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ANNUAL REPORT ON STRONG-MOTION EARTHQUAKE RECORDS IN JAPANESE PORTS (1991)

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港湾地域強震観測年報 (1991)

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Abbreviations used above:

AR: Analog record (computer plots of digitized records)
IR: Integated velocities and displacements (computer plots of digitized records)
FS: Fourier spectra
NR: Numerical tables of response spectra
LO: Loci of accelerations, velocities and displacements

港湾地域強震観測年報(1991)

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要旨

1991年12月現在，港湾地域強震観測網には81台の強震計が54港に設置されていた。このうち60台が地盤上に，15台が構造物上に，6台が地中に設置されていた。使用している強震計はアナログ記録方式のSMAC−B2強震計およびERS−B,C,D強震計と，デジタル記録方式のERS−F強震計である。

1991年に日本およびその周辺に発生した地震は千島列島，根室半島沖，釧路地方，十勝地方南東沖，浦河沖，岩手県南部，茨城県沖，銚子沖，東京湾，三宅島近海，静岡県中部，和歌山県北西部，鳥取県西部，周防灘，奄美大島近海などを震源として，いずれも中規模（マグニチュードが5～6）の地震があった。また石垣島近海では，1月下旬から約4ケ月間群発地震活動が続き，この間に震度Ⅳを9回含む676回の有感地震が観測された。雲仙岳でも年間を通じて火山性地震が頻繁に発生した。この一年に起きた地震の数は震度Ⅳが27回，震度Ⅲが104回，震度Ⅱが307回，震度Ⅰが891回，全有感地震は1329回であった。

この年報は前記観測網で1991年に得られた記録について報告するもので，対象期間中に得られた記録は最大加速度が50ガル以上の比較的大きな記録の6本を含む134本の記録である。年報は本文および観測結果からなり，観測結果は，強震観測表，記録波形，速度，変位波形，フーリェスペクトル，応答スペクトル，ディジタル記録，水平面内の加速度，速度および変位軌跡からなる。

強震観測表（Strong−Motion Earthquake Observation Results）には，対象期間中に得られたすべての記録を地震ごとに分類し，地震の資料と最大成分加速度等を示した。ただし，成分の最大加速度が20ガル以下で対応する地震が確認できないものは除いてある。地震資料(Earthquake data)に示すものは，震度(Intensities)を除き，気象庁地震津波監視課発行の「地震月報」によっている。しかし，この年報を編集する時点で地震月報が刊行されていない地震については，地震津波監視課が速報的に発表する「地震火山概況」によっている。その場合には，そのことが地震資料に注記されている。記録番号は記録が港湾技術研究所に到着した順序で付され，Sで始まる番号の記録はSMAC−B2強震計，Mで始まる番号の記録はアナログ記録方式のERS強震計，Fで始まる番号の記録はディジタル記録方式のERS強震計で得られたものである。

記録波形は最大加速度が20ガル以上の記録について示した。これはディジタル記録に関連して後に説明されている手法により記録を数字化し，これを電子計算機により図化したものである。

最大加速度が約20～50ガルの範囲の記録については水平2成分の波形を，50ガル以上の記録については水平2成分と上下成分の計3成分の波形を示した。ただし，ERS−B強震計は鉛直成分を含

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まないので，この強震計の記録では常に水平２成分の波形のみが示される。最大加速度によって振幅の目盛の尺度を変えることがあるので注意されたい。水平成分の方向は真北を基準にして示してある。これは，SMAC－B２強震計の場合，地震動の周期が地震計の振子の固有周期よりも十分に長いときに，地盤の加速度の方向を示すように定めたものである。ERS強震計の場合には，地震動の周期が強震計の振子の固有周期付近であるときに地盤の加速度の方向を示すように定めたものである。

ディジタル記録は次のようにして作られたものである。SMAC－B２強震計の記録の場合には，マイラーベースの感光フィルムを用いて密着印画を作り，これを数字化装置により時間軸に対し，0.1 mm（これは時間にして0.01秒に対応するが，後記のように円孤誤差を含んでいるので厳密な0.01秒でない）ごとに振幅を読取り数字化する。数字化装置の読取範囲の関係から，記録は30～45 cmごとに区切って数字化される。数字化された記録は読取区間ごとにゼロ線が設定され，各区間の記録が接続され一本の記録とされる。この際に，円孤誤差，記録紙送り誤差（記録開始時に記録紙の送り速度が徐々に一定値に近づく立上り誤差を含む），記録ペンの軸が加速度ゼロのときに紙送り方向に平行になっていないことによる誤差が補正される。このような補正のために，記録の数字化においては各成分の波形の他に，２本の基線，各成分の記録の前にある点検時に記録した円孤も数字化される。また，記録ごとに記録紙の送り速度が読取られる。円孤補正後の記録の数値の時間間隔は一定値とはなっていないが，直線補間により0.01秒間隔の記録に直される。

このようにして得られたものが，この年報でSMAC－B２強震計のディジタル記録として示されている。

ERS－B.C.D強震計の記録の場合には，原記録を用いて，数字化装置により時間軸0.1mm間隔に振幅を読取り数字化する。ERS－B強震計の記録紙の送り速度（仕様値）は２cm/sでERS－C.D強震計のそれは４cm/sである。したがって，読取り時間間隔はそれぞれ0.005秒および0.0025秒である。数字化は約70cmの区間ごとに行われる。各成分の波形の他に基線が１本数字化される。また，記録紙の送り速度が読取られる。得られた記録に区間ごとにゼロ線の設定をおこなった後，記録の一本化，時間間隔の補正，平滑化を行い，0.01秒間隔の記録とする。このようにして得られたものが，この年報でERS－B.C.D強震計のディジタル記録として示されている。

ディジタル記録の作表様式は表―８のディジタル記録の例に示されているとおりである。数値の配列順序は行の左から右へ，ページの左半分から右半分へと進む。ある数値が記録の先頭から何番目の数値であるかを知るには，その数値を含む行の左端のNo.の値と，その数値の欄の最上行にある（ ）内の数値を加えればよい。１行には10個の数値が含まれており，各データは空白を含めて６字となっている。これはディジタル記録を80欄カードにさん孔するときの便利さを考慮して定めたものである。カード１枚のうち60欄をデータに，残り20欄をカードの判別記号（地震番号，成分，カード番号等）に用いれば１行がカード１枚にさん孔できる。小数点は印字されていないが，数値の末尾にあるとすれば，数値の単位は0.1ガルとなる。

以上のようにして得られた等時間間隔のディジタル記録をフーリェ変換し，計器特性を補正する。その結果にフィルター操作を加える。フィルターは２種類のものを用いる。ひとつは，フィルターの定数が固定されているもの（以後固定フィルターと書く）で，他は，フィルターの定数が記録波形のフーリェ変換の特性により修正されているもの（以後パラメタ付フィルターと書く）である。

フィルター操作後，速度および変位に対するフーリェ変換を求め，それぞれのフーリェ逆変換を求めて，補正加速度，速度，変位の波形とした。本報告では，パラメタ付フィルターにより求まった加速度波形を補正加速度波形として示した。また，２種類のフィルターを用いて求まった速度，変位の波形も示した。両フィルターの特性等は本文または別報を参照されたい。[35)]

２種類のフィルターを用いた結果を並列して示している理由は次の通りである。第１に，現在のところどのような特性のフィルターが最適であるかを決め難いこと，第２に，求まる速度および変

位の波形はフィルターの特性に著しく依存するが，単一の方法による結果を示した場合には無批判に利用されるおそれがあること、第3に，両フィルターがそれぞれ特長を有していること，などである。

ERS強震計はSMAC－B2強震計に比し，より高い振動数まで感度が一様になっている。そのため，両強震計の記録波形をそのまま比較することは適切でないことがある。それ故，ERS強震計の記録については，SMAC－B2強震計が同一地点にあった場合に求まるであろう波形を求め，これをSMAC－B2等価加速度波形として示してある。

本年報に示されている応答スペクトルは，パラメタ付フィルターによる操作後の補正加速度波形を用いて求めたものである。前記のように，本年報に示すディジタル記録は計器補正の前段階におけるものである。したがって，ディジタル記録をそのまま用いて応答スペクトルを計算しても，本年報に示されているものと同一とはならない。また，1975年以前の年報では，ここに示す記録の補正方法と異なった処理によるディジタル記録および応答スペクトル等が示されていることに留意する必要がある。なお速度，変位波形の計算およびスペクトルの計算において，SMAC－B2強震計の記録の場合は最初の1秒間を無視した。これは，記録紙送りの立上り補正は行ってはいるが，記録の最初の部分における微少な誤差が記録の極く最初の部分の補正に与える影響が大きいことを考慮しての処置である。

本年報に示されているフーリェスペクトルは，高速フーリェ変換により加速度記録の全長に対しフーリェスペクトルを求めた後，このスペクトル値に時間長を乗じて加速度のディメンジョンとし，さらにバンド幅が1ヘルツのParzenウィンドウを用いて平滑化したものである。フーリェスペクトルも応答スペクトルと同様に，それぞれの強震計の計器特性の補正を行った加速度波形から求めたものである。

本年報に示される水平画面内の加速度，速度および変位の軌跡は，各波形の水平2成分を合成したベクトルの先端の移動軌跡を描いたものである。軌跡を描くのに用いた波形の時間長は，その全長とし，長い記録では，記録の先端部および後端部の振幅の小さい部分を除いたものとしている。用いる区間長の選定は観察によっている。軌跡を描くのに用いた加速度波形および変位波形は強震計の計器特性の補正を行ない，パラメタ付フィルターで求めたものである。図中のNは真北を示す。

キーワード：強震観測，数値化加速度記録，応答スペクトル

1990年における港湾地域強震観測には以下の諸機関が関係した。関係機関の協力に謝意を表する。

運輸省港湾局　　東京都港湾局
運輸省港湾建設局　　静岡県，宮崎県港湾課
北海道開発局港湾部　　大阪市港湾局
沖縄開発庁沖縄総合事務局

本年報は強震観測担当者の努力に負うところが非常に大きく，これら担当者の努力はこの年報の著者に準ずるものである。担当者各位に敬意と謝意を表する。なお，各観測地点で強震計の点検ならびに記録の取扱いは強震観測担当者によりなされているのでこれら担当者に対し将来，記録について問い合せたい事項等が発生した時に備えるため，全担当者を以下に示す。

平成3年強震観測担当者（1991）

第一港湾建設局

秋田港工事事務所　　松渕　知，神原　晋
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新潟港	〃	渡辺　孝，増井光男
		菅原英男，高橋信幸，松村高司
伏木富山港	〃	鷹濱　潤，竹田敏之
金沢港	〃	元波　守，田中　守，吉井
敦賀港	〃	西田一彦，広木智秀

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		阿部二郎，得田静郎
宮古港	〃 釜石工場	佐々木　等，原田久志，千葉　仁
塩釜港	〃	氏家正治，菅原豊明，片寄　誠
		野沢良一，瀬川　哲
小名浜港	〃	奈良　智，木村岩男，
		篠原邦彦，小野出則雄
小名浜港	〃 相馬工場	小野出則雄，大野　勝，家子清吉
		西塚　登
鹿島港	〃	橋本光灘，志鎌幸英，上原正光
		及川修一
鹿島港	〃 常陸那珂工場	松山　治，平野孝雄，田沢稔幸
		佐藤
千葉港	〃	佐野幸保，似内俊行
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		高木　保，藤原　茂，田口　昇
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		藤井宗一
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小松島港	〃	中川富士男，松本次男
松山港	〃	宮本武紀，高木悌二
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境港	〃	福永幹雄，北尾　進，山田真理

第四港湾建設局

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		金子敏志
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浦河港湾建設事務所		鈴木久孝，鈴木泰弘
		山下豊司
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		梶原利雄，小山良明，伊藤継夫
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その他		
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大阪市港湾局		小林靖仁
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宮崎県日向土木事務所		奥松秀樹，新地　卓，桑畑正仁

ANNUAL REPORT ON STRONG-MOTION EARTHQUAKE RECORDS IN JAPANESE PORTS (1991)

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Synopsis

In the major ports in Japan, strong-motion earthquakes and earthquake responses of structures have been observed since 1962; and as of December 1991, 4216 accelerograms were accumulated and analysed at the Geotechnical Earthquake Engineering Laboratory. The observation network consisted of 81 strong-motion accelerographs; the 60 accelerographs were on the ground, the 6 accelerographs were in the ground and the rest on the structures. Two types of accelerographs, the SMAC-B2 accelerograph and the ERS accelerograph are being used. The SMAC-B2 accelerograph is of a mechanical type. The ERS accelerograph is of a electrical type. The ERS accelerograph is equipped with either analogue or digital recorder. This report presents all the records obtained in 1991, which are listed in the tables with their maximum accelerations, being classified in accordance with earthquakes. The accelerograms of ground motions with maximum accelerations exceeding 20 Gals are reproduced in from of computer plots. For the ground acceleration records with maximum accelerations greater than 50 Glas, digitized records, Fourier spectra, response spectra, integrated velocities and displacements, and loci of accelerations, velocities and displacements in horizontal plane are presented.

Key Words: Strong-Motion Earthquake Observation, Digitized Acceleration Records, Response Spectra

1. Introduction

The observation of the strong-motion earthquake in major ports was started in 1962 in Japan by the Geotechnical Earthquake Engineering Laboratory of the Port and Harbour Research Institute. The observation network was expanded year by year; and as of December 1991, 81 accelerographs had been installed in 54 ports. Two types of accelerographs were being used, namely the SMAC-B2 accelerograph and the ERS accelerograph.

Until the end of 1991, 4216 accelerograms had been obtained in the network; 2391 accelerograms were obtained in the SMAC-B2 accelerographs and 1825 accelerograms, in the ERS accelerographs. They were collected in the Laboratory for preliminary processing and analyses which would be explained later on. The records from 1963 to 1975 had been published in the preceding annual reports which had similar format to the present one.[1~11]

In 1968, there occured an earthquake of large magnitude, the 1968 Tokachi-Oki Eathquake, and large number of aftershocks followed. The damage took place to buildings, roads, port facilities and many other types of structures. The largest acceleration was recorded

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at Hachinohe Port, which was 259 Gals. Because of the large magnitude of the earthquake and the damage to structures, the records were of great interest and importance. Therefore, the authors published a report of similar format to the annual report.[26] Digitized data of vertical components were not included in those reports; however, the data were reported separately.[12] In the annual report for the records of 1976 and 1977, a new data processing procedure was introduced, and accelerations after instrument correction, integrated velocities and displacements, and response spectra calculated with the instrument corrected accelerations were included.[13] In 1978, Japan was hit by two great earthquakes, the 1978 Izu-Oshima-Kinkai Earthquake (Magnitude 7.0) in January and 1978 Miyagi-Ken-Oki Earthquake (Magnitude 7.4) in June. Records of these earthquakes are compiled respectively into two special reports by the new data processing of similar format to the annual report.[27,28] Port structures were damaged by the 1982 Urakawa-Oki Earthquake and records of the earthquake are also compiled into special report.[29] The 1983 Nipponkai-Chubu Earthquake (Magnitude 7.7) brought about serious damage to port facilities in Akita port and records of the earthquake are compiled into special report.[30] In 1984, an earthquake (Magnitude 7.1) occurred in Hyuga-nada; off east coast of Kyushu and brought slight damages on port facilities. Records of the earthquake are also compiled into special report.[31]
In 1987, an earthquake (Magnitude 6.7) hit the metropolitan area and caused some damages on houses and civil engineering structures such as bridges and embankments reclaimed lands inport area also liquefied slightly by this earthquake. Records of the earthquake are compiled into special report.[32]

The records and the results of the preliminary analyses in those reports have been used very effectively for analyses of the earthquake damage, for analyses of earthquake response of structures and also for designing large piers; and the usefulness of the strong-motion earthquake observation has been perfectly proved.[42]

The present report consists of the Strong-Motion Earthquake Observation Results, reproduced accelerograms, digitized records, response spectra, Fourier spectra, integrated velocities and displacements, and loci of acceleration and displacement in horizontal plane. All the records in 1991 are listed in the Strong-Motion Earthquake Observation Results with their maximum accelerations. The computer plots of digitized records are prepared for the ground acceleration records with maximum accelerations exceeding 20 Gals, and the digitized records and the spectra are provided on records exceeding 50 Gals.

Following organizations are being cooperated with the Port and Harbour Research Institute in the strong-motion earthquake observation:

The Bureau for Ports and Harbours of the Ministry of Transport;
The Regional Bureaus for Port Construction of the Ministry of Transport;
The Port and Harbour Division, Hokkaido Development Bureau of the Hokkaido Development Agency;
The Okinawa General Office of the Okinawa Development Agency;
The Harbour Sections of Shizuoka, and Miyazaki Prefectural Governments; and The Harbour Bureaus of Tokyo and Osaka Municipal Governments.

2. Network and Instruments

(1) Network

The network of the Port and Harbour Research Institute was covering the coast-line of Japan with 81 strong-motion accelerographs in 1991 the location of ports where the accelero-

graphs are installed, are shown in Fig. 1. The numbers attached to the ports in Fig. 1 are corresponding to the numbers in Table 1. In Table 1, being classified in accordance with the ports, the stations are listed with the type of accelerograph, the installation condition, and the reference number. The reference number is showing the number of the Technical Note of the Port and Harbour Research Institute in which the site condition of each station is described. [33~37]

The accelerographs at the 50 stations out of the 81 stations were the SMAC-B2 accelerographs and the rest, the ERS accelerographs.

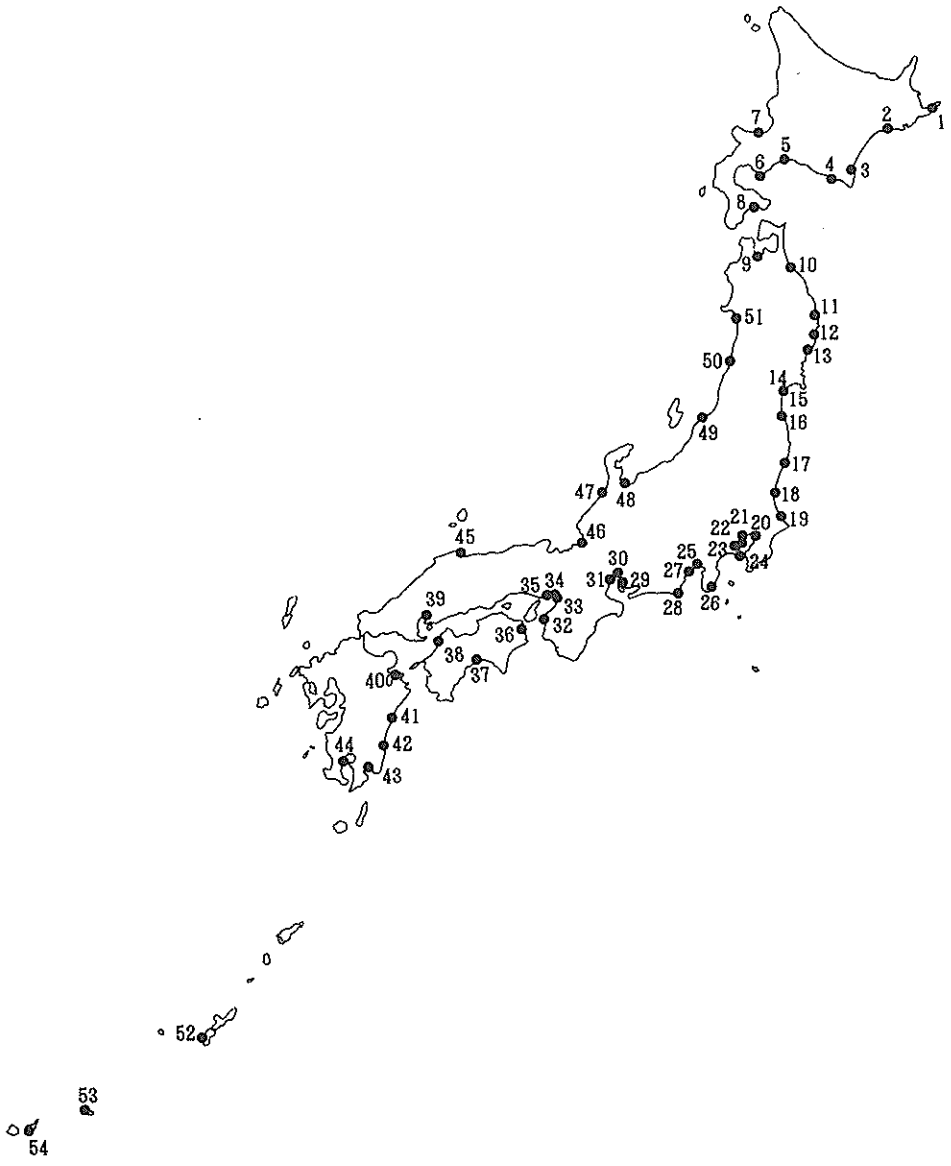

Fig. 1 Location of ports where the accelerographs are installed.
(The numbers to each port are corresponding to the numbers in Table 1)

Table 1 List of Strong-Motion Earthquake Stations of the Port and Harbour Research Institute

No. of port*	Name of port	Name of station	Type of accelerograph	Installation condition	Ref. No.**
1	Hanasaki	Hanasaki-F	ERS-F	on ground	
2	Kushiro	Kushiro-ji-S	SMAC-B2	on ground	
3	Tokachi	Tokachi-M	ERS-C	on ground	298
4	Urakawa	Urakawa-S	SMAC-B2	on ground	
5	Tomakomai	Tomakomai-S	SMAC-B2	on ground	107
6	Muroran	Muroran-S	SMAC-B2	on ground	34,107
7	Otaru	Otaru-S	SMAC-B2	on ground	107
8	Hakodate	Hakodate-M	ERS-C	on ground	298
		Hakodate-FB	ERS-F	in ground	
		Hakodate-F	ERS-F	on ground	
		Hakodate-FR	ERS-F	on structure	
9	Aomori	Aomori-S	SMAC-B2	on ground	107,156
10	Hachinohe	Hachinohe-ji-S	SMAC-B2	on ground	34,107
11	Miyako	Miyako-S	SMAC-B2	on ground	34,107
12	Kamaishi	Kamaishi-M	ERS-C	on ground	351
		Kamaishi-MB	ERS-D	in ground	351
13	Ofunato	Ofunato-bochi-S	SMAC-B2	on ground	34,107
		Ofunato-bo-S	SMAC-B2	on structure	34,107
		Ofunato-mound-M	ERS-C	on structure	
14	Shiogama	Shiogama-kojyo-S	SMAC-B2	on ground	34,107,156
15	Sendai	Sendai-M	ERS-C	on ground	351
		Sendai-MB	ERS-D	in ground	351
16	Soma	Soma-S	SMAC-B2	on ground	
17	Onahama	Onahama-ji-S	SMAC-B2	on ground	351
18	Hitachinaka	Hitachinaka-F	ERS-F	on ground	
19	Kashima	Kashima-zokan-S	SMAC-B2	on ground	156
20	Chiba	Chiba-S	SMAC-B2	on ground	107
21	Tokyo	Shinagawa-S	SMAC-B2	on ground	34,107
		Shinagawa-MB	ERS-D	in ground	
22	Kawasaki	Kawasaki-FB	ERS-F	in ground	
		Kawasaki-F	ERS-F	on ground	
		Kawasaki-FR	ERS-F	on structure	
23	Yokohama	Keihin-ji-S	SMAC-B2	on ground	34
		Yamashita-FB	ERS-F	in ground	
		Yamashita-F	ERS-F	on ground	
		Yamashita-FR	ERS-F	on structure	

No. of port*	Name of port	Name of station	Type of accelerograph	Installation condition	Ref. No.**
24	Yokosuka	Koken-S	SMAC-B2	on ground	34
		Koken-M	ERS-C	on ground	34
25	Tagonoura	Tagonoura-S	SMAC-B2	on ground	107
26	Shimoda	Shimoda-F	ERS-F	on ground	
27	Shimizu	Shimizu-kojyo-S	SMAC-B2	on ground	34,156
		Okitsu-S	SMAC-B2	on ground	34,156
		Shimizu-miho-S	SMAC-B2	on ground	298
28	Omaezaki	Omaezaki-M	ERS-C	on ground	351
29	Kinuura	Kinuura-ji-S	SMAC-B2	on ground	298
30	Nagoya	Nagoya-zokan-S	SMAC-B2	on ground	34, 156
		Nagoya-inae-S	SMAC-B2	on structure	34
		Inae-sanbashi-M	ERS-B	on structure	34
		Inae-yaita-M	ERS-B	on structure	34
31	Yokkaichi	Yokka.-chitose-S	SMAC-B2	on ground	107
		Yokka.-sekita-M	ERS-B	on structure	34
		Yokka.-dai2-M	ERS-B	on structure	34
32	Wakayama	Wakayama-S	SMAC-B2	on ground	298
33	Osaka	Osaka-ji-S	SMAC-B2	on ground	34
		Osaka-chuo-S	SMAC-B2	on structure	34
34	Amagasaki	Amagasaki-S	SMAC-B2	on ground	156
35	Kobe	Kobe-ji-S	SMAC-B2	on ground	34
		Kobe-dai6-S	SMAC-B2	on structure	34
		Kobe-dai8-S	SMAC-B2	on structure	34
		Kobe-maya-M	ERS-C	on ground	298
		Maya-dai1-M	ERS-B	on structure	34
		Maya-dai2-M	ERS-B	on structure	34
36	Komatsujima	Komatsujima-S	SMAC-B2	on ground	107
37	Kochi	Kochi-ji-S	SMAC-B2	on ground	298
38	Matsuyama	Matsuyama-S.	SMAC-B2	on ground	156
39	Hiroshima	Hiroshima-ji-S	SMAC-B2	on ground	
40	Oita	Oita-S	SMAC-B2	on ground	156
41	Hososhima	Hososhima-F	ERS-F	on ground	
42	Miyazaki	Miyazaki-M	ERS-C	on ground	298
43	Shibushi	Shibushi-S	SMAC-B2	on ground	
44	Kagoshima	Kagoshima-S	SMAC-B2	on ground	34

No. of port*	Name of port	Name of station	Type of accelerograph	Installation condition	Ref. No.**
45	Sakaiminato	Sakaiminato-ji-S	SMAC-B2	on ground	
46	Tsuruga	Tsuruga-S	SMAC-B2	on ground	34
47	Kanazawa	Kanazawa-S	SMAC-B2	on ground	107
48	Toyama	Toyama-S	SMAC-B2	on ground	34
49	Niigata	Nigata-ji-S	SMAC-B2	on ground	298
50	Sakata	Sakata-S	SMAC-B2	on ground	34
51	Akita	Akita-S	SMAC-B2	on ground	34,351
52	Naha	Naha-zokan-S	SMAC-B2	on ground	298
53	Hirara	Hirara-S	SMAC-B2	on ground	298
54	Ishigaki	Ishigaki-S	SMAC-B2	on ground	298

* The number correspond to those in Fig. 1.

** The number correspond to those of the Technical Note of the Port and Harbour Reseach Institute, in which the site condition of the station in given.

(2) Servicing

The installation and the servicing of the instruments have been made by the port construction offices of the previously described organizations under the direction of the Geotechnical Earthquake Engineering Laboratory. It is directed that the instrument should be checked at least twice a month and after an earthquake larger than the intensity II as soon as possible. The accelerogram is sent carefully to the Geotechnical Earthquake Engineering Laboratory by post or in hand, without any treatment or reading in the station, to eliminate possible danger to damage the accelerogram by unaccustomed persons to handle it.

The Geotechnical Earthquake Engineering Laboratory has been offering every year a training course of about 5 days to the persons who take care of the accelerographs at the stations. During the course, the trainees are instructed proper procedure to maintain the instruments and to handle the accelerograms, by the experts from the manufacturing companies of the accelerographs. They also attend introductory lectures to the earthquake engineering by the instructors inside and outside of the Institute.

(3) Stations

In the network, there are three kinds of stations; the first is to record acceleration of the ground surface, the second to record acceleration in the ground, and the third to record the earthquake response of structures. The station to record the earthquake response is always accompanied with another station to record the ground acceleration in its vicinity.

In the stations recording the ground acceleration independently, one of the horizontal components of the instrument is directed to the due north except a few number of instruments which have been installed in parallel with the structures. It is the reason that in the ports where the instruments are installed in parallel to the structures, there are many quay-walls or piers parallel each other, and that it is desirable to record components of the ground acceleration in parallel and perpendicular to the axes of the structures. At the stations recording structural response and the accompanying stations recording the ground acceleration, the instruments are installed parallel to the structures whose earthquake response is needed. Because two horizontal components of the accelerographs are always named NS and EW, the direction of the NS-component makes an angle to the due north direction in some of the accelerographs in the network.

Each station in the network has its own abbreviated name which implies its location, the type of its accelerograph and installation condition, on the ground or on the structure. For instance, the station in Hachinohe Port is named Hachinohe-S in which Hachinohe is the name of the place where the station is located and the capital letter S at the end of the abbreviated name is showing that the accelerograph in the station is the SMAC-B2 accelerograph. If the ERS accelerograph is being used in a station, the name of the place is followed by a capital letter M or MB. As this naming is made to distinguish the stations accurately in the network, it may be a little difficult for the people outside the network to imagine the location from its name, especially for the people who does not understand the Japanese language. The detailed publication on the network will help those people to find the location as well as other necessary data of the station.

(4) Accelerographs

i) SMAC-B2 Accelerograph

The SMAC-B2 accelerograph was developed by the Committee for the Standard Strong

Motion Accelerograph. It is a three component mechanical accelerograph which leaves records on a rolled waxed paper. The specifications, inside view and theoretical frequency characteristics are shown in Table 2 and Figs. 2 and 3 respectively.

In the network of the Port and Harbour Research Institute the SMAC-B2 accelerograph is practically one of the standard accelerographs; it is because at the earlier time of the observation the SMAC-B2 accelerograph was one of the most latest models and suitable for the observation condition in port areas. After the SMAC-B2 accelerograph, several types of accelerograph were developed by the Committee. However, it is inconvenient to use many types of accelerograph in a network from view point of instrument characteristics and maintenance; and the number of the SMAC-B2 accelerograph in the network continued to increase.

The triggering levels of the accelerographs in the network are 5 gals in places where ground noise is small and 8 gals in places where ground noise is relatively large because of heavy motor trucks for construction work or cargo transportation. Exceptionally a few number of the accelerographs located beside roads carrying very heavy traffic are triggered at 11 Gals.

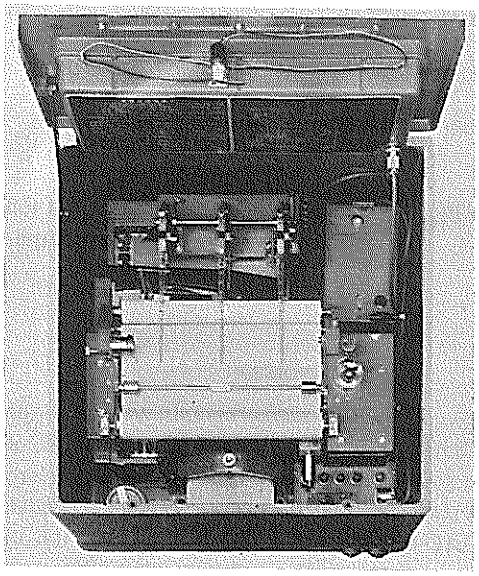

Fig. 2 Inside view of the SMAC-B2 accelerograph

Table 2 Specifications of the SMAC-B2 accelerograph

Component	2 horizontal and 1 vertical
Natural period	0.14 s.
Sensitivity	12.5 Gal/mm
Damping	Critical
Damping mechanism	Air piston
Maximum recording acceleration	500 Gal
Recording speed	10 mm/s.
Recording medium	Waxed paper
Driving mechanism for recorder	Hand-wound spring motor
Recording duration	3 min.
Recording capacity	5 earthquakes/roll
Starter	Electric contact made by vertical motion
Period of starter pendulum	0.3 s.
Starter threshold	5 Gal
Auxiliary starter	Mechanical, works at 100 gal
Time marking	1 s.
Power supply	4 dry cells
Size	54 x 54 x 37 in cm
Net weight	100 kg

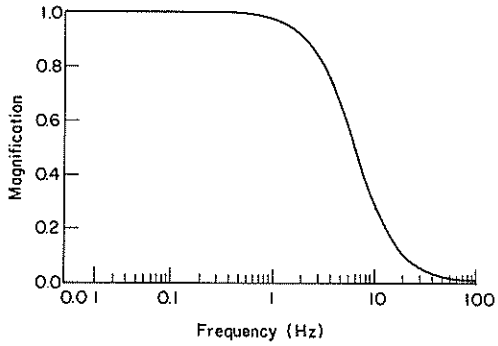

Fig. 3(a) Frequency characteristics of the SMAC-B2 accelerograph (amplitude)

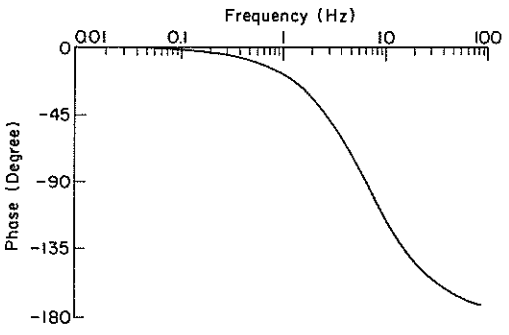

Fig. 3(b) Frequency characteristics of the SMAC-B2 accelerograph (phase)

ii) ERS Accelerograph

The ERS accelerograph was developed by the Geotechnical Earthquake Engineering Laboratory. In the network the SMAC-B2 accelerograph is very widely used. However, there are some places where the SMAC-B2 accelerograph is not convenient to the installed, especially on structures. For instance, if the earthquake response of a pier is going to measured with the SMAC-B2 accelerograph, a house for the instrument will be constructed on the pier where many motor trucks and cargo handling equipments are working. It is almost always difficult to find a place on a port structures for the house. Then, it is considered that transducers and a recorder are separately installed in a member of a pier and in a house which is located in the vicinity of the transducers but not disturbing the cargo handling work.

The ERS accelerograph consists of transducers of moving coil type and a recorder including power supply. Originally magnetic tape data recorders were used; this type of accelerograph is called the ERS-A accelerograph. After some period of operation the magnetic tape data recorders had been replaced by electro magnetic oscillographs. The model with an electro magnetic oscillogaph was named as the ERS-B accelerograph.

A model of similar type, the ERS-C accelerograph, was developed and have been installed at eleven stations in the network. While the ERS-B accelerograph records aceelerations in two horizontal components, the ERS-C accelerograph records acceleration of vertical component as well as accelerations of two horizontal ones.

A new model of similar type, the ERS-D accelerograph, was developed for recording acceleration in the ground and accelerographs of this type have been installed at two stations in the network. The transducers of the ERS-D accelerograph are installed in the bore-holes, but they are the same specifications as those of the ERS-C accelerograph.

In the ERS-B, C and D accelerograph the transducers are almost directly connected with galvanometers in the electro magnetic oscillograph; between them there exists only resistor circuits to adjust sensitivity and impedance matching. Non electronic amplifier is used to attain maximum reliability of the instrument. The overall sensitivity is more than 10 mm per Gal and it is easily adjusted by changing resistors of the circuit. Therefore, the ERS-B, C and D accelerograph has advantage to start the observation in its maximum sensitivity and after obtaining some records to readjust the sensitivity into the appropriate one for the strong-motion accelerograph. It will enable for researchers to obtain the record of sufficient amplitude

to analyze although the real acceleration amplitude is rather small and to start analyses from earlier stage of the observation.

The specifications of the ERS-B accelerograph are listed in Table 3, the transducer and the recorder are shown in Fig. 4 and 5. The corresponding information on the ERS-C accelerograph is given in Table 4 and Figs. 7 and 8. The frequency characteristics are shown in Fig. 6.

The triggering levels of the ERS accelerographs are similar to those of the SMAC-B2 accelerographs.

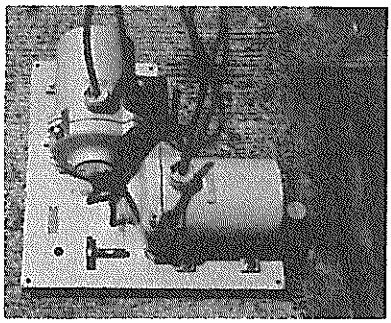

Fig. 4 Transducers of the ERS-A/B accelerograph

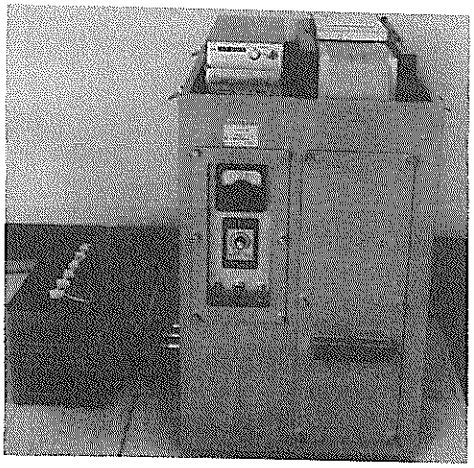

Fig. 5 Recorder of the ERS-B accelerograph

Table 3 Specifications of the ERS-B accelerograph

Transducer	
Type	Moving coil type
Component	2 horizontal
Natural period	0.5 s.
Damping factor	17
Damping mechanism	Electro-magnetic
Capacity	250 Gal
Coil impedance	320 ohm
Sensitivity	about 2 mv/gal (circuit open)
Water tightness	over 200 kg/cm^2
Recorder	
Type	Electro magnetic oscillograph
Natural frequency of galvanometer	100 Hz
Sensitivity	166 mm/mA
Recording paper	92 mm (width) x 30 m (length) (visible without processing)
Paper speed	2 cm/s.
Time mark	0.1 s.
Power supply	
Rechargeable battery, charged automatically when it is necessary.	

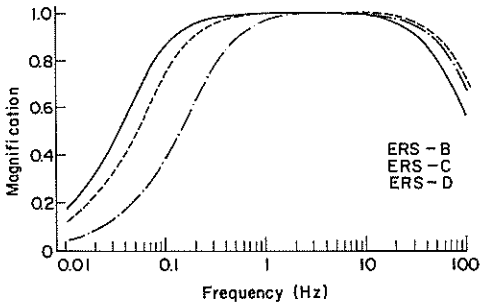

Fig. 6(a) Frequency characteristics of the ERS-B, C, D accelerograph (amplitude)

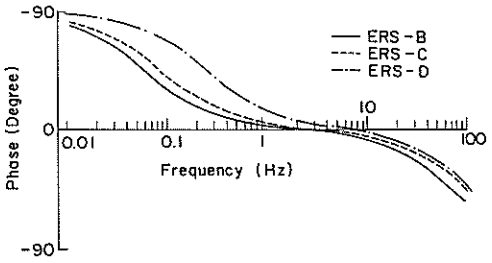

Fig. 6(b) Frequency characteristics of the ERS-B, C, D accelerograph (phase)

Table 4 Specifications of the ERS-C (D) accelerograph

Transducer	
Type	Moving coil type
Component	2 horizontal and 1 vertical
Natural frequency	3 Hz (5 Hz)
Damping factor	17 (10)
Damping mechanism	Electro-magnetic
Capacity	500 Gal
Water tightness	over 20 kg/cm^2
Recorder	
Type	Electro magnetic oscillograph
Natural frequency of galvanometer	270 Hz
Recording paper	198 mm (width) x 30 m (length) (visible without processing)
Paper speed	4 cm/s.
Time mark	0.1 s.
Sensitivity (overall)	2 Gal/mm, or 10 Gal/mm
Power supply	
Rechargeable battery, charged automatically when it is necessary.	

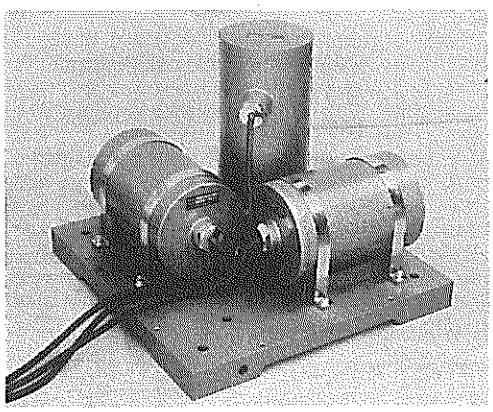

Fig. 7 Transducers of the ERS-C accelerograph

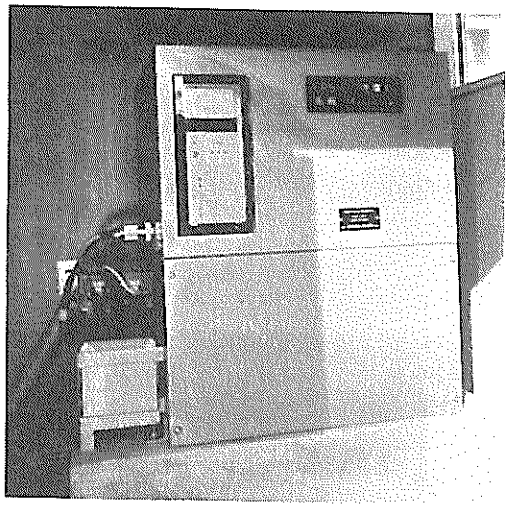

Fig. 8 Recorder of the ERS-C accelerograph

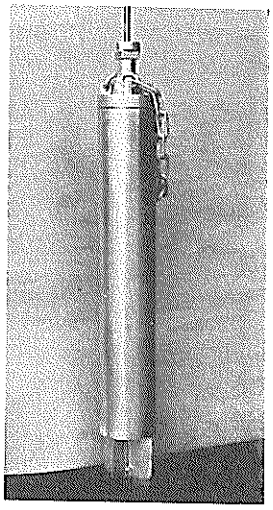

Fig. 9 Transducers of the ERS-D accelerograph

iii) ERS-F Accelerograph

ERS-F Accelerographs are, digital strong-motion accelerographs using non-volatile, solid state magnetic bubble memories. There are several types of the ERS-F Accelerographs: the standard type, as shown in Fig. 10 is a self-contained box type, containing the transducers and the magnetic bubble memories all in one; another has a separate transducer, as shown in Fig. 11, which will be buried in the ground and observe the motion at the base or in the ground; another has a separate transducer, as shown in Fig. 12, which will be attached to the structures.

The recording system of the ERS-F Accelerograph including the magnetic bubble memories is shown in Fig. 13 for the front view. ERS-F Accelerograph is a system shown by the block-diagram in Fig. 14, satisfies the specification shown in Table 5, and has the frequency characteristics shown in Figs. 15, 16.

The main unit of the recording system, shown in Fig. 17, consists of four non-volatile, solid-state magnetic bubble memories and the controlling parts. This unit is contained in a case, shown in Fig. 18, of which dimensions are 240 mm x 240 mm x 35 mm, weighing about one kilogram. The capacity in the memory of the unit is 512 kilobytes. Two of the units can be installed at one recording system, but at present one unit is installed for the accelerographs at Hakodate Port and Hitachinaka Port.

Recording length of the earthquake motions is, at minimum, 65.28 seconds (6528 data/component). The recording length is extended up to 195.84 seconds (19584 data/component) by monitoring the level of the acceleration; the recording length is doubled or trippled if the level of the acceleration monitored after 45 seconds from the triggering is higher than the trigger level of the acceleration. The main unit of the recording system can record, at the maximum, 65.28 seconds in length of three components of ten earthquake motions. If earthquakes occur successively and the earthquake motion data should over flow the recording system, records of the greatest maximum accelerations are secured. One exception to this is

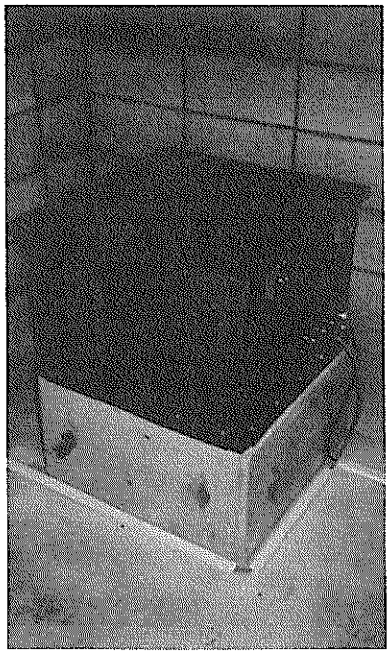

Fig. 10 The ERS-F accelerograph (Standard Type)

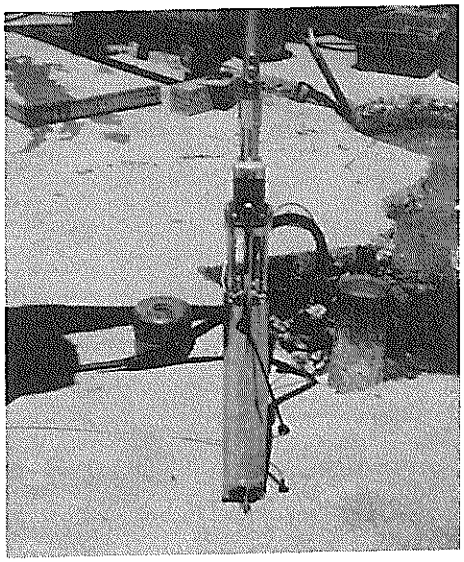

Fig. 11 Transducer installed in borehole (the ERS-F accelerograph)

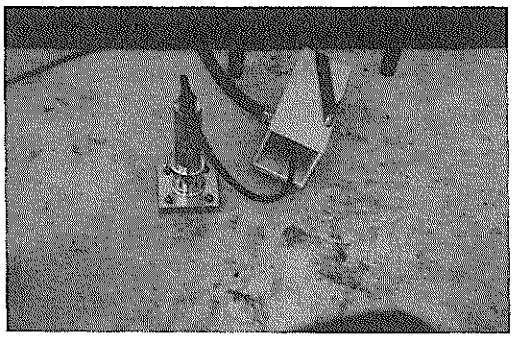

Fig. 12 Transducer attached to structure (the ERS-F accelerograph)

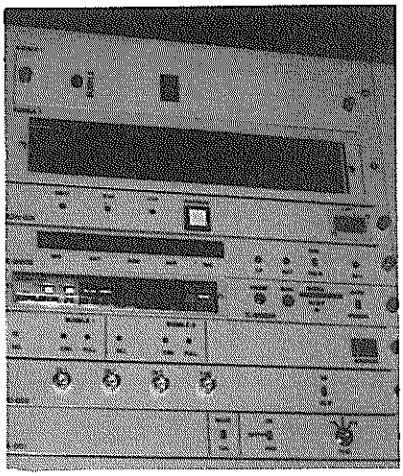

Fig. 13 Recorder of the ERS-F accelerograph

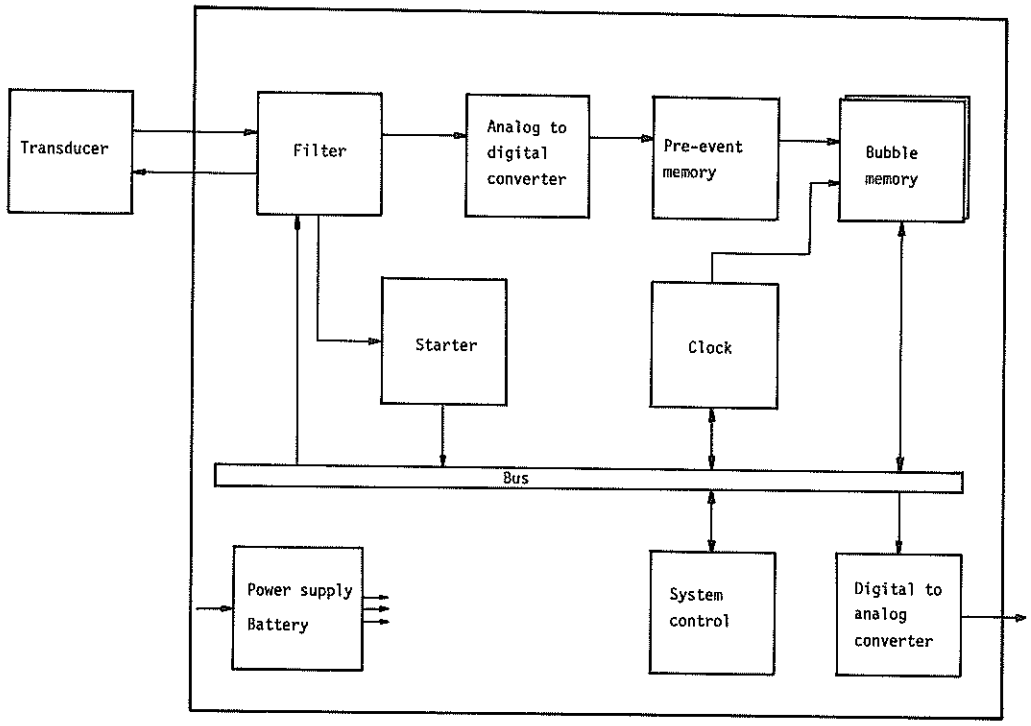

Fig. 14 Block-diagram of the ERS-F accelerograph

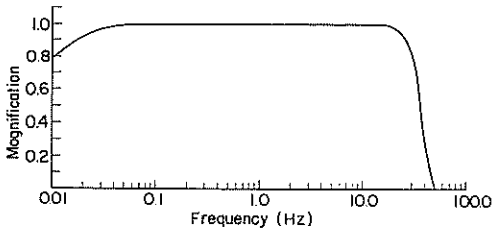

Fig. 15 Frequency characteristics of the ERS-F accelerograph (amplitude)

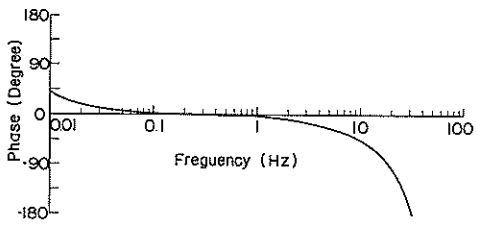

Fig. 16 Frequency characteristics of the ERS-F accelerograph (phase)

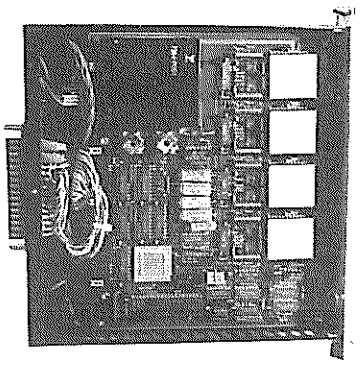

Fig. 17 Inside view of cartridge (ERS-F accelerograph)

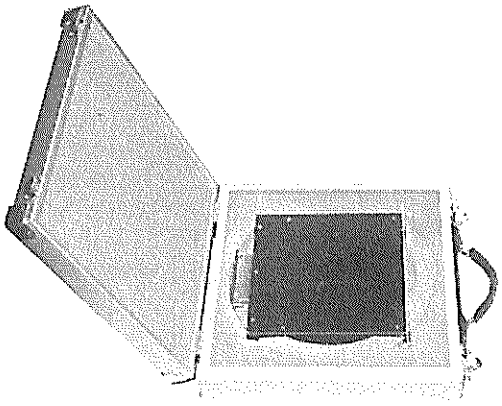

Fig. 18 A container of cartridge (the ERS-F accelerograph)

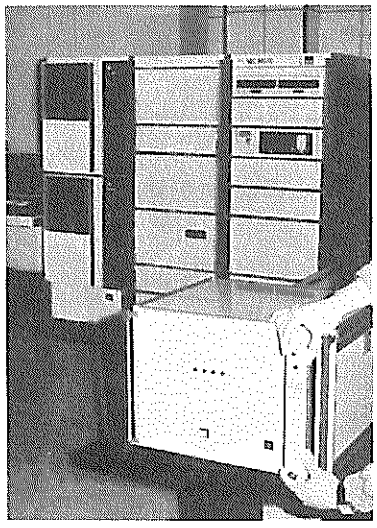

Fig. 19 Reproducer of the ERS-F accelerograph

Table 5 Specifications of the ERS-F accelerograph

Overall capabilities	Maximum acceleration capacity Frequency characteristics Dynamic range	2G 0.01 – 35 Hz 86 dB over
Transducer	Accelerometer Component Maximum capacity Sensitivity type	 2 horizontal, 1 vertical 2G 10^{-5} Force-ballance servo
Filter	High pass Low pass	0.007 Hz –6 dB/octave 35 Hz –18 dB/octave
A/D conversion	Resolution Convesion rate	16 bits 100 Hz
Pre-event memory	10 seconds.	
Clock	Accuracy of internal clock 1/100 seconds corrected every an hour by NHK time signal	
Starter	Trigger levels	0.5, 1, 2% of maximum acceleration
Recorder	No. of channel Memory size Record length Records of greatest maximum acceleration secured	3-9 records, 1 time signal 512 kwords 16 bit/word 1, 2, 3 minutes/record
Related informations	Observation station, Number of records, Start time of each data, Maximum accelerations of each component	
Calibration	Overall calibration are possible	
Buckup power supply	2 hour after power stopage	
Container	Alluminum box, water-proof Size	 54(L), 54(W), 38(H) cm

for the records of 195.84 seconds; these records are stored in the first-come first-serve basis.

(5) Foundation and House

All the SMAC-B2 accelerographs in the network are installed on simple shallow foundations which were designed based upon the same idea. It was supposed that the shape and the dimensions of a foundation on which a seismograph is installed affects to the earthquake record obtained by it. However, as there was no convincing idea to design the most suitable foundation, the foundations of almost same size and of same shape were selected for all the accelerographs in the network. This makes it easier to compare accelerograms of an earthquake recorded at several stations. As the most of the harbour structures have shallow foundations and do not rest on bed rock, it was decided to make shallow foundations for the accelerographs, as shown in Fig. 20. The hollow space under the foundation was made to make the bulk density of the foundation equal to that of the soil, so that the disturbance to the records due to the foundation is eliminated.

Usually, no pile is used to support the accelerograph and its foundation, but in the stations on very soft soil or loose sand, concrete piles or wooden piles were used. For example, the foundations in the Hachinohe-S station and the Niigata-S station are supported by piles. The foundation is isolated from a house covering the instrument.

In the network only two ERS-B accelerographs are installed on ground, and the standard

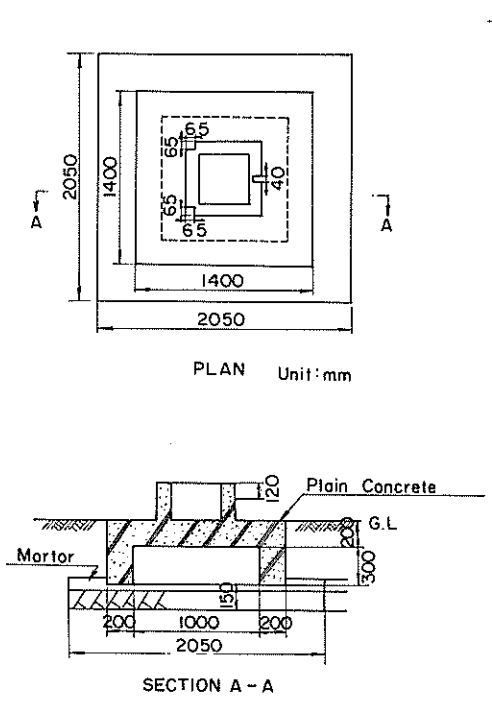

Fig. 20 Foundation for accelerograph (SMAC-B2)

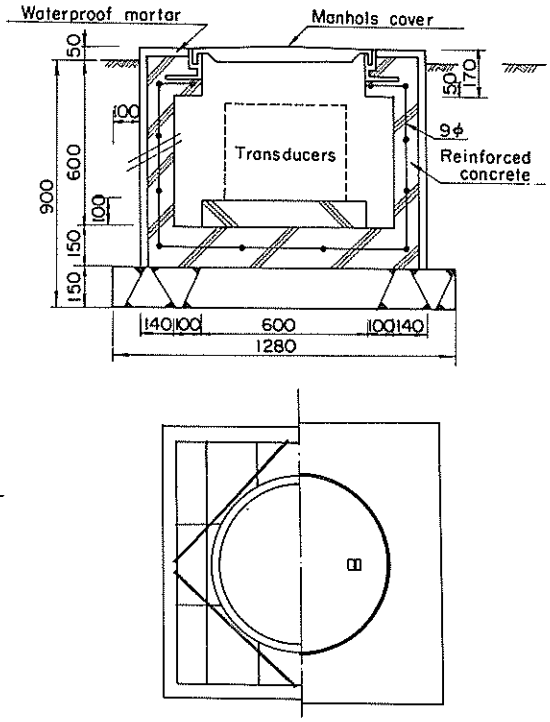

Fig. 21 Foundation for transducers of the ERS-C accelerograph

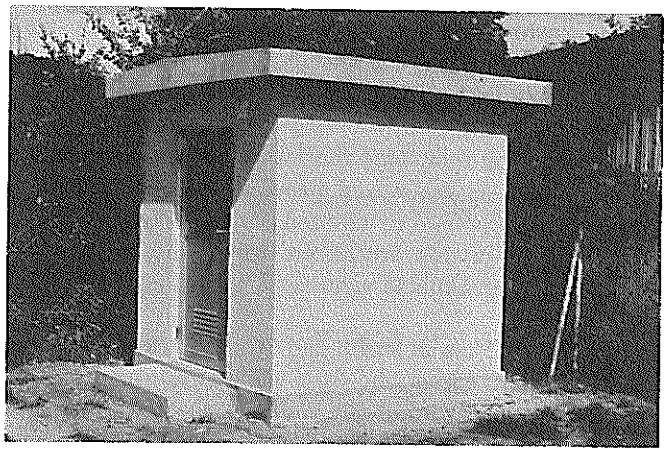

Fig. 22 House of the Onahama-ji-S station

foundation for this accelerograph has not been established. The shapes of the two foundations are shown in the separate reports.[33~37] Shape and size of a standard foundation for transducers of the ERS-C accelerograph are illustrated in Fig. 21.

The most of the accelerographs are covered with houses which were built for the instruments. Some of the accelerographs were installed in houses which had been built for other purposes. The house built for the instruments are made of reinforced concrete or concrete blocks; some are prefabricated houses. In Fig. 22 as an example, the house of the Onahama-ji-S station is shown.

3. Accelerogram Processing

(1) Preliminary Processing

The accelerograms collected at the Geotechnical Earthquake Engineering Laboratory will be listed in the table "Strong-Motion Earthquake Observation Results" through the following processing.

At first, each accelerogram is given a record number according to the order of its arrival at the Laboratory. The record number for the accelerogram from the SMAC-B2 accelerograph begins with a capital letter S, and that from the ERS accelerograph, with a capital letter M.

Then, the earthquake corresponding to the accelerogram is confirmed or determined. Most of the accelerograms are sent from the stations with information on the earthquake for which the accelerograms have been obtained. A few of the accelerograms, however, are sent without such information because the accelerograms have been found in the regular servicings, and at the station it is difficult to find the corresponding earthquake. For the accelerogram without the information, the earthquake is determined considering the possible period of the recording and the earthquakes occurred in that period. The determination or the check is made based on the Seismological Bulletin of the Japan Meteorological Agency. As at the time of compilation of the annual report the Seismological Bulletins on the earthquakes in later months in a year are not available because of time lag of the publication after earthquakes, the preliminary reports (Jishin Kazan Gaikyo published by the Japan Meteorological Agency) are used to check the records in those months. Some of the accelerograms are impossible to deter-

mine their corresponding earthquakes even in the Laboratory and they are treated as earthquake unknown. It will be noted that the reliability of the earthquake determination for accelerograms of small acceleration is limited because of such procedure.

In the SMAC-B2 accelerograph, the recording is made on waxed paper which has dark red background. The recording by scratching the waxed paper with a stylus leaves the semi-translucent trace on the paper. As the waxed paper is not stable against scratchings, the original accelerogram is not appropriate to be used for the digitization. The photographic contact print is made from the original accelerogram on a special photographic sheet. The base of the sheet is made of mylar film and very stable against temperature change, humidity, and mechanical distortion.

The sizes of the sheet are 55 cm in length and 30 cm in width. If the significant portion of the record is longer than 30 ~ 45 cm, the copy will be made on two sheets or more; and a portion of about 10 cm of the record at the end of a sheet is overlappedly appearing in the successive sheet. After the processing, the copy has black traces and semi-translucent background. They are in very good contrast for the digitization.

The record from the ERS-B accelerograph is only chemically stabilized before being used for analysis.

From the stabilized original record or the photographic copy, the maximum accelerations of each component are read with the aid of a magnifying glass. In this reading the base-line setting is not so accurate as that made in digitizing the accelerogram, since this is just preliminary processing. The difference between two accuracies in base-line setting may cause a little difference between the maximum accelerations read with the magnifying glass and in the digitized record.

The accelerograms are classified in accordance with the earthquakes, and listed with their maximum accelerations in the tables "Strong-Motion Earthquake Observation Results". The items in the table will be explained in the following sub-sections. The Strong-Motion Earthquake Observation Results are compiled every two months and sent to all the stations. The copy of the accelerogram is also sent with the necessary directions on the maintenance of the instrument to the station where the accelerogram was obtained. The Strong-Motion Earthquake Observation Results are included in the later part of this report.

(2) Earthquake Data

The earthquake data except the remarks in the Strong-Motion Earthquake Observation Results are based upon the Seismological Bulletin of the Japan Meteorological Agency. Because of the reason explained previously regarding the checking of earthquakes, the data on earthquakes in November and December are based upon the preliminary reports. Some of the remarks come from different sources.

The time in the earthquake data refers to the Japan Standard Time (JST) which is earlier than GMT by 9 hours.

The magnitude in the earthquake data is determined using Tsuboi's formula:

$$M = \frac{1}{2}\log(A^2_N + A^2_E) + 1.73\log\Delta - 0.83 \cdots\cdots\cdots\cdots\cdots (1)$$

where, M is the magnitude. A_N and A_E are the maximum amplitudes of N- and E-components in micron respectively, and Δ is the epicentral distance in km. Those ground amplitudes are of seismometers with periods of about 5 seconds, and of waves shorter than 5 seconds. The magnitude is the averaged value over magnitudes for every $\sqrt{A^2_N + A^2_E}$ reported by the

stations of JMA.

The intensity of the shock is estimated according to the scale as shown in Table 6.

Table 6 JMA Seismic Intensity Scale (After Ref. 40)

0:	NO FEELING Shocks too weak to cause human feelings and registered only by a seismograph.
I:	SLIGHT Extremely feeble shocks only felt by persons at rest or by those who are observant to an earthquake.
II:	WEAK Shocks felt by most persons, slight shaking of doors and Japanese latticed sliding doors (shoji).
III:	RATHER STRONG Slight shaking of houses and buildings, rattling of doors and Japanese latticed sliding doors (shoji), swinging of hanging objects like electric lamps, moving of liquids in vessels.
IV:	STRONG Strong shaking of houses and buildings, overturning of unstable objects, spilling of liquids out of vessels.
V:	VERY STRONG Cracks in the walls, overturning of gravestones, stone lanterns, etc., damage to chimneys and mud-and-plaster warehouses.
VI:	DISASTROUS Demolition of houses by less than 30% in total number, landslips, fissures in the ground, etc.
VII:	VERY DISASTROUS Demolition of houses by more than 30%, intense landslips, large fissures in the ground, faults.

(3) Accelerograph Results

The items in the accelerograph results have been explained previously. The maximum accelerations are those determined by the preliminary processing.

The accelerogram whose earthquake is unknown is not listed in the table, if both of its maximum horizontal accelerations are smaller than 20 Gals. If at least one of the maximum accelerations is larger than 20 Gals, then it is listed in the table, but the earthquake data can not be given.

4. Digitization

(1) Digitizers

Two strong-motion accelerogram digitizers are being used in the Port and Harbour Research Institute; one is for digitization of records by the SMAC-B2 accelerograph and the other for digitization of records by the ERS-B, C, D accelerograph.

a. Digitizer for records by the SMAC-B2 accelerograph

The digitizer being used for the accelerograms obtained by the SMAC-B2 accelerograph is a semiautomatic instrument. The view and the specifications of the digitizer are shown in Fig. 23 and Table 7, respectively.

The digitizer works in the following way. On the digitizer table there is a magnifying glass which can be translated along the Y-axis by rotating a small wheel near the glass. A magnescale is connected to the wheel, and the electric digital output corresponding to the position of the magnifying glass is available from the magnescale. The magnifying glass has a cross mark and a lamp to illuminate the accelerogram within its range. The operator places the cross mark on the trace and pushes a push-switch; then the digital output from the magnescale is displayed on the panel and is stored in the memories of the computer. After this step, the magnifying glass is automatically shifted along the X-axis by 0.1 mm.

b. Digitizer for records by the ERS-B, C, D accelerograph

The records obtained by the ERS-B, C, D accelerograph are processed by an on-line

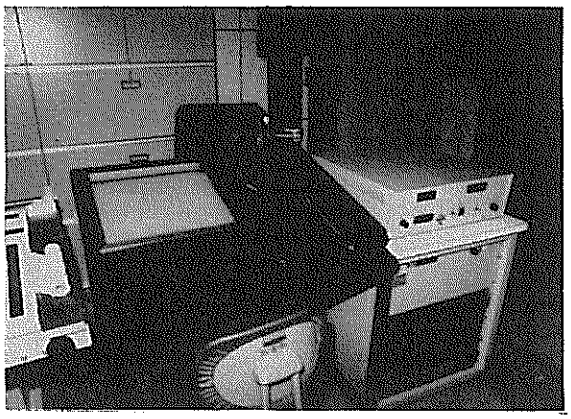

Fig. 23 Digitizer for records by the SMAC-B2 accelerograph

Table 7 Specifications of digitizer for records by the SMAC-B2 accelerograph

Digitizer Table	
Sizes of table to accommodate accelerogram	750 mm (X) x 660 mm (Y)
Effective area	430 mm (X) x 300 mm (Y)
Magnifying glass	5x, with a cross mark and illumination
Translation of magnifying glass	
Y-axis	manual by rotating a wheel
X-axis	automatic, at intervals of 0.1 mm
Analog to Digital Converter and Control	
Resolution (overall)	1000 counts per a millimeter
Indication	
Y-axis	sign and 4 digits
X-axis	4 digits

oscillogram digitizer. The digitizer is connected to a hybrid computer which is combination of a digital and an analog computers. The digitizer and the computer are photographed in Fig. 24 and 25.

The records is placed on the table and an operator traces waves in the records with cursor of the digitizer. The travels of the cursor along X- and Y-axis are digitally counted and at each 0.1 mm increment or decrement of travel along the X-axis, the location counts of the cursor are transferred into memories of the computer. After tracing the necessary segment of the record, digitized values in the memories are processed by appropriate programs. According to the direction given to the computer through the I/O typewriter, output of the digitized records in the memories is available in forms of printed list, magnetic tape and analog reproduction.

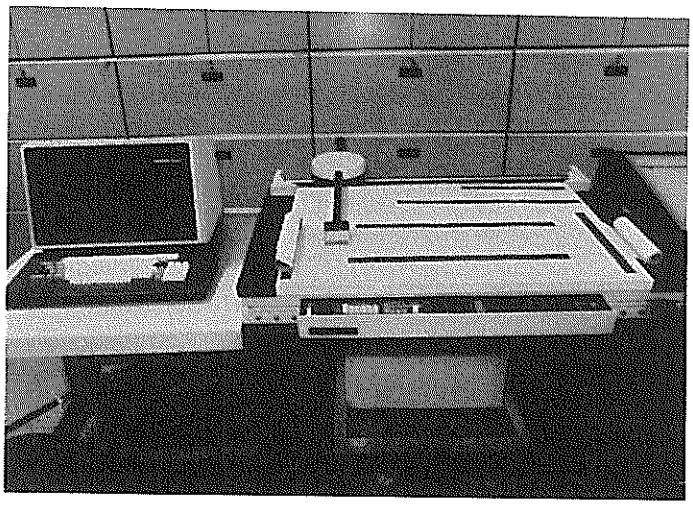

Fig. 24 Digitizer for records by the ERS-B, C, D accelerograph

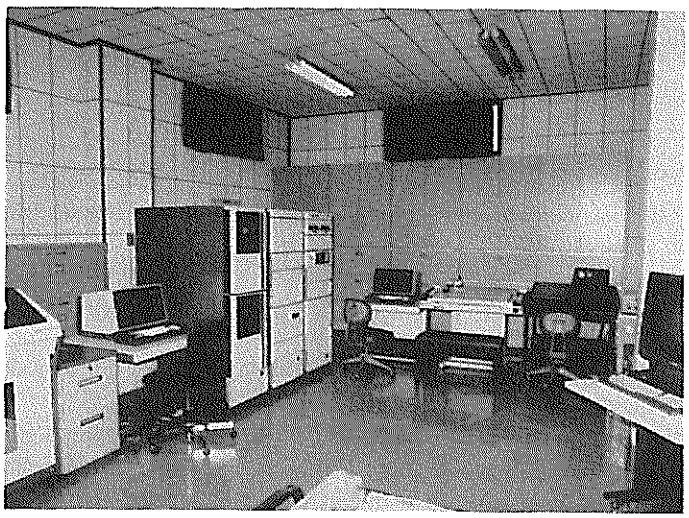

Fig. 25 Hybrid computer controlling the digitizer

(2) Digitization

The digitization procedure described here is applied for records obtained since 1976.

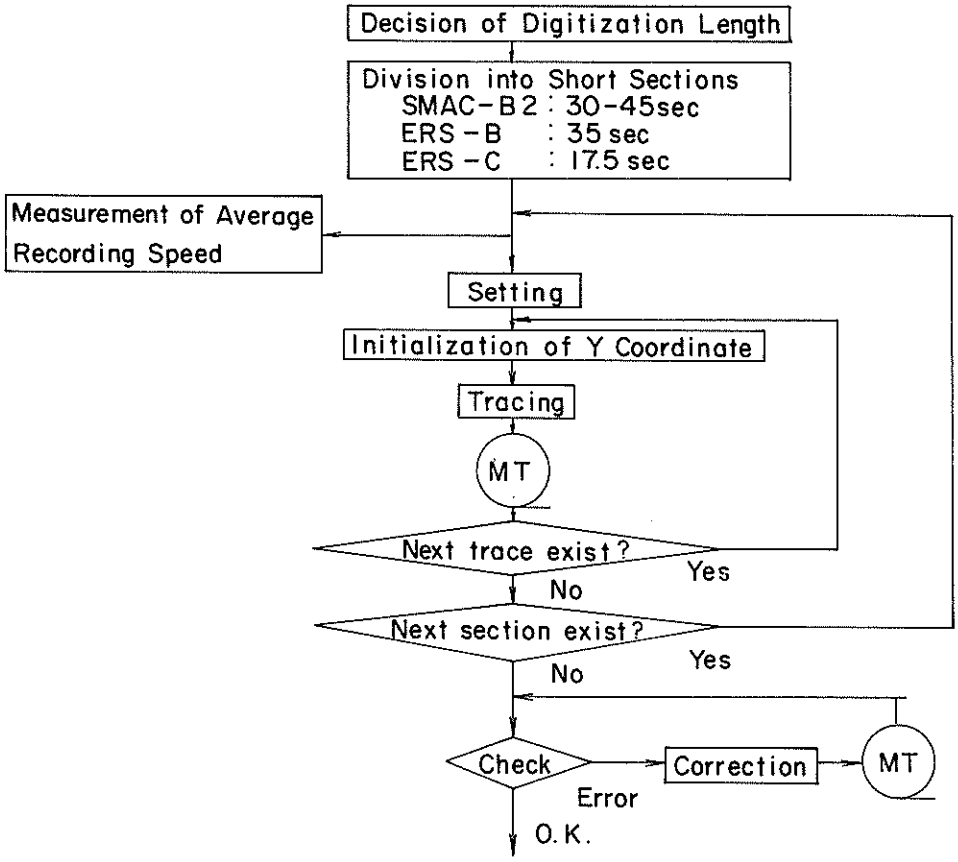

Fig. 26 Digitization procedure

i) Digitization of a record by the SMAC-B2 accelerograph

A recore by the SMAC-B2 accelerograph consists of following traces;

Recorded accelerations
Fixed traces
Timing marks
Arc traces
Free vibration traces for calibration of the characteristic periods and damping factors of the accelerograph

The fixed traces are recorded by the pens fixed to the accelerograph frame. The timing marks are pulses at intervals of one second. The arc traces are recorded manually with the recording pens supported by pivots when the paper drive mechanism is stopped. They show offset of the pens from the normal position where the pens are parallel to the direction of paper driving.

Traces to be digitized are the recorded accelerations, the fixed traces, and the arc traces. Digitized fixed traces and digitized arc traces are used for the standard data processing described later. The timing marks are used only to obtain the average recording speed because fluctuation of the timing marks are estimated as small as the digital unit of the digitizer (0.1 mm) according to the results of the tests of the SMAC-B2 accelerographs.[38] The average error in the time marking is expected to be less than 1 % and the fluctuation is less than 0.5 % according to the results of the tests of the SMAC-B2 accelerographs. [38] In order to obtain the average paper speed, length of intervals of 30 pulses is measured by the digitizer for a record by the ERS-B, C, D accelerograph.

A record is digitized from the starting point of recording. Portion of the record to be digitized is determined so as to include discernible acceleration on the paper. This determination is done by observation of a record to be digitized. The portion of the record to be digitized is divided into some sections because of the limitation of effective area of the digitizer table. Length of each section is about 30 cm to 45 cm which is almost equivalent to 30 second to 45 seconds. Digitization unit in the amplitude is 0.008 mm which is equivalent to 0.1 Gal. Contact prints are made for each section as described previously.

Digitization procedure is summarised as follows.

(a) Setting of the copy: A copy of a record to be digitized is fixed with the magnets on the table of the digitizer. The table is rotated by an adjusting screw so that the fixed trace on the copy is parallel to X axis of the digitizer. Two points on the fixed trace located on the both ends of the section are used for this adjustment: Y coordinate value of the two points are made to coincide with each other.

(b) Initialization of Y coordinate: Y coordinate is arbitrarily initialized in the digitization procedure because "Sectional Base-Line Location" described later is to be applied in the standard data processing. Y coordinate of a first point to be digitized is usually set to be zero.

(c) Tracing: The traces are digitized by an operator in the way described in the preceding section. Three accelerations, two fixed traces, and three are traces are digitized at intervals of 0.1 mm along X axis. The intervals are almost equivalent to 0.001 s. Accelerations are, however, recorded in a cylindrical coordinate system so that the digitized amplitude values are not corresponding to equal time intervals.

(d) Recording of Digitized Data: Data punched on a paper tape are recorded in a magnetic tape with such data as record number, component, station, date and time of the earthquake, time intervals, etc.

ii) Digitization of a record by the ERS-B, C, D accelerograph

A record by the ERS-B, C, D accelerograph consists of recorded accelerations, fixed traces, and timing marks. The Fixed traces are recorded by light beams reflected from fixed mirrors attached to the oscillograph frame. They are parallel lines at intervals of 2 mm drawn in the whole breadth of the recording paper. The recorded accelerations and one of the fixed traces located in the center of the oscillogram are digitized.

Portion of the record to be digitized is divided into some sections because of limitation of the effective area of the digitizer table. Length of each section is about 70 cm, which corresponds to about 35 seconds on a record by the ERS-B accelerograph and about 17.5 seconds on a record by the ERS-C/D accelerograph.

Procedure of setting of a record by the ERS-B, C, D accelerograph and the initialization of Y coordinate is similar to that for a record by the SMAC-B2 accelerograph. The record is digitized by an operator in the way described in the preceding section. The accelerations are

degitized at intervals of 0.1 mm, which corresponds to 0.005 s. on a record by the ERS-B accelerograph and about 0.0025 s. on a record by the ERS-C/D accelerograph. The fixed trace is digitized at intervals of about 5 cm, which corresponds to 2.5 seconds on a record by the ERS-B accelerograph and 1.25 seconds on a record by the ERS-C/D accelerograph; then the digitized data are obtained by linear interpolation at intervals of 0.1 mm. The digital unit in the amplitude is 0.1 mm, which corresponds to about 0.1 Gal on a record by the ERS-B accelerograph and about 0.2 Gal or about 1.0 Gal on a record by the ERS-C/D accelerograph. In the case of the ERS-C/D accelerograph, sensitivities of the galvanometers are calibrated for each recording with calibration currents before resetting paper drive.

Timing marks are used only to measure the average recording speed of the record by the ERS-C/D accelerograph because fluctuation of the timing marks is expected as small as the digital unit of the digitizer (0.1 mm) according to the results of the tests of the ERS-C/D accelerographs.[38] They are pulses of intervals of 0.1 second generated by a crystal timer. In case of a record by the ERS-B accelerograph, timing marks are not used because accuracy of the timer depends on that of the frequency of the power supply which consists of batteries and a DC-AC inverter.

(3) Standard Data Processing

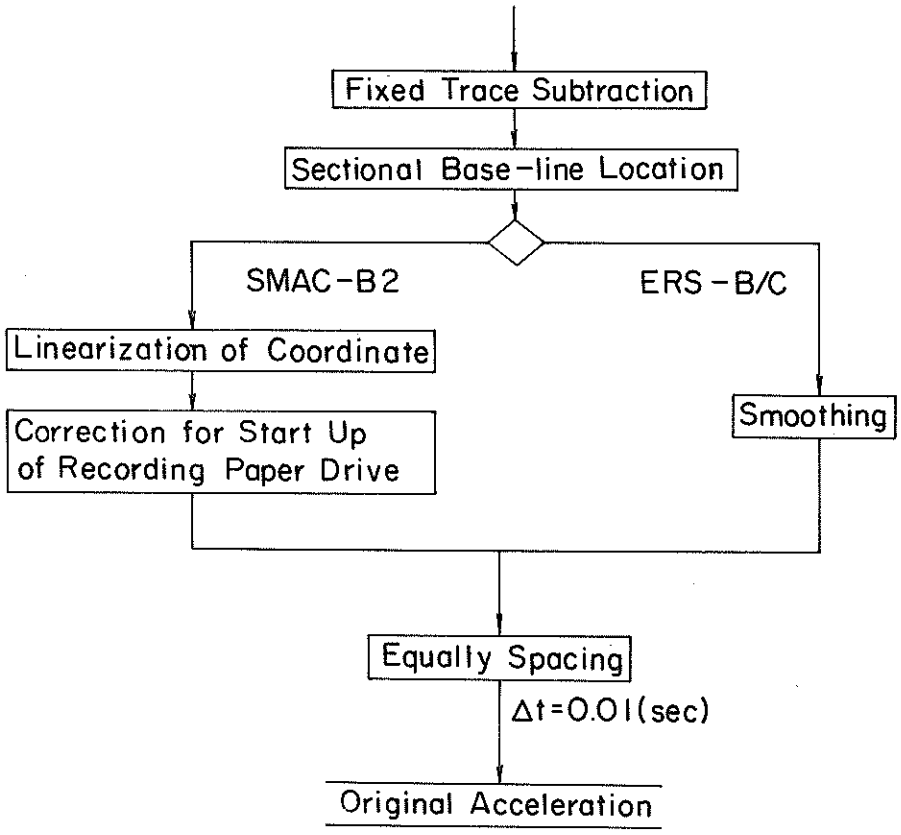

Fig. 27 Procedures of standard data processing

The procedure for the standard data processing described here is applied for records obtained since 1976, although the correction for start up of recording paper drive of the SMAC-B2 accelerograph was slightly modified for the improvement after the preceding annual report had been published. For the detailed description, see a separate report.[38] The acceleration processed through the standard data processing will be called "Original Acceleration". The original acceleration is showed in a figure and listed on a table. Data numbers of junctions of sections for digitalization are listed also on the table, if any (See Table 8).

Standard date processing for a record by the SMAC-B2 accelerograph is performed under following procedures.

1. Fixed Trace Subtraction
2. Sectional Base-line Location
3. Linearization of Coordinate
4. Correction for Start up of Recording Paper Drive
5. Equally Spacing

Standard data processing for a record by the ERS-B, C, D accelerograph is performed under following procedures.

1. Fixed Trace Subtraction
2. Sectional Base-line Location
3. Smoothing
4. Equally Spacing

Each correction procedure is described briefly as follows.

i) Fixed Trace Subtraction

This correction is applied in order to eliminate the following errors.

Errors caused by the transverse motion of recording paper in the drive mechanism of the accelerograph

Systematic errors caused by an imperfect mechanical transverse mechanism of the digitizer cross-hair system

Errors of sectional rotation of the record on the table of the digitizer at the setting

The systematic errors of the digitizer cross-hair system were found to be negligible according to the tests with a straight line made of a stretched steel wire and a stretched gut.

Digitized fixed traces are smoothed by a weighted running average scheme before subtracted from the accelerogram. The wieght function is defined by

$$w(t) = \begin{cases} \sqrt{\frac{\alpha}{\pi}} \exp\left[-\alpha t^2\right] & \text{if} \quad |t| \geq t_0 \\ 0 & \text{otherwise} \end{cases} \qquad \cdots\cdots\cdots\cdots\cdots\cdots (2)$$

where

$$\alpha = \left(\frac{\pi}{2}\right)^2$$

$$t_0 = \sqrt{\alpha / 5} = 0.7 \text{ (s.)}$$

At both ends of a section for digitization, α in the equation (2) is redefined by

$$\alpha = 5 / S^2 \qquad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (3)$$

where S is distance from the end of a section.

This weighted running average corresponds to a low pass filter of the cut off frequency of about 0.5 Hz.

The smoothed fixed traces are subtracted from the accelerogram. In the case of a record

Table 8 Example of digitized record

RECORD – S-1043 COMPONENT – W25N
STATION – ONAHAMA-S DATE AND TIME – 1977-12-17-00-10
TOTAL NUMBER OF DATA – 4600
SAMPLING INTERVAL – 0.010 (SEC) UNIT – 0.1 GAL
SIGNAL – GR. ACC. CORRECTION – ARC. ERR.

No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	-15	-15	-15	-15	-15	-14	-14	-14	-14	-14
10	-13	-13	-13	-13	-13	-12	-12	-12	-11	-11
20	-11	-10	-10	-10	-9	-9	-8	-8	-7	-6
30	-6	-6	-6	-6	-6	-6	-6	-7	-9	-10
40	-9	-8	-7	-7	-7	-8	-9	-10	-12	-14
50	-18	-23	-27	-28	-29	-25	-21	-17	-13	-7
60	-1	1	2	1	0	-3	-6	-8	-11	-14
70	-19	-26	-30	-30	-28	-25	-22	-15	-6	-1
80	3	6	1	-6	-9	-12	-16	-18	-19	-19
90	-13	-6	1	7	6	3	0	2	5	8
100	5	3	-1	-8	-10	-10	-8	-2	1	-1
110	1	8	6	0	7	13	13	12	8	3
120	-1	-4	-6	2	3	3	1	-1	-2	2
130	0	-5	-4	3	10	10	9	3	3	3
140	5	4	3	2	0	-4	-8	-6	-6	-6
150	-8	-12	-15	-15	-12	-9	-10	-12	-14	-18
160	-22	-22	-28	-29	-29	-29	-26	-21	-15	-8
170	0	6	11	15	15	13	9	9	7	4
180	0	-8	-18	-24	-23	-32	-31	-29	-14	-6
190	-7	-4	-10	-11	-9	-4	1	10	11	9
200	8	9	9	11	12	12	9	4	0	-7
210	-3	3	3	1	-2	-8	-11	-10	-3	0
220	0	0	1	4	1	7	13	13	10	7
230	4	-1	-7	-6	-6	-3	0	9	9	9
240	9	9	8	3	-3	-14	-27	-30	-24	-16
250	-10	-6	-3	1	3	6	11	11	8	5
260	5	1	-6	-9	-6	-8	-11	-15	-21	-21
270	-16	-10	-5	-1	0	5	6	2	0	9
280	20	14	16	23	17	12	9	7	4	-2
290	-11	-25	-25	-20	-19	-23	-23	-18	-12	-4
300	3	6	12	21	30	29	27	25	22	17
310	10	1	-4	-10	-19	-25	-24	-18	-11	-2
320	1	-1	0	0	0	4	8	12	16	17
330	19	27	28	24	17	14	6	1	-2	-9
340	-16	-15	-15	-12	-7	0	3	1	2	-1
350	0	-1	2	11	11	10	11	13	10	6
360	-2	-12	-22	-30	-32	-32	-30	-25	-20	-17
370	-16	-16	-17	-17	-14	-7	0	5	5	3
380	-1	-2	-4	-10	-16	-26	-26	-22	-16	-11
390	-9	-4	-1	3	6	4	2	-3	-10	-10
400	-6	-3	0	4	2	5	5	6	13	15
410	17	13	10	10	11	7	-1	-4	0	3
420	9	15	16	14	13	11	11	10	7	6
430	2	-3	-10	-13	-10	-8	-4	4	11	12
440	14	14	8	5	5	0	0	-3	-4	-4
450	0	5	8	13	16	17	18	14	8	5
460	4	6	6	5	2	-1	-6	-10	-21	-30
470	-29	-29	-26	-20	-15	-9	-3	5	16	23
480	25	24	20	15	5	-17	-27	-35	-32	-32
490	-27	-22	-16	-12	-6	-1	10	4	4	1
500	-2	-11	-13	-10	-6	1	6	8	12	18

TO BE CONTINUED

CONTINUED (S-1043 W25N)

No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
510	22	20	15	6	-2	-6	-6	-6	-5	-4
520	-1	1	4	6	8	8	7	4	2	2
530	5	9	15	20	20	16	13	6	0	-1
540	-2	-8	-3	0	9	12	19	27	30	34
550	34	29	24	19	10	2	-4	-15	-14	-9
560	-4	0	7	7	4	3	0	-2	-4	-9
570	-11	-10	-6	2	14	22	28	27	21	16
580	13	8	0	-4	-13	-19	-18	-16	-18	-16
590	-20	-27	-27	-26	-26	-23	-17	-11	-5	2
600	6	15	22	21	25	24	21	18	14	9
610	4	6	12	19	23	20	18	16	12	8
620	5	-6	-16	-10	0	9	14	20	21	18
630	15	14	16	16	14	10	6	1	-4	-3
640	-2	-2	-4	1	8	1	-4	-7	-4	3
650	11	11	3	-4	-15	-21	-22	-22	-19	-15
660	-8	0	12	23	26	27	26	20	8	3
670	6	10	12	13	16	19	23	25	26	26
680	26	26	25	26	27	24	16	3	-16	-26
690	-40	-47	-53	-56	-49	-43	-30	-20	-27	-42
700	-65	-91	-134	-157	-211	-249	-292	-309	-325	-345
710	-358	-357	-352	-344	-335	-329	-328	-324	-320	-292
720	-258	-210	-153	-99	-48	4	59	118	175	220
730	254	277	293	322	382	439	467	507	535	533
740	522	502	483	471	462	460	465	472	482	483
750	467	441	396	315	220	143	96	70	65	64
760	62	55	46	31	5	-1	11	66	135	173
770	201	223	200	142	62	-90	-278	-393	-485	-671
780	-737	-801	-728	-605	-446	-241	-4	215	368	444
790	492	500	452	372	239	3	-102	-236	-505	-649
800	-696	-711	-700	-676	-601	-508	-397	-253	-105	31
810	135	177	184	176	130	54	-8	-75	-156	-209
820	-234	-239	-215	-168	-103	-31	33	106	177	219
830	246	257	239	202	165	135	113	102	97	120
840	138	151	152	120	65	17	-10	-58	-93	-113
850	-140	-139	-119	-58	-10	45	93	156	229	305
860	328	344	355	342	320	250	182	118	45	-10
870	-44	-70	-91	-103	-94	-63	-32	10	75	125
880	150	163	154	128	95	62	35	11	-15	-35
890	-40	-41	-53	-70	-92	-105	-122	-134	-143	-155
900	-148	-136	-123	-113	-107	-103	-103	-102	-90	-71
910	-52	-24	-4	7	9	14	18	22	31	48
920	82	122	153	176	194	206	211	196	161	123
930	87	48	9	-18	-36	-44	-34	-24	-12	-6
940	-7	-13	-22	-32	-40	-40	-41	-41	-34	-32
950	-34	-37	-43	-44	-47	-54	-64	-62	-58	-53
960	-48	-42	-36	-30	-20	-15	-12	-13	-19	-42
970	-73	-100	-117	-129	-137	-130	-112	-94	-78	-54
980	-23	2	22	36	46	52	55	52	37	9
990	-3	-12	-24	-18	4	21	35	50	53	60
1000	71	91	107	125	146	164	181	189	176	156
1010	134	106	87	70	58	61	71	86	95	96
1020	88	55	7	-37	-72	-113	-150	-176	-200	-216
1030	-226	-224	-212	-200	-188	-179	-173	-164	-153	-142
1040	-132	-120	-106	-89	-46	-16	28	70	100	119

TO BE CONTINUED

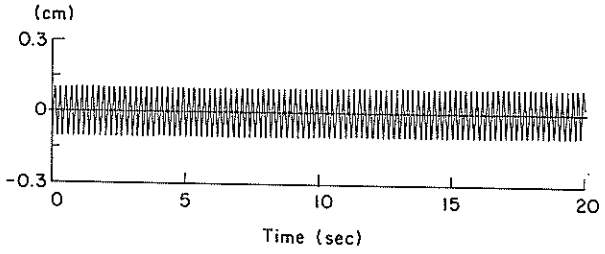

Fig. 28 (b) Integrated displacement from the acceleration with sectionally located base-lines by the proposed method

iii) Linearization of Coordinate

This correction is applied to a record by the SMAC-B2 accelerograph to obtain a corrected X coordinate of each datum. Y coordinate of the pivot of the recording pen is calculated from the digitized arc trace.

Let r (mm) denote the radius of the arc (length of the arm of the recording pen), r (mm) denote Y coordinate of a point whose X coordinate is to be corrected, a (mm) denote Y coordinate of the center of the arc (the pivot of the pen) and e (mm) denote error of X cordinate of the point to be corrected then we have

$$e = r - \sqrt{r^2 - (y-a)^2} \qquad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (5)$$

Although the arc trace is digitized with arbitrarily determined base-line, the linearization of coordinate is uniformly performed because $(y-a)$ in the equation remains constant for any base-line. a (mm) in the equation will be set to be zero if arc traces are accidentally not drawn or length of the arc trace is short (if maximum difference of X coordinates of the arc trace is less than 0.5 mm.)

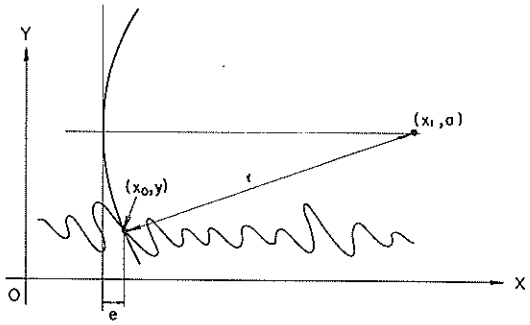

Fig. 29 Linearization of coordinate

iv) Correction for start up of recording paper drive

The variation of recording paper speed of the SMAC-B2 accelerograph is represented by the following equation which is based on the tests made by the authors.

by the SMAC-B2 accelerograph, subtraction is made as follows;

An upper trace is corrected with an upper fixed trace.

A lower trace is corrected with a lower fixed trace.

A center trace is corrected with an average of an upper fixed trace and lower one.

In the case of a record by the ERS-B, C, D accelerograph, one fixed trace is subtracted from all the components of accelerogram.

ii) Sectional Base-line Location

As described previously, base-line is arbitrarily inserted for each section by the initialization of Y coordinate. Sectional translation brings mainly low frequency errors into the accelerogram and produces an unnatural response of a low cut filter for integration around a point of junction of digitized sections.

Base-line is located so as to make an ideal average of acceleration over almost infinite length zero. On the sectional base-line location, the authors assume that low frequency components up to about $1/T$, where T is minimum length of sections, is almost none if calculation of spectrum is done over the infinite length for the accelerogram which have been corrected by the fixed trace subtraction and which have an ideal true base-line for each section. Based on the detailed study of the base-line location in the frequency space, the base-line is located sectionally so as to make a weighted average of each sectional acceleration zero. The weight function is difined by

$$u(t) = \sqrt{\frac{\beta}{\pi}} \exp\left[-\beta t^2\right] \quad \cdots\cdots (4)$$

Where $\beta = 20/T^2$, and T (s.) is length of each section.

The expected error of the location is almost proportional to the quantities of low frequency components up to about $1/T$ (Hz).

Because the authors do not have enough space to describe the detailed study, the authors introduce an example calculation to illustrate the difference between the proposed base-line location and the base-line location of least square fit scheme for each section. A sine wave generated by a computer of 100 Gals, 5 Hz, 5000 data with time intervals of 0.01 sec is divided into two sections; one section is the first 2510 data and the other is the last 2490 data, which are looked upon as a sectionally digitized accelerogram. Sectional base-lines are located by the two methods. Displacements are calculated from the two accelerations by the fixed filter method described later and a portion of the results including the junction of two sections are shown in Fig. 18(a) and (b) respectively. (10.1 sec is the junction in these figures.) These figures indicate that the proposed base-line location is much better in this case because true displacement is a sine wave.

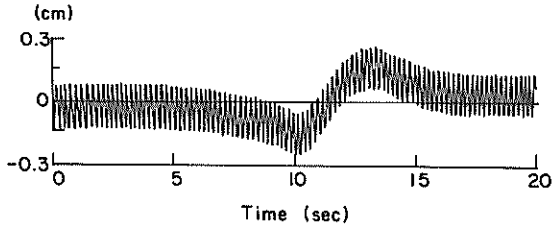

Fig. 28 (a) Integrated displacement from the acceleration with sectionally located base-line by a least square fit scheme

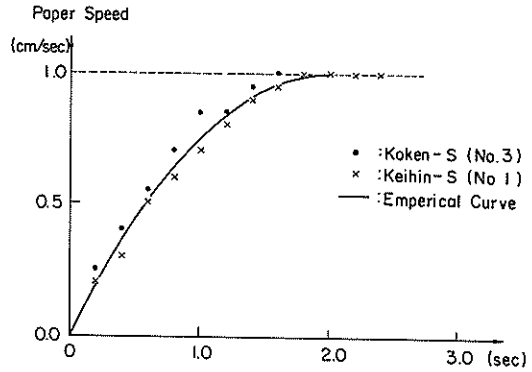

Fig. 30 Variable recording speed on start up of recording paper drive

$$v = [\,1 - \frac{1}{b^2}(t - t_0)^2\,] \cdot v_a \quad \text{if} \quad 0 \leqslant t \leqslant t_0 \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (6)$$

$$v = v_a \quad \text{if} \quad t_0 < t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (7)$$

Where; v : paper speed at time t (cm/s.)
v_a : paper speed after reaching constant speed (cm/s.)
t : time after triggering (s.)
t_0 : constant (s.)
b : constant (s.)

If t_0 and b are given, the correction for the start up of recording paper drive is simple problem.

For the correction of the digitized records in the preceding annual report, t_0 = 2.0 s. and b = 2.0 s. were used. After the annual report had been published, it was found that more appropriate correction would be possible with a slight modification of t_0 value. For the correction of the most of the digitized records in this report, t_0 = 1.9 s. was used.

v) Smoothing

Smoothing is applied to a record by the ERS-B, C, D accelerograph. A record by the ERS-B, C, D accelerograph is digitized at intervals of 0.1 mm which corresponds to about 0.005 s. on a record by the ERS-B accelerograph and corresponds to about 0.0025 s. on a record by the ERS-C/D accelerograph. Frequency components higher than about 50 Hz are eliminated because there are almost no significant components of seismic acceleration over 50 Hz for the most of the record of ground according to the records obtained by the ERS-B, C, D accelerograph so far.

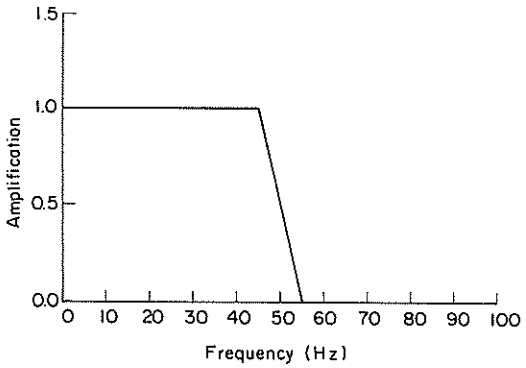

Fig. 31 Filter for the smoothing

The weight function is defined by

$$g(t) = \begin{cases} \dfrac{f_0 + f_1}{2} & \text{if } t = 0 \\ \dfrac{f_1 - f_0}{} \left[\dfrac{\cos(2\pi f_0 t) - \cos(2\pi f_1 t)}{(2\pi t)^2} \right] & \text{if } 0 < |t| \leqslant \ldots\ldots (8) \\ 0 & \text{otherwise} \end{cases}$$

where f_0 = 45 (Hz) and f_1 = 55 (Hz)

The filer corresponding to this weighted running average is approximately expressed as follows. (Errors of the approximation is less than 0.3%)

$$G(f) = \begin{cases} 1 & \text{if } |f| \leqslant f_0 \\ \dfrac{f_1 - |f|}{f_1 - f_0} & \text{if } f_0 < |f| \leqslant f_1 \ldots\ldots (9) \\ 0 & \text{if } |f| > f_1 \end{cases}$$

where f_0 = 45 (Hz) and f_1 = 55 (Hz)

vi) Equally Spacing

Data are equally spaced at intervals of 0.01 s. by means of linear interpolation.

A record by the SMAC-B2 accelerograph is digitized at intervals of 0.1 mm and is processed through the linearization of coordinate. The date processed through the linearization of coordinate are unequally spaced date, whose intervals of data are longer than 0.01 s. on portions of accelerogram where absolute value of acceleration decreases and intervals of data are shorter than 0.01 s. else where.

A record by the ERS-B, C, D accelerograph is digitized at intervals of 0.1 mm, which corresponds to about 0.005 s. on a record by the ERS-B accelerograph and about 0.0025 s. on a record by the ERS-C/D accelerograph. There is no possibility of aliasing by the equally spacing at intervals of 0.01 sec because their high frequency components over 50 Hz are eliminated by the smoothing. High density of sampling at digitization enables us to separate high frequency components which are possibly contaminated by digitization errors and assures us much accuracy of the interpolation.

(4) Processing of the Data obtained by the ERS-F Accelerograph.

The main unit of the recording system, which has recorded the earthquake motions, is drawn out from the box of the recording system of the ERS-F Accelerograph and replaced by the another main unit ready for recording the coming earthquakes. The drawn out unit is packed in a case, shown in Fig. 18, with a static eliminator on the connector of the unit and sent to the Earthquake Resistant Structures Laboratory in the Port and Harbour Research Institute by mail.

In the Geotechnical Earthquake Engineering Laboratory, the unit is set on the reproducer, shown in Fig. 19, which is connected to a computer, and digital time histories of the earthquake motions are reproduced. Absolute time at the trigger of the record is also obtained from the record of the time signal.

As mentioned in Table 5, the recording system has digital delay memory for ten seconds. If the recording started well enough before the first motion of the earthquake, some

of the portion of the record preceding the first motion is omitted.

Data processing and the preliminary analyses for the records by the ERS-F Accelerograph is almost the same as the standard data processing and the preliminary analyses for the record by ERS-B/C/D Accelerograph. The differences are as follows:

i) No smoothing is applied for the data at the standard data processing.

ii) As an instrument correction at the preliminary analyses, correction for the phase is applied but no correction is applied for the amplitude. Low pass filter with cut-off frequency of 25 Hz and roll-off frequency of 40 Hz are applied by using a digital filter of "consine" shape in frequency domain.

iii) As the high pass filtering at the preliminary analyses, parameter E for the Variable Filter in Eq. (19) is determined by the following equation;

$$E = (p \times 0.001) \times 0.02236 \tag{10}$$

in which p (1000 Gal/2^{15}) is the sensitivity of ERS-F accelerograph.

The factors in Eq. (10) was obtained by the study on the noise level obtained by the power spectra of the noise under the conditions with connectors of signal conditioner in short circuit.

Details of the ERS-F Accelerograph and the data processing will be reported in a separate report.

5. Preliminary Analyses

The Standard procedures of preliminary analyses described here is applied for records obtained since 1976. For the detailed description, see separate reports.[35,36] The standard procedures of preliminary analyses consist of filtering for instrument correction, filtering for correction of low or high frequency components, integration, calculation of response spectra and Fourier spectra (Fig. 32).

(1) The Method of Correction and Integration

Instrument correction, filtering, integration is applied in frequency space. FFT is applied for the accelerogram which is extended with a section of zero outside the digitized portion in order to avoid link effect. The length of section of zero L (s.) is determined so as to meet the following condition.

$$L > \max\left[\frac{2}{3}T, 10.0\right] \tag{11}$$

where T (s.) is the minimum length of sections made by the division of an accelerogram for the digitization. This condition is based on the examination of impulse responses of the high pass filters for integration to be described later. Length of the section of zero L is decided so as to make calculation time of FFT short as much as possible in the given memory size of the given computer.

i) The Filter for Instrument Correction and the Supplementary Filter

(a) Filters for a Record by the SMAC-B2 Accelerograph
The filter for instrument correction $A_S(f)$ is defined by

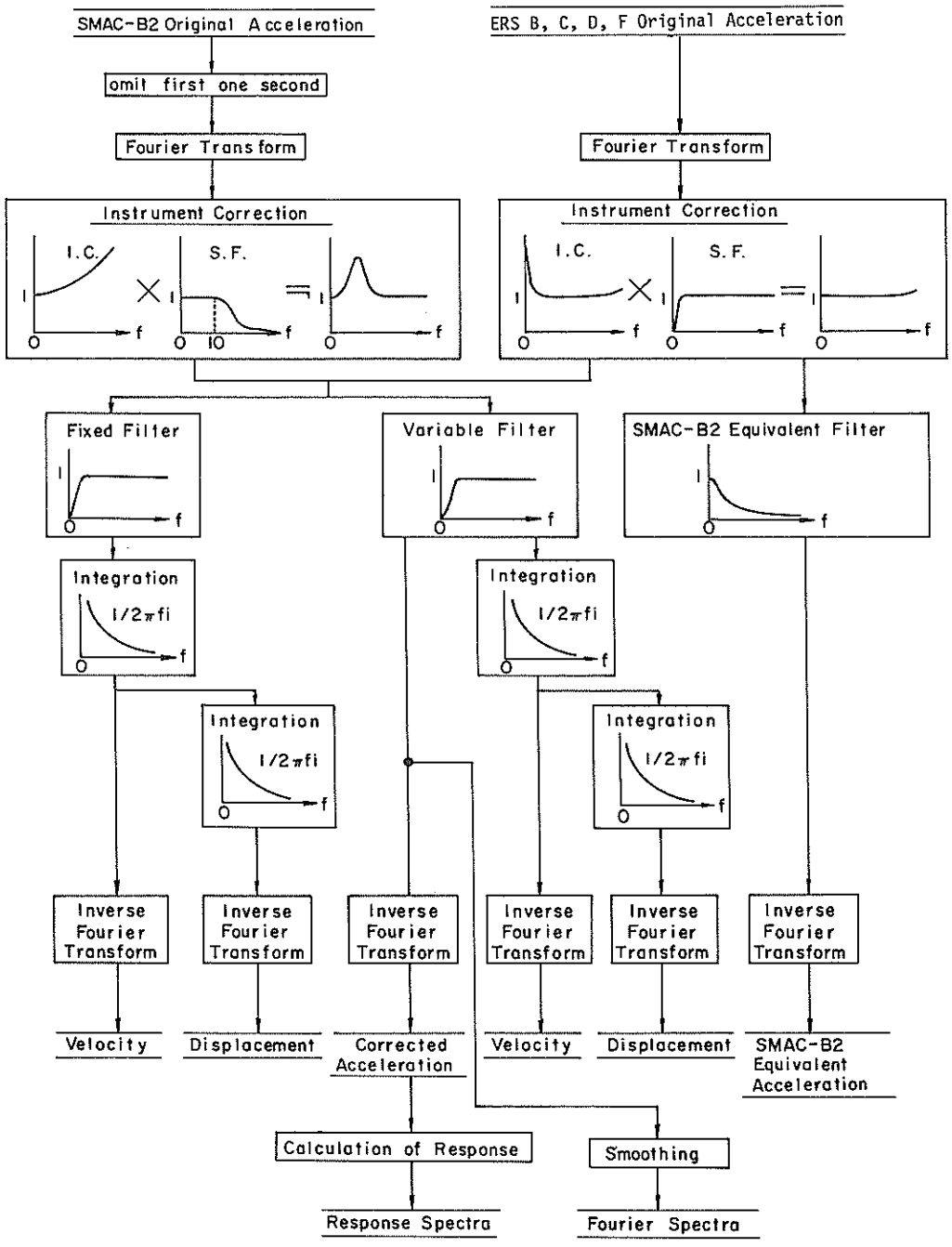

Fig. 32 Procedures of Preliminary Analyses

$$A_S(f) = 1 - (\frac{f}{f_S})^2 + 2h_S(\frac{f}{f_S})\ i \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (12)$$

where $f_S = 1/0.14$ (Hz) and $h_S = 1.0$

The supplementary filter $B_S(f)$ is defined by

$$B_S(f) = \begin{cases} 1 \\ [\,1 + (\,|A_S(f)| - 1\,)\exp\left\{-\frac{(|f| - f_0)^2}{20}\right\}\,]\frac{1}{|A_S(f)|} \end{cases} \quad \begin{matrix} \text{if } |f| \leqslant f_0 \\ \text{otherwise} \end{matrix} \quad \cdots (13)$$

where $f_0 = 10$ (Hz)

The supplementary filter is designed to suppress high frequency digitization noise and at the same time preserve high frequency components of an accelerogram in order to lessen an abnormal response of the filter to discontinuities at both ends of digitized portion of the accelerogram.

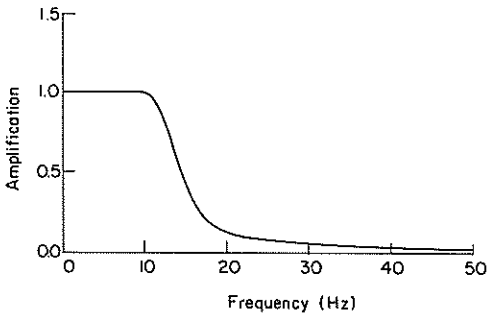

Fig. 33 The Supplementary Filter for a record by the SMAC-B2 accelerograph

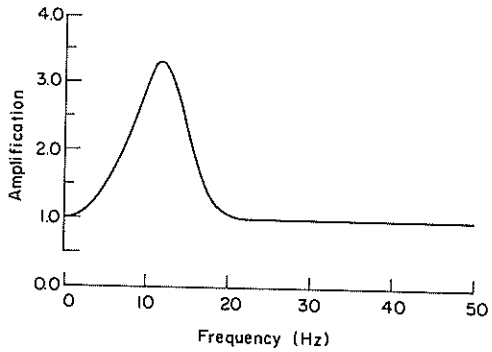

Fig. 34 Combined frequency characteristics of the filter for instrument correction and the supplementary filter for records by the SMAC-B2 accelerograph

(b) Filters for a Record by the ERS-B, C, D Accelerograph

The filter for the instrument correction $A_E(f)$ is defined by

$$A_E(f) = A_p(f) \cdot A_G(f)$$

$$A_p(f) = 1 + \frac{i}{2h_p}(\frac{f}{f_p} - \frac{f_p}{f}) \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (14)$$

$$A_G(f) = 1 - (\frac{f}{f_G})^2 + 2h_G(\frac{f}{f_G})\ i$$

where for a record by the ERS-B accelerograph

f_p = 2.0 (Hz), h_p = 17, f_G = 100 (Hz) and h_G = 0.7

and for a record by the ERS-C accelerograph

f_p = 3.0 (Hz), h_p = 17, f_G = 250 (Hz) and h_G = 0.7

and for a record by the ERS-D accelerograph

f_p = 5.0 (Hz), h_p = 10, f_G = 100 (Hz) and h_G = 0.7

$1/A_p(f)$ is frequency characteristics of the pick up of the accelerograph and $1/A_G(f)$ is those of the galvanometer.

The supplementary filter $B_E(f)$ is defined by

$$B_E(f) = \begin{cases} 1 / |A_p(f)| & \text{if } |f| \leqslant f_p \\ 1 & \text{otherwise} \end{cases} \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (15)$$

where $A_p(f)$ is the filter for the instrument correction of the pick up and f_p is the characteristic frequency of the instrument defined above for each type of accelerograph. The supplementary filter is designed to suppress low frequency digitazation errors.

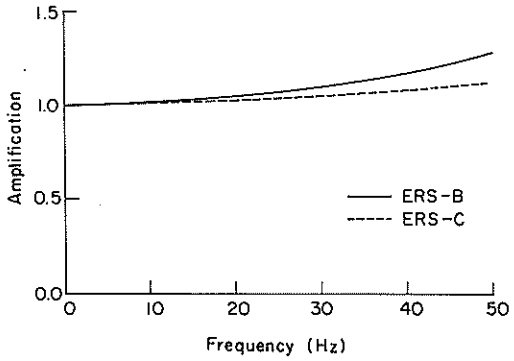

Fig. 35 The Combined Filter of Instrument Correction and Supplementary Filtering for a Record by the ERS-B, C, D Accelerograph

ii) SMAC-B2 Equivalent Filter

Frequency characteristics of SMAC-B2 accelerograph are different from that of ERS-B, C, D, F accelerograph. In order to make it easy to compare the accelerograms by these different types of accelerographs each other, a filter difined in the following equation is applied for a record by the ERS-B, C, D, F accelerograph.

$$S(f) = \frac{1}{1 - (\frac{f}{f_S})^2 + 2h_S(\frac{f}{f_S})\,i} \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (16)$$

where f_S = 1/0.14 (Hz) and h_S = 1.0

The filter has the same frequency characteristics as those of the SMAC-B2 accelerograph.

The filter is applied for the acceleration processed through the filter for instrument correction and the supplementary filter. Acceleration processed through this filter will be called "SMAC-B2 Equivalent Acceleration". This acceleration can be compared with the original acceleration by the SMAC-B2 accelerograph.

iii) The High Pass Filters for Integration

Processed through the preliminary correction procedure, a digitized accelerogram is expected to have only such errors as random digitization errors and errors of sectional base-line location. Errors of sectional base-line location affect mainly to frequency components lower than about $1/T$ where T is length of a section of an accelerogram devided for digitization.

As a result of the examination of random digitization errors, frequency characteristics of *SN* ratio calculated for each frequency are found to be similar to those of digitized acceleration. In other words, ratio of digitized acceleration to digitization errors calculated for each frequency is large if the corresponding frequency components of the digitized acceleration is large. For the frequency components higher than about $1/T$, the result of the examination of digitization errors may remain valid. The result implies that *SN* ratio of a frequency component varies with the frequency characteristics of accelerogram to be digitized.

The cut-off frequency of a high pass filter for integration of a digitized accelerogram should be varied in accordance with frequency characteristics of an accelerogram from such a point of view that *SN* ratio should be kept higher than some constant level for every frequency component and at the same time the physically real signals should be preserved as much as possible. On the other hand, cut-off frequency of the filter should be kept constant for any accelerograms from such a point of view that the preserved real seismic signals should be filtered out by the same filter for the purpose of comparison between two or more velocities or displacements even if integrated errors are more or less included in them.

In order to satisfy a wide range of applications of the strong-motion records from the

0.552) deployed by the Japan Meteorological Agency of Ministry of Transport.
Cut-off frequency (3 dB down) of this filter is 0.154 Hz.

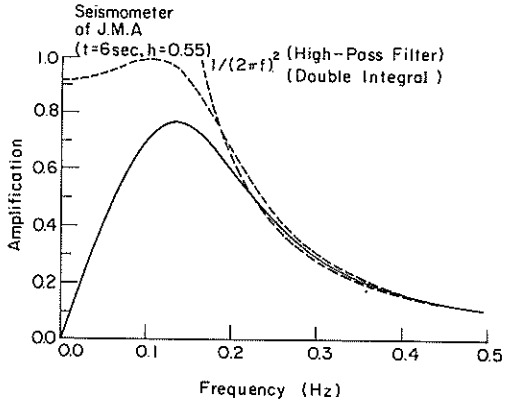

Fig. 36 Combined Frequency Characteristics of the Fixed Filter and Double Integral

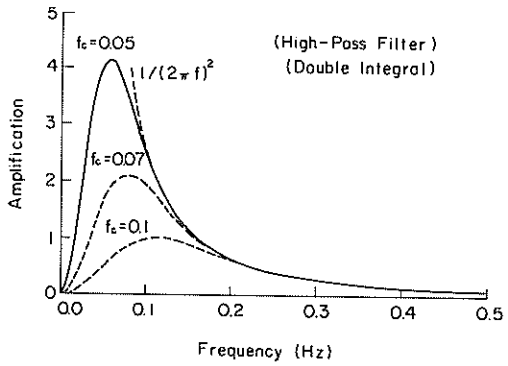

Fig. 37 Combined Frequency Characteristics of the Variable Filter and Double Integral

various view points, the authors proposed two methods of correction of an accelerogram to obtain velocities and displacements; one is a method with a fixed filter and another is a method with a variable filter.

(a) Fixed Filter

This filter is defined by

$$H_1(f) = \frac{1}{1 - (\frac{f_0}{f})^2 - 2h(\frac{f_0}{f})i} \cdot \frac{1}{\sqrt{1 + (\frac{f_1}{f})^2}} \quad \cdots\cdots\cdots\cdots\cdots\cdots (17)$$

where f_0 = 1/6 (Hz), h = 0.552 and f_1 = 0.1 (Hz)

This filter is designed to make it easy to compare the integrated displacement with records obtained by the one magnification strong-motion seismometer (T = 6 s. and h =

(b) Variable Filter

This filter is defined by

$$H_2(f) = [\, 1 - \exp\left\{ -(\frac{f}{f_C})^2 \right\} \,]^2 \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (18)$$

The parameter f_C in the equation varies so as to make σ equal to E, where σ is defined by

$$\sigma^2 = \frac{1}{M} \int_{-\infty}^{\infty} |X(f)|^2 \cdot [\, 1 - \exp\left\{ -(fT)^2 \right\} \,]^4 \cdot [\, 1 - H_2(f) \,]^2 \, df \quad \cdots\cdots (19)$$

where M is length of whole digitized portion

T is a minimum length of a section of accelerogram

$X(f)$ is Fourier Transform of the original acceleration

and E is the value listed below;

E = 0.5 (Gal) for a record by the SMAC-B2 accelerograph

$E = 0.05p$ (Gal) for a record by the ERS-B, C, D accelerograph where p (Gal/mm) is the sensitivity of ERS-B, C, D accelerograph.

E=(p×0.001)×0.02236 (Gal) for a record by the ERS-F accelegraph where p (1000 Gal/2^{16}) is the sensitivity of ERS-F accelegraph.

Cut-off frequency (3 dB down) of this filter is $1.36 f_C$.

Decision procedure of f_C is simply illustrated in Fig. 38. f_C is fundamentally determined so as to filter out some constant amount of low frequency components of an accelerogram higher than about $1/T$. The greater low frequency components of an accelerogram are, the lower f_C should be. Because the greater low frequency components of an accelerogram are, the higher SN ratio of these components are. Low frequency components lower than about $1/T$ are eliminated for the decision procedure of f_C because they are possible to be contaminated by the errors at sectional base-line location and the relation between the SN ratio and the quantity of a frequency component of an accelerogram is afraid no longer remaining valid.

This decision procedure of f_C is, however, a compromise between such a view point as

to keep *SN* ratio over some constant level for every frequency component and such a view point as to keep f_C to be a constant. The reason why we proposed such a compromised method is that the compromise makes decision procedure of f_C more stable against possible fluctuation of the relation between quantity of a frequency component of an accelerogram and the *SN* ratio. The relation may, to some extent, depend on frequency characteristics of an accelerogram to be digitized, digitized length of an accelerogram non-stationarity of an accelerogram, etc. and the relation itself if valid only in a stochastic sense.

The reason why the authors proposed a fixed low pass supplementary filter instead of a variable one for a record by the SMAC-B2 accelerograph was that the possible fluctuation of the relation is expected to be greater for high frequency components.

Slope of both of the high pass filters proposed here are disigned to be mild in order to lessen an artificial predominant frequency component around the cut-off frequency.

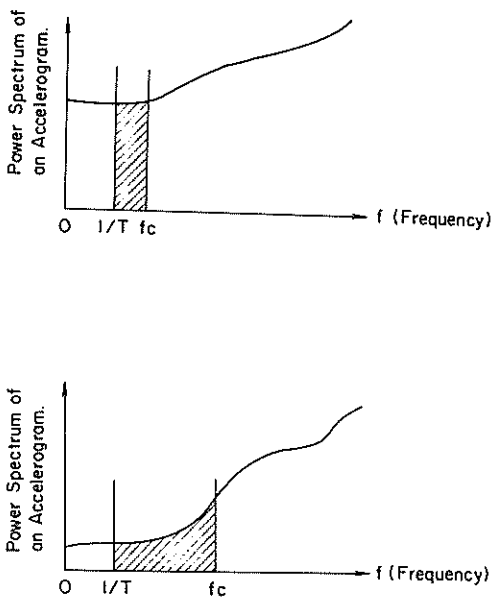

Fig. 38 Simplified illustration of decision procedure of f_C

(2) Corrected Acceleration, SMAC-B2 Equivalent Acceleration, Integrated Velocities and Integrated Displacement

A portion of first one second of the original acceleration of the SMAC-B2 accelerograph is omitted for the instrument correction and the integration because even a slight difference of start up of recording paper drive between SMAC-B2 accelerographs and even a small difference of selection of starting point of digitization may sensitively affect accuracy of the portion of first short section processed through the correction of start up of the recording paper drive. In the case of the original acceleration of the ERS-B, C, D, F accelerograph, no data is omitted. These accelerations are processed by the methods of correction and integration described previously. The calculated results are shown in figures and their maximum values are listed in a table.

"Corrected acceleration" denotes acceleration processed through the variable filter. "SMAC-B2 equivalent acceleration" denotes acceleration obtained by the SMAC-B2 equivalent filter. Integrated velocities and displacements are calculated with the fixed filter and the variable filter. The parameter f_C of the variable filter is also shown on the figures and the table.

The corrected acceleration of the different types of accelerographs can not necessarily be compared with each other freely because the difference of the supplementary filters produces difference mainly on the high frequency components over 10 Hz of the filtered accelerations. Instead of comparison of the corrected accelerations, "SMAC-B2 equivalent acceleration" can be freely compared with the original acceleration of the SMAC-B2 accelerograph except for the low frequency components lower than about 0.1 Hz.

(3) Response Spectra

Response spectra are calculated for the corrected acceleration, which is an acceleration processed through the variable filter as described previously.

The response spectra in the previous annual reports before 1968 were calculated from the digitized records by a digital computer using the Runge-Kuta-Gill method to integrate numerically the equation of motion of the oscillator. The response spectra in the present report were calculated with a step by step calculation of the exact solution to the governing differential equation.[41] No significant difference was seen in the results calculated by the both methods, according to the trial calculations.

The time interval of each step of the calculation is 0.01 second for the oscillators of natural periods longer than 0.2 second. For the oscillators of shorter periods, the small time intervals are selected so that one cycle of the undamped free oscillation of the oscillator is covered at least by 20 steps of the numerical calculation to maintain the necessary accuracy. In these calculation, the digitized records at smaller time intervals are made by means of the interpolation in the computer. The response spectra are provided in numerical tables as well as in the figures.

To calculate the response spectrum, entire length of the record is not necessary; the last part of the record after the maximum response have appeared is practically meaningless in the response calculation. Besides, the shorter record is more preferable from view point of the calculation time. On some long records, their beginning parts of small acceleration are not used in the calculation so far as it is thought that the neglected parts do not affect the results of the calculation. The length of the record used for the calculation and the length of the beginning part which is not used are shown in the numerical table as the time length and the skipped length respectively.

Response spectra of the period longer than about $1/f_C$ is influenced by the high pass filter ($1.36/f_C$ is the period of 3 dB down of the filter.); i.e., calculated response spectra is true if real seismic signals do not exist on the period longer than about $1/f_C$ and calculated response spectra are smaller than the true value if real seismic signals do exist. In the case of the corrected acceleration by the SMAC-B2 accelerograph, response spectra of the period shorter than about 0.1 sec is also influenced by the low pass filter. Users of the response spectra should be careful about these characteristics of the response spectra calculated for the corrected acceleration and difference between the response spectra for the corrected acceleration and those for the uncorrected acceleration which had been calculated so far.

(4) Fourier Spectrum

The Fourier spectra are calculated by the Fast Fourier Transform for whole length of the record, which are directly obtained at the filtering prosess with the variable filter. But, the spectra in this report are multiplied by the whole length of the record and then smoothed with the Parzen window of 1 Hz band width.

(5) Loci of Acceleration and Displacement

The loci of acceleration and displacement in horizontal plane are included in this report. The records used for calculation are acceleration without instrument correction and displacement processed by the variable filter.

6. Summary of Observation

Since 1962, 4216 records were obtained in the network of the Port and Harbour Research Institute, and most of the important records were analysed by the authors. In Table 9, a statistical summary of the observation is given. In Table 10, record numbers of accelerograms of which the digitized records and the spectra have been published are shown. The number in the parentheses behind each record number is showing the number of the Technical Note of the Port and Harbour Research Institute in which the digitized record appeared.

(Received on March 30, 1992)

Table 9

STATION	TOTAL NUMBER OF RECORDS	NUMBER OF RECORDS EXCEEDING 20 GALS IN MAX.	NUMBER OF RECORDS EXCEEDING 50 GALS IN MAX.
AKITA-S	31	7	2
AMAGASAKI-S	9	2	0
AOMORI-S	40	14	5
CHIBA-S	91	17	4
HACHINOHE-S*	111	16	5
HACHINOHE-JI-S	11	5	3
HAKODATE-FB	6	0	0
HAKODATE-F	6	0	0
HAKODATE-FR	6	0	0
HAKODATE-M	43	12	3
HANASAKI-M	36	21	7
HANASAKI-F	5	2	0
HIRARA-S	5	1	0
HIROSHIMA-S*	9	5	4
HIROSHIMA-JI-S	5	0	0
HITACHINAKA-F	165	83	26
HOSOSHIMA-S*	54	19	7
HOSOSHIMA-F	4	0	0
ISHIGAKI-S	5	1	0
INAE-S	19	6	0
INAE-SANBASHI-M	17	7	1
INAE-YAITA-M	25	11	2
KAGOSHIMA-S	26	4	0
KAMAISHI-M	27	9	1
KAMAISHI-MB	26	1	1
KANAZAWA-S	8	2	0
KASHIMA-S*	32	9	3
KASHIMA-JI-S*	30	6	3
KASHIMA-ZOKAN-S	123	30	10
KAWASAKI-CHI-M*	187	22	2
KAWASAKI-KO-M*	107	28	6
KAWASAKI-FB	31	3	2
KAWASAKI-F	31	7	2
KAWASAKI-FR	31	12	3
KEIHIN-JI-S	132	19	2
KINUURA-S*	8	4	2
KINUURA-JI-S	20	4	0
KOBE-DAI6-S	13	3	0
KOBE-DAI8-S	18	2	1
KOBE-JI-S	15	4	0
KOBE-MAYA-DAI1-M	16	7	2
KOBE-MAYA-DAI2-M	20	7	0
KOBE-MAYA-M	22	4	1
KOCHI-S*	21	3	1
KOCHI-JI-S	13	3	0
KOKEN-M	60	5	0
KOKEN-S	33	5	1
KOMATSUJIMA-S	17	2	0
KUSHIRO-S*	49	16	6
KUSHIRO-JI-S	13	7	3
MATSUYAMA-S	25	4	2
MINAMATA-M*	3	0	0
MIYAKO-S	45	27	12
MIYAZAKI-M	40	9	4
MURORAN-S	69	14	6
NAGOYA-ZOKAN-S	23	5	2
NAHA-S*	1	0	0
NAHA-ZOKAN-S	2	1	0

(to be continued)

(Table 9, continued)

STATION	TOTAL NUMBER OF RECORDS	NUMBER OF RECORDS EXCEEDING 20 GALS IN MAX.	NUMBER OF RECORDS EXCEEDING 50 GALS IN MAX.
NIIGATA-S*	12	1	0
NIIGATA-JI-S	5	1	0
OFUNATO-S*	21	3	2
OFUNATO-BOCHI-S	66	14	5
OFUNATO-BO-S	103	34	19
OFUNATO-MOUND-M	54	14	4
OITA-S	13	7	4
OKITSU-S	27	4	0
OMAEZAKI-M	26	2	0
ONAHAMA-S*	67	13	4
ONAHAMA-JI-S	28	24	8
OSAKA-CHUO-S*	8	1	0
OSAKA-JI-S	11	1	0
OSAKA-MINAMI-S	0	0	0
OTARU-S	13	0	0
SAKAIMINATO-S*	0	0	0
SAKAIMINATO-JI-S	13	6	3
SAKATA-S	48	6	0
SENDAI-M	71	13	2
SENDAI-MB	70	1	0
SHIBUSHI-S	13	0	0
SHIMIZU-KOJYO-S	24	7	3
SHIMIZU-MIHO-S	25	4	1
SHIM.-SEKITAN-M*	23	11	5
SHIM.-SEKITAN-S*	10	5	2
SHINAGAWA-M*	1	1	1
SHINAGAWA-MB	72	1	0
SHINAGAWA-S	110	27	7
SHIOGAMA-S*	19	1	0
SHIOGAMA-KOJYO-S	84	16	5
SHIMODA-F	9	1	0
SOMA-S	46	11	6
TAGONOURA-S	59	8	0
TOKACHI-M	90	48	18
TOMAKOMAI-S	26	7	4
TOYAMA-S	7	2	1
TSURUGA-S	30	3	1
URAKAWA-S	81	10	3
WAKA.-GANPEKI-S*	7	2	0
WAKAYAMA-S	41	19	3
WAKAYAMA-JI-S*	12	5	4
WAKA.-SUMIKIN-S*	0	0	0
YAMASHI.-DAI7-M*	81	6	1
YAMASHI.-DAI6-S*	102	31	11
YAMASHITA-HEN-M*	199	19	6
YAMASHITA-FB	49	2	0
YAMASHITA-F	49	11	3
YAMASHITA-FR	49	19	9
YAMASHITA-HEN-S*	119	24	8
YOKKA.-CHITOSE-S	10	5	1
YOKKA.-DAI2-M	19	4	2
YOKKA.-SEKITAN-M	49	9	2
YOKKAICHI-JI-S*	5	2	0
TOTAL	4216	983	305
ERS	1825	412	116
SMAC	2391	571	189

Table 10

STATION	RECORDS WHICH HAVE BEEN DIGITIZUED (REF. NO.)			
AKITA-S	S-655 (160)	S-1200 (319)	S-1567 (458)	S-1585 (458)
	S-1586 (458)			
AOMORI-S	S-235 (80)	S-264 (80)	S-304 (80)	S-400 (80)
	S-670 (160)	S-1192 (319)	S-1573 (458)	S-1592 (458)
CHIBA-S	S-1195 (319)	S-1378 (374)	S-1545 (487)	S-1884 (547)
	S-2107 (619)			
HACHINOHE-S*	S-252 (80)	S-310 (80)	S-401 (80)	S-669 (160)
	S-857 (202)	S-1202 (319)	S-1453 (426)	S-1575 (458)
HACHINOHE-JI-S	S-1968 (618)	S-2261 (676)		
HAKODATE-M	M-357 (374)	M-523 (442)	M-630 (458)	M-639 (458)
HANASAKI-M	M-106 (287)	M-262 (338)	M-496 (426)	M-887 (547)
	M-1014 (588)	M-1017 (588)		
HIROSHIMA-S*	S-364 (98)	S-1306 (338)	S-1623 (487)	
HITACHINAKA-F	F-12 (588)	F-15 (588)	F-19 (588)	F-34 (618)
	F-36 (618)	F-43 (618)	F-46 (618)	F-107 (649)
	F-174 (649)	F-358 (705)	F-384 (705)	F-423 (727)
	F-456 (727)			
HOSOSHIMA-S*	S-213 (98)	S-453 (100)	S-544 (116)	S-545 (116)
	S-1231 (338)	S-1625 (487)	S-1729 (503)	
KASHIMA-S*	S-196 (64)	S-612 (136)	S-647 (136)	
KASHIMA-JI-S*	S-770 (181)	S-813 (202)	S-845 (202)	S-882 (202)
KASHIMA-ZOKAN-S	S-1206 (319)	S-1506 (446)	S-1678 (519)	S-1867 (547)
	S-1910 (588)	S-1957 (588)	S-2110 (619)	S-2196 (676)
	S-2206 (676)			
KAWASAKI-CHI-M*	M-186 (317)	M-220 (319)	M-406 (374)	
KAWASAKI-F	F-98 (619)	F-123 (649)		
KEIHIN-JI-S	S-1188 (319)	S-1390 (374)	S-2112 (619)	
KINUURA-S*	S-480 (100)	S-585 (136)		
KOBE-MAYA-M	M-704 (487)			
KOCHI-S*	S-211 (98)			
KOCHI-JI-S	S-1730 (503)			
KOKEN-S	S-1046 (317)	S-2106 (619)		
KOKEN-M	M-170 (317)			
KUSHIRO-S*	S-98 (62)	S-369 (98)	S-634 (136)	S-674 (160)
	S-733 (181)	S-741 (181)		
KUSHIRO-JI-S	S-1976 (618)	S-2171 (649)	S-2390 (727)	
MATSUYAMA-S	S-1303 (338)	S-1731 (503)	S-1624 (487)	
MIYAKO-S	S-236 (80)	S-271 (80)	S-312 (80)	S-273 (98)
	S-420 (98)	S-537 (116)	S-1204 (319)	S-1104 (338)
	S-1317 (338)	S-1972 (618)	S-2255 (676)	
MIYAZAKI-M	M-228 (338)	M-877 (547)	M-1107 (618)	
MURORAN-S	S-234 (80)	S-241 (80)	S-399 (80)	S-1425 (426)
	S-1474 (442)	S-1571 (458)	S-1599 (458)	S-1979 (618)
NAGOYA-ZOKAN-S	S-1 (55)	S-20 (55)	S-578 (136)	

(to be continued)

(Table 10, continued)

STATION	RECORDS WHICH HAVE BEEN DIGITIZUED (REF. NO.)			
NIIGATA-S*	S-107 (62)			
NIIGATA-JI-S	S-1203 (319)			
OFUNATO-S*	S-140 (64)	S-282 (98)	S-361 (98)	
OFUNATO-BOCHI-S	S-554 (116)	S-786 (181)	S-1022 (287)	S-1210 (319)
	S-1120 (338)			
OITA-S	S-924 (236)	S-1629 (487)	S-1734 (503)	S-2021 (618)
OKITSU-S	S-1071 (317)			
ONAHAMA-S*	S-111 (62)	S-1043 (287)	S-1191 (317)	
ONAHAMA-JI-S	S-1330 (338)	S-1505 (446)	S-1602 (487)	S-1633 (487)
	S-1946 (588)			
SAKAIMINATO-JI-S	S-2248 (676)	S-2251 (676)	S-2383 (727)	
SAKATA-S	S-1568 (458)			
SENDAI-M	M-1127 (618)			
SHIMIZU-KOJYO-S	S-74 (62)	S-1063 (317)	S-1064 (317)	
SHIMIZU-MIHO-S	S-1066 (317)	S-1069 (317)		
SHINAGAWA-S	S-192 (64)	S-340 (98)	S-1394 (374)	S-1787 (519)
	S-1885 (547)	S-2111 (619)	S-2130 (649)	
SHIOGAMA-S*	S-138 (64)			
SHIOGAMA-KOJYO-S	S-782 (181)	S-1118 (338)	S-1201 (319)	S-2006 (618)
	S-2029 (618)			
SOMA-S	S-1872 (547)	S-2001 (618)	S-2031 (618)	S-2051 (618)
	S-2096 (618)	S-2220 (676)		
TAGONOURA-S	S-1055 (317)			
TOKACHI-M	M-125 (287)	M-145 (287)	M-247 (338)	M-260 (338)
	M-340 (338)	M-341 (374)	M-439 (426)	M-521 (442)
	M-522 (442)	M-540 (446)	M-636 (487)	M-703 (487)
	M-911 (547)	M-972 (547)	M-1078 (618)	M-1200 (649)
	M-1242 (649)	M-1383 (727)		
TOMAKOMAI-S	S-877 (202)	S-1418 (426)	S-1472 (442)	S-1977 (618)
TOYAMA-S	S-1892 (547)			
TSURUGA-S	S-1549 (487)			
URAKAWA-S	S-1978 (618)	S-2186 (676)	S-2401 (727)	
WAKAYAMA-S	S-945 (236)	S-1028 (287)		
WAKAYAMA-JI-S*	S-187 (64)	S-265 (98)	S-266 (98)	S-788 (181)
YAMASHITA-F	F-95 (619)	F-168 (649)	F-325 (676)	
YAMASHITA-HEN-S*	S-412 (98)	S-658 (160)	S-1058 (317)	S-1189 (319)
	S-1362 (374)	S-1386 (374)	S-1614 (487)	S-2113 (619)
YAMASHITA-HEN-M*	M-217 (319)	M-403 (374)	M-1022 (588)	M-1056 (588)
	M-1183 (619)	M-1195 (649)	M-1226 (649)	
YOKKA-CHITOSE-S	S-577 (136)			

* OBSERVATION OF THE STATIONS HAD ALREADY BEEN STOPPED.

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29) Eiichi Kurata and Setsuo Noda: Strong-Motion Earthquake Records on the 1982 Urakawa-Oki Earthquake in Port Areas, *Technical Note of the Port and Harbour Research Institute,* No. 442, Mar. 1983, 144p.

30) Eiichi Kurata, Tetsuo Fukuhara and Setsuo Noda: Strong-Motion Earthquake Records on the 1983 Nipponkai-Chubu Earthquake in Port Areas, *Technical Note of the Port and Harbour Research Institute,* No. 458, Sept. 1983, 327p.

31) Eiichi Kurata, Tetsuo Fukuhara and Setsuo Noda: Strong-Motion Earthquake Records on the 7 August 1984 Hyuganada Earthquake in Port Areas, *Technical Note of the Port and Harbour Research Institute,* No. 503, Dec. 1984, 113p.

32) Eiichi Kurata, Setsuo Noda and Toyoshi Higuchi: Strong-Motion Earthquake Records on the 17 December 1987 Chiba-ken-Toho-Oki Earthquake in Port Areas, *Technical Note of of the Port and Harbour Research Institute,* No. 619, June 1988, 299p.

33) Hajime Tsuchida, Teiichiro Yamada and Eiichi Kurata: Site Characteristics of Strong-Motion Earthquake Stations in Ports and Harbour in Japan (Part 1), *Technical Note of the Port and Harbour Research Institute,* No. 34, November 1967, 306p.

34) Eiichi Kurata, Hajime Tsuchida and Katsuko Sudo: Site Characteristics of Strong-Motion Earthquake Stations in Ports and Harbours in Japan (Part 2), *Technical Note of the Port and Harbour Research Institute,* No. 107, December 1970, 87p.

35) Eiichi Kurata and Tokuzo Ishizaka: Site Characteristics of Strong-Motion Earthquake Stations in Ports and Harbours in Japan (Part 3), *Technical Note of the Port and Harbour Research Institute,* No. 156, March 1973, 54p.

36) Yoshiko Yokoyama and Eiichi Kurata: Site Characteristics of Strong-Motion Earthquake Stations in Ports and Harbours in Japan (Part 4), *Technical Note of the Port and Harbour Research Institute,* No. 298, June 1978, 110p.

37) Yoshiko Yokoyama and Eiichi Kurata: Site Characteristics of Strong-Motion Earthquake Stations in Ports and Harbours in Japan (Part 5), *Technical Note of the Port and Harbour Research Institute,* No. 351, September 1980, 72p.

38) Susumu Iai, Eiichi Kurata and Hajime Tsuchida: Digitization and Correction of Strong-Motion Accelerograms, *Technical Note of the Port and Harbour Research Institute,* No. 286, March 1978, 286p.

39) Susumu Iai and Eiichi Kurata: Integration of Strong-Motion Accelerograms, *Proceedings of the 5th Japan Earthquake Engineering Symposium,* November 1978, 225–232p.

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41) Naba C. Nigam and Paul C. Jennings: Calculation of Response Spectra from Strong-Motion Earthquake Records, *Bulletin of the Seismological Society of America,* Vol. 59, No. 2, April 1969, 909–922p.

42) Hajime Tsuchida: Present State and Outcomes of Strong-Motion Earthquake Observation in Port Areas in Japan, *Proceedings of the Annual Research Conference of the Port and Harbour Research Institute,* December 1979, 127–195p.

Observation Results
and
Preliminary Analyses

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

21:06 JAN. 1 ,1991
E OFF IBARAKI PREF
EPICENTER : 36°28.5'N 141°11.8'E
DEPTH : 39.6KM MAGNITUDE : 4.2

JMA INTENSITIES

Ⅱ : MITO
Ⅰ : KAKIOKA,FUKUSHIMA

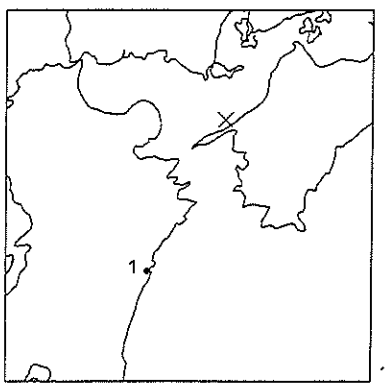
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 406	15	18	7	52

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

03:36 JAN. 4 ,1991
IYONADA SETONAIKAI
EPICENTER : 33°32.7'N 132°19.3'E
DEPTH : 57.5KM MAGNITUDE : 5.2

JMA INTENSITIES

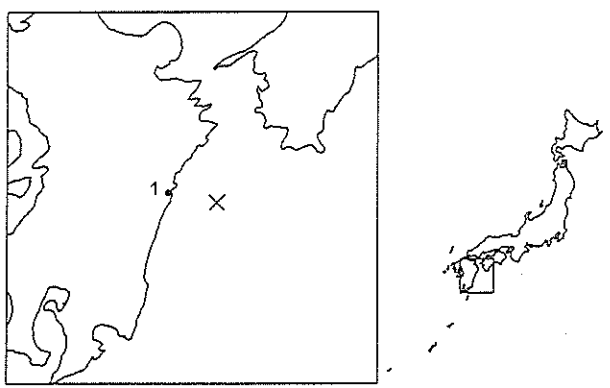
Ⅲ : OITA,HIROSHIMA,
MATSUYAMA
Ⅱ : UWAJIMA,FUKUYAMA
Ⅰ : OKAYAMA,KOCHI,
SHIMONOSEKI,TOKUSHIMA,
FUKUOKA



	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HOSOSHIMA-F	ON GROUND	F- 447	4	7	3	138

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

20:42 JAN. 4 ,1991
HYUGANADA REGION
EPICENTER : 32°21.8'N 132°4.4 'E
DEPTH : 31.8KM MAGNITUDE : 3.6

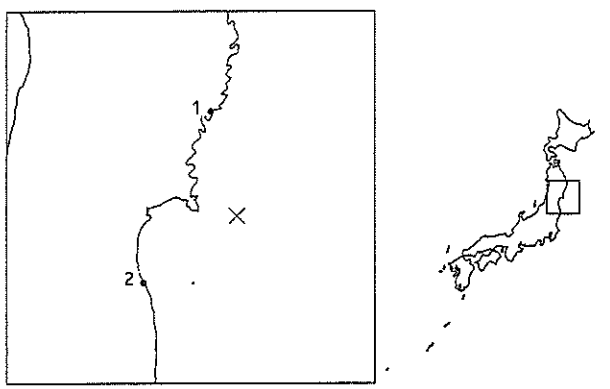


	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HOSOSHIMA-F	ON GROUND	F- 448	6	9	2	40

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:49 JAN. 16,1991
E OFF MIYAGI PREF
EPICENTER : 38°15.1'N 141°53.9'E
DEPTH : 48.5KM MAGNITUDE : 4.7

JMA INTENSITIES
Ⅲ : OFUNATO
Ⅱ : ISHINOMAKI,MIYAKO
Ⅰ : FUKUSHIMA,SENDAI,
MORIOKA,HACHINOHE



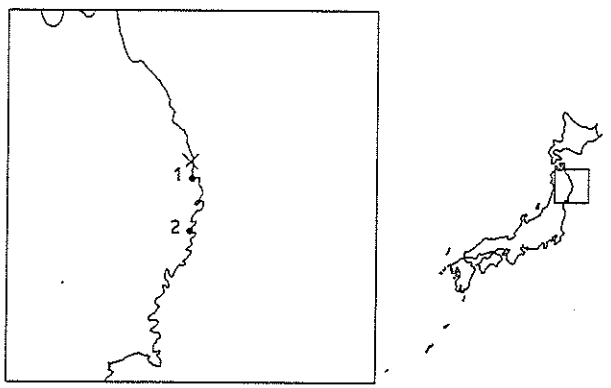
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	OFUNATO-MOUND-M	ON STRUC.	M-1352	14	7	9	86
1	OFUNATO-BOCHI-S	ON GROUND	S-2360	4	5	2	85
2	SOMA-S	ON GROUND	S-2361	5	4	3	94

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

18:56 JAN. 27,1991
NORTHERN IWATE PREF
EPICENTER : 39°46.0'N 141°58.3'E
DEPTH : 68.0KM MAGNITUDE : 4.6

JMA INTENSITIES

Ⅲ : MIYAKO,HACHINOHE,
MORIOKA
Ⅱ : OFUNATO



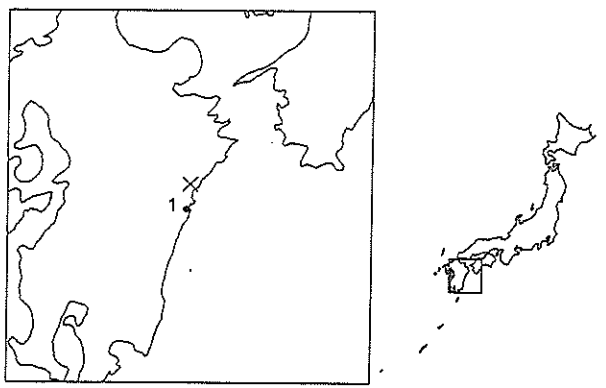
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	MIYAKO-S	ON GROUND	S-2362	25	29	13	13
2	KAMAISHI-MB	IN GROUND	M-1354	6	5	4	55
2	KAMAISHI-M	ON GROUND	M-1353	9	15	8	55

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

07:52 FEB. 8 ,1991
NORTHERN MIYAZAKI PREF
EPICENTER : 32°36.8'N 131°40.8'E
DEPTH : 55.1KM MAGNITUDE : 3.5

JMA INTENSITIES

I : NOBEOKA



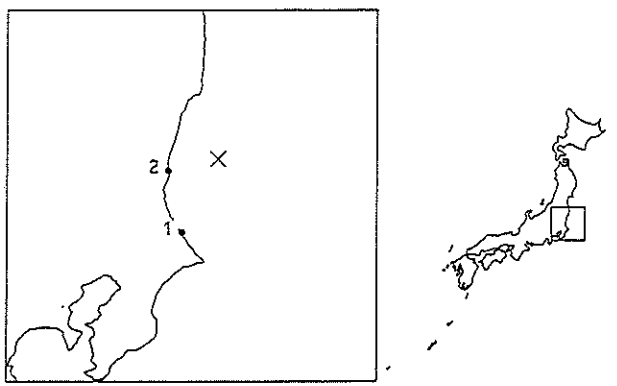
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HOSOSHIMA-F	ON GROUND	F- 449	6	10	3	20

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

07:32 FEB. 28,1991
E OFF IBARAKI PREF
EPICENTER : 36°26.5'N 141°4.6 'E
DEPTH : 41.5KM MAGNITUDE : 4.5

JMA INTENSITIES

Ⅲ : MITO
Ⅱ : ONAHAMA,CHOSHI
Ⅰ : UTSUNOMIYA,CHIBA,
FUKUSHIMA



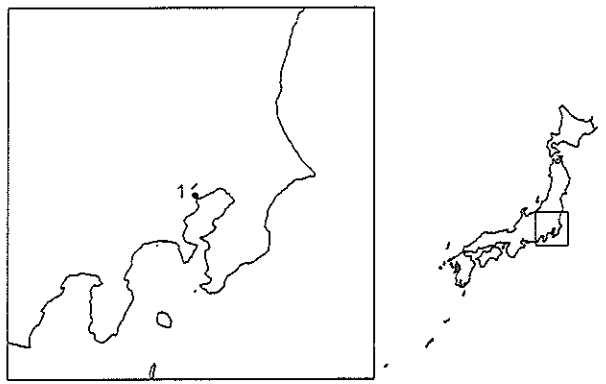
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KASHIMA-ZOKAN-S	ON GROUND	S-2363	8	5	3	66
2	HITACHINAKA-F	ON GROUND	F- 416	17	21	7	41

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

07:40 MAR. 1 ,1991
TOKYO PREF
EPICENTER : 35°39.5'N 139°42.6'E
DEPTH : 43.1KM MAGNITUDE : 3.8

JMA INTENSITIES

Ⅱ : TOKYO
Ⅰ : YOKOHAMA,CHIBA



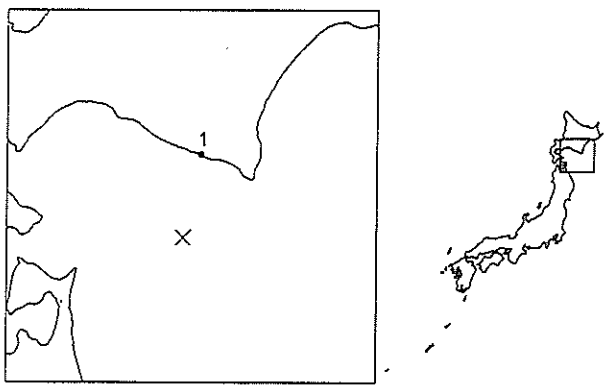
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1355				6

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:32 MAR. 3 ,1991
E OFF AOMORI PREF
EPICENTER : 41°34.4'N 142°31.6'E
DEPTH : 49.5KM MAGNITUDE : 4.7

JMA INTENSITIES

Ⅲ : HACHINOHE
Ⅰ : URAKAWA,HAKODATE,
TOMAKOMAI



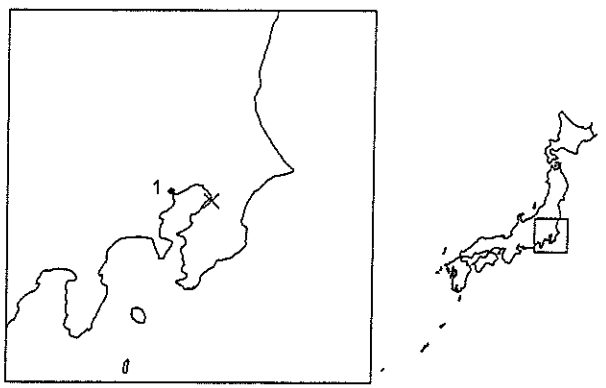
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2364	3	2	1	68

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

09:01 MAR. 15,1991
CENTRAL CHIBA PREF
EPICENTER : 35°32.2'N 140°6.8 'E
DEPTH : 80.7KM MAGNITUDE : 4.6

JMA INTENSITIES

Ⅱ : TOKYO,YOKOHAMA,AJIRO
Ⅰ : CHIBA,OSHIMA,UTSUNOMIYA,
KOFU,TATEYAMA



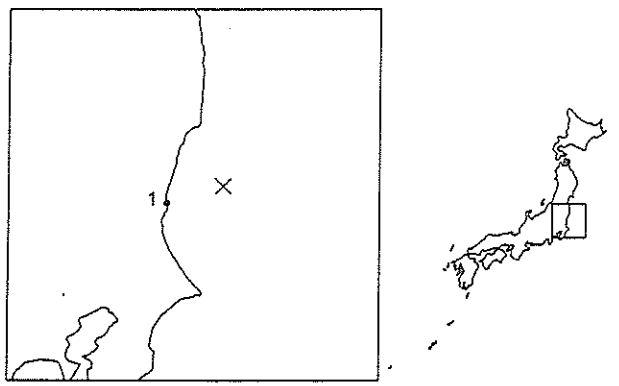
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1356				33
1	SHINAGAWA-S	ON GROUND	S-2365	3	3	2	33

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

16:35 MAR. 19,1991
E OFF IBARAKI PREF
EPICENTER : 36°28.6'N 141°8.0 'E
DEPTH : 40.4KM MAGNITUDE : 3.9

JMA INTENSITIES

I : MITO,UTSUNOMIYA



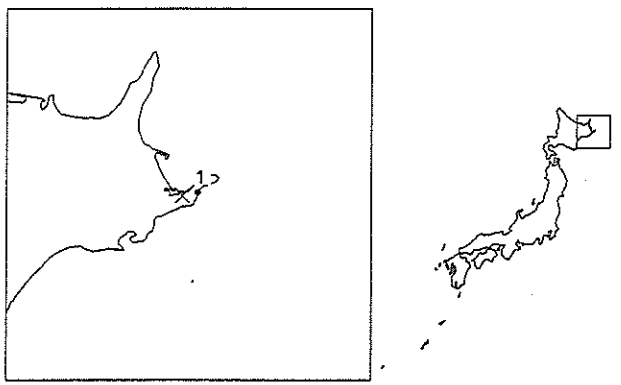
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 417	11	8	5	47

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

07:23 APR. 2 ,1991
NEMURO REGION
EPICENTER : 43°16.4'N 145°26.1'E
DEPTH : 66.3KM MAGNITUDE : 4.8

JMA INTENSITIES

Ⅲ : NEMURO
Ⅱ : KUSHIRO



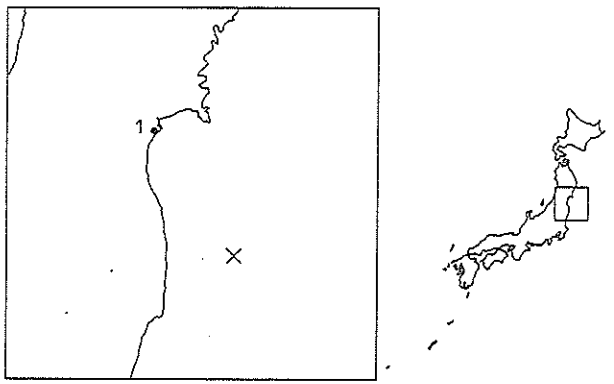
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HANASAKI-F	ON GROUND	F- 428	9	11	3	12

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

08:26 APR. 9 ,1991
E OFF FUKUSHIMA PREF
EPICENTER : 37°19.6'N 141°39.7'E
DEPTH : 46.0KM MAGNITUDE : 4.5

JMA INTENSITIES

I : KAKIOKA



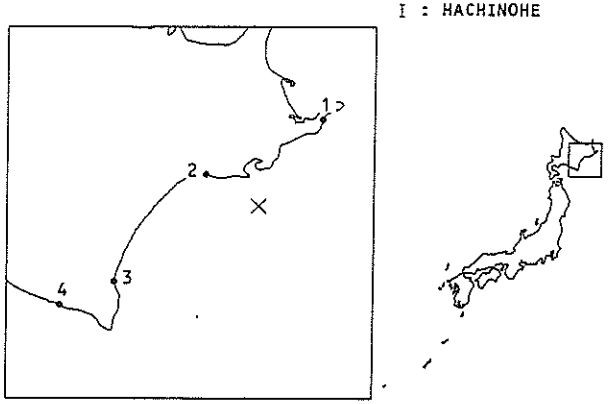
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SENDAI-M	ON GROUND	M-1367	5	5	2	120
1	SENDAI-MB	IN GROUND	M-1366	1	1	1	120

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

09:32 APR. 24,1991
OFF NEMURO PENINSULA
EPICENTER : 42°42.8'N 144°51.0'E
DEPTH : 52.2KM MAGNITUDE : 5.4

JMA INTENSITIES

Ⅳ : KUSHIRO
Ⅲ : NEMURO,HIROO
Ⅱ : URAKAWA,OBIHIRO
Ⅰ : HACHINOHE



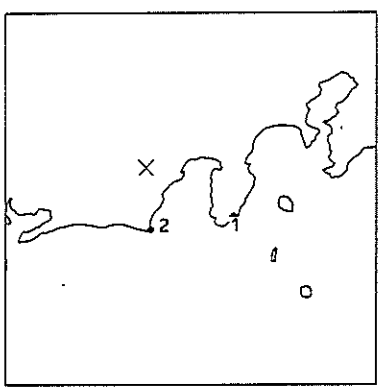
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HANASAKI-F	ON GROUND	F- 429	7	11	4	87
2	KUSHIRO-JI-S	ON GROUND	S-2366	35	38	8	50
3	TOKACHI-M	ON GROUND	M-1358	21	21	10	133
4	URAKAWA-S	ON GROUND	S-2367	3	4	2	180

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

07:12 APR. 25,1991
CENTRAL SHIZUOKA PREF
EPICENTER : 35°3.5 'N 138°12.3'E
DEPTH : 32.3KM MAGNITUDE : 4.9

JMA INTENSITIES

Ⅳ : AJIRO
Ⅱ : SHIZUOKA,HAMAMATSU,
MISHIMA,KOFU
Ⅰ : TOKYO,TATEYAMA,OMAEZAKI,
NAGOYA,IROZAKI



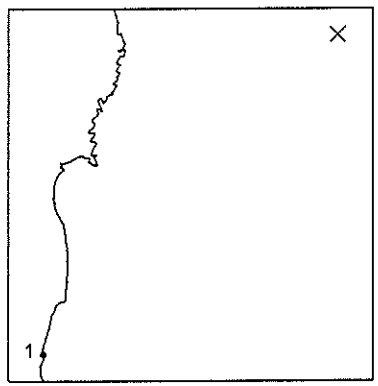
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHIMODA-F	ON GROUND	F- 433	8	10	7	80
2	OMAEZAKI-M	ON GROUND	M-1357	14	8	4	50

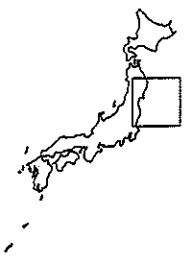
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

22:09 MAY 7 ,1991
FAR E OFF NORTH HONSHU
EPICENTER : 39°22.3'N 144°58.2'E
DEPTH : 18.3KM MAGNITUDE : 6.0

JMA INTENSITIES

Ⅲ : OFUNATO,MORIOKA
Ⅱ : MIYAKO,HACHINOHE,
KUSHIRO,UTSUNOMIYA,MITO
Ⅰ : NEMURO,URAKAWA,OBIHIRO,
SENDAI,ISHINOMAKI,
SHIRAKAWA,AOMORI,TOKYO,
KUMAGAYA,KAKIOKA,AJIRO,
NIKKO





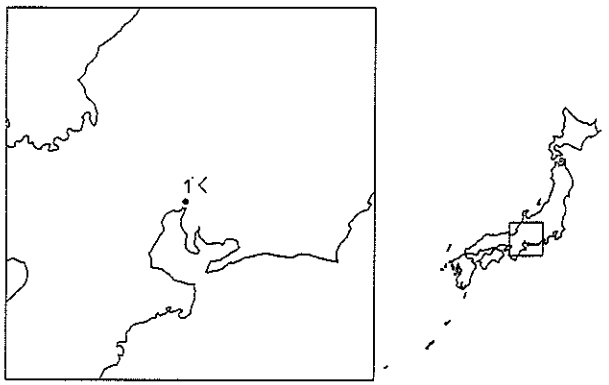
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 418	5	5	2	505

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

04:57 MAY 11,1991
CENTRAL AICHI PREF
EPICENTER : 35°11.9'N 136°59.8'E
DEPTH : 45.6KM MAGNITUDE : 3.9

JMA INTENSITIES

II : NAGOYA
I : GIFU,TSU,YOKKAICHI



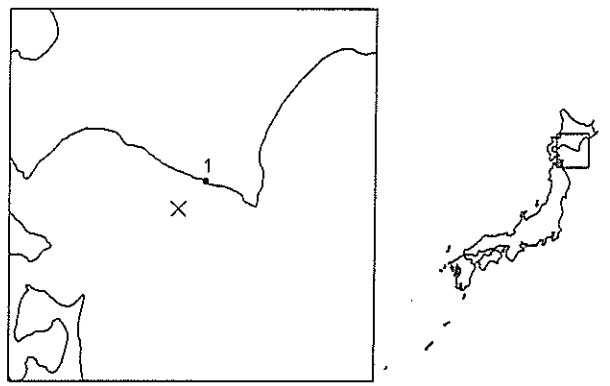
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	INAE-SANBASHI-M	ON STRUC.	M-1384		18		17
1	INAE-S	ON STRUC.	S-2406	1	4	3	18
1	INAE-YAITA-M	ON STRUC.	M-1385		12		17
1	NAGOYA-ZOKAN-S	ON GROUND	S-2407	3	4	3	18

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

04:00 MAY 14,1991
S OFF URAKAWA
EPICENTER : 41°59.1'N 142°28.6'E
DEPTH : 66.5KM MAGNITUDE : 4.4

JMA INTENSITIES

I : URAKAWA,MURORAN,SAPPORO, OTARU



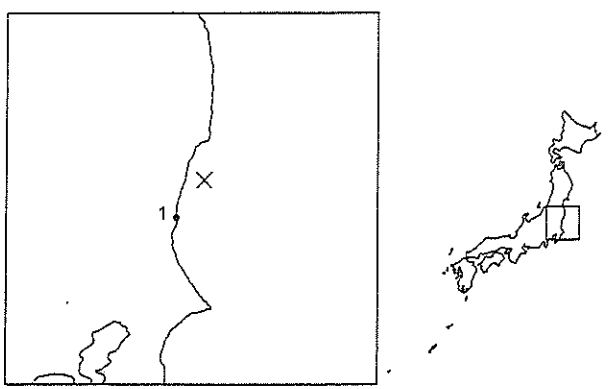
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2368	4	3	3	31

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

17:38 MAY 14,1991
E OFF IBARAKI PREF
EPICENTER : 36°38.7'N 140°53.8'E
DEPTH : 51.1KM MAGNITUDE : 3.6

JMA INTENSITIES

II : MITO
I : KAKIOKA



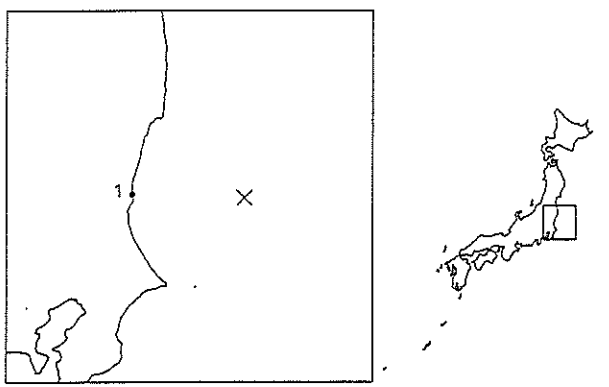
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 419	42	41	15	38

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

01:28 JUNE 10,1991
FAR E OFF IBARAKI PREF
EPICENTER : 36°17.5'N 141°38.9'E
DEPTH : 31.0KM MAGNITUDE :

JMA INTENSITIES

II : MITO
I : ONAHAMA,NIKKO,OSHIMA,
KAKIOKA



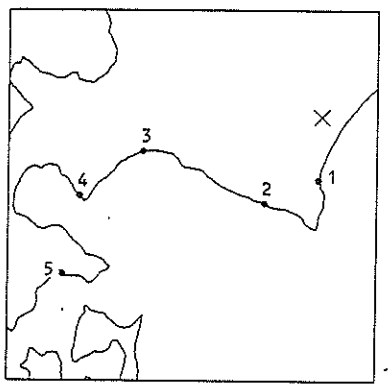
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 420	6	7	3	92

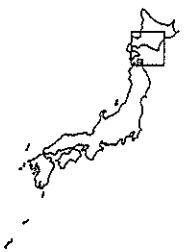
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

05:11 JUNE 13,1991
TOKACHI REGION
EPICENTER : 42°44.9'N 143°25.1'E
DEPTH : 119.5KM MAGNITUDE : 6.0

JMA INTENSITIES

Ⅲ : KUSHIRO,OBIHIRO,
TOMAKOMAI,HIROO
Ⅱ : OFUNATO,MORIOKA,
HACHINOHE,URAKAWA
Ⅰ : HAKODATE,SAPPORO,
MURORAN,NEMURO,MIYAKO,
AKITA





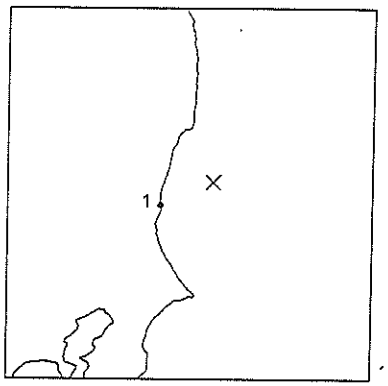
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1359	33	51	17	51
2	URAKAWA-S	ON GROUND	S-2370	11	11	6	83
3	TOMAKOMAI-S	ON GROUND	S-2372	6	6	3	147
4	MURORAN-S	ON GROUND	S-2369	8		3	206
5	HAKODATE-F	ON GROUND	F- 415	7	11	8	246
5	HAKODATE-FR	ON STRUC.	F- 414	7	6	5	246
5	HAKODATE-FB	IN GROUND	F- 413	7	4	4	246

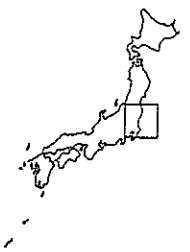
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

02:37 JUNE 15,1991
E OFF IBARAKI PREF
EPICENTER : 36°31.6'N 141°7.2 'E
DEPTH : 45.2KM MAGNITUDE : 4.0

JMA INTENSITIES

Ⅱ : MITO
Ⅰ : ONAHAMA,SHIRAKAWA,NIKKO,
UTSUNOMIYA,KAKIOKA





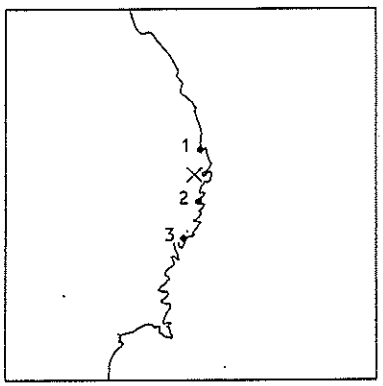
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 421	17	19	10	47

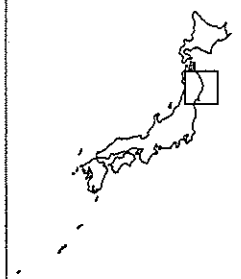
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

10:21 JUNE 15,1991
SOUTHERN IWATE PREF
EPICENTER : 39°28.1'N 141°54.0'E
DEPTH : 61.4KM MAGNITUDE : 5.4

JMA INTENSITIES

Ⅳ : OFUNATO
Ⅲ : ISHINOMAKI,HACHINOHE,
MORIOKA,MIYAKO
Ⅱ : SAKATA
Ⅰ : SENDAI,FUKUSHIMA,AKITA,
ONAHAMA





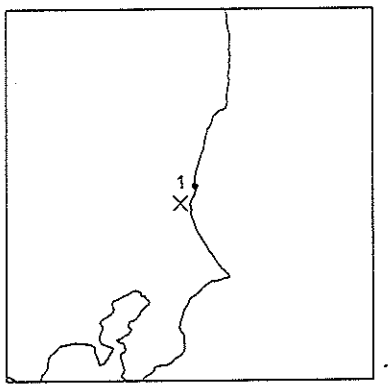
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	MIYAKO-S	ON GROUND	S-2371	33	19	11	20
2	KAMAISHI-MB	IN GROUND	M-1362	11	14	9	22
2	KAMAISHI-M	ON GROUND	M-1361	21	24	28	22
3	OFUNATO-MOUND-M	ON STRUC.	M-1360	38	31	23	52
3	OFUNATO-BOCHI-S	ON GROUND	S-2373	19	15	6	52

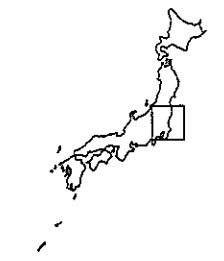
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

17:05 JUNE 19,1991
NORTHERN IBARAKI PREF
EPICENTER : 36°16.3'N 140°28.2'E
DEPTH : 66.2KM MAGNITUDE : 3.9

JMA INTENSITIES

Ⅱ : MITO,KAKIOKA
Ⅰ : NIKKO





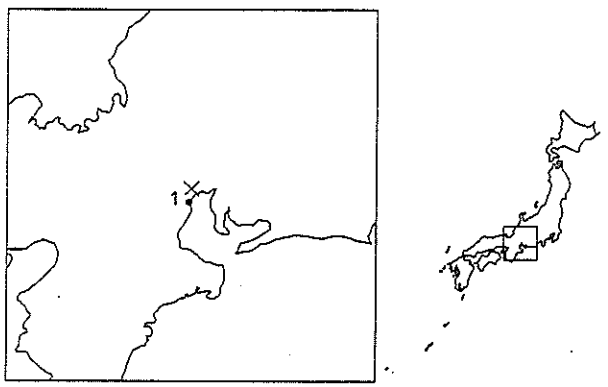
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 422	18	19	9	18

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:35 JUNE 19,1991
NORTHERN MIE PREF
EPICENTER : 35°2.7 'N 136°39.8'E
DEPTH : 17.8KM MAGNITUDE : 3.7

JMA INTENSITIES

I : TSU



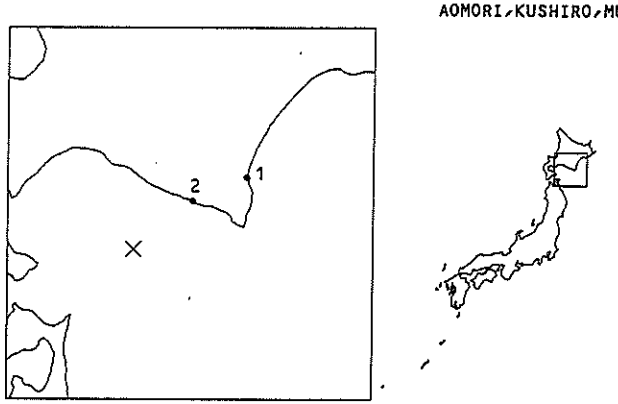
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	YOKKA.-SEKITAN-M	ON STRUC.	M-1363		11		11

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

20:38 JUNE 23,1991
S OFF URAKAWA
EPICENTER : 41°51.7'N 142°9.4 'E
DEPTH : 66.3KM MAGNITUDE : 4.8

JMA INTENSITIES

II : TOMAKOMAI,URAKAWA,
HACHINOHE
I : OBIHIRO,HIROO,MIYAKO,
AOMORI,KUSHIRO,MURORAN



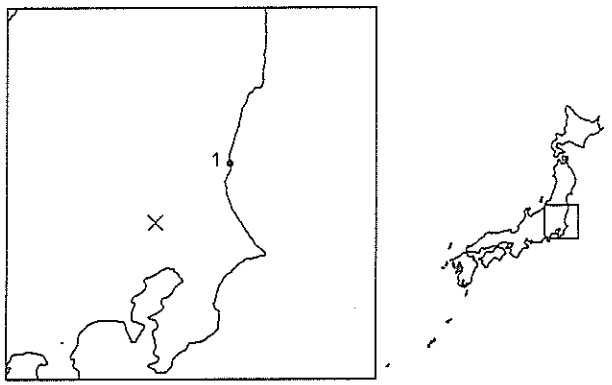
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1364	6	5	3	107
2	URAKAWA-S	ON GROUND	S-2374	3	3	1	61

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

12:15 JUNE 25,1991
SW IBARAKI PREF
EPICENTER : 36°0.0 'N 139°54.2'E
DEPTH : 67.6KM MAGNITUDE :

JMA INTENSITIES

I : UTSUNOMIYA,NIKKO



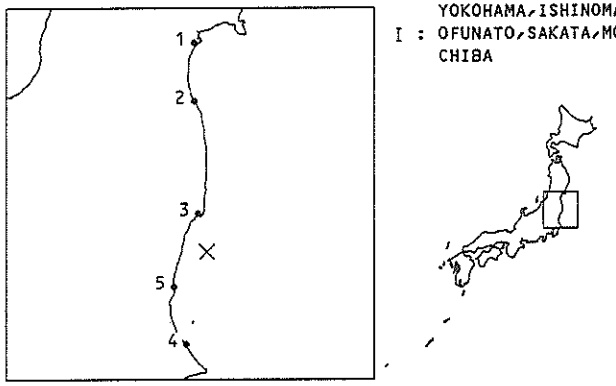
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 423	147	165	51	77

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

12:49 JUNE 25,1991
E OFF IBARAKI PREF
EPICENTER : 36°38.4'N 140°58.3'E
DEPTH : 48.6KM MAGNITUDE : 5.1

JMA INTENSITIES

Ⅳ : MITO
Ⅲ : FUKUSHIMA,ONAHAMA,
UTSUNOMIYA,SHIRAKAWA
Ⅱ : SENDAI,TOKYO,CHOSHI,
YOKOHAMA,ISHINOMAKI
I : OFUNATO,SAKATA,MORIOKA,
CHIBA



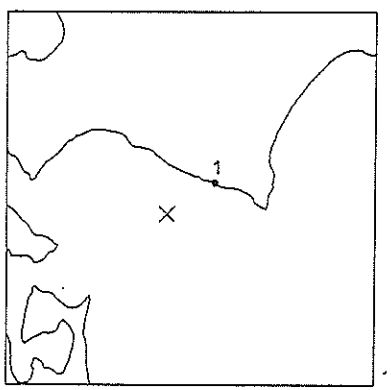
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SENDAI-M	ON GROUND	M-1369	10	7	2	182
1	SENDAI-MB	IN GROUND	M-1368	2	2	1	182
2	SOMA-S	ON GROUND	S-2376		9	5	132
3	ONAHAMA-JI-S	ON GROUND	S-2375	45	63	26	33
4	KASHIMA-ZOKAN-S	ON GROUND	S-2377	13	8	6	82
5	HITACHINAKA-F	ON GROUND	F- 424	28	33	8	42

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

07:53 JUNE 27,1991
S OFF URAKAWA
EPICENTER : 41°58.3'N 142°17.3'E
DEPTH : 69.5KM MAGNITUDE : 4.6

JMA INTENSITIES

Ⅲ : HIROO
Ⅱ : URAKAWA



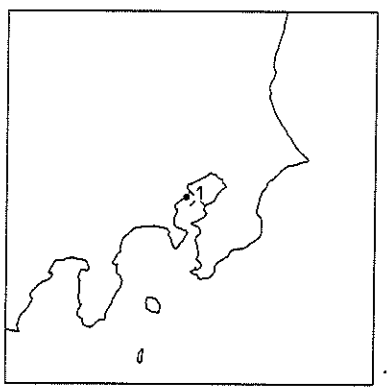
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2378	6	6	4	45

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

20:11 JUNE 28,1991
TOKYO BAY REGION
EPICENTER : 35°29.4'N 139°51.5'E
DEPTH : 68.0KM MAGNITUDE : 4.6

JMA INTENSITIES

Ⅱ : TOKYO,UTSUNOMIYA,MITO,
KAKIOKA,KATSUURA,AJIRO,
NIKKO
Ⅰ : KOFU,YOKOHAMA,CHICHIBU,
KAWAGUCHIKO,OSHIMA,
CHIBA,KUMAGAYA,SUWA



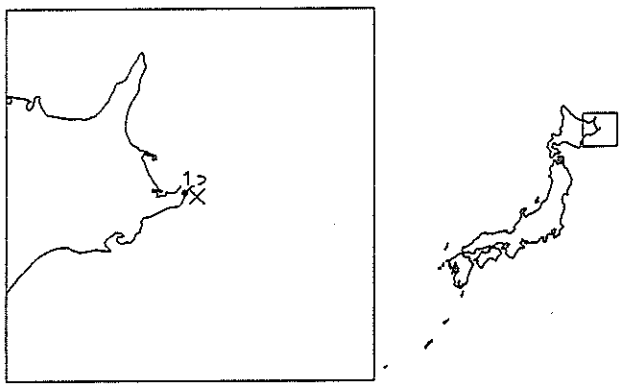
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KAWASAKI-FR	ON STRUC.	F- 437	15	14	14	9
1	KAWASAKI-F	ON GROUND	F- 436	12	15	8	9
1	KAWASAKI-FB	IN GROUND	F- 435	4	6	5	9

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

14:52 JULY 10,1991
OFF NEMURO PENINSULA
EPICENTER : 43°14.8'N 145°42.5'E
DEPTH : 92.0KM MAGNITUDE : 5.5

JMA INTENSITIES

Ⅲ : NEMURO,KUSHIRO,HIROO
Ⅰ : ABASHIRI,URAKAWA,
HACHINOHE



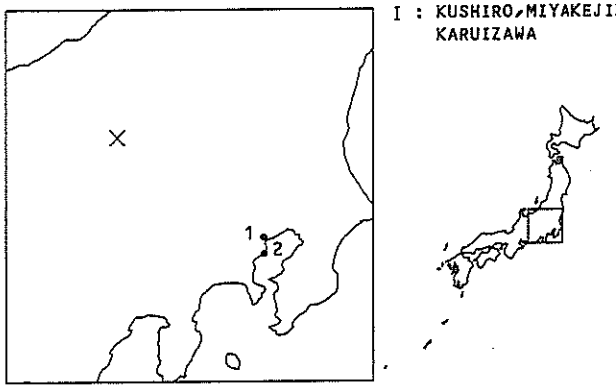
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HANASAKI-F	ON GROUND	F- 430	24	34	14	10

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:19 JULY 14,1991
NW GUNMA PREF
EPICENTER : 36°25.0'N 138°30.5'E
DEPTH : 187.8KM MAGNITUDE : 5.4

JMA INTENSITIES

Ⅲ : TOKYO,TATEYAMA,YOKOHAMA
Ⅱ : MITO,KOFU,UTSUNOMIYA,
OFUNATO,AJIRO,CHIBA,
CHICHIBU
Ⅰ : KUSHIRO,MIYAKEJIMA,
KARUIZAWA



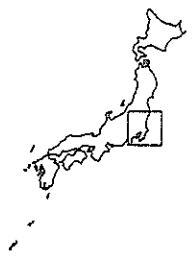
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1365	2	1	1	143
1	SHINAGAWA-S	ON GROUND	S-2379	6	5	2	143
2	KAWASAKI-FR	ON STRUC.	F- 440	39	44	8	151
2	KAWASAKI-F	ON GROUND	F- 439	20	20	8	151
2	KAWASAKI-FB	IN GROUND	F- 438	9	10	2	151

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:49 AUG. 6 ,1991
NEAR CHOSHI CITY
EPICENTER : 35°48.9'N 141°9.6 'E
DEPTH : 42.5KM MAGNITUDE : 5.9

JMA INTENSITIES

Ⅳ : CHOSHI
Ⅲ : MITO,TATEYAMA
Ⅱ : TOKYO,UTSUNOMIYA,
YOKOHAMA,ONAHAMA,
FUKUSHIMA,CHIBA
Ⅰ : OSHIMA,AKITA,SAKATA,
KOFU,NIIGATA,KANAZAWA,
AJIRO



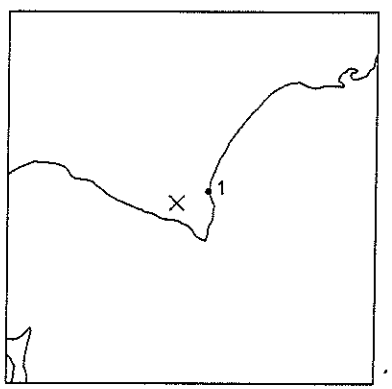
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KASHIMA-ZOKAN-S	ON GROUND	S-2380	30	28	7	43
2	HITACHINAKA-F	ON GROUND	F- 451	15	15	8	80
3	KAWASAKI-FR	ON STRUC.	F- 443	6	8	1	131
3	KAWASAKI-F	ON GROUND	F- 442	5	6	2	131
3	KAWASAKI-FB	IN GROUND	F- 441	2	2	1	131

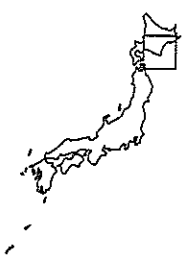
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:16 AUG. 16,1991
HIDAKA MOUNTAINS REGION
EPICENTER : 42°13.8'N 143°0.0 'E
DEPTH : 68.4KM MAGNITUDE : 4.8

JMA INTENSITIES

Ⅲ : URAKAWA,HIROO
Ⅱ : OBIHIRO
Ⅰ : KUSHIRO,MURORAN,
TOMAKOMAI





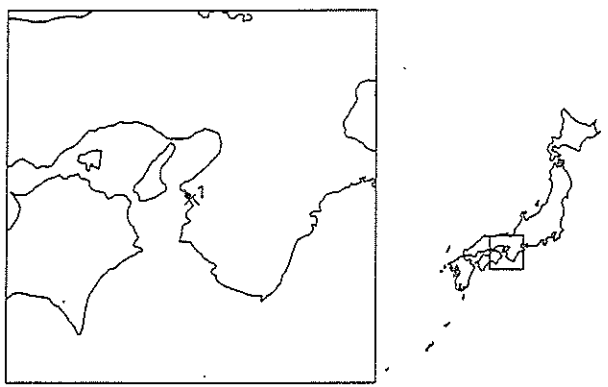
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1370	15	24	18	27

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

19:29 AUG. 22,1991
NW WAKAYAMA PREF
EPICENTER : 34°12.2'N 135°11.2'E
DEPTH : 5.7KM MAGNITUDE : 3.6

JMA INTENSITIES

Ⅳ : WAKAYAMA



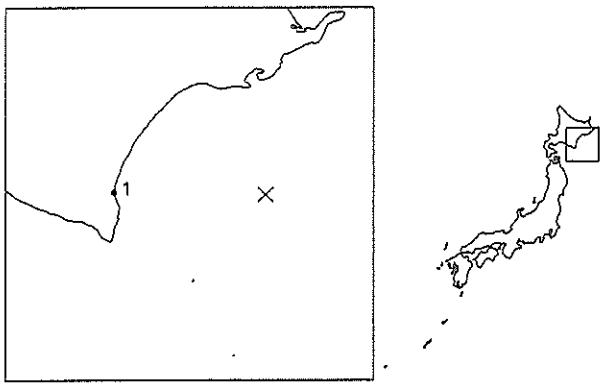
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	WAKAYAMA-S	ON GROUND	S-2381	35	30	13	3

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:59 AUG. 26,1991
SE OFF TOKACHI
EPICENTER : 42°8.7 'N 144°47.9'E
DEPTH : 58.0KM MAGNITUDE : 5.7

JMA INTENSITIES

Ⅲ : HIROO,KUSHIRO
Ⅱ : OBIHIRO,HACHINOHE,
NEMURO,URAKAWA
Ⅰ : MIYAKO



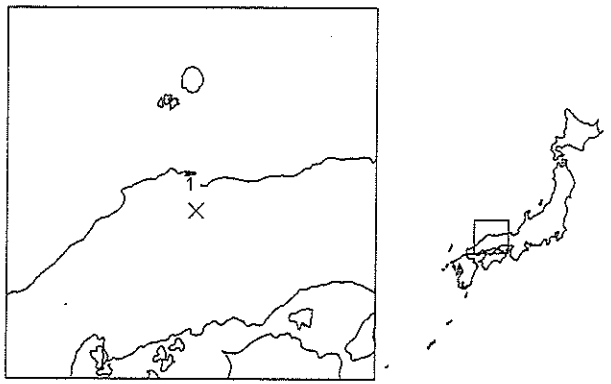
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1371	6	8	4	122

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:59 AUG. 27,1991
WESTERN TOTTORI PREF
EPICENTER : 35°17.1'N 133°19.9'E
DEPTH : 12.9KM MAGNITUDE : 4.4

JMA INTENSITIES

Ⅲ : YONAGO
Ⅱ : SAKAI,MATSUE
Ⅰ : OKAYAMA,SAIGO,HAMADA



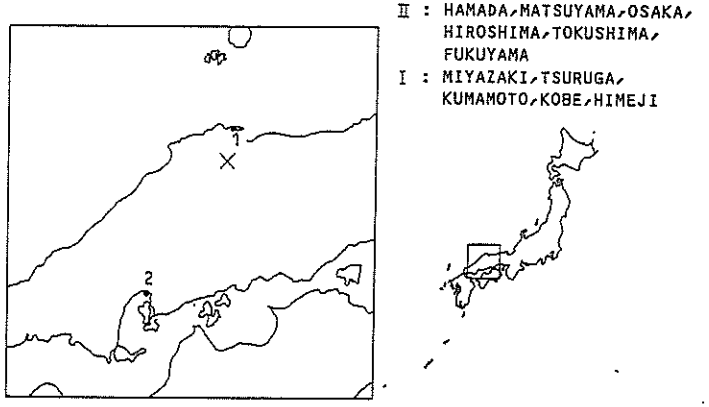
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SAKAIMINATO-JI-S	ON GROUND	S-2382	13	13	13	29

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

10:29 AUG. 28,1991
WESTERN TOTTORI PREF
EPICENTER : 35°19.2'N 133°11.5'E
DEPTH : 13.3KM MAGNITUDE : 5.9

JMA INTENSITIES

Ⅳ : MATSUE,YONAGO
Ⅲ : TAKAMATSU,KOCHI,TOTTORI,
SAKAI,OKAYAMA
Ⅱ : HAMADA,MATSUYAMA,OSAKA,
HIROSHIMA,TOKUSHIMA,
FUKUYAMA
Ⅰ : MIYAZAKI,TSURUGA,
KUMAMOTO,KOBE,HIMEJI



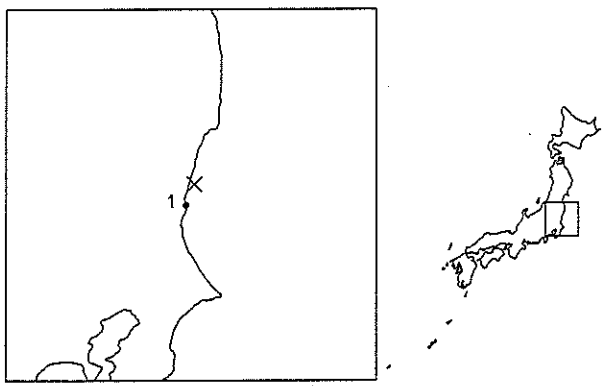
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SAKAIMINATO-JI-S	ON GROUND	S-2383	59	113	25	25
2	HIROSHIMA-JI-S	ON GROUND	S-2384	8	6	4	126

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

06:00 AUG. 30,1991
NORTHERN IBARAKI PREF
EPICENTER : 36°32.0'N 140°42.8'E
DEPTH : 55.7KM MAGNITUDE : 3.7

JMA INTENSITIES

II : MITO
I : KAKIOKA



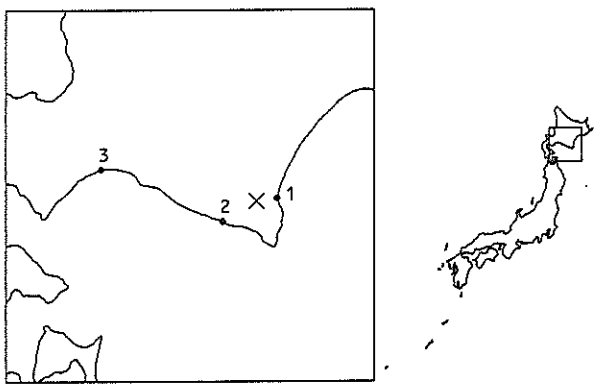
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 452	22	25	12	18

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

12:03 SEP. 2 ,1991
HIDAKA MOUNTAINS REGION
EPICENTER : 42°17.2'N 143°7.5 'E
DEPTH : 66.7KM MAGNITUDE : 5.0

JMA INTENSITIES

III : URAKAWA,HIROO



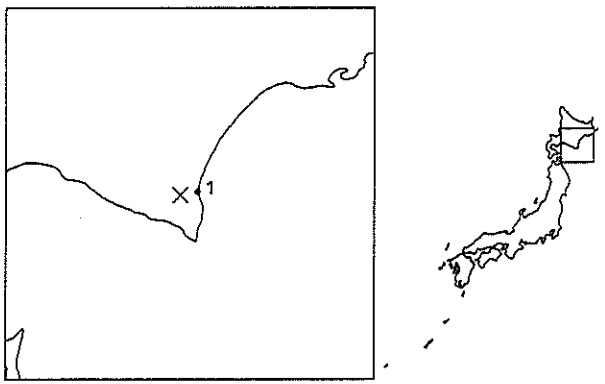
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1372	14	7	7	16
2	URAKAWA-S	ON GROUND	S-2385	1	1	1	31
3	TOMAKOMAI-S	ON GROUND	S-2387	3	6	1	129

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

13:38 SEP. 2 ,1991
HIDAKA MOUNTAINS REGION
EPICENTER : 42°16.9'N 143°8.7 'E
DEPTH : 64.6KM MAGNITUDE : 4.2

JMA INTENSITIES

Ⅲ : HIROO



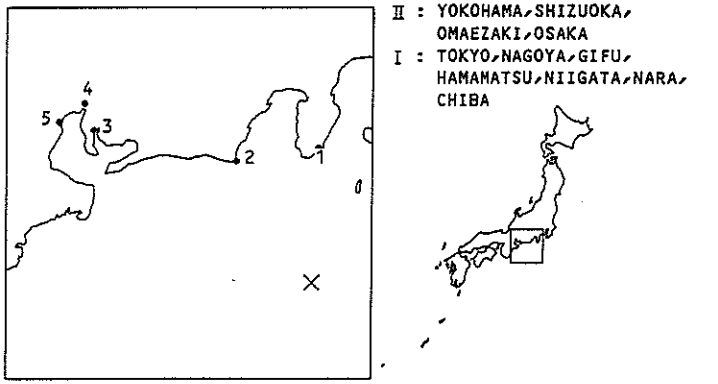
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1373	15	12	10	14

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

17:44 SEP. 3 ,1991
NEAR MIYAKEJIMA ISLAND
EPICENTER : 33°41.0'N 138°49.9'E
DEPTH : 33.1KM MAGNITUDE : 6.3

JMA INTENSITIES

Ⅳ : MIYAKEJIMA
Ⅲ : YOKKAICHI,HACHIJOJIMA, OSHIMA,TATEYAMA,MISHIMA, IROZAKI
Ⅱ : YOKOHAMA,SHIZUOKA, OMAEZAKI,OSAKA
Ⅰ : TOKYO,NAGOYA,GIFU, HAMAMATSU,NIIGATA,NARA, CHIBA

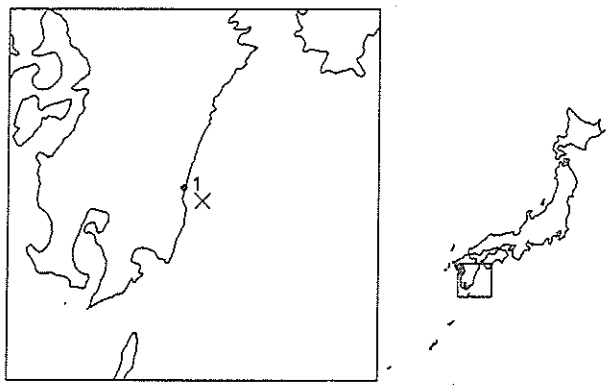


	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHIMODA-F	ON GROUND	F- 434	11	10	5	109
2	OMAEZAKI-M	ON GROUND	M-1374	9	10	5	117
3	KINUURA-JI-S	ON GROUND	S-2386	3	4	3	218
4	INAE-YAITA-M	ON STRUC.	M-1386		14		237
5	YOKKA.-SEKITAN-M	ON STRUC.	M-1375		12		245

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

12:06 SEP. 17,1991
HYUGANADA REGION
EPICENTER : 31°48.5'N 131°37.4'E
DEPTH : 25.8KM MAGNITUDE : 4.6

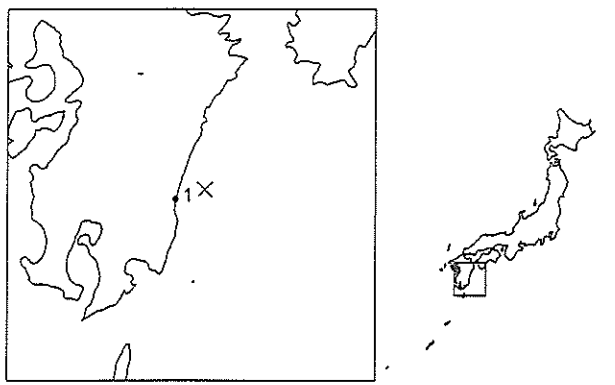
JMA INTENSITIES
II : MIYAZAKI



	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	MIYAZAKI-M	ON GROUND	M-1376	5	6	6	18

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

23:14 SEP. 20,1991
HYUGANADA REGION
EPICENTER : 31°58.4'N 131°42.7'E
DEPTH : 41.0KM MAGNITUDE : 4.2

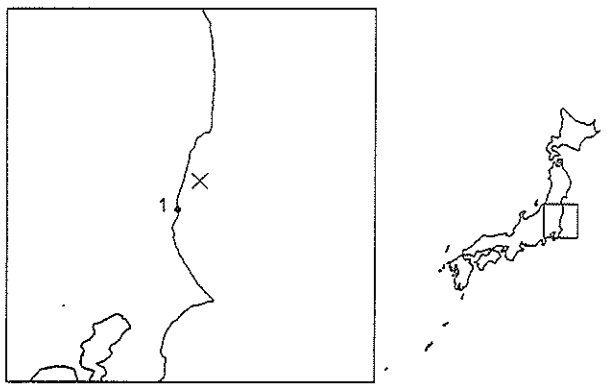


	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	MIYAZAKI-M	ON GROUND	M-1378	2	2	2	25

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

21:04 SEP. 22,1991
E OFF IBARAKI PREF
EPICENTER : 36°34.9'N 140°50.0'E
DEPTH : 48.7KM MAGNITUDE : 3.9

JMA INTENSITIES
II : MITO,KAKIOKA

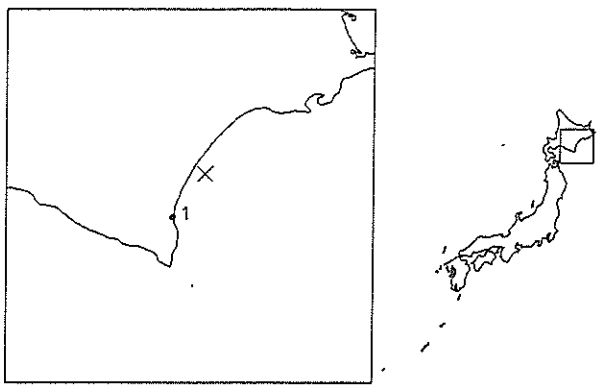


	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 453	21	17	11	29

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

02:14 SEP. 27,1991
SE OFF TOKACHI
EPICENTER : 42°34.7'N 143°41.3'E
DEPTH : 70.8KM MAGNITUDE : 4.5

JMA INTENSITIES
II : HIROO,OBIHIRO
I : KUSHIRO,HACHINOHE



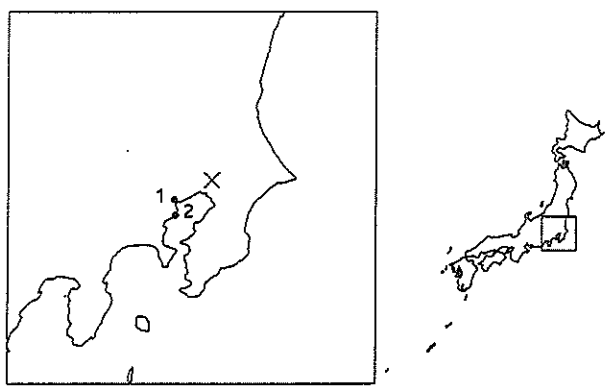
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	TOKACHI-M	ON GROUND	M-1377	22	24	11	43

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

13:13 SEP. 29,1991
NORTHERN CHIBA PREF
EPICENTER : 35°45.0'N 140°6.2 'E
DEPTH : 79.4KM MAGNITUDE : 4.9

JMA INTENSITIES

II : TOKYO,YOKOHAMA,TATEYAMA,
OSHIMA,MITO,CHIBA,AJIRO
I : CHICHIBU,KOFU,KATSUURA



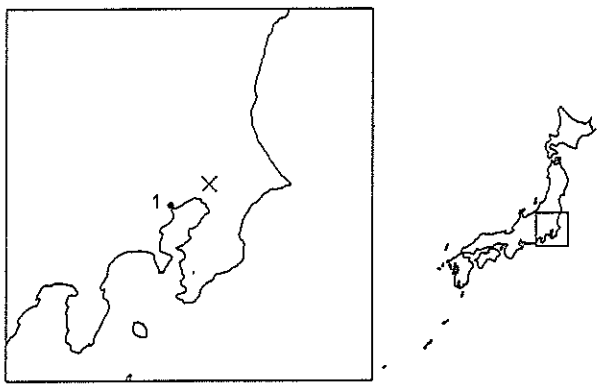
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1379	1	2	1	33
1	SHINAGAWA-S	ON GROUND	S-2392	7	8	3	33
2	KAWASAKI-FR	ON STRUC.	F- 446	8	19	3	41
2	KAWASAKI-F	ON GROUND	F- 445	8	12	4	41
2	KAWASAKI-FB	IN GROUND	F- 444	3	5	1	41

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

13:42 SEP. 29,1991
NORTHERN CHIBA PREF
EPICENTER : 35°45.6'N 140°7.7 'E
DEPTH : 81.6KM MAGNITUDE : 4.2

JMA INTENSITIES

II : YOKOHAMA,AJIRO
I : TOKYO,KAWAGUCHIKO,CHIBA



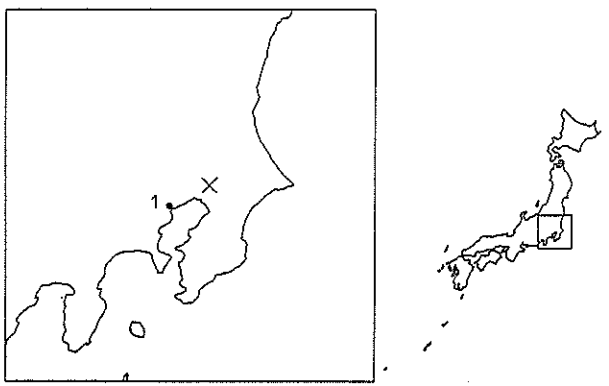
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1380		1	1	36
1	SHINAGAWA-S	ON GROUND	S-2393	3	5	2	36

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

14:00 SEP. 29,1991
NORTHERN CHIBA PREF
EPICENTER : 35°45.4'N 140°7.7 'E
DEPTH : 81.1KM MAGNITUDE : 4.3

JMA INTENSITIES

II : TOKYO,YOKOHAMA,CHIBA,
AJIRO,KAWAGUCHIKO
I : OSHIMA,TATEYAMA



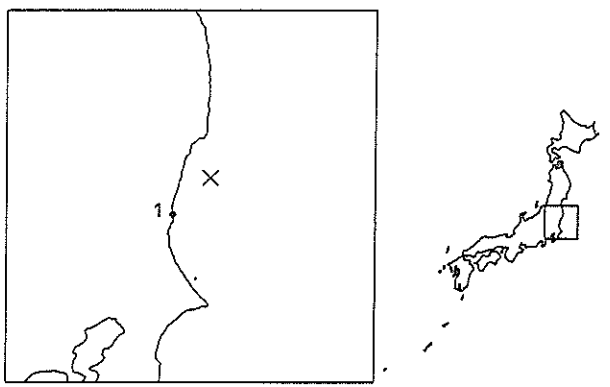
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1381	1	2	1	36
1	SHINAGAWA-S	ON GROUND	S-2394	6	9	3	36

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

04:54 OCT. 15,1991
E OFF IBARAKI PREF
EPICENTER : 36°37.9'N 140°58.7'E
DEPTH : 46.9KM MAGNITUDE : 4.3

JMA INTENSITIES

III : MITO
II : ONAHAMA,KAKIOKA
I : UTSUNOMIYA,FUKUSHIMA



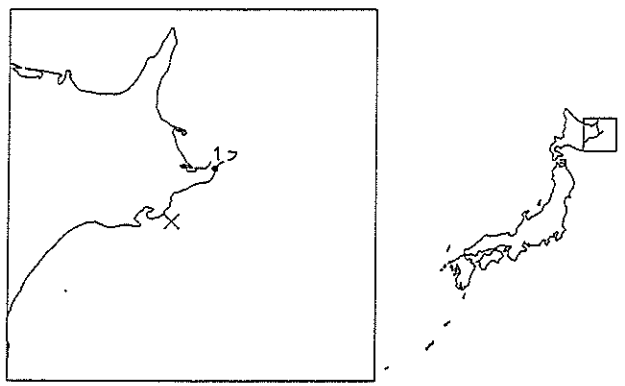
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 454	23	25	11	42

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

01:57 OCT. 18,1991
OFF NEMURO PENINSULA
EPICENTER : 42°56.3'N 145°6.0 'E
DEPTH : 59.7KM MAGNITUDE : 5.3

JMA INTENSITIES

Ⅲ : KUSHIRO,NEMURO
Ⅰ : OBIHIRO,HIROO,HACHINOHE



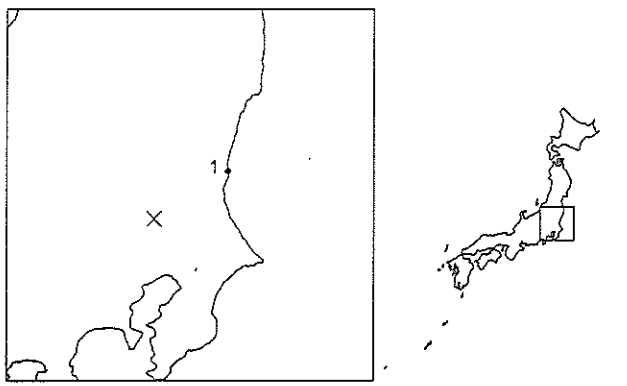
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HANASAKI-F	ON GROUND	F- 431	13	15	7	55

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

08:31 OCT. 19,1991
SW IBARAKI PREF
EPICENTER : 36°5.0 'N 139°55.2'E
DEPTH : 59.0KM MAGNITUDE : 4.3

JMA INTENSITIES

Ⅳ : KUMAGAYA
Ⅲ : UTSUNOMIYA
Ⅱ : TOKYO,MITO,YOKOHAMA
Ⅰ : AJIRO,CHIBA



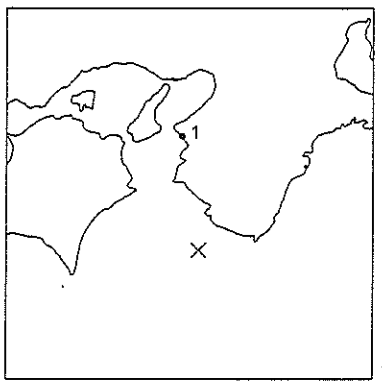
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 455	18	32	9	71

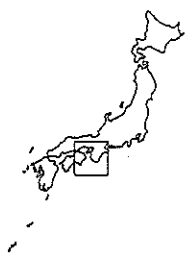
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

18:51 OCT. 20,1991
S OFF KII PENINSULA
EPICENTER : 33°22.5'N 135°16.3'E
DEPTH : 52.0KM MAGNITUDE : 5.1

JMA INTENSITIES

Ⅲ : TOKUSHIMA
Ⅱ : WAKAYAMA,SHIONOMISAKI,
MUROTOMISAKI,OSAKA
Ⅰ : TAKAMATSU,KOBE,TSURUGA





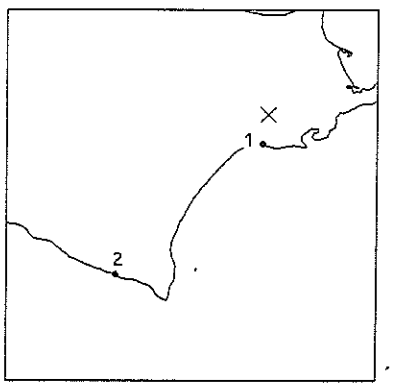
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	WAKAYAMA-S	ON GROUND	S-2388	20	16	5	93

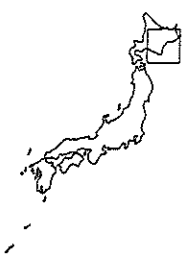
STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

19:39 OCT. 25,1991
KUSHIRO REGION
EPICENTER : 43°12.2'N 144°26.6'E
DEPTH : 104.9KM MAGNITUDE : 6.1

JMA INTENSITIES

Ⅳ : KUSHIRO
Ⅲ : URAKAWA,OBIHIRO,HIROO
Ⅱ : NEMURO,HACHINOHE,
MORIOKA,TOMAKOMAI,
OFUNATO,MIYAKO
Ⅰ : AOMORI,ISHINOMAKI





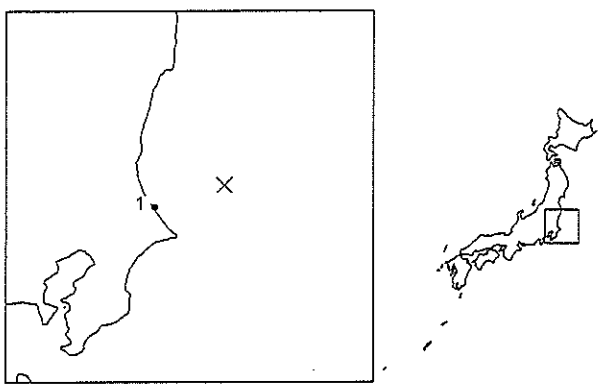
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KUSHIRO-JI-S	ON GROUND	S-2390	41	75	10	24
2	URAKAWA-S	ON GROUND	S-2391	7	5	3	178

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

14:06 OCT. 27,1991
FAR E OFF IBARAKI PREF
EPICENTER : 36°3.0 'N 141°20.5'E
DEPTH : 31.6KM MAGNITUDE : 5.2

JMA INTENSITIES

II : MITO,KAKIOKA,CHOSHI
I : ONAHAMA,UTSUNOMIYA, CHIBA,TOKYO



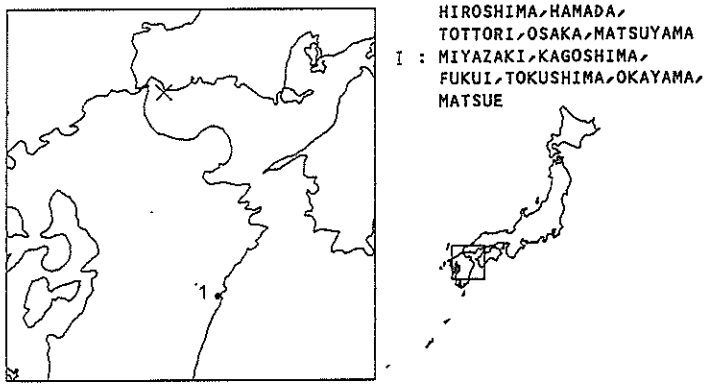
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KASHIMA-ZOKAN-S	ON GROUND	S-2389	30	21	6	59

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

10:09 OCT. 28,1991
SUONADA SETONAIKAI
EPICENTER : 33°55.2'N 131°10.0'E
DEPTH : 18.5KM MAGNITUDE : 5.9

JMA INTENSITIES

IV : FUKUOKA
III : YAMAGUCHI,OITA,SAGA, SHIMONOSEKI
II : KUMAMOTO,KOCHI, HIROSHIMA,HAMADA, TOTTORI,OSAKA,MATSUYAMA
I : MIYAZAKI,KAGOSHIMA, FUKUI,TOKUSHIMA,OKAYAMA, MATSUE



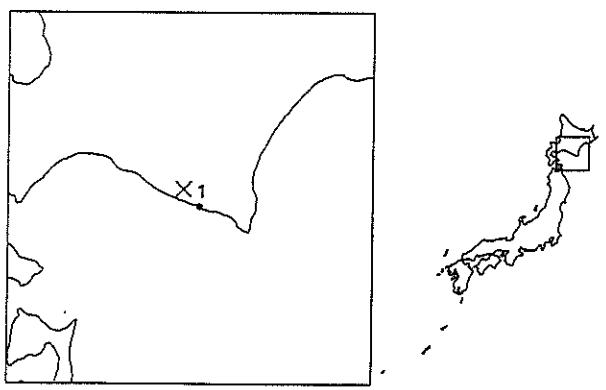
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HOSOSHIMA-F	ON GROUND	F- 450	5	7	2	171

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

21:04 NOV. 8 ,1991
HIDAKA REGION
EPICENTER : 42°18.1'N 142°38.5'E
DEPTH : 71.9KM MAGNITUDE : 4.6

JMA INTENSITIES

Ⅲ : HIROO,URAKAWA
I : OBIHIRO,MURORAN,OTARU,
TOMAKOMAI



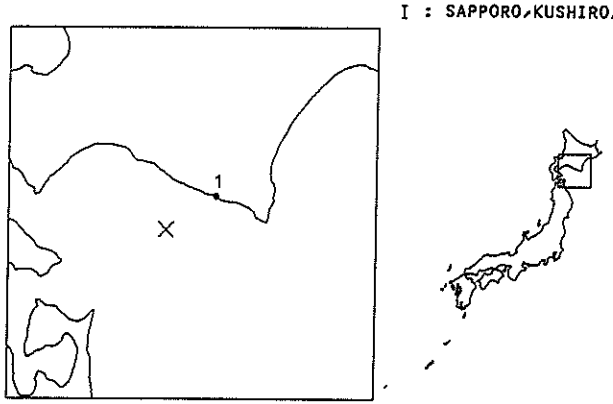
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2396	5	3	1	19

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

20:15 NOV. 11,1991
S OFF URAKAWA
EPICENTER : 41°57.8'N 142°15.1'E
DEPTH : 62.9KM MAGNITUDE : 4.8

JMA INTENSITIES

Ⅲ : HIROO
Ⅱ : URAKAWA,MURORAN,
TOMAKOMAI,HACHINOHE
I : SAPPORO,KUSHIRO,OFUNATO



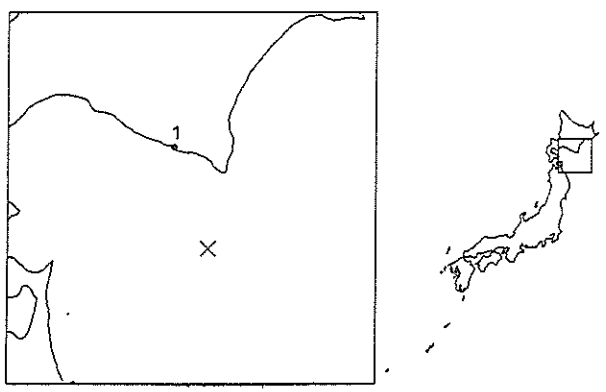
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2397	6	4	1	48

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

05:24 NOV. 18,1991
E OFF AOMORI PREF
EPICENTER : 41°24.1'N 143°0.4 'E
DEPTH : 67.4KM MAGNITUDE : 5.1

JMA INTENSITIES

Ⅲ : URAKAWA,HIROO
Ⅰ : KUSHIRO,HACHINOHE,
AOMORI,OBIHIRO



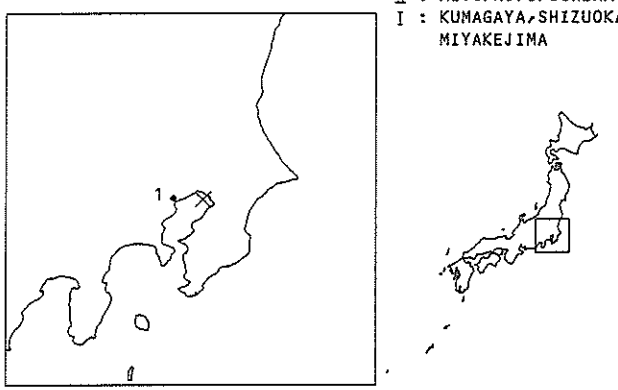
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2398	1	1	1	86

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

17:24 NOV. 19,1991
CENTRAL CHIBA PREF
EPICENTER : 35°36.3'N 140°1.5 'E
DEPTH : 81.2KM MAGNITUDE : 4.9

JMA INTENSITIES

Ⅳ : TOKYO
Ⅲ : UTSUNOMIYA,YOKOHAMA,
AJIRO,TATEYAMA,CHIBA
Ⅱ : MITO,KOFU,OSHIMA
Ⅰ : KUMAGAYA,SHIZUOKA,
MIYAKEJIMA



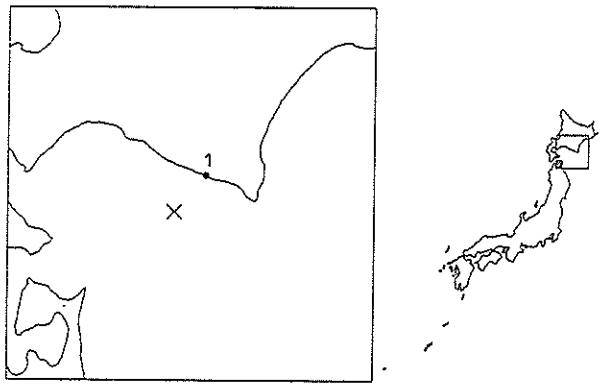
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	SHINAGAWA-MB	IN GROUND	M-1382	4	4	5	23
1	SHINAGAWA-S	ON GROUND	S-2395	73	38	8	23

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

19:39 NOV. 21,1991
S OFF URAKAWA
EPICENTER : 41°55.6'N 142°25.8'E
DEPTH : 66.7KM MAGNITUDE : 4.2

JMA INTENSITIES

II : URAKAWA



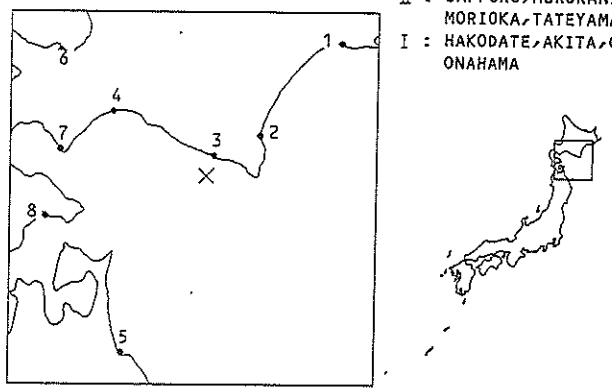
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2399	1	1	1	38

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

04:40 NOV. 27,1991
S OFF URAKAWA
EPICENTER : 41°59.8'N 142°39.9'E
DEPTH : 63.7KM MAGNITUDE : 6.4

JMA INTENSITIES

IV : HIROO,URAKAWA,OBIHIRO
III : KUSHIRO,TOMAKOMAI,OTARU, HACHINOHE
II : SAPPORO,MURORAN,AOMORI, MORIOKA,TATEYAMA
I : HAKODATE,AKITA,OFUNATO, ONAHAMA



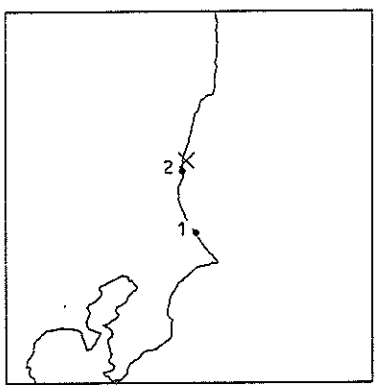
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KUSHIRO-JI-S	ON GROUND	S-2403	8	7	3	177
2	TOKACHI-M	ON GROUND	M-1383	95	90	59	63
3	URAKAWA-S	ON GROUND	S-2401	155	108	36	20
4	TOMAKOMAI-S	ON GROUND	S-2400	6	8	3	111
5	HACHINOHE-JI-S	ON GROUND	S-2404	6	6	4	188
6	OTARU-S	ON GROUND	S-2402	4	3	1	187
7	MURORAN-S	ON GROUND	S-2405	13	13	8	146
8	HAKODATE-FR	ON STRUC.	F- 427	7	6	3	161
8	HAKODATE-F	ON GROUND	F- 426	10	8	4	161
8	HAKODATE-FB	IN GROUND	F- 425	3	4	3	161

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

11:27 DEC. 12,1991
NORTHERN IBARAKI PREF
EPICENTER : 36°27.7'N 140°39.7'E
DEPTH : 48.4KM MAGNITUDE : 4.6

JMA INTENSITIES

Ⅳ : MITO
Ⅲ : KAKIOKA
Ⅱ : ONAHAMA
Ⅰ : TOKYO,UTSUNOMIYA,CHOSHI,
CHIBA



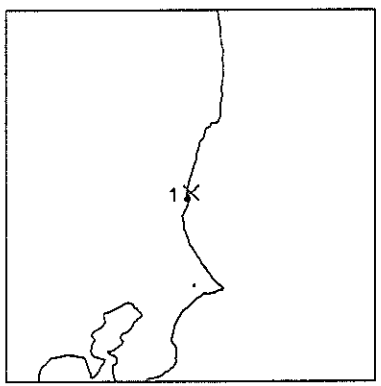
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	KASHIMA-ZOKAN-S	ON GROUND	S-2408	7	8	3	59
2	HITACHINAKA-F	ON GROUND	F- 456	94	118	31	9

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

18:06 DEC. 12,1991
NORTHERN IBARAKI PREF
EPICENTER : 36°25.7'N 140°39.3'E
DEPTH : 54.1KM MAGNITUDE : 3.3

JMA INTENSITIES

Ⅰ : MITO,KAKIOKA



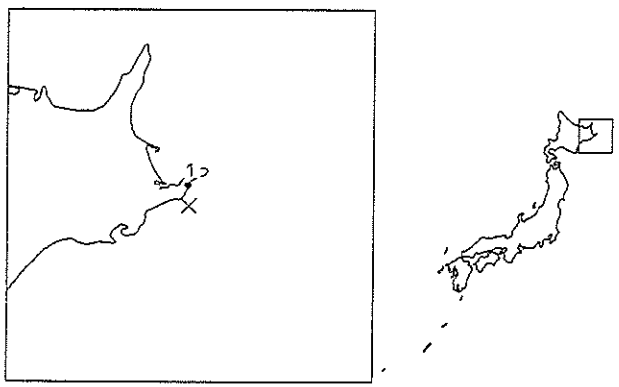
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 457	20	12	11	5

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

13:23 DEC. 17,1991
OFF NEMURO PENINSULA
EPICENTER : 43°8.1 'N 145°34.7'E
DEPTH : 50.3KM MAGNITUDE : 5.1

JMA INTENSITIES

Ⅲ : NEMURO
Ⅱ : KUSHIRO
Ⅰ : ABASHIRI,HIROO



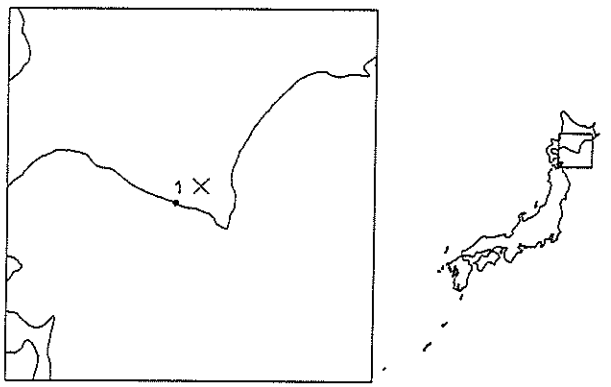
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HANASAKI-F	ON GROUND	F- 432	14	49	12	16

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

14:08 DEC. 18,1991
HIDAKA MOUNTAINS REGION
EPICENTER : 42°16.0'N 143°2.1 'E
DEPTH : 65.1KM MAGNITUDE : 4.0

JMA INTENSITIES

Ⅱ : URAKAWA
Ⅰ : HIROO,OBIHIRO



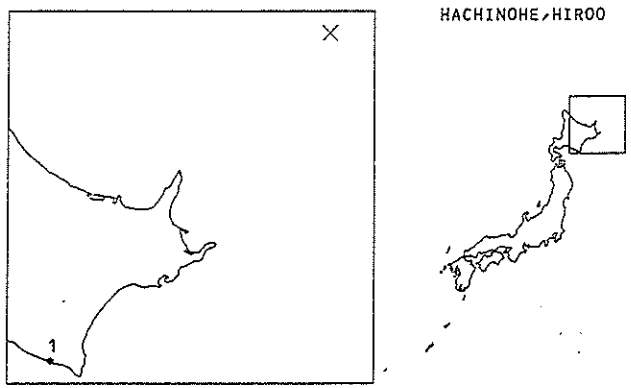
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2409	1	1	1	24

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

17:43 DEC. 22/1991
KURILE ISLANDS REGION
EPICENTER : 45°45.1'N 152°23.7'E
DEPTH : 10.0KM MAGNITUDE : 6.8

JMA INTENSITIES

II : URAKAWA/KUSHIRO
I : ASAHIKAWA/NEMURO/ABASHIRI/ONAHAMA/MORIOKA/AOMORI/HACHINOHE/HIROO



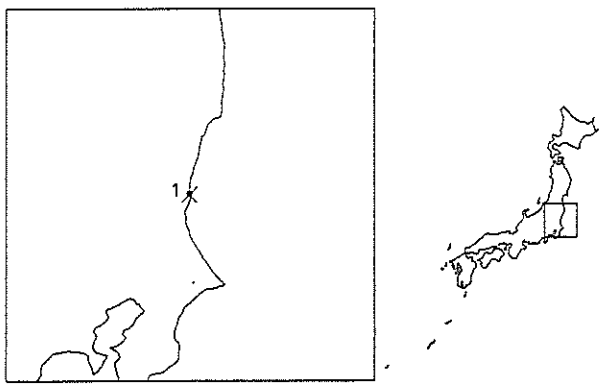
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	URAKAWA-S	ON GROUND	S-2410	3	3	3	866

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

05:52 DEC. 27/1991
NORTHERN IBARAKI PREF
EPICENTER : 36°23.0'N 140°36.9'E
DEPTH : 51.3KM MAGNITUDE : 3.5

JMA INTENSITIES

II : MITO
I : KAKIOKA



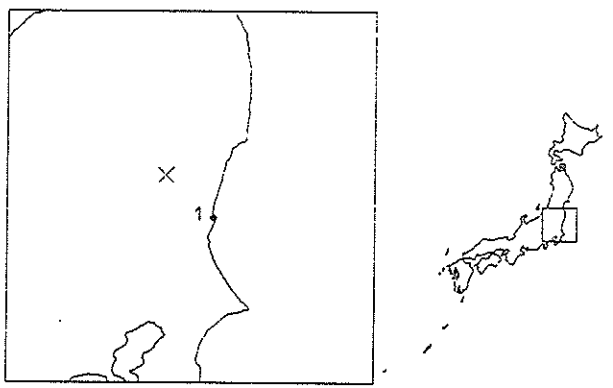
	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 458	30	18	12	0

STRONG-MOTION EARTHQUAKE OBSERVATION RESULTS

08:38 DEC. 31,1991
NORTHERN TOCHIGI PREF
EPICENTER : 36°43.8'N 140°13.5'E
DEPTH : 78.9KM MAGNITUDE : 4.4

JMA INTENSITIES

II : UTSUNOMIYA,MITO
I : NIKKO,ONAHAMA,KAKIOKA



	STATION	CONDITION	RECORD NUMBER	MAX.ACC.(GAL) (NS)	(EW)	(UD)	DIST. (KM)
1	HITACHINAKA-F	ON GROUND	F- 459	19	20	7	51

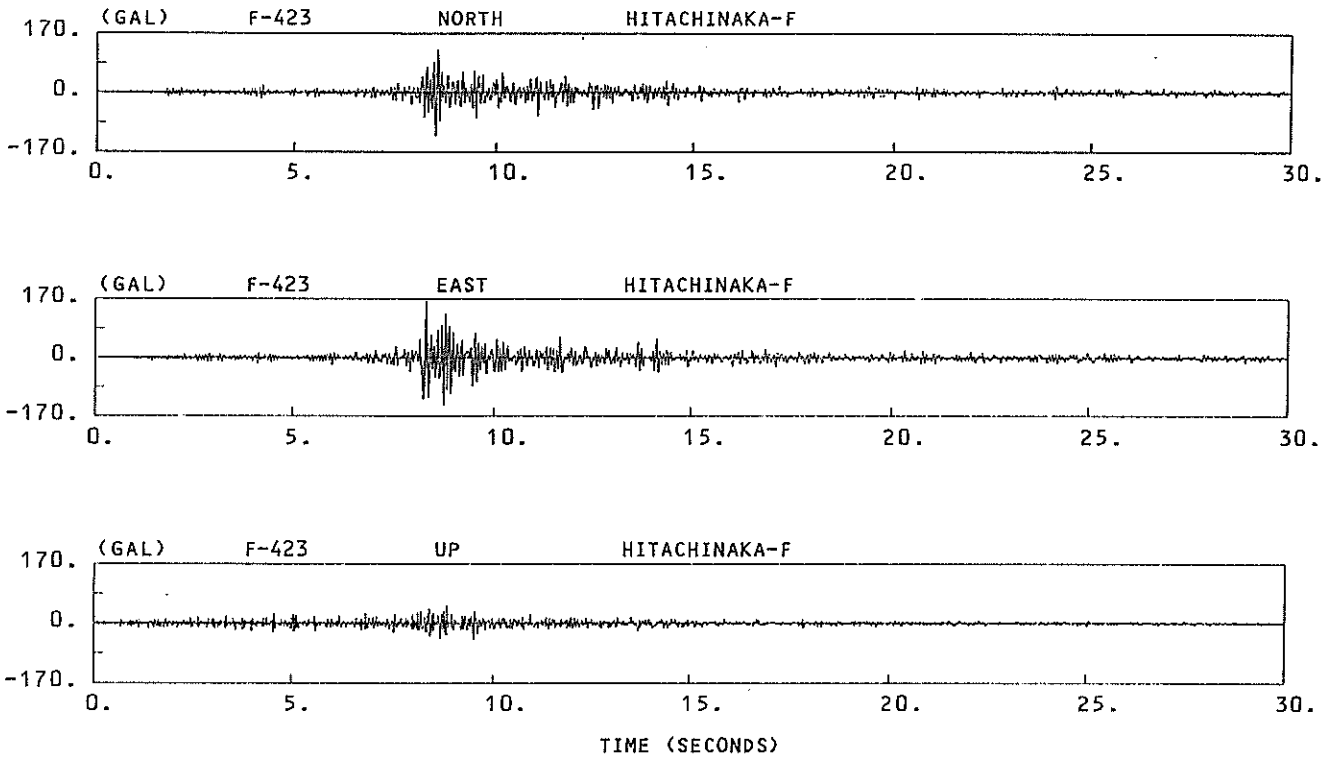
RECORD NUMBER F-423
STATION HITACHINAKA-F

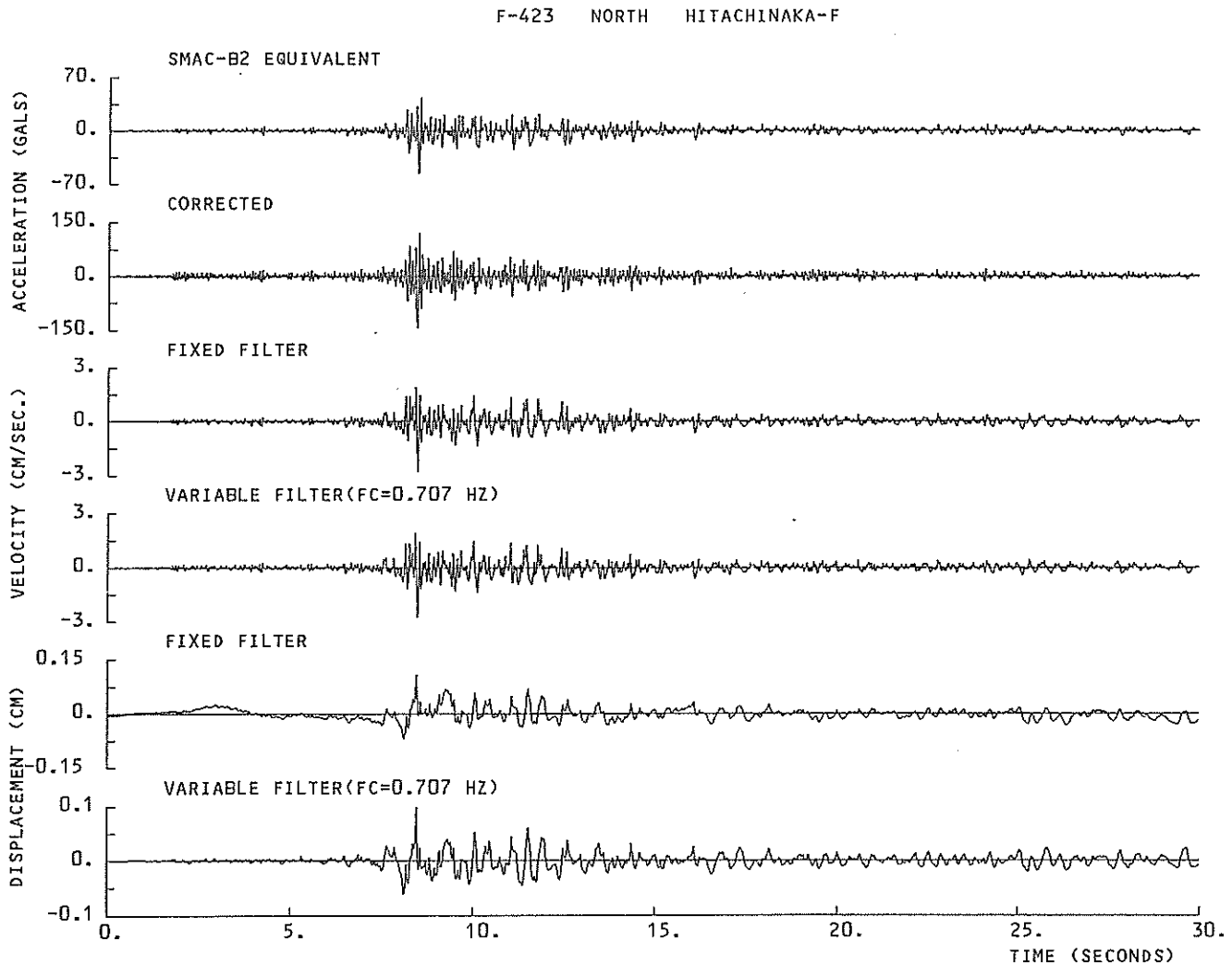
EARTHQUAKE DATA

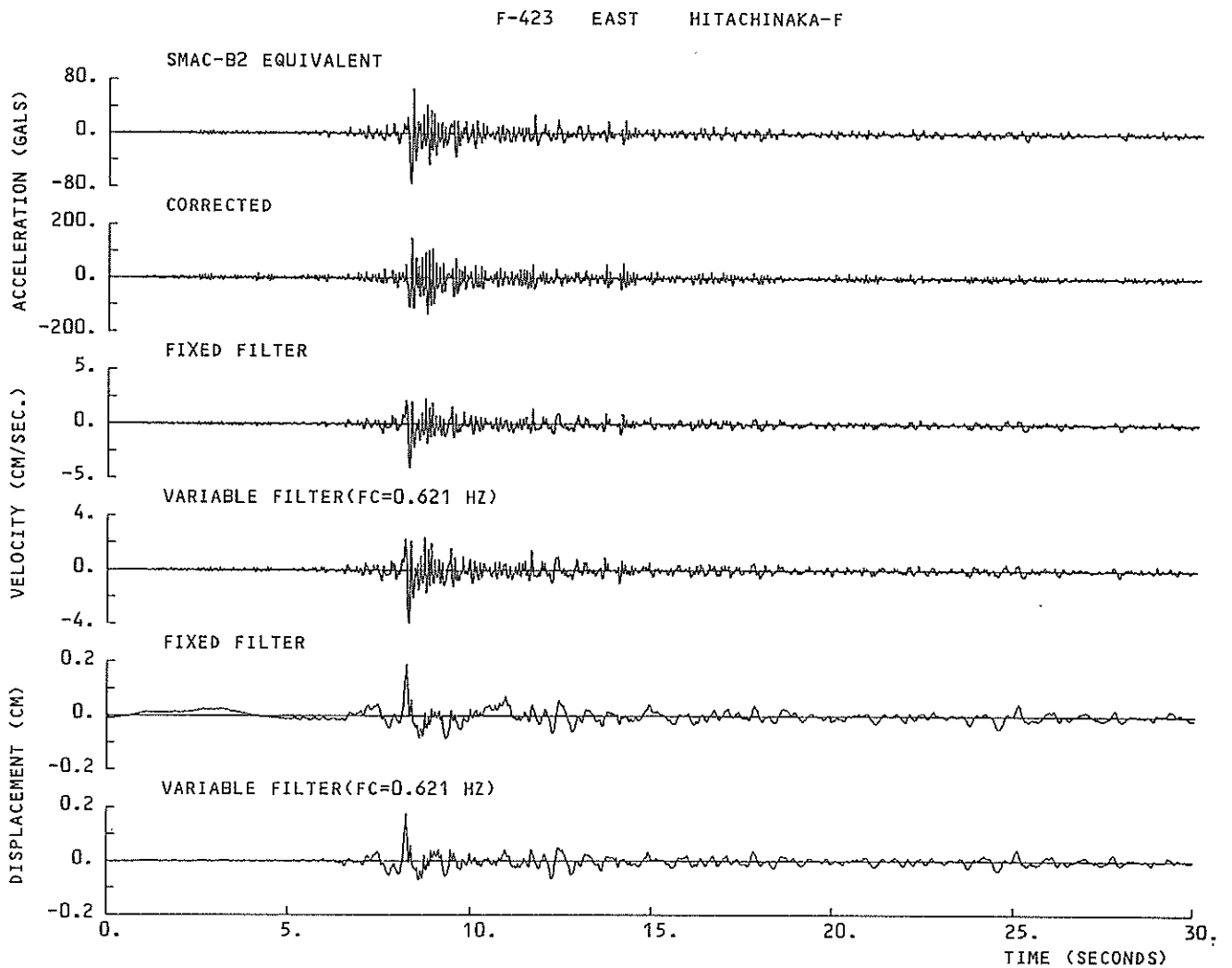
DATA AND TIME	12:15 JUNE25,1991
LOCATION OF HYPOCENTER	
EPCENTRAL REGION	SW IBARAKI PREF
LATITUDE	36° 0.0' N
LONGITUDE	139°54.2' E
DEPTH	67.6KM
MAGNITUDE	0.0

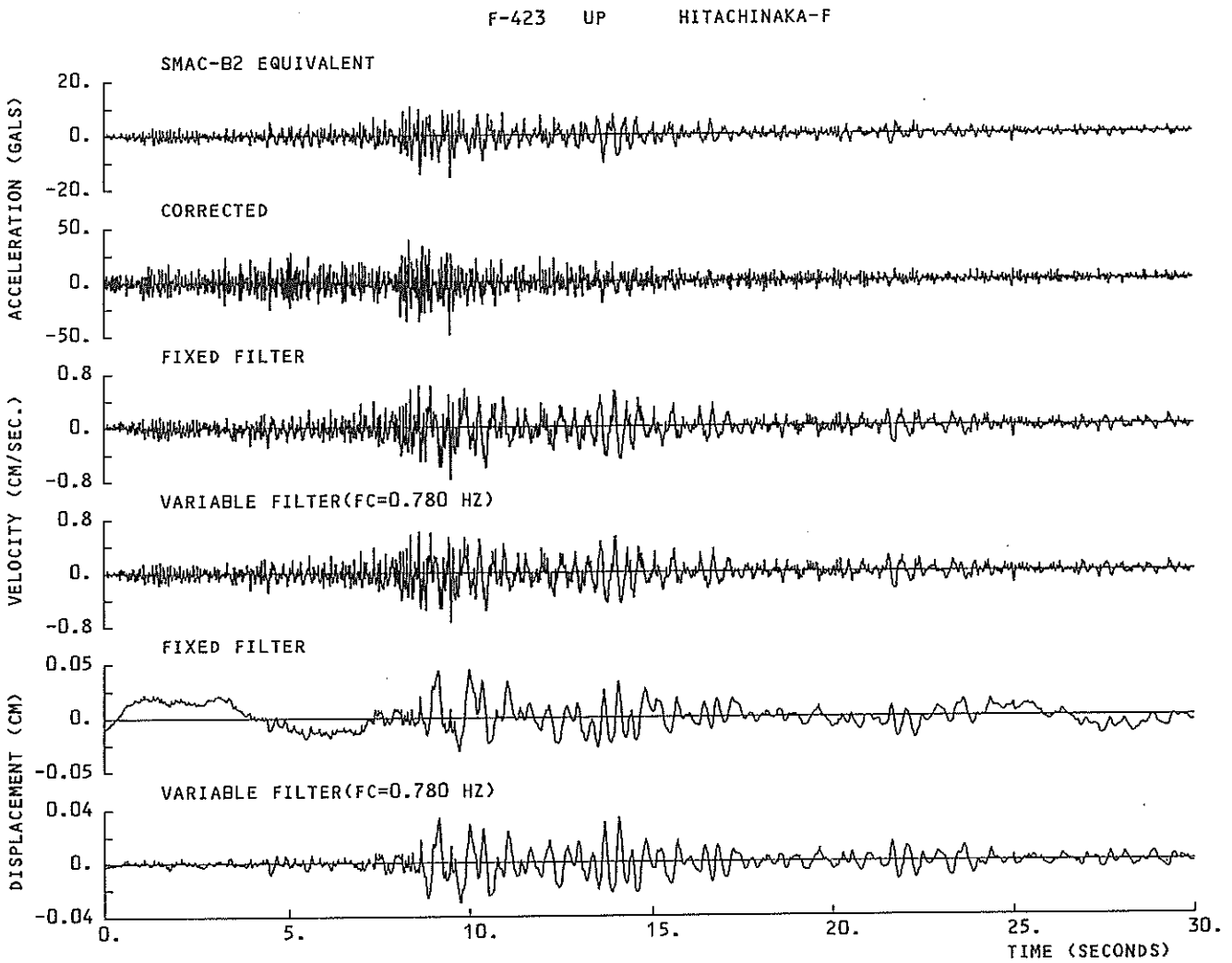
	PEAK VALUES OF COMPONENTS			
	N S	E W	U D	HORIZONTAL*
PARAMETER OF THE VARIABLE FILTER				
FC (HZ)	0.707	0.621	0.780	
MAXIMUM ACCELERATION (GAL)				
SMAC-B2 EQUIVALENT	62.3	75.2	15.6	76.1
ORIGINAL	146.8	165.1	51.3	165.5
CORRECTED	144.4	165.3	49.2	166.9
MAXIMUM VELOCITY (CM/SEC)				
FIXED FILTER	2.87	4.05	0.77	4.06
VARIABLE FILTER	2.87	3.93	0.75	3.93
MAXIMUM DISPLACEMENT (CM)				
FIXED FILTER	0.109	0.192	0.045	0.192
VARIABLE FILTER	0.098	0.176	0.034	0.176

* RESULTANT OF HORIZONTAL COMPONENTS

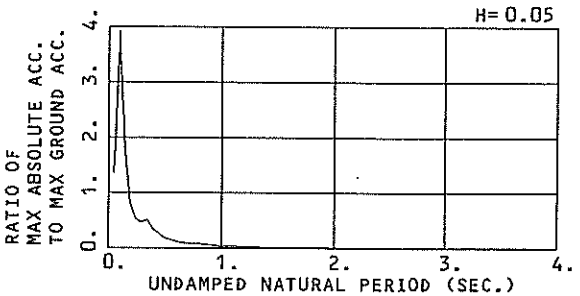

(GAL) F-423 NORTH HITACHINAKA-F
170.
0.
-170.
0. 5. 10. 15. 20. 25. 30.
(GAL) F-423 EAST HITACHINAKA-F
170.
0.
-170.
0. 5. 10. 15. 20. 25. 30.
(GAL) F-423 UP HITACHINAKA-F
170.
0.
-170.
0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)

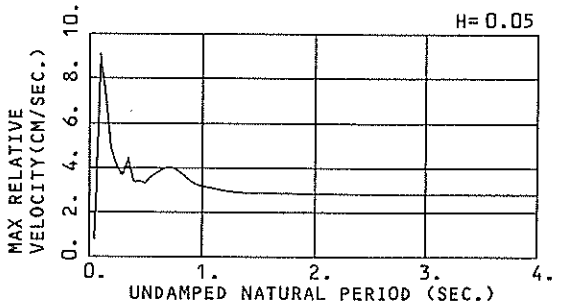

F-423 NORTH HITACHINAKA-F
SMAC-B2 EQUIVALENT
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.707 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.707 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
70.
0.
-70.
150.
0.
-150.
3.
0.
-3.
3.
0.
-3.
0.15
0.
-0.15
0.1
0.
-0.1
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

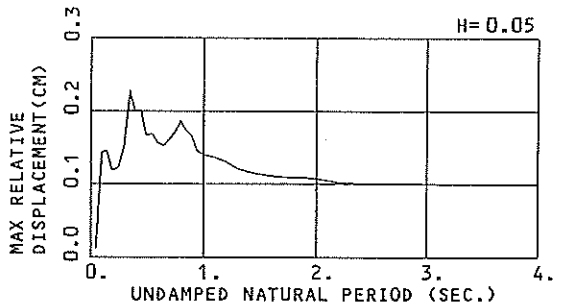

F-423 EAST HITACHINAKA-F
SMAC-B2 EQUIVALENT
80.
0.
-80.
ACCELERATION (GALS)
CORRECTED
200.
0.
-200.
FIXED FILTER
5.
0.
-5.
VELOCITY (CM/SEC.)
VARIABLE FILTER(FC=0.621 HZ)
4.
0.
-4.
FIXED FILTER
0.2
0.
-0.2
DISPLACEMENT (CM)
VARIABLE FILTER(FC=0.621 HZ)
0.2
0.
-0.2
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


F-423 UP HITACHINAKA-F
SMAC-B2 EQUIVALENT
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.780 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.780 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
20.
0.
-20.
50.
0.
-50.
0.8
0.
-0.8
0.8
0.
-0.8
0.05
0.
-0.05
0.04
0.
-0.04
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

F-423 NORTH HITACHINAKA-F
(1/FC=1.42 SEC.)

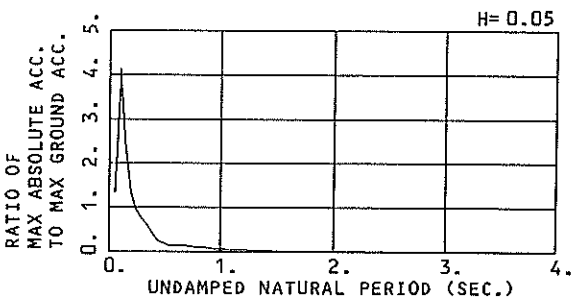


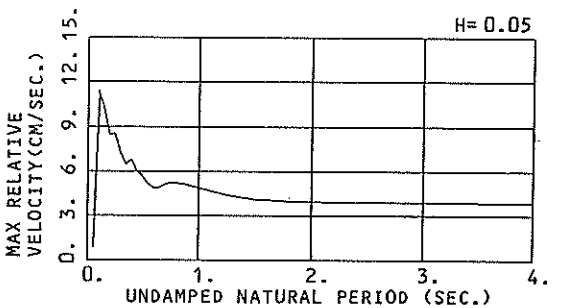


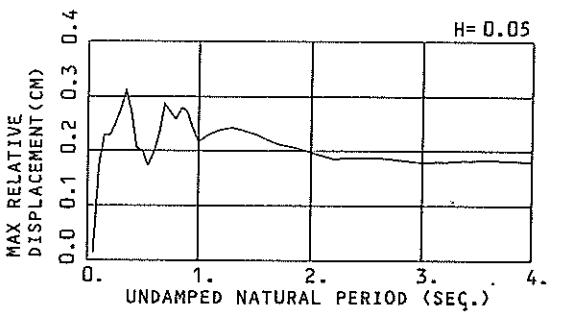


RESPONSE SPECTRA

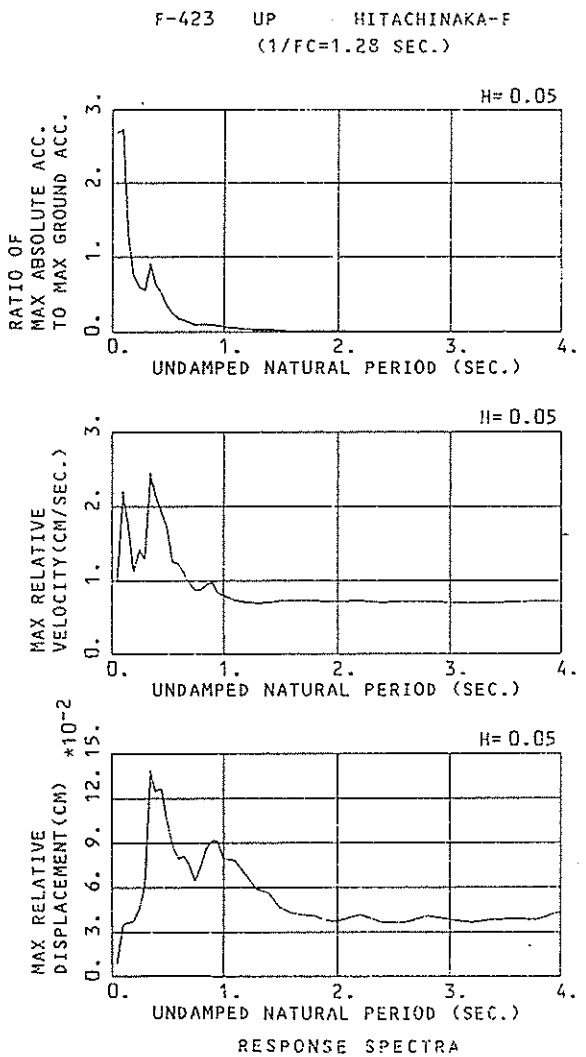
F-423 EAST HITACHINAKA-F
(1/FC=1.61 SEC.)

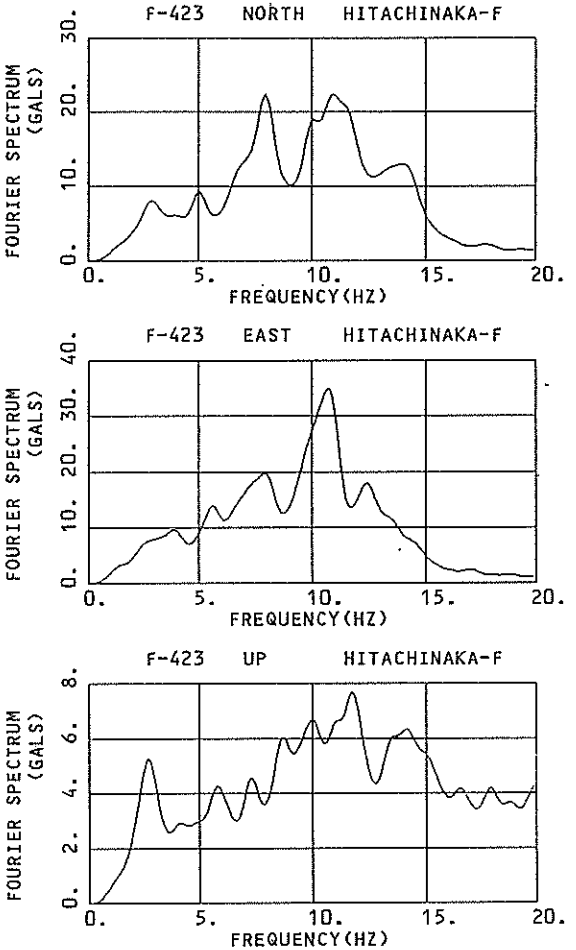






RESPONSE SPECTRA


F-423 UP HITACHINAKA-F
(1/FC=1.28 SEC.)
H= 0.05
RATIO OF
MAX ABSOLUTE ACC.
TO MAX GROUND ACC.
0. 1. 2. 3.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
H= 0.05
MAX RELATIVE
VELOCITY(CM/SEC.)
0. 1. 2. 3.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
H= 0.05
MAX RELATIVE
DISPLACEMENT(CM) *10-2
0. 3. 6. 9. 12. 15.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
RESPONSE SPECTRA


F-423 NORTH HITACHINAKA-F
FOURIER SPECTRUM
(GALS)
0. 10. 20. 30.
0. 5. 10. 15. 20.
FREQUENCY(HZ)
F-423 EAST HITACHINAKA-F
FOURIER SPECTRUM
(GALS)
0. 10. 20. 30. 40.
0. 5. 10. 15. 20.
FREQUENCY(HZ)
F-423 UP HITACHINAKA-F
FOURIER SPECTRUM
(GALS)
0. 2. 4. 6. 8.
0. 5. 10. 15. 20.
FREQUENCY(HZ)

RESPONSE SPECTRUM

RECORD = F-423 COMPONENT = NORTH SIGNAL = GR. ACC. CORRECTION = STATION = HITACHINAKA-F
DATE AND TIME = 1991- 6-25-11- 5 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 144.44 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	328.8	2.06	0.021	202.5	0.85	0.013	195.9	0.77	0.012	188.9	0.70	0.012	181.4	0.61	0.011
0.10	2080.3	33.03	0.527	728.2	11.93	0.184	568.3	9.10	0.144	411.3	6.41	0.102	263.2	3.49	0.061
0.15	798.8	18.97	0.455	303.9	8.60	0.175	263.6	7.40	0.146	213.6	6.25	0.119	159.6	4.16	0.078
0.20	543.2	17.25	0.550	166.9	5.56	0.170	118.3	4.92	0.118	97.3	4.28	0.093	98.4	3.60	0.079
0.25	141.7	5.83	0.224	93.8	4.52	0.148	77.9	4.08	0.123	71.4	3.63	0.108	71.8	3.19	0.086
0.30	205.7	9.84	0.469	83.5	4.39	0.191	65.9	3.67	0.149	58.0	3.47	0.128	53.0	3.18	0.087
0.35	283.0	15.92	0.878	109.1	6.05	0.337	73.5	4.45	0.227	50.6	3.14	0.153	42.7	3.08	0.089
0.40	76.0	5.02	0.308	50.9	3.63	0.206	49.9	3.39	0.201	40.7	3.21	0.161	37.0	3.10	0.098
0.45	99.2	7.17	0.509	49.6	4.10	0.254	39.7	3.42	0.202	30.0	3.26	0.149	32.5	3.17	0.101
0.50	84.6	7.02	0.536	31.1	3.31	0.196	26.7	3.33	0.167	23.3	3.34	0.141	28.9	3.24	0.104
0.55	34.2	3.77	0.262	26.4	3.68	0.201	22.4	3.61	0.169	20.0	3.52	0.137	25.8	3.33	0.106
0.60	27.6	3.95	0.252	17.9	3.84	0.163	17.4	3.78	0.156	17.0	3.66	0.136	22.9	3.40	0.104
0.65	25.7	4.10	0.275	17.3	4.02	0.184	14.7	3.92	0.153	14.0	3.77	0.129	20.3	3.45	0.098
0.70	34.9	4.37	0.433	16.4	4.18	0.204	13.1	4.04	0.161	11.8	3.82	0.132	17.8	3.48	0.091
0.75	21.1	4.19	0.301	15.7	4.08	0.223	12.0	3.98	0.170	9.8	3.79	0.122	15.6	3.47	0.088
0.80	27.1	4.00	0.439	14.2	3.92	0.229	11.8	3.84	0.186	9.5	3.70	0.139	13.8	3.43	0.089
0.85	21.8	3.73	0.400	11.8	3.67	0.215	9.8	3.63	0.174	8.6	3.56	0.137	12.2	3.38	0.097
0.90	10.8	3.28	0.221	9.1	3.37	0.185	8.3	3.41	0.166	8.1	3.42	0.136	11.0	3.33	0.103
0.95	8.8	3.22	0.201	7.2	3.25	0.164	6.9	3.28	0.145	7.3	3.31	0.135	10.0	3.27	0.107
1.00	6.0	3.16	0.151	5.9	3.18	0.145	6.1	3.20	0.141	6.7	3.23	0.133	9.2	3.22	0.109
1.10	5.9	3.10	0.182	4.7	3.09	0.140	5.0	3.10	0.137	5.7	3.12	0.130	8.1	3.14	0.111
1.20	3.8	2.91	0.139	3.9	2.96	0.135	4.2	2.99	0.131	4.8	3.03	0.126	7.3	3.08	0.111
1.30	2.8	2.89	0.120	3.0	2.92	0.121	3.4	2.94	0.121	4.1	2.98	0.120	6.6	3.03	0.110
1.40	2.3	2.89	0.116	2.5	2.90	0.117	2.9	2.92	0.116	3.6	2.95	0.116	6.1	3.00	0.109
1.50	2.0	2.88	0.115	2.1	2.89	0.114	2.5	2.90	0.114	3.2	2.92	0.113	5.7	2.97	0.108
1.60	1.7	2.86	0.112	1.9	2.87	0.112	2.2	2.89	0.111	2.9	2.91	0.111	5.3	2.95	0.107
1.70	1.5	2.86	0.108	1.6	2.87	0.109	2.0	2.88	0.109	2.6	2.90	0.109	5.0	2.94	0.106
1.80	1.3	2.86	0.109	1.5	2.87	0.109	1.8	2.87	0.109	2.4	2.89	0.108	4.7	2.92	0.105
1.90	1.2	2.85	0.112	1.4	2.86	0.110	1.6	2.86	0.109	2.2	2.88	0.107	4.5	2.91	0.104
2.00	1.1	2.83	0.110	1.2	2.84	0.108	1.5	2.85	0.107	2.1	2.87	0.106	4.2	2.90	0.104
2.20	0.8	2.82	0.100	1.0	2.83	0.101	1.2	2.84	0.102	1.8	2.86	0.103	3.9	2.89	0.102
2.40	0.7	2.84	0.100	0.8	2.84	0.101	1.1	2.84	0.101	1.6	2.85	0.102	3.6	2.88	0.102
2.60	0.6	2.83	0.103	0.7	2.84	0.102	0.9	2.84	0.102	1.4	2.85	0.102	3.3	2.87	0.101
2.80	0.5	2.82	0.102	0.6	2.83	0.102	0.8	2.83	0.102	1.3	2.84	0.101	3.1	2.86	0.100
3.00	0.4	2.82	0.100	0.6	2.83	0.100	0.8	2.83	0.100	1.2	2.84	0.100	2.9	2.86	0.100
3.20	0.4	2.82	0.099	0.5	2.83	0.099	0.7	2.83	0.100	1.1	2.84	0.100	2.7	2.86	0.100
3.40	0.3	2.82	0.099	0.5	2.83	0.099	0.6	2.83	0.100	1.0	2.83	0.100	2.5	2.85	0.099
3.60	0.3	2.82	0.100	0.4	2.82	0.100	0.6	2.83	0.100	1.0	2.83	0.099	2.4	2.85	0.099
3.80	0.3	2.82	0.100	0.4	2.82	0.100	0.5	2.82	0.100	0.9	2.83	0.099	2.3	2.85	0.099
4.00	0.2	2.82	0.099	0.4	2.82	0.099	0.5	2.82	0.099	0.8	2.83	0.099	2.2	2.84	0.099

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = F-423 COMPONENT = EAST SIGNAL = GR. ACC. CORRECTION = STATION = HITACHINAKA-F
DATE AND TIME = 1991- 6-25-11- 5 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 165.28 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	285.9	1.84	0.018	223.8	0.86	0.014	218.9	0.83	0.014	211.5	0.79	0.013	200.9	0.73	0.012
0.10	1643.1	25.95	0.416	929.2	15.27	0.236	684.0	11.36	0.172	461.5	7.47	0.114	259.6	3.69	0.061
0.15	693.3	16.83	0.395	478.6	12.29	0.275	410.8	10.30	0.230	323.8	8.39	0.177	231.1	5.22	0.116
0.20	582.7	18.75	0.590	246.8	9.09	0.250	224.6	8.48	0.228	201.0	7.54	0.194	159.7	5.62	0.136
0.25	457.8	17.99	0.725	193.6	9.76	0.306	156.4	8.55	0.248	125.8	7.45	0.195	118.3	5.90	0.159
0.30	236.3	11.58	0.539	127.4	7.56	0.289	123.6	7.26	0.279	116.0	6.74	0.255	103.9	5.38	0.193
0.35	139.0	7.80	0.431	108.9	6.77	0.337	101.5	6.46	0.314	93.5	5.89	0.276	85.4	4.65	0.204
0.40	184.8	11.92	0.749	69.9	7.32	0.282	67.4	6.82	0.269	65.1	6.19	0.244	68.4	4.97	0.199
0.45	85.7	6.32	0.440	49.5	6.13	0.253	40.6	6.04	0.206	42.8	5.76	0.199	54.3	4.99	0.184
0.50	46.7	6.00	0.296	39.4	5.78	0.249	32.1	5.65	0.201	30.8	5.44	0.172	44.1	4.90	0.169
0.55	67.9	6.08	0.520	28.2	5.19	0.216	23.1	5.18	0.172	23.6	5.13	0.153	37.0	4.79	0.159
0.60	34.8	4.71	0.317	22.5	4.81	0.204	22.2	4.88	0.196	21.0	4.93	0.176	32.0	4.72	0.152
0.65	33.8	4.83	0.362	24.3	4.88	0.260	22.4	4.91	0.233	21.0	4.91	0.204	28.3	4.71	0.147
0.70	66.5	7.64	0.825	27.7	5.19	0.344	23.6	5.11	0.287	20.2	5.00	0.223	25.3	4.72	0.149
0.75	42.6	5.34	0.607	23.5	5.29	0.334	19.4	5.21	0.272	18.0	5.06	0.222	22.7	4.73	0.149
0.80	24.7	5.49	0.401	19.5	5.33	0.315	16.4	5.23	0.259	15.0	5.07	0.202	20.4	4.74	0.147
0.85	37.8	5.31	0.692	17.8	5.23	0.326	15.4	5.17	0.280	12.2	5.04	0.211	18.3	4.73	0.147
0.90	28.4	5.25	0.582	15.4	5.16	0.315	13.5	5.10	0.273	11.1	4.99	0.211	16.6	4.71	0.154
0.95	20.3	5.06	0.464	11.9	5.04	0.272	10.9	5.00	0.241	10.2	4.92	0.198	15.1	4.68	0.162
1.00	13.8	4.97	0.349	9.4	4.94	0.235	9.1	4.91	0.217	8.9	4.84	0.200	13.9	4.65	0.169
1.10	8.1	4.70	0.249	7.9	4.71	0.239	7.8	4.70	0.230	7.9	4.68	0.215	11.8	4.57	0.181
1.20	7.0	4.53	0.256	6.9	4.53	0.247	6.8	4.53	0.239	7.0	4.53	0.224	10.3	4.48	0.189
1.30	6.1	4.30	0.261	5.9	4.34	0.251	6.0	4.36	0.242	6.2	4.39	0.228	9.2	4.40	0.195
1.40	5.0	4.17	0.248	5.0	4.20	0.243	5.1	4.23	0.237	5.4	4.27	0.226	8.3	4.32	0.197
1.50	4.3	4.06	0.243	4.2	4.10	0.236	4.4	4.13	0.231	4.7	4.18	0.222	7.6	4.26	0.198
1.60	3.5	3.98	0.225	3.5	4.02	0.223	3.7	4.06	0.221	4.2	4.12	0.216	7.1	4.21	0.197
1.70	2.9	3.97	0.213	3.0	3.99	0.213	3.2	4.02	0.213	3.7	4.07	0.210	6.7	4.17	0.196
1.80	2.6	3.96	0.213	2.7	3.97	0.211	2.8	3.99	0.209	3.3	4.04	0.205	6.3	4.13	0.194
1.90	2.3	3.91	0.210	2.4	3.94	0.206	2.5	3.96	0.204	3.0	4.01	0.201	5.9	4.10	0.192
2.00	1.9	3.88	0.197	2.0	3.91	0.197	2.2	3.94	0.197	2.7	3.99	0.196	5.7	4.08	0.190
2.20	1.5	3.91	0.179	1.6	3.92	0.183	1.8	3.94	0.186	2.2	3.97	0.188	5.2	4.04	0.187
2.40	1.3	3.93	0.189	1.4	3.93	0.188	1.5	3.94	0.187	1.9	3.96	0.186	4.8	4.02	0.185
2.60	1.1	3.90	0.192	1.2	3.91	0.189	1.3	3.92	0.187	1.7	3.94	0.185	4.4	4.00	0.183
2.80	0.9	3.88	0.182	1.0	3.90	0.182	1.2	3.91	0.183	1.5	3.93	0.183	4.1	3.99	0.182
3.00	0.8	3.89	0.175	0.9	3.90	0.178	1.0	3.91	0.179	1.4	3.93	0.181	3.8	3.97	0.181
3.20	0.7	3.90	0.178	0.8	3.90	0.179	0.9	3.91	0.179	1.3	3.92	0.180	3.6	3.96	0.180
3.40	0.6	3.90	0.183	0.7	3.90	0.182	0.8	3.91	0.182	1.2	3.92	0.181	3.4	3.96	0.180
3.60	0.6	3.89	0.187	0.6	3.89	0.185	0.8	3.90	0.183	1.1	3.91	0.181	3.2	3.95	0.179
3.80	0.5	3.87	0.186	0.6	3.88	0.184	0.7	3.89	0.183	1.1	3.91	0.181	3.1	3.94	0.179
4.00	0.4	3.87	0.182	0.5	3.88	0.181	0.6	3.89	0.180	1.0	3.90	0.179	2.9	3.94	0.178

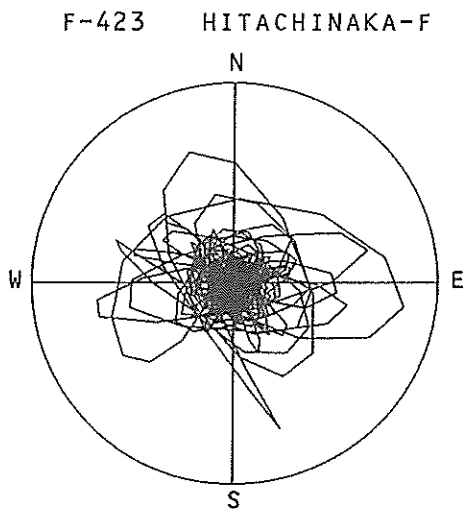
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

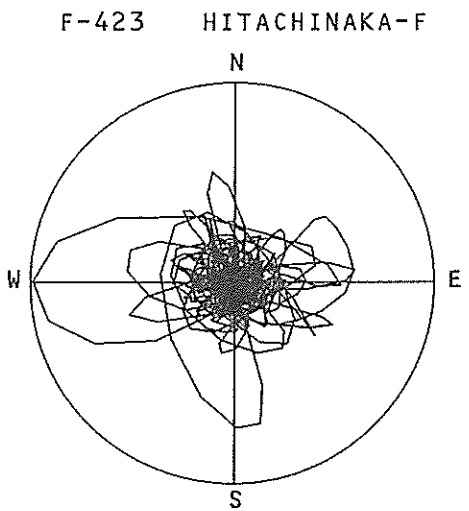
RECORD = F-423 COMPONENT = UP SIGNAL = GR. ACC. CORRECTION = STATION = HITACHINAKA-F
DATE AND TIME = 1991- 6-25-11- 5 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 49.21 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	524.9	4.13	0.033	162.7	1.32	0.010	132.3	1.01	0.008	98.0	0.71	0.006	68.6	0.41	0.004
0.10	402.2	6.52	0.102	191.7	3.13	0.048	134.5	2.20	0.034	89.6	1.46	0.022	60.9	0.87	0.014
0.15	80.6	1.82	0.046	69.3	1.81	0.040	63.6	1.77	0.036	55.3	1.47	0.031	43.7	0.90	0.021
0.20	181.2	5.78	0.184	44.2	1.31	0.045	36.5	1.13	0.037	31.9	1.03	0.031	26.2	0.88	0.021
0.25	145.8	5.82	0.231	37.7	1.78	0.060	29.0	1.43	0.046	23.4	1.11	0.036	19.0	0.92	0.026
0.30	74.3	3.53	0.169	32.2	1.49	0.073	27.1	1.29	0.061	23.2	1.13	0.052	18.1	0.97	0.035
0.35	98.5	5.57	0.306	54.7	3.04	0.170	44.8	2.44	0.139	29.1	1.59	0.089	16.9	1.09	0.047
0.40	100.9	6.42	0.409	40.5	2.91	0.164	30.9	2.14	0.125	24.7	1.61	0.097	15.6	1.18	0.055
0.45	50.6	3.95	0.259	30.7	2.39	0.158	24.8	1.92	0.127	17.6	1.46	0.088	12.7	1.15	0.054
0.50	44.7	3.71	0.283	23.0	2.08	0.145	16.9	1.72	0.106	12.7	1.30	0.078	9.9	1.03	0.051
0.55	16.0	1.73	0.122	13.3	1.43	0.101	11.8	1.25	0.088	10.1	1.01	0.073	8.0	0.88	0.049
0.60	20.9	2.31	0.191	11.3	1.34	0.103	8.8	1.24	0.079	8.2	1.06	0.069	7.3	0.82	0.050
0.65	11.3	1.26	0.121	9.0	1.22	0.096	7.7	1.10	0.081	6.3	0.99	0.065	6.5	0.78	0.050
0.70	8.3	1.24	0.103	6.9	1.05	0.085	6.2	0.96	0.075	5.5	0.91	0.064	5.8	0.76	0.048
0.75	7.5	0.92	0.106	4.7	0.88	0.067	4.6	0.87	0.064	4.3	0.86	0.058	5.1	0.75	0.047
0.80	10.6	1.43	0.173	5.1	0.92	0.081	4.7	0.88	0.075	4.3	0.83	0.065	4.6	0.75	0.045
0.85	10.3	1.56	0.188	5.6	1.14	0.102	4.9	0.94	0.087	4.1	0.82	0.069	4.2	0.75	0.045
0.90	9.9	1.77	0.203	5.6	1.24	0.115	4.5	0.97	0.092	3.5	0.81	0.065	3.7	0.74	0.044
0.95	9.6	1.49	0.219	5.3	0.95	0.121	4.1	0.84	0.091	3.0	0.79	0.067	3.4	0.73	0.043
1.00	5.8	1.25	0.147	3.9	0.92	0.099	3.2	0.80	0.080	2.7	0.76	0.064	3.1	0.72	0.046
1.10	3.2	0.90	0.098	2.9	0.74	0.087	2.6	0.74	0.078	2.3	0.72	0.064	2.6	0.70	0.049
1.20	2.9	0.85	0.107	2.1	0.73	0.075	2.0	0.71	0.069	1.9	0.70	0.061	2.3	0.68	0.049
1.30	1.7	0.72	0.071	1.4	0.71	0.061	1.5	0.70	0.059	1.6	0.69	0.057	2.0	0.67	0.048
1.40	1.5	0.81	0.072	1.2	0.75	0.060	1.2	0.71	0.056	1.3	0.70	0.053	1.8	0.68	0.046
1.50	0.9	0.78	0.052	0.8	0.75	0.045	0.9	0.73	0.046	1.1	0.71	0.047	1.6	0.69	0.044
1.60	0.7	0.71	0.047	0.7	0.73	0.043	0.8	0.73	0.043	0.9	0.72	0.043	1.5	0.70	0.043
1.70	0.7	0.77	0.050	0.6	0.75	0.044	0.6	0.73	0.042	0.8	0.72	0.040	1.4	0.70	0.041
1.80	0.6	0.74	0.047	0.5	0.73	0.043	0.5	0.73	0.041	0.7	0.72	0.039	1.3	0.71	0.039
1.90	0.5	0.69	0.045	0.5	0.71	0.040	0.5	0.72	0.038	0.6	0.72	0.038	1.2	0.71	0.038
2.00	0.4	0.72	0.045	0.4	0.72	0.040	0.4	0.72	0.037	0.5	0.72	0.037	1.1	0.71	0.037
2.20	0.4	0.74	0.052	0.4	0.73	0.045	0.4	0.73	0.042	0.5	0.72	0.038	1.0	0.71	0.036
2.40	0.3	0.68	0.046	0.3	0.70	0.040	0.3	0.71	0.036	0.4	0.71	0.035	0.9	0.71	0.035
2.60	0.3	0.73	0.047	0.3	0.72	0.040	0.3	0.72	0.037	0.4	0.71	0.035	0.9	0.71	0.035
2.80	0.3	0.74	0.050	0.2	0.73	0.045	0.2	0.72	0.041	0.3	0.72	0.037	0.8	0.71	0.035
3.00	0.2	0.70	0.044	0.2	0.71	0.040	0.2	0.71	0.038	0.3	0.71	0.036	0.7	0.71	0.035
3.20	0.2	0.68	0.046	0.2	0.69	0.039	0.2	0.70	0.037	0.3	0.71	0.035	0.7	0.71	0.035
3.40	0.2	0.70	0.049	0.2	0.70	0.042	0.2	0.70	0.038	0.3	0.71	0.035	0.7	0.71	0.034
3.60	0.2	0.73	0.050	0.1	0.72	0.043	0.2	0.72	0.039	0.3	0.71	0.034	0.6	0.71	0.034
3.80	0.1	0.74	0.044	0.1	0.73	0.040	0.1	0.72	0.039	0.2	0.72	0.037	0.6	0.71	0.034
4.00	0.1	0.73	0.054	0.1	0.73	0.048	0.1	0.72	0.044	0.2	0.71	0.039	0.6	0.71	0.034

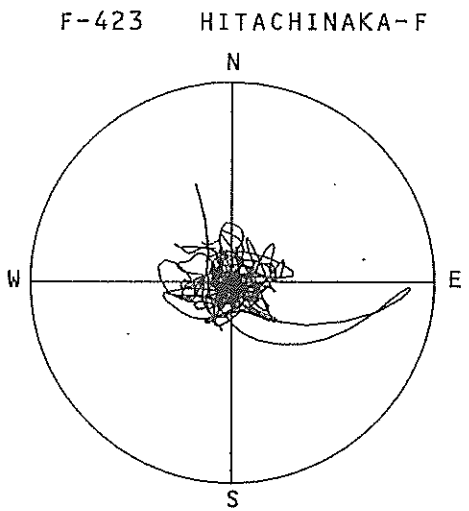
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)



ACCELERATION
R=200.0GAL
MAX=166.9GAL



VELOCITY
R=4.0 CM/SEC.
MAX=3.9 CM/SEC.



DISPLACEMENT
R=0.20 CM
MAX=0.18 CM

RECORD NUMBER S-2383
STATION SAKAIMINATO-JI-S

EARTHQUAKE DATA

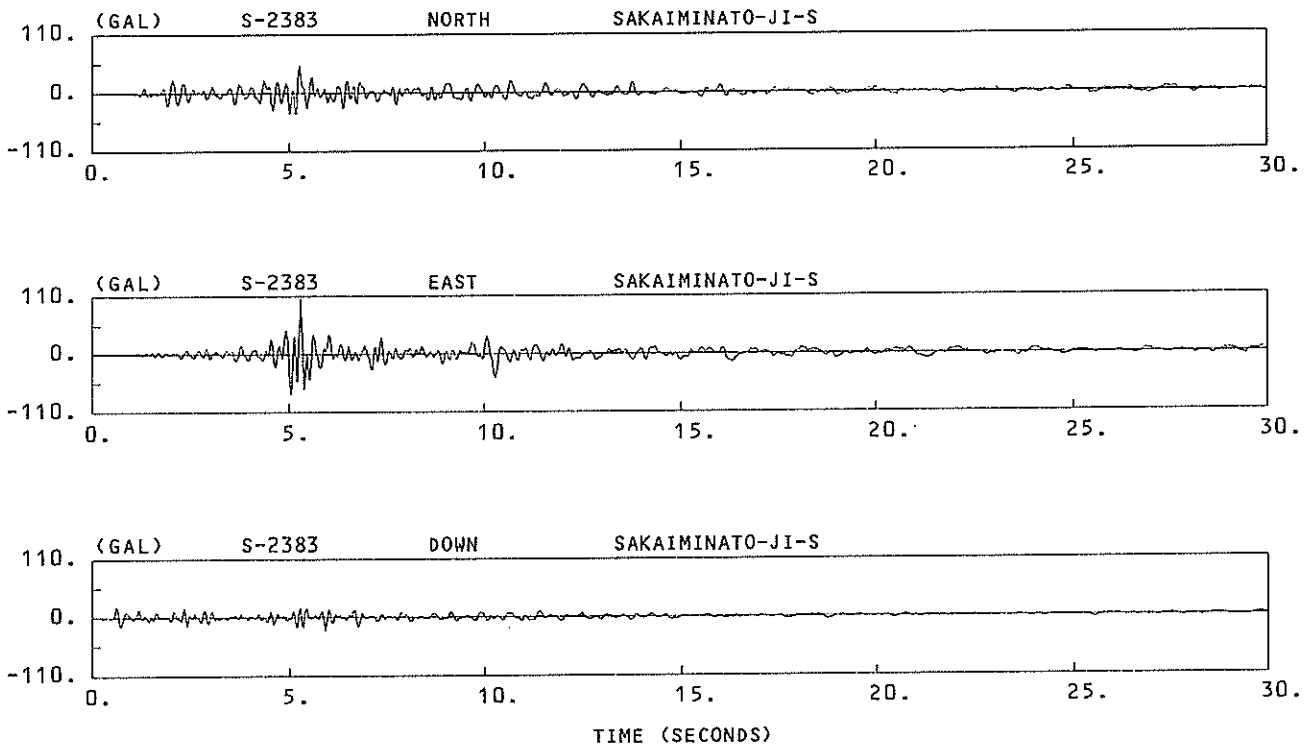
****

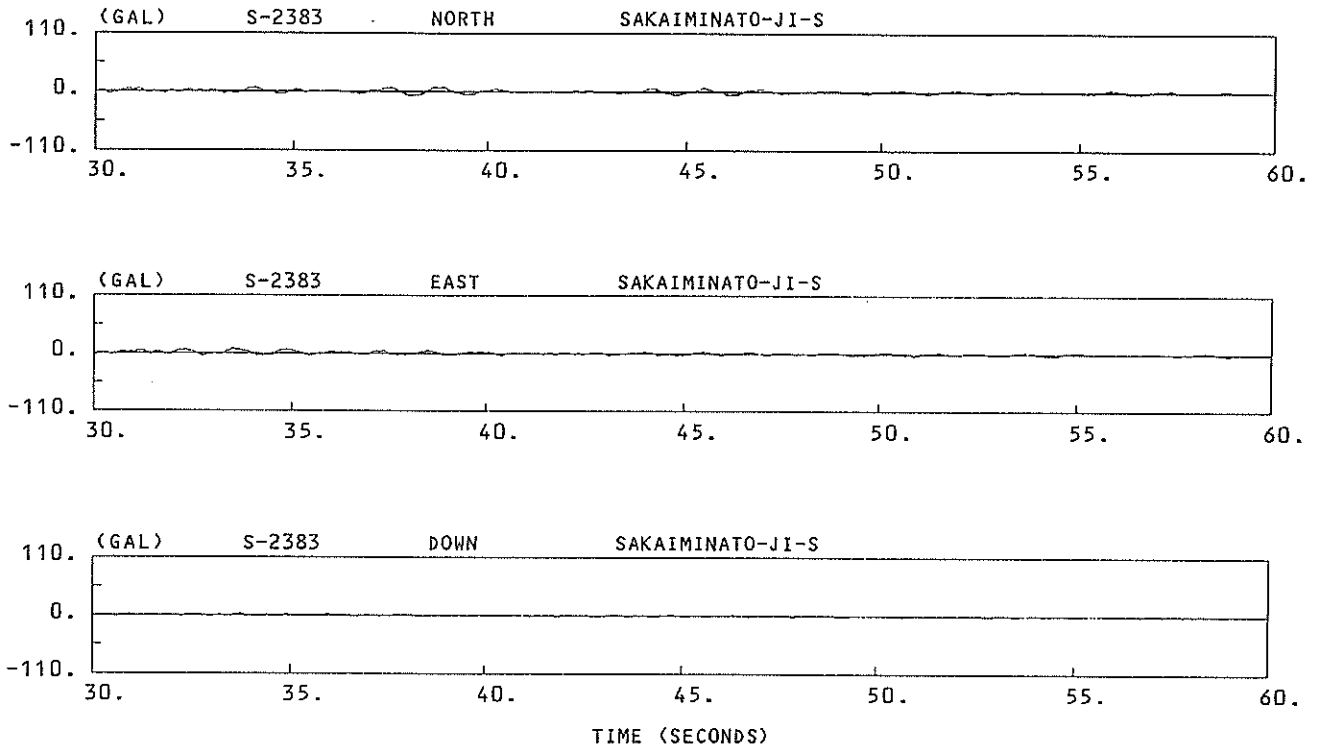
DATA AND TIME 10:29 AUG.28,1991
LOCATION OF HYPOCENTER
EPCENTRAL REGION WESTERN TOTTORI PREF
LATITUDE 35°19.2' N
LONGITUDE 133°11.5' E
DEPTH 13.3KM
MAGNITUDE 5.9

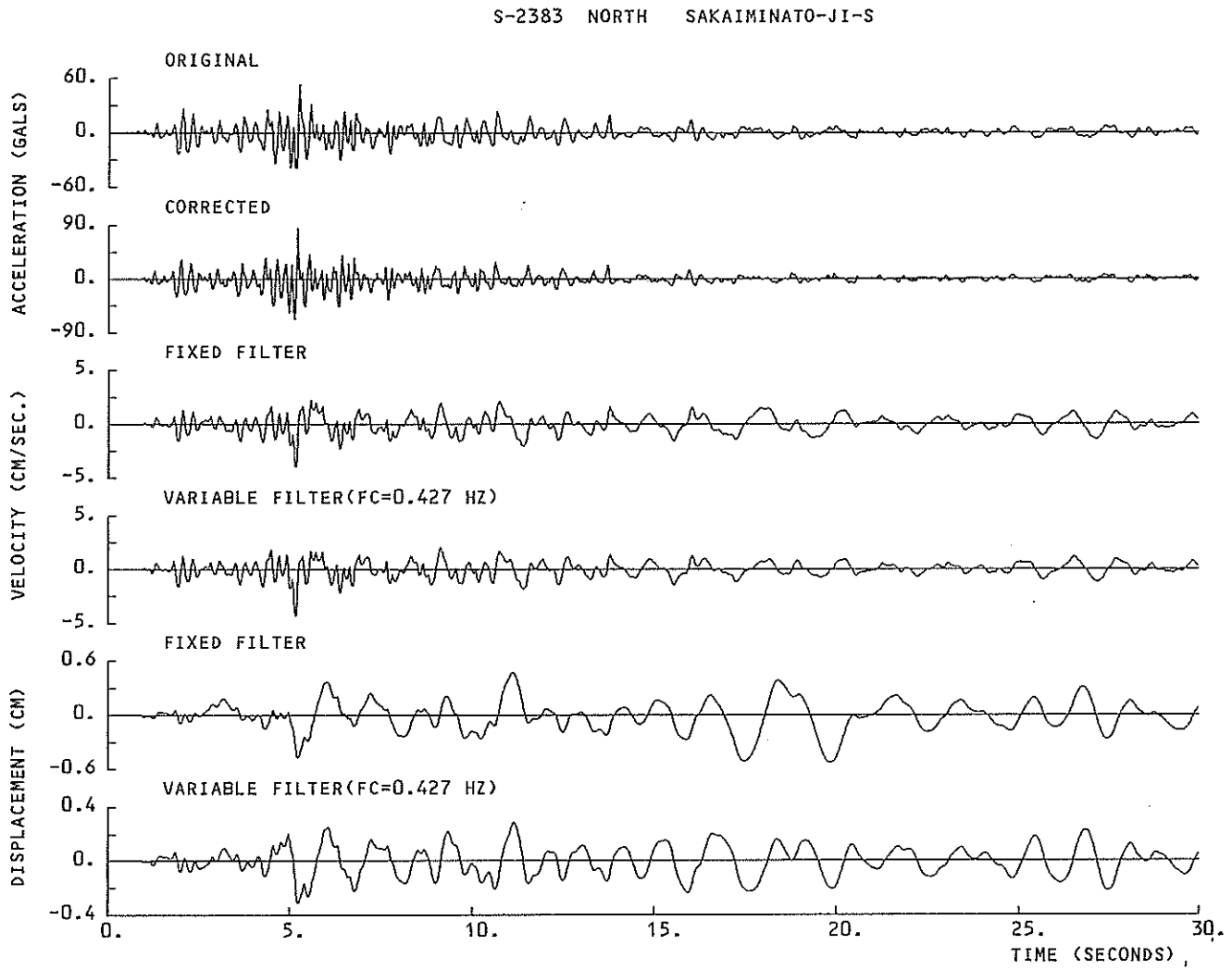
****

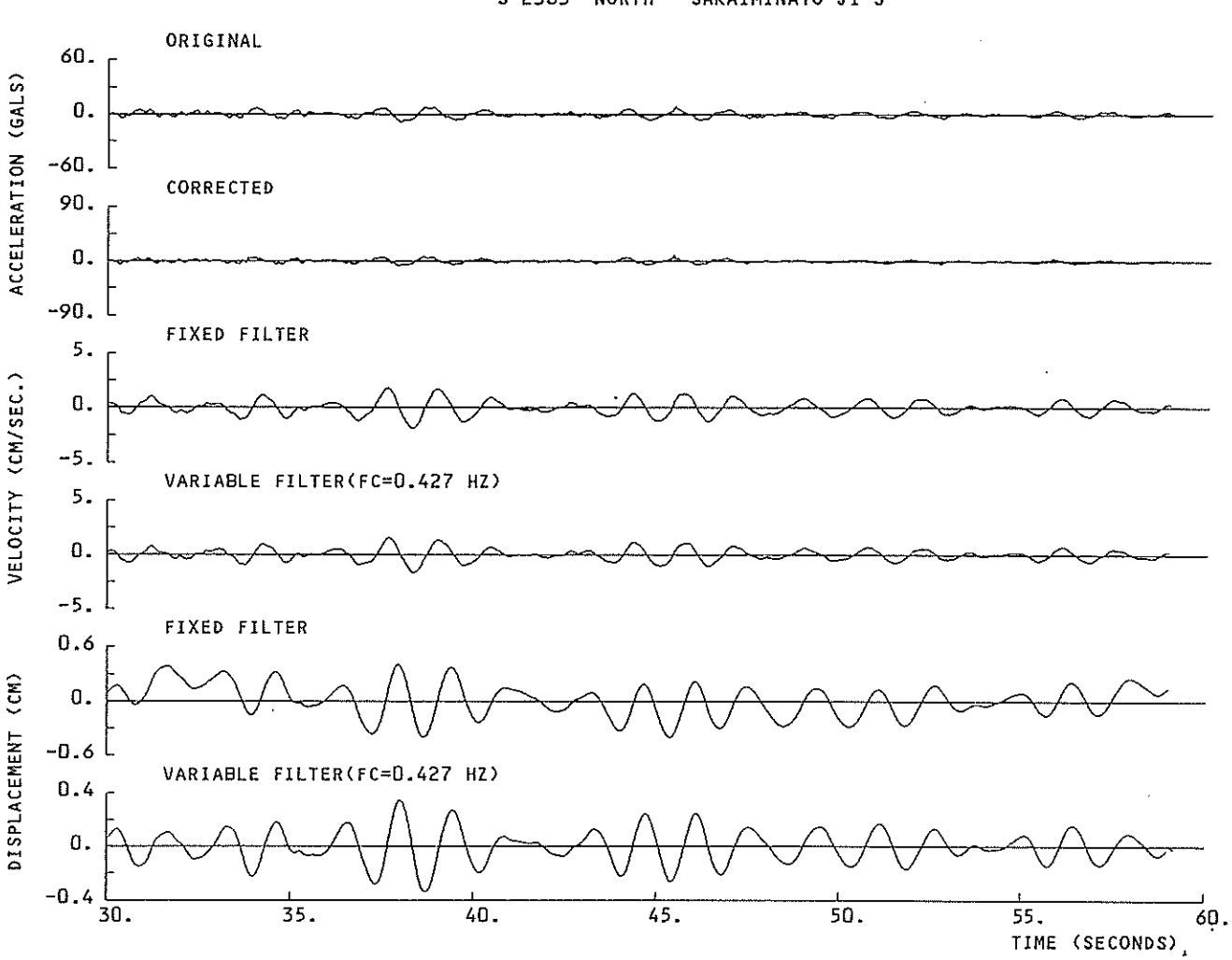
	PEAK VALUES OF COMPONENTS			
	N S	E W	U D	HORIZONTAL*
PARAMETER OF THE VARIABLE FILTER				
FC (HZ)	0.427	0.378	0.854	
MAXIMUM ACCELERATION (GAL)				
ORIGINAL	53.3	105.4	25.2	114.7
CORRECTED	85.1	150.8	38.3	162.8
MAXIMUM VELOCITY (CM/SEC)				
FIXED FILTER	4.04	5.04	1.34	5.35
VARIABLE FILTER	4.29	5.58	1.15	5.64
MAXIMUM DISPLACEMENT (CM)				
FIXED FILTER	0.526	0.870	0.469	0.896
VARIABLE FILTER	0.347	0.504	0.069	0.527

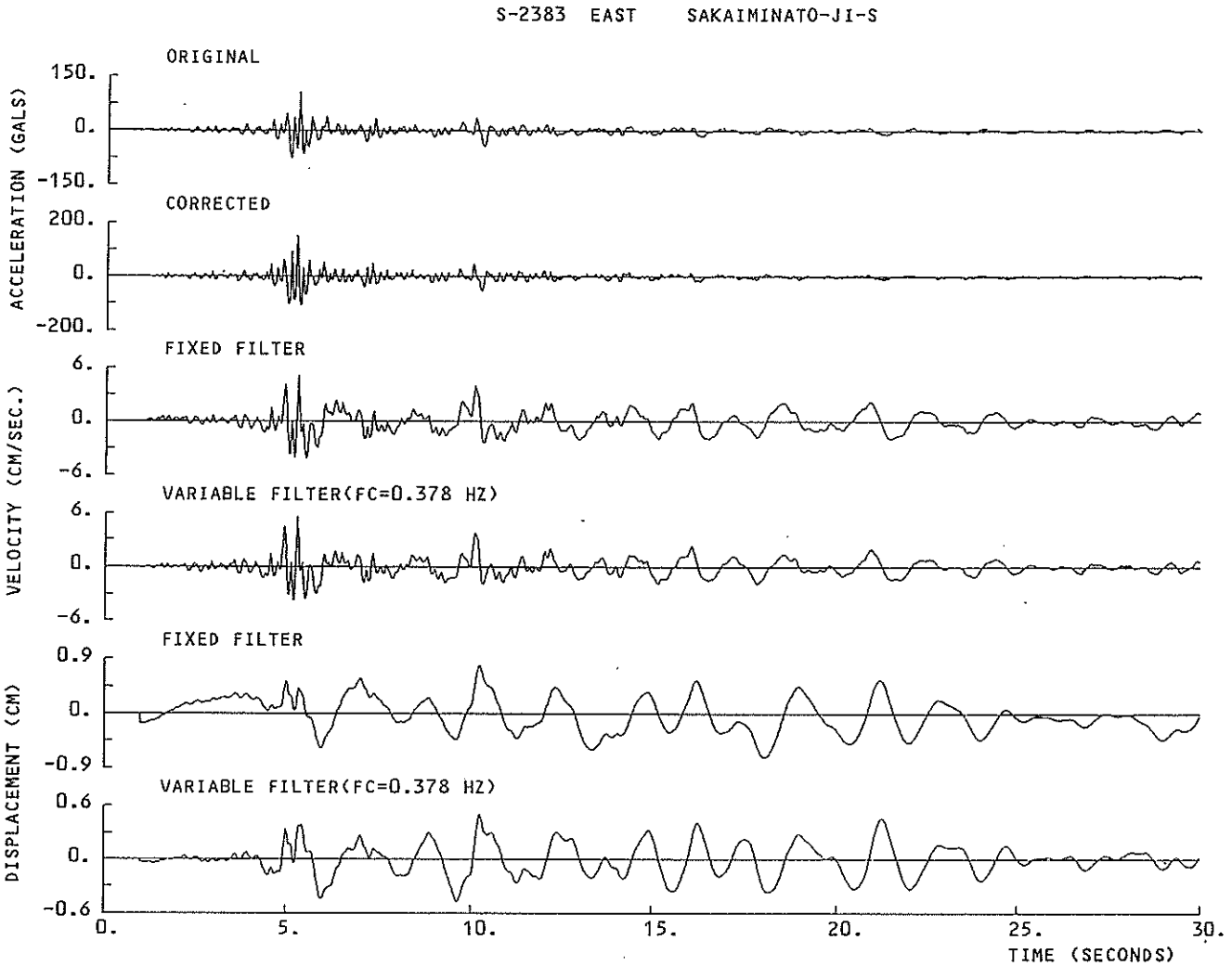
* RESULTANT OF HORIZONTAL COMPONENTS

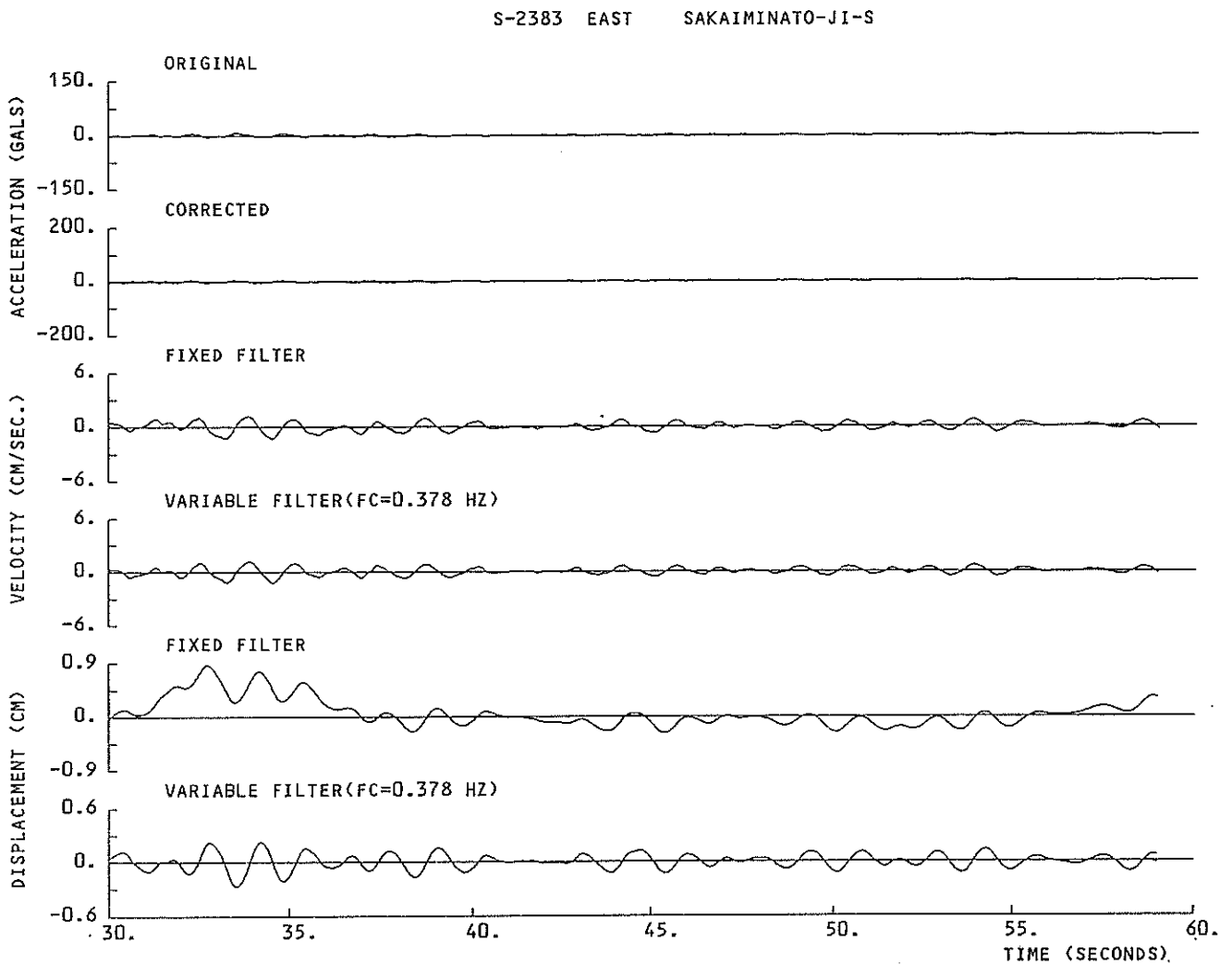

(GAL) S-2383 NORTH SAKAIMINATO-JI-S
110.
0.
-110.
0. 5. 10. 15. 20. 25. 30.
(GAL) S-2383 EAST SAKAIMINATO-JI-S
110.
0.
-110.
0. 5. 10. 15. 20. 25. 30.
(GAL) S-2383 DOWN SAKAIMINATO-JI-S
110.
0.
-110.
0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)

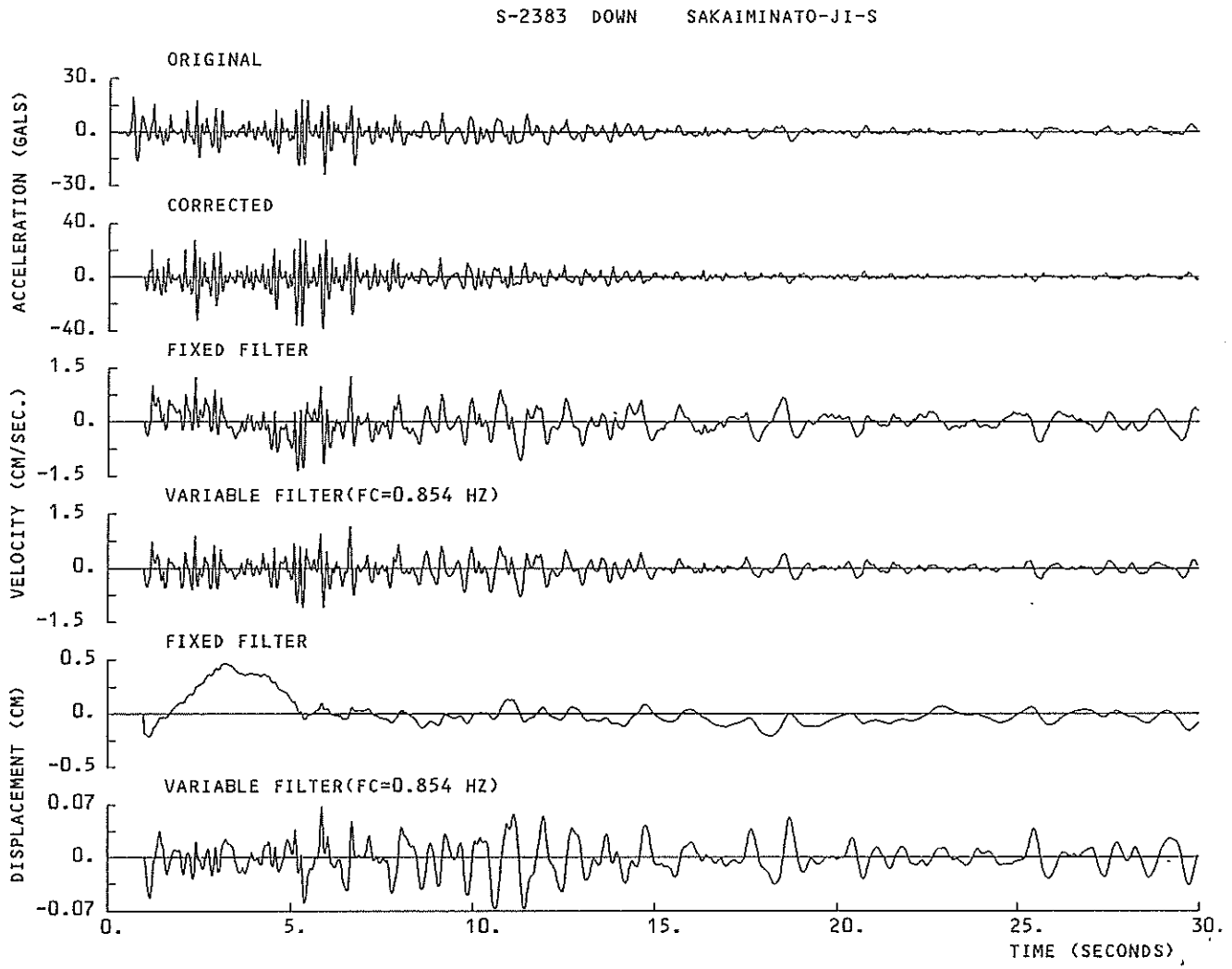

(GAL) S-2383 NORTH SAKAIMINATO-JI-S
110.
0.
-110.
30. 35. 40. 45. 50. 55. 60.
(GAL) S-2383 EAST SAKAIMINATO-JI-S
110.
0.
-110.
30. 35. 40. 45. 50. 55. 60.
(GAL) S-2383 DOWN SAKAIMINATO-JI-S
110.
0.
-110.
30. 35. 40. 45. 50. 55. 60.
TIME (SECONDS)

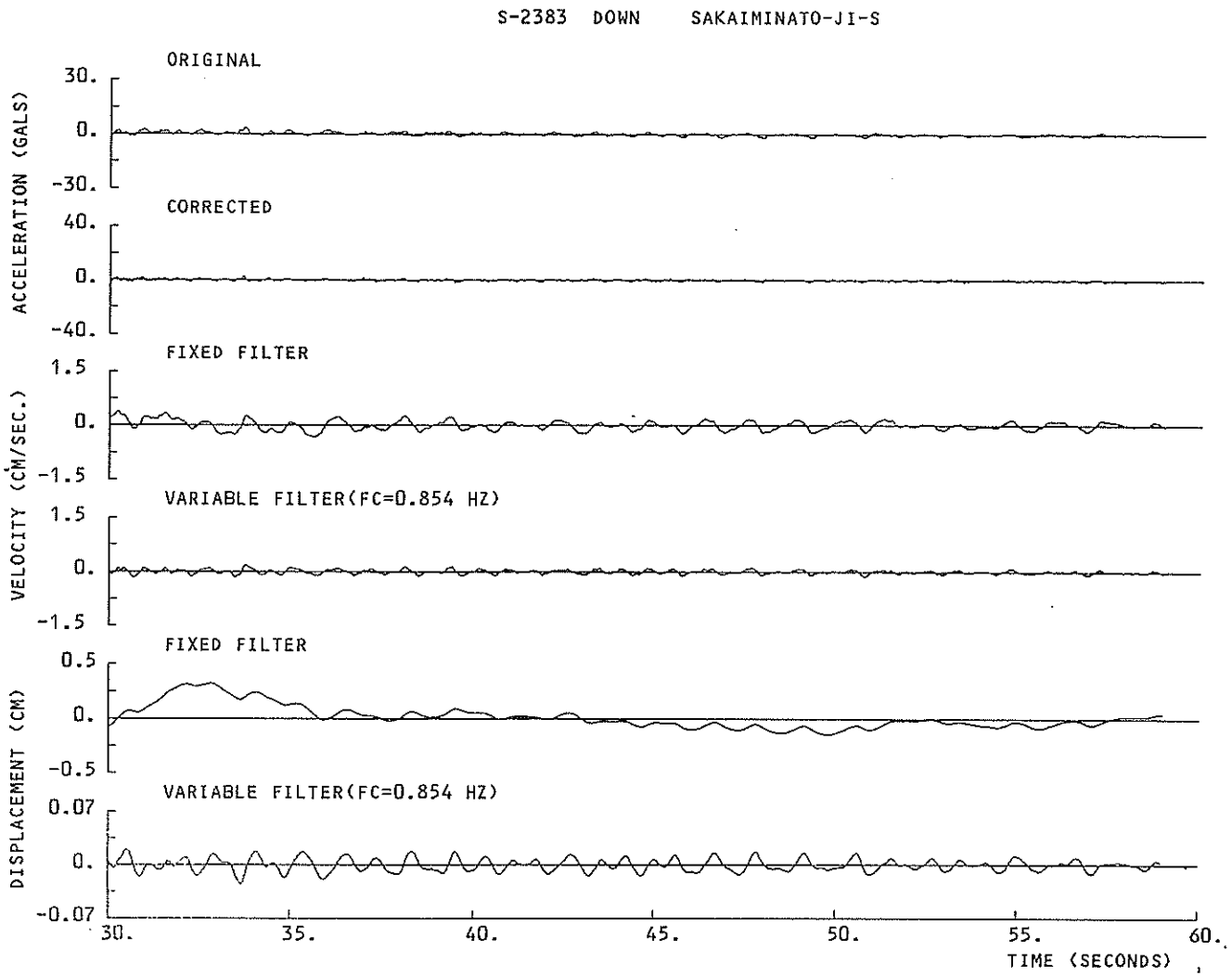

S-2383 NORTH SAKAIMINATO-JI-S
ORIGINAL
60.
0.
-60.
ACCELERATION (GALS)
CORRECTED
90.
0.
-90.
FIXED FILTER
5.
0.
-5.
VELOCITY (CM/SEC.)
VARIABLE FILTER(FC=0.427 HZ)
5.
0.
-5.
FIXED FILTER
0.6
0.
-0.6
DISPLACEMENT (CM)
VARIABLE FILTER(FC=0.427 HZ)
0.4
0.
-0.4
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


S-2383 NORTH SAKAIMINATO-JI-S
ORIGINAL
60.
0.
-60.
CORRECTED
90.
0.
-90.
ACCELERATION (GALS)
FIXED FILTER
5.
0.
-5.
VARIABLE FILTER(FC=0.427 HZ)
5.
0.
-5.
VELOCITY (CM/SEC.)
FIXED FILTER
0.6
0.
-0.6
VARIABLE FILTER(FC=0.427 HZ)
0.4
0.
-0.4
DISPLACEMENT (CM)
30.
35.
40.
45.
50.
55.
60.
TIME (SECONDS)

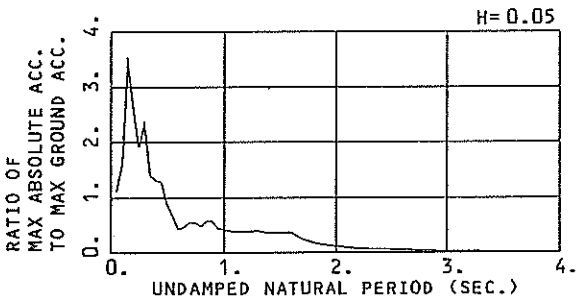

S-2383 EAST SAKAIMINATO-JI-S
ORIGINAL
150.
0.
-150.
ACCELERATION (GALS)
CORRECTED
200.
0.
-200.
FIXED FILTER
6.
0.
-6.
VELOCITY (CM/SEC.)
VARIABLE FILTER(FC=0.378 HZ)
6.
0.
-6.
FIXED FILTER
0.9
0.
-0.9
DISPLACEMENT (CM)
VARIABLE FILTER(FC=0.378 HZ)
0.6
0.
-0.6
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

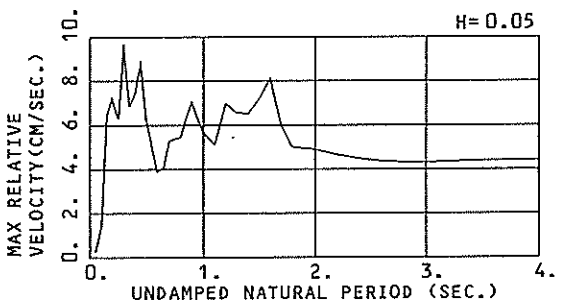

S-2383 EAST SAKAIMINATO-JI-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.378 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.378 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
150.
0.
-150.
200.
0.
-200.
6.
0.
-6.
6.
0.
-6.
0.9
0.
-0.9
0.6
0.
-0.6
30.
35.
40.
45.
50.
55.
60.
TIME (SECONDS)

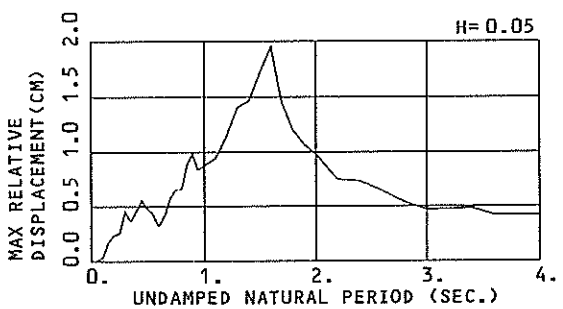

S-2383 DOWN SAKAIMINATO-JI-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.854 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.854 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
30.
0.
-30.
40.
0.
-40.
1.5
0.
-1.5
1.5
0.
-1.5
0.5
0.
-0.5
0.07
0.
-0.07
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


S-2383 DOWN SAKAIMINATO-JI-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.854 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.854 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
30.
0.
-30.
40.
0.
-40.
1.5
0.
-1.5
1.5
0.
-1.5
0.5
0.
-0.5
0.07
0.
-0.07
30.
35.
40.
45.
50.
55.
60.
TIME (SECONDS)

S-2383 NORTH SAKAIMINATO-JI-S
(1/FC=2.34 SEC.)

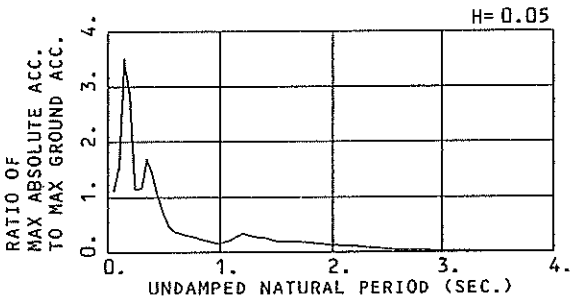


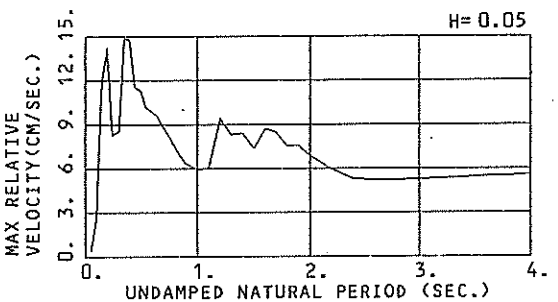


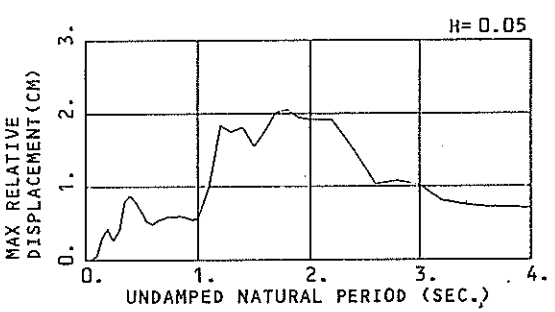


RESPONSE SPECTRA

S-2383 EAST SAKAIMINATO-JI-S
(1/FC=2.64 SEC.)

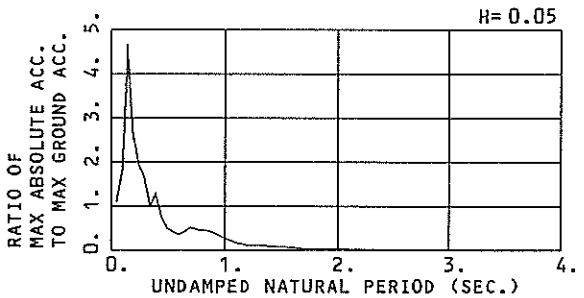


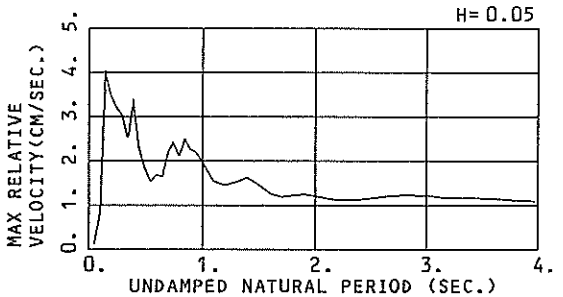


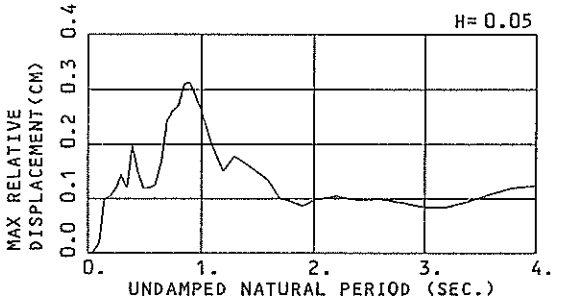


RESPONSE SPECTRA

S-2383 DOWN SAKAIMINATO-JI-S
(1/FC=1.17 SEC.)

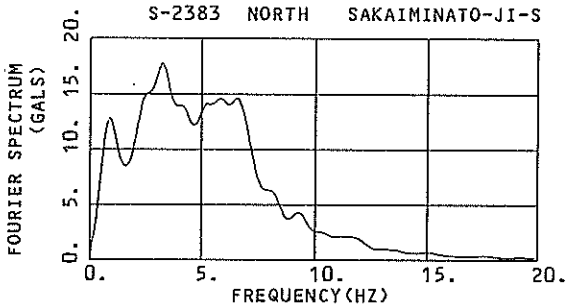




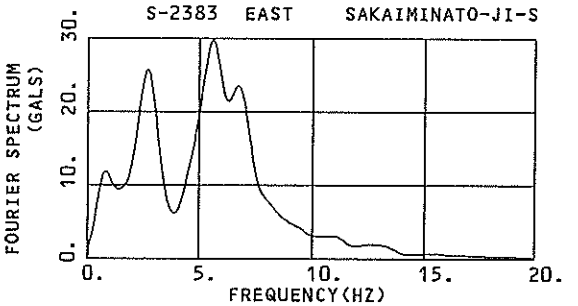


RESPONSE SPECTRA

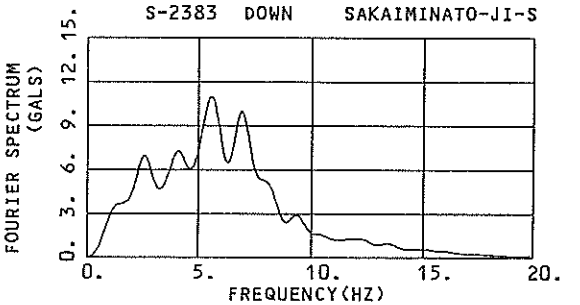
S-2383 NORTH SAKAIMINATO-JI-S



S-2383 EAST SAKAIMINATO-JI-S



S-2383 DOWN SAKAIMINATO-JI-S



RESPONSE SPECTRUM

RECORD = S-2383 COMPONENT = NORTH SIGNAL = GR. ACC. CORRECTION = STATION = SAKAIMINATO-JI-S
DATE AND TIME = 1991- 8-28-10-29 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 85.14 (GAL)
TIME LENGTH = 58.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	110.0	0.37	0.007	96.4	0.27	0.006	94.8	0.25	0.006	94.1	0.24	0.006	94.0	0.23	0.006
0.10	234.6	3.31	0.059	147.5	1.90	0.037	139.6	1.46	0.035	137.8	1.25	0.035	129.7	1.09	0.031
0.15	970.3	22.97	0.553	367.4	8.22	0.209	301.0	6.44	0.170	238.0	4.65	0.134	159.3	2.77	0.083
0.20	516.7	16.70	0.524	285.3	9.05	0.287	228.8	7.26	0.232	170.7	5.28	0.171	119.9	3.21	0.109
0.25	613.3	24.29	0.971	208.0	8.27	0.328	163.1	6.31	0.257	113.1	4.63	0.176	88.1	2.84	0.124
0.30	889.8	42.18	2.028	280.2	13.34	0.639	201.8	9.65	0.456	130.8	6.35	0.292	80.0	3.39	0.160
0.35	482.1	26.63	1.496	156.8	9.18	0.484	119.2	6.87	0.367	87.9	5.50	0.265	67.9	3.61	0.185
0.40	182.6	11.59	0.740	134.6	8.79	0.545	111.9	7.44	0.450	87.4	6.10	0.345	61.6	3.99	0.220
0.45	364.0	25.94	1.867	134.4	10.89	0.687	109.3	8.92	0.559	83.0	6.81	0.418	54.4	4.33	0.251
0.50	140.9	11.10	0.892	83.3	6.78	0.528	76.1	6.33	0.478	65.2	5.61	0.401	47.0	4.32	0.266
0.55	146.9	12.70	1.126	70.8	6.29	0.541	55.3	5.03	0.421	47.1	4.58	0.349	40.6	4.11	0.270
0.60	81.0	7.64	0.739	42.1	4.15	0.383	35.3	3.88	0.321	36.6	3.93	0.322	35.4	3.93	0.272
0.65	119.3	11.76	1.277	50.1	4.85	0.536	39.2	4.06	0.417	34.0	3.83	0.355	31.5	3.81	0.275
0.70	135.6	14.62	1.683	54.3	6.68	0.673	46.4	5.26	0.572	36.6	3.97	0.444	28.3	3.77	0.280
0.75	93.9	10.95	1.338	61.4	7.12	0.874	45.5	5.37	0.645	34.7	4.22	0.482	25.6	3.74	0.284
0.80	89.8	11.28	1.456	49.8	5.85	0.806	40.4	5.45	0.651	30.8	4.38	0.487	23.8	3.70	0.306
0.85	105.6	14.12	1.932	64.4	8.58	1.177	48.1	6.30	0.877	31.9	4.49	0.571	23.1	3.63	0.322
0.90	131.2	18.48	2.692	68.4	10.16	1.402	48.5	7.07	0.990	30.6	4.92	0.611	22.3	3.52	0.332
0.95	68.9	10.07	1.575	49.2	7.32	1.123	36.9	6.38	0.838	25.8	4.73	0.573	21.4	3.40	0.339
1.00	116.6	18.06	2.955	49.0	8.05	1.239	34.7	5.68	0.874	23.5	4.40	0.573	20.4	3.27	0.353
1.10	93.9	16.06	2.879	43.5	6.88	1.331	30.9	5.13	0.941	22.0	4.07	0.654	18.5	3.15	0.399
1.20	106.9	20.48	3.900	38.7	8.56	1.408	31.5	7.01	1.144	23.8	5.13	0.852	16.9	3.28	0.486
1.30	129.0	26.46	5.522	49.2	9.95	2.105	33.0	6.55	1.405	23.4	4.45	0.982	15.7	3.39	0.558
1.40	92.0	20.21	4.569	41.9	9.41	2.079	29.6	6.54	1.463	22.0	4.62	1.070	14.7	3.52	0.613
1.50	79.4	19.01	4.525	38.5	9.31	2.190	30.4	7.22	1.721	21.6	5.14	1.207	13.8	3.66	0.648
1.60	139.8	35.55	9.063	45.0	11.85	2.913	30.3	8.15	1.955	19.9	5.29	1.263	12.8	3.80	0.659
1.70	41.6	11.68	3.043	25.0	7.35	1.829	19.9	5.98	1.444	15.9	4.88	1.133	11.9	3.92	0.655
1.80	38.7	11.67	3.174	17.9	5.93	1.462	14.6	4.98	1.192	12.6	4.62	1.001	11.0	4.02	0.650
1.90	34.0	10.71	3.108	15.2	5.15	1.390	11.7	4.95	1.063	10.2	4.67	0.897	10.2	4.09	0.631
2.00	19.4	6.67	1.969	12.3	5.02	1.245	9.8	4.88	0.986	8.1	4.65	0.789	9.4	4.14	0.607
2.20	9.5	4.77	1.159	6.6	4.72	0.808	6.1	4.66	0.745	5.5	4.53	0.641	8.2	4.17	0.557
2.40	12.3	5.12	1.798	6.8	4.48	0.983	5.1	4.46	0.731	4.1	4.40	0.572	7.2	4.17	0.516
2.60	7.0	4.34	1.198	4.6	4.35	0.780	3.8	4.35	0.642	3.4	4.32	0.518	6.4	4.17	0.484
2.80	3.5	4.31	0.688	2.9	4.31	0.576	2.8	4.31	0.534	3.1	4.29	0.488	5.9	4.16	0.460
3.00	3.0	4.34	0.687	2.2	4.33	0.503	2.1	4.32	0.467	2.9	4.29	0.469	5.4	4.17	0.441
3.20	2.3	4.39	0.599	2.0	4.37	0.505	2.0	4.34	0.470	2.7	4.30	0.459	5.0	4.17	0.431
3.40	2.1	4.43	0.625	1.8	4.40	0.526	1.8	4.37	0.483	2.4	4.32	0.452	4.7	4.18	0.422
3.60	1.6	4.46	0.520	1.3	4.42	0.413	1.6	4.39	0.418	2.2	4.34	0.430	4.4	4.19	0.413
3.80	1.3	4.47	0.486	1.2	4.44	0.431	1.4	4.40	0.420	2.1	4.35	0.417	4.1	4.20	0.405
4.00	1.1	4.47	0.439	1.1	4.44	0.428	1.3	4.41	0.416	1.9	4.35	0.407	3.8	4.20	0.398

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = S-2383 COMPONENT = EAST SIGNAL = GR. ACC. CORRECTION = STATION = SAKAIMINATO-JI-S
DATE AND TIME = 1991- 8-28-10-29 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 150.79 (GAL)
TIME LENGTH = 58.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	172.5	0.45	0.011	170.1	0.44	0.011	167.8	0.41	0.011	166.3	0.38	0.011	166.1	0.35	0.010
0.10	281.5	3.53	0.071	247.4	2.96	0.062	236.7	2.70	0.060	231.9	2.40	0.058	220.0	1.83	0.053
0.15	1137.0	27.06	0.648	689.1	15.56	0.391	530.5	11.94	0.299	421.2	8.85	0.234	282.6	4.97	0.148
0.20	772.3	24.55	0.783	517.3	16.89	0.524	428.4	14.22	0.428	327.4	10.74	0.324	209.7	6.37	0.188
0.25	235.6	11.18	0.373	176.5	8.76	0.281	172.5	8.28	0.270	169.5	7.78	0.263	148.9	5.85	0.212
0.30	449.9	21.34	1.026	184.7	8.84	0.420	174.8	8.53	0.398	155.2	7.98	0.346	133.6	6.61	0.264
0.35	834.2	46.42	2.589	352.4	19.54	1.090	256.7	14.82	0.793	171.2	11.44	0.522	127.9	7.32	0.342
0.40	735.8	46.73	2.982	259.1	17.42	1.046	216.8	14.80	0.871	165.6	11.03	0.658	121.6	6.90	0.412
0.45	208.7	15.45	1.071	170.3	12.25	0.874	156.0	11.54	0.794	129.8	10.43	0.648	104.3	7.70	0.428
0.50	128.1	12.65	0.811	114.5	11.89	0.725	106.0	11.28	0.667	92.1	10.25	0.566	84.8	8.04	0.411
0.55	100.4	10.48	0.769	74.7	10.33	0.571	69.9	10.16	0.532	66.7	9.71	0.486	68.6	8.04	0.380
0.60	152.4	14.40	1.390	57.3	10.16	0.521	53.3	9.86	0.483	50.1	9.34	0.433	55.5	7.98	0.343
0.65	152.8	15.53	1.636	71.9	9.89	0.768	51.0	9.56	0.542	45.6	8.98	0.462	44.7	7.81	0.355
0.70	82.5	9.24	1.023	54.1	9.08	0.671	45.4	8.89	0.561	42.5	8.51	0.498	39.0	7.56	0.380
0.75	153.7	17.90	2.189	58.3	8.29	0.829	42.2	8.19	0.598	39.0	7.96	0.518	36.7	7.26	0.397
0.80	56.9	7.68	0.922	38.3	7.61	0.619	37.1	7.54	0.589	35.6	7.40	0.533	34.3	6.94	0.407
0.85	36.8	6.86	0.673	34.8	6.86	0.631	33.4	6.86	0.596	32.2	6.84	0.537	31.8	6.61	0.410
0.90	84.8	11.77	1.739	30.3	6.46	0.616	29.3	6.34	0.582	28.6	6.29	0.526	29.5	6.30	0.413
0.95	66.0	9.65	1.510	30.8	6.23	0.703	24.9	6.14	0.552	25.0	6.01	0.511	27.2	6.02	0.434
1.00	60.7	9.77	1.536	26.2	6.17	0.664	22.6	5.94	0.569	21.8	5.85	0.534	25.0	5.77	0.457
1.10	44.1	7.89	1.351	36.0	6.23	1.103	32.6	6.00	0.997	26.1	5.59	0.785	21.2	5.38	0.506
1.20	258.6	49.41	9.431	78.6	14.51	2.862	50.8	9.45	1.845	31.0	6.64	1.111	18.9	5.17	0.591
1.30	103.9	21.70	4.447	56.1	11.28	2.396	41.3	8.33	1.758	29.2	7.01	1.228	17.2	5.36	0.653
1.40	100.9	22.63	5.011	48.4	10.92	2.401	36.8	8.41	1.818	25.4	6.42	1.234	15.8	5.45	0.683
1.50	73.7	17.65	4.201	37.1	9.52	2.112	27.7	7.39	1.566	20.6	6.65	1.147	14.2	5.45	0.696
1.60	81.9	20.99	5.308	35.5	10.15	2.300	27.6	8.73	1.779	19.6	7.12	1.234	14.5	5.34	0.771
1.70	61.6	17.04	4.509	35.1	10.70	2.562	27.9	8.47	2.025	20.0	6.70	1.421	14.4	5.08	0.853
1.80	87.5	25.56	7.182	34.1	10.38	2.795	25.3	7.51	2.047	19.5	5.58	1.533	13.9	4.75	0.902
1.90	45.2	14.55	4.129	29.8	10.04	2.720	21.4	7.56	1.945	16.8	5.36	1.439	13.0	4.81	0.914
2.00	41.2	13.65	4.171	23.9	7.99	2.413	19.1	6.87	1.923	13.9	5.60	1.348	11.9	4.88	0.896
2.20	31.2	12.13	3.822	19.6	7.20	2.394	15.7	5.95	1.914	11.4	5.13	1.355	9.7	5.00	0.823
2.40	17.4	7.14	2.540	12.9	5.50	1.878	10.5	5.28	1.519	8.1	5.20	1.141	8.1	5.07	0.761
2.60	9.3	5.26	1.598	7.4	5.25	1.259	6.1	5.24	1.033	6.0	5.21	0.979	7.1	5.13	0.731
2.80	7.8	5.21	1.541	6.2	5.23	1.222	5.5	5.23	1.080	5.0	5.22	0.946	6.6	5.17	0.722
3.00	5.5	5.25	1.246	4.9	5.26	1.121	4.6	5.26	1.023	4.2	5.26	0.894	6.2	5.21	0.718
3.20	3.3	5.34	0.845	3.3	5.33	0.828	3.4	5.32	0.809	3.7	5.31	0.782	5.9	5.25	0.713
3.40	2.5	5.44	0.731	2.6	5.42	0.747	2.8	5.40	0.751	3.3	5.36	0.745	5.5	5.28	0.703
3.60	2.1	5.53	0.701	2.2	5.50	0.715	2.4	5.47	0.721	2.9	5.42	0.721	5.2	5.32	0.692
3.80	2.0	5.60	0.721	2.0	5.56	0.717	2.2	5.53	0.713	2.6	5.47	0.705	4.9	5.35	0.679
4.00	1.8	5.65	0.736	1.8	5.61	0.718	2.0	5.57	0.705	2.4	5.51	0.690	4.7	5.38	0.666

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

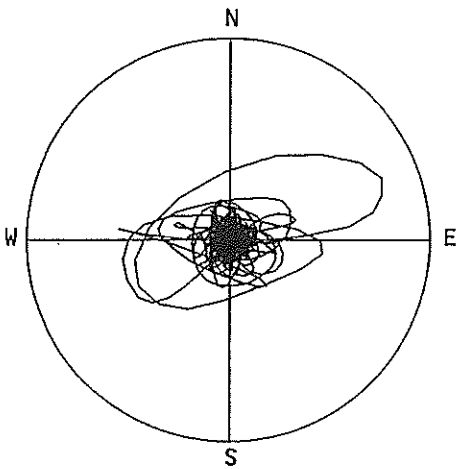
RESPONSE SPECTRUM

RECORD = S-2383 COMPONENT = DOWN SIGNAL = GR. ACC. CORRECTION = STATION = SAKAIMINATO-JI-S
DATE AND TIME = 1991- 8-28-10-29 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 38.28 (GAL)
TIME LENGTH = 58.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	57.1	0.24	0.004	42.6	0.12	0.003	42.2	0.12	0.003	42.1	0.11	0.003	41.9	0.11	0.003
0.10	148.8	2.13	0.038	77.2	1.10	0.020	69.9	0.82	0.018	67.3	0.76	0.017	56.1	0.57	0.013
0.15	496.3	11.72	0.283	241.5	5.60	0.138	178.5	4.04	0.101	126.4	2.79	0.070	71.5	1.45	0.037
0.20	238.2	7.58	0.241	128.6	4.13	0.130	102.4	3.52	0.104	81.0	2.72	0.081	54.0	1.67	0.048
0.25	289.8	11.50	0.459	97.8	4.15	0.155	74.4	3.20	0.117	50.3	2.17	0.077	39.9	1.63	0.054
0.30	167.5	7.93	0.382	82.5	4.05	0.188	63.3	3.04	0.144	47.2	2.19	0.105	34.3	1.52	0.067
0.35	196.3	10.86	0.609	64.9	3.58	0.201	38.9	2.52	0.120	33.7	2.16	0.102	28.1	1.62	0.072
0.40	171.6	10.93	0.696	73.1	4.77	0.295	49.8	3.39	0.201	32.5	2.30	0.129	21.9	1.66	0.071
0.45	78.7	5.80	0.404	39.7	2.95	0.204	29.2	2.29	0.149	21.6	2.05	0.108	16.7	1.61	0.070
0.50	86.2	6.80	0.546	25.0	2.37	0.158	19.0	1.84	0.119	15.9	1.73	0.095	14.5	1.51	0.071
0.55	43.5	3.79	0.334	22.5	1.97	0.172	15.8	1.53	0.120	13.0	1.47	0.096	12.3	1.39	0.070
0.60	60.2	5.73	0.549	18.0	1.96	0.163	13.7	1.68	0.123	11.5	1.42	0.101	10.3	1.32	0.076
0.65	28.5	2.93	0.305	19.2	1.93	0.205	15.8	1.66	0.168	11.8	1.43	0.123	9.6	1.36	0.086
0.70	36.5	4.07	0.453	24.6	2.64	0.305	19.6	2.18	0.242	14.1	1.61	0.170	9.2	1.42	0.094
0.75	71.6	8.57	1.020	25.0	3.10	0.356	18.3	2.43	0.259	13.3	1.81	0.185	8.4	1.48	0.098
0.80	23.5	3.24	0.381	20.5	2.57	0.332	16.7	2.12	0.270	12.6	1.84	0.198	7.6	1.53	0.101
0.85	64.1	8.67	1.172	23.9	3.41	0.438	16.9	2.50	0.309	11.8	1.87	0.209	7.2	1.56	0.108
0.90	25.1	3.61	0.514	18.6	2.86	0.382	15.4	2.26	0.313	10.5	1.87	0.211	6.7	1.57	0.117
0.95	37.7	5.72	0.861	16.3	2.56	0.372	12.8	2.19	0.290	9.1	1.75	0.202	6.4	1.56	0.122
1.00	20.9	3.35	0.530	12.8	2.44	0.323	10.4	1.99	0.261	8.1	1.62	0.196	6.2	1.53	0.124
1.10	12.1	2.36	0.371	8.4	1.70	0.257	6.5	1.55	0.198	5.0	1.48	0.144	5.5	1.48	0.121
1.20	6.4	1.58	0.234	4.7	1.44	0.170	4.2	1.46	0.150	3.7	1.42	0.123	4.8	1.43	0.117
1.30	20.8	4.33	0.890	6.3	1.55	0.268	4.2	1.52	0.178	3.5	1.45	0.139	4.2	1.40	0.114
1.40	6.0	1.96	0.297	3.5	1.75	0.175	3.3	1.63	0.164	2.9	1.47	0.133	3.7	1.36	0.112
1.50	3.4	1.54	0.196	2.9	1.50	0.164	2.7	1.46	0.149	2.5	1.40	0.127	3.2	1.33	0.108
1.60	4.0	1.37	0.261	2.4	1.21	0.158	2.1	1.26	0.132	2.2	1.30	0.115	2.8	1.30	0.104
1.70	1.7	1.22	0.124	1.5	1.16	0.106	1.5	1.20	0.099	1.8	1.25	0.103	2.6	1.27	0.100
1.80	1.6	1.26	0.132	1.2	1.24	0.097	1.2	1.23	0.094	1.5	1.23	0.096	2.4	1.24	0.096
1.90	1.2	1.32	0.106	1.0	1.27	0.087	1.1	1.25	0.085	1.4	1.23	0.090	2.2	1.22	0.093
2.00	1.2	1.24	0.119	1.0	1.23	0.099	1.1	1.22	0.096	1.3	1.21	0.093	2.0	1.21	0.091
2.20	1.1	1.07	0.131	1.0	1.10	0.114	1.0	1.13	0.105	1.1	1.16	0.094	1.8	1.18	0.086
2.40	0.8	1.14	0.124	0.8	1.12	0.105	0.8	1.14	0.096	1.0	1.16	0.085	1.7	1.17	0.083
2.60	0.7	1.24	0.128	0.7	1.22	0.108	0.7	1.20	0.099	0.9	1.19	0.086	1.5	1.17	0.081
2.80	0.7	1.30	0.130	0.5	1.27	0.106	0.5	1.24	0.092	0.7	1.21	0.082	1.4	1.17	0.079
3.00	0.5	1.27	0.106	0.4	1.24	0.088	0.4	1.23	0.084	0.6	1.20	0.082	1.3	1.17	0.078
3.20	0.4	1.21	0.116	0.4	1.19	0.094	0.4	1.18	0.084	0.5	1.17	0.083	1.2	1.16	0.079
3.40	0.4	1.21	0.130	0.4	1.19	0.108	0.4	1.18	0.095	0.5	1.16	0.084	1.1	1.15	0.079
3.60	0.4	1.17	0.131	0.4	1.16	0.116	0.4	1.16	0.108	0.5	1.15	0.097	1.0	1.15	0.081
3.80	0.4	1.13	0.144	0.4	1.13	0.130	0.4	1.13	0.120	0.5	1.13	0.104	1.0	1.14	0.083
4.00	0.4	1.08	0.147	0.4	1.09	0.134	0.4	1.09	0.123	0.5	1.11	0.107	0.9	1.14	0.083

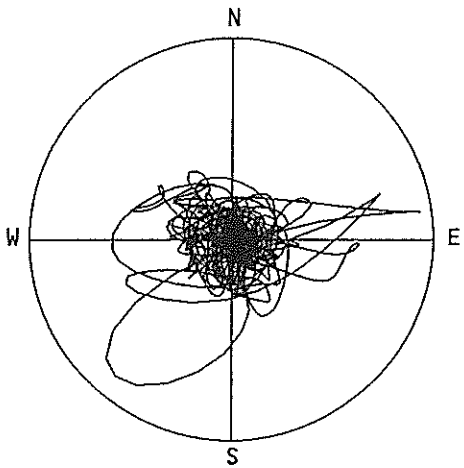
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

S-2383 SAKAIMINATO-J I-S



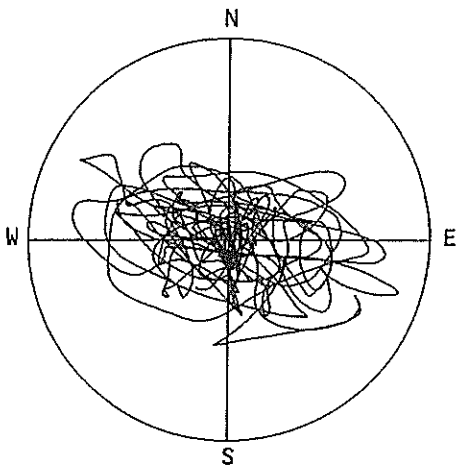
ACCELERATION
R=200.0GAL
MAX=162.8GAL

S-2383 SAKAIMINATO-J I-S



VELOCITY
R=6.0 CM/SEC.
MAX=5.6 CM/SEC.

S-2383 SAKAIMINATO-J I-S



DISPLACEMENT
R=0.60 CM
MAX=0.53 CM

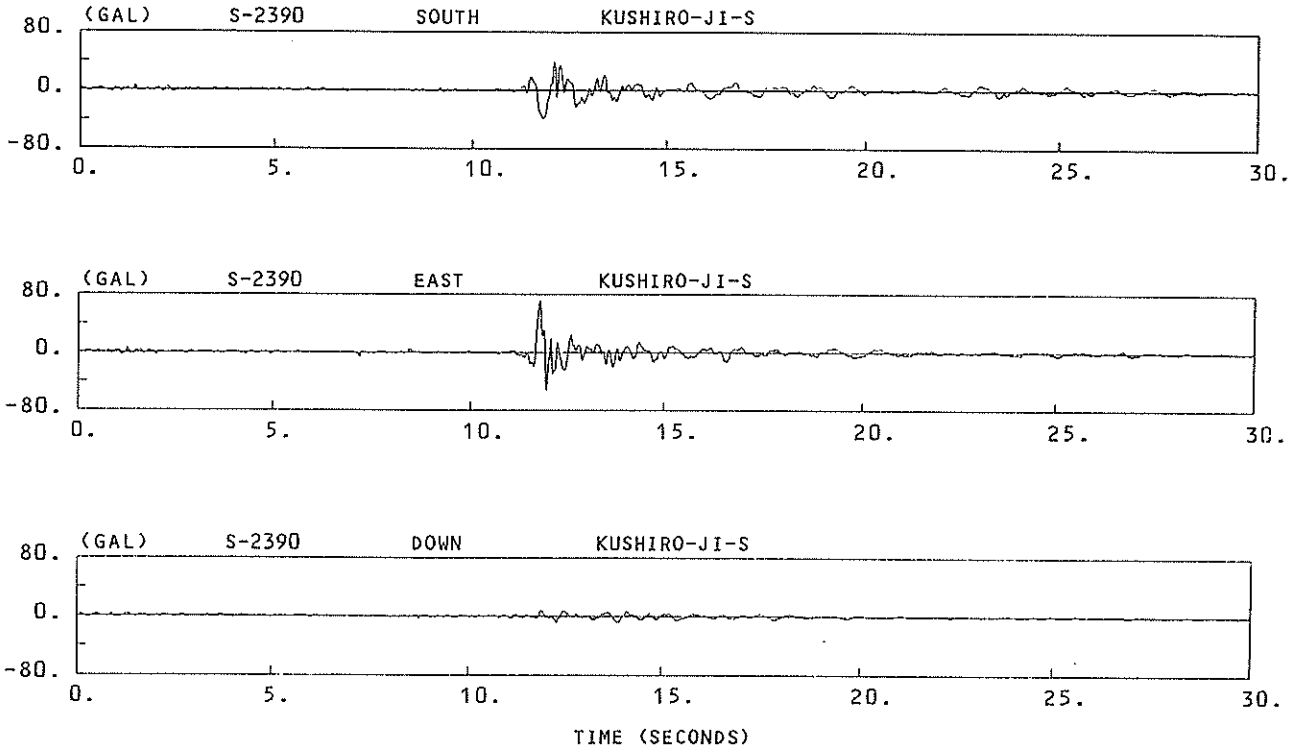
RECORD NUMBER S-2390
STATION KUSHIRO-JI-S

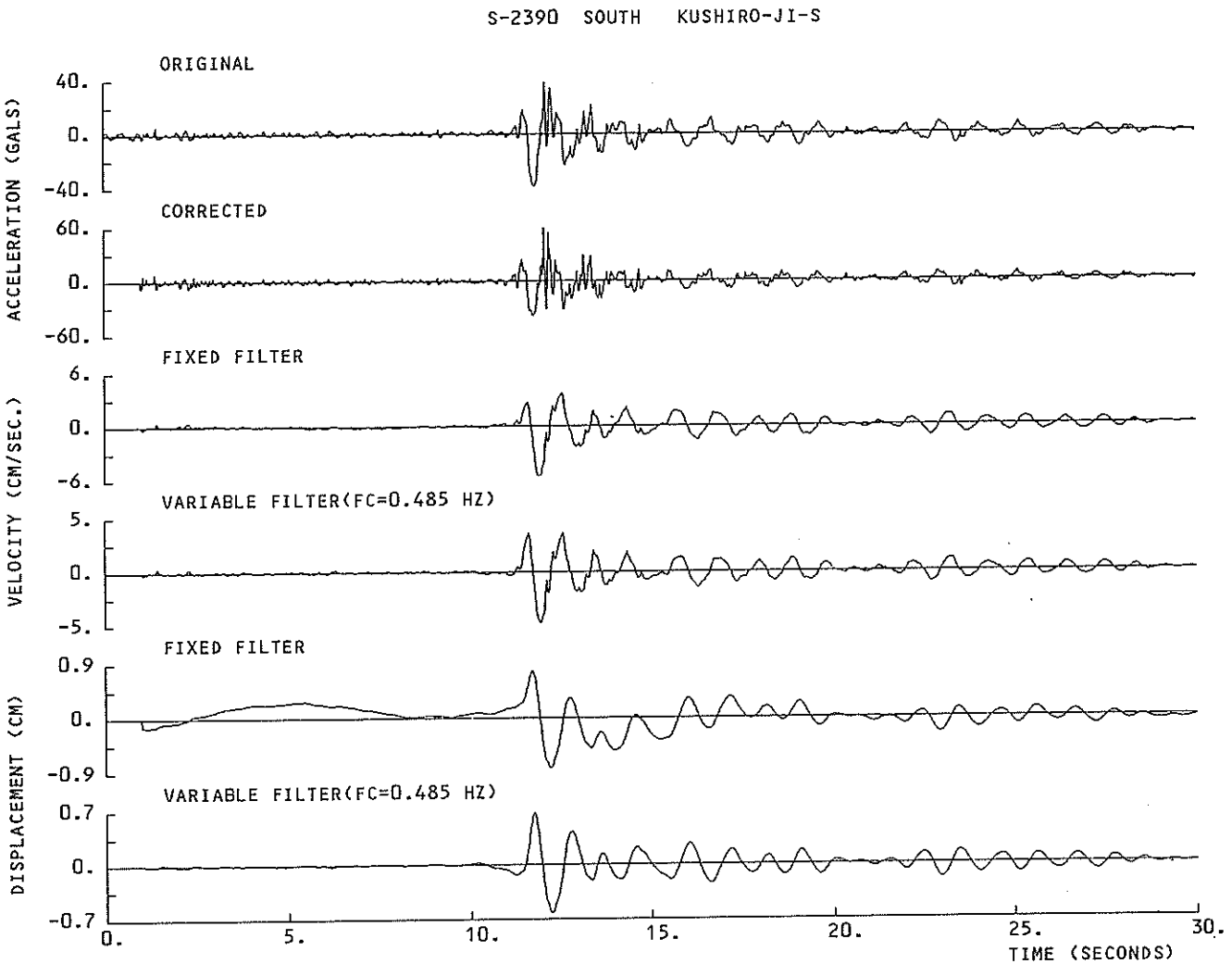
EARTHQUAKE DATA

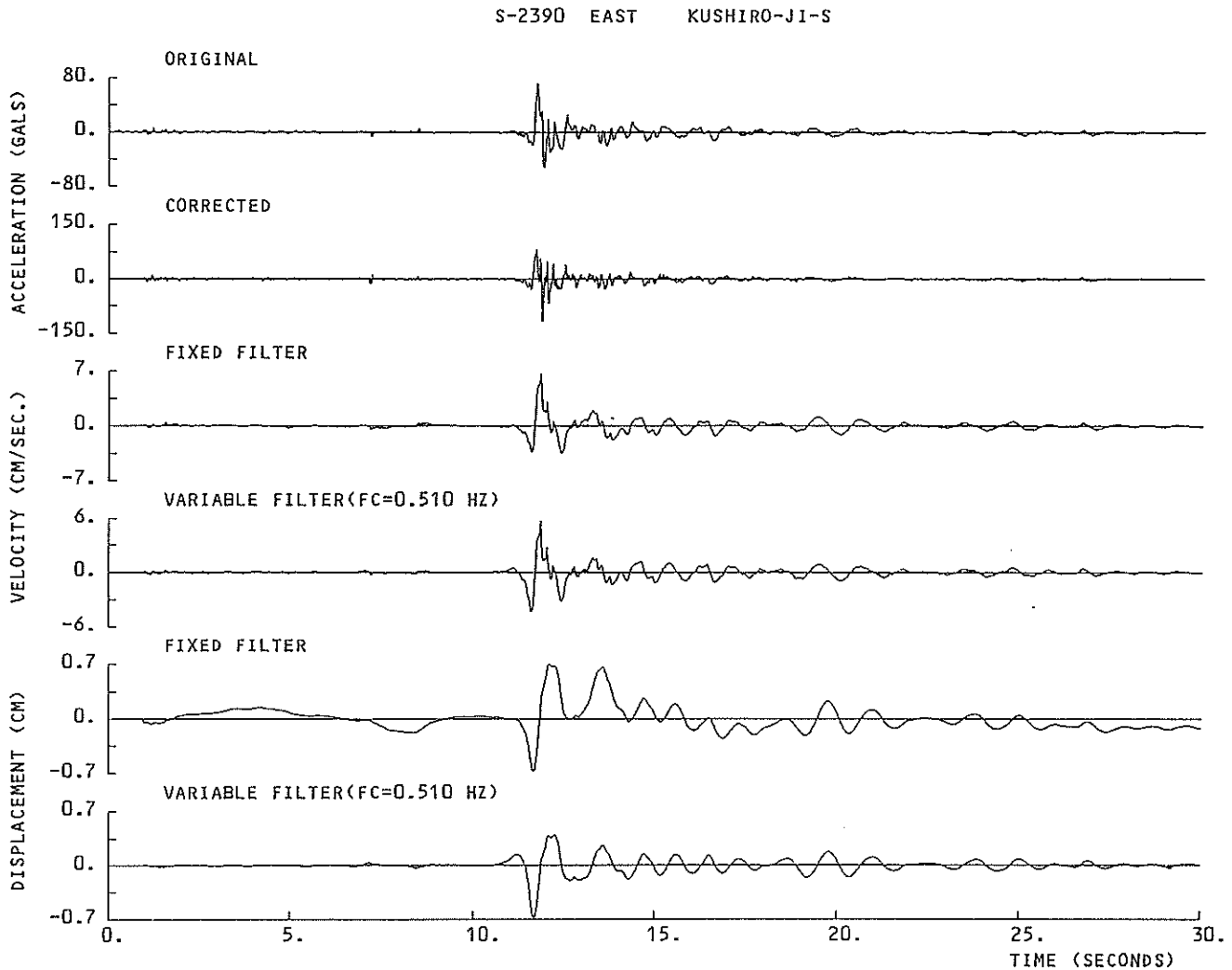
DATA AND TIME	19:39 OCT.25,1991
LOCATION OF HYPOCENTER	
EPCENTRAL REGION	KUSHIRO REGION
LATITUDE	43°12.2' N
LONGITUDE	144°26.6' E
DEPTH	104.9KM
MAGNITUDE	6.1

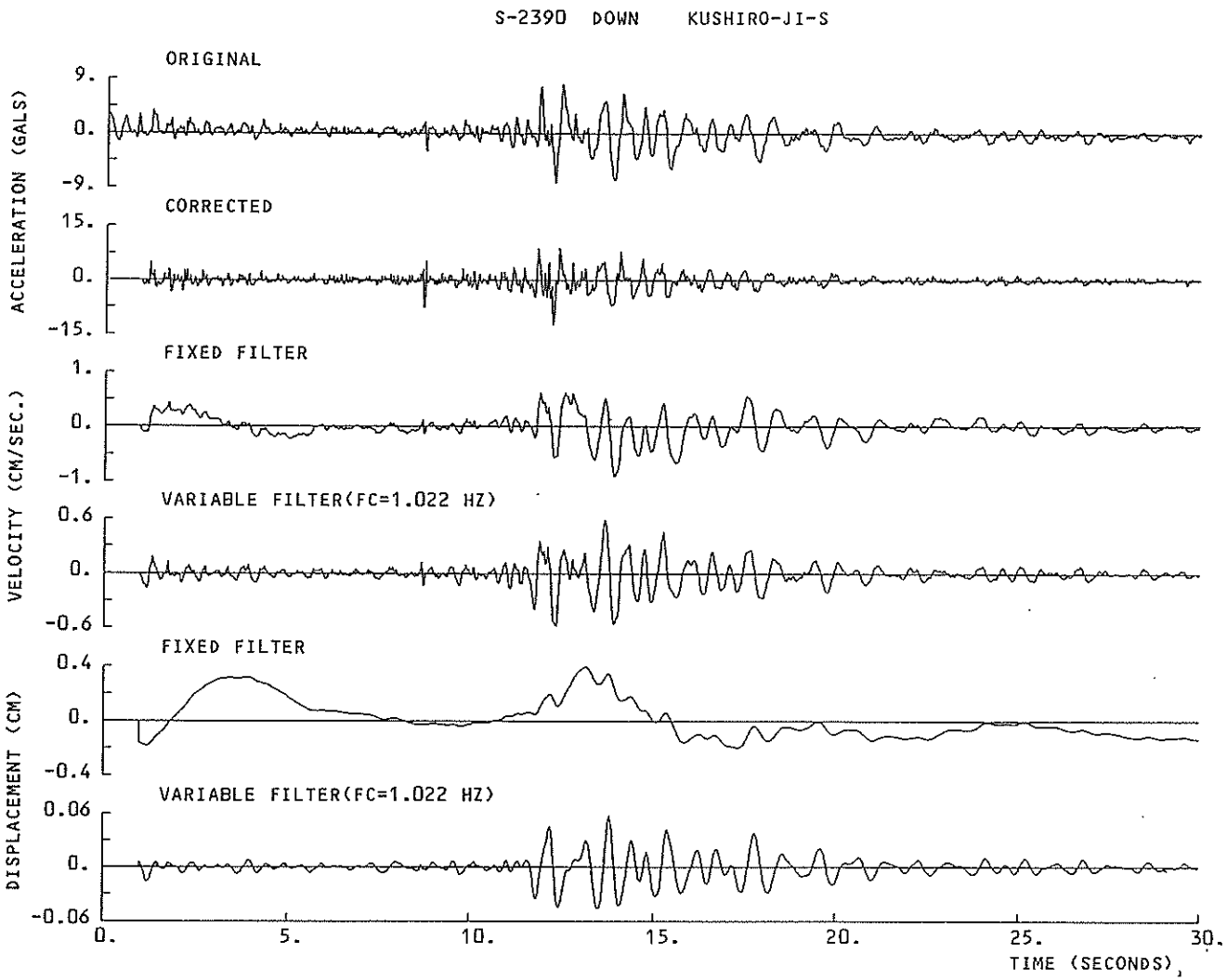
	PEAK VALUES OF COMPONENTS			
	N S	E W	U D	HORIZONTAL*
PARAMETER OF THE VARIABLE FILTER				
FC (HZ)	0.485	0.510	1.022	
MAXIMUM ACCELERATION (GAL)				
ORIGINAL	39.9	71.6	8.3	80.1
CORRECTED	58.4	117.9	12.3	117.9
MAXIMUM VELOCITY (CM/SEC)				
FIXED FILTER	5.53	6.79	0.91	8.73
VARIABLE FILTER	4.75	5.93	0.59	7.34
MAXIMUM DISPLACEMENT (CM)				
FIXED FILTER	0.823	0.701	0.398	1.057
VARIABLE FILTER	0.675	0.682	0.057	0.955

* RESULTANT OF HORIZONTAL COMPONENTS

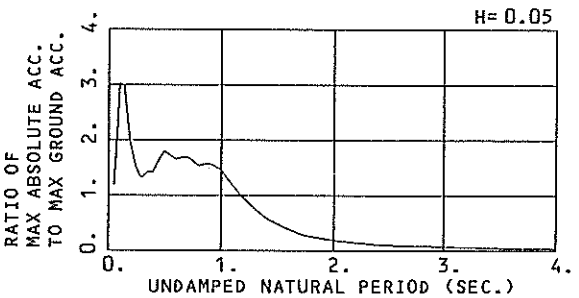

(GAL) S-2390 SOUTH KUSHIRO-JI-S
80.
0.
-80.
0. 5. 10. 15. 20. 25. 30.
(GAL) S-2390 EAST KUSHIRO-JI-S
80.
0.
-80.
0. 5. 10. 15. 20. 25. 30.
(GAL) S-2390 DOWN KUSHIRO-JI-S
80.
0.
-80.
0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)

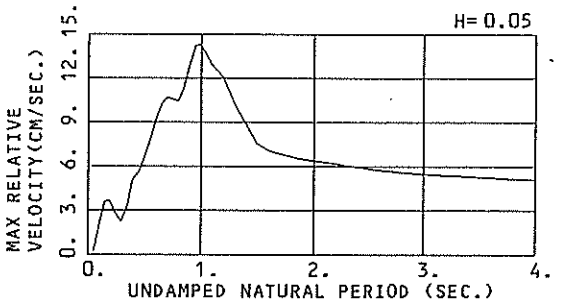

S-2390 SOUTH KUSHIRO-JI-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.485 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.485 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
TIME (SECONDS)
40.
0.
-40.
60.
0.
-60.
6.
0.
-6.
5.
0.
-5.
0.9
0.
-0.9
0.7
0.
-0.7
0.
5.
10.
15.
20.
25.
30.

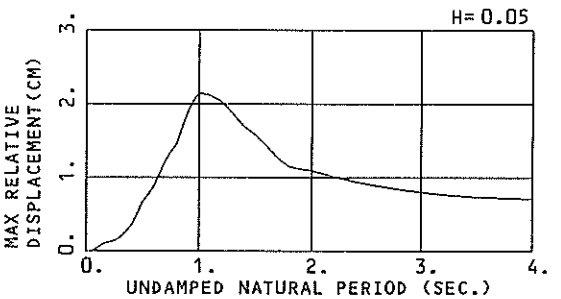

S-2390 EAST KUSHIRO-JI-S
ORIGINAL
80.
0.
-80.
CORRECTED
150.
0.
-150.
ACCELERATION (GALS)
FIXED FILTER
7.
0.
-7.
VARIABLE FILTER(FC=0.510 HZ)
6.
0.
-6.
VELOCITY (CM/SEC.)
FIXED FILTER
0.7
0.
-0.7
VARIABLE FILTER(FC=0.510 HZ)
0.7
0.
-0.7
DISPLACEMENT (CM)
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


S-2390 DOWN KUSHIRO-JI-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=1.022 HZ)
FIXED FILTER
VARIABLE FILTER(FC=1.022 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
9.
0.
-9.
15.
0.
-15.
1.
0.
-1.
0.6
0.
-0.6
0.4
0.
-0.4
0.06
0.
-0.06
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

S-2390 SOUTH KUSHIRO-JI-S
(1/FC=2.06 SEC.)

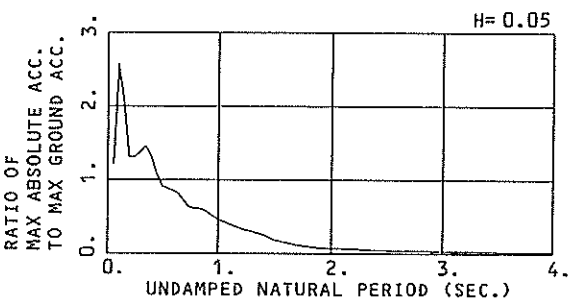


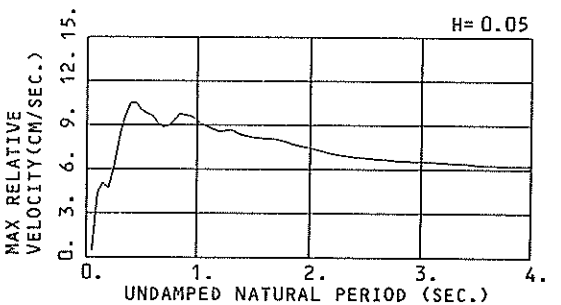


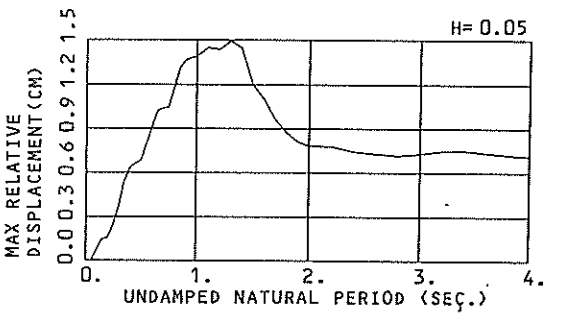


RESPONSE SPECTRA

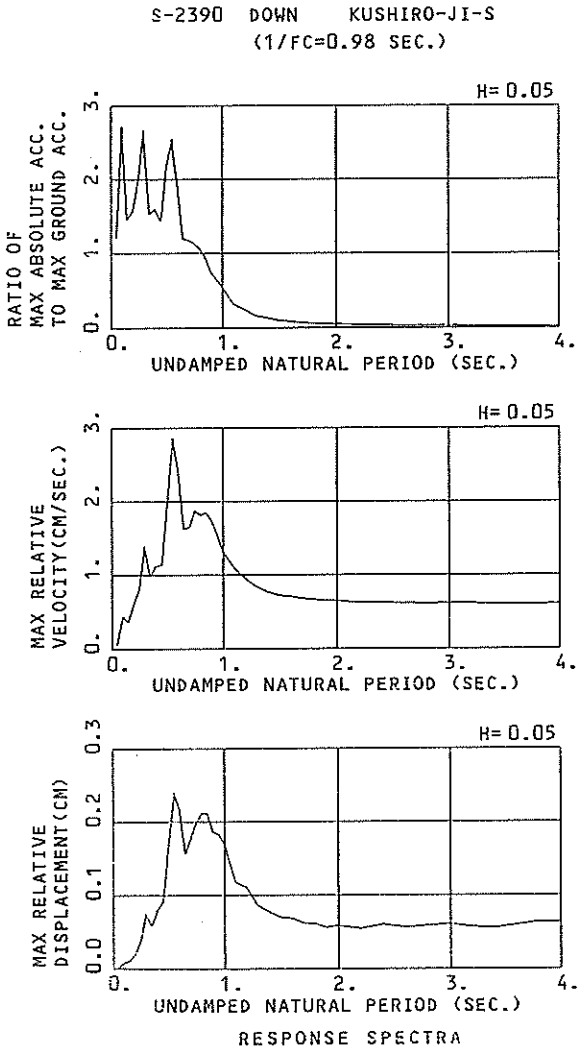
S-2390 EAST KUSHIRO-JI-S
(1/FC=1.96 SEC.)

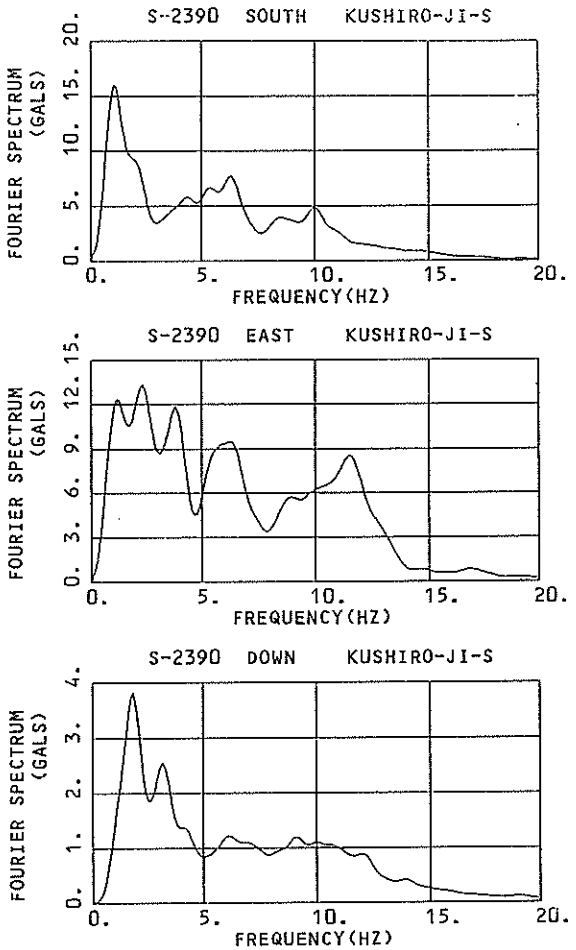






RESPONSE SPECTRA


S-2390 DOWN KUSHIRO-JI-S
(1/FC=0.98 SEC.)
H= 0.05
RATIO OF
MAX ABSOLUTE ACC.
TO MAX GROUND ACC.
0. 1. 2. 3.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
H= 0.05
MAX RELATIVE
VELOCITY(CM/SEC.)
0. 1. 2. 3.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
H= 0.05
MAX RELATIVE
DISPLACEMENT(CM)
0.0 0.1 0.2 0.3
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
RESPONSE SPECTRA


S-2390 SOUTH KUSHIRO-JI-S
FOURIER SPECTRUM
(GALS)
0. 5. 10. 15. 20.
0. 5. 10. 15. 20.
FREQUENCY(HZ)
S-2390 EAST KUSHIRO-JI-S
FOURIER SPECTRUM
(GALS)
0. 3. 6. 9. 12. 15.
0. 5. 10. 15. 20.
FREQUENCY(HZ)
S-2390 DOWN KUSHIRO-JI-S
FOURIER SPECTRUM
(GALS)
0. 1. 2. 3. 4.
0. 5. 10. 15. 20.
FREQUENCY(HZ)

RESPONSE SPECTRUM

RECORD = S-2390 COMPONENT = SOUTH SIGNAL = GR. ACC. CORRECTION = STATION = KUSHIRO-JI-S
DATE AND TIME = 1991-10-25-19-39 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 58.40 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	72.2	0.28	0.005	70.1	0.25	0.004	69.7	0.25	0.004	68.8	0.23	0.004	66.6	0.21	0.004
0.10	503.3	7.84	0.127	202.4	2.57	0.051	176.9	2.15	0.044	144.8	1.71	0.036	101.3	1.10	0.024
0.15	260.6	6.17	0.149	199.8	4.22	0.115	173.5	3.60	0.100	139.2	2.89	0.079	90.9	1.81	0.048
0.20	169.8	5.10	0.172	146.0	4.48	0.148	117.1	3.68	0.119	93.4	2.88	0.093	66.8	1.79	0.062
0.25	188.9	7.31	0.299	105.5	3.85	0.167	89.1	2.81	0.140	67.6	2.35	0.105	50.1	1.98	0.075
0.30	137.1	6.34	0.313	85.3	2.69	0.194	77.1	2.27	0.175	67.3	2.13	0.152	54.7	2.04	0.120
0.35	95.6	4.32	0.297	90.2	3.79	0.280	83.2	3.30	0.258	74.2	2.68	0.228	59.4	2.28	0.176
0.40	95.1	5.11	0.385	87.3	5.62	0.354	82.8	5.10	0.334	75.5	4.15	0.303	61.5	2.57	0.236
0.45	243.8	17.39	1.250	105.9	6.80	0.542	96.2	5.56	0.491	83.7	4.66	0.420	62.5	3.10	0.301
0.50	113.5	9.30	0.719	114.8	7.65	0.725	105.2	6.57	0.663	89.3	5.56	0.550	63.4	3.69	0.367
0.55	125.1	10.75	0.958	111.0	8.67	0.850	100.9	7.86	0.769	84.9	6.77	0.634	61.4	4.73	0.433
0.60	138.6	13.09	1.264	105.9	9.80	0.965	96.5	9.16	0.877	80.5	8.01	0.727	59.9	5.59	0.495
0.65	121.0	11.88	1.295	109.3	11.03	1.168	98.8	10.22	1.053	82.4	8.88	0.869	57.9	6.17	0.555
0.70	118.0	12.15	1.465	109.3	11.54	1.356	99.2	10.71	1.225	82.9	9.30	1.009	55.4	6.55	0.616
0.75	112.2	12.13	1.599	104.7	11.28	1.491	95.5	10.60	1.354	80.1	9.32	1.114	54.2	6.66	0.680
0.80	160.0	20.06	2.593	104.7	12.66	1.695	90.1	10.46	1.454	74.6	8.92	1.181	51.8	6.61	0.723
0.85	192.0	25.63	3.514	109.9	14.77	2.007	91.3	11.33	1.663	69.7	8.81	1.258	48.3	6.42	0.757
0.90	267.7	38.13	5.493	120.6	16.93	2.472	92.6	13.01	1.888	69.8	9.39	1.407	44.1	6.12	0.793
0.95	167.5	25.14	3.829	115.6	18.01	2.639	89.6	14.18	2.037	67.6	9.87	1.515	41.6	6.09	0.828
1.00	148.0	23.44	3.748	103.2	17.31	2.612	85.3	14.27	2.150	63.8	10.09	1.582	39.2	6.29	0.869
1.10	185.1	32.75	5.673	81.5	14.88	2.493	69.5	12.88	2.116	53.9	9.75	1.626	34.7	6.45	0.948
1.20	73.1	15.61	2.667	63.2	13.69	2.300	56.2	12.10	2.037	45.4	9.60	1.621	30.8	6.39	1.015
1.30	56.7	12.43	2.426	49.6	11.24	2.119	44.1	10.26	1.877	37.4	8.72	1.545	28.1	6.18	1.050
1.40	57.3	13.62	2.846	38.8	9.46	1.925	34.5	8.84	1.700	31.2	7.74	1.486	25.3	5.97	1.051
1.50	57.9	14.18	3.302	35.9	9.13	2.045	28.0	7.51	1.586	25.5	6.86	1.398	22.4	5.99	1.027
1.60	35.3	9.70	2.291	27.1	7.58	1.753	22.3	7.09	1.435	20.6	6.76	1.291	19.7	5.98	0.988
1.70	23.0	7.35	1.681	19.0	7.07	1.386	17.6	6.87	1.273	16.7	6.61	1.178	17.3	5.94	0.942
1.80	14.9	6.88	1.219	14.5	6.78	1.187	14.3	6.66	1.154	13.9	6.43	1.081	15.6	5.89	0.914
1.90	13.0	6.72	1.191	12.7	6.62	1.156	12.5	6.51	1.123	12.1	6.29	1.057	14.2	5.82	0.893
2.00	11.5	6.63	1.163	11.2	6.51	1.125	11.1	6.39	1.093	10.8	6.18	1.032	12.9	5.76	0.871
2.20	8.7	6.35	1.063	8.6	6.26	1.041	8.6	6.17	1.020	8.6	6.00	0.978	10.9	5.64	0.853
2.40	6.6	6.06	0.966	6.6	6.01	0.957	6.8	5.95	0.946	7.0	5.82	0.921	9.3	5.52	0.833
2.60	5.2	5.82	0.893	5.3	5.79	0.891	5.4	5.76	0.887	5.8	5.67	0.873	8.1	5.41	0.811
2.80	4.3	5.65	0.849	4.3	5.63	0.846	4.5	5.61	0.842	4.8	5.54	0.834	7.1	5.31	0.791
3.00	3.5	5.53	0.806	3.6	5.51	0.806	3.8	5.49	0.805	4.1	5.44	0.801	6.4	5.23	0.772
3.20	3.0	5.40	0.768	3.0	5.39	0.770	3.2	5.38	0.772	3.6	5.35	0.774	5.8	5.18	0.756
3.40	2.6	5.30	0.755	2.6	5.30	0.746	2.8	5.29	0.748	3.1	5.27	0.752	5.3	5.14	0.742
3.60	2.3	5.22	0.740	2.3	5.22	0.734	2.5	5.22	0.733	2.8	5.21	0.736	4.9	5.10	0.730
3.80	2.0	5.17	0.729	2.0	5.17	0.725	2.2	5.17	0.722	2.6	5.16	0.724	4.5	5.06	0.719
4.00	1.8	5.13	0.724	1.8	5.13	0.721	2.0	5.13	0.717	2.3	5.12	0.713	4.2	5.04	0.710

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = S-2390 COMPONENT = EAST SIGNAL = GR. ACC. CORRECTION = STATION = KUSHIRO-JI-S
DATE AND TIME = 1991-10-25-19-39 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 117.87 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	135.3	0.52	0.009	143.3	0.46	0.009	143.5	0.46	0.009	142.7	0.45	0.009	139.5	0.39	0.009
0.10	420.9	6.42	0.107	336.5	4.97	0.085	303.7	4.31	0.076	255.4	3.35	0.063	186.8	1.91	0.044
0.15	464.9	10.76	0.265	308.3	6.54	0.176	248.9	5.08	0.142	182.1	3.82	0.102	138.7	2.58	0.070
0.20	261.4	7.55	0.265	178.9	5.14	0.181	154.5	4.71	0.155	118.8	3.92	0.120	108.2	2.59	0.105
0.25	401.9	15.61	0.636	202.8	7.62	0.321	155.3	6.02	0.244	132.1	4.42	0.206	114.1	2.95	0.169
0.30	251.0	12.18	0.572	179.9	9.23	0.408	162.9	8.16	0.368	138.9	6.63	0.310	113.9	4.03	0.237
0.35	208.0	12.27	0.645	189.6	10.77	0.589	172.7	9.52	0.533	143.6	7.76	0.438	107.8	5.59	0.298
0.40	227.5	14.30	0.922	179.7	11.32	0.726	156.9	10.51	0.631	130.9	9.16	0.517	98.3	6.55	0.350
0.45	244.5	17.34	1.254	153.3	11.21	0.787	128.8	10.54	0.658	109.0	9.37	0.543	88.5	7.01	0.397
0.50	174.4	13.84	1.105	119.0	10.49	0.752	108.0	10.03	0.682	92.1	9.11	0.578	80.1	6.98	0.452
0.55	146.0	12.38	1.119	116.6	10.60	0.892	103.9	9.81	0.793	88.8	8.68	0.668	72.6	6.75	0.521
0.60	125.3	11.77	1.142	111.3	10.32	1.014	100.5	9.63	0.913	85.5	8.46	0.758	70.7	6.31	0.587
0.65	129.4	13.34	1.385	106.5	9.87	1.140	95.5	9.18	1.015	81.1	8.06	0.840	68.2	6.13	0.644
0.70	154.0	17.22	1.912	92.9	9.73	1.152	83.9	8.83	1.035	75.1	7.52	0.894	65.1	6.35	0.691
0.75	122.2	14.28	1.741	84.0	10.13	1.196	73.6	8.95	1.045	68.6	7.76	0.932	61.7	6.50	0.728
0.80	117.0	15.36	1.896	86.3	11.07	1.398	72.4	9.32	1.168	63.3	7.91	0.973	57.9	6.65	0.755
0.85	186.4	24.99	3.411	85.2	11.35	1.559	72.0	9.76	1.312	57.2	8.03	0.987	54.0	6.75	0.773
0.90	110.7	16.04	2.272	76.4	10.80	1.565	66.8	9.66	1.363	51.6	7.97	1.031	50.2	6.80	0.784
0.95	80.7	12.03	1.844	69.9	10.70	1.595	60.7	9.50	1.381	47.5	7.77	1.067	46.5	6.83	0.786
1.00	78.2	12.43	1.980	64.8	10.64	1.639	55.2	9.28	1.389	46.2	7.71	1.142	43.1	6.82	0.786
1.10	95.7	16.80	2.934	52.8	9.91	1.616	47.7	8.83	1.450	40.8	8.02	1.216	37.1	6.75	0.775
1.20	72.8	14.27	2.657	52.7	10.70	1.920	39.6	8.58	1.436	34.3	8.09	1.205	31.9	6.68	0.804
1.30	74.4	15.56	3.187	45.3	9.69	1.936	35.1	8.69	1.492	27.7	8.10	1.133	27.6	6.84	0.795
1.40	43.2	10.26	2.143	35.3	8.41	1.749	29.3	8.32	1.443	21.7	7.99	1.044	24.1	6.91	0.762
1.50	40.6	9.86	2.315	25.0	8.34	1.421	21.2	8.18	1.199	17.3	7.88	0.959	21.2	6.94	0.737
1.60	26.4	8.26	1.713	19.0	8.21	1.232	17.1	8.09	1.095	15.2	7.81	0.906	18.8	6.94	0.733
1.70	16.9	8.57	1.236	14.8	8.27	1.084	13.3	8.06	0.965	13.2	7.74	0.875	16.8	6.94	0.724
1.80	11.1	8.10	0.911	11.0	7.99	0.899	11.0	7.86	0.877	11.3	7.61	0.830	15.1	6.92	0.710
1.90	9.1	7.69	0.831	9.1	7.68	0.825	9.1	7.62	0.812	9.8	7.46	0.782	13.7	6.88	0.691
2.00	8.2	7.60	0.833	8.1	7.51	0.811	8.1	7.44	0.788	8.5	7.31	0.744	12.5	6.83	0.673
2.20	6.8	7.03	0.830	6.6	7.07	0.803	6.7	7.07	0.781	7.2	7.02	0.743	10.6	6.72	0.654
2.40	5.2	6.80	0.756	5.3	6.81	0.754	5.4	6.82	0.747	6.1	6.81	0.728	9.3	6.62	0.662
2.60	4.4	6.66	0.747	4.4	6.67	0.738	4.6	6.68	0.731	5.2	6.67	0.717	8.2	6.54	0.666
2.80	3.6	6.56	0.712	3.7	6.58	0.719	3.9	6.59	0.720	4.6	6.58	0.713	7.4	6.47	0.670
3.00	3.2	6.58	0.735	3.3	6.56	0.734	3.5	6.54	0.730	4.1	6.51	0.718	6.8	6.41	0.674
3.20	3.0	6.51	0.791	3.0	6.48	0.768	3.2	6.47	0.752	3.8	6.44	0.727	6.3	6.36	0.678
3.40	2.7	6.35	0.798	2.7	6.36	0.774	2.9	6.37	0.756	3.4	6.37	0.730	5.8	6.32	0.681
3.60	2.3	6.22	0.755	2.4	6.26	0.748	2.6	6.28	0.740	3.1	6.30	0.724	5.4	6.28	0.682
3.80	1.9	6.18	0.712	2.0	6.21	0.719	2.3	6.23	0.721	2.8	6.26	0.716	5.1	6.24	0.683
4.00	1.7	6.20	0.700	1.8	6.21	0.710	2.1	6.21	0.714	2.6	6.22	0.713	4.8	6.21	0.684

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

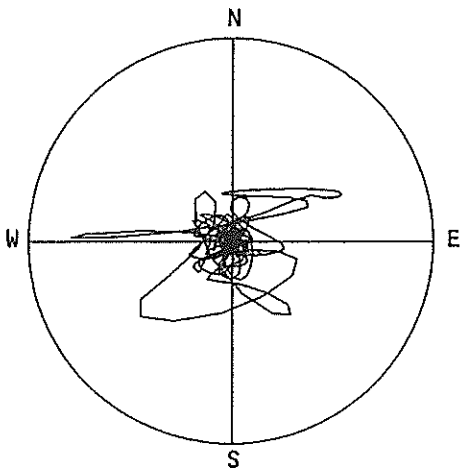
RESPONSE SPECTRUM

RECORD = S-2390 COMPONENT = DOWN SIGNAL = GR. ACC. CORRECTION = STATION = KUSHIRO-JI-S
DATE AND TIME = 1991-10-25-19-39 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 12.33 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	18.3	0.07	0.001	15.1	0.06	0.001	15.0	0.06	0.001	14.9	0.05	0.001	14.4	0.05	0.001
0.10	58.3	0.93	0.015	44.4	0.60	0.011	33.5	0.44	0.008	22.5	0.30	0.006	15.4	0.16	0.004
0.15	30.7	0.72	0.018	22.5	0.51	0.013	18.0	0.36	0.010	15.9	0.28	0.009	14.0	0.20	0.008
0.20	54.8	1.73	0.055	23.1	0.74	0.023	19.5	0.60	0.020	17.0	0.45	0.017	13.4	0.28	0.013
0.25	46.9	1.76	0.074	29.9	1.01	0.047	25.0	0.81	0.039	19.3	0.62	0.030	13.5	0.37	0.020
0.30	76.9	3.52	0.175	42.3	1.89	0.096	33.0	1.40	0.075	23.2	0.92	0.052	14.0	0.49	0.029
0.35	36.0	1.84	0.112	22.4	1.14	0.069	19.0	0.98	0.059	14.8	0.76	0.045	12.4	0.54	0.035
0.40	28.7	1.78	0.116	23.1	1.36	0.093	19.8	1.12	0.080	16.0	0.82	0.064	11.7	0.57	0.044
0.45	37.8	2.68	0.194	19.5	1.32	0.100	17.9	1.13	0.091	17.2	1.00	0.087	12.4	0.69	0.058
0.50	60.3	4.78	0.382	32.7	2.45	0.207	26.7	1.95	0.168	20.7	1.44	0.128	12.8	0.89	0.073
0.55	74.4	6.53	0.570	44.5	3.99	0.341	31.4	2.85	0.240	21.2	1.91	0.160	12.5	1.02	0.085
0.60	41.2	3.94	0.376	30.2	3.06	0.275	24.0	2.44	0.218	16.9	1.73	0.151	11.4	1.06	0.090
0.65	15.5	1.76	0.166	15.3	1.63	0.163	14.7	1.63	0.157	13.2	1.41	0.138	10.1	1.04	0.092
0.70	23.2	2.86	0.288	16.9	2.00	0.210	14.5	1.65	0.179	11.5	1.39	0.139	9.0	1.00	0.095
0.75	27.2	3.22	0.387	17.0	2.24	0.242	14.0	1.87	0.198	10.8	1.41	0.150	8.1	1.00	0.099
0.80	39.5	5.05	0.640	19.8	2.57	0.321	13.2	1.81	0.212	10.4	1.43	0.164	7.2	1.03	0.102
0.85	26.8	3.66	0.491	14.2	2.08	0.260	11.7	1.85	0.212	9.3	1.52	0.165	6.5	1.05	0.101
0.90	10.5	1.92	0.215	10.1	1.89	0.208	9.1	1.74	0.186	7.6	1.47	0.149	5.8	1.04	0.097
0.95	14.8	2.30	0.339	9.2	1.71	0.211	8.1	1.55	0.183	6.7	1.35	0.147	5.1	1.02	0.095
1.00	8.9	1.68	0.226	7.7	1.49	0.194	6.8	1.32	0.170	5.7	1.18	0.140	4.7	0.97	0.095
1.10	5.5	1.11	0.169	4.4	1.11	0.133	3.9	1.09	0.118	3.9	1.01	0.113	3.8	0.88	0.089
1.20	4.2	0.90	0.152	3.6	0.96	0.132	3.1	0.95	0.111	2.7	0.91	0.092	3.1	0.80	0.082
1.30	2.1	0.85	0.091	2.1	0.84	0.089	2.0	0.84	0.086	2.0	0.83	0.080	2.6	0.74	0.076
1.40	1.9	0.82	0.096	1.7	0.78	0.082	1.6	0.77	0.077	1.6	0.77	0.073	2.2	0.72	0.071
1.50	1.5	0.79	0.087	1.3	0.74	0.075	1.3	0.72	0.070	1.3	0.73	0.068	1.9	0.70	0.067
1.60	1.3	0.72	0.085	1.1	0.71	0.073	1.1	0.71	0.068	1.1	0.70	0.064	1.7	0.68	0.064
1.70	0.8	0.70	0.061	0.9	0.68	0.064	0.9	0.68	0.062	1.0	0.68	0.062	1.6	0.67	0.063
1.80	0.9	0.68	0.071	0.8	0.67	0.064	0.8	0.67	0.061	0.8	0.67	0.059	1.4	0.65	0.061
1.90	0.7	0.64	0.066	0.6	0.64	0.057	0.7	0.65	0.057	0.8	0.65	0.058	1.3	0.64	0.060
2.00	0.7	0.68	0.069	0.6	0.65	0.061	0.6	0.65	0.058	0.7	0.64	0.058	1.2	0.64	0.059
2.20	0.5	0.61	0.066	0.5	0.62	0.058	0.5	0.62	0.055	0.6	0.63	0.057	1.1	0.63	0.059
2.40	0.5	0.64	0.071	0.4	0.63	0.064	0.4	0.62	0.060	0.5	0.62	0.058	0.9	0.62	0.058
2.60	0.4	0.62	0.060	0.3	0.62	0.055	0.4	0.62	0.056	0.4	0.62	0.058	0.8	0.61	0.058
2.80	0.3	0.62	0.059	0.3	0.61	0.059	0.3	0.61	0.059	0.4	0.61	0.058	0.8	0.61	0.058
3.00	0.3	0.63	0.069	0.3	0.62	0.064	0.3	0.62	0.062	0.4	0.61	0.059	0.7	0.61	0.058
3.20	0.2	0.63	0.057	0.2	0.62	0.057	0.3	0.62	0.058	0.3	0.61	0.058	0.7	0.60	0.058
3.40	0.2	0.60	0.058	0.2	0.60	0.054	0.2	0.60	0.056	0.3	0.61	0.058	0.6	0.60	0.058
3.60	0.2	0.60	0.060	0.2	0.60	0.059	0.2	0.60	0.059	0.3	0.60	0.059	0.6	0.60	0.058
3.80	0.2	0.60	0.071	0.2	0.60	0.066	0.2	0.60	0.063	0.3	0.60	0.060	0.5	0.60	0.058
4.00	0.2	0.62	0.071	0.2	0.62	0.066	0.2	0.61	0.063	0.2	0.61	0.060	0.5	0.60	0.058

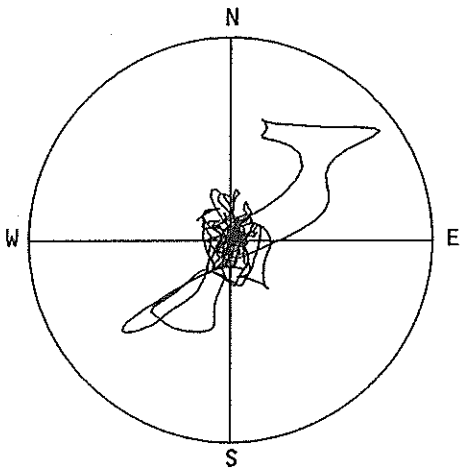
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

S-2390 KUSHIRO-JI-S



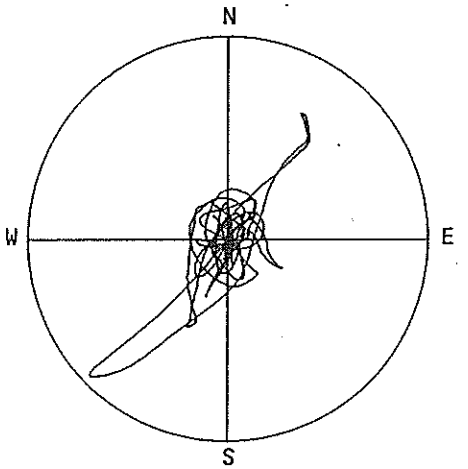
ACCELERATION
R=150.0GAL
MAX=117.9GAL

S-2390 KUSHIRO-JI-S



VELOCITY
R=8.0 CM/SEC.
MAX=7.3 CM/SEC.

S-2390 KUSHIRO-JI-S



DISPLACEMENT
R=1.00 CM
MAX=0.96 CM

RECORD NUMBER S-2401
STATION URAKAWA-S

EARTHQUAKE DATA

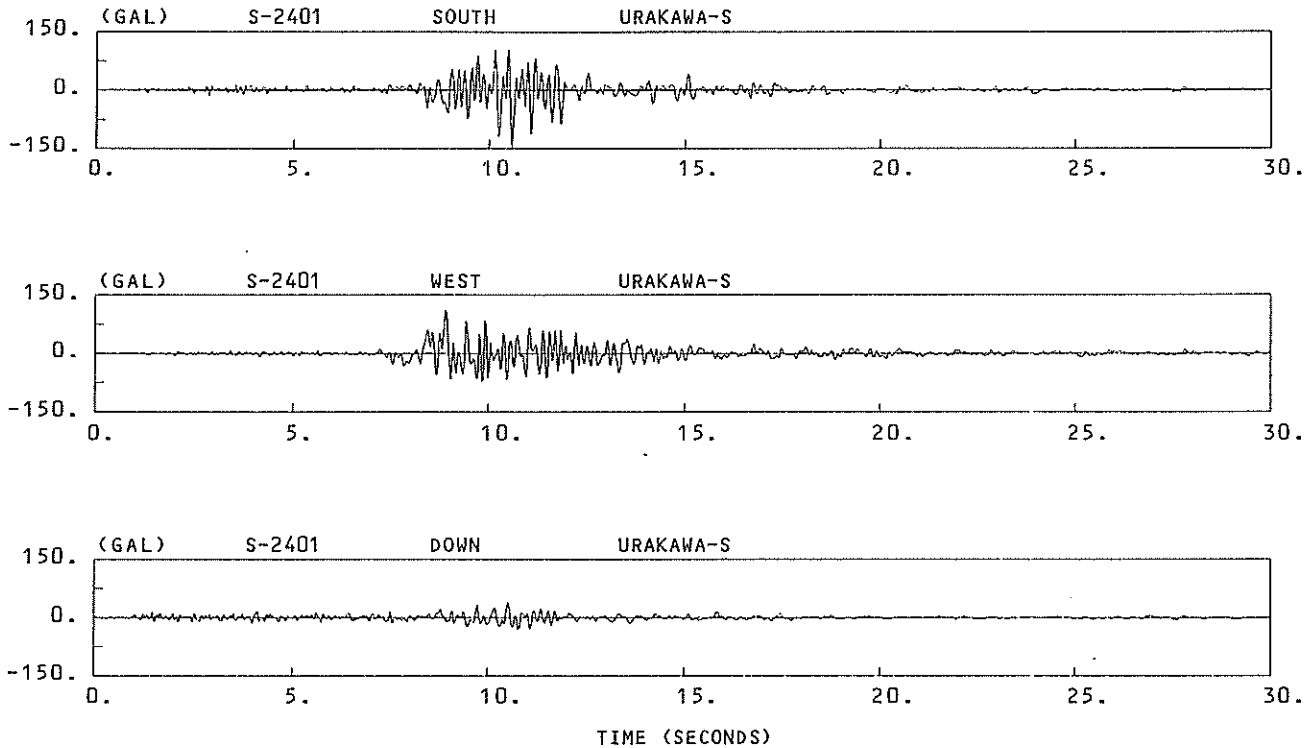
****

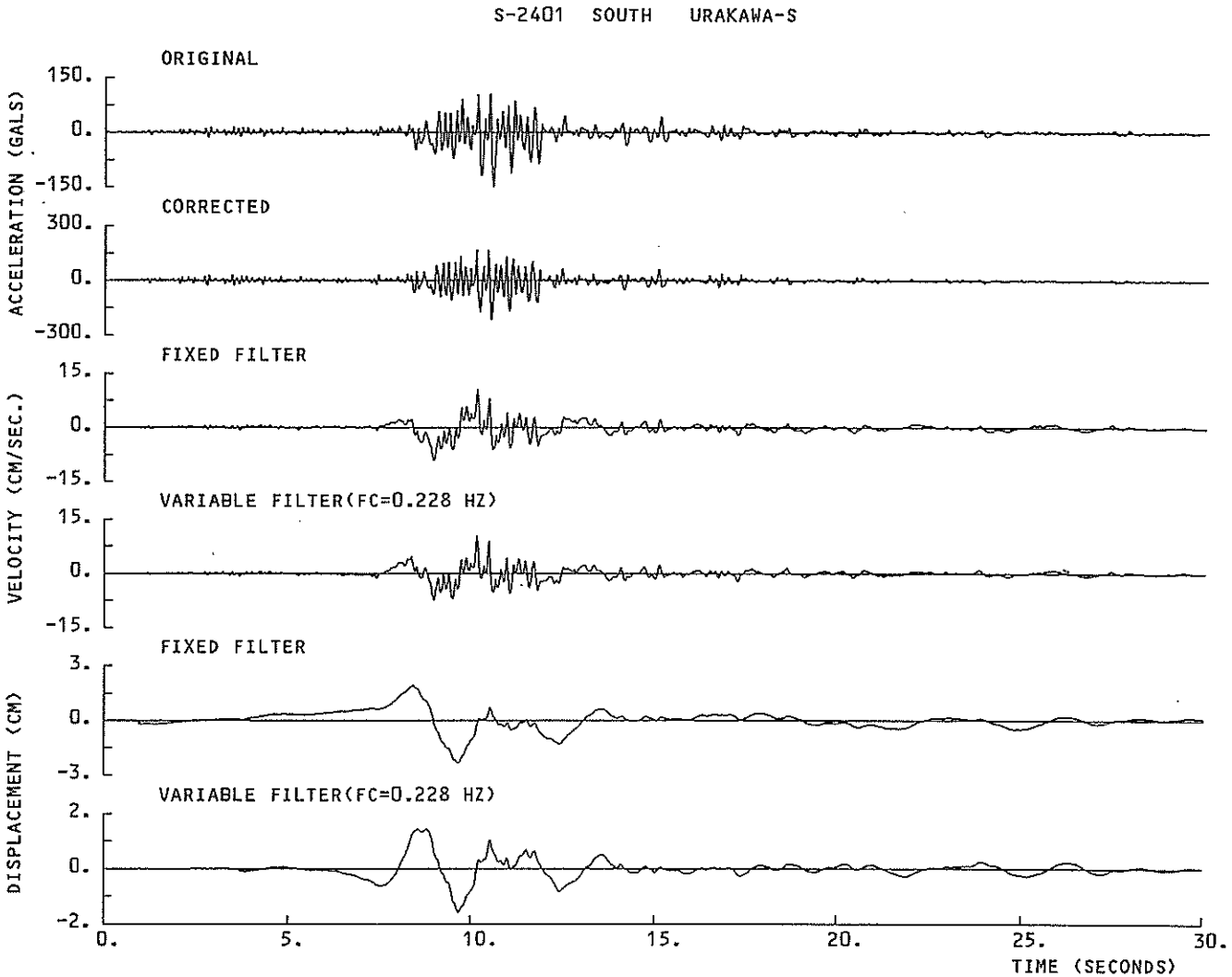
DATA AND TIME	4:40 NOV.27,1991
LOCATION OF HYPOCENTER	
EPCENTRAL REGION	S OFF URAKAWA
LATITUDE	41°59.8' N
LONGITUDE	142°39.9' E
DEPTH	63.7KM
MAGNITUDE	6.4

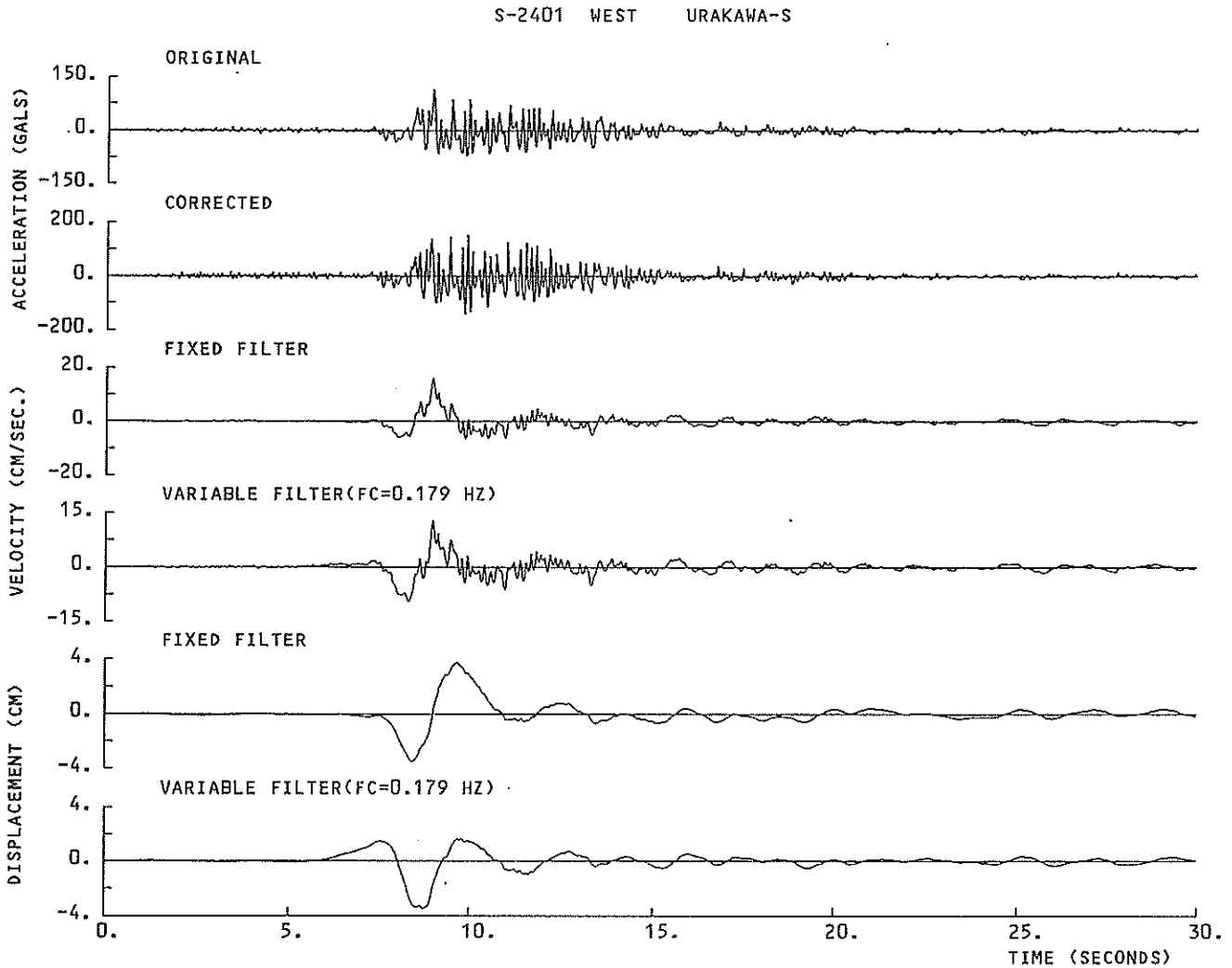
****

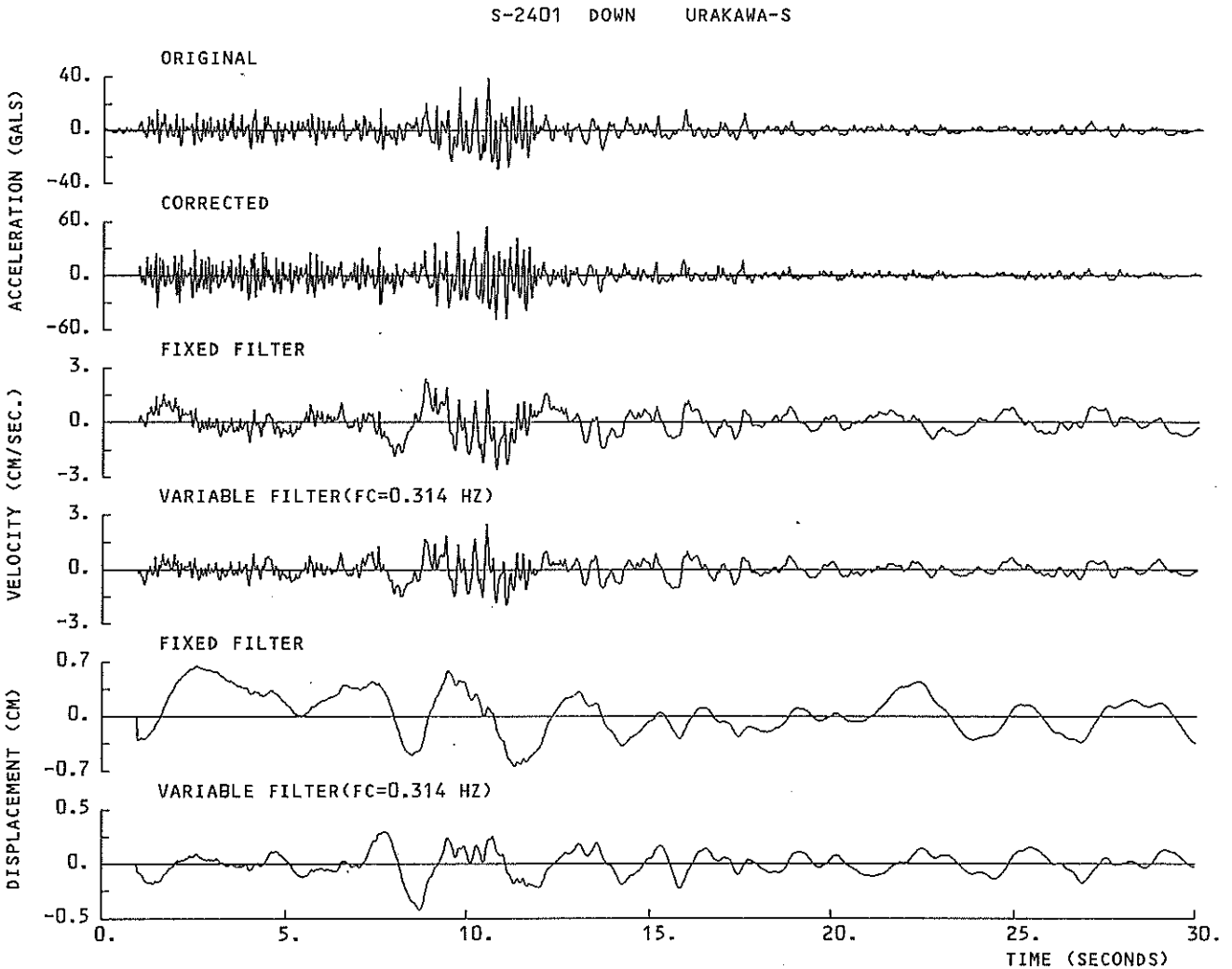
	PEAK VALUES OF COMPONENTS			
	N S	E W	U D	HORIZONTAL*
PARAMETER OF THE VARIABLE FILTER				
FC (HZ)	0.228	0.179	0.314	
MAXIMUM ACCELERATION (GAL)				
ORIGINAL	148.9	112.4	40.1	150.7
CORRECTED	237.3	165.3	54.3	240.7
MAXIMUM VELOCITY (CM/SEC)				
FIXED FILTER	10.72	16.10	2.59	18.55
VARIABLE FILTER	10.42	12.76	2.49	14.77
MAXIMUM DISPLACEMENT (CM)				
FIXED FILTER	2.353	3.756	0.648	4.431
VARIABLE FILTER	1.585	3.449	0.419	3.722

* RESULTANT OF HORIZONTAL COMPONENTS

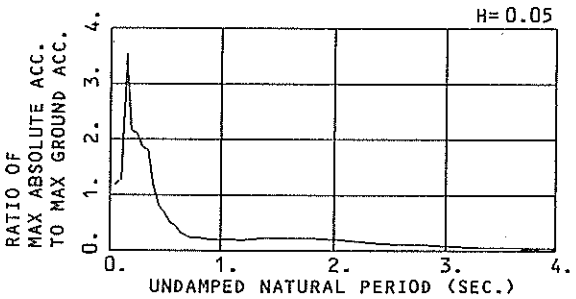

150.
(GAL)
S-2401
SOUTH
URAKAWA-S
0.
-150.
0.
5.
10.
15.
20.
25.
30.
150.
(GAL)
S-2401
WEST
URAKAWA-S
0.
-150.
0.
5.
10.
15.
20.
25.
30.
150.
(GAL)
S-2401
DOWN
URAKAWA-S
0.
-150.
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

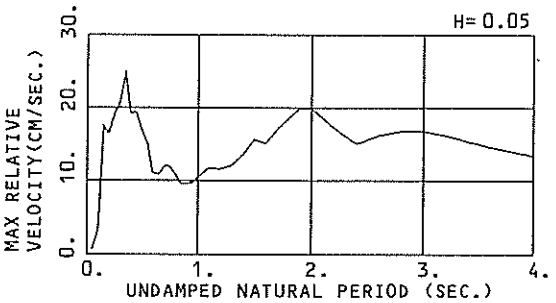

S-2401 SOUTH URAKAWA-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.228 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.228 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
150.
0.
-150.
300.
0.
-300.
15.
0.
-15.
15.
0.
-15.
3.
0.
-3.
2.
0.
-2.
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

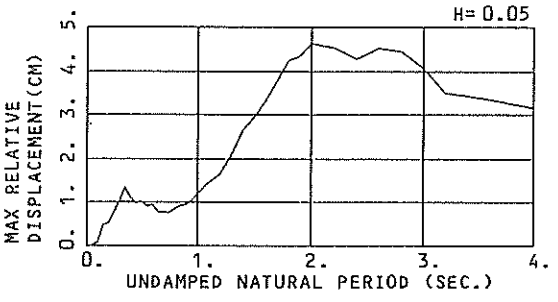

S-2401 WEST URAKAWA-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.179 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.179 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
150.
0.
-150.
200.
0.
-200.
20.
0.
-20.
15.
0.
-15.
4.
0.
-4.
4.
0.
-4.
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


S-2401 DOWN URAKAWA-S
ORIGINAL
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.314 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.314 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
40.
0.
-40.
60.
0.
-60.
3.
0.
-3.
3.
0.
-3.
0.7
0.
-0.7
0.5
0.
-0.5
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

S-2401 SOUTH URAKAWA-S
(1/FC=4.38 SEC.)

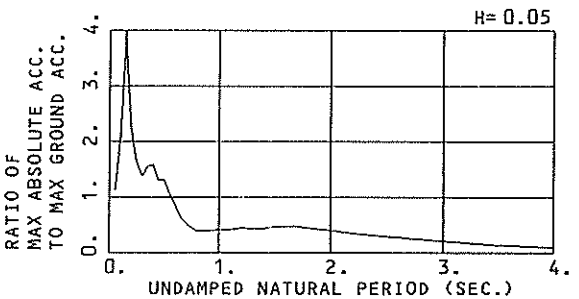


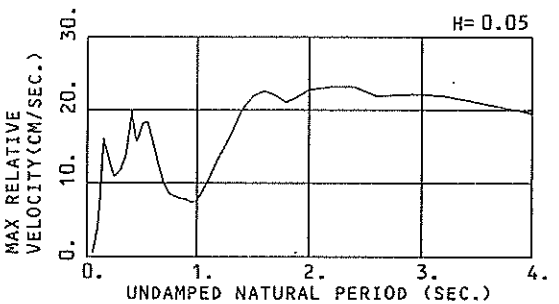


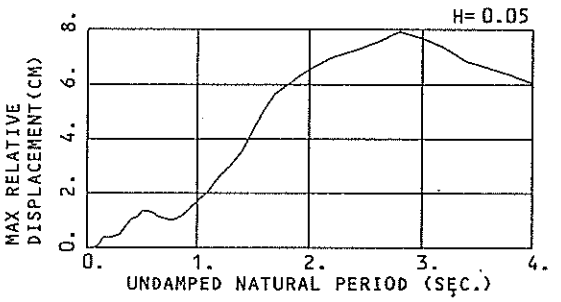


RESPONSE SPECTRA

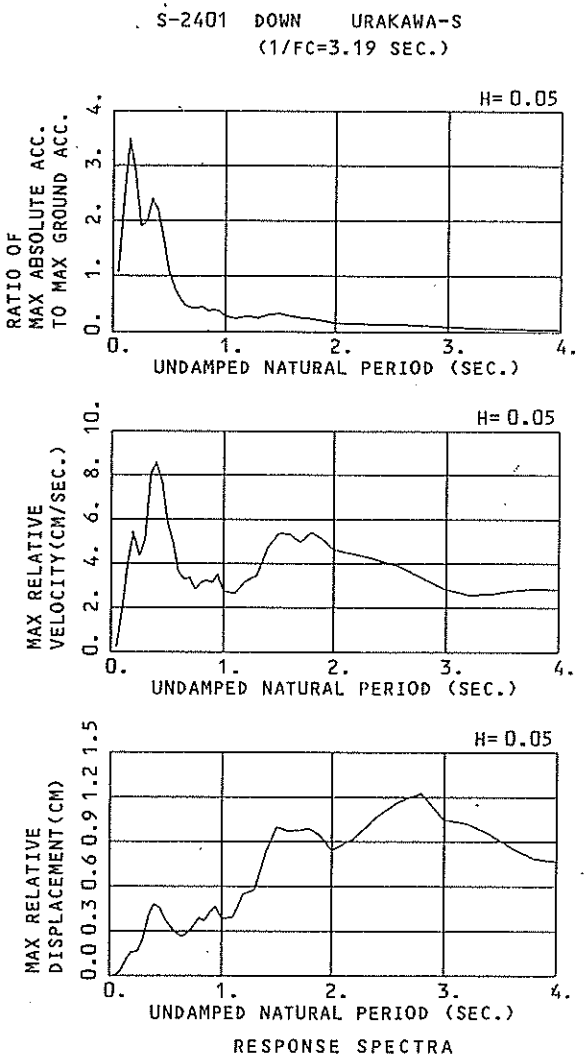
S-2401 WEST URAKAWA-S
(1/FC=5.57 SEC.)

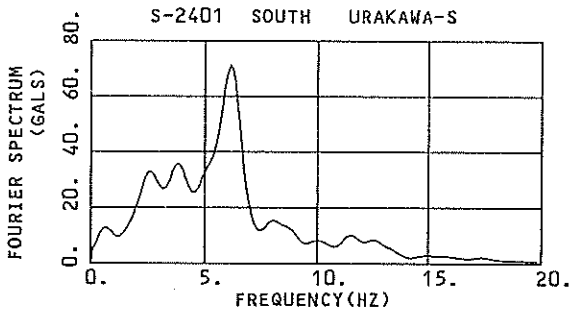


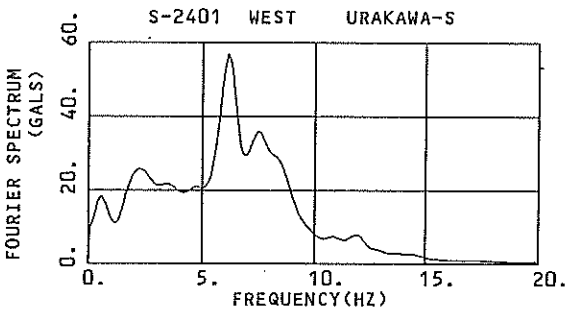


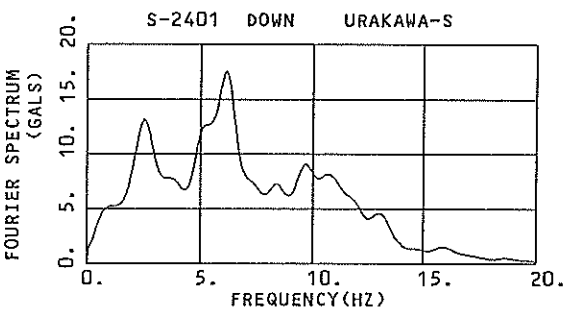


RESPONSE SPECTRA


S-2401 DOWN URAKAWA-S
(1/FC=3.19 SEC.)
H= 0.05
RATIO OF
MAX ABSOLUTE ACC.
TO MAX GROUND ACC.
0. 1. 2. 3. 4.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
H= 0.05
MAX RELATIVE
VELOCITY(CM/SEC.)
0. 2. 4. 6. 8. 10.
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
H= 0.05
MAX RELATIVE
DISPLACEMENT(CM)
0.0 0.3 0.6 0.9 1.2 1.5
0. 1. 2. 3. 4.
UNDAMPED NATURAL PERIOD (SEC.)
RESPONSE SPECTRA


S-2401 SOUTH URAKAWA-S
FOURIER SPECTRUM
(GALS)
0. 20. 40. 60. 80.
0. 5. 10. 15. 20.
FREQUENCY(HZ)


S-2401 WEST URAKAWA-S
FOURIER SPECTRUM
(GALS)
0. 20. 40. 60.
0. 5. 10. 15. 20.
FREQUENCY(HZ)


S-2401 DOWN URAKAWA-S
FOURIER SPECTRUM
(GALS)
0. 5. 10. 15. 20.
0. 5. 10. 15. 20.
FREQUENCY(HZ)

RESPONSE SPECTRUM

RECORD = S-2401 COMPONENT = SOUTH SIGNAL = GR. ACC. CORRECTION = STATION = URAKAWA-S
DATE AND TIME = 1991-11-27- 4-40 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 237.33 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	311.1	1.30	0.020	286.7	0.77	0.018	281.3	0.68	0.018	274.8	0.58	0.017	266.1	0.52	0.017
0.10	902.1	14.23	0.228	344.2	4.01	0.087	305.2	3.22	0.077	314.9	2.74	0.079	314.3	2.34	0.077
0.15	1879.0	42.79	1.071	1155.1	25.31	0.658	838.8	17.62	0.473	630.8	11.78	0.354	411.9	6.84	0.217
0.20	1504.0	47.65	1.524	699.5	22.81	0.709	514.3	16.50	0.517	391.2	12.48	0.387	320.2	7.99	0.290
0.25	923.6	36.77	1.462	649.9	25.58	1.023	499.8	19.15	0.785	339.4	13.05	0.527	264.6	8.84	0.374
0.30	737.1	35.25	1.680	491.7	23.26	1.123	443.3	20.66	1.001	370.2	16.55	0.827	254.3	11.05	0.512
0.35	855.8	47.37	2.655	537.0	30.26	1.659	431.5	25.02	1.333	323.4	19.31	0.979	209.4	12.39	0.560
0.40	525.8	33.38	2.131	355.8	25.00	1.441	278.6	19.24	1.119	204.6	16.38	0.800	152.1	11.64	0.506
0.45	330.9	30.11	1.697	239.5	23.40	1.227	188.8	19.32	0.964	142.3	14.60	0.694	115.6	9.93	0.448
0.50	268.2	25.17	1.698	202.6	20.28	1.276	161.6	16.95	1.014	121.3	12.88	0.741	87.4	8.85	0.448
0.55	254.8	24.35	1.953	143.8	18.49	1.102	118.3	15.16	0.905	95.7	11.85	0.713	77.3	8.69	0.463
0.60	175.7	17.59	1.602	123.2	12.48	1.119	104.8	11.01	0.943	82.6	9.80	0.718	65.4	8.23	0.447
0.65	80.3	11.88	0.859	74.4	11.50	0.796	72.3	10.84	0.768	65.5	9.84	0.686	56.9	8.38	0.482
0.70	123.2	13.71	1.530	64.6	12.83	0.800	62.2	12.00	0.764	57.2	10.67	0.689	51.2	8.56	0.515
0.75	79.9	14.42	1.139	60.1	12.86	0.856	53.3	11.94	0.751	49.9	10.68	0.684	46.8	8.57	0.540
0.80	58.1	11.59	0.942	56.5	11.23	0.915	53.0	10.82	0.850	46.1	10.06	0.724	43.8	8.39	0.558
0.85	80.5	11.46	1.473	55.4	10.00	1.012	50.9	9.61	0.918	44.7	9.18	0.781	41.5	8.08	0.573
0.90	56.2	9.82	1.154	51.4	9.81	1.047	47.3	9.57	0.946	41.9	9.00	0.803	39.2	7.93	0.589
0.95	59.6	10.70	1.362	51.6	10.13	1.174	46.4	9.70	1.036	40.0	9.07	0.829	36.8	8.05	0.606
1.00	72.4	13.03	1.835	56.8	11.46	1.434	47.5	10.49	1.184	37.2	9.27	0.875	36.6	8.12	0.684
1.10	67.4	14.29	2.065	55.0	12.89	1.681	47.7	11.74	1.446	38.4	10.10	1.117	36.4	8.21	0.847
1.20	78.5	15.10	2.863	51.8	11.91	1.889	45.0	11.56	1.633	37.2	10.57	1.332	35.9	8.52	1.010
1.30	60.4	13.05	2.587	55.0	12.63	2.349	48.8	12.05	2.077	37.8	10.79	1.581	35.5	8.78	1.191
1.40	84.4	18.51	4.193	66.4	14.76	3.295	53.8	13.56	2.661	38.2	11.84	1.834	35.1	9.15	1.382
1.50	102.7	25.97	5.852	67.6	18.15	3.847	51.7	15.71	2.935	42.7	12.42	2.335	34.1	9.45	1.556
1.60	110.0	27.62	7.134	66.9	17.41	4.331	52.0	15.14	3.325	44.5	12.31	2.745	33.5	10.23	1.681
1.70	84.1	23.97	6.157	58.6	19.36	4.279	52.2	17.08	3.783	43.5	14.29	3.012	32.1	11.16	1.779
1.80	69.7	23.40	5.722	59.6	20.18	4.877	52.4	18.54	4.246	41.8	16.05	3.303	32.6	11.91	2.054
1.90	65.4	24.16	5.983	55.7	21.80	5.076	48.2	19.90	4.356	39.5	17.03	3.397	33.3	12.40	2.289
2.00	62.0	23.72	6.287	53.2	21.65	5.371	46.5	19.92	4.631	39.4	17.22	3.720	33.3	12.61	2.473
2.20	46.5	19.71	5.706	40.3	18.25	4.913	38.0	17.20	4.543	35.1	15.68	3.917	31.7	12.35	2.676
2.40	48.0	18.53	7.010	32.9	16.53	4.784	29.9	15.04	4.280	28.9	13.43	3.739	28.9	11.50	2.686
2.60	41.9	18.04	7.179	30.4	17.10	5.190	27.3	16.23	4.529	24.5	14.67	3.848	25.6	11.42	2.560
2.80	31.9	18.66	6.344	25.5	17.69	5.044	23.5	16.83	4.459	21.8	15.32	3.842	22.4	12.11	2.581
3.00	28.3	18.40	6.461	20.3	17.56	4.612	18.9	16.79	4.076	18.5	15.46	3.603	19.5	12.52	2.572
3.20	17.8	17.40	4.606	15.4	16.81	3.971	14.6	16.25	3.503	15.2	15.21	3.224	16.9	12.71	2.483
3.40	13.2	16.14	3.869	12.5	15.82	3.637	12.1	15.47	3.438	12.3	14.75	3.087	14.8	12.74	2.341
3.60	11.2	15.01	3.667	10.8	14.87	3.513	10.6	14.68	3.362	10.4	14.22	3.073	13.2	12.67	2.363
3.80	9.5	14.14	3.484	9.4	14.09	3.374	9.3	14.00	3.258	9.2	13.71	3.027	11.9	12.54	2.401
4.00	8.2	13.47	3.338	8.2	13.47	3.252	8.2	13.42	3.158	8.2	13.26	2.965	10.8	12.38	2.415

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = S-2401 COMPONENT = WEST SIGNAL = GR. ACC. CORRECTION = STATION = URAKAWA-S
DATE AND TIME = 1991-11-27- 4-40 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 165.29 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	200.7	0.96	0.013	190.8	0.57	0.012	187.0	0.53	0.012	186.1	0.49	0.012	185.2	0.44	0.012
0.10	705.5	10.84	0.179	375.9	4.70	0.095	348.1	4.18	0.088	322.5	3.75	0.081	267.1	2.68	0.064
0.15	1153.4	26.57	0.657	886.9	20.19	0.504	661.0	15.11	0.376	521.0	12.05	0.294	303.1	6.49	0.155
0.20	1100.3	35.07	1.115	510.4	17.52	0.519	373.7	13.30	0.375	276.0	9.58	0.276	199.2	5.92	0.181
0.25	611.6	23.35	0.968	334.5	13.50	0.531	273.0	10.86	0.431	207.5	8.30	0.321	173.5	5.62	0.240
0.30	555.7	26.86	1.267	284.4	14.08	0.646	229.1	11.71	0.518	188.8	9.46	0.419	156.9	7.08	0.302
0.35	435.7	23.81	1.352	293.8	15.30	0.912	257.1	13.78	0.794	206.8	12.16	0.623	148.0	8.86	0.423
0.40	386.1	26.41	1.565	316.7	22.79	1.283	261.8	19.83	1.059	212.8	15.74	0.846	153.7	10.05	0.559
0.45	583.7	41.73	2.994	263.2	19.85	1.348	215.3	15.68	1.099	185.4	13.93	0.926	143.9	9.91	0.648
0.50	315.7	28.59	1.999	257.9	21.73	1.627	217.5	18.13	1.365	162.1	13.32	0.993	127.4	8.90	0.694
0.55	379.0	33.66	2.904	217.8	21.97	1.667	175.8	18.43	1.344	127.2	13.82	0.942	110.6	8.20	0.711
0.60	221.5	24.02	2.020	166.1	17.39	1.512	141.9	15.44	1.280	107.8	12.88	0.948	94.8	8.58	0.707
0.65	172.7	17.99	1.848	114.3	13.12	1.221	105.8	12.50	1.122	90.9	11.24	0.947	81.0	8.36	0.693
0.70	109.9	13.31	1.365	93.4	10.31	1.156	88.3	10.03	1.083	80.3	9.52	0.957	69.7	7.88	0.692
0.75	118.9	13.62	1.694	73.6	8.75	1.046	72.0	8.47	1.012	69.6	8.18	0.945	61.8	7.36	0.752
0.80	68.4	8.88	1.108	65.7	8.47	1.064	64.3	8.20	1.033	62.5	7.73	0.983	59.5	6.85	0.840
0.85	71.5	9.10	1.309	63.2	7.93	1.152	63.1	7.85	1.143	62.1	7.45	1.099	59.0	6.56	0.928
0.90	65.9	9.04	1.351	65.0	8.17	1.330	64.1	7.75	1.303	62.3	7.16	1.236	58.6	6.72	1.020
0.95	72.7	10.11	1.662	68.6	7.71	1.566	66.1	7.35	1.498	62.9	6.73	1.386	57.9	7.01	1.109
1.00	81.9	12.30	2.075	68.9	8.06	1.739	66.8	7.53	1.676	63.2	7.46	1.539	57.1	7.39	1.196
1.10	77.1	12.20	2.362	71.8	10.62	2.197	67.9	10.30	2.059	62.3	9.74	1.829	54.8	8.32	1.347
1.20	122.2	23.41	4.458	80.3	14.63	2.919	72.7	13.67	2.615	62.1	12.09	2.125	51.7	9.21	1.590
1.30	128.5	26.37	5.501	81.1	18.15	3.468	70.9	16.54	3.029	58.6	14.57	2.437	54.9	10.91	1.978
1.40	94.4	23.78	4.689	80.4	21.62	3.992	71.6	19.98	3.544	63.7	17.32	3.056	57.0	12.34	2.358
1.50	101.7	25.44	5.794	85.6	23.56	4.863	76.9	21.85	4.330	65.6	18.95	3.587	57.8	13.34	2.699
1.60	151.1	39.00	9.797	87.9	24.43	5.688	78.7	22.63	5.058	65.2	19.67	4.072	57.5	13.88	2.994
1.70	124.8	35.19	9.138	87.0	23.77	6.349	78.2	22.07	5.647	65.3	19.44	4.536	56.3	14.05	3.239
1.80	92.2	27.61	7.567	81.8	24.00	6.695	72.9	20.99	5.950	61.3	18.47	4.758	54.4	13.85	3.434
1.90	86.5	28.60	7.914	76.9	23.83	7.025	69.2	21.77	6.265	57.3	18.39	5.043	52.1	13.37	3.661
2.00	83.8	27.95	8.490	72.5	24.71	7.336	64.8	22.75	6.537	53.4	19.47	5.250	49.5	13.41	3.856
2.20	99.6	35.78	12.208	63.9	25.07	7.814	57.4	23.17	6.990	47.0	19.91	5.638	44.1	14.95	4.123
2.40	79.5	30.69	11.592	58.5	24.69	8.515	49.9	23.17	7.229	42.2	20.44	5.864	38.9	16.09	4.261
2.60	72.8	31.77	12.463	53.6	25.04	9.169	44.3	21.88	7.543	37.4	20.22	6.108	34.2	16.89	4.376
2.80	61.5	28.33	12.205	49.3	22.83	9.774	40.3	22.05	7.923	32.5	20.70	6.222	30.0	17.44	4.444
3.00	51.6	25.65	11.774	39.9	22.85	9.070	33.9	22.14	7.683	27.8	20.87	6.023	26.3	17.81	4.434
3.20	39.5	24.16	10.257	32.8	22.46	8.490	29.0	21.86	7.343	24.7	20.75	6.093	23.4	18.00	4.411
3.40	30.7	22.30	8.987	26.1	21.81	7.621	23.9	21.34	6.838	21.8	20.45	6.058	20.8	18.06	4.485
3.60	24.1	21.42	7.927	21.2	21.08	6.939	20.4	20.72	6.596	19.1	20.03	5.962	18.5	18.02	4.501
3.80	19.4	20.60	7.085	18.2	20.37	6.622	17.7	20.11	6.341	16.7	19.57	5.806	16.5	17.91	4.483
4.00	16.1	19.87	6.526	15.6	19.72	6.288	15.3	19.53	6.057	14.6	19.12	5.610	14.7	17.75	4.445

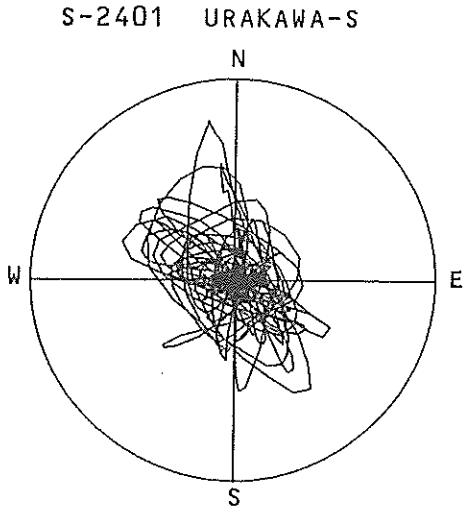
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

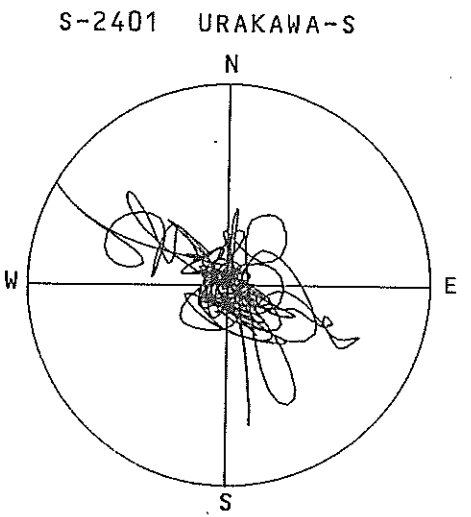
RECORD = S-2401 COMPONENT = DOWN SIGNAL = GR. ACC. CORRECTION = STATION = URAKAWA-S
DATE AND TIME = 1991-11-27- 4-40 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 54.33 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	103.0	0.57	0.007	57.6	0.24	0.004	58.0	0.22	0.004	59.2	0.20	0.004	58.6	0.17	0.004
0.10	776.4	12.27	0.197	184.0	2.80	0.047	133.4	2.00	0.034	113.3	1.29	0.028	80.2	0.81	0.019
0.15	699.1	16.12	0.398	238.9	5.10	0.135	189.3	4.07	0.107	138.4	2.91	0.078	87.7	1.69	0.047
0.20	699.2	22.23	0.708	244.3	8.18	0.246	159.3	5.42	0.160	116.0	3.67	0.116	77.6	2.25	0.071
0.25	156.4	6.43	0.248	125.2	5.14	0.197	103.2	4.35	0.164	86.9	3.44	0.135	68.1	2.58	0.096
0.30	186.7	9.48	0.426	105.7	5.41	0.240	107.6	5.07	0.245	96.1	4.66	0.213	69.7	3.16	0.142
0.35	220.8	12.09	0.685	160.9	9.55	0.500	130.8	8.07	0.405	103.1	6.07	0.312	69.8	3.42	0.187
0.40	343.2	21.53	1.391	155.1	11.05	0.627	120.1	8.58	0.482	92.2	6.30	0.363	59.4	3.74	0.199
0.45	189.6	13.55	0.972	107.0	8.95	0.549	89.9	7.72	0.457	64.3	5.98	0.320	43.2	3.78	0.173
0.50	149.4	11.77	0.946	70.3	6.74	0.445	60.1	5.95	0.379	44.5	4.61	0.274	30.8	3.40	0.157
0.55	86.5	7.39	0.662	49.8	5.47	0.382	43.0	5.00	0.327	34.0	4.25	0.255	26.0	3.09	0.155
0.60	69.7	6.76	0.636	39.7	4.31	0.361	31.7	3.62	0.286	27.1	3.38	0.239	22.5	2.96	0.163
0.65	49.0	5.19	0.525	28.8	3.21	0.308	24.9	3.27	0.264	20.3	3.18	0.211	19.3	2.90	0.164
0.70	70.0	7.82	0.869	33.1	4.22	0.410	23.5	3.35	0.290	16.3	3.07	0.199	16.6	2.83	0.161
0.75	46.0	5.69	0.656	29.4	3.66	0.419	23.2	2.82	0.329	18.4	2.81	0.259	14.5	2.76	0.184
0.80	102.6	13.06	1.663	33.4	4.30	0.541	24.1	3.14	0.387	19.2	2.68	0.306	13.8	2.68	0.205
0.85	31.2	4.30	0.572	24.3	3.66	0.444	20.4	3.24	0.371	18.3	2.71	0.327	13.6	2.60	0.222
0.90	45.0	6.67	0.924	27.5	3.96	0.563	21.0	3.13	0.429	17.4	2.53	0.346	13.1	2.53	0.235
0.95	62.7	9.57	1.434	28.5	4.82	0.652	20.5	3.52	0.465	15.4	2.39	0.341	12.4	2.46	0.243
1.00	34.5	5.31	0.875	18.7	3.43	0.472	15.3	2.75	0.385	12.7	2.34	0.312	11.7	2.39	0.250
1.10	14.7	3.18	0.452	13.6	2.92	0.415	12.7	2.64	0.388	11.4	2.44	0.342	10.5	2.26	0.265
1.20	38.9	7.44	1.419	18.7	3.90	0.682	15.1	3.17	0.547	11.9	2.84	0.426	9.5	2.36	0.284
1.30	24.5	5.13	1.049	16.8	3.64	0.719	13.6	3.43	0.578	11.6	3.06	0.479	9.8	2.53	0.349
1.40	47.9	10.63	2.376	22.9	5.86	1.138	16.8	4.71	0.831	12.9	3.70	0.616	10.2	2.67	0.411
1.50	42.5	10.73	2.424	23.4	6.41	1.334	17.8	5.37	1.000	14.1	4.10	0.756	10.2	2.75	0.460
1.60	24.3	6.84	1.576	17.9	5.99	1.159	15.3	5.35	0.972	12.8	4.33	0.768	9.8	2.88	0.491
1.70	22.3	6.73	1.632	16.4	5.57	1.195	13.5	4.96	0.977	10.6	4.15	0.745	9.0	2.94	0.507
1.80	29.9	8.38	2.457	14.6	6.19	1.198	12.1	5.42	0.987	9.3	4.42	0.740	8.3	3.16	0.511
1.90	16.0	6.02	1.463	11.6	5.56	1.060	10.4	5.14	0.943	8.7	4.46	0.761	7.6	3.28	0.508
2.00	10.3	4.46	1.039	8.5	4.67	0.853	8.4	4.63	0.841	7.8	4.29	0.749	7.0	3.33	0.516
2.20	9.3	5.27	1.146	8.4	4.77	1.022	7.7	4.42	0.922	6.7	3.97	0.762	5.9	3.23	0.537
2.40	11.8	5.21	1.717	8.9	4.60	1.289	7.5	4.17	1.064	6.0	3.64	0.837	5.1	2.99	0.540
2.60	15.0	6.29	2.561	9.1	4.54	1.557	7.0	3.85	1.168	5.9	3.41	0.934	4.5	2.79	0.596
2.80	10.3	5.04	2.052	7.9	4.06	1.563	6.3	3.33	1.228	4.9	3.16	0.870	4.2	2.75	0.615
3.00	10.0	4.95	2.273	6.0	3.17	1.371	4.6	2.82	1.046	3.9	2.84	0.768	3.9	2.68	0.612
3.20	7.7	4.05	2.006	4.8	2.73	1.241	4.0	2.60	1.024	3.2	2.65	0.793	3.6	2.61	0.599
3.40	4.7	3.20	1.369	3.8	2.83	1.115	3.3	2.62	0.958	2.9	2.59	0.744	3.3	2.54	0.581
3.60	3.8	3.11	1.243	3.1	2.93	1.023	2.7	2.78	0.863	2.6	2.57	0.690	3.0	2.48	0.559
3.80	3.1	3.29	1.124	2.5	3.04	0.917	2.3	2.86	0.785	2.3	2.59	0.645	2.7	2.42	0.530
4.00	2.4	3.32	0.988	2.1	3.05	0.828	1.9	2.83	0.766	1.9	2.54	0.676	2.5	2.36	0.527

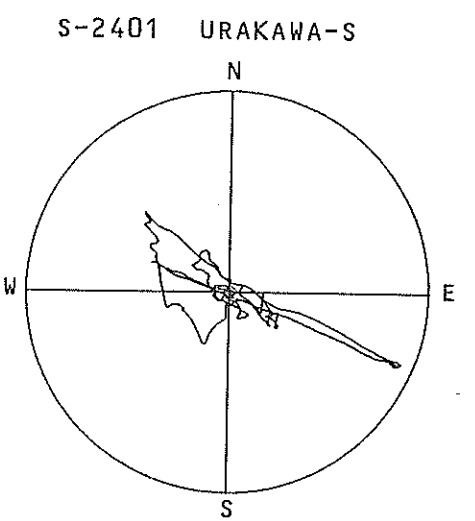
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)



ACCELERATION
R=300.0GAL
MAX=240.7GAL



VELOCITY
R=15.0 CM/SEC.
MAX=14.8 CM/SEC.



DISPLACEMENT
R=4.00 CM
MAX=3.72 CM

RECORD NUMBER M-1383
STATION TOKACHI-M

EARTHQUAKE DATA

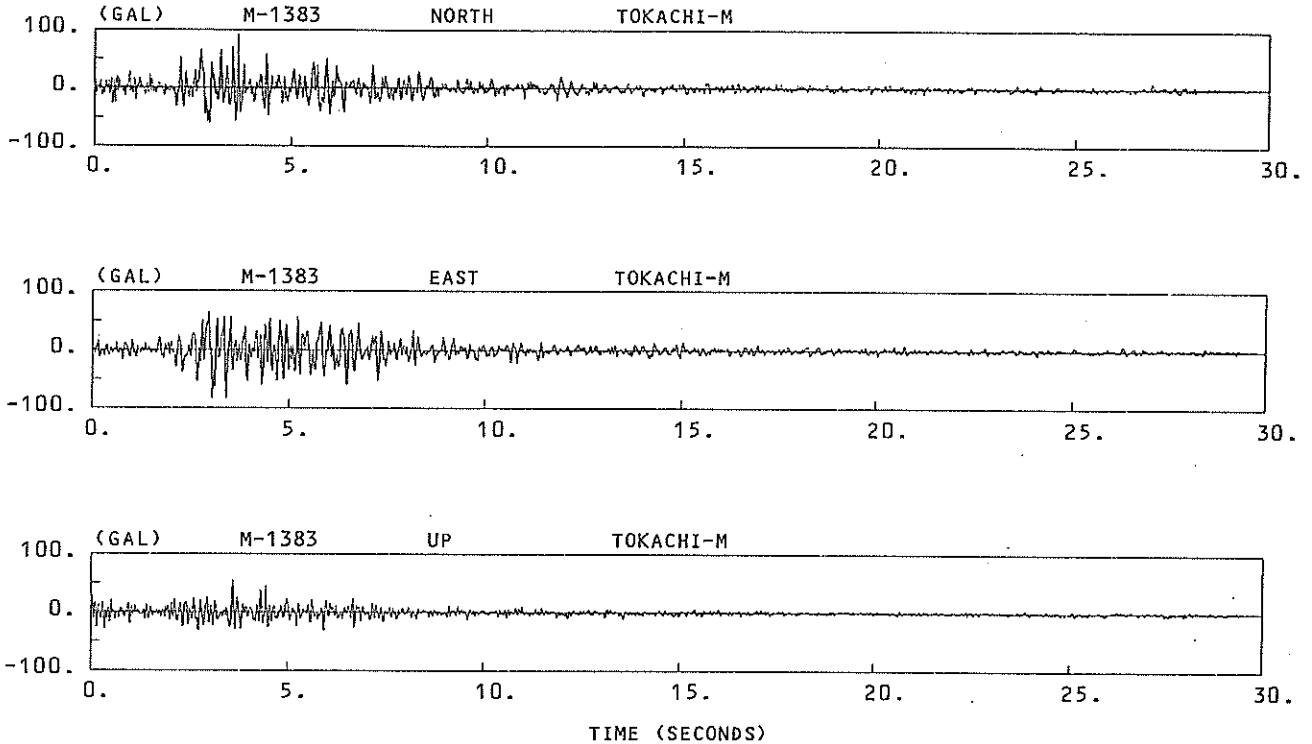
****

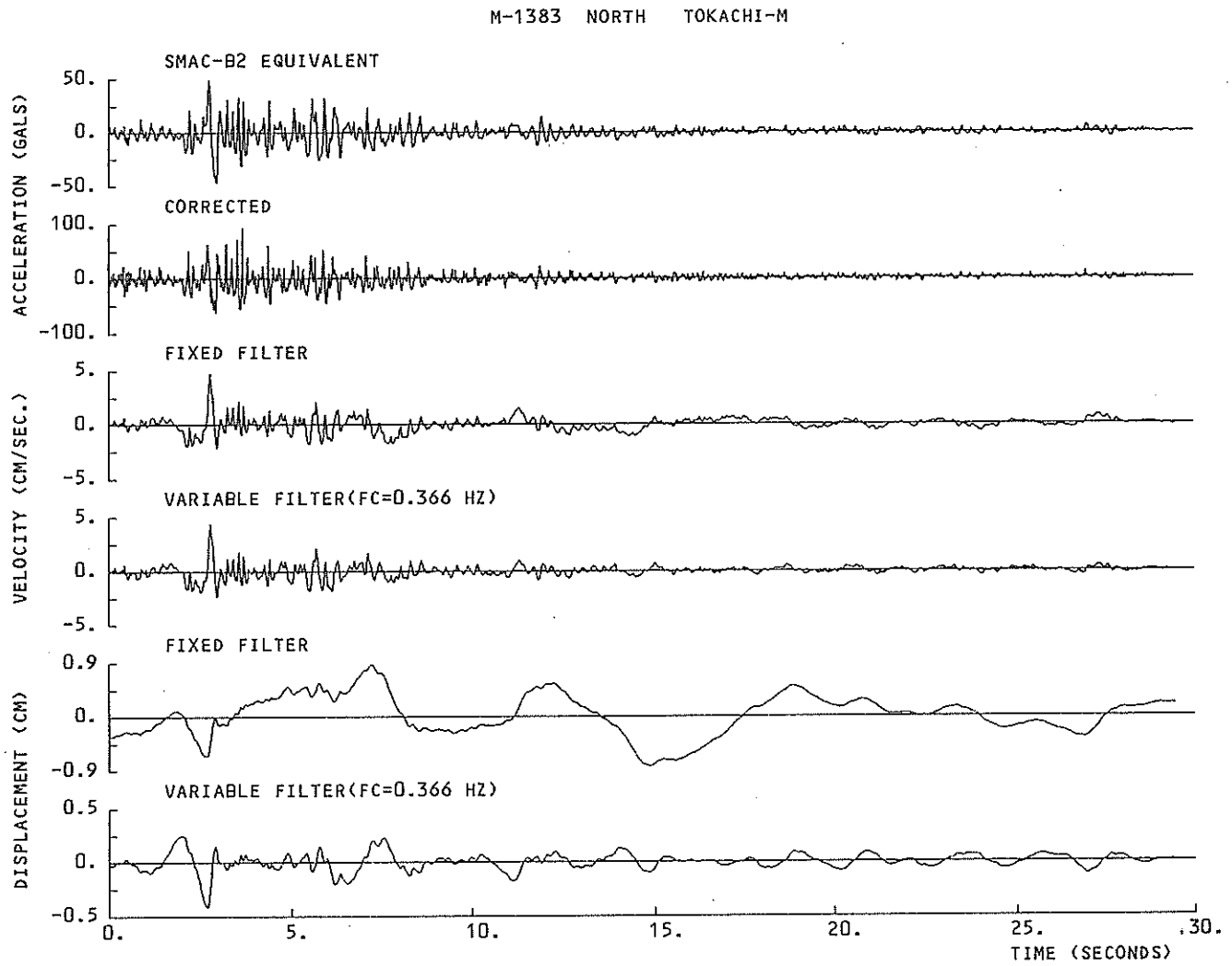
DATA AND TIME 4:40 NOV.27,1991
LOCATION OF HYPOCENTER
EPCENTRAL REGION S OFF URAKAWA
LATITUDE 41°59.8' N
LONGITUDE 142°39.9' E
DEPTH 63.7KM
MAGNITUDE 6.4

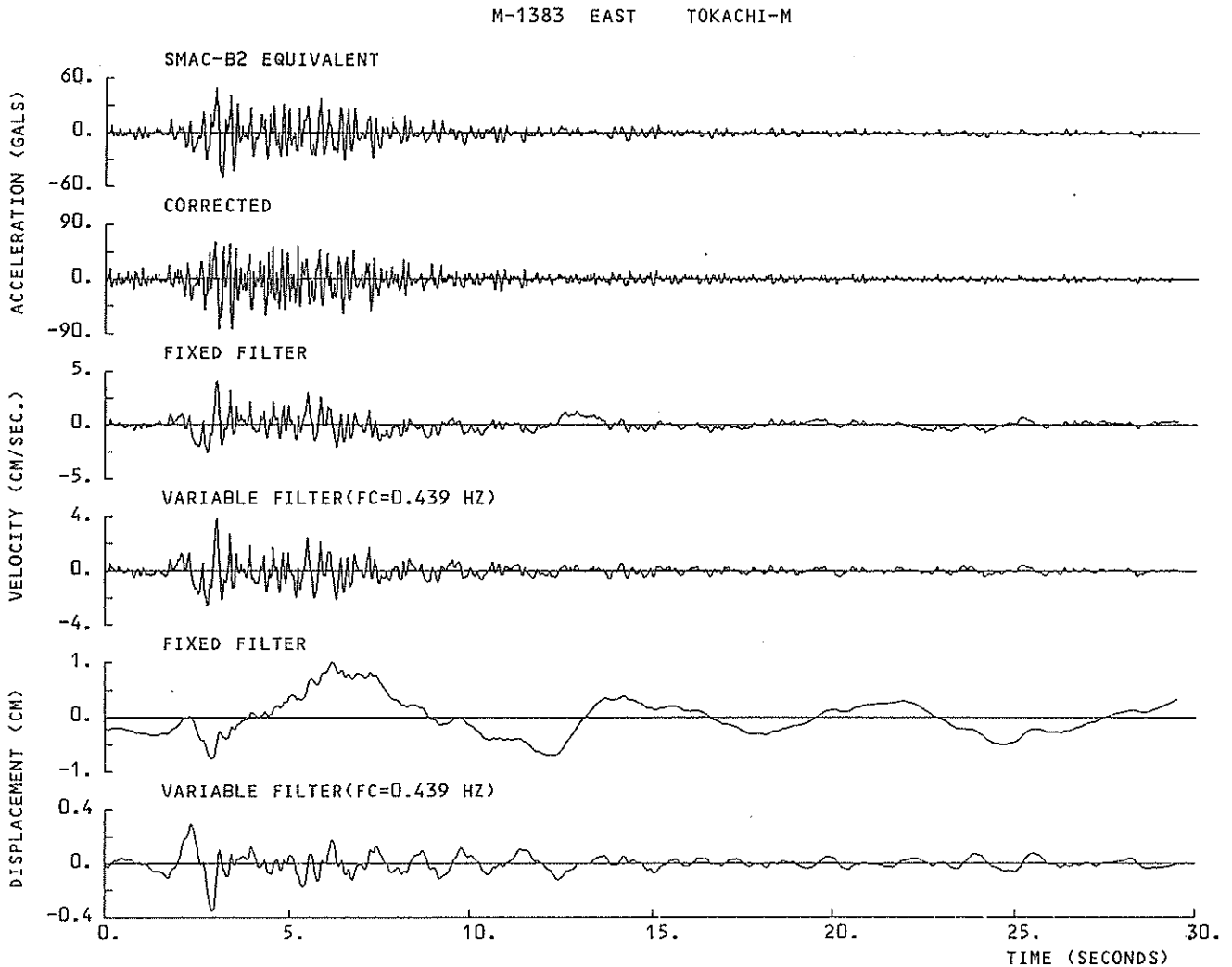
****

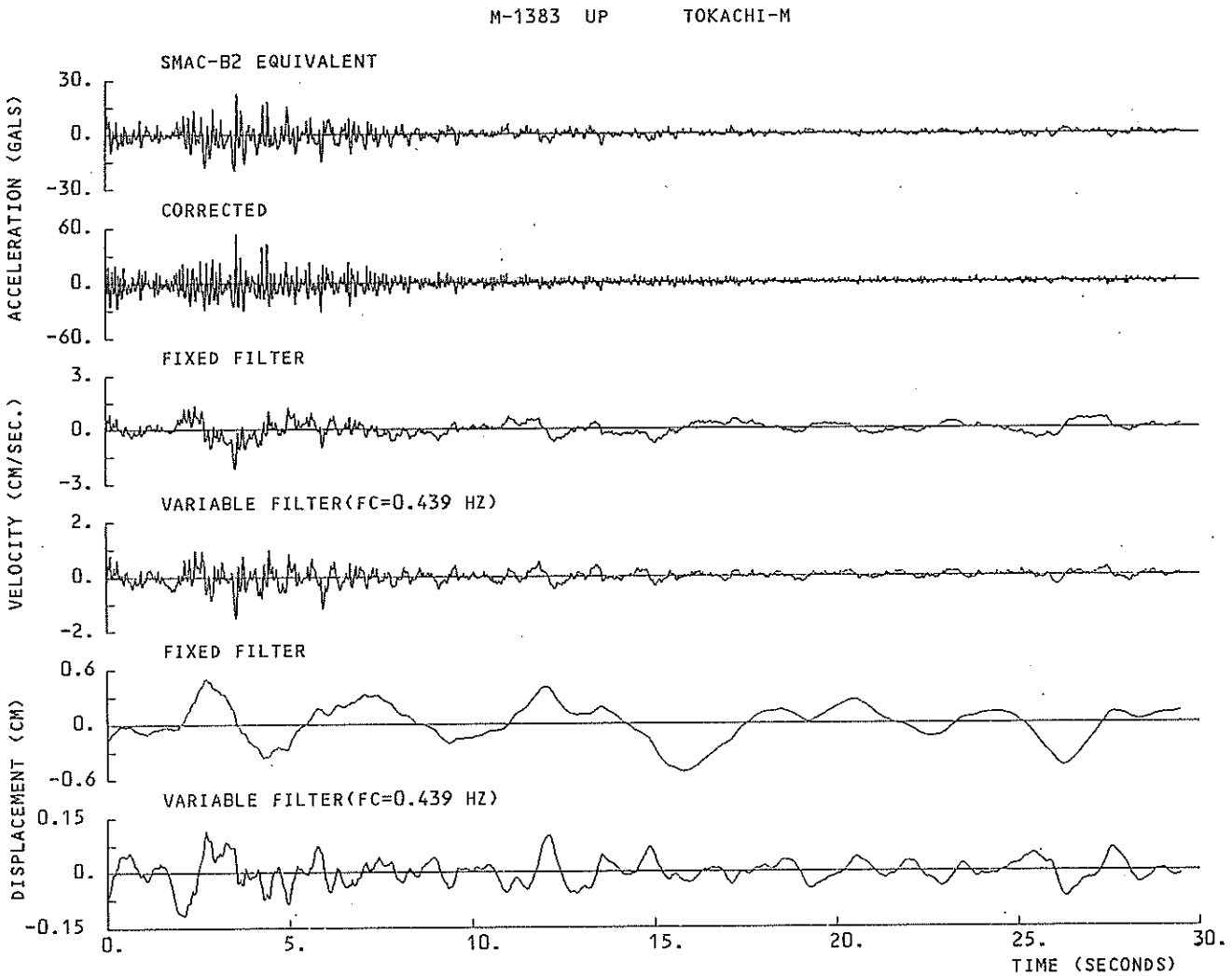
	PEAK VALUES OF COMPONENTS			
	N S	E W	U D	HORIZONTAL*
PARAMETER OF THE VARIABLE FILTER				
FC (HZ)	0.366	0.439	0.439	
MAXIMUM ACCELERATION (GAL)				
SMAC-B2 EQUIVALENT	49.3	50.3	23.1	63.9
ORIGINAL	90.9	83.1	55.5	91.3
CORRECTED	93.1	84.0	55.1	93.2
MAXIMUM VELOCITY (CM/SEC)				
FIXED FILTER	4.76	4.08	2.17	5.28
VARIABLE FILTER	4.39	3.88	1.54	5.00
MAXIMUM DISPLACEMENT (CM)				
FIXED FILTER	0.879	1.007	0.520	1.192
VARIABLE FILTER	0.412	0.359	0.117	0.412

* RESULTANT OF HORIZONTAL COMPONENTS

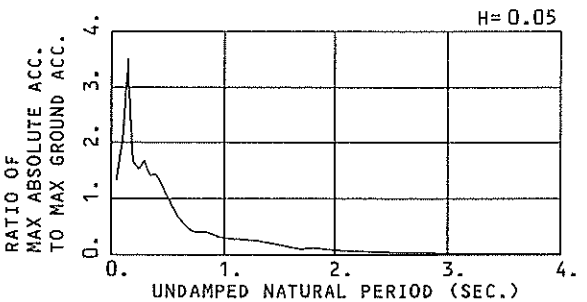

(GAL) M-1383 NORTH TOKACHI-M
100.
0.
-100.
0. 5. 10. 15. 20. 25. 30.
(GAL) M-1383 EAST TOKACHI-M
100.
0.
-100.
0. 5. 10. 15. 20. 25. 30.
(GAL) M-1383 UP TOKACHI-M
100.
0.
-100.
0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)

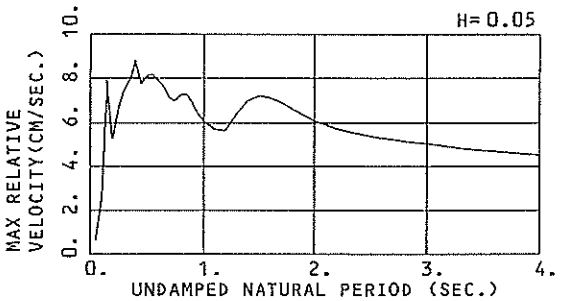

M-1383 NORTH TOKACHI-M
SMAC-B2 EQUIVALENT
50.
0.
-50.
CORRECTED
100.
0.
-100.
ACCELERATION (GALS)
FIXED FILTER
5.
0.
-5.
VARIABLE FILTER(FC=0.366 HZ)
5.
0.
-5.
VELOCITY (CM/SEC.)
FIXED FILTER
0.9
0.
-0.9
VARIABLE FILTER(FC=0.366 HZ)
0.5
0.
-0.5
DISPLACEMENT (CM)
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

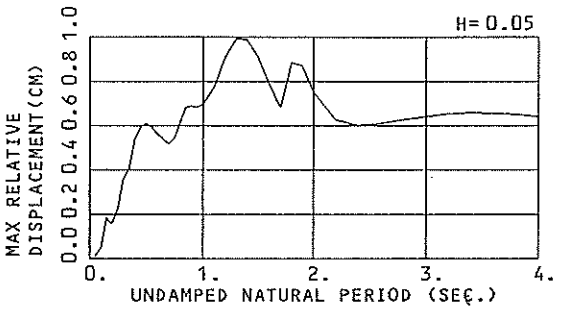

M-1383 EAST TOKACHI-M
SMAC-B2 EQUIVALENT
60.
0.
-60.
CORRECTED
90.
0.
-90.
ACCELERATION (GALS)
FIXED FILTER
5.
0.
-5.
VARIABLE FILTER(FC=0.439 HZ)
4.
0.
-4.
VELOCITY (CM/SEC.)
FIXED FILTER
1.
0.
-1.
VARIABLE FILTER(FC=0.439 HZ)
0.4
0.
-0.4
DISPLACEMENT (CM)
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


M-1383 UP TOKACHI-M
SMAC-B2 EQUIVALENT
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.439 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.439 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
30.
0.
-30.
60.
0.
-60.
3.
0.
-3.
2.
0.
-2.
0.6
0.
-0.6
0.15
0.
-0.15
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

M-1383 NORTH TOKACHI-M
(1/FC=2.73 SEC.)

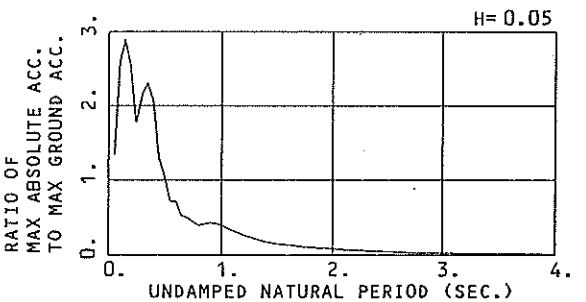


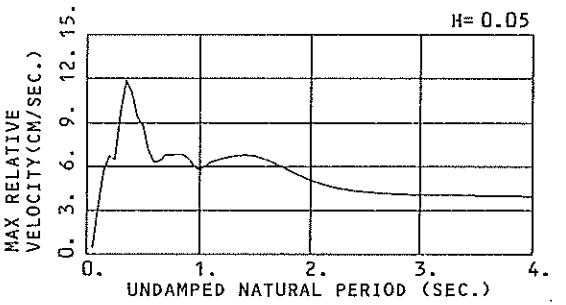


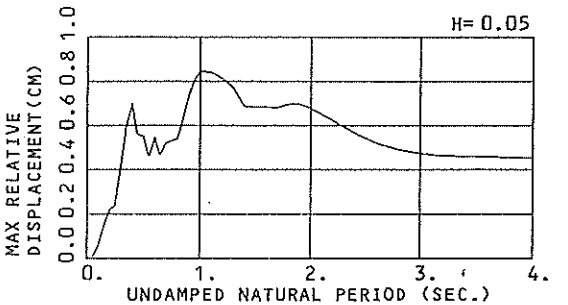


RESPONSE SPECTRA

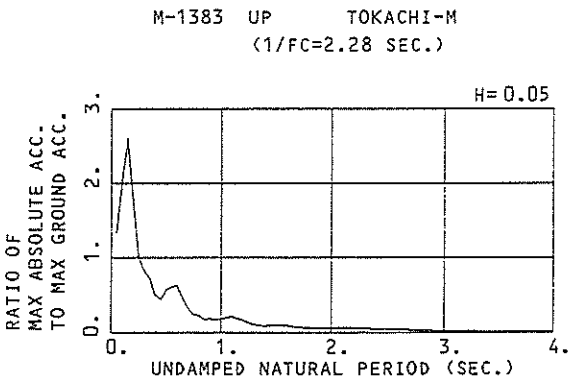
M-1383 EAST TOKACHI-M
(1/FC=2.28 SEC.)

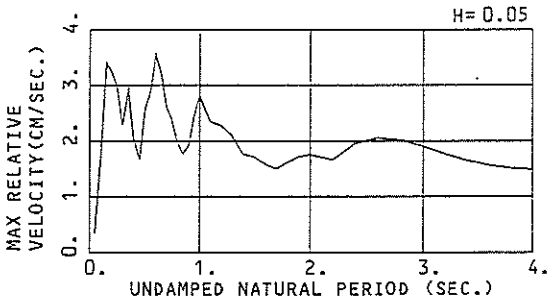


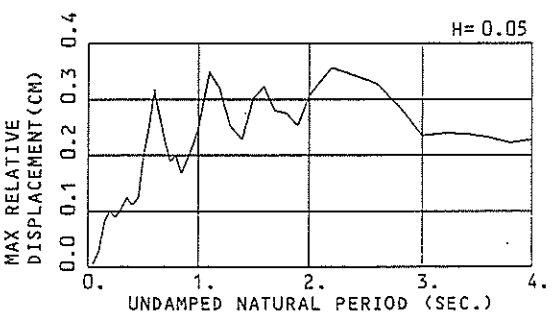




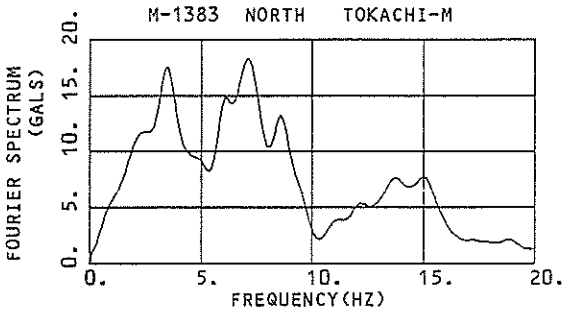
RESPONSE SPECTRA

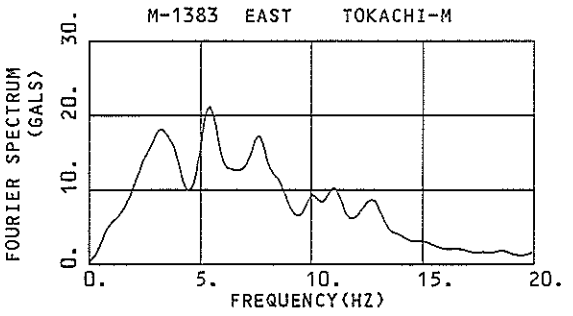


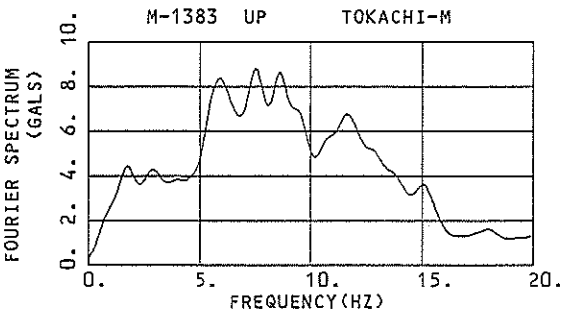




RESPONSE SPECTRA







RESPONSE SPECTRUM

RECORD = M-1383 COMPONENT = NORTH SIGNAL = GR. ACC. CORRECTION = STATION = TOKACHI-M
DATE AND TIME = 1991-11-27- 4-41 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 93.14 (GAL)
TIME LENGTH = 29.49 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	217.9	1.38	0.014	123.2	0.57	0.008	123.4	0.59	0.008	122.6	0.57	0.008	112.8	0.45	0.007
0.10	240.9	3.06	0.061	193.2	2.52	0.049	190.6	2.58	0.048	173.4	2.45	0.043	137.9	1.74	0.032
0.15	601.6	14.38	0.343	409.9	10.19	0.235	326.7	7.91	0.184	227.9	5.72	0.130	127.9	3.12	0.064
0.20	400.8	13.05	0.406	205.6	7.01	0.207	155.0	5.29	0.158	125.1	3.65	0.125	83.7	2.55	0.080
0.25	186.2	8.02	0.295	167.2	7.36	0.264	142.6	6.70	0.223	117.2	5.11	0.183	88.8	3.23	0.131
0.30	373.2	17.91	0.851	177.6	8.43	0.404	156.0	7.44	0.353	120.3	5.98	0.268	91.8	3.98	0.198
0.35	240.0	13.52	0.745	147.4	8.56	0.458	132.0	7.94	0.408	119.6	6.77	0.364	94.5	4.28	0.265
0.40	284.3	19.25	1.152	146.2	10.65	0.593	134.9	8.83	0.542	117.5	7.25	0.463	90.8	4.50	0.318
0.45	138.7	11.47	0.711	126.3	9.08	0.647	117.0	7.75	0.595	102.8	6.47	0.512	81.4	4.67	0.349
0.50	205.6	16.83	1.302	106.3	9.23	0.672	97.1	8.11	0.611	85.0	7.14	0.526	70.5	5.16	0.361
0.55	99.0	9.44	0.759	83.3	8.65	0.637	77.9	8.19	0.593	69.0	7.39	0.517	59.0	5.55	0.360
0.60	114.6	11.99	1.045	68.4	8.19	0.622	62.1	7.89	0.563	56.2	7.26	0.497	49.2	5.77	0.354
0.65	87.8	9.70	0.939	58.2	7.90	0.621	50.8	7.61	0.541	45.7	7.11	0.476	41.7	5.84	0.361
0.70	72.0	7.81	0.893	46.1	7.15	0.571	42.0	7.12	0.519	38.1	6.89	0.467	38.7	5.85	0.384
0.75	55.8	7.73	0.795	40.8	7.05	0.581	38.3	7.02	0.544	34.3	6.81	0.480	36.3	5.86	0.409
0.80	53.4	7.90	0.866	42.0	7.54	0.680	38.4	7.26	0.620	32.5	6.84	0.521	34.4	5.84	0.437
0.85	64.7	8.59	1.185	41.9	7.64	0.765	37.7	7.28	0.683	31.5	6.78	0.561	32.7	5.79	0.466
0.90	56.1	8.52	1.151	37.3	7.17	0.762	34.0	6.92	0.688	30.4	6.55	0.602	31.3	5.69	0.495
0.95	70.7	10.62	1.616	32.2	6.52	0.734	30.2	6.45	0.683	28.8	6.24	0.633	29.8	5.57	0.523
1.00	36.7	6.57	0.930	28.1	6.08	0.708	27.8	6.07	0.696	27.1	5.94	0.660	28.5	5.41	0.548
1.10	27.8	5.98	0.852	25.9	5.83	0.791	25.6	5.70	0.774	25.0	5.49	0.730	26.1	5.06	0.595
1.20	35.2	6.75	1.285	26.4	5.72	0.960	25.2	5.64	0.906	23.6	5.46	0.816	23.9	4.85	0.630
1.30	30.3	6.96	1.295	25.1	6.67	1.071	23.6	6.43	0.993	21.7	6.02	0.869	21.6	5.16	0.650
1.40	34.3	7.74	1.702	21.6	7.34	1.068	20.2	7.00	0.989	18.8	6.46	0.867	19.4	5.41	0.649
1.50	18.2	7.93	1.035	17.1	7.55	0.968	16.3	7.22	0.910	15.6	6.67	0.814	17.2	5.58	0.630
1.60	16.4	7.71	1.061	12.7	7.41	0.821	12.5	7.15	0.788	12.5	6.68	0.731	15.2	5.68	0.598
1.70	34.2	9.24	2.502	13.6	7.11	0.997	9.4	6.91	0.682	9.9	6.57	0.638	13.4	5.71	0.559
1.80	19.9	6.88	1.631	14.1	6.76	1.157	10.9	6.63	0.887	7.8	6.39	0.588	11.8	5.70	0.518
1.90	16.2	6.49	1.481	11.8	6.43	1.077	9.6	6.36	0.870	7.1	6.19	0.619	10.5	5.66	0.477
2.00	17.9	6.17	1.815	8.9	6.15	0.903	7.6	6.11	0.755	6.1	6.01	0.588	9.5	5.61	0.438
2.20	10.4	5.74	1.273	6.4	5.75	0.783	5.2	5.75	0.628	5.1	5.71	0.560	7.8	5.48	0.460
2.40	8.1	5.49	1.175	4.6	5.50	0.664	4.2	5.50	0.602	4.3	5.49	0.568	6.6	5.35	0.476
2.60	5.4	5.31	0.925	4.0	5.32	0.681	3.6	5.32	0.613	3.8	5.32	0.580	5.8	5.24	0.488
2.80	4.9	5.16	0.980	3.4	5.16	0.673	3.2	5.17	0.627	3.4	5.17	0.593	5.1	5.13	0.502
3.00	3.5	5.01	0.792	3.0	5.02	0.671	2.9	5.03	0.642	3.0	5.05	0.606	4.6	5.04	0.513
3.20	2.8	4.87	0.719	2.6	4.89	0.673	2.6	4.91	0.653	2.7	4.93	0.615	4.2	4.95	0.522
3.40	2.4	4.75	0.700	2.3	4.77	0.678	2.3	4.79	0.658	2.4	4.83	0.620	3.8	4.88	0.527
3.60	2.1	4.64	0.699	2.1	4.67	0.677	2.1	4.69	0.657	2.2	4.74	0.621	3.6	4.81	0.530
3.80	1.9	4.54	0.691	1.9	4.57	0.670	1.9	4.60	0.652	2.0	4.65	0.616	3.3	4.74	0.530
4.00	1.7	4.45	0.676	1.7	4.49	0.658	1.7	4.52	0.641	1.8	4.58	0.608	3.1	4.69	0.528

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = M-1383 COMPONENT = EAST SIGNAL = GR. ACC. CORRECTION = STATION = TOKACHI-M
DATE AND TIME = 1991-11-27- 4-41 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 83.96 (GAL)
TIME LENGTH = 29.49 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	213.8	1.45	0.014	116.3	0.58	0.007	113.0	0.46	0.007	109.5	0.45	0.007	102.9	0.38	0.006
0.10	1000.2	15.90	0.253	296.1	4.47	0.075	219.6	3.33	0.055	154.8	2.30	0.039	131.9	1.25	0.031
0.15	538.8	12.86	0.307	290.8	6.97	0.166	242.8	5.68	0.139	189.6	4.21	0.107	134.8	2.41	0.070
0.20	793.8	25.35	0.804	310.8	9.97	0.313	214.4	6.75	0.218	159.7	4.79	0.159	108.1	2.94	0.102
0.25	423.1	16.71	0.670	201.1	8.45	0.320	149.4	6.45	0.235	117.2	5.14	0.182	102.1	3.72	0.152
0.30	414.3	20.38	0.945	251.7	12.12	0.571	181.3	9.85	0.412	127.5	6.80	0.286	105.4	4.12	0.219
0.35	436.8	24.38	1.355	235.2	13.84	0.727	194.5	11.86	0.602	149.4	9.00	0.452	106.0	4.99	0.287
0.40	391.2	25.36	1.585	206.5	13.37	0.837	174.3	11.12	0.698	132.8	8.29	0.522	93.2	5.12	0.317
0.45	154.2	11.50	0.791	121.9	10.50	0.625	110.3	9.45	0.560	92.5	7.84	0.466	75.8	5.56	0.314
0.50	209.4	16.67	1.326	117.6	11.02	0.744	87.8	8.81	0.552	69.1	7.33	0.430	59.3	5.64	0.301
0.55	67.7	7.75	0.519	62.9	7.39	0.481	60.6	7.08	0.461	54.6	6.68	0.408	47.2	5.64	0.306
0.60	129.5	12.29	1.181	74.9	6.68	0.682	60.6	6.29	0.548	45.4	6.28	0.400	41.9	5.58	0.323
0.65	100.6	10.38	1.077	50.6	6.85	0.541	44.0	6.39	0.467	40.5	6.25	0.421	38.6	5.53	0.345
0.70	54.5	7.42	0.677	46.0	7.04	0.570	42.3	6.77	0.521	37.1	6.40	0.447	36.4	5.55	0.373
0.75	60.3	7.77	0.859	40.2	6.95	0.572	37.6	6.79	0.531	33.8	6.44	0.458	34.9	5.54	0.406
0.80	68.0	8.76	1.102	40.5	6.98	0.655	33.7	6.80	0.539	33.6	6.42	0.518	33.8	5.48	0.442
0.85	61.6	9.40	1.128	44.4	7.16	0.812	35.0	6.83	0.632	33.9	6.33	0.587	32.7	5.37	0.477
0.90	51.7	9.53	1.061	38.3	7.12	0.782	36.3	6.59	0.732	33.8	6.08	0.655	31.7	5.19	0.507
0.95	51.8	7.91	1.184	38.3	6.27	0.872	35.9	6.01	0.808	33.0	5.64	0.709	30.6	4.97	0.533
1.00	39.3	6.49	0.996	35.9	6.04	0.908	33.8	5.74	0.843	31.3	5.29	0.741	29.2	4.70	0.552
1.10	32.2	6.88	0.986	29.1	6.57	0.888	27.8	6.29	0.840	26.5	5.83	0.753	26.2	4.87	0.567
1.20	41.4	7.98	1.510	24.1	6.76	0.878	22.5	6.54	0.811	21.8	6.11	0.732	23.1	5.13	0.560
1.30	45.3	9.46	1.939	25.0	6.94	1.069	18.3	6.71	0.767	17.6	6.28	0.690	20.1	5.29	0.535
1.40	22.7	7.34	1.127	17.3	7.04	0.856	14.1	6.78	0.684	13.8	6.34	0.620	17.4	5.37	0.497
1.50	19.9	7.26	1.131	13.8	6.95	0.784	12.4	6.69	0.682	10.7	6.27	0.548	15.0	5.39	0.449
1.60	17.0	6.93	1.105	12.0	6.69	0.772	10.9	6.46	0.682	9.9	6.09	0.572	12.9	5.34	0.418
1.70	14.0	6.43	1.023	10.0	6.28	0.728	9.5	6.13	0.679	9.1	5.85	0.599	11.2	5.26	0.441
1.80	16.7	5.89	1.369	9.1	5.83	0.745	8.6	5.75	0.697	8.3	5.58	0.613	9.7	5.15	0.456
1.90	12.3	5.40	1.127	8.1	5.41	0.739	7.7	5.39	0.695	7.5	5.31	0.620	8.5	5.02	0.463
2.00	10.1	5.00	1.019	7.1	5.05	0.715	6.8	5.07	0.679	6.7	5.07	0.615	7.6	4.90	0.471
2.20	5.4	4.47	0.664	5.3	4.55	0.644	5.3	4.61	0.623	5.3	4.68	0.584	6.4	4.68	0.477
2.40	4.3	4.21	0.626	4.0	4.28	0.575	4.1	4.34	0.566	4.2	4.43	0.545	5.7	4.51	0.472
2.60	3.1	4.10	0.524	3.1	4.16	0.524	3.2	4.21	0.521	3.4	4.28	0.512	5.0	4.39	0.463
2.80	2.5	4.06	0.489	2.5	4.10	0.491	2.6	4.13	0.492	2.9	4.19	0.488	4.5	4.29	0.455
3.00	2.1	4.04	0.471	2.1	4.06	0.473	2.2	4.09	0.474	2.5	4.14	0.472	4.0	4.22	0.447
3.20	1.8	4.02	0.464	1.8	4.04	0.464	1.9	4.06	0.464	2.2	4.10	0.462	3.7	4.17	0.442
3.40	1.6	4.00	0.462	1.6	4.02	0.461	1.7	4.03	0.459	2.0	4.06	0.456	3.5	4.12	0.437
3.60	1.4	3.98	0.461	1.4	4.00	0.459	1.5	4.01	0.457	1.8	4.03	0.452	3.3	4.09	0.433
3.80	1.3	3.96	0.461	1.3	3.97	0.458	1.4	3.98	0.455	1.7	4.01	0.449	3.1	4.06	0.429
4.00	1.1	3.94	0.460	1.2	3.95	0.456	1.2	3.96	0.452	1.6	3.98	0.446	2.9	4.04	0.426

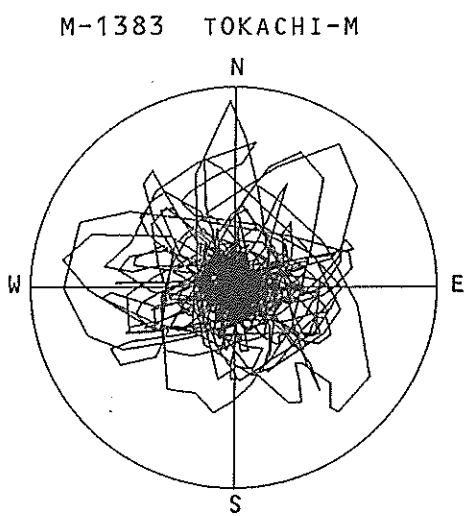
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

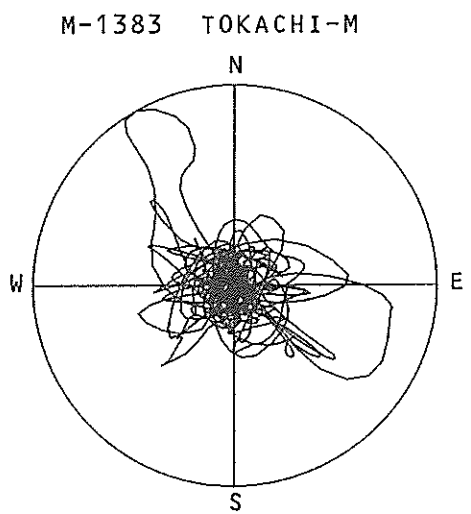
RECORD = M-1383 COMPONENT = UP SIGNAL = GR. ACC. CORRECTION = STATION = TOKACHI-M
DATE AND TIME = 1991-11-27- 4-41 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 55.14 (GAL)
TIME LENGTH = 29.49 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	224.0	1.74	0.014	74.4	0.45	0.005	73.6	0.35	0.005	72.1	0.30	0.005	69.4	0.23	0.004
0.10	528.5	8.43	0.134	133.7	2.06	0.034	115.8	1.73	0.029	102.8	1.37	0.026	77.9	0.91	0.018
0.15	410.6	9.70	0.234	169.0	4.17	0.096	143.7	3.41	0.081	103.7	2.39	0.058	73.6	1.53	0.037
0.20	167.3	5.62	0.170	125.2	4.13	0.126	101.3	3.25	0.101	77.0	2.37	0.075	56.2	1.73	0.048
0.25	128.9	5.14	0.204	73.1	3.45	0.115	56.3	2.98	0.089	45.2	2.48	0.069	37.5	1.82	0.047
0.30	103.7	4.91	0.236	48.9	2.56	0.112	45.8	2.29	0.104	36.0	1.79	0.080	25.0	1.67	0.047
0.35	112.2	6.25	0.348	54.7	3.65	0.170	40.2	2.96	0.125	27.1	2.18	0.082	20.6	1.54	0.049
0.40	104.4	6.67	0.423	40.4	2.69	0.164	27.8	2.05	0.112	19.9	1.67	0.079	16.5	1.38	0.055
0.45	33.9	2.62	0.174	27.5	1.95	0.141	24.2	1.67	0.123	19.6	1.57	0.097	16.2	1.30	0.069
0.50	91.3	7.31	0.578	44.5	3.50	0.282	31.4	2.56	0.198	22.7	1.82	0.140	16.0	1.33	0.082
0.55	68.7	6.00	0.526	39.8	3.57	0.305	33.3	2.89	0.254	23.5	2.11	0.175	14.9	1.42	0.090
0.60	102.7	9.82	0.937	48.3	4.92	0.440	35.0	3.58	0.317	22.3	2.31	0.199	13.1	1.44	0.096
0.65	42.8	4.91	0.458	31.8	3.86	0.340	25.1	3.21	0.267	17.2	2.40	0.181	11.6	1.50	0.096
0.70	27.7	3.38	0.344	22.1	2.93	0.273	18.3	2.61	0.224	13.5	2.16	0.162	11.5	1.49	0.101
0.75	21.4	3.39	0.305	16.1	2.78	0.229	13.4	2.40	0.189	11.6	1.94	0.149	11.0	1.42	0.106
0.80	33.8	4.23	0.547	17.3	2.31	0.280	12.4	1.98	0.200	10.3	1.78	0.149	10.3	1.34	0.107
0.85	21.0	2.80	0.385	10.6	1.77	0.193	9.3	1.76	0.169	9.3	1.70	0.149	9.5	1.41	0.106
0.90	17.3	2.52	0.356	10.9	2.10	0.222	9.8	1.92	0.193	8.6	1.87	0.153	8.7	1.49	0.107
0.95	27.4	4.28	0.627	12.2	2.67	0.277	9.6	2.44	0.217	7.5	2.10	0.162	7.7	1.55	0.120
1.00	28.1	4.43	0.711	12.5	3.30	0.316	9.9	2.83	0.248	7.9	2.25	0.192	7.0	1.57	0.134
1.10	17.5	3.65	0.538	13.6	2.77	0.416	11.6	2.35	0.350	9.1	1.90	0.262	6.9	1.51	0.153
1.20	20.8	4.13	0.760	10.4	2.53	0.378	8.8	2.28	0.320	7.3	1.92	0.245	6.3	1.41	0.154
1.30	15.5	3.26	0.665	7.2	2.31	0.309	6.0	2.11	0.252	5.0	1.78	0.200	5.5	1.41	0.142
1.40	10.5	2.40	0.522	5.9	1.97	0.295	4.7	1.76	0.229	3.7	1.65	0.176	4.6	1.37	0.127
1.50	13.6	3.38	0.775	7.6	2.08	0.432	5.3	1.71	0.301	3.3	1.53	0.187	4.0	1.34	0.118
1.60	10.5	2.72	0.682	6.7	1.81	0.432	5.0	1.59	0.323	3.3	1.47	0.209	3.5	1.35	0.128
1.70	8.0	2.15	0.583	4.5	1.51	0.329	3.8	1.50	0.280	3.0	1.49	0.209	3.5	1.36	0.134
1.80	5.7	1.77	0.468	4.1	1.66	0.334	3.4	1.62	0.275	2.7	1.54	0.213	3.5	1.37	0.142
1.90	7.4	2.29	0.680	3.3	1.80	0.306	2.9	1.72	0.253	2.9	1.59	0.215	3.5	1.37	0.156
2.00	4.1	1.96	0.414	3.4	1.85	0.344	3.2	1.76	0.306	3.1	1.62	0.254	3.4	1.37	0.170
2.20	8.7	3.13	1.072	4.0	1.79	0.485	3.2	1.66	0.356	3.0	1.55	0.290	3.3	1.42	0.193
2.40	4.3	2.20	0.632	2.9	2.06	0.416	2.4	1.95	0.342	2.5	1.78	0.293	3.0	1.53	0.207
2.60	2.7	2.30	0.460	2.1	2.17	0.365	2.0	2.06	0.328	1.9	1.89	0.287	2.7	1.60	0.209
2.80	2.4	2.18	0.476	1.6	2.09	0.302	1.5	2.02	0.287	1.6	1.88	0.260	2.3	1.63	0.202
3.00	1.8	1.98	0.401	1.2	1.94	0.261	1.1	1.90	0.235	1.2	1.82	0.221	2.1	1.64	0.189
3.20	1.1	1.77	0.277	1.0	1.77	0.256	1.0	1.76	0.239	0.9	1.74	0.210	1.8	1.62	0.173
3.40	1.3	1.61	0.377	0.9	1.63	0.269	0.8	1.65	0.238	0.8	1.66	0.208	1.7	1.61	0.169
3.60	0.8	1.50	0.268	0.8	1.54	0.249	0.7	1.56	0.232	0.8	1.59	0.204	1.5	1.59	0.172
3.80	0.7	1.44	0.253	0.7	1.48	0.237	0.6	1.51	0.222	0.7	1.55	0.210	1.4	1.57	0.178
4.00	0.6	1.42	0.241	0.6	1.46	0.234	0.6	1.49	0.228	0.7	1.53	0.216	1.4	1.56	0.184

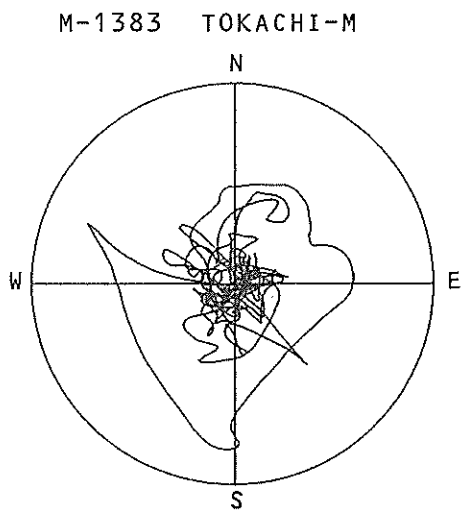
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)



ACCELERATION
R=100.0GAL
MAX=93.2 GAL



VELOCITY
R=5.0 CM/SEC.
MAX=5.0 CM/SEC.



DISPLACEMENT
R=0.50 CM
MAX=0.41 CM

RECORD NUMBER F-456
STATION HITACHINAKA-F

EARTHQUAKE DATA

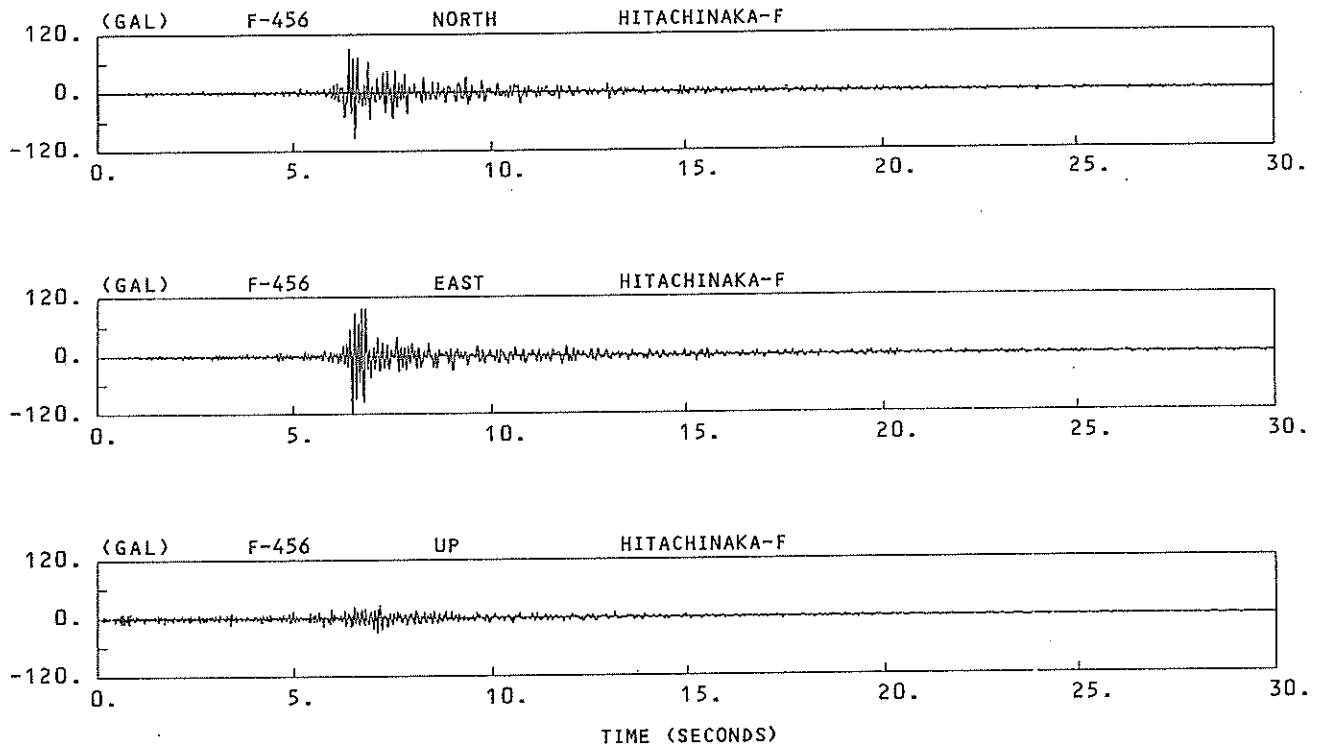
****

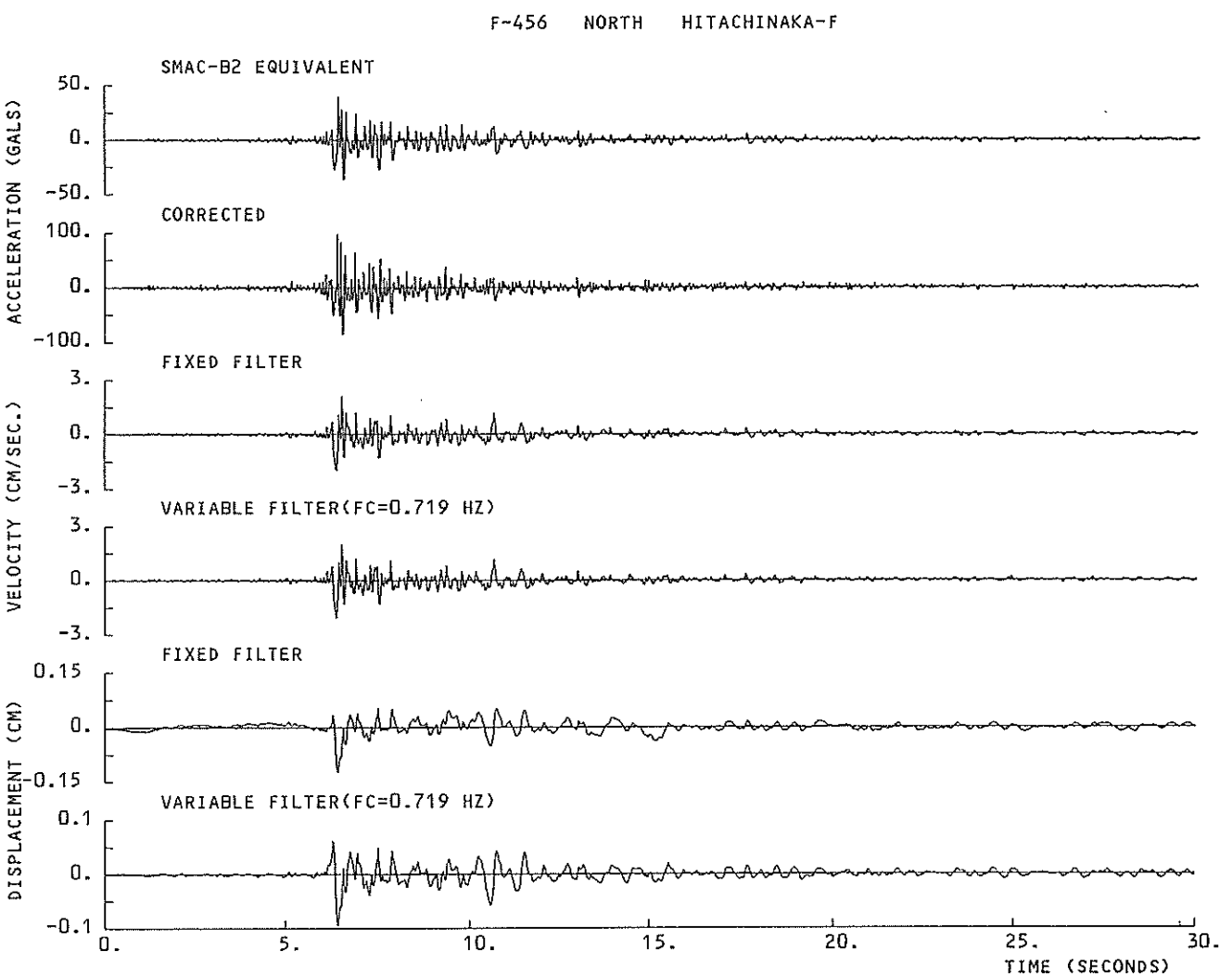
DATA AND TIME 11:27 DEC.12,1991
LOCATION OF HYPOCENTER
EPCENTRAL REGION NORTHERN IBARAKI PREF
LATITUDE 36°27.7' N
LONGITUDE 140°39.7' E
DEPTH 48.4KM
MAGNITUDE 4.6

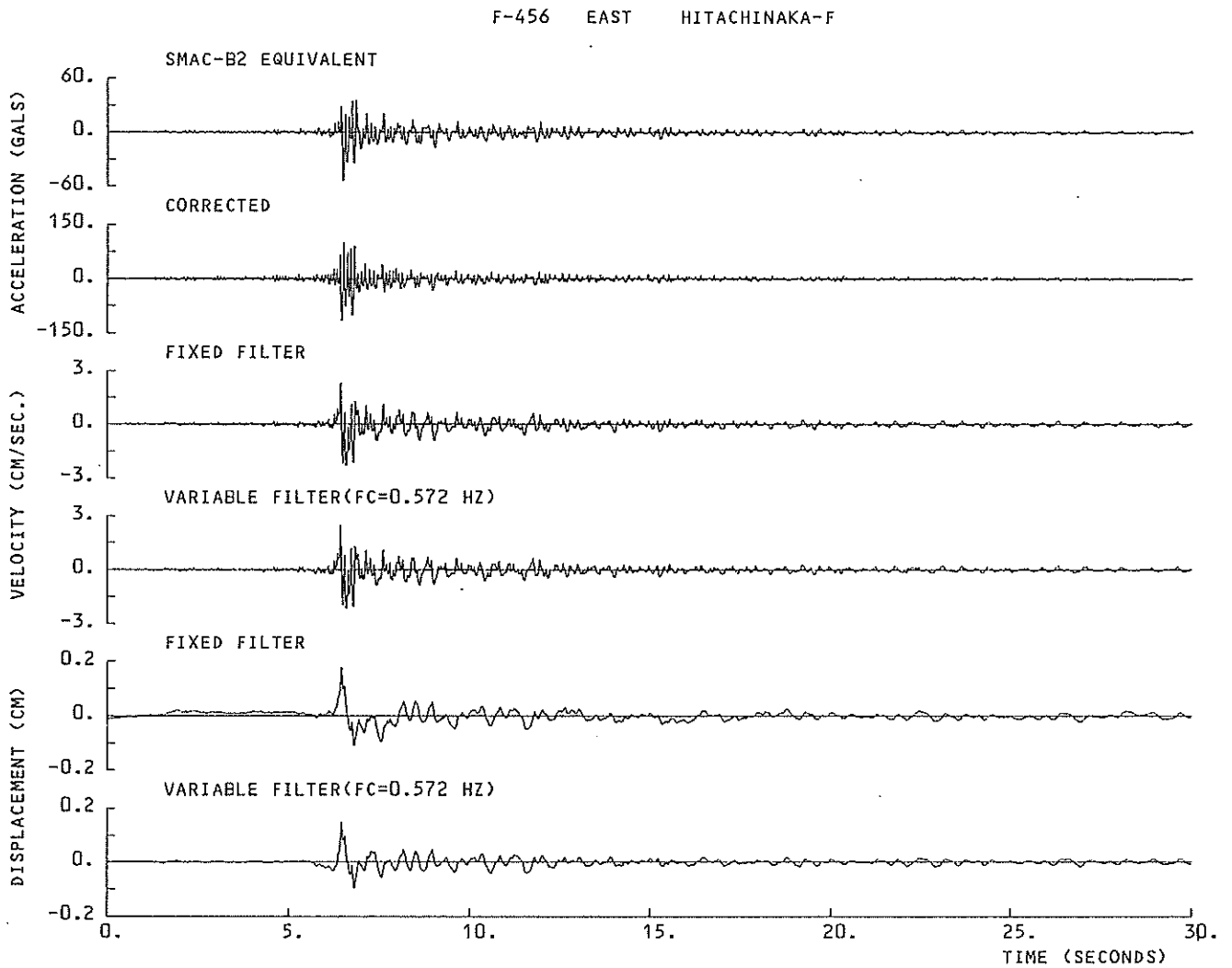
****

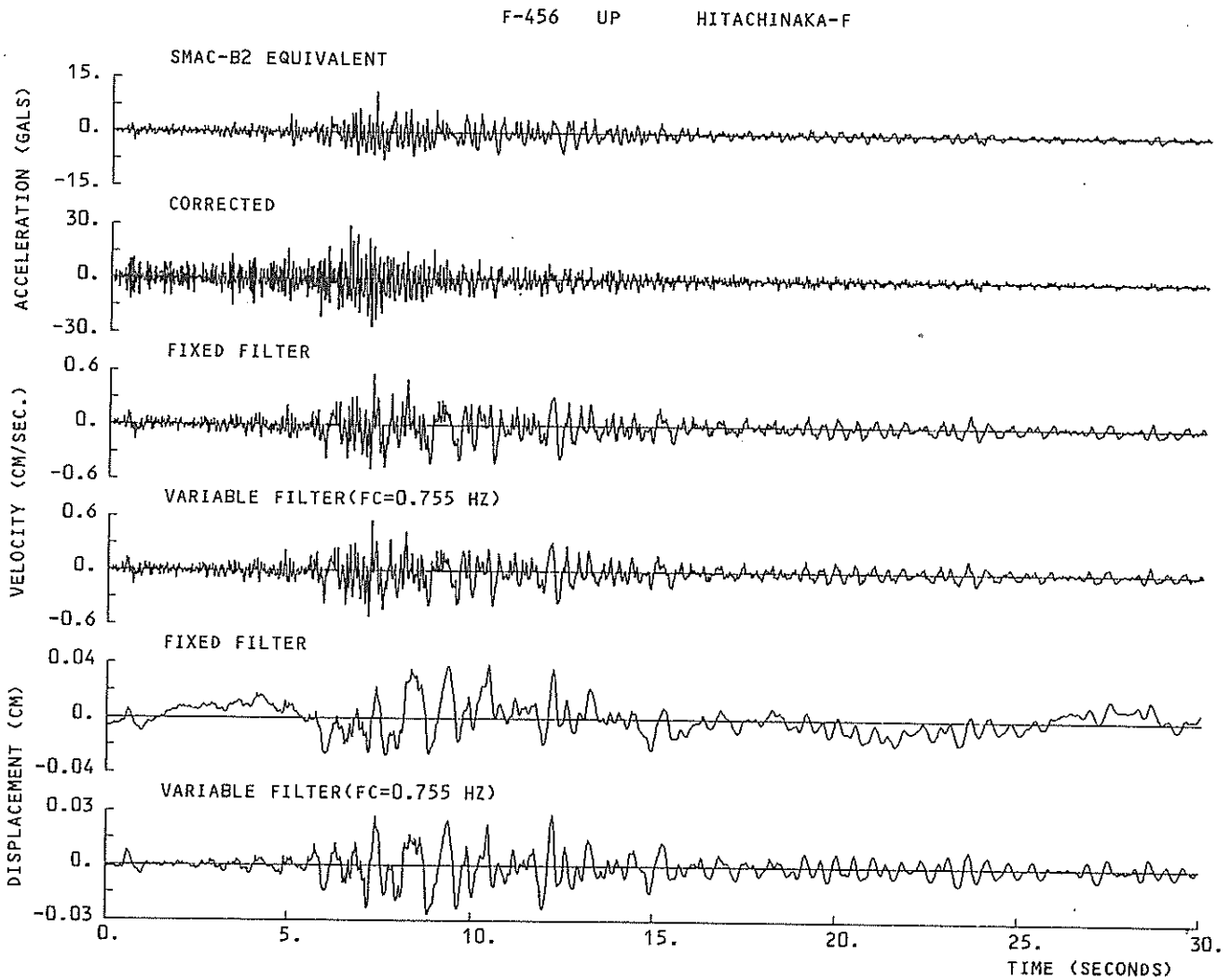
	PEAK VALUES OF COMPONENTS			
	N S	E W	U D	HORIZONTAL*
PARAMETER OF THE VARIABLE FILTER				
FC (HZ)	0.719	0.572	0.755	
MAXIMUM ACCELERATION (GAL)				
SMAC-B2 EQUIVALENT	41.6	54.2	11.3	54.3
ORIGINAL	94.0	118.2	30.8	123.7
CORRECTED	98.0	117.1	29.4	128.0
MAXIMUM VELOCITY (CM/SEC)				
FIXED FILTER	2.09	2.32	0.57	2.56
VARIABLE FILTER	2.09	2.49	0.56	2.69
MAXIMUM DISPLACEMENT (CM)				
FIXED FILTER	0.125	0.179	0.039	0.197
VARIABLE FILTER	0.098	0.151	0.028	0.163

* RESULTANT OF HORIZONTAL COMPONENTS

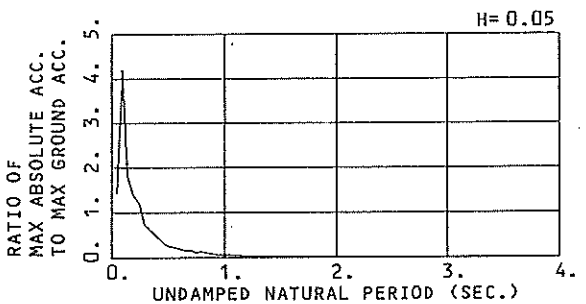

(GAL) F-456 NORTH HITACHINAKA-F
120.
0.
-120.
0. 5. 10. 15. 20. 25. 30.
(GAL) F-456 EAST HITACHINAKA-F
120.
0.
-120.
0. 5. 10. 15. 20. 25. 30.
(GAL) F-456 UP HITACHINAKA-F
120.
0.
-120.
0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)

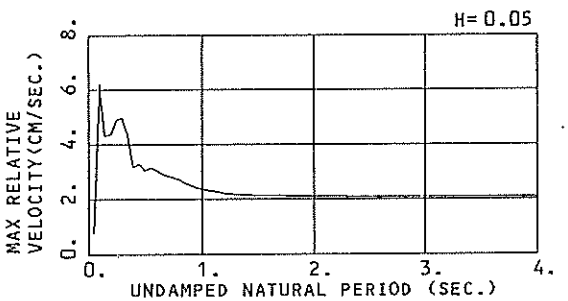

F-456 NORTH HITACHINAKA-F
SMAC-B2 EQUIVALENT
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.719 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.719 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
50.
0.
-50.
100.
0.
-100.
3.
0.
-3.
3.
0.
-3.
0.15
0.
-0.15
0.1
0.
-0.1
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

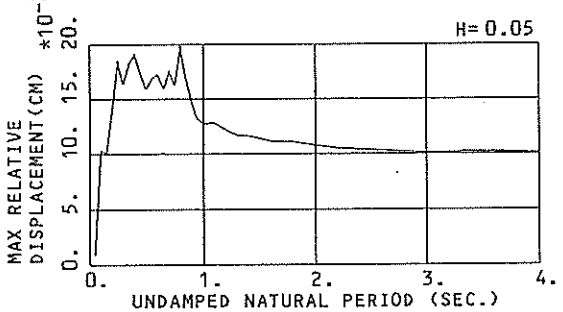

F-456 EAST HITACHINAKA-F
SMAC-B2 EQUIVALENT
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.572 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.572 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
60.
0.
-60.
150.
0.
-150.
3.
0.
-3.
3.
0.
-3.
0.2
0.
-0.2
0.2
0.
-0.2
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)


F-456 UP HITACHINAKA-F
SMAC-B2 EQUIVALENT
CORRECTED
FIXED FILTER
VARIABLE FILTER(FC=0.755 HZ)
FIXED FILTER
VARIABLE FILTER(FC=0.755 HZ)
ACCELERATION (GALS)
VELOCITY (CM/SEC.)
DISPLACEMENT (CM)
15.
0.
-15.
30.
0.
-30.
0.6
0.
-0.6
0.6
0.
-0.6
0.04
0.
-0.04
0.03
0.
-0.03
0.
5.
10.
15.
20.
25.
30.
TIME (SECONDS)

F-456 NORTH HITACHINAKA-F
(1/FC=1.39 SEC.)

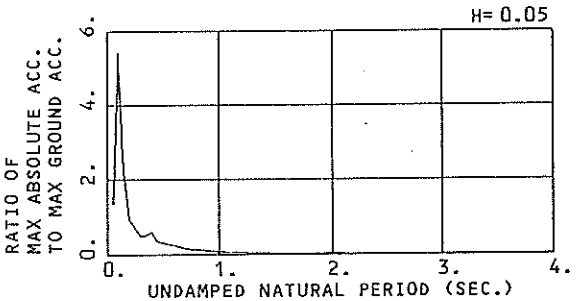


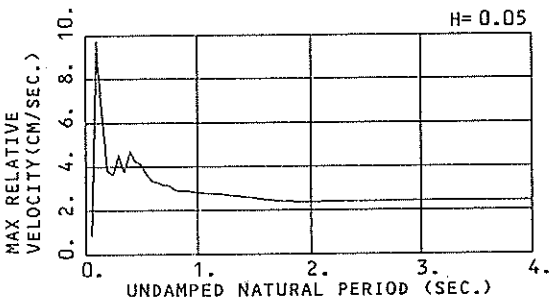


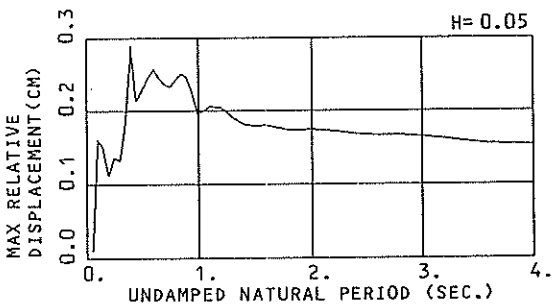


RESPONSE SPECTRA

F-456 EAST HITACHINAKA-F
(1/FC=1.75 SEC.)

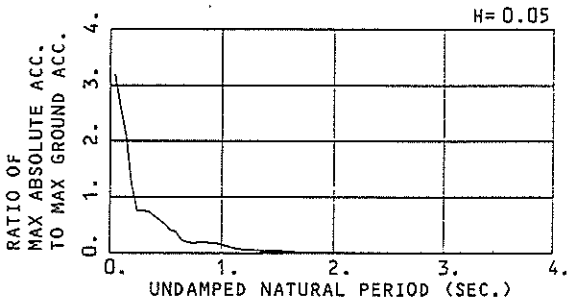


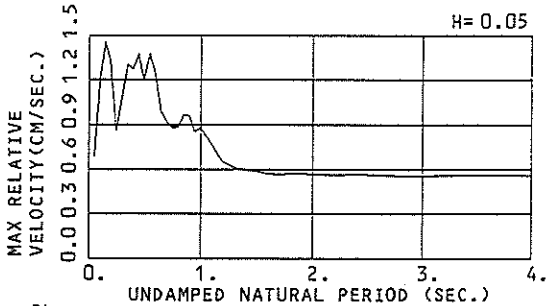


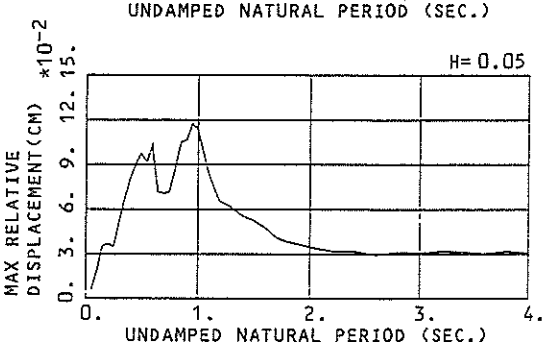


RESPONSE SPECTRA

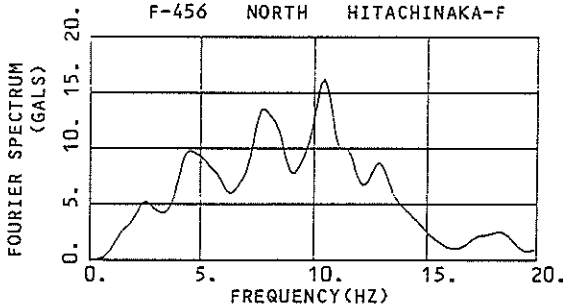
F-456 UP HITACHINAKA-F
(1/FC=1.32 SEC.)

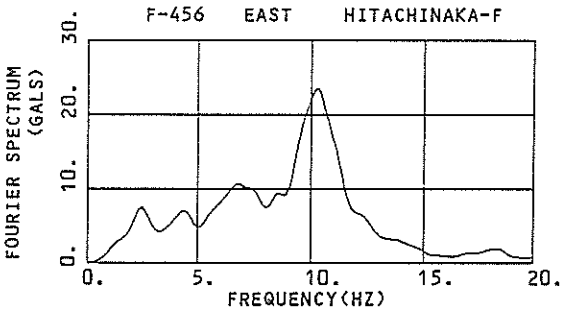


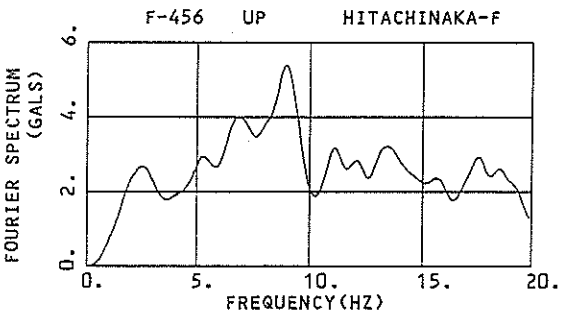




RESPONSE SPECTRA







RESPONSE SPECTRUM

RECORD = F-456 COMPONENT = NORTH SIGNAL = GR. ACC. CORRECTION = STATION = HITACHINAKA-F
DATE AND TIME = 1991-12-12-11-27 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 97.98 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	216.1	1.32	0.014	147.8	0.87	0.009	140.6	0.78	0.009	138.4	0.66	0.009	127.7	0.51	0.008
0.10	873.8	13.74	0.221	503.7	7.92	0.128	411.7	6.20	0.104	300.5	4.31	0.074	175.6	2.33	0.041
0.15	404.6	9.81	0.231	227.1	5.65	0.130	177.0	4.33	0.100	134.7	3.59	0.076	107.9	2.37	0.055
0.20	294.0	9.44	0.298	161.6	5.20	0.164	136.3	4.37	0.138	119.3	3.67	0.119	94.4	2.62	0.082
0.25	283.2	11.36	0.448	132.9	6.02	0.241	117.6	4.93	0.185	97.0	3.87	0.148	68.8	3.05	0.088
0.30	104.9	5.81	0.239	79.9	5.38	0.182	72.0	4.99	0.163	61.0	4.34	0.133	48.2	3.15	0.083
0.35	91.2	5.35	0.283	63.4	4.61	0.197	59.5	4.35	0.183	53.2	3.96	0.159	42.1	3.05	0.109
0.40	165.1	10.56	0.669	63.9	3.96	0.259	47.9	3.17	0.191	43.7	3.10	0.168	38.0	2.80	0.121
0.45	90.1	6.49	0.462	40.3	3.64	0.206	34.3	3.29	0.173	33.2	2.77	0.159	32.4	2.61	0.122
0.50	31.0	3.12	0.196	27.9	3.14	0.176	25.4	3.07	0.159	25.2	2.86	0.145	27.4	2.42	0.119
0.55	41.9	3.79	0.321	24.4	3.25	0.187	22.4	3.14	0.169	19.3	2.92	0.137	23.1	2.38	0.115
0.60	42.5	4.13	0.387	23.5	3.16	0.214	19.2	3.06	0.172	16.4	2.89	0.134	19.5	2.44	0.117
0.65	41.2	4.52	0.441	18.6	3.02	0.199	15.0	2.92	0.159	14.0	2.82	0.138	16.9	2.46	0.119
0.70	25.0	3.35	0.310	17.5	3.09	0.217	14.4	2.85	0.176	12.7	2.75	0.148	15.3	2.46	0.121
0.75	17.2	2.94	0.245	13.3	2.84	0.189	11.5	2.79	0.163	11.0	2.70	0.146	14.0	2.45	0.122
0.80	28.9	3.79	0.468	16.1	2.77	0.260	12.3	2.72	0.198	9.9	2.64	0.145	12.9	2.43	0.122
0.85	18.2	3.46	0.333	12.5	2.75	0.229	9.3	2.61	0.170	8.9	2.56	0.134	11.9	2.40	0.122
0.90	11.5	2.53	0.237	8.8	2.52	0.179	7.3	2.51	0.147	7.9	2.49	0.132	11.0	2.37	0.122
0.95	6.4	2.41	0.147	6.0	2.42	0.134	6.3	2.43	0.132	7.1	2.43	0.129	10.2	2.35	0.121
1.00	5.9	2.32	0.149	5.1	2.35	0.127	5.5	2.37	0.128	6.4	2.37	0.127	9.5	2.32	0.120
1.10	4.4	2.34	0.136	4.4	2.31	0.131	4.6	2.31	0.128	5.4	2.30	0.125	8.3	2.27	0.119
1.20	3.4	2.27	0.123	3.5	2.22	0.123	3.8	2.21	0.122	4.6	2.23	0.121	7.4	2.23	0.117
1.30	2.6	2.18	0.113	2.8	2.17	0.116	3.2	2.17	0.117	4.0	2.19	0.117	6.6	2.19	0.115
1.40	2.4	2.18	0.119	2.5	2.16	0.117	2.8	2.15	0.116	3.5	2.15	0.116	6.0	2.16	0.113
1.50	2.0	2.18	0.114	2.1	2.16	0.114	2.4	2.14	0.114	3.2	2.13	0.114	5.5	2.14	0.112
1.60	1.7	2.16	0.110	1.8	2.14	0.111	2.1	2.13	0.112	2.8	2.11	0.112	5.1	2.12	0.111
1.70	1.5	2.14	0.111	1.6	2.13	0.111	1.9	2.12	0.111	2.6	2.10	0.111	4.7	2.11	0.110
1.80	1.4	2.14	0.112	1.5	2.13	0.111	1.7	2.12	0.111	2.4	2.10	0.110	4.4	2.09	0.109
1.90	1.2	2.15	0.110	1.3	2.13	0.110	1.6	2.12	0.110	2.2	2.10	0.109	4.1	2.08	0.109
2.00	1.1	2.14	0.107	1.2	2.13	0.108	1.4	2.12	0.108	2.0	2.09	0.108	3.8	2.07	0.108
2.20	0.8	2.12	0.104	1.0	2.11	0.105	1.2	2.11	0.105	1.8	2.09	0.106	3.4	2.06	0.107
2.40	0.7	2.11	0.104	0.8	2.11	0.104	1.0	2.10	0.104	1.6	2.08	0.105	3.1	2.05	0.106
2.60	0.6	2.11	0.103	0.7	2.10	0.103	0.9	2.10	0.103	1.4	2.08	0.104	2.8	2.04	0.105
2.80	0.5	2.10	0.101	0.6	2.10	0.102	0.8	2.09	0.102	1.3	2.08	0.103	2.6	2.04	0.104
3.00	0.4	2.10	0.101	0.5	2.09	0.101	0.7	2.09	0.102	1.2	2.08	0.102	2.4	2.04	0.104
3.20	0.4	2.09	0.101	0.5	2.09	0.102	0.7	2.08	0.102	1.1	2.07	0.102	2.2	2.04	0.103
3.40	0.3	2.09	0.102	0.4	2.09	0.102	0.6	2.08	0.102	1.0	2.07	0.102	2.1	2.04	0.103
3.60	0.3	2.09	0.103	0.4	2.09	0.102	0.6	2.08	0.102	0.9	2.07	0.102	1.9	2.04	0.103
3.80	0.3	2.09	0.102	0.4	2.09	0.102	0.5	2.08	0.102	0.9	2.07	0.102	1.8	2.04	0.102
4.00	0.2	2.09	0.101	0.3	2.09	0.101	0.5	2.08	0.101	0.8	2.07	0.101	1.7	2.05	0.102

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) ; RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = F-456 COMPONENT = EAST SIGNAL = GR. ACC. CORRECTION = STATION = HITACHINAKA-F
DATE AND TIME = 1991-12-12-11-27 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 117.07 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	175.8	1.04	0.011	167.0	0.86	0.011	159.1	0.83	0.010	159.1	0.75	0.010	151.8	0.58	0.009
0.10	1449.0	22.84	0.367	851.3	13.35	0.215	634.2	9.73	0.161	411.8	6.14	0.102	210.4	2.84	0.048
0.15	520.6	12.48	0.297	334.0	8.10	0.188	269.5	6.61	0.151	194.4	4.93	0.109	132.5	3.31	0.066
0.20	137.7	4.68	0.140	117.0	3.95	0.119	110.2	3.80	0.112	105.0	3.52	0.102	97.5	2.98	0.081
0.25	228.5	9.06	0.362	104.0	4.45	0.165	86.9	3.63	0.136	70.1	3.13	0.107	71.6	2.86	0.090
0.30	128.5	6.10	0.293	61.2	4.98	0.140	58.5	4.54	0.133	55.9	3.90	0.120	55.5	3.08	0.096
0.35	164.7	9.22	0.511	66.2	3.98	0.204	60.8	3.79	0.185	52.1	3.59	0.154	43.7	3.19	0.099
0.40	198.6	12.74	0.805	103.2	6.82	0.417	72.0	4.70	0.290	43.6	3.53	0.173	36.0	3.22	0.103
0.45	85.8	6.45	0.440	55.3	4.83	0.283	41.8	4.25	0.214	34.0	3.78	0.166	30.3	3.20	0.122
0.50	67.7	5.38	0.429	42.5	4.34	0.269	36.5	4.13	0.229	30.2	3.75	0.179	28.2	3.15	0.135
0.55	44.3	3.85	0.340	34.8	3.68	0.266	32.1	3.64	0.245	27.1	3.46	0.204	25.5	3.07	0.140
0.60	50.8	4.97	0.463	31.3	3.58	0.285	28.5	3.32	0.257	24.6	3.19	0.216	22.8	3.02	0.142
0.65	33.1	3.75	0.354	24.9	3.43	0.266	23.2	3.28	0.245	20.7	3.06	0.211	20.3	2.96	0.142
0.70	27.5	3.82	0.342	22.9	3.34	0.284	19.3	3.15	0.237	16.9	2.96	0.196	18.2	2.90	0.139
0.75	25.8	3.97	0.368	20.0	3.50	0.284	16.4	3.15	0.233	14.3	2.89	0.189	16.3	2.84	0.146
0.80	30.0	3.71	0.487	17.3	3.11	0.280	15.0	2.92	0.242	12.9	2.83	0.191	14.6	2.79	0.150
0.85	20.0	3.45	0.366	15.7	2.98	0.288	13.8	2.92	0.251	11.5	2.79	0.196	13.2	2.75	0.152
0.90	24.6	3.55	0.505	13.6	2.97	0.278	12.1	2.90	0.245	10.2	2.78	0.196	12.0	2.70	0.152
0.95	21.8	3.32	0.499	10.7	2.90	0.244	9.9	2.85	0.223	9.0	2.76	0.185	11.0	2.66	0.151
1.00	10.8	2.83	0.273	8.3	2.82	0.209	8.2	2.80	0.196	8.3	2.73	0.179	10.2	2.62	0.149
1.10	7.4	2.83	0.228	7.1	2.80	0.216	7.2	2.77	0.205	7.4	2.70	0.187	9.2	2.55	0.144
1.20	6.3	2.86	0.230	6.1	2.79	0.216	6.1	2.75	0.205	6.4	2.68	0.187	8.4	2.50	0.149
1.30	4.6	2.67	0.197	4.7	2.67	0.195	4.9	2.66	0.191	5.5	2.62	0.180	7.7	2.48	0.149
1.40	3.9	2.63	0.194	3.9	2.61	0.187	4.1	2.60	0.182	4.7	2.57	0.172	7.1	2.46	0.153
1.50	3.4	2.59	0.191	3.4	2.57	0.185	3.6	2.55	0.179	4.3	2.52	0.172	6.6	2.44	0.155
1.60	2.9	2.48	0.191	3.0	2.49	0.185	3.3	2.48	0.180	3.9	2.48	0.173	6.1	2.42	0.157
1.70	2.5	2.43	0.180	2.6	2.42	0.179	2.9	2.43	0.177	3.6	2.43	0.172	5.7	2.39	0.158
1.80	2.1	2.42	0.174	2.3	2.39	0.175	2.6	2.39	0.174	3.3	2.40	0.171	5.4	2.37	0.159
1.90	1.9	2.41	0.177	2.0	2.40	0.176	2.3	2.37	0.174	3.0	2.37	0.171	5.0	2.35	0.159
2.00	1.8	2.43	0.181	1.9	2.41	0.177	2.1	2.38	0.175	2.8	2.35	0.171	4.7	2.34	0.160
2.20	1.4	2.46	0.176	1.6	2.43	0.174	1.8	2.41	0.173	2.4	2.36	0.169	4.2	2.31	0.160
2.40	1.2	2.45	0.169	1.3	2.43	0.169	1.5	2.41	0.168	2.1	2.37	0.167	3.8	2.28	0.160
2.60	1.0	2.44	0.168	1.1	2.43	0.168	1.3	2.41	0.167	1.9	2.38	0.165	3.5	2.29	0.160
2.80	0.9	2.45	0.170	1.0	2.43	0.168	1.2	2.42	0.167	1.7	2.39	0.165	3.2	2.30	0.159
3.00	0.7	2.46	0.168	0.9	2.44	0.167	1.1	2.43	0.165	1.6	2.40	0.163	3.0	2.31	0.158
3.20	0.6	2.46	0.163	0.7	2.45	0.162	0.9	2.43	0.162	1.4	2.40	0.161	2.7	2.32	0.158
3.40	0.5	2.46	0.157	0.7	2.44	0.158	0.9	2.43	0.158	1.3	2.40	0.158	2.6	2.33	0.157
3.60	0.5	2.45	0.153	0.6	2.44	0.154	0.8	2.43	0.155	1.2	2.40	0.156	2.4	2.34	0.156
3.80	0.4	2.44	0.151	0.5	2.43	0.152	0.7	2.42	0.154	1.1	2.40	0.155	2.3	2.34	0.155
4.00	0.4	2.44	0.151	0.5	2.43	0.153	0.7	2.42	0.154	1.0	2.40	0.155	2.1	2.35	0.155

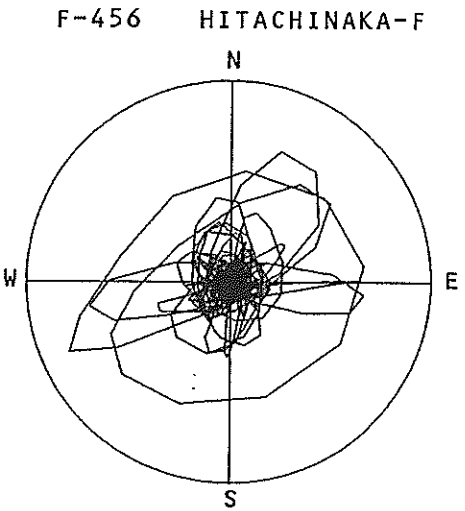
PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)

RESPONSE SPECTRUM

RECORD = F-456 COMPONENT = UP SIGNAL = GR. ACC. CORRECTION = STATION = HITACHINAKA-F
DATE AND TIME = 1991-12-12-11-27 SAMPRING INTERVAL = 0.0100(SEC) MAX.GROUND ACC. = 29.44 (GAL)
TIME LENGTH = 29.99 (SEC) SKIPPED LENGTH = 0.00 (SEC)

	DAMPING = 0.			DAMPING = 0.025			DAMPING = 0.050			DAMPING = 0.100			DAMPING = 0.250		
PER	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD	AA	RV	RD
0.05	206.9	1.64	0.013	107.5	0.81	0.007	94.0	0.69	0.006	73.8	0.55	0.005	46.0	0.31	0.003
0.10	134.0	2.04	0.034	92.5	1.43	0.023	76.3	1.21	0.019	58.7	0.91	0.015	38.8	0.49	0.009
0.15	190.4	4.53	0.108	89.2	2.10	0.050	61.9	1.46	0.035	45.1	0.98	0.025	26.5	0.69	0.013
0.20	74.4	2.39	0.075	42.9	1.53	0.043	36.7	1.33	0.037	28.3	1.01	0.028	21.2	0.70	0.018
0.25	64.6	2.58	0.102	28.6	1.23	0.045	22.2	0.86	0.035	16.3	0.78	0.026	15.1	0.61	0.020
0.30	63.2	3.02	0.144	29.2	1.37	0.066	22.4	1.08	0.051	16.9	0.77	0.038	11.0	0.58	0.021
0.35	85.2	4.74	0.264	32.9	1.87	0.102	21.9	1.30	0.067	14.2	0.85	0.043	9.0	0.56	0.025
0.40	73.4	4.66	0.297	28.9	1.87	0.117	19.9	1.27	0.080	14.1	0.94	0.056	9.1	0.57	0.033
0.45	41.1	3.15	0.211	23.5	1.82	0.120	17.6	1.38	0.090	12.9	1.04	0.065	8.8	0.59	0.039
0.50	51.3	4.06	0.325	21.5	1.79	0.136	15.6	1.21	0.098	11.5	0.91	0.071	8.0	0.62	0.044
0.55	19.9	1.96	0.153	14.9	1.63	0.114	12.1	1.38	0.092	9.3	1.05	0.068	7.1	0.68	0.046
0.60	45.3	4.34	0.413	16.3	1.75	0.148	11.5	1.26	0.104	8.2	0.98	0.072	6.2	0.71	0.046
0.65	12.2	1.34	0.131	7.7	1.07	0.082	6.7	1.00	0.071	5.8	0.88	0.060	5.2	0.71	0.044
0.70	11.9	1.40	0.147	6.4	1.02	0.080	5.8	0.92	0.071	5.1	0.79	0.061	4.4	0.69	0.041
0.75	10.6	1.31	0.151	5.0	0.88	0.071	5.1	0.88	0.071	4.7	0.78	0.063	3.8	0.67	0.040
0.80	9.4	1.35	0.153	6.2	1.01	0.100	5.5	0.89	0.088	4.5	0.76	0.071	3.2	0.65	0.041
0.85	9.3	1.31	0.171	6.8	1.08	0.125	5.8	0.97	0.105	4.5	0.80	0.078	3.0	0.64	0.047
0.90	7.2	1.23	0.148	6.0	1.09	0.124	5.2	0.96	0.107	4.2	0.78	0.084	3.0	0.63	0.052
0.95	9.4	1.39	0.214	6.0	0.96	0.137	5.2	0.85	0.118	4.2	0.71	0.091	3.0	0.63	0.055
1.00	10.1	1.67	0.257	5.2	1.11	0.131	4.5	0.88	0.114	3.8	0.67	0.090	2.8	0.63	0.056
1.10	4.2	1.06	0.128	3.0	0.87	0.091	2.8	0.77	0.083	2.6	0.64	0.074	2.4	0.62	0.053
1.20	1.8	0.71	0.067	1.9	0.67	0.067	1.8	0.65	0.066	1.8	0.63	0.058	2.0	0.62	0.047
1.30	1.8	0.66	0.079	1.6	0.61	0.068	1.5	0.61	0.062	1.5	0.62	0.055	1.7	0.61	0.044
1.40	1.1	0.59	0.056	1.2	0.59	0.057	1.2	0.60	0.056	1.3	0.60	0.052	1.4	0.60	0.044
1.50	1.0	0.59	0.057	1.0	0.59	0.054	1.0	0.59	0.052	1.1	0.59	0.049	1.3	0.60	0.043
1.60	0.8	0.55	0.051	0.8	0.56	0.049	0.8	0.57	0.048	0.9	0.58	0.046	1.2	0.59	0.041
1.70	0.5	0.55	0.035	0.5	0.56	0.039	0.6	0.57	0.041	0.8	0.58	0.042	1.1	0.59	0.040
1.80	0.4	0.58	0.036	0.5	0.57	0.037	0.5	0.57	0.038	0.7	0.57	0.039	1.0	0.58	0.038
1.90	0.4	0.58	0.038	0.4	0.57	0.037	0.5	0.57	0.037	0.6	0.57	0.037	0.9	0.58	0.037
2.00	0.4	0.56	0.041	0.4	0.56	0.037	0.4	0.57	0.035	0.5	0.57	0.035	0.9	0.58	0.036
2.20	0.2	0.55	0.030	0.3	0.56	0.031	0.3	0.56	0.032	0.4	0.57	0.033	0.8	0.57	0.034
2.40	0.2	0.57	0.034	0.2	0.57	0.032	0.3	0.57	0.032	0.4	0.57	0.032	0.7	0.57	0.033
2.60	0.2	0.56	0.029	0.2	0.56	0.029	0.2	0.56	0.030	0.3	0.56	0.031	0.6	0.57	0.032
2.80	0.2	0.55	0.033	0.2	0.55	0.031	0.2	0.56	0.031	0.3	0.56	0.030	0.6	0.57	0.031
3.00	0.1	0.55	0.033	0.2	0.55	0.031	0.2	0.55	0.031	0.3	0.56	0.030	0.6	0.56	0.031
3.20	0.1	0.56	0.035	0.1	0.56	0.033	0.2	0.56	0.032	0.2	0.56	0.031	0.5	0.56	0.031
3.40	0.1	0.56	0.034	0.1	0.56	0.033	0.2	0.56	0.031	0.2	0.56	0.030	0.5	0.56	0.030
3.60	0.1	0.57	0.032	0.1	0.57	0.031	0.1	0.56	0.030	0.2	0.56	0.030	0.5	0.56	0.030
3.80	0.1	0.57	0.037	0.1	0.56	0.034	0.1	0.56	0.032	0.2	0.56	0.030	0.4	0.56	0.030
4.00	0.1	0.56	0.033	0.1	0.56	0.032	0.1	0.56	0.031	0.2	0.56	0.030	0.4	0.56	0.029

PER = RERIOD (SEC) AA = ABSOLUTE ACC. (GAL) ; RV = RELATIVE VELOCITY (CM/SEC) RD = RELATIVE DISPLACEMENT (CM)



ACCELERATION
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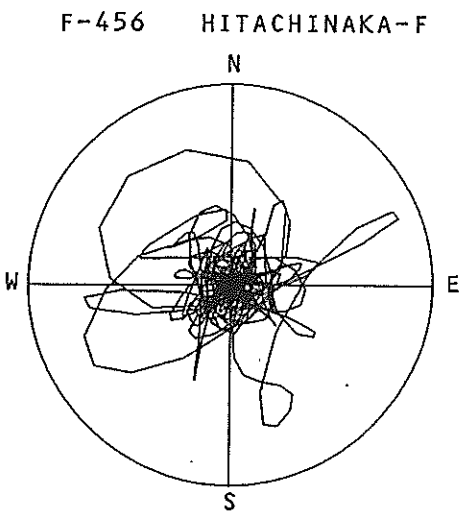
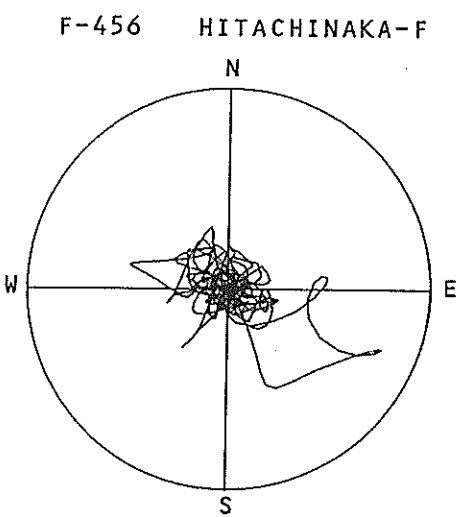
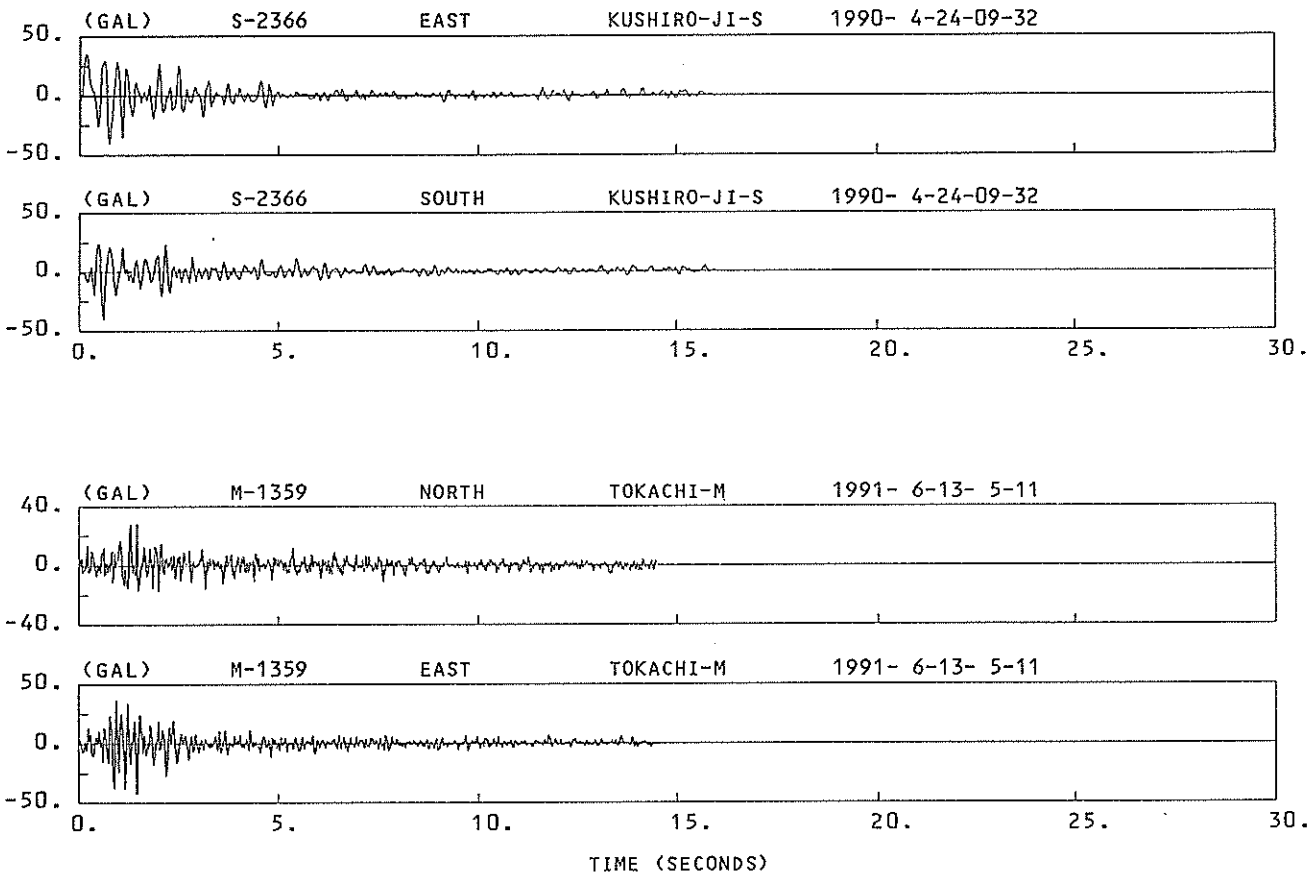
MAX=128.0GAL



VELOCITY
R=3.0 CM/SEC.
MAX=2.7 CM/SEC.



DISPLACEMENT
R=0.20 CM
MAX=0.16 CM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(GAL) S-2366 SOUTH KUSHIRO-JI-S 1990- 4-24-09-32
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0.
-50.
0. 5. 10. 15. 20. 25. 30.
(GAL) M-1359 NORTH TOKACHI-M 1991- 6-13- 5-11
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(GAL) M-1359 EAST TOKACHI-M 1991- 6-13- 5-11
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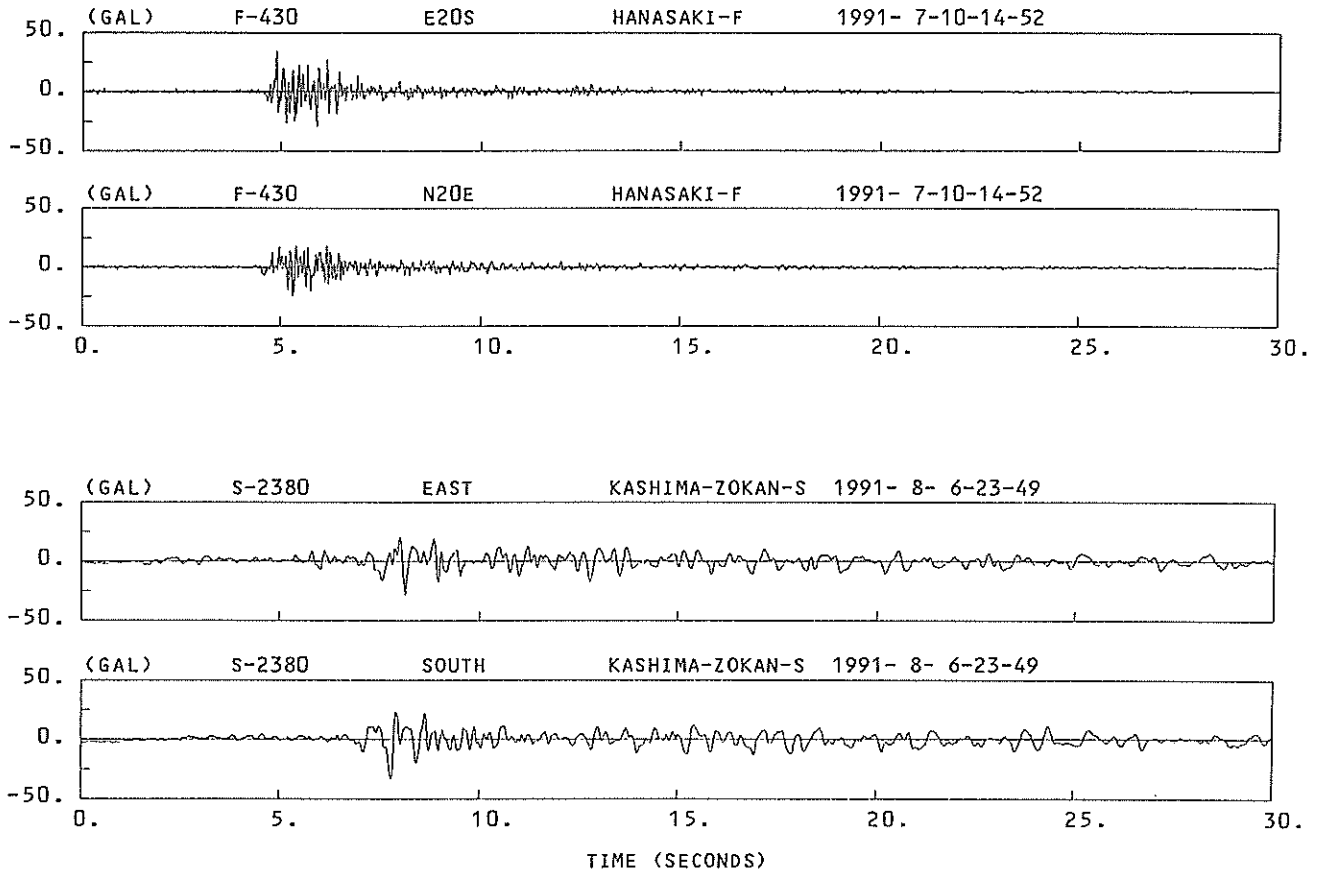
0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)


(GAL) F-430 E20S HANASAKI-F 1991- 7-10-14-52
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(GAL) S-2380 EAST KASHIMA-ZOKAN-S 1991- 8- 6-23-49
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(GAL) S-2380 SOUTH KASHIMA-ZOKAN-S 1991- 8- 6-23-49
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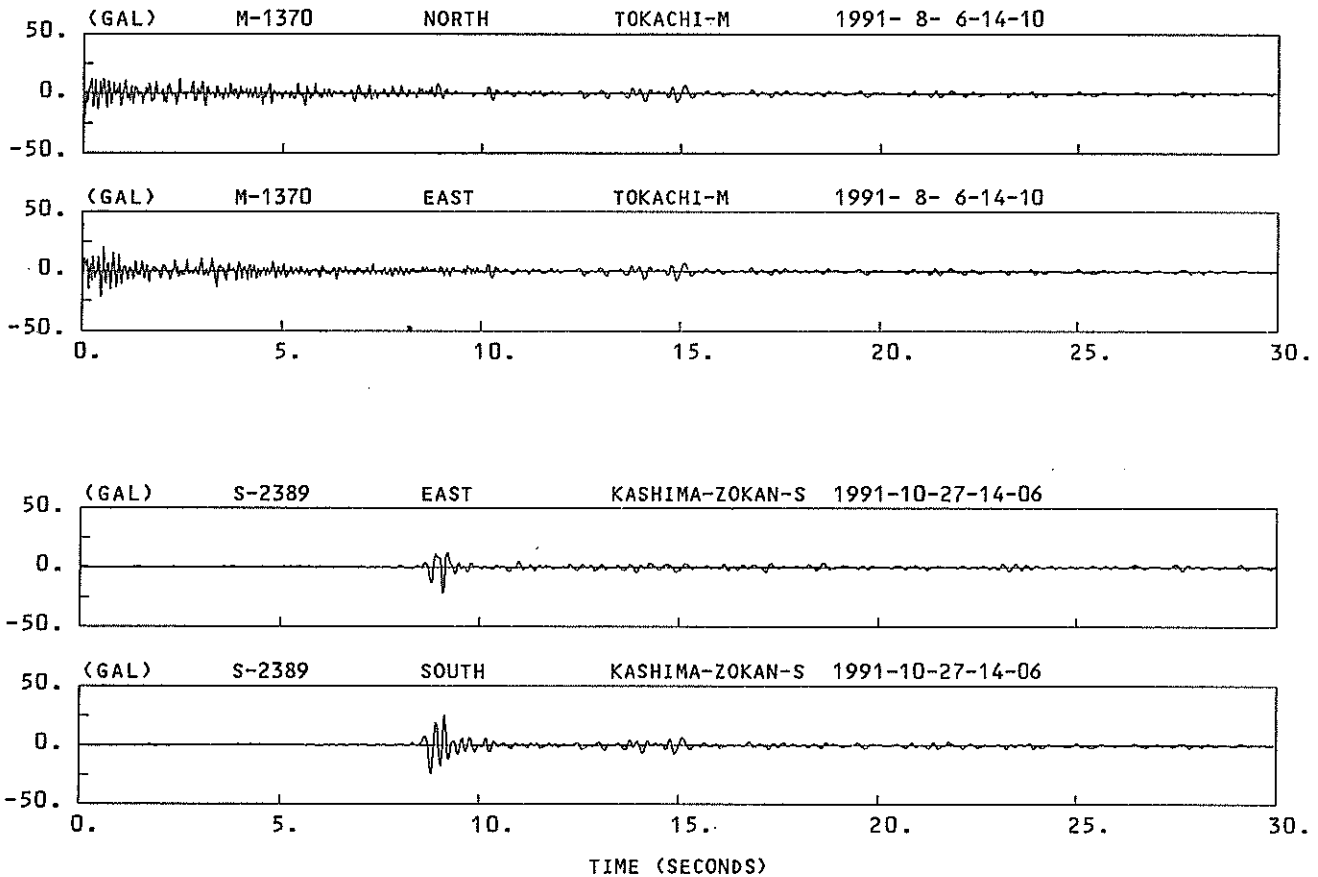
TIME (SECONDS)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(GAL) M-1370 EAST TOKACHI-M 1991- 8- 6-14-10
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(GAL) S-2389 EAST KASHIMA-ZOKAN-S 1991-10-27-14-06
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(GAL) S-2389 SOUTH KASHIMA-ZOKAN-S 1991-10-27-14-06
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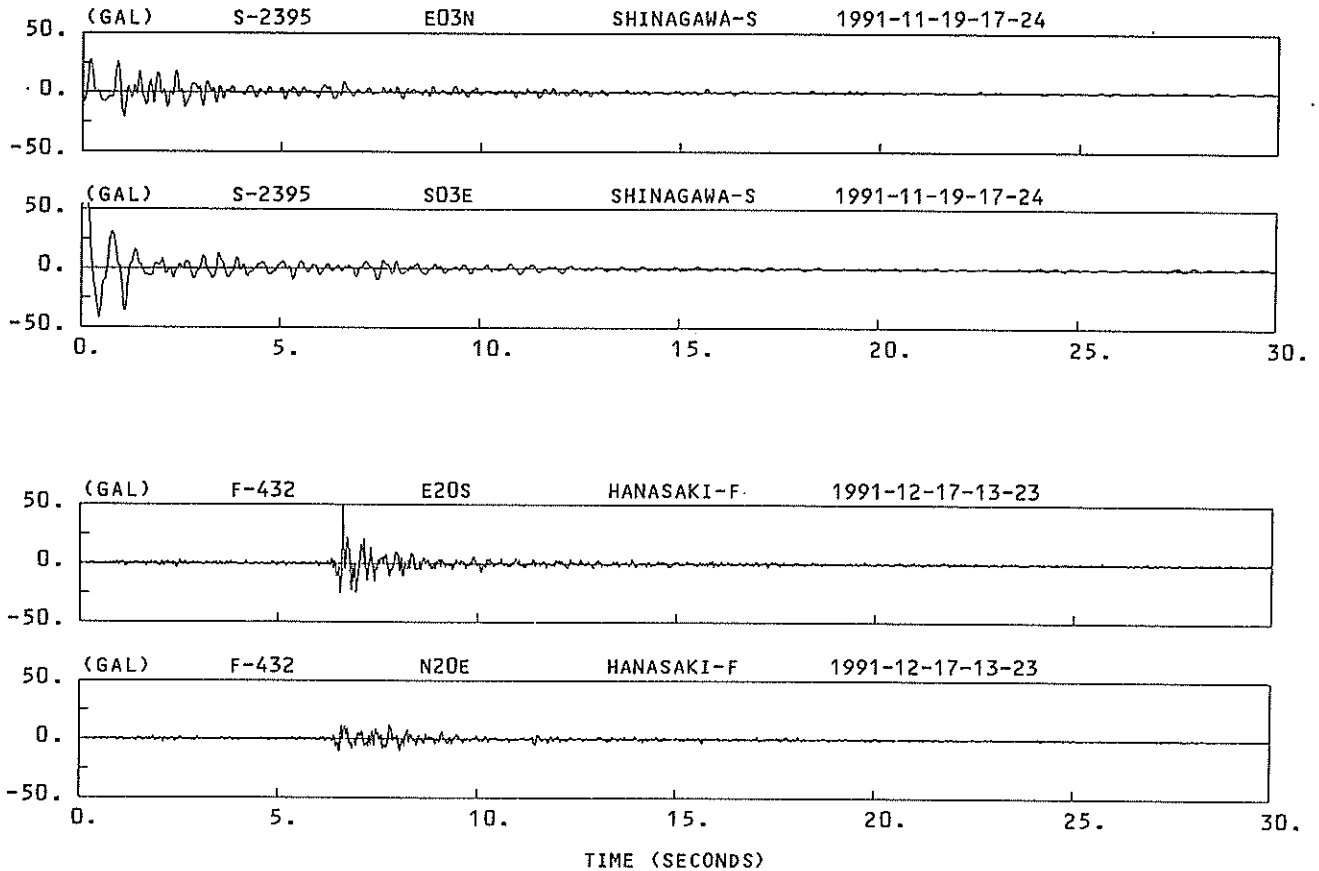
TIME (SECONDS)


(GAL) S-2395 E03N SHINAGAWA-S 1991-11-19-17-24
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(GAL) S-2395 S03E SHINAGAWA-S 1991-11-19-17-24
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(GAL) F-432 E20S HANASAKI-F 1991-12-17-13-23
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(GAL) F-432 N20E HANASAKI-F 1991-12-17-13-23
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0. 5. 10. 15. 20. 25. 30.
TIME (SECONDS)

RECORD = F-423 COMPONENT = NORTH STATION = HITACHINAKA-F
DATE AND TIME = 1991- 6-25-11- 5 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000, 3000,

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10	-4	-5	1	7	4	-3	-4	-1	3	-1
20	-5	7	14	0	-16	-8	16	21	-2	-15
30	-1	6	-4	-5	7	7	2	0	-1	0
40	4	2	-1	-10	-15	-4	13	16	4	-14
50	-23	-1	32	28	0	-12	-16	-8	11	22
60	8	-7	-9	-14	-18	-4	13	11	-1	0
70	9	-2	-15	-1	10	-9	-12	11	18	3
80	-4	-23	-28	8	36	19	-8	-8	-1	-11
90	-12	13	24	3	-2	-4	-32	-44	-3	40
100	39	15	-4	-30	-39	-8	19	19	21	17
110	-15	-50	-25	36	50	15	-3	-10	-27	-17
120	15	17	-3	-12	-6	6	3	-4	0	8
130	21	31	6	-38	-58	-40	-3	27	40	28
140	7	-7	-12	-1	11	13	13	-2	-25	-23
150	9	31	9	-16	-13	-6	8	13	-18	-38
160	1	38	18	-13	-16	-10	2	31	39	20
170	-1	-31	-56	-73	-23	61	119	92	-7	-107
180	-122	-45	67	118	56	-18	-72	-103	-91	-26
190	51	121	103	21	-56	-85	-57	15	72	66
200	9	-56	-76	-20	75	119	75	-21	-102	-127
210	-97	11	124	115	8	-78	-78	-13	35	52
220	26	-32	-72	-48	28	92	82	21	-40	-59
230	-18	44	75	40	-26	-72	-74	-39	-13	10
240	52	75	57	12	-45	-75	-42	-1	25	21
250	-24	-54	-3	78	100	40	-28	-57	-62	-41
260	13	56	46	12	-26	-47	1	84	79	-21
270	-112	-130	-85	-1	83	111	59	-19	-57	-38
280	15	59	53	8	-28	-54	-44	31	92	63
290	1	-44	-60	-35	-5	-5	-23	-39	-54	-18
300	49	60	16	-18	-16	3	36	67	55	0
310	-57	-64	-32	0	33	28	-12	-31	-18	-4
320	11	47	67	24	-41	-60	-42	-35	-8	45
330	48	0	-51	-87	-58	35	85	42	10	33
340	26	-17	-37	-7	36	50	39	11	-38	-82
350	-85	-28	36	31	-18	-35	-21	7	59	78
360	48	8	-26	-50	-57	-40	-3	3	-30	-26
370	53	127	106	15	-85	-107	-31	23	29	31
380	15	-38	-77	-28	50	69	35	-7	-64	-119
390	-105	-13	85	137	120	36	-70	-110	-51	47
400	107	105	37	-67	-117	-62	40	67	-15	-102
410	-98	2	126	161	75	-72	-188	-195	-77	97
420	220	196	70	-39	-94	-111	-68	7	21	-10
430	-38	-29	16	64	94	63	-26	-82	-59	0
440	48	48	8	-32	-57	-67	-35	21	40	35
450	21	-21	-55	-28	40	89	75	33	3	-25
460	-60	-46	-26	-38	-27	11	47	53	20	-10
470	-35	-48	-31	-7	13	40	40	-8	-31	13

TO BE CONTINUED

CONTINUED(F-423 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	48	33	15	1	-9	-17	4	42	47	1
490	-76	-108	-62	3	60	95	52	-42	-92	-90
500	-38	66	118	72	9	-10	-3	-12	-46	-36
510	20	24	-32	-64	-44	1	44	60	42	0
520	-22	-18	-1	1	-18	-21	11	40	63	70
530	20	-43	-82	-112	-102	-25	51	77	50	-13
540	-53	-47	22	66	34	-10	-19	-8	21	83
550	104	-3	-140	-162	-78	38	139	166	91	-19
560	-91	-124	-118	-34	59	87	28	-21	-39	-20
570	21	47	60	46	-30	-93	-65	9	50	40
580	15	-20	-50	-52	-16	31	55	40	5	-15
590	-24	-32	-43	-39	-2	68	90	20	-46	-25
600	18	13	18	62	68	13	-40	-61	-67	-58
610	-10	53	76	52	-2	-66	-102	-82	-45	0
620	78	134	84	-25	-73	-31	9	15	5	-28
630	-73	-76	-33	26	82	104	62	-13	-63	-35
640	27	40	8	-1	-4	-12	19	73	65	0
650	-52	-97	-144	-159	-90	40	122	95	13	-47
660	-39	0	13	21	48	70	73	79	84	43
670	-20	-77	-130	-144	-78	21	91	121	99	23
680	-41	-50	-48	-45	0	62	80	70	8	-89
690	-154	-165	-117	-5	124	200	159	39	-84	-156
700	-157	-93	16	100	117	100	47	-6	-18	0
710	19	23	-12	-82	-105	-40	44	79	73	37
720	-51	-111	-82	-30	-7	-13	-18	26	80	90
730	79	70	20	-52	-80	-67	-79	-81	-16	73
740	154	176	67	-117	-213	-162	-31	95	154	123
750	6	-144	-217	-134	63	233	277	196	66	-1
760	-49	-52	10	92	79	-22	-122	-192	-243	-213
770	-72	87	142	69	-52	-136	-109	6	97	117
780	57	-42	-51	64	178	218	157	15	-147	-279
790	-327	-248	-73	94	154	134	73	34	30	9
800	-77	-170	-167	-30	146	212	141	17	-138	-295
810	-295	-125	37	117	230	396	479	435	349	173
820	-157	-498	-719	-741	-444	86	577	823	750	379
830	-117	-492	-571	-324	85	394	382	78	-257	-456
840	-463	-192	303	739	880	683	146	-606	-1243	-1468
850	-1209	-599	120	792	1244	1268	813	75	-584	-910
860	-819	-381	174	552	594	299	-82	-253	-161	55
870	197	211	107	-101	-307	-380	-305	-80	248	488
880	506	346	94	-177	-394	-484	-426	-263	-50	107
890	191	256	320	321	226	89	-34	-176	-332	-377
900	-221	70	328	427	351	184	53	-19	-119	-265
910	-401	-468	-403	-187	143	458	594	495	244	-52
920	-290	-342	-164	72	153	49	-106	-175	-146	-45
930	87	137	16	-186	-276	-152	115	303	250	16
940	-257	-464	-466	-161	319	660	634	258	-222	-619
950	-729	-520	-153	178	409	527	471	294	105	-102
960	-277	-343	-310	-156	107	374	510	428	195	-72
970	-305	-401	-300	-98	59	140	87	-57	-155	-105
980	60	190	138	-56	-203	-228	-204	-151	-69	44
990	143	222	290	327	253	93	-87	-155	-61	173
1000	376	414	243	-70	-372	-511	-451	-278	-140	-122

TO BE CONTINUED

CONTINUED(F-423 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	-200	-289	-296	-141	161	460	558	408	146	-63
1020	-180	-217	-155	1	166	228	180	124	102	80
1030	54	24	-38	-129	-227	-289	-258	-145	-35	58
1040	162	246	280	230	85	-107	-273	-367	-355	-229
1050	-60	47	67	53	57	90	139	167	163	134
1060	55	-72	-158	-119	-26	28	52	67	81	118
1070	147	108	8	-128	-277	-336	-213	28	205	196
1080	36	-147	-227	-154	40	263	382	337	172	-48
1090	-246	-291	-142	46	120	40	-117	-190	-91	132
1100	379	523	458	185	-186	-517	-676	-592	-308	47
1110	315	374	236	46	-72	-99	-59	7	35	-4
1120	-88	-178	-226	-202	-135	-45	91	246	326	293
1130	159	-42	-202	-213	-87	113	323	441	367	125
1140	-125	-246	-163	67	261	300	179	-52	-290	-421
1150	-416	-326	-209	-108	-58	-57	-62	-59	-62	-58
1160	-41	28	110	207	295	315	244	92	-104	-252
1170	-263	-138	80	332	478	448	280	32	-238	-413
1180	-394	-188	78	253	267	117	-130	-311	-305	-162
1190	16	142	138	7	-166	-285	-298	-196	-31	106
1200	170	147	63	2	21	90	143	138	79	-4
1210	-63	-42	18	43	63	78	18	-80	-120	-82
1220	4	79	79	20	-40	-68	-68	-31	-3	-41
1230	-111	-147	-124	-36	92	214	270	232	138	90
1240	138	214	204	51	-198	-418	-492	-379	-139	82
1250	178	163	116	119	194	258	220	72	-142	-348
1260	-445	-381	-206	-13	131	181	137	78	53	50
1270	36	-38	-136	-164	-65	120	244	218	82	-72
1280	-171	-169	-60	102	211	181	21	-141	-179	-84
1290	69	181	164	36	-119	-250	-292	-208	-73	36
1300	121	164	147	91	24	-42	-90	-62	40	142
1310	194	181	100	-20	-107	-114	-58	-7	-10	-50
1320	-82	-103	-94	-40	33	86	88	53	44	73
1330	100	93	55	15	-2	-9	-25	-56	-81	-83
1340	-57	-1	70	92	15	-124	-250	-291	-216	-46
1350	136	230	221	149	52	-22	-21	5	-21	-105
1360	-187	-221	-176	-50	92	176	171	82	-35	-62
1370	40	189	263	195	37	-115	-203	-196	-94	69
1380	203	197	38	-167	-304	-305	-171	11	144	203
1390	204	150	90	54	24	11	18	-22	-119	-196
1400	-191	-119	0	112	136	70	-26	-98	-117	-70
1410	19	94	142	163	132	69	17	-26	-87	-145
1420	-159	-119	-21	108	194	171	63	-85	-192	-150
1430	40	240	336	282	74	-189	-369	-419	-345	-158
1440	46	142	107	7	-81	-83	16	168	285	290
1450	165	-30	-172	-178	-77	52	159	185	86	-74
1460	-204	-258	-191	-31	90	107	60	11	-17	-34
1470	-33	-28	-12	26	82	108	75	-11	-106	-150
1480	-131	-65	40	125	149	120	64	3	-31	-29
1490	-4	24	40	28	-2	-42	-79	-82	-40	6
1500	49	74	40	-52	-139	-145	-87	-24	21	35
1510	-18	-56	-12	110	210	235	178	40	-142	-264
1520	-250	-129	8	102	144	159	149	100	42	0
1530	-31	-57	-50	-5	23	8	-41	-104	-113	-46

TO BE CONTINUED

CONTINUED(F-423 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	21	59	67	24	-54	-129	-125	-77	-8	73
1550	131	138	111	63	0	-50	-53	-19	20	36
1560	21	-23	-85	-122	-117	-59	39	111	100	31
1570	-18	-1	40	49	31	18	11	-15	-81	-125
1580	-90	-10	58	102	110	77	0	-77	-91	-47
1590	6	50	67	50	23	-3	-47	-82	-58	-13
1600	5	18	45	55	48	55	59	52	-1	-71
1610	-161	-247	-273	-212	-70	76	150	146	105	75
1620	83	117	148	142	83	-28	-151	-224	-195	-88
1630	38	127	138	87	22	-39	-68	-51	-21	-8
1640	-21	-26	-1	32	42	20	-34	-100	-135	-107
1650	-21	54	81	70	38	0	-31	-14	48	87
1660	86	73	58	48	35	1	-23	-18	-5	7
1670	35	54	18	-49	-92	-85	-30	55	108	83
1680	-5	-97	-134	-105	-48	9	50	70	70	36
1690	-26	-85	-113	-111	-81	-35	30	97	129	112
1700	68	6	-42	-62	-57	-34	-12	-28	-86	-128
1710	-89	13	122	191	193	115	0	-81	-96	-57
1720	20	70	50	3	-3	29	66	75	62	23
1730	-33	-87	-110	-80	-18	27	24	-21	-72	-87
1740	-67	-24	20	28	-5	-44	-62	-55	-28	-10
1750	-3	11	23	15	10	34	63	65	46	28
1760	-1	-43	-52	-9	49	103	119	66	-18	-57
1770	-45	-18	12	36	31	13	-2	-22	-27	-8
1780	-11	-58	-101	-81	0	78	87	38	-26	-91
1790	-118	-57	48	119	149	149	104	25	-51	-95
1800	-106	-88	-53	-12	31	75	87	60	15	-19
1810	-26	-14	7	42	63	33	-32	-102	-156	-166
1820	-115	-42	11	48	51	26	0	-2	19	21
1830	-1	-3	33	86	120	97	20	-59	-93	-65
1840	3	66	67	5	-77	-109	-60	10	31	-4
1850	-56	-88	-70	8	105	152	120	32	-41	-52
1860	-24	16	58	58	1	-57	-78	-48	4	36
1870	15	-46	-89	-64	-3	52	87	78	40	16
1880	3	7	35	55	24	-32	-83	-111	-99	-36
1890	40	90	102	76	27	-30	-67	-60	-22	17
1900	21	-5	-36	-51	-52	-29	32	92	89	16
1910	-81	-142	-123	-38	53	100	95	60	23	30
1920	58	50	0	-79	-154	-170	-112	-12	72	108
1930	83	-2	-105	-129	-34	112	206	189	85	-28
1940	-101	-108	-43	44	87	45	-70	-171	-178	-105
1950	-25	29	85	134	147	115	53	-4	-38	-41
1960	-15	47	113	112	34	-60	-140	-167	-113	-4
1970	100	131	64	-46	-132	-146	-92	-31	0	1
1980	-6	11	62	105	114	81	13	-50	-73	-52
1990	1	62	91	66	0	-45	-39	8	58	80
2000	66	11	-74	-153	-168	-122	-62	0	53	66
2010	31	-8	-26	-32	-30	-10	32	81	92	59
2020	18	0	-7	-14	13	65	76	32	-25	-62
2030	-67	-30	28	56	45	-20	-58	-68	-50	-25
2040	-9	-15	-19	-3	26	60	75	47	-16	-73
2050	-73	-10	50	65	10	-52	-79	-23	78	159
2060	168	76	-63	-170	-202	-134	-15	47	16	-45

TO BE CONTINUED

CONTINUED(F-423 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-68	-33	39	100	112	75	-1	-81	-109	-62
2080	20	85	110	92	52	28	17	15	19	5
2090	-24	-34	-14	10	25	9	-52	-120	-137	-77
2100	27	110	124	53	-55	-123	-125	-78	7	80
2110	90	72	58	26	-17	-46	-45	-35	-27	-12
2120	21	44	19	-35	-58	-26	47	120	128	51
2130	-51	-114	-102	-40	25	73	87	68	19	-39
2140	-75	-73	-41	-8	-5	-18	-6	7	10	24
2150	44	51	46	30	16	2	-30	-75	-96	-78
2160	-43	-6	22	26	1	-26	-40	-40	-16	31
2170	73	84	62	23	-9	-10	11	31	45	36
2180	-6	-55	-77	-72	-51	-1	55	78	71	47
2190	17	-8	-36	-57	-60	-43	-23	-5	13	36
2200	45	27	12	25	37	38	31	13	-9	-40
2210	-60	-52	-3	53	70	26	-62	-140	-151	-87
2220	4	60	57	21	-18	-41	-38	-7	37	70
2230	67	36	8	-4	6	32	52	62	59	31
2240	-6	-23	-22	-13	-3	10	20	16	9	-1
2250	-14	-37	-64	-72	-60	-52	-52	-49	-47	-37
2250	-9	28	62	70	45	13	2	12	15	8
2270	-3	-25	-53	-53	0	87	164	176	106	1
2280	-75	-88	-35	23	34	-1	-61	-110	-116	-88
2290	-43	0	19	8	10	40	64	38	-19	-65
2300	-77	-57	-4	59	102	109	83	31	4	19
2310	25	3	-36	-89	-111	-87	-35	29	82	97
2320	66	18	-9	-13	-5	1	-10	-28	-35	-52
2330	-85	-98	-73	-33	4	46	75	83	92	99
2340	70	21	-18	-35	-46	-50	-19	28	58	49
2350	3	-52	-82	-68	-36	-25	-23	-12	-11	-14
2360	-10	1	19	36	40	28	7	-21	-57	-67
2370	-31	20	64	88	75	37	18	29	44	48
2380	31	-17	-66	-88	-90	-68	-24	8	11	-1
2390	-1	1	-4	-18	-23	-11	25	68	85	68
2400	23	-33	-72	-59	13	87	107	53	-52	-156
2410	-193	-136	-7	127	209	199	116	10	-68	-90
2420	-58	-1	44	40	-9	-73	-114	-107	-75	-43
2430	-23	-21	-33	-31	-14	16	71	125	141	110
2440	57	15	-3	-11	-16	-4	15	11	-21	-57
2450	-73	-83	-87	-62	-8	50	95	98	54	-5
2460	-45	-45	-22	8	40	60	47	14	-18	-52
2470	-75	-65	-28	25	75	95	83	48	-9	-68
2480	-89	-64	-16	25	40	16	-38	-76	-73	-46
2490	1	46	50	17	-12	-16	23	85	107	77
2500	21	-35	-64	-45	0	27	12	-26	-64	-87
2510	-78	-54	-49	-68	-83	-77	-33	29	82	105
2520	101	69	20	-15	-24	-14	-5	-8	-6	7
2530	40	90	127	124	97	52	-1	-40	-57	-62
2540	-70	-83	-83	-57	-18	13	25	5	-39	-85
2550	-98	-62	-14	19	45	59	52	41	47	77
2560	109	94	25	-48	-82	-65	-6	67	109	91
2570	20	-52	-82	-55	5	66	87	52	-25	-95
2580	-117	-88	-28	27	35	-6	-60	-77	-59	-28
2590	-1	8	-6	-43	-69	-66	-33	16	58	78

TO BE CONTINUED

CONTINUED(F-423 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	77	55	29	28	47	63	58	27	-4	-18
2610	-18	-14	-8	-8	0	20	34	27	-1	-41
2620	-68	-67	-50	-31	-23	-30	-47	-45	-11	28
2630	43	23	-9	-35	-41	-24	12	72	119	110
2640	59	3	-31	-47	-30	18	75	107	93	37
2650	-28	-75	-85	-59	-11	35	43	3	-47	-72
2660	-56	-10	37	67	52	3	-39	-55	-52	-38
2670	-15	7	15	3	-28	-53	-39	11	81	134
2680	129	65	-17	-67	-71	-43	-5	11	0	-32
2690	-67	-87	-67	-26	5	12	20	38	65	82
2700	71	40	13	-3	-7	8	36	58	55	13
2710	-47	-92	-110	-98	-61	-11	36	62	58	45
2720	33	17	-8	-31	-41	-32	-14	6	20	23
2730	5	-26	-58	-66	-35	15	69	94	61	-4
2740	-52	-65	-45	2	47	45	5	-35	-50	-43
2750	-25	-17	-31	-45	-38	-18	21	68	88	68
2760	21	-32	-68	-57	-10	32	44	36	21	25
2770	50	66	53	31	10	-6	-4	26	55	48
2780	5	-44	-68	-60	-36	-18	-29	-73	-118	-121
2790	-82	-30	16	48	48	33	25	33	55	70
2800	51	-2	-62	-94	-80	-18	55	105	116	89
2810	40	-3	-24	-28	-28	-35	-50	-52	-10	55
2820	103	105	58	-15	-68	-67	-25	18	38	28
2830	-6	-53	-82	-68	-12	39	39	-6	-50	-75
2840	-78	-52	-3	42	58	50	27	-1	-21	-18
2850	3	39	80	100	73	15	-28	-56	-80	-88
2860	-75	-43	-11	11	20	16	8	0	1	11
2870	21	24	22	9	-13	-33	-32	-18	0	31
2880	65	75	60	36	13	-5	-20	-25	-31	-38
2890	-32	-18	11	50	65	35	-17	-62	-83	-74
2900	-40	0	39	55	45	17	-18	-48	-53	-30
2910	2	31	35	10	-31	-59	-56	-26	10	42
2920	63	58	31	1	-17	-27	-31	-26	-9	13
2930	28	23	11	0	-14	-21	-18	-2	16	16
2940	11	12	23	42	66	77	70	49	26	-1
2950	-25	-35	-31	-12	1	-8	-31	-48	-56	-52
2960	-22	21	46	32	-5	-46	-73	-85	-88	-82
2970	-59	-28	1	25	46	48	26	6	8	24
2980	50	71	70	43	1	-28	-30	-12	5	15
2990	23	22	19	16	11	-4	-17	-9	5	16

END

RECORD = F-423 COMPONENT = EAST STATION = HITACHINAKA-F
DATE AND TIME = 1991- 6-25-11- 5 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000, 3000,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	0	0	2	6	-1	-8	0	5	3	0
10	-1	-1	-1	0	1	8	7	-3	-8	2
20	10	7	-3	-8	-7	-5	0	4	3	0
30	-2	2	0	-1	9	9	-3	1	10	6
40	0	0	0	-13	-23	-5	15	14	0	-5
50	-5	-12	1	29	20	-18	-27	1	16	10
60	9	5	-7	-10	1	9	-4	-4	10	17
70	-1	-15	5	9	-5	-9	-14	1	27	9
80	-8	-1	-8	-2	5	4	15	12	-12	-24
90	-15	8	24	32	25	-9	-45	-48	-14	19
100	32	29	18	-10	-51	-46	10	47	36	9
110	-9	-19	-37	-28	16	21	-13	-17	0	14
120	15	6	-11	-26	-2	40	31	-12	-26	-13
130	12	32	16	-30	-63	-37	10	42	58	54
140	17	-51	-97	-54	31	63	46	23	-20	-65
150	-55	-4	40	50	52	48	-8	-77	-52	20
160	32	15	20	17	-2	-37	-53	-21	-5	5
170	35	28	3	-22	-32	5	47	55	38	-16
180	-82	-83	-24	31	66	81	38	-25	-45	-38
190	-25	10	49	40	-28	-78	-62	-8	35	52
200	45	-3	-65	-55	12	72	74	26	-15	-40
210	-50	-19	25	36	16	2	10	27	21	-26
220	-80	-90	-40	42	106	89	13	-52	-69	-25
230	14	12	14	1	-7	13	37	53	20	-46
240	-56	-17	10	20	19	8	-22	-30	-19	-35
250	-25	35	88	94	50	-16	-66	-93	-87	-42
260	26	85	97	67	7	-60	-91	-70	15	100
270	81	0	-54	-83	-97	-45	39	86	95	73
280	17	-57	-121	-128	-54	50	113	120	97	29
290	-56	-101	-109	-74	8	57	50	40	29	17
300	4	-15	-27	-33	-9	45	59	34	-1	-65
310	-99	-77	-14	76	109	75	54	20	-46	-97
320	-103	-71	-14	48	76	58	24	-11	-38	-30
330	-2	11	13	13	0	-30	-32	-31	-30	19
340	75	65	1	-58	-65	-43	-16	15	36	38
350	44	68	75	10	-71	-97	-72	-35	26	94
360	75	-18	-75	-77	-33	40	79	72	31	-35
370	-65	-45	-36	-35	-2	14	21	45	64	70
380	41	-15	-52	-59	-57	-33	8	41	46	15
390	-22	-31	-18	-2	27	48	15	-58	-87	-25
400	35	40	21	-11	-10	46	77	57	-4	-108
410	-165	-85	61	157	146	34	-75	-99	-58	1
420	37	33	10	-20	-55	-65	-39	32	91	70
430	25	5	-13	-25	-2	22	-4	-74	-83	-11
440	62	98	100	48	-65	-148	-125	-9	83	109
450	92	13	-84	-111	-56	20	67	69	37	-16
460	-75	-71	10	64	43	27	13	-10	-22	-17
470	0	-5	-45	-53	-16	22	39	37	22	-1

TO BE CONTINUED

CONTINUED(F-423 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	-19	-16	-17	-27	3	57	65	13	-45	-52
490	-33	-22	12	41	26	18	21	-18	-50	0
500	40	28	9	-13	-34	-32	-21	-14	-2	7
510	18	54	75	47	0	-55	-64	1	37	6
520	-40	-70	-45	-8	-21	-4	75	88	6	-55
530	-47	-24	0	55	74	-1	-30	49	94	42
540	-19	-33	-29	-61	-93	-70	-23	-1	37	88
550	70	-30	-107	-70	8	45	55	59	31	-30
560	-68	-32	20	45	79	100	32	-68	-93	-57
570	-5	66	89	14	-78	-119	-108	-41	40	75
580	81	19	-87	-89	8	81	110	112	50	-36
590	-79	-79	-31	69	117	66	-10	-99	-192	-190
600	-57	84	140	121	45	-37	-70	-42	0	0
610	6	64	89	51	0	-33	-32	-18	4	24
620	-4	-39	-12	14	-9	-35	-56	-70	-28	29
630	57	60	44	38	20	-30	-52	-35	-29	-21
640	20	72	69	36	28	14	-30	-73	-75	-65
650	-70	-76	-40	60	153	164	152	141	59	-37
660	-67	-56	-40	-29	-19	1	-13	-61	-75	-83
670	-85	-14	67	59	7	4	10	-25	-50	-33
680	-13	39	131	173	102	-41	-145	-138	-102	-50
690	67	144	112	34	0	5	-30	-67	-70	-115
700	-172	-154	-25	141	220	214	202	174	65	-59
710	-90	-79	-61	-8	5	-40	-85	-115	-117	-110
720	-100	-50	45	119	111	54	-3	-27	25	107
730	141	123	56	-79	-190	-170	-73	18	111	167
740	127	39	-51	-142	-193	-179	-107	-6	13	-87
750	-197	-209	-105	84	260	344	325	194	-7	-166
760	-212	-157	-65	-1	-2	-40	-55	-17	27	49
770	57	44	-9	-45	4	116	232	286	248	140
780	-25	-182	-233	-166	-22	119	184	147	-9	-234
790	-380	-364	-205	32	219	219	93	-19	-109	-118
800	-3	107	145	162	188	208	217	164	9	-131
810	-116	35	262	468	541	404	100	-184	-264	-220
820	-263	-450	-735	-1022	-1183	-1121	-781	-125	687	1350
830	1650	1447	813	24	-685	-1118	-1149	-854	-411	80
840	537	767	654	320	-77	-363	-322	4	331	468
850	288	-153	-557	-705	-525	-93	387	728	808	576
860	159	-276	-598	-677	-500	-187	200	612	941	1001
870	644	-16	-719	-1254	-1373	-923	-87	773	1279	1157
880	523	-279	-917	-1061	-658	66	795	1128	905	322
890	-389	-932	-1026	-722	-187	401	739	657	303	-68
900	-304	-402	-390	-260	-65	131	275	374	411	303
910	18	-318	-536	-557	-390	-65	303	539	505	197
920	-213	-491	-512	-349	-147	26	140	165	127	108
930	152	197	197	187	184	125	20	-25	29	144
940	282	361	287	63	-245	-587	-818	-751	-413	13
950	425	713	705	391	-79	-519	-703	-545	-147	271
960	435	282	-2	-250	-342	-219	27	235	325	261
970	64	-127	-170	-17	247	439	414	182	-119	-367
980	-461	-345	-99	100	129	16	-84	-92	-38	49
990	147	213	245	242	177	65	-33	-115	-207	-313
1000	-399	-385	-259	-56	202	457	532	414	157	-157

TO BE CONTINUED

CONTINUED(F-423 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	-391	-376	-163	107	285	222	-35	-279	-392	-338
1020	-116	204	441	461	294	16	-267	-411	-340	-135
1030	92	267	344	281	133	-19	-119	-123	-56	4
1040	10	-25	-86	-118	-90	-31	27	66	76	77
1050	65	18	-58	-142	-196	-199	-105	71	192	178
1060	66	-62	-95	-15	109	226	265	149	-79	-282
1070	-378	-349	-189	55	268	357	315	198	77	2
1080	-62	-157	-245	-270	-210	-57	116	222	232	171
1090	69	-25	-60	-23	48	94	50	-66	-172	-232
1100	-245	-210	-143	-59	40	149	233	254	182	14
1110	-166	-275	-290	-226	-88	84	188	156	60	-9
1120	-17	51	147	180	139	32	-135	-245	-195	-23
1130	162	292	303	149	-86	-265	-338	-287	-117	86
1140	247	324	279	108	-103	-241	-225	-87	155	285
1150	267	109	-131	-345	-396	-255	-18	176	237	132
1160	-98	-305	-328	-121	199	475	609	554	330	21
1170	-248	-392	-419	-366	-260	-148	-50	15	38	29
1180	1	-37	-55	-37	21	107	146	80	-30	-100
1190	-105	-30	117	243	286	253	165	41	-92	-195
1200	-211	-118	30	148	194	146	10	-139	-218	-216
1210	-160	-117	-103	-65	0	55	85	77	49	12
1220	-65	-146	-175	-165	-139	-91	-9	97	195	274
1230	344	362	290	179	90	22	-20	-14	21	44
1240	51	25	-38	-115	-199	-277	-273	-178	-65	8
1250	8	-42	-74	-44	36	125	168	116	-27	-181
1260	-237	-163	-18	101	128	65	-40	-130	-143	-78
1270	15	86	95	66	40	20	-9	-42	-79	-131
1280	-156	-93	44	190	270	246	135	21	-24	19
1290	125	204	206	123	-17	-139	-191	-198	-176	-141
1300	-114	-62	13	66	54	-39	-141	-135	2	181
1310	294	290	190	35	-94	-97	3	77	64	-23
1320	-152	-255	-250	-133	27	139	150	85	-13	-86
1330	-80	-29	-16	-48	-73	-51	27	105	131	70
1340	-56	-167	-189	-120	-8	92	130	106	45	-29
1350	-47	10	90	131	105	32	-24	-52	-108	-195
1360	-253	-224	-82	157	395	513	443	211	-90	-323
1370	-368	-230	-4	194	257	147	-50	-207	-234	-155
1380	-53	32	65	35	3	-15	-15	5	15	10
1390	-2	-35	-35	16	61	56	4	-69	-119	-112
1400	-30	98	207	204	67	-149	-361	-440	-315	-43
1410	268	508	565	400	90	-219	-393	-365	-181	57
1420	232	267	172	0	-170	-248	-206	-88	26	109
1430	147	107	-11	-138	-192	-133	0	147	248	243
1440	131	-36	-196	-260	-189	-42	90	165	181	141
1450	52	-44	-90	-59	-10	-9	-42	-67	-70	-45
1460	1	29	31	29	32	26	10	17	45	75
1470	104	100	43	-25	-75	-92	-55	14	65	72
1480	50	-13	-94	-119	-90	-19	103	222	227	96
1490	-78	-210	-253	-228	-118	7	69	29	-71	-137
1500	-118	-25	112	219	208	102	-7	-68	-74	-28
1510	39	77	65	25	-19	-70	-118	-126	-75	5
1520	60	91	101	46	-26	-40	-25	-18	-10	-18
1530	-35	-30	1	50	90	70	5	-70	-133	-147

TO BE CONTINUED

CONTINUED(F-423 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-99	-8	70	95	72	50	60	75	55	7
1550	-67	-145	-173	-125	-23	87	148	140	76	2
1560	-37	-29	8	60	106	117	78	20	-19	-12
1570	34	41	-13	-66	-109	-141	-130	-68	9	55
1580	30	-27	-43	-12	29	64	72	55	36	8
1590	-32	-58	-52	-43	-25	25	91	119	72	-32
1600	-151	-242	-243	-141	-6	96	142	115	55	0
1610	-55	-83	-42	35	108	159	180	158	72	-50
1620	-157	-207	-171	-65	64	165	220	204	105	-15
1630	-77	-78	-65	-50	-4	26	-9	-93	-165	-178
1640	-130	-42	44	93	76	14	-41	-60	-8	105
1650	207	235	185	54	-102	-178	-151	-62	39	93
1660	82	36	-19	-43	-17	37	81	64	-18	-109
1670	-166	-176	-145	-97	-44	18	66	70	23	-51
1680	-101	-58	63	184	244	221	106	-46	-141	-139
1690	-75	8	85	131	129	66	-16	-76	-102	-85
1700	-60	-55	-25	40	102	122	80	-25	-161	-261
1710	-262	-157	0	115	152	127	59	-26	-71	-48
1720	13	71	100	104	101	76	41	8	-37	-87
1730	-95	-41	32	81	73	2	-90	-147	-143	-105
1740	-55	-3	25	21	10	25	65	87	74	60
1750	42	5	-29	-48	-51	-35	-9	22	55	57
1760	15	-53	-119	-125	-48	61	162	216	185	94
1770	4	-45	-39	9	59	77	60	20	-42	-115
1780	-168	-195	-190	-139	-60	11	75	116	93	-10
1790	-139	-203	-165	-65	34	100	130	116	58	-5
1800	-33	-8	46	115	173	175	100	-8	-94	-141
1810	-150	-111	-30	63	109	77	21	0	-4	-5
1820	3	13	-10	-77	-146	-162	-107	-7	72	84
1830	45	12	-4	-9	7	45	72	47	-16	-34
1840	25	110	152	137	92	20	-70	-120	-95	-37
1850	2	40	69	58	21	-19	-54	-75	-75	-42
1860	5	6	-35	-65	-69	-33	27	70	59	10
1870	-25	-37	-39	-35	-8	9	-12	-45	-67	-57
1880	9	76	96	89	47	7	11	41	55	44
1890	10	-25	-55	-72	-69	-51	-47	-65	-72	-43
1900	4	48	74	61	12	-44	-73	-50	-2	36
1910	55	50	17	-10	-16	-5	12	42	77	74
1920	44	19	4	-13	-25	-25	-12	28	69	74
1930	50	-2	-61	-85	-79	-58	-28	2	27	40
1940	32	4	-31	-69	-111	-116	-50	32	88	117
1950	98	34	-28	-61	-55	-19	14	29	22	6
1960	-10	-1	28	41	29	12	-22	-73	-98	-83
1970	-50	-12	9	19	45	86	106	95	70	31
1980	-2	-14	-1	7	-28	-78	-75	-30	0	-2
1990	-35	-92	-135	-117	-59	17	105	167	170	113
2000	15	-63	-85	-57	14	96	123	78	3	-56
2010	-80	-81	-62	-29	-7	-2	-8	-10	4	27
2020	26	0	-30	-28	10	55	62	19	-57	-119
2030	-116	-40	74	172	204	145	17	-84	-101	-62
2040	-5	42	45	8	-35	-75	-96	-95	-78	-36
2050	26	87	131	129	60	-28	-69	-47	-2	32
2060	40	0	-75	-106	-50	19	71	69	30	-5

TO BE CONTINUED

CONTINUED(F-423 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-7	17	36	17	-47	-124	-161	-130	-16	124
2080	204	192	107	-23	-133	-151	-67	49	115	105
2090	45	-29	-83	-82	-40	-1	7	-2	-4	-12
2100	-38	-68	-87	-95	-78	-14	85	155	144	71
2110	-37	-141	-157	-72	32	90	81	35	5	2
2120	30	87	113	80	30	-25	-72	-59	4	52
2130	65	40	-2	-27	-19	5	20	21	4	-25
2140	-40	-43	-50	-50	-33	-12	-12	-27	-32	-26
2150	-22	-6	10	20	24	27	34	44	45	13
2160	-51	-83	-41	45	105	111	80	11	-68	-114
2170	-95	-14	66	91	61	1	-61	-102	-99	-58
2180	-4	33	40	22	15	9	-25	-68	-77	-58
2190	-29	21	70	80	46	-10	-68	-85	-53	16
2200	112	185	190	130	29	-50	-79	-25	42	70
2210	46	-18	-94	-151	-152	-107	-65	-40	-19	-9
2220	-5	17	45	61	62	50	15	-8	0	32
2230	91	147	150	82	-25	-109	-135	-113	-66	-11
2240	24	30	10	-15	-17	8	28	29	18	-10
2250	-50	-75	-79	-65	-51	-52	-52	-19	30	68
2260	89	94	80	51	22	16	29	40	46	44
2270	23	-10	-40	-45	-17	10	15	-9	-59	-112
2280	-136	-115	-48	27	67	60	32	16	27	55
2290	59	13	-52	-83	-75	-25	40	80	65	12
2300	-45	-75	-48	9	51	64	39	-12	-65	-88
2310	-62	-1	56	83	64	27	1	-4	12	36
2320	46	49	43	14	-24	-59	-85	-87	-45	17
2330	51	42	11	-29	-70	-77	-35	19	25	7
2340	14	33	36	35	25	-8	-34	-36	-20	19
2350	70	100	83	17	-60	-102	-91	-51	-1	35
2360	33	-19	-95	-135	-95	4	91	112	62	-23
2370	-95	-119	-92	-25	54	97	93	79	70	70
2380	81	89	71	40	15	-4	-24	-29	-28	-35
2390	-39	-26	3	33	36	3	-55	-113	-139	-107
2400	-32	52	112	106	40	-27	-72	-81	-21	65
2410	109	105	61	-16	-90	-105	-50	36	100	91
2420	6	-103	-165	-158	-90	16	107	126	77	1
2430	-55	-65	-33	11	52	77	67	23	-25	-69
2440	-105	-118	-90	-34	13	40	35	0	-45	-67
2450	-59	-27	16	66	103	107	74	26	-2	2
2460	30	58	100	101	55	0	-37	-35	9	70
2470	113	99	29	-49	-107	-135	-113	-55	0	18
2480	1	-35	-75	-98	-78	-19	31	53	64	75
2490	42	-17	-57	-64	-35	34	116	169	157	87
2500	2	-54	-65	-30	18	56	54	4	-55	-89
2510	-111	-129	-132	-130	-116	-88	-53	-11	21	31
2520	15	-7	-16	2	40	75	93	88	60	25
2530	-4	-19	-7	5	-13	-50	-51	-5	57	115
2540	139	101	25	-55	-98	-80	-25	26	41	12
2550	-41	-85	-86	-37	35	102	110	45	-39	-100
2560	-118	-81	0	80	116	110	78	26	-32	-70
2570	-70	-39	9	55	75	80	67	25	-20	-40
2580	-39	-20	-8	-16	-27	-21	-4	13	24	15
2590	-5	-22	-23	-19	-27	-38	-39	-37	-28	-3

TO BE CONTINUED

CONTINUED(F-423 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	33	76	111	107	50	-30	-101	-134	-121	-75
2610	-22	6	1	-29	-59	-60	-30	3	38	61
2620	59	55	65	83	95	87	56	20	-2	-14
2630	-26	-38	-46	-48	-39	-25	-9	-23	-49	-55
2640	-37	-11	20	34	19	-1	-16	-26	-2	41
2650	82	93	68	22	-2	3	10	7	-13	-48
2660	-67	-58	-29	-3	7	23	41	46	35	10
2670	-13	-18	4	30	28	7	-13	-25	-29	-35
2680	-32	-25	-25	-10	22	51	51	44	-5	-51
2690	-56	-24	18	45	37	0	-50	-70	-50	-15
2700	9	19	11	-13	-43	-52	-35	-2	32	54
2710	50	19	-18	-37	-37	-19	13	45	52	31
2720	-5	-45	-71	-51	14	81	101	75	24	-31
2730	-73	-81	-55	-24	2	18	21	15	8	10
2740	19	25	21	4	-10	-7	5	17	26	30
2750	26	13	-12	-37	-34	-4	22	25	5	-20
2760	-22	1	34	62	75	69	50	15	-14	-26
2770	-31	-25	-17	-25	-40	-44	-44	-42	-36	-33
2780	-43	-59	-82	-101	-101	-65	0	60	100	115
2790	109	70	15	-32	-59	-51	-2	55	88	86
2800	57	17	-22	-40	-17	25	56	61	33	-17
2810	-68	-90	-67	-9	49	80	70	31	-18	-53
2820	-70	-79	-64	-28	8	37	52	47	24	-7
2830	-22	-14	-5	-9	-16	-25	-37	-38	-28	-13
2840	24	69	101	102	60	-10	-65	-91	-95	-73
2850	-19	35	55	34	1	-28	-38	-15	23	49
2860	51	41	26	20	25	26	10	-22	-52	-67
2870	-68	-55	-20	12	23	4	-27	-47	-42	-13
2880	24	55	63	50	39	42	61	95	112	69
2890	-19	-97	-135	-134	-100	-45	8	35	27	6
2900	4	23	50	65	46	-6	-65	-80	-55	-11
2910	30	53	50	18	-25	-53	-50	-9	51	79
2920	65	36	15	8	22	40	32	-6	-57	-90
2930	-98	-90	-62	-11	45	77	65	22	-26	-65
2940	-75	-55	-28	-20	-23	-16	5	34	70	101
2950	102	64	9	-33	-46	-25	10	21	-4	-41
2960	-55	-43	-25	-8	8	17	7	-9	-10	0
2970	12	21	22	22	19	12	13	6	-25	-63
2980	-80	-71	-40	3	38	52	49	38	29	20
2990	19	15	7	-1	-18	-36	-40	-18	20	53

END

RECORD = F-423 COMPONENT = UP STATION = HITACHINAKA-F
DATE AND TIME = 1991- 6-25-11- 5 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000, 3000,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	-21	14	25	-2	-18	18	24	-30	-20	59
10	56	-34	-67	-17	29	36	13	-11	-6	9
20	3	-27	-41	17	62	-8	-54	36	73	-31
30	-47	53	22	-81	-35	62	27	-63	-24	70
40	31	-54	-1	65	-33	-111	26	127	33	-30
50	5	-6	-49	-27	24	15	3	24	-12	-49
60	-18	4	13	48	40	-60	-115	-5	93	17
70	-29	58	27	-81	-49	9	29	59	-6	-76
80	31	115	7	-62	2	13	-86	-82	74	74
90	-74	-44	91	32	-102	-32	117	70	-59	-41
100	51	63	-41	-120	-40	43	29	50	85	41
110	-37	-117	-132	-11	110	67	-27	1	35	-38
120	-63	33	26	-101	-22	178	65	-155	-55	112
130	13	-82	55	154	46	-86	-130	-82	-19	-11
140	52	116	17	-47	51	70	-72	-135	36	98
150	-120	-164	47	141	117	88	-34	-139	-102	-42
160	26	117	105	1	-102	-72	76	61	-99	-114
170	17	110	61	-7	40	35	-125	-178	14	182
180	123	0	-10	26	-25	-118	-100	17	58	21
190	31	30	15	41	23	-45	-94	-84	6	77
200	58	0	-57	-42	1	10	46	107	82	-61
210	-122	-35	-30	-71	29	105	28	-18	29	17
220	-61	-74	-12	3	-5	69	99	17	-15	-2
230	-42	-57	-57	-27	99	96	-65	-65	39	-4
240	-68	46	152	26	-126	-52	84	30	-111	-94
250	21	41	18	38	76	65	-29	-87	-35	-38
260	-85	37	179	49	-119	-34	56	-32	-58	64
270	85	-19	-44	-6	22	64	26	-95	-52	81
280	51	-34	-57	-12	55	-8	-124	-23	126	65
290	-44	-40	4	20	-14	-61	-30	78	108	-38
300	-100	65	125	-50	-139	-36	66	74	-17	-59
310	53	57	-113	-118	70	149	15	-118	-92	38
320	86	-6	-30	28	-10	-33	19	-2	-33	73
330	69	-162	-140	186	223	-30	-101	-3	-15	-91
340	-37	87	65	-72	-73	41	7	-96	-40	45
350	-21	-37	144	147	-63	-41	87	-26	-186	-88
360	118	128	-27	-71	40	35	-71	-31	70	82
370	-6	-131	-82	123	139	-74	-172	1	152	10
380	-132	8	117	-8	-74	14	41	0	33	89
390	-7	-118	-20	65	-22	0	85	-61	-202	-113
400	50	188	147	-42	-63	31	0	-29	29	2
410	-97	-118	13	153	70	-59	7	93	-22	-153
420	-34	135	36	-94	25	96	-107	-151	152	234
430	-96	-249	-10	117	-42	-52	163	181	-68	-205
440	-47	100	0	-98	-36	-28	-91	-46	70	110
450	79	98	114	-98	-246	78	296	-6	-149	51
460	45	-101	-19	113	18	-103	-42	-15	-72	-10
470	25	-101	-81	113	119	-20	-16	51	4	-40

TO BE CONTINUED

CONTINUED(F-423 UP)

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490	34	-168	-106	105	32	-62	46	-18	-162	-14
500	155	7	-143	61	253	-14	-230	78	186	-188
510	-177	243	238	-96	-146	17	40	-110	-145	28
520	93	-18	-20	97	44	-123	-34	179	42	-204
530	-70	133	44	-44	70	142	15	-142	-106	19
540	-27	-140	-63	105	110	-5	-37	14	38	11
550	-1	33	33	21	30	-48	-71	138	223	-67
560	-225	-18	49	-101	-100	-3	-18	-13	58	52
570	60	75	-68	-129	38	123	14	-57	-12	17
580	-20	-33	41	101	46	-49	-86	-132	-119	72
590	140	-45	-41	159	111	-72	-46	5	-125	-139
600	132	282	19	-212	-85	33	-4	33	24	-100
610	-70	77	97	13	-25	-40	-98	-31	211	258
620	-21	-191	-50	33	-99	-145	11	115	41	-27
630	53	129	3	-106	6	65	-100	-179	21	163
640	14	-87	21	65	4	-34	-57	-17	60	69
650	-38	-119	51	238	36	-228	-106	43	-76	-79
660	153	205	-21	-179	-60	136	71	-101	18	107
670	-108	-107	136	78	-191	-170	117	188	-21	-92
680	37	0	-166	5	292	133	-146	-108	6	-73
690	-137	43	158	51	-15	-5	15	6	-76	-84
700	36	142	180	92	-136	-254	-116	-22	-31	107
710	205	64	-9	22	-89	-160	32	189	80	-46
720	-39	-38	-76	-53	18	29	-64	-96	67	161
730	-4	-86	29	-2	-112	-48	48	83	126	137
740	106	29	-154	-235	-82	3	-57	-13	85	90
750	85	73	16	-110	-254	-101	254	260	-55	-171
760	-20	14	-124	-122	38	57	-62	-39	85	76
770	30	90	144	99	-71	-190	-65	26	-84	-96
780	56	80	-31	26	150	25	-98	18	113	36
790	-45	-18	48	51	-58	-128	6	40	-165	-111
800	221	203	-148	-190	93	165	-105	-218	78	165
810	-165	-145	301	314	-176	-396	-190	-18	17	163
820	347	265	-3	-147	-165	-194	-138	28	144	206
830	203	57	-185	-347	-247	51	214	65	-32	238
840	412	31	-362	-224	-15	-156	-244	56	299	68
850	-220	-52	279	219	-76	-146	16	83	-55	-156
860	-30	179	239	179	127	57	-91	-313	-425	-303
870	-90	105	265	235	1	-223	-175	189	362	38
880	-266	-116	88	-131	-336	46	512	329	-113	-157
890	79	184	10	-170	-25	241	246	25	-104	-67
900	-144	-295	-190	47	114	85	102	84	-18	-71
910	-20	14	20	11	-36	-72	-25	16	-81	-210
920	-170	-93	-112	9	222	119	-181	-229	5	203
930	225	173	137	72	-74	-210	-192	-39	99	159
940	148	58	-105	-133	70	249	217	57	-69	-80
950	-163	-411	-462	-86	339	355	100	12	157	204
960	-21	-266	-281	-186	-82	56	123	110	102	32
970	-92	-138	-80	23	140	168	129	141	129	-21
980	-194	-192	1	155	68	-49	58	156	62	34
990	90	8	-144	-169	-19	80	-47	-77	147	177
1000	-99	-247	-163	-54	-5	-27	-115	-81	68	139

TO BE CONTINUED

CONTINUED(F-423 UP)

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1030	126	78	-103	-114	55	64	-130	-194	-47	17
1040	-104	-204	-150	1	115	88	-12	-94	-156	-131
1050	10	105	96	112	137	116	89	20	-76	-50
1060	93	86	-87	-96	100	205	116	-33	-74	-4
1070	-8	-104	-91	84	182	55	-130	-220	-167	-4
1080	54	13	43	40	-19	24	80	15	-36	-28
1090	-70	-130	-39	154	257	195	69	-2	-42	-49
1100	-5	6	-27	-49	-53	-78	-127	-116	-7	41
1110	-20	-9	54	-37	-148	-59	48	18	5	35
1120	8	-17	-15	17	98	81	-62	-73	49	28
1130	-34	75	124	-30	-98	61	186	73	-67	-53
1140	-38	-135	-166	1	141	36	-89	-22	30	-72
1150	-82	68	122	47	39	127	119	-36	-122	-30
1160	59	7	-71	-47	1	1	-10	-30	-53	-24
1170	1	-74	-109	15	120	73	-54	-106	-11	59
1180	13	9	74	36	-45	11	85	-17	-143	-57
1190	93	51	-85	-53	109	97	-98	-81	180	265
1200	97	-84	-140	-86	-31	-44	-49	41	163	110
1210	-104	-174	-48	24	19	84	111	4	-73	-39
1220	-121	-87	-24	-52	1	133	92	-22	-62	-74
1230	-57	-33	-37	-38	-28	23	149	225	105	-99
1240	-143	-24	56	45	29	55	41	-12	-4	59
1250	103	75	-30	-83	-60	-15	76	105	3	-74
1260	-85	-67	-52	26	52	-5	-25	-20	-53	-87
1270	-101	-57	69	156	77	-92	-131	0	41	-28
1280	31	89	-47	-99	77	172	45	-47	31	85
1290	26	19	51	-22	-126	-146	-86	24	74	-22
1300	-114	-86	-60	-79	-28	45	37	28	66	119
1310	95	-27	-85	-3	8	-104	-104	77	174	85
1320	28	55	13	-40	33	93	16	-47	-52	-78
1330	-58	48	87	11	-57	-75	-63	-22	-12	-47
1340	-31	13	-26	-72	-50	-7	48	70	-2	-69
1350	20	172	182	85	23	-5	-7	49	95	86
1360	47	-29	-59	-8	10	-52	-47	-10	-77	-200
1370	-210	-117	-75	-15	99	60	-96	-113	-7	37
1380	55	100	94	51	33	-33	-43	53	113	85
1390	36	-8	-50	-52	26	97	120	151	127	-2
1400	-60	25	51	-31	-67	-62	-63	-114	-146	-132
1410	-50	-8	-66	-118	-88	-40	-15	1	26	53
1420	62	17	7	63	92	57	24	-2	-17	41
1430	138	135	40	21	63	-7	-145	-140	-34	1
1440	11	65	70	-12	-98	-136	-138	-87	5	46
1450	-7	-75	-64	21	88	99	105	109	40	-32
1460	7	61	46	81	128	46	-55	-41	3	-36
1470	-98	-46	83	80	-91	-142	44	128	-14	-71
1480	1	-40	-120	-38	42	-35	-102	-21	44	-11
1490	-45	29	73	-14	-84	7	112	43	-59	-14
1500	25	-32	0	105	32	-97	11	158	87	6
1510	43	24	-78	-137	-98	-37	-25	5	89	85
1520	-29	-64	17	43	-31	-90	-44	38	19	-43
1530	-26	-31	-99	-62	43	61	14	10	43	35

TO BE CONTINUED

CONTINUED(F-423 UP)

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1550	0	37	30	5	61	102	41	-11	-19	-5
1560	11	5	28	100	70	-45	-58	-43	-75	-48
1570	-12	-74	-105	-57	-28	1	64	69	1	-40
1580	-39	-14	-1	-53	-55	70	129	34	-22	7
1590	29	35	49	33	-31	-61	-34	-44	-27	53
1600	61	-9	1	11	-17	-15	-10	-28	-23	-11
1610	-25	-20	3	-9	-27	19	81	47	-38	-50
1620	4	8	-21	6	78	70	-39	-90	-12	40
1630	8	-7	6	33	48	41	54	65	51	13
1640	-34	-37	-23	-52	-62	-1	21	-38	-52	-29
1650	-68	-66	25	53	4	-12	-20	-62	-78	-7
1660	60	34	5	-10	-45	16	135	108	9	39
1670	105	39	-23	38	82	19	-38	-37	-60	-97
1680	-42	21	-40	-87	-3	25	-59	-61	18	23
1690	-31	-54	-35	16	52	33	5	-7	-22	-30
1700	0	38	26	25	65	57	-10	-54	-2	61
1710	37	13	41	37	9	0	-10	-17	3	26
1720	-4	-58	-13	48	-28	-114	-32	57	-22	-117
1730	-50	57	52	16	31	30	-13	-34	-6	9
1740	-8	-20	-2	14	20	8	-33	-74	-30	47
1750	24	-48	-43	17	26	-20	-8	53	41	-3
1760	14	47	33	11	-3	-20	-14	-2	0	31
1770	49	-28	-79	-2	55	-9	-60	8	55	-35
1780	-94	25	116	-6	-135	-74	19	18	33	55
1790	-9	-54	19	75	37	4	24	38	-3	-52
1800	-48	-7	24	36	26	-5	-20	11	5	-60
1810	-62	-14	-1	13	51	58	51	53	1	-94
1820	-97	0	43	-18	-36	38	51	-45	-98	-14
1830	77	34	-54	-46	15	35	25	26	11	-31
1840	-23	53	54	-22	-22	11	-25	-36	55	103
1850	41	-15	-48	-66	-63	-30	43	62	-30	-58
1860	28	38	-42	-52	18	5	-89	-91	-6	48
1870	70	57	14	19	49	11	-23	23	55	33
1880	21	-18	-71	-57	-20	-7	-19	0	43	26
1890	-25	-14	26	24	-5	-21	-30	-22	3	21
1900	33	27	-22	-55	-40	-9	22	41	46	26
1910	-40	-93	-74	-7	67	73	10	-31	-42	-49
1920	-16	39	53	48	44	-23	-80	-16	68	46
1930	-14	-20	2	0	-20	10	83	73	-19	-59
1940	-38	-42	-15	65	79	11	-30	-35	-34	-25
1950	-15	19	60	21	-60	-67	17	43	-5	16
1960	62	9	-49	-25	28	23	-41	-92	-97	-52
1970	26	84	65	6	-25	-43	-38	12	53	52
1980	38	-5	-41	-27	-28	-34	8	35	10	5
1990	1	-25	3	50	29	-23	-52	-40	-6	-2
2000	-7	14	23	26	37	34	8	-8	3	20
2010	-6	-63	-66	-12	45	85	82	23	-17	-32
2020	-57	-69	-37	13	54	75	64	25	-21	-51
2030	-73	-74	-71	-1	80	37	-47	-27	22	-3
2040	-17	36	41	-8	-2	37	57	67	31	-32
2050	-31	7	-12	-42	-31	-29	-44	-52	-59	-15
2060	73	65	-17	-20	11	-8	-20	9	34	25

TO BE CONTINUED

CONTINUED(F-423 UP)

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2080	65	53	13	33	19	-47	-38	53	71	-2
2090	-47	-43	-39	-32	15	59	14	-71	-72	2
2100	26	4	37	67	-18	-87	-41	9	11	2
2110	-1	4	-10	-37	-2	40	28	27	37	-13
2120	-45	-4	17	11	26	15	-34	-37	9	14
2130	-23	-47	-53	-45	1	57	60	17	-18	-2
2140	47	43	-19	-41	8	22	-23	-18	33	5
2150	-42	11	90	69	1	11	54	14	-35	-1
2160	30	-18	-70	-68	-63	-48	-16	-32	-79	-67
2170	-13	1	-5	0	-6	-22	-2	45	79	88
2180	68	26	0	14	43	44	5	-10	-10	-37
2190	-14	44	36	18	41	21	-28	-34	-31	-45
2200	-18	28	11	-50	-66	-25	-1	-13	7	33
2210	-3	-50	-31	6	-2	-44	-46	-6	5	-4
2220	19	48	34	-6	-41	-38	4	48	72	85
2230	76	28	-22	-47	-28	0	-2	-2	41	79
2240	38	-10	-6	3	-20	-52	-71	-39	4	-20
2250	-43	-17	-5	-10	1	22	31	20	12	8
2260	-12	-18	11	26	-1	-15	18	40	4	-36
2270	-10	35	25	-4	-2	10	6	-20	-25	18
2280	32	-12	-32	21	65	22	-38	-58	-40	-3
2290	-4	-37	-18	27	15	-21	-6	25	17	-14
2300	-15	0	4	-2	-17	-2	31	29	-17	-39
2310	-20	0	-3	-23	-28	-22	-14	13	37	23
2320	1	15	25	-9	-17	35	54	1	-30	16
2330	65	56	21	9	11	-6	-17	-5	-23	-43
2340	-8	8	-16	-10	14	-2	-47	-63	-21	24
2350	29	23	25	23	18	10	-3	-8	11	4
2360	-22	-25	-40	-48	-7	5	-38	-37	0	-18
2370	-44	5	45	11	-10	19	33	6	-4	-5
2380	-1	9	6	-21	-38	-20	29	73	60	24
2390	19	21	13	7	3	1	-15	-18	15	19
2400	-44	-62	0	0	-60	-52	21	76	61	4
2410	-22	-4	5	-2	-10	-18	-20	-16	-4	15
2420	28	41	57	40	-2	-15	-8	-37	-54	8
2430	75	56	4	-12	-15	-24	-35	-42	-32	-17
2440	-29	-37	-17	7	12	1	6	39	51	21
2450	-3	1	0	-21	-12	6	-14	-18	25	27
2460	-32	-51	1	31	9	5	5	-23	-44	-12
2470	41	39	0	4	26	11	-5	20	46	3
2480	-65	-48	17	11	-26	11	52	6	-50	-47
2490	-5	22	21	9	9	8	13	26	17	-3
2500	-22	-48	-77	-90	-49	23	58	69	72	33
2510	-14	-26	-11	4	6	-5	-15	-2	29	51
2520	25	-19	-31	-17	-26	-22	26	53	37	-27
2530	-57	-27	11	6	-26	-22	21	33	8	6
2540	23	7	-43	-64	-28	18	22	6	23	39
2550	1	-31	0	19	-8	-17	4	-5	-29	-20
2560	-6	9	32	4	-53	-30	33	26	-5	18
2570	33	-17	-47	-14	28	47	39	11	-30	-63
2580	-57	-18	7	8	13	20	17	7	5	11
2590	5	-18	-17	1	3	-2	9	24	6	-18

TO BE CONTINUED

CONTINUED(F-423 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-17	1	11	9	17	34	25	-15	-16	11
2610	-21	-60	0	70	51	-2	-25	-20	-18	-27
2620	-32	-10	26	42	19	-2	-13	-30	-26	17
2630	53	51	30	-19	-45	1	13	-43	-35	18
2640	-2	-49	-36	5	25	10	-2	10	11	-7
2650	-2	14	-7	-27	0	21	18	6	-7	-28
2660	-20	10	25	13	4	0	-5	-13	-13	-7
2670	1	9	3	-18	-33	-20	17	49	52	38
2680	17	-27	-59	-36	-33	-49	-1	56	23	-19
2690	2	21	21	30	28	16	24	23	-17	-43
2700	-14	25	22	-9	-27	-28	-28	-23	-17	-7
2710	5	-10	-22	4	29	31	31	19	-13	-41
2720	-25	14	30	24	18	9	-18	-31	-10	-1
2730	-3	3	5	-1	5	4	-23	-27	9	7
2740	-38	-41	-14	-17	-5	54	84	41	-16	-38
2750	-14	13	21	17	7	0	8	19	11	6
2760	5	16	9	-27	-31	11	30	6	-10	-21
2770	-21	11	9	-48	-66	-31	-11	-18	-17	17
2780	41	19	-1	9	11	5	12	21	7	3
2790	19	14	-5	-8	-10	-16	-19	-5	11	9
2800	2	6	17	11	-7	-1	24	18	-7	-6
2810	-7	-49	-64	-13	20	7	-5	-10	-11	-11
2820	-2	21	21	-6	-13	-8	-9	12	36	8
2830	-28	-25	-10	1	16	27	30	17	4	9
2840	7	-12	-15	0	6	4	-13	-20	0	22
2850	33	25	3	-6	-1	-17	-37	-15	19	16
2860	-4	-4	1	-16	-41	-24	6	1	1	37
2870	50	0	-28	29	56	-12	-52	-3	36	12
2880	-9	2	-1	-20	-9	3	-6	-10	-1	-2
2890	-16	-15	0	1	-12	-17	-6	-6	-20	-13
2900	-5	-15	3	42	37	-6	-16	21	28	-12
2910	-26	4	12	-5	1	4	-10	-7	13	19
2920	-1	-23	-10	11	0	-7	20	26	-12	-30
2930	10	51	33	8	26	37	-2	-35	-18	13
2940	10	-13	-30	-40	-40	-12	29	35	-7	-40
2950	-27	-2	-11	-21	16	51	17	-24	-1	33
2960	19	1	12	8	-22	-34	-7	3	-10	-4
2970	9	11	2	-15	-20	-10	-2	6	32	33
2980	1	-24	-20	-6	-7	-18	-20	-6	6	9
2990	16	25	16	1	1	-2	-12	-7	6	12

END

RECORD = S-2383 COMPONENT = NORTH STATION = SAKAIMINATO-JI-S
DATE AND TIME = 1991- 8-28-10-29 TOTAL NUMBER OF DATA = 5900
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 2968, 5900, 5900,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	-8	-8	-8	-8	-8	-8	-8	-8	-8	-8
10	-8	-8	-8	-8	-8	-8	-8	-8	-8	-7
20	-7	-7	-7	-7	-7	-7	-7	-7	-6	-6
30	-4	-3	-2	-2	-2	-3	-2	-1	0	0
40	0	1	2	3	4	5	4	4	4	4
50	5	5	5	4	4	4	4	4	4	4
60	4	5	5	5	6	6	4	4	4	3
70	2	1	2	3	5	8	11	13	15	17
80	20	23	23	21	16	10	5	0	-6	-9
90	-10	-8	-5	-1	3	8	13	19	24	28
100	30	30	28	24	17	8	0	-9	-17	-21
110	-22	-21	-15	-8	-2	4	8	7	2	-5
120	-15	-26	-38	-47	-48	-39	-22	0	20	44
130	67	86	99	104	98	85	70	52	32	12
140	-6	-21	-38	-48	-55	-55	-53	-48	-43	-41
150	-40	-40	-40	-34	-23	-12	-1	12	23	28
160	29	23	13	0	-9	-18	-25	-27	-27	-26
170	-23	-19	-12	-5	0	6	13	22	36	53
180	68	82	93	100	96	81	58	22	-24	-74
190	-124	-167	-198	-223	-235	-230	-211	-179	-134	-74
200	-9	52	110	160	201	234	260	272	265	240
210	205	163	109	45	-20	-76	-122	-158	-186	-206
220	-215	-213	-198	-171	-131	-90	-49	-7	28	66
230	107	146	178	199	207	203	187	161	125	79
240	38	0	-39	-79	-110	-134	-152	-161	-156	-138
250	-113	-80	-38	-1	24	42	55	67	74	76
260	72	62	48	34	21	12	6	5	9	15
270	25	30	31	27	22	15	7	-2	-8	-10
280	-8	1	18	36	51	60	62	54	36	8
290	-20	-53	-83	-101	-107	-109	-104	-94	-80	-64
300	-44	-15	18	49	77	100	117	127	130	120
310	103	82	59	31	0	-21	-37	-46	-48	-46
320	-42	-39	-41	-48	-50	-74	-86	-95	-100	-98
330	-89	-72	-54	-38	-21	-9	-2	1	0	-6
340	-14	-20	-20	-16	-3	9	25	44	65	82
350	95	101	104	100	91	78	63	38	2	-42
360	-89	-136	-171	-195	-211	-214	-203	-174	-127	-70
370	-1	56	106	150	174	178	173	164	147	130
380	114	95	79	64	42	13	-21	-52	-73	-87
390	-97	-102	-101	-95	-87	-81	-68	-50	-31	-5
400	23	48	75	97	111	119	122	116	104	87
410	72	53	28	-1	-31	-55	-71	-83	-88	-89
420	-89	-90	-97	-110	-129	-158	-181	-193	-193	-172
430	-128	-67	-2	56	121	180	220	244	255	251
440	228	186	139	98	76	71	78	92	110	123
450	129	117	83	35	-22	-94	-171	-233	-281	-320
460	-337	-321	-287	-190	-112	-31	54	126	176	211
470	228	228	213	183	139	83	23	-42	-106	-161

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	-197	-206	-192	-156	-113	-72	-28	22	63	99
490	135	170	192	199	188	152	98	28	-52	-159
500	-252	-354	-388	-364	-302	-221	-128	-36	29	61
510	64	40	-13	-86	-180	-287	-384	-422	-390	-311
520	-190	-25	165	331	451	516	532	514	451	373
530	295	227	173	134	114	107	104	99	84	50
540	-3	-72	-151	-224	-269	-293	-291	-254	-198	-140
550	-70	10	88	157	213	263	308	325	310	265
560	203	136	66	1	-40	-55	-55	-44	-18	24
570	63	86	96	90	65	28	-13	-51	-72	-77
580	-74	-63	-48	-30	-12	1	12	32	57	75
590	86	86	71	31	-37	-106	-154	-179	-182	-167
600	-133	-91	-48	-21	-13	-20	-40	-64	-86	-105
610	-129	-152	-166	-173	-172	-165	-146	-103	-44	10
620	55	91	114	126	129	127	124	122	119	116
630	102	73	22	-52	-140	-216	-274	-296	-300	-283
640	-229	-148	-42	60	139	194	229	241	234	198
650	149	88	28	-26	-70	-97	-106	-99	-68	-21
660	22	69	116	138	132	106	54	-41	-113	-157
670	-187	-202	-200	-156	-71	15	97	169	207	218
680	216	205	188	164	142	128	119	112	110	106
690	93	71	31	-15	-52	-84	-101	-106	-99	-73
700	-41	-14	8	29	43	51	56	53	47	39
710	33	35	35	34	31	24	13	-5	-27	-57
720	-86	-115	-144	-168	-173	-172	-153	-129	-106	-87
730	-68	-54	-47	-43	-36	-19	-2	18	38	47
740	50	52	47	39	31	23	17	15	14	12
750	9	5	-8	-24	-35	-45	-49	-48	-30	7
760	44	76	102	117	118	100	55	-10	-72	-133
770	-192	-228	-229	-205	-174	-141	-99	-41	19	66
780	82	83	75	48	3	-35	-57	-64	-61	-47
790	-27	-8	14	37	56	70	76	79	81	83
800	82	79	75	64	49	33	15	-2	-10	-17
810	-21	-17	-5	12	30	48	60	68	73	73
820	72	68	63	63	64	68	78	89	96	99
830	102	95	79	59	37	12	-13	-36	-54	-63
840	-63	-59	-47	-31	-16	-1	6	2	-11	-32
850	-67	-96	-118	-138	-146	-143	-122	-80	-26	22
860	60	84	103	110	106	90	63	32	-10	-61
870	-108	-135	-142	-136	-115	-82	-50	-26	-10	-1
880	1	-8	-31	-57	-83	-103	-114	-115	-102	-78
890	-52	-25	0	22	42	62	83	107	133	155
900	167	172	177	179	179	177	174	172	172	171
910	166	154	133	105	78	52	21	-9	-38	-63
920	-80	-91	-97	-100	-100	-99	-100	-102	-106	-112
930	-115	-116	-114	-110	-107	-106	-109	-115	-124	-132
940	-136	-132	-116	-89	-61	-38	-17	2	20	36
950	50	63	75	84	89	88	81	62	22	-25
960	-69	-107	-139	-159	-166	-158	-135	-102	-71	-51
970	-38	-30	-22	-12	2	20	38	65	98	130
980	151	160	162	160	151	134	115	97	87	80
990	73	65	54	40	24	10	-3	-18	-35	-50
1000	-64	-77	-85	-90	-93	-88	-73	-48	-17	12

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	30	35	29	7	-24	-59	-89	-107	-115	-115
1020	-101	-69	-20	26	60	86	103	116	124	130
1030	132	132	134	134	130	121	107	88	66	41
1040	23	8	-5	-14	-18	-21	-25	-32	-47	-66
1050	-83	-100	-114	-125	-133	-138	-140	-134	-116	-87
1060	-53	-12	41	96	146	181	209	226	233	232
1070	224	211	194	173	151	129	107	83	62	40
1080	19	-2	-17	-29	-37	-42	-45	-44	-45	-45
1090	-49	-57	-65	-69	-71	-74	-70	-56	-38	-29
1100	-15	-3	5	13	18	21	23	21	11	-4
1110	-22	-42	-62	-77	-90	-98	-102	-104	-108	-110
1120	-112	-113	-117	-120	-123	-124	-122	-110	-92	-74
1130	-59	-49	-40	-38	-40	-47	-58	-72	-82	-88
1140	-91	-86	-76	-65	-49	-31	-16	-5	5	17
1150	36	56	75	95	122	150	166	176	181	183
1160	176	162	145	126	104	81	60	36	6	-18
1170	-38	-51	-58	-62	-63	-54	-40	-29	-16	-3
1180	9	20	27	36	43	48	50	51	54	55
1190	53	52	51	48	47	46	44	38	28	13
1200	-7	-24	-46	-61	-69	-72	-71	-66	-59	-53
1210	-50	-49	-51	-52	-54	-56	-52	-40	-24	-12
1220	-3	6	14	20	22	21	16	9	0	-12
1230	-31	-53	-80	-104	-122	-134	-141	-142	-135	-119
1240	-96	-67	-39	-11	12	36	58	75	94	117
1250	135	146	153	157	157	156	150	142	132	122
1260	112	100	87	74	62	50	38	23	10	0
1270	-14	-32	-49	-64	-77	-87	-94	-98	-98	-91
1280	-81	-70	-54	-39	-28	-18	-6	3	11	17
1290	23	27	30	31	31	27	18	9	0	-11
1300	-22	-28	-31	-33	-33	-35	-36	-37	-39	-43
1310	-47	-51	-55	-58	-61	-62	-60	-57	-53	-49
1320	-45	-42	-40	-40	-42	-44	-45	-44	-36	-24
1330	-12	0	14	32	50	66	80	94	103	106
1340	104	97	85	74	62	50	39	25	9	-3
1350	-13	-22	-29	-34	-38	-43	-46	-47	-50	-54
1360	-56	-57	-57	-54	-49	-42	-32	-17	-1	15
1370	30	51	78	108	136	158	175	186	192	190
1380	176	151	116	78	50	25	0	-24	-42	-52
1390	-58	-63	-65	-64	-62	-58	-53	-49	-45	-39
1400	-33	-30	-27	-23	-21	-20	-20	-20	-20	-19
1410	-16	-14	-12	-11	-10	-9	-6	-6	-8	-10
1420	-14	-22	-30	-36	-40	-42	-44	-45	-45	-43
1430	-41	-41	-45	-48	-53	-53	-50	-45	-37	-28
1440	-20	-13	-9	-4	0	-1	-3	-5	-7	-8
1450	-8	-7	-4	0	8	19	31	40	45	51
1460	56	58	60	63	64	64	60	56	51	48
1470	45	43	40	39	39	40	44	47	48	51
1480	51	47	46	45	45	43	39	34	29	24
1490	20	14	7	-2	-12	-21	-29	-34	-37	-39
1500	-38	-38	-39	-39	-37	-33	-33	-35	-38	-42
1510	-43	-47	-48	-43	-38	-33	-30	-30	-30	-30
1520	-32	-28	-19	-9	-7	0	6	10	7	1
1530	-7	-13	-19	-23	-28	-30	-32	-34	-35	-34

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-33	-37	-42	-50	-56	-61	-58	-76	-84	-92
1550	-97	-100	-100	-95	-84	-72	-58	-33	-7	11
1560	32	47	57	60	64	63	62	56	53	49
1570	46	46	45	42	41	41	37	29	27	26
1580	23	22	19	14	12	11	9	8	10	16
1590	27	39	52	64	77	95	110	123	130	134
1600	136	135	126	112	94	73	51	27	5	-14
1610	-33	-53	-69	-79	-85	-87	-84	-77	-67	-53
1620	-40	-24	-9	2	13	25	35	43	49	52
1630	52	54	55	50	44	36	28	20	13	7
1640	2	-4	-11	-19	-27	-30	-35	-41	-46	-47
1650	-50	-53	-55	-58	-63	-68	-73	-76	-77	-78
1660	-77	-73	-68	-63	-55	-44	-33	-25	-18	-12
1670	-6	-2	0	0	0	1	0	0	-3	-6
1680	-11	-19	-28	-36	-44	-51	-56	-56	-53	-47
1690	-37	-27	-20	-14	-9	-5	-5	-7	-11	-17
1700	-21	-24	-27	-28	-27	-24	-22	-20	-18	-16
1710	-14	-10	-9	-12	-17	-23	-32	-42	-51	-56
1720	-61	-62	-58	-51	-43	-34	-24	-12	-1	10
1730	21	31	40	47	51	53	56	59	61	62
1740	62	63	64	61	59	59	56	50	45	41
1750	34	30	31	32	34	37	42	47	49	49
1760	47	44	37	28	22	17	15	16	17	21
1770	28	36	41	42	43	46	47	44	44	44
1780	42	39	39	39	40	41	42	44	48	49
1790	49	47	43	39	32	24	15	8	4	3
1800	3	4	5	7	10	13	15	16	17	19
1810	22	25	28	28	26	25	22	17	12	6
1820	0	-5	-12	-19	-26	-31	-35	-39	-42	-46
1830	-48	-49	-51	-55	-57	-61	-67	-72	-72	-70
1840	-65	-60	-57	-52	-48	-46	-45	-45	-44	-42
1850	-41	-37	-32	-31	-26	-21	-17	-13	-11	-9
1860	-8	-7	-7	-8	-9	-11	-12	-12	-14	-18
1870	-19	-17	-13	-8	-2	4	14	29	38	46
1880	53	61	66	61	56	55	56	56	52	50
1890	46	42	37	30	20	6	-5	-16	-27	-38
1900	-48	-58	-68	-75	-78	-75	-70	-68	-65	-60
1910	-55	-48	-41	-34	-26	-20	-15	-15	-14	-17
1920	-23	-28	-31	-36	-42	-47	-49	-50	-50	-48
1930	-46	-44	-39	-37	-35	-34	-30	-28	-25	-24
1940	-23	-19	-15	-12	-9	-7	-5	-4	0	-1
1950	-4	-8	-12	-13	-17	-22	-25	-25	-22	-14
1960	-7	-1	4	9	13	16	17	18	18	17
1970	16	18	18	17	18	22	26	32	37	44
1980	50	55	59	60	59	57	51	42	35	28
1990	23	23	24	24	30	42	55	64	69	73
2000	77	78	76	68	57	51	49	45	43	41
2010	38	34	30	27	25	22	21	19	17	16
2020	18	20	20	22	23	23	22	19	15	11
2030	7	1	-5	-12	-18	-24	-29	-33	-39	-44
2040	-48	-50	-50	-49	-50	-50	-49	-46	-46	-48
2050	-50	-53	-56	-59	-60	-61	-61	-57	-49	-38
2060	-23	-8	3	12	19	24	28	30	28	24

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	21	17	14	13	11	9	8	10	10	8
2080	6	5	5	5	5	6	8	9	10	11
2090	11	11	9	6	4	3	2	0	0	2
2100	4	8	11	12	12	13	13	10	7	3
2110	0	0	-1	-2	1	7	11	13	16	21
2120	24	29	33	36	40	43	45	47	47	44
2130	39	33	25	14	3	-4	-10	-16	-21	-22
2140	-21	-19	-18	-16	-12	-10	-9	-6	-4	-6
2150	-7	-8	-9	-10	-8	-5	-2	0	2	3
2160	4	1	-1	-4	-7	-10	-12	-14	-16	-18
2170	-21	-24	-29	-34	-40	-46	-51	-54	-56	-56
2180	-51	-44	-37	-32	-25	-15	-4	5	12	19
2190	26	32	36	34	29	24	19	13	7	4
2200	1	-2	-5	-6	-9	-12	-15	-19	-23	-27
2210	-30	-32	-34	-34	-33	-36	-39	-40	-38	-35
2220	-34	-35	-36	-38	-39	-37	-35	-32	-28	-20
2230	-10	0	6	13	19	23	27	28	29	29
2240	25	26	27	30	31	32	35	36	37	37
2250	36	37	37	36	35	35	31	24	19	15
2260	10	9	9	10	11	13	16	20	22	24
2270	26	29	29	30	31	34	36	36	36	35
2280	31	27	24	22	21	16	15	14	10	1
2290	-4	-10	-17	-20	-22	-19	-15	-13	-8	-3
2300	3	8	13	18	24	33	39	43	45	45
2310	45	47	39	24	14	3	-7	-13	-19	-23
2320	-24	-23	-20	-19	-19	-17	-15	-10	-9	-9
2330	-9	-9	-8	-6	-3	0	0	0	1	1
2340	2	0	-4	-9	-14	-20	-25	-30	-34	-39
2350	-44	-49	-54	-57	-58	-60	-58	-54	-45	-37
2360	-30	-24	-15	-8	-2	2	7	13	17	20
2370	23	24	25	24	22	21	21	19	17	16
2380	15	15	15	16	15	14	14	14	13	11
2390	9	12	14	13	13	13	12	11	7	4
2400	4	7	11	11	7	3	-3	-10	-17	-23
2410	-27	-31	-35	-37	-39	-41	-43	-45	-45	-44
2420	-41	-37	-32	-26	-18	-9	-4	0	4	9
2430	10	12	12	11	8	6	4	3	3	4
2440	6	10	16	23	31	35	36	36	38	36
2450	31	24	16	8	3	-1	-6	-10	-15	-18
2460	-20	-22	-23	-24	-25	-25	-22	-17	-15	-12
2470	-7	-2	0	2	4	5	9	15	21	27
2480	32	38	44	49	54	59	62	63	64	65
2490	65	63	60	59	53	47	43	39	35	32
2500	29	25	21	18	15	12	10	9	7	5
2510	2	0	0	0	1	3	3	1	1	1
2520	0	0	0	0	-1	-2	-1	0	-1	-1
2530	0	0	1	0	-1	-3	-7	-11	-16	-23
2540	-30	-36	-42	-48	-53	-57	-60	-63	-63	-62
2550	-60	-57	-56	-55	-52	-52	-52	-54	-57	-58
2560	-57	-56	-53	-50	-47	-43	-38	-32	-26	-20
2570	-15	-8	-2	2	7	12	18	24	29	33
2580	35	38	40	40	40	39	37	34	33	32
2590	33	36	37	35	32	28	26	23	21	20

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	17	13	11	11	13	16	19	22	26	29
2610	27	27	28	30	30	31	32	32	32	31
2620	30	30	29	28	28	28	27	28	28	27
2630	30	30	28	27	26	26	24	25	27	33
2640	38	42	48	51	50	50	52	52	49	45
2650	45	41	34	25	19	11	4	-1	-9	-16
2660	-25	-31	-37	-39	-40	-39	-39	-39	-38	-37
2670	-33	-33	-35	-37	-39	-43	-45	-48	-52	-55
2680	-54	-50	-47	-44	-44	-39	-37	-35	-35	-37
2690	-41	-46	-51	-56	-58	-62	-67	-65	-61	-59
2700	-53	-49	-46	-44	-43	-39	-37	-35	-35	-35
2710	-33	-30	-30	-29	-25	-23	-21	-19	-14	-9
2720	-5	1	6	11	18	21	23	25	29	31
2730	33	37	40	40	44	51	58	63	66	66
2740	68	70	70	68	66	64	61	57	53	49
2750	47	47	48	49	49	49	52	54	55	59
2760	62	64	65	65	65	65	63	59	50	38
2770	28	22	15	6	0	-4	-6	-7	-9	-11
2780	-13	-14	-13	-11	-10	-11	-12	-12	-13	-12
2790	-11	-9	-9	-7	-7	-7	-7	-5	-3	-4
2800	-6	-10	-15	-19	-23	-29	-35	-39	-43	-48
2810	-53	-58	-61	-64	-65	-64	-63	-60	-55	-51
2820	-47	-40	-32	-25	-16	-7	0	8	17	24
2830	28	30	33	35	36	34	31	24	16	12
2840	8	4	2	1	0	-3	-7	-8	-8	-7
2850	-5	0	6	14	20	27	34	39	42	42
2860	42	42	41	39	39	37	33	30	25	20
2870	15	6	-1	-7	-16	-24	-31	-36	-39	-41
2880	-43	-45	-44	-39	-35	-31	-26	-21	-16	-12
2890	-9	-7	-4	-1	2	4	3	3	5	5
2900	3	0	-3	-6	-7	-9	-10	-10	-10	-10
2910	-8	-7	-6	-5	-2	0	1	4	6	6
2920	4	4	4	5	3	2	2	2	0	0
2930	0	4	6	10	15	19	20	21	23	25
2940	26	25	27	27	26	19	13	9	8	6
2950	2	0	0	0	1	2	5	9	13	16
2960	23	31	34	36	38	41	41	42	44	44
2970	41	38	37	37	38	38	40	42	45	48
2980	50	50	49	45	39	34	27	18	9	3
2990	-5	-12	-18	-23	-26	-28	-30	-29	-26	-24
3000	-20	-17	-13	-9	-5	-2	1	5	8	9
3010	9	9	9	8	7	4	3	1	-2	-3
3020	-1	-2	-3	-4	-4	-5	-7	-9	-12	-16
3030	-21	-25	-31	-36	-40	-42	-46	-48	-49	-49
3040	-46	-41	-36	-31	-25	-19	-14	-10	-7	-6
3050	-6	-7	-10	-12	-15	-17	-17	-17	-16	-14
3060	-9	-4	0	3	5	8	9	13	17	21
3070	24	27	32	35	37	38	39	38	38	38
3080	39	42	44	47	49	49	48	48	45	44
3090	41	39	38	35	34	33	30	29	27	25
3100	24	24	24	26	27	32	36	38	41	45
3110	47	48	50	50	49	49	46	44	40	37
3120	33	29	23	20	16	11	6	1	-3	-8

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3130	-11	-16	-21	-24	-28	-29	-30	-30	-30	-27
3140	-23	-21	-18	-14	-11	-8	-5	-3	-1	-2
3150	-2	-2	-2	-2	-2	-1	0	0	0	0
3160	0	0	-1	-3	-4	-8	-11	-13	-16	-18
3170	-19	-21	-23	-24	-26	-27	-29	-28	-26	-25
3180	-26	-25	-24	-22	-20	-16	-10	-3	0	3
3190	5	9	13	18	23	24	24	23	21	18
3200	14	11	6	2	-2	-8	-12	-14	-14	-16
3210	-17	-17	-15	-12	-8	-5	-1	1	4	6
3220	9	11	13	12	11	12	12	12	13	15
3230	18	23	27	29	31	33	37	38	39	39
3240	39	40	40	37	32	29	25	20	15	10
3250	8	8	8	7	7	7	8	8	9	10
3260	12	17	20	22	26	30	32	32	32	30
3270	26	19	13	8	5	1	-1	-1	-1	-1
3280	0	1	4	7	9	12	14	15	16	16
3290	15	15	15	15	15	15	13	12	12	11
3300	11	12	13	12	11	9	7	4	0	-2
3310	-3	-6	-8	-9	-12	-15	-16	-17	-18	-19
3320	-20	-25	-29	-32	-35	-36	-37	-38	-37	-35
3330	-34	-29	-24	-20	-16	-13	-11	-9	-10	-10
3340	-9	-10	-14	-17	-19	-23	-25	-27	-27	-25
3350	-30	-34	-36	-35	-36	-37	-38	-39	-38	-36
3360	-32	-25	-19	-11	-5	-1	3	5	6	7
3370	6	2	0	-4	-6	-6	0	7	15	25
3380	33	37	40	43	44	47	51	55	57	56
3390	57	59	58	57	58	58	60	63	66	68
3400	68	69	70	70	68	63	57	54	53	51
3410	52	54	57	51	49	47	43	42	39	38
3420	34	32	30	23	18	14	9	4	-1	-5
3430	-6	-7	-9	-10	-12	-12	-14	-14	-11	-7
3440	-4	-4	-5	-4	-2	-7	-15	-9	-7	-11
3450	-11	-15	-24	-29	-33	-36	-39	-44	-47	-48
3460	-45	-41	-41	-39	-37	-37	-37	-38	-40	-42
3470	-43	-45	-46	-47	-46	-45	-48	-52	-50	-44
3480	-40	-38	-33	-28	-25	-22	-19	-15	-12	-8
3490	-7	-7	-3	0	3	7	8	12	17	21
3500	25	27	30	35	38	36	35	34	36	39
3510	40	38	38	39	40	40	39	37	35	31
3520	26	19	12	6	2	-3	-11	-16	-18	-21
3530	-25	-27	-27	-24	-21	-16	-12	-7	0	5
3540	9	13	16	18	18	20	22	20	20	22
3550	23	25	26	22	20	20	19	17	14	11
3560	10	9	7	5	2	1	-1	-1	0	2
3570	2	2	3	2	2	3	6	8	8	8
3580	8	10	11	13	17	19	19	17	17	18
3590	19	17	15	15	15	15	15	15	15	16
3600	17	17	17	17	17	16	16	15	12	10
3610	11	12	11	10	10	9	9	7	7	8
3620	8	8	7	6	5	5	2	0	0	0
3630	-4	-6	-7	-7	-5	-5	-6	-8	-8	-9
3640	-11	-12	-12	-12	-14	-19	-23	-26	-28	-31
3650	-34	-34	-34	-34	-34	-33	-31	-28	-23	-19

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3660	-19	-23	-26	-27	-30	-34	-37	-38	-40	-43
3670	-45	-46	-46	-46	-45	-45	-45	-46	-46	-44
3680	-41	-37	-34	-34	-30	-26	-22	-18	-12	-4
3690	1	3	5	7	10	13	14	14	15	15
3700	15	15	18	21	21	20	21	21	20	17
3710	16	16	16	17	18	17	17	16	16	19
3720	22	25	29	34	38	43	44	49	54	54
3730	55	57	60	61	60	57	57	58	59	62
3740	64	66	67	67	67	67	66	65	67	70
3750	70	69	67	66	67	67	65	61	57	55
3760	52	47	43	42	40	38	35	33	28	21
3770	15	9	1	-3	-8	-14	-18	-19	-17	-21
3780	-24	-26	-27	-31	-36	-42	-49	-54	-58	-62
3790	-66	-68	-70	-72	-77	-81	-81	-82	-81	-81
3800	-79	-76	-72	-72	-69	-65	-64	-65	-65	-65
3810	-65	-65	-64	-64	-65	-65	-62	-62	-62	-61
3820	-61	-60	-60	-57	-55	-55	-54	-52	-52	-52
3830	-51	-50	-47	-45	-40	-35	-28	-21	-15	-10
3840	-3	2	8	10	15	19	22	27	28	31
3850	35	39	42	46	51	56	57	61	67	71
3860	72	76	78	81	81	81	81	78	75	74
3870	70	69	66	64	64	63	63	65	67	69
3880	71	74	75	76	77	79	81	81	77	74
3890	71	66	61	57	52	47	44	43	40	38
3900	36	32	26	24	21	18	11	6	2	-2
3910	-7	-9	-10	-11	-13	-19	-23	-25	-24	-24
3920	-24	-26	-25	-24	-24	-25	-27	-29	-31	-33
3930	-35	-37	-39	-43	-45	-44	-47	-50	-53	-54
3940	-56	-58	-60	-60	-61	-59	-58	-57	-56	-56
3950	-56	-54	-54	-53	-51	-49	-49	-50	-52	-53
3960	-54	-53	-52	-52	-51	-49	-46	-43	-38	-32
3970	-28	-24	-22	-17	-14	-11	-7	-3	0	3
3980	4	6	7	8	7	7	9	10	11	13
3990	14	14	13	13	13	13	15	15	15	19
4000	23	24	25	27	28	27	27	29	30	32
4010	33	34	35	39	44	47	49	50	50	50
4020	50	50	50	50	48	46	44	45	44	42
4030	41	42	42	42	42	40	38	34	32	33
4040	33	33	31	29	27	24	21	18	14	9
4050	5	1	-3	-6	-8	-10	-13	-14	-16	-18
4060	-19	-17	-15	-13	-12	-12	-11	-8	-8	-9
4070	-9	-11	-12	-13	-14	-15	-19	-21	-21	-20
4080	-20	-21	-21	-22	-22	-22	-23	-24	-24	-25
4090	-24	-20	-19	-19	-16	-13	-10	-8	-5	-2
4100	0	2	4	5	6	7	8	8	7	5
4110	2	1	0	-3	-2	1	3	1	0	0
4120	0	0	-1	-2	-2	-3	-4	-6	-9	-11
4130	-11	-11	-11	-9	-8	-6	-2	0	0	0
4140	0	0	-1	0	-1	-4	-7	-9	-9	-6
4150	-5	-5	-4	0	3	5	8	9	12	14
4160	13	10	7	6	7	6	1	-1	-3	-6
4170	-7	-13	-17	-18	-17	-17	-20	-20	-19	-17
4180	-17	-15	-12	-12	-14	-12	-8	-7	-7	-9

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4190	-7	-4	-4	-5	-4	-1	0	0	0	-1
4200	-2	0	2	2	4	7	8	8	9	12
4210	10	8	9	10	10	13	14	15	15	18
4220	19	20	20	19	14	12	9	8	5	3
4230	2	0	0	2	3	3	2	3	6	7
4240	7	8	8	9	10	9	10	15	18	21
4250	22	23	23	26	30	28	25	24	21	19
4260	18	15	13	14	11	6	3	4	2	-2
4270	-7	-8	-9	-11	-12	-12	-14	-17	-17	-15
4280	-18	-20	-19	-15	-12	-8	-3	0	5	6
4290	5	4	5	7	8	7	7	8	7	5
4300	4	5	7	6	5	5	5	6	6	5
4310	3	3	2	0	0	-5	-8	-10	-11	-14
4320	-18	-21	-23	-27	-29	-31	-33	-35	-35	-36
4330	-35	-35	-37	-37	-35	-33	-30	-26	-23	-22
4340	-22	-22	-22	-21	-22	-25	-26	-25	-22	-20
4350	-21	-24	-24	-23	-23	-23	-21	-20	-22	-23
4360	-22	-18	-15	-14	-14	-12	-9	-7	-6	-2
4370	0	0	0	-2	-5	-7	-7	-8	-10	-11
4380	-10	-8	-5	-3	-1	3	7	11	14	15
4390	18	20	24	27	30	33	36	39	42	45
4400	48	49	49	49	50	52	54	54	53	54
4410	56	58	59	58	58	58	57	56	55	54
4420	53	52	53	51	49	46	42	38	36	34
4430	31	27	24	21	17	13	9	6	2	-2
4440	-7	-11	-15	-18	-19	-21	-22	-24	-26	-26
4450	-26	-26	-26	-26	-27	-30	-34	-38	-40	-42
4460	-43	-44	-47	-50	-53	-54	-55	-56	-59	-61
4470	-61	-61	-61	-61	-60	-59	-58	-56	-54	-54
4480	-55	-53	-52	-51	-48	-46	-46	-44	-42	-40
4490	-39	-37	-35	-33	-31	-29	-28	-26	-25	-23
4500	-20	-19	-18	-16	-15	-13	-10	-9	-9	-9
4510	-8	-4	0	3	5	6	8	9	9	10
4520	10	10	11	17	20	21	23	24	25	28
4530	29	30	34	35	38	41	47	51	55	60
4540	67	72	80	85	87	82	73	67	63	58
4550	57	57	56	57	57	54	53	52	49	43
4560	39	36	33	28	27	24	23	22	20	18
4570	17	17	17	13	12	10	9	8	8	7
4580	5	4	3	2	2	2	2	-1	-4	-6
4590	-9	-11	-15	-19	-22	-27	-31	-36	-40	-44
4600	-46	-49	-51	-54	-56	-56	-59	-60	-60	-60
4610	-61	-65	-65	-61	-60	-58	-57	-56	-55	-51
4620	-50	-50	-49	-49	-49	-49	-50	-52	-51	-50
4630	-50	-50	-51	-51	-47	-43	-41	-39	-35	-29
4640	-26	-23	-22	-18	-13	-11	-7	-1	4	9
4650	12	16	19	21	23	24	24	26	26	25
4660	25	24	23	23	23	26	27	28	29	29
4670	31	32	31	30	30	30	29	30	31	32
4680	35	37	40	42	43	45	47	50	52	54
4690	54	55	55	55	53	51	50	47	45	43
4700	41	38	35	32	30	27	24	21	18	15
4710	10	8	6	4	2	0	-2	-3	-6	-8

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4720	-10	-12	-13	-13	-13	-10	-7	-7	-7	-8
4730	-10	-11	-12	-13	-15	-18	-20	-20	-23	-26
4740	-28	-30	-33	-35	-36	-36	-36	-36	-35	-34
4750	-32	-29	-28	-25	-23	-22	-21	-21	-22	-23
4760	-25	-26	-27	-27	-27	-27	-26	-27	-28	-26
4770	-22	-21	-21	-21	-21	-22	-23	-24	-24	-22
4780	-22	-24	-24	-22	-20	-19	-17	-14	-11	-9
4790	-7	-5	-2	0	0	2	4	5	6	4
4800	3	3	2	0	0	-1	-3	-6	-7	-7
4810	-9	-10	-11	-11	-11	-10	-8	-7	-8	-7
4820	-6	-6	-6	-5	-4	-3	-2	-1	0	0
4830	1	2	4	5	6	7	9	9	11	12
4840	13	14	15	17	18	20	21	22	21	20
4850	20	21	21	19	18	19	17	16	16	18
4860	19	17	16	15	13	13	13	13	14	16
4870	17	17	19	20	20	20	21	23	25	27
4880	29	29	30	29	27	26	26	26	24	23
4890	21	20	21	21	20	20	21	23	21	18
4900	17	16	13	10	7	5	2	1	-1	-3
4910	-7	-9	-10	-10	-14	-18	-20	-22	-23	-21
4920	-20	-20	-19	-16	-16	-17	-16	-16	-16	-16
4930	-18	-20	-21	-21	-20	-20	-20	-22	-23	-22
4940	-21	-21	-22	-24	-24	-25	-24	-24	-22	-22
4950	-21	-21	-21	-22	-25	-26	-26	-26	-27	-30
4960	-31	-31	-32	-34	-34	-36	-37	-37	-37	-36
4970	-34	-34	-31	-29	-26	-21	-19	-16	-15	-12
4980	-11	-9	-7	-6	-2	-1	-1	0	0	0
4990	0	0	0	0	0	2	4	5	7	5
5000	6	8	8	8	7	7	8	7	5	5
5010	5	5	5	5	6	7	8	8	12	14
5020	16	18	18	19	22	23	23	23	24	24
5030	23	25	27	26	25	24	23	25	27	29
5040	27	26	27	31	32	31	30	30	30	28
5050	27	27	27	28	26	25	25	25	24	23
5060	23	22	22	23	22	23	23	21	19	18
5070	17	17	16	12	7	4	3	1	-1	-3
5080	-4	-5	-5	-6	-8	-10	-12	-14	-16	-18
5090	-20	-21	-23	-25	-28	-29	-29	-28	-27	-27
5100	-28	-28	-27	-25	-24	-24	-24	-25	-25	-27
5110	-28	-31	-33	-36	-39	-39	-38	-38	-39	-39
5120	-39	-39	-39	-38	-37	-36	-35	-34	-33	-31
5130	-32	-31	-29	-27	-27	-26	-25	-23	-21	-21
5140	-21	-19	-17	-16	-14	-11	-9	-6	-2	-1
5150	-1	0	0	0	3	5	6	7	6	5
5160	7	9	11	12	15	17	18	19	20	22
5170	24	25	25	26	27	29	30	30	31	34
5180	37	37	37	38	40	40	40	39	38	38
5190	38	39	39	39	39	38	37	37	36	35
5200	33	31	29	26	23	21	19	17	15	13
5210	10	9	8	8	8	8	8	10	12	11
5220	11	12	12	11	10	9	8	8	7	5
5230	3	3	1	0	0	-1	-3	-6	-8	-9
5240	-11	-13	-14	-16	-17	-17	-18	-20	-22	-21

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5250	-21	-21	-21	-22	-22	-23	-25	-24	-24	-24
5260	-24	-24	-24	-25	-27	-30	-36	-40	-41	-42
5270	-42	-41	-40	-37	-33	-29	-29	-27	-23	-20
5280	-18	-14	-13	-12	-10	-8	-6	-6	-5	-6
5290	-7	-6	-5	-4	-4	-4	-3	-2	-1	0
5300	0	0	0	0	0	3	3	4	3	3
5310	3	3	4	6	8	8	12	14	14	15
5320	17	19	18	17	17	18	19	18	17	15
5330	17	18	19	18	17	17	17	17	17	17
5340	19	20	20	19	18	17	15	13	9	8
5350	5	5	4	2	4	5	5	4	2	2
5360	0	2	0	0	0	-1	-2	-6	-7	-9
5370	-11	-12	-14	-15	-15	-14	-15	-14	-13	-11
5380	-11	-12	-14	-15	-11	-10	-10	-7	-5	-3
5390	-1	-1	0	1	4	6	7	7	7	7
5400	8	9	12	12	11	12	11	10	11	11
5410	10	9	8	7	7	8	8	9	10	12
5420	13	11	9	8	8	8	7	5	3	1
5430	1	1	0	0	-3	-4	-5	-3	-1	0
5440	1	2	4	6	7	8	8	8	8	7
5450	7	8	8	7	5	5	6	6	5	5
5460	5	5	5	5	4	4	4	3	3	4
5470	3	2	2	2	1	0	0	-1	-5	-7
5480	-6	-5	-3	-2	-3	-4	-3	-2	0	0
5490	0	0	0	0	0	0	0	-1	-3	-4
5500	-5	-6	-7	-8	-10	-12	-14	-14	-13	-13
5510	-14	-15	-15	-16	-17	-17	-18	-19	-19	-16
5520	-15	-15	-16	-18	-19	-19	-19	-20	-20	-21
5530	-21	-20	-20	-20	-20	-21	-21	-21	-19	-18
5540	-16	-13	-12	-11	-9	-7	-4	0	2	5
5550	7	10	13	14	14	15	16	17	17	17
5560	17	17	17	18	18	18	19	21	22	24
5570	26	27	28	28	29	33	35	37	39	39
5580	39	40	42	43	42	41	40	40	39	38
5590	37	37	37	35	33	31	29	26	26	27
5600	26	25	23	22	21	20	18	15	13	11
5610	12	12	10	7	4	1	-1	-2	-3	-5
5620	-8	-10	-13	-14	-15	-18	-19	-21	-22	-23
5630	-24	-25	-26	-27	-28	-30	-31	-33	-34	-32
5640	-30	-29	-30	-30	-30	-30	-30	-30	-29	-29
5650	-29	-27	-27	-28	-29	-29	-29	-30	-30	-29
5660	-27	-24	-22	-21	-20	-20	-20	-19	-18	-17
5670	-17	-16	-14	-14	-15	-15	-14	-13	-11	-10
5680	-9	-8	-7	-7	-5	-3	0	1	1	3
5690	5	6	8	8	12	15	19	21	24	24
5700	25	27	28	29	30	30	30	32	33	33
5710	32	30	30	30	29	28	28	26	24	24
5720	25	25	27	27	27	28	29	30	33	33
5730	34	35	38	37	37	38	38	38	35	33
5740	30	29	28	25	23	20	19	17	14	10
5750	8	7	5	3	3	3	3	3	0	0
5760	2	0	2	3	3	3	3	3	4	5
5770	4	3	3	2	1	-1	-4	-6	-9	-10

TO BE CONTINUED

CONTINUED(S-2383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5780	-12	-14	-15	-16	-17	-16	-17	-16	-17	-16
5790	-16	-15	-16	-16	-15	-15	-13	-12	-12	-13
5800	-14	-15	-13	-13	-14	-16	-17	-17	-13	-12
5810	-13	-14	-13	-12	-10	-8	-7	-5	-5	-6
5820	-3	-2	-2	-1	0	1	2	3	3	3
5830	3	1	1	2	1	0	0	0	-1	-3
5840	-3	-2	-3	-4	-4	-4	-5	-4	-4	-3
5850	-2	-1	-1	-1	0	2	3	4	5	6
5860	7	9	12	15	16	17	18	20	21	22
5870	23	23	23	23	23	23	23	24	23	23
5880	25	25	26	28	28	27	26	24	22	21
5890	19	17	16	14	10	8	8	7	6	4

END

RECORD = S-2383 COMPONENT = EAST STATION = SAKAIMINATO-JI-S
DATE AND TIME = 1991- 8-28-10-29 TOTAL NUMBER OF DATA = 5900
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 2975, 5900, 5900,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	12	12	12	12	12	12	12	12	13	13
10	13	13	14	14	14	14	15	15	15	16
20	16	16	17	18	19	19	19	19	19	19
30	19	19	19	19	18	18	17	16	15	15
40	15	16	17	18	18	19	19	18	18	17
50	17	16	14	13	13	12	12	13	14	15
60	15	15	15	15	14	13	13	12	12	12
70	12	12	14	15	16	16	16	15	15	15
80	14	13	12	12	12	11	10	9	8	7
90	7	7	6	5	5	4	6	8	10	12
100	12	12	12	12	12	10	9	9	9	11
110	13	15	16	18	21	24	25	24	21	17
120	16	13	12	7	2	-2	-6	-9	-12	-15
130	-19	-21	-19	-13	-3	7	19	28	35	37
140	37	35	28	18	11	3	-1	-2	-2	3
150	15	27	37	43	46	47	42	30	11	-9
160	-29	-44	-52	-50	-40	-23	0	27	48	58
170	59	54	42	29	16	-1	-17	-31	-38	-40
180	-39	-40	-35	-7	9	15	21	25	28	29
190	32	33	33	31	27	19	7	-3	-13	-19
200	-22	-21	-17	-12	-3	9	21	29	32	30
210	22	15	10	8	10	16	22	25	26	25
220	22	14	1	-15	-34	-51	-63	-71	-76	-76
230	-69	-52	-28	-6	7	16	24	30	37	51
240	66	78	84	85	82	72	58	40	22	9
250	0	-5	-11	-16	-20	-25	-36	-47	-58	-65
260	-70	-72	-70	-60	-47	-33	-14	7	30	48
270	61	69	75	76	73	66	54	42	28	14
280	0	-16	-29	-40	-48	-51	-48	-34	-11	15
290	52	82	99	108	109	97	70	32	-1	-32
300	-60	-76	-82	-81	-70	-49	-26	-9	3	12
310	18	21	24	27	32	37	42	45	47	49
320	47	40	28	14	4	-5	-11	-15	-16	-19
330	-26	-36	-41	-48	-51	-50	-39	-19	0	19
340	39	52	60	65	66	63	51	38	29	24
350	23	25	31	37	44	50	52	52	50	35
360	8	-31	-69	-94	-114	-123	-126	-122	-111	-98
370	-88	-75	-56	-25	8	41	77	106	132	157
380	169	168	153	119	85	58	24	0	-12	-19
390	-27	-34	-42	-55	-76	-95	-111	-119	-121	-119
400	-106	-84	-56	-23	4	28	44	55	62	65
410	67	70	72	78	87	91	88	76	54	26
420	0	-24	-39	-46	-49	-50	-48	-49	-53	-60
430	-74	-90	-101	-109	-114	-112	-103	-88	-64	-27
440	11	41	65	72	62	33	0	-21	-28	-16
450	21	84	163	234	275	295	291	253	186	109
460	22	-61	-132	-193	-231	-244	-239	-218	-176	-109
470	-30	45	106	149	169	168	149	117	76	28

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	-21	-61	-83	-85	-57	10	109	221	319	393
490	443	464	465	438	384	312	227	129	12	-122
500	-257	-393	-533	-655	-738	-785	-762	-569	-534	-317
510	-63	202	349	374	320	215	67	-116	-301	-440
520	-504	-456	-309	-110	175	486	674	875	1054	1014
530	899	728	542	271	-1	-244	-455	-603	-651	-631
540	-546	-383	-216	-85	-23	-19	-55	-149	-245	-341
550	-422	-463	-464	-416	-323	-194	-42	102	221	311
560	370	384	364	321	258	191	135	94	67	44
570	19	-15	-60	-113	-166	-209	-241	-258	-263	-261
580	-251	-230	-197	-151	-92	-23	44	93	115	115
590	92	62	45	45	63	104	169	241	307	360
600	387	388	360	316	259	201	143	81	20	-35
610	-77	-98	-96	-72	-38	-4	15	18	5	-14
620	-33	-45	-45	-29	2	41	86	127	153	182
630	187	187	179	157	123	83	45	9	-28	-62
640	-92	-112	-121	-120	-106	-78	-33	20	74	119
650	144	153	142	104	46	-14	-63	-97	-111	-114
660	-105	-87	-68	-50	-25	4	30	45	46	34
670	12	-19	-53	-83	-103	-113	-113	-101	-75	-46
680	-21	-3	8	14	17	24	41	68	99	128
690	150	159	155	138	114	91	66	42	18	-4
700	-29	-52	-74	-100	-136	-176	-220	-263	-297	-308
710	-297	-255	-185	-114	-38	49	108	133	131	100
720	50	-13	-77	-121	-137	-133	-99	-33	66	157
730	225	279	309	315	295	246	185	115	35	-47
740	-105	-150	-183	-198	-201	-194	-172	-136	-85	-29
750	12	36	48	54	54	46	36	22	5	-18
760	-46	-67	-81	-86	-78	-50	-3	46	90	110
770	111	91	54	16	-8	-25	-37	-43	-49	-60
780	-72	-82	-88	-92	-93	-91	-87	-79	-66	-51
790	-30	0	34	60	74	80	77	68	55	46
800	41	41	53	74	92	103	112	113	106	86
810	57	26	-1	-29	-53	-64	-65	-56	-35	-7
820	23	53	73	79	75	61	43	26	12	4
830	1	5	16	34	63	108	152	150	133	116
840	103	88	65	39	9	-12	-30	-45	-55	-57
850	-56	-53	-47	-37	-18	2	18	31	39	44
860	42	34	22	7	-12	-32	-48	-59	-64	-58
870	-44	-28	-14	-4	4	13	22	31	39	46
880	50	50	41	21	-6	-41	-78	-111	-143	-168
890	-183	-187	-179	-158	-132	-95	-49	-9	18	38
900	48	49	40	21	-8	-44	-77	-100	-110	-111
910	-101	-82	-56	-24	11	41	59	67	70	66
920	54	34	8	-17	-43	-69	-92	-106	-112	-107
930	-91	-55	-14	16	40	58	65	62	51	37
940	25	16	12	14	19	24	27	29	28	22
950	15	9	5	5	8	12	17	25	33	43
960	58	80	106	138	177	207	222	229	229	223
970	211	195	174	150	123	97	71	43	18	-3
980	-23	-39	-47	-51	-48	-40	-31	-25	-23	-27
990	-38	-53	-70	-84	-94	-99	-95	-70	-21	39
1000	108	180	247	298	336	353	351	333	304	266

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	217	157	97	47	8	-22	-44	-63	-79	-101
1020	-135	-181	-234	-290	-343	-388	-428	-452	-453	-437
1030	-404	-353	-294	-235	-172	-106	-45	6	54	89
1040	113	127	133	132	125	115	106	96	87	81
1050	79	77	72	64	50	28	6	-17	-39	-55
1060	-71	-88	-108	-126	-143	-156	-162	-162	-153	-131
1070	-93	-47	-4	29	53	64	66	61	46	26
1080	-1	-31	-66	-95	-116	-125	-128	-122	-107	-80
1090	-43	-5	33	58	70	76	75	70	62	53
1100	49	49	54	68	85	94	103	106	100	85
1110	60	31	2	-26	-53	-76	-96	-109	-114	-110
1120	-99	-77	-44	0	45	83	105	124	138	146
1130	151	154	158	159	160	157	148	134	117	97
1140	78	60	41	21	2	-22	-47	-76	-104	-123
1150	-133	-139	-141	-132	-113	-81	-46	-7	20	33
1160	37	33	24	10	-8	-25	-35	-42	-44	-38
1170	-20	5	30	56	75	84	87	79	63	43
1180	22	3	-13	-26	-35	-40	-40	-35	-25	-12
1190	4	28	54	81	101	122	145	164	175	180
1200	180	173	155	124	91	52	11	-22	-46	-57
1210	-59	-47	-19	17	53	81	93	97	95	81
1220	51	19	-13	-48	-78	-101	-118	-127	-133	-134
1230	-129	-117	-104	-95	-88	-82	-79	-78	-82	-90
1240	-95	-100	-102	-101	-96	-85	-74	-66	-58	-49
1250	-42	-36	-29	-22	-16	-14	-12	-10	-10	-9
1260	-7	-3	4	15	24	32	38	42	44	45
1270	46	45	40	34	25	15	2	-13	-27	-39
1280	-54	-70	-85	-96	-106	-115	-118	-119	-116	-109
1290	-100	-93	-88	-84	-79	-75	-72	-67	-57	-45
1300	-34	-21	-9	0	5	9	9	8	6	4
1310	1	1	5	17	33	49	64	71	73	72
1320	64	51	39	32	28	26	27	32	37	41
1330	42	42	41	39	39	40	41	44	48	57
1340	67	77	84	86	81	71	56	39	22	12
1350	7	4	8	18	32	48	59	65	68	67
1360	63	58	50	40	27	10	-6	-21	-33	-45
1370	-54	-66	-79	-88	-97	-106	-113	-117	-117	-112
1380	-104	-92	-80	-66	-49	-31	-15	-4	4	12
1390	20	28	37	47	58	70	79	85	89	89
1400	83	72	56	36	14	-10	-37	-65	-89	-108
1410	-118	-122	-117	-99	-66	-27	7	36	61	78
1420	87	93	96	96	96	96	96	96	97	99
1430	103	110	118	125	126	123	112	97	79	57
1440	37	22	14	8	6	7	7	6	3	0
1450	0	-4	-9	-15	-21	-26	-31	-36	-42	-46
1460	-50	-52	-55	-55	-53	-47	-36	-21	-10	0
1470	4	7	6	0	-10	-24	-35	-41	-43	-38
1480	-30	-19	-9	0	7	11	11	9	-2	-18
1490	-38	-58	-74	-91	-102	-111	-118	-121	-123	-122
1500	-118	-110	-101	-94	-85	-77	-68	-63	-60	-59
1510	-60	-64	-69	-72	-74	-74	-72	-64	-49	-28
1520	0	23	40	51	56	55	50	41	31	23
1530	15	9	4	1	0	0	0	0	0	2

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	8	14	26	38	47	58	67	74	82	89
1550	93	95	99	98	90	79	69	59	48	40
1560	36	34	35	39	46	54	63	72	78	84
1570	87	89	86	79	72	68	63	56	48	41
1580	35	30	24	17	12	10	9	7	7	7
1590	7	6	5	5	4	7	12	20	32	48
1600	65	77	87	95	99	101	97	88	74	53
1610	27	0	-32	-62	-89	-110	-124	-130	-133	-134
1620	-133	-133	-134	-136	-142	-150	-155	-158	-159	-158
1630	-154	-146	-138	-129	-119	-109	-99	-90	-82	-75
1640	-70	-66	-59	-52	-47	-39	-34	-29	-26	-26
1650	-28	-30	-29	-25	-21	-18	-13	-7	-1	2
1660	2	0	-2	-4	-3	-4	-2	0	4	10
1670	20	32	41	50	57	61	62	62	61	58
1680	55	52	51	52	55	60	67	71	71	69
1690	66	60	52	41	29	20	12	7	4	5
1700	7	10	12	15	20	25	31	37	41	41
1710	41	40	37	36	36	34	32	28	24	19
1720	16	14	10	5	0	-3	-5	-8	-12	-19
1730	-29	-40	-51	-60	-68	-73	-75	-73	-66	-55
1740	-47	-40	-34	-29	-26	-22	-17	-15	-17	-18
1750	-19	-22	-28	-33	-36	-39	-43	-45	-44	-42
1760	-39	-36	-34	-34	-35	-38	-44	-51	-59	-65
1770	-69	-71	-72	-71	-69	-67	-67	-67	-70	-75
1780	-79	-80	-79	-76	-67	-54	-36	-16	1	15
1790	25	31	34	36	37	37	37	37	36	39
1800	45	55	65	76	87	96	100	101	101	101
1810	98	95	91	88	86	83	81	79	75	70
1820	63	53	44	38	34	34	34	36	38	41
1830	41	42	45	47	51	54	58	62	64	65
1840	64	62	59	56	53	50	50	49	45	44
1850	44	42	40	39	38	35	33	30	27	22
1860	15	5	-4	-13	-20	-26	-32	-36	-40	-44
1870	-45	-46	-49	-49	-47	-44	-39	-32	-19	-6
1880	3	11	15	16	17	16	15	11	4	-4
1890	-14	-25	-40	-56	-71	-81	-90	-95	-98	-96
1900	-91	-86	-81	-78	-78	-78	-76	-74	-71	-66
1910	-61	-55	-51	-46	-39	-30	-19	-7	0	6
1920	13	16	15	12	7	0	-6	-11	-16	-22
1930	-28	-30	-33	-34	-34	-33	-31	-29	-29	-29
1940	-28	-26	-24	-20	-16	-15	-11	-6	-1	2
1950	7	10	12	12	12	12	11	8	3	-1
1960	-6	-13	-20	-25	-28	-30	-28	-23	-15	-5
1970	4	14	25	32	39	46	51	54	53	50
1980	47	42	34	24	16	11	3	-2	-9	-15
1990	-20	-25	-31	-33	-35	-39	-42	-43	-43	-43
2000	-44	-42	-41	-38	-36	-31	-26	-21	-17	-16
2010	-17	-19	-23	-29	-32	-34	-34	-31	-25	-16
2020	-6	2	11	20	27	32	36	37	38	39
2030	39	39	38	37	35	33	31	29	25	22
2040	19	18	22	26	31	37	45	52	59	64
2050	68	70	71	70	68	66	62	58	55	51
2060	49	48	47	46	46	47	50	53	53	51

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	48	45	40	35	30	26	24	25	29	34
2080	40	50	59	68	76	82	84	82	80	76
2090	71	63	54	46	37	32	28	24	18	12
2100	5	-3	-13	-23	-32	-41	-48	-54	-56	-58
2110	-58	-56	-55	-53	-53	-57	-61	-66	-71	-78
2120	-82	-85	-88	-89	-90	-90	-91	-94	-98	-98
2130	-101	-104	-106	-107	-106	-104	-101	-99	-97	-96
2140	-94	-93	-92	-88	-80	-71	-62	-54	-47	-41
2150	-37	-36	-34	-30	-26	-20	-15	-12	-9	-8
2160	-8	-7	-5	-1	0	2	3	4	4	1
2170	-1	-3	-6	-8	-10	-11	-12	-13	-13	-13
2180	-12	-11	-8	-2	4	12	21	31	39	45
2190	50	51	50	48	47	47	48	52	54	56
2200	59	62	62	63	65	66	66	69	71	73
2210	76	76	76	76	75	72	66	59	50	44
2220	37	32	27	25	25	26	29	32	35	37
2230	39	39	38	35	32	27	22	17	14	12
2240	10	10	9	8	6	5	4	5	5	5
2250	5	5	6	7	9	11	15	15	14	15
2260	13	11	10	6	2	0	0	-1	-4	-5
2270	-6	-8	-9	-9	-10	-15	-23	-29	-36	-43
2280	-46	-51	-55	-58	-58	-55	-52	-46	-40	-34
2290	-33	-31	-29	-28	-28	-29	-30	-30	-32	-33
2300	-34	-31	-25	-24	-19	-12	-6	-1	3	8
2310	10	12	12	10	7	5	3	0	-1	0
2320	0	0	0	-2	-4	-6	-8	-9	-10	-10
2330	-10	-9	-6	0	1	3	5	6	5	2
2340	-1	-6	-11	-16	-21	-25	-25	-24	-22	-17
2350	-14	-12	-15	-19	-27	-36	-45	-51	-58	-64
2360	-68	-72	-70	-63	-53	-42	-34	-29	-22	-16
2370	-14	-12	-11	-11	-13	-16	-18	-21	-22	-23
2380	-24	-25	-22	-16	-10	-4	2	8	14	20
2390	26	30	38	47	54	59	63	66	68	68
2400	67	65	63	62	62	63	64	63	62	61
2410	60	60	58	57	54	51	46	42	37	34
2420	32	29	27	26	26	25	25	23	22	19
2430	17	16	15	14	16	18	21	25	28	30
2440	29	26	24	20	16	12	8	4	0	-1
2450	-4	-7	-8	-11	-15	-18	-20	-22	-23	-23
2460	-22	-21	-20	-21	-22	-25	-29	-33	-37	-40
2470	-43	-46	-48	-48	-49	-52	-53	-54	-53	-51
2480	-50	-49	-46	-42	-40	-38	-35	-33	-32	-32
2490	-32	-31	-28	-24	-20	-14	-7	1	8	13
2500	16	18	19	19	17	14	12	11	11	12
2510	13	16	20	24	26	29	31	31	31	31
2520	31	32	32	32	32	30	28	25	25	26
2530	29	30	31	30	28	26	21	15	10	6
2540	3	0	0	-2	-4	-6	-7	-8	-7	-7
2550	-7	-9	-12	-15	-17	-20	-22	-24	-23	-22
2560	-21	-16	-10	-4	-1	0	0	0	0	-2
2570	-3	-4	-4	-2	-1	0	1	4	6	7
2580	7	8	9	9	8	7	1	-3	-8	-12
2590	-15	-15	-14	-16	-17	-16	-16	-18	-19	-19

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-17	-13	-9	-6	-1	3	7	10	11	11
2610	10	10	10	12	16	23	28	30	31	32
2620	30	27	22	17	13	9	5	3	0	-1
2630	-4	-5	-6	-5	-5	-4	-2	0	1	4
2640	3	0	0	0	0	0	0	-1	-5	-9
2650	-14	-19	-23	-25	-28	-29	-30	-29	-29	-31
2660	-33	-34	-34	-32	-30	-30	-27	-23	-19	-15
2670	-14	-13	-13	-12	-10	-6	0	8	15	28
2680	36	44	51	56	57	57	56	55	52	50
2690	47	46	44	41	40	41	43	46	47	46
2700	43	38	34	28	17	10	5	0	-3	-4
2710	-1	0	0	3	4	5	3	4	6	6
2720	7	7	6	5	2	0	-2	-2	-2	-3
2730	-7	-8	-9	-12	-13	-12	-13	-13	-14	-13
2740	-13	-14	-17	-20	-22	-24	-25	-24	-22	-20
2750	-19	-18	-16	-16	-17	-18	-16	-13	-11	-8
2760	-6	-2	1	4	8	10	11	11	11	12
2770	12	13	14	15	15	15	17	21	24	27
2780	27	27	27	24	19	15	11	4	0	-3
2790	-6	-8	-9	-8	-5	-2	0	0	1	2
2800	2	2	2	1	0	-2	-4	-4	-4	-8
2810	-13	-18	-23	-29	-35	-39	-42	-42	-40	-34
2820	-27	-19	-12	-6	-3	0	5	8	9	9
2830	9	9	9	8	7	6	6	6	6	6
2840	6	6	7	7	8	9	10	9	8	6
2850	1	-5	-12	-18	-23	-30	-36	-41	-43	-45
2860	-45	-45	-42	-38	-33	-27	-21	-15	-11	-10
2870	-10	-10	-12	-13	-15	-17	-16	-14	-10	-6
2880	-1	5	10	18	26	31	35	38	41	42
2890	42	41	39	37	36	36	38	40	43	45
2900	48	49	48	47	45	44	43	42	42	42
2910	40	41	39	37	35	35	35	35	34	33
2920	31	27	20	14	8	0	-7	-14	-20	-23
2930	-24	-23	-22	-22	-22	-23	-25	-28	-32	-35
2940	-42	-48	-53	-59	-61	-61	-55	-43	-29	-15
2950	0	13	23	29	31	33	33	32	32	30
2960	29	29	30	31	31	30	28	27	28	29
2970	30	31	31	30	28	37	38	36	35	35
2980	35	38	44	50	55	59	63	65	62	60
2990	58	54	48	42	36	28	20	9	0	-9
3000	-19	-27	-32	-35	-35	-33	-29	-22	-17	-9
3010	-1	2	6	7	7	7	5	3	3	6
3020	7	7	6	6	6	6	6	6	6	4
3030	1	0	0	1	0	0	0	0	-4	-8
3040	-13	-18	-24	-29	-33	-33	-29	-25	-22	-17
3050	-13	-14	-14	-15	-18	-22	-24	-22	-19	-15
3060	-9	-2	2	7	11	16	19	21	25	27
3070	30	34	35	36	36	34	32	31	26	22
3080	19	17	17	17	19	19	20	19	19	20
3090	17	19	21	23	25	28	30	31	30	28
3100	27	26	25	25	25	25	25	26	28	33
3110	37	40	44	48	51	52	51	49	46	45
3120	44	44	43	42	41	42	42	41	39	37

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3130	36	34	32	28	23	18	12	6	2	-2
3140	-7	-10	-13	-16	-18	-17	-17	-15	-10	-4
3150	1	6	10	13	16	20	24	27	30	33
3160	34	35	36	34	31	29	27	23	23	24
3170	23	20	19	18	16	12	9	4	0	-6
3180	-12	-15	-17	-16	-15	-14	-14	-12	-10	-10
3190	-11	-13	-14	-15	-15	-15	-14	-12	-10	-7
3200	-4	0	3	8	13	17	19	20	23	27
3210	32	37	41	44	48	51	54	55	55	55
3220	52	49	48	48	50	52	53	57	60	62
3230	65	66	66	65	62	60	56	51	46	42
3240	39	35	35	36	39	41	44	46	47	46
3250	45	40	34	28	23	18	13	8	5	2
3260	0	-4	-6	-7	-9	-12	-16	-19	-23	-30
3270	-36	-40	-42	-42	-45	-47	-47	-47	-46	-43
3280	-40	-39	-37	-32	-29	-26	-24	-22	-19	-17
3290	-17	-16	-16	-17	-17	-17	-17	-15	-13	-11
3300	-8	-8	-7	-5	-4	-5	-5	-5	-6	-7
3310	-7	-7	-7	-8	-10	-11	-12	-12	-12	-13
3320	-14	-14	-12	-11	-10	-7	-5	-2	0	5
3330	11	16	21	25	30	37	42	45	46	47
3340	46	47	49	54	58	61	67	73	79	83
3350	87	87	86	83	80	78	74	72	71	71
3360	71	72	72	72	68	64	62	58	56	56
3370	55	53	51	50	49	49	48	47	46	47
3380	47	48	49	50	48	45	44	44	44	40
3390	35	28	23	18	14	11	10	10	9	9
3400	6	3	1	-1	-8	-14	-19	-25	-30	-34
3410	-35	-35	-35	-35	-34	-34	-32	-30	-30	-33
3420	-33	-33	-32	-35	-38	-39	-40	-40	-38	-37
3430	-34	-33	-29	-27	-27	-27	-27	-27	-27	-27
3440	-29	-32	-32	-27	-25	-25	-24	-23	-22	-22
3450	-24	-25	-25	-27	-26	-23	-18	-12	-4	4
3460	14	21	27	33	39	44	46	47	49	50
3470	49	50	50	50	54	55	56	59	60	58
3480	56	59	61	63	65	66	66	69	69	67
3490	64	62	60	58	57	57	54	51	51	52
3500	51	51	50	48	47	47	45	44	41	39
3510	37	33	30	29	26	23	22	21	21	19
3520	17	13	9	7	4	2	0	-2	-3	-5
3530	-7	-11	-14	-16	-18	-20	-24	-26	-27	-30
3540	-34	-34	-34	-36	-38	-38	-38	-38	-38	-40
3550	-41	-38	-35	-32	-28	-26	-23	-18	-14	-11
3560	-8	-4	-1	0	0	-1	-3	-5	-5	-7
3570	-11	-11	-8	-7	-7	-7	-7	-8	-7	-7
3580	-7	-7	-7	-6	-4	-1	0	0	4	10
3590	16	21	24	25	26	30	31	30	28	27
3600	27	28	29	29	29	29	29	29	28	26
3610	24	21	17	14	11	7	6	5	7	10
3620	14	17	18	20	22	24	24	23	21	20
3630	19	17	17	15	15	15	17	20	23	25
3640	25	26	25	24	25	27	27	25	25	24
3650	23	21	18	15	10	5	2	-1	-6	-10

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3660	-15	-17	-16	-15	-13	-11	-8	-7	-7	-7
3670	-6	-6	-10	-13	-16	-21	-26	-29	-29	-29
3680	-29	-29	-28	-26	-25	-24	-23	-23	-22	-21
3690	-21	-22	-24	-23	-24	-24	-22	-19	-15	-9
3700	-1	6	14	20	25	27	31	35	37	36
3710	36	38	39	38	37	36	38	40	40	38
3720	36	35	34	33	32	32	32	33	35	38
3730	41	43	46	47	46	46	44	43	40	38
3740	35	34	30	25	21	15	9	3	-2	-8
3750	-11	-14	-16	-17	-17	-15	-13	-14	-13	-11
3760	-11	-12	-14	-14	-15	-18	-21	-25	-28	-29
3770	-30	-29	-28	-26	-25	-23	-17	-14	-12	-12
3780	-13	-12	-13	-15	-18	-21	-24	-25	-27	-28
3790	-27	-25	-22	-18	-16	-13	-12	-8	-7	-5
3800	-4	-4	-5	-8	-11	-9	-8	-9	-8	-7
3810	-8	-10	-8	-8	-12	-12	-4	1	5	7
3820	10	12	11	14	16	17	19	22	25	27
3830	29	30	32	35	36	36	36	35	35	35
3840	35	37	40	41	45	48	50	51	51	49
3850	47	46	43	42	42	44	45	45	46	46
3860	43	42	41	38	36	33	31	27	25	22
3870	22	20	17	15	12	8	6	6	3	2
3880	1	1	0	-5	-7	-10	-12	-17	-20	-22
3890	-24	-26	-27	-28	-29	-28	-28	-28	-28	-28
3900	-28	-28	-29	-31	-33	-33	-32	-30	-28	-27
3910	-29	-29	-26	-26	-26	-25	-25	-26	-26	-25
3920	-25	-25	-24	-23	-21	-19	-18	-19	-19	-19
3930	-18	-18	-19	-20	-19	-18	-17	-15	-12	-8
3940	-3	0	2	4	6	10	12	13	14	14
3950	17	18	19	21	21	21	20	21	21	20
3960	18	17	17	18	19	19	18	16	14	13
3970	12	13	14	13	13	16	20	23	26	28
3980	31	33	34	35	36	36	34	32	29	28
3990	26	25	24	21	19	17	14	12	12	13
4000	14	16	17	17	18	19	19	18	16	15
4010	17	18	17	17	16	15	14	10	9	9
4020	7	4	2	0	-2	-6	-11	-14	-15	-17
4030	-21	-25	-29	-33	-35	-36	-37	-37	-37	-35
4040	-32	-29	-26	-23	-20	-18	-15	-13	-10	-8
4050	-7	-4	-2	-2	-1	-1	-2	-2	-2	-3
4060	-4	-5	-5	-5	-3	0	3	7	11	13
4070	14	13	11	8	6	3	2	1	1	1
4080	1	1	1	1	1	1	1	1	1	1
4090	1	2	2	3	3	1	3	4	4	4
4100	4	5	6	7	9	13	14	14	14	14
4110	13	10	7	4	3	1	0	0	-1	-2
4120	-1	1	2	2	2	3	3	1	1	0
4130	0	0	-2	-5	-5	-4	-4	-5	-6	-7
4140	-7	-7	-7	-9	-10	-10	-9	-7	-6	-3
4150	0	1	1	2	2	3	5	6	6	5
4160	6	7	8	7	4	1	3	4	0	-5
4170	-9	-13	-15	-17	-19	-21	-22	-22	-19	-18
4180	-16	-12	-8	-3	1	3	5	8	10	12

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4190	12	11	12	10	9	9	7	7	7	6
4200	7	9	10	11	10	10	9	6	4	1
4210	2	1	1	1	1	1	1	0	-3	-5
4220	-7	-7	-9	-10	-9	-8	-4	0	1	3
4230	6	9	9	9	7	6	5	3	0	-3
4240	-8	-12	-13	-12	-13	-12	-10	-9	-7	-5
4250	-4	-3	-1	0	0	1	3	3	2	2
4260	2	3	4	5	7	8	9	10	13	14
4270	14	14	14	13	12	11	11	12	12	11
4280	13	14	14	15	13	11	12	10	9	9
4290	7	5	4	3	1	0	0	0	0	-1
4300	-5	-8	-14	-18	-22	-26	-30	-32	-32	-32
4310	-32	-31	-28	-26	-25	-24	-23	-24	-23	-23
4320	-23	-22	-21	-18	-15	-14	-14	-13	-14	-12
4330	-10	-9	-10	-12	-11	-8	-6	-5	-6	-6
4340	-4	-4	-3	-2	-2	-3	-2	0	-2	-4
4350	-4	-2	-1	0	0	0	1	2	3	5
4360	8	10	10	10	10	9	9	9	8	7
4370	7	7	7	5	3	2	1	2	3	7
4380	10	12	15	19	20	22	23	24	24	24
4390	23	22	23	24	24	25	27	30	33	35
4400	35	34	33	30	27	25	23	22	21	19
4410	19	19	20	19	18	17	15	13	10	8
4420	7	6	5	3	2	0	-4	-10	-15	-19
4430	-22	-24	-25	-26	-27	-27	-27	-27	-26	-25
4440	-25	-25	-25	-25	-25	-23	-19	-15	-14	-14
4450	-13	-13	-12	-11	-12	-12	-11	-9	-8	-7
4460	-6	-5	-3	-3	-1	0	-1	-4	-8	-11
4470	-14	-18	-21	-23	-25	-27	-31	-32	-33	-33
4480	-34	-34	-31	-28	-27	-25	-21	-19	-18	-17
4490	-17	-17	-19	-21	-22	-22	-20	-17	-16	-14
4500	-14	-13	-11	-8	-8	-8	-7	-7	-9	-10
4510	-11	-13	-13	-13	-11	-8	-6	-4	-1	1
4520	4	9	13	18	22	23	23	23	24	25
4530	24	23	22	22	22	23	24	24	24	24
4540	25	26	26	27	30	30	30	31	32	33
4550	34	34	34	34	30	29	27	23	20	22
4560	21	21	19	15	13	12	14	14	14	12
4570	10	11	9	4	1	0	-3	-7	-8	-10
4580	-13	-14	-15	-15	-15	-15	-17	-19	-22	-23
4590	-24	-25	-28	-29	-28	-28	-29	-28	-27	-23
4600	-22	-18	-17	-15	-14	-12	-12	-12	-12	-14
4610	-14	-14	-13	-12	-13	-13	-12	-12	-14	-14
4620	-14	-12	-12	-14	-13	-11	-9	-7	-7	-7
4630	-7	-7	-7	-5	-4	-6	-6	-5	-4	-4
4640	-6	-10	-13	-14	-13	-12	-9	-5	0	2
4650	6	10	14	17	19	20	21	21	21	20
4660	20	19	19	21	21	23	24	25	26	26
4670	26	25	23	21	20	20	18	17	16	13
4680	12	10	8	7	4	3	3	2	2	1
4690	1	1	0	0	-1	-4	-7	-8	-10	-11
4700	-13	-15	-17	-18	-20	-22	-25	-25	-25	-25
4710	-25	-25	-24	-23	-22	-21	-20	-20	-21	-21

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4720	-20	-19	-17	-15	-14	-13	-11	-9	-7	-4
4730	-1	0	1	1	1	2	5	8	11	13
4740	13	12	11	10	10	9	9	9	8	7
4750	8	9	11	12	12	11	9	8	7	6
4760	5	4	1	0	0	0	0	1	0	-1
4770	-2	-2	-2	-4	-5	-5	-5	-5	-4	-5
4780	-7	-10	-12	-13	-13	-14	-14	-14	-13	-11
4790	-11	-11	-10	-10	-9	-10	-10	-10	-8	-7
4800	-5	-5	-5	-5	-3	-2	-1	0	0	0
4810	0	0	0	0	0	0	-2	-5	-8	-11
4820	-14	-16	-17	-19	-20	-21	-22	-22	-21	-20
4830	-18	-16	-15	-15	-15	-14	-14	-13	-10	-8
4840	-8	-7	-4	0	2	4	6	7	7	7
4850	7	7	6	6	6	6	5	5	4	4
4860	5	7	8	9	10	11	13	15	14	14
4870	14	12	10	9	8	9	12	11	12	13
4880	15	17	18	21	21	20	20	22	20	18
4890	16	17	18	17	14	13	10	7	4	2
4900	1	0	0	0	0	0	1	1	1	1
4910	1	1	0	-1	-2	-4	-6	-9	-12	-13
4920	-15	-16	-17	-16	-16	-20	-20	-22	-21	-22
4930	-23	-24	-23	-24	-25	-24	-22	-24	-25	-24
4940	-24	-24	-25	-25	-25	-25	-25	-25	-24	-23
4950	-21	-19	-18	-18	-18	-17	-19	-19	-18	-20
4960	-26	-29	-29	-28	-27	-25	-24	-22	-18	-14
4970	-12	-9	-7	-4	-3	-3	-3	-5	-7	-8
4980	-8	-8	-9	-9	-8	-7	-3	-2	0	1
4990	3	6	10	10	10	11	12	14	14	14
5000	14	12	12	14	20	24	24	24	25	26
5010	26	26	25	24	24	24	23	22	22	24
5020	25	25	25	25	26	26	25	24	23	22
5030	21	19	16	13	12	11	10	8	7	4
5040	2	2	1	0	-2	-3	-5	-8	-9	-9
5050	-9	-9	-9	-8	-8	-7	-7	-8	-8	-8
5060	-11	-13	-13	-16	-18	-21	-23	-24	-23	-21
5070	-19	-17	-18	-18	-19	-18	-17	-17	-17	-17
5080	-19	-19	-21	-22	-25	-27	-29	-30	-32	-33
5090	-33	-33	-32	-30	-29	-28	-26	-25	-25	-23
5100	-22	-21	-20	-17	-15	-13	-10	-7	-7	-7
5110	-7	-6	-5	-4	-3	-3	-2	0	0	0
5120	1	2	2	2	2	2	2	1	1	1
5130	1	1	2	3	2	2	2	3	4	5
5140	7	8	10	12	14	15	17	18	19	22
5150	25	26	24	24	24	22	21	20	17	15
5160	12	9	8	6	3	0	0	-2	-4	-6
5170	-7	-8	-9	-10	-13	-14	-14	-14	-14	-13
5180	-12	-11	-13	-14	-14	-13	-13	-13	-13	-12
5190	-12	-12	-12	-12	-13	-16	-17	-17	-17	-17
5200	-17	-17	-17	-17	-18	-18	-17	-14	-11	-9
5210	-5	-1	1	2	4	5	6	6	6	5
5220	4	4	6	7	9	10	9	9	9	9
5230	9	12	12	12	12	11	12	12	11	11
5240	12	13	14	14	16	17	16	13	13	14

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5250	15	15	14	14	14	14	15	14	14	14
5260	14	13	10	8	6	5	3	1	0	0
5270	-1	-3	-5	-6	-8	-12	-13	-12	-12	-14
5280	-14	-15	-17	-19	-19	-20	-23	-25	-25	-25
5290	-26	-26	-25	-25	-25	-25	-25	-24	-23	-23
5300	-22	-22	-22	-23	-23	-23	-23	-24	-25	-24
5310	-22	-23	-23	-23	-24	-25	-25	-24	-23	-22
5320	-21	-19	-18	-16	-14	-14	-12	-12	-10	-7
5330	-2	0	1	2	4	6	7	9	9	9
5340	10	12	14	15	16	15	15	15	15	14
5350	14	14	14	14	15	16	15	15	16	16
5360	16	17	20	21	22	24	24	25	27	31
5370	32	31	31	32	34	35	35	33	30	27
5380	27	26	25	23	21	20	17	19	20	18
5390	17	14	9	6	5	2	1	-2	-6	-7
5400	-9	-11	-12	-14	-14	-14	-15	-15	-15	-16
5410	-17	-16	-16	-17	-19	-19	-21	-21	-21	-23
5420	-24	-25	-25	-25	-24	-23	-23	-23	-23	-24
5430	-25	-25	-25	-26	-27	-27	-28	-29	-29	-29
5440	-28	-28	-29	-28	-28	-31	-31	-30	-30	-29
5450	-27	-25	-25	-23	-20	-17	-14	-11	-9	-6
5460	-3	-1	0	1	2	3	4	6	6	5
5470	6	8	9	8	8	11	13	14	14	14
5480	14	14	14	14	14	17	18	19	19	19
5490	19	19	19	20	20	21	22	23	24	24
5500	24	25	24	24	23	22	22	21	21	21
5510	20	18	17	16	16	14	14	14	13	11
5520	9	8	7	7	7	7	5	3	2	1
5530	0	0	0	0	0	0	0	-1	-2	-1
5540	0	0	1	1	1	0	0	0	-1	-2
5550	-4	-6	-7	-7	-8	-8	-7	-7	-7	-7
5560	-7	-7	-7	-7	-7	-7	-9	-9	-10	-11
5570	-12	-13	-14	-16	-17	-16	-16	-17	-16	-15
5580	-15	-13	-10	-8	-7	-6	-4	-2	0	1
5590	3	4	4	5	5	4	4	4	5	3
5600	2	2	1	1	1	2	3	4	4	5
5610	5	5	5	3	2	2	2	1	2	2
5620	2	2	4	5	5	5	3	2	2	1
5630	1	1	1	1	1	1	1	1	1	0
5640	0	0	0	0	0	0	1	1	1	1
5650	2	3	3	3	5	3	1	1	1	2
5660	2	2	1	3	3	2	2	2	4	6
5670	8	10	10	9	8	6	7	7	7	6
5680	5	4	6	7	6	6	6	7	7	7
5690	7	7	8	9	10	11	11	11	12	12
5700	12	10	11	11	10	10	9	9	9	7
5710	6	4	1	0	0	1	1	1	1	1
5720	1	1	2	2	2	4	2	2	1	-2
5730	-4	-3	-2	-2	-2	0	0	-2	-3	-3
5740	-3	-4	-4	-3	0	0	0	-2	-3	-4
5750	-5	-8	-9	-9	-9	-9	-9	-10	-12	-12
5760	-14	-14	-13	-13	-12	-10	-11	-9	-7	-7
5770	-8	-6	-4	-2	-2	-2	-1	0	-1	-4

TO BE CONTINUED

CONTINUED(S-2383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5780	-4	-4	-4	-2	-3	-3	-3	-1	0	0
5790	-1	-2	-1	0	0	0	0	0	1	2
5800	3	3	1	3	5	6	8	11	11	12
5810	11	13	18	22	20	19	20	24	25	24
5820	24	23	22	19	21	22	23	24	25	25
5830	24	25	27	27	26	26	25	24	24	23
5840	22	21	21	21	23	24	23	22	21	21
5850	21	22	21	20	18	16	14	11	6	2
5860	1	1	0	-2	-2	-2	-2	-2	-1	0
5870	-2	-5	-7	-7	-6	-6	-9	-11	-12	-11
5880	-10	-11	-12	-13	-14	-18	-20	-22	-23	-26
5890	-28	-29	-31	-32	-31	-31	-32	-31	-29	-27

END

RECORD = S-2383 COMPONENT = DOWN STATION = SAKAIMINATO-JI-S
DATE AND TIME = 1991- 8-28-10-29 TOTAL NUMBER OF DATA = 5900
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 2971, 5900, 5900,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	2	2	2	2	1	1	1	1	1	0
10	0	0	0	0	0	0	0	0	0	-1
20	-1	-2	-3	-4	-4	-5	-6	-7	-7	-8
30	-8	-8	-7	-7	-6	-5	-3	-2	0	0
40	2	1	0	-2	-6	-10	-15	-18	-21	-21
50	-19	-15	-9	-5	-1	5	14	41	72	112
60	150	182	196	204	194	172	133	85	35	-18
70	-69	-117	-143	-158	-163	-155	-140	-118	-84	-54
80	-29	-7	19	48	73	85	91	93	91	88
90	84	78	69	58	47	37	28	22	16	10
100	4	-1	-14	-32	-47	-51	-43	-31	-18	-6
110	5	20	37	44	47	51	66	95	130	153
120	153	129	96	62	28	-2	-21	-30	-37	-38
130	-30	-9	12	26	32	31	25	17	8	1
140	-6	-17	-39	-62	-72	-76	-71	-53	-30	-8
150	10	20	20	5	-18	-41	-52	-48	-31	-10
160	10	37	57	86	96	100	93	70	39	17
170	10	8	10	12	13	10	4	0	-3	-6
180	-7	-6	-9	-11	-13	-13	-10	-6	-2	0
190	3	8	12	16	18	18	13	1	-17	-36
200	-50	-57	-51	-58	-41	-5	40	81	108	120
210	119	106	84	55	24	0	-11	-19	-24	-26
220	-24	-22	-19	-20	-27	-44	-62	-71	-69	-49
230	-14	32	85	133	164	177	176	156	107	41
240	-28	-96	-143	-157	-137	-93	-36	8	32	42
250	45	41	26	8	-7	-16	-16	-6	10	36
260	56	70	76	77	70	51	29	14	7	3
270	1	-1	-8	-19	-30	-40	-53	-71	-84	-87
280	-68	-39	-5	35	70	97	119	132	133	123
290	102	69	21	-30	-76	-105	-116	-119	-115	-97
300	-59	-15	23	51	91	113	121	117	99	71
310	35	4	-22	-35	-41	-40	-31	-22	-15	-13
320	-14	-19	-23	-27	-29	-29	-28	-23	-13	-2
330	4	9	11	9	5	2	1	0	-2	-7
340	-12	-14	-17	-18	-21	-25	-28	-29	-20	0
350	13	18	19	18	17	16	15	13	16	23
360	31	36	41	42	42	41	36	23	3	-13
370	-23	-28	-26	-17	-3	14	32	46	56	62
380	59	45	30	17	6	1	-1	-1	2	11
390	17	20	15	-3	-23	-37	-43	-44	-36	-19
400	-2	13	23	29	32	32	30	22	14	5
410	-1	-8	-14	-20	-23	-24	-17	-5	11	28
420	43	56	64	68	63	50	28	1	-21	-36
430	-45	-48	-47	-37	-19	0	10	16	15	8
440	-3	-23	-50	-72	-84	-84	-74	-55	-28	2
450	37	76	109	127	124	104	72	25	-31	-86
460	-121	-127	-114	-89	-60	-30	1	29	53	69
470	75	70	52	36	25	19	13	8	3	2

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	1	2	7	14	19	22	23	19	10	-4
490	-21	-36	-46	-49	-52	-48	-38	-25	-17	-14
500	-16	-26	-37	-42	-37	-19	8	42	80	107
510	123	123	102	53	-19	-96	-155	-185	-185	-165
520	-128	-75	-11	55	115	161	184	181	145	84
530	12	-66	-131	-168	-181	-163	-114	-41	32	89
540	131	163	178	176	157	125	86	49	20	4
550	-3	-8	-13	-15	-16	-18	-21	-23	-23	-19
560	-6	11	28	39	43	43	38	30	19	4
570	-10	-23	-33	-38	-35	-23	-2	27	59	85
580	104	114	116	107	84	44	-13	-77	-141	-198
590	-238	-252	-235	-182	-105	-25	42	98	137	153
600	149	124	84	40	-1	-40	-73	-96	-105	-108
610	-101	-75	-31	8	34	50	57	54	41	24
620	8	1	0	7	21	32	39	42	39	33
630	21	8	-2	-6	-7	-4	0	2	1	-5
640	-17	-31	-44	-53	-58	-54	-37	-7	20	39
650	49	52	48	39	26	17	13	15	31	57
660	81	102	123	138	145	145	134	108	59	0
670	-54	-106	-148	-173	-186	-190	-177	-147	-107	-55
680	-8	28	55	70	74	72	64	49	37	28
690	19	5	-7	-18	-24	-24	-20	-14	-5	1
700	7	10	10	8	5	2	3	8	15	22
710	28	32	33	32	25	10	-10	-30	-47	-59
720	-66	-68	-68	-67	-63	-56	-49	-38	-23	-7
730	11	30	46	54	59	57	46	31	13	-4
740	-18	-28	-33	-34	-27	-7	6	16	20	21
750	23	25	25	25	20	14	8	2	-5	-11
760	-13	-14	-13	-7	5	17	25	26	19	2
770	-20	-37	-47	-55	-57	-56	-45	-23	2	25
780	49	73	87	95	94	88	76	58	38	21
790	9	5	7	18	35	52	60	62	58	46
800	27	6	-10	-25	-41	-55	-64	-71	-76	-75
810	-71	-63	-52	-42	-36	-30	-23	-14	-5	0
820	2	2	0	-4	-10	-15	-20	-21	-21	-18
830	-12	-7	0	6	12	14	12	9	5	0
840	-7	-13	-18	-22	-24	-23	-23	-21	-21	-24
850	-27	-30	-32	-34	-36	-29	-15	-1	12	26
860	37	45	51	54	58	60	59	58	56	56
870	56	57	56	52	47	41	33	24	15	5
880	-6	-17	-27	-36	-40	-42	-42	-42	-40	-37
890	-34	-29	-26	-23	-19	-16	-15	-16	-20	-22
900	-23	-22	-18	-10	0	11	28	48	67	85
910	98	107	108	103	92	78	59	37	20	8
920	-4	-19	-33	-47	-58	-66	-69	-68	-62	-55
930	-47	-40	-35	-31	-29	-27	-25	-22	-18	-12
940	-5	-1	1	3	5	6	10	13	16	18
950	19	20	21	21	23	24	25	25	24	21
960	18	13	7	2	-4	-11	-18	-24	-27	-32
970	-40	-50	-58	-64	-66	-67	-65	-62	-54	-38
980	-19	2	25	45	62	74	83	87	87	86
990	85	83	80	76	69	63	55	46	36	23
1000	8	-7	-22	-37	-51	-62	-69	-71	-67	-60

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	-46	-25	-4	10	21	27	28	26	17	2
1020	-12	-24	-34	-37	-37	-31	-18	-5	5	12
1030	15	18	18	15	10	4	-1	-6	-12	-19
1040	-26	-33	-39	-46	-54	-59	-59	-57	-47	-35
1050	-20	-4	7	20	35	46	55	62	68	74
1060	75	74	71	69	66	65	65	67	67	68
1070	67	65	59	51	39	25	13	0	-12	-20
1080	-26	-28	-27	-24	-20	-17	-15	-11	-12	-20
1090	-30	-43	-56	-64	-68	-69	-67	-58	-40	-20
1100	-1	13	25	33	34	31	22	6	-11	-26
1110	-36	-45	-53	-58	-59	-59	-59	-59	-59	-57
1120	-56	-53	-52	-52	-53	-54	-54	-53	-51	-43
1130	-30	-13	0	16	33	43	53	67	78	86
1140	95	100	101	99	94	85	75	63	46	29
1150	14	2	-6	-11	-15	-17	-18	-18	-18	-14
1160	-9	-3	4	13	20	26	32	37	37	36
1170	36	34	31	25	16	9	2	-2	-4	-3
1180	0	2	6	9	6	1	-6	-17	-30	-41
1190	-49	-55	-59	-62	-63	-65	-69	-72	-71	-68
1200	-63	-55	-40	-23	-6	6	16	25	33	37
1210	38	36	32	28	24	21	15	10	7	4
1220	3	1	0	-3	-5	-9	-11	-11	-9	-6
1230	-3	0	4	13	19	22	21	21	20	19
1240	19	20	22	28	36	44	54	62	67	70
1250	68	63	53	41	28	15	6	0	-6	-12
1260	-16	-20	-25	-28	-29	-29	-31	-35	-39	-41
1270	-42	-42	-42	-40	-37	-34	-29	-23	-18	-14
1280	-11	-10	-7	-6	-6	-6	-6	-8	-9	-10
1290	-15	-23	-32	-40	-47	-51	-53	-52	-47	-38
1300	-28	-17	-6	3	13	23	32	37	39	41
1310	41	40	38	34	30	26	25	25	25	25
1320	26	26	24	20	16	10	3	-4	-11	-16
1330	-20	-24	-26	-25	-23	-19	-15	-13	-11	-9
1340	-4	-3	-3	-1	3	10	17	23	29	35
1350	38	39	35	29	22	16	10	6	3	1
1360	-2	-5	-7	-10	-16	-23	-29	-36	-43	-50
1370	-54	-58	-59	-58	-53	-47	-39	-30	-20	-7
1380	7	21	32	43	50	54	55	51	44	36
1390	28	21	12	4	-4	-12	-18	-20	-22	-25
1400	-26	-24	-21	-19	-16	-15	-14	-14	-14	-10
1410	-5	0	4	10	18	24	29	33	36	40
1420	42	44	46	47	48	47	45	42	36	30
1430	24	18	9	2	-2	-7	-12	-15	-17	-18
1440	-19	-19	-18	-17	-16	-13	-8	-3	1	4
1450	8	11	15	19	23	26	30	33	35	37
1460	37	35	31	25	15	3	-10	-21	-28	-36
1470	-42	-45	-48	-47	-45	-43	-41	-38	-37	-38
1480	-37	-37	-37	-36	-36	-38	-38	-36	-33	-34
1490	-32	-30	-26	-23	-19	-11	-6	0	3	6
1500	8	12	13	17	19	20	18	15	11	10
1510	7	5	2	2	2	3	6	7	7	5
1520	3	2	-2	-6	-8	-6	-4	0	6	10
1530	13	16	17	16	13	9	7	4	3	5

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	5	5	5	5	5	6	5	4	3	2
1550	1	-1	-3	-3	0	5	13	17	21	28
1560	33	35	35	37	37	38	35	33	28	24
1570	21	16	9	4	-1	-8	-14	-18	-21	-19
1580	-17	-17	-17	-17	-18	-18	-17	-14	-11	-8
1590	-6	-6	-4	-3	-3	-2	-4	-7	-9	-9
1600	-8	-10	-13	-15	-16	-18	-20	-21	-21	-23
1610	-24	-26	-25	-24	-20	-17	-15	-11	-8	-6
1620	-3	-1	-1	-1	-2	-5	-9	-12	-16	-19
1630	-18	-13	-6	1	9	17	22	25	25	21
1640	14	6	-2	-9	-16	-19	-22	-22	-20	-17
1650	-14	-10	-4	1	4	5	5	2	-2	-5
1660	-6	-6	-7	-7	-6	-2	0	2	6	11
1670	15	16	16	15	14	11	9	6	4	4
1680	3	2	3	3	3	0	-3	-8	-12	-15
1690	-16	-16	-15	-11	-5	2	9	15	19	20
1700	21	23	23	20	16	13	11	8	6	3
1710	1	0	0	0	0	1	2	2	1	1
1720	1	0	-1	-4	-6	-8	-7	-5	-4	-4
1730	-4	-4	-4	-3	0	1	2	3	6	7
1740	6	4	3	3	3	4	5	5	6	10
1750	14	17	17	16	13	7	1	-3	-11	-18
1760	-24	-27	-30	-32	-33	-34	-34	-34	-35	-37
1770	-38	-37	-35	-33	-33	-33	-32	-30	-28	-25
1780	-23	-19	-17	-18	-17	-17	-17	-17	-15	-11
1790	-9	-6	0	6	12	15	17	19	19	18
1800	16	15	14	12	12	12	12	11	11	9
1810	8	8	6	6	7	7	8	7	7	6
1820	5	4	3	3	4	6	10	15	20	23
1830	24	26	26	27	28	27	26	25	23	21
1840	19	17	17	18	20	24	29	32	33	33
1850	31	29	26	24	21	16	13	9	6	5
1860	3	1	0	-4	-10	-15	-20	-28	-35	-40
1870	-44	-48	-52	-54	-56	-55	-52	-50	-48	-46
1880	-45	-43	-41	-38	-36	-33	-30	-26	-23	-20
1890	-17	-15	-13	-13	-11	-7	-3	0	2	5
1900	7	7	6	8	11	11	12	13	15	17
1910	18	20	20	19	17	16	15	14	13	12
1920	12	12	12	9	7	4	2	0	-3	-7
1930	-8	-11	-12	-12	-11	-11	-9	-7	-3	-1
1940	0	2	3	5	5	6	7	9	11	11
1950	12	13	13	13	11	12	12	10	10	12
1960	11	11	9	7	7	6	6	5	3	1
1970	0	0	-1	-4	-7	-9	-8	-4	-2	0
1980	1	4	7	8	7	7	6	4	3	0
1990	-1	-4	-8	-9	-9	-9	-9	-6	-4	-1
2000	0	3	5	7	8	9	9	7	4	1
2010	-2	-7	-9	-9	-9	-9	-8	-5	-1	1
2020	3	5	5	4	3	2	2	4	7	8
2030	8	6	4	1	-2	-6	-11	-16	-20	-22
2040	-24	-25	-25	-26	-27	-28	-28	-28	-30	-32
2050	-31	-29	-28	-27	-26	-23	-19	-13	-7	-3
2060	0	0	2	4	5	5	5	7	9	11

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	15	21	27	32	34	37	38	38	37	33
2080	30	26	22	17	12	6	1	-2	-4	-6
2090	-7	-8	-9	-9	-7	-6	-5	-4	-3	-1
2100	-1	-1	-1	-1	-2	-5	-7	-9	-10	-11
2110	-12	-11	-10	-9	-9	-9	-9	-9	-9	-10
2120	-11	-9	-5	-2	0	2	4	4	3	1
2130	0	0	-2	-5	-6	-8	-7	-5	-2	0
2140	0	3	8	13	16	19	20	21	22	23
2150	23	23	22	20	17	15	12	7	1	-4
2160	-7	-8	-8	-7	-7	-5	-4	-1	0	2
2170	1	0	-2	-4	-4	-6	-8	-9	-9	-9
2180	-9	-9	-8	-6	-5	-6	-7	-7	-8	-10
2190	-14	-14	-14	-12	-10	-8	-3	0	3	4
2200	5	5	5	6	10	13	14	16	16	14
2210	12	12	11	8	5	5	4	2	3	6
2220	10	13	14	16	16	16	15	13	11	8
2230	5	2	2	1	0	-1	-2	-4	-7	-7
2240	-5	-4	-3	-2	-1	2	7	12	17	19
2250	20	21	20	18	16	11	7	5	5	3
2260	3	3	4	5	6	5	2	2	1	0
2270	-1	-2	-3	-3	-3	-3	-6	-6	-9	-12
2280	-12	-12	-12	-11	-12	-11	-9	-8	-7	-4
2290	-2	-1	-1	-2	-3	-3	-5	-7	-9	-11
2300	-12	-12	-12	-12	-12	-13	-14	-13	-13	-14
2310	-14	-11	-8	-4	0	2	2	3	5	6
2320	6	7	6	3	3	5	4	4	6	6
2330	4	3	2	0	-2	-3	-5	-7	-7	-7
2340	-4	-2	0	2	3	5	5	4	3	2
2350	2	0	-2	0	0	1	4	8	11	11
2360	13	13	12	10	10	10	10	10	10	9
2370	6	5	5	6	6	4	3	4	5	5
2380	5	4	3	1	0	-1	-4	-7	-9	-13
2390	-14	-14	-15	-16	-18	-16	-15	-13	-10	-7
2400	-5	-2	0	1	2	4	5	5	5	5
2410	4	3	2	3	2	2	0	0	-2	-4
2420	-6	-6	-4	-4	-4	-6	-7	-7	-6	-4
2430	-4	-4	-4	-2	0	1	0	0	0	0
2440	-2	-3	-2	-2	0	1	2	5	10	14
2450	14	14	16	17	16	14	13	12	12	11
2460	11	10	8	8	7	7	6	5	8	10
2470	10	9	10	9	7	6	6	6	7	7
2480	7	7	6	6	8	9	10	13	15	15
2490	14	13	12	9	6	3	1	0	0	0
2500	0	0	0	0	1	3	4	5	6	4
2510	3	3	3	0	-1	-2	-3	-3	-2	0
2520	2	3	4	8	12	14	14	10	7	5
2530	3	1	-1	-4	-7	-7	-7	-6	-7	-8
2540	-9	-12	-17	-21	-23	-25	-27	-30	-32	-34
2550	-36	-38	-38	-38	-38	-36	-33	-30	-28	-24
2560	-21	-19	-16	-13	-11	-10	-9	-9	-6	-4
2570	0	2	9	15	17	20	23	22	19	17
2580	15	16	16	16	17	18	20	22	23	23
2590	23	24	25	25	25	23	19	17	17	16

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	17	17	17	17	17	17	17	16	17	17
2610	17	16	15	13	11	11	10	8	7	6
2620	5	2	1	0	-3	-3	-2	-2	-2	-2
2630	-1	0	0	1	2	1	0	0	-1	-2
2640	-2	-2	-2	-1	0	1	2	2	3	6
2650	7	8	8	8	8	7	3	1	-2	-4
2660	-7	-8	-8	-7	-8	-7	-4	-2	0	2
2670	2	5	5	5	6	6	5	5	3	2
2680	2	0	-1	-2	-2	-2	-3	-2	-2	-3
2690	-4	-5	-7	-7	-4	-2	-2	-1	-1	-1
2700	-2	-2	-3	-2	-2	-2	-1	-1	-2	-6
2710	-8	-11	-12	-13	-14	-14	-16	-17	-15	-13
2720	-9	-7	-4	0	2	4	7	10	10	10
2730	10	11	10	10	12	12	13	14	15	16
2740	17	17	19	20	21	24	27	30	30	32
2750	30	28	25	23	21	17	14	11	7	4
2760	1	0	-1	-2	-1	-1	-4	-6	-7	-6
2770	-7	-9	-10	-11	-11	-13	-14	-14	-14	-15
2780	-16	-15	-15	-16	-17	-15	-13	-12	-12	-10
2790	-7	-6	-7	-7	-6	-5	-4	-2	0	0
2800	3	6	7	9	11	12	12	11	10	10
2810	10	12	12	12	12	12	13	13	13	10
2820	6	4	1	-2	-6	-9	-11	-12	-14	-16
2830	-17	-18	-16	-15	-13	-12	-11	-8	-5	-3
2840	-1	1	3	5	6	6	7	6	6	6
2850	8	9	10	10	10	9	9	12	15	18
2860	20	22	25	28	30	30	30	27	24	23
2870	21	19	18	16	15	15	15	16	17	17
2880	17	17	17	16	14	13	11	11	9	6
2890	5	4	3	1	0	0	-1	-3	-6	-8
2900	-9	-9	-9	-7	-8	-8	-8	-7	-8	-9
2910	-10	-11	-11	-11	-11	-11	-12	-12	-11	-12
2920	-14	-17	-18	-17	-16	-15	-13	-11	-11	-12
2930	-12	-10	-9	-9	-9	-7	-7	-8	-9	-9
2940	-9	-10	-11	-12	-13	-14	-14	-14	-12	-13
2950	-14	-14	-14	-14	-12	-9	-5	-4	0	1
2960	3	7	13	16	18	20	23	24	26	26
2970	26	34	38	39	38	39	40	43	43	42
2980	40	39	40	37	33	30	27	26	25	22
2990	20	18	15	11	6	3	1	1	0	-2
3000	-2	-3	-4	-6	-5	-3	-2	-1	0	2
3010	4	6	8	10	13	14	14	14	14	14
3020	17	18	19	21	18	18	17	15	13	10
3030	7	2	0	-1	-3	-3	-2	0	3	6
3040	6	6	6	6	6	3	1	0	-1	-3
3050	-6	-7	-8	-10	-11	-10	-10	-8	-7	-5
3060	-6	-8	-11	-12	-12	-11	-10	-10	-8	-6
3070	-2	-1	1	3	3	6	7	8	11	12
3080	14	14	13	13	13	13	15	17	18	20
3090	21	23	24	25	26	25	24	24	23	20
3100	18	16	14	10	8	7	7	8	8	7
3110	8	8	7	6	6	4	3	3	5	6
3120	6	7	10	10	9	8	8	8	8	5

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3130	4	5	7	7	7	10	12	14	17	18
3140	18	18	16	14	13	12	12	12	13	13
3150	15	16	16	17	18	19	19	18	17	15
3160	12	9	8	7	5	3	2	1	1	0
3170	0	-1	-2	-2	-2	-2	0	0	3	5
3180	7	9	9	9	10	12	13	14	15	16
3190	16	15	14	13	11	10	7	5	4	4
3200	3	3	3	3	3	4	5	6	5	4
3210	4	4	3	2	3	1	0	-1	-1	-1
3220	-1	-1	-1	-3	-4	-4	-5	-6	-7	-4
3230	-2	0	2	4	7	9	11	14	14	14
3240	14	14	12	11	11	11	13	14	16	18
3250	19	19	19	20	20	19	18	18	16	14
3260	12	11	10	9	10	11	11	10	9	8
3270	8	8	9	9	9	10	10	9	9	7
3280	6	6	5	4	3	2	1	1	0	0
3290	-2	-3	-3	-3	-3	-4	-5	-7	-7	-8
3300	-8	-7	-6	-4	-4	-3	-1	-1	0	0
3310	0	0	0	0	0	2	3	4	6	7
3320	8	8	8	8	8	8	7	6	7	7
3330	5	5	7	7	7	6	5	4	4	3
3340	3	3	3	2	2	1	0	0	0	0
3350	0	2	3	6	9	11	14	17	18	18
3360	18	17	17	17	17	18	19	20	24	26
3370	30	34	35	36	36	36	35	32	29	26
3380	24	20	17	15	13	9	6	5	3	1
3390	1	1	1	1	2	3	3	3	3	1
3400	0	0	0	-1	-1	-1	-1	-2	-2	-2
3410	-3	-6	-7	-8	-10	-11	-11	-11	-11	-10
3420	-8	-7	-3	-1	-1	-1	-1	1	2	1
3430	-1	-1	-1	0	2	3	4	6	8	9
3440	11	13	14	14	14	13	9	9	9	8
3450	7	7	4	3	2	0	-1	-1	-1	-1
3460	0	0	-1	-1	-1	0	0	2	2	3
3470	3	3	3	3	1	1	3	3	5	6
3480	8	11	13	15	17	18	18	18	19	19
3490	19	19	19	19	19	19	19	18	15	14
3500	14	13	9	8	7	6	6	5	3	2
3510	3	3	3	3	1	0	0	-1	-1	-1
3520	0	0	0	-1	-1	-1	-1	-2	-2	-2
3530	-2	-4	-6	-5	-5	-6	-7	-7	-8	-9
3540	-10	-10	-9	-8	-8	-8	-7	-5	-5	-5
3550	-3	-2	-1	-1	-1	-1	-1	-1	0	0
3560	0	0	-1	0	0	-1	-1	-1	0	1
3570	2	3	4	4	4	5	7	8	8	8
3580	9	10	11	11	12	14	16	17	19	19
3590	19	19	19	19	19	20	21	21	22	22
3600	21	19	19	17	15	13	13	11	10	9
3610	11	11	11	12	13	13	12	11	11	10
3620	9	9	9	9	9	10	11	10	9	9
3630	9	8	6	4	3	3	1	0	-1	-1
3640	-1	-1	-1	-1	-1	-3	-3	-3	-3	-2
3650	-2	-2	-2	-2	-4	-7	-7	-7	-6	-5

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
3660	-5	-5	-4	-4	-5	-7	-7	-7	-8	-8
3670	-7	-8	-8	-6	-4	-3	-1	-1	0	1
3680	3	3	4	5	6	4	3	2	3	3
3690	3	4	5	7	9	11	13	13	12	11
3700	10	8	5	4	3	3	3	2	3	5
3710	5	7	8	8	8	8	8	6	6	6
3720	5	3	3	3	2	1	0	-2	-3	-4
3730	-6	-5	-4	-2	-1	-2	-2	-2	-2	-2
3740	-2	-1	-1	-1	-1	-1	0	0	1	3
3750	2	0	-1	-1	0	0	1	2	2	4
3760	7	8	9	9	9	10	11	11	13	13
3770	12	13	11	10	9	11	11	10	9	9
3780	8	8	7	8	8	8	9	9	8	10
3790	11	11	10	9	9	9	11	12	13	14
3800	14	16	14	14	14	13	13	14	14	13
3810	11	9	8	6	3	1	0	-1	-1	-2
3820	-6	-7	-7	-7	-8	-7	-7	-7	-7	-7
3830	-7	-7	-7	-7	-10	-10	-8	-7	-7	-7
3840	-8	-8	-8	-11	-12	-12	-11	-10	-9	-8
3850	-4	-3	-2	-1	1	2	3	5	6	7
3860	8	8	8	9	9	9	8	8	7	6
3870	4	4	3	3	3	4	3	3	5	6
3880	8	9	9	9	9	9	8	8	8	5
3890	4	3	3	3	3	3	5	7	8	9
3900	9	8	10	11	13	10	6	4	3	3
3910	3	2	3	3	5	6	8	10	11	12
3920	13	13	15	16	16	15	14	12	12	12
3930	12	10	9	8	8	7	7	7	6	5
3940	4	3	2	0	-1	-3	-7	-10	-11	-11
3950	-12	-13	-12	-12	-12	-12	-12	-13	-13	-12
3960	-11	-11	-10	-9	-8	-7	-7	-5	-3	-2
3970	-1	-1	0	0	2	3	3	4	4	3
3980	3	3	4	5	6	8	9	9	8	8
3990	8	8	8	6	4	3	4	3	2	3
4000	3	3	3	3	3	4	4	5	7	9
4010	9	9	9	8	8	8	6	4	3	1
4020	0	-1	-3	-3	-3	-1	-1	0	1	0
4030	0	-1	-1	-2	-3	-5	-7	-9	-10	-9
4040	-8	-7	-7	-6	-4	-2	-1	-2	-3	-3
4050	-4	-5	-6	-4	-2	-2	-3	-2	0	0
4060	0	1	2	3	3	5	6	8	10	11
4070	10	10	11	11	10	10	11	13	12	13
4080	12	12	11	11	10	9	9	9	9	9
4090	6	5	4	4	4	3	3	2	1	2
4100	2	3	3	3	3	3	1	1	1	0
4110	0	0	-1	-2	-3	-4	-6	-7	-6	-6
4120	-7	-5	-3	-1	0	0	1	2	2	4
4130	3	2	2	2	2	0	-1	-1	-1	-2
4140	-2	0	0	2	2	3	3	3	1	1
4150	1	1	1	1	1	0	0	1	2	2
4160	2	2	4	3	3	3	3	2	1	-1
4170	-1	-1	-1	-1	-1	-1	-2	-3	-4	-7
4180	-7	-5	-5	-6	-5	-6	-7	-8	-7	-5

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4190	-3	-2	-1	1	3	6	7	7	7	7
4200	6	7	7	6	7	7	6	6	7	9
4210	11	11	12	12	13	12	12	11	11	8
4220	9	8	7	7	7	6	6	3	3	2
4230	3	3	6	6	4	3	3	2	3	3
4240	3	2	1	0	1	2	0	0	-1	-2
4250	-2	-1	-1	-1	-1	-1	-1	-1	-1	0
4260	0	0	-1	-1	-2	-5	-5	-6	-7	-9
4270	-10	-10	-10	-10	-11	-11	-11	-10	-10	-10
4280	-10	-11	-11	-9	-8	-8	-7	-7	-8	-8
4290	-8	-8	-8	-7	-4	-3	-2	-2	-2	-2
4300	-1	-1	-4	-4	-3	-2	-1	-1	0	0
4310	-1	-1	0	0	1	3	3	4	5	6
4320	9	11	11	11	11	11	12	12	14	14
4330	13	12	11	10	9	9	7	4	3	3
4340	3	3	3	3	4	4	4	4	4	4
4350	4	2	0	-1	-3	-3	-4	-5	-6	-8
4360	-9	-10	-9	-8	-7	-5	-4	-3	-3	-2
4370	-1	-3	-3	-3	-2	-2	-2	-1	-1	-1
4380	-1	0	2	3	3	4	3	3	3	3
4390	3	3	2	1	1	1	1	1	1	3
4400	5	6	5	4	4	4	2	0	0	0
4410	-1	-2	-2	-3	-5	-5	-5	-5	-7	-7
4420	-7	-7	-8	-9	-10	-10	-10	-10	-11	-11
4430	-11	-12	-12	-11	-11	-10	-9	-7	-5	-5
4440	-5	-3	-1	0	1	1	0	1	3	3
4450	3	3	2	0	0	0	-1	-1	0	2
4460	3	5	7	8	9	10	11	12	12	13
4470	13	12	12	11	11	11	10	9	7	6
4480	6	6	5	4	2	1	0	-2	-2	-1
4490	0	0	0	-1	-1	-2	-5	-6	-4	-5
4500	-7	-7	-6	-7	-7	-5	-5	-7	-8	-9
4510	-9	-8	-8	-8	-5	-5	-5	-3	0	0
4520	0	-1	-1	0	-1	-1	0	-1	-1	-1
4530	0	-1	-1	0	0	3	3	5	5	2
4540	2	1	0	0	0	0	-1	-2	-2	-3
4550	-4	-5	-6	-6	-6	-8	-9	-11	-11	-11
4560	-12	-14	-15	-15	-15	-15	-13	-15	-13	-12
4570	-12	-12	-11	-8	-8	-6	-2	-1	-2	-1
4580	2	3	3	2	3	6	6	6	6	6
4590	6	7	7	6	6	6	6	6	6	7
4600	7	4	2	4	6	3	3	1	0	2
4610	2	0	0	1	3	3	6	6	5	6
4620	6	6	5	6	6	6	7	8	8	7
4630	8	8	8	7	4	3	0	-1	-1	-1
4640	-2	-5	-5	-5	-4	-2	-2	-3	-3	-1
4650	0	0	0	0	-1	-2	-3	-4	-5	-6
4660	-9	-12	-13	-14	-15	-15	-16	-16	-16	-16
4670	-16	-16	-16	-16	-14	-12	-12	-11	-10	-10
4680	-11	-10	-9	-8	-7	-7	-8	-7	-7	-5
4690	-3	-2	-1	-1	-2	0	0	0	0	0
4700	1	4	4	3	2	1	0	0	-1	-1
4710	0	0	-1	-1	-1	0	1	2	1	1

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4720	1	2	3	2	3	3	3	3	3	2
4730	2	2	2	3	5	6	7	7	9	9
4740	9	8	8	8	8	8	7	7	6	5
4750	3	3	2	1	1	1	0	0	-1	-2
4760	-2	0	0	0	0	0	0	-1	-3	-5
4770	-9	-10	-11	-12	-12	-12	-12	-13	-13	-12
4780	-13	-15	-17	-18	-18	-18	-19	-21	-21	-19
4790	-16	-15	-13	-11	-9	-6	-3	-2	-1	-1
4800	-2	-3	-3	-3	-3	-1	-2	-2	-2	-3
4810	-4	-5	-3	-1	0	1	2	2	3	2
4820	0	0	0	0	1	-1	0	1	1	1
4830	1	1	1	1	1	1	2	3	3	3
4840	2	1	1	0	0	-1	-1	-1	-1	-1
4850	-1	-1	0	0	0	1	2	3	3	2
4860	3	3	3	1	1	2	2	1	0	0
4870	1	3	4	5	6	7	7	7	5	4
4880	1	1	2	1	1	1	1	2	0	-1
4890	0	0	0	-1	-3	-3	-3	-2	-3	-5
4900	-6	-5	-6	-7	-7	-7	-7	-8	-10	-12
4910	-11	-10	-12	-14	-15	-16	-16	-16	-17	-16
4920	-17	-18	-18	-18	-17	-16	-14	-14	-13	-11
4930	-9	-7	-5	-2	-3	-3	-2	-1	0	-1
4940	-1	0	-1	-1	-1	-1	0	2	0	0
4950	0	0	0	0	0	0	0	1	1	1
4960	2	2	0	-1	0	0	-1	-1	-1	-2
4970	-3	-5	-2	-1	-1	0	1	1	2	1
4980	2	4	4	6	7	6	6	7	7	6
4990	4	4	2	1	0	0	0	1	1	2
5000	1	0	0	1	2	1	0	2	3	3
5010	1	1	2	2	1	2	1	1	1	2
5020	-3	-1	1	0	0	1	3	4	3	3
5030	2	1	1	2	1	0	0	1	1	2
5040	-2	-2	-4	-7	-8	-7	-7	-5	-3	-4
5050	-6	-6	-5	-6	-7	-7	-9	-9	-8	-9
5060	-10	-10	-11	-14	-15	-16	-16	-16	-16	-15
5070	-15	-14	-13	-13	-13	-13	-11	-11	-10	-8
5080	-5	-4	-1	0	1	3	3	4	5	7
5090	6	6	8	8	9	10	11	10	9	8
5100	8	8	8	6	6	5	4	4	4	5
5110	6	6	6	6	5	4	4	4	2	1
5120	2	4	4	3	3	3	4	4	3	2
5130	1	1	1	1	1	0	-1	-3	-4	-6
5140	-7	-6	-6	-4	-2	0	1	1	1	2
5150	3	3	2	0	-1	-3	-6	-8	-9	-10
5160	-10	-11	-11	-10	-10	-10	-10	-9	-8	-8
5170	-8	-8	-7	-6	-5	-5	-5	-3	0	0
5180	1	3	3	2	1	1	1	1	1	1
5190	1	0	0	0	0	0	-1	-2	-4	-7
5200	-7	-6	-5	-2	-1	-2	-3	-4	-4	-2
5210	0	0	-3	-5	-5	-3	0	0	0	0
5220	1	1	1	1	1	1	4	5	5	4
5230	2	3	4	3	2	2	0	-2	-2	-1
5240	-1	-2	-1	0	0	0	-1	-1	-1	-1

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5250	-2	-2	-1	0	0	0	-1	-2	-2	-1
5260	-2	-2	-1	0	0	-1	-3	-3	-3	-4
5270	-6	-8	-9	-11	-12	-13	-12	-12	-11	-9
5280	-8	-7	-6	-5	-4	-2	-3	-5	-7	-7
5290	-6	-5	-4	-4	-6	-6	-3	0	0	0
5300	3	3	3	4	6	6	4	1	4	6
5310	7	7	5	4	2	1	3	4	2	3
5320	2	1	1	3	3	3	3	2	0	-1
5330	0	1	1	-2	-1	1	1	1	0	-1
5340	-1	-1	-2	-3	-3	-5	-8	-10	-10	-11
5350	-10	-8	-7	-7	-8	-7	-7	-8	-8	-7
5360	-6	-3	-3	-5	-2	0	0	-1	-1	-1
5370	-2	-3	-3	-2	-2	-2	-2	-1	0	1
5380	1	1	0	0	1	2	0	-3	-2	-1
5390	0	-1	-2	-1	-1	-2	-1	-2	-1	0
5400	-1	-1	0	0	-1	-1	-2	-2	-1	0
5410	0	-1	-1	0	0	0	0	-1	-4	-5
5420	-3	-2	-4	-4	-4	-5	-5	-5	-5	-3
5430	-1	0	0	-1	-2	-1	-2	-2	-3	-2
5440	-1	0	0	0	1	2	2	3	5	7
5450	7	7	6	5	5	6	5	4	4	3
5460	3	3	3	3	3	5	5	5	6	6
5470	5	5	6	6	6	5	3	2	2	1
5480	0	-1	-2	-2	-1	-2	-4	-5	-7	-8
5490	-8	-8	-8	-8	-9	-10	-13	-13	-12	-11
5500	-11	-10	-9	-8	-8	-8	-8	-9	-9	-8
5510	-8	-8	-8	-9	-9	-8	-8	-8	-8	-6
5520	-5	-6	-4	-1	0	0	-1	-3	-4	-5
5530	-5	-5	-4	-4	-6	-5	-3	-3	-1	0
5540	1	0	0	1	2	3	3	4	6	6
5550	4	4	4	3	3	1	0	0	0	0
5560	1	3	4	5	6	8	8	8	8	8
5570	7	7	7	7	6	4	4	3	3	4
5580	4	3	3	3	2	0	0	0	1	0
5590	-2	-1	0	-2	-3	-2	-4	-5	-2	0
5600	2	5	4	2	1	3	2	1	1	1
5610	0	-2	-2	-1	-1	0	0	0	2	1
5620	0	0	0	-3	-5	-5	-7	-7	-6	-5
5630	-5	-5	-6	-6	-3	-2	-2	-2	-1	0
5640	0	0	0	0	0	0	1	0	-1	-2
5650	-2	-1	0	0	-2	-2	-3	-5	-6	-8
5660	-9	-9	-8	-9	-10	-8	-5	-6	-6	-8
5670	-8	-7	-8	-7	-5	-6	-8	-10	-11	-8
5680	-5	-5	-5	-4	-4	-2	-2	-2	-1	0
5690	1	2	1	1	3	3	5	7	7	7
5700	7	7	7	7	8	8	8	8	8	9
5710	12	11	11	10	11	11	11	9	8	7
5720	6	6	6	6	4	1	1	2	0	-2
5730	-5	-2	-1	-1	0	1	0	-1	0	0
5740	0	-1	0	0	1	1	0	-1	-2	-2
5750	-2	-2	-2	-1	0	1	1	2	0	0
5760	1	0	-1	-1	-1	0	0	-1	-2	-2
5770	-1	0	1	1	0	-2	-2	-1	0	-1

TO BE CONTINUED

CONTINUED(S-2383 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
5780	-1	-1	-2	-3	-5	-7	-8	-5	-2	-3
5790	-1	1	0	0	0	0	0	0	0	0
5800	0	0	-2	-2	-1	0	-1	-3	-2	-1
5810	-4	-4	-2	-3	-2	-1	0	2	2	2
5820	1	1	2	0	0	0	2	3	0	0
5830	-1	-1	-1	0	1	0	0	0	-1	0
5840	1	2	2	1	0	0	0	0	0	2
5850	3	3	2	1	1	4	6	7	7	7
5860	6	7	7	7	6	6	6	6	7	4
5870	0	0	0	1	1	0	0	1	1	2
5880	0	-3	-5	-2	-1	-3	-6	-5	-5	-5
5890	-3	-4	-5	-5	-4	-3	-4	-5	-3	-4

END

RECORD = S-2390 COMPONENT = SOUTH STATION = KUSHIRO-JI-S
DATE AND TIME = 1991-10-25-19-39 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000.

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	19	20	20	21	22	22	23	23	23	21
10	18	16	14	11	6	0	-4	-10	-14	-17
20	-20	-23	-22	-20	-19	-17	-16	-14	-13	-11
30	-10	-9	-6	-4	-1	3	7	12	17	20
40	22	23	22	20	19	18	18	18	19	22
50	25	26	27	26	24	22	18	14	10	7
60	5	4	3	3	2	1	0	-1	-1	-2
70	-5	-9	-11	-13	-15	-16	-17	-16	-17	-19
80	-22	-25	-27	-26	-20	-10	0	10	17	22
90	25	25	23	20	18	16	16	15	16	18
100	15	6	-9	-25	-31	-31	-23	-6	10	19
110	21	18	11	4	3	6	11	18	23	27
120	29	25	18	12	7	2	-1	-3	-4	-4
130	-4	-4	-3	0	3	5	8	13	22	34
140	45	53	55	46	26	7	-6	-16	-20	-20
150	-16	-13	-12	-12	-13	-15	-18	-17	-15	-11
160	-10	-9	-8	-8	-5	-4	0	5	8	11
170	13	13	11	8	6	3	0	-2	-4	-7
180	-9	-9	-6	-1	0	1	1	2	2	5
190	6	7	8	9	11	18	23	26	30	30
200	26	22	19	18	17	17	14	8	-1	-12
210	-22	-28	-28	-22	-11	0	7	13	17	21
220	24	29	36	43	46	44	40	35	29	25
230	22	15	2	-14	-26	-31	-31	-27	-22	-18
240	-17	-21	-25	-26	-21	-8	7	19	24	23
250	16	5	-2	-6	-4	0	6	10	11	9
260	7	3	-1	-6	-9	-8	-2	7	13	16
270	16	16	13	10	7	8	8	10	13	15
280	18	19	19	15	7	0	-6	-9	-7	0
290	8	11	10	7	1	0	1	8	16	22
300	25	26	26	23	18	11	5	1	-1	-1
310	-2	-2	0	0	1	4	6	7	8	8
320	10	13	15	16	16	11	3	-7	-17	-21
330	-21	-17	-13	-9	-7	-6	-6	-5	-1	3
340	8	14	18	21	23	25	27	25	21	17
350	14	11	8	6	2	-3	-8	-10	-10	-8
360	-6	-5	-5	-4	-2	0	4	10	15	18
370	21	22	23	26	28	29	29	28	24	21
380	17	10	2	-2	-8	-13	-16	-13	-8	-1
390	4	8	10	11	10	10	10	11	9	7
400	4	0	-6	-8	-10	-11	-11	-9	-5	-1
410	1	4	7	9	9	9	7	6	5	6
420	7	9	11	10	7	4	2	0	0	1
430	3	5	5	5	8	12	17	23	31	32
440	30	24	20	14	9	7	2	-1	-4	-7
450	-7	-5	0	1	2	0	-4	-8	-8	-5
460	-1	4	9	14	16	17	19	22	23	24
470	22	17	11	8	5	3	2	2	2	0

TO BE CONTINUED

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	1	2	2	0	-2	-2	-1	2	6	9
490	13	16	17	19	19	18	19	19	16	11
500	6	1	-4	-7	-6	-5	-1	3	8	16
510	22	25	26	23	17	9	4	0	-3	-6
520	-8	-9	-9	-7	-3	1	4	7	9	10
530	9	9	10	13	17	18	17	16	14	12
540	11	6	5	5	5	4	3	-2	-10	-14
550	-17	-18	-15	-9	-3	0	1	0	-1	-4
560	-7	-8	-7	-6	-3	2	8	11	12	10
570	8	7	6	2	1	1	0	2	5	9
580	10	13	16	19	23	27	30	29	26	24
590	19	15	10	4	-1	-7	-11	-13	-13	-13
600	-13	-12	-9	-5	-3	0	1	1	0	0
610	1	2	3	1	1	3	6	11	16	23
620	28	31	32	31	25	22	21	19	16	15
630	16	15	14	13	13	12	9	5	1	0
640	-3	-5	-7	-9	-10	-13	-17	-15	-14	-12
650	-9	-7	-3	0	3	5	4	2	1	1
660	0	2	4	5	5	3	2	4	6	8
670	11	12	13	15	16	15	14	14	14	11
680	5	0	-6	-14	-19	-21	-18	-13	-9	-6
690	-5	-4	-4	-2	4	8	11	13	14	13
700	10	7	5	3	2	2	3	4	6	8
710	11	12	12	8	2	0	-1	0	5	13
720	18	19	17	13	8	6	6	6	6	5
730	1	-3	-7	-11	-13	-14	-13	-11	-4	2
740	5	7	8	9	9	10	11	11	10	6
750	1	-3	-7	-4	-3	-1	0	-1	-4	-4
760	-5	-4	-3	-3	-2	0	2	5	8	10
770	12	14	14	14	14	14	13	12	11	10
780	8	6	3	1	-2	-2	0	0	-1	0
790	0	-4	-6	-6	-4	-3	-2	-2	-3	-4
800	-4	-3	0	2	4	2	0	0	-2	-3
810	-1	1	4	6	6	6	3	2	2	5
820	11	16	20	21	19	15	10	8	6	6
830	6	4	1	0	1	2	5	7	8	8
840	7	4	2	0	-1	-3	-6	-8	-9	-8
850	-5	0	4	9	12	16	16	15	12	10
860	9	8	6	2	-1	-4	-4	-2	-1	0
870	6	12	16	18	19	19	19	17	12	6
880	5	3	0	-2	-3	-3	-3	-1	0	0
890	0	-2	-7	-12	-17	-21	-20	-17	-14	-10
900	-5	-3	0	2	4	6	7	6	5	6
910	7	9	11	12	9	6	8	22	33	11
920	-3	-4	-8	-10	-15	-18	-19	-17	-12	-6
930	-2	0	2	4	7	10	13	15	15	10
940	4	0	-2	-2	0	2	7	11	11	9
950	3	5	7	10	13	18	20	18	17	15
960	15	13	10	6	5	5	5	4	1	-2
970	-7	-9	-9	-6	-2	0	3	2	1	1
980	1	2	4	7	10	11	12	11	9	8
990	9	8	7	7	6	5	2	1	0	-1
1000	-2	-3	-5	-6	-3	1	9	16	18	14

TO BE CONTINUED

CONTINUED(S-2390 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	9	3	-1	-3	-1	1	2	0	-4	-9
1020	-10	-11	-10	-9	-8	-10	-11	-12	-11	-9
1030	-8	-9	-8	-9	-7	-3	1	5	8	8
1040	7	4	1	-1	-3	-3	-3	-1	0	0
1050	1	3	5	7	7	9	13	16	19	20
1060	22	23	23	21	21	24	25	25	25	23
1070	17	12	9	7	7	8	7	2	-3	-8
1080	-11	-11	-9	-4	3	10	14	13	12	11
1090	12	14	15	16	16	13	10	11	12	11
1100	8	0	-9	-19	-23	-26	-25	-20	-15	-10
1110	-7	-4	-5	-5	-4	-1	2	6	8	9
1120	11	14	20	28	38	44	47	49	52	53
1130	57	58	50	32	9	-13	-30	-38	-35	-25
1140	-2	28	58	83	109	136	158	174	183	186
1150	181	170	155	139	124	114	107	102	99	94
1160	87	77	59	28	-25	-70	-114	-161	-208	-249
1170	-278	-300	-313	-323	-334	-346	-358	-370	-378	-383
1180	-385	-384	-380	-373	-367	-357	-336	-315	-288	-248
1190	-201	-158	-129	-112	-100	-87	-63	-24	20	63
1200	79	80	82	91	122	166	234	317	379	398
1210	386	333	258	170	62	-36	-91	-86	-8	113
1220	216	276	308	327	338	341	332	308	267	217
1230	164	107	52	3	-28	-35	-18	16	62	103
1240	128	148	159	162	161	154	142	129	117	109
1250	104	102	102	102	101	92	75	51	24	-12
1260	-57	-107	-158	-202	-229	-236	-232	-217	-198	-183
1270	-175	-174	-177	-178	-178	-172	-160	-141	-124	-109
1280	-99	-98	-109	-128	-148	-164	-173	-177	-174	-163
1290	-147	-130	-112	-94	-79	-66	-52	-33	-10	13
1300	27	27	11	-13	-44	-68	-75	-72	-58	-37
1310	-18	-7	0	11	29	60	97	135	165	175
1320	161	131	95	56	17	-12	-23	-20	-3	23
1330	50	77	103	127	146	162	182	202	216	215
1340	196	160	119	75	34	-1	-25	-34	-35	-32
1350	-25	-21	-20	-25	-39	-59	-81	-108	-129	-139
1360	-139	-127	-106	-91	-88	-92	-105	-123	-138	-145
1370	-146	-139	-126	-108	-88	-71	-55	-39	-26	-11
1380	3	21	41	56	62	60	51	37	18	4
1390	0	0	8	22	38	52	63	69	71	72
1400	73	73	67	57	48	40	33	27	22	18
1410	20	26	33	41	51	61	68	75	79	82
1420	82	82	82	83	84	86	85	81	76	72
1430	71	74	79	83	82	71	48	20	-5	-26
1440	-43	-57	-67	-74	-80	-84	-86	-87	-83	-76
1450	-67	-57	-52	-48	-50	-54	-64	-75	-88	-100
1460	-111	-119	-124	-126	-124	-116	-103	-87	-68	-47
1470	-24	3	29	48	56	56	44	19	-11	-37
1480	-53	-63	-69	-71	-68	-62	-53	-43	-33	-26
1490	-21	-19	-15	-14	-13	-11	-7	-1	4	12
1500	18	20	21	22	21	21	21	19	19	17
1510	14	10	9	8	9	11	11	14	15	14
1520	13	16	19	24	29	32	33	33	31	29
1530	28	28	28	27	25	20	13	4	-1	-2

TO BE CONTINUED

CONTINUED(S-2390 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-2	-2	0	2	3	1	0	0	0	5
1550	14	29	42	53	67	80	87	94	98	101
1560	102	103	101	99	95	88	78	67	56	47
1570	40	34	30	27	23	20	17	15	14	13
1580	11	10	9	8	8	8	8	8	6	0
1590	-5	-12	-21	-30	-37	-42	-47	-54	-61	-68
1600	-77	-84	-89	-93	-96	-97	-99	-101	-103	-105
1610	-104	-104	-102	-100	-99	-95	-90	-84	-77	-70
1620	-62	-57	-53	-49	-44	-41	-41	-42	-44	-46
1630	-47	-48	-47	-45	-40	-30	-15	0	15	26
1640	32	36	38	39	39	41	40	38	36	35
1650	35	36	41	47	51	53	54	50	48	46
1660	47	48	51	57	65	74	82	91	99	104
1670	108	111	114	116	116	111	101	87	70	52
1680	38	27	20	16	13	13	13	12	10	8
1690	8	7	7	9	10	11	10	6	0	-5
1700	-13	-19	-22	-22	-23	-23	-22	-20	-19	-20
1710	-25	-28	-29	-32	-35	-38	-43	-49	-59	-69
1720	-74	-75	-74	-70	-67	-65	-66	-70	-76	-83
1730	-87	-88	-87	-84	-80	-76	-73	-69	-62	-51
1740	-42	-33	-22	-8	5	19	29	36	41	41
1750	38	34	28	25	20	15	12	11	8	5
1760	3	0	0	-1	2	10	21	33	42	46
1770	46	45	41	37	34	33	32	32	33	33
1780	32	31	31	32	35	39	44	48	52	53
1790	52	51	48	48	48	47	46	46	46	44
1800	41	34	25	13	1	-11	-23	-31	-35	-36
1810	-35	-35	-33	-32	-31	-30	-30	-29	-29	-33
1820	-38	-48	-55	-59	-62	-67	-72	-76	-79	-80
1830	-78	-73	-64	-53	-42	-33	-28	-25	-24	-25
1840	-27	-30	-29	-25	-17	-7	3	11	18	25
1850	31	35	38	42	43	40	38	34	32	29
1860	29	31	37	44	52	61	68	71	74	76
1870	73	67	60	52	46	42	40	39	39	41
1880	44	46	50	51	51	51	51	48	44	38
1890	31	23	16	10	4	-1	-8	-14	-22	-28
1900	-33	-39	-44	-48	-53	-60	-68	-75	-82	-86
1910	-89	-92	-93	-93	-92	-89	-86	-84	-82	-79
1920	-75	-73	-67	-58	-47	-35	-25	-19	-11	-7
1930	-5	-6	-7	-10	-11	-13	-18	-20	-21	-22
1940	-24	-23	-20	-13	-5	2	9	15	21	26
1950	29	29	29	29	28	28	31	34	36	42
1960	52	58	63	67	71	72	73	73	71	68
1970	64	61	56	51	46	42	39	36	32	28
1980	26	24	22	19	17	12	6	0	-4	-8
1990	-12	-16	-22	-27	-33	-39	-42	-43	-43	-43
2000	-42	-41	-39	-35	-30	-25	-22	-20	-17	-15
2010	-13	-11	-9	-8	-8	-9	-9	-10	-11	-10
2020	-8	-7	-6	-6	-6	-6	-7	-7	-8	-12
2030	-14	-15	-17	-17	-12	-9	-4	-2	1	8
2040	16	24	30	33	32	30	25	20	17	13
2050	9	8	8	8	8	6	5	5	6	6
2060	5	4	2	-3	-10	-16	-20	-23	-23	-23

TO BE CONTINUED

CONTINUED(S-2390 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-20	-17	-16	-14	-13	-12	-11	-10	-8	-9
2080	-11	-15	-19	-21	-20	-18	-16	-14	-12	-10
2090	-9	-8	-6	-4	-2	0	2	3	4	6
2100	6	6	8	10	13	16	17	16	14	12
2110	10	7	7	10	14	18	20	21	21	21
2120	22	25	28	28	27	26	22	16	10	4
2130	0	-3	-8	-12	-13	-16	-17	-15	-13	-9
2140	-6	-3	-4	-6	-8	-9	-9	-10	-11	-10
2150	-9	-8	-8	-9	-10	-11	-13	-14	-14	-14
2160	-13	-15	-16	-17	-19	-21	-23	-26	-26	-24
2170	-21	-15	-12	-10	-10	-12	-14	-17	-21	-24
2180	-24	-22	-19	-14	-9	-4	0	6	11	14
2190	17	22	25	26	27	29	34	37	40	44
2200	48	51	52	52	54	55	57	57	53	46
2210	38	28	19	14	11	10	11	13	14	14
2220	12	9	7	4	0	-4	-7	-11	-16	-21
2230	-24	-26	-26	-26	-24	-21	-18	-16	-16	-17
2240	-18	-20	-22	-26	-32	-38	-43	-47	-50	-52
2250	-50	-48	-46	-46	-44	-44	-45	-46	-48	-49
2260	-49	-50	-52	-55	-56	-58	-59	-59	-58	-56
2270	-53	-46	-39	-31	-20	-10	-3	4	9	12
2280	12	13	14	14	16	21	26	31	36	42
2290	48	55	61	66	72	76	77	78	78	77
2300	74	71	67	66	62	60	57	56	55	54
2310	55	56	55	55	52	49	45	41	39	36
2320	32	27	22	16	11	8	5	4	4	4
2330	5	5	4	1	-3	-12	-22	-33	-45	-57
2340	-68	-75	-79	-81	-80	-79	-79	-78	-78	-77
2350	-71	-64	-55	-48	-44	-41	-39	-29	-7	-12
2360	-42	-55	-56	-54	-52	-49	-47	-47	-44	-41
2370	-35	-26	-16	-11	-10	-8	-7	-6	-6	-4
2380	-2	-1	0	3	4	6	11	15	20	24
2390	25	26	25	24	22	19	17	16	17	22
2400	29	37	42	48	54	59	59	59	59	59
2410	55	49	44	40	38	33	28	26	25	26
2420	27	26	24	20	16	14	15	15	16	18
2430	19	18	15	10	5	0	-4	-9	-10	-10
2440	-13	-16	-17	-17	-17	-16	-13	-12	-9	-8
2450	-9	-11	-14	-16	-19	-21	-22	-21	-19	-15
2460	-13	-12	-12	-13	-14	-16	-19	-22	-25	-29
2470	-32	-36	-40	-41	-43	-44	-43	-42	-37	-33
2480	-31	-29	-29	-30	-30	-29	-29	-30	-29	-29
2490	-30	-28	-25	-20	-17	-14	-11	-6	-3	-1
2500	1	4	7	10	13	17	21	26	30	33
2510	35	41	48	54	60	66	70	70	70	70
2520	66	60	54	49	44	40	36	33	31	29
2530	29	29	29	29	30	28	25	22	19	14
2540	11	8	4	1	0	0	0	-2	-2	-4
2550	-6	-10	-13	-17	-24	-32	-39	-44	-49	-52
2560	-54	-55	-57	-55	-49	-43	-38	-34	-29	-25
2570	-25	-26	-28	-32	-34	-36	-39	-40	-40	-40
2580	-39	-37	-36	-32	-28	-23	-20	-16	-11	-9
2590	-4	0	1	3	3	3	4	5	5	7

TO BE CONTINUED

CONTINUED(S-2390 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	9	10	11	10	9	8	9	10	11	13
2610	16	17	17	19	20	21	20	18	20	20
2620	20	21	21	21	21	22	23	26	28	28
2630	26	24	23	21	22	25	29	31	34	37
2640	38	39	40	39	37	33	29	25	18	9
2650	2	-2	-6	-11	-13	-14	-16	-16	-17	-18
2660	-18	-18	-18	-18	-18	-20	-23	-27	-31	-34
2670	-35	-37	-37	-38	-39	-39	-40	-40	-40	-39
2680	-40	-41	-43	-43	-43	-42	-40	-34	-29	-25
2690	-22	-18	-17	-14	-12	-11	-9	-7	-7	-8
2700	-8	-9	-9	-8	-6	-3	1	4	6	7
2710	8	10	13	16	16	17	18	15	13	14
2720	15	17	19	21	25	26	29	31	32	34
2730	36	38	40	40	41	42	42	42	42	40
2740	38	37	34	30	29	27	23	21	23	21
2750	17	14	11	8	4	0	0	-2	-5	-8
2760	-7	-9	-12	-16	-17	-19	-20	-21	-23	-25
2770	-26	-29	-32	-34	-37	-40	-41	-42	-43	-42
2780	-40	-38	-36	-34	-33	-32	-31	-32	-32	-32
2790	-32	-28	-24	-20	-18	-15	-13	-10	-7	-2
2800	1	4	6	8	11	14	17	22	24	26
2810	26	24	24	23	22	20	21	23	23	22
2820	18	16	16	17	21	23	25	25	25	23
2830	22	21	18	15	13	13	11	8	5	3
2840	0	-2	-6	-9	-13	-16	-19	-21	-24	-27
2850	-29	-30	-30	-27	-25	-23	-20	-18	-15	-13
2860	-12	-10	-10	-13	-16	-19	-19	-19	-18	-15
2870	-12	-9	-7	-4	-2	-1	-1	-2	-2	0
2880	0	1	3	4	6	8	8	9	10	10
2890	10	10	11	11	11	10	10	10	9	7
2900	8	7	6	6	6	6	6	6	7	8
2910	9	9	7	7	8	8	9	9	9	7
2920	4	0	-6	-9	-8	-8	-9	-8	-5	-5
2930	-5	-6	-6	-6	-5	-4	-5	-6	-6	-7
2940	-9	-12	-15	-17	-17	-16	-15	-12	-9	-7
2950	-5	-2	0	1	3	4	7	8	7	8
2960	10	10	9	8	9	9	7	6	6	5
2970	5	5	5	4	2	1	2	3	2	1
2980	1	3	4	5	5	5	6	7	7	6
2990	4	2	0	-1	-3	-5	-11	-16	-17	-17

END

RECORD = S-2390 COMPONENT = EAST STATION = KUSHIRO-JI-S
DATE AND TIME = 1991-10-25-19-39 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000.

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	1	1	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	1	2	4	7
20	11	14	16	18	19	20	21	22	22	20
30	19	16	12	8	4	0	-3	-5	-7	-8
40	-8	-6	-3	0	3	6	8	10	11	13
50	13	13	12	10	8	6	3	0	-1	-2
60	-3	-4	-4	-2	0	0	1	1	0	-1
70	-1	-1	1	5	11	15	20	23	19	13
80	8	6	1	-8	-15	-18	-17	-14	-11	-8
90	-5	-2	2	8	16	21	24	27	27	26
100	24	24	24	24	20	11	-2	-18	-30	-35
110	-35	-32	-26	-19	-18	-17	-18	-19	-17	-10
120	6	27	44	53	55	52	44	34	19	5
130	-7	-16	-20	-22	-20	-14	-7	-5	-7	-13
140	-19	-21	-18	-9	2	10	19	23	23	20
150	17	15	14	16	18	20	22	25	31	34
160	35	32	25	8	-8	-17	-20	-20	-18	-15
170	-13	-11	-12	-14	-13	-6	4	14	20	25
180	27	26	22	16	11	6	5	4	3	4
190	3	3	2	2	0	-9	-20	-29	-32	-31
200	-26	-18	-7	1	5	9	11	11	11	11
210	11	11	11	12	13	11	6	1	-3	-8
220	-11	-13	-13	-9	-5	-4	-3	-4	-7	-9
230	-10	-9	-9	-7	-5	-4	0	5	11	16
240	18	16	11	7	5	4	6	8	8	8
250	5	3	1	-1	-2	-1	0	2	3	4
260	7	12	17	17	13	9	5	1	0	-4
270	-6	-8	-12	-14	-16	-18	-20	-18	-16	-12
280	-5	1	6	11	15	17	16	15	18	21
290	24	24	21	15	9	4	0	-4	-4	-3
300	-4	-8	-10	-9	-5	1	9	13	12	7
310	3	2	3	6	10	12	14	13	9	7
320	5	4	4	5	7	7	5	3	2	4
330	7	6	3	3	4	5	6	6	6	4
340	3	1	0	-3	-5	-8	-10	-11	-12	-11
350	-9	-5	-3	0	3	6	8	9	9	8
360	5	1	-5	-7	-7	-7	-4	-2	-1	-2
370	-4	-7	-8	-9	-7	-3	0	0	2	6
380	7	7	8	8	8	8	8	9	11	13
390	13	13	13	12	10	7	6	8	12	17
400	19	18	13	8	2	-2	-5	-5	-3	1
410	4	6	4	0	-2	-6	-9	-9	-8	-5
420	0	3	7	10	9	3	-8	-18	-25	-28
430	-24	-16	-8	-1	1	2	1	1	1	1
440	6	14	21	24	25	21	14	5	-3	-10
450	-13	-11	-6	-2	0	0	-2	-6	-11	-14
460	-14	-8	-3	-1	0	2	5	7	7	6
470	5	5	4	3	1	1	3	5	6	9

TO BE CONTINUED

CONTINUED(S-2390 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	11	9	8	6	4	0	-1	0	1	0
490	-7	-14	-16	-18	-19	-19	-19	-17	-12	-8
500	-5	-3	-1	2	4	4	4	4	4	4
510	6	12	18	21	22	21	16	10	6	2
520	0	0	-1	-2	-3	-6	-9	-12	-13	-12
530	-8	-1	3	6	9	10	8	7	5	5
540	4	7	8	5	0	-1	-2	-2	2	4
550	2	1	0	2	2	3	4	6	9	10
560	10	11	12	13	12	10	10	10	11	10
570	8	4	0	-3	-7	-9	-10	-13	-14	-15
580	-14	-9	-5	-1	1	3	2	1	0	0
590	0	1	2	3	4	3	0	-2	-2	-1
600	1	5	6	6	5	3	-2	-6	-9	-11
610	-10	-8	-5	-2	-2	0	2	1	0	0
620	1	1	-2	-3	-4	-5	-4	-3	-1	0
630	0	-2	-4	-4	-3	0	6	10	11	12
640	10	7	3	0	-1	-3	-2	-3	-5	-5
650	-7	-9	-8	-9	-9	-7	-5	-2	0	0
660	2	3	2	1	0	-2	-1	0	0	-1
670	-1	0	2	4	5	7	9	10	9	9
680	9	6	1	0	1	2	6	10	13	15
690	16	15	13	10	5	1	-1	-2	-2	-2
700	-1	1	5	6	4	2	0	-3	-6	-7
710	-7	-8	-10	-9	-7	-8	-12	-18	-64	-132
720	-61	-9	1	5	7	8	5	4	2	1
730	1	1	1	1	1	1	1	0	-1	-3
740	-7	-10	-10	-8	-6	-3	-1	0	0	0
750	-1	-4	-8	-8	-8	-9	-8	-8	-7	-7
760	-6	-3	-2	-1	1	3	4	5	8	11
770	12	12	11	10	9	7	5	7	8	9
780	12	14	12	11	6	0	-2	-5	-6	-4
790	-2	-1	-1	-3	-3	-2	-1	0	0	0
800	0	0	0	0	1	2	1	0	-2	-7
810	-10	-9	-7	-4	-1	2	3	1	-2	-4
820	-5	-2	3	8	12	11	7	3	-1	-5
830	-6	-4	-2	-2	-1	0	0	0	0	0
840	-1	-3	0	15	38	46	47	47	47	44
850	30	7	0	0	1	4	6	7	7	6
860	5	4	4	6	6	7	10	11	9	9
870	9	9	8	5	0	-2	-5	-7	-7	-4
880	-3	-4	-7	-9	-11	-13	-10	-8	-8	-6
890	-3	-5	-7	-6	-7	-5	0	0	2	1
900	0	0	1	2	3	4	5	5	2	-2	-4
910	-5	-4	-1	2	4	5	5	5	6	7
920	8	9	10	11	8	5	3	0	-2	-5
930	-5	-4	-5	-7	-7	-5	-4	-2	0	3
940	5	5	5	6	7	6	5	4	2	0
950	-3	-4	-4	-5	-5	-3	-7	-7	-5	-4
960	-3	-3	-3	-3	-3	-2	-3	-3	-2	0
970	2	4	8	11	10	8	7	5	2	0
980	-1	-2	-3	-5	-7	-7	-6	-4	-3	0
990	1	4	5	9	11	11	11	10	10	8
1000	6	5	6	6	5	2	0	-3	-3	-2

TO BE CONTINUED

CONTINUED(S-2390 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	0	0	0	0	0	0	1	1	0	0
1020	-1	-5	-5	-4	-3	-3	-2	-4	-4	-2
1030	1	2	2	2	3	5	4	3	2	2
1040	1	-1	-2	-1	-2	-4	-4	-3	-2	0
1050	3	4	5	6	6	4	5	8	10	12
1060	11	7	7	6	5	4	3	0	-7	-12
1070	-17	-21	-21	-18	-13	-8	-5	-4	-3	0
1080	4	7	9	9	8	5	0	-6	-9	-10
1090	-13	-11	-8	-2	0	1	3	3	4	10
1100	14	16	18	17	14	14	13	13	14	19
1110	23	25	23	14	1	-9	-17	-22	-27	-31
1120	-33	-32	-31	-33	-34	-34	-34	-35	-37	-38
1130	-39	-40	-42	-50	-58	-64	-65	-50	-54	-42
1140	-24	-11	-6	-5	-7	-13	-25	-43	-66	-93
1150	-121	-143	-155	-158	-151	-137	-128	-128	-138	-161
1160	-185	-199	-197	-174	-122	-42	36	141	231	316
1170	407	475	542	605	652	692	716	699	628	529
1180	412	312	242	212	224	266	308	331	312	214
1190	35	-241	-494	-551	-521	-456	-367	-272	-197	-160
1200	-120	-79	-10	91	164	195	195	123	-45	-227
1210	-292	-298	-282	-265	-257	-255	-254	-243	-200	-113
1220	4	104	146	150	123	53	5	-25	-37	-43
1230	-51	-75	-121	-173	-205	-199	-170	-210	-233	-233
1240	-235	-243	-250	-254	-242	-209	-168	-111	-59	-23
1250	7	36	66	96	138	193	237	257	253	225
1260	178	132	110	104	103	103	98	81	53	31
1270	24	28	40	56	72	87	96	100	100	99
1280	93	82	64	36	-5	-57	-94	-107	-104	-92
1290	-72	-52	-32	-10	10	31	58	79	87	88
1300	83	73	60	51	47	45	47	51	54	54
1310	48	39	25	9	-1	-7	-5	7	29	52
1320	74	94	110	116	115	109	101	96	96	99
1330	101	96	78	48	18	-7	-17	-16	-10	1
1340	10	11	5	-9	-36	-88	-129	-153	-161	-150
1350	-123	-82	-28	12	28	32	28	15	-2	-22
1360	-43	-69	-107	-152	-186	-203	-205	-193	-171	-148
1370	-123	-95	-59	-25	8	38	55	59	49	23
1380	-15	-57	-89	-106	-111	-103	-84	-61	-38	-15
1390	1	10	14	19	25	34	45	53	58	64
1400	71	78	83	85	85	82	73	63	51	39
1410	28	17	7	-5	-20	-37	-54	-67	-76	-78
1420	-77	-73	-67	-59	-49	-38	-21	1	30	64
1430	99	127	142	149	148	140	125	111	100	90
1440	82	77	70	55	60	54	48	40	34	31
1450	29	27	25	22	23	25	25	25	26	27
1460	28	27	25	21	13	1	-14	-36	-62	-86
1470	-108	-123	-132	-132	-124	-110	-102	-99	-96	-93
1480	-91	-89	-73	-51	-31	-15	-5	0	5	8
1490	11	16	21	20	9	-12	-36	-57	-71	-77
1500	-76	-69	-58	-47	-34	-22	-9	6	22	37
1510	57	75	83	87	83	72	65	63	70	82
1520	92	97	96	89	77	63	54	51	51	55
1530	60	61	59	55	48	41	36	34	31	28

TO BE CONTINUED

CONTINUED(S-2390 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	22	10	-2	-10	-16	-17	-19	-20	-23	-31
1550	-34	-38	-46	-53	-58	-59	-61	-65	-68	-73
1560	-78	-80	-76	-70	-62	-52	-46	-44	-45	-49
1570	-56	-64	-70	-72	-70	-67	-61	-54	-48	-42
1580	-38	-35	-36	-34	-25	-14	-4	2	6	11
1590	17	24	28	30	34	41	48	53	56	56
1600	55	54	48	40	34	31	29	29	31	34
1610	38	43	47	55	61	64	67	67	63	55
1620	48	39	27	14	2	-7	-14	-19	-21	-19
1630	-13	-7	-1	4	9	11	12	15	17	18
1640	22	25	26	24	14	-7	-31	-48	-64	-77
1650	-91	-103	-110	-117	-124	-125	-125	-124	-121	-113
1660	-107	-97	-84	-66	-48	-32	-17	-4	5	13
1670	20	24	30	36	42	44	45	46	46	42
1680	35	32	31	30	30	35	40	46	52	59
1690	67	74	78	78	77	76	73	66	60	52
1700	40	28	16	4	-4	-8	-11	-11	-9	-6
1710	-1	2	1	0	-1	-2	-4	-5	-4	-6
1720	-8	-11	-13	-18	-23	-31	-37	-42	-45	-47
1730	-46	-44	-44	-44	-44	-44	-44	-44	-41	-35
1740	-28	-19	-12	-8	-6	-6	-11	-17	-25	-30
1750	-32	-34	-34	-36	-38	-36	-35	-35	-34	-28
1760	-9	8	22	31	36	38	37	35	32	30
1770	28	27	26	25	24	24	29	34	38	41
1780	40	40	43	45	44	41	39	34	27	17
1790	5	-3	-7	-9	-9	-8	-5	-3	-2	-6
1800	-14	-22	-28	-30	-31	-32	-30	-26	-22	-17
1810	-12	-6	0	8	14	16	18	18	15	11
1820	8	4	0	-2	-2	0	3	4	5	7
1830	7	7	4	0	-3	-3	-1	4	8	9
1840	12	12	11	9	6	1	-4	-10	-15	-18
1850	-22	-26	-27	-27	-20	-12	-8	-7	-7	-8
1860	-7	-6	-5	-6	-8	-14	-22	-28	-32	-36
1870	-38	-37	-33	-30	-28	-27	-28	-32	-35	-38
1880	-42	-46	-50	-54	-53	-48	-38	-26	-17	-10
1890	-1	3	7	13	15	14	12	7	2	0
1900	-4	-8	-11	-11	-7	-1	3	9	16	24
1910	30	37	43	46	48	51	53	53	51	50
1920	50	51	51	52	53	53	56	54	54	57
1930	58	56	54	52	50	45	39	36	36	33
1940	30	29	28	26	22	17	14	12	10	10
1950	10	10	7	4	0	-3	-9	-17	-21	-24
1960	-28	-32	-36	-35	-36	-36	-32	-27	-24	-25
1970	-24	-24	-29	-35	-42	-49	-53	-56	-59	-61
1980	-62	-63	-64	-64	-61	-58	-57	-56	-55	-55
1990	-55	-56	-56	-53	-47	-44	-41	-39	-40	-39
2000	-37	-37	-37	-37	-36	-35	-33	-31	-28	-22
2010	-17	-12	-8	-3	1	4	6	10	14	18
2020	19	19	21	22	22	25	30	34	38	44
2030	50	53	53	52	52	48	42	41	42	42
2040	43	43	44	46	49	52	53	54	55	54
2050	50	47	42	35	30	24	20	17	13	10
2060	7	7	11	14	18	19	18	13	6	0

TO BE CONTINUED

CONTINUED(S-2390 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-4	-8	-10	-11	-12	-14	-16	-17	-17	-17
2080	-15	-13	-12	-12	-12	-14	-16	-20	-25	-28
2090	-32	-32	-31	-32	-31	-27	-25	-22	-19	-20
2100	-21	-18	-17	-19	-22	-25	-28	-30	-32	-34
2110	-36	-35	-34	-34	-33	-32	-30	-29	-30	-32
2120	-24	-35	-35	-31	-28	-27	-26	-25	-25	-23
2130	-21	-17	-14	-10	-6	-5	-5	-1	4	12
2140	17	21	23	25	25	24	23	21	18	14
2150	11	8	6	7	8	9	10	13	17	21
2160	24	25	24	22	21	18	17	17	17	13
2170	7	6	6	10	17	25	31	33	32	33
2180	32	28	24	20	16	11	4	0	-2	-5
2190	-9	-11	-12	-14	-14	-14	-16	-16	-16	-18
2200	-20	-21	-23	-26	-23	-19	-16	-14	-9	-1
2210	2	4	3	3	3	2	0	-2	-1	0
2220	0	0	0	0	0	1	2	3	3	3
2230	2	0	-2	-5	-4	-3	-1	0	0	-4
2240	-7	-9	-12	-14	-16	-18	-18	-20	-22	-20
2250	-16	-11	-3	2	3	3	3	1	0	-3
2260	-4	-3	-2	-1	0	-1	-3	-7	-11	-11
2270	-9	-3	0	0	0	-1	-6	-10	-11	-13
2280	-16	-18	-20	-21	-21	-19	-14	-8	-3	0
2290	3	4	3	3	3	1	-1	-5	-10	-15
2300	-18	-20	-18	-16	-15	-11	-4	0	3	6
2310	8	9	9	10	9	9	9	9	10	11
2320	11	9	8	7	5	3	5	7	9	12
2330	16	19	19	19	21	22	22	21	19	21
2340	23	22	20	19	20	19	17	14	8	3
2350	0	-2	-1	-1	-2	-3	-5	-9	-15	-18
2360	-19	-19	-16	-14	-11	-8	-6	-5	-7	-9
2370	-12	-13	-14	-10	-7	-8	-9	-8	-8	-10
2380	-15	-19	-20	-22	-25	-25	-24	-24	-23	-22
2390	-22	-23	-26	-29	-31	-30	-29	-29	-28	-24
2400	-23	-25	-26	-25	-27	-31	-33	-33	-34	-31
2410	-29	-26	-21	-15	-9	-2	3	8	12	16
2420	16	13	10	8	6	6	8	8	8	8
2430	9	11	14	15	17	19	19	18	17	17
2440	19	21	21	20	19	19	20	19	18	20
2450	21	21	19	15	11	6	0	-1	-1	-1
2460	0	2	3	6	8	8	11	14	16	19
2470	22	25	25	26	26	25	24	23	23	22
2480	17	10	5	0	-4	-10	-15	-18	-18	-21
2490	-24	-24	-25	-26	-26	-26	-26	-28	-30	-33
2500	-35	-38	-41	-43	-44	-44	-45	-44	-43	-41
2510	-39	-35	-31	-26	-23	-19	-15	-14	-14	-11
2520	-10	-9	-9	-12	-12	-10	-7	-7	-8	-10
2530	-13	-14	-14	-16	-16	-14	-13	-12	-9	-7
2540	-5	-1	5	10	16	19	20	21	20	18
2550	16	13	11	8	6	5	5	5	5	7
2560	10	14	20	24	26	25	23	21	19	18
2570	17	16	15	13	11	10	9	8	7	6
2580	5	3	0	-2	-7	-12	-15	-14	-14	-14
2590	-14	-14	-12	-13	-14	-13	-12	-14	-16	-18

TO BE CONTINUED

CONTINUED(S-2390 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-21	-24	-26	-25	-24	-22	-20	-18	-14	-13
2610	-14	-14	-12	-10	-7	-3	0	2	1	6
2620	7	9	8	5	3	0	0	-1	-3	-3
2630	-4	-5	-3	-2	-4	-7	-8	-6	-3	-2
2640	-1	0	-2	-5	-5	-6	-7	-8	-9	-9
2650	-10	-9	-3	0	1	3	6	5	6	10
2660	17	22	26	28	29	33	35	34	31	27
2670	23	18	13	7	2	-4	-13	-17	-20	-22
2680	-23	-22	-19	-19	-23	-28	-30	-34	-39	-42
2690	-40	-37	-36	-35	-33	-32	-30	-28	-27	-27
2700	-28	-28	-27	-27	-27	-27	-27	-23	-19	-13
2710	-6	0	2	2	-1	-3	0	-1	-2	-2
2720	0	2	5	8	9	10	11	14	14	14
2730	14	9	6	5	5	5	6	8	9	9
2740	12	14	14	15	15	16	16	12	10	9
2750	6	3	1	0	0	0	0	0	5	8
2760	7	4	5	4	2	0	-4	-8	-9	-10
2770	-10	-8	-6	-5	-3	-3	-3	-4	-4	-4
2780	-5	-7	-9	-10	-12	-14	-15	-16	-16	-14
2790	-14	-11	-8	-7	-7	-8	-11	-14	-16	-14
2800	-12	-10	-11	-13	-14	-16	-15	-15	-15	-14
2810	-14	-14	-12	-9	-7	-6	-3	-1	1	4
2820	5	6	9	10	10	12	15	15	15	14
2830	13	11	9	7	6	5	4	2	-1	-2
2840	-3	-3	-5	-7	-8	-7	-4	-2	-3	-1
2850	-2	-3	-4	-5	-5	-7	-9	-8	-7	-9
2860	-10	-10	-9	-9	-8	-6	-7	-8	-8	-8
2870	-9	-7	-3	-3	-5	-7	-10	-12	-13	-13
2880	-13	-12	-11	-13	-14	-14	-14	-15	-16	-15
2890	-9	-6	-5	-5	-8	-10	-11	-8	-3	-1
2900	-1	-2	-3	-2	0	1	3	5	7	8
2910	9	9	10	12	13	13	13	13	13	13
2920	13	11	9	8	7	8	8	7	5	4
2930	5	1	-1	-4	-3	-5	-11	-12	-10	-7
2940	-4	-4	-7	-8	-6	-4	-4	-5	-5	-7
2950	-8	-8	-7	-7	-8	-10	-10	-8	-9	-9
2960	-8	-8	-8	-8	-7	-7	-8	-10	-10	-11
2970	-12	-10	-13	-16	-19	-19	-14	-8	-5	-4
2980	-4	-5	-6	-6	-5	-5	-7	-7	-7	-7
2990	-8	-8	-8	-6	-4	-4	-3	-2	-1	0

END

RECORD = S-2390 COMPONENT = DOWN STATION = KUSHIRO-JI-S
DATE AND TIME = 1991-10-25-19-39 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000.

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	33	33	33	32	32	32	32	31	31	29
10	27	25	23	21	19	16	14	12	9	6
20	3	0	-1	-3	-5	-7	-9	-11	-12	-13
30	-14	-14	-11	-9	-6	-3	0	2	4	7
40	10	12	14	16	19	21	23	25	27	27
50	27	25	24	23	20	15	11	8	6	4
60	3	2	1	0	0	0	-1	0	0	1
70	2	3	3	3	2	0	-1	-3	-6	-7
80	-8	-4	3	12	21	27	31	32	31	28
90	24	17	11	6	1	-1	-2	-3	-3	-4
100	-3	-1	0	-1	-3	-5	-5	-5	-5	-4
110	-3	-1	0	1	2	2	1	0	0	2
120	12	22	30	35	38	38	35	33	31	29
130	28	28	30	30	26	17	12	7	3	1
140	1	1	1	1	1	2	2	0	-1	-3
150	-3	-2	-1	-1	-2	-1	0	2	6	12
160	14	14	13	11	11	11	12	12	10	10
170	14	18	22	24	24	21	15	7	-1	-7
180	-11	-12	-9	-2	2	3	1	4	5	4
190	4	4	4	5	5	8	11	11	11	9
200	6	5	4	5	7	9	9	7	5	0
210	-4	-6	-6	0	10	18	19	13	9	13
220	18	22	25	23	19	16	15	12	12	13
230	14	15	14	10	8	4	0	-1	0	0
240	-1	0	3	5	6	7	6	5	1	-2
250	-4	-5	-3	-1	0	0	0	0	-1	-2
260	-1	2	7	13	16	18	19	19	19	16
270	16	12	13	16	14	11	8	5	1	-1
280	-3	-4	-4	-2	0	0	0	2	4	6
290	6	7	7	7	7	8	9	9	9	9
300	7	6	6	8	10	10	9	8	7	5
310	4	5	6	6	6	4	2	-1	-4	-4
320	-3	-1	1	2	3	4	5	6	6	6
330	8	12	14	14	15	14	14	13	9	3
340	0	-2	-4	-4	-3	-2	-1	0	1	2
350	3	4	4	4	4	4	4	2	0	0
360	4	7	10	12	14	13	13	16	17	16
370	16	16	16	17	14	11	10	10	11	11
380	9	7	5	1	-2	-1	1	3	6	9
390	11	12	10	7	2	-1	-3	-5	-6	-7
400	-11	-11	-10	-9	-6	-6	-5	-4	-2	-2
410	-2	0	1	3	4	5	8	9	11	13
420	16	20	22	20	18	15	10	8	7	6
430	5	6	7	7	9	10	9	7	3	1
440	0	0	0	0	-1	-1	-1	-1	-2	-3
450	-1	0	0	0	1	1	3	1	-1	-1
460	0	1	1	2	4	6	10	13	14	11
470	7	7	6	3	2	2	2	2	3	6

TO BE CONTINUED

CONTINUED(S-2390 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	8	7	6	6	6	4	4	4	4	3
490	2	1	0	0	-1	-4	-6	-5	-3	-3
500	-3	-2	-1	0	0	2	3	3	4	4
510	7	8	8	8	6	4	3	2	3	4
520	6	7	8	8	9	8	6	5	4	2
530	1	1	1	2	4	5	6	5	6	6
540	4	3	3	1	0	-1	-2	0	2	4
550	2	1	1	1	3	5	7	7	6	6
560	5	6	8	12	14	16	17	18	18	16
570	13	10	7	6	6	6	6	6	5	5
580	6	7	6	5	5	6	7	7	7	7
590	7	6	6	5	3	0	-1	-2	-4	-5
600	-6	-6	-5	-4	-2	1	5	6	8	9
610	10	10	8	6	6	5	5	5	6	7
620	9	8	7	4	1	0	0	0	1	2
630	4	2	0	0	0	-1	-1	0	1	3
640	5	7	10	11	8	5	2	0	0	-2
650	-3	-2	0	4	7	7	5	3	2	2
660	1	0	2	4	5	4	2	1	0	0
670	1	3	4	4	5	7	7	7	8	9
680	9	9	7	7	7	7	8	8	6	3
690	0	0	1	1	1	1	0	0	0	-1
700	-2	-1	0	1	1	0	0	1	2	2
710	4	5	6	3	2	1	2	4	6	6
720	7	6	5	3	0	-1	0	1	0	-1
730	0	0	0	0	0	1	1	0	-1	-4
740	-7	-7	-3	-2	-2	0	0	1	1	-1
750	-3	0	5	7	7	6	7	7	7	7
760	7	9	10	10	10	9	8	7	7	8
770	8	8	8	7	7	6	7	10	11	11
780	9	7	2	0	1	2	5	6	6	1
790	0	-2	-4	-4	-2	0	2	3	2	-1
800	-4	-6	-7	-7	-7	-6	-5	-4	-3	-1
810	1	2	2	1	0	-1	-2	0	1	0
820	0	0	1	-2	-5	-3	-3	-1	2	6
830	6	3	1	1	3	5	7	7	8	8
840	6	4	3	2	2	2	0	-2	-2	0
850	2	2	2	5	6	6	3	2	2	7
860	10	12	12	13	14	14	15	22	16	10
870	7	0	-26	-45	-29	-2	6	7	9	9
880	9	8	7	6	8	8	8	9	11	10
890	9	8	7	8	6	5	5	3	0	-3
900	-4	-4	-4	-3	-3	-5	-7	-7	-6	-4
910	-2	0	0	0	-2	-5	-3	-1	1	5
920	8	9	7	4	1	1	4	6	5	4
930	2	0	1	0	0	-2	-4	-2	1	5
940	6	7	10	12	12	12	11	11	9	8
950	6	3	3	4	5	3	0	-4	-6	-8
960	-11	-12	-11	-7	-5	-6	-9	-7	-5	-5
970	-6	-5	-4	-1	5	12	17	20	22	23
980	20	16	12	12	13	12	12	13	13	16
990	14	8	3	0	-2	-1	1	3	3	2
1000	0	-1	-5	-7	-6	-2	2	7	11	12

TO BE CONTINUED

CONTINUED(S-2390 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	11	10	6	1	-5	-10	-12	-14	-13	-8
1020	-2	0	4	7	8	9	8	6	2	0
1030	-1	0	4	4	2	2	2	3	3	3
1040	3	3	1	0	-1	-1	-1	2	7	10
1050	11	13	13	11	10	9	7	6	7	7
1060	7	7	6	6	10	11	11	11	10	7
1070	5	2	-2	-6	-8	-11	-13	-14	-12	-6
1080	0	5	9	12	12	12	12	12	13	17
1090	19	19	18	17	14	12	11	10	11	10
1100	4	-1	-7	-12	-15	-16	-19	-22	-24	-23
1110	-21	-15	-5	0	7	14	21	24	27	27
1120	26	26	24	19	13	9	3	0	-3	-4
1130	-4	-2	-2	-1	-1	-6	-13	-17	-18	-18
1140	-14	-9	-2	5	14	20	23	23	23	21
1150	16	11	7	5	5	7	6	3	-1	-5
1160	-6	-6	-5	-4	-3	-2	-4	-6	-6	-5
1170	-7	-9	-13	-17	-21	-21	-18	-10	1	16
1180	34	50	62	70	74	77	77	74	68	59
1190	51	42	33	23	12	0	-9	-11	-11	-6
1200	-1	3	5	3	-3	-12	-20	-21	-19	-12
1210	1	12	15	14	8	-3	-15	-24	-28	-28
1220	-29	-33	-44	-51	-76	-83	-82	-71	-54	-43
1230	-34	-26	-18	-11	-7	-3	5	14	30	48
1240	61	71	76	81	81	79	79	76	69	61
1250	54	49	45	42	41	39	36	32	27	20
1260	14	11	10	9	7	6	3	0	-4	-7
1270	-10	-10	-3	7	15	25	32	35	32	26
1280	20	11	2	-3	-5	-5	-4	-4	-4	-5
1290	-6	-8	-11	-15	-16	-13	-10	-7	-4	0
1300	4	7	6	2	1	0	0	0	1	4
1310	8	9	9	5	-4	-14	-23	-30	-35	-39
1320	-40	-40	-41	-42	-41	-37	-33	-29	-25	-23
1330	-25	-26	-26	-24	-21	-19	-17	-14	-8	0
1340	11	19	26	29	32	33	35	36	38	40
1350	42	42	45	50	50	50	51	53	53	53
1360	54	54	53	50	45	39	30	22	14	6
1370	-2	-11	-23	-29	-35	-39	-43	-49	-56	-62
1380	-66	-70	-72	-75	-75	-75	-75	-75	-72	-65
1390	-54	-45	-35	-23	-13	-6	-1	0	2	4
1400	5	10	22	36	49	57	61	64	66	66
1410	63	57	51	46	39	31	27	23	21	20
1420	20	19	18	17	16	15	15	14	12	11
1430	11	11	10	8	4	-3	-11	-18	-25	-31
1440	-38	-43	-41	-40	-42	-42	-42	-39	-36	-33
1450	-31	-28	-26	-23	-21	-19	-17	-12	-5	0
1460	6	12	19	27	34	39	43	45	44	40
1470	36	30	24	20	18	15	10	1	-6	-12
1480	-19	-26	-29	-32	-34	-36	-36	-37	-36	-33
1490	-30	-27	-21	-15	-9	-3	1	5	10	15
1500	20	23	25	27	30	32	34	35	34	31
1510	29	28	28	28	29	29	32	37	40	38
1520	34	31	28	24	21	19	16	10	2	-6
1530	-17	-27	-36	-41	-45	-49	-52	-55	-57	-59

TO BE CONTINUED

CONTINUED(S-2390 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-58	-56	-52	-47	-43	-41	-39	-32	-29	-29
1550	-28	-24	-22	-20	-19	-20	-20	-21	-21	-20
1560	-17	-15	-12	-10	-7	-5	-3	0	1	4
1570	9	15	19	21	22	23	25	28	32	33
1580	34	33	29	25	24	23	23	24	24	23
1590	23	22	21	19	18	18	17	14	10	7
1600	3	1	0	0	0	3	6	9	9	10
1610	9	6	5	4	1	-1	-4	-6	-10	-15
1620	-19	-19	-19	-18	-18	-19	-18	-19	-23	-26
1630	-29	-29	-30	-30	-27	-24	-21	-16	-13	-10
1640	-8	-6	-2	0	3	7	10	14	16	19
1650	21	22	24	25	26	24	22	21	19	17
1660	15	12	8	3	-1	-5	-8	-14	-19	-21
1670	-22	-24	-25	-25	-26	-25	-25	-26	-27	-28
1680	-28	-29	-29	-29	-29	-28	-26	-22	-17	-14
1690	-11	-9	-7	-6	-4	-2	1	4	8	11
1700	13	15	16	16	16	16	16	16	15	14
1710	13	11	8	3	0	0	-3	-5	-6	-9
1720	-7	-5	-5	-5	-6	-7	-10	-11	-12	-11
1730	-8	-5	-1	2	6	9	12	14	16	17
1740	20	23	25	27	29	30	32	34	34	34
1750	34	32	32	30	27	25	20	15	10	5
1760	4	2	1	0	0	-1	-1	-3	-5	-6
1770	-9	-13	-17	-21	-26	-31	-35	-37	-38	-38
1780	-39	-40	-41	-43	-45	-47	-47	-45	-43	-42
1790	-41	-37	-34	-29	-26	-24	-20	-18	-15	-14
1800	-13	-11	-9	-6	-3	0	4	7	10	12
1810	15	18	20	22	22	21	20	21	24	26
1820	27	28	28	28	28	28	28	28	26	24
1830	21	17	15	12	11	10	8	6	4	2
1840	1	0	0	-1	-1	0	0	0	-1	-2
1850	-4	-6	-8	-9	-10	-13	-15	-16	-19	-20
1860	-19	-18	-17	-17	-17	-17	-17	-17	-16	-12
1870	-10	-8	-5	-4	-3	-3	-5	-7	-9	-11
1880	-11	-9	-7	-4	-2	-1	-1	-1	-2	-4
1890	-7	-8	-8	-8	-9	-9	-7	-4	-2	-1
1900	1	3	4	3	3	5	4	3	2	2
1910	3	4	6	7	9	9	9	9	9	8
1920	5	4	0	0	0	0	2	3	5	3
1930	2	1	1	2	5	6	7	7	7	7
1940	7	5	5	3	1	0	-1	-3	-5	-5
1950	-6	-10	-13	-16	-18	-20	-21	-20	-20	-20
1960	-20	-19	-19	-21	-23	-25	-28	-28	-27	-28
1970	-28	-27	-25	-24	-24	-24	-22	-19	-18	-15
1980	-13	-11	-8	-5	-3	0	2	6	10	13
1990	15	16	16	15	15	15	15	14	15	17
2000	19	19	17	18	19	19	17	16	15	13
2010	10	7	5	3	0	0	-2	-4	-4	-4
2020	-5	-5	-5	-6	-6	-6	-7	-7	-5	-5
2030	-5	-5	-5	-7	-9	-10	-11	-10	-7	-7
2040	-7	-6	-6	-5	-5	-5	-5	-7	-8	-8
2050	-7	-7	-7	-6	-5	-5	-5	-6	-7	-7
2060	-8	-9	-9	-10	-10	-9	-11	-13	-14	-15

TO BE CONTINUED

CONTINUED(S-2390 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-18	-18	-18	-18	-17	-18	-18	-17	-16	-15
2080	-14	-13	-13	-12	-9	-8	-6	-4	-1	0
2090	1	2	2	2	2	3	4	5	7	11
2100	11	12	12	13	14	14	14	14	13	11
2110	9	7	7	7	7	7	6	5	3	1
2120	1	0	-1	-2	-3	-4	-5	-7	-8	-8
2130	-6	-6	-7	-8	-8	-8	-8	-9	-9	-9
2140	-8	-7	-8	-5	-6	-7	-8	-9	-9	-9
2150	-9	-7	-7	-6	-5	-4	-4	-4	-4	-4
2160	-5	-6	-6	-6	-6	-7	-8	-8	-7	-6
2170	-6	-6	-5	-2	-3	-2	-3	-5	-8	-8
2180	-7	-7	-8	-8	-6	-5	-5	-4	-2	0
2190	1	1	2	2	2	5	6	5	5	7
2200	5	5	4	4	4	2	1	-1	-2	-5
2210	-8	-9	-9	-9	-9	-8	-6	-5	-5	-4
2220	-2	0	0	0	-1	-2	-4	-8	-10	-10
2230	-10	-13	-15	-15	-13	-12	-13	-12	-12	-10
2240	-10	-9	-8	-7	-5	-3	-1	0	1	3
2250	4	4	4	4	3	2	1	0	0	1
2260	3	5	7	9	10	10	9	8	7	10
2270	8	6	3	3	2	1	0	-1	0	-1
2280	-2	-3	-2	0	1	2	0	-1	-2	-4
2290	-5	-4	-4	-3	-1	0	0	-1	-2	-3
2300	-4	-6	-7	-8	-8	-8	-6	-5	-4	-8
2310	-9	-10	-9	-9	-11	-12	-10	-8	-7	-6
2320	-6	-7	-8	-8	-8	-7	-5	-3	-2	-1
2330	-1	-1	-2	-3	-3	-3	-4	-7	-7	-6
2340	-5	-5	-5	-5	-5	-4	-4	-4	-4	-3
2350	-2	-2	-3	-5	-5	-4	-3	-2	-2	-1
2360	0	0	-1	0	-1	0	0	0	2	3
2370	2	3	6	5	3	3	3	3	4	6
2380	6	7	8	8	9	9	8	6	4	3
2390	2	2	1	0	-1	-1	-1	-1	-1	0
2400	1	0	-1	-3	-4	-5	-7	-8	-10	-12
2410	-13	-15	-16	-16	-15	-14	-14	-14	-14	-14
2420	-13	-12	-12	-11	-9	-9	-8	-7	-5	-4
2430	-3	-2	-2	-3	-4	-5	-4	-3	-3	-3
2440	-2	0	2	3	3	2	1	1	2	3
2450	5	6	6	5	4	4	4	4	3	1
2460	0	-4	-6	-7	-8	-8	-9	-10	-8	-6
2470	-6	-7	-7	-5	-5	-6	-6	-6	-6	-6
2480	-6	-6	-6	-6	-5	-4	-1	-1	0	2
2490	3	3	5	6	8	8	8	8	6	5
2500	4	3	3	3	3	2	1	0	-2	-3
2510	-3	-4	-5	-6	-8	-8	-9	-9	-9	-12
2520	-13	-12	-13	-14	-14	-15	-15	-14	-13	-13
2530	-14	-13	-12	-11	-11	-10	-8	-7	-4	-3
2540	-3	-4	-4	-5	-7	-5	-5	-2	0	0
2550	3	4	5	5	6	8	8	8	7	7
2560	7	6	5	4	2	0	-1	-3	-4	-5
2570	-5	-5	-5	-5	-5	-5	-5	-5	-6	-5
2580	-4	-3	-1	0	0	0	-1	-1	-3	-3
2590	-2	-2	-3	-4	-4	-6	-8	-7	-5	-5

TO BE CONTINUED

CONTINUED(S-2390 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-4	-5	-4	-3	-2	-4	-4	-4	-4	-4
2610	-5	-6	-8	-8	-9	-11	-10	-9	-8	-9
2620	-9	-8	-8	-7	-8	-8	-6	-6	-5	-3
2630	-3	-2	-1	0	0	0	0	1	0	0
2640	0	-1	-2	-3	-3	-3	-2	-1	-2	-1
2650	0	0	1	2	3	3	4	6	5	6
2660	6	6	5	4	1	0	0	0	-2	-2
2670	-2	-1	0	0	0	-2	-3	-4	-5	-6
2680	-9	-12	-14	-15	-14	-15	-15	-13	-14	-14
2690	-15	-15	-14	-13	-12	-12	-10	-9	-7	-5
2700	-3	-3	-3	-2	-2	-2	-1	-1	-1	-1
2710	-1	0	0	1	3	1	0	2	3	3
2720	2	2	3	4	3	2	1	1	0	0
2730	-2	-5	-4	-3	-3	-4	-4	-4	-2	0
2740	0	1	0	-2	-3	-2	-2	-4	-5	-6
2750	-9	-10	-10	-10	-10	-7	-6	-6	-7	-6
2760	-5	-4	-4	-5	-5	-5	-5	-4	-2	-1
2770	-2	-4	-5	-5	-5	-6	-6	-6	-6	-6
2780	-6	-6	-5	-4	-5	-5	-6	-6	-6	-6
2790	-5	-5	-5	-6	-5	-4	-4	-4	-1	-1
2800	-3	-4	-4	-5	-4	-2	0	0	0	-1
2810	-1	-2	-2	-2	-2	-2	-2	-2	-2	-3
2820	-4	-6	-6	-6	-4	-4	-4	-4	-3	0
2830	1	1	1	1	2	1	1	1	3	3
2840	3	3	3	3	3	4	3	1	1	1
2850	-1	-4	-5	-5	-5	-6	-5	-5	-5	-7
2860	-5	-7	-8	-9	-9	-9	-9	-9	-9	-9
2870	-10	-10	-10	-10	-10	-8	-7	-7	-8	-9
2880	-7	-5	-5	-4	-1	0	0	0	-2	-3
2890	-2	-1	0	0	-2	-2	0	0	0	0
2900	2	2	0	0	0	0	0	0	0	0
2910	0	0	-1	-2	-3	-4	-4	-4	-4	-4
2920	-4	-4	-3	-4	-4	-4	-4	-4	-4	-4
2930	-4	-4	-4	-2	-1	0	0	0	0	-1
2940	-2	-2	-2	-2	-2	-2	-2	-1	0	0
2950	0	0	-1	-2	-3	-3	-5	-5	-5	-4
2960	-3	-4	-6	-8	-7	-9	-12	-13	-13	-11
2970	-9	-7	-6	-6	-5	-6	-6	-5	-4	-2
2980	-2	-2	-2	-2	-2	-1	-1	-1	-1	-1
2990	-1	-2	-2	-2	-3	-3	-3	-2	-2	-3

END

RECORD = S-2401 COMPONENT = SOUTH STATION = URAKAWA-S
DATE AND TIME = 1991-11-27- 4-40 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000.

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	6	6	6	6	7	7	7	7	6	4
10	2	0	-1	-3	-4	-6	-7	-8	-9	-11
20	-13	-13	-12	-11	-9	-9	-9	-9	-8	-3
30	0	3	5	8	9	11	13	15	17	17
40	17	12	7	4	1	-3	-8	-12	-15	-17
50	-17	-15	-11	-6	0	3	6	7	8	6
60	4	2	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	-2	-4	-5	-4
80	-2	1	7	12	11	3	-2	-6	-10	-10
90	-10	-8	-3	3	6	5	2	-5	-9	-14
100	-18	-16	-9	0	10	23	36	30	22	12
110	4	-3	-10	-7	-9	-9	-6	-1	6	19
120	33	48	53	49	34	3	-36	-67	-76	-72
130	-57	-36	0	13	11	6	2	1	9	23
140	33	39	37	28	22	12	5	6	-1	-5
150	-21	-30	-20	0	28	50	49	32	10	-7
160	-11	-11	-6	1	5	5	2	0	-3	-3
170	3	10	18	21	19	19	19	19	19	19
180	13	3	-2	1	4	0	-9	-19	-14	2
190	33	38	27	2	-9	-12	-20	-21	-18	-10
200	-6	-3	1	8	20	38	54	61	35	-15
210	-46	-56	-33	5	37	64	61	41	18	-9
220	-26	-24	-15	-11	-17	-26	-36	-39	-26	-3
230	23	57	79	74	59	43	28	16	10	12
240	23	31	26	2	-32	-69	-86	-65	-20	19
250	41	40	25	4	-5	-3	1	8	9	10
260	10	8	7	7	7	7	5	4	3	-4
270	-26	-46	-44	-19	20	60	94	101	84	51
280	22	-29	-87	-131	-147	-109	-61	-5	56	113
290	120	104	78	49	10	-9	-16	-23	-30	-29
300	-33	-16	-3	15	36	49	55	46	37	24
310	15	8	5	-1	0	-8	-14	-15	-12	-4
320	5	15	21	33	38	61	70	55	20	-39
330	-69	-75	-59	-39	-22	-7	15	30	34	25
340	4	-25	-39	-41	-46	-48	-41	-20	15	91
350	135	144	79	-13	-71	-79	-61	-48	-28	-7
360	24	53	89	89	73	44	-4	-48	-81	-104
370	-118	-105	-63	-13	51	112	131	100	52	22
380	10	5	-7	-14	-9	23	51	89	115	112
390	97	69	43	19	-3	-35	-60	-54	-32	-3
400	28	52	63	61	50	42	18	-15	-32	-41
410	-38	-24	-9	-2	-5	-9	-3	12	36	66
420	91	93	76	59	55	63	62	51	23	-25
430	-75	-102	-106	-76	-29	16	53	64	50	24
440	3	1	9	11	7	3	2	12	28	51
450	71	74	53	17	-14	-33	-44	-40	-31	-29
460	-26	-22	-16	-5	11	27	30	26	15	2
470	-9	-17	-27	-39	-44	-40	-9	27	58	104

TO BE CONTINUED

CONTINUED(S-2401 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	111	88	52	23	10	1	8	1	-15	-36
490	-64	-69	-49	-28	-17	4	25	27	16	2
500	-8	-2	1	20	33	30	25	21	21	22
510	25	22	18	9	4	16	29	24	10	-4
520	-26	-37	-43	-39	-30	-38	-42	-40	-24	-3
530	25	55	96	110	105	86	53	32	12	3
540	-11	-21	-25	-24	-17	-9	2	14	30	42
550	41	39	30	21	12	2	-11	-25	-17	12
560	37	59	56	39	31	22	18	22	24	25
570	27	30	34	38	44	45	44	44	43	35
580	16	-8	-35	-57	-61	-47	-32	-15	-2	1
590	-1	0	11	36	63	75	63	42	26	17
600	16	15	17	24	23	18	11	5	1	0
610	3	3	2	0	-4	-5	-3	3	13	34
620	54	61	57	48	46	49	48	40	19	-12
630	-53	-74	-54	-16	12	32	38	34	29	23
640	13	-4	-26	-48	-57	-57	-48	-38	-26	-9
650	13	39	66	100	110	89	63	33	5	-9
660	-12	-3	7	24	34	43	51	53	52	45
670	43	31	17	10	6	4	2	0	0	-9
680	-16	-16	-15	-13	-5	2	1	-2	-5	-2
690	5	21	39	36	26	15	4	4	7	11
700	11	11	11	16	37	52	59	56	52	44
710	39	34	26	15	5	4	13	21	35	48
720	41	30	13	-6	-38	-55	-71	-70	-58	-39
730	-22	-3	21	44	42	19	-9	-47	-79	-97
740	-103	-68	-5	53	107	145	151	140	129	117
750	103	78	57	41	32	24	22	23	25	28
760	38	47	52	59	67	78	86	81	69	57
770	43	32	27	32	46	57	76	96	103	97
780	87	76	66	58	52	47	37	29	17	4
790	1	7	23	45	72	96	123	140	155	158
800	135	99	60	27	3	-13	-9	0	6	12
810	9	-1	-17	-37	-60	-87	-102	-100	-78	-33
820	11	67	127	165	190	184	161	117	68	32
830	32	48	74	97	105	107	69	-5	-85	-208
840	-351	-409	-455	-476	-461	-406	-251	-91	48	95
850	92	34	-63	-142	-202	-250	-311	-322	-308	-281
860	-253	-228	-196	-156	-111	-24	81	137	203	276
870	294	293	281	236	157	114	25	17	-77	-174
880	-211	-251	-314	-355	-354	-339	-318	-308	-307	-330
890	-378	-440	-490	-539	-586	-596	-578	-463	-299	-111
900	59	256	365	445	506	540	549	504	423	325
910	213	59	-170	-369	-492	-492	-422	-307	-172	-47
920	146	340	460	550	524	415	260	69	-153	-345
930	-414	-416	-329	-169	30	209	381	486	501	407
940	222	1	-193	-421	-545	-677	-723	-689	-607	-473
950	-303	-104	117	309	452	553	570	536	418	253
960	45	-163	-270	-282	-205	-54	149	371	609	769
970	889	921	860	661	462	205	-46	-256	-317	-244
980	-165	-23	211	333	388	413	401	342	238	138
990	33	-101	-339	-472	-471	-367	-201	-67	103	219
1000	177	86	2	-64	-88	-84	-69	-54	-23	55

TO BE CONTINUED

CONTINUED(S-2401 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	315	471	678	902	1032	1158	997	708	419	131
1020	-325	-352	-689	-1015	-1189	-1247	-1142	-1033	-807	-581
1030	-357	-349	184	371	371	337	254	145	53	-69
1040	-222	-245	-156	1	172	504	822	942	1041	1016
1050	649	681	356	-36	-730	-919	-1294	-1415	-1489	-1359
1060	-1159	-960	-760	-560	-361	-162	297	351	351	307
1070	153	-3	-124	-204	-215	-162	-40	114	286	395
1080	482	541	549	465	383	267	48	-123	-350	-452
1090	-428	-308	-96	124	320	587	720	761	710	573
1100	340	51	-265	-574	-858	-1058	-1126	-1022	-897	-657
1110	-382	-75	271	429	617	801	835	768	656	490
1120	322	78	-219	-243	-178	-53	75	191	323	412
1130	464	446	368	256	137	3	-165	-266	-386	-472
1140	-475	-432	-342	-242	-146	-14	193	355	406	410
1150	352	202	27	-108	-259	-472	-702	-791	-815	-783
1160	-666	-515	-311	-71	161	370	544	613	661	682
1170	659	593	501	359	190	15	-184	-403	-590	-758
1180	-854	-865	-821	-709	-541	-306	-113	45	195	241
1190	209	165	124	93	71	55	49	48	42	36
1200	29	18	10	2	0	9	17	31	48	71
1210	99	122	147	158	137	114	93	69	49	30
1220	16	-12	-75	-112	-172	-250	-253	-251	-197	-133
1230	-46	24	88	118	114	64	15	-36	-80	-96
1240	-94	-78	-45	59	138	231	306	381	440	463
1250	446	410	349	259	169	94	17	-29	-26	-11
1260	9	40	40	34	27	13	4	-5	-15	-37
1270	-50	-71	-83	-79	-69	-55	-34	-19	17	50
1280	68	61	31	-20	-76	-104	-111	-80	-22	24
1290	75	113	144	147	136	125	115	110	104	97
1300	91	84	71	64	57	55	57	63	65	60
1310	45	21	-25	-74	-108	-149	-166	-171	-164	-150
1320	-124	-107	-91	-74	-57	-34	13	73	151	191
1330	202	191	177	159	128	90	52	6	-56	-110
1340	-140	-153	-151	-143	-124	-97	-72	-49	-27	-9
1350	-5	-13	-26	-40	-52	-64	-77	-88	-94	-97
1360	-99	-96	-98	-104	-114	-126	-135	-138	-143	-149
1370	-153	-150	-137	-126	-116	-104	-82	-57	-31	3
1380	38	63	83	97	98	94	86	77	65	50
1390	35	18	4	-3	-8	3	37	74	103	138
1400	171	207	225	234	237	224	202	172	102	12
1410	-77	-170	-273	-328	-360	-357	-330	-288	-243	-151
1420	-73	23	80	119	122	98	73	35	11	-8
1430	-16	-6	12	28	32	52	58	68	77	88
1440	94	98	99	99	88	77	67	47	18	-8
1450	-25	-36	-36	-10	0	18	53	70	90	111
1460	131	140	139	133	134	134	132	128	114	97
1470	66	13	-37	-83	-130	-186	-227	-251	-276	-269
1480	-251	-231	-197	-143	-83	-23	29	63	71	66
1490	41	19	0	-24	-50	-81	-112	-135	-136	-117
1500	-74	-16	68	171	259	342	410	427	418	378
1510	305	217	114	-3	-90	-163	-204	-221	-235	-245
1520	-248	-241	-219	-193	-160	-108	-50	-10	18	36
1530	31	27	20	15	17	22	25	29	30	31

TO BE CONTINUED

CONTINUED(S-2401 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
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1550	49	27	1	-28	-53	-71	-72	-57	-30	-3
1560	14	31	38	42	38	22	3	-20	-42	-63
1570	-93	-112	-117	-108	-86	-58	-24	13	44	71
1580	98	111	108	92	67	43	15	-11	-22	-24
1590	-16	0	13	35	54	71	83	92	94	91
1600	79	65	54	48	40	39	43	44	43	44
1610	44	39	36	28	16	2	-12	-14	-14	-13
1620	-7	-3	-4	-13	-26	-38	-50	-69	-81	-94
1630	-102	-110	-117	-117	-112	-100	-88	-67	-54	-15
1640	24	85	124	148	166	163	152	145	117	87
1650	52	1	-18	-43	-68	-71	-48	-30	-9	10
1660	32	44	42	32	3	-24	-71	-149	-189	-223
1670	-208	-147	-81	-5	59	136	185	194	183	146
1680	96	32	-23	-59	-78	-95	-104	-99	-78	-40
1690	-5	26	58	101	125	128	119	103	80	54
1700	22	-19	-56	-79	-98	-103	-96	-90	-84	-73
1710	-63	-53	-44	-43	-41	-35	-46	-72	-97	-119
1720	-148	-172	-176	-157	-127	-88	-30	21	87	155
1730	179	187	178	158	142	129	115	104	102	106
1740	111	114	118	118	114	106	96	81	68	46
1750	26	16	7	0	-1	5	19	30	41	58
1760	55	56	44	33	13	-4	-16	-27	-38	-53
1770	-65	-70	-77	-73	-64	-50	-37	-25	-12	-1
1780	3	-1	-7	-15	-21	-26	-33	-43	-52	-57
1790	-56	-48	-44	-42	-39	-32	-32	-30	-37	-44
1800	-40	-47	-50	-43	-33	-19	-7	3	16	29
1810	38	27	10	-3	-24	-49	-62	-83	-96	-108
1820	-104	-85	-73	-54	-27	0	26	56	93	102
1830	100	84	74	57	43	33	16	27	39	52
1840	53	60	57	59	56	51	51	46	40	39
1850	33	33	40	51	59	80	96	108	112	103
1860	80	24	-17	-69	-105	-124	-134	-131	-118	-109
1870	-98	-90	-79	-75	-72	-67	-56	-48	-42	-33
1880	-27	-27	-28	-28	-25	-24	-24	-20	-21	-16
1890	-12	-7	-2	1	1	5	5	2	-2	-14
1900	-30	-45	-62	-74	-86	-91	-84	-74	-63	-49
1910	-32	-17	-4	7	17	23	25	26	20	16
1920	17	21	26	32	42	48	52	58	59	54
1930	49	39	29	20	12	0	-9	-17	-15	-7
1940	4	17	29	44	56	63	57	50	44	36
1950	29	21	19	12	4	6	13	21	28	37
1960	44	45	44	35	25	14	1	-12	-23	-34
1970	-44	-50	-46	-42	-36	-28	-22	-18	-18	-25
1980	-36	-41	-49	-61	-71	-80	-72	-59	-41	-29
1990	-13	5	21	30	29	34	33	32	36	37
2000	38	36	33	30	26	23	24	17	18	14
2010	16	17	19	18	13	6	2	-4	-18	-25
2020	-40	-49	-60	-68	-78	-85	-84	-77	-76	-73
2030	-66	-60	-53	-46	-45	-51	-62	-74	-81	-96
2040	-106	-108	-98	-83	-64	-43	-6	41	64	84
2050	86	74	61	44	30	21	16	18	28	37
2060	49	65	78	97	112	118	115	112	102	89

TO BE CONTINUED

CONTINUED(S-2401 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	73	60	45	33	26	10	-2	-10	-20	-26
2080	-27	-23	-24	-26	-32	-40	-47	-54	-59	-63
2090	-64	-62	-54	-46	-33	-17	-3	5	3	-6
2100	-19	-37	-55	-67	-76	-84	-82	-73	-61	-48
2110	-36	-24	-15	-7	0	2	0	0	-4	-10
2120	-15	-23	-32	-43	-53	-55	-45	-28	-10	6
2130	26	42	58	61	51	40	24	11	0	-11
2140	-18	-21	-14	-6	0	3	7	10	10	11
2150	10	6	2	4	7	12	14	15	11	10
2160	8	5	-1	-7	-10	-14	-18	-17	-17	-16
2170	-9	-5	0	8	17	18	17	21	20	21
2180	15	18	23	32	31	29	26	22	20	18
2190	15	16	15	20	33	44	57	64	67	63
2200	58	55	48	34	23	16	6	1	6	11
2210	16	16	18	14	11	11	3	0	-3	-9
2220	-9	-9	-4	-6	-3	-3	-1	2	-1	-6
2230	-11	-12	-11	-16	-14	-16	-22	-24	-27	-28
2240	-30	-21	-10	0	4	17	26	30	28	23
2250	20	10	-1	-7	-12	-19	-23	-27	-31	-37
2260	-44	-49	-50	-50	-42	-33	-27	-22	-18	-15
2270	-12	-12	-11	-12	-14	-14	-11	-12	-14	-18
2280	-25	-30	-30	-22	-10	4	19	37	52	55
2290	75	81	79	70	59	44	19	-10	-31	-41
2300	-49	-58	-66	-67	-64	-61	-53	-44	-32	-22
2310	-19	-16	-10	-3	0	9	16	22	33	39
2320	36	26	14	1	-13	-28	-42	-50	-48	-36
2330	-21	-7	6	18	27	27	23	17	11	6
2340	0	-6	-12	-13	-8	-11	-10	-9	-9	-10
2350	-13	-15	-17	-24	-25	-23	-22	-22	-21	-19
2360	-16	-13	-8	3	13	21	24	28	30	35
2370	37	37	40	45	46	47	53	55	56	61
2380	64	65	50	28	15	-1	-15	-32	-55	-67
2390	-84	-94	-105	-107	-101	-97	-94	-85	-79	-80
2400	-83	-79	-73	-68	-60	-53	-49	-41	-34	-26
2410	-19	-15	-6	-1	4	2	8	16	22	24
2420	31	38	39	40	38	39	30	25	21	13
2430	6	2	0	-5	-13	-19	-27	-30	-35	-34
2440	-35	-32	-34	-31	-32	-34	-35	-34	-32	-31
2450	-32	-34	-32	-31	-32	-33	-34	-33	-36	-30
2460	-16	-11	-2	7	13	15	17	22	23	24
2470	25	28	31	34	35	35	34	32	30	26
2480	23	19	12	2	-5	-5	-2	2	8	17
2490	26	32	34	30	24	18	11	2	-5	-8
2500	-6	-7	-7	-5	-5	-4	0	1	0	2
2510	4	4	7	13	20	25	26	28	32	38
2520	38	38	40	42	44	42	41	36	26	17
2530	7	-2	-6	-5	-1	3	4	6	9	11
2540	18	24	23	16	11	8	-5	-15	-26	-35
2550	-42	-41	-32	-19	-6	7	20	33	46	47
2560	48	49	45	41	37	31	23	19	9	4
2570	4	4	4	12	6	13	15	16	16	17
2580	17	19	22	23	17	18	13	7	5	-8
2590	-14	-19	-25	-25	-26	-29	-30	-30	-28	-28

TO BE CONTINUED

CONTINUED(S-2401 SOUTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-26	-28	-34	-39	-44	-46	-40	-34	-29	-16
2610	-8	-4	-3	4	6	8	2	-3	-8	-16
2620	-27	-35	-40	-38	-34	-32	-31	-28	-23	-17
2630	-10	-1	0	0	-5	-10	-15	-18	-23	-28
2640	-31	-29	-28	-24	-21	-17	-15	-12	-8	-10
2650	-13	-18	-23	-33	-39	-41	-40	-38	-36	-30
2660	-21	-10	-7	-7	-8	-10	-11	-16	-21	-24
2670	-27	-29	-29	-26	-20	-13	-7	0	9	14
2680	15	14	15	11	7	5	4	3	0	0
2690	3	8	17	24	29	31	28	24	22	20
2700	16	11	9	9	13	19	24	29	36	38
2710	35	31	25	18	11	4	3	6	10	14
2720	15	20	24	28	27	25	23	19	18	17
2730	13	12	14	20	28	35	43	51	56	57
2740	59	57	54	50	39	24	12	-11	-27	-39
2750	-45	-52	-53	-51	-47	-44	-39	-35	-29	-24
2760	-21	-23	-23	-27	-25	-30	-34	-40	-43	-46
2770	-49	-40	-31	-21	-4	10	30	41	52	62
2780	72	70	65	61	58	51	46	32	23	13
2790	8	5	0	-5	-11	-6	-5	0	1	3
2800	1	2	0	-7	-13	-18	-26	-35	-39	-42
2810	-43	-34	-23	-11	2	5	7	9	12	10
2820	13	11	8	2	1	2	0	-2	-3	-2
2830	-4	-9	-16	-25	-32	-38	-41	-36	-33	-31
2840	-29	-26	-24	-20	-16	-12	-9	-6	-3	0
2850	4	8	7	2	3	1	0	-3	-6	-8
2860	-8	-5	-2	0	0	1	0	-2	-3	-2
2870	1	7	13	16	18	20	21	19	16	11
2880	6	0	-4	-6	-9	-10	-7	-5	0	4
2890	11	15	20	24	29	31	31	29	26	24
2900	21	16	9	2	-5	-13	-16	-13	-10	-8
2910	-5	-4	-4	-2	-2	0	5	6	7	8
2920	10	11	12	16	10	14	15	17	18	19
2930	15	16	15	15	13	13	11	19	22	16
2940	19	17	18	16	15	17	18	15	10	3
2950	-1	-8	-16	-25	-29	-34	-39	-36	-34	-31
2960	-25	-17	-7	-15	-8	-14	-9	-12	-17	-21
2970	-17	-21	-19	-21	-13	-13	-15	-6	-4	-4
2980	0	4	7	6	2	0	3	-5	-8	-13
2990	-9	-8	-4	-1	3	4	2	-1	0	-3

END

RECORD = S-2401 COMPONENT = WEST STATION = URAKAWA-S
DATE AND TIME = 1991-11-27- 4-40 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000.

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	7	8	8	9	10	10	11	12	12	12
10	12	13	13	13	13	12	12	12	11	10
20	10	8	7	5	3	0	-2	-5	-7	-9
30	-11	-12	-14	-14	-14	-13	-10	-7	-3	0
40	2	2	2	2	3	5	9	11	12	11
50	11	9	5	4	2	0	-4	-5	-7	-12
60	-14	-14	-14	-13	-8	0	9	14	17	19
70	16	12	9	3	-5	-5	-4	-2	1	6
80	12	14	16	17	18	11	7	3	-3	-6
90	-1	7	10	12	9	4	6	3	-3	-7
100	-9	-13	-15	-14	-10	-1	13	23	28	26
110	19	9	0	-10	-17	-18	-14	-9	-6	0
120	10	15	21	25	14	3	-1	-9	-18	-25
130	-27	-26	-20	-22	-30	-33	-42	-49	-44	-31
140	-11	4	8	30	30	27	17	14	4	2
150	2	0	-13	-20	-21	-13	-2	5	2	-4
160	-10	-13	-12	-4	1	5	7	4	-1	-8
170	-15	-16	-9	-1	0	-6	-18	-31	-35	-20
180	1	18	23	20	19	18	18	17	15	14
190	11	6	0	-7	-8	-1	0	-9	-25	-50
200	-64	-66	-52	-25	2	22	49	62	65	59
210	45	25	13	3	1	-2	-7	-11	-5	7
220	15	19	26	30	20	-4	-22	-32	-44	-45
230	-33	-18	-5	-5	-13	-19	-17	-8	-1	7
240	22	31	16	-1	-11	-20	-31	-22	-1	16
250	30	11	-22	-45	-47	-29	0	26	40	43
260	28	15	-1	-18	-25	-17	-5	13	21	22
270	8	-5	-17	-11	1	13	21	33	26	14
280	4	-5	-17	-22	-32	-40	-46	-36	-16	-4
290	10	20	34	54	62	43	20	15	2	-16
300	-32	-40	-40	-37	-8	2	22	22	2	-18
310	-31	-30	-21	-19	5	15	32	42	39	19
320	1	1	5	6	3	7	8	13	-4	-21
330	-28	-32	-33	-35	-30	-19	-8	0	61	89
340	90	75	52	11	-15	-23	-27	-31	-20	-15
350	-7	5	1	-18	-50	-61	-52	-31	-16	-2
360	22	39	62	68	52	37	10	-7	-15	-22
370	-23	-27	-34	-32	-15	-1	7	20	24	22
380	24	35	39	25	4	-12	-13	-5	7	24
390	29	24	7	-3	-17	-20	-25	-31	-43	-36
400	-13	0	9	21	33	46	43	34	19	-14
410	-37	-44	-55	-64	-74	-80	-80	-72	-54	-33
420	-14	4	24	32	37	38	41	51	51	42
430	28	9	-2	-1	4	6	4	0	-13	-27
440	-43	-55	-46	-28	-9	-1	-7	-17	-29	-26
450	-7	21	49	55	43	20	-6	-27	-33	-30
460	-26	-17	-17	-19	-25	-21	-9	12	38	58
470	59	47	26	-3	-26	-40	-43	-38	-25	-10

TO BE CONTINUED

CONTINUED(S-2401 WEST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	4	2	-8	-17	-18	-3	15	37	54	49
490	37	19	7	5	4	12	18	15	9	0
500	-35	-55	-59	-47	-23	0	30	42	33	13
510.	0	-6	-11	-12	-19	-40	-62	-59	-48	-18
520	14	50	66	46	31	20	13	11	6	6
530	5	0	-10	-18	-23	-9	-2	9	13	14
540	11	2	-4	-9	-18	-18	-13	-6	3	17
550	32	41	39	25	-2	-16	-28	-39	-37	-31
560	-17	4	28	62	71	54	33	4	-25	-38
570	-53	-63	-65	-56	-44	-30	-17	-3	5	13
580	21	26	19	8	-2	-6	4	14	23	24
590	12	-2	-11	-9	1	14	27	28	14	-12
600	-39	-47	-40	-20	5	23	27	20	14	11
610	14	19	26	29	21	7	-7	-19	-23	-22
620	-14	-9	-9	-8	-8	-8	-8	-8	-7	-6
630	-11	-17	-24	-25	-17	4	32	57	57	37
640	14	-6	-9	-8	-13	-17	-19	-22	-31	-39
650	-45	-46	-40	-33	-21	-11	-10	-14	-19	-26
660	-28	-25	-22	-20	-24	-31	-34	-32	-26	-16
670	-1	13	29	45	58	47	32	16	-3	-21
680	-35	-37	-24	-5	10	27	34	34	32	24
690	23	8	0	-10	-18	-31	-46	-54	-50	-32
700	-18	-5	10	4	-8	-19	-29	-34	-34	-33
710	-33	-25	-18	-6	6	19	30	30	35	46
720	59	71	92	106	114	109	99	84	69	50
730	19	1	-3	0	0	1	0	-5	-17	-44
740	-77	-94	-111	-113	-93	-64	-26	13	43	50
750	35	12	-18	-77	-150	-227	-274	-293	-281	-253
760	-216	-162	-96	-30	29	35	27	5	-23	-45
770	-68	-93	-110	-116	-105	-84	-55	-21	-1	0
780	-14	-51	-117	-187	-254	-297	-323	-315	-295	-267
790	-232	-207	-194	-194	-206	-219	-232	-246	-252	-246
800	-225	-203	-184	-153	-115	-84	-65	-45	-27	-23
810	-23	-20	-17	-14	0	27	58	79	91	90
820	75	50	11	-33	-101	-160	-209	-239	-275	-270
830	-219	-165	-83	31	122	156	180	213	237	277
840	331	381	447	513	557	600	608	589	546	471
850	368	264	196	154	164	243	298	427	531	577
860	550	474	358	203	50	-127	-244	-419	-494	-543
870	-535	-455	-311	-114	139	343	475	540	527	457
880	354	233	162	112	125	199	349	536	695	863
890	957	1096	1124	1111	1049	963	786	608	429	243
900	37	-169	-426	-542	-638	-684	-648	-518	-315	-57
910	140	281	279	208	49	-156	-302	-457	-497	-476
920	-392	-270	-147	-31	5	46	44	16	-41	-89
930	-151	-203	-275	-371	-442	-487	-522	-528	-476	-306
940	-50	307	533	721	832	842	734	602	482	345
950	190	24	-110	-188	-243	-268	-277	-269	-251	-225
960	-194	-162	-130	-122	-139	-191	-288	-388	-469	-558
970	-619	-656	-641	-562	-353	-70	232	395	504	492
980	246	16	-192	-526	-718	-740	-674	-528	-257	105
990	487	747	834	841	719	490	136	-188	-430	-583
1000	-628	-534	-337	-103	155	282	282	199	104	-11

TO BE CONTINUED

CONTINUED(S-2401 WEST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	-90	-141	-181	-183	-160	-130	-105	-86	-56	-26
1020	-1	33	62	105	117	85	41	-43	-159	-346
1030	-405	-403	-335	-212	-42	159	375	465	518	522
1040	457	326	134	-93	-275	-539	-651	-655	-607	-471
1050	-275	-54	114	270	318	341	332	294	230	165
1060	71	-73	-232	-317	-331	-315	-267	-136	38	205
1070	345	428	470	458	431	367	270	153	64	-33
1080	-84	-100	-100	-79	-52	-33	-44	-67	-133	-228
1090	-297	-390	-500	-562	-593	-589	-547	-412	-188	163
1100	419	586	680	689	645	525	390	253	144	99
1110	80	78	80	87	96	113	143	181	214	239
1120	230	181	109	24	-130	-262	-389	-473	-521	-515
1130	-444	-356	-190	75	339	462	562	598	580	430
1140	251	35	-154	-280	-447	-570	-621	-608	-555	-330
1150	-68	203	464	568	573	526	363	197	56	-61
1160	-174	-215	-179	-67	99	279	475	575	583	498
1170	343	78	-150	-349	-451	-479	-420	-219	6	239
1180	448	583	598	544	436	166	-67	-210	-263	-261
1190	-225	-78	71	167	202	190	128	28	-67	-136
1200	-155	-129	-67	-1	53	85	48	-18	-116	-236
1210	-372	-488	-507	-461	-337	-134	95	306	439	515
1220	539	469	312	155	-57	-166	-273	-297	-285	-207
1230	-70	55	136	203	218	168	109	29	-114	-200
1240	-262	-259	-210	-121	-58	50	129	184	210	182
1250	145	79	32	-77	-143	-211	-258	-313	-314	-279
1260	-202	-86	0	117	195	251	308	295	242	182
1270	97	-18	-126	-205	-267	-293	-299	-282	-253	-243
1280	-222	-190	-178	-162	-132	-90	-56	-30	-19	-29
1290	-47	-48	-55	-49	-16	43	110	185	269	321
1300	340	313	239	99	-39	-116	-227	-294	-302	-264
1310	-181	-94	-2	105	203	259	258	221	179	122
1320	22	-81	-130	-165	-216	-289	-342	-402	-467	-503
1330	-496	-448	-380	-286	-160	-15	112	200	263	290
1340	284	271	257	246	245	255	274	307	342	365
1350	379	375	349	315	258	191	135	85	35	-4
1360	-45	-88	-122	-160	-197	-229	-253	-271	-267	-228
1370	-180	-116	-38	31	111	180	202	199	184	163
1380	143	129	129	143	164	193	213	214	175	133
1390	23	-77	-169	-243	-268	-252	-216	-172	-112	-50
1400	-11	31	41	28	18	3	7	27	59	91
1410	115	135	120	101	47	-18	-100	-162	-217	-228
1420	-198	-141	-45	64	133	155	89	-9	-78	-144
1430	-237	-262	-240	-173	-114	-33	22	57	60	29
1440	-12	-66	-96	-117	-127	-113	-96	-82	-69	-78
1450	-92	-104	-115	-118	-94	-58	10	58	99	149
1460	187	193	176	132	70	16	-15	-30	-24	-8
1470	13	53	81	95	97	81	50	13	-31	-79
1480	-136	-158	-170	-174	-158	-141	-119	-79	-31	32
1490	102	120	128	115	97	69	26	-13	-70	-126
1500	-164	-191	-195	-180	-152	-102	-59	-8	57	98
1510	126	154	177	196	207	205	187	151	103	64
1520	30	2	-23	-36	-34	-31	-29	-24	-21	-16
1530	-5	16	37	54	82	116	137	154	158	149

TO BE CONTINUED

CONTINUED(S-2401 WEST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	138	128	119	113	116	124	130	128	114	91
1550	60	30	9	-9	-18	-10	8	24	40	49
1560	45	37	24	8	-6	-21	-25	-12	10	37
1570	63	77	69	53	36	-6	-51	-87	-115	-130
1580	-127	-115	-98	-84	-66	-55	-50	-61	-75	-86
1590	-94	-105	-119	-131	-143	-148	-141	-127	-111	-97
1600	-82	-62	-45	-37	-40	-49	-58	-71	-85	-97
1610	-108	-101	-92	-77	-53	-46	-29	-13	2	16
1620	30	38	41	40	36	37	28	20	9	2
1630	-1	4	9	18	19	12	-8	-30	-52	-66
1640	-79	-76	-70	-60	-56	-49	-47	-49	-55	-59
1650	-63	-70	-72	-74	-69	-68	-65	-60	-57	-43
1660	-31	-19	-7	1	19	27	33	30	25	22
1670	17	12	11	14	36	75	115	170	217	243
1680	242	225	193	145	91	45	20	0	-12	0
1690	22	47	76	101	121	129	123	106	84	72
1700	60	53	51	54	53	48	34	14	-15	-42
1710	-58	-59	-34	-1	27	53	71	72	56	32
1720	-10	-61	-92	-113	-129	-140	-139	-134	-132	-133
1730	-135	-133	-132	-126	-112	-95	-80	-63	-53	-59
1740	-74	-89	-103	-115	-110	-90	-57	-4	55	107
1750	138	147	137	109	76	46	20	3	-6	-11
1760	-12	-17	-23	-28	-34	-41	-40	-40	-36	-35
1770	-35	-33	-34	-37	-43	-43	-36	-31	-23	-18
1780	-11	-9	-17	-27	-43	-76	-102	-120	-130	-122
1790	-104	-85	-62	-32	0	27	43	58	65	63
1800	60	55	48	48	40	37	46	64	96	120
1810	135	156	171	173	160	136	102	68	37	-7
1820	-34	-55	-57	-41	-22	0	33	67	86	81
1830	64	30	-2	-49	-62	-61	-36	-10	10	34
1840	34	13	-13	-46	-59	-74	-85	-74	-69	-63
1850	-61	-68	-68	-75	-76	-73	-63	-42	-9	14
1860	31	28	17	-4	-24	-44	-68	-77	-72	-63
1870	-47	-36	-21	-12	4	19	35	48	61	70
1880	72	57	34	4	-43	-95	-140	-168	-170	-153
1890	-114	-84	-50	-15	1	1	-15	-45	-71	-93
1900	-105	-101	-81	-52	-11	28	65	91	101	99
1910	89	69	37	9	-9	-22	-29	-28	-20	-7
1920	8	23	41	66	87	106	123	137	147	147
1930	139	126	108	90	70	52	38	31	35	48
1940	66	85	101	112	112	105	93	79	66	51
1950	39	30	21	20	17	16	13	9	2	-9
1960	-22	-36	-55	-70	-81	-90	-92	-82	-69	-48
1970	-19	10	44	71	97	116	126	120	102	82
1980	49	10	-35	-76	-93	-101	-94	-71	-33	3
1990	30	62	72	53	31	5	-21	-52	-67	-80
2000	-89	-84	-82	-77	-71	-67	-62	-57	-51	-68
2010	-81	-91	-105	-111	-121	-134	-143	-122	-113	-89
2020	-61	-28	-6	21	41	52	43	27	13	-32
2030	-53	-66	-73	-65	-46	-29	-8	5	22	35
2040	39	40	41	44	62	73	85	98	113	125
2050	124	117	103	87	72	54	36	23	15	17
2060	22	29	35	41	48	53	52	50	50	44

TO BE CONTINUED

CONTINUED(S-2401 WEST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
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2080	30	30	27	23	23	22	20	11	2	-9
2090	-24	-43	-64	-72	-83	-80	-56	-27	-2	13
2100	19	14	0	-18	-39	-59	-74	-85	-86	-75
2110	-63	-50	-36	-26	-24	-29	-31	-34	-34	-28
2120	-19	-8	5	15	20	27	28	27	27	27
2130	25	23	19	17	11	2	-5	-18	-32	-42
2140	-50	-52	-51	-43	-34	-28	-23	-19	-13	-7
2150	-2	3	8	11	13	11	8	3	-1	-1
2160	-4	-7	-8	-12	-10	-15	-23	-31	-41	-50
2170	-62	-67	-58	-52	-46	-37	-26	-13	-8	-12
2180	-16	-26	-31	-39	-32	-16	-3	14	32	57
2190	75	83	83	77	72	69	67	68	71	67
2200	70	63	54	43	29	19	8	3	9	10
2210	17	22	28	32	30	29	22	19	12	7
2220	2	-2	-5	-7	-4	-3	-12	-15	-18	-26
2230	-31	-37	-39	-28	-22	-13	-7	2	6	-1
2240	-7	-16	-25	-37	-39	-36	-32	-28	-21	-12
2250	-4	-5	-1	0	1	2	1	5	7	2
2260	-12	-25	-39	-58	-70	-77	-81	-74	-64	-55
2270	-51	-49	-45	-45	-43	-37	-19	1	24	49
2280	62	78	85	74	59	39	16	-1	-17	-33
2290	-39	-40	-35	-27	-21	-13	-5	1	7	16
2300	25	25	26	29	28	23	17	8	-9	-27
2310	-46	-60	-68	-74	-72	-67	-53	-52	-39	-31
2320	-23	-19	-19	-19	-19	-19	-20	-21	-17	-11
2330	-5	4	13	21	29	39	47	55	58	59
2340	58	56	50	43	37	28	21	19	20	21
2350	21	21	21	19	12	11	10	4	6	7
2360	12	13	8	2	-1	-6	-13	-19	-19	-18
2370	-17	-13	-2	3	1	1	-1	-1	-6	-7
2380	-8	-11	-8	-5	-1	6	15	22	19	16
2390	12	9	0	-9	-22	-28	-33	-40	-40	-40
2400	-40	-40	-40	-31	-31	-24	-24	-26	-25	-24
2410	-15	-8	3	11	27	41	54	60	57	49
2420	37	23	15	9	5	0	-6	-11	-18	-26
2430	-31	-35	-37	-31	-26	-17	-4	5	16	27
2440	33	26	28	30	31	34	39	46	50	54
2450	58	58	59	62	66	67	71	70	69	65
2460	60	57	47	34	15	-2	-12	-17	-16	-11
2470	-3	5	9	8	5	3	-3	-14	-22	-24
2480	-21	-14	-6	1	9	20	29	32	29	27
2490	27	25	22	17	12	8	8	3	0	2
2500	3	2	3	3	-2	-10	-20	-30	-43	-55
2510	-62	-66	-76	-80	-85	-88	-93	-99	-101	-97
2520	-88	-75	-60	-41	-20	-2	13	27	40	48
2530	43	36	26	13	-5	-28	-46	-58	-72	-76
2540	-69	-60	-52	-45	-38	-33	-38	-45	-53	-58
2550	-62	-66	-67	-58	-46	-30	-19	-9	-1	6
2560	7	6	-1	-5	-6	-8	-13	-22	-29	-29
2570	-34	-39	-39	-39	-34	-29	-26	-22	-17	-12
2580	-8	1	14	26	36	41	49	61	79	89
2590	88	79	67	58	46	39	34	33	36	45

TO BE CONTINUED

CONTINUED(S-2401 WEST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	58	58	51	45	39	36	28	19	20	26
2610	29	35	49	63	70	73	67	59	60	58
2620	49	47	47	49	50	48	42	35	21	12
2630	6	0	-1	-2	0	-2	0	4	3	5
2640	6	1	-2	-8	-14	-20	-26	-29	-29	-32
2650	-33	-23	-15	-10	-2	3	2	-2	-9	-19
2660	-32	-43	-47	-43	-40	-35	-21	-7	8	20
2670	23	19	17	18	16	12	7	1	-5	-10
2680	-14	-14	-10	-2	5	13	21	28	33	35
2690	30	27	26	25	20	18	18	17	16	16
2700	16	16	16	16	15	8	5	5	0	-3
2710	-10	-19	-31	-47	-52	-55	-57	-58	-57	-52
2720	-42	-32	-19	-12	-4	6	5	2	-1	-7
2730	-12	-21	-32	-37	-45	-48	-49	-46	-45	-45
2740	-40	-34	-33	-35	-29	-22	-16	-13	-14	-16
2750	-17	-24	-33	-40	-40	-43	-46	-43	-39	-37
2760	-33	-31	-27	-23	-22	-22	-22	-19	-14	-14
2770	-14	-14	-14	-14	-15	-18	-12	-5	19	46
2780	64	84	99	109	102	94	78	58	49	48
2790	37	29	23	15	9	3	-3	-10	-15	-8
2800	-1	6	18	32	44	56	60	60	56	50
2810	44	34	25	19	10	-3	-9	-17	-28	-33
2820	-32	-27	-21	-10	5	13	9	6	3	-1
2830	-7	-10	-4	3	9	19	26	28	25	16
2840	5	-1	1	9	18	27	37	43	41	35
2850	27	19	12	3	-5	-9	-9	-9	-5	-1
2860	1	6	11	15	16	21	30	36	39	34
2870	24	11	-3	-13	-19	-18	-9	-2	5	15
2880	29	41	40	32	25	16	8	4	-1	-3
2890	-3	-3	-3	-3	-3	-7	-9	-20	-24	-30
2900	-37	-42	-44	-44	-41	-36	-34	-29	-24	-18
2910	-13	-11	-12	-13	-13	-13	-14	-14	-10	-8
2920	3	8	9	10	10	7	0	-10	-20	-24
2930	-24	-24	-24	-25	-28	-32	-33	-33	-38	-45
2940	-50	-50	-55	-64	-72	-73	-73	-68	-59	-55
2950	-53	-43	-36	-32	-27	-22	-18	-9	-9	-7
2960	-1	5	16	25	35	50	51	46	43	34
2970	29	22	15	8	8	5	2	-1	-2	-10
2980	-15	-18	-18	-17	-10	-12	-14	-14	-14	-14
2990	-14	-14	-13	-8	1	8	21	36	51	58

END

RECORD = S-2401 COMPONENT = DOWN STATION = URAKAWA-S
DATE AND TIME = 1991-11-27- 4-40 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	14	13	13	13	12	12	12	11	10	8
10	7	5	3	1	0	-1	-2	-4	-4	-5
20	-6	-7	-9	-10	-12	-13	-13	-13	-14	-15
30	-16	-16	-16	-15	-13	-10	-7	-4	-1	2
40	5	10	14	13	10	7	5	1	-2	-6
50	-11	-15	-21	-21	-20	-16	-12	-4	3	9
60	14	16	19	22	18	12	2	-4	-9	-14
70	-12	-6	-4	2	13	12	9	4	-1	-6
80	-8	-7	-6	-6	-5	-5	-6	-8	-11	-11
90	-10	-8	-3	1	6	13	25	40	43	47
100	54	58	63	64	62	55	42	15	-4	-15
110	-19	-17	-13	-12	-16	-25	-39	-53	-54	-38
120	-10	32	80	102	99	82	53	47	36	41
130	54	72	78	68	46	8	-19	-33	-35	-28
140	-16	0	26	54	83	121	152	138	109	0
150	-87	-109	-98	-76	-11	33	59	65	59	44
160	30	27	37	57	86	112	117	106	79	46
170	16	-9	-31	-48	-52	-37	-14	15	40	46
180	45	43	41	34	16	-7	-30	-39	-40	-43
190	-45	-40	-25	-8	23	59	95	120	122	102
200	61	-2	-57	-52	-24	8	28	19	-22	-84
210	-115	-114	-92	-44	27	78	88	68	44	18
220	-3	-8	-2	1	10	24	30	28	22	16
230	9	3	5	9	17	24	23	22	24	33
240	46	45	23	-29	-85	-112	-109	-75	-18	39
250	87	124	131	112	77	20	-25	-43	-47	-51
260	-55	-61	-64	-69	-85	-88	-59	-7	39	68
270	74	67	51	24	-11	-39	-46	-21	12	51
280	61	48	15	-12	-27	-31	-15	12	49	94
290	97	79	22	-35	-54	-43	-17	4	21	30
300	23	12	-6	-19	-17	-7	6	26	44	58
310	70	69	51	30	-28	-52	-66	-73	-75	-75
320	-75	-75	-49	-10	36	74	85	75	59	35
330	23	5	-10	-30	-40	-34	-19	-7	-5	-3
340	11	35	68	59	39	16	6	28	81	117
350	121	55	-12	-21	-37	-43	-55	-73	-64	-51
360	-30	2	27	28	27	21	16	7	-3	-16
370	-16	27	82	121	113	64	-18	-46	-46	-35
380	-21	-5	10	25	35	34	33	29	18	21
390	34	44	42	15	-33	-81	-112	-130	-140	-126
400	-84	-35	15	60	87	97	98	104	113	127
410	154	165	147	94	-3	-77	-88	-65	-38	-21
420	-11	-4	1	0	-2	-10	-31	-56	-75	-88
430	-93	-79	-32	24	81	112	100	64	15	-4
440	19	54	87	106	101	81	55	40	37	39
450	44	43	34	14	-1	-7	-7	-7	-7	-8
460	-12	-20	-34	-56	-84	-107	-112	-95	-58	-10
470	38	61	59	31	6	-18	-16	-5	5	14

TO BE CONTINUED

CONTINUED(S-2401 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	6	-31	-83	-92	-79	-53	-15	18	41	51
490	44	30	18	9	2	1	6	5	0	-4
500	-17	-26	-25	-20	-14	0	29	49	61	62
510	52	2	-36	-72	-74	-54	-32	-7	-1	-5
520	0	5	10	15	51	75	63	49	26	0
530	-4	-13	-6	3	13	27	41	57	59	58
540	49	39	26	16	9	16	25	35	35	39
550	49	66	78	71	53	8	-44	-61	-49	2
560	51	93	124	128	109	69	25	11	1	-9
570	-15	-22	-39	-70	-108	-121	-105	-54	14	62
580	92	107	87	49	22	12	0	-2	-11	-23
590	-30	-24	4	38	66	67	50	25	-11	-46
600	-63	-60	-48	-36	-18	-3	4	18	42	61
610	67	63	49	26	1	-10	-6	0	8	24
620	29	14	-19	-51	-49	-19	12	32	35	32
630	29	24	16	8	1	-7	-8	6	22	39
640	58	63	63	68	77	98	119	113	94	69
650	49	26	-5	-38	-61	-80	-81	-77	-74	-66
660	-53	-42	-31	-29	-30	-36	-41	-41	-37	-33
670	-25	-15	-4	4	12	16	16	4	-3	-9
680	-9	3	31	61	70	66	46	12	3	11
690	22	41	51	45	14	-24	-48	-65	-78	-86
700	-68	-41	-8	38	67	104	106	105	101	90
710	79	47	16	-25	-41	-47	-35	-9	15	39
720	40	55	63	69	59	46	35	24	6	-2
730	-6	-5	1	8	16	27	22	8	-21	-54
740	-72	-77	-86	-93	-96	-94	-85	-63	-27	21
750	69	123	158	157	120	31	-62	-124	-146	-146
760	-129	-90	-51	-22	2	24	30	18	2	-18
770	-40	-44	-36	-28	-18	-10	-6	-11	-19	-29
780	-41	-52	-64	-71	-69	-63	-55	-44	-30	-15
790	-10	-16	-30	-59	-94	-113	-112	-79	-31	0
800	19	34	45	47	45	42	34	26	16	6
810	-9	-25	-35	-51	-71	-82	-76	-60	-42	-18
820	5	20	35	49	56	57	57	54	53	53
830	53	53	49	47	46	37	33	26	14	14
840	19	33	37	30	20	11	12	24	44	66
850	84	98	98	90	78	45	25	8	-6	-23
860	-34	-40	-47	-42	-28	-9	5	21	46	66
870	84	92	96	102	100	102	114	128	164	187
880	202	205	192	156	96	77	60	45	42	27
890	14	-17	-35	-52	-67	-80	-92	-94	-88	-85
900	-85	-86	-95	-88	-71	-47	16	103	148	173
910	176	144	79	-13	-78	-113	-143	-134	-102	-44
920	-1	43	59	63	67	59	53	46	43	36
930	28	22	11	-9	-19	1	37	93	127	145
940	147	132	106	54	-22	-86	-162	-206	-230	-244
950	-235	-205	-171	-138	-110	-81	-51	-40	-45	-58
960	-72	-92	-111	-122	-125	-109	-80	-37	26	78
970	130	213	288	320	321	289	222	143	57	-15
980	-79	-133	-150	-151	-136	-110	-71	-18	20	50
990	72	66	38	-12	-75	-130	-158	-166	-172	-170
1000	-154	-155	-148	-133	-83	-28	2	22	40	54

TO BE CONTINUED

CONTINUED(S-2401 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	84	117	148	165	190	210	230	244	244	222
1020	173	124	64	-13	-64	-98	-136	-170	-196	-214
1030	-226	-224	-204	-184	-150	-91	-36	-27	-49	-82
1040	-162	-175	-151	-126	-35	56	134	196	270	351
1050	390	400	385	355	295	148	50	-48	-134	-174
1060	-215	-236	-241	-227	-204	-169	-143	-47	10	49
1070	71	59	10	-50	-119	-186	-297	-302	-289	-236
1080	-180	-80	-26	53	104	131	125	113	100	88
1090	77	65	54	44	25	26	41	59	88	98
1100	98	62	9	-98	-187	-272	-280	-274	-247	-200
1110	-138	-58	13	95	149	165	177	174	156	116
1120	79	34	-13	-46	-77	-94	-96	-74	-32	21
1130	90	169	227	245	243	211	155	69	0	-50
1140	-91	-132	-145	-142	-118	-77	-39	0	43	93
1150	153	185	178	144	111	38	-61	-133	-194	-218
1160	-206	-166	-124	-86	-17	72	138	171	185	183
1170	167	134	59	-16	-52	-78	-77	-50	-14	20
1180	35	26	9	-11	-28	-35	-27	-9	4	22
1190	34	37	34	30	24	12	0	-3	5	23
1200	41	59	74	91	105	116	112	103	92	78
1210	66	59	52	45	38	31	20	11	-6	-27
1220	-47	-59	-72	-82	-84	-76	-68	-49	-32	-16
1230	4	19	31	25	19	8	-4	-11	-19	-14
1240	-4	3	6	11	5	-1	-2	-4	-6	-2
1250	11	22	27	32	24	11	-10	-29	-40	-42
1260	-26	-3	17	36	48	42	22	-5	-28	-38
1270	-66	-83	-90	-73	-57	-37	-19	-3	6	2
1280	4	1	10	15	20	20	24	21	17	13
1290	17	22	29	42	45	50	43	32	19	6
1300	-8	-18	-23	-35	-48	-53	-61	-67	-76	-82
1310	-90	-95	-101	-102	-105	-101	-98	-89	-77	-66
1320	-51	-25	-6	14	32	47	59	72	83	86
1330	89	92	90	89	81	70	60	47	31	18
1340	7	0	5	15	20	28	31	28	24	13
1350	0	-18	-39	-62	-87	-109	-126	-139	-154	-157
1360	-149	-134	-114	-97	-84	-75	-66	-57	-45	-30
1370	-17	-3	8	19	37	50	58	60	53	46
1380	36	26	23	28	38	43	46	47	44	36
1390	27	19	7	1	-6	-17	-26	-34	-42	-49
1400	-52	-57	-61	-54	-49	-40	-31	-16	-6	-10
1410	-11	-15	-11	-16	-12	-16	-6	9	25	40
1420	51	66	83	92	96	93	85	76	68	59
1430	43	32	34	36	40	44	46	41	35	31
1440	23	17	7	-1	-13	-19	-28	-29	-32	-28
1450	-31	-33	-30	-36	-30	-27	-11	-2	23	30
1460	47	43	36	27	16	2	-9	-30	-31	-20
1470	-7	6	19	25	35	41	49	45	42	40
1480	30	20	10	2	-7	-13	-19	-17	-17	-15
1490	-10	-9	-9	-8	-12	-16	-24	-33	-42	-51
1500	-50	-45	-36	-22	0	21	38	54	75	94
1510	105	102	81	61	36	9	-14	-36	-52	-60
1520	-58	-53	-51	-45	-42	-41	-38	-32	-30	-30
1530	-31	-32	-36	-43	-50	-52	-55	-60	-63	-62

TO BE CONTINUED

CONTINUED(S-2401 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-63	-65	-62	-56	-50	-43	-39	-32	-23	-14
1550	-6	-4	-9	-18	-30	-36	-35	-31	-24	-18
1560	-17	-14	-9	-3	0	3	8	8	3	-1
1570	-6	-8	-9	-5	-3	-2	3	17	41	61
1580	78	101	121	131	144	148	150	146	129	111
1590	91	60	40	30	25	24	26	42	47	43
1600	30	14	0	-12	-25	-35	-44	-49	-50	-44
1610	-40	-24	-14	-6	0	7	11	13	16	18
1620	12	16	14	12	7	5	3	-5	-11	-20
1630	-29	-36	-37	-46	-51	-53	-55	-53	-60	-53
1640	-38	-30	-21	-12	-1	8	13	15	12	6
1650	2	-4	-13	-22	-34	-39	-49	-45	-47	-42
1660	-48	-49	-55	-53	-51	-43	-36	-28	-27	-27
1670	-34	-42	-46	-39	-35	-19	0	16	35	53
1680	59	55	45	37	26	10	3	-1	7	19
1690	32	40	45	48	48	44	38	33	26	21
1700	14	7	-6	-16	-25	-34	-39	-41	-41	-42
1710	-38	-35	-27	-16	-9	0	1	-6	-11	-16
1720	-25	-36	-47	-57	-68	-75	-78	-79	-74	-60
1730	-50	-39	-24	-11	1	10	15	19	27	34
1740	34	37	45	53	62	79	100	116	124	120
1750	111	99	81	64	47	35	25	15	3	-8
1760	-18	-26	-27	-23	-17	-12	-7	-7	-7	-12
1770	-16	-23	-28	-44	-55	-60	-69	-65	-55	-48
1780	-39	-32	-18	-9	-5	-2	-4	-1	-4	-6
1790	-7	-4	-10	-12	-9	-2	0	-2	-6	-11
1800	-14	-16	-24	-23	-13	-10	-1	4	11	10
1810	16	20	19	27	27	23	20	12	7	2
1820	-2	-4	-6	-4	-1	-1	1	0	0	4
1830	5	14	16	17	16	20	22	26	27	29
1840	29	24	24	22	17	13	0	-3	-14	-21
1850	-31	-30	-29	-30	-26	-16	-9	-1	10	17
1860	21	29	33	34	30	27	23	19	15	15
1870	12	15	11	17	23	30	39	53	64	62
1880	57	50	42	35	27	17	6	-5	-12	-18
1890	-21	-20	-23	-23	-21	-20	-20	-23	-29	-30
1900	-32	-37	-39	-41	-38	-31	-29	-30	-28	-28
1910	-28	-24	-17	-12	-7	-1	1	0	-5	-7
1920	-10	-13	-14	-14	-12	-6	-4	-7	-9	-14
1930	-19	-19	-21	-25	-29	-31	-32	-35	-37	-34
1940	-31	-25	-18	-13	-8	-5	-3	-3	-3	0
1950	0	-2	-2	-2	-2	0	0	0	2	9
1960	18	25	30	25	20	16	13	15	19	22
1970	26	29	33	36	39	36	36	34	31	28
1980	24	22	12	8	4	-2	-7	-11	-11	-5
1990	3	10	21	18	21	21	18	17	17	19
2000	12	9	7	8	6	0	-1	-10	-13	-23
2010	-33	-42	-37	-33	-27	-25	-21	-22	-27	-34
2020	-37	-36	-39	-38	-38	-33	-32	-27	-27	-26
2030	-26	-16	-11	-3	1	8	12	3	5	0
2040	-4	-1	-1	0	1	13	24	33	39	41
2050	35	32	26	18	9	1	-6	-10	-13	-11
2060	-3	1	6	8	8	12	14	14	17	13

TO BE CONTINUED

CONTINUED(S-2401 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	8	1	-4	-8	-12	-16	-15	-14	-12	-5
2080	3	11	18	22	24	23	19	20	26	21
2090	16	19	19	18	23	24	25	26	22	18
2100	14	8	4	1	-7	-11	-10	-10	-6	-1
2110	4	12	16	15	16	17	14	11	13	19
2120	26	33	40	37	30	24	17	8	0	-3
2130	-1	0	2	2	5	5	4	2	0	-2
2140	-1	-1	0	0	3	11	18	24	29	33
2150	39	35	33	28	22	15	8	1	6	9
2160	6	8	6	2	3	0	0	-5	-6	-9
2170	-12	-12	-15	-14	-10	-5	0	0	3	3
2180	5	5	6	3	1	0	-2	-4	-10	-21
2190	-28	-32	-39	-38	-39	-28	-14	-3	-1	6
2200	8	15	16	15	8	11	10	6	13	16
2210	26	32	37	37	37	37	29	22	15	12
2220	5	3	-12	-16	-17	-18	-14	-10	-4	0
2230	5	8	3	-1	-5	-12	-20	-20	-21	-24
2240	-29	-28	-27	-29	-27	-27	-33	-32	-35	-29
2250	-27	-28	-32	-38	-40	-36	-35	-31	-26	-26
2260	-26	-27	-27	-34	-39	-41	-39	-33	-26	-19
2270	-14	-10	-3	0	3	8	10	17	22	23
2280	26	33	37	31	23	21	16	6	5	9
2290	8	13	20	23	22	19	14	10	5	-1
2300	-9	-15	-23	-27	-26	-25	-21	-24	-23	-18
2310	-15	-12	-8	-4	-2	-2	-4	-9	-15	-19
2320	-21	-22	-21	-24	-21	-21	-23	-22	-21	-21
2330	-21	-22	-19	-21	-16	-10	-7	-4	-4	-5
2340	-1	-4	-2	-6	-8	-10	-12	-7	-6	-7
2350	-5	-5	-4	-2	0	2	-3	-3	4	6
2360	4	0	-2	3	7	9	11	17	21	16
2370	14	9	9	4	5	7	4	4	4	5
2380	9	12	22	26	26	28	21	27	23	27
2390	24	24	21	17	13	16	12	9	5	-2
2400	-3	-4	-5	-11	-10	-7	-9	-7	-8	-5
2410	-5	-5	-5	-2	-8	-11	-10	-10	-12	-10
2420	-9	-9	-7	-7	-5	-4	-2	-3	-5	-4
2430	-4	-4	-4	-4	-3	-2	0	6	11	15
2440	19	25	25	24	24	23	21	21	21	21
2450	21	21	22	25	29	28	27	26	26	27
2460	32	33	28	22	20	17	16	11	9	7
2470	6	6	5	3	1	2	3	5	9	12
2480	14	18	20	21	19	16	13	12	9	4
2490	0	-6	-10	-13	-18	-22	-24	-27	-28	-29
2500	-30	-30	-30	-29	-28	-23	-17	-14	-12	-10
2510	-12	-15	-17	-20	-25	-34	-40	-41	-35	-33
2520	-27	-22	-14	-9	-1	5	12	19	22	23
2530	23	19	11	0	-6	-7	-12	-14	-14	-13
2540	-11	-12	-16	-18	-20	-24	-29	-34	-37	-38
2550	-37	-35	-34	-33	-28	-25	-22	-29	-19	-11
2560	-4	0	4	4	3	-2	-4	-8	-17	-22
2570	-23	-23	-30	-30	-28	-25	-20	-17	-14	-12
2580	-6	-6	-6	-4	-1	4	5	5	6	5
2590	-3	-6	-13	-20	-23	-23	-22	-21	-19	-14

TO BE CONTINUED

CONTINUED(S-2401 DOWN)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-15	-15	-15	-12	-2	-2	1	10	18	22
2610	27	36	37	37	40	40	39	38	33	21
2620	15	14	9	3	-2	-5	-12	-17	-24	-29
2630	-30	-29	-28	-28	-26	-23	-23	-24	-28	-32
2640	-32	-28	-20	-16	-9	-1	5	8	11	16
2650	22	24	27	27	26	22	16	14	9	1
2660	-2	-3	-4	-8	-13	-15	-17	-18	-20	-23
2670	-29	-31	-30	-28	-25	-26	-21	-12	-9	-4
2680	2	12	18	25	29	32	33	35	37	39
2690	41	43	49	54	58	63	65	62	59	55
2700	47	40	37	31	28	27	26	18	10	8
2710	8	8	4	4	4	1	0	-1	-4	-6
2720	-9	-10	-11	-12	-10	-8	-2	-1	-1	3
2730	4	4	4	4	5	6	6	6	6	5
2740	6	14	16	19	23	23	9	7	0	-7
2750	-12	-20	-28	-33	-38	-40	-44	-44	-43	-44
2760	-47	-47	-47	-47	-47	-46	-42	-41	-30	-25
2770	-20	-20	-15	-10	-5	-2	8	19	31	40
2780	44	48	48	42	41	38	32	26	14	14
2790	7	6	2	-2	-6	-7	-7	-2	2	4
2800	9	13	13	12	10	3	1	-2	-4	-4
2810	-6	-9	-8	-6	-5	-5	-3	-2	-1	0
2820	-1	-5	-6	-8	-11	-13	-15	-15	-16	-19
2830	-23	-24	-23	-24	-25	-25	-25	-26	-25	-22
2840	-20	-17	-17	-17	-12	-8	-6	-7	-5	-1
2850	-1	-1	-1	0	0	1	3	5	6	7
2860	8	9	11	12	18	22	19	14	11	9
2870	7	6	7	10	14	18	19	18	17	15
2880	14	12	10	9	8	7	6	6	7	9
2890	9	11	13	13	14	11	7	-1	-5	-13
2900	-19	-23	-27	-28	-30	-33	-32	-30	-30	-30
2910	-32	-32	-32	-33	-35	-36	-36	-36	-36	-35
2920	-32	-32	-32	-27	-25	-24	-22	-20	-20	-19
2930	-15	-15	-8	-6	-6	-6	-5	-4	-3	-4
2940	-7	-9	-11	-12	-17	-17	-17	-18	-18	-21
2950	-21	-23	-20	-20	-17	-17	-17	-17	-17	-15
2960	-15	-14	-13	-11	-11	-11	-11	-11	-10	-7
2970	-7	-6	-7	-7	-7	-7	-5	-5	-4	-4
2980	-2	-1	-1	0	3	9	9	11	11	9
2990	9	7	6	6	6	5	3	3	4	4

END

RECORD = M-1383 COMPONENT = NORTH STATION = TOKACHI-M
DATE AND TIME = 1991-11-27- 4-41 TOTAL NUMBER OF DATA = 2950
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 1491, 2950, 2950,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	7	204	178	54	-95	-117	-54	12	51	95
10	89	11	-45	-7	58	136	125	67	-19	-88
20	-129	-98	7	19	-27	-62	-96	-65	17	109
30	121	45	-2	-62	-17	63	115	82	-22	-106
40	-100	8	175	315	120	-76	-273	-326	-168	27
50	123	95	-88	-277	-251	-53	97	299	203	63
60	-74	-94	-10	152	162	24	-19	-23	1	11
70	30	16	-18	-73	-82	7	26	3	-73	-175
80	-145	-27	49	62	51	2	0	86	181	333
90	278	54	-71	-85	-45	1	35	-27	-100	-138
100	-73	39	162	143	62	-73	-196	-210	-107	-3
110	61	61	20	15	77	122	170	172	140	58
120	-15	-13	38	50	16	-10	-1	2	-34	-69
130	-104	-140	-114	-34	49	91	78	-6	-59	-143
140	-87	119	224	150	34	-42	-54	100	152	150
150	47	-21	-74	-73	-9	27	-2	-53	-90	-78
160	-62	-37	-10	38	23	30	88	98	78	42
170	37	37	14	-9	-32	-44	-22	-13	-45	-107
180	-131	-116	-26	97	69	21	-60	-79	-40	-6
190	-6	-39	-69	-50	-55	-69	-48	-28	14	63
200	38	11	-15	-41	-69	-44	9	54	12	-62
210	-203	-309	-309	-228	-170	-94	-44	-127	-48	50
220	193	431	534	426	253	0	-211	-250	-257	-275
230	-325	-301	-224	50	241	306	276	140	67	74
240	47	-4	-72	-155	-165	-94	-16	55	38	-10
250	-66	-102	-172	-154	-62	0	77	142	223	331
260	320	160	59	-36	-68	48	121	134	96	112
270	196	435	607	721	657	563	491	424	380	310
280	207	-64	-208	-358	-448	-331	-175	-198	-331	-535
290	-576	-484	-378	-352	-427	-550	-601	-477	-146	186
300	436	542	443	252	129	125	243	292	187	34
310	-103	-201	-111	-15	-26	-88	-166	-204	-212	-153
320	-21	174	394	574	661	486	174	-83	-222	-256
330	-271	-231	-224	-146	-72	-12	82	171	238	331
340	376	366	88	-196	-292	-283	-229	-263	-288	-224
350	-144	34	130	420	715	643	439	242	5	-444
360	-517	-596	-572	-490	-359	-138	367	699	908	713
370	189	-85	-423	-403	-396	-311	-284	-234	-204	-47
380	196	320	400	315	142	-29	-102	-93	-22	-9
390	-37	-56	-53	-19	22	81	148	191	156	77
400	-14	-115	-122	-28	39	57	-82	-158	-236	-251
410	-149	29	96	113	90	64	29	6	-1	7
420	51	83	129	185	231	241	160	52	-47	-137
430	-195	-251	-284	-355	-358	-225	-16	338	579	678
440	597	297	-119	-344	-455	-326	-185	-218	-119	-91
450	-19	113	203	182	140	102	35	-13	-38	-17
460	30	93	105	44	-20	-17	61	140	211	164
470	121	83	75	62	40	-26	-87	-174	-259	-118

TO BE CONTINUED

CONTINUED(M-1383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	32	157	198	136	57	0	-185	-235	-151	-150
490	-201	-230	-224	-163	-82	24	-3	-56	-69	-98
500	-83	-20	56	137	207	269	323	366	304	207
510	128	0	-88	-134	-173	-195	-197	-115	27	119
520	231	211	156	112	54	17	-50	-119	-168	-211
530	-97	23	106	204	193	92	21	-92	-164	-122
540	-143	-200	-264	-295	-298	-270	-221	-162	-109	-60
550	6	101	248	348	420	484	449	398	291	140
560	69	-4	-49	-66	53	273	395	319	170	-5
570	-164	-281	-383	-415	-398	-347	-280	-214	-153	-128
580	-201	-260	-256	-181	-104	-22	123	299	494	595
590	512	365	236	107	-17	-230	-353	-429	-454	-365
600	-252	-144	3	122	117	21	-50	-108	-149	-111
610	-26	89	193	282	389	415	312	194	95	116
620	179	166	141	115	98	82	63	30	-2	-47
630	-96	-187	-322	-493	-407	-243	-69	61	83	122
640	102	62	46	37	39	30	31	30	36	76
650	107	97	64	43	76	119	135	110	72	-1
660	-22	8	-33	-83	-112	-63	21	86	129	146
670	171	137	34	-47	-115	-132	-156	-175	-93	-19
680	36	92	84	67	53	30	23	20	53	55
690	21	-15	-43	13	37	14	-64	-159	-227	-242
700	-262	-203	-121	10	215	328	393	386	301	213
710	43	-95	-184	-205	-160	-152	-154	-109	-65	-84
720	-139	-172	-200	-221	-232	-217	-177	-120	-15	84
730	179	151	84	36	-20	-9	91	150	206	183
740	140	105	61	3	-43	-103	-144	-180	-184	-142
750	-97	-47	10	23	-43	-115	-161	-204	-212	-130
760	-43	-1	-20	-57	-80	-82	-57	-24	0	22
770	62	95	181	182	98	26	-92	-152	-194	-202
780	-141	-56	22	60	88	112	130	98	53	26
790	-23	-55	-115	-84	17	98	151	187	210	183
800	162	99	5	-82	-137	-175	-216	-246	-183	-89
810	-15	12	21	13	-3	-13	8	27	-14	-43
820	-67	51	180	237	296	262	220	181	132	57
830	4	-63	-122	-168	-206	-222	-209	-175	-138	-52
840	-14	-37	-17	45	69	52	12	3	13	32
850	57	85	110	146	184	223	186	118	83	35
860	-27	-77	-118	-145	-167	-147	-118	-82	-14	35
870	30	-16	-55	-93	-130	-107	-15	60	39	6
880	-34	-34	-5	48	76	34	13	-6	27	54
890	64	70	62	53	43	31	10	-21	-37	-27
900	-13	-9	-34	-59	-59	-58	-41	-22	-10	-10
910	-10	-19	-39	-38	-20	2	7	-35	-70	-107
920	-63	22	67	126	153	127	83	37	-6	-46
930	-49	-48	-49	-47	-56	-79	-92	-98	-90	-70
940	-60	-55	-47	-8	19	61	104	150	168	114
950	61	17	-26	-83	-42	54	129	166	120	54
960	-28	-63	-63	-75	-81	-97	-80	-48	-18	12
970	2	-27	-39	-24	-23	-42	-79	-72	-26	33
980	106	132	99	55	18	7	30	79	93	55
990	16	-29	-78	-71	-30	-26	-57	-76	-77	-68
1000	-60	-54	-43	-34	-27	-27	-28	-6	33	104

TO BE CONTINUED

CONTINUED(M-1383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	171	180	152	121	81	54	46	6	-34	-87
1020	-136	-153	-118	-48	0	-11	-45	-77	-102	-85
1030	-64	-24	9	23	37	44	39	22	25	57
1040	58	25	-21	-68	-126	-90	-3	51	73	36
1050	-41	-102	-34	36	78	90	56	20	-11	-11
1060	-5	5	18	18	6	-11	-34	-52	-49	-20
1070	4	11	-1	-13	-10	14	46	73	74	50
1080	25	0	-20	-19	-5	11	26	36	32	38
1090	64	54	14	-24	-82	-126	-171	-98	4	15
1100	-9	-56	-28	43	94	123	102	77	23	8
1110	67	112	118	82	41	-11	3	78	98	81
1120	58	34	34	58	68	47	28	34	53	71
1130	53	17	-3	-24	-35	-56	-69	-68	-59	-66
1140	-57	-32	5	25	0	-28	-55	-87	-99	-86
1150	-84	-84	-84	-74	-56	-42	-26	-10	13	2
1160	-19	5	47	73	75	63	41	30	44	64
1170	62	23	-9	-38	-66	-65	-52	-60	-92	-146
1180	-210	-204	-154	-101	-49	0	64	107	150	181
1190	202	195	170	130	89	56	11	-13	-37	-51
1200	-38	-27	-49	-89	-121	-157	-153	-108	-89	-63
1210	-41	-9	35	67	105	136	126	89	37	-5
1220	-36	-21	-24	-45	-67	-101	-93	-57	-51	-79
1230	-108	-113	-111	-81	-54	-48	-47	-39	-19	2
1240	33	62	88	95	70	41	-7	-5	18	34
1250	27	5	-24	-57	-90	-75	-34	-14	-40	-78
1260	-107	-102	-59	-29	0	16	-30	-60	-60	-15
1270	41	86	123	98	61	36	17	62	101	94
1280	59	16	-24	-64	-76	-52	-35	-16	-32	-54
1290	-70	-71	-55	-27	-5	8	22	41	62	81
1300	83	72	48	13	-14	-44	-47	-19	2	-19
1310	-45	-64	-72	-71	-67	-44	-22	-14	-14	-2
1320	15	19	19	35	49	50	30	7	1	24
1330	55	57	38	21	2	-11	-24	-36	-44	-54
1340	-64	-78	-75	-55	-26	-20	-43	-59	-70	-69
1350	-43	-25	-18	-9	0	14	34	52	73	103
1360	88	39	11	-16	-41	-62	-76	-69	-56	-49
1370	-40	-36	-42	-45	-32	-5	12	10	17	42
1380	59	39	21	1	-14	-31	-23	6	44	77
1390	72	43	8	-14	-42	-75	-99	-125	-135	-110
1400	-80	-46	-21	-10	-14	-32	-42	-47	-38	-13
1410	5	14	13	3	-6	-23	-34	-35	-27	-8
1420	-4	-18	-33	-49	-59	-51	-41	-33	-33	-26
1430	-22	-13	-8	-9	-9	-8	-8	1	15	31
1440	47	51	14	-14	-38	-65	-95	-100	-68	-33
1450	6	26	9	2	14	33	50	31	12	-3
1460	-10	1	20	45	47	29	16	11	31	52
1470	78	97	59	-2	-24	-16	-7	-13	-30	-47
1480	-44	-8	34	46	46	40	38	80	75	54
1490	16	8	-6	-27	3	27	77	107	73	34
1500	39	44	32	-1	-30	-54	-94	-120	-88	-64
1510	-36	-22	-18	-10	2	30	37	11	8	-10
1520	-27	-27	-23	-42	-54	-70	-68	-55	-28	5
1530	30	20	2	3	24	48	25	-2	-41	-68

TO BE CONTINUED

CONTINUED(M-1383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-51	-16	4	30	25	0	-7	-5	-16	-36
1550	-48	-78	-80	-44	22	94	104	88	63	43
1560	68	74	76	13	-35	-71	-76	-47	-20	-4
1570	-13	-11	13	27	29	22	5	-6	6	24
1580	50	55	31	10	-9	5	42	36	0	-29
1590	-51	-36	-16	26	60	43	9	-19	-46	-57
1600	-54	-54	-29	-32	-38	-17	7	36	61	81
1610	59	19	-7	-22	-14	-6	-7	7	17	16
1620	22	39	68	96	72	40	14	-22	-69	-78
1630	-67	-65	-63	-34	-5	30	62	86	103	77
1640	26	-27	-52	-55	-3	20	-3	-24	-27	1
1650	30	57	56	30	11	6	11	16	2	-19
1660	-46	-74	-59	-42	-27	-38	-35	-10	29	65
1670	59	33	1	-17	5	36	45	22	-8	-44
1680	-54	-15	34	75	75	46	13	13	37	64
1690	67	44	1	-43	-60	-44	-5	48	60	25
1700	17	34	56	55	30	10	-16	-31	-21	-3
1710	10	-6	-32	-13	30	61	53	21	10	14
1720	28	33	15	-5	-32	-37	-28	-8	2	-11
1730	-25	-30	-23	-9	11	47	73	43	3	-24
1740	-31	-27	-11	5	19	37	54	78	79	56
1750	34	14	-2	-16	-29	-38	-35	-11	5	29
1760	32	13	-4	-26	-52	-57	-35	-21	-5	-13
1770	-13	5	40	39	-7	-37	-57	-46	-22	-4
1780	7	3	-1	-8	-15	-25	-30	-16	2	19
1790	36	54	66	60	42	21	4	9	38	49
1800	42	37	21	1	23	62	49	36	28	20
1810	9	2	-2	-9	-21	-34	-48	-42	-24	-10
1820	8	47	73	66	54	29	19	2	-15	-25
1830	-11	11	42	38	8	0	5	19	36	40
1840	19	0	-23	-23	-6	22	32	13	0	-17
1850	-27	-12	15	36	13	-21	-35	-19	5	14
1860	13	5	-2	0	10	29	63	89	76	57
1870	21	-10	6	-1	-14	-30	-49	-52	-50	-31
1880	-6	16	9	-13	-34	-59	-68	-69	-61	-41
1890	-11	-8	-29	-35	-33	-12	3	25	30	13
1900	1	1	17	34	52	46	28	-8	-52	-57
1910	-39	-14	13	0	-15	-35	-47	-44	-35	-27
1920	-22	-18	-12	-18	-7	9	14	4	1	11
1930	32	34	19	14	26	42	40	26	7	-6
1940	-28	-17	3	21	36	20	4	14	34	24
1950	2	-19	-38	-36	-25	-21	-25	-39	-31	-6
1960	14	38	29	24	16	9	1	-12	-14	-14
1970	-3	7	22	48	70	71	56	31	8	-12
1980	-40	-65	-76	-62	-35	4	15	1	-7	-4
1990	6	30	55	35	11	-15	-13	12	40	56
2000	38	24	17	16	23	19	-2	-18	-32	-51
2010	-51	-20	7	21	24	25	39	52	66	61
2020	49	27	1	-28	-42	-25	-2	9	24	41
2030	68	66	58	50	39	26	7	-3	-10	-19
2040	-30	-14	0	21	15	-2	-13	-31	-41	-34
2050	-8	16	9	-7	-29	-31	-15	8	42	39
2060	17	6	19	48	61	41	9	-22	-47	-41

TO BE CONTINUED

CONTINUED(M-1383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-26	-35	-51	-68	-50	0	28	29	24	19
2080	10	-3	-14	-34	-47	-60	-65	-54	-33	-3
2090	26	23	12	4	-5	-36	-67	-69	-63	-43
2100	-26	-5	9	11	1	11	38	40	15	-10
2110	-9	9	37	35	14	-19	-56	-87	-87	-72
2120	-53	-25	-9	0	2	17	46	66	59	42
2130	25	-3	-26	-31	-28	-12	0	0	-6	-4
2140	2	2	12	37	41	33	24	11	0	6
2150	15	26	33	13	9	15	31	42	36	29
2160	13	-3	-19	-35	-34	-13	1	12	24	32
2170	27	8	12	25	15	0	-19	-38	-53	-66
2180	-19	19	46	43	26	25	29	37	26	16
2190	1	-26	-51	-46	-37	-27	-16	-5	0	8
2200	3	-6	1	21	26	5	-12	-42	-43	-15
2210	24	21	-8	-33	-61	-59	-35	-5	-2	-27
2220	-31	-25	-8	-5	-8	-12	0	9	16	24
2230	46	63	46	30	23	25	38	46	47	30
2240	19	17	18	17	2	-27	-66	-88	-72	-46
2250	-18	5	22	26	25	22	11	12	18	23
2260	27	16	8	15	18	17	17	17	1	-17
2270	-4	13	30	32	16	1	-4	-12	-14	-20
2280	-23	-13	0	17	29	35	28	11	9	11
2290	18	9	-7	-23	-38	-22	0	32	43	21
2300	0	-14	-28	-24	-10	-21	-37	-38	-28	-12
2310	-5	-6	-6	-6	-5	7	9	-9	-25	-32
2320	-21	-7	11	19	16	24	26	31	35	32
2330	18	2	-7	-25	-42	-55	-68	-65	-46	-33
2340	-30	-43	-53	-46	-36	-25	-8	2	2	1
2350	8	33	58	81	66	38	12	-15	-26	-18
2360	-12	-25	-31	-17	-14	-13	-20	-34	-38	-38
2370	-34	-17	-25	-36	-21	4	39	69	57	33
2380	9	-10	-12	-13	-5	-9	-25	-37	-40	-24
2390	-18	-12	-24	-28	-29	-18	-2	-9	-43	-65
2400	-67	-52	-27	4	3	3	-10	-12	-11	6
2410	30	49	68	62	49	37	24	16	2	-6
2420	-11	-11	-11	-12	-9	-3	6	13	13	6
2430	-11	-10	-6	13	28	20	14	6	0	-6
2440	-22	-33	-35	-35	-35	-35	-35	-28	-12	0
2450	13	33	47	55	47	37	36	45	49	32
2460	21	0	-26	-43	-27	-9	9	21	16	4
2470	-13	-20	-15	36	36	13	0	-4	-3	-3
2480	-5	4	27	29	22	11	13	23	28	28
2490	18	0	-5	-14	-20	-28	-22	-5	4	11
2500	11	1	-8	-16	-21	-20	-16	0	-8	-23
2510	-12	-1	12	20	16	-3	-29	-18	4	24
2520	38	44	38	21	2	-17	-27	-14	-3	4
2530	-2	-18	-29	-30	-15	-5	-2	-4	-20	-34
2540	-40	-15	5	29	54	55	39	29	7	-12
2550	-26	-12	-3	-18	-50	-60	-42	-26	-6	8
2560	13	1	-11	-12	-18	-21	-20	-20	-20	-17
2570	8	12	14	22	10	-3	-16	-29	-37	-44
2580	-43	-44	-40	-21	4	29	37	26	10	4
2590	5	8	18	7	-7	-21	-28	-29	-10	7

TO BE CONTINUED

CONTINUED(M-1383 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	27	28	15	-5	-9	-11	-17	-16	-10	-7
2610	-12	-21	-23	-1	31	42	37	31	25	20
2620	11	8	9	9	2	0	1	-5	-9	-18
2630	-23	-22	-22	-16	-2	8	11	2	-21	-38
2640	-47	-34	-1	12	1	-5	-5	-2	3	15
2650	16	-2	-11	-38	-52	-21	6	24	11	4
2660	-2	-4	-3	-4	-3	2	4	4	4	4
2670	8	27	38	47	50	44	37	22	12	2
2680	-6	-17	-19	-19	-19	-17	-7	3	5	4
2690	-2	3	11	21	33	45	68	89	111	96
2700	64	52	42	33	28	23	2	-18	-19	-16
2710	-4	-2	-2	-6	-18	-18	-10	4	20	36
2720	32	21	24	29	35	38	37	38	38	38
2730	38	34	13	4	6	2	-2	-6	-15	-23
2740	-27	-26	-28	-34	-35	-32	-25	-19	-18	-18
2750	-4	10	24	45	58	70	61	29	12	-14
2760	-35	-43	-32	-18	-25	-42	-57	-59	-59	-59
2770	-59	-46	-22	-7	5	20	46	55	47	36
2780	11	17	32	47	52	38	23	-9	-37	-41
2790	-32	-20	-7	-26	-40	-28	-12	3	17	14
2800	-20	-37	-43	-37	-10	17	44	22	-4	-51
2810	-49	-26	0	27	15	2	-3	0	14	30
2820	30	26	14	4	-3	-1	-5	-8	18	30
2830	19	13	14	14	11	-1	-8	-11	-8	-25
2840	-40	-14	3	28	45	46	27	5	-19	-29
2850	-20	-13	3	13	15	22	21	22	24	39
2860	46	20	-11	-35	-27	-17	-5	18	44	29
2870	13	13	6	5	5	5	6	-5	-8	3
2880	-5	-15	-1	5	-1	1	10	23	20	0
2890	-3	0	5	5	-5	-12	-17	-19	-18	-12
2900	-11	-11	-11	-8	9	7	-1	-7	-18	-19
2910	-19	-19	-13	-1	11	23	29	19	8	4
2920	6	13	13	13	14	9	2	-2	-1	-1
2930	-1	-1	-1	-1	-13	-26	-19	-6	9	13
2940	0	-11	-22	-24	-17	10	24	24	4	2

END

RECORD = M-1383 COMPONENT = EAST STATION = TOKACHI-M
DATE AND TIME = 1991-11-27- 4-41 TOTAL NUMBER OF DATA = 2950
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 1492, 2950, 2950,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	-1	-16	-1	20	14	-24	-56	10	54	71
10	27	-12	78	134	167	126	37	-4	-114	-152
20	-66	-24	7	7	5	-25	-17	-7	-33	-53
30	-94	-55	0	77	69	68	95	93	26	-44
40	-51	-49	-87	-94	-61	-19	23	66	50	-17
50	-53	-66	-52	-45	-12	24	37	25	-10	-33
60	26	100	139	49	-16	-34	-58	-82	-55	4
70	40	55	24	11	21	33	-60	-120	-165	-151
80	-80	32	124	104	91	79	102	91	62	35
90	19	-1	-19	-47	-71	-94	-119	-91	-60	0
100	76	135	180	163	89	2	-60	-64	-53	-37
110	-20	-64	-113	-88	-12	71	66	33	2	-9
120	-3	13	11	-22	-58	-26	13	37	51	53
130	30	9	-26	-15	16	100	109	76	44	-1
140	-20	-32	-3	10	33	59	73	50	-20	-44
150	-11	-32	-53	-45	-7	-7	-14	-14	-9	-2
160	3	16	-19	-58	-53	-30	-2	21	52	75
170	109	177	221	226	185	130	71	-8	-83	-129
180	-99	-57	-66	-106	-140	-106	-30	47	109	79
190	52	18	-6	-7	32	82	136	141	74	-7
200	-75	-48	21	117	146	99	78	49	6	-24
210	-55	-81	-80	-112	-173	-205	-283	-256	-143	-39
220	81	188	252	218	170	149	150	86	8	-49
230	-179	-327	-370	-336	-263	-174	-111	-91	-109	-137
240	-130	-90	-80	-91	-96	-60	-17	37	83	26
250	-26	-65	-86	-120	-106	-5	134	270	305	291
260	260	246	287	285	226	122	44	-310	-467	-602
270	-546	-387	-238	83	90	-50	-188	-238	-207	70
280	380	525	514	270	145	-76	-167	-66	40	248
290	356	346	331	333	458	500	496	655	642	494
300	244	113	30	37	32	-100	-239	-621	-822	-757
310	-523	-396	-353	-536	-636	-504	-403	-175	365	436
320	532	439	179	1	-126	-125	-70	55	141	223
330	243	244	266	352	384	465	569	591	396	-57
340	-444	-705	-830	-740	-572	-390	-198	-67	-9	55
350	198	415	509	599	567	300	-55	-271	-338	-340
360	-212	-114	-10	75	165	217	153	78	11	-155
370	-192	-145	-90	-2	80	145	97	-54	-183	-200
380	-139	-40	39	141	229	201	152	192	280	408
390	402	371	-11	-379	-451	-556	-533	-382	-201	-80
400	102	146	91	-32	-132	-149	-120	-13	53	40
410	19	-12	-44	1	92	182	261	336	334	209
420	120	-26	-123	-158	-24	128	202	318	263	111
430	-42	-423	-591	-565	-412	-316	-205	0	152	307
440	439	420	315	209	63	-50	-208	-271	-165	121
450	399	527	540	508	285	-97	-260	-339	-354	-353
460	-216	-12	96	142	63	48	-48	-217	-327	-426
470	-518	-256	-111	261	445	498	516	432	382	299

TO BE CONTINUED

CONTINUED(M-1383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	204	123	-79	-259	-355	-499	-502	-441	-121	206
490	306	375	437	429	365	234	61	-172	-343	-405
500	-326	-185	48	177	86	-109	-174	-124	-21	36
510.	89	37	-122	-273	-357	-425	-278	-108	16	431
520	564	613	428	182	39	-240	-416	-468	-390	-111
530	181	240	286	271	259	184	120	73	57	114
540	177	243	287	315	339	357	321	235	158	17
550	-77	-213	-398	-460	-425	-351	-278	-178	-98	18
560	-5	-67	-199	-291	-342	-395	-343	-220	-24	107
570	177	198	157	175	203	242	300	334	388	450
580	481	441	344	255	68	-115	-254	-377	-445	-423
590	-355	-276	-179	-82	11	13	-8	-15	22	155
600	336	402	422	357	165	-15	-105	-95	-7	49
610	105	46	-90	-196	-290	-366	-334	-279	-183	-74
620	-75	-127	-178	-226	-283	-303	-261	-203	-109	68
630	194	246	356	432	382	317	276	249	240	222
640	186	45	-166	-311	-427	-555	-598	-419	-243	-49
650	209	291	279	260	275	291	349	366	252	155
660	-2	-213	-302	-358	-353	-365	-256	-164	-100	-14
670	59	166	273	399	470	408	283	174	108	39
680	-44	-90	-127	-161	-159	-137	-116	-100	-81	-64
690	-44	-44	-48	-28	-12	0	3	23	66	3
700	-71	-117	-164	-138	-97	-43	16	57	94	173
710	248	221	161	133	96	111	173	210	238	150
720	50	-81	-228	-361	-520	-537	-398	-244	-75	74
730	129	240	341	315	232	105	3	-73	-165	-193
740	-116	-82	-173	-223	-271	-270	-192	-110	-34	24
750	141	234	166	81	10	-72	-73	-46	-17	-7
760	-36	-37	-3	37	77	112	130	90	25	-49
770	-102	-136	-155	-113	-63	-31	-7	-3	28	97
780	155	204	203	138	59	-11	-76	-43	46	72
790	78	53	18	-32	-70	-63	-24	29	67	35
800	-68	-134	-195	-193	-157	-125	-104	-74	-24	34
810	87	151	217	311	342	213	89	-136	-260	-286
820	-231	-134	-61	28	87	160	241	259	221	123
830	49	7	-19	-23	-44	-79	-104	-106	-74	-49
840	-17	-1	-8	-13	-31	-48	-58	-64	-68	-64
850	-50	-36	-15	-11	-20	-25	-22	-2	16	33
860	32	50	84	100	90	40	-14	-69	-113	-162
870	-205	-172	-122	-86	-55	-65	-75	-76	-67	-45
880	-12	-13	-25	-24	-16	-7	1	24	59	88
890	116	175	234	247	127	13	-17	-68	-101	-85
900	-8	5	-15	-34	-70	-100	-128	-155	-163	-141
910	-75	-4	30	59	87	109	138	177	218	184
920	130	63	-14	-69	-80	-43	2	49	21	-24
930	-56	-74	-64	-36	6	59	79	59	47	47
940	56	50	26	0	-14	-1	25	37	47	43
950	12	-23	-63	-108	-135	-152	-123	-80	-1	76
960	114	81	37	-8	-16	-5	0	11	15	17
970	15	-33	-75	-93	-106	-130	-145	-141	-146	-160
980	-167	-124	-71	7	50	67	41	6	-32	-53
990	-19	10	40	62	86	102	96	89	53	30
1000	3	-17	-43	-70	-95	-80	-44	-39	-64	-86

TO BE CONTINUED

CONTINUED(M-1383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	-99	-91	-33	7	24	38	53	65	73	70
1020	22	-24	-59	-86	-105	-106	-86	-57	-49	-49
1030	-50	-45	-31	22	82	93	78	55	36	16
1040	6	0	18	37	42	43	34	16	1	-8
1050	-3	13	31	54	65	77	91	93	83	39
1060	32	33	16	-46	-102	-173	-201	-188	-148	-50
1070	51	130	139	103	58	52	60	51	17	-18
1080	-72	-162	-209	-178	-130	-88	-16	8	22	41
1090	61	94	138	139	104	57	-8	-41	-39	-21
1100	-6	0	-20	-56	-87	-80	-38	8	41	25
1110	6	-28	-41	-3	34	57	43	28	17	15
1120	17	7	-9	-32	-32	3	34	46	-4	-22
1130	-18	-16	-29	-46	-65	-90	-113	-149	-166	-133
1140	-89	-50	3	79	137	158	150	58	-32	-70
1150	-119	-96	-49	-31	-8	-7	-17	-42	-45	-35
1160	-20	-14	-16	-36	-54	-48	-35	-26	-18	-13
1170	-5	7	10	14	33	56	79	90	104	100
1180	79	56	27	0	-30	-52	-68	-82	-68	-42
1190	-21	0	13	30	43	33	9	-3	-5	-3
1200	-7	-13	-12	-13	-12	-12	-12	-13	-4	23
1210	51	70	87	84	74	52	18	-10	-40	-84
1220	-86	-54	-25	10	12	13	4	-8	-12	-5
1230	16	31	42	42	37	38	49	80	102	112
1240	95	73	49	22	11	29	55	55	37	12
1250	18	37	59	69	59	44	32	16	-14	-44
1260	-60	-61	-54	-49	-42	-36	-34	3	47	81
1270	77	68	49	-10	-45	-36	-25	-8	0	5
1280	11	52	90	99	94	79	42	9	-2	-18
1290	-34	-50	-58	-72	-66	-33	-12	-4	0	1
1300	-1	5	5	0	-36	-16	23	43	15	-16
1310	-34	-44	-25	9	44	69	52	24	4	-13
1320	-39	-22	8	47	67	41	11	-29	-41	-34
1330	-3	52	92	87	50	-4	-52	-78	-99	-45
1340	3	11	-2	-2	0	11	31	37	14	-8
1350	-29	-35	-37	-44	-42	-30	-19	16	37	19
1360	15	6	6	-12	-43	-50	-60	-87	-67	-39
1370	-18	-10	-47	-78	-92	-93	-68	-27	6	27
1380	47	69	105	104	92	83	72	37	10	5
1390	-1	1	-18	-42	-50	-48	-33	-4	21	41
1400	62	69	76	76	77	71	47	30	6	-14
1410	-10	0	1	-19	-43	-63	-87	-112	-125	-123
1420	-115	-76	-41	-69	-97	-93	-69	-29	36	106
1430	137	131	112	74	46	30	28	28	28	29
1440	21	6	-7	-33	-65	-72	-67	-57	-43	-36
1450	-28	-28	-24	-10	7	21	36	53	72	77
1460	57	33	4	-29	-43	-42	-42	-43	-53	-64
1470	-67	-51	-40	-42	-37	-21	12	43	61	57
1480	44	30	10	5	42	81	111	100	66	38
1490	9	-7	-59	-74	-99	-113	-113	-89	-45	5
1500	45	82	123	146	143	113	72	38	9	-15
1510	-24	0	11	27	45	40	14	-5	-28	-37
1520	-37	-37	-37	-37	-36	-22	-11	-6	-3	-2
1530	7	26	56	44	29	11	-10	-29	-21	0

TO BE CONTINUED

CONTINUED(M-1383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	31	52	46	16	-19	-45	-77	-90	-76	-57
1550	-34	-8	21	48	54	55	38	26	14	-7
1560	-30	-57	-79	-71	-49	-33	-22	-11	-2	-21
1570	-45	-67	-62	-33	-8	24	37	30	28	13
1580	5	3	13	37	60	54	31	6	-18	-29
1590	-19	3	27	50	41	20	-11	-34	-18	13
1600	43	70	42	9	-6	-12	-12	-12	-12	-12
1610	-12	-13	-7	-3	2	19	43	63	49	7
1620	-31	-66	-89	-84	-70	-50	-38	-38	-16	2
1630	2	-3	-5	-5	-6	-5	-6	-12	-32	-31
1640	-10	7	31	49	51	36	11	-12	-35	-61
1650	-80	-90	-90	-75	-57	-58	-44	-15	18	46
1660	56	67	61	59	59	60	54	34	12	-11
1670	-31	-47	-50	-45	-27	-14	14	42	50	47
1680	26	0	-31	-52	-72	-76	-63	-41	-20	-2
1690	20	42	66	94	107	84	54	21	-8	-30
1700	-35	-35	-31	-11	8	27	38	38	24	10
1710	-30	-57	-70	-77	-58	-30	-6	2	14	13
1720	14	14	13	14	4	-8	-18	-26	-33	-37
1730	-23	1	29	36	18	-6	-37	-53	-52	-40
1740	-19	-23	-29	-26	-17	-3	9	23	33	47
1750	43	26	1	-31	-50	-52	-41	-21	-1	13
1760	22	22	33	38	36	25	16	-1	-19	-20
1770	-1	39	71	82	71	58	38	15	3	7
1780	7	-14	-36	-49	-56	-38	-17	-13	-12	-11
1790	4	21	25	18	12	2	-11	-27	-36	-19
1800	-2	11	6	-17	-33	-43	-46	-29	0	22
1810	39	48	14	-19	-20	7	41	69	64	52
1820	42	35	46	63	82	64	51	37	5	-25
1830	-71	-91	-78	-62	-42	-22	-28	-38	-32	-3
1840	11	8	-1	-25	-32	-27	-5	25	55	60
1850	64	69	68	64	51	41	22	3	-13	-34
1860	-49	-58	-55	-39	-24	-6	2	-11	-32	-49
1870	-34	-16	0	17	34	50	31	15	16	16
1880	16	16	13	-3	-10	31	51	48	34	11
1890	-8	-51	-70	-67	-59	-41	-35	-34	-26	-17
1900	-9	0	15	35	53	60	63	49	25	-2
1910	-20	-40	-35	-11	5	19	22	23	18	13
1920	14	13	15	23	18	13	10	-1	-9	-10
1930	8	26	37	39	37	25	15	0	-20	-28
1940	-22	-3	19	36	39	22	12	13	17	29
1950	27	15	13	7	-10	-9	-2	-8	-23	-36
1960	-33	-10	19	47	50	34	16	-11	-26	-29
1970	-18	0	26	59	61	41	4	-38	-51	-50
1980	-39	-37	-42	-55	-51	-31	2	24	29	27
1990	10	-10	-21	-21	-18	-10	-6	-11	-3	6
2000	26	36	22	7	-36	-87	-86	-63	-39	-20
2010	-9	1	10	-4	-14	-10	0	0	-12	-12
2020	3	28	45	56	49	28	11	11	27	22
2030	9	3	2	3	10	16	29	37	30	18
2040	10	10	-1	-8	11	29	45	68	85	68
2050	46	32	4	-22	-38	-41	-41	-34	-16	-3
2060	4	17	24	2	-16	-33	-42	-41	-42	-39

TO BE CONTINUED

CONTINUED(M-1383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-25	-12	5	25	49	72	88	93	81	18
2080	-20	-44	-63	-63	-48	-21	-10	-11	-33	-37
2090	-14	14	25	17	12	1	-14	-23	-35	-28
2100	0	23	43	48	39	19	-9	-19	-18	-19
2110	-13	-6	12	35	40	37	26	10	-8	-22
2120	-28	-27	-17	-3	6	7	5	4	10	21
2130	22	10	-16	-37	-46	-44	-44	-30	-10	9
2140	30	38	39	34	29	24	19	9	2	-12
2150	-22	-13	-2	3	5	4	5	-3	-19	-20
2160	-20	-20	-18	-6	10	25	39	48	55	50
2170	41	33	21	8	-1	-15	-22	-28	-29	-24
2180	-4	17	31	15	0	-14	-26	-34	-38	-35
2190	-25	-16	-12	-20	-27	-35	-36	-24	-6	10
2200	21	16	-3	-22	-27	0	26	38	25	14
2210	8	-9	-32	-45	-46	-38	-19	-1	5	4
2220	4	-3	-15	-1	2	-8	-17	-29	-17	-4
2230	-4	-3	-3	-3	-3	-13	-24	-41	-48	-56
2240	-56	-29	-6	12	41	65	49	16	-7	-27
2250	-44	-37	-26	-7	14	20	8	5	2	-2
2260	-9	-19	-25	-29	-29	-28	-20	-13	0	4
2270	9	17	21	21	21	21	21	29	43	64
2280	79	66	41	8	-26	-49	-55	-53	-55	-42
2290	-18	-12	-9	-3	-4	-2	18	41	19	-9
2300	-24	-37	-36	-42	-39	-30	-24	-19	-21	-18
2310	2	20	13	-10	-23	-35	-37	-37	-27	-12
2320	5	23	36	38	38	36	27	9	3	4
2330	-4	-11	-21	-20	-7	3	10	18	17	14
2340	22	24	36	29	14	13	18	38	48	45
2350	39	33	15	6	0	-8	-17	-35	-45	-44
2360	-45	-44	-45	-39	-25	-2	17	34	39	33
2370	26	22	18	3	-6	-18	-19	-19	-19	-19
2380	-24	-34	-24	-23	-36	-35	-29	-26	-27	-27
2390	-27	-27	-26	-28	-34	-36	-29	-15	3	20
2400	33	42	33	16	2	-9	-17	-23	-41	-59
2410	-70	-77	-71	-41	-13	9	28	27	23	24
2420	24	24	24	24	24	22	13	2	-30	-39
2430	-22	-9	1	13	23	25	24	34	55	56
2440	45	24	4	-16	-26	-36	-23	1	24	33
2450	28	16	7	6	-4	-15	-25	-33	-35	-29
2460	-6	12	25	22	21	31	33	32	32	33
2470	30	21	15	16	15	15	15	15	15	16
2480	10	-4	-9	-10	-4	0	-1	-1	-1	-1
2490	-1	-1	-1	-1	-9	-10	-10	-10	-9	7
2500	30	49	65	80	71	52	38	21	15	33
2510	52	42	26	9	-2	-2	-2	-2	4	15
2520	19	12	5	-4	-15	-24	-28	-27	-28	-22
2530	-18	-12	-3	5	6	3	-6	-21	-37	-46
2540	-27	8	28	15	-7	-35	-44	-44	-38	-22
2550	9	3	-27	-44	-42	-27	-11	1	8	-3
2560	-19	-18	-13	12	23	24	16	11	-32	-31
2570	-16	-19	-17	-18	-18	-17	-21	-25	-26	-15
2580	4	15	16	17	9	-12	3	25	44	61
2590	58	37	23	10	-11	-24	-9	16	17	18

TO BE CONTINUED

CONTINUED(M-1383 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	18	18	18	18	18	12	9	10	10	10
2610	10	-2	-17	-22	-22	-22	-22	-14	-13	-13
2620	-13	-13	-13	-10	0	24	43	62	79	79
2630	81	63	45	40	35	24	-2	-20	-38	-45
2640	-51	-36	-23	-13	-9	-4	0	3	-2	-2
2650	1	12	14	19	28	36	42	48	53	60
2660	52	27	6	-20	-34	-34	-34	-26	-14	-3
2670	6	12	17	10	4	-11	-32	-25	-4	15
2680	34	49	46	35	26	25	35	29	24	21
2690	15	14	-1	10	3	-10	-8	-7	-22	-32
2700	-16	0	10	17	15	20	-2	-39	-23	-16
2710	-5	6	6	-6	-8	-11	-9	-2	0	16
2720	26	25	25	25	23	13	0	11	35	48
2730	51	47	29	8	9	3	4	10	13	23
2740	21	10	4	0	1	-4	-9	-21	-32	-27
2750	-18	-6	0	14	24	26	19	2	0	0
2760	0	0	0	5	9	6	0	2	8	8
2770	8	10	17	17	25	23	14	-1	-8	-12
2780	-17	-9	-7	2	8	10	18	15	18	2
2790	-10	-2	4	14	17	12	1	-9	-16	-15
2800	-4	0	0	0	7	16	24	25	25	24
2810	27	32	25	25	25	22	0	-15	-30	-30
2820	-13	-3	-26	-18	2	-19	-24	-19	0	15
2830	20	6	-10	-27	-41	-52	-60	-54	-38	-8
2840	20	42	58	61	53	26	10	9	8	17
2850	7	-14	-8	-7	1	24	35	33	34	33
2860	26	26	19	17	17	17	11	8	9	9
2870	8	11	17	24	25	28	34	33	34	33
2880	27	22	14	5	-5	-8	-8	-8	-8	-7
2890	-11	-17	-13	-3	15	31	33	30	11	16
2900	28	32	33	33	17	-7	-9	-8	-9	-8
2910	-9	-2	8	15	17	24	31	34	25	18
2920	4	-14	-32	-33	-28	0	25	39	39	28
2930	19	17	18	18	18	18	13	6	-4	-13
2940	-14	-6	-5	-2	8	19	20	19	22	29

END

RECORD = M-1383 COMPONENT = UP STATION = TOKACHI-M
DATE AND TIME = 1991-11-27- 4-41 TOTAL NUMBER OF DATA = 2950
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 1492, 2950, 2950,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	-58	59	294	291	182	-33	-107	-89	7	122
10	179	134	47	-136	-249	-243	-179	-65	63	126
20	137	99	52	-33	-109	-73	-89	16	180	182
30	150	48	-62	-173	-267	-186	58	77	-13	-40
40	-119	-74	62	90	82	20	-39	-127	-168	-90
50	53	203	199	64	-53	-53	33	64	31	-41
60	-42	-87	-119	-59	-22	-4	-1	2	-8	3
70	-19	-67	-89	-75	-22	46	77	74	69	42
80	60	31	-17	-17	-55	-80	-83	13	42	12
90	36	5	-13	51	129	153	158	79	-110	-249
100	-184	-114	13	103	112	50	-44	-66	-12	13
110	36	80	134	121	36	26	10	-13	-10	16
120	43	38	-5	16	0	-33	-42	-32	-39	-14
130	-33	-65	-36	-4	47	76	59	2	-112	-113
140	-10	81	128	110	102	55	-77	-162	-118	-70
150	-42	21	97	85	32	46	43	-28	-59	-35
160	-24	-18	-5	3	-23	-60	-12	29	-3	-10
170	54	43	-32	-53	-43	-5	30	49	34	-31
180	-58	-62	15	59	48	59	40	29	4	-65
190	-83	31	99	117	57	30	19	23	110	132
200	105	48	-14	-99	-132	-72	2	123	175	99
210	-17	-103	-82	-11	65	187	224	208	132	-18
220	-116	-126	-140	-142	-121	-87	32	152	144	153
230	175	136	42	-39	-130	-203	-239	-220	-153	-29
240	127	198	167	156	181	143	169	134	15	-200
250	-210	-164	-87	-4	62	26	5	2	-43	-103
260	-110	-57	39	151	236	209	131	19	-58	-122
270	-124	-100	-87	-119	-226	-292	-318	-172	-96	51
280	209	177	104	76	66	19	-73	-155	-227	-223
290	-177	-142	-76	-4	131	172	170	227	253	210
300	108	-24	-167	-245	-166	-81	69	182	119	94
310	-29	-132	-221	-204	-56	8	93	152	207	185
320	123	5	-72	-95	-133	-104	-105	-113	-92	-56
330	-36	-3	-11	10	10	-43	-74	-54	-8	32
340	38	62	31	-50	-60	7	77	108	66	-31
350	-107	-178	-211	-192	-227	-251	-251	-214	-83	54
360	331	529	554	366	138	-5	-153	-295	-282	-159
370	-76	90	254	308	248	204	122	36	-5	-62
380	-104	-176	-285	-309	-238	-106	7	90	148	129
390	66	25	-21	-8	66	110	96	68	20	-45
400	-81	-98	-70	-35	68	109	77	72	52	30
410	40	41	1	-36	-100	-140	-119	-100	-142	-170
420	-140	-47	87	140	126	44	-3	-102	-159	-116
430	80	293	389	377	199	59	-100	-226	-187	-100
440	-51	-89	-73	13	186	368	448	285	115	47
450	-138	-277	-256	-181	-50	66	126	74	-2	-98
460	-152	-161	-49	47	106	127	109	65	15	-43
470	-100	-121	-96	-115	-104	-90	-43	-29	-8	-9

TO BE CONTINUED

CONTINUED(M-1383 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	19	64	107	80	58	87	14	-43	-93	-129
490	-52	-20	12	46	95	168	238	205	209	204
500	155	115	54	-30	-131	-132	-108	-81	-54	-63
510	-7	34	77	75	41	15	26	53	23	-48
520	-96	-183	-234	-188	-87	16	157	186	141	54
530	-34	-92	-104	-66	-55	-36	-21	26	50	67
540	37	12	21	33	9	-7	-17	-25	6	56
550	122	166	128	29	-76	-119	-168	-132	-75	93
560	218	212	151	91	28	-29	-68	-91	-75	-71
570	-29	3	-6	3	-41	-79	-118	-79	-10	-63
580	-70	-71	-64	-39	21	63	72	136	33	-74
590	-172	-270	-302	-275	-34	173	201	202	151	108
600	40	-60	-76	-51	-14	58	156	154	123	70
610	32	57	91	117	82	31	-2	-33	-56	-37
620	-14	40	112	110	27	-23	-102	-145	-103	-81
630	-73	-67	-16	-16	-33	-29	-55	-96	-108	-62
640	-3	34	47	90	82	45	57	39	0	-49
650	-23	24	59	93	112	96	37	-1	-80	-135
660	-96	-40	88	199	237	134	1	-144	-252	-245
670	-215	-122	119	166	116	76	47	58	80	94
680	89	42	-18	-83	-143	-148	-80	21	53	79
690	112	104	50	20	-10	-33	-36	-35	-35	-23
700	-2	5	0	-12	-28	-51	-81	-104	-124	-135
710	-105	-61	9	90	163	179	110	38	-48	-98
720	-93	-27	59	126	130	65	26	7	-21	-53
730	-75	-74	-98	-62	8	53	85	116	60	0
740	-111	-192	-151	-109	-39	1	49	54	14	-22
750	-39	-15	20	10	-27	1	52	98	98	48
760	-11	-61	-84	-77	-22	36	77	79	39	6
770	-28	-32	-3	0	-47	-82	-118	-128	-102	-62
780	-17	46	50	8	-35	-45	0	15	34	56
790	70	69	65	36	3	-26	-37	-26	-10	-3
800	-6	-22	10	27	36	69	84	64	63	58
810	31	0	-36	-59	-86	-47	-12	18	48	14
820	-7	-17	-24	-32	-43	-66	-103	-125	-86	-30
830	19	66	69	45	0	-22	-12	-19	-12	0
840	19	0	0	21	38	61	41	28	12	12
850	32	46	37	27	21	14	-4	-40	-67	-100
860	-74	-32	22	68	47	8	-31	-72	-68	-36
870	-10	15	41	53	28	3	-11	3	12	-4
880	-28	-50	-48	-12	27	42	29	13	-8	-41
890	-47	-39	-30	-15	4	-5	-44	-51	-33	-16
900	8	10	-23	-40	-61	-77	-68	-29	-2	53
910	109	81	44	-30	-66	-20	27	68	43	17
920	0	-19	-2	27	35	10	-11	-32	-47	-37
930	-13	18	65	109	103	59	6	-22	-31	-18
940	29	54	44	49	58	38	12	-7	-14	17
950	29	38	25	8	-7	-30	-50	-77	-121	-104
960	-76	-55	-27	7	37	61	42	24	29	9
970	-19	-57	-27	20	49	74	25	-19	-57	-70
980	-37	-6	37	51	28	-5	-26	-34	-34	-24
990	-18	-3	14	28	26	24	36	36	18	-1
1000	7	22	37	34	7	-9	-25	-30	-27	-14

TO BE CONTINUED

CONTINUED(M-1383 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	0	-5	-29	-37	-38	-15	6	26	34	9
1020	-17	-11	-3	-4	25	42	26	17	0	-9
1030	9	31	44	48	28	1	-22	-54	-71	-27
1040	6	45	40	6	-36	-44	-30	-16	2	-7
1050	-21	-41	-35	-7	25	53	52	25	-9	-46
1060	-83	-52	-2	38	59	27	4	-22	-38	-30
1070	-15	2	32	52	29	5	-9	-18	-22	-21
1080	-9	1	25	62	82	77	36	9	-37	-45
1090	-16	31	75	53	29	3	-13	23	65	91
1100	98	45	-10	-45	-30	-9	7	-7	-28	-19
1110	-1	11	9	6	-4	7	-19	-3	-19	-41
1120	-49	-56	-36	-19	16	24	3	-16	-28	-35
1130	-29	-8	-15	-8	18	56	68	32	-2	-35
1140	-28	0	34	57	37	-2	-40	-43	-19	23
1150	52	82	81	56	36	9	-18	-46	-44	-26
1160	-4	23	39	48	35	13	-8	-35	-29	22
1170	33	-9	-18	-26	-17	8	19	22	11	5
1180	5	12	24	31	28	17	2	-24	-42	-64
1190	-85	-96	-72	-41	-18	13	36	6	-32	-37
1200	-44	-39	-23	-1	6	6	-11	-33	-34	-34
1210	-43	-50	-38	-31	-15	-25	-60	-99	-94	-40
1220	-12	10	18	-5	-29	-44	-50	-38	-15	2
1230	17	36	45	44	35	26	10	0	-21	-26
1240	-19	-6	13	8	-9	-26	-37	-16	9	33
1250	40	20	-1	-21	-26	-5	16	53	47	18
1260	6	-12	-21	-2	12	22	19	-2	-2	23
1270	39	50	58	45	17	-11	-24	-22	-8	-3
1280	-30	-60	-36	-19	4	24	42	53	38	32
1290	25	24	24	17	7	-2	-9	-18	-25	-19
1300	-7	0	0	0	-6	0	8	7	8	-10
1310	-39	-56	-77	-60	0	15	40	55	57	24
1320	-22	-44	-16	12	34	52	58	56	48	35
1330	14	-1	-14	-15	-17	-8	6	22	35	32
1340	13	-8	-7	-7	0	0	-1	-24	-53	-53
1350	-21	-2	-1	22	-20	-70	-75	-94	-100	-108
1360	-65	-31	-7	8	24	26	24	10	0	1
1370	-13	-27	-29	-12	5	27	35	25	-7	-23
1380	-27	-30	-19	1	24	18	-1	-21	-33	-44
1390	-37	-28	-18	-5	13	28	18	5	-8	-17
1400	-27	-29	-28	-18	0	24	5	-23	-49	-47
1410	-21	1	34	43	29	9	-9	-12	-10	-1
1420	15	14	-4	-26	-25	-12	2	21	18	-10
1430	-19	-19	-16	0	13	20	6	-14	-30	-45
1440	-48	-23	9	19	14	5	-4	-7	13	35
1450	56	44	5	-14	-4	7	-5	-31	-43	-53
1460	-55	-34	-13	20	41	18	-11	-14	-14	-9
1470	-3	-13	-29	-22	-8	5	20	14	-5	-20
1480	-31	-37	-37	-38	-36	-61	-64	-42	-36	-42
1490	-43	-35	-25	7	19	10	-11	-27	-50	-62
1500	-57	-42	-13	17	36	34	21	19	12	19
1510	21	15	8	3	4	-4	-15	-32	-52	-46
1520	-8	28	37	36	36	21	4	-5	4	10
1530	-1	-8	-7	0	9	19	20	27	43	56

TO BE CONTINUED

CONTINUED(M-1383 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	60	42	15	-8	-32	-46	-39	-21	5	20
1550	9	-15	-18	-2	15	14	-24	-44	-62	-56
1560	-35	-2	28	44	44	36	3	-22	-20	-14
1570	4	18	28	25	3	-23	-17	2	29	60
1580	54	30	0	-35	-39	-26	0	33	32	14
1590	2	-4	-1	14	7	-5	-17	-12	16	41
1600	61	63	30	9	-8	-27	-36	-13	10	26
1610	22	17	1	-20	0	15	20	17	11	3
1620	-18	-4	17	18	-3	-31	-42	-21	-4	13
1630	39	51	23	-11	-44	-54	-32	-12	13	24
1640	13	-3	-2	7	24	24	11	2	-14	-13
1650	12	31	41	24	10	-31	-57	-43	-25	0
1660	15	16	17	14	7	9	7	14	16	16
1670	3	-12	-33	-37	-3	13	35	25	-6	-34
1680	-39	-18	5	17	6	-5	-25	-30	-11	4
1690	3	-2	-6	-13	-2	9	23	52	52	26
1700	1	-26	-22	-7	4	17	25	38	52	63
1710	57	43	30	16	4	-2	-9	-10	7	26
1720	41	18	-26	-33	-20	-5	8	17	32	23
1730	-9	-37	-54	-43	-20	4	3	7	-18	-36
1740	-19	-1	16	20	12	0	-4	-3	-3	-5
1750	-12	-11	-2	11	34	37	28	20	13	10
1760	0	-5	0	10	27	44	44	16	-22	-37
1770	-37	-36	-28	-19	-12	-13	-7	1	4	3
1780	6	16	9	-5	0	20	20	18	1	-13
1790	-19	-13	-5	-1	7	7	3	3	2	-13
1800	-31	-42	-44	-29	-6	19	25	8	-6	-23
1810	-26	-10	11	21	31	38	28	8	-4	-4
1820	-3	-7	1	0	-1	9	24	7	-11	-13
1830	-3	12	29	36	17	0	-4	2	0	-12
1840	-14	-15	-12	-6	-4	1	1	-4	-11	-17
1850	-24	-12	7	2	-17	-30	-32	-18	-1	18
1860	32	22	7	-10	-17	-13	-4	0	0	0
1870	-3	-9	-6	4	22	31	2	-13	-22	-32
1880	-32	-14	8	17	9	-18	-28	-34	-20	19
1890	32	26	6	-10	-21	1	34	38	28	2
1900	-13	-23	-28	-22	-9	0	8	12	6	5
1910	5	4	10	14	16	24	29	36	33	27
1920	15	-7	-6	11	19	16	13	26	29	30
1930	24	11	-2	5	18	27	30	27	9	-4
1940	-3	-4	-3	-10	-11	-3	-4	-2	11	30
1950	26	6	-5	5	10	3	0	-5	0	7
1960	13	7	0	-4	-2	4	3	17	29	28
1970	26	9	-7	-19	-14	-4	-4	-4	-4	-4
1980	2	3	4	-5	10	24	28	4	-19	-33
1990	-17	-1	20	29	14	12	7	11	9	-9
2000	-28	-29	1	12	5	2	-16	-27	-8	-1
2010	24	35	36	26	5	-16	-20	-11	-3	2
2020	6	9	1	2	-6	-1	2	13	25	9
2030	-2	-10	-17	-23	-17	0	16	27	23	7
2040	-11	-22	-9	-10	-21	-23	-23	-22	-15	-7
2050	5	4	-10	-22	-11	-1	-12	-22	-21	-14
2060	-16	-6	-8	-18	-40	-44	-36	-21	1	25

TO BE CONTINUED

CONTINUED(M-1383 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	40	40	26	3	-5	-16	-12	-5	-26	-21
2080	3	25	7	-9	-9	-9	-9	-9	-9	-10
2090	-9	-10	-10	-10	-10	-10	-7	8	20	29
2100	12	-12	-30	-44	-24	-6	6	4	11	13
2110	13	1	-3	5	0	-7	-27	-11	7	26
2120	36	39	23	-5	-17	-28	-27	-22	-16	-7
2130	7	27	29	20	6	4	3	15	34	33
2140	24	2	-19	-27	-27	-16	1	4	-2	-10
2150	-10	-3	-4	-3	-3	-4	-2	1	-4	-2
2160	13	21	14	6	7	23	29	18	-5	-23
2170	-30	-23	-11	11	29	26	7	-10	-12	-12
2180	-1	12	14	1	-7	-16	-21	-12	-5	1
2190	3	-10	-19	-20	-11	-3	-4	-4	-12	-20
2200	-21	-18	-4	9	12	12	7	-7	-10	3
2210	14	21	0	-19	-25	-29	-19	-1	10	4
2220	-4	-12	-13	-21	-17	-12	-11	-2	5	14
2230	20	19	6	-10	-21	-14	2	36	46	33
2240	18	-24	-36	-20	-4	13	27	37	36	37
2250	16	1	9	24	18	-2	-13	-29	-29	-13
2260	-4	-1	7	12	12	12	12	12	12	6
2270	-3	-12	-24	-18	1	4	11	5	3	0
2280	-11	-3	16	20	21	26	18	11	4	5
2290	15	20	20	18	11	19	20	20	14	-11
2300	-21	-9	1	21	28	34	30	10	-1	-4
2310	-4	-1	8	12	11	6	-1	-3	-7	-13
2320	-10	0	8	18	21	19	4	-10	-20	-16
2330	0	19	25	14	-4	-19	-19	-12	-5	3
2340	4	2	-12	-19	-22	-29	-30	-19	-5	-3
2350	2	-8	-12	-11	-11	-12	-8	-2	-3	-3
2360	-3	-3	-3	-2	-6	-17	-20	-8	8	25
2370	38	26	11	-6	-18	-19	-19	-10	-11	7
2380	13	17	4	0	11	13	13	16	40	45
2390	32	24	-2	-25	-12	-2	-2	0	-17	-35
2400	-35	-31	-17	-6	-1	0	6	6	6	6
2410	6	7	16	8	-9	-9	-9	-9	-9	-7
2420	1	7	6	7	3	-2	0	-4	-3	-6
2430	-12	-17	-13	-7	-14	-13	-5	-3	-10	5
2440	25	31	32	30	7	-15	-17	-17	-17	-16
2450	-5	0	0	-5	-20	-25	-14	3	4	-2
2460	0	-10	-22	-34	-30	-7	12	15	19	24
2470	22	23	12	0	-14	-11	-11	-27	-40	-37
2480	-16	-4	0	-2	0	-4	-12	-28	-34	-20
2490	-3	7	5	7	2	-9	-11	-19	-15	-4
2500	9	15	2	-9	-18	-3	20	30	30	22
2510	18	-7	-35	-42	-44	-30	-19	-18	-31	-43
2520	-16	7	22	16	-7	-20	-13	3	18	22
2530	16	-4	-26	-41	-40	-19	15	23	2	-13
2540	-25	-28	-20	-6	-2	-13	-39	-44	-40	-27
2550	-13	-2	17	22	10	0	-3	4	5	-2
2560	-10	-8	-1	-2	-1	-2	-6	0	7	3
2570	-2	-1	4	17	24	22	23	23	24	21
2580	-1	-23	-24	-14	-1	14	15	3	-19	-38
2590	-41	-41	-36	-24	-15	-8	-7	-7	-7	-6

TO BE CONTINUED

CONTINUED(M-1383 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2500	0	1	1	1	1	1	2	0	12	25
2610	25	26	18	18	18	19	18	19	18	22
2620	29	37	44	43	33	27	28	20	20	19
2630	26	29	29	23	20	21	20	21	21	21
2640	13	13	13	14	9	-6	-19	-31	-13	11
2650	14	13	14	11	5	5	8	19	26	31
2660	31	21	6	6	6	6	6	6	6	7
2670	6	7	1	-1	0	-1	-3	-17	-26	-8
2680	15	24	15	8	3	-2	-1	5	7	7
2690	15	15	9	-17	-29	-16	4	18	23	9
2700	7	12	21	24	13	7	8	7	8	1
2710	0	0	0	1	7	8	7	13	17	15
2720	17	22	32	20	-18	-29	-17	-1	11	17
2730	9	-1	-8	-8	-6	5	13	25	29	17
2740	10	5	-1	1	-13	-32	-54	-42	-5	-10
2750	-18	-25	-27	-34	-36	-47	-39	-14	0	0
2760	-9	-19	-31	-16	-6	-8	-8	1	22	22
2770	14	5	-1	-13	-18	-6	1	8	6	1
2780	-4	-8	-8	-7	0	-1	-9	-18	-12	-10
2790	6	40	24	-3	-31	-46	-48	1	35	27
2800	10	-25	-37	-41	-9	11	17	5	0	1
2810	26	48	41	34	29	16	1	-23	-16	-7
2820	-3	3	7	8	4	-1	1	7	22	32
2830	33	27	15	17	11	7	8	15	17	15
2840	8	9	6	0	-5	-7	0	6	9	15
2850	25	18	2	-7	-6	0	0	0	0	-10
2860	-18	-7	6	22	34	32	32	14	1	0
2870	0	7	16	17	13	-2	-11	-27	-33	-30
2880	-14	0	0	0	6	8	7	1	0	0
2890	4	17	21	13	7	8	6	8	-11	-34
2900	-32	-25	-10	11	2	-10	-22	-18	0	13
2910	21	24	20	7	8	4	-1	-6	2	15
2920	13	7	8	8	8	8	1	0	0	7
2930	9	8	9	18	33	28	0	-6	-6	0
2940	5	11	10	10	10	11	9	0	-5	-4

END

RECORD = F-456 COMPONENT = NORTH STATION = HITACHINAKA-F
DATE AND TIME = 1991-12-12-11-27 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONSECTION POINT IN DATA NUMBER = 3000, 3000,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	0	0	0	0	0	0	0	-1	0	0
10	0	0	0	0	0	-1	0	0	0	-1
20	3	4	-2	-3	0	0	0	0	-4	-1
30	5	0	-4	-3	0	0	0	-2	-5	0
40	7	0	-4	-4	-1	3	3	0	-1	-8
50	-7	0	15	10	-8	-11	-4	-1	0	0
60	9	0	-8	-1	3	-1	-4	-9	-11	8
70	23	7	-7	0	8	0	-8	-11	-9	5
80	26	10	-23	-26	0	15	20	26	5	-18
90	-15	-8	-12	-10	4	17	13	-4	-11	7
100	34	32	-2	-38	-34	-13	-3	6	10	0
110	-9	-1	4	-3	5	26	13	-16	-15	10
120	30	38	31	-13	-70	-60	0	40	49	27
130	-21	-43	-24	10	38	47	23	-18	-45	-38
140	-6	3	-9	-9	0	10	26	42	30	9
150	10	0	-23	-25	-8	-7	-12	-9	-9	-12
160	-4	0	14	20	13	-5	-20	-16	-2	0
170	3	0	-8	-11	-5	10	25	15	-7	-8
180	4	7	4	0	-3	-15	-18	-4	-5	-1
190	15	33	27	7	-4	-18	-22	2	30	37
200	15	-19	-28	-10	0	-3	-11	-10	4	19
210	15	9	-1	-19	-26	-30	-24	-4	4	0
220	0	0	0	3	20	30	35	27	7	-13
230	-28	-21	-1	7	-5	-20	-24	-24	0	35
240	49	43	19	-4	-22	-28	-15	0	4	-3
250	-13	-21	-12	8	18	12	0	-13	-19	3
260	20	19	7	-12	-33	-35	5	57	67	26
270	-20	-42	-39	-11	10	7	-7	-7	-5	-4
280	10	28	30	15	-6	-28	-42	-38	-18	0
290	9	6	0	18	36	20	0	-3	-5	-12
300	-8	8	29	30	0	-38	-42	-23	-6	-3
310	0	14	29	46	49	28	-9	-38	-43	-26
320	-8	0	5	-7	-16	-20	-23	-6	16	27
330	27	25	18	0	-6	-2	-8	-19	-12	-2
340	6	26	40	10	-31	-32	-5	7	18	33
350	33	9	-8	-9	-14	-21	-9	6	-2	-30
360	-23	10	27	28	20	-3	-21	-11	-8	-21
370	-30	-21	15	43	24	-11	-18	-8	-1	17
380	22	6	6	4	-13	-13	3	17	16	7
390	0	3	10	0	-20	-34	-30	0	40	57
400	20	-38	-63	-48	-26	1	37	46	10	-14
410	-19	-12	6	30	39	15	-16	-32	-39	-28
420	-10	-8	6	35	27	3	17	30	20	20
430	21	10	-4	-31	-42	-28	-19	-2	15	10
440	-8	-25	-19	13	30	29	30	18	-11	-11
450	0	6	8	-4	-42	-64	-41	-1	40	60
460	23	-8	-8	-9	-13	-1	6	-4	-18	-19
470	0	33	45	37	6	-48	-70	-44	-12	20

TO BE CONTINUED

CONTINUED(F-456 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	50	40	7	-13	-8	7	20	29	25	-4
490	-53	-80	-52	0	32	34	27	20	10	-1
500	-4	5	29	47	40	20	-6	-17	-17	-9
510	-9	-25	-55	-72	-70	-58	-28	20	75	113
520	99	49	-4	-36	-29	-18	-8	-3	-5	-18
530	-49	-70	-40	14	57	70	50	16	-16	-32
540	-23	7	30	45	34	-14	-58	-43	-19	0
550	18	-3	-8	20	29	10	-6	-33	-44	-41
560	-23	10	27	30	35	50	0	-44	-43	-30
570	-21	-1	8	6	13	18	0	-24	-15	36
580	79	84	63	27	-21	-66	-89	-80	-48	-9
590	13	-2	-32	-24	23	79	105	73	0	-64
600	-115	-124	-48	77	155	134	25	-80	-132	-139
610	-71	63	187	235	170	14	-147	-224	-189	-68
620	75	144	117	70	52	65	109	151	117	10
630	-150	-349	-505	-523	-402	-216	-58	-46	-142	-248
640	-195	126	600	940	919	544	126	-177	-427	-528
650	-335	89	551	811	721	273	-325	-787	-933	-765
660	-448	-123	205	532	722	651	354	8	-205	-238
670	-168	-90	-29	17	15	-18	-94	-216	-278	-216
680	-48	128	167	77	-58	-193	-248	-172	-43	105
690	333	584	639	383	-34	-392	-543	-465	-277	-100
700	54	154	136	39	-29	-20	8	-32	-128	-199
710	-194	-78	109	255	302	254	163	63	-40	-115
720	-132	-133	-140	-127	-97	-83	-35	99	282	425
730	430	256	20	-168	-332	-444	-420	-269	-11	282
740	450	410	243	50	-65	-84	-24	50	105	88
750	-42	-238	-424	-543	-533	-359	-80	225	455	524
760	435	223	-39	-234	-295	-221	-54	116	215	208
770	84	-74	-164	-167	-70	88	186	150	17	-108
780	-127	-8	168	321	383	300	82	-170	-374	-471
790	-424	-266	-88	55	128	117	55	-7	-44	-46
800	-18	-4	-21	-40	-30	26	119	197	197	105
810	-20	-94	-100	-43	29	64	45	-4	-31	-8
820	25	50	54	-19	-149	-232	-206	-61	146	290
830	312	247	115	-56	-182	-151	-68	6	20	-13
840	-24	0	30	56	19	-75	-150	-174	-142	-49
850	70	178	225	178	76	-12	-70	-92	-89	-107
860	-140	-153	-142	-97	3	127	204	199	109	-14
870	-88	-81	-32	25	66	55	5	-38	-31	39
880	94	83	24	-80	-196	-251	-216	-107	10	84
890	113	129	134	127	105	68	40	17	-9	-18
900	-13	-19	-18	-2	28	55	50	-1	-68	-131
910	-199	-236	-189	-68	68	164	206	206	182	153
920	134	112	63	-26	-112	-144	-135	-115	-102	-117
930	-139	-118	-18	146	307	374	303	129	-68	-210
940	-246	-167	-51	2	-46	-138	-189	-162	-69	50
950	148	181	134	39	-34	-41	0	40	57	57
960	30	-11	-41	-42	-42	-54	-65	-90	-125	-135
970	-117	-71	-2	65	122	191	246	243	184	92
980	-9	-101	-163	-196	-199	-160	-78	9	73	97
990	78	40	24	37	50	71	94	79	29	-17
1000	-42	-35	-11	9	-7	-22	-32	-40	-51	-70

TO BE CONTINUED

CONTINUED(F-456 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	-76	-61	-21	39	107	159	178	149	70	-24
1020	-83	-88	-71	-54	-46	-58	-83	-91	-61	-4
1030	47	49	0	-63	-105	-93	-49	0	45	60
1040	37	-11	-72	-120	-118	-65	7	86	139	147
1050	96	3	-88	-119	-92	-33	40	115	168	176
1060	147	119	109	89	77	94	134	164	148	72
1070	-40	-154	-233	-256	-221	-167	-114	-75	-59	-66
1080	-71	-52	-2	62	96	74	8	-59	-102	-110
1090	-78	-18	46	97	125	119	92	39	-2	0
1100	26	43	39	17	-13	-37	-43	-34	-1	37
1110	45	20	-23	-81	-121	-127	-117	-63	20	89
1120	102	67	0	-64	-96	-88	-38	20	71	88
1130	79	60	47	40	28	6	3	30	72	103
1140	116	113	98	67	14	-38	-54	-51	-44	-38
1150	-48	-70	-85	-82	-81	-91	-99	-97	-91	-85
1160	-68	-27	10	27	28	29	54	99	134	124
1170	72	-4	-79	-126	-141	-106	-13	79	125	119
1180	86	30	-5	-13	0	20	20	8	-4	-24
1190	-38	-33	-25	-32	-42	-34	0	40	79	107
1200	117	99	54	-1	-36	-48	-50	-63	-38	-109
1210	-97	-53	-18	0	9	4	-15	-30	-18	40
1220	99	117	68	-4	-54	-65	-45	-11	9	10
1230	0	-4	0	20	45	57	46	15	-9	-13
1240	4	30	44	40	24	-3	-38	-68	-78	-51
1250	-11	20	45	60	66	52	25	-4	-31	-59
1260	-72	-48	-4	30	54	60	49	33	14	-3
1270	-15	-33	-60	-78	-72	-58	-41	-24	-14	-19
1280	-21	-20	-28	-21	7	34	40	39	33	25
1290	23	27	15	-8	-32	-41	-15	40	102	155
1300	172	127	28	-85	-177	-197	-147	-72	-11	28
1310	50	59	62	59	52	27	-14	-53	-81	-85
1320	-73	-60	-61	-55	-33	-4	23	42	50	46
1330	30	10	12	40	77	93	74	39	0	-48
1340	-92	-107	-85	-41	20	75	79	37	-19	-55
1350	-48	-9	20	45	53	30	-4	-38	-46	-24
1360	0	18	19	13	0	6	29	54	69	64
1370	34	-6	-31	-21	4	20	25	9	-25	-54
1380	-58	-30	9	33	20	-16	-58	-69	-34	30
1390	94	119	102	50	-8	-52	-78	-71	-43	-21
1400	-23	-34	-34	-21	-2	13	15	10	7	-1
1410	-11	-9	3	10	15	20	10	-16	-43	-82
1420	-49	-13	24	50	37	-8	-60	-58	-58	-29
1430	7	28	26	16	10	11	20	29	29	20
1440	16	20	34	54	74	75	49	0	-51	-73
1450	-52	-8	20	30	17	-22	-55	-84	-71	-28
1460	10	24	19	6	-9	-16	-1	19	20	10
1470	0	-4	0	6	4	-13	-36	-45	-32	-1
1480	28	28	-8	-51	-80	-76	-30	44	113	133
1490	82	-3	-77	-97	-55	15	79	115	97	37
1500	-20	-51	-45	-20	-6	-16	-48	-75	-80	-69
1510	-30	23	60	60	40	18	10	17	20	36
1520	49	54	45	20	-3	-24	-46	-68	-73	-51
1530	-12	30	64	75	69	57	37	19	9	3

TO BE CONTINUED

CONTINUED(F-456 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	-8	-19	-30	-26	0	38	56	41	8	-15
1550	-37	-63	-81	-85	-81	-68	-43	-13	24	54
1560	66	66	45	3	-38	-63	-60	-38	-6	18
1570	30	29	8	-21	-42	-38	-11	20	51	67
1580	54	29	15	24	33	25	6	-8	-30	5
1590	19	14	-10	-52	-85	-83	-44	-4	29	25
1600	6	-18	-21	-4	30	60	57	21	-28	-69
1610	-58	-34	-9	10	23	29	40	54	50	20
1620	-17	-41	-41	-21	8	26	20	6	-16	-38
1630	-41	-32	-19	-9	-11	-18	-17	-6	13	36
1640	52	46	29	8	-9	-21	-16	4	30	39
1650	26	4	-16	-37	-48	-40	-20	-5	9	12
1660	15	18	26	44	54	47	17	-25	-66	-84
1670	-58	-24	16	39	30	0	-38	-54	-57	-5
1680	46	57	25	-23	-51	-42	-8	34	70	78
1690	50	7	-26	-41	-34	-21	-8	6	26	49
1700	70	79	65	37	0	-33	-59	-63	-55	-40
1710	-20	0	6	0	-6	-18	-25	-21	-4	15
1720	24	20	3	-20	-40	-48	-43	-28	-8	20
1730	38	43	24	-6	-30	-38	-31	-12	10	30
1740	29	10	-2	0	8	17	27	30	27	8
1750	-19	-37	-36	-18	7	37	65	84	88	75
1760	40	0	-38	-60	-68	-68	-62	-51	-39	-25
1770	-24	-29	-33	-32	-29	-18	0	12	20	20
1780	23	29	41	46	37	26	12	3	8	20
1790	20	7	-12	-34	-42	-19	19	54	71	67
1800	14	-31	-58	-63	-48	-32	-29	-21	-48	-33
1810	-13	15	29	28	20	10	12	27	42	43
1820	27	3	-4	7	27	33	14	-22	-58	-74
1830	-58	-18	27	59	70	60	40	27	20	14
1840	0	-26	-48	-49	-34	-13	-1	4	-4	-35
1850	-69	-78	-56	-18	15	24	15	-2	-20	-26
1860	-4	34	56	67	40	9	-10	-15	-4	9
1870	10	5	0	-1	0	16	30	34	17	-1
1880	-11	-10	0	18	32	34	14	-20	-43	-42
1890	-19	10	27	9	-27	-60	-72	-52	-11	27
1900	42	28	-2	-27	-36	-24	-5	0	19	-33
1910	-50	-39	-4	37	74	86	72	38	7	-4
1920	0	10	18	10	-11	-24	-23	-8	10	18
1930	3	-13	-29	-42	-35	-4	30	43	36	17
1940	0	-19	-31	-19	0	14	27	44	52	47
1950	20	-11	-28	-32	-30	-13	12	20	13	-30
1960	-48	-38	-18	7	28	20	-4	-22	-29	-19
1970	-4	9	14	9	-2	-13	-12	0	8	4
1980	-8	-24	-41	-44	-23	10	54	74	68	20
1990	-11	-29	-28	-8	16	20	0	-28	-50	-55
2000	-26	10	47	67	57	28	0	-18	-24	-17
2010	-9	-2	7	19	24	25	20	12	-2	-25
2020	-41	-38	-22	-8	0	15	25	20	7	-10
2030	-26	-25	-11	13	40	52	31	-8	-45	-66
2040	-49	-4	34	54	47	10	-28	-56	-61	-43
2050	-13	9	14	7	0	-3	-3	4	17	27
2060	29	19	3	-9	-19	-18	-11	0	10	24

TO BE CONTINUED

CONTINUED(F-456 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	30	37	40	36	10	-15	-38	-46	-41	-21
2080	-4	0	-4	-10	-18	-12	3	10	17	25
2090	30	34	37	37	22	6	-6	-13	-19	-21
2100	-24	-33	-45	-46	-38	-24	-12	-4	-3	-4
2110	0	20	46	52	64	47	20	-8	-31	-38
2120	-33	-24	-13	-4	0	3	5	0	-3	0
2130	10	17	27	33	29	18	6	-2	-9	-15
2140	-19	-21	-18	-11	-8	-11	-9	-8	-13	-16
2150	-9	0	19	36	42	36	19	0	-14	-23
2160	-21	-16	-13	-13	-4	10	28	38	39	22
2170	0	-13	-10	0	5	5	0	-1	-8	-13
2180	-16	-18	-17	-21	-28	-28	-15	-4	0	-4
2190	-14	-19	-10	3	16	20	10	-1	-6	-4
2200	4	23	40	44	26	0	-5	-5	0	7
2210	7	-1	-8	-4	-4	-4	-13	-26	-33	-26
2220	-8	17	35	40	30	10	-19	-41	-48	-41
2230	-25	-8	-3	-2	0	3	4	10	12	10
2240	23	34	36	28	10	-10	-28	-32	-22	0
2250	23	27	18	8	5	13	20	15	5	-13
2260	-30	-29	-13	0	7	0	-17	-34	-40	-25
2270	4	37	50	35	0	-23	-32	-21	0	20
2280	30	27	12	-2	-14	-19	-17	-13	-13	-12
2290	-4	0	7	10	14	12	10	10	15	18
2300	10	-2	-18	-34	-34	-25	-10	8	23	28
2310	20	14	9	4	0	-2	-11	-21	-26	-24
2320	-19	-6	5	15	19	13	0	-13	-13	-2
2330	10	27	35	36	30	19	5	-2	-6	-12
2340	-13	-8	0	8	10	3	-3	-12	-22	-31
2350	-34	-38	-43	-38	-13	15	44	56	50	20
2360	-10	-29	-28	-14	0	7	7	0	-12	-21
2370	-21	-13	-6	-11	-21	-23	-9	13	34	40
2380	30	18	0	-8	-5	9	27	32	20	5
2390	0	0	9	15	18	8	-4	-22	-42	-59
2400	-65	-51	-21	10	33	31	17	4	-5	-6
2410	3	18	20	15	7	6	9	15	16	10
2420	0	-4	-5	-11	-18	-19	-12	-1	8	15
2430	20	23	17	8	4	0	0	-2	-6	-12
2440	-8	0	7	10	6	-8	-19	-26	-23	-13
2450	0	7	0	-9	-17	-16	-14	-14	-14	-9
2460	-6	-6	-2	5	8	8	6	6	3	0
2470	0	-2	-3	-4	-1	6	10	14	18	20
2480	15	14	20	25	20	12	0	-9	-13	-5
2490	14	33	37	24	-2	-33	-56	-60	-47	-25
2500	-2	13	14	7	3	0	7	7	0	-13
2510	-27	-29	-18	-3	4	2	-9	-24	-29	-16
2520	10	40	50	36	9	-14	-23	-12	4	17
2530	18	11	0	0	12	27	24	7	-14	-29
2540	-28	-13	7	29	36	25	7	-6	-14	-10
2550	-3	0	3	-4	-17	-24	-22	-12	0	10
2560	15	15	4	-8	-18	-16	-3	10	20	20
2570	14	0	-4	-4	0	7	8	-2	-14	-16
2580	-9	0	-4	0	-8	-13	-12	-2	10	20
2590	20	10	-4	-13	-18	-19	-17	-11	-3	0

TO BE CONTINUED

CONTINUED(F-456 NORTH)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	4	10	15	15	13	8	4	-4	-13	-18
2610	-12	-2	9	16	19	17	10	3	-4	-7
2620	-4	-1	-4	-11	-13	-8	6	18	20	10
2630	-5	-28	-48	-55	-42	-14	15	40	47	36
2640	19	10	7	9	10	12	10	7	0	-4
2650	-8	-8	-6	-3	-2	-4	-7	-8	-4	3
2660	20	23	20	14	4	0	-4	-13	-23	-33
2670	-31	-18	-1	9	10	0	-17	-32	-34	-23
2680	-2	20	33	29	10	-13	-33	-37	-33	-21
2690	-3	18	33	40	40	28	13	0	0	8
2700	14	15	4	-10	-21	-18	-4	6	10	13
2710	10	14	20	26	25	18	5	-8	-19	-28
2720	-36	-39	-40	-35	-22	-4	15	27	22	10
2730	1	0	10	18	18	10	0	-4	-5	-5
2740	-4	-1	-6	-19	-23	-19	-8	9	19	18
2750	15	9	4	0	0	0	6	3	-4	-12
2760	-23	-29	-28	-21	-13	-8	-3	3	8	11
2770	10	10	10	10	3	-4	-8	-13	-14	-10
2780	0	10	13	5	-8	-16	-18	-9	5	20
2790	22	10	-4	-16	-12	5	27	42	40	19
2800	-4	-13	-9	0	10	10	0	-8	-13	-10
2810	0	8	8	0	-10	-20	-24	-21	-16	-8
2820	-10	-12	-7	4	15	18	13	0	-9	-13
2830	-10	-2	9	20	27	30	32	35	35	24
2840	4	-11	-21	-18	-3	8	10	0	-4	-9
2850	-12	-15	-16	-18	-18	-19	-20	-18	-13	-4
2860	7	15	20	25	20	7	-8	-18	-19	-12
2870	-4	3	9	10	8	7	8	15	19	15
2880	0	-9	-16	-17	-16	-13	-13	-13	-14	-11
2890	-4	7	13	10	4	-9	-21	-24	-14	5
2900	20	20	18	9	0	-3	-1	6	15	18
2910	13	7	5	6	10	16	20	18	9	0
2920	-2	-5	-8	-11	-18	-25	-21	-11	0	15
2930	20	10	0	-12	-22	-23	-18	-13	-9	-7
2940	0	10	15	8	-4	-24	-35	-33	-18	1
2950	20	27	20	10	7	10	20	30	28	18
2960	5	-2	0	10	15	7	-7	-23	-32	-24
2970	-8	8	19	20	10	-2	-13	-18	-13	-6
2980	-1	-2	-9	-18	-22	-21	-13	-4	0	0
2990	-2	-4	3	15	28	30	25	10	-4	-8

END

RECORD = F-456 COMPONENT = EAST STATION = HITACHINAKA-F
DATE AND TIME = 1991-12-12-11-27 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000, 3000,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	1	1	1	1	0	0	0	0	1	2
10	1	1	0	0	1	3	2	1	0	1
20	3	1	-2	-5	3	7	1	-6	-5	4
30	4	0	-5	1	4	0	-3	-1	0	0
40	0	1	3	1	0	-1	4	9	-2	-12
50	-6	8	14	9	-5	-18	-15	-2	1	3
60	9	9	0	1	14	4	-22	-21	7	20
70	8	-10	-21	-8	4	12	4	-11	-15	11
80	26	16	-3	-15	-8	4	14	11	-15	-26
90	0	11	-2	5	16	-1	-3	14	4	-14
100	-7	14	13	4	8	-6	-30	-2	26	-1
110	-26	1	9	-6	1	16	-1	-17	-10	-7
120	3	21	9	-16	-23	-10	-5	-7	9	20
130	14	31	33	-9	-36	-19	-13	-16	14	39
140	23	0	-10	-15	-20	-24	-12	4	24	26
150	3	-17	-26	-16	16	46	51	39	22	-8
160	-46	-39	4	19	13	14	9	-6	-25	-37
170	-35	-11	21	43	36	9	-20	-15	8	0
180	-9	3	4	-4	11	34	16	-23	-27	-15
190	-18	-11	9	11	-2	-10	-35	-47	-26	-5
200	12	21	29	29	12	-11	-26	-15	23	48
210	40	19	1	-15	-36	-48	-47	-18	28	50
220	49	38	4	-21	-17	-7	11	22	-6	-35
230	-36	-25	1	20	34	49	39	2	-35	-51
240	-46	-5	29	14	-8	-15	-26	-16	5	26
250	30	-3	-26	-21	-20	3	23	14	10	27
260	37	20	-2	-23	-39	-30	-9	6	24	21
270	2	-2	-2	-6	-1	3	6	9	13	9
280	-2	-15	-10	14	25	16	8	0	-7	-35
290	-63	-36	14	37	31	11	-11	-27	-38	-15
300	32	58	62	41	-1	-42	-56	-51	-31	6
310	59	68	14	-28	-42	-51	-36	-3	19	28
320	34	35	7	-36	-45	-16	1	13	41	44
330	9	-24	-37	-25	4	25	31	19	1	-24
340	-43	-28	14	39	30	24	21	3	-31	-50
350	-41	-15	9	18	13	14	8	-2	1	0
360	-6	18	44	24	-10	-16	-14	-28	-35	0
370	43	39	12	-5	-29	-47	-38	-21	4	52
380	69	49	13	-18	-18	-21	-35	-19	4	9
390	14	9	-3	-13	-21	6	49	42	4	-17
400	-29	-38	-35	-2	41	41	6	-10	-22	-36
410	-28	0	34	49	9	-25	-11	9	14	14
420	21	-6	-49	-37	-5	7	14	8	-36	-70
430	-45	14	54	60	53	33	-1	-21	-15	-6
440	10	14	-2	-2	1	-18	-25	-1	6	-5
450	-7	0	-3	-3	6	8	16	53	74	44
460	-22	-76	-90	-75	-39	34	101	94	37	-20
470	-45	-66	-83	-38	34	60	48	28	0	-25

TO BE CONTINUED

CONTINUED(F-456 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	-45	-45	4	53	64	34	6	-25	-39	-37
490	-36	-1	53	71	33	-26	-60	-59	-46	-9
500	19	34	31	9	13	21	6	4	-3	-28
510	-9	17	9	-1	4	-1	-32	-46	-26	-18
520	1	47	51	9	-18	-40	-75	-73	3	88
530	106	83	44	-10	-66	-71	-32	23	69	64
540	24	-18	-63	-89	-71	-29	10	34	46	36
550	9	-20	-22	9	49	50	14	-29	-54	-51
560	-20	26	46	19	0	-5	-29	-56	-35	6
570	37	69	58	-12	-68	-88	-80	-41	9	80
580	131	105	51	24	11	2	-2	1	-18	-65
590	-101	-95	-39	14	49	85	92	44	-26	-95
600	-112	-48	44	89	74	29	-20	-27	19	41
610	43	79	67	-36	-145	-178	-125	-16	89	121
620	49	-55	-106	-105	-45	70	181	243	231	100
630	-85	-175	-166	-70	71	179	261	275	134	-88
640	-221	-178	18	284	551	675	449	-80	-679	-1117
650	-1181	-874	-471	-35	541	964	892	404	-225	-720
660	-889	-758	-447	-32	407	706	681	347	-95	-456
670	-551	-315	153	688	968	752	214	-329	-765	-1007
680	-936	-536	74	669	972	930	645	231	-117	-276
690	-275	-154	20	144	154	66	-109	-328	-435	-350
700	-167	-8	99	179	203	132	-4	-157	-266	-231
710	-55	158	314	392	384	299	151	-25	-184	-286
720	-310	-263	-185	-63	89	221	294	252	93	-65
730	-156	-208	-238	-210	-120	-26	68	181	242	167
740	9	-153	-263	-284	-258	-201	-76	60	134	131
750	89	60	31	-11	-37	-32	-6	33	89	169
760	269	361	384	282	91	-115	-300	-390	-319	-151
770	25	157	198	156	43	-116	-231	-225	-113	28
780	159	229	183	44	-121	-252	-285	-220	-99	63
790	207	231	114	-41	-136	-145	-70	47	168	261
800	258	134	-4	-66	-54	10	104	162	130	4
810	-165	-269	-246	-115	43	154	184	154	84	-32
820	-158	-226	-229	-188	-148	-133	-115	-55	24	89
830	116	93	44	9	-21	-43	-40	-9	68	179
840	259	260	184	98	41	-5	-34	-23	14	49
850	29	-64	-177	-245	-239	-155	-30	52	64	20
860	-65	-170	-243	-230	-130	16	141	174	141	104
870	59	11	14	49	65	73	67	43	22	21
880	37	51	67	80	84	89	92	64	5	-65
890	-128	-170	-156	-76	36	124	151	104	-7	-153
900	-267	-323	-312	-227	-93	23	88	102	84	61
910	58	84	118	143	154	114	26	-41	-68	-59
920	0	68	83	48	0	-43	-68	-68	-45	-8
930	24	56	79	94	87	47	-30	-128	-189	-193
940	-155	-88	-18	28	39	16	-5	3	34	63
950	60	33	9	-1	0	1	-15	-39	-39	0
960	64	143	210	231	189	104	7	-72	-115	-125
970	-119	-108	-97	-75	-22	53	118	134	92	4
980	-85	-144	-157	-116	-41	9	11	-4	-6	-10
990	-13	0	19	54	109	133	109	69	24	-15
1000	-37	-31	3	29	20	-15	-65	-111	-115	-71

TO BE CONTINUED

CONTINUED(F-456 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	4	80	118	97	26	-66	-145	-170	-137	-66
1020	21	104	136	109	70	58	64	71	79	70
1030	21	-47	-96	-100	-70	-38	-25	-49	-101	-147
1040	-167	-150	-78	4	51	63	64	64	78	85
1050	54	1	-55	-89	-86	-47	24	113	179	194
1060	159	92	34	0	-18	-16	0	9	10	14
1070	8	-23	-65	-95	-98	-56	14	86	133	130
1080	74	-9	-88	-140	-155	-136	-101	-74	-58	-37
1090	-16	7	34	54	47	26	9	-2	-14	4
1100	54	100	121	109	70	37	14	0	3	14
1110	3	-35	-93	-136	-128	-70	4	73	124	141
1120	93	1	-81	-127	-127	-96	-56	-15	23	37
1130	34	37	33	5	-39	-73	-76	-57	-25	17
1140	54	70	59	30	-13	-60	-95	-125	-132	-105
1150	-56	-1	53	104	140	134	104	69	38	14
1160	4	0	4	19	34	47	57	53	46	51
1170	66	70	62	54	33	-13	-75	-134	-178	-186
1180	-157	-114	-58	-31	0	18	24	43	89	151
1190	199	194	129	34	-55	-116	-131	-91	-26	13
1200	5	-36	-93	-138	-133	-71	16	95	144	138
1210	60	-43	-110	-131	-131	-106	-50	19	84	118
1220	104	82	56	26	1	-9	-1	4	-8	-28
1230	-26	11	63	96	93	59	17	-14	-18	1
1240	19	14	-13	-39	-58	-71	-66	-46	-37	-45
1250	-48	-32	4	61	118	147	126	62	-15	-75
1260	-95	-74	-41	-35	-53	-87	-117	-117	-70	0
1270	69	124	150	136	104	66	22	-6	-25	-48
1280	-60	-41	-17	-15	-22	-36	-51	-60	-56	-35
1290	-2	28	56	84	111	118	89	40	5	-25
1300	-60	-70	-57	-50	-60	-79	-91	-79	-37	14
1310	51	54	32	0	-33	-50	-38	3	37	34
1320	6	-6	0	27	72	94	78	29	-36	-84
1330	-78	-23	39	76	65	18	-20	-26	-6	21
1340	34	30	21	11	3	12	29	20	-13	-70
1350	-122	-120	-70	-13	20	13	-24	-51	-45	-5
1360	47	92	105	78	26	-16	-28	-6	26	44
1370	44	13	-33	-65	-59	-28	1	14	23	34
1380	41	40	29	14	9	10	14	18	6	-22
1390	-53	-75	-81	-70	-40	-5	5	-9	-43	-83
1400	-100	-75	-20	33	73	98	105	94	84	64
1410	34	-3	-37	-51	-51	-37	-20	-9	-3	4
1420	14	19	26	43	60	68	61	42	20	-5
1430	-37	-65	-82	-88	-81	-65	-41	-19	9	51
1440	89	104	91	63	29	-1	-24	-25	-15	-13
1450	-35	-59	-70	-68	-50	-17	9	27	39	38
1460	23	9	0	-8	-28	-45	-36	-5	39	71
1470	79	72	54	25	-8	-30	-43	-50	-46	-30
1480	-8	8	9	0	-20	-25	-10	0	-5	-14
1490	-22	-27	-20	6	60	109	113	75	17	-38
1500	-71	-73	-50	-25	-15	-30	-59	-70	-55	-18
1510	21	51	63	52	27	10	11	21	34	49
1520	54	47	24	-16	-71	-115	-135	-135	-108	-63
1530	-8	35	54	51	34	21	32	54	78	89

TO BE CONTINUED

CONTINUED(F-456 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	84	54	18	-8	-20	-29	-44	-62	-73	-71
1550	-50	0	55	100	121	104	68	14	-45	-85
1560	-86	-55	-9	24	29	11	-20	-55	-65	-46
1570	-23	-8	-5	-16	-29	-25	9	49	79	84
1580	62	29	-5	-25	-28	-26	-18	-6	7	19
1590	28	31	32	27	8	-20	-41	-55	-68	-71
1600	-61	-31	9	46	65	53	11	-25	-29	-5
1610	24	48	50	28	3	-11	-13	4	24	24
1620	6	-13	-30	-32	-18	6	34	46	42	34
1630	29	28	19	3	-17	-39	-56	-65	-61	-46
1640	-18	14	50	77	78	59	31	4	-23	-45
1650	-58	-51	-27	-7	-2	-11	-24	-34	-40	-45
1660	-38	-20	-5	5	11	14	16	20	24	34
1670	47	44	24	-1	-33	-60	-67	-50	-7	45
1680	80	84	64	26	-16	-39	-41	-25	0	9
1690	4	0	2	9	14	6	-16	-47	-76	-79
1700	-56	-26	-3	4	-1	-11	-20	-15	14	49
1710	69	68	54	41	26	14	10	9	1	-9
1720	-20	-23	-9	10	21	21	9	-15	-28	-17
1730	4	34	58	54	26	-8	-35	-47	-50	-40
1740	-26	-19	-22	-27	-36	-40	-31	-20	-5	20
1750	44	62	74	65	36	9	-8	-21	-31	-20
1760	6	21	11	-7	-29	-46	-45	-13	29	66
1770	88	74	32	-23	-58	-61	-36	2	31	30
1780	2	-39	-71	-75	-46	0	41	58	52	29
1790	0	-15	-5	23	51	68	64	34	0	-39
1800	-65	-70	-65	-50	-28	-5	9	12	16	14
1810	6	-5	-12	-19	-12	3	20	46	63	54
1820	24	-5	-23	-27	-18	-9	-11	-23	-30	-28
1830	-15	5	13	0	-33	-60	-73	-58	-19	28
1840	68	80	61	28	6	0	0	3	3	1
1850	6	14	19	16	13	9	8	0	-5	-6
1860	-3	2	3	-10	-25	-28	-18	-4	4	11
1870	19	26	34	34	29	24	10	-3	-16	-29
1880	-31	-26	-25	-32	-41	-43	-41	-41	-33	-18
1890	-11	-4	9	21	22	14	16	22	20	11
1900	3	-10	-22	-26	-21	-11	6	21	34	34
1910	23	0	-15	-17	-15	-1	14	29	41	53
1920	61	62	53	38	19	-9	-33	-41	-30	-12
1930	-6	-20	-39	-51	-58	-51	-31	-7	4	4
1940	0	4	18	34	49	53	39	8	-26	-43
1950	-40	-37	-46	-59	-65	-50	-29	-2	26	51
1960	64	54	28	3	-5	1	20	43	63	68
1970	56	27	-9	-36	-39	-29	-15	-1	-5	-20
1980	-28	-32	-35	-26	-3	15	21	14	9	1
1990	-5	1	19	40	51	45	26	3	-8	-14
2000	-25	-30	-32	-37	-39	-33	-17	6	33	43
2010	21	-20	-59	-73	-60	-20	24	64	78	59
2020	19	-19	-37	-24	5	24	24	2	-35	-71
2030	-81	-58	-13	29	64	81	67	26	-13	-36
2040	-31	-4	20	34	37	31	24	11	0	-5
2050	-5	-6	-5	1	6	4	-5	-15	-26	-33
2060	-25	-3	9	11	0	-22	-35	-35	-29	-18

TO BE CONTINUED

CONTINUED(F-456 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	-7	4	19	24	20	12	3	-5	0	9
2080	19	26	24	4	-20	-34	-34	-21	9	44
2090	59	44	14	-13	-30	-35	-26	-10	3	10
2100	12	4	-2	-3	-1	-4	-6	-11	-17	-18
2110	-11	0	4	9	14	19	19	21	27	28
2120	28	28	20	8	0	-3	-7	-15	-25	-37
2130	-51	-55	-41	-26	-12	4	16	20	17	13
2140	9	10	15	24	29	15	-5	-23	-33	-26
2150	-15	-9	-6	-8	-10	-8	-5	-3	-8	-13
2160	-15	-11	-4	8	29	44	48	29	0	-25
2170	-26	-3	24	51	64	64	39	9	-11	-15
2180	-15	-11	-9	-5	-8	-18	-29	-35	-35	-28
2190	-26	-25	-20	-16	-8	-1	0	-5	-6	-3
2200	2	14	20	20	16	4	-15	-31	-36	-26
2210	0	29	54	68	63	44	14	-5	-17	-16
2220	-6	2	9	11	19	24	24	18	5	-14
2230	-30	-35	-25	-5	17	24	20	2	-21	-35
2240	-27	1	28	37	24	-5	-35	-51	-50	-30
2250	-5	9	6	-6	-11	-2	4	4	1	-6
2260	-16	-13	3	24	37	29	4	-21	-30	-21
2270	-10	-3	-1	-12	-26	-30	-28	-19	-5	9
2280	14	4	-10	-12	-12	-7	4	14	21	29
2290	33	29	26	28	24	20	10	0	-13	-20
2300	-18	-2	14	29	31	33	34	24	12	9
2310	14	14	9	-1	-18	-29	-29	-30	-35	-38
2320	-36	-33	-26	-15	1	20	30	23	5	-20
2330	-39	-36	-18	8	30	41	32	0	-35	-50
2340	-42	-16	17	41	39	13	-23	-46	-43	-19
2350	4	24	24	14	9	9	16	25	31	35
2360	39	34	31	26	24	23	12	-9	-35	-53
2370	-58	-43	-15	9	28	27	7	-21	-40	-41
2380	-32	-16	1	9	9	4	-6	-16	-11	4
2390	14	21	14	-5	-29	-36	-18	8	34	50
2400	44	29	12	4	3	4	2	-8	-20	-23
2410	-16	0	11	11	4	-11	-28	-36	-33	-26
2420	-23	-21	-16	-13	-15	-8	9	31	47	47
2430	34	23	19	19	23	29	29	18	3	-6
2440	-8	-1	4	9	3	-5	-11	-11	-11	-11
2450	-16	-27	-40	-42	-28	-11	-3	-5	-9	-16
2460	-15	-2	22	41	40	19	-7	-25	-25	-5
2470	14	32	41	31	10	-8	-20	-16	-6	-2
2480	-5	-15	-24	-20	-2	18	33	37	28	9
2490	-15	-29	-33	-25	-5	18	31	34	33	19
2500	-3	-20	-28	-29	-30	-31	-29	-29	-25	-10
2510	8	24	40	48	34	4	-27	-43	-36	-16
2520	4	23	24	15	8	1	2	9	14	12
2530	4	-1	0	4	11	10	7	2	3	9
2540	14	9	1	-15	-25	-22	-3	18	24	20
2550	6	-10	-23	-18	-6	3	4	-9	-29	-38
2560	-25	0	18	24	13	-11	-33	-37	-23	-5
2570	13	24	24	17	9	0	-9	-17	-17	-5
2580	12	26	33	26	13	4	1	5	16	28
2590	29	24	11	-5	-16	-20	-21	-18	-14	-10

TO BE CONTINUED

CONTINUED(F-456 EAST)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	-5	-4	-13	-21	-25	-26	-18	-10	-5	-4
2610	-6	-8	-6	1	9	13	14	14	13	8
2620	0	-8	-8	-1	9	23	38	45	44	37
2630	18	0	-6	0	13	31	35	14	-15	-43
2640	-57	-53	-34	-8	9	9	-1	-15	-21	-22
2650	-18	-10	0	4	6	6	9	14	19	14
2660	7	0	-8	-14	-9	-5	-5	-11	-16	-18
2670	-15	-5	9	16	13	2	-17	-38	-48	-42
2680	-30	-10	13	32	33	21	11	9	6	4
2690	-3	-8	-8	-1	9	19	24	21	18	14
2700	14	18	28	39	39	27	4	-18	-28	-26
2710	-15	8	29	33	20	0	-26	-40	-36	-21
2720	-8	1	4	0	-8	-13	-8	-1	2	0
2730	-10	-18	-21	-16	-10	-5	-1	6	18	24
2740	24	14	-2	-25	-33	-25	-3	17	24	21
2750	8	-6	-11	-8	0	7	11	8	-1	-12
2760	-10	2	16	27	28	18	4	-6	-5	6
2770	14	21	21	11	-6	-21	-29	-24	-10	1
2780	1	-6	-16	-25	-24	-18	-8	1	2	0
2790	-5	-8	-11	-5	9	24	26	21	14	8
2800	5	9	20	29	34	29	19	8	1	-6
2810	-10	-8	-8	-10	-12	-15	-16	-15	-10	-2
2820	1	3	-5	-6	-6	-6	-5	-5	-4	-10
2830	-15	-11	-3	5	11	11	2	-12	-21	-25
2840	-15	2	13	9	0	-8	-9	0	13	29
2850	31	14	-11	-33	-36	-22	1	23	37	36
2860	24	11	1	-5	-9	-8	-4	-2	0	0
2870	4	5	2	-1	-3	-3	-1	4	9	9
2880	9	8	0	-7	-11	-9	-5	3	11	19
2890	21	17	8	-1	-11	-25	-35	-40	-36	-22
2900	-5	7	11	9	1	-15	-28	-33	-25	-5
2910	10	21	21	14	8	1	-4	-6	-5	1
2920	9	14	14	14	13	9	6	4	1	0
2930	0	4	6	5	4	1	-5	-8	-7	0
2940	9	18	14	3	-9	-19	-20	-11	1	15
2950	24	28	19	5	-5	-6	3	13	21	24
2960	24	22	13	0	-15	-25	-30	-33	-29	-19
2970	-6	4	9	2	-13	-30	-39	-38	-26	-8
2980	8	14	9	3	-5	-10	-6	5	14	19
2990	14	7	0	-3	4	14	24	24	24	20

END

RECORD = F-456 COMPONENT = UP STATION = HITACHINAKA-F
DATE AND TIME = 1991-12-12-11-27 TOTAL NUMBER OF DATA = 3000
SAMPLING INTERVAL = 0.010 (SEC) SCAL = 0.10000
SIGNAL = GR. ACC.
CONECTION POINT IN DATA NUMBER = 3000, 3000,

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
0	0	1	1	1	2	2	3	3	2	3
10	3	-13	-29	3	48	14	-46	-17	38	8
20	-31	0	27	22	0	-45	-41	13	20	-13
30	10	32	-1	-23	-3	11	8	-5	-13	6
40	39	46	6	-58	-70	-16	23	10	13	59
50	35	-36	-2	91	40	-104	-75	94	89	-77
60	-115	-41	-25	38	100	-24	-112	0	41	-17
70	13	38	-78	-94	77	105	-70	-48	106	-16
80	-127	52	101	-41	-11	42	-35	-35	69	61
90	-41	-61	9	11	-55	-16	66	39	-19	-16
100	18	56	47	-30	-33	42	1	-85	-22	62
110	33	-23	-20	21	13	-20	23	23	-90	-70
120	52	50	-25	-53	8	83	10	-65	28	71
130	-38	-60	28	27	-16	21	27	-35	-38	-6
140	0	23	35	-11	-51	-27	42	82	20	-77
150	-53	52	75	-29	-71	-25	-3	12	65	32
160	-35	2	10	-28	13	77	39	-72	-99	-3
170	47	5	-18	27	35	-38	-49	10	33	19
180	-9	-16	8	18	23	2	-48	-16	32	-25
190	-70	-7	67	66	6	-38	-5	50	30	-36
200	-44	4	22	-16	-39	18	33	-30	-27	-4
210	-10	45	64	-41	-57	52	33	-62	-50	27
220	51	-10	-22	29	-12	-41	42	23	-46	39
230	58	-63	-77	19	82	33	-65	-52	28	9
240	-25	12	10	-3	25	23	-9	-12	6	13
250	0	-25	-28	-21	-6	52	77	-1	-68	-32
260	20	23	3	11	50	10	-61	-9	58	-10
270	-59	-14	27	23	-57	-79	49	85	-40	-72
280	31	96	36	-46	-23	0	-40	-1	49	-1
290	-13	57	37	-54	-50	-3	-35	-37	62	82
300	-21	-41	10	-16	-27	19	3	-70	-55	61
310	80	-7	0	50	-7	-56	-11	33	30	22
320	-2	-30	-12	-11	-43	-48	-15	50	76	1
330	-33	33	44	-35	-20	103	78	-104	-135	39
340	102	-13	-25	22	-45	-69	13	28	-22	-10
350	72	85	-55	-112	37	118	-20	-117	-18	62
360	25	-6	7	52	29	-70	-49	24	-6	-29
370	-7	-9	14	40	3	-30	-40	-35	-21	-13
380	62	123	16	-61	-16	22	20	-46	-41	77
390	19	-113	3	137	-8	-168	-45	131	55	-82
400	12	115	-1	-60	52	62	-45	-39	12	-28
410	-45	23	33	19	52	22	-58	-97	-97	-21
420	97	87	-8	-16	30	30	-30	-65	-9	0
430	-18	20	57	17	-57	-43	19	-6	-48	17
440	77	-9	-65	25	34	-81	-24	131	23	-117
450	1	87	-25	-65	42	97	13	-53	-12	23
460	-38	-78	-25	33	57	0	-30	56	32	-97
470	-70	39	82	75	-28	-105	23	142	13	-139

TO BE CONTINUED

CONTINUED(F-456 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
480	-62	62	-8	-65	31	49	58	148	102	-65
490	-94	-3	-45	-151	-86	28	-1	2	137	149
500	4	-65	-46	-57	-69	-16	62	70	31	11
510	-16	-57	-66	-46	-26	1	52	85	12	-58
520	3	62	13	-45	-39	-22	0	13	5	32
530	45	-3	-33	-16	13	7	-27	15	32	-74
540	-75	72	102	-30	-81	6	23	-11	13	48
550	48	-23	-78	8	89	65	37	-26	-90	-66
560	-26	-25	-48	3	127	106	-60	-120	13	100
570	35	-13	27	78	5	-167	-179	-6	42	-29
580	13	109	26	-97	-6	131	27	-131	-82	33
590	6	-48	-12	-52	-122	-16	192	229	33	-137
600	-78	79	94	-11	-50	7	66	71	3	-45
610	9	62	36	-25	-43	-18	-8	-22	-9	25
620	71	95	-50	-205	-69	109	27	-85	-16	126
630	150	8	-161	-174	-103	-20	38	30	8	49
640	106	62	-51	-17	78	-39	-171	-35	84	-32
650	-154	-126	59	273	230	10	-106	-125	-115	-30
660	124	223	140	-6	-23	-25	-134	-186	-97	-27
670	-56	-23	180	287	131	-23	-38	-16	-55	-137
680	-146	19	190	124	-39	-59	-46	-82	-59	-55
690	-125	-101	23	72	69	106	127	58	-1	27
700	-15	-183	-228	-94	82	210	159	-25	-65	52
710	38	-169	-307	-119	198	199	8	81	275	235
720	69	-1	-59	-193	-235	-107	42	87	52	51
730	55	8	-3	82	71	-111	-174	-35	-19	-163
740	-173	-6	105	89	70	47	-35	-96	-79	-79
750	-120	-88	23	115	101	22	18	52	-6	-95
760	-55	76	137	77	13	18	18	22	89	135
770	67	-33	-104	-130	-90	-48	-25	-16	-2	52
780	78	4	-27	52	71	-49	-140	-107	-55	-45
790	-25	46	82	54	48	67	85	92	59	-1
800	-31	-35	-48	-94	-124	-53	39	82	157	183
810	88	17	42	57	4	-73	-106	-104	-124	-125
820	-50	45	55	22	29	0	-50	10	111	101
830	5	-65	-87	-108	-94	-11	66	59	6	-29
840	-35	-23	8	52	90	62	-35	-105	-127	-135
850	-55	86	141	115	82	42	-11	-45	-29	-6
860	-30	-92	-114	-69	-20	40	94	62	-10	-41
870	-47	-48	-49	-69	-75	-18	37	26	-11	17
880	106	165	135	47	5	-10	-58	-48	32	59
890	15	-17	-16	-20	-26	32	124	109	3	-53
900	-55	-50	-50	-45	1	54	61	52	52	39
910	-16	-57	-91	-75	27	105	77	-6	-53	-37
920	-10	-13	6	47	20	-47	-55	3	46	23
930	-28	-42	-25	-16	-16	-4	-4	-30	-61	-69
940	-45	-14	17	33	6	-20	-21	-25	-18	23
950	52	19	-59	-92	-72	-51	-6	29	18	50
960	106	86	31	45	83	50	-7	12	59	50
970	6	-16	1	13	-16	-40	-24	-6	-35	-85
980	-78	3	67	64	37	29	61	62	-21	-95
990	-58	-65	-110	-79	-16	-20	-41	-22	4	14
1000	29	48	40	31	69	111	92	37	2	8

TO BE CONTINUED

CONTINUED(F-456 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1010	10	-1	-3	-17	-53	-65	-29	8	13	9
1020	27	33	1	-4	12	4	-7	-25	-58	-61
1030	0	15	1	0	0	8	25	33	46	58
1040	59	18	-6	-9	-16	-45	-67	-48	-26	-75
1050	-118	-75	-39	-65	-58	3	48	55	51	45
1060	20	-10	0	45	70	42	7	35	101	74
1070	-17	-31	-7	-31	-41	-6	-6	-35	-25	-6
1080	-3	-18	-46	-30	19	20	6	9	-12	-19
1090	21	33	9	-11	-33	-26	1	0	3	50
1100	95	82	15	-23	-19	-31	-68	-50	23	28
1110	-16	33	109	74	8	3	3	-37	-60	-35
1120	-19	-43	-55	-28	-22	-45	-28	8	10	0
1130	3	19	67	87	58	42	12	-49	-55	-8
1140	-16	-44	-18	3	10	42	58	33	-1	-43
1150	-66	-50	-15	-6	-6	-3	2	12	29	42
1160	46	50	42	13	-16	-37	-39	-30	-28	-14
1170	8	11	3	10	28	23	0	-4	-11	-67
1180	-82	-25	-14	-42	1	45	-3	-41	9	62
1190	23	-29	1	36	-6	-65	-63	-11	20	20
1200	42	84	82	38	17	28	32	10	0	30
1210	57	37	10	0	0	13	26	1	-5	22
1220	20	-24	-49	-40	-35	-50	-50	-24	-16	-46
1230	-90	-82	-55	-60	-58	-25	2	10	3	0
1240	19	48	61	62	49	23	28	39	28	17
1250	6	-20	-36	-1	38	50	52	60	58	22
1260	-24	-40	-31	-40	-71	-76	-51	-43	-40	-25
1270	6	28	-3	-45	-8	30	-7	-21	42	71
1280	13	-11	27	37	0	-12	19	33	22	30
1290	56	62	38	-3	-38	-55	-46	-29	-26	-38
1300	-28	0	19	12	-15	-35	-16	3	3	6
1310	15	12	6	46	101	92	28	3	18	-10
1320	-36	-5	-3	-48	-50	-25	-27	-37	-30	-20
1330	-7	3	8	13	-12	-33	-19	-19	-25	-6
1340	10	10	-6	-31	-28	22	49	28	9	7
1350	-6	-17	-3	23	48	38	1	-21	-6	33
1360	49	8	-35	-41	-47	-65	-21	50	42	-11
1370	-17	22	33	23	43	52	23	-1	7	2
1380	-40	-75	-48	2	-6	-53	-56	-29	2	42
1390	70	48	0	-16	-5	10	35	47	22	2
1400	10	10	-17	-35	-28	-22	-28	-42	-38	-9
1410	8	13	38	52	7	-22	7	13	-20	-29
1420	-25	-40	-35	-3	19	22	22	30	42	42
1430	30	24	22	6	6	18	-1	-29	-16	-9
1440	-47	-71	-45	-1	21	30	29	20	13	-9
1450	-41	-38	-20	-30	-36	-16	8	16	-6	-14
1460	22	50	33	8	0	-17	-20	8	16	-3
1470	-6	2	-7	-12	10	27	10	-3	6	8
1480	-1	-16	-25	-25	-34	-39	-35	-8	35	33
1490	6	27	52	21	-6	28	71	52	8	-16
1500	-10	7	13	13	23	26	-1	-48	-60	-29
1510	-5	-5	8	25	11	-9	-11	-13	-1	19
1520	21	3	-16	-21	-13	-3	-12	-26	-27	-16
1530	1	2	3	18	3	-39	-51	-48	-17	1

TO BE CONTINUED

CONTINUED(F-456 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1540	4	-2	-15	-14	13	30	26	31	23	8
1550	17	30	26	10	-11	-19	0	3	-7	-6
1560	-2	-6	13	38	31	20	22	6	-7	3
1570	-10	-46	-45	-17	-8	-16	-16	-2	2	-16
1580	-6	30	23	-6	-9	-2	7	10	7	13
1590	33	37	32	23	-6	-43	-45	-15	9	17
1600	13	0	-11	0	3	-9	-15	-8	0	-7
1610	-7	12	18	7	-4	-16	-18	-16	-6	15
1620	33	13	-11	-7	17	28	23	18	7	-14
1630	-27	-23	-13	-15	-31	-40	-21	2	2	-2
1640	23	40	2	-45	-31	8	30	23	10	11
1650	8	-6	-9	6	12	-3	-16	4	33	30
1660	12	5	-1	-2	3	8	6	-6	-17	-7
1670	1	-11	-9	17	19	8	7	3	-15	-31
1680	-20	-9	-23	-32	-11	-6	-1	19	28	13
1690	-1	-16	-20	-6	3	-3	1	30	33	-3
1700	-20	0	5	-20	-25	5	3	-15	3	23
1710	0	-24	-21	-16	-16	6	28	23	21	13
1720	-17	-25	0	-3	-12	20	33	1	-5	17
1730	30	21	12	13	10	-12	-13	13	29	18
1740	-6	-35	-45	-31	-1	13	3	-10	-5	-1
1750	1	9	8	0	0	1	1	-9	-25	-23
1760	-9	8	19	8	-11	-1	18	12	-8	0
1770	22	13	-4	4	13	-6	-25	-20	-19	-16
1780	2	10	2	0	-1	-13	-8	2	-15	-18
1790	23	42	13	4	18	20	10	2	1	1
1800	-11	-16	-1	1	-1	7	6	-13	-17	-6
1810	0	3	19	33	19	-10	-8	15	18	-6
1820	-28	-40	-45	-29	5	18	3	-9	-5	-2
1830	-10	-9	10	22	13	13	13	10	8	8
1840	2	0	-9	-25	-29	-18	-3	-3	2	19
1850	19	12	5	-18	-32	-13	-6	-16	-5	10
1860	3	2	13	5	-16	-6	12	1	-6	19
1870	42	23	-12	-17	-6	-6	3	30	28	0
1880	-16	-13	-6	-7	-11	-6	9	13	3	-6
1890	-17	-28	-23	0	-1	-13	0	22	28	31
1900	39	33	8	-18	-25	4	33	30	15	10
1910	-13	-38	-19	3	-7	-18	-6	3	-16	-40
1920	-35	-6	8	3	-6	-6	-1	-9	-13	10
1930	25	-6	-43	-25	13	20	9	10	10	8
1940	5	3	13	28	30	7	-13	-1	13	3
1950	-8	-6	-5	-8	5	18	12	5	2	-4
1960	-11	-16	-20	-30	-20	8	3	-35	-41	-17
1970	1	11	10	3	8	0	-18	-4	27	38
1980	28	13	8	0	-6	13	30	22	18	22
1990	13	-6	-24	-16	3	10	-4	-12	-2	-6
2000	-17	-17	0	18	5	-28	-35	-16	-7	-19
2010	-20	2	3	-23	-32	-1	18	3	-1	22
2020	30	7	-2	9	8	6	7	1	0	11
2030	13	-7	-24	-18	-7	-1	4	9	7	2
2040	4	19	31	20	12	16	6	-12	-16	-12
2050	-6	13	8	-25	-27	-6	-16	-37	-25	-11
2060	-25	-27	3	18	-1	-3	23	20	-16	-19

TO BE CONTINUED

CONTINUED(F-456 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2070	13	19	-1	8	30	18	3	8	6	0
2080	3	6	1	-1	-11	-25	-16	16	23	6
2090	-1	15	23	12	8	8	-1	-4	6	9
2100	7	0	-19	-27	-12	-1	-11	-19	-8	3
2110	-11	-27	-12	7	-3	-21	-12	4	-1	-11
2120	-3	2	-2	0	8	19	13	7	7	10
2130	13	20	11	6	8	8	6	9	2	-14
2140	-10	-1	-22	-37	-23	-13	-11	-1	9	13
2150	4	0	3	-8	-16	0	8	-12	-27	-7
2160	22	27	9	9	27	13	-16	-8	13	16
2170	5	-3	6	23	22	5	0	5	-6	-19
2180	-9	9	13	2	-13	-13	-9	-11	-15	-16
2190	-19	-16	-5	1	7	3	2	3	-6	-17
2200	-1	19	16	3	-2	-1	0	-1	0	8
2210	13	7	-6	-9	-6	7	20	13	-3	-11
2220	-6	0	-6	-7	3	10	3	3	8	1
2230	2	13	3	-13	1	23	13	-16	-25	-17
2240	-17	-21	-16	0	3	1	0	-4	-7	0
2250	6	0	-6	-8	-13	-11	-1	3	0	-8
2260	-6	-1	3	19	28	17	6	3	9	-1
2270	-4	15	28	13	-2	-8	-3	3	11	22
2280	23	7	-8	-11	-18	-19	-4	3	-9	-27
2290	-23	-13	-16	-12	5	9	0	-6	3	13
2300	15	19	18	12	12	14	13	3	-9	-8
2310	-6	-6	-8	-20	-29	-16	0	-10	-22	-14
2320	-6	-6	-3	3	8	-1	-9	-8	-6	-6
2330	-3	0	13	19	7	0	10	26	23	2
2340	-5	7	6	-6	3	18	10	2	19	23
2350	13	23	30	10	0	10	8	-13	-21	-12
2360	-18	-31	-20	-1	8	10	-1	-18	-20	-11
2370	-6	-11	-16	-17	-20	-32	-30	-6	9	3
2380	0	10	16	9	8	13	10	-1	-5	0
2390	8	19	23	17	7	8	12	10	7	12
2400	13	5	-3	-3	-2	-8	-9	-4	1	0
2410	-11	-10	-3	1	-16	-14	2	8	1	-1
2420	1	-2	-17	-27	-16	-6	-9	-11	-1	3
2430	3	0	0	3	0	-6	0	1	-4	0
2440	3	6	13	21	13	0	0	8	13	8
2450	0	-6	0	3	2	-6	1	9	-4	-13
2460	2	13	7	3	12	13	1	-4	6	3
2470	-11	-16	-3	-1	-5	-8	-8	-4	-6	0
2480	-2	-21	-20	7	8	-9	-8	-1	-4	-4
2490	1	10	8	-6	-6	1	0	0	6	8
2500	10	8	5	8	11	2	-4	3	15	18
2510	7	-3	-6	-3	2	0	-1	0	-8	-21
2520	-16	0	6	3	0	0	5	10	10	7
2530	3	0	2	8	8	3	-3	-7	-8	-11
2540	-12	-6	0	-2	-1	-2	-8	-12	-13	-6
2550	-4	-9	-11	-6	1	15	13	-6	-8	3
2560	10	13	17	11	1	-6	-2	9	13	6
2570	3	6	3	2	3	15	18	0	-11	0
2580	7	2	-1	-1	-6	-14	-25	-25	-10	-1
2590	3	8	9	8	3	2	-7	-6	1	2

TO BE CONTINUED

CONTINUED(F-456 UP)

NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2600	1	7	9	9	-9	-6	0	-6	5	17
2610	12	0	-6	-7	-9	-9	0	10	10	5
2620	0	-9	-12	-8	-9	-11	2	18	20	10
2630	5	0	-11	-8	3	7	3	1	0	-7
2640	-12	-8	-3	-6	0	1	3	-2	-3	7
2650	7	-1	0	9	8	5	6	0	-11	-13
2660	-7	-6	-7	-6	0	0	1	0	0	-1
2670	2	9	8	3	3	6	7	10	17	16
2680	8	9	6	-7	-9	-6	-12	-17	-5	3
2690	-1	-6	-1	-3	-10	-10	-6	-9	-14	-11
2700	-4	-6	-4	3	6	0	0	5	8	3
2710	0	-1	-1	0	10	16	7	2	10	10
2720	0	0	7	12	9	8	18	13	-3	-6
2730	2	7	6	3	0	3	1	-6	-1	1
2740	1	0	-8	-19	-21	-11	-1	-1	-6	1
2750	0	-14	-20	-11	-1	-6	-11	-3	6	6
2760	3	6	8	3	-1	0	6	8	4	6
2770	3	0	-6	-3	0	3	5	6	5	7
2780	3	-4	-11	-1	8	0	-12	-9	1	7
2790	3	3	0	-9	-12	0	9	6	5	9
2800	10	3	-6	-6	-1	-1	0	-3	-6	-1
2810	3	4	8	13	4	-2	3	8	3	3
2820	2	-4	-10	-11	-10	-8	-1	-5	-17	-19
2830	-8	-3	-6	-2	1	-1	-6	3	17	22
2840	17	12	13	13	2	0	13	21	13	10
2850	13	10	-1	-6	-6	-9	-18	-22	-17	-13
2860	-13	-13	-11	-6	5	3	-9	-17	-11	-6
2870	1	7	2	-6	-4	3	8	3	-3	-2
2880	-1	-6	3	13	13	1	-7	-6	2	7
2890	5	7	18	20	10	1	1	0	1	-1
2900	-8	-6	3	-1	-9	-4	3	1	1	8
2910	3	-13	-22	-17	-8	-2	0	-2	-10	-6
2920	3	7	3	3	2	-2	2	5	3	2
2930	2	8	10	3	2	7	11	8	6	12
2940	13	0	-8	-1	9	8	3	0	-1	1
2950	5	1	-8	-16	-16	-13	-8	-1	2	0
2960	-7	-13	-12	-7	6	15	10	5	6	0
2970	-5	3	8	-1	-11	-11	-4	3	3	3
2980	2	6	10	2	-13	-9	10	19	12	8
2990	7	3	-6	-6	3	6	-3	-11	-11	-5

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印刷所　横浜ハイテクプリンティング株式会社

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