



防災科学技術研究資料

第七号

国立防災科学技術センター

11 AUG 1969

REVIEW OF RESEARCH FOR DISASTER PREVENTION
No. 7

SEISMOLOGICAL DATA OF MATSUSHIRO EARTHQUAKE SWARM
(REPORT II)

OBSERVATIONS BY THE NETWORK OF THE EARTHQUAKE RESEARCH INSTITUTE,
THE UNIVERSITY OF TOKYO,
DURING THE PERIOD FROM OCTOBER 1965 TO DECEMBER 1966

防災科学技術研究資料

第 7 号

松代群発地震観測資料(第2報)

*Not included in
the database*

NATIONAL RESEARCH CENTER FOR DISASTER PREVENTION

No. 1, GINZAHIGASHI 6-CHOME, CHUO-KU, TOKYO

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昭和44年3月

科学技術庁

国立防災科学技術センター

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国立防災科学技術センター刊行物

1. 国立防災科学技術センター研究報告

- 第 1 号 気象レーダーのエコーを電子計算機により実時間解析する可能性について, p.1-13; 天竜川佐久間の洪水予報方式について, p.15-35; 高速 A-D, D-A 変換器を持つデータ処理機 TOSBAC-3400 のプログラミング例(I), p.37-43; 気象資料の長期変動について — 月平均気圧・月平均気温・月雨量のスペクトル解析 —, p.45-86, 昭和43年3月発行

2. 国立防災科学技術センター研究速報

- 第 1 号 富士山坑道の微動調査 10 p. 昭和40年9月発行
 第 2 号 1965年5月3日の降水による東京都区内のがけくずれ 6 p. 昭和40年11月発行
 第 3 号 海面上における風の応力(英文) 6 p. 昭和41年3月発行
 第 4 号 川崎市久末の仄津波災害の発生機構について 12 p. 昭和41年9月発行
 第 5 号 温美沖人工地震の作手における観測と周波数分析 — 人工地震波の周波数分析(I) — 26 p. 昭和42年3月発行
 第 6 号 耐震実験装置に関する試験研究報告(第1報) 52 p. 折込み図版1枚 昭和42年7月発行
 第 7 号 豪雨によるがけくずれ調査法に対する提案 11 p. 昭和43年3月発行
 第 8 号 情報検索における出力と有効性の研究 — 防災情報の検索の諸方法に関する研究(その1) — 22 p. 昭和43年3月発行
 第 9 号 電子計算機による X 線回折データの検索 10 p. 昭和43年8月発行
 第 10 号 日本の自然災害の諸特性 — 昭和30年代の災害資料から — 30 p. 昭和43年9月発行

3. 防災科学技術総合研究報告

- 第 1 号 火山性地すべりの発生機構および予知に関する研究(第1報) 56 p. 折込み図版4枚 昭和40年3月発行
 第 2~4 号 北陸地方における主として空中写真を利用した雪害に関する基礎的ならびに応用的研究 第1報:66 p. 第2報:73 p. 第3報:93 p. 昭和40年3月発行
 第 5 号 北海道冷害気象に関する研究(第1報) 91 p. 昭和40年3月発行
 第 6 号 北海道冷害気象に関する研究(第2報) 65 p. 昭和41年3月発行
 第 7~9 号 火山性地すべりの発生機構および予知に関する研究 第2報その1:39 p. 折込み図版2枚 第2報その2:42 p. 第2報その3:78 p. 昭和41年3月発行
 第 10 号 北陸地方における主として空中写真を利用した雪害に関する基礎的ならびに応用的研究(第4報) 86 p. 昭和41年3月発行

- 第 11~12 号 新潟地震防災総合研究報告 その1:72 p. その2:89 p. 折込み図版1枚 昭和41年3月発行
 第 13 号 噴出岩地帯におけるがけくずれの機構および予知に関する研究(第1報) 28 p. 昭和41年12月発行
 第 14 号 風化花崗岩地帯におけるがけくずれ・山くずれ等の機構および予知に関する研究(第1報) 127 p. 折込み図版4枚 昭和43年3月発行
 第 15 号 1965年岐阜・福井県境付近に発生した山地崩壊に関する研究 31 p. 折込み図版4枚 昭和43年3月発行

4. 防災科学技術総合研究速報

- 第 1 号 相模灘における海象等に関する研究(中間報告) 47 p. 昭和41年3月発行
 第 2~3 号 有明海北岸低地における水害防止に関する研究 第1報その1:43 p. 第1報その2:74 p. 昭和41年3月発行
 第 4 号 島根県東部地域がけくずれの気象特性に関する研究 — 予報 — 12 p. 昭和41年3月発行
 第 5 号 松代群発地震に関する特別研究 89 p. 折込み図版5枚 昭和42年3月発行
 第 6 号 地震時における軟弱基礎地盤の振動性状に関する現場実験研究 22 p. 折込み図版2枚 昭和42年3月発行
 第 7 号 冷害気象の局地的発現機構ならびに人工霧による局地気象改良に関する研究(中間報告) 50 p. 昭和42年3月発行

5. 防災科学技術研究資料

- 第 1 号 松代群発地震観測資料(第1報)(英文) 140 p. 昭和42年3月発行
 第 2 号 がけくずれの地域的・季節的分布と降水量(1949~1959) 62 p. 昭和42年3月発行
 第 3 号 災害統計資料(昭和30年~40年) — 災害原因別・都道府県別被害集計 — 119 p. 昭和43年3月発行

6. 防災科学技術

- No. 1 : 15 p. 昭和38年9月発行
 No. 2 : 33 p. 昭和39年12月発行
 No. 3 : 43 p. 昭和41年3月発行
 No. 4 : 50 p. 昭和42年3月発行
 No. 5 : 13 p. 昭和43年8月発行
 No. 6 : 13 p. 昭和43年11月発行

REVIEW OF RESEARCH FOR DISASTER PREVENTION
No. 7

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(REPORT II)

OBSERVATIONS BY THE NETWORK OF THE EARTHQUAKE RESEARCH INSTITUTE,
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昭和44年3月

科学技術庁

国立防災科学技術センター

On the Publication of
"Seismological Data of the
Matsushiro Earthquake Swarm"

The publication "Seismological Data of the Matsushiro Earthquake Swarm" is continuously issued, forming a link in the duties of data collection and arrangement of the Research Center of Matsushiro Earthquake Swarm, in cooperation with the government organs concerned, and the preceding issue, Report I, was published with special assistance from the Observation Division of the Japan Meteorological Agency, and the present issue, Report II, is published with greatest support from the Earthquake Research Institute of the University of Tokyo. It is earnestly hoped that these publications would be widely utilized by the persons concerned, in compliance with the purport of the establishment of National Research Center for Disaster Prevention.

March 1969

National Research Center for
Disaster Prevention

REVIEW OF RESEARCH FOR DISASTER PREVENTION, No. 7, MARCH 1969

550, 140, 6 (321, 63)

Seismological Data of Matsushiro Earthquake Swarms

REVIEW OF RESEARCH FOR DISASTER PREVENTION

Observations by the Network of No. 7

SEISMOLOGICAL DATA OF MATSUSHIRO EARTHQUAKE SWARM
(REPORT II) during the Period from October 1965 to December 1966

OBSERVATIONS BY THE NETWORK OF
THE EARTHQUAKE RESEARCH INSTITUTE,
THE UNIVERSITY OF TOKYO,
DURING THE PERIOD FROM OCTOBER 1965 TO DECEMBER 1966

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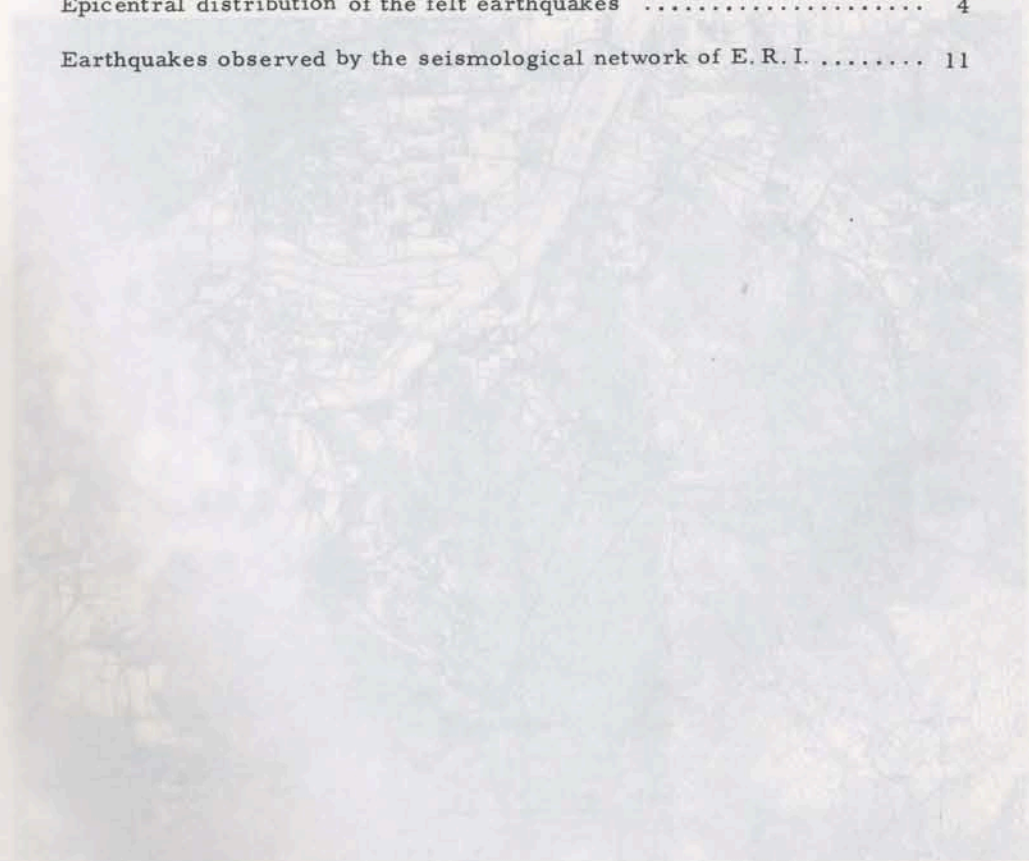


Fig. 1. Location of temporary seismographic stations.

Seismological Data of Matsushiro Earthquake Swarm
(Report II)

Observations by the Network of
the Earthquake Research Institute,
the University of Tokyo,
during the Period from October 1965 to December 1966

Introductory Note

The Matsushiro swarm earthquakes commenced in August 1965 and still continue even now when more than three years have passed since the outbreak. The Earthquake Research Institute of the University of Tokyo dispatched its members to Matsushiro and set up temporary seismographic stations in four places around Mt. Minakami, i. e., at Akashiba, Hoshina, Zozan and Mori in October 1965, each station being equipped with an Ishimoto acceleration seismograph and a short-period electromagnetic seismograph. The observation was continued till March 1967, when the earthquakes decreased in number, but the area of activity was extended and the seismographic network was forced to be rearranged so as to cover a wider area.



Fig. 1. Location of temporary seismographic stations.

This report compiles the seismological data obtained from the Ishimoto acceleration seismograms at Akashiba, Hoshina and Zozan during the period from October 1965 to December 1966, which were available for locating the hypocenters of the swarm earthquakes.

1. Criteria of the data

The determination of hypocenters was made according to the following criteria:

- 1) The earthquake was recorded at three stations at least.
- 2) Both the P and S phases were clear.
- 3) When too many earthquakes were recorded on a seismogram for a day beyond the capability of the seismogram interpreters (normally two persons were engaged in the interpretation of the acceleration seismograms), then 50 of larger earthquakes were selected to be read.

Referring to the frequency-magnitude curves of the swarm earthquakes determined by the observation, it may be expected that we were able to determine the hypocenters of almost all the earthquakes with magnitudes larger than 2.5 under such criteria.

2. Determination of magnitude

We obtained the magnitudes of the swarm earthquakes by using maximum amplitudes of earthquakes recorded on the acceleration seismograms of two stations, Akashiba and Zozan, and took the mean values of these two stations. For obtaining the magnitude, we used the graph devised by I. Muramatsu (*Zisin* II, 17 (1964), 215), who gave the relation between the maximum amplitude and the hypocentral distance, taking M as a parameter for the wide range of hypocentral distance and magnitude. The magnitudes of larger earthquakes obtained by this method were compared with the corresponding magnitudes obtained by the JMA (Japan Meteorological Agency) using observational data of its ordinary seismographic network. We found that there was a certain systematic difference between them, that is to say, the values obtained by Muramatsu's method were always smaller than the JMA magnitudes by 0.5, and so we adjusted our magnitude by adding 0.5 to the JMA magnitude.

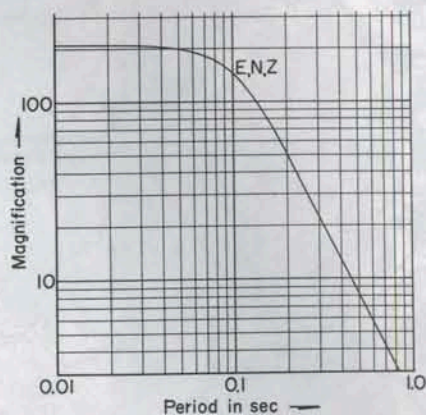


Fig. 2. Characteristics of the instruments.

3. Determination of hypocenters

We obtained the hypocenters of the earthquakes by assuming as the first approximation that the velocities of P and S waves are constant with depth. Assuming this, the hypocentral distance from a station is given by $\Delta = kt$, where Δ is the hypocentral distance, t the difference between the arrival times of P and S waves, k a constant. Since the position of hypocenter has three unknown quantities (latitude, longitude and depth) and k is also unknown, there are four unknown quantities. Therefore, if we observe the difference between the arrival times of P and S waves at four stations, we can determine these four unknown quantities. Once we have determined the value of k , we can determine the position of hypocenter simply by using the values of t at three stations, because the hypocentral distances from the three stations are given by the equation $\Delta = kt$. First, we determined the value of k by using the observational data of four stations, Akashiba, Hoshina, Zozan and Mori. The number of used data for this purpose was 113 and we obtained $k = 7.39 \pm 0.53$ as a mean value, excepting 32 data which gave large deviations from the mean value.

The hypocentral distributions of the earthquakes thus obtained are indicated graphically in the Bulletin of the Earthquake Research Institute, the University of Tokyo.

- 1) The Party for Seismographic Observation of Matsushiro Earthquakes and the Seismometrical Section, Earthquake Research Institute, "Matsushiro Earthquakes Observed with a Temporary Seismographic Network, Part 1." *Bull. Earthq. Res. Inst.*, 44 (1966), 309-333.
- 2) The Party for Seismographic Observation of Matsushiro Earthquakes and the Seismometrical Section, Earthquake Research Institute, "Matsushiro Earthquakes Observed with a Temporary Seismographic Network, Part 2." *Bull. Earthq. Res. Inst.*, 44 (1966), 1689-1714.
- 3) The Party for Seismographic Observation of Matsushiro Earthquakes and the Seismometrical Section, Earthquake Research Institute, "Matsushiro Earthquakes Observed with a Temporary Seismographic Network, Part 3." *Bull. Earthq. Res. Inst.*, 45 (1967), 197-223.
- 4) The Party for Seismographic Observation of Matsushiro Earthquakes and the Seismometrical Section, Earthquake Research Institute, "Matsushiro Earthquakes Observed with a Temporary Seismographic Network, Part 4." *Bull. Earthq. Res. Inst.*, 45 (1967), 887-917.
- 5) T. HAGIWARA and T. IWATA, "Summary of the Seismographic Observation of Matsushiro Swarm Earthquakes." *Bull. Earthq. Res. Inst.*, 46 (1968), 485-515.

4. Abbreviation of the names of stations

A: Akashiba, H: Hoshina, Z: Zozan.

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Seismological Data of Matsushiro Earthquake Swarm (Report II)

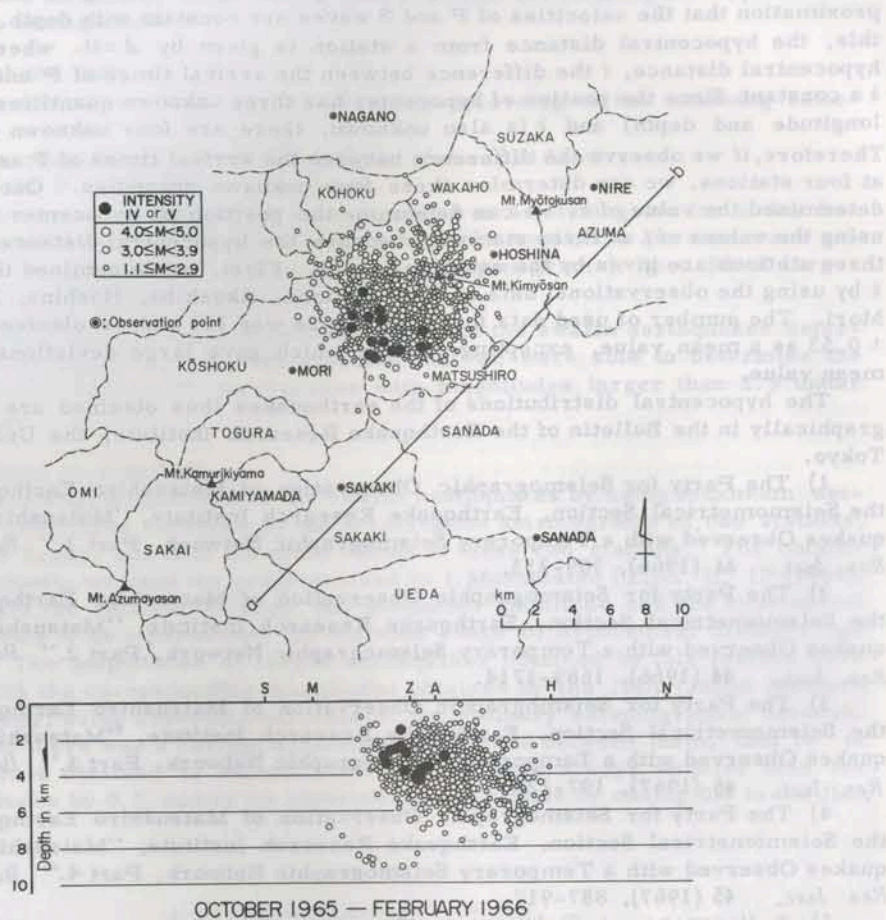


Fig. 3. Above: Epicentral distribution of the felt earthquakes during the period from October 1965 to February 1966.
 Below: Vertical distribution of the felt earthquakes during the period from October 1965 to February 1966.
 a-b: Plane of projection, A: Akashiba, H: Hoshina, M: Mori, N: Nire, S: Sakaki, Z: Zōzan.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

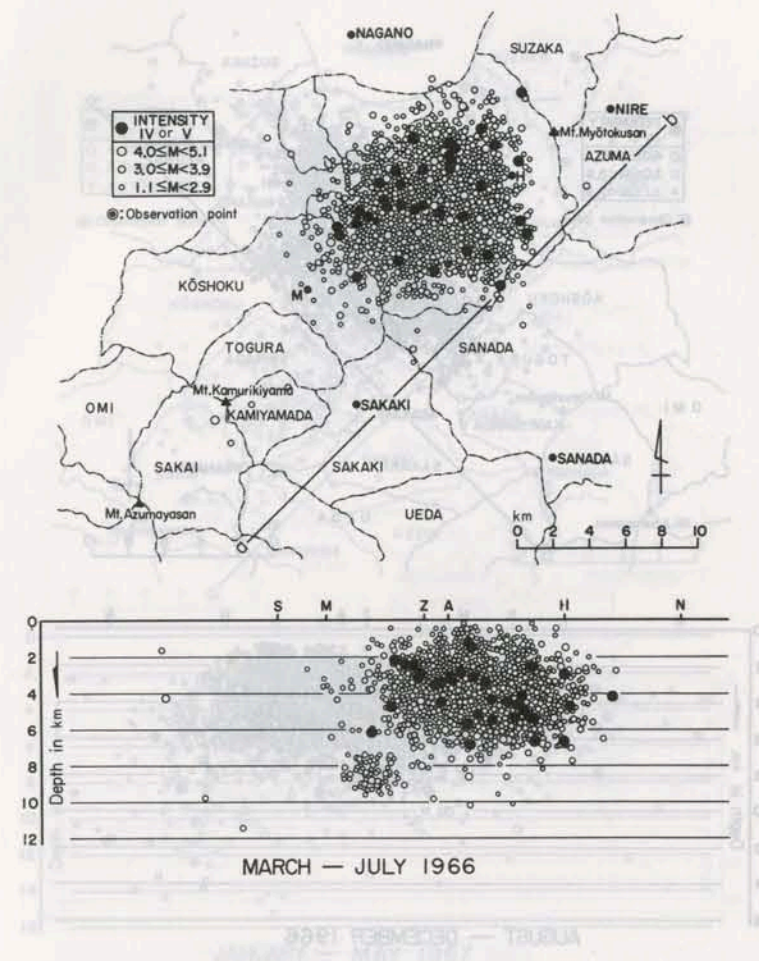


Fig. 4. Above: Epicentral distribution of the felt earthquakes during the period from March to July 1966.
 Below: Vertical distribution of the felt earthquakes during the period from March to July 1966.
 a-b: Plane of projection, A: Akashiba, H: Hoshina, M: Mori, N: Nire, S: Sakaki, Z: Zōzan.

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

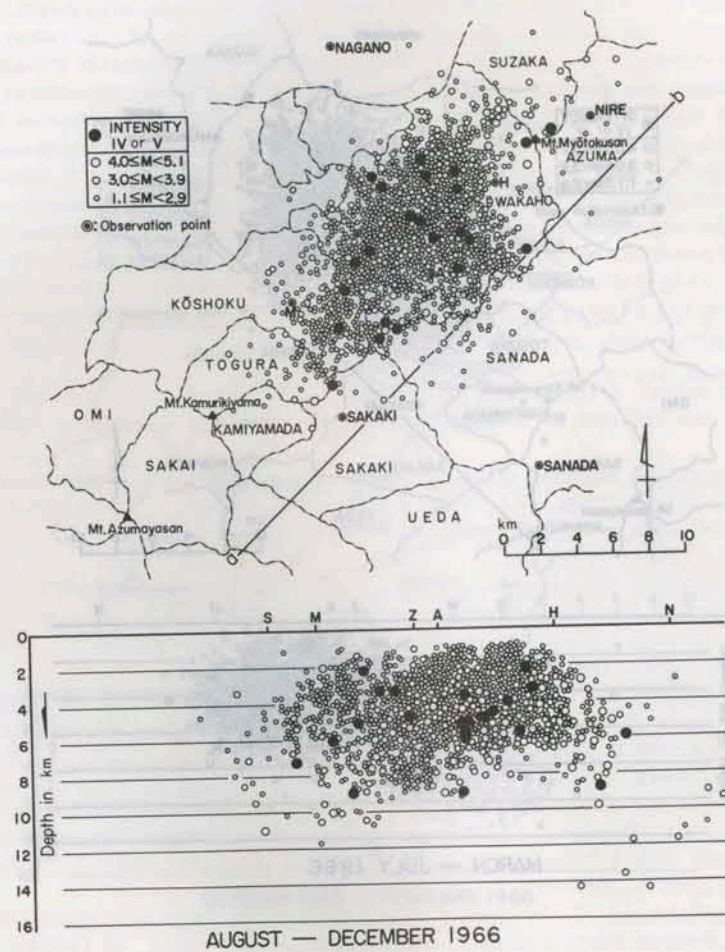


Fig. 5. Above: Epicentral distribution of the felt earthquakes during the period from August to December 1966.
Below: Vertical distribution of the felt earthquakes during the period from August to December 1966.
a-b: Plane of projection, A: Akashiba, H: Hoshina, M: Mori, N: Nire, S: Sakaki, Z: Zōzan.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

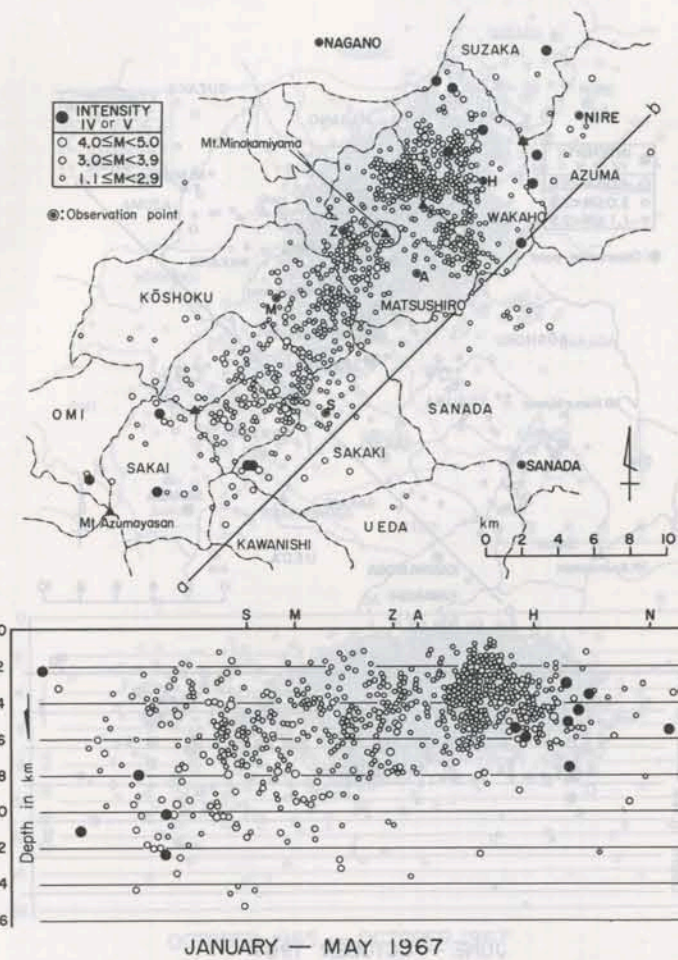


Fig. 6. Above: Epicentral distribution of the felt earthquakes during the period from January to May 1967.
Below: Vertical distribution of the felt earthquakes during the period from January to May 1967.
a-b: Plane of projection, A: Akashiba, H: Hoshina, M: Mori, N: Nire, S: Sakaki, Z: Zōzan.

Seismological Data of Matsushiro Earthquake Swarm (Report II)

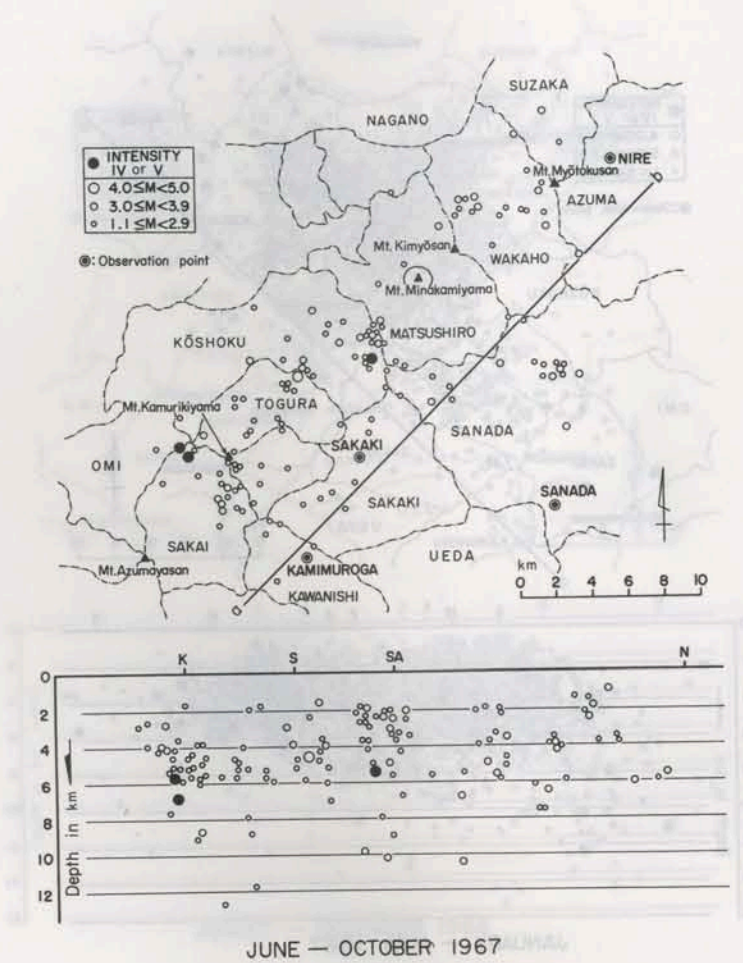


Fig. 7. Above: Epicentral distribution of the felt earthquakes during the period from June to October 1967. Below: Vertical distribution of the felt earthquakes during the period from June to October 1967. a-b: Plane of projection, K: Kamimuroga, S: Sakaki, SA: Sanada, N: Nire.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

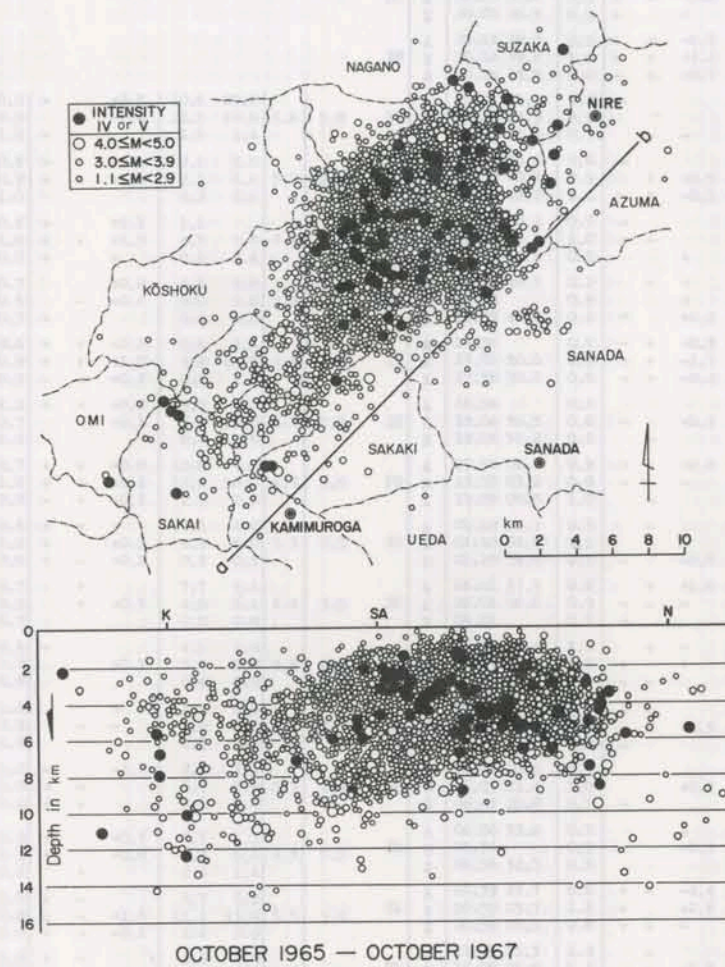
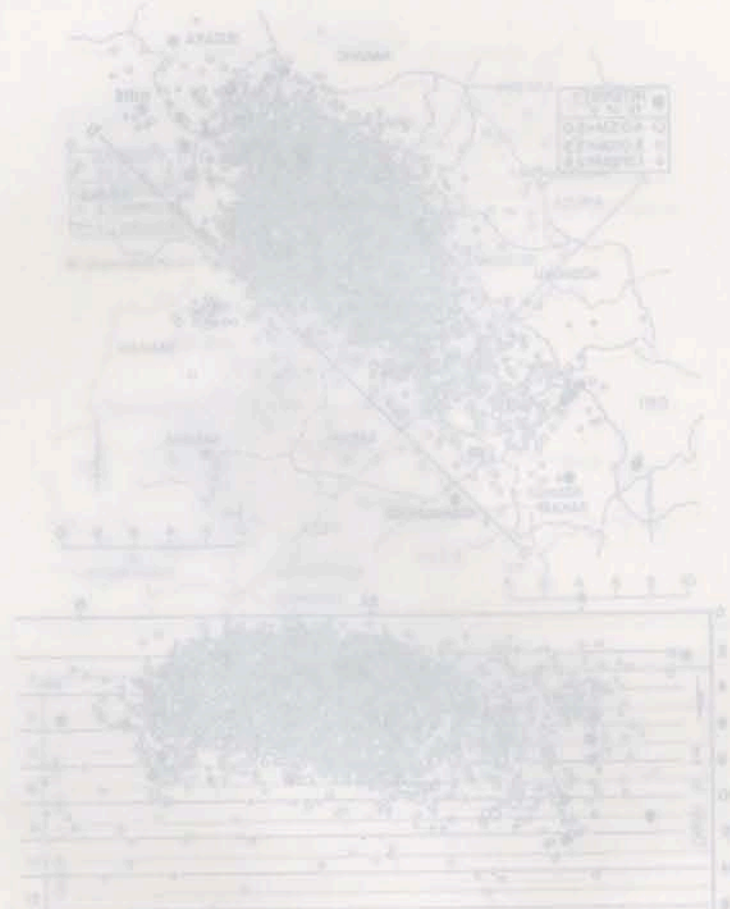


Fig. 8. Above: Epicentral distribution of the felt earthquakes during the period from October 1965 to October 1967. Below: Vertical distribution of the felt earthquakes during the period from October 1965 to October 1967. a-b: Plane of projection, K: Kamimuroga, N: Nire, SA: Sanada.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966



OCTOBER 1965 to OCTOBER 1966

Fig. 8. Above: Epicentral distribution of the felt earthquakes during the period from October 1965 to October 1966. Below: Vertical distribution of the felt earthquakes during the period from October 1965 to October 1966. The vertical axis shows the depth in kilometers (km) from the surface to the hypocenter. The horizontal axis shows the depth in kilometers (km) from the surface to the hypocenter. The vertical axis is labeled 'Depth (km)' and the horizontal axis is labeled 'Depth (km)'. The vertical axis ranges from 0 to 100 km, and the horizontal axis ranges from 0 to 100 km. The vertical axis is labeled 'Depth (km)' and the horizontal axis is labeled 'Depth (km)'. The vertical axis ranges from 0 to 100 km, and the horizontal axis ranges from 0 to 100 km.

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S	E-W		
1965 October													
10	A	22.37	20.8		0.9	+		+0.3	10.6	25.2			
	H	22.37	20.0		0.9			-1.2	15.3	10.6	5.6	3.9	
	Z	22.37	20.6		1.0	+			1.4	1.4			
11	A	04.28	25.8		0.9	+	-	+0.1	2.1	3.8			
	H	04.28	24.8		0.7	+	+	+4.0	2.1	6.4	5.0	2.7	
	Z	04.28			1.0				0.2	0.2			
11	A	15.52	30.3		0.6	+		+0.1	1.1				
	H	15.52	30.9		1.0	+	+	+1.5	4.3	5.7	4.7	2.5	
	Z	15.52	30.5		0.7	+			0.6	0.4			
12	A	14.05	25.5		0.7			+0.2	4.6	5.8		2.8	
	H	14.05	25.7		0.9		-	+0.4	5.0	7.8	3.9		
	Z	14.05	25.6		0.7	+			0.4	0.6			
12	A	16.43	37.1		0.6	+	+	-0.2	0.6	4.3			
	H	16.43	37.2		0.9	+	+	+1.0	5.4	12.0	4.1	3.1	
	Z	16.43	37.4		0.9	-	+	+0.2	0.8	1.4			
12	A	18.58	27.2		1.1	+	+	+0.2	5.0	9.0			
	H	18.58	27.0		0.7			+0.1	5.2	10.8	4.7	3.2	
	Z	18.58	27.5		1.0				0.4	0.5			
12	A	22.26	22.7		0.7	+	+	+0.8	10.6	4.8			
	H	22.26	22.8		1.0	+	+	+2.5	12.6	18.0	4.7	3.5	
	Z	22.26	22.6		0.8	-	+	-0.2	2.3	2.2			
13	A	01.04	31.2		0.6	+	+		3.1	4.2			
	H	01.04	31.4		1.0	+		+0.9	4.5	6.0	3.9	2.7	
	Z	01.04	31.5		0.6	+	-	+0.2	0.6	0.5			
13	A	23.06	48.2		0.7				7.7	5.1			
	H	23.06			0.9		+	+0.5	4.0	6.4	4.4	3.1	
	Z	23.06	48.6		0.7				0.8	0.8			
14	A	04.29	31.9		0.9	-			4.5	5.9			
	H	04.29			0.7			+0.3	3.0	8.8	4.5	2.9	
	Z	04.29	32.2		0.8				0.4	0.5			
14	A	05.25	12.5		1.0			+	1.7	0.8			
	H	05.25			0.9	-	-		5.0	8.6	6.3	2.5	
	Z	05.25	12.8		1.0				0.3	0.4			
14	A	23.43	47.2		1.0	-		-2.7	2.7	2.4			
	H	23.43			1.0	+	+		5.7	8.9	6.3	2.9	
	Z	23.43	47.2		1.0	+	-		0.6	0.4			
15	A	18.15	43.1		0.9	+		+0.7	2.7	1.3			
	H	18.15	43.0		1.2	+		-0.6	9.4	6.6	4.3	3.1	
	Z	18.15			0.6		+		2.0	1.4			
16	A	13.56	52.3		1.0	-	-		6.3	5.2			
	H	13.56	52.0		0.8	-		+1.6	11.1	13.6	5.5	3.4	
	Z	13.56	52.6		1.0	-	+	-0.1	1.6	0.9			
16	A	13.59	26.0		1.0	+	-		5.2	4.0			
	H	13.59	25.6		0.8	+	+		6.6	6.4	5.9	3.2	
	Z	13.59	26.1		1.1				0.6	0.4			
16	A	21.04			0.6			+	1.3	1.0			
	H	21.04	45.9		0.9	+		+0.2	3.8	5.6	3.8	2.5	
	Z	21.04	45.9		0.6				1.2	0.8			
16	A	21.34	22.9		0.6			-2.1	0.4	0.1			
	H	21.34	23.0		0.9	-	+	+1.2	4.0	7.2	4.0	2.6	
	Z	21.34	23.5		0.7	+	+	-0.1	0.6	0.6			
17	A	13.54	11.1		1.1	-		+7.9	11.8	8.3			
	H	13.54	10.8		0.3	-	+	+4.8	25.4	14.1	1.9	4.0	
	Z	13.54	11.4		1.2	+	-	+0.8	4.0	3.2			
18	A	17.46	40.6		0.8				0.5	1.1			
	H	17.46	41.0		1.4	-		+0.7	1.9	3.4	5.3	2.8	
	Z	17.46	40.4		1.1	-	+		1.1	1.0			
18	A	18.54	15.3		0.5	+			1.0	0.7			
	H	18.54	15.2		1.7			+0.4	1.6	1.9	2.8	2.2	
	Z	18.54	15.6		0.7				0.7	0.7			
18	A	19.47	49.5		0.6	-		+	4.5	3.9			
	H	19.47	50.0		1.0			+0.2	2.4	4.9	4.2	3.2	
	Z	19.47	49.9		1.0	+	-	+0.1	0.7	2.0			
18	A	20.01			0.6			+1.4	12.8				
	H	20.01	59.6		0.9	+		+1.7	9.4	19.4	4.3	3.7	
	Z	20.01	57.7		0.8	-	+		3.0	4.4			
18	A	20.02	29.3		0.7	+		+0.5	3.6				
	H	20.02	30.0		0.6				2.5	1.8	3.5	3.0	
	Z	20.02	30.3		1.0	+	-	-0.1	1.0	0.5			
18	A	20.05	26.8		0.5	-	-	-0.1	7.1	4.4			
	H	20.05	26.6		0.9	+	+	+0.8	4.4	4.4	3.5	2.9	
	Z	20.05	26.3		0.9	+			0.6	0.6			
18	A	20.14	58.8		0.5	-	+	-0.5	16.2	22.6			
	H	20.14	59.6		1.0	+	+	+2.2	17.4	16.3	3.4	3.8	
	Z	20.14	59.9		1.0	-	+	-0.7	3.1	1.8			
18	A	20.41	14.2		0.6	-			2.5	1.1			
	H	20.41	14.9		0.9				4.6	5.7	4.0	2.7	
	Z	20.41	15.2		0.7				0.8	0.6			
18	A	20.53	48.0		0.6	-				6.9			
	H	20.53	48.7		0.9	+	+	+0.5	8.5	9.0	3.9	3.3	
	Z	20.53	48.7		1.0	-	+	-0.1	1.8	1.7			
18	A	21.11	32.2		0.5	+			1.2	0.9			
	H	21.11	31.2		1.0				1.5	3.1	2.9	2.3	
	Z	21.11	30.9		0.5		+		1.0	1.0			
19	A	15.58	48.5		0.2	-	+		0.6	0.8			
	H	15.58			0.9		+		3.0	3.5	1.8	2.1	
	Z	15.58	48.2		0.6	-		+0.2	1.0	1.4			
19	A	17.36			0.7	-	+	+0.3	1.5	3.7			
	H	17.36	50.0		0.9	+	+	+1.7	3.3	7.6	4.8	3.0	
	Z	17.36	50.2		0.8	-	+	-0.2	1.0	1.1			
19	A	18.04			0.6				1.0	0.6			
	H	18.04	30.3		0.8	-		+0.2	2.8	3.5	3.6	2.5	
	Z	18.04	30.2		0.6				1.1	1.2			
19	A	19.56	08.4		0.9	+	+	+2.0	8.0	6.3			
	H	19.56	09.2		0.8	-			10.0	18.7	5.7	2.7	
	Z	19.56	09.3		1.0				0.8	0.8			
20	A	01.18	54.1		0.5	-			1.3	0.5			
	H	01.18	54.4		1.1	-			2.0	3.6	2.7	2.4	
	Z	01.18	54.0		0.5	-		+0.8	1.0	1.0			
20	A	06.01	57.3		0.6	-	+	+1.0	1.1	1.5			
	H	06.01	56.6		0.9	-	-		1.4	2.1	3.8	2.6	
	Z	06.01			0.7	+			1.0	0.6			
20	A	06.13	34.4		1.2	+	-		1.6	1.7			
	H	06.13	35.4		1.2	+	+		1.8	1.2	4.5	3.0	
	Z	06.13	35.0		0.7	-	-		1.4	0.9			
20	A	14.05	21.0		0.6	-	-		1.5	4.1			
	H	14.05	21.1		0.9	+	-	+0.3	0.6	0.5	4.4	2.6	
	Z	14.05	21.8		0.8	+			0.4	0.3			
21	A	06.07	20.5		0.5				1.8	1.9			
	H	06.07	21.4		1.0	</							

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

Oct. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
22	A	00.00	17.6	0.6		+	+1.0						
	H	00.00	17.9	0.9		+	+0.3	3.9	7.7		4.3	2.9	
	Z	00.00	17.4	0.8		-	-0.2	1.6	2.0				
22	A	03.19	18.7	0.5		+	+0.4		4.5				
	H	03.19	19.4	0.9		-	+0.7	3.5	0.7	5.6	2.9		
	Z	03.19	19.5	0.7		-	-0.2	1.1	1.0				
22	A	03.26	52.9	0.8		-	-0.3		1.3				
	H	03.26	52.9	0.8		+	+0.2	1.6	2.3	2.9	2.1		
	Z	03.26	53.6	0.5		-	-	0.3	0.3				
22	A	03.30	02.9	0.6		-	+0.1		1.9				
	H	03.30	03.7	0.8		+	+0.2	4.6	7.1	3.9	2.7		
	Z	03.30	03.2	0.7		-	-	0.6	0.9				
22	A	03.30	15.5	0.5		-	-1.4		2.5				
	H	03.30	15.5	0.9		+	+0.9	5.4	8.0	3.8	2.7		
	Z	03.30	15.6	0.7		+	+	1.0	1.3				
22	A	03.45	48.4	0.5		-	-0.4		1.2				
	H	03.45	49.4	0.9		+	+0.3	0.9	1.4	1.9	2.3		
	Z	03.45	49.0	0.3		-	-0.2	1.6	1.1				
22	A	11.05	16.0	0.6		-	-0.5						
	H	11.05	16.6	1.0		+	+1.2	5.2	7.2	3.3	3.4		
	Z	11.05	16.0	0.5		-	-	1.9	3.2				
22	A	14.20	09.1	0.5		+	+		1.3				
	H	14.20	09.6	1.0		+	+0.3	1.6	2.2	3.6	2.3		
	Z	14.20	08.9	0.6		+	-0.2	0.6	0.7				
22	A	18.26	05.7	0.6		-	-1.6		4.1				
	H	18.26	06.4	1.0		-	-	2.2	2.4	4.4	2.9		
	Z	18.26	06.0	0.8		-	-	0.8	0.4				
22	A	23.49	43.3	0.5		+	+		1.6				
	H	23.49	44.1	0.8		+	+	1.3	1.3	3.5	2.5		
	Z	23.49	43.2	0.7		+	+	0.3	0.2				
23	A	02.55	26.2	0.6		-	-0.4		1.6				
	H	02.55	27.3	0.7		-	-	1.4	0.8	3.6	2.1		
	Z	02.55	26.5	0.8		-	-	0.2	0.2				
23	A	03.14	34.7	0.7		+	+1.6		5.8				
	H	03.14	35.0	0.9		-	-0.1	1.3	1.6	4.8	3.0		
	Z	03.14		0.9		+	-0.2	0.4	0.6				
23	A	06.28	49.4	0.7		+	+		0.9				
	H	06.28	50.0	0.9		+	+	2.2	2.0	4.4	2.6		
	Z	06.28	48.7	0.7		+	+0.2	0.9	1.6				
23	A	06.34	38.4	0.6		+	+		0.1				
	H	06.34	38.7	0.8		+	+	1.4	1.7	2.7	1.5		
	Z	06.34		0.5		+	+	0.4	0.4				
23	A	12.26	56.7	0.6		+	+		0.6				
	H	12.26	56.7	1.0		+	+0.3	0.7	1.4	4.0	1.8		
	Z	12.26	57.2	0.6		+	+	0.1	0.2				
23	A	14.55	23.9	0.6		-	-0.3		4.5				
	H	14.55	24.3	0.9		+	+0.3	6.0	9.3	3.3	3.0		
	Z	14.55	23.7	0.5		-	-	2.2	2.6				
23	A	14.55	42.0	0.3		-	-0.2		0.2				
	H	14.55	42.3	0.8		-	+0.1	1.3	2.0	2.2	1.8		
	Z	14.55	41.2	0.6		-	-	0.4	0.3				
24	A	21.22	03.3	0.7		+	+0.2		1.1	1.5			
	H	21.22	03.6	0.9		+	+0.4	1.8	2.6	4.6	2.4		
	Z	21.22	03.4	0.7		+	+	0.4	0.3				
24	A	00.18	51.8	0.5		+	+1.0		2.0	3.1			
	H	00.18	52.2	1.0		+	+0.2	1.3	1.4	3.6	2.4		
	Z	00.18	51.9	0.9		+	-0.2	0.6	0.5				
24	A	00.34	05.8	0.8		-	-		0.8	0.7			
	H	00.34	06.0	1.0		+	+0.2	1.0	1.0	2.5	2.4		
	Z	00.34	05.2	0.4		+	-0.2	1.7	1.4				
24	A	11.14	33.0	0.8		+	+		13.1				
	H	11.14	33.7	1.0		+	+0.7	9.2	8.2	5.4	3.5		
	Z	11.14	33.3	0.8		-	-0.4	1.2	1.3				
24	A	12.55	24.5	0.8		+	+0.4		3.0				
	H	12.55	25.5	1.0		+	+0.2	1.4	1.6	5.0	2.5		
	Z	12.55	24.7	0.7		+	-0.2	0.2	0.3				
24	A	15.36	23.3	0.6		+	+		3.9	4.6			
	H	15.36	23.7	0.9		+	+0.9	3.9	5.1	4.3	2.6		
	Z	15.36	23.1	0.8		+	-0.3	0.4	0.4				
24	A	20.20	44.4	0.5		+	+		1.0	1.0			
	H	20.20	45.3	0.9		-	-0.1	1.6	2.9	3.0	2.2		
	Z	20.20	44.0	0.5		-	-	0.8	0.8				
24	A	20.39	52.5	0.7		+	+		2.0	2.8			
	H	22.39	53.4	1.1		+	+	1.5	1.8	4.5	2.9		
	Z	22.39	52.4	0.7		-	-0.2	1.4	1.0				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Oct. 1965 - Nov. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
27	A	21.49	51.3	0.6		+	+0.1		1.9	1.9			
	H	21.49	51.9	1.0		+	+0.7	1.9	4.2	4.2	2.6		
	Z	21.49	51.7	0.7		-	-0.2	0.8	0.7				
27	A	23.07	03.7	0.6		+	+0.3		9.5	5.6			
	H	23.07	04.4	0.9		+	+0.3	1.7	5.6	4.1	2.9		
	Z	23.07	03.9	0.9		+	+0.3	0.3	0.4				
28	A	03.19	08.0	1.2		+	+0.3		3.2	4.5			
	H	03.19	07.4	0.9		+	+0.5	6.4	3.5	6.6	3.5		
	Z	03.19	08.7	1.2		-	-0.1	0.8	0.6				
28	A	10.47	30.2	0.7		+	+0.8		11.8	12.1			
	H	10.47	29.8	0.9		+	+0.8	3.6	11.4	5.1	3.1		
	Z	10.47	30.1	0.9		-	-0.1	0.4	0.4				
28	A	21.15	41.1	0.8		+	+0.2		3.4	3.7			
	H	21.15	41.4	0.9		+	+0.3	1.2	3.0	5.0	2.7		
	Z	21.15	40.1	0.9		+	+0.3	0.2	0.3				
28	A	22.12	08.9	1.0		+	+4.4		26.0	19.3			
	H	22.12	09.5	1.0		+	+4.2	13.2	14.1	5.8	3.7		
	Z	22.12	09.6	0.9		-	-0.3	4.0	4.0				
28	A	22.19	23.4	0.7		+	+0.2		2.5	1.2			
	H	22.19	24.3	1.0		+	+0.3	2.0	2.7	4.8	2.6		
	Z	22.19	23.6	0.8		+	+0.2	0.4	0.5				
28	A	23.11	35.7	0.9		+	+0.2		3.3	3.1			
	H	23.11	35.4	0.7		+	+0.2	5.0	2.0	2.4	2.7		
	Z	23.11	36.1	0.6		+	+0.2	0.5	0.2				
28	A	23.05	54.1	0.8		+	+0.2		0.4	1.0			
	H	23.05	52.8	1.0		+	+1.8	3.7	2.1	5.0	2.2		
	Z	23.05	55.1	0.8		+	+0.2	0.3	0.2				
29	A	07.44	16.4	0.5		+	+1.2		27.8				
	H	07.44	16.7	1.1		+	+0.3	9.9	14.2	3.1	3.3		
	Z	07.44		0.8		+	+0.4	7.7	8.2				
29	A	07.51	61.7	1.2		+	+1.4		1.4				
	H	07.51	52.4	1.4		+	+2.6	6.6	10.7	2.4	2.8		
	Z	07.51	53.6	1.0		+	+0.2	0.6	0.5				
29													

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
02	A H Z	04.50	22.2	0.8								
02	A H Z	04.50	22.3	0.8								
02	A H Z	04.50	21.7	0.4								
02	A H Z	05.02	06.6	0.5								
02	A H Z	05.02	07.2	1.0								
02	A H Z	05.02	06.8	0.8								
02	A H Z	05.05	43.6	0.5								
02	A H Z	05.05	44.1	1.0								
02	A H Z	05.05	43.7	0.8								
02	A H Z	05.05	38.3	0.3								
02	A H Z	05.05	39.3	1.0								
02	A H Z	05.05	38.3	0.7								
02	A H Z	05.08	22.7	0.6								
02	A H Z	05.08	24.6	1.0								
02	A H Z	05.08	23.6	0.7								
02	A H Z	11.57	11.5	1.0								
02	A H Z	11.57	11.3	0.6								
02	A H Z	11.57	11.5	0.8								
02	A H Z	22.18	30.8	1.0								
02	A H Z	22.18	31.3	1.3								
02	A H Z	22.18	30.5	0.8								
02	A H Z	22.56	48.5	1.1								
02	A H Z	22.56	47.8	0.7								
02	A H Z	22.56	48.4	0.9								
03	A H Z	10.25	25.9	0.3								
03	A H Z	10.25	27.4	0.9								
03	A H Z	10.25	26.7	0.6								
03	A H Z	10.39	04.5	0.6								
03	A H Z	10.39	05.0	0.7								
03	A H Z	10.39	04.8	0.7								
03	A H Z	10.50	12.0	0.6								
03	A H Z	10.50	12.6	1.0								
03	A H Z	10.50	11.9	0.5								
04	A H Z	11.20	44.0	0.9								
04	A H Z	11.20	45.0	0.9								
04	A H Z	11.20	44.3	1.0								
04	A H Z	11.35	17.6	0.8								
04	A H Z	11.35	18.1	0.8								
04	A H Z	11.35	17.1	0.6								
04	A H Z	14.08	40.5	0.5								
04	A H Z	14.08	40.8	1.1								
04	A H Z	14.08	40.0	0.6								
04	A H Z	14.46	47.2	0.7								
04	A H Z	14.46	47.8	1.1								
04	A H Z	14.46	47.5	0.6								
04	A H Z	16.42	15.5	0.8								
04	A H Z	16.42	16.9	1.1								
04	A H Z	16.42	16.1	0.6								
04	A H Z	18.39	44.4	1.2								
04	A H Z	18.39	44.0	0.8								
04	A H Z	18.39	44.6	1.1								
04	A H Z	19.53	15.1	0.5								
04	A H Z	19.53	15.4	0.8								
04	A H Z	19.53	15.5	0.9								
04	A H Z	20.48	35.1	0.5								
04	A H Z	20.48	35.4	1.1								
04	A H Z	20.48	34.8	0.9								
04	A H Z	21.31	21.6	0.7								
04	A H Z	21.31	22.3	0.8								
04	A H Z	21.31	21.9	0.9								
04	A H Z	23.45	48.7	0.5								
04	A H Z	23.45	49.2	1.0								
04	A H Z	23.45	48.7	0.8								
05	A H Z	00.23	13.8	0.7								
05	A H Z	00.23	14.6	1.0								
05	A H Z	00.23	13.4	0.8								
05	A H Z	01.14	43.5	0.8								
05	A H Z	01.14	44.0	1.1								
05	A H Z	01.14	43.2	0.6								
05	A H Z	08.39	02.8	1.2								
05	A H Z	08.39	03.9	1.0								
05	A H Z	08.39	02.8	0.9								
05	A H Z	13.38	42.2	0.5								
05	A H Z	13.38	43.2	1.0								
05	A H Z	13.38	42.7	0.6								

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
05	A H Z	14.48	43.0	0.8								
05	A H Z	14.48	45.1	1.1								
05	A H Z	14.48		0.5								
05	A H Z	15.20	48.5	0.9								
05	A H Z	15.20	49.6	1.2								
05	A H Z	15.20	48.7	0.9								
05	A H Z	16.36	32.5	0.5								
05	A H Z	16.36	33.8	1.1								
05	A H Z	16.36	33.0	0.6								
05	A H Z	20.17	10.6	0.6								
05	A H Z	20.17	11.5	0.9								
05	A H Z	20.17	11.1	0.7								
05	A H Z	20.17	43.5	0.6								
05	A H Z	20.17	44.4	0.9								
05	A H Z	20.17	43.9	0.6								
05	A H Z	21.13	04.2	0.7								
05	A H Z	21.13	05.3	1.1								
05	A H Z	21.13	04.7	0.7								
05	A H Z	22.15	50.6	0.7								
05	A H Z	22.15	51.2	1.0								
05	A H Z	22.15	50.7	0.5								
06	A H Z	00.11	41.0	0.2								
06	A H Z	00.11	41.5	1.0								
06	A H Z	00.11	41.0	0.6								
06	A H Z	04.32	19.2	0.6								
06	A H Z	04.32	21.1	1.0								
06	A H Z	04.32	20.3	0.6								
06	A H Z	07.57		0.5								
06	A H Z	07.57	25.4	0.9								
06	A H Z	07.57	25.3	0.3								
06	A H Z	07.57	34.6	0.5								
06	A H Z	07.57		1.0								
06	A H Z	07.57	35.8	0.8								
06	A H Z	08.15		0.4								
06	A H Z	08.15	21.5	0.9								
06	A H Z	08.15	21.1	0.6								
06	A H Z	16.29	36.7	0.8								
06	A H Z	16.29	37.4	1.0								
06	A H Z	16.29	37.2	0.7								
06	A H Z	17.31	52.2	0.9								
06	A H Z	17.31	52.6	1.1								
06	A H Z	17.31	52.0	0.5								
06	A H Z	18.21	17.1	0.9								
06	A H Z	18.21	17.4	0.9								
06	A H Z	18.21	17.6	0.9								
06	A H Z	18.23	16.2	0.6								
06	A H Z	18.23	17.0	1.0								
06	A H Z	18.23	17.3	0.9								
06	A H Z	18.36	10.1	0.7								
06	A H Z	18.36	10.2	0.9								
06	A H Z	18.36	09.7	0.3								
06	A H Z	19.02	38.3	0.9								
06	A H Z	19.02	38.4	0.9								
06	A H Z	19.02	38.6	0.8								
06	A H Z	19.03	21.3	0.8								
06	A H Z	19.03	21.6	1.0								
06	A H Z	19.03	21.8	0.8								
06	A H Z	20.58	28.7	0.7								
06	A H Z	20.58	30.2	0.9								
06	A H Z	20.58	29.9	0.5								
07	A H Z	01.37	26.1	0.8								
07	A H Z	01.37	27.3	0.9								
07	A H Z	01.37	26.8	1.0								
07	A H Z	04.31	24.5	1.1								
07	A H Z	04.31	23.9	0.9								
07	A H Z	04.31	24.6	1.1								
07	A H Z	05.59	33.5	0.6								
07	A H Z	05.59	33.9	0.9								
07	A H Z	05.59	33.7	0.7								
07	A H Z	07.21	38.2	0.6								
07	A H Z	07.21	38.8	0.9								
07	A H Z	07.21	38.8	0.7								
07	A H Z	08.31	07.5	0.8								
07	A H Z	08.31	07.8	0.9								
07	A H Z	08.31	07.8	0.8								

Seismological Data of Matushiro Earthquake Swarm (Report II)

Nov. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
13	A H Z	17.41	10.0	0.5				5.7	6.5	2.9	3.2		
13	A H Z	23.14	33.5	0.4				41.0	71.0	2.9	4.5		
13	A H Z	23.35	23.0	0.6				4.3	5.3	3.8	2.9		
14	A H Z	08.29	34.7	0.7				1.9	0.6	2.1	2.4		
14	A H Z	08.34	01.0	0.7				15.7		5.0	3.8		
14	A H Z	12.31	29.7	0.6				8.0		4.1	2.9		
14	A H Z	13.32	31.7	0.7				5.9		4.8	3.3		
14	A H Z	23.56	08.5	0.6				0.7		3.2	2.6		
15	A H Z	01.09	49.9	0.7				2.9		2.1	3.1		
15	A H Z	01.42	05.4	0.3				1.2		1.7	2.7		
15	A H Z	01.45	00.5	0.4				10.0		2.8	2.8		
15	A H Z	09.23	06.6	0.6				6.4		4.1	3.0		
15	A H Z	13.44	32.5	1.2				1.8		5.9	3.2		
15	A H Z	15.35	05.4	0.7				3.9		4.8	3.1		
16	A H Z	00.18	21.2	0.3				25.0		4.5	2.2		
16	A H Z	07.19	22.5	0.9				8.4		1.2	3.6		
16	A H Z	12.37	20.7	0.5				3.0		3.3	2.8		
16	A H Z	21.35	44.3	0.7				0.9		4.7	2.9		
17	A H Z	21.12	08.9	0.7				3.8		4.5	3.6		
17	A H Z	21.54	44.2	0.8				1.8		4.4	2.8		
17	A H Z	23.31	33.6	0.8				0.8		3.7	2.5		
17	A H Z	23.32	03.2	0.8				0.7		3.7	2.3		
18	A H Z	01.53	52.0	1.0				2.1		4.3	2.8		
18	A H Z	05.59	10.0	0.9				1.4		3.8	2.8		
18	A H Z	17.51	38.3	1.0				2.7		3.7	3.1		

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Nov. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
22	A H Z	07.13	27.2	0.5				7.3		3.4	2.8		
22	A H Z	21.09	14.7	0.6				50.5		3.7	4.8		
22	A H Z	22.20	15.0	0.7				0.6		4.2	3.1		
22	A H Z	22.30	04.9	0.6				25.0		3.2	4.7		
22	A H Z	23.37	05.0	0.8				-0.7		2.2	2.8		
22	A H Z	23.37	16.7	0.7				3.5		1.7	2.6		
22	A H Z	23.38	50.2	0.6				5.1		3.3	3.5		
23	A H Z	01.59	23.3	0.8				6.3		4.3	3.4		
23	A H Z	02.31	14.4	0.5				5.0		2.3	2.8		
23	A H Z	02.31	33.9	0.7				3.3		4.0	3.2		
23	A H Z	02.46	45.0	0.7				2.8		3.7	2.9		
23	A H Z	04.12	36.9	1.1				2.5		3.5	3.1		
23	A H Z	04.58	33.5	0.7				2.4		2.1	2.6		
23	A H Z	09.56	32.8	1.0				5.6		4.3	3.0		
23	A H Z	14.36	12.6	0.6				4.6		2.7	2.9		
23	A H Z	18.20	54.4	1.0				12.9		6.6	3.8		
23	A H Z	19.51	22.0	0.8				38.0		5.5	3.7		
23	A H Z	21.29	05.3	0.6				8.9		3.9	3.2		
23	A H Z	22.49	35.6	0.7				0.6		2.9	2.2		
24	A H Z	06.05	42.6	0.6				3.5		4.4	2.7		
24	A H Z	07.01	08.8	0.6				12.6		4.1	3.5		
24	A H Z	08.45	51.5	0.7				8.1		5.0	3.0		
24	A H Z	09.44	27.6	0.7				7.9		4.2	3.1		
24	A H Z	13.42	17.3	0.8				1.8		3.0	2.5		

18 Seismological Data of Matsushiro Earthquake Swarm (Report II)

Nov. 1965 - Dec. 1965

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S		
27	A	19.19	58.0	0.9	+	+	-	5.2	7.2	2.9	3.7
	H	19.19	58.4	1.2	-	-	-	5.5	6.3		
	Z	19.19	57.4	0.5	-	-	+	7.6	10.1		
27	A	22.30	37.1	0.8	-	-	+	2.6	2.4	2.9	2.9
	H	22.30	37.1	0.8	-	-	+	6.0	6.8		
	Z	22.30	37.0	0.5	-	-	+	1.9	1.3		
27	A	23.43	14.6	0.8	+	+	+	3.9	3.0	3.2	2.7
	H	23.43	14.8	0.9	+	+	-	2.0	2.4		
	Z	23.43	14.7	0.5	-	-	-	1.2	1.3		
28	A	00.40	31.5	0.6	-	-	-	3.0	4.4	2.9	2.0
	H	00.40	30.5	0.7	-	-	-	0.2	0.3		
	Z	00.40	31.6	0.5	-	-	-	0.8	0.4		
28	A	07.20	49.0	0.5	-	+	-	2.1	2.9	3.4	2.3
	H	07.20	49.1	1.0	+	-	+	1.0	1.1		
	Z	07.20	48.4	0.7	-	-	-	2.3	2.3		
28	A	08.57		0.8	+	-	-	3.8	3.9	3.4	3.0
	H	08.57	52.3	1.1	-	-	+	2.7	3.5		
	Z	08.57	52.4	0.5	-	-	+	1.6	1.4		
28	A	15.56	12.2	0.9	-	-	+	3.3	4.0	2.6	2.9
	H	15.56	12.4	0.8	-	-	-	2.7	1.0		
	Z	15.56	12.3	0.5	-	-	-	10.2	7.1		
28	A	22.27	55.1	0.6	-	+	+	2.8	3.9	4.0	3.0
	H	22.27	55.7	0.9	-	+	+	0.3	0.5		
	Z	22.27	56.1	0.8	-	+	+	1.7	1.6		
28	A	22.30	15.5	0.6	+	-	-	4.0	4.7	3.2	2.5
	H	22.30	15.8	0.8	-	-	-	0.8	0.5		
	Z	22.30	15.6	0.6	-	-	+	4.6	2.8		
29	A	01.31	13.3	1.0	-	-	-	4.0	7.2	4.8	3.5
	H	01.31	14.1	1.2	-	-	+	1.4	4.5		
	Z	01.31	13.3	0.7	-	-	+	4.8	4.6		
29	A	02.50	54.2	0.5	-	+	-	2.0	2.7	2.7	2.6
	H	02.50	54.0	0.9	-	+	-	0.7	0.8		
	Z	02.50	54.4	0.5	-	+	-	4.2	2.9		
29	A	03.16	10.5	0.5	+	+	-	2.5	3.5	3.0	2.6
	H	03.16	11.3	0.8	+	+	-	0.4	0.6		
	Z	03.16	10.8	0.6	-	-	-	2.2	3.4		
29	A	12.26	07.4	0.8	-	-	+	2.0	2.6	4.2	3.3
	H	12.26	08.3	1.1	-	-	+	3.5	5.0		
	Z	12.26	07.2	0.6	-	-	+	11.4	12.8		
29	A	13.00	30.8	0.9	-	+	+	2.9	4.0	6.8	4.0
	H	13.00	32.5	1.3	-	+	+	1.4	4.4		
	Z	13.00	31.8	1.1	-	+	+	8.6	7.8		
29	A	13.57	31.0	1.0	-	+	-	11.7	18.2	4.8	4.0
	H	13.57	30.7	1.2	-	+	-	7.2	11.4		
	Z	13.57	31.3	0.7	-	+	-	3.0	3.8		
29	A	16.42	42.3	1.1	-	-	+	6.1	6.0	6.0	3.5
	H	16.42	42.5	0.9	-	-	+	1.4	0.4		
	Z	16.42		1.0	-	-	+	1.1	1.4		
29	A	16.58	55.4	1.3	-	+	+	1.1	1.4	6.1	3.0
	H	16.58	55.7	0.9	+	+	+	2.8	3.7		
	Z	16.58	56.2	1.2	-	-	-	0.8	0.4		
29	A	20.26	13.2	0.6	+	+	-	4.6	2.8	4.1	2.7
	H	20.26	14.9	1.0	+	+	-	2.5	3.6		
	Z	20.26	14.4	0.7	+	-	-	0.4	0.6		
29	A	21.59	11.5	1.0	-	-	-	12.2	12.4	4.5	3.7
	H	21.59	11.8	0.6	-	-	-	11.2	4.0		
	Z	21.59	12.7	1.2	-	-	-	1.1	0.9		
29	A	22.00	08.6	0.9	-	-	+	2.4	3.4	4.7	2.7
	H	22.00	08.3	0.7	-	-	+	6.8	5.2		
	Z	22.00	09.0	1.1	-	-	+	0.2	0.1		
30	A	02.14	07.7	0.9	+	+	-	0.8	0.9	3.6	2.8
	H	02.14	08.8	1.1	-	-	+	1.8	2.8		
	Z	02.14	08.1	0.5	-	-	+	1.0	3.5		
30	A	02.22	25.9	0.8	+	+	-	25.6	13.8	5.5	3.6
	H	02.22	26.9	1.1	+	+	-	2.8	3.3		
	Z	02.22	26.9	0.9	+	+	-	0.9	0.5		
30	A	05.05	57.0	0.6	+	+	+	9.2	9.2	4.3	3.1
	H	05.05	58.4	0.9	+	+	+	6.4	8.1		
	Z	05.05		0.8	-	-	-	0.9	0.6		
30	A	05.10	46.3	0.6	-	-	+	10.0	12.0	4.5	3.4
	H	05.10	47.5	1.0	+	+	+	9.9	8.6		
	Z	05.10	47.5	0.8	-	-	-	0.6	1.6		
30	A	05.15	44.2	0.6	+	+	+	17.3	9.2	3.9	3.3
	H	05.15	45.4	0.9	-	-	-	5.4	3.7		
	Z	05.15	45.3	0.8	-	-	-	0.5	0.9		

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S		
30	A	05.54	13.0	0.6	-	-	-	10.6	10.0	4.3	3.4
	H	05.54	14.2	0.9	+	+	-	16.9	19.3		
	Z	05.54	14.3	0.8	-	-	-	1.6	2.4		
30	A	06.28	04.1	0.6	-	-	+	1.5	1.3	3.4	2.2
	H	06.28	05.3	0.9	-	-	+	2.2	3.1		
	Z	06.28	05.1	0.6	-	-	+	0.2	0.4		
30	A	18.29	11.7	0.8	-	-	+	1.4	1.6	3.0	3.1
	H	18.29	12.6	1.1	-	-	+	5.2	3.0		
	Z	18.29	12.1	0.4	-	-	+	1.2	6.4		
30	A	18.35	17.1	1.0	+	+	-	5.3	3.1	2.8	3.5
	H	18.35	18.0	1.0	+	+	-	3.8	3.3		
	Z	18.35	17.3	0.5	-	-	-	2.0	5.1		
30	A	20.55	24.5	0.6	-	-	+	1.8	1.6	2.4	2.1
	H	20.55	25.1	0.7	-	-	+	2.5	3.1		
	Z	20.55	25.3	0.5	-	-	+	0.2	0.3		
30	A	23.58	45.8	0.7	-	-	+	2.0	1.5	2.5	2.5
	H	23.58	46.2	0.8	-	-	+	3.0	3.4		
	Z	23.58	46.2	0.4	-	-	-	1.2	0.9		

1965 December

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S		
01	A	02.17	23.5	0.7	+	+	+	11.8	9.5	4.7	3.2
	H	02.17	24.0	0.9	-	-	-	4.0	2.8		
	Z	02.17	24.0	0.8	-	-	-	0.9	0.4		
01	A	09.13	39.9	0.7	+	+	+	3.6	7.8	3.5	3.1
	H	09.13	39.9	0.7	+	+	+	4.0	4.6		
	Z	09.13	39.7	0.7	-	-	-	0.6	1.2		
01	A	10.58	35.6	0.6	-	-	-	4.1	4.5	4.2	3.2
	H	10.58	36.1	0.9	+	+	+	3.3	2.4		
	Z	10.58	35.7	0.8	-	-	-	1.0	2.4		
01	A	11.16	58.9	0.6	+	+	+	35.5	22.7	4.4	4.3
	H	11.16	59.4	1.0	+	+	+	10.4	14.7		
	Z	11.16	59.5	1.0	+	-	+	3.8	12.0		
01	A	11.58	53.4	0.6	-	-	-	1.0	0.7	3.4	2.1
	H	11.58	53.5	0.8	-	-	-	1.6	4.0		
	Z	11.58	53.7	0.7	-	-	-	0.4			
01	A	12.14	00.1	0.5	+	+	+	2.7	1.6	3.5	2.8
	H	12.14		1.0	+	+	+	4.0	4.8		
	Z	12.14		0.7	-	-	-	0.5	1.8		
01	A	21.25	20.7	1.1	-	-	-	2.8	7.5	4.0	3.3
	H	21.25	20.6	0.9	-	-	-	6.5	7.8		
	Z	21.25	20.8	0.9	-	-	-	1.0	1.2		
01	A	21.54	42.4	0.8	-	+	+	25.7	12.3	4.4	4.5
	H	21.54	42.9	1.1	+	+	+	23.0	29.6		
	Z	21.54	42.1	0.6	+	+	+	31.9			
01	A	23.45	14.5	0.8	+	+	+	3.7	3.2	3.4	3.2
	H	23.45	15.2	0.9	+	+	+	7.0	7.2		
	Z	23.45	14.4	0.5	-	-	-	4.4			
02	A	00.49	31.0	0.6	-	-	+	0.7	1.2	2.8	2.0
	H	00.49	31.1	0.6	-	-	+	2.0	2.8		
	Z	00.49	31.1	0.7	-	-	+	0.2			
02	A	00.50	01.2	0.6	-	+	-	1.6	3.8	1.2	3.2
	H	00.50	00.7	0.5	-	+	-	1.0	3.0		
	Z	00.50	01.7	0.5	-	-	-				
02	A	03.37	00.5	1.3	+	+	+	3.9	2.5	8.5	3.2
	H	03.36	59.9	1.2	+	+	+	2.7	3.4		
	Z	03.37	00.9	1.4	-	-	-	0.4			
02	A	08.12	48.1	0.8	+	+	+	9.0	4.0	3.6	3.3
	H	08.12	49.4	0.6	+	+	+	6.0	7.0		
	Z	08.12	48.6	0.8	-	-	+	1.2			
02	A	08.48	16.6	1.0	-	-	+	3.0	1.9	4.4	3.4
	H	08.48	17.4	1.2	-	-	+	2.7	3.4		
	Z	08.48	16.5	0.6	-	-	-				
02	A	09.16	41.8	0.8	+	+	+	5.6	7.2	5.4	3.0
	H	09.16	42.4	0.9	+	+	+	2.9	5.4		
	Z	09.16	42.0	0.9	-	-	+	0.5			
02	A	09.43	07.8	0.8	-	+	+	22.5	24.9	5.4	3.7
	H	09.43	06.8	0.9	-	+	+	4.0	6.9		
	Z	09.43	06.7	1.0	-	+	+	1.0			
02	A	14.55	04.1	0.9	-	-	-	2.			

Seismological Data of Matushiro Earthquake Swarm (Report II)

Dec. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
07	A	05.03	20.9	0.7	+	-		1.0	1.6		4.3	2.4	
	H	05.03	21.5	0.9		+		2.5	3.2				
	Z	05.03	21.4	0.7				0.5	0.5				
07	A	06.05	00.9	0.2				0.5	0.5		1.4	1.6	
	H	06.05	00.7	0.9		+		1.7	3.2				
	Z	06.05	00.1	0.6				0.5	0.5				
07	A	08.22		1.0	+	-		1.5	1.1		3.0	3.0	
	H	08.22	45.7	1.1				3.4	3.3				
	Z	08.22	44.8	0.5		+		2.5	4.0				
07	A	17.12	26.8	0.6	-	-	+	7.1	5.1		3.3	3.4	
	H	17.12	27.5	0.9				7.5	10.2				
	Z	17.12	26.7	0.5		-	-	5.3	4.2				
07	A	17.12	44.2	0.8			+	6.6	3.3		4.1	3.4	
	H	17.12	44.9	0.9				4.4	7.0				
	Z	17.12	44.1	0.6		+	-	4.0	2.3				
07	A	17.29	29.4	0.7			+	5.7	4.8		4.6	2.8	
	H	17.29	29.5	0.9	+	+		3.1	4.1				
	Z	17.29		0.9				0.2	0.4				
08	A	02.25	54.4	0.7	+	+	+	14.9	21.8		4.2	3.4	
	H	02.25	55.1	0.9		+	+	4.4	5.1				
	Z	02.25	54.7	0.7		+	+	0.9	0.7				
08	A	03.41	21.7	0.6	+	+	+	2.2	2.2		4.2	2.8	
	H	03.41	22.6	1.0	+	+	+	4.2	4.7				
	Z	03.41	22.0	0.7		+	+	1.0	1.5				
08	A	06.54	05.9	0.8	+	+	-	29.5	11.9		4.9	4.3	
	H	06.54	06.6	1.3	+	+	+	17.0	22.7				
	Z	06.54	05.6	0.8		+	+	10.5					
08	A	06.55	10.1	0.8		-		1.8	2.2		4.3	2.5	
	H	06.55	10.8	1.0				2.1	2.9				
	Z	06.55	09.7	0.6		-		0.5					
08	A	06.57	56.6	0.8	-	+	-	12.6	7.9		3.6	3.8	
	H	06.57	56.8	1.3	+	+	+	11.3	14.0				
	Z	06.57	56.1	0.6		+	+	6.5	8.5				
08	A	07.16	37.5	1.2			+	1.4	1.9		4.5	2.6	
	H	07.16	37.4	0.8		+		7.7	12.2				
	Z	07.16	37.4	1.0				0.2					
08	A	08.15	21.6	0.8	+	-	+	1.4	2.4		0.9	3.2	
	H	08.15	21.4	0.8		-	-	6.2	4.7				
	Z	08.15	20.8	0.3		-	+	9.7	10.2				
08	A	13.57	06.0	0.5	+	+	+	3.3	9.5		2.7	2.9	
	H	13.57	06.2	0.6	+	+	+	4.0	5.7				
	Z	13.57	06.2	0.8		-	-	0.3	0.5				
08	A	14.08	59.7	0.8	-	-	+	2.5	2.9		1.8	3.2	
	H	14.08	58.8	0.8		-	-	5.8	3.5				
	Z	14.08	59.5	0.4		-	-	6.5					
08	A	15.16	01.2	0.7	+	+	+	17.3	8.6		5.2	3.4	
	H	15.16	01.9	1.0		+	+	4.0	3.8				
	Z	15.16	01.8	0.9		+	+	0.8	0.7				
08	A	18.24	11.0	0.8	-	+	-	11.4	8.5		5.3	3.2	
	H	18.24	11.3	1.0	+	+	-	3.4	6.0				
	Z	18.24	11.5	0.9		+	-	0.5	0.6				
09	A	05.09	06.5	0.9			+	1.9	1.1		3.7	2.3	
	H	05.09	06.0	0.5				1.7	2.0				
	Z	05.09	06.8	1.0				0.1	0.1				
09	A	05.54	06.6	0.6	+	-		2.0	1.7		3.8	2.2	
	H	05.54	07.6	1.0				2.1	2.8				
	Z	05.54	06.9	0.7		+		0.1	0.3				
09	A	10.42	12.4	0.7		+	+	13.3	12.3		5.0	3.4	
	H	10.42	12.3	0.9		+	+	3.1	5.6				
	Z	10.42	12.9	0.9				1.0	1.0				
09	A	20.33	13.3	0.9	+	+	+	0.7	1.0		1.2	3.0	
	H	20.33	14.2	0.8		+	+	5.0	3.6				
	Z	20.33	13.9	0.5		+	+	5.3					
09	A	20.34	13.2	1.0		+	+	7.4	14.8		6.7	3.7	
	H	20.34	14.7	1.1				2.9	4.8				
	Z	20.34	14.3	1.0				1.5					
09	A	21.12	59.3	0.7			+	0.8	1.4		3.5	2.3	
	H	21.12	59.9	1.1				4.3	5.3				
	Z	21.12	59.5	0.5				0.3	0.6				
09	A	23.10	49.6	0.6		-		2.2	2.8		3.6	2.4	
	H	23.10	50.6	0.9	+			3.4	4.8				
	Z	23.10	50.6	0.6				0.2	0.5				
09	A	23.11	56.0	0.7	-	+	+	18.0	28.0		4.2	4.3	
	H	23.11	56.7	1.0	+	-	+	14.0	17.0				
	Z	23.11	56.3	0.6	+	-	+	13.0	14.2				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Dec. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
13	A	17.55	27.7	0.5	-	+	+	0.9	1.2		2.5	2.4	
	H	17.55	28.1	0.9		-	-	2.5	3.5				
	Z	17.55	28.6	0.5		+	-	0.5	1.6				
14	A	00.07	16.1	1.0	+	-	+	11.1	10.0		5.9	3.8	
	H	00.07	17.9	0.8	+	+	+	10.7	17.4				
	Z	00.07	17.8	0.8	-	+	-	6.1	3.4				
14	A	00.02	11.8	0.6			+	7.8	6.0		4.1	3.4	
	H	00.02	12.4	0.9	-	-	+	5.2	4.0				
	Z	00.02	12.5	0.8				0.7	3.0				
14	A	00.41	36.5	0.5	+	+	+	1.0	1.1		2.2	2.4	
	H	00.41	36.1	0.8			+	7.3	3.6				
	Z	00.41	36.7	0.4				0.4	0.3				
14	A	02.22	26.9	0.5	+	+	+	12.0	6.7		3.3	3.1	
	H	02.22	27.7	1.0	-	+	+	2.4	3.2				
	Z	02.22	27.4	0.6		-	+	1.2	1.2				
14	A	05.21	16.8	0.5	-	-	+	4.6	2.4		3.5	2.6	
	H	05.21	17.5	0.9		+	+	3.0	4.0				
	Z	05.21	17.2	0.7			-	0.4	0.6				
14	A	06.09	36.4	0.9	+	+	+	27.2	27.5		4.9	4.0	
	H	06.09	37.2	1.1		+	+	6.7	6.5				
	Z	06.09	36.9	0.7	-	-	-	4.5	4.7				
14	A	07.00	01.7	0.7		+	+	11.0			4.7	3.6	
	H	07.00	02.3	0.9		+	+	6.5	5.0				
	Z	07.00	02.4	0.8		+	-	0.6	3.1				
14	A	08.09	31.7	0.7		+	+	4.9			2.5	3.4	
	H	08.09	32.3	1.2	+	+	+	6.2	7.9				
	Z	08.09	31.3	0.5		-	-	5.4	7.4				
14	A	08.58	49.4	0.7		+	+	5.4			3.7	3.1	
	H	08.58	49.8	0.7		+	+	2.1	3.4				
	Z	08.58	49.7	0.7		+	+	0.8	1.4				
14	A	13.04	41.0	0.8		-	+	1.3	0.8		1.8	2.5	
	H	13.04	41.0	0.8		-	-	2.5	2.7				
	Z	13.04	40.7	0.4		+	-	1.3	1.1				
14	A	15.01	08.8	0.7	-	+	+	3.6	3.4		4.2	3.1	
	H	15.01	09.4	0.9		+	+	2.6	4.2				
	Z	15.01	08.6	0.7		+	-	1.2	2.3				
14	A	16.22	54.0	0.7	-	+	+	12.8	9.7		4.8	3.3	
	H	16.22	54.9	0.9	+	+	+	2.6	7.5				
	Z	16.22	54.7	0.8		+	-	1.0	0.6				
14	A	16.24	23.9	1.0		+	+	0.7	0.9		3.7	2.2	
	H	16.24	23.5	0.6		-	-	5.0	5.2				
	Z	16.24	23.8	0.9				0.2	0.2				
15	A	01.17	19.3	0.5		+	+	6.5	5.0		3.1	3.1	
	H	01.17	20.0	1.1		+	+	4.7	6.1				
	Z	01.17	19.5	0.6				1.0	2.2				
15	A	01.43	18.8	0.6		-	-	1.1	1.3		2.6	2.2	
	H	01.43	19.2	0.9		-	-	2.6	4.0				
	Z	01.43	18.3	0.4	-	+	-	0.6	0.7				
15	A	07.08	02.6	0.6			+	3.3	2.7		3.7	2.7	
	H	07.08	03.0	0.9			+	2.4	3.6				
	Z	07.08	02.4	0.6	-	-	-	1.0	0.7				
15	A	08.41	07.3	0.9			+	1.7	3.1		4.6	3.2	
	H	08.41	07.0	0.7			+	2.1	3.4				
	Z	08.41	07.9	0.9				0.2					
15	A	14.30	54.8	0.7	-	-	-	2.0	1.4		3.0	2.6	
	H	14.30	55.1	0.8		-	-	5.7	4.8				
	Z	14.30	54.6	0.5	-	+	-	0.6	1.2				
15	A	14.40	19.7	0.5		+	+	1.7	1.4		2.8	2.7	
	H	14.40	20.4	1.0		+	+	4.5					

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Dec. 1965

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
19	A	02.38	24.6	1.0	-	-	-	4.9	5.0	5.2	3.1		
	H	02.38	24.7	0.7				9.0	4.8				
	Z	02.38	25.2	1.1				0.5	0.3				
19	A	04.59	58.0	1.0	+	+		2.0	5.4	6.3	3.1		
	H	04.59	58.3	0.9				7.6	17.3				
	Z	04.59	58.5	1.0				0.5	0.4				
19	A	05.24	02.6	0.8	+	+		1.7	4.3	1.4	3.4		
	H	05.24	02.2	0.8				9.7	9.2				
	Z	05.24	02.3	0.3				10.2	11.3				
19	A	05.34	31.9	0.8				4.7	4.4	4.5	3.4		
	H	05.34	33.4	1.1				3.0	4.9				
	Z	05.34	32.3	0.6				3.8	3.2				
19	A	10.16		0.5			+	1.4	2.0	3.3	2.3		
	H	10.16	24.9	0.9			+	3.3	4.2				
	Z	10.16	24.1	0.6			+	0.5	0.6				
19	A	10.30	59.6	0.5	+								
	H	10.31	01.3	0.9				13.0	19.4	3.5	2.9		
	Z	10.31	00.7	0.7			-	2.0	1.9				
19	A	10.31	32.0	0.7			+	8.3		4.9	3.3		
	H	10.31	33.5	1.0			+	9.4	5.6				
	Z	10.31	32.7	0.8				1.3	1.6				
19	A	15.43	05.1	0.7			+	11.0	13.5	2.7	4.0		
	H	15.43	06.1	1.1			+	13.0	14.0				
	Z	15.43	04.9	0.4				20.0					
19	A	17.47	11.0	0.4			+	3.4	2.6	2.7	2.9		
	H	17.47	12.2	1.0			+	4.2	5.9				
	Z	17.47	11.6	0.6			-	2.2	1.5				
19	A	21.12	23.6	0.8			+	11.4	6.6	3.5	3.6		
	H	21.12	24.8	1.2			+	7.6	8.9				
	Z	21.12	23.6	0.5				4.0	3.1				
19	A	21.17	46.4	0.8	+		-	1.6	2.4	3.1	2.7		
	H	21.17	47.5	1.2			-	3.0	3.4				
	Z	21.17	46.2	0.5			+	1.0	1.2				
19	A	21.22	11.3	1.0			-	3.2	3.0	6.6	3.4		
	H	21.22	11.6	1.0				12.4					
	Z	21.22	11.9	1.3				0.6	1.8				
19	A	23.14	39.2	0.7	+	+	+	4.6	9.8	3.7	3.4		
	H	23.14	40.4	1.3			+	5.0	6.0				
	Z	23.14	39.7	0.7			+	2.1	1.0				
20	A	16.45	42.5	0.7	+		-	8.9	6.5	4.6	2.7		
	H	16.45	42.9	0.8			+	2.3	3.1				
	Z	16.45	43.0	0.9				0.2	0.2				
21	A	00.11	42.6	0.7	+	+	+	3.6	3.4	4.9	2.8		
	H	00.11	43.3	1.0			+	3.3	4.2				
	Z	00.11	42.8	0.8			-	0.6	0.5				
21	A	03.49	59.6	0.5	+		-	3.0	1.5	3.6	2.7		
	H	03.50	00.5	1.0			+	2.5	3.4				
	Z	03.49	59.9	0.7			+	0.4	0.9				
21	A	04.20	23.1	0.6			+	4.2	3.3	4.3	3.1		
	H	04.20	23.9	1.0			+	3.0	3.3				
	Z	04.20	23.3	0.7			+	1.9	1.5				
21	A	06.56	52.6	0.5	+	+		2.2	2.1	3.0	2.3		
	H	06.56	53.4	0.8			+	3.7	4.7				
	Z	06.56	52.9	0.6				0.3	0.5				
21	A	11.09	01.6	0.5			-	2.5	2.2	3.3	2.6		
	H	11.09	01.2	1.0			+	3.3	3.8				
	Z	11.09	01.6	0.7			+	0.9	0.8				
21	A	13.25	52.0	1.0			-	2.2	2.8	3.7	3.1		
	H	13.25	52.0	0.6			+	5.2	5.7				
	Z	13.25	52.1	1.0			+	1.0	0.7				
21	A	13.26	31.0	1.0			-	2.7	2.0	4.7	3.0		
	H	13.26	30.6	0.7			+	4.7	5.4				
	Z	13.26	31.0	1.0				1.0	0.6				
21	A	14.29	09.6	1.0	+	+	-	3.9	5.4	4.5	3.7		
	H	14.29	09.4	1.4			-	4.5	2.5				
	Z	14.29	09.1	0.7			-	3.8	2.8				
21	A	14.55	45.6	1.1	+	+		2.8	3.8	2.8	3.5		
	H	14.55	46.1	1.2			-	4.3	5.8				
	Z	14.55	45.3	0.6			+	5.0	4.2				
21	A	15.00	31.6	0.7	+		-	8.3	9.0	4.8	3.1		
	H	15.00	32.0	0.9			+	2.9	6.5				
	Z	15.00	32.2	0.8			-	0.7	0.8				
21	A	21.56	32.3	0.7			-	5.0	20.2	2.9	3.3		
	H	21.56	32.5	0.5			+	8.4	14.0				
	Z	21.56	32.6	0.7			-	0.6	0.7				

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
21	A	22.19	44.8	0.5			+	1.5	1.7	3.0	2.6		
	H	22.19	45.5	1.0			+	2.6	4.0				
	Z	22.19	45.0	0.5				1.0	2.0				
21	A	22.31	40.8	0.7			+	4.2	12.7	3.6	3.3		
	H	22.31	40.9	0.7			+	8.3	17.4				
	Z	22.31	41.1	0.8			-	0.6	1.2				
22	A	01.22	01.9	0.5			+	3.0	1.5	3.6	2.2		
	H	01.22	02.5	0.9			+	2.6	2.8				
	Z	01.22	02.1	0.7				0.2	0.2				
22	A	06.02	28.0	0.7	+	+		2.9	2.2	3.3	3.2		
	H	06.02	29.9	1.0			+	4.4	6.7				
	Z	06.02	27.5	0.5			+	4.6	6.1				
22	A	06.15	02.5	0.8			+	18.1	7.4	4.5	3.6		
	H	06.15	02.4	0.8			+	9.8	12.5				
	Z	06.15	02.7	1.2			-	0.9	0.8				
22	A	06.16	57.4	0.9	+	+		2.2	2.2	2.9	3.1		
	H	06.16	57.7	1.0			+	2.3	5.2				
	Z	06.16	56.8	0.5			+	3.6	4.6				
22	A	08.20	54.1	0.5	+	+	+	5.8	8.8	3.2	2.7		
	H	08.20	54.5	0.7			+	3.3	4.2				
	Z	08.20	54.3	0.7			-	0.3	0.4				
22	A	10.40	54.0	0.5			+	9.9	6.4	3.4	3.0		
	H	10.40	54.7	1.0			+	2.7	3.7				
	Z	10.40	54.0	0.8			-	0.4	0.9				
22	A	12.41	37.7	0.6			+	3.6	5.4	3.6	2.8		
	H	12.41	38.3	0.8			+	3.2	4.0				
	Z	12.41	37.9	0.8				0.5	0.5				
22	A	13.37	14.4	1.0	+	+	-	4.1	3.0	7.6	3.0		
	H	13.37	14.4	1.2			+	11.8	5.4				
	Z	13.37	14.7	1.2			-	0.4	0.3				
22	A	14.50	40.0	0.7	+	+	+	2.8	3.1	2.6	3.1		
	H	14.50	40.1	1.0			-	5.0	3.8				
	Z	14.50	39.4	0.4			-	7.0	6.2				
22	A	18.53	34.6	0.9			+	3.0	3.5	4.1	3.3		
	H	18.53	35.1	1.2			+	3.5	6.4				
	Z	18.53	34.3	0.6			+	3.4	4.6				
22	A	22.35	22.2	0.8	+	+		0.7	0.8	4.3	2.7		
	H	22.35	22.5	0.9			+	1.8	3.0				
	Z	22.35	21.7	0.6			+	2.2	2.0				
23	A	03.40	31.4	0.8			+	16.0	20.5	5.1	3.1		
	H	03.40	31.7	1.0			+	2.4	2.6				
	Z	03.40	31.6	0.8			-	1.4	1.4				
23	A	11.45	20.1	0.6			+	6.7	4.2	1.8	2.9		
	H	11.45	21.5	0.4			+	2.6	4.2				
	Z	11.45	20.5	0.7			-	0.6	0.6				
23	A	13.05	33.5	0.8			+	12.3	18.0	5.2	3.3		
	H	13.05	33.9	0.9			-	2.0	2.9				
	Z	13.05	33.9	0.9			-	0.5	0.3				
23	A	19.35	16.9	0.7			+	0.8	2.0	3.4	2.5		
	H	19.35	17.7	0.6			-	3.2	4.6				
	Z	19.35	17.2	0.9			-	0.4	0.3				
24	A	22.23	29.6	0.7			+	1.2	1.6	3.6	2.5		
	H	22.23	29.7	0.7			+	1.8	3.4				
	Z	22.23	30.0	0.7			-	0.4	0.6				
24	A	23.27	08.2	0.6	+	+		2.3	1.5	3.5	2.3		
	H	23.27	09.8	0.8			+	1.8	2.2				
	Z	23.27	09.0	0.7			+	0.3	0.3				
25	A	03.15	50.0	0.9	+	+	-	4.7	6.7	1.9	3.6		
	H	03.15	50.2	0.9			-	11.4	8.9				
	Z	03.15	50.0	0.5			+	3.6	7.0				
25	A	03.30	57.4	0.7			+	2.2	3.0	4.7	2.8		
	H	03.30	57.8	0.									

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

Dec. 1965 - Jan. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
31	A	15.25	35.1	0.5			+	0.9	1.5	3.2	2.4	
	H	15.25	35.9	0.8				4.6	6.9			
	Z	15.25	35.2	0.6				0.4	0.7			
31	A	16.15	04.6	0.7			+	3.9	4.1	5.0	3.4	
	H	16.15	05.3	1.0			+	4.2	1.6			
	Z	16.15	04.7	0.7			+	4.8	2.5			
31	A	16.52	38.7	0.8			+	9.6	5.8	5.5	3.2	
	H	16.52	39.1	1.1			+	2.6	4.5			
	Z	16.52	38.4	0.9				0.8	0.4			
31	A	18.35	31.0	0.7			+	6.7	7.0	4.9	2.8	
	H	18.35	31.5	0.9			+	3.6	5.1			
	Z	18.35	31.2	0.9				0.3	0.3			
31	A	23.40		0.5			+	11.4	8.2	3.2	3.4	
	H	23.40	36.1	1.0			+	4.5	6.8			
	Z	23.40	35.5	0.7			+	1.5	3.5			

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01	A	00.36	13.3	1.0			+	2.6	2.2	3.0	3.1
	H	00.36	14.7	0.9			+	4.0	5.2		
	Z	00.36	13.1	0.6				2.3	1.8		
01	A	01.30	11.2	0.9			+	0.7	0.7	3.7	2.6
	H	01.30	11.9	1.0			+	2.0	2.4		
	Z	01.30	10.7	0.5			+	2.4	1.3		
01	A	05.08		0.7				1.3	1.6		
	H	05.08	33.0	0.8			+	4.7	4.7	2.9	2.5
	Z	05.08	32.1	0.5				1.0	0.6		
01	A	10.21	31.3	0.7				0.7	0.7		
	H	10.21	32.0	0.9			+	1.6	2.8	4.0	2.1
	Z	10.21	31.1	0.6				0.5	0.6		
01	A	14.28	09.1	0.9			+	1.2	1.4		
	H	14.28	09.9	1.2			-	2.5	3.6	4.0	2.7
	Z	14.28		0.6				1.0	0.6		
01	A	17.17	12.2	0.6			+	1.3	2.3		
	H	17.17	12.9	0.8			+	2.6	2.4	3.8	2.3
	Z	17.17	12.6	0.9			+	0.2	0.2		
01	A	21.32		0.6			-	2.2	5.0	4.2	3.0
	H	21.32	18.5	1.0			+	4.8	7.7		
	Z	21.32	17.8	0.7			-	1.1	1.0		
02	A	01.07	29.1	0.4			+	1.4	0.7	2.9	2.1
	H	01.07	31.6	0.8			+	2.0	3.3		
	Z	01.07	31.0	0.7				0.5	0.5		
02	A	02.06	40.5	0.8			+	6.0	5.0	3.6	3.3
	H	02.06	41.7	0.9			+	7.6	6.2		
	Z	02.06	40.7	0.5			+	3.8	3.2		
02	A	05.23	38.7	0.7			+	1.5	5.2	2.1	3.6
	H	05.23	39.1	0.9			-	5.1	6.0		
	Z	05.23	38.2	0.3			-	17.3	13.7		
02	A	11.08	46.8	0.9			+	7.0	7.4	5.3	3.0
	H	11.08	46.7	0.8			+	4.5	9.7		
	Z	11.08	46.8	1.0				0.4	0.2		
02	A	13.06	02.3	0.8			+	22.8	55.0	5.0	4.3
	H	13.06	03.0	0.9			+	30.3	14.3		
	Z	13.06	02.6	0.8			+	1.8	5.0		
02	A	13.49	53.4	0.7				1.4		3.6	2.8
	H	13.49	53.5	0.9			-	3.7	2.6		
	Z	13.49	52.8	0.6				2.9	1.1		
02	A	17.49	44.5	0.5			+	1.0	1.0		
	H	17.49	44.9	1.0			+	3.8	2.4	2.3	2.7
	Z	17.49	43.5	0.4			-	4.5	6.1		
02	A	20.14	40.0	0.8			+	0.9	1.0	2.9	2.8
	H	20.14	39.9	0.8			-	4.0	2.4		
	Z	20.14	39.3	0.5			-	3.0	1.1		
03	A	01.13	38.2	0.6			+	3.5	3.5	3.0	2.9
	H	01.13	38.9	0.8			+	4.4	7.6		
	Z	01.13	38.0	0.5			+	1.7	1.2		
03	A	01.28	56.5	0.5			-	1.5	0.9		
	H	01.28	57.7	0.8			-	3.2	7.6	2.7	2.4
	Z	01.28	56.7	0.5			-	0.8	0.9		
03	A	01.59	40.2	0.8			+	5.5	3.6	4.9	3.1
	H	01.59	40.4	0.8			+	3.4	13.4		
	Z	01.59	40.4	1.0			-	0.6	0.8		

Observations by the Network of the Earthquake Research Institute during Oct. 1965 to Dec. 1966

Jan. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
05	A	04.25		0.6			+	8.6	7.9	4.3	3.3	
	H	04.25	44.6	1.1			+	5.0	8.6			
	Z	04.25	44.1	0.8			+	2.1	1.1			
05	A	09.39	07.1	0.6			+	6.3	8.1	4.5	3.1	
	H	09.39	07.7	1.0			+	3.0	6.5			
	Z	09.39	07.4	0.8			-	0.8	0.5			
05	A	12.09	58.2	0.7			+	3.1	9.5	2.1	3.3	
	H	12.09	58.5	0.5			+	6.0	13.0			
	Z	12.09	59.4	0.6			-	1.6	2.1			
05	A	12.45	03.1	0.6			+	18.3	39.5	4.5	4.1	
	H	12.45	04.2	1.0			+	7.2	12.5			
	Z	12.45	03.8	0.8			+	2.2	4.3			
05	A	14.05	18.1	0.5			+	19.9	30.9	3.7	3.8	
	H	14.05	19.2	0.9			+	12.0	7.8			
	Z	14.05	19.0	0.8			+	4.0	4.4			
05	A	18.35	31.6	0.9			+	1.6	2.0			
	H	18.35		0.8			-	7.6	7.4	2.6	3.1	
	Z	18.35	30.9	0.5			+	4.3	2.0			
05	A	22.02	15.6	1.0			+	1.0	1.8			
	H	22.02	15.5	0.7			+	3.6	3.7	3.8	2.8	
	Z	22.02	14.9	0.9			+	0.8	0.5			
06	A	01.46	09.2	0.5			+	5.8	4.0			
	H	01.46	10.3	0.9			+	3.4	2.3	3.2	3.2	
	Z	01.46	08.7	0.5			-	0.8	3.8			
06	A	05.04	00.6	0.6			+	1.8	3.8	2.7	2.5	
	H	05.04	00.8	0.6			+	6.5	9.8			
	Z	05.04	00.9	0.6			+	0.4	0.4			
06	A	07.46	34.3	0.6			-	4.5	9.0	4.0	3.2	
	H	07.46	35.2	0.8			+	3.4	3.9			
	Z	07.46	33.7	0.8			+	1.1	0.6			
06	A	09.15	39.6	0.7			+	1.2	1.0			
	H	09.15	40.2	0.9			+	3.4	2.7	3.5	3.0	
	Z	09.15	39.4	0.5			+	7.6	4.6			
06	A	12.49	10.6	0.9			+	0.6	0.8			
	H	12.49	10.6	1.0			+	4.0	4.2	3.8	2.4	
	Z	12.49	10.3	0.6			+	0.9	1.1			
06	A	13.35	06.2	1.2			+		3.5			
	H	13.35	05.5	1.1			-	11.4	6.6	7.7	3.2	
	Z	13.35	05.8	1.2			+	0.7	0.7			
06	A	13.46	13.7	0.8			+	1.2	2.4			
	H	13.46	14.5	0.9			-	3.2	2.8	4.7	2.8	
	Z	13.46	13.2	0.7			+	0.9	0.8			
06	A	14.23	54.3	0.9			-		0.5			
	H	14.23	54.6	0.8			-	3.2	3.6	4.2	2.2	
	Z	14.23	53.9	0.5			+	0.4	0.5			
06	A	18.45	25.6	1.0			+	0.7	1.8			
	H	18.45	26.1	1.3			-	3.1	2.4	2.5	2.8	
	Z	18.45	25.3	0.5			-	1.8	1.6			
06	A	21.31	05.5	0.7			-	1.9	4.4			
	H	21.31	05.8	0.6			+	3.9	6.8	3.0	2.7	
	Z	21.31	05.8	0.7			-	0.6	0.6			
06	A											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jan. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
12	A	00.24	29.1	0.7	+	+		2.0	3.8			
	H	00.24	29.1	0.7				2.6	5.7	3.4	2.9	
	Z	00.24	29.2	0.6				0.7	1.1			
12	A	01.26	53.4	0.8	-	-		35.1	19.3			
	H	01.26	53.9	1.0	+	+		6.4	7.3	5.5	3.8	
	Z	01.26	54.0	1.0				1.1	1.3			
12	A	18.13	29.9	0.6	-	-		11.8	6.0			
	H	18.13	30.1	0.8				2.9	3.1	3.7	2.9	
	Z	18.13	30.1	0.8				0.5	0.5			
13	A	04.32	23.8	0.5				2.9	1.5	3.4	2.3	
	H	04.32	24.6	0.9				2.6	2.5			
	Z	04.32	24.3	0.7				0.3	0.2			
14	A	00.08	15.4	0.8	+	+		1.0	0.6			
	H	00.08	16.1	1.1				1.5	2.7	3.3	2.2	
	Z	00.08	15.1	0.5				0.5	0.4			
14	A	00.12	08.8	0.9	+	+		2.0	1.6			
	H	00.12	09.6	1.2				1.8	2.9	2.3	2.5	
	Z	00.12	08.8	0.4				0.8	0.3			
14	A	00.34	24.1	0.6	+	+		6.2	3.2			
	H	00.34	25.0	1.1				4.0	5.7	3.4	2.9	
	Z	00.34	24.1	0.6				1.7	2.8			
14	A	01.42	03.9	0.5				6.7	5.0			
	H	01.42	04.5	0.9	+	+		3.4	2.0	3.7	2.6	
	Z	01.42	04.6	0.8				0.3	0.2			
14	A	02.28	54.5	0.6	+	+		23.3	27.3			
	H	02.28	55.2	1.0				2.9	6.0	4.3	3.8	
	Z	02.28	54.9	0.7				1.9	3.0			
14	A	08.39	03.3	0.7				1.4	2.0			
	H	08.39	04.0	0.9				2.6	3.8	4.2	3.0	
	Z	08.39	03.5	0.7				0.4	0.4			
14	A	08.50	33.9	0.6	-	-		8.8	4.5			
	H	08.50	34.4	0.8				2.2	2.7	4.2	2.8	
	Z	08.50	34.4	0.8				0.3	0.2			
14	A	09.57	25.4	0.7	+	+		6.9	5.0			
	H	09.57	25.9	1.0				5.2	8.0	4.1	3.3	
	Z	09.57	26.3	0.6				2.8	1.5			
14	A	10.26	44.7	0.8	+	+		4.9	4.7			
	H	10.26	45.6	0.8				2.2	2.4	4.3	3.2	
	Z	10.26	45.3	0.7				1.1	1.7			
14	A	12.43	43.1	0.8	+	+		3.3	3.0			
	H	12.43	43.9	1.1				5.2	6.3	3.4	3.1	
	Z	12.43	43.3	0.5				3.2	1.5			
14	A	12.54	37.4	0.8	+	+		1.1	0.8			
	H	12.54	37.8	1.0				1.7	2.8	3.7	2.6	
	Z	12.54	37.2	0.5				0.6	1.5			
14	A	15.21	19.8	0.6	-	-		2.0	2.0			
	H	15.21	20.6	0.9				3.3	3.7	4.3	2.5	
	Z	15.21	20.4	0.8				0.5	0.5			
14	A	15.48	17.8	0.7	+	+		2.2	3.3			
	H	15.48	18.5	0.8				3.3	4.2	4.0	2.5	
	Z	15.48	18.4	0.7				0.4	0.4			
14	A	15.57	49.1	0.7	-	-		34.5	16.2			
	H	15.57	49.6	1.0				4.2	5.0	5.0	3.8	
	Z	15.57	49.7	1.0				1.4	1.1			
14	A	16.00	51.2	0.8	-	-		36.5	25.8			
	H	16.00	51.7	1.0				8.0	17.6	5.1	3.7	
	Z	16.00	51.8	0.8				0.9	1.0			
14	A	17.06	50.0	0.7	+	+		8.5	5.9			
	H	17.06	51.3	1.0				2.2	2.4	4.3	3.4	
	Z	17.06	50.6	0.6				2.8	1.8			
14	A	17.42			+	+		3.2	2.0			
	H	17.42						3.4	3.5	3.6	3.1	
	Z	17.42						3.8	2.5			
15	A	01.21	14.4	1.0	-	-		32.0	40.0			
	H	01.21	13.8	0.6				41.0	53.0	4.2	4.3	
	Z	01.21	14.7	1.2				4.0	4.5			
15	A	06.04	10.2	0.7	+	+		14.9	10.4			
	H	06.04	10.9	1.0				11.0	12.3	5.0	3.8	
	Z	06.04	10.6	0.8				4.4	4.7			
15	A	10.05	18.6	0.7	-	-		5.1	6.5			
	H	10.05	19.0	0.7				11.2	15.8	2.9	3.5	
	Z	10.05	18.8	0.5				8.2	8.2			
15	A	11.30	23.6	0.6	+	+		1.3	3.4			
	H	11.30	23.8	0.6				3.4	5.7	2.7	2.9	
	Z	11.30	24.1	0.7				0.1	0.2			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
17	A	02.33	49.1	0.9				2.3	3.7			
	H	02.33	48.9	0.7				1.8	2.9	3.4		
	Z	02.33										
17	A	03.57	11.6	0.8								
	H	03.57	11.8	0.6				2.0	5.4	2.9		
	Z	03.57										
17	A	07.48	21.7	0.9								
	H	07.48	21.6	0.6				2.0	2.9	2.5		
	Z	07.48										
17	A	08.12	35.5	0.7								
	H	08.12	35.7	0.8				3.0	2.3	3.1	2.4	
	Z	08.12	35.4	0.5				1.2	0.6			
17	A	09.12	05.8	1.0								
	H	09.12	05.8	0.6				2.4	2.4	2.6		
	Z	09.12						0.2	0.2			
17	A	10.29	04.4	0.5				5.5	4.6			
	H	10.29	04.7	0.6				2.6	3.2	3.4		
	Z	10.29	04.8	0.6								
17	A	12.23	02.4	0.7				14.1	9.0			
	H	12.23	03.4	1.1				2.8	5.1	4.4	2.9	
	Z	12.23	02.9	0.7				0.3	0.2			
17	A	14.30	57.3	0.8				28.7	16.4			
	H	14.30	58.3	1.1				2.4	4.8	5.8	3.5	
	Z	14.30		0.5				0.6	0.4			
17	A	15.51	39.5	0.6				0.4				
	H	15.51	40.4	1.0				2.6	4.4	2.0		
	Z	15.51	40.0	0.7								
17	A	16.27	55.6	0.6				2.1	5.8			
	H	16.27	56.3	0.9				4.9	3.0	3.1	3.1	
	Z	16.27	56.2	0.8				0.9	1.8			
17	A	21.31	03.2	1.1				0.9	1.1			
	H	21.31	02.1	0.6				2.0	2.8	2.6	2.1	
	Z	21.31						0.4	0.3			
17	A	23.02	06.0	0.7				1.2	1.8			
	H	23.02	06.5	0.9				**	8.5	2.4		
	Z	23.02										
17	A	23.57	36.5	1.0				9.6	8.8			
	H	23.57	36.9	0.7				3.4	5.0	3.4	3.0	
	Z	23.57	37.1	1.1				0.3	0.6			
18	A	00.15	49.1	0.9				8.5	3.9			
	H	00.15	48.5	0.6				3.6	4.8	3.3	2.6	
	Z	00.15						0.2	0.3			
18	A	00.20	37.3	0.9				0.4	1.0			
	H	00.20	36.5	0.4				2.3	5.4	2.7		
	Z											
18	A	02.58	08.6	1.0				4.8	2.8			
	H	02.58	08.2	0.6				2.6	2.8	3.1		
	Z	02.58	08.8	1.0								
18	A	03.17	12.4	0.6								
	H	03.17	13.0	1.0				2.7	4.4	6.0	2.9	
	Z	03.17	12.6	0.7				0.1	0.1			
18	A	04.19	26.4	0.7				8.5	3.8			
	H	04.19	27.2	1.1				1.4	2.4	3.8	2.4	
	Z	04.19	26.8	0.7					0.1			
18	A	04.26	51.2	0.9				1.7	1.8			
	H	04.26	52.5	1.1				3.4	5.0	4.7	2.5	
	Z	04.26	52.2	0.7				0.5	0.2			
18	A	11.18	24.3	0.7				4.5	2.9			
	H	11.18	24.5	0.9				1.3	3.0	4.9	2.6	
	Z	11.18	24.0	0.5				0.2	0.2			
18	A	12.39	25.6	1.1								
	H	12.39	25.5	0.9				0.6	0.6	2.7		
	Z	12.39	26.0	0.9				3.3	6.2			
18	A	13.18	56.6	1.1								
	H	13.18	56.0	0.7				2.1	1.3	3.1		
	Z	13.18						6.4	5.0			
18	A	16.46	25.7	1.1								
	H	16.46	25.4	1.1				5.1	2.5			
	Z	16.46	25.0	0.6				3.7	2.5	3.7		
18	A	17.16	15.9	0.9								
	H											

Seismological Data of Matushiro Earthquake Swarm (Report II)

Jan. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
21	A H Z	15.56	54.2	0.7				2.0	2.0		2.0	2.7	
	A H Z	15.56	54.4	0.8				3.0	2.6				
	A H Z	15.56	53.9	0.3				3.0	1.6				
22	A H Z	01.56	00.0	1.0				15.5	21.7		4.0	3.4	
	A H Z	01.55	59.6	0.7				12.1	12.6				
	A H Z	01.56	00.9	0.8				1.6	1.6				
22	A H Z	03.17	28.8	0.5				17.8	8.2		3.6	3.2	
	A H Z	03.17	29.6	0.9				4.9	4.0				
	A H Z	03.17	29.0	0.7				0.6	0.7				
22	A H Z	03.58	45.9	0.8				2.1	1.8		2.4	3.0	
	A H Z	03.58	46.5	1.0				3.7	3.2				
	A H Z	03.58	45.8	0.4				2.9	4.5				
22	A H Z	09.35	25.0	0.9				1.6	1.2		4.7	2.5	
	A H Z	09.35	25.5	1.0				2.5	1.8				
	A H Z	09.35	24.7	0.7				0.5	0.6				
22	A H Z	14.10	01.1	0.7				8.5	4.5		5.2	3.1	
	A H Z	14.10	01.4	1.0				6.4	3.1				
	A H Z	14.10	01.6	1.0				0.3	0.5				
22	A H Z	17.52	27.4	0.6				0.8	1.3		2.8	2.1	
	A H Z	17.52	27.4	0.8				3.8	5.0				
	A H Z	17.52	27.4	0.5				0.5	0.4				
22	A H Z	22.03	49.9	0.5				8.1	3.0		3.8	2.8	
	A H Z	22.03	50.4	0.9				2.3	3.4				
	A H Z	22.03	50.4	0.8				0.2	0.5				
22	A H Z	22.16	22.9	0.8				2.1	1.4		4.5	3.0	
	A H Z	22.16	23.4	1.1				2.0	3.7				
	A H Z	22.16	22.6	0.6				2.5	1.5				
23	A H Z	06.46	51.2	0.8				1.1	1.0		4.5	2.4	
	A H Z	06.46	51.4	0.9				3.1	2.4				
	A H Z	06.46	51.0	0.6				0.6	0.4				
23	A H Z	06.55	12.7	0.9				0.7	0.4		5.1	2.5	
	A H Z	06.55	12.7	0.9				5.8	3.2				
	A H Z	06.55	12.5	0.8				0.7	0.9				
23	A H Z	11.57	34.8	0.6				12.4	14.2		4.3	3.3	
	A H Z	11.57	35.3	1.0				3.9	9.0				
	A H Z	11.57	35.2	0.7				1.1	1.1				
23	A H Z	11.58	12.4	0.6				6.0	6.4		4.1	2.8	
	A H Z	11.58	12.7	1.1				2.1	3.2				
	A H Z	11.58	12.7	0.8				0.5	0.4				
23	A H Z	12.07	01.3	0.6				38.0	17.2		4.1	3.7	
	A H Z	12.07	02.1	1.0				4.1	2.4				
	A H Z	12.07	01.9	0.8				1.8	1.1				
23	A H Z	12.24	51.7	0.8				2.2	5.4		3.8	2.9	
	A H Z	12.24	51.4	0.6				8.0	8.9				
	A H Z	12.24	52.0	0.8				0.3	0.6				
23	A H Z	20.15	57.9	0.6				64.0	50.0		2.9	4.6	
	A H Z	20.15	58.8	1.2				29.0	30.0				
	A H Z	20.15	58.1	0.5				24.0	23.0				
23	A H Z	20.17	31.5	0.8				4.8	6.8		2.7	3.1	
	A H Z	20.17	32.9	1.3				3.0	3.6				
	A H Z	20.17	31.7	0.6				1.3	1.4				
23	A H Z	20.34	33.9	0.9				4.8	2.9		4.5	3.2	
	A H Z	20.34	34.6	1.1				4.1					
	A H Z	20.34	33.9	0.6				1.6	1.9				
23	A H Z	20.46	45.7	0.7				4.4	3.3		2.3	2.9	
	A H Z	20.46	47.3	0.4				2.3	3.2				
	A H Z	20.46	45.9	0.8				0.7	0.4				
23	A H Z	20.57	31.4	0.7				4.6	4.4		0.8	3.0	
	A H Z	20.57	32.4	1.3				2.0	3.4				
	A H Z	20.57	31.3	0.5				2.0	2.1				
23	A H Z	21.17	03.1	0.6				3.7	4.5		1.3	3.0	
	A H Z	21.17	03.6	1.2				2.4	4.8				
	A H Z	21.17	02.7	0.5				1.8	2.3				
23	A H Z	22.42	58.1	0.5				1.6	1.7		2.9	2.5	
	A H Z	22.42	58.7	0.9				3.6	5.1				
	A H Z	22.42	58.4	0.5				1.0	1.6				
24	A H Z	00.54	18.8	0.8				17.0	15.2		2.1	4.0	
	A H Z	00.54	19.2	1.2				7.0	14.8				
	A H Z	00.54	18.5	0.4				13.9	17.7				
24	A H Z	06.06	28.7	1.0				3.0	3.5		4.4	3.9	
	A H Z	06.06	28.4	0.7				8.0	8.0				
	A H Z	06.06	29.0	0.9				1.4	0.9				
24	A H Z	21.29	22.5	0.7				9.6	6.9		4.5	3.1	
	A H Z	21.29	22.5	0.8				5.3	11.0				
	A H Z	21.29	23.0	1.0				0.4	0.5				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Jan. 1966 - Feb. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
27	A H Z	14.09	08.8	0.6				5.6	1.6		3.0	2.8	
	A H Z	14.09	09.3	0.9				3.3	4.2				
	A H Z	14.09	08.8	0.5				0.8	1.0				
27	A H Z	15.13	02.9	0.9				1.7	1.0		4.1	2.8	
	A H Z	15.13	03.9	0.9				1.7	2.8				
	A H Z	15.13	02.9	0.6				0.8	1.2				
27	A H Z	15.25	16.1	0.6				1.7	1.3		4.3	2.3	
	A H Z	15.25	16.3	0.9				2.3	2.4				
	A H Z	15.25	16.6	0.8				0.3	0.3				
27	A H Z	18.41	26.8	0.8				5.4	2.5		4.2	3.0	
	A H Z	18.41	26.5	0.6				3.9	6.6				
	A H Z	18.41	27.5	1.1				0.2	0.4				
27	A H Z	22.02	28.5	0.6				2.4	2.6		3.7	2.3	
	A H Z	22.02	28.9	0.8				1.6	3.0				
	A H Z	22.02	28.9	0.6				2.2	0.3				
28	A H Z	02.01	49.8	0.6				15.2	9.0		4.1	3.7	
	A H Z	02.01	50.3	1.0				9.1	8.8				
	A H Z	02.01	50.6	1.0				2.8	5.0				
28	A H Z	03.42	23.3	0.9				1.4	0.8		4.2	2.6	
	A H Z	03.42	23.6	1.1				2.4	2.2				
	A H Z	03.42	23.1	0.6				0.5	1.1				
28	A H Z	03.47	26.5	0.8				2.4	1.5		4.5	2.8	
	A H Z	03.47	27.0	1.2				1.6	2.2				
	A H Z	03.47	26.7	0.7				0.9	0.5				
28	A H Z	05.24	27.7	0.5				2.0	1.0		3.3	2.3	
	A H Z	05.24	28.2	0.8				4.2	6.6				
	A H Z	05.24	28.0	0.6				0.5	0.6				
28	A H Z	13.39	52.3	0.9				1.2	2.6		1.9	3.0	
	A H Z	13.39	52.3	0.9				3.3	2.9				
	A H Z	13.39	51.9	0.4				3.0	2.3				
28	A H Z	17.53	55.0	0.5				4.6	5.8		3.5	3.0	
	A H Z	17.53	55.4	1.0				2.1	2.1				
	A H Z	17.53	55.5	0.7				1.0	1.3				
28	A H Z	18.14	53.6	0.9				2.2	1.8		3.6	2.7	
	A H Z	18.14	54.0	1.1				3.0	2.9				
	A H Z	18.14	53.5	0.5				1.0	1.1				
29	A H Z	00.36	09.6	0.9				0.6			3.6	2.0	
	A H Z	00.36	09.3	1.0				3.5	4.7				

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

Feb. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											Initial Motion (mm)		
P-Time (J.S.T.)			S-P (sec)			Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
h	m	s	S	P	E	N	U	E	W	N	S		
05	A	15.57	07.0	0.6	+	-	+	2.3	2.1				
	H	15.57	07.2	0.8	-	-	-	6.4	5.4	2.8	2.6		
	Z	15.57	06.7	0.5				1.2	1.0				
06	A	08.44	15.7	0.7	+	-	-	5.4	2.8	2.9	2.7		
	H	08.44	16.4	0.9	-	+	+	4.8	5.3				
	Z	08.44	15.9	0.5	-	+	-	0.8	0.8				
07	A	04.05	14.3	0.4	+	-	+	50.0	49.0	1.5	4.4		
	H	04.05	15.0	1.0	+	+	+	37.0	34.5				
	Z	04.05	14.3	0.5	-	-	-	27.0	31.0				
07	A	04.07	25.8	0.7	+	-	+	5.6	8.2	4.6	3.1		
	H	04.07	26.6	1.0	-	+	-	2.3	3.8				
	Z	04.07	26.2	0.7	-	+	-	0.8	0.7				
07	A	04.09	37.1	0.5	-	+	-	12.8	3.8	3.3	2.7		
	H	04.09	37.8	0.8	-	+	+	4.3	3.0				
	Z	04.09	37.8	0.7				0.2	0.3				
07	A	04.16	23.0	1.0	+	-	+	5.1	6.0	2.1	3.5		
	H	04.16	23.6	1.1	-	+	+	8.2	13.8				
	Z	04.16	22.6	0.5	-	+	-	5.3	4.6				
07	A	04.34	03.4	0.4	-	+	-	8.9	7.8	2.9	2.7		
	H	04.34	04.1	0.9	-	+	-	3.6	2.8				
	Z	04.34	03.7	0.7	-	+	-	0.5	0.5				
07	A	04.39	20.2	0.7	+	-	-	3.6	4.6	3.7	3.0		
	H	04.39	20.8	0.9	-	+	-	4.0	5.8				
	Z	04.39	20.2	0.6				1.0	1.9				
07	A	04.47	37.7	0.5	+	-	+	10.5	11.8				
	H	04.47	38.6	0.8	-	+	+	3.4	3.4	3.3	3.2		
	Z	04.47	38.1	0.6	-	+	+	0.6	1.2				
07	A	05.52	02.3	1.2	-	-	+	4.3	4.4	3.8	3.4		
	H	05.52	02.6	1.3	-	-	+	3.6	3.7				
	Z	05.52	01.6	0.7				2.8	2.2				
07	A	11.47	45.2	1.1	-	+	-	4.6	4.1	3.6	3.5		
	H	11.47	45.4	1.3	-	+	-	3.3	3.4				
	Z	11.47	44.4	0.6	+	+	+	4.1	3.6				
07	A	13.13	40.0	1.1	-	-	-	2.6	3.0	5.0	3.4		
	H	13.13	40.4	1.2	-	-	-	3.0	2.6				
	Z	13.13	39.1	0.6				3.6					
07	A	14.14	30.0	0.8	+	-	+	2.8	2.7	4.1	3.0		
	H	14.14	30.4	0.9	-	-	-	6.0	7.1				
	Z	14.14	29.7	0.6	-	-	-	2.3	1.3				
07	A	15.05	23.7	0.6	-	+	+	10.2	27.7	4.0	3.5		
	H	15.05	24.2	0.8	-	+	+	7.3	10.1				
	Z	15.05	23.9	0.8	-	+	-	0.9	0.4				
07	A	17.39	04.4	0.8	-	+	+		7.6				
	H	17.39	05.1	0.9	+	+	+	2.8	4.4	3.5			
	Z	17.39	04.7	0.8				0.4	0.3				
08	A	04.59	26.8	0.9	-	+	-		0.8				
	H	04.59	26.9	0.6				3.0	4.8	5.0	2.9		
	Z	04.59	27.1	0.8				0.3	0.2				
08	A	14.39	26.4	0.5	+	+	+	9.2	11.4				
	H	14.39	27.3	1.1	+	+	+	6.8	8.0	3.5	3.3		
	Z	14.39	26.8	0.7	+	+	+	1.4	1.9				
08	A	16.42	51.5	1.3	+	+	+	2.3	2.4	8.9	3.1		
	H	16.42	52.2	1.5				2.6	4.3				
	Z	16.42	51.5	1.2				0.9	0.6				
09	A	04.10	11.9	1.0	+	-	-	9.3	6.2	6.6	3.3		
	H	04.10	12.3	1.0	-	+	+	10.2	4.4				
	Z	04.10	12.4	1.0				0.6	0.8				
09	A	11.28	43.5	1.2	-	-	+	6.1	4.8	4.8	3.2		
	H	11.28	44.4	1.3				2.6	3.2				
	Z	11.28	43.5	0.8				0.8	0.8				
10	A	11.09	15.7	1.5	+	-	+	4.0	6.4	8.7	3.9		
	H	11.09	16.3	1.7	+	-	+	4.5	5.1				
	Z	11.09		1.2				3.9	2.0				
10	A	15.12	51.3	1.0	-	+	-	11.4	8.2	6.4	3.7		
	H	15.12	52.1	1.0				3.8	4.3				
	Z	15.12	51.6	1.0				1.8	1.2				
10	A	16.08	43.8	0.7	+	+	+	6.6	4.7	4.8	2.9		
	H	16.08	44.2	0.9	+	+	+	2.8	4.7				
	Z	16.08	44.1	0.9	-	-	-	0.3	0.4				
10	A	16.09	07.7	0.8	+	-	+	11.8	6.4	5.8	3.5		
	H	16.09	08.2	1.0				7.2	10.0				
	Z	16.09	08.1	0.9	+	-	-	0.7	1.3				
11	A	01.02	03.7	0.7	+	+	+		2.9				
	H	01.02	04.1	0.9				3.8	3.4	2.5	3.2		
	Z	01.02	03.2	0.4	-	+	-	10.0	8.7				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											Initial Motion (mm)		
P-Time (J.S.T.)			S-P (sec)			Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
h	m	s	S	P	E	N	U	E	W	N	S		
15	A	15.02	09.7	0.7	-	+	-	9.2	7.8	4.5	3.5		
	H	15.02	10.6	1.1	+	-	+	12.4	14.4				
	Z	15.02	10.1	0.7				3.5	2.5				
15	A	20.40	26.9	0.4	+	+	+	14.0		2.6	3.2		
	H	20.40	27.8	1.1	+	+	+	2.9	3.5				
	Z	20.40	27.4	0.7				1.5	1.2				
16	A	05.08	38.5	0.6	+	+	+	3.5		3.9	2.5		
	H	05.08	39.3	0.8				2.4	4.0				
	Z	05.08	39.0	0.7				0.4	0.4				
16	A	06.24	48.1	0.5	+	-	-	4.0	4.0	3.6	2.5		
	H	06.24	48.9	0.9	+	+	+	5.0	4.6				
	Z	06.24	48.8	0.7	+	+	+	0.5	0.4				
16	A	06.52	41.1	0.7	+	+	+	1.1	2.4	4.3	2.8		
	H	06.52	41.8	1.1	+	+	+	2.6	4.4				
	Z	06.52	41.3	0.7				1.4	1.4				
16	A	09.48	20.1	0.6	+	-	+	2.5	2.3	3.8	2.8		
	H	09.48	20.8	0.9	+	-	+	4.2	5.8				
	Z	09.48	20.6	0.6	+	-	+	1.2	1.7				
16	A	09.46	58.1	0.5	+	+	+	8.0	6.9	3.6	3.1		
	H	09.46	59.0	1.0	+	+	+	6.2	5.4				
	Z	09.46	58.3	0.7				1.1	1.4				
16	A	17.11	46.4	0.6	+	-	-	49.8	41.2	3.7	4.2		
	H	17.11	47.5	1.1	+	+	+	13.5	17.2				
	Z	17.11	46.9	0.6	+	+	+	8.8	5.6				
16	A	18.31	28.3	0.9	+	+	-	4.6	8.2	2.0	3.4		
	H	18.31	29.2	1.4	+	+	-	6.0	8.0				
	Z	18.31	28.1	0.5				1.7	3.0				
16	A	18.39	31.7	0.7	+	+	+	10.8	11.4	4.5	3.2		
	H	18.39	32.3	0.9	+	+	+	7.7	11.7				
	Z	18.39	32.3	0.8				0.5					

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Feb. 1966 - Mar. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
23	A H Z	03.33	03.2	0.7	-	-	-	10.0	4.9	2.9	3.5	
23	A H Z	07.18	46.8	0.9	-	-	-	2.8	1.0	2.7	2.8	
23	A H Z	13.25	38.7	1.1	-	-	-	22.4	12.0	3.6	4.3	
23	A H Z	18.25	09.1	1.0	+	+	+	6.2	4.4	5.7	3.3	
24	A H Z	08.23	52.1	0.7	-	-	-	40.8	32.4	2.5	4.0	
24	A H Z	08.24	26.5	0.7	+	-	-	20.3	9.2	2.5	3.4	
24	A H Z	15.36	17.5	1.6	-	-	+	2.8	3.2	8.6	3.4	
24	A H Z	20.11	53.7	0.6	+	+	+	11.0	7.0	3.4	3.1	
24	A H Z	23.33	15.7	0.8	-	-	+	1.8	2.8	0.0	3.3	
25	A H Z	04.37	02.3	0.5	+	+	+	10.7	13.0	3.5	3.1	
25	A H Z	11.05	09.2	1.6	-	-	+	11.0	10.5	6.7	4.0	
25	A H Z	13.09	59.9	0.5	+	+	+	22.4	9.6	2.9	3.5	
25	A H Z	16.41	33.9	0.7	-	-	+	4.3	3.2	2.9	2.8	
26	A H Z	00.00	49.3	0.8	+	+	+	5.1	9.2	4.6	3.1	
26	A H Z	10.07	49.7	1.1	-	-	-	2.8	2.2	1.3	2.9	
26	A H Z	11.17	02.5	0.8	+	+	+	2.9	2.8	3.4	3.1	
26	A H Z	12.23	24.8	0.7	+	+	+	21.4	19.4	2.6	3.9	
26	A H Z	15.31	23.3	0.7	+	+	+	24.6	4.4	4.6	3.7	
26	A H Z	20.16	49.8	0.8	-	-	-	5.6	7.6	3.4	3.6	
26	A H Z	20.16	53.2	0.6	-	-	-	4.8	8.3	1.1	3.6	
26	A H Z	20.17	16.0	0.8	-	-	+	3.0	6.0	8.4	2.7	
26	A H Z	20.24	49.0	0.7	+	+	+	0.6	3.0	1.0	1.6	
26	A H Z	03.31	20.1	1.0	+	+	+	0.7	0.9	2.4	2.7	
27	A H Z	09.20	44.4	0.5	+	+	+	0.8	0.4	2.1	2.0	
27	A H Z	09.23	27.3	0.7	+	+	+	1.4	0.8	2.9	2.3	

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01	A H Z	04.22	06.1	0.9	-	+	+	5.2	10.0	2.9	
01	A H Z	06.20	53.2	1.2	+	+	+	2.8	4.8	2.2	
01	A H Z	15.45	28.1	1.0	+	+	+	13.4	6.0	3.0	
01	A H Z	21.37	00.4	1.0	-	-	+	6.6	10.6	2.2	3.9
02	A H Z	12.00	35.1	1.0	-	-	+	14.6	9.4	4.7	2.9
02	A H Z	13.14	59.6	1.0	-	-	+	10.7	12.3	3.8	2.4
02	A H Z	14.44	10.9	1.0	+	+	+	13.6	34.2	6.1	3.0
03	A H Z	03.06	51.4	0.5	+	+	+	4.7	3.7	2.6	2.8
03	A H Z	03.25	14.9	1.0	+	-	+	5.2	6.6	4.5	3.3
03	A H Z	05.22	07.8	0.7	+	+	+	10.0	5.1	5.2	3.2
03	A H Z	07.50	09.6	0.6	+	+	+	6.0	4.6	3.4	3.3

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Mar. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
03	A H Z	11.40	27.0	0.6	-	-	-	9.0	6.2	4.0	3.8	
03	A H Z	16.35	36.0	0.5	+	+	+	2.8	2.8	5.9	3.0	
03	A H Z	22.06	18.3	0.9	+	+	+	1.8	1.2	2.6	2.4	
03	A H Z	09.31	31.3	0.7	+	+	+	12.6	8.0	4.8	3.2	
04	A H Z	15.14	29.1	0.6	+	+	+	8.0	7.3	3.2	3.0	
04	A H Z	15.28	05.0	0.5	+	+	+	13.1	5.6	2.7	3.0	
04	A H Z	22.27	52.5	0.5	+	+	+	10.6	9.6	3.6	3.2	
05	A H Z	03.36	25.2	0.9	+	+	+	5.8	9.0	4.5	3.3	
05	A H Z	06.17	50.2	0.6	-	-	-	2.2	2.0	4.3	2.6	
05	A H Z	07.10	12.2	0.5	-	-	+	10.2	9.4	3.4	2.9	
05	A H Z	11.23	08.5	0.6	-	-	+	4.9	3.8	3.9	2.8	
06	A H Z	00.42	59.1	0.6	+	+	+	0.7	1.5	3.4	2.3	
06	A H Z	04.23	53.9	0.9	+	+	+	3.8	2.2	1.1	2.0	
06	A H Z	04.55	47.3	0.6	-	-	+	7.5	4.4	12.6	9.8	
06	A H Z	09.39	22.2	1.5	+	+	+	2.6	2.2	7.9	3.1	
06	A H Z	20.40	48.3	1.0	-	-	-	2.3	4.0	2.3	2.6	
06	A H Z	21.31	21.9	0.9	+	+	+	1.3	1.5	2.6	3.0	
06	A H Z	22.18	12.2	0.9	-	-	+	22.0	1.7	24.6	1.1	
07	A H Z	02.05	42.5	0.9	-	-	+	4.7	3.2	6.8	12.5	
07	A H Z	07.37	42.6	0.6	+	+	+	4.0	2.2	5.0	5.0	
07	A H Z	09.57	11.5	0.7	+	+	+	4.0	1.9	2.6	4.0	
07	A H Z	18.21	08.6	1.5	+	+	+	2.8	1.6	0.6	0.6	
07	A H Z	19.30	30.4	0.7	+	+	-	43.4	26.3	5.8	5.0	
07	A H Z	23.51	52.7	0.5	+	+	+	2.5	1.4	3.6	3.5	
08	A H Z	00.12	18.0	0.4	+	+	+	3.8	2.0	1.0	2.1	
08	A H Z	00.17	50.4	0.5	+	-	-	8.0	4.6	1.6	2.1	
08	A H Z	08.15	24.3	1.2	-	-	+	1.1	1.2	2.0	3.0	
08	A H Z	09.24	58.1	1.4	-	-	+	8.3	7.6	16.0	11.0	
08	A H Z	18.49	47.3	0.5	+	+	+	1.5	1.6	2.6	3.0	
08	A H Z	19.28	56.2	0.5	+	+	+	72.0	40.0	28.0	31.0	
08	A H Z	19.36	56.8	1.0	+	+	+	3.9	8.1	1.4	1.2	
08	A H Z	20.50	02.2	0.5	+	+	+	20.0	17.3	3.3	3.0	
08	A H Z	21.51	04.9	0.5	+	-	-	4.0	3.2	4.9	6.6	
08	A H Z	21.52	59.8	0.8	-	-	-	2.6	3.4	0.3	0.3	
08	A H Z	00.52	53.4	0.3	+	+	+	21.0	10.3	3.6	1.8	
08	A H Z	06.56	17.7	0.5	-	-	+	4.0	2.1	4.4	4.2	
08	A H Z	09.13	15.3	0.9	+	+	+	12.6	6.2	5.8	16.0	
08	A H Z	14.30	01.2	1.4	+	+	+	1.2	1.4	6.8	7.4	
08	A H Z	14.30	09.9	1.2	+	+	+	0.9	1.8	5.5	4.6	
08	A H Z	18.22	32.2	0.6	-	-	-	10.4	7.4	9.6	13.2	
08	A H Z	18.23	14.7	0.7	+	+	+	7.9	3.4	1.6	3.6	
08	A H Z	21.56	54.8	0.9	+	+	+	6.7	4.0	4.1	5.4	
08	A H Z	22.59	53.0	1.0	-	-	+	0.6	0.9	3.4	4.0	
08	A H Z	23.07	56.6	0.7	+	+	+	8.5	7.5	5.4	7.4	
08	A H Z	04.21	58.3	1.0	-	-	+	7.4	7.7	9.4	9.8	
08	A H Z	05.03	13.6	1.6	+	-	-	1.6	1.1	1.8	2.9	
08	A H Z	05.03	14.2	1.7	+	+	+	1.8	2.9	0.3	0.2	
08	A H Z	06.45	10.8	0.6	-	-	-	8.0	7.4	12.2	12.4	
08	A H Z	07.03	45.5	0.8	-	-	-	23.0	29.0	18.0	33.0	
08	A H Z	07.03	46.3	1.1	+	+	+	35.0	42.0			

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date		P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude
10	A	07.04	08.6	0.7	+		+		2.0	1.4	2.2	2.8
	H	07.04	08.8	1.0					1.7	3.3		
	Z	07.04	08.6	0.4	+		+		4.3	2.9		
	A	13.03	11.7	0.9		-	+		5.1	2.5	5.9	3.1
	H	13.03	11.9	0.9					5.2	10.3		
	Z	13.03	12.3	1.0					0.8	0.4		
	A	14.51	31.1	0.7		+	+		10.4	4.2	4.5	3.3
	H	14.51	31.5	0.9					7.1	15.8		
	Z	14.51	31.8	1.0	+		+		1.1	0.7		
	A	14.52	53.9	0.5		+	+		8.0	5.4	3.2	3.0
	H	14.52		0.9					5.0	3.4		
	Z	14.52	53.7	1.0					0.5	0.3		
	A	18.18	40.5	0.8					5.5	3.0	3.3	3.1
	H	18.18	41.5	1.1					2.7	2.7		
	Z	18.18	40.4	0.5					2.4	1.6		
	A	19.08	21.9	1.0		-			1.8	1.4	6.3	2.5
	H	19.08	22.2	1.0	+		+		2.2	4.6		
	Z	19.08	22.4	1.0					0.3	0.3		
	A	20.11	53.4	1.3		-			4.8	6.4	3.7	3.1
	H	20.11	54.1	0.7					3.5	2.0		
	Z	20.11	53.1	0.5	+				7.7	6.5		
	A	23.35	34.4	1.0					4.2	3.6	5.1	3.1
	H	23.35	35.4	1.3					3.0	2.8		
	Z	23.35	34.5	0.7					0.5	1.4		
	A	00.38	06.9	1.0	+	-	+		1.4	1.4	6.8	2.7
	H	00.38	07.3	1.1					1.6	2.0		
	Z	00.38	07.4	1.1					0.5	0.3		
	A	02.05	05.4	1.1		-	+		6.8	7.0	5.2	3.7
	H	02.05	05.2	0.9					10.2	9.2		
	Z	02.05	05.7	0.9					3.2	1.4		
	A	05.24	03.4						4.2	3.6	3.1	14
	H	05.24	03.8						3.4	4.8		
	Z	05.24	03.9						0.7	2.5		
	A	12.51	45.8	1.0		-			6.0	3.4	5.1	3.2
	H	12.51	47.2	0.9					2.4	4.8		
	Z	12.51	46.7	0.8					1.0	1.2		
	A	00.59	20.6	1.0					3.1	5.2	4.8	3.5
	H	00.59	20.4	0.7					19.0	19.2		
	Z	00.59	20.6	0.9					2.3	2.0		
	A	01.43	15.2	1.0					4.7	3.1	3.7	3.2
	H	01.43	16.1	1.3					4.2	4.6		
	Z	01.43	14.9	0.6					1.1	2.3		
	A	05.11	38.8	0.5	+				7.3	4.0	3.6	3.1
	H	05.11	40.3	1.0	+				3.2	4.1		
	Z	05.11	39.4	0.7					1.6	0.9		
	A	08.54	54.1	0.8	+				20.8	8.0	5.4	3.8
	H	08.54	55.2	1.0					2.6	3.8		
	Z	08.54	54.6	0.9					2.1	1.2		
	A	10.44	29.1	1.0		-	+		0.8	1.2	5.4	2.6
	H	10.44	29.4	0.8					3.4	4.3		
	Z	10.44	29.2	1.0					0.4	0.3		
	A	11.16	49.7	0.4	+	+	+		10.4	4.6	1.0	3.3
	H	11.16	50.7	1.1	+	+	+		7.0	3.4		
	Z	11.16	49.6	0.5					6.3	5.7		
	A	13.14	40.8	1.0					1.0	1.0	6.6	2.9
	H	13.14	41.1	1.0					2.6	4.2		
	Z	13.14	41.0	1.0					0.2	0.2		
	A	13.24	30.7	0.8		-	+		14.4	4.4	4.7	3.5
	H	13.24	30.9	0.8					5.5	6.7		
	Z	13.24	31.0	0.9					0.4	1.2		
	A	17.38	23.4	0.6	+				3.2	4.3	1.5	2.7
	H	17.38	23.9	0.4					0.6	0.9		
	Z	17.38	23.7	0.7					1.6	2.4		
	A	19.34	44.6	1.7					3.0	3.1	6.4	3.6
	H	19.34	45.1	1.7					3.0	1.3		
	Z	19.34	44.3	1.2								
	A	20.46	43.9	1.0		-			3.0	2.1	4.3	2.8
	H	20.46	43.6	0.6					3.8	7.6		
	Z	20.46	44.4	1.1					0.4	0.2		
	A	01.53	14.3	0.6	+				7.5	7.3	4.1	2.7
	H	01.53	15.4	1.1					2.0	2.9		
	Z	01.53	14.8	0.7					0.3	0.3		
	A	05.00	40.2	0.7	+	+			1.6	1.2	3.3	2.5
	H	05.00	40.7	1.1					1.8	3.8		
	Z	05.00	39.9	0.5					0.5	1.0		

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
		h	m	s		E	N	U	E-W	N-S			
16	A	02.20	05.7	1.1				0.4	0.8		3.2	2.8	
	H	02.20	05.9	0.9				3.8	2.9				
	Z	02.20	05.3	0.7		+	-	2.5	1.2				
16	A	02.38	06.1	1.1				3.3	5.0		5.9	3.1	
	H	02.38	05.8	0.9		+		4.5	6.2				
	Z	02.38	06.4	1.0				0.7	0.4				
16	A	02.49	06.2	1.3				1.0	1.8		0.2	2.7	
	H	02.49	06.2	0.7				5.8	9.0				
	Z	02.49	06.6	1.0				0.4	0.4				
16	A	05.05	45.3	1.2				3.9	2.4		6.5	3.0	
	H	05.05	44.6	1.0				8.4	6.2				
	Z	05.05	45.9	1.4				0.3	0.3				
15	A	13.22	22.2	1.0		+	+	0.5	0.5		1.7	19	
	H	13.22	22.3	1.1				2.4	3.0				
	Z	13.22	21.9	0.6				1.3	1.0				
15	A	13.40	31.8	0.7				1.8	1.4		3.3	2.9	
	H	13.40	32.5	1.1		+	+	1.4	1.4				
	Z	13.40	31.9	0.5				3.3	2.3				
15	A	13.46	36.4	0.5	+			5.4	3.3		3.2	2.7	
	H	13.46	36.6	0.8				2.4	2.4				
	Z	13.46	36.8	0.7	+			0.4	0.7				
15	A	13.50	24.1	1.7				0.4	0.6		7.5	2.9	
	H	13.50	24.5	1.8				0.6	0.5				
	Z	13.50	24.3	1.3				1.0	0.5				
15	A	19.31	46.3	1.1	+			1.0	1.4		2.7	20	
	H	19.31	47.1	1.3				1.3	1.0				
	Z	19.31	46.4	1.0	+			2.0	1.6				
16	A	05.47	56.7	0.8	+	+		7.0	4.1		2.9	3.4	
	H	05.47	57.4	1.1	+			12.3	9.0				
	Z	05.47	56.4	0.5				5.4	4.1				
16	A	14.01	24.7	0.7		-		0.6	1.2		3.0	2.8	
	H	14.01	25.2	0.9				3.2	2.3				
	Z	14.01	24.8	0.5				4.0	2.0				
16	A	14.11	57.4	0.6	+	+		12.4	18.0		4.0	3.5	
	H	14.11	58.7	1.1	+			4.5	5.1				
	Z	14.11	58.5	0.7	+			1.8	1.7				
17	A	04.09	52.5	1.2		-		3.8	4.5		6.9	3.6	
	H	04.09	52.1	1.0				12.1	7.4				
	Z	04.09	52.7	1.2	+			2.6	1.0				
17	A	10.21	48.2	0.8				4.3	4.7		3.7	2.6	
	H	10.21	48.6	0.9				1.6	0.9				
	Z	10.21	48.2	0.6	+			6.0	4.1				

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Mar. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
22	A	06.06	35.4	1.0	-	+	-	1.6			2.2	3.0	
	H	06.06	35.3	1.0	-	+	-	6.4	6.3				
	Z	06.06	34.9	0.5				5.0	1.4				
22	A	06.38	42.9	1.0	-	-	-	3.0			3.8	3.5	
	H	06.38	42.9	1.0				7.4	8.0				
	Z	06.38	42.6	0.6				3.6	6.4				
22	A	07.15	33.5	1.0	+			3.1			6.3	3.2	
	H	07.15	33.6	1.0				6.7	8.0				
	Z	07.15	33.8	1.0				1.3	0.8				
22	A	07.59	51.3	0.8	+	-	-	59.3					
	H	07.59	51.9	1.1				13.2	17.5		5.9	4.3	
	Z	07.59	52.1	1.0				2.2	3.6				
22	A	14.54	24.9	0.7	+	+	+	10.3	5.6		4.4	3.1	
	H	14.54	25.6	0.9				4.6	6.9				
	Z	14.54	25.5	0.7				0.8	0.5				
22	A	17.11	27.7	0.7	+	+	+	2.8	2.0				
	H	17.11	28.3	1.1				3.9	5.0		3.2	3.0	
	Z	17.11	27.7	0.5				0.8	2.6				
22	A	20.01	14.1	0.8	+	-	+	2.4	2.0				
	H	20.01	14.3	0.9				2.8	3.2		3.7	3.3	
	Z	20.01	13.8	0.6				7.8	4.5				
22	A	22.34	54.8	1.0	-	-	+	2.6					
	H	22.34	54.8	1.0				11.3	12.8		3.9	3.2	
	Z	22.34	54.8	0.6				3.0	3.2				
23	A	01.54	02.2	0.4	-	-	+	3.6					
	H	01.54	02.4	0.8				4.0	3.9		1.2	2.8	
	Z	01.54	01.9	0.3				4.8	2.4				
23	A	06.42	20.8	0.8	-	-	+	9.2					
	H	06.42	20.4	0.8				14.7	17.0		5.0	3.4	
	Z	06.42	20.9	0.9				1.4	1.5				
23	A	09.08	26.5	1.0	+	+	+	3.4					
	H	09.08	26.1	1.0				7.0	8.6		6.4	3.3	
	Z	09.08	26.5	1.0				1.2	1.0				
23	A	13.24	54.7	0.5	+	+	+	29.0	13.4				
	H	13.24	55.1	1.0				10.0	14.6		3.5	4.1	
	Z	13.24	55.1	0.7				9.6	6.0				
23	A	15.05	52.6	0.8	-	-	+	3.6	2.3				
	H	15.05	52.7	0.8				2.4	1.9		2.3	3.1	
	Z	15.05	52.3	0.4				4.2	3.7				
23	A	16.25	11.3	0.8	-	-	+	4.4	4.4				
	H	16.25	11.5	0.9				3.7	5.8		4.5	3.0	
	Z	16.25	11.3	0.7				1.1	0.6				
23	A	17.30	45.4	0.9	-	-	+	3.7	6.1				
	H	17.30	45.1	0.9				6.8	13.2		5.8	3.2	
	Z	17.30	45.3	0.9				1.0	0.8				
23	A	19.37	38.0	0.9	+	-	+	1.4	0.5				
	H	19.37	37.7	0.9				1.4	1.0		2.2	2.9	
	Z	19.37	37.5	0.4				3.2	4.0				
23	A	22.36	32.4	1.0	-	-	+	9.6	10.0				
	H	22.36	31.8	0.8				13.7	16.7		5.6	3.8	
	Z	22.36	32.1	1.0				3.2	2.6				
24	A	00.57	57.7	0.9	-	-	+	1.1	1.2				
	H	00.57	57.2	0.9				1.7	0.9		2.6		
	Z	00.57	57.2	0.9				2.4	2.1				
24	A	05.33	30.6	1.2	+	+	+	1.9	2.1				
	H	05.33	30.1	1.1				7.6	5.0		2.9	3.3	
	Z	05.33	29.8	0.7				3.5	3.2				
24	A	07.57	56.7	0.9	+	-	+	3.5	3.0				
	H	07.57	56.7	0.7				3.9	5.6		3.1		
	Z	07.57	56.4	0.5				3.2	2.4				
24	A	12.43	32.0	0.9	+	-	+	1.0	1.8				
	H	12.43	31.9	0.7				2.4	2.3		2.9		
	Z	12.43	31.7	0.5				2.4	1.4				
24	A	13.38	05.2	0.8	+	-	+	0.8	0.4				
	H	13.38	05.0	0.8				1.6	0.6		2.6		
	Z	13.38	04.3	0.3				4.3	3.4				
24	A	14.03	49.4	0.8	+	+	+	11.8	10.3				
	H	14.03	49.3	1.0				11.9	14.3		5.7	4.1	
	Z	14.03	49.6	1.0				10.6	5.4				
24	A	23.29	48.0	0.9	-	-	+						
	H	23.29	48.2	1.1				1.1	0.8		5.4	2.9	
	Z	23.29	48.0	0.7				1.8	1.1				
25	A	00.42	29.0	1.0	+	+	+	10.1	18.2				
	H	00.42	27.5	0.9							5.4	3.4	
	Z	00.42	28.1	0.9				3.2	1.4				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Mar. 1966 - Apr. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
30	A	04.16	53.1	0.9	-	+	+	19.7					
	H	04.16	52.6	0.8				26.0	39.1		5.1	4.1	
	Z	04.16	53.4	0.9				5.8	3.3				
30	A	05.53	19.2	0.9	-	-	-	10.0					
	H	05.53	17.5	0.3				36.4	28.1		2.2	3.1	
	Z	05.53	18.6	1.0				0.3	0.3				
30	A	08.39	26.1	0.9	-	-	+	13.2					
	H	08.39	25.9	0.9				18.0	34.5		5.6	4.0	
	Z	08.39	26.3	1.0				5.7	3.6				
30	A	14.35	22.2	0.9	+	-	+	21.0	12.0				
	H	14.35	22.5	1.0				14.6	24.9		5.5	3.8	
	Z	14.35	22.3	0.8				19.6	21.3				
30	A	16.57	48.3	0.6	+	+	+	8.9	11.0				
	H	16.57	48.7	0.5				15.9	28.3		0.7	2.8	
	Z	16.57	48.9	0.5				0.6	0.3				
30	A	17.04	58.7	0.7	+	-	-	1.9	1.2				
	H	17.04	59.2	1.0				4.4	4.9		3.6	3.1	
	Z	17.04	58.6	0.5				4.5	6.8				
30	A	17.27	37.0	0.9	+	-	+	3.9	4.3				
	H	17.27	37.1	0.8				9.0	9.3		1.8	3.6	
	Z	17.27	37.2	0.5				11.0	7.0				
30	A	17.29	36.6	0.9	+	-	+	1.6	1.5				
	H	17.29	36.7	0.8				5.3	5.6		2.1	3.1	
	Z	17.29	36.4	0.5				5.3	3.0				
30	A	17.29	54.3	0.9	-	-	+	2.7	1.8				
	H	17.29	54.5	0.9				4.8	3.0		2.9	3.0	
	Z	17.29	54.4	0.5				2.0	1.6				
30	A	21.05	02.5	1.0	+	+	+	12.5	3.4				
	H	21.05	05.2	1.3				2.0	1.8		6.7	3.9	
	Z	21.05	02.6	1.0				2.0	4.1				
30	A	21.34	53.7	0.5	-	-	-	8.6	6.3				
	H	21.34	54.6	0.9				4.5	7.0		2.0	3.2	
	Z	21.34	53.6	0.4				4.0	3.1				
30	A	23.21	44.0	1.0	-	-	-	2.4	1.4				
	H	23.21	44.1	0.7				7.2	10.6		3.9	3.0	
	Z	23.21	43.7	0.8				0.6	1.2				
31	A	02.08	42.0	1.1	+	-	+	23.4	6.0				
	H	02.08	42.8	1.3				4.8	6.8		4.9	4.3	
	Z	02.08	42.3	0.7				11.2	9.1				
31	A	05.00	17.1	1.0	+	-	+	8.4					

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
01	A	23.33	32.1	1.0				1.8	1.8	0	3.0	
	H	23.33	32.3	0.9				7.7	8.0			
	Z	23.33	31.8	0.5				1.6	2.7			
01	A	23.43	09.0	1.1				3.2	3.1	3.1	3.4	
	H	23.43	09.4	1.0				10.6	9.7			
	Z	23.43	09.0	0.7				2.2	3.7			
02	A	00.41	44.6	0.8				9.3	15.4	2.1	3.9	
	H	00.41	44.9	1.0				5.6	10.8			
	Z	00.41	44.4	0.3				15.6	10.8			
02	A	00.42	10.1	0.7				1.7	1.9	1.7	2.7	
	H	00.42	10.7	0.8				2.0	3.1			
	Z	00.42	10.0	0.3				3.0	3.2			
02	A	05.32	39.7	0.8				2.6	2.8	2.7	3.4	
	H	05.32	40.0	1.0				20.2	14.2			
	Z	05.32	39.5	0.4				10.4	8.0			
02	A	05.33	21.2	0.8				1.9	1.9	1.4	2.7	
	H	05.33	21.6	0.9				3.9	2.9			
	Z	05.33	20.9	0.3				2.4	2.1			
02	A	05.44	13.7	0.8				5.4	6.7	2.8	3.9	
	H	05.44	14.1	1.0				7.0	6.2			
	Z	05.44	13.6	0.4				22.2	20.6			
02	A	06.02	32.8	0.8				4.0		2.7	2.9	
	H	06.02	33.2	0.9				6.0	3.2			
	Z	06.02	32.6	0.4				1.4	2.1			
02	A	06.02	39.6	0.8				18.4		3.0	4.2	
	H	06.02	40.0	1.1				33.0				
	Z	06.02	39.5	0.4				28.4	23.0			
02	A	06.09	26.8	0.8				12.1		3.3	3.9	
	H	06.09	27.4	1.1				16.6				
	Z	06.09	26.7	0.5				10.1	8.0			
02	A	06.35	01.7	0.9				3.6		3.2	3.3	
	H	06.35	01.5	1.0				7.4	8.6			
	Z	06.35	01.8	0.5				4.3	4.6			
02	A	11.39	24.8	0.8				4.2	5.4	2.4	3.4	
	H	11.39	25.2	0.9				5.6	8.0			
	Z	11.39	24.9	0.4				5.2	3.3			
02	A	12.10	03.4	0.9				4.6	5.4	4.2	3.7	
	H	12.10	03.7	1.0				16.5				
	Z	12.10	03.5	0.6				8.0	6.2			
02	A	13.31	40.7	0.9				7.8		4.6	3.7	
	H	13.31	41.2	1.0				9.3	13.1			
	Z	13.31	40.8	0.7				5.5	5.7			
02	A	13.33	30.4	1.5				2.4		3.4	3.4	
	H	13.33	31.0	1.0				5.2	10.2			
	Z	13.33	29.3	1.0				2.4	2.6			
02	A	13.50	57.7	0.8				3.8		3.4	3.1	
	H	13.50	58.4	0.9				6.6	12.6			
	Z	13.50	57.7	0.5				2.0	3.0			
02	A	14.33	58.9	0.9				2.7		5.3	3.2	
	H	14.34	00.1	1.2				1.6	2.0			
	Z	14.33	59.6	0.8				1.5	2.8			
02	A	14.55	58.7	1.0				1.5		2.9	2.8	
	H	14.55	59.1	1.0				4.5	5.2			
	Z	14.55	58.8	0.6				1.3	1.6			
02	A	14.58	48.0	0.9				2.7		4.2	3.3	
	H	14.58	48.4	1.0				7.0	6.4			
	Z	14.58	47.8	0.6				4.3	2.5			
02	A	15.18	08.2	0.8				3.2		2.6	3.3	
	H	15.18	09.2	1.2				3.0	3.9			
	Z	15.18	08.6	0.5				7.4	5.4			
02	A	15.36	18.2	0.8				2.6		4.6	3.2	
	H	15.36	18.5	1.3				6.8	6.2			
	Z	15.36	17.6	0.8				3.1	1.7			
02	A	16.58	40.0	1.1				0.8	0.8	3.0	04	
	H	16.58	40.2	1.0				5.4	3.8			
	Z	16.58	39.6	0.8				5.7	2.1			
02	A	18.52	23.1	0.8				2.4	2.8	0	3.0	
	H	18.52	23.4	0.9				3.2	2.2			
	Z	18.52	22.7	0.4				5.1	3.2			
03	A	00.09	29.7	1.0				2.4	2.0	4.1	3.1	
	H	00.09	29.6	1.0				6.7	5.9			
	Z	00.09	29.5	0.6				3.1	3.0			
03	A	01.59	57.3	0.6				46.2	8.8	4.3	4.4	
	H	01.59	58.5	1.1				13.6	10.2			
	Z	01.59	58.0	0.8				20.1	7.0			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
04	A	04.52	01.2	0.6				10.4		3.9	3.3	
	H	04.52	02.4	1.0				4.5	2.2			
	Z	04.52	02.2	0.7				1.3	1.8			
04	A	05.33	44.0	1.0				10.4		6.4	3.7	
	H	05.33	43.5	1.0				9.0	13.0			
	Z	05.33	44.2	1.0				2.0	1.4			
04	A	06.14	03.9	0.8				2.5	2.2	4.8	2.9	
	H	06.14	04.7	1.1				3.7	3.4			
	Z	06.14	04.3	0.7				1.3	1.2			
04	A	06.42	36.8	1.1				0.7	0.7	1.4	2.7	
	H	06.42	37.1	1.0				3.5	1.4			
	Z	06.42	36.7	0.6				2.4	2.2			
04	A	07.06	46.2	0.9				1.0	0.8	2.7	2.6	
	H	07.06	46.6	0.9				3.0	4.8			
	Z	07.06	46.0	0.5				1.6	1.0			
04	A	07.29	16.1	0.8				4.8	3.3	3.4	3.0	
	H	07.29	17.1	0.9				3.4	1.8			
	Z	07.29	17.1	0.5				1.9	1.4			
04	A	09.04	31.8	1.1				4.2	2.9	4.0	3.5	
	H	09.04	32.4	1.0				7.0	11.8			
	Z	09.04	32.1	0.7				4.7	3.4			
04	A	11.12	01.7	1.1				12.2	5.1	3.9	3.7	
	H	11.12	02.1	1.0				7.2	14.4			
	Z	11.12	02.3	1.0				3.5	2.2			
04	A	11.31	12.5	0.7				2.7	1.8	3.2	3.1	
	H	11.31	13.0	1.0				3.8	7.1			
	Z	11.31	12.8	0.5				4.8	3.0			
04	A	14.25	33.6	0.8				47.1	11.0	3.5	4.0	
	H	14.25	33.9	1.5				3.3	3.0			
	Z	14.25	34.3	0.9				2.2	1.1			
04	A	14.57	20.9	0.8				0.7	0.7	1.9	2.5	
	H	14.57	21.3	1.0				2.2	1.1			
	Z	14.57	20.8	0.3				2.6	1.4			
04	A	15.20	45.2	1.1				2.7	4.3	4.5	3.3	
	H	15.20	45.1	0.9				14.0	13.7			
	Z	15.20	45.8	0.8				2.0	2.0			
04	A	15.43	33.5	0.7				3.2	4.2	2.0	3.2	
	H	15.43	33.9	0.9				5.2	5.0			
	Z	15.43	33.2	0.3				3.3	6.1			
04	A	20.41	41.0	1.1				3.8	5.4	7.5	3.3	
	H	20.41	41.4	1.1				6.8	13.4			
	Z	20.41	41.8	1.1				0.5	0.8			
04	A	22.11	28.4	0.9				7.6	3.5	4.0	3.5	
	H	22.11	29.6	1.3				5.8	10.4			
	Z	22.11	28.8	0.6				2.6	3.3			
04	A	22.14	48.8	0.8				0.4	0.8	2.5	2.2	
	H	22.14	49.5	1.0				1.4	0.6			
	Z	22.14	48.6	0.4				0.3	0.8			
05	A	00.26	36.6	0.8				12.5	7.0	4.8	3.8	
	H	00.26	38.4	1.0				6.2	4.7			
	Z	00.26	38.0	0.7				5.8	2.7			
05	A	02.39	24.3	1.0				2.4		3.3	05	
	H	02.39	24.6	1.0				2.7	6.2			
	Z	02.39	24.2	1.0				2.7	4.1			
05	A	03.13	34.1	0.7				19.3	4.6	4.9	3.4	
	H	03.13	35.9	1.0				5.7	4.6			
	Z	03.13	36.1	1.1				0.9	1.0			
05	A											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Apr. 1966

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S	N-S		
06	A H Z	09.01	29.1	0.8	-	-	+	6.4	4.3	4.6	4.4	
	A H Z	09.01	28.7	0.8	-	-	-	7.5	20.9			
	A H Z	09.01	29.1	0.8	-	-	-	2.5	1.2			
06	A H Z	11.12	06.8	0.5	-	-	+	3.8	2.8	3.4	2.9	
	A H Z	11.12	06.9	0.9	-	-	+	1.8	1.9			
	A H Z	11.12	06.4	0.7	-	-	+	1.6	1.2			
06	A H Z	11.38	38.5	0.5	+	+	-	24.6		3.4	4.1	
	A H Z	11.38	39.1	1.0	+	+	-	13.5	12.2			
	A H Z	11.38	38.5	0.7	+	+	-	8.6	14.5			
06	A H Z	21.40	45.8	0.5	-	-	+	8.6		3.4	3.4	
	A H Z	21.40	46.7	1.1	-	-	+	2.6	1.8			
	A H Z	21.40	46.2	0.8	-	-	+	3.4	2.8			
06	A H Z	21.55	28.4	1.0	+	+	-	2.2		0.8	3.2	
	A H Z	21.55	29.0	0.9	+	+	-	5.0	5.4			
	A H Z	21.55	28.4	0.5	+	+	-	3.4	2.0			
07	A H Z	00.55	16.8	0.6	-	-	-	1.2		4.0	2.9	
	A H Z	00.55	17.6	0.9	-	-	-	2.9	1.7			
	A H Z	00.55	16.8	0.7	-	-	-	2.0	2.6			
07	A H Z	01.01	37.0	0.8	-	-	+	3.5		3.6	3.4	
	A H Z	01.01	37.7	1.0	-	-	+	4.4	8.1			
	A H Z	01.01	36.8	0.5	-	-	+	3.8	3.8			
07	A H Z	02.46	13.7	0.3	+	+	-	43.9		2.1	3.8	
	A H Z	02.46	14.1	0.8	+	+	-	12.6	11.0			
	A H Z	02.46	14.1	0.8	+	+	-	1.9	2.0			
07	A H Z	03.31	09.4	0.6	-	-	+	7.7		3.7	3.4	
	A H Z	03.31	09.8	1.0	-	-	+	4.7	4.5			
	A H Z	03.31	09.7	0.7	-	-	+	2.9	2.1			
07	A H Z	03.58	38.4	0.7	-	-	+	1.0	1.8	3.5	3.0	
	A H Z	03.58	38.7	1.0	-	-	+	1.8	3.2			
	A H Z	03.58	38.0	0.5	-	-	+	1.1	2.8			
07	A H Z	06.49	32.8	0.7	-	-	+	4.9	9.4	4.2	3.7	
	A H Z	06.49	33.4	0.9	-	-	+	9.2	16.6			
	A H Z	06.49	34.0	1.0	-	-	+	2.2	1.6			
07	A H Z	07.13	27.9		-	-	+	3.5			3.1	
	A H Z	07.13	28.0		-	-	+	7.2	3.3			
	A H Z	07.13	27.4		-	-	+	11.5	11.9			
07	A H Z	08.13	18.6	1.1	+	+	+	23.6		3.9		
	A H Z	08.13	18.4	1.0	+	+	+	19.8	15.8			
	A H Z	08.13	18.9	1.1	+	+	+	4.8	2.9			
07	A H Z	08.25	40.0	0.8	-	-	+	20.8		4.9	4.1	
	A H Z	08.25	40.2	0.9	-	-	+	9.8	13.3			
	A H Z	08.25	40.8	1.1	-	-	+	5.5	3.8			
07	A H Z	08.38	33.6	0.7	-	-	+	10.2		4.5	3.6	
	A H Z	08.38	34.2	0.9	-	-	+	2.6	4.2			
	A H Z	08.38	33.7	0.7	-	-	+	1.6	4.1			
07	A H Z	10.29	06.1	0.4	-	-	+	2.7		2.5	3.2	
	A H Z	10.29	05.7	0.9	-	-	+	2.6	2.5			
	A H Z	10.29		0.6	-	-	+	4.5	4.6			
07	A H Z	12.10	42.9	0.8	-	-	+	8.3	9.5	5.0	3.7	
	A H Z	12.10	41.8	0.8	-	-	+	15.8	5.7			
	A H Z	12.10	43.4	1.0	-	-	+	2.5	1.6			
07	A H Z	12.41	54.4	0.6	-	-	+	1.7		3.4	3.7	
	A H Z	12.41	53.4	0.7	-	-	+	7.0	9.1			
	A H Z	12.41	54.7	0.9	-	-	+	2.4	0.8			
07	A H Z	14.31	02.4	0.8	-	-	+	8.8		5.0	3.7	
	A H Z	14.31	01.4	0.8	-	-	+	5.8	8.6			
	A H Z	14.31	02.8	0.9	-	-	+	3.2	1.6			
07	A H Z	18.05	21.7	0.8	-	-	+	3.3		3.3	3.6	
	A H Z	18.05	20.7	0.9	-	-	+	11.7	12.6			
	A H Z	18.05	21.6	0.5	-	-	+	5.0	3.4			
07	A H Z	18.08		0.8	-	-	+	0.8		1.8	2.6	
	A H Z	18.08	04.8	0.8	-	-	+	2.0	2.6			
	A H Z	18.08	05.5	0.4	-	-	+	2.3	0.8			
07	A H Z	18.16	16.1	0.9	-	-	+	1.5		3.2	3.4	
	A H Z	18.16	15.2	0.8	-	-	+	9.1	12.0			
	A H Z	18.16	15.9	0.6	-	-	+	4.2	3.4			
07	A H Z	19.26	12.9	0.8	-	-	+	1.5		4.2	3.4	
	A H Z	19.26	12.0	0.9	-	-	+	7.6	10.0			
	A H Z	19.26	12.5	0.6	-	-	+	2.8	4.3			
08	A H Z	00.47	00.2	0.6	-	-	+	9.5		3.5	3.8	
	A H Z	00.46	59.9	1.0	-	-	+	17.2	1.6			
	A H Z	00.47	00.4	1.1	-	-	+	2.4	1.6			
08	A H Z	04.10	36.0	0.4	-	-	+	9.1		2.5	3.3	
	A H Z	04.10	35.9	1.0	-	-	+	6.1	5.3			
	A H Z	04.10	36.7	0.6	-	-	+	3.0	1.0			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S	N-S		
09	A H Z	11.24	28.3	0.7	-	-	+	4.8	6.8		3.7	
	A H Z	11.24	29.1	0.6	-	-	+	11.1	11.6			
	A H Z	11.24	28.3	0.4	-	-	+	9.6	20.3			
09	A H Z	11.28	48.4	0.5	-	-	+	3.2	8.0		3.4	
	A H Z	11.28	48.5	0.6	-	-	+	8.0	8.8			
	A H Z	11.28	48.1	0.4	-	-	+	12.2	10.2			
09	A H Z	12.35	02.5	1.1	-	-	+	1.6		6.5	3.3	
	A H Z	12.35	02.4	1.0	-	-	+	3.8	6.1			
	A H Z	12.35	02.4	1.0	-	-	+	2.5	2.4			
09	A H Z	13.24	45.9	0.6	-	-	+	1.0	2.2	2.3	3.0	
	A H Z	13.24	45.9	0.8	-	-	+	2.4	2.0			
	A H Z	13.24	45.3	0.4	-	-	+	5.8	4.4			
09	A H Z	17.19	30.4	0.7	-	-	+	3.3	2.6		3.0	
	A H Z	17.19	30.3	0.7	-	-	+	7.6	5.2			
	A H Z	17.19	29.4	0.5	-	-	+	16.3	12.6			
09	A H Z	17.32	15.2	0.8	-	-	+	1.9	2.1	3.3	3.3	
	A H Z	17.32	15.4	0.9	-	-	+	3.8	7.4			
	A H Z	17.32	14.9	0.5	-	-	+	3.6	2.1			
09	A H Z	19.14	34.9	0.7	-	-	+	0.6	0.7	1.4	2.5	
	A H Z	19.14	34.9	0.9	-	-	+	2.5	1.7			
	A H Z	19.14	34.0	0.3	-	-	+	3.0	0.9			
09	A H Z	20.23	45.6	0.9	-	-	+	2.5	4.8	5.5	3.5	
	A H Z	20.23	45.5	0.9	-	-	+	7.8	9.0			
	A H Z	20.23	45.8	1.0	-	-	+	1.6	1.0			
09	A H Z	21.46	04.3	0.8	-	-	+	6.2	8.1	5.5	3.7	
	A H Z	21.46	04.4	1.0	-	-	+	8.4	5.8			
	A H Z	21.46	04.7	1.1	-	-	+	1.9	0.6			
09	A H Z	23.15	59.6	0.5	-	-	+	26.6	45.6	3.3	4.1	
	A H Z	23.16	00.1	0.7	-	-	+	4.0	2.2			
	A H Z	23.16	00.2	0.9	-	-	+	1.5	1.4			
10	A H Z	02.49	13.4	0.7	-	-	+	5.0	3.5	3.0	3.0	
	A H Z	02.49	13.7	0.9	-	-	+	2.0	4.0			
	A H Z	02.49	13.1	0.5	-	-	+	1.0	0.8			
10	A H Z	03.06	00.7	0.8	-	-	+	7.6	5.3	3.1	2.9	
	A H Z	03.06	00.7	0.8	-	-	+	3.1	2.0			
	A H Z	03.06	00.1	0.5	-	-	+	14.4	8.2			
10	A H Z	06.02	27.7	0.5	-	-	+	3.0	6.0	2.9	3.8	
	A H Z	06.02	28.5	1.2	-	-	+	7.7	6.1			
	A H Z	06.02	27.9	0.7	-	-	+	9.6	3.7			
10	A H Z	06.54	55.6	0.7	-	-	+	10.3	19.3	4.4	3.9	
	A H Z	06.54	55.3	0.8	-	-	+	3.4	1.8			
	A H Z	06.54	55.6	0.9	-	-	+	1.2	1.5			
10	A H Z	09.28	21.2	0.8	-	-	+	1.6	3.4	4.8	3.1	
	A H Z	09.28	21.3	1.1	-	-	+	1.6	3.4			
	A H Z	09.28	20.5	0.								

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
12	A H Z	14.05	58.7	0.5	-	+		9.8	6.6	3.6	3.7	
12	A H Z	14.16	58.0	0.9	-	+		15.0	9.0	6.0	4.0	
12	A H Z	17.50	59.2	1.0	+	+		5.7	14.4	6.3	3.9	
12	A H Z	19.53	49.9	0.5	-	+		72.1	41.9	3.0	4.3	
12	A H Z	20.24	02.7	0.6	-	+		9.1	11.7	3.4	3.7	
12	A H Z	20.55	00.4	1.3	+	+		1.7	2.7	6.8	3.3	
12	A H Z	23.15	33.8	1.0	-	-		10.6	13.8			
12	A H Z	23.59	58.4	0.7	+	+		8.3	4.8	3.3	4.2	
13	A H Z	00.00	19.3	0.7	-	-		2.6	2.0	2.9	2.8	
13	A H Z	01.13	03.7	0.5	-	-		4.3	4.2	2.8	3.4	
13	A H Z	01.15	37.2	0.6				1.0	0.8	2.0		
13	A H Z	01.32	26.7	0.7	-	+		4.3	3.5	3.3	3.9	
13	A H Z	01.33	27.4	0.5				0.8	0.7	2.5	2.6	
13	A H Z	01.35	26.5	0.5	-	+		2.0	5.6		3.1	
13	A H Z	04.50	58.3	0.5	-	-		1.6	1.1	2.5	3.2	
13	A H Z	05.37	03.3	0.7	-	+		3.2	3.1	3.3	3.4	
13	A H Z	09.00	26.1	0.6	-	+		9.8	15.6	4.1	3.6	
13	A H Z	11.15	05.4	0.7	-	-		0.8	0.6	3.3	2.3	
13	A H Z	11.33	36.7	0.5	-	-		10.6	6.1	3.1	3.1	
13	A H Z	12.19	52.6	0.7	+	-		14.9	11.8	4.5	3.3	
13	A H Z	13.34	49.5	1.0	-	-		13.1	21.5	4.9	3.8	
13	A H Z	13.35	22.7	0.6	-	+		25.1	10.2	4.2	3.6	
13	A H Z	13.40	08.9	0.7	-	+		11.1	8.4	4.4	3.2	
13	A H Z	13.40	52.6	0.9	-	+		4.8	7.6	4.4	2.9	
13	A H Z	13.44	10.6	0.7	-	+		45.1	39.8	5.0	4.3	

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
14	A H Z	14.51	08.2	1.1	-	+		3.2	3.6	5.3	3.0	
14	A H Z	15.31	40.1	1.0	-	+		2.4	3.0	4.3	2.5	
14	A H Z	15.38	31.2	1.3	-	-		2.8	6.4	2.9	15	
14	A H Z	16.12	50.4	0.9	-	+		5.8	8.6	3.0	15	
14	A H Z	17.05	51.4	0.8	+	+		10.5		5.4	3.4	
14	A H Z	17.25	59.5	0.8	+	-		6.7	9.1	4.2	3.7	
14	A H Z	18.12	41.2	1.1	-	+		2.6	2.0	4.4	3.3	
14	A H Z	18.26	09.7	0.8	+	+		0.6	1.0	3.6	2.5	
14	A H Z	18.50	52.5	0.7	+	-		4.4	5.2	2.6	2.8	
14	A H Z	19.26	45.3	0.6	-	-		16.7	18.2	2.6	4.1	
14	A H Z	19.41	33.6	0.7	+	+		16.9	11.2	4.6	3.1	
14	A H Z	20.06	19.0	0.9	+	-		11.4	15.6	5.1	3.6	
14	A H Z	01.01	30.7	0.8	-	+		1.7	1.6	5.2	2.6	
14	A H Z	01.02	42.0	1.0	+	-		2.2	2.4	2.8	3.4	
14	A H Z	01.51	51.5	1.0	-	-		0.8	0.7	3.8	2.4	
14	A H Z	02.29	26.6	1.0	+	+		6.8	6.0	6.0	3.1	
14	A H Z	03.50	48.6	0.9	-	-		0.6	1.0	2.7	2.5	
14	A H Z	05.01	25.4	0.7	+	+		16.2	15.2	5.7	3.4	
14	A H Z	05.08	10.0	0.8	+	-		20.4	29.6	3.9	3.2	
14	A H Z	07.27	54.5	0.8	+	+		7.0	5.2	3.6	3.4	
14	A H Z	09.09	09.0	1.1	+	+		59.0	37.0	6.2	4.1	
14	A H Z	10.17	41.8	0.9	+	-		4.8	2.6	5.4	3.1	
14	A H Z	11.45	30.8	0.7	+	+		7.8	4.0	4.7	3.0	
14	A H Z	12.16	49.5	0.6	+	-		2.0	1.9	2.4	2.9	
14	A H Z	13.05	22.9	0.9	-	+		1.2	1.6	5.4	2.8	
14	A H Z	13.46	13.0	1.0	+	+		14.6	6.6	3.0	2.2	

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Apr. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											Initial Motion (mm)		
16	A H Z	15.56	42.4	0.9	+	+		2.1	4.8	2.1	4.1	2.8	
16	A H Z	15.57	36.2	0.9	-	+		2.0	3.9	2.0	3.0	2.8	
16	A H Z	16.00	51.7	0.7	-	+		2.5	2.2	1.6	3.2	2.8	
16	A H Z	16.33	10.7	0.9	-	+		9.8	10.5	6.2	5.0	3.5	
16	A H Z	16.33	10.6	0.8	-	+		1.2	1.6	1.0	4.4	2.3	
16	A H Z	16.33	10.8	0.9	+	-		1.5	1.0	0.2	4.4	2.3	
16	A H Z	17.16	54.8	1.0			+	0.9	9.0	5.2	2.2	1.9	
16	A H Z	17.31	48.2	0.7	-	-		1.3	6.2	2.8	2.7	2.5	
16	A H Z	17.31	48.6	0.9	-	-		2.8	6.2	1.0	2.7	2.5	
16	A H Z	17.31	48.6	0.4	-	-		1.0	1.4	1.0	2.7	2.5	
16	A H Z	18.49	16.3	0.9	-	+		44.4	23.0	6.2	5.0	4.4	
16	A H Z	18.49	17.2	0.8	-	+		23.0	21.5	6.2	5.0	4.4	
16	A H Z	18.49	16.7	0.9	-	+		6.2	4.0	6.2	5.0	4.4	
16	A H Z	19.23	38.9	0.7	-	+		4.8	5.4	3.8	4.1	3.0	
16	A H Z	19.23	39.1	0.7	-	+		5.4	5.4	0.8	4.1	3.0	
16	A H Z	19.23	39.4	0.9	-	+		0.8	0.4	0.8	4.1	3.0	
16	A H Z	19.45	05.6	0.7			+	1.0	1.0	1.8	2.6	2.5	
16	A H Z	19.45	06.3	1.0			+	1.8	1.6	2.0	2.6	2.5	
16	A H Z	19.45	05.3	0.4			+	2.0	1.3	2.0	2.6	2.5	
16	A H Z	20.11	00.0	0.5	+	+		7.4	3.8	3.8	2.9	3.2	
16	A H Z	20.11	01.0	1.2	+	+		3.8	3.4	2.1	2.9	3.2	
16	A H Z	20.11	00.5	0.7	+	+		2.1	1.0	2.1	2.9	3.2	
16	A H Z	20.33	21.6	0.9	-	+		3.2	4.4	4.4	3.8	3.6	
16	A H Z	20.33	21.4	0.6	-	+		4.4	4.4	1.0	3.8	3.6	
16	A H Z	20.33	21.5	0.9	-	+		1.0	0.6	1.0	3.8	3.6	
16	A H Z	20.33	54.4	0.9	-	+		3.6	6.5	6.5	4.1	3.1	
16	A H Z	20.33	54.2	0.7	-	+		12.2	12.2	1.4	4.1	3.1	
16	A H Z	20.33	54.5	0.8	-	+		1.4	0.8	1.4	4.1	3.1	
16	A H Z	21.55	09.7	0.8	-	+		0.6	1.6	4.2	2.5	2.6	
16	A H Z	21.55	09.8	0.9	-	+		1.6	1.0	4.2	2.5	2.6	
16	A H Z	21.55	09.4	0.4	-	+		4.2	3.6	4.2	2.5	2.6	
16	A H Z	22.20	32.1	1.0	-	+		6.6	12.5	19.2	5.4	4.0	
16	A H Z	22.20	32.1	0.9	-	+		19.2	26.2	7.2	5.4	4.0	
16	A H Z	22.20	32.4	0.9	-	+		7.2	7.6	7.2	5.4	4.0	
16	A H Z	22.38	26.4	1.0	-	+		1.0	1.6	10.0	3.6	3.1	
16	A H Z	22.38	26.8	0.9	-	+		10.0	10.8	4.4	3.6	3.1	
16	A H Z	22.38	26.3	0.6	-	+		4.4	4.0	4.4	3.6	3.1	
16	A H Z	23.15	35.4	0.8	-	+		4.6	3.8	4.6	2.4	3.2	
16	A H Z	23.15	35.8	1.0	-	+		10.0	10.0	5.3	2.4	3.2	
16	A H Z	23.15	35.1	0.4	-	+		5.3	5.2	5.3	2.4	3.2	
16	A H Z	23.43	50.6	0.9	+	+		5.1	2.8	2.0	4.8	2.7	
16	A H Z	23.43	51.0	0.7	+	+		2.0	1.0	0.2	4.8	2.7	
16	A H Z	23.43	50.9	0.9	+	+		0.2	0.3	0.2	4.8	2.7	
17	A H Z	01.07	36.4	0.6	+	+		10.7	8.6	1.6	3.8	3.0	
17	A H Z	01.07	37.7	1.1	+	+		1.6	1.8	0.6	3.8	3.0	
17	A H Z	01.07	37.1	0.7	+	+		0.6	0.4	0.6	3.8	3.0	
17	A H Z	01.36	01.6	1.0			+	0.4	1.0	2.8	4.4	2.3	
17	A H Z	01.36	01.7	1.1			+	2.8	2.6	0.2	4.4	2.3	
17	A H Z	01.36	01.8	0.6			+	0.2	0.8	0.2	4.4	2.3	
17	A H Z	01.44	42.9	1.0			+	2.1	4.6	5.9	3.3	3.0	
17	A H Z	01.44	42.8	0.6			+	0.7	0.4	0.7	3.3	3.0	
17	A H Z	01.44	43.2	0.9			+	0.7	0.4	0.7	3.3	3.0	
17	A H Z	02.21	11.5	1.2	-	-	+	6.9	6.8	14.8	6.1	3.9	
17	A H Z	02.21	11.4	1.2	-	-	+	14.8	11.3	3.9	6.1	3.9	
17	A H Z	02.21	11.2	0.9	-	-	+	3.9	6.8	3.9	6.1	3.9	
17	A H Z	02.26	35.8	0.7	+	+		0.9	1.3	3.0	1.9	2.6	
17	A H Z	02.26	36.2	0.9	+	+		1.4	1.4	3.0	1.9	2.6	
17	A H Z	02.26	35.5	0.4	+	+		3.0	1.4	3.0	1.9	2.6	
17	A H Z	03.49	30.6	1.0	+	+		1.8	2.3	10.1	3.5	3.5	
17	A H Z	03.49	30.6	1.0	+	+		10.1	11.6	1.3	3.5	3.5	
17	A H Z	03.49	30.6	0.6	+	+		1.3	1.8	1.3	3.5	3.5	
17	A H Z	03.52	31.6	1.0	+	+		2.5	1.5	0.8	4.1	3.0	
17	A H Z	03.52	31.4	0.7	+	+		0.8	1.0	0.6	4.1	3.0	
17	A H Z	03.52	31.6	0.9	+	+		0.6	1.0	0.6	4.1	3.0	

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Apr. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											Initial Motion (mm)		
17	A H Z	16.13	23.9	1.1			+	2.2	1.4	5.8	0.8	3.2	
17	A H Z	16.13	23.9	0.9			+	5.8	7.4	3.8	2.8	3.2	
17	A H Z	16.13	23.6	0.6			+	3.8	2.8	3.8	2.8	3.2	
17	A H Z	16.14	33.2	1.1	+	+		7.2	5.9	22.5	25.8	3.1	3.9
17	A H Z	16.14	33.5	1.1	-	-		9.5	13.4	9.5	13.4	3.1	3.9
17	A H Z	16.14	33.0	0.6			+	0.5	1.3	4.3	3.6	2.9	
17	A H Z	16.25	59.1	1.0			+	4.3	3.6	2.4	1.5	3.0	2.9
17	A H Z	16.25	59.6	0.9			+	2.4	1.5	2.4	1.5	3.0	2.9
17	A H Z	16.25	58.8	0.9			+	0.2	0.4	2.0	1.4	3.0	2.4
17	A H Z	16.26	09.9	1.0			+	1.5	1.5	1.5	1.5	3.0	2.4
17	A H Z	16.26	10.4	0.9			+	2.0	1.4	2.0	1.4	3.0	2.4
17	A H Z	16.26	09.6	0.6			+	0.8	0.6	0.8	0.6	3.0	2.4
17	A H Z	17.32	47.5	0.6			+	1.8	1.3	3.0	3.4	3.5	2.3
17	A H Z	17.32	48.1	0.9			+	3.0	3.4	0.6	0.3	3.5	2.3
17	A H Z	17.32	47.4	0.6			+	0.6	0.3	0.6	0.3	3.5	2.3
17	A H Z	19.41	03.8	0.9			+	8.3	13.3	2.2	3.4	4.6	3.2
17	A H Z	19.41	04.0	0.9			+	2.2	3.4	0.6	2.0	4.6	3.2
17	A H Z	19.41	04.3	0.7			+	0.6	2.0	0.6	2.0	4.6	3.2
17	A H Z	20.02	53.6	1.1	-	-	+	9.4	14.5	9.0	8.0	5.8	4.4
17	A H Z	20.02	53.3	1.3	-	-	+	9.0	8.0	9.0	8.0	5.8	4.4
17	A H Z	20.28	20.0	0.9	-	-		21.0	28.5	13.0	14.2	2.3	4.2
17	A H Z	20.28	20.5	1.3	-	-		13.0	14.2	S=0	31.5	2.3	4.2
17	A H Z	20.28	19.5	0.4	-	-		2.4	1.6	2.4	1.6	2.3	4.2
17	A H Z	20.55	12.0	1.0	-	-		1.7	1.1	1.7	1.1	1.4	2.7
17	A H Z	20.55	12.7	1.2	-	-		1.2	0.5	1.2	0.5	1.4	2.7
17	A H Z	20.55	11.5	0.4	-	-		1.6	1.3	1.6	1.3	1.4	2.7
17	A H Z	20.57	35.0	0.7			+	2.0	3.5	2.0	3.5	4.1	2.8
17	A H Z	20.57	35.8	1.0			+	0.6	0.8	0.6	0.8	4.1	2.8
17	A H Z	20.57	35.4	0.6			+	0.9	0.8	0.9	0.8	4.1	2.8
17	A H Z	21.50	51.7	0.8			-	1.6	0.6	3.9	3.3	3.6	3.4
17	A H Z	21.50	52.6	0.9			-	3.9	3.3	0.5	0.6	3.6	3.4
17	A H Z	21.50	51.7	0.6			-	0.5	0.6	0.5	0.6	3.6	3.4
17	A H Z	22.33	25.5	0.7			+	1.3	0.8	0.4	0.6	1.3	2.8
17	A H Z	22.33	26.3	1.1			+						

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Apr. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude		
		h	m	s		E	N	U	E-W	N-S					
											h			m	s
19	A	08.21	39.5	0.7	-			1.7	4.1	1.6	3.2	2.0	2.6		
	H	08.21	39.9	0.7				11.0	10.0					3.9	5.8
	Z	08.21	39.5	0.4				5.0	3.0					0.8	0.5
19	A	08.50	45.5	0.9	-			9.2	16.2	5.1	3.7	2.0	3.0		
	H	08.50	45.4	0.8				19.0	19.0					3.4	4.4
	Z	08.50	45.9	0.9				1.2	1.6					2.4	2.8
19	A	09.09	53.7	0.9	-			2.6	1.9	5.5	3.2	2.0	3.2		
	H	09.09	54.5	1.3				1.2	1.2					7.8	15.8
	Z	09.09	54.1	0.8				2.8	0.5					1.0	0.8
19	A	09.17	06.8	0.6	+	+		15.9	18.3	3.7	3.5	2.0	3.7		
	H	09.17	07.3	0.8				7.4	10.8					9.4	5.8
	Z	09.17	07.3	0.9				0.8	1.7					4.2	12.8
19	A	10.25	22.2	0.7	-			1.7	2.2	2.3	2.7	2.0	3.4		
	H	10.25	22.8	0.8				4.4	2.8					6.1	5.7
	Z	10.25	22.0	0.4				1.0	2.2					5.3	10.0
19	A	10.55	57.6	0.5	-	+		6.4	9.1	3.3	3.2	2.0	3.5		
	H	10.55	58.0	0.9				10.2	13.4					12.2	11.3
	Z	10.55	58.0	0.9				1.0	2.2					4.2	3.5
19	A	11.20	22.5	0.6	-			4.6	3.2	3.7	2.8	2.0	3.7		
	H	11.20	23.1	0.8				1.0	1.0					5.6	8.6
	Z	11.20	22.7	0.7				0.8	0.6					4.7	4.0
19	A	11.31	26.6	0.9	-			2.4	1.6	5.3	2.8	2.0	3.1		
	H	11.31	27.1	1.2				2.2	1.2					3.0	4.6
	Z	11.31	26.4	0.8				0.4	0.8					1.0	1.2
19	A	14.48	19.2	1.1	-			2.8	3.5	4.5	3.7	2.0	3.5		
	H	14.48	19.2	0.8				7.8	9.2					4.8	4.7
	Z	14.48	19.2	0.9				7.3	4.3					2.2	1.8
19	A	14.48	33.2	1.1	-			2.2	2.4	1.2	3.2	2.0	2.1		
	H	14.48	33.3	0.7				4.2	6.3					0.8	1.4
	Z	14.48	33.2	0.8				2.5	1.2					0.8	1.3
19	A	15.09	05.5	1.0	+	+		4.0	14.0	16.8	10.8	2.0	2.1		
	H	15.09	05.8	0.8				16.8	10.8					0.7	0.8
	Z	15.09	04.0	1.0				4.8	4.0					16.2	18.9
19	A	16.14	50.5	1.2	+	+		3.6	8.9	7.4	11.2	5.0	4.1		
	H	16.14	50.3	0.8				7.4	11.2					21.2	31.4
	Z	16.14	50.9	1.0				1.0	0.6					11.2	6.5
19	A	16.39	33.4	0.9	+			1.6	2.9	10.3	18.8	4.3	2.9		
	H	16.39	33.5	0.7				10.3	18.8					3.8	4.4
	Z	16.39	33.8	0.8				1.0	1.0					2.7	2.0
19	A	17.46	19.6	0.7	-			4.5	8.0	3.2	2.6	3.5	3.1		
	H	17.46	20.2	1.0				3.2	2.6					3.2	3.0
	Z	17.46	20.1	1.1				0.6	0.5					4.2	2.6
19	A	20.10	33.9	0.8	+	+		50.7	58.0	6.8	7.5	4.6	4.0		
	H	20.10	34.8	0.9				6.8	7.5					4.4	1.8
	Z	20.10	34.7	0.7				2.1	1.8					6.1	9.2
19	A	20.11	35.9	0.6	+			2.9	2.6	1.9	3.9	3.4	3.0		
	H	20.11	36.8	1.1				1.9	3.9					22.45	16.8
	Z	20.11	36.3	0.6				3.4	2.8					22.45	17.0
19	A	20.12	20.2	1.0	-			1.8	1.3	4.2	5.8	5.0	2.9		
	H	20.12	20.4	1.1				4.2	5.8					22.48	43.9
	Z	20.12	20.1	0.7				1.4	1.2					22.48	44.2
19	A	21.35	44.2	0.9	+			6.1	6.0	7.4	9.2	4.9	3.2		
	H	21.35	44.5	0.7				7.4	9.2					23.09	25.8
	Z	21.35	44.7	1.0				0.5	0.7					23.09	26.0
19	A	22.30	10.2	0.9	-			3.4	3.9	5.8	8.0	3.9	3.1		
	H	22.30	10.7	0.6				5.8	8.0					10.0	9.8
	Z	22.30	10.7	0.9				1.0	0.8					3.5	2.6
19	A	23.11	21.6	1.1	-	+		4.6	7.4	1.6	1.8	6.4	3.5		
	H	23.11	21.3	0.9				1.6	1.8					1.8	2.6
	Z	23.11	21.8	1.3				1.1	0.6					4.8	3.1
19	A	23.13	35.8	0.6	-			0.6	0.3	1.2	1.6	1.8	2.2		
	H	23.13	36.0	0.7				1.2	1.6					0.8	1.2
	Z	23.13	35.4	0.4				1.4	1.0					2.6	1.6
19	A	23.47	35.7	1.1	+			4.3	3.6	5.8	6.4	5.1	3.1		
	H	23.47	35.7	0.9				5.8	6.4					1.6	1.5
	Z	23.47	36.1	1.1				0.6	0.4					0.5	1.0
20	A	01.27	52.6	0.6	-			1.8	2.0	2.8	4.8	2.8	2.5		
	H	01.27	52.6	0.7				2.8	4.8					1.4	1.0
	Z	01.27	52.6	0.6				0.8	0.7					10.2	10.2
20	A	02.11	48.9	1.0	-			4.0	8.0	7.7	12.3	4.8	3.6		
	H	02.11	48.8	0.8				7.7	12.3					30.4	37.7
	Z	02.11	49.1	0.9				3.0	1.2					5.3	3.8
20	A	03.18	43.6	0.7	-			3.7	3.0	1.2	2.0	4.6	2.8		
	H	03.18	44.0	1.0				1.2	2.0					10.6	13.4
	Z	03.18	43.7	0.7				0.8	0.6					1.0	1.0

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude		
		h	m	s		E	N	U	E-W	N-S					
											h			m	s
22	A	03.48	35.1	0.9				6.2		5.3	3.7	2.0	2.6		
	H	03.48	36.1	0.9				5.7	9.4					3.9	5.8
	Z	03.48	36.4	0.9				4.8	1.5					0.8	0.5
22	A	06.11	19.8	1.0				3.4	1.8	3.8	3.2	2.0	3.0		
	H	06.11	20.2	1.1				3.4	3.6					3.4	4.4
	Z	06.11	19.5	0.6				2.0	3.0					2.4	2.8
22	A	06.59	23.1	0.9				2.0	1.6	2.9	2.9	2.0	3.2		
	H	06.59	23.2	0.9				1.2	1.0					7.8	15.8
	Z	06.59	22.7	0.4				3.5	1.6					1.0	0.8
22	A	08.15	11.9	1.4				7.9	19.0	2.8	3.9	2.0	3.7		
	H	08.15	10.6	0.7				18.9	14.0					9.4	5.8
	Z	08.15	12.0	1.5				0.6	0.8					4.2	12.8
22	A	11.50	14.2	0.7				7.0	7.3	4.2	3.1	2.0	3.4		
	H	11.50	14.7	0.8				2.2	4.2					6.1	5.7
	Z	11.50	14.6	0.8				0.9	0.8					5.3	10.0
22	A	12.10	26.0	1.1				6.6	13.9	4.0	2.4	4.0	3.2		
	H	12.10	26.0	1.2				0.6	0.6					12.2	11.3
	Z	12.10	25.7	0.7				1.2	1.4					4.2	3.5
22	A	12.37	01.2	1.0				8.3	6.0	5.2	3.1	2.0	2.8		
	H	12.37	00.6	0.8				4.9	5.6					5.6	8.6
	Z	12.37	01.4	1.0				1.0	0.9					4.7	4.0
22	A	13.42	15.7	0.9				17.4	11.5	5.6	3.5	2.0	3.8		
	H	13.42	15.3	0.9				11.1	8.0					3.0	4.6
	Z	13.42	15.9	1.2				0.5	0.6					1.0	1.2
22	A	14.59	32.8	0.9				8.7	19.8	1.7	3.7	2.0	3.8		
	H	14.59	32.6	0.7				10.2	13.8					4.8	4.7
	Z	14.59	33.4	0.7				2.3	2.9					2.2	1.8
22	A	15.04	38.0	0.6				5.1	4.2	2.7	2.9	2.0	2.1		
	H	15.04	38.8	1.2				2.8	3.4					0.8	1.4
	Z	15.04	38.0	0.5				1.8	2.0					0.8	1.3
22	A	16.11	38.5	0.9				3.4	5.0	4.6	3.5	2.0	2.1		
	H	16.11	37.8	0.9				9.7	5.0					0.7	0.8
	Z	16.11	38.4	0.8				3.3	1.8					16.2	18.9
22	A	16.25	51.7	1.2				1.8	1.8	3.7	3.3	2.0	4.1		
	H	16.25	51.4	1.3				3.2	6.2					21.2	31.4
	Z	16.25	51.3	0.7				3.3	4.0					11.2	6.5
22	A	16.54	30.8	0.6				7.9	9.0	3.0	3.3	2.0	3.2		
	H	16.54	31.6	1.0				1.4							

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
25	A H Z	06.34	29.0	1.0				5.1	5.2		3.4		
	A H Z	06.34	28.8	0.5				1.1	2.4				
	A H Z	06.34	28.8	0.5				4.2	5.5				
25	A H Z	08.17	03.4	1.0				6.1	4.6		5.7	3.4	
	A H Z	08.17	03.8	0.9				9.2	14.6				
	A H Z	08.17	03.8	0.7				1.8	1.2				
25	A H Z	11.12	14.8	0.7				2.4	2.6		3.2	2.6	
	A H Z	11.12	14.8	0.7				1.4	1.8				
	A H Z	11.12	15.2	0.7				0.2	0.6				
25	A H Z	11.47	26.9	0.7				7.7	6.0		5.0	3.3	
	A H Z	11.47	27.4	1.0				2.5	2.4				
	A H Z	11.47	27.7	1.0				1.4	1.0				
25	A H Z	11.56	23.5	0.5				9.4	8.2		3.4	3.6	
	A H Z	11.56	24.1	0.9				9.1	11.4				
	A H Z	11.56	24.1	0.7				1.0	6.7				
25	A H Z	13.40	07.3	1.0				2.4	2.6		5.8	3.5	
	A H Z	13.40	07.3	1.2				4.4	7.6				
	A H Z	13.40	07.0	0.8				7.2	5.2				
25	A H Z	15.17	24.2	0.6				1.0	0.4		2.9	2.3	
	A H Z	15.17	23.7	0.9				0.8	0.6				
	A H Z	15.17	24.7	0.5				0.6	1.0				
25	A H Z	15.44	07.3	1.0				3.3	2.8		5.8	3.6	
	A H Z	15.44	07.7	1.4				3.2	6.0				
	A H Z	15.44	07.3	0.8				3.2	7.9				
25	A H Z	15.50	52.2	1.0				0.8	0.4		3.9	2.8	
	A H Z	15.50	52.5	1.2				0.6	0.4				
	A H Z	15.50	52.0	0.6				0.8	2.4				
25	A H Z	16.20	37.3	1.1				1.4	1.0		6.7	2.9	
	A H Z	16.20	37.8	1.4				0.6	0.6				
	A H Z	16.20	37.5	1.0				1.0	1.0				
25	A H Z	16.28	26.4	1.0				3.3	7.2		4.5	3.5	
	A H Z	16.28	25.7	0.7				8.7	6.8				
	A H Z	16.28	26.9	1.0				1.0	1.6				
25	A H Z	17.30	16.1	0.5				2.0	2.1		2.5	2.3	
	A H Z	17.30	16.8	0.8				1.0	1.2				
	A H Z	17.30	16.3	0.5				0.2	0.8				
25	A H Z	17.36	11.8	1.0				1.9	2.0		4.5	2.8	
	A H Z	17.36	11.2	0.7				1.8	1.6				
	A H Z	17.36	12.3	1.0				0.5	0.4				
25	A H Z	17.44	02.4	1.1				2.6	1.8		6.3	3.1	
	A H Z	17.44	01.9	0.9				5.0	5.7				
	A H Z	17.44	03.0	1.2				0.6	0.8				
25	A H Z	19.45	37.7	0.9				2.9	1.6		3.7	3.5	
	A H Z	19.45	38.3	1.2				4.4	3.6				
	A H Z	19.45	37.6	0.5				4.2	12.2				
25	A H Z	19.46	04.6	0.7				0.4	0.2		2.6	1.9	
	A H Z	19.46	04.9	1.1				0.6	0.4				
	A H Z	19.46	04.4	0.4				0.7	1.2				
25	A H Z	20.25	24.0	1.5				1.8	1.4		8.2	3.4	
	A H Z	20.25	24.6	1.9				1.5	1.8				
	A H Z	20.25	24.1	1.2				1.7	2.0				
25	A H Z	22.20	35.0	1.1				1.6	1.0		3.2		
	A H Z	22.20	33.6	0.9				1.1	1.2				
	A H Z	22.20	34.5	0.5				5.4	1.4				
26	A H Z	01.35	35.6	1.0				2.2	1.8		4.9	3.4	
	A H Z	01.35	35.7	1.2				1.3	1.6				
	A H Z	01.35	35.4	0.7				1.4	7.2				
26	A H Z	02.50	51.5	0.9				5.8	4.4		5.8	3.8	
	A H Z	02.50	52.2	1.4				4.2	7.4				
	A H Z	02.50	51.9	0.9				3.4	8.8				
26	A H Z	04.11	26.0	1.0				1.9	3.2		5.2	3.3	
	A H Z	04.11	26.3	0.9				3.0	2.8				
	A H Z	04.11	26.8	0.9				2.0	1.0				
26	A H Z	06.25	05.1	0.8				1.6	1.0		4.8	3.0	
	A H Z	06.25	05.9	1.3				1.8	2.4				
	A H Z	06.25	05.3	0.7				1.4	3.2				
26	A H Z	07.20	41.8	1.0				9.6	9.2		4.3	3.7	
	A H Z	07.20	41.9	0.7				6.1	10.6				
	A H Z	07.20	42.5	1.0				1.6	2.8				
26	A H Z	07.50	38.0	0.8				13.0	22.0		4.8	4.0	
	A H Z	07.50	38.1	0.8				12.7	21.4				
	A H Z	07.50	38.7	0.9				3.3	4.3				
26	A H Z	07.51	06.6	0.8				24.4	42.0		4.6	4.3	
	A H Z	07.51	06.4	0.9				24.4	21.0				
	A H Z	07.51	07.2	0.8				4.2	8.0				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
27	A H Z	08.13	34.2	0.9				3.6	3.8		4.3	3.0	
	A H Z	08.13	34.1	0.9				5.4	6.4				
	A H Z	08.13	34.7	1.0				0.4	1.2				
27	A H Z	09.47	06.6	0.9				1.6	2.0		3.3	3.1	
	A H Z	09.47	06.1	0.7				3.6	3.2				
	A H Z	09.47	06.8	0.8				1.4	2.4				
27	A H Z	09.51	41.5	0.4				6.9	6.0		2.3	3.0	
	A H Z	09.51	42.1	1.0				4.2	4.8				
	A H Z	09.51	42.1	0.5				2.0	2.6				
27	A H Z	09.54	47.3	1.0				1.8	0.8		2.7	3.5	
	A H Z	09.54	46.9	0.7				3.8	2.9				
	A H Z	09.54	48.0	0.9				0.6	1.2				
27	A H Z	11.16	34.4	0.6				7.6	4.6		3.9	3.7	
	A H Z	11.16	35.0	1.2				1.7	2.8				
	A H Z	11.16	34.7	0.7				2.1	7.5				
27	A H Z	15.27	35.9	0.5				29.8	28.4		3.0	4.2	
	A H Z	15.27	35.6	0.7				23.8	22.9				
	A H Z	15.27	36.7	0.9				1.6	8.5				
27	A H Z	17.52	23.3	1.0				3.0	2.0		5.7	3.2	
	A H Z	17.52	23.1	0.9				3.3	4.1				
	A H Z	17.52	23.3	1.0				1.2	1.4				
27	A H Z	18.58	19.7	0.8				2.4	1.2		3.6	3.2	
	A H Z	18.58	19.6	1.1				1.4	1.4				
	A H Z	18.58	19.6	0.5				2.4	5.0				
27	A H Z	20.45	30.9	0.9				4.0			4.8	3.3	
	A H Z	20.45	30.4	0.8				7.3	6.2				
	A H Z	20.45	31.1	0.9				1.2	1.9				
27	A H Z	20.47	41.4	0.6				2.2	3.2		2.8	2.9	
	A H Z	20.47	42.2	1.0				2.0	2.2				
	A H Z	20.47	41.7	0.5				2.6	2.0				
27	A H Z	22.25	21.2	0.6				42.0	1.2		4.2	3.6	
	A H Z	22.25	21.7	1.1				40.9	2.2				
	A H Z	22.25	21.5	0.7				43.6	1.4				
27	A H Z	22.59	37.0	1.2				0.6	0.4		3.0		
	A H Z	22.59	36.9	1.2				1.6	2.0				
	A H Z	22.59	36.4	0.7				2.0	4.2				
27	A H Z	23.00	07.8	1.1				0.4	0.6		2.1		
	A H Z	23.00	08.1	1.0				0.6	1.3				
	A H Z	23.00	07.5	0.7				0.8	1.7				
27	A H Z	00.06	53.9	0.9				4.0	3.1		5.1	3.7	
	A H Z	00.06	53.9	1.2				7.8	9.8				
	A H Z	00.06	52.6	0.7				6.4	9.1				
27	A H Z	00.10	28.4	1.0				6.3	4.5		6.7	3.1	
	A H Z	00.10	28.2	1.1				9.0	6.6				
	A H Z	00.10	29.0	1.2				0.6	1.4				
27	A H Z	00.36	08.8	1.0				8.0	8.3		7.0	4.7	
	A H Z	00.36	09.4	1.3				8.6	14.0				
	A H Z	00.36	08.8	1.0				9.4	26.4				
27	A H Z	00.59	09.0	1.0				18.0	2.0		2.2	2.3	
	A H Z	00.59	09.1	1.2				15.2	2.3				
	A H Z	00.59	08.8	0.5				18.3	1.0				
27	A H Z	01.59	54.7	0.9				15.9	16.4		5.9	4.7	
	A H Z	01.59	54.3	0.9				14.2	15.6				
	A H Z	01.59	55.4	1.1				2.8	11.2				
27	A H Z	04.17	37.7	1.0				2.8	1.9		6.2	3.4	
	A H Z	04.17	37.7	1.3				3.4	6.8				
	A H Z	04.17	37.3	0.9				2.5	1.7				
27	A H Z	04.19	42.1	0.9				3.9	5.4		5.5	3.4	
	A H Z	04.19	41.8	0.9		</							

Seismological Data of Matushiro Earthquake Swarm (Report II)

Apr. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
30	A H Z	08.00	29.3	1.0	-	3.6	3.0	3.9	3.2				
30	A H Z	08.00	28.8	1.2	-	4.4	6.6						
30	A H Z	08.00	29.1	0.6	-	2.0	2.0						
30	A H Z	08.09	12.0	0.6	+	1.4	1.6	2.3	2.6				
30	A H Z	08.09	12.1	0.9	+	1.2	2.1						
30	A H Z	08.09	11.7	0.4	-	1.6	2.2						
30	A H Z	12.18	35.4	1.0	-	16.8	6.0	4.5	4.0				
30	A H Z	12.18	34.8	0.7	-	23.7	17.4						
30	A H Z	12.18	35.8	1.0	-	1.6	4.0						
30	A H Z	14.23	37.5	0.9	+	10.2	6.8	1.8	3.8				
30	A H Z	14.23	37.8	1.1	+	1.4	2.0						
30	A H Z	14.23	36.1	0.4	+	3.4	13.4						
30	A H Z	16.26	14.0	0.9	-	1.2	1.4	2.8	2.8				
30	A H Z	16.26	14.3	1.3	+	0.6	0.6						
30	A H Z	16.26	13.3	0.4	+	3.5	3.3						
30	A H Z	16.31	29.9	0.7	+	6.0	5.2	5.1	3.5				
30	A H Z	16.31	30.3	1.0	+	3.2	2.2						
30	A H Z	16.31	30.0	0.9	+	3.8	4.0						
30	A H Z	17.42	54.0	1.0	-	33.6	43.4	5.1	4.6				
30	A H Z	17.42	53.3	0.8	-	38.4	40.4						
30	A H Z	17.42	54.7	1.0	-	2.8	9.2						
30	A H Z	18.47	27.5	1.0	-	5.4	4.0	5.0	3.7				
30	A H Z	18.47	28.0	1.3	+	4.0	4.0						
30	A H Z	18.47	27.0	0.7	+	3.7	8.4						
30	A H Z	19.26	40.7	0.6	+	5.5	3.1	4.0	3.6				
30	A H Z	19.26	40.9	0.8	+	1.7	1.9						
30	A H Z	19.26	41.3	0.9	-	0.6	6.4						
30	A H Z	19.40	45.0	1.0	+	6.7	11.9	1.1	3.8				
30	A H Z	19.40	44.6	0.8	+	13.0	17.8						
30	A H Z	19.40	45.3	0.7	+	3.6	4.2						
30	A H Z	19.49	07.9	0.8	+	3.8	4.2	4.8	3.5				
30	A H Z	19.49	07.3	0.8	-	6.3	10.5						
30	A H Z	19.49	08.0	0.9	-	5.2	4.2						
30	A H Z	19.53	18.4	0.8	-	5.9	10.7	4.4	3.5				
30	A H Z	19.53	18.2	0.9	-	10.0	7.8						
30	A H Z	19.53	18.8	0.7	-	1.0	3.1						
30	A H Z	19.58	51.7	0.9	+	0.8	1.6	2.6	2.9				
30	A H Z	19.58	52.3	1.3	+	0.4	0.2						
30	A H Z	19.58	51.3	0.4	+	3.4	3.2						
30	A H Z	20.19	43.9	0.9	+	1.3	1.4	4.4	3.0				
30	A H Z	20.19	43.5	1.3	+	3.0	3.0						
30	A H Z	20.19	43.5	0.6	+	3.4	2.2						
30	A H Z	21.25	19.3	0.8	+	7.6		4.6	3.4				
30	A H Z	21.25	18.7	0.8	+	6.0	6.0						
30	A H Z	21.25	19.4	1.0	+	0.6	1.8						
30	A H Z	21.53	10.2	0.7	+	8.0	13.3	4.5	3.7				
30	A H Z	21.53	10.5	0.8	+	7.2	6.3						
30	A H Z	21.53	10.9	0.9	+	1.1	3.0						
30	A H Z	22.19	08.6	1.1	-	3.8	1.9	5.0	3.4				
30	A H Z	22.19	08.3	1.2	+	5.2	5.8						
30	A H Z	22.19	07.9	0.8	+	2.8	2.3						
30	A H Z	23.59	19.7	1.0	+	4.0	7.6	5.0	3.7				
30	A H Z	23.59	19.1	0.8	-	8.6	10.0						
30	A H Z	23.59	19.8	1.0	-	1.4	3.0						
1966 May													
01	A H Z	03.26	27.8	0.6	+	2.9	1.5	3.5	3.0				
01	A H Z	03.26	28.9	1.0	-	1.6	2.2						
01	A H Z	03.26	28.4	0.5	-	3.4	3.6						
01	A H Z	04.04	10.2	1.0	+	2.9	2.6	5.4	3.2				
01	A H Z	04.04	10.3	1.2	+	4.8	3.7						
01	A H Z	04.04	09.8	0.8	-	2.7	2.2						
01	A H Z	04.23	24.2	0.6	+	3.4	1.8	3.9	3.2				
01	A H Z	04.23	24.7	1.0	+	2.6	4.6						
01	A H Z	04.23	24.3	0.7	+	0.9	4.0						
01	A H Z	04.40	56.1	1.1	+	2.8	2.2	4.6	3.4				
01	A H Z	04.40	55.8	1.2	+	2.4	2.8						
01	A H Z	04.40	55.1	0.8	+	3.1	3.5						

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
02	A H Z	09.38	16.6	0.8	+	7.1	9.4	2.8	3.7				
02	A H Z	09.38	16.4	1.0	-	5.6	6.3						
02	A H Z	09.38	16.1	0.5	+	5.0	8.8						
02	A H Z	11.33	09.1	0.5	+	1.9	2.8	2.6	2.7				
02	A H Z	11.33	09.5	0.9	+	1.6	2.4						
02	A H Z	11.33	08.9	0.5	-	0.9	1.9						
02	A H Z	11.58	33.5	0.8	+	1.6	2.1	0.5	2.6				
02	A H Z	11.58	33.8	1.0	-	0.5	0.4						
02	A H Z	11.58	33.1	0.3	+	1.0	2.2						
02	A H Z	13.29	35.4	1.3	+	48.2		6.1	4.8				
02	A H Z	13.29	34.7	1.1	+	29.4	22.1						
02	A H Z	13.29	35.7	1.2	+	11.2	11.4						
02	A H Z	13.30	20.2	1.0	+	8.1		6.4	3.7				
02	A H Z	13.30	18.5	1.0	+	6.9	7.5						
02	A H Z	13.30	20.3	1.1	-	2.1	1.6						
02	A H Z	15.48	13.5	1.0	+	1.2		3.6	3.0				
02	A H Z	15.48	13.4	1.1	-	1.0	1.2						
02	A H Z	15.48	12.9	0.6	+	3.2	2.4						
02	A H Z	16.10	41.5	1.2	+	4.3		3.8	3.3				
02	A H Z	16.10	40.9	0.8	+	7.2	6.5						
02	A H Z	16.10	41.4	1.1	+	1.1	0.7						
02	A H Z	17.16	37.6	0.9	-	3.0		5.1	3.3				
02	A H Z	17.16	37.8	1.4	+	2.0	2.2						
02	A H Z	17.16	37.3	0.7	+	3.2	2.6						
02	A H Z	17.33	55.4	1.1	+	2.9		5.5	3.3				
02	A H Z	17.33	54.7	0.8	+	5.8	11.9						
02	A H Z	17.33	55.7	1.2	+	0.8	1.4						
02	A H Z	17.35	59.9	0.7	+	3.9		4.4	2.9				
02	A H Z	17.35	59.4	0.8	+	8.1	16.4						
02	A H Z	17.35	59.9	0.9	-	0.6	0.7						
02	A H Z	20.02	33.3	1.1	+	1.6		4.0	3.2				
02	A H Z	20.02	33.3	1.2	+	2.1	3.6						
02	A H Z	20.02	32.9	0.7	+	4.3	4.2						
02	A H Z	20.10	25.2	1.2	+	1.6		3.0	3.2				
02	A H Z	20.10	25.3	1.4	-	2.7	2.2						
02	A H Z	20.10	24.9	0.7	+	3.5	3.7						
02	A H Z	21.02	40.0	1.5	+	0.7		9.0	2.9				
02	A H Z	21.02	40.3	1.9	+	0.4	0.5						
02	A H Z	21.02	39.7	1.3	+	0.6	0.9						
02	A H Z	23.58	21.9	1.1	+	21.1		7.1	4.3				
02	A H Z	23.58	21.4	1.0	+	14.7	18.0						
02	A H Z	23.58	22.4	1.3	+	5.6	3.4						
03	A H Z	00.44	26.3	1.0	+	3.4		5.9	3.5				
03	A H Z	00.44	26.5	1.4	+	2.4	4.2						
03	A H Z	00.44	26.3	0.8	+	3.4	4.5						
03	A H Z	00.59	53.0	0.9	+	10.0		5.3	3.5				
03	A H Z	00.59	52.4	0.9	+	6.6	10.9						
03	A H Z	00.59	53.0	0.9	+	1.2	1.5						
03	A H Z	03.25	27.4	0.5	+	4.7		2.3	3.0				
03	A H Z	03.25	28.3	1.0	+	2.2	3.6						
03	A H Z	03.25	27.7	0.4	-	3.2	3.4						
03	A H Z	04.32	14.6	1.2	+	26.0		5.6	4.6				
03	A H Z	04.32	13.6	0.8	+	10.6	14.7						
03	A H Z	04.32	14.8	1.3	+	10.2	6.4						
03	A H Z	04.36	38.8	1.1	+	13.0		5.2	4.1				
03	A H Z	04.36	37.9	1.0	+	7.9	7.9						
03	A H Z												

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

May, 1966

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S		
04	A H Z	10.31	15.6	0.7				3.9	3.3		
	A H Z	10.31	16.4	1.1				1.4	1.6	2.4	3.2
	A H Z	10.31	15.6	0.4				6.2	4.8		
04	A H Z	10.48	47.0	0.8							
	A H Z	10.48	47.1	1.1				15.7	15.2	3.6	4.5
	A H Z	10.48	46.3	0.5				23.2	33.8		
04	A H Z	10.50	07.4	0.8							
	A H Z	10.50	08.3	1.1				10.0	9.2	3.5	4.3
	A H Z	10.50	07.9	0.5				11.2	29.4		
04	A H Z	11.48	57.3	0.8				0.9	0.7		
	A H Z	11.48	57.2	0.9				0.8	1.0	1.5	2.7
	A H Z	11.48	56.7	0.4				3.8	3.8		
04	A H Z	12.02	47.0	0.7				0.3	0.2		
	A H Z	12.02	47.3	1.1				2.0	3.2	2.9	2.2
	A H Z	12.02	46.6	0.4				3.0	3.0		
04	A H Z	12.17	19.1	0.7				2.0	1.4		
	A H Z	12.17	19.3	0.9				1.6	2.0	2.1	3.2
	A H Z	12.17	18.7	0.4				6.6	9.7		
04	A H Z	12.27	32.8	0.7				2.5	1.5		
	A H Z	12.27	33.0	1.0				0.7	0.8	3.1	3.0
	A H Z	12.27	32.6	0.5				4.6	5.5		
04	A H Z	13.16	19.5	0.9				1.8	1.4		
	A H Z	13.16	19.6	1.1				0.6	0.5	3.0	3.1
	A H Z	13.16	18.8	0.5				4.4	3.5		
04	A H Z	14.31	43.3	0.3				47.3			
	A H Z	14.31	43.7	0.9				9.8	11.4	2.0	4.0
	A H Z	14.31	43.9	0.8				8.7	5.8		
04	A H Z	14.46	32.2	0.9				2.6			
	A H Z	14.46	32.5	1.3				1.7	1.8	4.4	3.2
	A H Z	14.46	31.7	0.6				2.1	3.3		
04	A H Z	16.26	23.6	1.1				3.2			
	A H Z	16.26	23.2	0.8				11.1	15.4	3.8	3.1
	A H Z	16.26	23.9	1.0				0.8	1.0		
04	A H Z	16.26	31.2	1.1				7.0			
	A H Z	16.26	30.8	0.9				11.9	18.0	5.5	3.5
	A H Z	16.26	31.6	1.0				1.2	1.6		
04	A H Z	16.30	02.5	1.0				5.1			
	A H Z	16.30	02.1	0.6				16.0	23.5	3.5	3.5
	A H Z	16.30	02.7	1.0				2.7	2.0		
04	A H Z	18.53	26.9	0.9				8.2			
	A H Z	18.53	26.6	0.7				8.4	13.6	4.1	3.5
	A H Z	18.53	27.3	1.0				1.0	1.8		
04	A H Z	21.07	31.9	0.8				1.0	0.8		
	A H Z	21.07	32.3	1.3				0.2	0.2	0.5	2.5
	A H Z	21.07	31.3	0.3				2.7	3.0		
04	A H Z	21.12	37.3	0.7				2.8	1.8		
	A H Z	21.12	37.8	1.2				1.4	1.4	3.2	3.1
	A H Z	21.12	37.0	0.5				4.1	5.4		
04	A H Z	21.36	44.1	0.6				4.5	3.6		
	A H Z	21.36	44.7	1.0				3.4	6.0	3.6	3.3
	A H Z	21.36	44.3	0.6				2.5	4.4		
04	A H Z	21.54	08.2	0.7				72.4	39.2		
	A H Z	21.54	08.6	1.1				7.8	14.4	5.1	4.3
	A H Z	21.54	08.7	0.9				5.7	4.2		
04	A H Z	22.41	18.0	0.8				4.7	4.4		
	A H Z	22.41	18.4	1.0				1.6	2.8	0.8	3.3
	A H Z	22.41	17.7	0.3				7.7	8.2		
04	A H Z	22.59	37.6	0.7				3.4	2.9		
	A H Z	22.59	38.0	1.0				2.4	3.3	1.7	3.1
	A H Z	22.59	37.4	0.3				6.6	7.9		
04	A H Z	23.06	34.0	0.7				3.2	2.6		
	A H Z	23.06	34.5	1.0				2.0	2.0	2.0	3.3
	A H Z	23.06	33.5	0.4				12.2	13.4		
05	A H Z	00.16	27.9	0.9				14.9	23.8		
	A H Z	00.16	27.7	0.7				8.8	17.0	4.5	4.1
	A H Z	00.16	28.5	1.0				4.1	2.4		
05	A H Z	00.17	09.3	1.0				2.8	1.8		
	A H Z	00.17	09.3	1.2				4.9	7.0	5.2	3.2
	A H Z	00.17	09.0	0.8				2.3	1.6		
05	A H Z	00.51	33.3	0.6				1.3	1.2		
	A H Z	00.51	33.6	1.0				0.8	0.8	1.6	2.7
	A H Z	00.51	32.9	0.3				5.1	6.4		
05	A H Z	01.58	21.2	0.8				5.8	7.6		
	A H Z	01.58	20.3	0.7				7.1	7.6	4.0	3.5
	A H Z	01.58	21.0	0.9				3.0	2.8		

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

May, 1966

Date	Station	P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s	E	N	U	E-W	N-S		
06	A H Z	07.55	45.1	1.1				12.4	5.0		
	A H Z	07.55	44.3	0.9				6.2	8.8	6.1	3.6
	A H Z	07.55	45.2	1.3				0.5	0.9		
06	A H Z	08.37	16.7	0.9				12.2	4.5		
	A H Z	08.37	16.4	0.8				6.0	4.4	5.4	3.4
	A H Z	08.37	16.9	1.3				0.2	0.6		
06	A H Z	08.50	56.7	0.9				2.5	1.9		
	A H Z	08.50	57.4	1.3				1.2	1.2	2.7	3.2
	A H Z	08.50	56.1	0.4				6.2	5.2		
06	A H Z	09.08	59.2	0.9				2.0	3.4		
	A H Z	09.08	58.6	0.6				4.9	3.4	2.7	3.3
	A H Z	09.08	59.3	0.8				2.8	1.0		
06	A H Z	11.08	59.6	0.8				33.2	16.4		
	A H Z	11.08	59.2	0.6				40.4	30.6	3.6	4.2
	A H Z	11.09	00.1	1.2				4.2	4.0		
06	A H Z	11.09	22.0	0.8				5.6	4.8		
	A H Z	11.09	21.5	0.6				8.6	8.2	3.9	3.3
	A H Z	11.09	22.4	1.1				0.8	1.4		
06	A H Z	11.49	25.4	1.1				12.3	4.0		
	A H Z	11.49	24.8	0.6				8.0	10.4	3.4	3.8
	A H Z	11.49	25.6	1.2				1.6	2.0		
06	A H Z	13.15	53.8	0.9				3.2	8.9		
	A H Z	13.15	53.4	0.9				8.7	9.2	5.1	3.7
	A H Z	13.15	53.8	0.9				4.0	2.1		
06	A H Z	14.01	04.9	0.7				23.8	12.0		
	A H Z	14.01	05.2	0.9				5.8	5.7	4.5	3.5
	A H Z	14.01	05.3	0.8				0.8	1.0		
06	A H Z	16.04	00.5	0.8				50.6			
	A H Z	16.04	00.1	0.7				22.8	27.4	3.7	4.5
	A H Z	16.04	00.6	0.8				6.2	10.5		
06	A H Z	18.56	23.5	1.0				1.6			
	A H Z	18.56	23.7	1.1				2.7	4.5	4.9	3.2
	A H Z	18.56	23.1	0.8				3.1	3.8		
06	A H Z	19.06	01.3	0.8				40.0			
	A H Z	19.06	01.1	0.7				19.3	29.4	4.2	4.4
	A H Z	19.06	01.5	0.9				6.8	9.1		
06	A H Z	19.08	15.3	1.0				87.0			
	A H Z	19.08	15.1	0.7				39.8	26.2	2.8	4.6
	A H Z	19.08	15.2	0.9				11.6	21.8		
06	A H Z	19.09	10.2	0.7				6.0			
	A H Z	19.09	09.8	0.6				6.5	8.4		
	A H Z	19.09	10.2	0.4				0.8	0.6		
06	A H Z	19.09	29.8	0.6				7.5			
	A H Z	19.09	29.7	0.6				18.3	15.6	3.2	3.0
	A H Z	19.09	30.2	0.9				0.8	0.6		
06	A H Z	19.12	47.8	0.9				4.5			
	A H Z	19.12	47.0	0.7				11.9	7.2	4.6	3.3
	A H Z	19.12	47.7	1.0				1.8	1.7		
06	A H Z	19.16	43.9	0.6				13.7			
	A H Z	19.16	43.9	0.7				15.8	19.2	2.9	3.4
	A H Z	19.16	44.1	0.7				1.6	1.8		
06	A H Z	19.17	35.0	0.6				2.8			
	A H Z	19.17	34.9	0.7				2.4	3.2	3.0	2.9
	A H Z	19.17	35.1	0.7				0.8	1.7		
06	A H Z	19.23	23.7	1.5				1.0			
	A H Z	19.23	23.9	1.5				1.4	2.3	9.8	3.2
	A H Z	19.23	22.7	1.5				1.4	0.8		
06	A H Z	19.44	24.9	1.0				6.8			
	A H Z	19.44	24.2	0.7				10.8	10.9	3.9	3.7
	A H Z	19.44	24.9	1.0				4.1	2.1		
06	A H Z	19.52	46.0	0.7				26.0	18.4		
	A H Z	19.52	45.9	0.7				19.6	19.7	3.8	3.9
	A H Z	19.52	46.0	0.8				2.2	3.4		
06	A H Z	20.12	05.2	0.7				6.0	8.3		
	A H Z	20.12	05.9	1.4				3.3	4.2	4.2	3.5
	A H Z										

Seismological Data of Matsushiro Earthquake Swarm (Report II)

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
08	A H Z	00.01	08.3	0.9				80.7	39.5	4.9	4.7	
	H H Z	00.01	08.0	0.8				36.4	39.1			
	Z Z	00.01	08.8	1.2				4.4	6.9			
08	A H Z	00.17	16.5	1.1		+		5.1	3.4	5.6	3.7	
	H H Z	00.17	16.3	1.0		-		7.8	6.7			
	Z Z	00.17	16.3	1.0				3.5	2.3			
08	A H Z	02.28	17.0	1.2			+	16.4	7.0	4.7	4.1	
	H H Z	02.28	16.4	0.8				8.5	8.1			
	Z Z	02.28	17.1	1.2		-		3.2	2.4			
08	A H Z	02.29	37.0	1.2			+	5.7	6.3	3.7	3.4	
	H H Z	02.29	37.3	0.7				3.7	5.2			
	Z Z	02.29	38.2	1.2				0.9	0.7			
08	A H Z	03.33	22.3	0.9		-		2.0	1.5	3.2	2.8	
	H H Z	03.33	23.0	1.4				1.5	1.8			
	Z Z	03.33	22.0	0.5		+		1.0	1.9			
08	A H Z	03.49	23.6	0.9			+	10.5	4.8	6.9	3.5	
	H H Z	03.49	23.7	1.1		-		4.6	4.6			
	Z Z	03.49	24.0	1.4				0.6	0.7			
08	A H Z	04.57	20.1	0.9			+	2.6	1.2	1.9	2.8	
	H H Z	04.57	20.0	0.9				1.3	1.8			
	Z Z	04.57	19.8	0.5				0.8	1.7			
08	A H Z	04.57	40.0	1.3			+	3.7	4.6	5.2	3.4	
	H H Z	04.57	39.5	0.9				8.0	8.7			
	Z Z	04.57	40.1	1.2				0.9	0.9			
08	A H Z	05.06	17.8	0.8			+	8.6	7.8	1.9	3.5	
	H H Z	05.06	17.6	0.6				15.5	19.4			
	Z Z	05.06	17.9	0.7		-		2.7	3.1			
08	A H Z	06.19	17.4	0.8			+	5.0	3.8	1.1	2.8	
	H H Z	06.19	17.1	0.9				7.4	9.2			
	Z Z	06.19	17.9	0.5				0.7	1.0			
08	A H Z	10.41	03.8	0.9			+	6.0	8.6	4.7	3.2	
	H H Z	10.41	03.8	0.8				4.1	8.6			
	Z Z	10.41	04.2	1.0		-		0.6	0.6			
08	A H Z	12.42	58.5	0.6			-	24.4	6.8	3.2	4.1	
	H H Z	12.42	59.4	0.8				9.4	10.6			
	Z Z	12.42	58.9	0.7				4.6	10.4			
08	A H Z	15.30	34.0	0.7			+	18.2	8.6	4.5	3.4	
	H H Z	15.30	34.3	0.9				3.0	2.9			
	Z Z	15.30	34.7	1.0				0.5	11.0			
08	A H Z	15.32	52.5	4.7				31.9	11.0	5.0	3.8	
	H H Z	15.32	53.1	1.0				4.3	3.8			
	Z Z	15.32	53.2	0.9				1.0	1.6			
08	A H Z	15.35	50.1	1.2				5.4	5.3	5.5	3.6	
	H H Z	15.35	50.0	1.0				6.9	6.4			
	Z Z	15.35	50.2	1.0				3.2	2.5			
08	A H Z	15.36	39.6	0.5			+	4.7	7.0	3.6	3.3	
	H H Z	15.36	39.0	0.9				4.3	8.5			
	Z Z	15.36	39.4	0.9				2.4	0.9			
08	A H Z	17.25	25.5	1.2			+	3.2	5.3	3.4		
	H H Z	17.25	25.2	0.9			+	3.5	2.4			
	Z Z	17.25	25.9	0.7				2.6	1.3			
08	A H Z	18.20	23.1	1.0			+	1.6	1.0	5.6	3.1	
	H H Z	18.20	23.4	1.2				2.0	2.6			
	Z Z	18.20	23.1	0.8				3.1	1.2			
08	A H Z	18.41	59.0	1.1				5.0	3.6	6.4	3.6	
	H H Z	18.41	58.9	1.1				5.9	7.4			
	Z Z	18.41	58.9	1.0				3.2	1.3			
08	A H Z	19.32	09.1	0.9				8.0	6.2	6.0	3.6	
	H H Z	19.32	09.9	1.2				0.9	1.4			
	Z Z	19.32	08.5	1.0				3.2	1.5			
08	A H Z	19.39	34.7	0.9			+	3.3	2.5	5.0	3.4	
	H H Z	19.39	33.6	0.9				1.7	3.8			
	Z Z	19.39	33.9	0.9				3.7	1.3			
08	A H Z	21.31	39.6	0.6			+	5.2	3.6	3.8	2.7	
	H H Z	21.31	40.2	0.8				0.6	0.4			
	Z Z	21.31	40.0	0.8				0.4	0.3			
08	A H Z	22.20	14.4	1.1			+	4.7	6.5	6.1	3.7	
	H H Z	22.20	13.8	0.9				7.1	6.3			
	Z Z	22.20	14.5	1.2			+	2.6	1.0			
08	A H Z	22.57	43.0	0.8				0.7	0.8	3.3	2.4	
	H H Z	22.57	43.6	1.2				1.0	1.0			
	Z Z	22.57	42.5	0.5				1.5	0.9			
08	A H Z	23.55	16.7	0.8				8.5	4.7	2.3	3.7	
	H H Z	23.55	17.7	1.5			+	6.5	7.2			
	Z Z	23.55	16.3	0.5			+	6.9	8.2			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
09	A H Z	20.07	44.2	0.7				1.0	0.8	5.8	3.1	
	H H Z	20.07	44.1	0.6				1.4	2.0			
	Z Z	20.07	44.9	1.1				4.5	1.8			
09	A H Z	23.11	07.5	1.0				2.2	1.6		3.1	
	H H Z	23.11	07.9	1.2				0.9	1.4			
	Z Z	23.11	07.1	0.6			+	1.9	0.8			
09	A H Z	23.25	42.8	0.4				2.3	2.0	3.2	2.8	
	H H Z	23.25	43.4	0.9				1.4	1.7			
	Z Z	23.25	42.6	0.4				1.0	2.2			
09	A H Z	23.43	47.9	1.0				1.7	1.4	4.5	2.9	
	H H Z	23.43	47.5	0.9			+	4.5	3.7			
	Z Z	23.43	47.6	0.9				1.0	0.6			
09	A H Z	23.48	21.1	0.6				1.4	1.9	3.5	2.6	
	H H Z	23.48	21.3	1.0				0.9	1.4			
	Z Z	23.48	21.2	0.8				0.7	0.9			
10	A H Z	01.27	47.1	0.7				17.8	17.3	2.8	3.8	
	H H Z	01.27	47.6	1.0				22.9	24.5			
	Z Z	01.27	47.0	0.6				6.6	7.4			
10	A H Z	01.28	10.7	0.9				0.3	0.7	0.8	2.1	
	H H Z	01.28	10.5	0.9				0.2	0.6			
	Z Z	01.28	10.6	1.0				2.4	2.0			
10	A H Z	01.34	05.5	0.7				3.3	5.1	3.7	3.3	
	H H Z	01.34	05.1	0.9			+	7.5	5.9			
	Z Z	01.34	05.6	1.0			+	1.8	1.4			
10	A H Z	02.26	43.0	1.1				1.6	1.9	5.8	2.8	
	H H Z	02.26	43.9	0.9			+	2.3	2.3			
	Z Z	02.26	42.2	0.6				0.7	0.6			
10	A H Z	02.27	47.2	1.0				0.6	0.7	2.1	2.3	
	H H Z	02.27	47.7	1.4				0.3	0.3			
	Z Z	02.27	47.1	0.9				2.7	1.1			
10	A H Z	02.42	32.6	1.0				1.6	1.7	4.5	2.8	
	H H Z	02.42	32.8	1.1			+	4.3	6.9			
	Z Z	02.42	32.1	0.6			+	0.7	0.6			
10	A H Z	04.16	36.5	0.9				3.4	3.5	3.6	3.1	
	H H Z	04.16	36.7	0.8				2.3	2.6			
	Z Z	04.16	36.6	1.0				1.2	4.1			
10	A H Z	04.30	16.8	0.9				5.0	6.8	2.1	3.3	
	H H Z	04.30	16.3	0.7				4.7	3.8			
	Z Z	04.30	17.1	1.2				5.7	5.4			
10	A H Z	06.38	23.1	0.7				1.3	2.0	4.1	3.1	
	H H Z	06.38	23.9	1.1				2.8	3.7			
	Z Z	06.38	23.8	1.0			+	3.2	3.3			
10	A H Z	08.50	18.2	1.1				3.5	4.3	5.9	3.5	

Seismological Data of Matsushiro Earthquake Swarm (Report II)

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											P-Time (J.S.T.)		
11	A	23.50	12.1		1.0				7.2	5.7			
	H	23.50	12.3		1.2				7.0	10.6	6.2	3.8	
	Z	23.50	11.8		0.9				3.8	5.8			
12	A	00.38	56.4		0.8				4.2	3.0			
	H	00.38	56.5		1.2				8.4	13.8	4.8	3.2	
	Z	00.38	56.5		0.7				2.8	1.7			
12	A	00.51	07.4		0.9				2.2	2.5			
	H	00.51	08.2		1.9				1.7	2.5	3.0		
	Z	00.51	07.7		0.9				2.7	1.6			
12	A	01.00	38.7		0.3				4.7	5.8			
	H	01.00	39.4		0.8				8.8	11.8	1.9	2.6	
	Z	01.00	38.9		0.6				0.8	1.0			
12	A	01.02	24.2		0.5				26.8				
	H	01.02	24.8		1.0				7.5	7.8	3.1	4.0	
	Z	01.02	24.5		0.8				8.8	8.6			
12	A	01.16	19.5		0.4				9.6	4.9			
	H	01.16	20.0		0.8				5.0	7.8	2.0	3.0	
	Z	01.16	19.5		0.5				0.8	2.1			
12	A	01.17	46.8		0.6				16.9	2.7			
	H	01.17	47.5		1.0				3.2	5.4	3.9	3.6	
	Z	01.17	47.1		0.7				3.2	2.6			
12	A	01.41	27.8		0.5				17.6	9.9			
	H	01.41	28.5		0.9				11.9	14.8	3.1	3.4	
	Z	01.41	28.1		0.6				3.4	3.2			
12	A	02.41	53.8		0.6				9.5	7.4			
	H	02.41	53.8		0.9				3.5	3.7	3.9	3.1	
	Z	02.41			0.9				0.8	0.6			
12	A	10.53	57.2		0.7				2.7	6.1			
	H	10.53	57.1		0.7				4.3	6.5	3.4	3.0	
	Z	10.53	57.4						0.8	1.2			
12	A	11.17	02.9		1.0				1.8	1.7			
	H	11.17	02.5		0.9				6.1	9.4	5.3	2.8	
	Z	11.17	02.8		1.0				0.8	0.6			
12	A	11.35	22.4		0.9				3.4	5.5			
	H	11.35	21.9		0.9				4.9	7.8	4.4	3.1	
	Z	11.35	22.5		0.8				1.0	0.8			
12	A	12.44	37.0		0.9				1.2	2.4			
	H	12.44	36.9		0.9				1.3	2.6	5.2	2.9	
	Z	12.44	37.1		0.9				1.1	0.4			
12	A	12.58	03.3		0.6				3.4				
	H	12.58	04.2		1.0				1.2	2.4	3.0	2.9	
	Z	12.58	03.6		0.4				2.3	1.9			
12	A	12.59	28.6		0.7				12.3	11.9			
	H	12.59	29.5		1.2				8.9	14.6	2.4	3.6	
	Z	12.59	28.9		0.4				6.4	5.4			
12	A	13.02	09.8		0.6				3.1	2.8			
	H	13.02	10.9		1.1				0.6	1.6	3.5	2.6	
	Z	13.02	10.1		0.6				0.7	0.6			
12	A	13.29	07.3		0.3				7.9				
	H	13.29	08.1		0.9				2.4	2.3	1.3	2.6	
	Z	13.29	08.0		0.5				0.4	0.9			
12	A	13.31	01.2		0.4				4.6				
	H	13.31	01.9		1.0				2.6	3.1	2.7	2.5	
	Z	13.31	01.6		0.6				0.4	0.8			
12	A	13.31	17.3		0.9				3.1				
	H	13.31	17.8		1.3				2.4	2.0	2.1	3.2	
	Z	13.31	17.1		0.4				4.8	3.5			
12	A	13.36	33.1		0.9				5.7				
	H	13.36	33.8		1.1				1.1	2.1	6.3	3.5	
	Z	13.36	33.6		1.0				2.7	0.9			
12	A	14.17	34.6		0.6				4.6				
	H	14.17	35.7		0.9				1.3	0.8	3.6	3.0	
	Z	14.17	35.2		0.7				1.5	1.1			
12	A	14.19	26.1		0.7				6.4	3.6			
	H	14.19	27.1		0.8				1.2	1.2	4.2	2.8	
	Z	14.19	26.6		1.1				0.3	0.2			
12	A	14.59	28.1		0.7				4.2	7.2			
	H	14.59	28.0		0.6				4.4	5.3	3.5	3.1	
	Z	14.59	28.5		0.9				0.3	0.8			
12	A	15.42	59.1		1.2				9.2				
	H	15.42			1.2				5.0	7.5	7.8	3.8	
	Z	15.42	59.5		1.2				3.1	1.9			
12	A	15.43	17.5		1.2				3.4				
	H	15.43	17.2		0.9				2.6	2.6	5.9	3.6	
	Z	15.43	17.7		1.4				2.4	1.2			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											P-Time (J.S.T.)		
13	A	08.04	31.9		0.8				5.2	3.0			
	H	08.04	32.3		1.3				0.4	0.7	5.8	2.8	
	Z	08.04	32.1		1.0				0.3	0.2			
13	A	08.53	19.0		1.0				2.8	4.0			
	H	08.53	19.7		1.4				1.5	1.2	3.3		
	Z	08.53	18.1						4.7	2.5			
13	A	09.25			0.6				1.1	1.0			
	H	09.25	14.9		1.1				0.6	1.1	4.0	2.1	
	Z	09.25	14.3		0.8				0.4	0.4			
13	A	09.52	04.8		0.9				0.8	1.0			
	H	09.52	04.5		0.9				2.6	2.7	4.6	2.5	
	Z	09.52	04.7		0.8				0.7	0.5			
13	A	10.33	44.0		0.7				5.8	7.2			
	H	10.33	43.4		0.8				10.0	15.5	3.8	3.4	
	Z	10.33	43.6		0.8				1.6	3.1			
13	A	10.49	14.6		0.9				0.3	0.9			
	H	10.49	14.6		0.9				0.3	0.4	2.2		
	Z	10.49	14.0						1.0	1.1			
13	A	11.29	23.5		1.1				2.3	3.1			
	H	11.29	23.2		1.0				2.3	4.5	4.0	3.3	
	Z	11.29	22.4		0.9				2.4	1.0			
13	A	11.32	23.2		0.8				14.6	10.8			
	H	11.32	23.2		1.1				5.4	6.4	6.0	3.7	
	Z	11.32	23.3		1.0				2.0	1.5			
13	A	11.52	20.2		0.8				7.1	7.5			
	H	11.52	19.7		0.7				3.7	3.4	3.7	3.1	
	Z	11.52	20.1		0.9				0.8	0.9			
13	A	12.05	50.5		1.2				4.3	3.5			
	H	12.05	49.8		0.8				14.8	22.5	3.3		
	Z	12.05	50.4		0.9				1.2	1.5			
13	A	12.33	50.5		0.9				4.1	2.6			
	H	12.33	50.4		1.4				4.5	5.2	4.7	3.4	
	Z	12.33	50.0		0.7				3.3	3.7			
13	A	12.48	36.6		0.8				0.5	1.1			
	H	12.48	36.3		1.0				0.7	1.0	2.6		
	Z	12.48	35.6						3.2	4.0			
13	A	12.52	10.6		0.7				0.8	1.0			
	H	12.52	10.8		1.0				0.7	1.2	2.6	2.7	
	Z	12.52	10.0		0.5				2.8	3.3			
13	A	13.23	16.9		0.7				1.1	1.1			
	H	13.23	17.5		0.9				0.5		4.6	2.5	
	Z	13.23	16.7		0.9				0.6	1.0			
13	A	13.33	34.5		0.9				1.6	1.8			
	H	13.33	34.4		1.1				0.9		0.8	3.0	
	Z	13.33	33.8		0.4				4.9	5.0			
13	A	13.35	04.1		0.8				0.8	1.0			
	H	13.35	04.1		1.0				0.4	1.0	1.6	2.8	
	Z	13.35	03.5		0.4				3.2	4.9			
13	A	13.39	10.8		0.8				0.4	0.7			
	H	13.39	10.9		0.9				0.4	0.4	1.7	2.3	
	Z	13.39	10.4		0.4				1.4	1.2			
13	A	14.00	33.6		0.8				2.3	2.2			
	H	14.00	33.7		0.8				1.1	1.5	3.0		
	Z	14.00	33.2						5.3	5.9			
13	A	14.59	30.0		0.6				8.1	10.1			
	H	14.59											

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
14	A	07.28	50.1	0.8	-			3.6	4.3				
	H	07.28	50.9	1.3				4.7	5.7	3.5	3.3		
	Z	07.28	49.8	0.5	+			2.7	4.4				
14	A	08.27		0.6				18.5	8.8				
	H	08.27		1.0				4.2	3.8	4.3	3.4		
	Z	08.27	26.4	1.0	-			0.6	1.1				
14	A	10.00	35.4	0.7	+			5.1	8.2				
	H	10.00	35.3	0.8	+			5.8	6.6	2.3	3.0		
	Z	10.00		0.5				0.8	1.1				
14	A	11.44	05.5	1.4	-			1.0	0.7				
	H	11.44	04.1	1.9	+			0.8	1.0	8.4	2.6		
	Z	11.44	05.4	1.3				0.2	0.5				
14	A	11.52	07.1					1.5	1.7				
	H	11.52	06.5	0.8	+			3.3	2.3		2.5		
	Z	11.52	07.5	0.7				0.3	0.2				
14	A	12.40	47.3	0.7				1.6	2.8				
	H	12.40	46.7	0.9				4.0	3.5	4.7	2.4		
	Z	12.40	47.6	1.0				0.8	0.8				
14	A	13.12	38.2	1.2				5.8					
	H	13.12	39.0	0.8	+			4.5	6.2	3.3	3.1		
	Z	13.12	39.7	1.0				0.3	0.6				
14	A	13.20	59.8	1.1	+			6.5	4.5				
	H	13.20	59.4	0.8				3.0	3.8	5.2	3.6		
	Z	13.21	00.4	1.1	+			2.5	0.7				
14	A	13.23	54.4	1.0				1.0	1.9				
	H	13.23	54.4	0.7	-			1.2	1.8	1.7	3.3		
	Z	13.23	55.0	0.8				0.2	0.4				
14	A	13.25	30.1	0.8	+			8.8	6.2				
	H	13.25	29.9	0.9	+			7.0	9.2	5.0	3.6		
	Z	13.25	30.8	1.0				0.6	2.6				
14	A	13.27	24.0	1.2	+			10.2	6.1				
	H	13.27	23.4	1.0	+			9.5	8.8	6.0	3.5		
	Z	13.27	24.6	1.2				1.1	1.0				
14	A	13.28	25.3	1.2				3.1	1.8				
	H	13.28	24.4	1.7	+			1.5	1.2	4.1	3.2		
	Z	13.28	25.9	1.2				0.9	0.4				
14	A	13.39	49.0	1.2				0.6	0.7				
	H	13.39	49.0	1.2				0.6	1.1	5.1	2.4		
	Z	13.39	49.0	0.9				0.4	0.2				
14	A	13.52	08.7	0.7				6.1	9.2				
	H	13.52	08.4	1.0	-			6.8	9.0	4.7	3.5		
	Z	13.52	09.0	1.9				1.4	2.4				
14	A	14.46	20.3	0.9				1.7	1.1				
	H	14.46	20.4	1.1	+			0.5	1.1	3.4	3.0		
	Z	14.46	19.7	0.5				4.0	3.6				
14	A	17.49	38.1	1.0				1.9	1.1				
	H	17.49	38.0	1.1	-			2.6	3.7	6.6	2.6		
	Z	17.49	38.3	1.1				0.2	0.3				
14	A	18.04	55.8	1.4	+			1.6	1.2				
	H	18.04	56.4	1.8	+			1.1	0.7	7.7	3.1		
	Z	18.04	55.9	1.1				1.0	1.0				
14	A	18.29	21.3	0.7	+			2.6	9.2				
	H	18.29	21.9	0.9				3.9	5.0	4.8	3.7		
	Z	18.29	21.6	0.8	-			5.8	2.6				
14	A	18.36	03.2	1.0	+			10.0	11.6				
	H	18.36	02.7	1.1	+			4.9	5.1	6.7	3.6		
	Z	18.36	03.7	1.1	-			1.3	1.2				
14	A	18.46	08.8	0.8	-			2.3	1.4				
	H	18.46	09.4	1.2				1.7	1.8	3.3	2.8		
	Z	18.46	08.6	0.5				1.4	1.6				
14	A	18.47	35.8	0.7	+			5.0	7.6				
	H	18.47	36.3	0.7				0.8	1.2	4.2	2.4		
	Z	18.47	35.9	1.0				0.4	0.3				
14	A	18.47	52.2	0.9	-			3.2	2.7				
	H	18.47	52.9	1.2				3.1	3.0	3.6	3.4		
	Z	18.47	51.7	0.5	+			3.4	7.7				
14	A	19.08	06.6	0.9				0.6	0.4				
	H	19.08	06.6	1.0	-			0.4	0.6	3.0	2.1		
	Z	19.08	06.5	0.6				0.6	0.6				
14	A	19.17	49.7	2.2				1.4	2.5				
	H	19.17	50.5	2.9	-			4.4	5.4	10.7	3.3		
	Z	19.17	49.3	2.1				0.4	0.7				
14	A	19.36	32.3	0.8	+			42.4					
	H	19.36	32.0	0.9	+			31.5	33.2	4.9	4.6		
	Z	19.36	32.7	1.1	-			6.0	12.6				

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
14	A	19.38	01.8	0.8				5.8	8.3				
	H	19.38	01.3	0.8				5.0	5.5	4.8	2.5		
	Z	19.38	02.3	1.0	-			0.5	0.4				
14	A	19.39	14.8	0.8	+			5.2	9.8				
	H	19.39	14.5	0.8	+			6.6	10.8	4.6	3.3		
	Z	19.39	15.0	0.9	-			0.9	1.2				
14	A	20.32	50.8	1.5	+			9.2	10.7				
	H	20.32	51.4	2.0	+			8.0	6.3	6.4	4.0		
	Z	20.32	50.4	1.3				7.6	6.3				
14	A	21.38	41.6	0.3	+			1.6	1.2				
	H	21.38	42.2	1.0	-			1.3	3.0	1.5	1.9		
	Z	21.38	41.7	0.5	-			1.1	0.6				
14	A	21.38	53.2	1.0	+			0.9	1.8				
	H	21.38	52.8	0.8	+			3.7	3.6	4.2	2.8		
	Z	21.38	53.4	1.0	-			1.0	0.6				
14	A	22.24	15.6	1.0				9.1	12.5				
	H	22.24	15.3	1.0	+			30.1	22.3	5.6	4.4		
	Z	22.24	15.7	0.9	-			12.1	19.8				
14	A	22.24	38.7	0.9				2.1	2.9				
	H	22.24	37.8	0.7				2.3	2.8	3.6	3.0		
	Z	22.24	38.3	0.9				0.9	0.4				
14	A	22.45	41.0	0.7				1.4	1.0				
	H	22.45	41.1	1.0	-			1.6	1.6	2.4	2.6		
	Z	22.45	40.8	0.4				1.3	1.6				
14	A	22.45	48.8	0.7				1.0	0.5				
	H	22.45	49.0	0.9				1.0	1.2	2.0	2.4		
	Z	22.45	48.4	0.4				1.0	1.5				
14	A	22.56	17.9	0.9	+			1.8	1.7				
	H	22.56	17.7	0.8	-			2.4	2.7	4.2	3.1		
	Z	22.56	17.8	0.8				2.4	1.0				
14	A	23.07	01.6	1.0				1.5	6.6				
	H	23.07	01.3	0.8	-			5.5	6.6	4.5	3.3		
	Z	23.07	01.7	0.9				1.3	1.0				
14	A	23.13	41.7	2.3				3.1	4.7				
	H	23.13	42.3	3.1	+			13.1	9.4	6.3	4.0		
	Z	23.13	41.3	2.1				1.5	2.7				
14	A	23.15	38.7	0.8				10.0	11.8				
	H	23.15	38.0	0.7	+			5.5	7.7	4.4	3.3		
	Z	23.15	38.5	0.9	-			0.6	1.0				
14	A	23.42	18.6	1.1				0.8	0.5				
	H	23.42	18.7	1.2	-			0.6	1.1		2.3		
	Z	23.42	18.1		+			0.6	0.5				
14	A	23.43	02.5	1.5	+			4.4	4.2				
	H	23.43	02.9	2.0	+			3.0	2.1	5.9	3.5		
	Z	23.43	02.3	1.2	+			3.5	1.5				
14	A	23.45	33.3	2.3				10.0	1.5				
	H	23.45	33.6	3.0	-			3.6	2.8	7.6	3.5		
	Z	23.45	32.2	2.2	+			0.2	0.3				
14	A	23.54	35.8	1.5				0.4	0.5				
	H	23.54	35.8	2.9	+			2.1	1.9	4.8	3.2		
	Z	23.54	34.6	2.1				0.2	0.4				
15	A	01.28	19.3	0.6	+			0.5	0.6				
	H	01.28	19.5	0.9				0.7	0.7	1.9	2.6		
	Z	01.28	19.0	0.4	-			1.6	1.1				
15	A	01.29	51.9	0.9				1.0	0.9				
	H	01.29	52.2	1.3	-			0.4	0.5	2.0	2.6		
	Z	01.29	50.9	0.4	+			1.2	2.2				
15	A	02.24	25.9	0.9	+			1.3	2.4				
	H	02.24	25.0	0.7	+			4.0	4.2	4.9	2.8		
	Z	02.24	25.8	1.1				0.5	0.3				
15	A	02.31	34.5	0.8	+			4.1	7.2</				

Seismological Data of Matsushiro Earthquake Swarm (Report II)

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
17	A H Z	01.25	38.1	0.6				18.0	10.6	2.9	4.0	
	A H Z	01.25	38.8	1.0				12.6	15.5			
	A H Z	01.25	37.8	0.5				9.8	19.1			
17	A H Z	01.31	33.4	0.6				3.2	4.3	3.0	3.2	
	A H Z	01.31	34.2	1.2				2.4	3.6			
	A H Z	01.31	33.1	0.5				4.7	4.2			
17	A H Z	02.11	50.7	0.6				3.9	3.0			
	A H Z	02.11	50.1	0.8				2.5	3.1	3.1	3.3	
	A H Z	02.11	50.9	1.2				2.3	1.0			
17	A H Z	02.22	55.2	1.0				2.8	2.2			
	A H Z	02.22	54.6	0.9				6.7	6.3	4.8	3.0	
	A H Z	02.22	55.2	0.9				0.8	0.9			
17	A H Z	03.41	02.4	1.0				2.8	2.6			
	A H Z	03.41	02.1	0.7				1.3	2.0	4.3	3.2	
	A H Z	03.41	02.2	1.1				1.5	1.1			
17	A H Z	04.48		1.1				0.2	0.2			
	A H Z	04.48	31.0	0.8				16.0	24.5	2.9	2.6	
	A H Z	04.48	31.7	0.9				4.2	2.8			
17	A H Z	04.56	44.2	1.0				1.3	3.0			
	A H Z	04.56	43.4	0.9				4.6	5.3	5.5	3.0	
	A H Z	04.56	44.0	1.0				0.7	0.7			
17	A H Z	05.07	17.9	0.9				3.3	9.6			
	A H Z	05.07	17.6	1.0				7.6	8.6	5.8	3.9	
	A H Z	05.07	17.6	0.9				6.5	5.5			
17	A H Z	08.48	23.6	1.1				0.2	0.3			
	A H Z	08.48	22.0	0.8				1.1	1.3	2.5		
	A H Z	08.48	21.9	0.7				2.3	1.7			
17	A H Z	08.54	24.2	0.9				5.1	6.1			
	A H Z	08.54	24.0	0.8				6.0	6.1	3.3	3.6	
	A H Z	08.54	24.2	0.7				4.8	2.9			
17	A H Z	09.08	48.1	1.0				0.3	0.4			
	A H Z	09.08	49.0	1.2				0.3	0.4	5.0	2.3	
	A H Z	09.08	48.3	0.7				0.6	0.7			
17	A H Z	12.52	47.4	1.1				5.0	4.4			
	A H Z	12.52	47.0	0.9				9.0	15.2	6.0	3.3	
	A H Z	12.52		1.1				1.0	0.8			
17	A H Z	13.12	30.3	0.9				4.8	5.6			
	A H Z	13.12	30.2	0.7				4.3	3.8	3.7	3.1	
	A H Z	13.12	30.5	0.9				0.8	0.7			
17	A H Z	15.35	51.3	0.6				4.4	3.0			
	A H Z	15.35	51.2	0.9				0.8	0.4	4.1	2.7	
	A H Z	15.35	51.6	0.8				0.6	0.5			
17	A H Z	16.59	37.0	1.4				9.8	9.8			
	A H Z	16.59	36.1	0.9				17.0	8.6	3.1	4.0	
	A H Z	16.59	36.9	1.2				3.8	3.0			
17	A H Z	17.15	34.1	1.0				7.0	15.2			
	A H Z	17.15	34.4	0.9				6.5	7.0	5.9	3.5	
	A H Z	17.15	34.8	1.1				0.7	0.8			
17	A H Z	17.20	02.7	0.7				11.0	7.8			
	A H Z	17.20	03.3	1.0				5.7	6.2	4.9	3.4	
	A H Z	17.20	03.0	0.8				1.8	1.4			
17	A H Z	17.39	36.8	0.7				4.2	5.6			
	A H Z	17.39	37.3	1.0						4.4	3.1	
	A H Z	17.39	37.0	0.7				1.4	1.3			
17	A H Z	18.38	50.2	0.6				9.4	4.0			
	A H Z	18.38	50.4	0.8				3.8	3.6	4.0	3.1	
	A H Z	18.38	50.4	0.9				0.4	0.9			
17	A H Z	18.53	16.2	1.2				3.0	3.2			
	A H Z	18.53	16.2	1.2				9.6	5.4	3.3	3.5	
	A H Z	18.53	16.5	0.7				4.6	2.4			
17	A H Z	19.24	09.7	1.1				7.4	4.8			
	A H Z	19.24	09.7	1.2				16.4	35.8	5.3	3.6	
	A H Z	19.24	09.3	1.0				2.3	2.6			
17	A H Z	20.02	44.7	1.0				2.1	3.6			
	A H Z	20.02	44.6	0.7				4.4		3.5	3.1	
	A H Z	20.02	45.0	0.9				0.9	0.4			
17	A H Z	20.55	37.8	0.8				3.0	9.8			
	A H Z	20.55	37.8	0.6				6.0	7.3	3.7	3.3	
	A H Z	20.55	38.3	0.9				0.6	1.0			
17	A H Z	21.03	23.4	0.8				7.4	5.4			
	A H Z	21.03	23.8	0.9				3.3	3.8	4.8	3.2	
	A H Z	21.03	23.6	0.8				0.8	1.0			
17	A H Z	21.12	45.7	1.2				2.2	1.3			
	A H Z	21.12	45.9	1.2				4.8	8.4	2.7	2.9	
	A H Z	21.12	45.6	0.8				0.8	1.0			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
18	A H Z	22.15	41.0	0.5				5.4	5.1	2.8	2.7	
	A H Z	22.15	42.2	0.9				4.4	6.0			
	A H Z	22.15	41.2	0.5				1.0	0.8			
19	A H Z	00.02	21.0	0.7				1.0	0.8			
	A H Z	00.02	21.6	0.9				0.6	0.6	2.7		
	A H Z	00.02	20.2					7.3	8.2			
19	A H Z	05.46	56.0	0.7				8.8	7.2			
	A H Z	05.46	56.7	0.9				10.7		3.4	3.7	
	A H Z	05.46	55.8	0.6				4.4	11.2			
19	A H Z	05.57	08.1	0.6				5.2	10.4			
	A H Z	05.57	09.1	1.2				4.4	5.2	2.4	3.4	
	A H Z	05.57	07.8	0.4				5.0	5.4			
19	A H Z	09.34	23.6	0.6				2.6	5.0			
	A H Z	09.34	24.8	0.9				2.9	3.7	2.8	3.0	
	A H Z	09.34	23.8	0.5				2.2	2.3			
19	A H Z	15.28	34.7	0.9				18.2	12.8			
	A H Z	15.28	34.5	0.9				18.5	31.8	5.7	4.3	
	A H Z	15.28	35.2	1.0				3.8	10.3			
19	A H Z	16.58	49.1	0.7				11.6	11.6			
	A H Z	16.58	49.4	0.8				9.6	9.6	4.1	3.4	
	A H Z	16.58	49.6	1.0				0.8	1.2			
19	A H Z	17.00	10.8	0.7				0.4	1.0			
	A H Z	17.00	11.2	0.9				0.3	0.3	4.7	2.6	
	A H Z	17.00	10.3	0.3				3.7	3.6			
19	A H Z	19.28	23.7	0.9				15.8	24.0			
	A H Z	19.28	23.8	1.5				7.4	10.3	3.0	4.5	
	A H Z	19.28	22.5	0.6				16.2	27.4			
19	A H Z	19.55	00.9	0.5				1.1	0.8			
	A H Z	19.55	00.7	1.0				0.9	0.8	2.1	2.5	
	A H Z	19.55	00.0	0.4				2.4	3.2			
19	A H Z	21.00	19.6	0.8				16.8	12.3			
	A H Z	21.00	19.7	0.7				16.0	25.2	4.5	3.7	
	A H Z	21.00	20.1	1.1				0.8	1.4			
19	A H Z	21.21	11.6	0.8				2.9	3.7			
	A H Z	21.21	12.4	1.5				4.0	5.5	3.8	3.4	
	A H Z	21.21	11.5	0.8				4.0	5.2			
19	A H Z	21.51	08.8	0.5				29.8	45.0			
	A H Z	21.51	09.4	0.8				10.3	13.2	1.3	4.4	
	A H Z	21.51	08.4	0.4				33.5	33.2			
19	A H Z	21.52	39.1	0.6				49.0				
	A H Z	21.52	39.5	1.0				3.8	7.8	2.9	3.9	
	A H Z	21.52	39.6	1.2				0.7	1.2			
19	A H Z	21.53	31.8	0.9				3.6				
	A H Z	21.53	32.5	1.2				2.4	1.8	2.3	3	

Seismological Data of Matsushiro Earthquake Swarm (Report II)

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
21	A	11.03	56.1	0.6	+	6.0	4.8						
	H	11.03	57.4	1.0		6.4	7.0				2.7	3.4	
	Z	11.03	55.8	0.4		7.4	6.2						
21	A	11.04	04.9	0.6		0.7	0.8						
	H	11.04	05.5	1.0		1.0	1.2				1.9	2.3	
	Z	11.04	04.7	0.3		2.6	1.8						
21	A	13.52	13.4	1.0	-	4.5	5.7				4.2	3.6	
	H	13.52	13.5	1.2		3.4	4.2						
	Z	13.52	12.6	0.6		7.0	5.4						
21	A	13.55	48.2	0.7	+	8.0	4.7						
	H	13.55	48.1	0.7		4.8	6.4				1.3	3.2	
	Z	13.55		0.5		1.8	2.0						
21	A	13.56	14.1	1.0	-	3.0	4.0						
	H	13.56	14.2	1.2		4.0	5.4				4.2	3.7	
	Z	13.56	13.6	0.6		12.3	7.6						
21	A	13.57	01.6	0.9	+	3.1	2.4						
	H	13.57	01.5	1.2		4.4	4.4				4.0	3.3	
	Z	13.57	00.9	0.6		4.0	5.6						
21	A	14.36	44.0	1.0		3.4	3.0						
	H	14.36	43.5	1.0		14.6	11.6				5.4	3.3	
	Z	14.36	43.8	0.9		1.9	1.6						
21	A	14.56	48.4	1.0	+	3.0	3.6						
	H	14.56	48.1	0.9		7.8	9.0				4.5	3.8	
	Z	14.56	48.3	0.9		9.6	6.0						
21	A	16.38	14.9	0.8	+	3.0	2.6						
	H	16.38	14.9	0.7		8.2	10.6				3.4	3.0	
	Z	16.38	14.8	0.8		1.0	1.6						
21	A	18.22	25.0	0.5	+	6.5	5.7						
	H	18.22	25.7	0.9		3.4	5.6				3.2	3.0	
	Z	18.22	25.4	0.7		0.9	1.7						
21	A	19.30	25.0	0.6	+	8.8	7.0						
	H	19.30	25.4	0.9		3.3	3.6				3.8	3.4	
	Z	19.30	25.5	0.8		1.8	2.5						
21	A	22.48	11.8	0.7	-	1.3	9.5						
	H	22.48	11.7	0.5		15.9	17.4				2.2	3.4	
	Z	22.48		0.8		0.8	2.2						
21	A	23.10	42.5	0.7	-	19.4	7.8						
	H	23.10	42.4	0.8		27.2	35.5				3.8	3.7	
	Z	23.10	42.9	0.7		1.4	3.0						
22	A	01.30	40.9	1.2	+	2.7	3.1						
	H	01.30	40.0	0.9		6.8	7.2				4.6	3.3	
	Z	01.30	40.8	1.1		0.8	0.9						
22	A	02.31	26.3	0.7		1.6	1.1						
	H	02.31	25.4	1.0		0.4					2.7	2.8	
	Z	02.31	24.4	0.4		3.8	2.4						
22	A	07.14	42.0	1.0	+	10.6	7.1						
	H	07.14	41.2	1.0		12.0	19.0				6.2	3.9	
	Z	07.14	41.9	1.0		4.0	3.4						
22	A	10.25	15.7	0.9	+	4.3	4.7						
	H	10.25	15.0	0.8		14.3	21.3				4.2	3.2	
	Z	10.25	15.8	0.9		1.4	1.4						
22	A	13.02	06.5	1.1		1.1	0.8						
	H	13.02	07.0	0.9		2.4	2.2				5.2	3.3	
	Z	13.02	07.3	1.0		4.0	4.0						
22	A	13.07	23.1	1.0	-	4.0	2.0						
	H	13.07	22.7	1.0		7.8	9.8				6.1	3.6	
	Z	13.07	23.0	1.0		3.4	1.8						
22	A	14.19	01.7	1.2	-	13.0	14.1						
	H	14.19	01.2	1.0		14.8	16.6				6.5	4.2	
	Z	14.19	02.0	1.2	+	4.2	6.2						
22	A	16.54	10.6	0.7		59.6	36.0						
	H	16.54	11.1	1.0		4.0	4.2				5.0	4.2	
	Z	16.54	11.1	0.9		3.2	4.0						
22	A	17.28	25.4	0.9		15.5	21.2						
	H	17.28	25.3	1.2		8.2	6.8				4.7	4.5	
	Z	17.28	24.6	0.9	+	24.6	19.8						
22	A	18.00	37.9	0.9		1.4	1.1						
	H	18.00	37.6	1.2		1.0	2.2				3.6	2.8	
	Z	18.00	37.1	0.5		2.4	2.0						
22	A	21.57	04.5	1.3	+	4.4	2.2						
	H	21.57	05.1	1.8		2.3	1.6				8.6	3.7	
	Z	21.57	04.3	1.2	+	3.2	2.0						
23	A	02.02	46.8	0.8	+	7.0	5.6						
	H	02.02	46.3	0.7		8.0	11.0				4.1	3.4	
	Z	02.02		1.0		1.3	1.9						

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
24	A	13.16	37.6	0.4		-			9.8	7.3			
	H	13.16	38.3						0.3			3.0	
	Z	13.16	37.7	0.4				1.4	2.5				
24	A	16.33	19.9	0.7		+		1.0	1.0				
	H	16.33	19.7	1.1				0.4	0.4		2.1	2.5	
	Z	16.33	19.4	0.3				1.0	2.7				
24	A	17.52	12.9	1.0		+		2.3	2.7				
	H	17.52	12.6	0.7				6.8	6.6		3.9	3.0	
	Z	17.52	13.0	1.0		+		0.8					
24	A	18.13	05.3	1.0		+		10.7	11.0				
	H	18.13	05.1	0.8		+		7.2	10.4		3.7	3.7	
	Z	18.13	05.7	0.8		-		1.0	2.7				
24	A	21.00	53.7	0.9		-		2.7	2.5				
	H	21.00	54.7	1.4				1.5	2.6		2.6	3.2	
	Z	21.00	53.2	0.4				5.8	5.0				
24	A	21.05	10.7	1.0		+		3.0	7.8				
	H	21.05	09.6	0.9		-		5.2	3.7		5.4	3.9	
	Z	21.05	10.8	1.0				6.6	3.8				
24	A	21.48	28.2	1.1		+		2.1	6.3				
	H	21.48	27.8	1.0		-		4.2	4.8		5.4	3.7	
	Z	21.48	27.9	0.9		+		4.7	3.6				
24	A	23.11	15.3	1.3		+		9.0	16.6				
	H	23.11	15.2	1.0		+		14.2	21.0		6.0	3.9	
	Z	23.11	16.0	1.2		+		1.7	1.6				
24	A	23.45	52.3	0.9		-		11.0	11.4				
	H	23.45	52.9	0.6				1.9	2.7		4.0	3.4	
	Z	23.45	53.5	1.0		+		0.4	0.6				
25	A	01.05	39.1	1.1		+		4.3	12.0				
	H	01.05	38.7	1.0		+		7.7	6.4		6.8	3.6	
	Z	01.05	39.5	1.2				0.9	0.9				
25	A	01.06	55.1	0.7		+		20.5	11.1				
	H	01.06	55.7	1.0		+		14.4	17.0		5.1	3.9	
	Z	01.06	55.5	1.0				3.2	2.4				
25	A	02.14	17.2	0.7		+		9.0	8.6				
	H	02.14	17.9	1.3		-		3.1	5.2		3.7	3.7	
	Z	02.14	17.1	0.6				8.3	9.9				
25	A	02.55	08.3	0.8		+		72.1	50.0				
	H	02.55	08.1	0.8		+		40.2	51.2		4.8	4.5	
	Z	02.55	08.6	1.1		-		6.8	6.8				
25	A	02.59	57.6	0.8		-		21.2	7.7				
	H	02.59	57.3	0.7		+		11.2	18.6		4.3	3.8	
	Z	02.59	57.9	1.0				1.0	1.5				
25	A	03.17	36.7	0.8		+		17.2	8.2				
	H	03.17	36.6	0.8		+		14.4	26.5		4.8	4.0	
	Z	03.17	37.1	0.9				5.8	5.6				
25	A	03.19	07.4	0.8		+		3.3	13.5				
	H	03.19	07.4	0.7		-		7.7	10.0		4.3	3.7	
	Z	03.19	07.9	0.9		+		1.0	2.6				
25	A	04.09	24.5	0.9		+		6.2					
	H	04.09	24.0	0.8		-		20.3	18.6		5.2	3.4	
	Z	04.09	24.4	1.0				1.6	1.6				
25	A	04.43	31.7	0.6		+		3.7	7.4				
	H	04.43	32.6	1.1				2.4	4.4		3.8	3.2	
	Z	04.43	31.8	0.6		-		2.7	1.8				
25	A	05.57	01.9	0.5		-		67.1					
	H	05.57	02.6	1.2		-		22.4	39.5		2.5	4.4	
	Z	05.57	02.0	0.5		+		16.6	15.8				
25	A	05.57	51.2	0.6		+		7.9					
	H	05.57	52.2	1.0		-		6.7	10.0		1.8	3.1	
	Z	05.57	51.2	0.3				1.3	2.8				
25	A	06.											



Seismological Data of Matsushiro Earthquake Swarm (Report II)

May, 1966

Table with columns: Date, Station, P-Time (J.S.T.), S-P (sec), Initial Motion (mm), Half of Max. Amplitude (mm), Depth (km), Magnitude. Contains multiple columns of data for various stations and dates.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

May, 1966

Table with columns: Date, Station, P-Time (J.S.T.), S-P (sec), Initial Motion (mm), Half of Max. Amplitude (mm), Depth (km), Magnitude. Contains multiple columns of data for various stations and dates.

Seismological Data of Matsushiro Earthquake Swarm (Report II)

May, 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
30	A H Z	00.51	38.3	0.9	-				2.4	1.2	6.0	2.9	
30	A H Z	00.51	37.8	1.1					3.0	3.4			
30	A H Z	00.51	37.7	0.9					1.0	0.4			
30	A H Z	00.56	00.3	0.9	+				1.4	2.0			
30	A H Z	00.56	00.3	0.8	-				4.2	5.2	4.5	3.1	
30	A H Z	00.56	00.5	0.9					2.1	0.8			
30	A H Z	01.12	46.2	1.0					1.2	1.2			
30	A H Z	01.12	46.4	1.3					0.6	0.4	4.3	2.9	
30	A H Z	01.12	45.6	0.6	+				2.4	1.4			
30	A H Z	01.13	13.9	0.7					0.5	0.5			
30	A H Z	01.13	13.8	0.9					0.8	1.4	2.4	2.1	
30	A H Z	01.13	13.7	0.4					1.2	2.0			
30	A H Z	01.55							0.6	0.7			
30	A H Z	01.55	51.4		+				7.4	10.4	5.0	2.6	
30	A H Z	01.55	51.4						1.2	1.3			
30	A H Z	01.59	33.1	0.8	+				12.6	22.0			
30	A H Z	01.59	32.8	0.7	-				17.8	27.6	4.4	4.1	
30	A H Z	01.59	33.3	1.0					5.6	4.4			
30	A H Z	02.08	50.3	0.7						0.2			
30	A H Z	02.08	49.9	0.7					0.5	0.5	2.0		
30	A H Z	02.08							2.8	1.0			
30	A H Z	03.11	16.1	0.6						6.8			
30	A H Z	03.11	16.4	1.1	-				2.6	3.2	3.7	3.4	
30	A H Z	03.11	15.9	0.6					3.4	4.0			
30	A H Z	03.20	59.9		+				5.0	5.8			
30	A H Z	03.21	00.4		+				3.4	5.0	5.9	3.7	
30	A H Z	03.20	59.8		+				6.2	5.3			
30	A H Z	07.08	20.6	1.0					2.2	4.0			
30	A H Z	07.08	19.9	0.8	-				4.0	6.4	3.0	2.8	
30	A H Z	07.08	20.7	0.8					0.4				
30	A H Z	07.23	42.5	1.0					0.4	1.2			
30	A H Z	07.23	41.8	1.0	+				1.8	2.2	6.4	3.0	
30	A H Z	07.23	39.3	1.4					2.3	1.4			
30	A H Z	10.09	08.9	0.9	+				5.0	5.4			
30	A H Z	10.09	09.0	0.8					2.8	5.8	4.8	3.1	
30	A H Z	10.09	09.0	0.9					0.7	0.5			
30	A H Z	10.52	57.2	1.1	+				2.3	1.8			
30	A H Z	10.52	56.7	1.0	-				2.0	2.0	2.8	3.2	
30	A H Z	10.52	56.8	0.8					2.2	1.4			
30	A H Z	11.06	35.1	1.0					2.4	0.8			
30	A H Z	11.06	35.0	1.2	-				0.6	1.2	3.7	3.3	
30	A H Z	11.06	34.0	0.6					4.0	5.8			
30	A H Z	11.25	50.3	1.0					0.4	1.2			
30	A H Z	11.25	49.8	1.0					1.1	1.2	2.4		
30	A H Z	11.25			-				0.6	0.8			
30	A H Z	13.27	50.0	1.4					13.0	12.3			
30	A H Z	13.27	50.3	1.9					19.5	29.0	7.7	4.4	
30	A H Z	13.27	49.5	1.2					5.4	9.6			
30	A H Z	14.16	13.0	0.9	-				2.0	1.6			
30	A H Z	14.16	12.2	0.6	-				5.8	7.6	3.8	3.0	
30	A H Z	14.16	12.9	1.0					1.3	1.4			
30	A H Z	16.02	11.1	1.1					1.6	5.0			
30	A H Z	16.02	11.3	1.4					1.2	1.4	3.2		
30	A H Z	16.02			-				2.2	1.6			
30	A H Z	16.02	23.5	1.1					2.1	1.3			
30	A H Z	16.02	23.7	1.5					0.6	0.7	2.1	2.9	
30	A H Z	16.02	22.6	0.5	-				1.4	1.5			
30	A H Z	17.03	04.1	0.7	-				16.2	15.5			
30	A H Z	17.03	04.0	0.6	-				12.2	11.8	3.6	3.4	
30	A H Z	17.03	04.5	1.0					0.8	1.0			
30	A H Z	17.32	06.3	1.1					0.4	0.5			
30	A H Z	17.32	05.8	1.1	+				1.2	1.8	4.7	2.5	
30	A H Z	17.32	05.5	0.8					0.9	1.0			
30	A H Z	18.45	30.3	0.8	+				9.2	8.2			
30	A H Z	18.45	29.5	0.6	+				4.2	6.0	3.7	3.2	
30	A H Z	18.45	30.4	1.1					0.4	0.6			
30	A H Z	18.51	07.7	0.9	+				4.2	8.3			
30	A H Z	18.51	07.2	1.0	-				9.0	11.3	5.4	3.6	
30	A H Z	18.51	07.4	0.8					1.5	3.0			
30	A H Z	19.43	53.9	0.6	+				11.4	10.0			
30	A H Z	19.43	53.7	0.9	-				2.4	3.8	3.9	3.6	
30	A H Z	19.43	53.4	0.7	-				4.2	3.0			
30	A H Z	19.54	03.0	1.0					2.2	1.0			
30	A H Z	19.54	02.7	1.3					3.2	6.4	3.1	2.7	
30	A H Z	19.54	02.9	0.5						1.0			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
1966 June													
01	A H Z	00.12	59.4	0.9									
01	A H Z	00.12	58.5	0.7					5.6	4.7			
01	A H Z	00.12	59.4	0.9					4.8	3.8	3.4	3.1	
01	A H Z	01.03	29.2	1.0					0.6	0.4			
01	A H Z	01.03	28.8	0.8	-				3.8	5.6	4.2	3.3	
01	A H Z	01.03	29.2	0.9					8.2	10.7			
01	A H Z	02.53	50.4	1.3	+				1.3	0.6			
01	A H Z	02.53	49.9	1.0					6.8	20.0	4.8	4.0	
01	A H Z	02.53			+				11.0	14.6			
01	A H Z	04.46	51.1	0.9					1.0	1.9			
01	A H Z	04.46	50.9	0.8	-				5.0	6.6			
01	A H Z	04.46	51.5	1.0					5.9	6.6	5.2	3.3	
01	A H Z	04.56	12.0	1.0					1.0	1.3			
01	A H Z	04.56	12.1	0.7					0.4	0.4			
01	A H Z	04.56	11.2						0.3	0.4	2.4		
01	A H Z	06.18	04.8	0.9	+				1.5	1.0			
01	A H Z	06.18	05.2	1.1					2.0	1.2			
01	A H Z	06.18	04.5	0.6					1.0	0.8	3.6	2.8	
01	A H Z	07.01	32.2	1.0					0.8	1.4			
01	A H Z	07.01	31.7	0.8					4.0	4.0			
01	A H Z	07.01	32.5	0.9					4.8	6.3	3.4	3.1	
01	A H Z	07.44	23.7	0.7					0.6	0.9			
01	A H Z	07.44	23.5	1.0					0.2	0.5			
01	A H Z	07.44	23.1	0.4	-				0.2	0.2	2.3	2.0	
01	A H Z	12.14	39.7	1.1					1.2	1.0			
01	A H Z	12.14	39.5	1.1	-				3.9	3.4	4.4	2.8	
01	A H Z	12.14	39.5	0.8					1.2	0.8			
01	A H Z	12.18	22.9	1.0					1.1	1.6			
01	A H Z	12.18	23.0	1.0					2.2	3.2	4.8	2.9	
01	A H Z	12.18	23.1	0.8	+				6.8	4.0			
01	A H Z	12.22	49.0	0.7					0.6	1.0			
01	A H Z	12.22	49.3	1.0	-				1.2	1.4	1.5	3.2	
01	A H Z	12.22	48.3	0.3	-				7.2	5.8			
01	A H Z	12.47	03.7	0.8					2.1	7.2			
01	A H Z	12.47	04.0	1.0	-				1.0	1.1	2.5	2.9	
01	A H Z	12.47	03.0	0.4	+				0.8	1.0			
01	A H Z	14.33	51.9	0.5					4.9	8.7			
01	A H Z	14.33	52.8	1.1					2.6	4.4	3.4	3.2	
01	A H Z	14.33	52.2	0.7					2.3	2.1			
01	A H Z	16.49	54.5	0.7					0.8	0.6			
01	A H Z	16.49	55.9	0.9					0.3	0.4	2.5	2.3	
01	A H Z	16.49	54.7	0.5	+				1.2	0.9			
01	A H Z	18.31	21.9	0.8					6.5	14.6			
01	A H Z	18.31	21.6	0.9	-				16.8	23.2	5.4	3.7	
01	A H Z	18.31	22.3	1.0					2.2	1.8			
01	A H Z	19.49	57.5	1.3					0.6	0.7			
01	A H Z	19.49	57.3	1.9	+				2.1	2.6	2.3	2.3	
01	A H Z	19.49	57.3	0.8					0.5				
01	A H Z	20.01	11.5	1.									

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jun. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
03	A H Z	01.32	24.0	0.4				3.4	4.6	2.4	3.0		
	A H Z	01.32	24.5	1.0				2.2	3.8				
	A H Z	01.32	24.1	0.6				2.1	2.7				
03	A H Z	01.46	51.1	0.5				0.2	0.3	0.4	1.9		
	A H Z	01.46	51.0	0.8				0.4	0.2				
	A H Z	01.46	50.5	0.4				2.2	1.0				
03	A H Z	01.47	52.3	0.9				2.1	5.4	4.4	3.4		
	A H Z	01.47	52.5	0.8				5.4	7.2				
	A H Z	01.47	52.5	0.9				2.2	1.6				
03	A H Z	01.51	28.2	0.9				1.2	1.1				
	A H Z	01.51	28.6	1.2				0.2	0.2	3.4	2.8		
	A H Z	01.51	27.7	0.5				2.2	2.6				
03	A H Z	02.19	26.0	0.8				3.0	6.7				
	A H Z	02.19	26.3	1.0				2.1	1.8	3.2	3.4		
	A H Z	02.19	25.4	0.5					4.0				
03	A H Z	02.50	21.1	0.9				11.1	9.3				
	A H Z	02.50	20.2	0.6				10.8	8.9	4.4	3.4		
	A H Z	02.50	21.4	1.2				0.6	0.6				
03	A H Z	02.55	55.8	0.6				7.8	8.7				
	A H Z	02.55	56.8	1.3				2.0	3.0	3.5	3.0		
	A H Z	02.55	55.9	0.8				0.6	0.7				
03	A H Z	03.26	27.2	0.6				5.8	7.2				
	A H Z	03.26	26.7	1.0				11.0	8.2	4.3	3.0		
	A H Z	03.26	27.0	1.0				4.4	3.0				
03	A H Z	03.26	37.9	1.0				3.7	7.4				
	A H Z	03.26	37.5	0.9				11.8	8.6	5.5	3.8		
	A H Z	03.26	37.7	1.0				4.3	5.2				
03	A H Z	04.10	31.4	1.0				3.2	6.0				
	A H Z	04.10	31.0	1.0				4.6	6.6	6.1	3.6		
	A H Z	04.10	30.9	1.0				2.9	1.4				
03	A H Z	05.03	47.4	0.9				7.7	11.1				
	A H Z	05.03	47.6	0.9				5.4	8.1	4.3	3.9		
	A H Z	05.03	47.4	0.8				6.4	4.9				
03	A H Z	06.17	33.5	0.5				50.1	12.0				
	A H Z	06.17	34.1	1.0				4.2	4.0	3.7	4.2		
	A H Z	06.17	34.0	0.8				5.0	7.3				
03	A H Z	06.17	52.7	0.5				7.8	11.6				
	A H Z	06.17	53.3	1.0				1.4	2.8	3.7	3.1		
	A H Z	06.17	53.0	0.9				1.0	0.5				
03	A H Z	06.18	04.7	0.6				9.5	7.8				
	A H Z	06.18	05.3	1.0				1.0	1.4	3.9	3.2		
	A H Z	06.18	05.1	0.9				1.0	0.7				
03	A H Z	07.29	55.6	1.0				5.4	6.0	6.9	2.5		
	A H Z	07.29	55.4	1.2				0.6	0.6				
	A H Z	07.29	56.1	1.0									
03	A H Z	08.04	39.2	0.7				2.9	5.4				
	A H Z	08.04	40.5	1.2				0.8	1.5	4.6	3.2		
	A H Z	08.04	38.7	0.8				1.8	1.4				
03	A H Z	08.13	26.8	0.8				2.0	8.1				
	A H Z	08.13	27.7	1.4				1.4	1.4	4.0	3.3		
	A H Z	08.13	26.2	0.6				1.2	1.8				
03	A H Z	10.13	11.8	0.5				5.8	8.0				
	A H Z	10.13	12.5	1.0				4.6	7.5	3.3	3.2		
	A H Z	10.13	11.8	0.6				1.1	2.1				
03	A H Z	12.48	23.0	0.9				0.6	0.7				
	A H Z	12.48	23.0	1.3				0.7	0.9	4.1	2.9		
	A H Z	12.48	22.1	0.6				2.9	4.3				
03	A H Z	12.48	39.0	1.0				1.8	2.9				
	A H Z	12.48	39.2	1.2				1.8	2.2	2.3	3.5		
	A H Z	12.48	38.3	0.6				4.1	9.5				
03	A H Z	12.57	25.3	0.7				1.8	5.2				
	A H Z	12.57	25.0	0.7				0.9	2.8	4.2	3.0		
	A H Z	12.57	24.8	1.0				0.6	0.2				
03	A H Z	13.40	59.8	0.9				0.3	0.6				
	A H Z	13.41	00.4	1.0				0.5	0.6	2.3	2.3		
	A H Z	13.40	59.1	0.5				0.5	1.2				
03	A H Z	14.13	04.7	0.9				0.7	1.4				
	A H Z	14.13	04.0	0.8				1.2	2.0	4.3	3.0		
	A H Z	14.13	04.1	0.9				2.4	0.8				
03	A H Z	14.16	43.9	0.5				0.6	0.9				
	A H Z	14.16	43.6	1.0				1.1	1.3	3.7	2.3		
	A H Z	14.16	42.9	0.8				0.6	0.7				
03	A H Z	15.56	11.8	0.7				3.7	6.3				
	A H Z	15.56	12.6	1.1				1.2	2.2	3.5	3.4		
	A H Z	15.56	11.4	0.5				4.1	3.8				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Jun. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
04	A H Z	11.30	26.7	0.7				2.8	4.2				
	A H Z	11.30	27.3	0.9				2.5	3.9	2.7	3.3		
	A H Z	11.30	26.2	0.5					8.0				
04	A H Z	12.09	25.9	1.0				3.0	1.8				
	A H Z	12.09	25.8	1.2				4.5	7.4	5.7	3.4		
	A H Z	12.09	25.3	0.8				3.6	2.3				
04	A H Z	13.04	37.2	0.9				2.8	2.8				
	A H Z	13.04	37.9	1.4				2.1	3.0	4.3	3.0		
	A H Z	13.04	36.7	0.6				0.8	1.8				
04	A H Z	13.50	41.2	0.7				2.7	5.6				
	A H Z	13.50	41.9	1.2				1.3	2.4	3.4	3.2		
	A H Z	13.50	40.7	0.5					3.6				
04	A H Z	16.10	01.6	1.0				1.4	0.8				
	A H Z	16.10	02.4	1.0				0.6	0.7	0.7	2.7		
	A H Z	16.10	00.6	0.6				0.8	1.4				
04	A H Z	20.40	42.6	1.0				6.7	5.4				
	A H Z	20.40	42.1	0.9				12.2	15.8	5.9	3.7		
	A H Z	20.40	42.3	1.1				4.4	2.8				
04	A H Z	21.37	26.9	0.7				0.4	0.3				
	A H Z	21.37	27.2	0.6				0.4	0.2	2.2	0.5		
	A H Z	21.37	26.1	0.5				1.6	1.9				
04	A H Z	22.41	48.1	1.1				4.2	2.7				
	A H Z	22.41	47.5	0.9				5.9	5.7	5.6	2.2		
	A H Z	22.41	47.8	1.1				1.0	0.8				
05	A H Z	02.14	04.1	0.6				9.4	5.2				
	A H Z	02.14	04.8	1.0				2.2	3.2	3.2	3.3		
	A H Z	02.14	03.7	0.5				2.4	2.5				
05	A H Z	02.18	52.5	0.7				2.9	1.4				
	A H Z	02.18	53.3	1.1				2.8	3.6	3.5	3.2		
	A H Z	02.18	52.2	0.5				4.8	5.1				
05	A H Z	02.30	41.0	0.7				1.4	1.1				
	A H Z	02.30	41.2	1.1				1.6	2.8	3.2	2.8		
	A H Z	02.30											



Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jun. 1966

Table with columns: Date, Station, P-Time (J.S.T.), S-P (sec), Initial Motion (mm), Half of Max. Amplitude (mm), Depth (km), Magnitude. Contains multiple rows of seismic data for stations A, H, Z.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Jun. 1966

Table with columns: Date, Station, P-Time (J.S.T.), S-P (sec), Initial Motion (mm), Half of Max. Amplitude (mm), Depth (km), Magnitude. Contains multiple rows of seismic data for stations A, H, Z.

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jun. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
10	A	09.49	24.8	0.6				0.8				
	H	09.49	25.3	1.2				0.2	0.3	2.6	2.2	
	Z	09.49	24.9	0.4				0.8	1.3			
10	A	09.49	44.0	0.9				0.3				
	H	09.49	44.5	1.2				0.2	0.2	2.3	2.3	
	Z	09.49	43.6	0.4					2.8			
10	A	10.26	32.9	1.3				8.6	9.7			
	H	10.26	32.5	1.0				9.7	15.4	6.9	3.7	
	Z	10.26	33.3	1.4					1.1			
10	A	11.02	56.5	1.1				0.6	3.0			
	H	11.02	56.0	0.9				3.0	6.6	5.4	3.1	
	Z	11.02	56.6	1.1				0.6	0.7			
10	A	10.36	29.5	0.8				21.4	32.0			
	H	10.36	29.6	0.7				36.7	36.6	4.6	4.2	
	Z	10.36	30.5	1.1				2.7	5.1			
10	A	10.54	49.4	1.1				16.8	8.0			
	H	10.54	49.9	1.2				5.8	6.4	5.0	4.2	
	Z	10.54	49.1	0.8				9.6	5.2			
10	A	18.09	51.6	1.1				42.5	51.2			
	H	18.09	52.7	1.5				25.4	24.4	8.0	4.7	
	Z	18.09		1.2					49.0			
10	A	19.19	36.5	1.0				4.8	5.5			
	H	19.19	36.3	0.9				10.7	10.8	3.7	5.6	
	Z	19.19	37.1	1.1				13.2	7.2			
10	A	19.21	11.9	1.0				0.2	0.4			
	H	19.21	11.4	0.8				1.5	2.4	2.4	2.4	
	Z	19.21		0.8				11.1	6.6			
10	A	19.24	13.6	0.6				1.7	1.0			
	H	19.24	14.3	1.1				1.0	2.0	3.6	2.7	
	Z	19.24	13.9	0.6				8.6	4.4			
10	A	19.24	28.8	0.5				1.4	1.1			
	H	19.24	29.6	1.0				2.0	3.2	3.1	2.8	
	Z	19.24	29.0	0.6				9.4	4.4			
10	A	19.25	23.9	0.6				1.4	1.8			
	H	19.25	24.6	1.1				2.2	2.6	3.0	2.9	
	Z	19.25	23.9	0.5				10.0	12.9			
10	A	19.51	53.8	0.8				0.7	0.8			
	H	19.51	53.2	0.5				2.3	2.9	2.8	2.5	
	Z	19.51	54.0	0.9				2.8	3.0			
10	A	19.53	08.9	0.9				5.4	2.3			
	H	19.53	08.6	0.8				4.1	5.8	4.9	3.4	
	Z	19.53	09.8	1.3				3.4	2.4			
10	A	21.17	00.0	0.6				0.9				
	H	21.16	59.7	0.8				2.5	5.1	3.6	2.7	
	Z	21.17	00.1	0.9				2.8	2.8			
10	A	22.41	12.6	1.1				1.5	1.4			
	H	22.41	12.1	0.7				5.4	9.3	2.8	3.2	
	Z	22.41	13.0	1.0				4.4	2.5			
10	A	22.56	37.1	0.9				0.3	1.0			
	H	22.56	36.7	1.0				0.9	0.9	5.3	2.5	
	Z	22.56	36.8	0.9				3.4	2.6			
10	A	23.52	16.4	1.2				0.6	0.2			
	H	23.52	15.7	0.7				1.7	2.4	5.1	2.6	
	Z	23.52	16.1	1.4				2.4	2.7			
11	A	00.34	39.3	1.2				0.5	0.6			
	H	00.34	39.2	1.1				1.2	2.1	3.6	2.5	
	Z	00.34	39.4	1.1				3.0	3.6			
11	A	00.36	40.5	1.1				0.4	0.3			
	H	00.36	40.0	1.0				0.6	1.3	6.4	2.4	
	Z	00.36	40.3	1.1				1.7	1.8			
11	A	00.49	11.9	0.5				1.0	4.0			
	H	00.49	11.6	0.6				3.4	5.0	2.6	3.0	
	Z	00.49	12.4	0.9				2.8	3.2			
11	A	01.11	20.2	1.1				0.4	0.5			
	H	01.11	20.1	1.0				1.2	1.7	4.7	2.6	
	Z	01.11	20.5	0.9				6.6	3.7			
11	A	01.40	17.9	0.4				1.0	0.9			
	H	01.40	18.4	1.0				1.0	1.0	2.9	2.2	
	Z	01.40	17.7	0.7				11.1	4.8			
11	A	02.07	29.6	0.7				0.6	0.2			
	H	02.07	30.1	1.1				0.2	0.4	2.5	2.0	
	Z	02.07	29.6	0.4				8.4	10.8			
11	A	02.13	14.0	1.0				2.8	2.2			
	H	02.13	14.0	1.0				1.4	3.4	5.8	3.2	
	Z	02.13	14.4	1.0				7.0	5.9			

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
11	A	03.05	43.7	0.6				6.8	7.6			
	H	03.05	44.4	1.2				3.1	3.4	3.2	3.3	
	Z	03.05	43.9	0.6				7.5	9.2			
11	A	03.13	43.4	0.6				0.4	0.5			
	H	03.13	43.9	0.9				0.6	1.0	2.5	2.0	
	Z	03.13	43.1	0.5				5.1	5.4			
11	A	03.26	55.7	0.5				1.8	2.3			
	H	03.26	56.3	1.2				1.2	1.7	2.7	2.7	
	Z	03.26	55.9	0.7				8.0	6.6			
11	A	04.13	30.0	0.6				0.7	1.8			
	H	04.13	29.5	0.6				0.7	1.2	1.0	2.4	
	Z	04.13	30.6	1.2				2.4	2.3			
11	A	05.19	16.7	1.0				0.4	0.2			
	H	05.19	17.0	1.3				0.2	0.5	5.5	2.2	
	Z	05.19	16.4	0.8				2.2	3.6			
11	A	06.10	08.1	0.7				0.8	1.4			
	H	06.10	08.2	1.0				0.9	1.5	2.9	2.6	
	Z	06.10	07.8	0.5				4.5	5.5			
11	A	06.14	25.9	0.9				1.3	2.8			
	H	06.14	25.7	0.7				5.5	7.4	4.2	3.2	
	Z	06.14	26.2	1.1				12.0	5.0			
11	A	06.24	07.9	1.0				0.5	0.6			
	H	06.24	07.9	1.1				0.4	0.7	4.5	2.4	
	Z	06.24	07.4	0.7				7.1	14.1			
11	A	06.31	32.8	1.1				0.2				
	H	06.31	32.7	1.1				0.5	0.6	2.4	2.0	
	Z	06.31	32.0	0.6				3.2	6.0			
11	A	06.56	20.6	0.6				5.4	4.2			
	H	06.56	19.8	0.8				8.6	15.3	4.0	3.6	
	Z	06.56	20.3	1.0				20.9	7.4			
11	A	06.56	55.4	0.7				2.0	2.0			
	H	06.56	55.1	0.8				4.2	6.2	4.1	3.1	
	Z	06.56	55.7	0.8				3.2	3.0			
11	A	06.58	10.5	0.8				0.5	0.3			
	H	06.58	10.3	0.8				1.4	3.5	3.7	2.5	
	Z	06.58	10.8	0.8				6.2	2.6			
11	A	07.15	33.2	0.9				1.8	1.4			
	H	07.15	32.8	0.6				2.0	2.0	4.3	2.7	
	Z	07.15	33.8	1.1				4.3	3.4			
11	A	07.43	39.1	1.0				0.5	0.6			
	H	07.43	38.7	0.6				1.0	2.7	3.3	2.5	
	Z	07.43	39.6	1.0				2.7	2.6			
11	A	08.03	22.8	0.9				1.8	2.6			
	H	08.03	22.4	0.7				9.0	7.4	3.6	3.3	
	Z	08.03	22.7	0.8				11.8	4.4			
11	A	08.03	40.9	1.7				0.4	0.2			
	H	08.03	41.2	2.1				0.2	0.3	9.1	2.4	
	Z	08.03	40.7	1.4				4.0	2.5			
11	A	08.25	13.1	0.7				0.6	2.5			
	H	08.25	12.5	0.6				3.8	4.4	3.4	2.9	
	Z	08.25	13.3	1.0				3.5	2.8			
11	A	09.05	10.8	0.6				0.3				
	H	09.05	11.2	1.2				0.2	0.3	2.8	1.7	
	Z	09.05	10.5	0.5				2.8	7.8			
11	A	09.47	22.2	0.6				2.7	3.0			
	H	09.47	21.5	0.7				2.7	3.0	3.0	2.8	
	Z	09.47	22.2	1.0				10.3	6.2			
11	A	09.59	59.8	0.6				0.5				
	H	09.59	59.6	0.7				1.0	1.7	3.4	2.1	
	Z	10.00	00.0	0.8				3.7	2.6			
11	A	10.17	32.5	1.0				1.0	0.5			
	H	10.17		0.8				0.7	2.1	5.1	2.7	
	Z	10.17	32.2	1.0				3.5	2.9			
11												

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jun. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
13	A H Z	06.18	48.3	0.9				3.4				
	A H Z	06.18	49.2	1.5				4.5	5.8	4.3	3.6	
	A H Z	06.18	48.1	0.7				5.4	7.4			
13	A H Z	06.31	16.9	1.0				5.5				
	A H Z	06.31	16.6	0.9				13.6	11.2	5.4	3.8	
	A H Z	06.31	17.0	1.0				14.4	19.2			
13	A H Z	07.15	11.2	0.7				0.6				
	A H Z	07.15	10.8	0.8				0.9	1.2	4.1	2.4	
	A H Z	07.15	11.1	0.8				1.5	2.1			
13	A H Z	08.49	18.4	0.9				1.5	5.1			
	A H Z	08.49	17.9	0.6				2.9	2.6	4.1	3.1	
	A H Z	08.49	18.5	1.0				4.4	3.3			
13	A H Z	09.33	48.4	0.4				3.3				
	A H Z	09.33	49.3	0.7				0.4	0.3	1.8	2.1	
	A H Z	09.33	49.1	0.6				1.0	0.7			
13	A H Z	10.46	26.9	1.0				0.9				
	A H Z	10.46	26.4	0.6				3.1	2.7	3.4	2.7	
	A H Z	10.46	27.3	1.1				5.0	3.3			
13	A H Z	12.52	23.9	1.0				1.7	1.3			
	A H Z	12.52	23.7	1.1				3.0	2.1	5.5	3.0	
	A H Z	12.52	23.9	0.9				10.6	5.5			
13	A H Z	12.56	21.0	0.8				2.4	3.3			
	A H Z	12.56	20.4	0.7				5.0	4.6	4.1	3.1	
	A H Z	12.56	21.1	1.0				4.8	2.6			
13	A H Z	13.57	37.3	0.3				0.3	6.6			
	A H Z	13.57	37.9	0.8				0.6	0.2	2.1	2.5	
	A H Z	13.57	38.1	0.7				0.8	0.4			
13	A H Z	16.53	23.0	0.9				1.3	2.8			
	A H Z	16.53	22.8	1.0				4.0	5.6	5.3	3.3	
	A H Z	16.53	22.8	0.8				6.3	4.2			
13	A H Z	17.09	47.1	0.9				1.6	2.5			
	A H Z	17.09	47.8	1.1				1.1	1.3	4.3	2.9	
	A H Z	17.09	46.8	0.7					9.9			
13	A H Z	17.39	12.8	0.6				2.6	5.5			
	A H Z	17.39	12.8	0.7				3.3	3.2	3.5	3.0	
	A H Z	17.39	12.8	0.9				4.4	3.2			
13	A H Z	17.52	03.4	0.7				3.8	5.3			
	A H Z	17.52	04.0	1.0				1.1	1.9	4.1	3.1	
	A H Z	17.52	03.0	0.6				10.8	13.4			
13	A H Z	18.11	10.3	1.2				3.4	8.3			
	A H Z	18.11	09.5	0.8				2.6	3.4	5.4	3.5	
	A H Z	18.11	09.9	1.3				4.4	2.5			
13	A H Z	18.44	40.0	1.2				2.6	5.0			
	A H Z	18.44	39.7	0.7				2.7	3.3	4.6	3.3	
	A H Z	18.44	40.6	1.2				7.7	6.0			
13	A H Z	18.55	28.8	1.0				12.6	8.0			
	A H Z	18.55	28.6	1.0				16.0	19.0	5.8	4.2	
	A H Z	18.55	28.7	1.0				33.8	28.6			
13	A H Z	19.41	02.8	0.9				3.4	3.2			
	A H Z	19.41	02.3	0.7				10.0	13.0	4.1	3.5	1.4
	A H Z	19.41	02.7	0.9				20.8	8.4			
13	A H Z	21.53	25.3	1.2				3.2	2.9			
	A H Z	21.53	24.5	0.7				3.1	3.1	4.3	3.2	
	A H Z	21.53	25.6	1.2				11.1	5.0			
13	A H Z	23.07	16.5	0.9				1.5	2.6			
	A H Z	23.07	16.3	1.1				3.0	4.7	6.1	3.3	
	A H Z	23.07	16.1	1.0				2.7	2.8			
14	A H Z	01.02	25.7	0.7				0.8	1.8			
	A H Z	01.02	25.6	0.6				2.1	2.7	3.2	2.7	
	A H Z	01.02	26.3	1.1				0.6	2.0			
14	A H Z	01.36	17.4	0.7				4.3	4.8			
	A H Z	01.36	17.1	0.8				10.8	10.2	4.6	3.5	
	A H Z	01.36	17.4	0.9				9.5	5.8			
14	A H Z	02.32	38.2	0.9				0.3	1.4			
	A H Z	02.32	38.4	1.3				0.6	0.6	3.7	2.6	
	A H Z	02.32	37.4	0.5				6.3	7.8			
14	A H Z	02.39	39.1	0.8				1.8	7.6			
	A H Z	02.39	39.1	0.5				6.3	5.5	3.2	3.3	
	A H Z	02.39	39.9	0.1				2.5	3.6			
14	A H Z	03.13	08.8	1.0				1.0	5.8			
	A H Z	03.13	08.2	0.8				4.8	6.0	5.3	3.5	
	A H Z	03.13	09.1	1.2				5.1	3.7			
14	A H Z	03.25	19.6	0.6				2.5	4.1			
	A H Z	03.25		0.7				0.4	0.4	3.7	2.4	
	A H Z	03.25	20.3	1.0				1.0	1.5			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
14	A H Z	23.15	05.3	1.0				0.6	0.7			
	A H Z	23.15	05.0	1.3				0.8	1.1	5.9	2.6	
	A H Z	23.15	04.5	0.8				2.7	2.2			
15	A H Z	00.24	49.0	1.0				10.5	3.0			
	A H Z	00.24	49.4	1.3				1.2	0.8	5.1	3.4	
	A H Z	00.24	49.6	0.7				4.4	7.7			
15	A H Z	00.38	14.3	0.4				10.2	27.2			
	A H Z	00.38	15.2	0.9				1.8	2.3	3.0	3.5	
	A H Z	00.38	15.0	0.8				4.2	5.6			
15	A H Z	00.42	25.2	0.7				1.4	3.6			
	A H Z	00.42	24.7	0.7				2.4	2.8	3.5	3.0	
	A H Z	00.42	25.0	0.8				5.0	2.8			
15	A H Z	00.47	29.8	1.0				2.3	1.2			
	A H Z	00.47	29.9	1.5				0.5	0.5	4.1	2.8	
	A H Z	00.47	28.7	0.6				5.0	5.3			
15	A H Z	00.51	42.2	1.0				9.8	4.2			
	A H Z	00.51	41.4	0.8				4.8	4.5	5.2	3.6	
	A H Z	00.51	42.0	1.0				3.8	3.9			
15	A H Z	02.13	31.2	1.2				39.7	22.0			
	A H Z	02.13	30.0	0.7				23.0	27.8	1.6	4.6	
	A H Z	02.13	31.2	1.1				7.2	9.6			
15	A H Z	02.17	17.9	0.8				0.9	1.0			
	A H Z	02.17	18.3	1.5				0.4	0.6	2.5	2.5	
	A H Z	02.17	17.2	0.7				8.1	4.7			
15	A H Z	02.22	57.4	1.3				3.2	2.6			
	A H Z	02.22	56.4	0.9				4.2	3.2	6.0	3.4	
	A H Z	02.22	57.9	1.3				4.6	3.3			
15	A H Z	02.53	57.7	0.9				9.6	5.6			
	A H Z	02.53	57.1	0.7				5.0	4.8	4.0	3.5	
	A H Z	02.53	57.9	0.9								
15	A H Z	03.55	01.7	1.0				52.3	18.2			
	A H Z	03.55	01.1	0.8				25.3		4.7	4.6	
	A H Z	03.55	01.8	1.0				21.7	18.7			
15	A H Z	03.56	19.3	1.0				3.4	6.3			
	A H Z	03.56	18.6	0.7				5.4	4.2	3.9	3.4	
	A H Z	03.56	19.5	1.0				6.6	5.0			
15	A H Z	05.49	48.6	0.6				5.2	7.0			
	A H Z	05.49	49.4	0.7				0.6	0.4	3.3	2.6	
	A H Z	05.49	49.3	0.8				1.3	2.4			
15	A H Z	05.54	51.3	1.0				4.3	2.5			
	A H Z	05.54	15.7	1.4				0.7	0.7	1.5	3.0	
	A H Z	05.54	14.6	0.4				12.4				
15	A H Z	07.53	47.3	1.5				0.8	1.0			
	A H Z	07.53	47.7	1.8				0.6	0.6	9.1	2.9	
	A H Z	07.53	47.3	1.3				3.2	3.5			
15	A H Z	07.55	26.7	1.3				6.4	6.0			
	A H Z	07.55	25.9	0.9				6.0	8.2	5.7	3.8	
	A H Z	07.55	26.7	1.2				13.6	4.0			
15	A H Z	08.03	19.5	1.4				1.0	2.0			
	A H Z	08.03	19.9	1.9				1.3	1.4	8.1	3.3	
	A H Z	08.03	19.1	1.2				2.9	3.6			
15	A H Z	08.21	19.0	1.0				1.8	5.6			
	A H Z	08.21	18.2	0.7				4.6	3.8	4.4	3.3	
	A H Z	08.21	19.3	1.1				3.5	2.6			
15	A H Z	09.30	37.7	1.5				2.8	2.6			
	A H Z	09.30	36.7	1.1				5.3	3.6	6.6	3.5	
	A H Z	09.30	38.0	1.9				2.0	3.2			
15	A H Z	09.42	45.9	1.3				36.8	15.1			</

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jun. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
16	A	10.15	40.8	0.7				6.0	5.6	4.8	2.6	
	H	10.15	40.7	1.1				0.7	0.7			
	Z	10.15	41.3	1.1				2.4	2.3			
16	A	10.55	10.0	0.8				2.7	2.1	3.4	2.7	
	H	10.55	09.5	0.8				2.4	2.9			
	Z	10.55	10.1	0.8				3.6	5.8			
16	A	10.57	13.4	1.1				0.4	0.7			
	H	10.57	13.0	1.3				1.3	1.1	5.6	2.4	
	Z	10.57	12.7	0.9				7.1	5.6			
16	A	12.45	23.6	1.3				2.8	3.1			
	H	12.45	22.3	0.8				4.8	6.6	5.4	3.1	
	Z	12.45	23.5	1.4				3.2	4.2			
16	A	13.17	02.1	0.7				2.8	4.4			
	H	13.17		0.7				3.5	4.4	3.2	2.8	
	Z	13.17	02.1	0.9				6.0	3.8			
16	A	14.33	35.9	0.4				7.4	9.0			
	H	14.33	36.1	0.8				2.0	1.8	2.2	2.7	
	Z	14.33	35.9	0.7				2.1	2.4			
16	A	16.25	15.7	0.8				2.9	3.8			
	H	16.25	15.0	0.9				2.6	2.8			
	Z	16.25	15.0	0.4					11.7			
16	A	16.26	23.1	0.8				1.7	1.8			
	H	16.26	22.7	0.8				2.0	1.6	2.1	2.5	
	Z	16.26	22.4	0.6				12.4	14.0			
16	A	16.34	00.1	0.7				0.8	2.2			
	H	16.33	59.7	0.9				1.0	0.9	1.1	2.3	
	Z	16.33	59.4	0.4				9.0	4.0			
16	A	16.34	02.5	0.8				5.0	4.8			
	H	16.34	03.0	0.9				5.1	4.2	3.0		
	Z	16.34	02.8	0.4				9.8	20.6			
16	A	16.37	09.1	0.8				1.2	3.6			
	H	16.37	08.7	0.9				1.8	2.4	1.6	2.3	
	Z	16.37	08.5	0.5					23.9			
16	A	16.43	16.3	0.8				1.6	3.1			
	H	16.43	15.9	0.9				1.5	2.2	2.7	2.7	
	Z	16.43	15.7	0.5					15.2			
16	A	16.47	58.6	0.3				4.7	5.4			
	H	16.47	58.6	0.8				1.6	1.4	0.5	2.4	
	Z	16.47		0.5					24.0			
16	A	17.20	25.4	1.1				2.8	4.4			
	H	17.20	24.3	1.0				7.2	7.2	6.6	3.3	
	Z	17.20	25.5	1.3				3.1	2.4			
16	A	18.43	43.2	1.5				5.5	3.8			
	H	18.43	43.1	1.9				2.7	4.1	9.6	3.6	
	Z	18.43	42.5	1.5				5.6	12.0			
16	A	19.19	37.2	0.9				8.0	7.4			
	H	19.19	36.1	0.8				19.2	22.6	4.6	3.6	
	Z	19.19	37.4	1.2				6.0	8.4			
16	A	19.37	36.5	1.1				1.1	2.3			
	H	19.37	35.9	1.3				2.8	4.6	7.0	3.1	
	Z	19.37	36.0	1.1				5.0	11.2			
16	A	20.55	18.5	1.0				4.8	4.0			
	H	20.55	17.0	0.7				3.4	3.9	4.1	3.0	
	Z	20.55	17.7	1.0				3.9	2.6			
16	A	21.50	46.7	1.3				4.0	2.7			
	H	21.50	45.3	1.0				10.8	10.0	2.8	3.4	
	Z	21.50	46.3	1.0				8.6	8.2			
16	A	22.41	33.4	1.1				3.6	4.4			
	H	22.41	33.0	1.0				10.6	6.3	5.5	3.4	
	Z	22.41	33.1	1.0				5.6	4.6			
16	A	23.47	31.3	0.8				3.3	3.8			
	H	23.47	31.1	1.5				1.2	1.2	3.9	2.8	
	Z	23.47	30.8	0.7					6.2			
17	A	02.13	11.7	1.0				2.8	2.6			
	H	02.13	10.2	0.7				2.4	4.0	5.0	2.9	
	Z	02.13	11.7	1.2				5.1	4.3			
17	A	02.34	52.4	0.7				51.0	14.1			
	H	02.34	51.3	0.7				16.2	12.2	3.8	4.0	
	Z	02.34	52.5	1.0				43.7	9.3			
17	A	02.44	27.5	0.7				7.0	4.9			
	H	02.44	26.4	0.8				4.7	5.6	3.8	3.1	
	Z	02.44	27.4	0.9				6.7	6.0			
17	A	02.57	39.9	1.6				1.4	1.0			
	H	02.57	39.3	2.0				1.0	1.2	9.3	2.9	
	Z	02.57	39.3	1.4				6.0	3.7			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Jun. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
17	A	18.37	14.5	1.7				0.6	1.4			
	H	18.37	15.0	2.1				0.8	1.0	9.2	2.9	
	Z	18.37	14.1	1.5				4.4	3.2			
17	A	18.43	14.8	1.5				1.0	2.3			
	H	18.43	14.9	2.0				1.7	1.6	9.1	3.1	
	Z	18.43	14.1	1.4				3.3	6.8			
17	A	19.31	16.7	0.9				1.6	2.5			
	H	19.31	16.0	0.7				3.9	4.0	3.9	2.8	
	Z	19.31	16.7	1.0				5.3	4.8			
17	A	19.41	38.9	0.8				2.2	3.0			
	H	19.41	39.3	1.1				1.4	2.6	4.6	2.8	
	Z	19.41	38.3	0.7				9.0	16.2			
17	A	20.17	48.0	0.7				2.3	4.8			
	H	20.17	47.7	0.7				3.3	3.5	3.6	2.8	
	Z	20.17	48.2	1.0				2.8	2.4			
17	A	20.19	11.8	0.8				1.2	4.6			
	H	20.19	11.3	0.7				5.2	4.0	4.0	2.9	
	Z	20.19	12.0	1.0				2.6	1.8			
17	A	21.15	57.7	0.9				8.9	7.8			
	H	21.15	57.3	0.8				15.2	18.4	4.9	3.6	
	Z	21.15	57.5	1.1				18.4	9.7			
17	A	21.34	25.2	1.0				18.6	18.6			
	H	21.34	25.1	0.8				20.8	14.8	4.3	3.9	
	Z	21.34	25.2	1.0				19.2	11.0			
17	A	21.47	41.0	1.0				0.7	2.0			
	H	21.47	40.3	0.6				1.3	0.8	3.4	2.3	
	Z	21.47	40.8	1.0				2.4	2.8			
17	A	21.57		0.4				0.4	1.0			
	H	21.57	23.3	0.6				4.0	2.3	1.4	2.1	
	Z	21.57	23.9	0.9				4.0	4.8			
17	A	22.18	49.7	0.8				1.0	1.4			
	H	22.18	49.3	0.7				2.8	2.8	2.8	2.5	
	Z	22.18	49.5	0.7				6.0	5.2			
17	A	22.28	49.8	0.8				1.6	1.9			
	H	22.28	49.1	0.6				6.6	6.0	2.8	2.7	
	Z	22.28	49.5	0.9				6.0	2.0			
17	A	22.29	08.7	0.8				4.3	5.0			
	H	22.29	08.7	0.8				5.4	4.0	4.3	3.1	
	Z	22.29	08.6	0.9				14.4	9.6			
18	A	00.05	42.8	0.8				1.6	1.7			
	H	00.05	42.9	1.0				0.6	0.4	0	2.2	
	Z	00.05	41.9	0.4				5.8	5.5			
18	A	00.18	41.8	0.4				1.6	4.3			
	H	00.18	42.5	1.0				0.6	0.6	2.5	2.2	
	Z	00.18	42.3	0.6				2.8	5.1			
18	A	01.19	10.9	1.0				0.4	0.7			
	H	01.19	11.4	1.2				1.7	2.4	5.1	2.5	

Seismological Data of Matsuhiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
19	A	02.04	37.3	0.6				2.2	2.6			
	H	02.04	37.7	0.9				2.6	3.5	2.5	2.7	
	Z	02.04	36.8	0.5				9.6	21.2			
19	A	04.08	15.5	0.6				24.8	35.3			
	H	04.08	16.2	1.2				6.6	7.2	3.9	3.8	
	Z	04.08	15.4	0.8				25.6	25.4			
19	A	04.37	10.3	1.0				2.6	7.6			
	H	04.37	09.9	0.9				13.2	35.0	4.9	3.9	
	Z	04.37	10.3	1.0				22.6	10.9			
19	A	04.55	54.7	0.9				12.1	26.7			
	H	04.55	54.5	0.8				19.0	32.8	5.0	4.2	
	Z	04.55	55.2	1.2				5.5	7.7			
19	A	05.05	58.1	0.7				4.3	8.4			
	H	05.05	58.2	0.9				1.2	1.6	4.3	2.8	
	Z	05.05	58.5	1.0				3.3	1.5			
19	A	05.12	05.8	0.7				1.0	2.0			
	H	05.12	06.2	1.0				15.2	2.0	4.1	3.1	
	Z	05.12	05.6	0.7				6.2	5.8			
19	A	05.20	25.9	0.7				22.0	44.2			
	H	05.20	26.3	1.0				4.7	7.6	4.8	3.9	
	Z	05.20	26.6	1.0				7.4	4.8			
19	A	05.22	53.3	0.7				7.7	17.4			
	H	05.22	53.8	0.9				1.7	3.0	3.0	3.2	
	Z	05.22		0.6				11.0	6.4			
19	A	06.00	52.0	0.6				2.5	3.1			
	H	06.00	52.4	0.9				2.2	2.1	2.6	2.6	
	Z	06.00	51.7	0.5				11.0	7.5			
19	A	06.20	10.9	0.5				16.5	20.6			
	H	06.20	12.2	1.0				3.4	5.4	3.2	3.4	
	Z	06.20	11.5	1.0				4.5	2.3			
19	A	06.27	53.7	0.6				3.5	8.0			
	H	06.27	54.2	0.9				0.4	0.7	3.4	2.5	
	Z	06.27	54.3	2.0				2.2	1.4			
19	A	06.31	48.3	0.7				4.7	6.0			
	H	06.31	48.3	0.9				4.0	4.0	3.2	3.0	
	Z	06.31	47.6	0.6				14.9	25.8			
19	A	06.33	49.6	0.6				1.2	1.4			
	H	06.33	49.9	1.0				1.2	1.6	2.9	2.3	
	Z	06.33	49.2	0.5				10.7	7.4			
19	A	06.43	02.9	0.6				22.6	32.8			
	H	06.43	03.2	0.9				5.1	6.6	3.9	3.6	
	Z	06.43	03.2	1.0				10.8				
19	A	07.28	54.4	0.9				4.0	4.4			
	H	07.28	53.9	0.7				6.6	6.7	2.8	3.1	
	Z	07.28	54.8	0.8				7.7	4.4			
19	A	07.45	05.3	0.8				0.6	1.4			
	H	07.45	05.4	0.9				0.5	0.4	2.1	2.0	
	Z	07.45	04.5	0.5				6.6	5.6			
19	A	07.46	11.9	0.7				0.8	2.0			
	H	07.46	11.6	0.9				0.7	0.9	2.2	2.3	
	Z	07.46	10.7	0.5				6.8	14.0			
19	A	08.34	29.0	1.1				0.8	4.3			
	H	08.34	28.5	0.9				3.6	3.7	5.6	3.0	
	Z	08.34	28.9	1.2				2.5	3.0			
19	A	09.13	54.8	1.2				1.2	2.6			
	H	09.13	54.0	1.0				12.4	21.2	5.2	3.5	
	Z	09.13	54.5	1.1				2.4	3.4			
19	A	09.18	06.4	0.9				13.2	7.8			
	H	09.18	06.0	0.9				19.8	15.4	4.1	3.8	
	Z	09.18	06.2	0.8					10.2			
19	A	09.18	35.2	1.0				2.8	6.7			
	H	09.18	34.8	1.2				10.0	16.2	6.4	3.7	
	Z	09.18	34.3	1.0				7.8	9.2			
19	A	09.20	13.2	0.9				0.8	1.2			
	H	09.20	13.9	1.3				1.0	0.9	3.9	2.4	
	Z	09.20	12.9	0.6				4.8	6.1			
19	A	09.28	23.6	0.9				1.6	2.3			
	H	09.28	23.2	0.9				2.4	3.6	5.0	3.0	
	Z	09.28	23.5	1.0				5.0	4.2			
19	A	09.37	42.0	0.7				2.0	5.7			
	H	09.37	42.6	0.8				0.6	0.6	4.0	2.3	
	Z	09.37	42.5	1.0				2.0	2.2			
19	A	09.38	27.9	0.6				3.4	6.3			
	H	09.38		1.0				0.6	0.6	4.0	2.4	
	Z	09.38	28.2	1.0				1.6	2.6			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
20	A	06.02	39.6	1.0				0.6	1.8			
	H	06.02	38.6	1.5				1.8	2.4	5.6	2.7	
	Z	06.02	39.7	1.1				5.1	4.8			
20	A	06.30	49.6	0.9				0.5	1.6			
	H	06.30	49.3	0.9				3.6	3.2	1.6	2.5	
	Z	06.30	49.5	1.0				3.0	2.9			
20	A	06.57	52.7	1.0				5.6	8.4			
	H	06.57	52.4	0.9				7.6	5.2	2.8	3.1	
	Z	06.57	52.7	1.0				16.0	13.0			
20	A	07.33	30.7	1.0				3.0	6.0			
	H	07.33	30.7	1.2				2.0	1.9	2.5	2.6	
	Z	07.33	29.9	1.0				10.8	4.6			
20	A	07.42	06.2	0.8				1.6	6.2			
	H	07.42	06.7	1.1				6.9	6.5	3.1	3.0	
	Z	07.42	05.8	0.8				4.6	1.6			
20	A	08.10	05.0	1.5				0.7	1.4			
	H	08.10	05.5	2.0				0.4	0.4	2.8	2.1	
	Z	08.10	04.6	1.4				11.9	6.0			
20	A	08.21	08.0	1.0				4.7	6.8			
	H	08.21		0.8				8.3	6.3	5.2	3.3	
	Z	08.21	08.3	1.1				9.8	10.7			
20	A	08.39	39.2	0.5				4.6	5.3			
	H	08.39	39.6	0.6				4.2	5.8	5.2	3.2	
	Z	08.39	40.0	0.9				4.9	5.5			
20	A	09.36	27.5	0.6				10.6	10.9			
	H	09.36	27.0	0.6				1.0	0.8	4.4	2.6	
	Z	09.36	28.0	0.9				3.6	16.6			
20	A	09.46	19.3	0.6				0.6	1.0			
	H	09.46	19.6	0.8				3.0	3.7	4.3	2.5	
	Z	09.46	20.0	1.0				2.6	5.4			
20	A	09.59	57.6	1.1				33.4	37.2			
	H	09.59	58.8	1.7				4.6	6.0	3.9	3.7	
	Z	09.59	57.2	1.1				4.4	11.0			
20	A	10.06	11.8	1.3				16.0	15.4			
	H	10.06	12.5	1.9				2.5	4.3	4.8	3.4	
	Z	10.06	11.4	1.0				3.3	6.8			
20	A	10.25	45.1	0.5				5.6	8.7			
	H	10.25	45.4	1.0				11.0	8.4	4.2	3.4	
	Z	10.25	45.5	1.0				6.4	9.6			
20	A	11.07	12.1	0.9				2.4	2.2			
	H	11.07	11.6	0.7				0.4	0.3	3.1	1.9	
	Z	11.07	12.4	0.7				1.8	3.0			
20	A	11.43	42.7	0.8				1.2	2.2			
	H	11.43	42.2	0.6				1.4	1.6	5.9	2.7	
	Z	11.43	43.0	1.1				3.0				
20	A	12.30	58.3	1.3				0.8	3.2			

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date		P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)		Magnitude	
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude	
													P-Time (J.S.T.)
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude	
21	A	17.45	43.3	1.0	1.0				1.4	2.5	3.8	2.9	
	H	17.45	42.8	0.7					5.6	5.4			
	Z	17.45	43.5	1.0					6.9	3.9			
21	A	18.03	31.9	0.9					6.8	7.3	6.1	3.4	
	H	18.03	32.3	1.4					4.0	5.3			
	Z	18.03	31.9	1.0					9.2				
21	A	19.02	51.1	0.4					6.6	5.9	2.4	2.9	
	H	19.02	52.0	0.8					4.4	5.6			
	Z	19.02	51.8	0.7					6.6	9.5			
21	A	19.06	09.7	0.4					2.0	3.9	2.0	2.4	
	H	19.06	10.5	0.8					1.4	2.2			
	Z	19.06	10.2	0.7					2.2	3.4			
21	A	19.43	52.1	0.5					4.7	9.0	2.8	3.0	
	H	19.43	52.9	0.9					4.2	4.5			
	Z	19.43	52.7	0.7					8.0	4.8			
21	A	19.48	48.8	0.9					0.5	2.6	3.7	2.5	
	H	19.48	48.2	0.6					1.8	2.0			
	Z	19.48	49.3	1.0					2.0	0.6			
21	A	20.13	19.7	1.0					0.5	2.2	5.4	2.8	
	H	20.13	19.1	0.9					3.4				
	Z	20.13	19.7	1.1					0.9	0.8			
21	A	20.49	20.7	1.0					1.0	1.8	5.6	2.7	
	H	20.49	21.0	1.1					2.1	2.9			
	Z	20.49	20.4	0.9					19.5				
21	A	21.20	40.4	0.5					15.8	17.6	3.4	3.2	
	H	21.20	41.0	1.1					3.4				
	Z	21.20	41.1	0.9					10.5	11.6			
21	A	21.22	52.3	0.9					3.8	6.2	5.4	3.4	
	H	21.22	52.9	1.1					10.0	6.7			
	Z	21.22	53.0	1.4					4.8	3.2			
21	A	21.22	59.2	1.0					1.6	3.3	5.7	3.0	
	H	21.22	59.9	1.0					5.0	4.9			
	Z	21.23	00.1	1.4					2.4	2.7			
21	A	21.30	35.4	1.0					0.8	1.9	5.7	2.6	
	H	21.30	35.0	1.0					2.4	2.2			
	Z	21.30	35.5	1.1					6.4	6.4			
21	A	21.34	30.0	0.6					4.6	7.0	4.1	2.7	
	H	21.34	30.8	1.0					0.9	1.0			
	Z	21.34	30.5	0.9					6.7	5.0			
21	A	21.51	09.6	0.4					5.0	14.2	2.2	2.5	
	H	21.51	10.4	0.7					0.8	0.9			
	Z	21.51	10.3	0.8					1.1	1.7			
21	A	21.53	07.9	1.3					1.7	5.0	2.2		
	H	21.53	08.4	1.0					0.4	0.4			
	Z	21.53	08.6	1.0					0.4	0.6			
21	A	21.57	03.1	1.2					2.9	3.2	6.3	3.1	
	H	21.57	01.8	1.0					4.8	4.9			
	Z	21.57	03.4	1.2					8.0	4.4			
21	A	22.05	13.1	1.1					51.0	68.0	3.0	4.6	
	H	22.05	12.1	0.5					48.0				
	Z	22.05		1.3					46.0				
21	A	22.06	58.4	1.1					45.0	44.0	2.6	4.5	
	H	22.06		0.5					46.0				
	Z	22.06		1.2					42.0	61.0			
21	A	22.28	04.5	0.9					2.0	4.0	2.9	2.7	
	H	22.28	04.2	0.5					3.0	2.0			
	Z	22.28	05.0	1.0					2.0	2.0			
21	A	23.11	40.4	0.8					0.8	2.4	3.3	2.4	
	H	23.11	39.4	0.7					2.0	2.0			
	Z	23.11	40.3	0.9					1.6	2.1			
21	A	23.14	32.3	0.7					0.8	4.3	2.6	2.6	
	H	23.14	31.8	0.5					2.9	2.7			
	Z	23.14	32.6	0.9					1.8	1.2			
21	A	23.33	38.0	1.0					0.8	2.4	1.8	2.7	
	H	23.33	37.6	0.5					3.6	4.3			
	Z	23.33	38.4	0.9					2.8	3.5			
22	A	00.24	19.1	0.9					0.9	1.9	4.0	2.5	
	H	00.24	18.9	0.6					2.2	2.9			
	Z	00.24	18.7	1.2					1.9	1.4			
22	A	00.34	15.3	0.9					0.8	3.3	3.9	2.9	
	H	00.34	15.1	0.6					7.0	4.2			
	Z	00.34	15.7	1.1					4.4	6.6			
22	A	01.21	52.5	0.9					0.4	0.6	4.0	2.1	
	H	01.21	52.1	0.7					1.0	1.5			
	Z	01.21	52.9	1.0					1.0	0.9			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date		P-Time (J.S.T.)			Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)		Magnitude	
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude	
													P-Time (J.S.T.)
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude	
23	A	05.33	20.5	0.8					1.7	5.8	3.7	3.2	
	H	05.33	20.1	0.6					10.0	9.8			
	Z	05.33	21.0	1.1					3.4	4.6			
23	A	08.06	57.0	1.0					0.7	2.1	4.5	2.7	
	H	08.06	56.8	0.9					1.8	3.0			
	Z	08.06		0.9					2.0	1.8			
23	A	08.47	19.4	1.0					1.4	2.6	5.2	2.7	
	H	08.47	19.3	0.9					1.0	1.6			
	Z	08.47	19.4	1.0					4.0	5.6			
23	A	08.56	26.7	1.1					0.6	2.1	5.8	2.8	
	H	08.56	26.4	0.9					3.0	3.3			
	Z	08.56	26.7	1.2					1.9	1.4			
23	A	08.59	48.9	1.2					0.7	1.8	5.8	2.7	
	H	08.59	48.5	0.9					2.2	2.0			
	Z	08.59		1.2					1.2	0.7			
23	A	09.00	09.2	0.4					2.6	5.6	2.5	2.5	
	H	09.00	09.9	0.8					1.7	2.0			
	Z	09.00	09.6	0.7					2.2	4.2			
23	A	09.18	31.4	1.1					1.1	2.4	5.1	3.1	
	H	09.18	30.8	0.9					4.3	6.5			
	Z	09.18	31.0	1.0					2.6	3.2			
23	A	10.25	00.4	0.4					1.8	5.6	1.9	2.4	
	H	10.25	00.9	0.7					1.2	1.0			
	Z	10.25	00.8	0.7					1.4	3.0			
23	A	10.54	11.6	0.4					4.8	9.4	2.4	2.8	
	H	10.54	12.2	0.9					2.0	2.2			
	Z	10.54	12.2	0.6					2.8	5.3			
23	A	11.25	36.8	0.9					0.5	1.6	3.7	2.8	
	H	11.25	36.3	0.7					5.3	6.7			
	Z	11.25	37.1	0.9					3.8	3.0			
23	A	11.50	01.8	0.4					1.8	8.2	1.6	2.8	
	H	11.50	02.1	0.6					4.3	4.6			
	Z	11.50	02.8	0.9					4.0	3.4			
23	A	14.28	03.9	0.5					4.5	4.2	3.2	2.1	
	H	14.28	04.6	0.9					0.5	0.4			
	Z	14.28	04.6	0.8					1.6	2.0			
23	A	14.31	08.3	0.9					0.6	1.8	5.7	2.7	
	H	14.31	08.2	1.0					2.8	2.4			
	Z	14.31	09.1	1.3					0.9	0.6			
23	A	15.22	26.8	1.0					1.0	4.4	5.1	2.9	
	H	15.22	26.7	1.0					4.4	3.3			
	Z	15.22	27.1	0.9					8.5	6.6			
23	A	16.40	51.6	1.1					11.0	17.8	5.8	3.8	
	H	16.40		0.9					0.8	1.4			
	Z	16.40	51.7	1.2					3.9	3.1			
23	A	16.41	26.2	1.2					0.8	2.6	4.7	3.0	
	H	16.41	25.1	0.7					3.0	3.8			
	Z	16.41	26.2	1.2					7.0	4.8			
23	A	16.53	53.2	1.1					0.4	1.0	3.5	2.0	
	H	16.53	52.5	0.7					0.5	0.5			
	Z	16.53	53.4	1.2					10.9	14.4			
23	A	17.56	39.5	1.0					0.5	1.1	7.6	2.6	
	H	17.56	38.7	1.0					0.7	0.8			
	Z	17.56	39.2	1.3					1.6	4.4			
23	A	18.06	12.2	1.4					3.1	5.1	2.0	2.0	
	H	18.06	11.6	1.8					0.3	0.4			
	Z	18.06	11.7	1.2					0.8	0.4			
23	A	18.07	05.9	1.4					0.4	2.0	6.4	2.8	
	H	18.07	06.2	1.9									

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date		P-Time (J.S.T.)			S-P (sec)			Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)		Magnitude									
Date	Station	h	m	s	S-P	E	N	U	E-W	N-S	Depth	Magnitude	Date	Station	h	m	s	S-P	E	N	U	E-W	N-S	Depth	Magnitude
24	A	19.14	29.9	0.8	-	-	-	-	5.8	7.8	3.2	3.2	25	A	23.50	10.3	1.0	+	+	+	+	3.0	3.1	5.7	3.0
	H	19.14	29.5	0.6	-	-	-	-	4.8	7.6				H	23.50	09.8	1.0	+	+	+	+	3.1	3.4		
	Z	19.14	30.4	0.9	-	-	-	-	4.2	6.2				Z	23.50	09.9	1.0	+	+	+	+	7.0	5.8		
24	A	19.26	27.4	0.6	-	-	-	-	1.6	3.3	2.7	2.3	26	A	00.39	32.8	1.1	-	-	-	-	1.4	1.9	4.5	2.6
	H	19.26	27.9	0.6	+	+	+	+	1.0	1.5				H	00.39	32.4	1.0	-	-	-	2.1	2.1			
	Z	19.26	27.7	1.0	-	-	-	-	2.6	1.8				Z	00.39	32.3	0.9	+	+	+	10.2	6.0			
24	A	20.56	36.6	0.9	-	-	-	-	4.9	6.9	5.7	3.4	26	A	00.41	11.5	0.6	-	-	-	-	1.9	3.8	4.2	2.2
	H	20.56	36.1	1.0	-	-	-	-	9.4	8.1				H	00.41	11.7	1.1	+	+	+	0.3	0.4			
	Z	20.56	36.5	1.0	+	+	+	+	11.4	9.3				Z	00.41	12.0	1.0	+	+	+	2.2	1.8			
24	A	21.33	55.4	1.3	-	-	-	-	0.7	2.2	5.2	2.7	26	A	00.41	26.8	0.8	-	-	-	-	0.7	2.9	4.4	2.9
	H	21.33	54.5	0.8	-	-	-	-	2.1	1.4				H	00.41	26.2	0.8	-	-	-	4.5	4.0			
	Z	21.33	55.6	1.3	-	-	-	-	1.8	1.6				Z	00.41	26.9	0.9	-	-	-	2.9	3.2			
24	A	23.43	20.5	0.8	-	-	-	-	1.2	2.0	3.2	2.6	26	A	01.06	30.3	0.6	+	+	+	+	1.0	4.6	2.9	2.6
	H	23.43	20.1	0.7	+	+	+	+	3.6	3.6				H	01.06	30.1	0.6	+	+	+	2.4	2.9			
	Z	23.43	21.0	1.3	-	-	-	-	1.4	1.5				Z	01.06	30.7	0.9	+	+	+	2.0	3.6			
25	A	00.15	18.7	0.4	-	-	-	-	6.2	5.6	2.2	2.6	26	A	01.26	04.7	1.0	+	+	-	-	3.3	1.8	4.7	3.0
	H	00.15	19.3	0.9	+	+	+	+	1.8	2.6				H	01.26	04.7	1.0	+	+	-	4.0	4.2			
	Z	00.15	19.1	0.6	-	-	-	-	4.2	5.8				Z	01.26	04.6	0.9	-	-	-	15.2	6.5			
25	A	00.51	04.5	0.6	-	-	-	-	1.7	3.4	3.8	2.4	26	A	01.43	20.4	0.8	-	+	+	+	0.7	1.3	3.8	2.4
	H	00.51	04.9	1.1	-	-	-	-	0.7	0.8				H	01.43	20.2	0.7	-	+	+	2.6	3.0			
	Z	00.51	05.1	1.2	-	-	-	-	2.8	1.3				Z	01.43	20.5	0.9	-	+	+	4.2	3.6			
25	A	01.55	15.1	0.7	+	+	+	+	0.8	1.5	1.5	2.0	26	A	01.57	08.7	0.4	-	+	+	+	10.3	19.8	2.4	3.2
	H	01.55	15.4	0.9	-	-	-	-	0.6	0.6				H	01.57	09.2	0.8	+	+	+	4.8	5.3			
	Z	01.55	14.7	0.4	-	-	-	-	12.0	4.1				Z	01.57	09.3	0.9	+	+	+	4.3	6.1			
25	A	02.30	46.8	0.7	+	+	+	+	4.8	5.4	4.0	2.8	26	A	02.10	19.0	0.9	-	-	-	-	33.1	34.3	3.9	4.2
	H	02.30	47.2	0.9	+	+	+	+	2.3	2.7				H	02.10	18.4	0.7	+	+	-	26.3	35.9			
	Z	02.30	47.6	0.9	-	-	-	-	9.5	6.2				Z	02.10	19.1	1.0	+	+	-	15.1	30.3			
25	A	02.58	19.9	1.0	-	-	-	-	1.1	2.1	4.9	2.6	26	A	02.41	38.4	1.3	-	+	+	+	0.9	3.3	7.6	3.4
	H	02.58	19.8	0.7	-	-	-	-	2.3	2.6				H	02.41	38.6	1.4	-	+	+	5.6	6.9			
	Z	02.58		1.2	-	-	-	-	6.4	3.4				Z	02.41	38.0	1.2	-	+	+	3.9	2.4			
25	A	03.36	54.8	0.6	-	-	-	-	0.6	2.0	2.9	2.2	26	A	03.47	46.6	1.0	-	+	+	+	0.8	1.6	4.9	2.6
	H	03.36	54.9	1.3	-	-	-	-	0.6	0.6				H	03.47	46.8	0.9	-	+	+	1.7	2.0			
	Z	03.36	54.5	0.6	+	+	+	+	7.0	8.0				Z	03.47	46.5	0.9	+	+	+	4.3	6.1			
25	A	05.30	54.7	1.1	+	+	+	+	1.5	4.0	4.4	2.8	26	A	04.00	55.6	0.9	-	+	+	+	0.9	2.2	3.0	2.5
	H	05.30	54.3	0.7	+	+	+	+	2.3	2.8				H	04.00	55.3	0.6	-	+	+	1.8	2.5			
	Z	05.30	55.1	1.2	+	+	+	+	1.7	4.0				Z	04.00	55.7	0.9	+	+	+	4.2	4.1			
25	A	07.02	35.6	0.6	-	-	-	-	27.7	32.2	2.9	4.0	26	A	05.04	30.6	0.5	-	+	+	+	2.5	5.8	2.6	2.5
	H	07.02	35.2	0.7	+	+	+	+	37.6	25.3				H	05.04	31.4	0.7	+	+	+	1.9	2.2			
	Z	07.02	36.1	1.1	+	+	+	+	15.8	57.7				Z	05.04	31.3	0.8	-	+	+	1.4	1.6			
25	A	07.06	26.3	1.0	-	-	-	-	14.1	10.5	1.4	3.5	26	A	06.46	10.6	1.1	-	+	+	+	8.7	8.7	4.9	3.5
	H	07.06	25.8	0.5	-	-	-	-	13.5	10.5				H	06.46	10.6	0.8	-	+	+	12.4	12.3			
	Z	07.06	26.5	1.0	-	-	-	-	12.1	9.7				Z	06.46	10.0	1.2	-	+	+	9.8	12.8			
25	A	08.05	59.7	0.9	-	-	-	-	2.3	4.2	3.6	2.9	26	A	07.48	35.8	0.8	-	-	-	-	2.7	2.0	2.5	2.5
	H	08.05	59.1	0.6	-	-	-	-	3.4	4.5				H	07.48	35.3	0.5	-	-	-	0.5	0.4			
	Z	08.05	59.1	1.0	-	-	-	-	0.7	3.3				Z	07.48	35.9	0.9	-	-	-	0.5	0.4			
25	A	08.20	24.6	1.3	+	+	+	+	2.5	3.1	3.4	3.2	26	A	07.48	58.6	0.8	+	+	+	5.2	5.2	5.2	3.2	
	H	08.20	24.1	0.9	+	+	+	+	5.6	7.0				H	07.48	57.8	1.3	+	+	+	3.3	4.2			
	Z	08.20	24.8	1.1	+	+	+	+	9.8	3.8				Z	07.48	58.8	0.9	+	+	+	10.0	3.6			
25	A	08.32	04.0	1.3	+	+	+	+	2.6	5.5	5.5	3.4	26	A	07.56	41.3	1.3	+	+	+	2.1	2.1	6.4	3.0	
	H	08.32	03.4	0.9	+	+	+	+	4.2	6.4				H	07.56	41.5	1.1	+	+	+	2.2	3.4			
	Z	08.32	04.3	1.3	+	+	+	+	1.6	2.6				Z	07.56	42.1	1.3	+	+	+	1.8	1.6			
25	A	09.07	54.4	1.0	-	-	-	-	4.8	3.5	3.7	3.2	26	A	09.41	55.2	0.8	+	+	+	10.8	14.7	4.5	4.0	
	H	09.07	53.9	0.7	+	+	+	+	9.9	7.6				H	09.41	55.5	0.9	+	+	+	14.3	23.1			
	Z	09.07	54.9	0.9	+	+	+	+	12.7	4.8				Z	09.41	55.3	0.8	+	+	+	18.1	18.1			
25	A	09.09		1.0	-	-	-	-	0.6	1.6	3.5	2.4	26	A	10.36	50.7	0.3	-	-	-	-	1.2	1.0	1.7	2.6
	H	09.09	50.1	0.5	-	-	-	-	1.9	2.6				H	10.36	51.5	0.9	-	-	-	2.0	2.9			
	Z	09.09	51.5	1.2	-	-	-	-	2.8	1.8				Z	10.36	51.1	0.7	-	-	-	17.1	16.6			
25	A	11.36	27.0	1.0	-	-	-	-	1.2	1.5	3.2	2.7	26	A	12.32	00.6	1.0	-	-	-	21.0	20.8	5.7	4.0	
	H	11.36	26.5	0.9	+	+	+	+	2.9	3.6				H	12.32	00.5	1.0	-	-	-	4.4	7.3			
	Z	11.36	27.0	0.8	-	-	-	-	5.1	3.4				Z	12.32	00.5	1.0	-	-	-	21.0	20.8			
25	A	12.20																							

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jun. 1966													
Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
28	A	17.33	50.3	0.8	+	14.3	23.8	3.6	3.3				
	H	17.33		0.6		3.3	3.3						
	Z	17.33	50.5	1.0	-		6.3						
28	A	17.34	21.2	0.8		1.4	3.8	3.6	2.6				
	H	17.34	20.6	0.7		1.6	2.2						
	Z	17.34	21.4	1.1	-		1.0						
28	A	18.10	31.7	1.0		59.0	28.0	5.3	4.6				
	H	18.10	31.0	0.9	+	40.0	49.0						
	Z	18.10	31.7	1.4	-		12.0						
28	A	18.11	21.2	1.3		5.2	7.4	3.8	3.3				
	H	18.11	20.0	0.6	+	5.8	4.1						
	Z	18.11	21.2	1.4	-		0.8						
28	A	18.28	46.9	0.6		2.4	4.2	2.5	2.8				
	H	18.28		0.7	+	4.4	5.2						
	Z	18.28	47.0	0.7	-		6.2						
28	A	18.31	08.9	0.8		2.5	1.6	3.5	2.6				
	H	18.31	08.4	0.7	+	1.6	3.2						
	Z	18.31	08.8	0.9	-								
28	A	18.59	25.9	0.7		0.8	4.5	3.0	2.7				
	H	18.59	25.6	1.0	-	1.6	1.0						
	Z	18.59	25.3	0.5	+								
28	A	19.07	17.9	1.4		0.5	4.6						
	H	19.07		0.8	+	3.7	4.3		3.2				
	Z	19.07	17.5	1.0	-								
28	A	20.26	45.0	0.8		5.5	9.1	4.5	3.4				
	H	20.26	45.3	1.2	-	4.6	5.4						
	Z	20.26	44.2	0.7									
28	A	21.20	25.3	0.6		0.4	1.5		2.3				
	H	21.20	24.0	0.7	-	3.0	4.6						
	Z	21.20	25.3	1.0									
28	A	22.29	08.2	1.1		1.0	4.8						
	H	22.29	07.6	0.7	-		4.7	4.8	3.1				
	Z	22.29	08.0	1.2									
29	A	03.59		0.6		19.1	20.1						
	H	03.59	51.3	0.9	+	1.2	2.1	3.8	3.1				
	Z	03.59	51.1	0.8	-								
29	A	05.29	14.4	0.9		12.4	9.0	5.0	3.7				
	H	05.29	13.9	0.8	-	7.8	14.2						
	Z	05.29	14.1	1.1									
29	A	06.25	42.9	0.7		3.7	5.7	3.7	2.9				
	H	06.25	42.9	0.7	-	2.7	3.4						
	Z	06.25	43.4	0.9									
29	A	06.51	01.3	0.7		3.8	4.2	3.0	2.6				
	H	06.51	01.7	1.0	-	0.8	1.6						
	Z	06.51	00.7	0.5									
29	A	10.19	48.0	1.0		0.7	1.6						
	H	10.19	47.5	0.6	-	1.0	0.8	2.1					
	Z	10.19											
29	A	10.23	34.2	0.7		5.2	6.9	4.0	2.5				
	H	10.23	34.5	0.8	+	0.5	0.8						
	Z	10.23	34.6	1.0	-								
29	A	13.54	51.8	0.4		11.2	17.4	3.1	3.2				
	H	13.54	52.1	1.0	+	3.8	3.8						
	Z	13.54	52.5	0.9	-	6.4	5.7						
29	A	13.55	00.5	0.4		19.3	18.4	1.8	3.2				
	H	13.55	01.0	0.8	+	3.9	6.0						
	Z	13.55	00.8	1.0	-	4.6	5.6						
29	A	13.55	29.7	0.6		23.8	75.2	3.4	3.7				
	H	13.55	29.9	0.9	+	3.5	3.8						
	Z	13.55	30.0	0.7	-	5.8	7.4						
29	A	15.17	44.4	0.4		4.5	6.3						
	H	15.17	45.0	0.8	+	0.2	0.2	2.6	1.9				
	Z	15.17	44.8	0.8	-	0.6							
29	A	15.26	56.1	0.8		10.3	17.3						
	H	15.26	56.2	0.9	+	6.5	4.3	2.7	3.5				
	Z	15.26	55.6	0.5	-		13.2						
29	A	16.31	25.2	1.0		2.1	3.0						
	H	16.31	25.2	1.1	-	1.4	0.9	4.0	2.9				
	Z	16.31	24.6	0.6	+		6.9						
29	A	16.42	29.2	1.0		1.0	2.5						
	H	16.42	29.3	0.8	+	3.7	3.8	4.2	2.9				
	Z	16.42	29.5	0.9	-		1.7						
29	A	17.11	37.8	1.0		0.6	1.9						
	H	17.11	37.9	1.4	+	0.9	0.8	5.2	2.5				
	Z	17.11	37.2	0.8	-		4.9						

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
30	A	17.39	40.4	0.9				6.0	4.2				
	H	17.39	40.1	0.6	+			2.5	4.0	3.7	2.9		
	Z	17.39	40.7	1.0	-			3.4	4.0				
30	A	18.58	22.0	0.9				1.8	3.6	6.0	3.0		
	H	18.58	22.2	1.1	+			2.7	3.6				
	Z	18.58	22.6	1.2	-			4.0	3.6				
30	A	19.51	16.2	1.0				0.7	3.2	4.3	2.7		
	H	19.51	15.9	0.7	+			3.0	2.3				
	Z	19.51	16.6	1.1	-			4.1	2.7				
30	A	21.44	42.7	0.7				64.2	58.8	4.0	4.3		
	H	21.44	43.4	0.9	+			14.2	22.6				
	Z	21.44	43.3	0.8	-			11.3	6.6				
30	A	21.46	24.7	0.4				6.1	11.2	2.0	2.9		
	H	21.46	25.4	0.8	+			3.7	3.2				
	Z	21.46	25.4	0.8	-			2.5	2.7				
30	A	22.33	55.7	0.4				5.1	6.3	2.7	2.4		
	H	22.33	56.5	0.9	+			0.8	1.2				
	Z	22.33	56.2	0.7	-			2.2	3.8				
30	A	22.54	22.3	1.1				2.7	6.9	5.4	3.5		
	H	22.54	22.0	0.9	+			10.6	10.5				
	Z	22.54	22.4	1.2	-			3.3	2.0				
30	A	22.55	08.1	0.4				5.2	5.3	2.4	2.5		
	H	22.55	08.9	0.9	+			1.2	1.8				
	Z	22.55	08.6	0.8	-			2.5	3.1				
30	A	23.30	26.3	0.9				1.7	2.5	0.6	2.7		
	H	23.30		0.8	+			1.0	1.4				
	Z	23.30	25.9	0.6	-			9.4	10.3				
1966 July													
01	A	00.26	53.2	0.4				36.6	17.3	2.4	3.4		
	H	00.26	54.1	0.8	+			3.1	4.7				
	Z	00.26	53.8	0.7	-			10.5	8.0				
01	A	02.43	41.3	1.5				4.2	6.9	8.9	3.7		
	H	02.43	42.1	1.9	+			3.1	4.8				
	Z	02.43	41.2	1.3	-			12.8	4.3				
01	A	03.19	07.8	1.1				1.7	2.1	5.8	2.8		
	H	03.19	07.7	1.0	+			3.3	3.0				
	Z	03.19	07.8	1.1	-			8.5	7.1				
01	A	03.44	20.3	1.5				4.1	3.0	8.1	3.3		
	H	03.44	19.6	1.2	+			3.4	5.1				
	Z	03.44	20.6	1.5	-			2.0	0.8				
01	A	04.21	23.6	0.8				3.7	9.0	4.3	3.5		
	H	04.21	24.9	1.4	+			5.0	6.4				
	Z	04.21	23.6	0.7	-			12.7					
01	A	05.32	28.5	1.1				18.5	11.0	4.7	3.7		
	H	05.32	28.6	0.9	+			10.0	8.0				
	Z	05.32	27.8	1.0	-			5.0	5.0				
01	A	05.44	23.3	1.1				1.1	2.4	5.4	2.9		
	H	05.44	23.6	1.4	+			1.7	2.0				
	Z	05.44	22.9	0.8	-			14.8					
01	A	06.06	31.3	1.0				2.2	2.9	4.2	2.9		
	H	06.06	31.6	0.8	+			2.7	3.6				
	Z	06.06	31.6	0.9	-								
01	A	06.13	47.6	1.2				4.0	3.5	5.0	3.2		
	H	06.13	47.9	1.3	+			1.6	3.0				
	Z	06.13	47.0	0.8	-								
01	A	07.21	40.5	1.3				4.6	4.1	6.6	3.2		
	H	07.21	40.6	1.5	+			2.5	2.7				
	Z	07.21	40.0	1.0	-								
01	A	08.08		0.9				4.9	5.5	3.9	3.1		
	H	08.08	29.1	1.2	+			3.6	2.3				
	Z	08.08</											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jul. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
02	A	08.22	18.5	0.4				4.8	6.9			
	H	08.22	19.6	0.8				0.8	0.7	2.4	2.3	
	Z	08.22	19.1	0.7								
02	A	09.05	18.0	1.1				2.6	4.4			
	H	09.05	18.0	1.1				11.4	15.5	6.6	3.6	
	Z	09.05	17.9	1.1								
02	A	09.27	04.8	1.2				10.4	5.3			
	H	09.27	04.3	0.9				13.0	12.5	3.6	3.7	
	Z	09.27	04.9	1.0								
02	A	09.36	05.0	0.7				32.0	15.2			
	H	09.36	04.8	0.7				10.6	12.6	3.4	3.7	
	Z	09.36	05.3	0.9								
02	A	11.49	15.1	1.2				1.9	2.7			
	H	11.49	15.8	1.9				1.2	1.0	6.2	2.9	
	Z	11.49	14.9	1.0				9.6	6.5			
02	A	12.53	57.6	0.7				1.6	5.4			
	H	12.53	57.3	0.7				6.7	10.4	3.7	3.2	
	Z	12.53		1.0				1.7	1.6			
02	A	13.00	15.0	0.6				3.3	5.3			
	H	13.00	15.4	0.8				0.6	1.0	0.8	2.5	
	Z	13.00	15.2	0.4				0.8	0.2			
02	A	14.06	31.7	1.0				26.8	37.8			
	H	14.06	31.2	0.7				10.8	15.4	3.9	4.0	
	Z	14.06		1.0				19.2	13.0			
02	A	15.09	54.3	0.8				7.5	15.8			
	H	15.09		0.7				9.4	5.7	4.2	3.5	
	Z	15.09	54.9	1.0				21.3	9.7			
02	A	15.37	41.7	0.6				2.1	3.6			
	H	15.37	42.6	1.2				1.0	0.8	3.9	2.5	
	Z	15.37	42.0	0.7				2.6	1.8			
02	A	17.00	48.4					4.3	5.8			
	H	17.00	48.1	1.8				2.6	3.2		3.1	
	Z	17.00	47.7	1.3				24.8	9.8			
02	A	17.01	04.3	0.5				5.4	8.0			
	H	17.01	05.0	0.8				1.6	2.0	2.5	2.7	
	Z	17.01	04.8	0.7				3.5	2.2			
02	A	17.02	01.7	0.6				2.2	6.5			
	H	17.02	01.5	0.6				4.6	4.4	2.8	2.9	
	Z	17.02	02.2	0.9				2.6	3.3			
02	A	18.26	51.3	1.0				4.4	2.4			
	H	18.26	50.7	0.7				4.6	5.2	4.8	3.1	
	Z	18.26	51.7	1.2				8.5	5.8			
02	A	20.37	16.8	1.3				8.5	10.0			
	H	20.37	15.7	0.7				10.8	12.5	4.3	3.6	
	Z	20.37	17.0	1.3				2.8	3.2			
03	A	00.31	41.4	1.0				2.7	7.7			
	H	00.31	41.2	0.5				1.9	2.9	2.6	2.9	
	Z	00.31	41.9	1.0				4.7	1.8			
03	A	01.40	12.8	0.9				2.0	3.3			
	H	01.40	12.5	0.7				3.0	3.3	4.0	2.7	
	Z	01.40	13.3	1.0				2.0	2.4			
03	A	02.04	29.6	0.5				19.2	13.1			
	H	02.04	30.5	1.0				2.0	1.9	3.3	3.0	
	Z	02.04	30.2	0.7				5.6	5.1			
03	A	02.04		0.4				7.5	5.2			
	H	02.04	44.8	0.7				0.3	0.2	1.3	1.9	
	Z	02.04	44.5	0.6				1.4	0.8			
03	A	02.49	49.6					5.9	6.4			
	H	02.49	50.2					0.3	0.4		2.4	
	Z	02.49	50.3	0.6				2.2	2.3			
03	A	02.51	59.9	1.2				2.8	6.3			
	H	02.51	59.1	1.0				4.7	5.0	6.6	3.3	
	Z	02.51	59.8	1.3				4.6	2.2			
03	A	04.05	19.8	0.8				1.2	2.2			
	H	04.05	19.7	0.6				1.3	2.0	3.2	2.4	
	Z	04.05	20.6	0.9				1.1	0.7			
03	A	05.03	59.8	0.9				9.7	11.1			
	H	05.03	59.2	0.6				8.7	8.7	3.7	3.4	
	Z	05.03	59.9	1.0				11.2	12.4			
03	A	05.40	10.4	1.0				1.0	2.0			
	H	05.40	10.2	1.2				3.7	5.2	5.2	3.0	
	Z	05.40	10.0	0.8				6.9	2.2			
03	A	06.25	42.6	1.0				5.9	4.4			
	H	06.25	42.2	0.8				5.0	5.6	4.1	3.2	
	Z	06.25	42.7	0.9				6.5	3.7			

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
03	A	10.21	26.2	0.8				2.0	7.2			
	H	10.21	25.9	0.6				4.5	4.4	2.2	2.9	
	Z	10.21	27.0	1.3								
03	A	12.03	55.1	0.9				4.0	10.0			
	H	12.03	54.3	0.5				3.7	3.0	3.3	3.0	
	Z	12.03	55.4	1.1				3.2	4.3			
03	A	12.30	11.6	1.0				4.0	3.2			
	H	12.30	11.2	0.7				4.6	5.0	4.5	3.0	
	Z	12.30	12.0	1.1				3.2	2.4			
03	A	14.03	01.7	0.9				1.9	5.5			
	H	14.03	01.3	0.6				4.6	6.7	4.2	3.1	
	Z	14.03	02.0	1.1				6.8	5.0			
03	A	14.49	06.6	1.5				2.1	4.6			
	H	14.49	07.0	1.9				4.8	4.5	8.8	3.5	
	Z	14.49	06.3	1.3				6.6	5.8			
03	A	16.18	51.2	0.6				6.5	11.3			
	H	16.18	51.6	1.0				1.3	2.2	3.8	3.0	
	Z	16.18	51.9	1.0				4.2	2.3			
03	A	16.29	14.0	0.6				13.9	51.4			
	H	16.29	14.2	1.0				4.9	9.0	3.7	3.8	
	Z	16.29	14.5	1.0				5.2	11.0			
03	A	16.29	39.8	0.6				1.7	4.7			
	H	16.29	39.8	0.9				0.9	1.9	4.0	2.6	
	Z	16.29	39.9	1.0				0.4	2.1			
03	A	16.41	47.2	1.0				7.5	4.5			
	H	16.41	46.7	1.0				8.0	4.1	5.0	3.4	
	Z	16.41	47.2	0.9				4.0	15.9			
03	A	17.11	57.6	0.8				0.6	3.0			
	H	17.11	57.4	0.9				1.2	3.0	4.8	2.8	
	Z	17.11		0.9				0.8	1.2			
03	A	17.33	42.2	0.6				7.6	10.4			
	H	17.33	42.5	0.9				0.8	0.9	3.5	2.6	
	Z	17.33	42.9	1.0				1.5	1.8			
03	A	17.42	07.6	1.0				0.5	2.6			
	H	17.42	07.2	0.6				1.1	1.0	3.4	2.3	
	Z	17.42	08.0	1.0				1.0	0.9			
03	A	17.58	10.6	0.9				0.6	1.2			
	H	17.58	10.4	0.8				3.2	4.3	3.8	2.6	
	Z	17.58	10.5	0.9				1.8	7.9			
03	A	20.22	37.3	0.9				0.5	1.0			
	H	20.22	37.0	0.7				2.2	2.8	3.2	2.4	
	Z	20.22	37.4	0.9				2.6	3.6			
03	A	21.41	05.1	0.8				8.5	5.1			
	H	21.41	04.9	0.8				5.2	5.0	3.9	3.2	
	Z	21.41	05.0	0.8					22.5			
03	A	21.41	54.8	1.1				0.7	1.8			
	H	21.41	54.8	1.3				1.3	1.7	5.0	2.7	
	Z	21.41	54.1	0.8					13.7			
03	A	21.44	08.7	0.4				16.5	9.5			
	H	21.44	09.7	1.1				0.3	0.2	2.5	2.4	
	Z	21.44	09.3	0.7				1.3	2.0			
03	A	22.49	46.9	1.2				2.3	3.5			
	H	22.49	46.4	0.9				7.9	7.5	4.4	3.2	
	Z	22.49	47.1	1.1				2.8	2.7			
04	A	02.19	50.0	0.7				1.3	2.3			
	H	02.19	50.0	0.7				5.9	4.9	3.5	2.7	
	Z	02.19	50.6	0.9								
04	A	02.57	16.9	1.0				1.1	3.5			
	H	02.57	16.7	0.7				3.5	4.6	4.5	2.9	
	Z	02.57	17.2	1.1								
04	A	02.59	56.0	0.9				0.3	1.7			
	H	02.59	55.8	0.7				1.4	1.6	3.3	2.4	
	Z	02.59	56.2	0.9								
04	A	03.01	33.0	0.7				1.2	2.9			
	H	03.01	33.9	1.0				1.4	1.5	3.1	2.5	
	Z	03.01	32.7	0.5								
04	A	03.05	19.1	0.7				1.2	2.9			
	H	03.05	18.9	0.7				2.1	2.9	3.5	2.6	
	Z	03.05	19.4	1.0								
04	A	04.14	48.0	1.1				6.8	16.7			
	H	04.14	48.0	1.4				7.2	7.9	4.1	3.5	
	Z	04										

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jul. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
06	A	05.39	15.6	0.6				1.6	7.4	2.8	2.9	
	H	05.39	15.4	0.6				4.0	3.6			
	Z	05.39	15.7	0.9				1.5	1.2			
06	A	05.49	55.4	0.6				9.2	18.4			
	H	05.49	55.7	1.0				0.8	1.8	4.0	3.7	
	Z	05.49	55.8	1.0				2.7	1.1			
06	A	08.50	40.4	1.4				1.9	1.4			
	H	08.50	39.5	1.0				2.2	3.6	6.3	3.0	
	Z	08.50	40.3	0.4								
06	A	09.01	06.1	0.4				12.3	11.4			
	H	09.01	06.7	0.9				3.4	3.8	0.6	3.0	
	Z	09.01	06.0	0.3								
06	A	09.34	44.7	1.0				2.4	3.0			
	H	09.34	44.3	1.0				5.7	5.0	5.7	3.1	
	Z	09.34	44.5	1.0								
06	A	11.41	02.0	0.9				1.8	4.4			
	H	11.41	01.4	0.6				4.2	3.8	3.1	2.9	
	Z	11.41	01.9	1.0				6.2	3.0			
06	A	13.24	38.0	0.9				0.5	1.6			
	H	13.24	37.7	0.7				1.6	1.2	2.8	2.3	
	Z	13.24		0.9				3.0	1.6			
06	A	14.55	34.6	0.6				1.2	2.6			
	H	14.55	35.4	1.1				0.5	0.5	3.7	2.1	
	Z	14.55		0.8				2.2	1.4			
06	A	15.22	29.6	0.7				0.8	2.1			
	H	15.22	29.0	0.6				2.6	2.0	2.9	2.4	
	Z	15.22		0.9				2.2	1.8			
06	A	15.28	28.4	0.9				1.4	4.8			
	H	15.28	27.8	0.6				2.6	2.0	3.9	2.7	
	Z	15.28		1.0				2.7	1.6			
06	A	15.37	08.3	0.5				4.8	6.6			
	H	15.37	09.2	1.2				3.4	3.5	3.2	3.0	
	Z	15.37		0.9				4.9	3.8			
06	A	15.39	28.3	1.0				0.8	2.5			
	H	15.39	27.7	0.8				5.6	4.0	4.3	2.9	
	Z	15.39		1.0				1.4	6.8			
06	A	15.59	15.8	0.3				3.2	5.4			
	H	15.59	16.6	0.9				1.7	2.7	2.0	2.6	
	Z	15.59		0.8				3.5	2.8			
06	A	16.29	35.8	1.0				0.7	2.5			
	H	16.29	35.3	0.6				2.4	3.0	2.5	2.6	
	Z	16.29		0.9				3.5	1.7			
06	A	16.39	50.8	0.8				0.6	4.2			
	H	16.39	50.4	0.7				2.2	2.8	3.7	2.7	
	Z	16.39		0.9				5.4	1.6			
06	A	16.54	31.1	0.9				0.6	1.6			
	H	16.54	30.9	0.7				3.2	3.2	3.1	2.6	
	Z	16.54		0.8				7.6	1.8			
06	A	17.00	51.8	0.4				2.6	6.5			
	H	17.00	52.1	1.0				4.6	5.2	2.7	3.0	
	Z	17.00		0.7				30.6				
06	A	17.02	53.8	0.9				3.3	8.9			
	H	17.02	53.1	0.5				6.6	6.7	2.8	3.2	
	Z	17.02		1.0				8.3	7.8			
06	A	19.00	28.1	1.4				17.6	13.2			
	H	19.00	27.1	1.0				21.5	18.9	7.0	4.2	
	Z	19.00		1.6				5.5	5.9			
06	A	20.01	00.6	0.5				23.9	16.0			
	H	20.01	01.7	1.0				0.7	0.4	2.8	2.8	
	Z	20.01		0.6				2.6	1.0			
06	A	20.21	35.4	0.9				1.6	3.1			
	H	20.21	35.1	0.7				3.2	5.0	4.3	2.8	
	Z	20.21		1.0				2.9	0.8			
06	A	23.33	42.4	0.9				1.4	3.5			
	H	23.33	43.1	1.2				0.9	1.3	4.8	2.7	
	Z	23.33		0.7				7.8	2.3			
07	A	00.05	54.0	0.6				1.2	4.0			
	H	00.05	54.9	1.1				2.6	2.8	2.8	2.8	
	Z	00.05		0.5				16.8	10.2			
07	A	00.17	42.2	0.6				4.9	8.8			
	H	00.17	42.7	1.0				2.8	4.3	3.6	3.1	
	Z	00.17		0.7				37.0	4.6			
07	A	01.43	32.3	0.5				3.6	3.4			
	H	01.43	33.1	1.0				4.8	8.6	3.5	2.0	
	Z	01.43		0.8				13.4	5.8			
07	A	04.02	22.6	0.9				3.1	9.2			
	H	04.02	22.0	0.5				7.6	5.1	3.0	3.2	
	Z	04.02		1.0								
07	A	05.16	04.5	0.8				1.6	3.4			
	H	05.16	04.0	0.6				3.4	3.6	2.9	2.7	
	Z	05.16		0.9								
07	A	05.21	44.7	1.5				1.0	1.3			
	H	05.21	45.3	2.0				1.7	2.2	8.6	3.0	
	Z	05.21		1.3								
07	A	09.24	09.9	1.3				0.8	4.1			
	H	09.24	09.6	0.9				6.2	9.4	5.1	3.4	
	Z	09.24		1.2								
07	A	11.10	49.9	0.8				0.5	4.0			
	H	11.10	49.6	0.7				3.3	3.7	3.6	2.8	
	Z	11.10		0.9				4.2	2.7			
07	A	14.06	57.3	0.5				2.6	3.7			
	H	14.06	57.5	0.7				0.9	0.4	2.6	2.2	
	Z	14.06	58.2	0.8				1.2	0.6			
07	A	14.33	49.5	0.8				6.2	12.1			
	H	14.33	49.2	0.7				7.4	8.0	4.2	3.4	
	Z	14.33	50.0	1.1				8.0	4.8			
07	A	14.34	07.8	0.8				10.2	16.2			
	H	14.34	07.5	0.7				16.6	16.6	3.9	3.6	
	Z	14.34		1.0				8.6	8.4			
07	A	15.38	44.9	1.1				8.6	7.1			
	H	15.38	44.6	1.0				17.3	16.1	5.7	3.7	
	Z	15.38	45.0	1.0				25.4	5.7			
07	A	15.45	23.3	0.8				10.2	13.7			
	H	15.45	22.8	0.5				11.3	8.0	3.1	3.4	
	Z	15.45	23.6	1.0				6.2	3.0			
07	A	15.45	26.1	0.7				13.4	15.8			
	H	15.45	25.6	0.4				10.6	7.9	1.5	2.9	
	Z	15.45	26.2	0.9				16.8	6.0			
07	A	15.56	02.1	1.0				1.6	2.6			
	H	15.56	01.6	0.9				3.0	5.0	5.3	3.0	
	Z	15.56	02.0	1.1				2.0	2.4			
07	A	17.19	13.5	0.9				4.4	5.6			
	H	17.19	13.6	1.2				3.8	3.8	4.2	3.2	
	Z	17.19	12.7	0.6				20.0				
07	A	18.13	01.7	0.8				3.1	3.8			
	H	18.13	01.1	0.8				4.0	6.4	4.3	3.0	
	Z	18.13	01.7	0.9				5.3	5.6			
07	A	18.57		0.8				1.9	1.9			
	H	18.57	01.1	1.2				1.6	1.9	5.1	2.6	
	Z	18.57	00.6	0.8				16.6	12.0			
07	A	19.04	48.5	0.9				2.6	2.1			
	H	19.04	47.8	0.6				2.8	2.9	2.6	2.6	
	Z	19.04	48.7	0.9				4.7	4.4			
07	A	19.09	12.2	0.6				4.8	4.8			
	H	19.09	12.9	1.2				1.0	0.7	4.1	2.6	
	Z	19.09	12.7	0.8				4.4	5.6			
07	A	19.33	35.2	0.6				6.2	5.8			
	H	19.33	35.5	1.0				2.0	1.6	2.6	2.8	
	Z	19.33	34.6	0.5				54.2				
07	A	20.09	50.8	1.0				1.6	2.3			
	H	20.09	50.6	1.2				2.1	2.1	5.6	2.8	
	Z	20.09	51.3	1.5				1.0	1.9			
07	A	20.34	34.9	0.6				4.1	5.1			
	H	20.34	34.9	0.7				0.7	1.6	3.3	2.6	
	Z	20.34	35.3	0.8				0.7	0.6			
07	A	22.24	43.0	1.1				22.6	18.0			
	H	22.24	42.6	1.0				25.4		4.7	4.2	
	Z	22.24	43.1	0.9				66.3	15.4			
07	A	22.28	10.7	0.5				3.6	6.8			
	H	22.28	11.2	1.0				0.6	0.4	3.1	2.3	
	Z	22.28	11.1	0.8				1.4	1.4			
07	A	22.50	44.7	1.2				11.5	6.2			
	H	22.50	44.0	1.0				10.8	11.8	4.1	3.8	
	Z	22.50	44.7	1.0				10.0	4.0			
08	A	01.09	43.9	1.0				2.4	2.2			
	H	01.09	43.0	1.0				4.2	3.3	5.7	2.9	
	Z	01.09	43.5	1.0				6.0	5.0			
08	A	01.23	03.6	0.7				3.9	4.3			
	H	01.23	03.3	0.6				3.3	3.2	3.1	2.8	
	Z	01.23	04.2	0.8				2.0	0.8			

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jul. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
09	A	14.19			0.9				1.3	3.4			
	H	14.19			1.0				1.4	1.0	5.8	2.6	
	Z	14.19			1.1				1.0	0.5			
09	A	14.37	48.2		1.0				5.0	12.7			
	H	14.37	47.5		0.7				6.6	7.2	4.1	3.4	
	Z	14.37	48.4		1.1				8.7	3.0			
09	A	15.18	49.7		1.3				2.8	3.6			
	H	15.18	49.2		1.0				1.3	1.6	6.3	2.8	
	Z	15.18	49.9		1.3				7.1	3.4			
09	A	16.06	14.1		1.2				27.0	30.0			
	H	16.06	13.6		1.0				20.6	38.8	3.2	4.4	
	Z	16.06	14.1		0.9				37.3	14.0			
09	A	16.52	52.6		1.1				4.9	5.1			
	H	16.52	52.0		1.1				12.4	11.2	6.3	3.5	
	Z	16.52	52.7		1.1				4.8	3.0			
09	A	17.32	12.6		1.1				2.1	2.2			
	H	17.32			0.7				3.0	4.3	2.9	2.8	
	Z	17.32	12.7		1.0				6.3	2.9			
09	A	18.04	42.8		0.4				2.8	3.7			
	H	18.04	43.3		0.9				0.8	1.0	2.3	2.2	
	Z	18.04			0.7				1.5	1.1			
09	A	19.48	13.9		1.0				5.0	3.8			
	H	19.48	13.6		0.9				2.8	5.4	4.6	3.1	
	Z	19.48	14.1		1.0				10.2	5.6			
09	A	20.21	56.3		0.4				11.2	11.4			
	H	20.21	56.9		0.8				4.6	4.8	2.5	3.0	
	Z	20.21	56.6		0.7				5.0	5.3			
09	A	20.39	30.0		1.1				0.9	2.4			
	H	20.39	29.2		0.5				2.2	2.0	3.3	2.5	
	Z	20.39	30.0		1.2				2.5	2.6			
09	A	22.02	39.2		1.0				4.7	2.8			
	H	22.02	38.7		0.9				5.6	4.8	5.0	3.1	
	Z	22.02	39.2		1.0				7.3	2.0			
09	A	22.39	11.3		0.9				2.4	3.8			
	H	22.39	10.8		0.6				3.0	2.7	2.8	2.6	
	Z	22.39	11.6		0.9				2.4	0.6			
09	A	22.48	09.8		0.4				2.8	2.4			
	H	22.48	10.8		0.7				0.6	0.6	0.9	1.8	
	Z	22.48	10.2		0.6				2.2	2.0			
09	A	23.13	11.2		0.4				3.9	3.5			
	H	23.13	11.9		1.2				0.7	0.7	2.2	2.3	
	Z	23.13	11.3		0.6				3.0	3.4			
10	A	01.49	04.4		0.4				2.1	2.9			
	H	01.49	05.1		0.8				0.8	0.6	1.7	1.9	
	Z	01.49	04.9		0.6				2.3	1.6			
10	A	02.32	30.1		1.0				2.4	3.4			
	H	02.32	30.7		1.4				1.2	1.2	4.5	2.8	
	Z	02.32	29.8		0.7				37.0	8.2			
10	A	02.34	22.8		1.1				4.5	6.4			
	H	02.34	22.4		0.9				6.0	6.4	5.8	3.3	
	Z	02.34	22.7		1.2				5.8	5.0			
10	A	02.40	41.4		1.1				7.3	9.5			
	H	02.40	40.9		1.0				13.0	11.2	6.0	3.7	
	Z	02.40	41.3		1.0				10.0	6.9			
10	A	02.49	30.8		1.3				1.2	2.0			
	H	02.49	29.9		0.7				3.6	2.8	4.7	2.8	
	Z	02.49	31.0		1.4				0.8	0.6			
10	A	02.49	57.0		1.3				5.6	10.8			
	H	02.49	57.0		1.3				11.8	11.0	8.5	3.9	
	Z	02.49	57.2		1.5				15.2	8.4			
10	A	03.12	41.5		1.1				5.6	8.0			
	H	03.12	41.0		0.9				6.8	7.6	5.2	3.4	
	Z	03.12	41.3		1.0				7.2	6.0			
10	A	04.48	09.6		1.4				6.4	3.5			
	H	04.48	08.8		1.0				10.8	6.8	1.9	3.6	
	Z	04.48			1.2				3.8	1.5			
10	A	05.22	45.1		1.1				3.5	3.8			
	H	05.22	45.4		1.5				1.7	2.5	4.8	3.1	
	Z	05.22			0.7				11.8	9.0			
10	A	09.00	23.4		0.6				19.1	20.5			
	H	09.00	23.6		0.8				9.2	10.4	3.5	3.5	
	Z	09.00			1.0				8.4	6.4			
10	A	11.16	31.4		1.0				4.2	6.9			
	H	11.16	31.0		0.8				5.6	6.6	3.9	3.3	
	Z	11.16	31.3		0.9				8.4	8.2			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
11	A	07.23	34.0		0.6				7.0	9.4			
	H	07.23	34.5		1.0				1.3	2.0	3.8	2.9	
	Z	07.23	34.5		0.9					0.6			
11	A	09.58	43.5		1.2								
	H	09.58	43.6		1.0				3.6	5.2	6.1	3.2	
	Z	09.58	43.6		1.2				6.5	3.0			
11	A	10.03	46.1		0.6								
	H	10.03	46.8		0.8				0.7	0.5	3.2	1.8	
	Z	10.03	47.0		1.0				1.6	1.1			
11	A	11.08	17.9		0.6								
	H	11.08	18.7		0.9				0.8	0.9	3.7	2.1	
	Z	11.08	18.7		1.0				3.0	2.9			
11	A	11.26	16.3		1.0								
	H	11.26	16.8		1.1				17.8	31.4	6.6	4.4	
	Z	11.26	17.0		1.2					10.8			
11	A	11.40	27.5		0.6								
	H	11.40	28.4		1.0				5.1	6.0	3.2	3.3	
	Z	11.40	28.5		1.0				3.3	1.3			
11	A	11.42	33.6		0.6								
	H	11.42	34.2		1.0				2.0	3.0	3.8	2.9	
	Z	11.42	34.4		1.2				4.5	2.6			
11	A	12.25	39.2		1.4								
	H	12.25	38.4		0.9				5.4	3.6			
	Z	12.25	39.2		1.3				2.0	3.4	4.3	3.2	
11	A	12.42	59.6		0.8				13.3	17.9			
	H	12.43	00.4		0.8				4.7	5.0	3.6	3.4	
	Z	12.42	59.4		0.8					7.1			
11	A	13.35	22.6		0.5				2.7	2.4			
	H	13.35	23.3		1.0				0.7	0.8	3.4	2.2	
	Z	13.35	22.9		0.7				1.8	1.2			
11	A	13.56	18.4		0.6								
	H	13.56	18.3		0.9				9.2	7.7			
	Z	13.56	18.7		0.9				0.6	1.0	3.7	2.7	
11	A	14.49	26.6		1.0								
	H	14.49	26.4		1.0				1.6	1.8			
	Z	14.49	26.7		1.0				3.0	2.8	5.5	2.7	
11	A	15.49	13.6		1.2								
	H	15.49	12.5		0.6				1.4	2.7			
	Z	15.49			0.6				1.8	1.2	2.6		
11	A	16.31	39.3		0.9								
	H	16.31	39.1		1.0				0.9	0.8			
	Z	16.31	39.9		1.2				0.5	0.6	5.2	2.2	
11	A	16.41	43.9		1.1				1.0	0.6			
	H	16.41	43.5		0.8				1.3	1.4			
	Z	16.41	43.9		1.0				3.8	2.0	4.4	2.6	
11	A	17.05	40.9		1.1								
	H	17.05	40.4		1.0				4.4	1.7			
	Z	17.05	40.9		1.2				1.5	2.0			
11	A	17.07	14.1		0.6				3.0	2.6	6.2	2.7	
	H	17.07	14.1		0.7				3.4	0.9			
	Z	17.07	14.5		0.8				3.3	3.4			
11	A	17.07	54.7		0.7				2.0	3.0	3.0	2.6	
	H	17.07	54.5		0.8				7.0	3.2			
	Z	17.07	54.8		0.8								
11	A	18.52	12.3		1.4								
	H	18.52	12.6		1.9				4.3	6.3			
	Z	18.52	12.1		1.0				2.6	3.4	3.7	2.9	
11	A	18.52	23.7										

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date		P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
Station	h	m	s	E		N	U	E-W	N-S				
13	A H Z	01.41	52.3	0.7				6.2	8.0		4.7	3.1	
	A H Z	01.41	52.6	1.0				2.6	3.8				
	A H Z	01.41	52.9	1.1				3.1	0.9				
	A H Z	01.57	51.5	0.5				1.8	1.8		3.2	1.9	
	A H Z	01.57	52.6	1.2				0.4	0.4				
	A H Z	01.57	52.0	0.7				1.4	1.0				
13	A H Z	02.19	51.4	1.1				3.0	4.3		4.6	2.8	
	A H Z	02.19	51.0	0.7				2.2	2.4				
	A H Z	02.19		1.2				10.6	2.8				
13	A H Z	02.21	35.0	1.2				8.4	12.1		4.9	3.6	
	A H Z	02.21	34.4	0.8				8.4	8.0				
	A H Z	02.21	35.2	1.3				17.1	6.2				
13	A H Z	04.11	12.7	0.7				6.4	8.9		4.8	3.1	
	A H Z	04.11	13.2	1.0				2.8	3.8				
	A H Z	04.11	13.4	1.0				3.8	1.4				
13	A H Z	06.23	09.9	0.5				2.1	4.0		3.0	2.5	
	A H Z	06.23	10.2	0.9				0.7	1.6				
	A H Z	06.23	10.4	1.0				1.4	1.0				
13	A H Z	07.27	58.0	0.5				8.2	8.0		2.2	2.9	
	A H Z	07.27	58.8	1.2				2.0	1.5				
	A H Z	07.27	58.2	0.5				19.8	9.6				
13	A H Z	07.28	10.1	0.7				2.3	2.3		1.2	2.1	
	A H Z	07.28	10.8	0.5				0.4	1.2				
	A H Z	07.28	10.5	1.2				1.0	0.6				
13	A H Z	08.44	44.3	1.3				2.3	2.8		5.5	3.0	
	A H Z	08.44	43.7	1.0				2.3	2.0				
	A H Z	08.44		1.2				2.9	1.0				
13	A H Z	09.05	16.9	1.2				4.6	6.2		6.0	3.4	
	A H Z	09.05	16.7	1.0				5.4	5.8				
	A H Z	09.05	17.1	1.2				7.3	1.8				
13	A H Z	09.18	44.6	9.7				3.2	4.0		4.0	2.9	
	A H Z	09.18	44.4	0.8				4.7	6.0				
	A H Z	09.18		1.0				1.1	0.6				
13	A H Z	10.26	02.7	0.9				1.6	3.4		4.3	2.7	
	A H Z	10.26	03.2	1.3				1.3	0.8				
	A H Z	10.26	02.3	0.6				3.6	2.6				
13	A H Z	10.43	23.1	0.6				0.8	2.6		3.6	2.2	
	A H Z	10.43	24.0	1.2				0.6	0.4				
	A H Z	10.43	23.4	0.8				1.4	1.1				
13	A H Z	11.00	04.6	0.5				1.8	2.2		3.0	2.1	
	A H Z	11.00	05.7	1.1				0.9	0.7				
	A H Z	11.00	05.0	0.7				2.2	2.0				
13	A H Z	11.46	07.9	1.2				4.0	7.8		4.8	3.3	
	A H Z	11.46	07.4	0.8				5.3	3.8				
	A H Z	11.46	07.0	1.2					4.6				
13	A H Z	12.56	20.0	0.9				3.4	6.8		4.7	3.3	
	A H Z	12.56	19.7	0.8				8.3	9.4				
	A H Z	12.56	20.2	1.0				7.6	2.0				
13	A H Z	13.32	35.5	0.9				6.9	12.5		5.0	3.5	
	A H Z	13.32	35.1	0.9				8.8	9.0				
	A H Z	13.32	35.7	1.0				30.0	4.0				
13	A H Z	14.37	40.0	0.5				2.7	4.6		2.5	2.0	
	A H Z	14.37	40.6	0.7				0.4	0.2				
	A H Z	14.37	40.7	0.9				2.1					
13	A H Z	15.20	57.1	0.8				2.9	4.4		4.5	3.1	
	A H Z	15.20	57.8	1.4				2.9	4.0				
	A H Z	15.20	57.2	0.7				19.0	15.0				
13	A H Z	17.41	40.3	1.3					9.2		5.0	3.7	
	A H Z	17.41	39.7	0.8									
	A H Z	17.41	40.2	1.3									
13	A H Z	19.29	50.2	0.9				2.0	2.0		3.2	2.5	
	A H Z	19.29	49.7	0.8				1.8	1.6				
	A H Z	19.29	50.1	0.8				2.4	0.6				
13	A H Z	19.30	47.7	0.5				6.8	8.2		3.1	2.4	
	A H Z	19.30	48.6	1.0				0.7	0.6				
	A H Z	19.30	48.2	0.8				5.6	3.5				
13	A H Z	19.32	50.3	0.9				1.0	2.3		3.6	2.5	
	A H Z	19.32	50.0	0.6				2.3	2.0				
	A H Z	19.32	50.8	1.0				4.8					
13	A H Z	20.03	31.3	0.7				3.2	3.3		4.0	2.5	
	A H Z	20.03	31.6	1.0				0.9	1.0				
	A H Z	20.03	31.9	1.1				1.1	0.3				
13	A H Z	21.58	44.4	1.0				1.0	1.5		4.3	2.7	
	A H Z	21.58	43.9	0.8				2.6	5.3				
	A H Z	21.58	44.3	1.0				3.3	0.8				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date		P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
Station	h	m	s	E		N	U	E-W	N-S				
14	A H Z	14.30	05.4	0.7				2.0	3.4		3.3	2.4	
	A H Z	14.30	06.0	1.1				0.6	0.4				
	A H Z	14.30	05.1	0.5				14.4	1.8				
14	A H Z	14.30	56.5	1.3				0.6	2.0		5.3	2.9	
	A H Z	14.30	55.8	0.7				5.0	3.4				
	A H Z	14.30		1.4				1.4	0.8				
14	A H Z	17.03	20.4	0.8				1.1	4.6		3.8	2.8	
	A H Z	17.03	20.0	0.7				1.6	3.2				
	A H Z	17.03	20.9	1.0				2.4	0.6				
14	A H Z	20.58	16.3	0.6				2.5	11.4		4.2	3.2	
	A H Z	20.58	17.1	1.1				1.8	2.9				
	A H Z	20.58	16.6	0.9				8.3	4.2				
14	A H Z	21.00	13.9	0.6				1.1	4.0		3.8	2.5	
	A H Z	21.00	14.8	1.0				1.2	1.0				
	A H Z	21.00	14.3	0.7				3.4	3.4				
14	A H Z	21.13	55.4	0.7				2.6	7.9		3.7	3.0	
	A H Z	21.13	56.3	1.1				2.0	2.3				
	A H Z	21.13	55.0	0.6				5.4	3.6				
14	A H Z	22.51	15.4	0.7				2.1	4.6		3.7	2.2	
	A H Z	22.51	16.2	0.8				0.3	0.4				
	A H Z	22.51	16.0	0.8				3.8	1.0				
14	A H Z	22.57	13.7	0.8				1.1	4.4		3.7	2.9	
	A H Z	22.57	14.2	1.2				2.8	3.0				
	A H Z	22.57	13.2	0.6				14.0					
14	A H Z	23.28	54.2	1.1				1.0	1.9		5.2	2.4	
	A H Z	23.28	53.5	0.8				1.0	0.9				
	A H Z	23.28	54.5	1.2				3.6	2.4				
14	A H Z	23.47	56.6	1.2				0.4	1.7		5.3	2.7	
	A H Z	23.47	56.1	0.9				1.8	2.4				
	A H Z	23.47	56.8	1.2				3.5	1.0				
15	A H Z	01.29	34.4	1.1				1.1	2.0		3.4	2.8	
	A H Z	01.29	34.1	0.8				3.2	3.9				
	A H Z	01.29	34.4	0.9				4.8	1.2				
15	A H Z	03.06	10.7	0.9				1.0	1.6		5.3	2.9	
	A H Z	03.06	11.1	1.2				4.0	5.2				
	A H Z	03.06	10.3	0.8				3.9	5.4				
15	A H Z	03.21	26.2	0.8				1.2	6.7		4.2	2.9	
	A H Z	03.21	26.2	0.7				2.7	3.1				
	A H Z	03.21	26.9	1.0				2.6	1.7				
15	A H Z	04.20	33.0	1.0				3.0	7.0		5.4	3.3	
	A H Z												

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											P-Time (J.S.T.)		
16	A	12.50	25.8	0.5	-			6.0	15.4		2.5	2.9	
	H	12.50	26.4	0.7	+			2.5	2.8				
	Z	12.50	26.3	0.9				2.8	2.4				
16	A	13.02	26.7	1.0				0.5	2.0		4.6	2.7	
	H	13.02	26.4	0.8	-			1.5	3.0				
	Z	13.02	26.7	1.0	+			2.2	0.8				
16	A	15.29	07.9	0.9	-			0.5	1.6		5.2	2.4	
	H	15.29	07.9	0.9	+			1.4	1.4				
	Z	15.29	08.3	1.3	-			0.8	0.2				
16	A	15.30	03.3	0.8	+			2.3	1.4		5.2	2.4	
	H	15.30	04.4	1.4				0.6	0.6				
	Z	15.30	03.3	0.9	+			2.6	1.2				
16	A	16.33	11.0	0.9	+			0.5	2.1				
	H	16.33	10.7					1.2	0.9		2.2		
	Z	16.33	10.9	0.9				2.0	1.6				
16	A	17.28	48.2	0.9				0.4	1.2				
	H	17.28	48.1	0.8	-			1.7	2.0		3.0	2.4	
	Z	17.28	48.2	0.7	+			3.9	1.1				
16	A	17.58	51.9	0.7				0.5	3.3				
	H	17.58	51.7	0.6	-			1.6	2.2		3.2	2.5	
	Z	17.58	52.2	0.9				1.6	0.6				
16	A	18.08	03.4	0.7				0.6	6.3				
	H	18.08	02.8	0.7	-			5.3	4.3		2.2	3.0	
	Z	18.08	03.8	1.2				1.2	0.8				
16	A	19.10	07.8	0.8	+			2.3	5.2				
	H	19.10		0.8				2.4	2.4		1.5	2.8	
	Z	19.10	07.1	0.6				18.8	11.0				
16	A	19.19	03.9	0.9	+			2.2	5.7				
	H	19.19	04.3	1.2	-			4.0	5.2		4.5	3.4	
	Z	19.19	03.2	0.7	+			31.4	23.4				
16	A	20.17	37.7	1.0	+			2.4	7.8				
	H	20.17	37.2	0.7	-			7.2	9.3		4.2	3.4	
	Z	20.17	37.7	1.1	+			7.0	2.3				
16	A	22.25	54.4	0.5	+			0.9	2.4				
	H	22.25	55.0	0.8	-			2.8	4.1		2.5	2.5	
	Z	22.25	54.9	0.7				2.1	2.3				
16	A	22.39	28.1	0.9	+			0.8	3.2				
	H	22.39	27.3	0.5	-			1.8	2.5		2.7	2.5	
	Z	22.39	28.2	1.0				3.6	2.6				
17	A	00.09	34.9	0.6				2.1	3.1				
	H	00.09	35.6	1.2	+			1.4	1.5		3.2	2.5	
	Z	00.09	35.0	0.6				4.1	2.1				
17	A	01.34	37.9	0.4				1.7	8.2				
	H	01.34	38.4	1.1	+			1.1	1.0		2.7	2.6	
	Z	01.34	38.1	1.7				3.0	2.1				
17	A	01.59	01.8	1.0	+			0.5	2.1				
	H	01.59	01.0	0.9				3.6	3.9		5.5	2.9	
	Z	01.59	01.8	1.2	+			5.6	1.5				
17	A	02.20	23.9	0.7	+			1.4	3.4				
	H	02.20	24.5	1.0				2.0	1.9		3.5	2.6	
	Z	02.20	23.8	0.6	-			12.4	8.6				
17	A	03.26	06.7	0.9				0.4	2.6				
	H	03.26	06.0	0.6	+			0.6	1.1		3.6	2.2	
	Z	03.26	06.9	1.1				0.5	0.8				
17	A	05.17	41.5	0.6	+			1.6	3.4				
	H	05.17	41.8	0.9	+			1.2	0.6		3.5	2.4	
	Z	05.17	41.8	0.7				7.3	3.1				
17	A	07.13	45.7	1.3				0.3	2.0				
	H	07.13	44.8	0.9	-			0.8	1.2		4.6	2.6	
	Z	07.13	45.6	1.2				1.3	0.7				
17	A	07.54	13.5	0.7				0.8	3.1				
	H	07.54	13.6	0.9	+			2.0	2.4		4.1	2.6	
	Z	07.54	14.0	1.0				1.6	1.0				
17	A	09.23	37.3	0.6				0.9	3.0				
	H	09.23	37.9	0.9	-			1.0	0.6		3.5	2.3	
	Z	09.23	37.6	0.8				6.2	2.7				
17	A	10.56	39.7	0.8				0.6	3.4				
	H	10.56	39.4	0.5	+			1.9	1.8		2.1	2.4	
	Z	10.56		1.3				0.7	0.3				
17	A	12.27	03.2	1.2				1.0	1.8				
	H	12.27	03.0	1.0	+			3.2	3.7		3.4	2.9	
	Z	12.27	03.1	0.9				14.2	3.8				
17	A	13.18	39.0	1.0	+			2.6	5.6				
	H	13.18	38.9	0.9	-			10.6	12.4		2.4	3.4	
	Z	13.18	38.8	0.7				17.1	4.6				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											P-Time (J.S.T.)		
18	A	12.05	35.6	0.9	+			18.0	23.5		5.8	4.1	
	H	12.05		1.0				18.2	22.6				
	Z	12.05	35.5	1.2				9.5					
18	A	12.26	31.8	0.8	-			2.2	8.2				
	H	12.26	31.0	0.6				3.6	3.6		3.7	3.0	
	Z	12.26	32.1	1.0	-			5.6	1.6				
18	A	12.32	11.7	1.1	+			0.7	1.2				
	H	12.32		0.8				2.3	2.2		4.5	2.5	
	Z	12.32	11.8	1.1				1.4	0.9				
18	A	14.10	50.1	1.1				2.5	3.0				
	H	14.10	49.4	0.7	+			7.6	6.2		5.0	3.1	
	Z	14.10	50.3	1.2				7.0	3.0				
18	A	14.31	11.0	1.3				0.4	1.6				
	H	14.31		0.7				3.9	6.3		4.2	2.9	
	Z	14.31	11.3	1.3				1.7	1.0				
18	A	15.07	28.1	0.9	-			1.8	2.0				
	H	15.07	27.8	0.9				3.3	3.6		4.3	2.7	
	Z	15.07	27.9	0.9	-			10.6	4.9				
18	A	17.41	46.5	1.1				0.8	1.6				
	H	17.41	46.2	1.2	-			1.8	2.6		6.6	2.8	
	Z	17.41	46.0	1.0				5.1	4.3				
18	A	18.25	09.9	0.9				0.5	1.6				
	H	18.25	11.0	1.5	+			1.4	1.4		5.2	2.6	
	Z	18.25	10.1	0.9				2.0	1.6				
18	A	19.06	07.3	0.8				2.2	2.9				
	H	19.06	07.1	0.8	+			5.6	6.6		3.6	2.9	
	Z	19.06	07.5	0.7				5.7	4.5				
18	A	19.26	32.9	1.2				0.7	2.6				
	H	19.26	32.0	0.8	+			2.0	2.6		4.4	2.8	
	Z	19.26	33.1	1.2				5.3	3.0				
18	A	21.24	13.3	1.0				0.4	2.4				
	H	21.24	12.8	0.7	+			2.2	3.0		4.2	2.7	
	Z	21.24	13.5	1.0				2.0	1.3				
18	A	22.06	43.8	0.5				0.8	2.4				
	H	22.06	44.8	1.0	+			0.5	0.6		3.0	2.1	
	Z	22.06	44.1	0.6				2.3	1.9				
18	A	22.53	06.4	0.8	+			1.4	5.2				
	H	22.53	06.0	0.5				2.4	2.4		1.9	2.6	
	Z	22.53		0.8	-			5.6	2.1				
18	A	22.54	05.6	1.3				0.2	2.1				
	H	22.54	04.9	0.9	+			2.2	2.4		4.7	2.7	
	Z	22.54	05.8	1.2				0.7	0.5				
18	A	23.49	28.9	1.4				1.6	1.8				
	H	23.49	28.9	1.9	+			0.9	1.2		8.1	2.9	
	Z	23.49	28.4	1.2				3.6	1.8				
19	A	00.46	48.5	0.8				0.4	1.0				
	H	00.46	49.8	1.5	+			0.6	0.4		4.5	2.2	
	Z	00.46	48.8	0.9				4.0	2.3				
19	A	02.52	44.9	1.1				1.0	1.2				
	H	02.52	44.3	0.8	-			2.8	2.6		4.9	2.5	
	Z	02.52	45.3	1.2				2.0	1.0				
19	A	03.10	10.9	0.6	+			0.5	2.2				
	H	03.10	10.6	0.6				2.0	2.6		2.7	2.4	
	Z	03.10	11.4	0.8				2.0	1.4				
19	A	03.31	56.6	0.7				4.4	10.8				
	H	03.31	56.4	0.7	+			7.3	8.1		3.3	3.3	
	Z	03.31	57.1	0.9				7.5	5.2				
19	A	04.32	18.9	0.7				0.2	1.8				
	H	04.32	18.6	0.6	+			2.8	5.0		3.2	2.6	
	Z	04.32	18.6	1.1				0.8	0.4				
19	A	05.57	57.9	0.9				0.6	5.6				
	H	05.5											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
20	A H Z	02.31	43.6	0.8				0.8	2.1		4.0	2.5	
20	A H Z	02.32	12.1	0.4				1.4	2.6		2.4	1.8	
20	A H Z	03.37	00.0	0.7				3.6	12.0		4.0	3.2	
20	A H Z	04.31	21.0	1.2				1.8	4.8		5.2	3.3	
20	A H Z	05.53	36.6	0.8				1.2	4.1		2.8	2.6	
20	A H Z	11.47	16.5	0.5				5.4	16.2		3.1	3.1	
20	A H Z	11.50	12.8	0.5				3.1	7.6		3.5	2.2	
20	A H Z	13.15	50.8	0.8				2.6	9.0		4.3	3.1	
20	A H Z	14.45	02.8	0.6				5.8	17.4		3.7	3.3	
20	A H Z	15.17	45.0	0.6				1.2	1.8		1.0	0.8	
20	A H Z	16.30	19.3	1.0				1.6	9.2		1.7	1.9	
20	A H Z	17.10	28.2	0.6				0.8	4.3		0.8	2.0	
20	A H Z	17.10	41.6	0.5				0.7	2.5		0.6	0.7	
20	A H Z	18.11	03.9	0.5				6.2	14.1		3.1	3.2	
20	A H Z	19.21	34.3	0.7				1.9	14.3		3.1	3.2	
20	A H Z	19.24	05.5	0.6				0.8	4.0		1.3	1.4	
20	A H Z	21.31	32.8	0.8				0.7	3.8		1.6	2.0	
20	A H Z	21.34	46.1	0.8				3.2	17.8		8.2	8.0	
20	A H Z	22.01	27.1	0.8				0.8	4.5		3.8	3.8	
20	A H Z	22.09	24.2	1.1				1.8	5.3		3.1	4.0	
20	A H Z	22.52	17.5	1.0				1.0	4.0		6.2	5.0	
20	A H Z	23.29	53.7	1.0				2.0	2.4		2.8	2.6	
21	A H Z	00.48	53.9	0.7				1.9	5.9		6.0	6.0	
21	A H Z	01.21	55.9	0.7				3.4	12.7		3.6	3.6	
21	A H Z	02.13	38.6	1.1				1.0	2.3		2.6	3.8	
21	A H Z	02.13	38.4	1.9				3.1					

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
21	A H Z	22.29	23.8	0.4				1.7	6.0		4.1	3.3	
21	A H Z	04.17	41.2	0.8				1.0	1.6		3.9	2.6	
21	A H Z	04.44	19.3	0.8				1.4	2.1		3.8	2.6	
21	A H Z	05.45	20.2	1.1				8.2	10.8		3.9	4.2	
21	A H Z	06.07	27.1	0.9				0.8	3.8		5.0	3.6	
21	A H Z	08.17	36.7	0.9				3.2	5.2		8.8	7.1	
21	A H Z	08.32	40.5	0.9				0.8	2.2		4.2	3.6	
21	A H Z	08.36	14.0	0.9				0.6	1.7		1.3	1.5	
21	A H Z	09.49	51.3	0.9				1.3	3.6		1.9	2.0	
21	A H Z	11.31	18.0	1.5				0.9	1.4		3.0	3.1	
21	A H Z	11.57	01.3	1.1				0.8	1.6		2.8	2.6	
21	A H Z	14.00	26.4	0.7				0.5	1.8		2.0	2.0	
21	A H Z	15.09	55.9	0.8				0.8	2.4		2.8	5.1	
21	A H Z	15.15	33.1	0.4				0.4	0.6		2.3	2.5	
21	A H Z	15.30	45.1	1.0				3.2	3.2		3.4	6.7	
21	A H Z	16.07	27.9	0.9				8.0	5.0		5.0	5.0	
21	A H Z	16.32	52.2	1.0				1.5	3.3		2.5	3.3	
21	A H Z	17.46	05.0	0.8				1.1	1.0		1.1	1.0	
21	A H Z	18.33	22.7	0.9				1.2	1.8		1.6	1.8	
21	A H Z	18.51	05.1	0.8				5.1	4.6		5.1	4.6	
21	A H Z	19.11	36.0	0.7				0.8	0.8		0.8	0.8	
21	A H Z	19.22	42.7	0.8				0.8	1.6		0.8	1.6	
21	A H Z	19.27	01.1	1.1				5.0	6.9		5.0	6.9	
21	A H Z	19.31	01.9	0.9				1.3	1.2		1.3	1.2	
21	A H Z	20.21	06.9	0.4				0.4	0.2		0.4	0.2	
21	A H Z	20.21	15.4	0.7				1.8	1.8		1.8	1.8	
22	A H Z	22.29	24.6	1.0				1.9	3.6		2.8	2.3	
22	A H Z	01.33	43.0	0.9				2.1	2.1		2.1	2.1	
22	A H Z	01.33	42.8	1.0				0.8	1.6		0.8	1.6	
22	A H Z	01.33	43.4	1.3				0.7	0.7		0.7	0.7	
22	A H Z	01.39	07.8	1.0				1.8	1.8		1.8	1.8	
22	A H Z	04.18	57.3	0.9				3.0	3.0		3.0	3.0	
22	A H Z	05.36	25.2	1.4				1.2	3.3		2.4	2.8	
22	A H Z	06.04	42.5	0.5				11.1	7.6		1.0	1.2	
22	A H Z	06.04	43.4	1.0				1.0	1.2		2.6	2.6	
22	A H Z	06.22	26.2	1.4				1.6	3.8		4.2	2.6	
22	A H Z	08.28	16.3	0.8				1.0	6.2		4.4	3.4	
22	A H Z	08.53	13.8	0.6				3.4	6.4		2.9	4.8	
22	A H Z	09.14	24.8	0.7				1.0	4.6		3.4	4.9	
22	A H Z	09.22	14.7	1.1				0.7	1.4		1.2	1.2	
22	A H Z	12.21	32.5	1.0				2.7	4.8		7.6	8.2	
22	A H Z	12.34	11.5	0.9				1.9	4.1		6.6	6.9	
22	A H Z	14.16	40.4	1.5				6.6	14.8		7.7	11.9	
22	A H Z	14.45	12.2	1.3				1.2	1.7		1.8	1.8	
22	A H Z	15.41	53.7	0.6				7.1	28.2		2.3	5.0	
22	A H Z	15.45	26.8	0.8				0.5	2.5		2.0	2.2	
22	A H Z	16.23	27.5	0.6				0.6	2.2		2.2	2.3	
22	A H Z	16.51	05.1	1.0				1.1	2.4		5.3	3.6	
22	A H Z	17.41	27.0	0.6				1.0	3.0		1.3	1.6	
22	A H Z	18.21	27.3	0.6				1.9	2.5		0.7	0.2	
22	A H Z	18.50	32.8	1.0				1.4	4.8		3.4	2.9	
22	A H Z	19.40	59.8	0.5				2.4	5.2		1.1	1.0	
22	A H Z	20.39	05.2	0.7				0.6	1.6		0.9	1.0	
22	A H Z	21.06	56.9	1.0				0.6	1.4		1.8	2.0	
22	A H Z	21.06	56.3	1.0				1.8	2.0		3.4	2.9	
22	A H Z	21.06	56.7	0.9				3.4	2.9				
23	A H Z	21.29	50.3	0.6				16.5	14.6		1.6	2.2	
23	A H Z	21.31	20.5	0.8				1.0	1.1		1.0	1.5	
23	A H Z	21.45	54.8	0.7				1.6	1.9		1.6	1.9	
23	A H Z	22.02	10.1	1.0				2.2	0.9		2.2	0.6	
23	A H Z	22.02	09.6	1.0				4.5	3.8		8.3	6.0	
23	A H Z	22.11	13.7	0.8				1.4	1.4		1.0	2.0	
23	A H Z	00.32	20.7	0.9				0.8	0.6		0.8	0.6	
23	A H Z	01.22	45.4	1.0				1.4	2.2		2.7	1.1	
23	A H Z	01.30	39.6	0.9				3.8	7.1		4.0	3.8	
23	A H Z	02.58	17.3	1.0				1.4	2.2		11.5	16.0	
23	A H Z	03.51	58.9	0.6				0.6	2.0		1.4	1.0	
23	A H Z	05.53	15.7	1.5				1.2	2.0		2.0	3.8	
23	A H Z	05.53	14.7	1.0				2.0	3.8		1.2	1.0	
23	A H Z	05.53	15.9	1.3				1.2	2.0		1.2	1.0	
23	A H Z	04.34	02.3	1.0				2.2	2.2		1.6	2.2	
23	A H Z	04.34	02.8	1.8				1.6	2.2		4.7	4.7	
23	A H Z	05.00	33.4	0.9				1.8	2.2		1.8	2.2	
23	A H Z	05.00	32.7	0.5				3.9	5.4		1.2	2.0	
23	A H Z	07.06	41.7	1.2				1.0	1.6		1.0	1.6	
23	A H Z	11.15	27.5	0.8				1.4	5.4		3.0	2.9	
23	A H Z	12.20	26.1	1.4				5.0	14.9		8.5	6.2	
23	A H Z	15.10	15.0	1.1				1.8	2.3		7.0	5.3	
23	A H Z	15.10	14.8	1.0				7.0	5.3		1.8	3.4	
23	A H Z	17.50	06.4	0.6				0.3	0.4		1.1	1.1	

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jul. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
24	A H Z	02.56	16.5	1.0				3.8	3.4	5.1	3.1	
24	A H Z	02.56	16.1	0.9				3.6	6.8			
24	A H Z	02.56	16.8	1.0				2.2	1.3			
24	A H Z	05.04	36.9	1.0				12.2	11.6	3.5	3.5	
24	A H Z	05.04	36.2	0.7				11.1	10.2			
24	A H Z	05.04	37.1	1.0				8.4	6.4			
24	A H Z	05.12	03.6	0.6				1.3	3.8	2.8	2.5	
24	A H Z	05.12	03.3	0.6				2.4	2.4			
24	A H Z	05.12	04.1	0.9				1.2	1.5			
24	A H Z	09.53	43.9	1.2				0.6	2.1	5.6	2.7	
24	A H Z	09.53	43.4	0.9				1.6	2.3			
24	A H Z	09.53	43.9	1.2				0.5	0.3			
24	A H Z	10.03		0.5				3.0	3.0	2.3	2.1	
24	A H Z	10.03	06.7	0.6				1.0	0.8			
24	A H Z	10.03	07.2	0.9				1.0	0.7			
24	A H Z	10.44	38.8	1.2				13.0	18.2	6.2	4.1	
24	A H Z	10.44	37.9	1.0				13.3	19.6			
24	A H Z	10.44	38.8	1.2				5.2	4.2			
24	A H Z	10.45	25.6	1.2				1.2	2.0	4.8	2.9	
24	A H Z	10.45	25.2	0.9				1.8	4.6			
24	A H Z	10.45	25.8	1.1				2.4	2.6			
24	A H Z	10.49	15.6	1.2				1.2	2.2	4.8	2.9	
24	A H Z	10.49	15.2	0.8				3.2	3.9			
24	A H Z	10.49	15.4	1.2				1.4	1.2			
24	A H Z	10.52	13.4	1.1				1.0	2.2			
24	A H Z	10.52	12.7	0.9				2.6	3.6	5.3	2.9	
24	A H Z	10.52	13.1	1.2				0.9	0.9			
24	A H Z	12.23	18.3	1.1				2.6	1.8	4.4	3.0	
24	A H Z	12.23	18.0	0.8				5.0	5.6			
24	A H Z	12.23	18.5	1.0				6.2	2.2			
24	A H Z	16.07	45.6	1.2				1.3	2.4	4.3	2.8	
24	A H Z	16.07	45.1	0.8				3.8	3.6			
24	A H Z	16.07	45.9	1.1				3.3	2.0			
24	A H Z	17.19	39.3	0.5					24.2			
24	A H Z	17.19	39.7	1.0				1.8	2.9	3.4	3.3	
24	A H Z	17.19	40.1	0.7				2.0	3.4			
24	A H Z	18.17	34.0	1.0					4.1			
24	A H Z	18.17	33.8	1.0				3.6	4.0	5.2	3.1	
24	A H Z	18.17	36.9	0.9				15.0	7.9			
24	A H Z	18.41	02.7	1.2				3.6	10.0			
24	A H Z	18.41	01.9	0.9				12.5	12.2	5.8	3.7	
24	A H Z	18.41	02.7	1.2				14.0				
24	A H Z	20.07	11.1	0.5				2.1	3.6	2.4	2.4	
24	A H Z	20.07	12.0	1.3				0.8	0.6			
24	A H Z	20.07	11.4	0.7				3.6	1.7			
24	A H Z	23.40	48.1	1.4				7.0	3.5	6.0	3.6	
24	A H Z	23.40	46.5	0.9				8.4	10.8			
24	A H Z	23.40	48.0	1.5				2.0	1.6			
25	A H Z	00.06	33.2	1.4				2.6	2.2	4.6	2.9	
25	A H Z	00.06	32.5	0.8				3.1	3.1			
25	A H Z	00.06	33.6	1.5				1.0	0.8			
25	A H Z	00.33	01.3	1.2				5.9	13.7	4.0	3.7	
25	A H Z	00.33	00.5	0.8				8.2	12.1			
25	A H Z	00.33	01.7	1.1				9.0	5.9			
25	A H Z	00.34	28.2	1.4				1.4	4.0	2.1	3.1	
25	A H Z	00.34	27.0	0.7				3.6	4.0			
25	A H Z	00.34	28.4	1.4				0.8	1.0			
25	A H Z	00.36	16.5	1.1				1.2	2.2	5.0	2.6	
25	A H Z	00.36	15.1	0.8				1.2	2.0			
25	A H Z	00.36	17.1	1.2				4.0	2.0			
25	A H Z	00.39	43.8	1.1				6.8	10.6	5.1	3.5	
25	A H Z	00.39	42.7	0.8				6.7	4.6			
25	A H Z	00.39	44.1	1.2				6.2	6.7			
25	A H Z	00.39	50.7	1.1				6.2	15.6	6.1	3.9	
25	A H Z	00.39	49.9	1.0				14.2	11.3			
25	A H Z	00.39	51.3	1.1				8.2	4.0			
25	A H Z	00.42	46.1	1.1				1.8	5.8	3.9	3.0	
25	A H Z	00.42	45.3	0.6				2.8	3.4			
25	A H Z	00.42	46.7	1.1				3.0	2.0			
25	A H Z	02.53	22.6	0.8				1.8	4.6	3.5	2.8	
25	A H Z	02.53	22.4	0.6				4.4	3.9			
25	A H Z	02.53	23.6	1.1				1.3	1.1			
25	A H Z	03.49	28.0	0.7				5.4	7.9	4.4	2.9	
25	A H Z	03.49	28.0	1.0				2.0	3.4			
25	A H Z	03.49	28.5	1.1				3.5	1.8			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Jul. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
26	A H Z	20.36	06.1	0.8				4.5	8.0	4.1	3.0	
26	A H Z	20.36	06.4	1.1				2.0	3.5			
26	A H Z	20.36	05.8	0.6				4.2	2.6			
26	A H Z	22.26	07.0	1.2				3.1	5.7	2.6	2.9	
26	A H Z	22.26	06.5	0.8				4.4	3.6			
26	A H Z	22.26	07.2	1.3				1.3	0.4			
26	A H Z	23.52	14.9	0.8				1.4	2.6	5.6	3.0	
26	A H Z	23.52	14.6	0.5				4.1	4.2			
26	A H Z	23.52	15.6	1.0				2.8	1.3			
27	A H Z	02.32	20.7	0.9				1.3	3.4			
27	A H Z	02.32	21.6	1.2				3.3	9.8	5.5	3.1	
27	A H Z	02.32	20.5	0.5				5.6	6.0			
27	A H Z	02.39	53.2	0.9				4.1	4.2			
27	A H Z	02.39	53.4	1.0				5.4	7.4	5.3	3.2	
27	A H Z	02.39	54.1	1.3				6.0	4.9			
27	A H Z	03.21	47.1	0.5				3.8	5.6	4.0	2.9	
27	A H Z	03.21	29.5	0.8				3.4	3.4			
27	A H Z	03.21	48.8	1.0				3.6	2.3			
27	A H Z	08.24	29.7	0.9				1.2	1.7	6.7	2.9	
27	A H Z	08.24	29.4	0.9				1.8	2.2			
27	A H Z	08.24	30.2	1.3				3.0	4.0			
27	A H Z	10.19	47.5	1.1				9.3	15.4	4.1	3.2	
27	A H Z	10.19	47.0	0.8				1.4	3.1			
27	A H Z	10.19	47.6	1.0				4.6	2.0			
27	A H Z	10.51	57.7	1.4				21.6	36.0	4.1	3.7	
27	A H Z	10.51	56.6	0.8				4.4	7.8			
27	A H Z	10.51	57.6	1.4				14.6	4.0			
27	A H Z	11.51	59.5	1.2				2.5	2.1	3.6	3.0	
27	A H Z	11.51	59.5	1.2				2.4	2.1			
27	A H Z	11.51	59.3	1.2				2.6	5.8			
27	A H Z	16.20	37.5	0.8				5.4	6.2	3.5	2.4	
27	A H Z	16.20	36.9	0.6				0.6	0.4			
27	A H Z	16.20	37.9	1.0				1.6	1.4			
27	A H Z	16.56	20.7	0.8				4.1	3.0	5.0	3.1	
27	A H Z	16.56	20.4	0.7				3.4	3.3			
27	A H Z	16.56	20.6	0.8				2.9	1.4			
27	A H Z	17.59	59.0	1.2				3.1	4.0	4.0	2.0	
27	A H Z	17.59	59.2	1.7				0.3	0.3			
27	A H Z	17.59	58.7	1.2				1.9	0.8			
27	A H Z	18.23	39.8	1.0				18.0	9.8			
27	A H Z	18.23	39.4	1.0				9.8	9.4	3.3	3.8	
27	A H Z	18.23	39.7	0.9				8.8	4.2			
27	A H Z	19.57	53.8	1.4				6.8	3.2	6.8	3.3	
27	A H Z	19.57	52.7	0.9				2.3	3.7			
27	A H Z	19.57	53.8	1.5				2.2	1.7			
27	A H Z	23.05	08.3	0.7				1.5	2.3	4.9	2.6	
27	A H Z	23.05	08.0	0.7				1.0	1.6			
27	A H Z	23.05	08.8	1.1				4.2	2.0			
27	A H Z	23.08	01.0	0.6				11.6	12.6	4.5	3.5	
27	A H Z	23.08	01.0	0.8				10.0	7.1			
27	A H Z	23.08	01.0	0.7				16.4	5.8			
27	A H Z	23.08	15.9	0.8				51.6	30.4	3.9	4.1	
27	A H Z	23.08	15.4	0.7				19.4	14.5			
27	A H Z	23.08	16.4	1.0				25.6				
28	A H Z	00.04	03.0	1.2				9.4	5.6	2.3	2.9	
28	A H Z	00.04	01.8	0.7				2.2	2.9			
28	A H Z	00.04	03.0	1.4				0.8	1.0			
28	A H Z	01.02	32.8	1.2				3.2	3.2	0.9	2.7	
28	A H Z	01.02	34.4	1.1				2.5	2.6			
28	A H Z	01.02	33.6	0.9				11.1	6.0			
28	A H Z	01.06	33.8	0.4				11.8	7.7	5.6	3.6	
28	A H Z											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Jul. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
29	A H Z	11.00	05.7	0.9				1.7	3.8				
	A H Z	11.00	05.2	0.6				1.4	1.4		3.5	2.5	
	A H Z	11.00	06.0	1.1				1.7	1.2				
29	A H Z	12.35	43.5	1.0				1.3	1.9				
	A H Z	12.35	43.2	0.6				2.3	3.2		1.7	2.6	
	A H Z	12.35	43.7	0.9				3.4	1.2				
29	A H Z	13.51	46.7	0.8				3.0	8.3				
	A H Z	13.51	46.5	0.6				3.7	4.6		3.5	3.0	
	A H Z	13.51	47.2	1.0				1.1	0.7				
29	A H Z	13.51	55.7	0.8				2.2	7.0				
	A H Z	13.51	55.3	0.7				2.7	2.2		3.9	2.9	
	A H Z	13.51	56.0	1.0				1.2	0.8				
29	A H Z	13.57	40.8	0.9				3.0	2.4				
	A H Z	13.57	40.8	0.7				4.1	3.4		3.4	2.9	
	A H Z	13.57	41.5	0.9				5.8	4.1				
29	A H Z	14.58	06.3	0.9				2.4	5.4				
	A H Z	14.58	05.9	0.6				2.7	2.4		3.7	2.8	
	A H Z	14.58	06.6	1.0				2.2	2.4				
29	A H Z	16.30	44.0	0.9				2.0	3.4				
	A H Z	16.30	43.0	1.2				2.0	1.3		6.2	2.8	
	A H Z	16.30	44.8	1.1				1.6	0.9				
29	A H Z	16.58	19.7	1.2				3.4	3.1				
	A H Z	16.58	19.4	0.9				4.7	4.5		3.0		
	A H Z	16.58	19.8	0.9				3.2	2.5				
29	A H Z	17.10	08.7	1.3				9.0	5.1				
	A H Z	17.10	08.3	1.0				12.2	8.9		1.6	3.7	
	A H Z	17.10	08.8	1.0				5.3	6.8				
29	A H Z	17.55	38.8	0.6				1.8	2.3				
	A H Z	17.55	38.8	0.7				2.2	3.1		3.2	2.5	
	A H Z	17.55	39.0	0.8				2.6	1.2				
29	A H Z	18.56	55.3	1.0				3.2	2.9				
	A H Z	18.56	55.1	1.1				2.2	2.7		5.8	2.9	
	A H Z	18.56	55.9	1.5				2.3	0.9				
29	A H Z	22.03	55.4	0.7				2.8	3.4				
	A H Z	22.03	55.4	0.8				1.7	2.0		2.5	2.6	
	A H Z	22.03	55.9	1.2				1.4	1.1				
30	A H Z	00.58	36.8	0.9				2.4	4.2				
	A H Z	00.58	36.3	0.4				1.4	1.9		2.9	2.5	
	A H Z	00.58	37.4	1.1				1.5	1.5				
30	A H Z	01.31	12.7	0.8				2.6	2.9				
	A H Z	01.31	13.3	1.4				1.8	2.8		4.4	2.9	
	A H Z	01.31	12.6	0.8				2.7	2.7				
30	A H Z	01.35	37.6	1.3				1.8	2.8				
	A H Z	01.35	38.6	1.2				2.1	2.2		6.9	2.9	
	A H Z	01.35	37.4	1.2				3.9	2.4				
30	A H Z	01.46	09.4	0.9				2.6	3.2				
	A H Z	01.46	09.6	1.2				2.6	2.6		4.7	2.9	
	A H Z	01.46	08.9	0.7				7.4	11.3				
20	A H Z	04.08	58.0	1.1				3.8	2.4				
	A H Z	04.08	57.7	0.8				4.9	3.1		4.7	3.0	
	A H Z	04.08	58.6	1.1				3.0	1.1				
30	A H Z	06.32	41.5	0.8				2.3	4.5				
	A H Z	06.32	42.1	1.1				1.4	1.7		3.9	2.8	
	A H Z	06.32	41.0	0.6				10.7	2.5				
20	A H Z	07.08	12.6	1.1				2.3	3.6				
	A H Z	07.08	12.3	1.0				2.7	4.1		5.9	3.1	
	A H Z	07.08	12.6	1.1					6.2				
30	A H Z	08.08	02.2	1.0				24.2	14.4				
	A H Z	08.08	01.7	1.0				17.1	18.2		6.0	4.1	
	A H Z	08.08	02.2	1.1				73.7	21.7				
30	A H Z	08.34	42.2	0.8				3.4	5.2				
	A H Z	08.34	42.7	1.3				1.4	1.8		5.5	2.9	
	A H Z	08.34	41.0	1.0				9.6	5.0				
20	A H Z	08.51	40.0	1.0				0.9	2.5				
	A H Z	08.51	39.7	0.9				3.2	5.5		5.4	3.0	
	A H Z	08.51	39.4	1.0				2.1	1.4				
30	A H Z	08.52	45.0	0.7				2.1	5.6				
	A H Z	08.52	44.9	0.6				5.2	5.7		2.7	2.9	
	A H Z	08.52	44.4	0.9				0.9	1.4				
30	A H Z	09.18	11.4	0.9				4.3	10.9				
	A H Z	09.18	12.2	1.3				7.1	5.8		5.2	3.6	
	A H Z	09.18	11.1	0.8				34.0	5.3				
30	A H Z	09.20	25.5	0.8				2.8	6.4				
	A H Z	09.20	26.3	1.3				2.2	2.6		4.5	3.1	
	A H Z	09.20	25.0	0.7				12.6	9.6				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Jul. 1966 - Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
31	A H Z	12.46	20.5	0.4				8.0	5.6				
	A H Z	12.46	21.6	1.2				0.4	0.4		2.1	2.3	
	A H Z	12.46	21.1	0.7				2.4	2.5				
31	A H Z	15.16	57.9	1.0				1.2	1.4				
	A H Z	15.16	58.1	0.9				2.2	2.0		4.8	2.5	
	A H Z	15.16	58.1	0.9				13.7	3.3				
31	A H Z	16.53	54.1	0.9				1.1	1.2				
	A H Z	16.53	54.0	0.8				1.6	1.4		4.1	2.3	
	A H Z	16.53	54.4	0.9				4.5	2.6				
31	A H Z	18.57	06.4	0.3				2.9	3.5				
	A H Z	18.57	07.3	1.0				0.2	0.2		2.0	1.7	
	A H Z	18.57	07.1	0.7				2.4	0.9				
31	A H Z	19.45	12.0	1.0				1.9	4.5				
	A H Z	19.45	12.0	0.7				1.6	2.7		4.8	2.8	
	A H Z	19.45		1.2				1.8	1.4				
1966 August													
01	A H Z	00.26	50.2	1.0				4.4	10.2				
	A H Z	00.26	50.1	0.7				1.4	2.0		4.7	3.0	
	A H Z	00.26		1.2				3.0	2.5				
01	A H Z	00.36	55.7	1.0				3.2	6.4				
	A H Z	00.36	55.8	0.6				0.8	1.0		3.4	2.6	
	A H Z	00.36		1.0				2.7	1.4				
01	A H Z	01.48	12.3	1.1				1.2	2.1				
	A H Z	01.48	12.6	1.0				4.2	2.6		4.1	2.9	
	A H Z	01.48	12.9	0.8				5.2	3.6				
01	A H Z	04.58	22.8	0.8				19.8	10.2				
	A H Z	04.58	22.8	1.0				7.0	7.6		4.8	3.6	
	A H Z	04.58	23.7	0.8				2.5	1.6				
01	A H Z	05.32	05.8	1.1				3.1	3.0				
	A H Z	05.32	05.2	0.9				4.4	5.7		5.8	3.1	
	A H Z	05.32	06.2	1.2				4.0	2.3				
01	A H Z	06.41	32.2	0.9				13.2	5.5				
	A H Z	06.41	31.9	0.9				7.4	9.6		4.2	3.6	
	A H Z	06.41	32.3	0.8				23.2	5.6				
01	A H Z	06.56	30.1	0.8				2.5	4.2				
	A H Z	06.56	29.9	0.7				9.4	10.0		4.1	3.1	
	A H Z	06.56	30.8	1.1				4.3	3.0				
01	A H Z	07.57	10.9	1.1				8.7	6.6				
	A H Z	07.57	10.2	0.9				12.1	18.2		6.0	3.7	
	A H Z	07.57	11.1	1.3				12.0	6.0				
01	A H Z	08.36	56.7	0.9				7.7	4.3				
	A H Z	08.36	56.1	0.5				3.6	6.0		1.8	3.1	
	A H Z	08.36	56.9	0.9				3.0	4.6				
01	A H Z	09.44	00.1	0.8				7.3	5.2				
	A H Z	09.44	00.2	0.5				3.6	4.0		2.3	2.8	
	A H Z	09.44	00.4	0.9				1.6	1.0				
01	A H Z	09.44	34.5	1.0				61.6	26.8				
	A H Z	09.44	34.1	0.6				31.2	26.4		1.7	4.3	
	A H Z	09.44	34.8	0.9				8.1	4.7				
01	A H Z	09.44	44.9	0.4				10.8	7.0				
	A H Z	09.44	43.8	0.7				7.4	7.8		0.9	3.1	
	A H Z	09.44	44.4	0.5				1.8	1.0				
01	A H Z	10.01	30.4	0.8				4.0	5.1				
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Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
02	A	02.13	03.4	0.4				13.6	8.5			
	H	02.13	04.0	0.8				0.4	0.9	2.5	2.6	
	Z	02.13	04.1	0.8				1.6	1.5			
	A	03.10	01.8	0.9				2.6	4.1	5.1	2.8	
	H	03.10	01.8	1.1				1.2	2.0			
	Z	03.10	02.5	1.4				2.0	0.9			
	A	06.55	12.8	0.5				5.0	1.4	3.3	2.5	
	H	06.55		1.2				0.8	0.6			
	Z	06.55	13.4	1.0				2.0	1.0			
	A	08.50	47.1	0.7				8.0	4.3	2.5	3.1	
	H	08.50	46.9	0.6				5.5	6.6			
	Z	08.50	47.1	0.8				10.0	8.0			
	A	11.16	13.7	1.0				10.4	8.4	5.8	3.6	
	H	11.16	13.4	1.0				9.2	8.3			
	Z	11.16	13.9	1.1				7.7	6.0			
	A	11.18	13.4	0.9				6.4	4.3	3.6	2.9	
	H	11.18	13.1	0.6				3.7	3.8			
	Z	11.18	13.9	1.0				2.7	1.6			
	A	13.26	51.1	0.5				1.6	2.6	1.9		
	H	13.26	51.7	0.8				0.4	0.3			
	Z	13.26	52.0	0.2				1.6	1.3			
	A	13.55	50.1	0.7				6.0	8.8	3.8	3.2	
	H	13.55	49.9	0.8				4.9	6.7			
	Z	13.55		0.9				11.0	5.0			
	A	16.17	05.8	0.8				2.6	7.6	2.2	2.8	
	H	16.17	05.4	0.5				3.4	2.8			
	Z	16.17	06.2	0.9				2.4	0.9			
	A	19.18	49.0	1.3				6.8	7.0	7.5	3.5	
	H	19.18	48.7	1.2				6.3	4.8			
	Z	19.18	49.3	1.2				5.4	2.4			
	A	19.47	31.1	0.6				7.8	5.8	3.3	3.2	
	H	19.47	31.7	1.1				4.0	4.8			
	Z	19.47	31.1	0.6				19.8	9.3			
	A	19.47	41.2	0.7				4.2	3.8	3.8	2.8	
	H	19.47	41.7	1.0				2.3	2.4			
	Z	19.47	41.0	0.7				12.1	5.7			
	A	21.41	06.8	1.4				4.4	4.9	4.3	3.4	
	H	21.41	06.2	1.0				3.1	6.4			
	Z	21.41	07.1	1.1				2.0	3.1			
	A	22.28	57.8	0.9				4.8	7.3	4.3	3.2	
	H	22.28	57.2	0.7				4.7	6.3			
	Z	22.28	58.3	1.2				3.0	1.2			
	A	23.08	23.1	0.7				5.1	2.2	3.6	2.9	
	H	23.08	23.2	0.8				2.6	4.4			
	Z	23.08	23.6	0.8				4.6	1.9			
	A	23.17	10.0	1.3				15.6	9.8	6.3	3.8	
	H	23.17	09.5	0.9				7.0	9.6			
	Z	23.17	10.5	1.5				8.8	7.3			
	A	01.29	33.5	1.4				19.2	10.3	6.2	4.0	
	H	01.29		1.3				7.0	8.0			
	Z	01.29	33.3	1.1				22.4	14.0			
	A	01.44	26.2	1.3				1.7	1.9	5.8	2.8	
	H	01.44	26.8	1.1				1.6	2.0			
	Z	01.44	26.2	1.1				5.2	9.8			
	A	02.23	09.1	0.5				4.7	7.3	2.8	2.8	
	H	02.23	09.7	0.9				2.7	3.1			
	Z	02.23	09.7	0.7				13.1	6.0			
	A	03.47		0.6				14.9	7.7	3.4	3.3	
	H	03.47	07.0	1.0				4.6	4.1			
	Z	03.47	07.0	0.6				7.0	10.1			
	A	04.14		0.7					11.9	3.5	2.7	
	H	04.14	47.7	0.7				1.0	1.1			
	Z	04.14	46.7	1.0				4.6				
	A	04.14		0.4					7.3	2.5	2.4	
	H	04.14	58.9	1.1				0.7	0.5			
	Z	04.14	58.6	0.7				1.7				
	A	04.15	01.8	0.5					3.4	2.0		
	H	04.15	02.6	0.7				1.4	1.6			
	Z	04.15	02.7	0.7				4.5				
	A	04.20	51.5	0.4				21.6	14.0	2.7	2.8	
	H	04.20	52.3	0.8				0.9	0.9			
	Z	04.20	52.4	0.8				1.6				
	A	04.37	58.5	0.6					4.0	1.7	2.3	
	H	04.37	59.9	0.8				0.9	0.6			
	Z	04.37	59.5	0.5				1.4				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
04	A	05.24	44.3	0.8				1.5	3.0	2.1	2.3	
	H	05.24	44.0	0.5				1.3	1.3			
	Z	05.24		0.9				0.8	0.5			
	A	05.57	56.6	0.8				2.0	3.6	3.5	2.6	
	H	05.57	56.6	0.7				1.6	2.7			
	Z	05.57		0.9				0.7	0.6			
	A	06.49	59.3	0.5				3.4	4.0	3.2	2.2	
	H	06.49	59.9	1.0				0.6	0.5			
	Z	06.50	00.1	0.7				2.1	1.5			
	A	07.26	22.1	0.8				1.8	3.0	2.7	2.4	
	H	07.26	22.1	0.6				1.2	1.4			
	Z	07.26		0.8				1.2	0.5			
	A	08.48	44.2	0.9				3.4	2.5	2.7	2.9	
	H	08.48	44.1	0.6				8.6	7.6			
	Z	08.48		0.9				7.0	3.7			
	A	08.50	08.9	0.9				1.0	3.0	5.4	2.4	
	H	08.50	08.7	0.9				0.8	0.7			
	Z	08.50		1.1				1.1	0.3			
	A	08.57	31.0	0.7				9.5	6.0	2.7	3.1	
	H	08.57	30.7	0.5				6.6	7.3			
	Z	08.57		1.0				1.7	0.9			
	A	09.21		0.6				6.5	3.6	3.1	2.8	
	H	09.21	25.7	0.8				1.6	2.8			
	Z	09.21	25.3	0.7				3.0	5.0			
	A	09.34	01.3	0.8				12.4	8.4	4.0	3.5	
	H	09.34	01.0	0.7				15.0	13.7			
	Z	09.34		1.0				3.9	2.3			
	A	10.18	48.6	0.5				8.8	4.5	1.9	2.8	
	H	10.18	49.7	1.3				1.0	0.8			
	Z	10.18	49.5	0.9				1.7	1.4			
	A	11.33	52.6	1.0				3.4	4.8	5.4	3.5	
	H	11.33	52.6	0.9				16.9	15.6			
	Z	11.33		1.1				15.2	6.0			
	A	11.37	36.9	1.1				3.0	3.0	4.8	3.1	
	H	11.37	36.5	0.9				7.6	5.4			
	Z	11.37		1.0				10.2	5.6			
	A	11.59	48.7	0.8				4.8	3.8	4.1	2.9	
	H	11.59	49.6	1.2				1.6	2.2			
	Z	11.59	49.1	0.6					5.0			
	A	12.23	43.0	0.9				1.4	2.7	5.3	3.1	
	H	12.23	42.9	0.9				5.0	7.5			
	Z	12.23	43.5	1.0					2.0			
	A	15.34	52.4	1.0				1.1	5.9	4.4	2.8	
	H	15.34	52.3	0.7				1.4	2.2			
	Z	15.34		1.2					1.6			
	A	21.33	48.8	1.2				48.4	35.4	5.3	4.4	
	H	21.33	48.2	0.8				32.9	20.0			
	Z	21.33		1.3					15.2			
	A	21.36	44.4	1.0				15.7	7.0	5.7	3.8	
	H	21.36	44.0	1.0				11.9	10.8			
	Z	21.36		1.0				12.4	5.8			
	A	21.54	27.0	1.1				2.2	1.8	4.0	2.8	
	H	21.54	26.7	0.8				3.6	3.1			
	Z	21.54		1.0				2.0	1.4			
	A	23.06	20.2	1.0				1.8	1.1	5.3	2.6	
	H	23.06	19.6	0.8				2.4	2.4			
	Z	23.06	20.5	1.2				2.6	1.0			
	A	01.39	21.6	1.0				1.6	2.3	3.2	2.4	
	H	01.39	22.0	1.4				0.3	0.4			
	Z	01.39	21.3	0.9				7.0	7.0			
	A	02.17	08.6	1.3				7.7	5.0	6.1	3.7	
	H	02.17	07.8	1.0				9.0	12.4			
	Z	02.17	08.8	1.3				6.0	3.6			
	A	04.09	57.0	0.8				0.8	1.3	1.6	2.3	
	H	04.09	57.4	1.6				0.6	0.5			
	Z	04.09	56.6	0.6				5.0	3.8			
	A	04.13	50.5	0.6				1.2	2.6	2.7	2.4	
	H	04.13	50.4	0.6				2.1	2.7			
	Z	04.13		0.8				1.4	1.0			
	A	04.43	32.1	0.7				1.6	2.8	2.8	2.6	
	H	04.43	31.8	0.6				2.6	3.5			

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
06	A H Z	11.07	19.5	1.2				1.1	3.8		6.0	2.8	
	A H Z	11.07	19.5	1.0				1.4	1.6				
	A H Z	11.07	19.5	1.2				1.6	0.9				
06	A H Z	13.24	57.9	0.9				2.8	2.9		5.9	2.8	
	A H Z	13.24	58.9	1.3				1.7	1.6				
	A H Z	13.24		0.9				4.3	4.9				
06	A H Z	14.32	07.5	0.9				2.1	4.0		1.9	2.9	
	A H Z	14.32	07.4	0.5				6.0	6.7				
	A H Z	14.32		0.9				1.5	1.4				
06	A H Z	17.29		0.5				1.6	4.4		3.1	2.5	
	A H Z	17.29		0.9				0.4	1.4				
	A H Z	17.29		0.7				2.8	3.0				
06	A H Z	18.44	42.3	1.0				3.2	1.6				
	A H Z	18.44	42.3	0.7				7.6	12.4		4.1	3.2	
	A H Z	18.44		1.0				3.8	2.4				
06	A H Z	19.10	42.2	1.3				4.1	2.7				
	A H Z	19.10	41.4	0.8				14.8	9.4		5.1	3.4	
	A H Z	19.10	43.1	1.6				1.2	1.1				
06	A H Z	19.40	13.7	0.8				1.4	2.6				
	A H Z	19.40	13.5	0.7				6.8	7.0		3.9	2.9	
	A H Z	19.40		1.0				3.0	1.1				
06	A H Z	20.16	38.5	1.3				2.3	3.6				
	A H Z	20.16	38.3	1.0				15.0	10.4		6.3	3.5	
	A H Z	20.16	39.1	1.3				4.6	2.2				
06	A H Z	20.38	51.3	1.0				1.6	1.5				
	A H Z	20.38	51.4	0.9				3.6	3.4		5.1	2.7	
	A H Z	20.38	51.5	1.0				6.4	5.7				
06	A H Z	21.24	22.1	1.2				2.3	2.1				
	A H Z	21.24	22.3	1.0				7.3	5.4		5.1	3.1	
	A H Z	21.24	22.6	1.0				7.1	6.6				
06	A H Z	22.31	06.1	0.7				2.1	2.7				
	A H Z	22.31	06.4	0.8				3.1	4.6		3.6	2.7	
	A H Z	22.31	06.9	0.8				2.1	1.0				
07	A H Z	00.45	15.4	0.3				14.8	20.0		2.1	2.8	
	A H Z	00.45	16.3	0.9				1.7	1.6				
	A H Z	00.45		0.7				1.8	1.6				
07	A H Z	00.53	33.7	0.9				2.1	5.8				
	A H Z	00.53	33.7	0.7				2.4	4.4		4.6	3.1	
	A H Z	00.53		1.2				2.3	1.0				
07	A H Z	01.12	10.7	1.0				7.3	3.2				
	A H Z	01.12	10.8	0.6				8.0	6.1		1.8	3.3	
	A H Z	01.12		0.9				4.4	4.4				
07	A H Z	03.12	49.2	0.4				7.8	3.0				
	A H Z	03.12	50.2	0.9				1.2	1.4		2.8	2.6	
	A H Z	03.12	50.1	0.8				2.2	2.4				
07	A H Z	03.44	55.7	1.1				2.5	2.4				
	A H Z	03.44	55.5	0.9				3.9	3.1		5.8	2.9	
	A H Z	03.44		1.2				2.6	2.0				
07	A H Z	04.03	13.8	0.9				5.3	5.0				
	A H Z	04.03	14.0	0.6				3.3	4.7		2.5	2.9	
	A H Z	04.03	14.5	0.9				7.4	5.4				
07	A H Z	04.58	18.1	1.0				5.0	8.0				
	A H Z	04.58	18.1	0.7				4.4	3.0		3.9	3.1	
	A H Z	04.58		1.1				3.2	1.7				
07	A H Z	05.53	37.4	1.4				1.5	2.8				
	A H Z	05.53	38.6	1.8				0.8	0.8		8.1	2.8	
	A H Z	05.53	37.8	1.2				3.2	4.6				
07	A H Z	07.25	49.3	0.4				8.8	6.8				
	A H Z	07.25	49.8	1.2				1.6	2.2		1.6	2.9	
	A H Z	07.25		0.8				2.7	3.0				
07	A H Z	11.09	45.0	0.8				7.3	7.2				
	A H Z	11.09	45.3	0.6				9.0	7.4		3.3	3.2	
	A H Z	11.09		1.0				3.1	1.4				
07	A H Z	11.25	27.7	1.6				1.0	1.3				
	A H Z	11.25	28.9	2.0				1.0	0.5		8.0	2.8	
	A H Z	11.25		1.3				1.4	3.4				
07	A H Z	14.53	06.0	0.8				8.3	14.2				
	A H Z	14.53	06.3	0.6				4.1	3.7		3.4	3.1	
	A H Z	14.53	06.7	1.1				4.0	1.3				
07	A H Z	16.02	03.2	1.0				2.0	1.8				
	A H Z	16.02	03.5	0.9				2.9	4.0		5.3	2.8	
	A H Z	16.02	03.7	1.0				5.8	4.3				
07	A H Z	17.11	25.4	1.1				3.9	8.0				
	A H Z	17.11	25.9	1.1				10.6	11.2		6.3	3.6	
	A H Z	17.11		1.1				8.6	12.6				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
08	A H Z	09.39	29.8	0.8				11.5	7.6		4.2	3.5	
	A H Z	09.39	29.1	0.7				6.2	10.6				
	A H Z	09.39	30.2	1.0				4.1	5.0				
08	A H Z	09.40	22.3	0.9				6.3	7.6				
	A H Z	09.40	21.8	0.5				6.9	6.7		3.1	3.1	
	A H Z	09.40	22.6	1.0				5.8	3.0				
08	A H Z	09.42	44.3	0.9				4.6	7.0				
	A H Z	09.42	43.7	0.5				1.9	2.7		3.0	2.8	
	A H Z	09.42	44.3	1.1				4.2	1.8				
08	A H Z	09.44	26.6	0.9				9.6	9.6				
	A H Z	09.44	26.1	0.5				3.2	3.4		2.8	3.0	
	A H Z	09.44	27.0	1.0				2.7	1.4				
08	A H Z	09.56	51.3	0.8				4.9	3.8				
	A H Z	09.56	51.1	0.5				5.8	4.3		3.1	2.9	
	A H Z	09.56	51.7	1.0				3.2	2.0				
08	A H Z	10.04	54.8	0.9				20.2	12.0				
	A H Z	10.04	54.3	0.6				22.0	10.5		3.0	3.8	
	A H Z	10.04	55.2	0.9				3.2	3.6				
08	A H Z	10.32	34.1	0.6				2.0	3.7				
	A H Z	10.32	34.5	0.7				0.6	0.4		2.9	2.1	
	A H Z	10.32	34.8	1.0				0.4	0.4				
08	A H Z	10.33	08.9	0.8				5.5	12.1				
	A H Z	10.33	08.5	0.7				3.8	7.6		4.2	3.4	
	A H Z	10.33	09.5	1.2				4.5	2.2				
08	A H Z	11.16	52.9	0.9				1.6	1.3				
	A H Z	11.16	52.4	0.7				4.2	2.5		3.9	2.6	
	A H Z	11.16	53.2	0.9				2.1	2.2				
08	A H Z	11.40	09.9	0.5				3.0	4.2				
	A H Z	11.40	10.3	0.7				0.7	0.5		2.5	2.1	
	A H Z	11.40	10.7	0.8				1.2	1.2				
08	A H Z	11.41	42.4	0.8				1.8	1.2				
	A H Z	11.41	41.7	0.5				4.0	3.9		3.1	2.5	
	A H Z	11.41	42.8	1.0				0.4	0.6				
08	A H Z	11.52	24.5	0.9				1.4	3.2				
	A H Z	11.52	23.6	0.6				1.3	2.6		3.8	2.6	
	A H Z	11.52		1.2				0.6	0.4				
08	A H Z	12.03	43.9	0.8				2.2	1.0				
	A H Z	12.03	43.3	0.5				5.0	4.6		3.1	2.6	
	A H Z	12.03	44.2	1.0				0.8	0.9				
08	A H Z	12.26	24.2	0.7				1.8	1.9				
	A H Z	12.26	23.7	0.5				3.6	3.6		2.3	2.4	
	A H Z	12.26	24.5	0.9				0.4	0.2				
08	A H Z	12.50	42.3	0.8				8.9	7.2				
	A H Z	12.50	41.9	0.7				6.8	6.0		3.2	2.9	
	A H Z	12.50	42.3					2.7	2.6				
08	A H Z	12.51	13.0	0.7				5.6	3.8				
	A H Z	12.51	12.9	0.7				3.1	3.9		3.1	2.8	
	A H Z	12.51	13.1	0.8				3.2	3.7				
08	A H Z	14.03	27.4	0.9				2.1	3.7				
	A H Z	14.03	26.9	0.8				3.0	3.1		4.0	2.8	
	A H Z	14.03	28.1	1.4				2.2	2.0				
08	A H Z	18.30	27.1	0.8				2.7	1.6				
	A H Z	18.30	26.4	0.7				7.2	6.2		3.6	2.9	
	A H Z	18.30	27.6	0.9				0.9	1.5				
08	A H Z	21.21	01.5	0.8				3.7	4.9				
	A H Z	21.21	01.1	0.6				8.7	5.3		3.3	3.0	
	A H Z	21.21	01.6	0.9				8.5	5.4				
08	A H Z	22.16	47.2	1.2				0.6	2.0				
	A H Z	22.16	46.6										

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
10	A	03.12	06.8	0.6				1.9	1.9				
	H	03.12	07.1	0.9				2.0	2.9	2.9	2.5		
	Z	03.12	07.2	0.6					1.8				
10	A	03.54	30.6	0.9				23.5	60.6				
	H	03.54	30.6	1.2				9.3	12.0	5.9	4.2		
	Z	03.54	31.1	1.0					9.8				
10	A	04.41	42.9	1.5				3.7	1.8				
	H	04.41	41.5	1.1				2.1	3.4	4.9	3.2		
	Z	04.41	42.6	1.3					0.7				
10	A	05.54	28.1	1.2				4.6	7.9				
	H	05.54	27.1	0.6				7.2	8.0	2.8	3.3		
	Z	05.54	28.4	1.2					2.4				
10	A	08.26	26.8	0.8				3.6	3.0				
	H	08.26	26.4	0.8				3.8	3.0	3.9	2.8		
	Z	08.26	26.5	0.8					2.2				
10	A	12.09	05.7	1.3				6.4	4.5				
	H	12.09	05.1	1.0				5.6	7.2	6.0	3.5		
	Z	12.09	05.5	1.2					3.8				
10	A	12.42	26.3	0.9				4.2	3.7				
	H	12.42	25.5	0.6				2.9	2.7	3.1	2.7		
	Z	12.42	26.5	1.0					1.6				
10	A	14.23	24.9	0.7				3.3	4.1				
	H	14.23	25.3	1.0				3.0	2.4	2.9	2.9		
	Z	14.23	24.5	0.5					6.3				
10	A	14.39	23.9	1.6				2.0	2.1				
	H	14.39	24.5	1.9				0.9	1.0	7.0	2.9		
	Z	14.39	23.6	1.4					2.4				
10	A	15.45	57.0	1.1				16.1	12.9				
	H	15.45	56.0	0.9				18.4	28.9	6.0	4.1		
	Z	15.45	57.4	1.3					4.6				
10	A	17.48	43.8	1.0				27.4	18.3				
	H	17.48	43.0	0.7				18.8	15.6	3.9	4.0		
	Z	17.48	44.0	1.0					7.7				
10	A	17.48	54.0	1.0				2.4	2.0				
	H	17.48	54.0	0.6				2.2	1.5	1.6	2.5		
	Z	17.48	54.1	0.9					1.4				
10	A	19.00	42.4	1.4				9.4	3.2				
	H	19.00	43.2	1.9				8.3	8.8	7.3	3.9		
	Z	19.00	42.2	1.2					14.5				
10	A	19.08	19.9	0.5				12.4	8.2				
	H	19.08	20.9	1.2				0.9	0.8	2.9	2.8		
	Z	19.08	20.4	0.9					2.0				
11	A	00.08	09.3	1.0				7.3	5.4				
	H	00.08	09.0	0.8				3.8	6.4	4.2	3.3		
	Z	00.08	09.3	1.0					4.6				
11	A	00.23	21.0	1.0				2.1	1.8				
	H	00.23	20.6	1.0				4.6	3.8		3.0		
	Z	00.23	21.0	1.0					6.8				
11	A	01.19	55.0	0.8				1.3	1.8				
	H	01.19	55.6	1.1				1.5	2.4	3.6	2.6		
	Z	01.19	55.0	0.6					15.0				
11	A	01.20	07.3	0.8				12.5	12.5				
	H	01.20	07.8	1.2				4.7	8.6	4.7	3.6		
	Z	01.20	07.1	0.8					10.5				
11	A	01.21	36.7	0.6				2.6	2.0				
	H	01.21	37.2	1.0				1.4	3.4	3.0	2.7		
	Z	01.21	36.7	0.5					4.1				
11	A	03.51	16.1	1.1				2.1	3.7				
	H	03.51	15.5	0.7				2.4	1.6	3.7	2.7		
	Z	03.51	16.5	1.0					1.0				
11	A	07.20	22.8	1.0				3.5	2.4				
	H	07.20	22.2	1.0				2.7	5.4	5.7	3.1		
	Z	07.20	22.6	1.4					1.5				
11	A	10.00	26.4	0.4				3.1	3.8				
	H	10.00	27.1	0.8				0.5	0.6	2.1	2.0		
	Z	10.00	27.0	0.6					0.8				
11	A	10.02	19.0	0.8				2.3	1.4				
	H	10.02	18.8	0.8				2.6	3.7	4.2	2.7		
	Z	10.02	19.6	0.9					1.1				
11	A	10.33	33.1	0.7				2.4	4.0				
	H	10.33	33.2	0.9				0.8	1.5	4.4	2.6		
	Z	10.33	33.4	0.9					1.4				
11	A	13.06	42.3	1.0				3.4	4.2				
	H	13.06	42.3	1.1				3.8	3.1	6.0	3.1		
	Z	13.06	43.1	1.4					1.0				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
12	A	09.33	39.3	0.7				2.8	1.8				
	H	09.33	39.5	0.7				1.5	2.0	2.8	2.5		
	Z	09.33	39.5	0.7					3.3	4.4			
12	A	09.39	57.5	0.9				17.5	9.4				
	H	09.39	57.3	0.6				9.7	7.2	2.0	3.5		
	Z	09.39	57.3	0.9					8.5	4.2			
12	A	09.41	57.5	0.7				4.0	4.4				
	H	09.41	57.3	0.9				1.0	2.1	3.9	2.7		
	Z	09.41	57.3	0.8					2.5	1.0			
12	A	09.47	48.4	0.9				5.1	3.2				
	H	09.47	48.4	0.8				4.0	5.4	3.0	3.1		
	Z	09.47	48.9	0.7					2.2	3.3			
12	A	09.50	43.9	0.9				6.9	4.7				
	H	09.50	43.6	0.7				4.9	5.4	2.9	3.1		
	Z	09.50	44.1	0.9					5.4	10.4			
12	A	11.12	34.2	1.0				15.7	11.9				
	H	11.12	34.0	0.6				7.2	6.3	3.7	3.4		
	Z	11.12	34.9	1.1					7.9	5.9			
12	A	11.15	09.4	1.1				5.7	3.7				
	H	11.15	09.0	0.6				9.0	5.9	3.2	3.1		
	Z	11.15	09.9	0.6					4.8	2.8			
12	A	12.58	42.1	0.8				6.8	3.0				
	H	12.58	42.2	0.6				2.4	2.6	2.6	2.8		
	Z	12.58	42.5	0.8					2.8	1.7			
12	A	12.58	53.6	1.1				5.0	5.7				
	H	12.58	53.2	0.5				3.8	4.3	3.2	3.0		
	Z	12.58	53.2	1.2					1.6	0.7			
12	A	13.06	41.8	0.7				12.6	6.0				
	H	13.06	41.9	0.7				5.7	7.1	2.8	3.3		
	Z	13.06	41.9	0.7					1.5	2.7			
12	A	14.37	10.2	0.7				6.8	3.4				
	H	14.37	10.7	0.8				3.8	5.0	3.4	3.0		
	Z	14.37	10.7	0.8					3.2	2.0			
12	A	15.11	57.9	1.0				25.4	20.1				
	H	15.11	57.3	0.6				14.4	10.3	3.4	3.8		
	Z	15.11	58.4	1.0					9.5	8.4			
12	A	15.20	47.6	0.9				11.0	9.6				
	H	15.20	47.3	0.6									

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
13	A	23.30	07.2	1.1	-	0.9	1.1	5.8	2.4			
	H	23.30	06.8	0.8		1.4	1.1					
	Z	23.30	07.8	1.3		0.9	0.6					
14	A	00.28	51.1	1.3	+	2.0	1.6	1.8	2.8			
	H	00.28	50.8	0.7		3.4	4.1					
	Z	00.28	51.4	1.2		3.0	1.3					
14	A	01.01	24.6	1.0	-	1.8	3.2	4.2	2.9			
	H	01.01	24.1	0.7	+	5.3	5.2					
	Z	01.01	24.8	1.1		2.0	1.3					
14	A	01.34	37.6	0.5	+	8.3	11.3	2.7	3.3			
	H	01.34	37.1	0.7	-	12.1	13.0					
	Z	01.34	37.9	0.8		9.5	5.4					
14	A	01.41	42.4	0.8	-	33.6	62.0	5.2	4.7			
	H	01.41	43.1	1.4	+	29.6	46.0					
	Z	01.41	42.8	1.1		30.0	18.5					
14	A	01.42	16.1	0.9	-	2.0	3.1	6.1	2.7			
	H	01.42	16.9	1.1	+	0.8	1.2					
	Z	01.42		1.2		7.4						
14	A	01.48		0.8	-	8.8	7.7	4.1	3.3			
	H	01.48	55.3	1.3	+	3.8	4.4					
	Z	01.48	54.4	0.6		10.3						
14	A	02.10	12.3	0.8	+	1.4	2.3	4.4	2.5			
	H	02.10	13.1	1.3	-	0.9	1.1					
	Z	02.10	12.4	0.7		6.7	8.8					
14	A	02.16	37.1	0.5	+	13.5	11.0	2.3	3.1			
	H	02.16	37.7	0.8	-	4.8	4.9					
	Z	02.16	37.8	0.6		5.9	10.0					
14	A	02.50	27.1	0.6	+	10.6	4.8	2.8	3.2			
	H	02.50	27.9	1.3	-	3.6	5.2					
	Z	02.50	27.0	0.6		14.0	11.9					
14	A	03.42		0.9	-	1.7	3.4	2.3	2.5			
	H	03.42	55.5	0.5	+	2.2	1.8					
	Z	03.42	56.6	1.0		0.6						
14	A	03.56	00.0	0.9	-	2.9	3.0	3.4	3.0			
	H	03.56	01.3	1.6	+	3.6	3.4					
	Z	03.56	00.1	0.7		10.0	9.6					
14	A	04.05	03.0	0.8	-	32.0	27.0	3.2	4.1			
	H	04.05	03.6	1.4	+	10.0	12.0					
	Z	04.05	02.7	0.5								
14	A	04.05	43.4	0.5	-	7.5	10.0	2.5	3.2			
	H	04.05		1.1	+	4.0	5.6					
	Z	04.05	43.1	0.6		13.6						
14	A	04.05	44.7	0.6	-	7.4	10.6	3.7	3.3			
	H	04.05		0.8	+	9.2	8.8					
	Z	04.05	44.6	0.9		21.1						
14	A	05.18	36.8	0.4	+	3.4	4.0	2.0	2.5			
	H	05.18	36.9	0.9	-	1.7	2.1					
	Z	05.18		0.5		21.4						
14	A	07.49		0.8	+	5.3	3.7	4.3	2.7			
	H	07.49	14.0	0.9	-	1.6	1.4					
	Z	07.49	14.3	0.8		2.0						
14	A	13.33	57.6	0.4	-	5.2	3.3	2.2	2.6			
	H	13.33	58.3	0.9	+	2.4	2.7					
	Z	13.33	57.9	0.6		4.2	5.2					
14	A	13.40	52.6	0.8	-		2.8	3.4	2.7			
	H	13.40		0.7	+	1.9	4.6					
	Z	13.40	53.2	1.2		2.2	1.0					
14	A	13.59	22.3	1.2	-	1.0	1.4	1.7	2.6			
	H	13.59	21.7	0.8	+	2.2	1.9					
	Z	13.59	22.3	0.9		1.6	1.5					
14	A	14.48	59.0	0.8	-	25.1	12.1	2.4	3.6			
	H	14.48	58.8	0.7	+	9.0	9.6					
	Z	14.48	58.9	0.7		13.8						
14	A	14.57	21.3	0.8	-	7.5	4.9	0.8	2.9			
	H	14.57	21.2	0.6	+	1.9	2.8					
	Z	14.57	21.7	0.6		3.8	2.1					
14	A	15.26	47.9	0.6	-	1.5	2.1	3.5	2.6			
	H	15.26	48.2	0.9	+	2.2	3.1					
	Z	15.26	48.2	0.7		5.9	3.8					
14	A	16.00	08.7	0.4	-	6.0	7.0	2.1	2.6			
	H	16.00	09.4	0.8	+	1.9	1.6					
	Z	16.00	09.2	0.7		1.4	1.0					
14	A	16.47	55.0	0.7	-	1.8	1.8	2.4	2.5			
	H	16.47	55.1	0.7	+	1.4	1.9					
	Z	16.47	55.4	0.7		2.5	1.3					

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
15	A	20.54	26.5	1.0				6.0	3.4	2.3	3.1	
	H	20.54	26.7	0.5				4.9	7.2			
	Z	20.54	26.2	1.0				13.0				
15	A	22.09	44.0	0.7				1.6	1.8	3.5	2.3	
	H	22.09	44.2	0.9				1.0	1.6			
	Z	22.09	44.1	0.7				2.4	1.3			
15	A	22.14	47.7	0.6				2.8	2.2	5.7	2.8	
	H	22.14	48.0	0.9				4.4	4.9			
	Z	22.14	48.0	0.7				6.0	2.0			
15	A	22.46	05.8	0.9				2.4	2.3	3.7	2.7	
	H	22.46	04.6	0.6				2.8	3.1			
	Z	22.46	05.9	1.2				0.8	0.8			
15	A	22.57	30.8	0.8				5.7	2.9	2.4	3.0	
	H	22.57	30.9	0.9				1.3	1.6			
	Z	22.57	30.3	0.5				5.8	5.5			
15	A	23.22	22.6	1.0				3.8	3.2	2.1	2.5	
	H	23.22	22.2	0.5				1.5	0.8			
	Z	23.22	22.9	1.0				0.8	1.2			
15	A	23.31	58.5	0.8				3.6	2.4	2.9	2.8	
	H	23.31	58.7	1.0				1.9	2.4			
	Z	23.31	58.2	0.5				12.0	5.6			
16	A	00.32	04.4	0.9				17.3	6.9	2.0	3.5	
	H	00.32	04.6	1.0				3.3	4.0			
	Z	00.32	03.8	0.5				61.0	28.4			
16	A	00.54	22.8	0.8				3.0	4.9	2.6	2.7	
	H	00.54	23.4	1.0				0.8	1.5			
	Z	00.54	22.3	0.5				6.6				
16	A	01.10	52.7	0.6				2.8	1.4	2.5	2.4	
	H	01.10	53.0	0.7				1.9	1.3			
	Z	01.10	52.6	0.7				7.9	4.4			
16	A	01.36	07.6	0.8				5.8	5.0	2.9	2.8	
	H	01.36	08.0	1.0				1.4	1.7			
	Z	01.36	06.9	0.5								
16	A	02.46	05.7	0.6				43.8		3.9	3.8	
	H	02.46	06.6	1.0				6.8	7.6			
	Z	02.46	06.2	0.7								
16	A	02.56	56.0	0.8				1.8	2.2	2.1	2.5	
	H	02.56	55.1	0.6				2.6	2.2			
	Z	02.56	55.8	0.8				1.0	0.7			
16	A	03.18	28.1	0.5				5.2	6.8	2.5	3.0	
	H	03.18	28.8	0.8				4.2	5.4			
	Z	03.18	28.4	0.6				6.7	5.2			
16	A	03.34	34.9	0.7				1.3	1.6	2.4	2.6	
	H	03.34	34.9	0.8				2.8	4.4			
	Z	03.34	35.1	0.6				3.2	1.9			
16	A	03.37	18.6	0.7				2.9	1.8	1.3	2.6	
	H	03.37	18.7	0.8				2.1	2.6			
	Z	03.37	18.7	0.5				4.5	2.0			
16	A	06.39	52.0	1.1				1.9	1.8	4.4	2.8</	

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966													
Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
17	A	21.54	11.8		0.7				3.6	3.0			
	H	21.54	12.1		1.0				2.3	2.7	2.5	2.8	
	Z	21.54	11.5		0.5				9.9	4.3			
17	A	22.32	26.8		0.7				11.1	4.2			
	H	22.32	26.6		0.7		+		5.3	6.3	2.9	3.2	
	Z	22.32	27.0		0.7				14.0	13.5			
17	A	22.34	38.1		0.7				7.2	4.2			
	H	22.34	38.7		1.0		+		3.8	4.4	4.0	3.1	
	Z	22.34	38.3		0.8				11.4	2.9			
18	A	00.37	20.0		0.8				4.3	2.4			
	H	00.37	20.0		1.0				1.4	1.2	2.8	2.7	
	Z	00.37	19.5		0.5				19.7	10.2			
18	A	00.38	49.8		0.7				15.6	14.8			
	H	00.38	50.2		1.0				9.6	16.0	2.8	3.7	
	Z	00.38	49.6		0.5				39.2	38.0			
18	A	00.49	49.7		0.8				6.4	5.2			
	H	00.49	50.0		1.0				3.2	3.9	3.1	3.1	
	Z	00.49	49.1		0.5		+			16.7			
18	A	01.08	36.7		1.0				12.4	9.1			
	H	01.08	37.0		1.1				7.4	7.5	1.2	3.6	
	Z	01.08	36.2		0.5				21.9				
18	A	01.10	35.6		0.7				2.4	1.4			
	H	01.10	35.4		1.1				1.6	1.3	3.7	2.5	
	Z	01.10	34.9		0.6				2.7	1.2			
18	A	01.38	04.4		0.4				3.0	2.1			
	H	01.38	05.0		0.9				0.8	0.8	2.6	2.2	
	Z	01.38	04.8		0.7				1.9	1.2			
18	A	02.13	00.8		0.8				2.4	1.7			
	H	02.13	01.0		1.0				1.6	2.4	5.2	2.6	
	Z	02.13	01.0		1.0				16.2	7.2			
18	A	02.56	00.7		0.7				3.8	2.2			
	H	02.56	01.1		1.1				2.3	3.5	3.8	2.9	
	Z	02.56	00.6		0.6								
18	A	03.57	00.7		0.7				4.4	5.0			
	H	03.57	01.0		1.0				1.4	1.6	4.6	2.7	
	Z	03.57	01.1		1.1				1.7	0.9			
18	A	05.02	10.4		0.4				3.3	2.8			
	H	05.02	10.8		1.0				0.4	0.4	2.1	1.9	
	Z	05.02	10.5		0.5				2.3	2.7			
18	A	05.57	39.8		0.9				7.0	10.0			
	H	05.57	39.1		0.6		+		16.0	14.6	3.4		
	Z	05.57	39.9		0.6				2.7	2.3			
18	A	06.08	08.3		0.7				3.9	3.8			
	H	06.08	09.5		1.6				1.7	2.2	2.0	2.9	
	Z	06.08			1.1				1.7	1.1			
18	A	06.11	48.4		0.7		+		3.6	5.1			
	H	06.11	48.8		1.4				1.4	0.7	2.8	2.8	
	Z	06.11	48.0		0.6				18.1	10.0			
18	A	06.18	36.5		1.1				3.4	5.0			
	H	06.18	36.6		1.2				4.6	4.3	6.7	3.2	
	Z	06.18	37.2		1.5				3.0	2.5			
18	A	07.19	09.7		0.7				3.3	4.2			
	H	07.19	09.7		0.9		+		0.7	1.6	4.3	2.7	
	Z	07.19	09.7		0.9				1.0				
18	A	07.30	49.1		0.8				8.3	4.7			
	H	07.30	48.9		0.8				5.8	5.3	3.9	3.2	
	Z	07.30	49.4		0.8				9.0	3.0			
18	A	07.38	49.5		1.0				7.4	8.3			
	H	07.38	49.0		0.9				10.8	6.4	3.3		
	Z	07.38	49.5		0.9				11.2	5.1			
18	A	08.19	41.2		0.5				6.8	8.3			
	H	08.19	42.4		0.8				4.3	4.8	2.5	3.0	
	Z	08.19	41.6		0.6								
18	A	08.35	21.0		0.7				6.0	6.5			
	H	08.35	21.5		0.7				0.6	0.8	3.7	2.4	
	Z	08.35	21.1		0.9				1.0	1.0			
18	A	08.38	41.0		0.8				8.4	8.0			
	H	08.38	41.6		0.9				0.9	1.5	4.5	2.8	
	Z	08.38	41.4		0.9				2.6	2.4			
18	A	08.38	47.6		0.7				16.1	11.4			
	H	08.38	48.1		0.8				2.9	4.6	4.1	3.3	
	Z	08.38	48.0		0.9				2.3	2.2			
18	A	08.42	30.0		0.7				6.4	4.3			
	H	08.42	30.3		0.9		+		1.7	3.3	4.3	3.0	
	Z	08.42	30.3		0.9				1.6	1.0			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Aug. 1966													
Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
18	A	21.37	55.4		0.9				1.6	2.6			
	H	21.37	54.9		0.5				1.4	2.0	2.1	2.4	
	Z	21.37	55.6		0.9				3.0	3.1			
18	A	22.08	25.9		0.5				1.6	1.6			
	H	22.08	26.1		0.8				2.0	2.1	2.5	2.2	
	Z	22.08	25.6		0.6		+		3.2	1.9			
18	A	23.24	04.9		0.9				4.0	1.2			
	H	23.24	04.1		0.4				9.2	8.6	2.1	2.9	
	Z	23.24	05.2		1.0				1.5	1.0			
19	A	00.40	06.5		0.7				10.5	9.3			
	H	00.40	07.0		1.0				4.1	3.2	3.1	3.2	
	Z	00.40	06.4		0.5		+						
19	A	01.48	47.1		1.0				3.0	1.8			
	H	01.48	46.7		0.8				4.1	4.6	2.9		
	Z	01.48	47.2		0.7				5.5	1.8			
19	A	01.57	42.1		0.6				4.4	4.1			
	H	01.57	42.4		1.2				3.7	4.0	3.6	3.0	
	Z	01.57	41.8		0.6				17.0	5.2			
19	A	02.07	17.7		0.9				1.4	0.8			
	H	02.07	17.8		0.9				1.1	1.4	2.9	2.4	
	Z	02.07	17.3		0.6					7.2			
19	A	03.48	42.8		0.6				6.0	5.4			
	H	03.48	43.4		1.1				5.4	6.0	3.1	3.2	
	Z	03.48	42.8		0.5					17.2			
19	A	04.42	22.8		0.7				7.9	5.8			
	H	04.42	23.6		1.1				9.2	12.1	3.3	3.5	
	Z	04.42	22.9		0.5				17.0	10.2			
19	A	05.25	07.0		1.0				2.4	3.0			
	H	05.25	06.7		0.7				3.5	3.3	3.0	2.8	
	Z	05.25	07.4		0.9				3.9	3.1			
19	A	05.49	23.3		0.8				3.6	5.6			
	H	05.49	24.4		1.3				1.3	1.4	4.7	2.8	
	Z	05.49	23.4		0.7		+		7.0	5.1			
19	A	07.05	36.4		0.9				5.0	2.8			
	H	07.05	36.4		1.1				1.3	0.7	3.9	2.8	
	Z	07.05	36.0		0.6				5.8	4.6			
21	A	09.57											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude
22	A H Z	12.17	00.4	0.3					16.2	14.9	1.7	2.6
	A H Z	12.17	00.9	1.0					1.0	0.7		
	A H Z	12.17	00.6	0.7					1.8	1.4		
22	A H Z	12.50	18.2	1.0					2.8	1.8	4.6	2.8
	A H Z	12.50	18.0	0.9					2.0	3.0		
	A H Z	12.50	17.9	0.9					14.4	5.5		
22	A H Z	12.51	50.8	1.1					4.0	2.5	4.3	3.2
	A H Z	12.51	50.6	0.9					6.7	4.5		
	A H Z	12.51	50.7	0.9					9.6	3.9		
22	A H Z	14.46	24.6	0.7					3.0	1.6	2.8	2.5
	A H Z	14.46	24.7	0.7					1.5	2.8		
	A H Z	14.46		0.8					1.9	1.8		
22	A H Z	15.20	32.1	1.2					2.0	2.0	5.3	3.1
	A H Z	15.20	32.2	1.3					4.0	5.6		
	A H Z	15.20	31.4	0.9								
22	A H Z	15.30	25.5	0.5					6.7	3.5	2.4	2.7
	A H Z	15.30	26.0	0.9					2.3	1.7		
	A H Z	15.30	25.5	0.5					5.8	3.4		
22	A H Z	17.04	04.7	0.8					2.2	2.6	4.1	2.7
	A H Z	17.04	04.9	0.9					1.6	3.6		
	A H Z	17.04	05.0	0.8					2.0	1.5		
22	A H Z	18.11	41.7	0.8					5.9	5.1		
	A H Z	18.11	42.0						2.3	1.9	2.7	
	A H Z	18.11	41.5	0.7								
22	A H Z	18.47	58.1	0.8					8.8	5.5		
	A H Z	18.47	58.8	1.0					4.6	4.2	3.7	3.2
	A H Z	18.47	58.6	0.7					5.1	5.7		
22	A H Z	19.41	02.1	0.4					4.2	2.9	2.1	2.1
	A H Z	19.41	02.7	1.0					0.5	0.3		
	A H Z	19.41	02.3	0.5					1.7	1.7		
22	A H Z	19.50	02.0	0.8					2.8	3.0	4.1	2.8
	A H Z	19.50	01.7	0.7					3.6	4.4		
	A H Z	19.50	02.2	1.0					2.2	1.2		
22	A H Z	19.50	24.9	0.5					5.2	6.1	3.0	3.0
	A H Z	19.50	25.7	1.0					4.2	4.4		
	A H Z	19.50	25.0	0.6						11.5		
22	A H Z	20.30	48.8	1.1					1.6	1.3	4.7	2.7
	A H Z	20.30	48.5	0.9					2.8	3.0		
	A H Z	20.30	48.6	1.0					5.0	3.5		
22	A H Z	21.19	15.3	0.9					1.5	1.6	4.1	2.4
	A H Z	21.19	15.5	1.0					0.8	1.1		
	A H Z	21.19	14.9	0.7					7.4	2.0		
22	A H Z	22.07	17.9	0.7					2.0	3.2	3.0	2.6
	A H Z	22.07		1.0					1.3	1.7		
	A H Z	22.07	17.2	0.5					9.8			
23	A H Z	00.17	00.9	0.8					5.1	4.6		
	A H Z	00.16	59.9						6.6	6.4	2.9	
	A H Z	00.17	00.9	0.7					1.4	1.0		
23	A H Z	02.00	47.6	0.6					7.8	8.3	3.9	2.9
	A H Z	02.00	48.1	0.9					1.8	2.3		
	A H Z	02.00	48.0	0.9					3.0	1.1		
23	A H Z	02.30	06.6	1.0					2.2	2.3		
	A H Z	02.30	06.2	0.6					3.6	3.6	2.7	
	A H Z	02.30	07.1						2.8	3.0		
23	A H Z	03.17	04.4	0.8					7.2	5.4	4.7	2.8
	A H Z	03.17	04.8	0.9					1.4	1.3		
	A H Z	03.17	04.6	0.9					2.6	2.5		
23	A H Z	03.29	58.4	0.7					3.8	5.8	4.2	2.6
	A H Z	03.29	58.3	0.9					1.0	0.9		
	A H Z	03.29	58.5	0.8					2.6	1.2		
23	A H Z	04.06	55.8	0.9					3.7	3.2	3.7	3.1
	A H Z	04.06	55.4	0.7					8.5	9.5		
	A H Z	04.06	56.0	0.9					6.9	4.5		
23	A H Z	04.07	05.4	0.8					2.4	1.9	3.6	2.6
	A H Z	04.07	05.5	1.0					2.0	2.2		
	A H Z	04.07	05.0	0.6						8.6		
23	A H Z	04.25	23.3	1.0					2.0	2.9	5.2	3.0
	A H Z	04.25	23.1	1.0					4.6	5.0		
	A H Z	04.25	23.1						6.3	3.0		
23	A H Z	04.32	22.2	1.1					4.0	4.7	6.1	3.3
	A H Z	04.32	23.2	1.6					3.1	4.0		
	A H Z	04.32	21.9	0.9					7.0			
23	A H Z	04.45	12.1	0.7					2.4	3.4	1.8	2.2
	A H Z	04.45	12.5	0.8					0.6	0.7		
	A H Z	04.45		0.5					6.6	1.6		

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Aug. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
Date	Station	h	m	s	S-P (sec)	E	N	U	E-W	N-S	Depth (km)	Magnitude
24	A H Z	00.52	15.4	0.7					10.3	10.0	2.6	3.4
	A H Z	00.52	16.2	0.9					4.3	4.0		
	A H Z	00.52	15.0	0.5								
24	A H Z	04.23	56.2	0.6					6.6	9.1	3.1	2.8
	A H Z	04.23	56.6	0.8					2.2	3.2		
	A H Z	04.23	56.6	0.7					2.4	2.2		
24	A H Z	04.48	46.2	1.8					2.9	4.0	7.2	3.8
	A H Z	04.48	45.4	1.2					4.2	4.7		
	A H Z	04.48	46.9	2.0					5.1	2.0		
24	A H Z	10.42	05.6	0.7					5.8	6.4	4.7	2.9
	A H Z	10.42	06.1	1.0					0.8	1.2		
	A H Z	10.42	06.0	1.0					0.5	0.2		
24	A H Z	11.00	11.5	0.7					3.3	6.3	3.6	2.5
	A H Z	11.00	12.0	0.7					1.3	1.3		
	A H Z	11.00	11.8	0.9					1.6	1.4		
24	A H Z	19.48	43.3	1.5					5.4	8.6	3.8	
	A H Z	19.48	42.5	1.7					10.0	6.8		
	A H Z	19.48	43.5	1.4					1.4	1.0		
24	A H Z	20.08	34.8	0.8					1.9	4.0	4.7	3.4
	A H Z	20.08	35.6	1.2					1.0	1.0		
	A H Z	20.08	34.7	0.7					10.6			
24	A H Z	20.43	57.8	0.7					7.6	19.7	3.9	3.2
	A H Z	20.43	58.0	0.7					5.0	6.8		
	A H Z	20.43	58.1	0.9					3.2	1.1		
24	A H Z	21.26	33.1	1.0					2.0	1.5	3.2	2.8
	A H Z	21.26	32.7	0.6					2.1	2.9		
	A H Z	21.26	33.3	1.0					2.0	1.3		
24	A H Z	21.31	04.3	0.9					2.2	3.8		
	A H Z	21.31	04.5	0.9					1.0	1.6	3.4	
	A H Z	21.31	03.8	0.5					17.4			
24	A H Z	21.59	34.4	0.7					3.6	3.1	4.0	3.1
	A H Z	21.59	35.3	1.1					0.9	2.4		
	A H Z	21.59	34.3	0.7					6.4	2.2		
24	A H Z	22.13	28.1	0.6					1.8	2.8	3.2	2.5
	A H Z	22.13	28.7	0.9					1.0	0.6		
	A H Z	22.13	27.3	0.6					13.1			
24	A H Z	22.14	10.7	0.8								

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Aug. 1966 - Sep. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											E		
29	A H Z	06.40	00.6	1.6				3.5	4.6		3.2		
29	A H Z	06.40	01.8	0.7				0.5	0.5				
29	A H Z	06.40	00.3	0.6				3.5	2.8				
29	A H Z	08.08	48.2	0.7				3.6	4.0		3.0		
29	A H Z	08.08	48.2	1.2				2.1	2.2				
29	A H Z	08.08	47.7	0.6				6.7	3.0				
29	A H Z	09.47	33.1	0.8				20.2	25.0		4.5	4.0	
29	A H Z	09.47	33.0	0.9				3.7	6.0				
29	A H Z	09.47	33.1	1.2				9.5	5.6				
29	A H Z	10.37	02.4	0.9				23.7	14.6		3.2	4.4	
29	A H Z	10.37	01.4	0.7				39.1	54.5				
29	A H Z	10.37	02.3	1.4				6.4	4.3				
29	A H Z	10.57	21.4	1.0				9.3	13.0				
29	A H Z	10.57	20.3	0.5				24.7	17.6		2.5	4.1	
29	A H Z	10.57	21.3	1.0				8.9	3.4				
29	A H Z	11.05	54.5	1.1				6.5	7.4		4.2	3.7	
29	A H Z	11.05	55.2	1.5				8.6	6.0				
29	A H Z	11.05	54.2	0.7				15.5	11.0				
29	A H Z	11.23	05.4	0.7				5.5	4.8				
29	A H Z	11.23	05.7	0.9				1.1	1.8		4.3	2.7	
29	A H Z	11.23	05.7	1.0				1.8	0.9				
29	A H Z	11.38	11.8	0.6				7.0	7.0		3.7	3.0	
29	A H Z	11.38	11.4	0.8				0.3	0.2				
29	A H Z	11.38	12.1	1.0				1.5	2.1				
29	A H Z	12.09	41.9	1.2				5.5	2.8		3.2	3.5	
29	A H Z	12.09	42.0	1.3				2.4	3.7				
29	A H Z	12.09	41.3	0.7				13.7	8.3				
29	A H Z	00.40	57.3	0.8				8.7	6.9		4.0	3.5	
29	A H Z	00.40	57.4	0.9				6.5	5.8				
29	A H Z	00.40	56.6	0.7				33.8	13.7				
29	A H Z	20.49	47.0	0.8				5.8	2.6		3.9	3.4	
29	A H Z	20.49	46.7	0.9				1.6	2.6				
29	A H Z	20.49	46.8	0.7				10.2	4.0				
29	A H Z	20.52	39.2	0.3				10.0	8.6				
29	A H Z	20.52	39.5	0.9				1.0	1.4		2.7		
29	A H Z	20.52	39.8	1.0				0.6	0.6				
30	A H Z	01.23	16.0	0.9				7.8	5.2				
30	A H Z	01.23	16.0	0.9				6.0	7.7		4.4	3.7	
30	A H Z	01.23	15.5	0.8				13.0	10.2				
30	A H Z	01.23	33.0	0.9				12.5	10.5				
30	A H Z	01.23	33.3	0.6				10.6	8.0		2.2	3.6	
30	A H Z	01.23	33.0	0.8				37.5	20.0				
30	A H Z	02.27	42.1	1.1				3.2	2.3				
30	A H Z	02.27	41.6	0.9				4.8	4.4		4.7	3.3	
30	A H Z	02.27	41.9	1.0				3.2	1.9				
30	A H Z	08.03	18.5	0.6				4.2	7.3				
30	A H Z	08.03	18.7	1.0				0.4	0.6		2.9	3.2	
30	A H Z	08.03	18.7	0.5				7.4					
30	A H Z	08.29	55.3	0.6				6.7	10.6				
30	A H Z	08.29	55.5	1.0				1.0	1.9		4.1	3.5	
30	A H Z	08.29	55.7	1.0				7.4	1.9				
30	A H Z	09.30	55.9	0.5				28.0	16.5				
30	A H Z	09.30	56.6	1.2				4.6	3.4		2.3	3.7	
30	A H Z	09.30		0.6				1.8					
30	A H Z	09.47	56.1	1.5				2.4	3.5				
30	A H Z	09.47	56.3	1.9				1.0	1.4		3.5		
30	A H Z	09.47	51.2	0.7				9.8	9.0				
30	A H Z	10.11	09.5	0.6				5.5	4.2				
30	A H Z	10.11	09.8	0.9				0.8	1.6		3.8	3.0	
30	A H Z	10.11	10.0	1.0				2.4	1.2				
30	A H Z	11.32	57.4	0.7				3.1	2.2				
30	A H Z	11.32	58.1	1.0				1.3	2.3		3.1	2.9	
30	A H Z	11.32	57.2	0.5				12.6	10.3				
30	A H Z	12.16	47.3	0.9				5.5	5.5				
30	A H Z	12.16	46.5	0.6				6.3	6.5		2.9	3.0	
30	A H Z	12.16	46.9	0.9				2.8	2.6				
30	A H Z	12.24	08.8	0.9				5.7	3.4				
30	A H Z	12.24	08.4	0.5				2.0	2.6		2.7		
30	A H Z	12.24	07.5	0.5				0.4	0.2				
30	A H Z	12.46	04.7	0.8				3.3	6.2				
30	A H Z	12.46	04.8	0.7				3.3	5.7		3.9	3.3	
30	A H Z	12.46	05.1	0.9				2.0	1.4				
30	A H Z	12.49	42.8	0.5				15.5	8.4				
30	A H Z	12.49	43.9	1.5				0.6	0.4		2.9		
30	A H Z	12.49	42.8	0.5				5.6	5.4				

1966 September

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											E		
01	A H Z	01.02	44.5	0.5				8.8	7.8				
01	A H Z	01.02	45.1	0.9				1.4	1.0		1.1	2.8	
01	A H Z	01.02	44.4	0.5				3.3	2.4				
01	A H Z	05.08	03.4	1.0				2.3	4.2				
01	A H Z	05.08	02.3	1.0				1.4	1.0		4.6	2.8	
01	A H Z	05.08	02.6	0.5				8.2	7.4				
01	A H Z	05.21	30.1	1.0				4.2	4.1				
01	A H Z	05.21	29.2	1.5				2.1	1.2		3.4	3.1	
01	A H Z	05.21	29.2	0.6				9.0	12.6				
01	A H Z	05.22	33.7	1.0				2.9	3.4				
01	A H Z	05.22	32.7	1.7				1.6	2.2		3.3	3.1	
01	A H Z	05.22	33.0	0.7				5.0					
01	A H Z	12.12	06.2	0.7				3.5	3.4				
01	A H Z	12.12	06.8	1.0				2.0	3.5		2.7	2.9	
01	A H Z	12.12	06.1	0.7				13.4					
01	A H Z	15.31	15.4	1.2				3.9	4.1				
01	A H Z	15.31	14.9	0.8				6.4	4.5		3.4	3.3	
01	A H Z	15.31	15.5	1.2				6.9	4.2				
01	A H Z	16.06	35.9	1.4				3.1	2.1				
01	A H Z	16.06	35.0	0.9				14.6	10.7		5.0	3.5	
01	A H Z	16.06	36.2	1.6				1.0	0.9				
01	A H Z	16.50	31.3	0.5				17.2	10.8				
01	A H Z	16.50	31.1	0.9				3.1	3.7		2.4	3.2	
01	A H Z	16.50		0.8				4.3	3.6				
01	A H Z	20.37	39.9	0.4				4.7	5.6				
01	A H Z	20.37	40.7	0.9				1.3	1.1		1.9	2.6	
01	A H Z	20.37	40.4	0.8				1.9	1.8				
01	A H Z	21.30	02.6	1.1				2.5	4.2				
01	A H Z	21.30	02.8	0.5				1.9	2.7		2.0	2.9	
01	A H Z	21.30	03.8	1.2				2.6	1.7				
01	A H Z	22.51	28.6	0.5				4.0	7.4				
01	A H Z	22.51	30.5	1.3				0.6	0.7		2.1	2.7	
01	A H Z	22.51	29.3	0.7				8.6	7.4				
02	A H Z	02.43	19.6	0.6				4.2	5.2				
02	A H Z	02.43	19.8	1.0				3.0	3.2		1.5	2.9	
02	A H Z	02.43	19.3	0.5				19.4	6.0				
02	A H Z	05.46	12.3	0.6				8.1	6.0				
02	A H Z	05.46	12.6	1.0				1.3	1.6		2.2	2.8	
02	A H Z	05.46	12.1	0.6				10.2	6.2				
02	A H Z	13.22	26.6	0.9				5.0	3.3		1.9	3.1	
02	A H Z	13.22	26.1	0.7				2.9	5.0				
02	A H Z	13.22	26.8	0.9				2.4	2.0				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											E		
02	A H Z	17.25	38.7	0.8				2.2	1.6		1.8	3.0	
02	A H Z	17.25	38.7	0.8				6.4	7.6				
02	A H Z	17.25	38.3	0.7				14.4	6.4				
03	A H Z	02.23	43.5	0.6				2.6	2.2				
03	A H Z	02.23	43.6	0.9				0.8	0.7		3.0	2.3	
03	A H Z	02.23	44.3	1.0				2.6	0.4				
03	A H Z	03.17	04.7	0.7				6.6	7.2				
03	A H Z	03.17	04.4	0.7				5.2	5.4		2.4	3.1	
03	A H Z	03.17	05.0	1.0				4.2</					

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Sep. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											E		
07	A H Z	04.21	27.4	0.6				14.4	19.0				
	A H Z	04.21	27.8	1.1				0.6	1.3		3.4	3.1	
	A H Z	04.21	27.8	0.9				10.8	2.9				
07	A H Z	04.43	41.9	0.6				5.6	3.6				
	A H Z	04.43	42.5	1.2				0.6	0.7		1.5	2.7	
	A H Z	04.43	42.5	0.4				9.1	3.8				
07	A H Z	08.16	04.6	1.0				2.2	3.5				
	A H Z	08.16	04.0	0.7				5.6	6.3		2.2	3.0	
	A H Z	08.16	04.5	0.9				2.6	1.7				
07	A H Z	10.41	39.0	1.0				1.6	1.3				
	A H Z	10.41	38.5	0.8				6.2	5.8		3.1	2.9	
	A H Z	10.41	38.9	1.0				3.2	1.8				
07	A H Z	11.09	25.1	0.7				3.2	3.9				
	A H Z	11.09	25.6	1.0				0.6	0.7		3.7	2.5	
	A H Z	11.09	25.4	1.0				4.4	2.5				
07	A H Z	22.29	06.6	1.3				2.8	1.8				
	A H Z	22.29	05.7	0.9				3.5	3.0		4.2	3.0	
	A H Z	22.29	06.7	1.3				2.8	1.6				
08	A H Z	03.14	44.2	0.6				7.0	5.1				
	A H Z	03.14	44.4	1.0				1.4	2.8		3.3	3.0	
	A H Z	03.14	45.0	1.0				3.9	5.5				
08	A H Z	04.13	19.8	1.0				1.3	1.5				
	A H Z	04.13	20.3	1.4				0.6	0.6		3.3	2.4	
	A H Z	04.13	19.4	0.6									
08	A H Z	04.18	24.9	1.4				7.3	2.9				
	A H Z	04.18	23.9	1.0				3.7	4.0		5.1	3.4	
	A H Z	04.18	25.0	1.4				2.6	1.4				
08	A H Z	05.01	11.7	1.0				13.5	16.7				
	A H Z	05.01	11.2	0.7				17.0	13.2		3.0	3.9	
	A H Z	05.01	12.3	1.0					8.0				
08	A H Z	05.01	31.2	0.9				3.1	6.2				
	A H Z	05.01	31.0	0.6				3.0	3.3		2.5	3.0	
	A H Z	05.01	31.4	1.0				2.2	1.4				
08	A H Z	09.54	36.4	0.6				8.0	16.0				
	A H Z	09.54	36.9	1.4				1.3	2.1		3.1	3.3	
	A H Z	09.54	36.4	0.7				6.6	9.0				
08	A H Z	14.06	06.4	0.9				3.4	3.8				
	A H Z	14.06	07.0	1.0				1.5	1.8		2.2	2.9	
	A H Z	14.06	06.4	0.6				10.0	4.9				
08	A H Z	19.36	38.4	1.1				2.2	4.4				
	A H Z	19.36	37.5	0.8				7.5	8.5		3.3	3.3	
	A H Z	19.36	38.3	1.0				3.8	2.9				
09	A H Z	03.23	06.1	0.3				13.6	17.3				
	A H Z	03.23	06.8	0.9				0.6	0.4		1.0	2.5	
	A H Z	03.23	06.6	0.8				3.3	1.2				
09	A H Z	03.41	57.7	0.8				8.0	8.5				
	A H Z	03.41	58.1	1.0				2.5	3.3		2.7	3.2	
	A H Z	03.41	57.5	0.7				5.5	5.4				
09	A H Z	04.23	58.4	0.7				6.1	3.2				
	A H Z	04.23	58.2	0.6				2.8	4.1		1.9	3.0	
	A H Z	04.23	58.9	0.9				2.4	1.1				
09	A H Z	04.39	29.1	0.9				2.4	2.3				
	A H Z	04.39	30.2	1.4				1.2	1.3		4.1	2.8	
	A H Z	04.39	28.6	0.7				10.4	7.8				
09	A H Z	06.17	58.4	0.6				14.0	24.8				
	A H Z	06.17	58.1	0.6				6.8	7.2		1.9	3.6	
	A H Z	06.17	58.8	0.9				2.4	2.4				
09	A H Z	07.34	57.4	0.9				17.3	20.4				
	A H Z	07.34	56.8	0.9				13.5	17.9		3.4	4.0	
	A H Z	07.34	57.3	0.9				15.1	7.0				
09	A H Z	07.42	32.0	0.7				3.9	4.9				
	A H Z	07.42	31.9	0.7				0.8	1.0		1.9	2.5	
	A H Z	07.42	32.6	0.8				0.5	0.2				
09	A H Z	08.34	39.4	0.7				6.6	5.0				
	A H Z	08.34	39.6	0.6				2.5	2.5		2.2	2.8	
	A H Z	08.34	40.0	1.1				1.3	1.0				
09	A H Z	10.52	58.0	0.6				6.2	8.8				
	A H Z	10.52	58.2	0.8				2.7	3.7		2.7	3.1	
	A H Z	10.52	58.7	0.9				1.3	0.6				
09	A H Z	13.39	25.9	0.8				5.4	3.5				
	A H Z	13.39	25.4	0.6				3.7	5.3		2.3	3.1	
	A H Z	13.39	26.2	1.0				3.6	1.4				
09	A H Z	13.44	37.2	0.6				8.8	13.4				
	A H Z	13.44	37.1	0.9				5.5	5.8		2.9	3.3	
	A H Z	13.44	37.7	0.9				2.0	2.0				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Sep. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											E		
11	A H Z	01.55	44.8	1.1				3.8	4.1		1.1	2.8	
	A H Z	01.55	45.0	1.6				4.6	3.1				
	A H Z	01.55	44.4	0.6				1.1	1.0				
11	A H Z	02.11	11.7	2.0				4.8	8.1		2.9	2.8	
	A H Z	02.11	10.6	1.2				1.7	1.9				
	A H Z	02.11	12.0	2.1				1.0	0.7				
11	A H Z	02.30	36.8	0.7				3.4	2.0		7.0	3.4	
	A H Z	02.30	37.9	1.4				1.8	2.0				
	A H Z	02.30	36.9	0.6				2.2	3.2				
11	A H Z	05.06	42.3	1.4				11.7	7.8				
	A H Z	05.06	43.5	2.1				4.1	6.4		7.9	3.9	
	A H Z	05.06	44.1	1.1				12.4	16.7				
11	A H Z	07.15	27.8	0.8				3.5	1.8				
	A H Z	07.15	28.7	1.5				1.9	3.0		6.3	3.4	
	A H Z	07.15	28.1	1.0				4.1	4.9				
11	A H Z	10.13	33.5	0.5				9.1	8.1				
	A H Z	10.13	34.3	0.9				0.7	1.0		2.3	2.6	
	A H Z	10.13	34.2	0.9				0.8	0.5				
11	A H Z	16.00	04.7	1.2				17.4	10.6				
	A H Z	16.00	04.4	0.8				1.1	1.8		3.0	2.4	
	A H Z	16.00	05.0	1.0				1.3	1.4				
11	A H Z	16.02	30.8	1.1				8.8	16.9				
	A H Z	16.02	30.2	0.9				8.4	13.3		9.1	4.4	
	A H Z	16.02	31.0	1.0				7.7	4.8				
11	A H Z	16.07	43.9	1.1				2.9	1.8				
	A H Z	16.07	43.3	0.8				1.4	2.2		7.2	3.0	
	A H Z	16.07	44.0	1.0				3.6	6.6				
11	A H Z	17.17	51.2	0.8				4.3	3.3				
	A H Z	17.17	52.2	1.5				1.9	2.1		5.7	3.1	
	A H Z	17.17	51.2	0.4				14.0	9.8				
11	A H Z	17.46	12.2	1.1				9.9	5.8				
	A H Z	17.46	12.2	0.9				4.6	4.3		4.8	3.7	
	A H Z	17.46	12.9	0.9				14.7	11.6				
11	A H Z	17.59	57.1	1.3				8.2	4.9				
	A H Z	17.59	56.6	1.0				0.6	0.3		1.8	2.4	
	A H Z	17.59	57.7	1.1				1.1	1.0				
11	A H Z	19.55	50.3	1.5				4.1	5.4				
	A H Z	19.55	49.2	0.8				0.8	0.6		3.2	2.7	
	A H Z	19.55	50.6	0.5				6.4	6.1				
11	A H Z	20.09	50.7	1.0				5.3	6.5				
	A H Z	20.09	50.3	0.7				6.6	7.2		2.7	3.5	
	A H Z	20.09	51.0	0.9				2.1	1.4				
11	A H Z	20.21	16.4	1.3				13.4	12.4				
	A H Z	20.21	17.0	1.4				2.6	2.1		2.3	3.1	
	A H Z	20.21	16.4	1.2				2.1	2.3				
11	A H Z	21.19	01.1	0.7				5.0	8.8				
	A H Z	21.19	00.6	0.9				1.2	1.6		2.4	3.0	
	A H Z	21.19	01.0	1.0				8.5	5.2				
11	A H Z	23.12	35.8	1.4				15.7	13.8				
	A H Z	23.12	36.3	2.0				10.2	10.4		1.7	3.6	
	A H Z	23.12	35.7	1.2				10.4	7.4				
12	A H Z	01.13	40.8										

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Sep. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
13	A H Z	19.18	27.9	0.6				6.6	8.4	2.2	3.0		
	A H Z	19.18	28.0	0.7				2.2	3.2	2.2	3.0		
	A H Z	19.18	28.5	1.0				1.0	1.0				
14	A H Z	00.49	44.5	0.6				6.0	4.6	1.0	2.9		
	A H Z	00.49	44.4	0.6				4.2	3.7	1.0	2.9		
	A H Z	00.49	45.2	0.8				1.0	1.4				
14	A H Z	02.08	58.1	0.8				4.5	4.4	3.5	3.1		
	A H Z	02.08	59.1	1.2				2.7	2.8	3.5	3.1		
	A H Z	02.08	58.5	0.7									
14	A H Z	02.46	12.8	0.7				8.7	15.3	4.1	3.5		
	A H Z	02.46	13.7	1.2				3.5	4.6	4.1	3.5		
	A H Z	02.46	12.8	0.7					11.0				
14	A H Z	05.29	51.4	0.7				2.3	4.1				
	A H Z	05.29	51.4	1.3				7.3	9.0	3.8	3.4		
	A H Z	05.29	51.9	0.8					3.9				
14	A H Z	06.17	24.7	1.4				5.6	7.1	4.8	3.7		
	A H Z	06.17	23.9	0.9				10.3	11.6	4.8	3.7		
	A H Z	06.17	24.9	1.4				3.8	2.7				
14	A H Z	06.26	40.1	1.0				35.2	10.2	2.0	4.5		
	A H Z	06.26	39.4	0.5									
	A H Z	06.26	40.5	1.1									
14	A H Z	09.25	41.9	1.5				11.6	11.4	6.0	4.1		
	A H Z	09.25	42.8	2.0				4.3	7.0	6.0	4.1		
	A H Z	09.25	41.9	1.1									
14	A H Z	10.23	25.3	0.7				3.0	4.2				
	A H Z	10.23	25.9	1.2				1.1	1.0	2.5	2.7		
	A H Z	10.23	25.0	0.5				8.7	3.7				
14	A H Z	11.05	22.8	1.2				2.8	3.2				
	A H Z	11.05	22.6	1.0				8.2	6.7	3.7	3.3		
	A H Z	11.05	22.8	1.0				7.4	3.8				
14	A H Z	12.24	10.4	0.7				5.6	4.1	2.7	3.0		
	A H Z	12.24	10.9	1.2				2.5	3.1	2.7	3.0		
	A H Z	12.24	09.7	0.6					5.2				
14	A H Z	13.24	34.0	0.5				7.6	6.6	2.1	2.6		
	A H Z	13.24	34.9	1.0				0.6	0.8	2.1	2.6		
	A H Z	13.24	34.6	0.6					5.4				
14	A H Z	13.49	00.2	0.9				2.8	5.4	3.9	2.9		
	A H Z	13.49	00.8	1.4				0.8	0.7	3.9	2.9		
	A H Z	13.49	00.0	0.7					7.6				
14	A H Z	14.36	51.9	0.7				1.6	1.6	3.0	2.6		
	A H Z	14.36	52.4	1.1				2.0	1.8	3.0	2.6		
	A H Z	14.36	52.1	0.6					3.9				
14	A H Z	15.37	51.1	1.3				3.0	3.0				
	A H Z	15.37	52.4	1.8				3.2	4.4	6.4	3.4		
	A H Z	15.37	51.5	1.1					6.9				
14	A H Z	16.57	27.3	0.7				3.0	3.0				
	A H Z	16.57	27.8	1.2				3.0	3.6	2.9	3.0		
	A H Z	16.57	27.3	0.6					5.1				
14	A H Z	19.00	29.4	1.1				13.4	21.0	4.0	3.5		
	A H Z	19.00	29.9	1.0				1.5	2.0	4.0	3.5		
	A H Z	19.00	30.0	1.0					5.6				
14	A H Z	21.52	36.4	0.7				24.2					
	A H Z	21.52	37.0	0.9				4.2	5.1	3.4	3.6		
	A H Z	21.52	37.1	1.0				29.2	14.0				
14	A H Z	23.28	14.1	0.8				16.8					
	A H Z	23.28	14.1	0.7				37.8	26.2	3.3	3.1		
	A H Z	23.28	14.8	1.1					7.7				
15	A H Z	01.24	11.3	0.9				13.5	18.6	1.2	3.7		
	A H Z	01.24	10.8	0.5				15.4	11.8				
	A H Z	01.24	11.8	1.0				1.4	3.1				
15	A H Z	02.31	02.0	1.0				1.6	5.3	1.8	3.2		
	A H Z	02.31	01.5	0.5				5.3	5.0				
	A H Z	02.31	02.4	1.0					0.8				
15	A H Z	03.56	50.1	1.2				11.1	5.4	2.0	3.7		
	A H Z	03.56	49.0	0.5				15.2	13.4	2.0	3.7		
	A H Z	03.56	50.2	1.2				2.2	3.4				
15	A H Z	10.01	18.6	0.5				9.4	7.9	2.1	2.6		
	A H Z	10.01	19.6	0.9				0.8	0.6				
	A H Z	10.01	19.1	0.7					1.1				
15	A H Z	10.35	30.7	0.7				7.2	7.8	2.6	3.3		
	A H Z	10.35	31.2	1.1				3.6	3.7				
	A H Z	10.35	30.5	0.6									
15	A H Z	11.22	53.4	1.3				2.6	4.8	5.6	3.4		
	A H Z	11.22	52.8	1.0				5.2	3.3	5.6	3.4		
	A H Z	11.22	53.9	1.7									

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S		
17	A H Z	09.27	46.4	1.8				6.8	8.5	4.7	4.1		
	A H Z	09.27	45.4	1.0				13.6	19.0				
	A H Z	09.27	46.5	1.9					3.8				
17	A H Z	09.52	54.8	0.8				2.6	5.6	2.1	3.1		
	A H Z	09.52	55.2	1.1				2.4	2.4				
	A H Z	09.52	54.5	0.5									
17	A H Z	09.54	24.9	1.2				8.3	12.6	7.3	4.1		
	A H Z	09.54	24.6	1.5				10.4	11.2				
	A H Z	09.54	25.5	1.4					2.4				
17	A H Z	11.49	26.3	0.9				4.0	2.2	3.2	3.0		
	A H Z	11.49	26.2	1.4				2.8	3.4				
	A H Z	11.49	25.8	0.5									
17	A H Z	21.38	05.2	0.4				4.6	2.7	1.8	2.2		
	A H Z	21.38	06.0	0.9				0.5	0.5				
	A H Z	21.38	05.7	0.7					0.8				
17	A H Z	22.25	28.8	1.0				4.2	3.6	3.1	3.5		
	A H Z	22.25	27.8	0.7				11.1	17.6				
	A H Z	22.25	28.7	1.1					2.2				
17	A H Z	23.08	36.2	1.1				2.2	2.1	2.7	3.1		
	A H Z	23.08	36.5	1.1				6.0	6.5				
	A H Z	23.08	36.0	0.8					2.8				
17	A H Z	23.38	35.2	0.9				1.4	2.9	4.2	3.0		
	A H Z	23.38	36.3	1.2				2.0	2.9				
	A H Z	23.38	34.9	0.8				4.0	8.7				
18	A H Z	00.46	03.4	0.5				2.9		3.0	2.8		
	A H Z	00.46	04.3	1.1				2.4	3.4				
	A H Z	00.46	03.5	0.9					6.8				
18	A H Z	03.24	39.3	1.7				5.4	2.1	7.1	3.4		
	A H Z	03.24	40.0	2.4				2.0	2.0				
	A H Z	03.24	38.9	1.4					5.1				
18	A H Z	03.56	25.6	0.7				9.4	14.6	3.7	3.1		
	A H Z	03.56	26.3	1.0				0.8	1.7				
	A H Z	03.56	25.9	0.9					3.6				
18	A H Z	04.15	30.8	0.9									

Sep. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
20	A	12.45	13.9	0.8	-			2.2	1.8			
	H	12.45	14.3	1.4				1.0	1.4	5.5	2.7	
	Z	12.45	14.5	1.3				1.1	1.4			
20	A	13.31	42.2	0.7	-			0.8	2.4			
	H	13.31	42.4	0.6				1.8	1.9	2.1	2.4	
	Z	13.31	42.7	1.1				0.8	0.3			
20	A	13.34	42.2	1.2	-			2.2	2.6			
	H	13.34	42.7	1.4				2.6	2.0	3.7	3.1	
	Z	13.34	41.6	0.7				7.2	5.6			
20	A	13.45	57.7	0.6	-			1.7	2.6			
	H	13.45	58.4	1.0				1.9	2.2	1.9	2.7	
	Z	13.45	57.5	0.5				7.8	12.0			
20	A	16.45	17.5	1.0	+			1.8	4.6			
	H	16.45	16.8	1.1				4.6	6.8	5.1	3.3	
	Z	16.45	17.8	1.1				2.4	1.1			
20	A	20.45	34.5	1.0	-			2.6	1.9			
	H	20.45	33.9	0.7				5.2	4.1	3.4	3.0	
	Z	20.45	35.0	1.0				2.2	1.9			
20	A	23.10	41.3	1.0	+			2.8	4.9			
	H	23.10	53.5	0.9				4.3	7.4	3.2	3.3	
	Z	23.10	52.8	0.9				1.1	1.0			
21	A	00.36	38.9	0.8	+			9.0	7.7	2.8	3.3	
	H	00.36	38.1	0.6				3.9	3.8			
	Z	00.36	39.0	1.1								
21	A	03.59	14.8	1.3	+			13.3	9.4	4.5	3.7	
	H	03.59	14.3	0.8				8.7	5.2			
	Z	03.59	15.1	1.3								
21	A	05.04	33.8	1.3	-			4.1	2.8	4.0	3.4	
	H	05.04	49.4	1.5				10.8	9.4			
	Z	05.04	48.3	0.8								
21	A	05.29	23.9	1.2	-			1.6	1.7	4.6	2.9	
	H	05.29	24.6	1.5				5.6	6.7			
	Z	05.29	23.5	0.8								
21	A	08.09	03.0	0.5	+			2.8	3.6	2.0	3.2	
	H	08.09	05.2	1.1				43.2	12.4			
	Z	08.09	03.0	0.6								
21	A	08.26	14.3	0.7	-			1.5	1.6	1.4	2.6	
	H	08.26	14.7	1.0				8.0				
	Z	08.26	14.1	0.5								
21	A	10.43	37.5	0.6	+			1.3	1.4	1.7	2.6	
	H	10.43	38.5	1.1				10.1	9.6			
	Z	10.43	37.5	0.4								
21	A	12.53	04.0	0.5	-			13.4	12.6			
	H	12.53	04.8	1.0				1.7	1.6	2.9	3.0	
	Z	12.53	04.9	0.9				3.9	4.5			
21	A	14.40	36.2	0.7	+			1.0	2.0			
	H	14.40	36.5	0.9				2.0	2.4	3.5	2.6	
	Z	14.40	37.2	1.2				0.6	0.4			
21	A	15.49	43.2	1.4	-			1.6	2.0			
	H	15.49	44.3	2.0				1.2	1.5	7.1	3.1	
	Z	15.49	43.1	1.2				4.5	4.4			
21	A	16.33	48.0	0.6	-			4.7	8.4			
	H	16.33	48.9	1.3				1.7	1.3	2.4	3.0	
	Z	16.33	49.0	0.5				9.4				
21	A	17.07	53.2	1.0	+			1.4	3.5			
	H	17.07	52.9	0.8				5.6	10.0	4.4	3.3	
	Z	17.07	53.9	1.2				1.4	0.8			
21	A	18.22	35.0	0.9	-			1.0	1.7			
	H	18.22	35.7	1.2				0.6	0.4	2.5	2.4	
	Z	18.22	34.6	0.5				7.0	6.3			
21	A	18.43	25.5	1.2	-			1.9	2.4			
	H	18.43	25.7	1.4				2.0	1.8	5.1	3.0	
	Z	18.43	24.9	0.9				7.6				
21	A	19.29	25.5	1.0	-			1.8	2.4			
	H	19.29	25.6	0.9				3.6	3.9	1.8	2.9	
	Z	19.29	24.9	0.8				4.0	2.4			
21	A	20.48	33.6	0.7	+			3.0	3.4			
	H	20.48	34.0	1.2				2.0	1.8	2.9	2.8	
	Z	20.48	33.0	0.6				59.4	18.2			
21	A	20.49	55.3	0.7	-			2.1	3.4			
	H	20.49	55.7	1.0				1.0	1.2	2.6	2.6	
	Z	20.49	54.8	0.6				9.4	16.1			
21	A	22.03	05.9	1.0	+			22.3	25.4			
	H	22.03	06.7	1.6				10.4	11.2	5.9	4.2	
	Z	22.03	07.2	1.2				44.9	11.4			

Sep. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
24	A	09.56	38.8	1.3	-			1.2	1.6			
	H	09.56	38.5	1.4				3.6	5.8	5.7	3.2	
	Z	09.56	38.3	1.1				10.2	8.4			
24	A	11.14	07.2	1.5	-			0.4	0.6			
	H	11.14	06.9	1.3				1.9	1.9	3.9	2.7	
	Z	11.14	06.9	1.1				4.7	1.9			
24	A	12.19	06.0	0.7	+			3.8	2.5			
	H	12.19	06.9	1.2				0.8	0.7	2.6	2.6	
	Z	12.19	05.8	0.5				4.3	6.4			
24	A	14.16	26.7	1.0	-			0.5	1.0			
	H	14.16	28.6	1.1				0.9	1.2	5.2	2.5	
	Z	14.16	29.6	1.5				0.7	0.8			
24	A	14.19	09.9	0.9	-			6.4	2.9			
	H	14.19	28.8	1.4				3.0	4.1	3.3	3.4	
	Z	14.19	27.6	0.6				46.7	17.9			
24	A	15.06	46.0	1.0	+			1.3	1.6			
	H	15.06	46.1	1.1				3.0	2.7	3.1	2.8	
	Z	15.06	45.5	0.8				4.0	4.7			
24	A	16.08	35.9	0.5	+			4.0	4.1			
	H	16.08	36.9	1.1				5.1	6.7	2.6	3.1	
	Z	16.08	36.3	0.7				4.5	3.2			
24	A	16.53	20.4	0.8	-			39.6	35.0			
	H	16.53	20.9	1.2				13.0	20.9	4.7	4.4	
	Z	16.53	21.1	1.0				27.2	9.8			
24	A	17.12	07.4	0.6	+			1.1	1.4			
	H	17.12	08.0	1.1				1.2	1.4	2.2	2.3	
	Z	17.12	07.3	0.6				3.1	13.6			
24	A	19.29	16.5	1.2	-			2.4	3.0			
	H	19.29	16.1	0.9				10.1	6.1	2.0	3.4	
	Z	19.29	16.6	1.0				4.4	3.2			
24	A	19.29	22.9	1.3	+			25.8	21.2			
	H	19.29	22.4	1.0				29.4	16.6	4.1	4.4	
	Z	19.29	23.0	1.1				20.8	15.6			
24	A	20.27	04.8	1.0	-			2.5	4.0			
	H	20.27	24.8	1.1				3.6	3.0	1.5	3.2	
	Z	20.27	23.7	0.5				32.4	15.0			
24	A	22.21	51.8	1.1	+			0.7	1.3			
	H	22.21	51.9	0.9				1.6	2.4	4.6	2.6	
	Z	22.21	52.6	1.5				1.1	1.0			
24	A	22.34	15.3	1.0	-			0.9	0.8			
	H	22.34	15.6	1.3				0.4	0.4	3.3	2.2	
	Z	22.34	14.8	0.6				2.6	3.0			
25	A	04.07	47.9	0.7	+			1.3	1.4			
	H	04.07	48.3	1.1				1.1	1.7	1.4	2.5	
	Z	04.07	47.7	0.4				15.7	7.0			
25	A	05.07	09.4	0.7	-			1.1	1.4			
	H	05.07	09.9	1.1				0.6	0.6	1.9	2.2	
	Z	05.07	08.7	0.5				13.1	21.7			
25	A	05.56	42.0	0.7	+			40.3	11.2			
	H	05.56	42.5	1.0				5.3	9.3	3.9	4.0	
	Z	05.56	42.6	1.1				11.6	3.9			
25	A	07.01	02.4	1.0	-			1.5	3.1			
	H	07.01	02.4	0.9				3.4	8.2	4.4	3.3	
	Z	07.01	03.3	1.5				7.6	1.7			
25	A	08.15	08.7	0.9	+			4.7	3.2			
	H	08.15	09.5	1.0				5.6	5.0	1.4	3.2	
	Z	08.15	08.3	0.5				10.6	15.9			
25	A	09.22	56.4	0.5	-			2.2	2.4			
	H	09.22	57.3	0.9				1.1	1.5	2.0	2.4	
	Z	09.22	57.5	0.7				1.2	1.2			
25	A	10.46	35.6	0.9	+			8.2	8.7			
	H	10.46	36.7	1.6				6.5	6.9	4.6	3.7	
	Z	10.46	36.2	1.0				18.2				
25	A	11.48	10.2	0.5	-			0.9	4.5			
	H	11.48	10.9	1.0				2.0	3.7	2.1	2.9	
	Z	11.48	10.5	0.7				4.0	2.5			
25	A	14.01	04.5	0.8	+			1.2	2.1			
	H	14.01	05.1	1.2				1				

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Sep. 1966 - Oct. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
27	A H Z	20.13	44.3	0.8				2.3	2.6		2.9	2.8	
27	A H Z	20.13	45.4	1.2				1.7	1.8				
27	A H Z	20.13	43.9	0.6				25.4					
27	A H Z	22.03	51.2	0.5				5.1	4.7		2.8	2.6	
27	A H Z	22.03	52.0	1.0				1.2	1.2				
27	A H Z	22.03	51.5	1.0				3.3					
27	A H Z	23.02	06.8	0.6				24.8	30.4		2.3	3.4	
27	A H Z	23.02	07.5	0.8				1.6	2.6				
27	A H Z	23.02	07.2	1.2				3.2					
28	A H Z	00.06	48.8	1.2				1.1	2.2		3.9	2.8	
28	A H Z	00.06	48.4	0.8				2.2	2.8				
28	A H Z	00.06	49.1	1.3				1.7					
28	A H Z	00.26	36.0	1.1				1.2	0.7				
28	A H Z	00.26	36.0	1.0				3.4	3.4		3.1	2.8	
28	A H Z	00.26	35.6	0.9				3.8					
28	A H Z	00.51	55.1	0.9				5.3	8.6		1.4		
28	A H Z	00.51	55.8	1.2				6.4	6.6		5.2	3.5	
28	A H Z	00.51	55.9	1.4				3.2					
28	A H Z	02.02	50.7	1.0				1.6	1.1				
28	A H Z	02.02	50.7	0.9				2.0	1.5		2.0	2.6	
28	A H Z	02.02	50.5	0.8				2.8					
28	A H Z	02.04	22.8	1.2				1.9	3.1				
28	A H Z	02.04	22.3	0.8				2.4	2.0		3.7	2.9	
28	A H Z	02.04	22.9	1.2				4.1					
28	A H Z	03.07	08.2	1.0				5.0	6.6				
28	A H Z	03.07	09.3	1.7				3.3	4.5		4.9	3.5	
28	A H Z	03.07	07.7	0.9									
28	A H Z	07.33	10.0	1.2				1.2	4.0				
28	A H Z	07.33	09.4	0.6				5.4	4.4		2.1	3.1	
28	A H Z	07.33	10.1	1.2				2.0	1.6				
28	A H Z	11.47	54.8	0.8				1.2	2.8		2.4	2.8	
28	A H Z	11.47	55.4	1.3				1.7	1.5				
28	A H Z	11.47	54.2	0.4									
28	A H Z	15.56	40.5	1.9				4.6	13.3				
28	A H Z	15.56	39.6	1.2				8.0	8.4		2.8	4.1	
28	A H Z	15.56	40.5	1.7				5.0	3.0				
28	A H Z	15.57	23.6	1.7				0.8	2.6				
28	A H Z	15.57	22.6	1.3				1.6	2.5		5.8	3.2	
28	A H Z	15.57	23.4	1.5				1.2					
28	A H Z	16.25	28.5	0.8				1.4	1.6				
28	A H Z	16.25	29.2	1.2				0.6	0.6		3.0	2.3	
28	A H Z	16.25	27.9	0.5				16.3	5.7				
28	A H Z	16.50	50.3	0.5				12.1	34.2				
28	A H Z	16.50	51.0	0.9				0.7	0.7		2.7	3.1	
28	A H Z	16.50	50.9	0.8				1.3	0.4				
28	A H Z	19.50	42.5	1.1				3.4	2.3				
28	A H Z	19.50	42.2	1.0				6.0	5.6		3.7	3.3	
28	A H Z	19.50	42.3	1.0				8.6	5.4				
28	A H Z	20.19	05.7	0.6				16.9	14.8				
28	A H Z	20.19	06.6	1.0				1.8	1.6		3.4	3.2	
28	A H Z	20.19	06.0	0.9				6.1	4.1				
28	A H Z	21.24	01.3	0.8				2.4	2.3				
28	A H Z	21.24	01.0	0.6				3.2	3.4		2.0	2.7	
28	A H Z	21.24	01.4	0.9				2.0	0.9				
28	A H Z	22.45	00.3	1.2				3.5	16.0				
28	A H Z	22.44	59.5	1.0				7.9	6.2		4.8	3.8	
28	A H Z	22.45	00.3	1.2				5.7	2.9				
28	A H Z	23.53	01.0	1.5				2.2	1.7				
28	A H Z	23.53	01.6	1.9				2.4	2.4		7.2	3.2	
28	A H Z	23.53	00.6	1.2				4.8	5.6				
29	A H Z	07.34	17.4	0.7				5.0	7.4				
29	A H Z	07.34	18.4	1.1				1.1	1.8		2.2	3.0	
29	A H Z	07.34	17.1	0.5				77.1					
29	A H Z	08.48	24.2	0.8				4.6	6.4				
29	A H Z	08.48	24.6	1.0				0.8	1.0		3.1	2.8	
29	A H Z	08.48	24.5	0.7				2.8	2.4				
29	A H Z	12.03	23.8	1.0				2.2	4.4				
29	A H Z	12.03	23.7	1.1				1.8	1.9		5.0	3.0	
29	A H Z	12.03	23.3	1.0				4.6	6.6				
29	A H Z	15.34	48.4	1.0				1.8	1.9				
29	A H Z	15.34	48.6	1.0				4.7	4.3		3.7	3.0	
29	A H Z	15.34	48.4	0.9				4.5	2.4				
29	A H Z	15.38	45.5	1.0				0.8	0.6				
29	A H Z	15.38	45.4	0.9				1.2	1.0		2.9	2.0	
29	A H Z	15.38	45.6	0.8				4.5	2.1				

1966 October

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Oct. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
01	A H Z	14.51	23.4	1.0				1.9	2.4		1.4	3.3	
01	A H Z	14.51	23.0	0.8				8.3	13.0				
01	A H Z	14.51	23.2	0.7				2.3	2.1				
01	A H Z	15.03	59.1	0.7				2.6	3.4		3.2	2.7	
01	A H Z	15.03	59.0	0.8				1.9	1.7				
01	A H Z	15.03	59.6	1.0				0.8	0.7				
01	A H Z	22.29	18.5	1.5				0.7	1.2				
01	A H Z	22.29	18.4	2.0				0.4	0.4		7.6	2.6	
01	A H Z	22.29	17.8	1.3				3.4	4.4				
02	A H Z	01.16	51.6	0.7				4.0	4.8				
02	A H Z	01.16	51.9	0.8				1.6	2.0		3.5	2.8	
02	A H Z	01.16	52.5	1.1				1.6	0.8				
02	A H Z	04.25	15.2	1.0				0.8	0.6				
02	A H Z	04.25	15.2	1.2				0.8	0.7		2.5	2.3	
02	A H Z	04.25	14.9	0.6				3.3	6.0				
02	A H Z	04.25	36.9	1.0				1.5	0.7				
02	A H Z	04.25	36.5	1.0				1.8	1.0		4.3	2.6	
02	A H Z	04.25	36.4	1.0				6.0	3.7				
02	A H Z	04.33	34.6	0.9				1.3	1.0				
02	A H Z	04.33	35.5	1.7				0.4	0.6		2.5	2.5	
02	A H Z	04.33	34.0	0.7				3.4	2.5				
02	A H Z	06.45	12.8	0.9				1.2	2.2				
02	A H Z	06.45	13.1	1.2				0.6	0.3		2.4	2.4	
02	A H Z	06.45	12.1	0.5									
02	A H Z	07.11	16.0	0.9				1.6	3.1				
02	A H Z	07.11	16.3	1.2				0.8	0.6		2.5	2.6	
02	A H Z	07.11	15.4	0.5				21.9					
02	A H Z	08.20	20.7	1.4				2.2	4.0				
02	A H Z	08.20	19.8	0.8				7.1	7.1		1.8	3.3	
02	A H Z	08.20	20.4	1.2				5.8	3.4				
02	A H Z	10.40	02.6	0.7				0.6	1.3				
02	A H Z	10.40	02.8	1.0				0.9	0.9		3.8	2.3	
02	A H Z	10.40	03.4	1.1				0.4	0.3				
02	A H Z	12.21	27.4	0.9				3.2	2.6				
02	A H Z	12.21	28.1	0.4				0.5	0.7		3.3	2.7	
02	A H Z	12.21	26.8	0.6				6.0	6.5				
02	A H Z	13.23	21.9	1.0				1.5	1.8				
02	A H Z	13.23	21.4	1.0				5.2	4.1		2.9	3.0	
02	A H Z	13.23	21.7	0.8				9.5	7.5				
02	A H Z	14.27	48.0	1.0				12.1	13.1				
02	A H Z	14.27	47.7	0.8				9.6	11.6		2.2	3.5	
02	A H Z	14.27	48.0	0.8				6.8	5.4				
02	A H Z	16.07	16.5	1.0				10.0	13.4				
02	A H Z	16.07	16.3	0.9				3.3	3.2		5.3	3.5	
02	A H Z	16.07		1.0				2.9	2.8				
02	A H Z	16.10	24.6	1.5				2.4	3.0				
02	A H Z	16.10	25.5	1.9				0.9	2.8		2.1	2.8	
02	A H Z	16.10	24.5	1.2				3.6	5.6				
02	A H Z	18.26	24.6	0.8				1.8	1.3				
02	A H Z	18.26	24.5	0.7				1.2	1.3		2.0	2.5	
02	A H Z	18.26	25.0	0.9				16.42	14.7				
02	A H Z	19.23		1.4				12.3	3.9				
02	A H Z	19.23		2.0				7.0	7.3		2.5	3.7	
02	A H Z	19.23		1.2				16.42	20.1		0.5		
02	A H Z	17.06	5										

Oct. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
05	A H Z	20.06	26.4	0.9				1.1	2.5	2.0	2.7	
	A H Z	20.06	25.6	0.6				2.2	2.8			
	A H Z	20.06	27.1	1.0				0.6	1.0			
05	A H Z	20.38	09.3	0.6				10.8	30.5	3.3	3.6	
	A H Z	20.38	09.8	1.2				1.0	3.4			
	A H Z	20.38	09.7	0.9								
06	A H Z	00.05	06.3	1.2				0.9	0.9	4.1	2.5	
	A H Z	00.05	06.3	1.4				0.8	0.8			
	A H Z	00.05	05.8	0.8				3.1	6.3			
06	A H Z	01.12	29.7	0.4				7.2	11.2	2.1	2.5	
	A H Z	01.12	30.1	0.9				0.4	0.6			
	A H Z	01.12	30.2	0.8				0.8	0.7			
06	A H Z	06.44	47.9	1.1				1.0	1.0			
	A H Z	06.44	48.0	1.4				0.9	0.8	4.1	2.5	
	A H Z	06.44	47.5	0.7				10.4	8.2			
06	A H Z	09.35	09.4	0.5				3.6	4.8			
	A H Z	09.35	10.3	0.9				0.9	0.8	1.4	2.5	
	A H Z	09.35	10.0	0.6				0.8	1.0			
06	A H Z	11.05	36.7	1.6				2.9	2.0			
	A H Z	11.05	37.5	2.2				4.7	3.3	6.7	3.6	
	A H Z	11.05	36.4	1.2				4.1	5.0			
06	A H Z	11.31	40.3	0.7				28.0	32.1			
	A H Z	11.31	40.7	1.0				6.4	8.0	3.9	3.9	
	A H Z	11.31	40.8	1.1				9.0	5.3			
06	A H Z	12.00	05.6	0.6				3.9	4.4			
	A H Z	12.00	06.2	0.7				0.6	0.5	2.4	2.3	
	A H Z	12.00	06.0	1.0				0.8	1.3			
06	A H Z	12.34	40.1	1.4				0.8	0.7			
	A H Z	12.34	40.7	2.2				0.4	0.3	3.6	2.5	
	A H Z	12.34	39.6	1.1				0.8	0.8			
06	A H Z	16.13	40.7	0.6								
	A H Z	16.13	41.6	1.1				5.0	5.4	3.1	3.3	
	A H Z	16.13	41.5	1.2				5.8	5.6			
06	A H Z	16.13	50.2	0.4				6.6	10.4			
	A H Z	16.13	51.2	0.8				2.2	2.0	1.6	2.8	
	A H Z	16.13	50.8	0.8				1.4	1.0			
06	A H Z	16.28	28.0	0.5				5.9	7.0			
	A H Z	16.28		1.0				1.0	1.1	2.7	2.7	
	A H Z	16.28	28.6	0.8				1.2	1.0			
06	A H Z	17.01	19.7	0.9				1.1	1.6			
	A H Z	17.01	20.3	1.4				1.0	1.0	4.3	2.6	
	A H Z	17.01	19.6	0.7				1.3	2.4			
06	A H Z	17.27	18.0	0.5				4.5	3.4			
	A H Z	17.27	18.7	0.8				0.8	0.7	2.1	2.4	
	A H Z	17.27	18.5	0.8				1.0	1.2			
06	A H Z	17.30	20.0	1.0				1.1	1.8			
	A H Z	17.30	19.5	1.1				5.3	8.0	4.4	3.2	
	A H Z	17.30	19.9	0.9				10.2				
06	A H Z	18.34	44.7	1.1				1.6	1.9			
	A H Z	18.34	44.7	1.1				2.4	3.5	5.8	2.9	
	A H Z	18.34	45.5	1.5				0.9	1.1			
06	A H Z	19.06	37.7	1.6				1.8	2.1			
	A H Z	19.06	38.0	2.0				1.0	0.7	8.3	3.0	
	A H Z	19.06	37.5	1.4				3.6	3.9			
06	A H Z	21.01	33.4	1.2				1.0	1.4			
	A H Z	21.01	33.2	1.6				1.8	2.4	6.1	3.0	
	A H Z	21.01	33.0	1.0				4.0	6.4			
06	A H Z	21.07	44.8	0.9				7.1	7.1			
	A H Z	21.07	45.2	1.1				4.0	5.6	4.0	3.4	
	A H Z	21.07	44.7	0.8								
07	A H Z	03.11	37.6	1.3				1.4	2.5			
	A H Z	03.11	37.0	1.0				4.4	4.6	3.4	3.1	
	A H Z	03.11	37.7	1.0				3.4	3.3			
07	A H Z	05.31	12.1	0.8				2.4	1.8			
	A H Z	05.31	12.9	1.2				0.6	0.7	3.2	2.5	
	A H Z	05.31	12.1	0.6				4.8	3.4			
07	A H Z	06.22	52.8	1.5				2.0	2.3			
	A H Z	06.22	51.8	0.9				6.0	5.4	4.7	3.2	
	A H Z	06.22	53.1	1.6				1.0	1.1			
07	A H Z	06.41	01.7	1.6				7.4	4.7			
	A H Z	06.41	00.4	1.1				18.2	15.0	6.2	4.0	
	A H Z	06.41	02.0	1.9				2.4	3.6			
07	A H Z	06.48	22.4	1.0				1.8	2.4			
	A H Z	06.48	21.8	0.6				2.8	3.1	1.0	2.7	
	A H Z	06.48	22.8	1.0				1.0	0.9			
07	A H Z	08.55	14.3	1.0				1.4	5.3			
	A H Z	08.55	13.6	0.7				6.6	6.1	3.7	3.2	
	A H Z	08.55	15.1	1.3				1.1	2.1			
07	A H Z	08.55	33.6	0.9				1.8	2.0			
	A H Z	08.55	34.2	1.0				0.8	0.6	1.1	2.4	
	A H Z	08.55	33.2	0.5				9.2				
07	A H Z	09.14	15.5	0.9				2.5	2.4			
	A H Z	09.14	15.9	1.4				1.2	1.0	3.0	2.7	
	A H Z	09.14	15.3	0.5								
07	A H Z	09.14	36.6	0.8				2.0	2.6			
	A H Z	09.14	37.1	1.1				1.8	1.9	2.3	2.7	
	A H Z	09.14	36.2	0.6								
07	A H Z	11.05	56.7	0.6				1.6	3.3			
	A H Z	11.05	56.9	0.7				1.0	1.6	2.1	2.5	
	A H Z	11.05	57.1	0.9				0.4				
07	A H Z	15.17	10.3	1.1				1.4	2.0			
	A H Z	15.17	10.2	1.0				5.5	7.2	4.4	3.1	
	A H Z	15.17	10.1	1.0				22.4	8.6			
07	A H Z	16.29	09.0	0.6				1.0	3.7			
	A H Z	16.29	09.2	0.7				4.0	4.8	2.2	2.8	
	A H Z	16.29	09.8	1.0				1.2	1.7			
07	A H Z	20.20	45.6	1.0				2.4	2.6			
	A H Z	20.20	45.2	0.9				3.6	3.7	2.8	2.9	
	A H Z	20.20	45.6	0.8				7.0	1.7			
07	A H Z	20.50	18.1	1.4				1.6	4.7			
	A H Z	20.50	16.7	0.7				7.3	6.3	3.9	3.3	
	A H Z	20.50	18.4	1.5				1.3	1.6			
07	A H Z	23.02	12.1	1.1				1.3	2.5			
	A H Z	23.02	12.3	2.0				1.3	2.1	3.6	3.1	
	A H Z	23.02	11.9	1.3				2.9	2.8			
07	A H Z	23.03	41.7	1.6				0.7	1.0			
	A H Z	23.03	42.3	2.0				0.5	0.4	8.5	2.6	
	A H Z	23.03	41.5	1.4				2.6	2.9			
08	A H Z	01.44	06.1	1.2				0.6	1.2			
	A H Z	01.44	06.2	1.4				1.2	1.3	4.7	2.7	
	A H Z	01.44	05.6	0.9				3.6	3.3			
08	A H Z	07.47	20.5	0.7				2.8	3.8			
	A H Z	07.47	20.4	1.0				0.6	0.8	3.4	2.5	
	A H Z	07.47	21.0	1.0				0.6	0.4			
08	A H Z	09.36	54.6	1.1				1.0	1.2			
	A H Z	09.36	55.2	1.3				0.4	0.3	1.8	2.2	
	A H Z	09.36	54.1	0.5				9.3	6.8			
08	A H Z	12.01	45.7	1.0				0.8	0.8			
	A H Z	12.01	46.5	1.7				0.5	0.6	4.5	2.4	
	A H Z	12.01	45.3	0.8				1.8	2.6			
08	A H Z	16.01	15.3	1.1				2.1	6.5			
	A H Z	16.01	14.5	0.7				3.8	4.6	2.9	3.2	
	A H Z	16.01	15.6	1.2				4.2	4.1			
08	A H Z	19.13	33.7	0.7				1.				

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Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
13	A	18.13	00.6	1.4				1.6	2.2				
	H	18.13	00.0	0.8				4.2	3.4	2.3	3.0		
	Z	18.13	00.9	1.2				1.3	2.1				
13	A	18.46	20.9	1.0				1.1	3.9				
	H	18.46	20.4	0.7				3.4	3.4	1.4	3.0		
	Z	18.46	21.0	0.9				2.4	1.6				
13	A	19.59	55.2	1.1				3.6	2.6				
	H	19.59	54.8	0.7				10.5	7.0	0.9	3.3		
	Z	19.59	55.5	1.0				6.7	4.0				
13	A	22.09	58.8	0.9				10.4	8.1				
	H	22.09	58.3	0.6				4.4	6.1	1.4	3.3		
	Z	22.09	58.7	0.9				4.4	4.9				
13	A	23.51	27.4	1.0				1.1	1.2				
	H	23.51	27.0	0.9				2.4	3.1	2.8	2.7		
	Z	23.51	27.4	0.9				3.5	4.2				
14	A	02.28	34.5	1.3				3.2	2.0				
	H	02.28	35.2	1.8				1.0	1.2	7.4	3.1		
	Z	02.28	34.7	1.3				13.3	3.6				
14	A	07.54	53.4	0.9				1.3	1.6				
	H	07.54	53.6	1.1				1.9	2.2	1.6	2.7		
	Z	07.54	53.0	0.5				18.6					
14	A	08.15	54.7	1.0				1.0	2.1				
	H	08.15	53.9	0.9				8.6	11.8	1.7	3.3		
	Z	08.15	54.4	0.8				2.6	3.0				
14	A	08.16	01.2	1.0				1.4	2.2				
	H	08.16	00.4	0.9				4.5	6.2	2.5	3.1		
	Z	08.16	00.9	0.8				3.6	3.8				
14	A	11.45	14.4	1.4				0.9	1.6				
	H	11.45	13.3	0.8				1.6	1.6	4.5	2.6		
	Z	11.45	15.0	1.5				0.8	0.8				
14	A	13.27	18.4	1.1				1.0	1.5				
	H	13.27	18.1	1.0				1.4	2.3	4.3	2.7		
	Z	13.27	18.3	1.0				4.2	2.8				
14	A	14.02	40.8	0.9				1.6	2.4				
	H	14.02	40.8	0.8				3.5	3.4	2.5	2.8		
	Z	14.02	40.5	0.8				6.4	5.6				
14	A	14.22	51.0	1.0				0.6	1.6				
	H	14.22	50.7	1.0				3.3	4.1	2.6	2.8		
	Z	14.22	50.8	0.8				18.6	10.5				
14	A	14.50	38.3	0.8				1.5	3.2				
	H	14.50	37.9	0.8				4.8	6.1	2.5	3.0		
	Z	14.50	38.5	0.9				3.0	1.5				
14	A	17.53	03.7	1.0				0.7	1.0				
	H	17.53	03.0	0.8				4.6	2.6	4.0	2.7		
	Z	17.53	03.9	1.1				2.4	1.8				
14	A	20.18	48.7	0.5				0.4	0.2				
	H	20.18	48.3	0.7				1.1	1.0	1.5	1.6		
	Z	20.18	47.8	0.9				1.9	1.3				
14	A	22.02	20.0	1.3				2.3	4.6				
	H	22.02	20.9	1.9				1.0	1.1	6.0	3.2		
	Z	22.02	20.0	1.0				3.3	9.7				
14	A	22.11	00.6	1.5				0.6	1.5				
	H	22.11	00.7	2.0				0.7	0.6	8.4	2.8		
	Z	22.11	00.0	1.4				3.4	5.8				
14	A	22.22	15.7	1.1				2.0	2.0				
	H	22.22	17.1	1.1				1.0	0.8	2.0	2.5		
	Z	22.22		0.7				8.6	6.7				
15	A	01.50	08.7	0.7				1.2	2.3				
	H	01.50	09.3	1.4				0.7	1.0	3.1	2.6		
	Z	01.50	08.7	0.6				3.5	3.2				
15	A	05.04	11.7	1.2				0.6	0.7				
	H	05.04	11.2	1.0				0.7	1.0	4.1	2.3		
	Z	05.04	11.8	1.0				2.8	1.8				
15	A	08.02	18.2	0.6				1.1	1.6				
	H	08.02	18.6	1.0				1.0	1.0	1.4	2.2		
	Z	08.02	17.9	0.5				19.2	8.1				
15	A	09.48	22.5	1.1				0.6	0.8				
	H	09.48	22.5	1.0				1.9	1.8	3.6	2.5		
	Z	09.48	22.5	0.9				4.8	2.2				
15	A	10.25	34.2	1.3				1.2	1.4				
	H	10.25	33.9	1.1				1.0	0.7	6.5	2.6		
	Z	10.25	35.0	1.5				0.7	0.8				
15	A	11.41	11.8	2.0				0.6	1.3				
	H	11.41	10.7	1.5				4.2	6.3	9.0	3.4		
	Z	11.41	12.2	2.1				0.9	0.4				

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Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											h		
18	A	10.48	32.6	1.1				2.0	3.0				
	H	10.48	32.0	1.0				7.2	5.4	4.2	3.3		
	Z	10.48	32.6	1.0				11.4	11.8				
18	A	11.31	07.8	1.0				0.6	0.6				
	H	11.31	07.4	0.7				1.4	1.6	1.9	2.2		
	Z	11.31	08.0	0.9				3.0	1.8				
18	A	14.02	10.1	1.5				0.6	1.2				
	H	14.02	10.6	2.0				0.4	0.2	7.9	2.6		
	Z	14.02	10.0	1.3				2.0	4.8				
18	A	20.18	53.2	2.3				1.9	1.4				
	H	20.18	54.2	3.1				3.0	2.3	9.0	3.6		
	Z	20.18	53.1	2.0				2.8	4.5				
18	A	22.42	04.8	0.5				5.3	8.6				
	H	22.42	05.4	0.9				4.4	6.0	2.2	3.2		
	Z	22.42	05.3	0.7				2.4	2.0				
19	A	00.55	11.7	1.6				4.0	6.2				
	H	00.55	12.0	2.0				2.9	4.0	4.5	3.8		
	Z	00.55	11.7	1.0				0.8	0.2				
19	A	05.59	29.4	1.7				3.3	3.8				
	H	05.59	29.9	2.0				2.6	2.7	8.6	3.5		
	Z	05.59	29.4	1.4				2.7	2.9				
19	A	06.25	33.3	1.6				1.7	1.8				
	H	06.25	33.6	1.8				1.4	1.6	7.5	3.1		
	Z	06.25	33.2	1.3				2.9	3.6				
19	A	09.32	21.8	1.5				12.2	11.8				
	H	09.32	22.1	1.4				3.4	5.4	6.0	3.8		
	Z	09.32	21.6	1.2				15.8	3.9				
19	A	09.38	50.2	1.6				7.6	7.1				
	H	09.38	50.7	1.8				3.1	4.2	7.2	3.6		
	Z	09.38	50.2	1.3									
19	A	15.04	19.3	1.1				1.2	0.7				
	H	15.04	18.8	1.1				2.1	2.4	3.4	2.6		
	Z	15.04	19.4	0.9				6.0	5.2				
19	A	16.16	43.4	1.4				1.6	2.0				
	H	16.16	44.1	1.9				1.0	1.3	7.4	3.0		
	Z	16.16	43.7	1.2				4.5	2.8				
19	A	18.44	02.6	0.5				3.2	2.7				
	H	18.44	03.2	1.0				0.5	0.6	2.8	2.3		
	Z	18.44	03.2	0.8				2.8	1.7				
19	A	23.11	06.0	1.1				0.7	1.4				
	H	23.11	05.8	1.2				0.9	1.0	6.0	2.5		
	Z	23.11	06.7	1.5				0.8	0.6				
20	A	01.32	49.2	1.0				1.8	1.8				
	H	01.32	48.7	0.8				9.4	7.1	1.7	3.0		
	Z	01.32	49.3	0.8				3.8	2.4				
20	A	02.11	56.2	1.3				1.2	4.5				
	H	02.11	55.3	1.0				8.0	6.3				
	Z	02.11	56.2	0.8				3.3	1.6	3.5	2.0		
20	A	02.42	17.8	0.9				1.8	5.2				
	H	02.42	17.2	0.6				2.8	3.7	2.2	3.0		
	Z	02.42	17.2	1.0				1.4					
20	A	05.48	23.4	0.8				0.8	2.3				
	H	05.48	22.9	0.7				1.0	1.6	2.8	2.5		
	Z	05.48	23.9	1.0				0.8	0.2				

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Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
23	A	14.40	39.5	1.2				9.0	4.8			
	H	14.40	40.0	1.8				8.2	11.1	5.6	4.0	
	Z	14.40	39.3	1.0								
23	A	14.41	25.2	1.1				1.6	2.4			
	H	14.41	25.9	1.6				1.2	1.8	5.6	3.0	
	Z	14.41	25.1	1.0				3.3	2.9			
23	A	15.24	33.7	1.2				1.2	1.2			
	H	15.24	34.3	1.7				1.4	2.0	1.4	2.9	
	Z	15.24		0.5				8.5	8.3			
23	A	16.39	43.6	0.8				0.6	0.8			
	H	16.39	43.3	0.8				1.8	2.4	2.5	2.4	
	Z	16.39	43.3	0.8				1.7	0.9			
23	A	23.42	37.0	1.0				2.9	3.3			
	H	23.42	36.8	1.1				7.7	5.9	5.0	3.3	
	Z	23.42	37.0	1.0				14.2				
24	A	00.22	48.5	0.7				2.2	4.0			
	H	00.22	49.1	1.0				0.7	0.7	3.7	2.5	
	Z	00.22	49.4	1.1				2.4	2.4			
24	A	00.31	36.2	0.7				3.8	4.4			
	H	00.31	37.2	1.3				1.3	1.2	3.4	2.8	
	Z	00.31	36.1	0.7				2.6	4.8			
24	A	01.27	57.4	1.0				2.0	1.4			
	H	01.27	57.1	0.9				3.4	4.0	2.7	2.8	
	Z	01.27	57.3	0.8				3.7	2.0			
24	A	09.10	42.9	1.2				0.9	1.0			
	H	09.10	43.8	1.9				0.5	0.7	5.5	2.6	
	Z	09.10	42.8	1.0				3.0				
24	A	11.08	20.6	1.6				4.7	5.9			
	H	11.08	21.1	2.0				3.4	3.3	8.5	3.7	
	Z	11.08	20.7	1.4				6.6				
24	A	11.09	08.6	1.5				0.6	1.0			
	H	11.09	08.7	2.0				0.5	0.4	7.5	2.6	
	Z	11.09	08.3	1.2				2.0				
24	A	17.34	45.3	0.9				3.1	2.6			
	H	17.34	45.2	1.0				1.9	3.6	4.4	3.0	
	Z	17.34	45.9	1.3				2.9				
25	A	02.19	30.5	1.0				1.0	0.9			
	H	02.19	29.9	0.6				2.7	2.8	2.5		
	Z	02.19	30.7	0.7				1.3				
25	A	14.19	06.8	1.3				1.4	1.5			
	H	14.19	07.3	2.0				1.6	2.0	6.0	3.0	
	Z	14.19	06.3	1.0				8.0				
25	A	17.06	30.1	1.0				1.4	0.4			
	H	17.06	29.6	0.7				1.1	2.3	3.0	2.5	
	Z	17.06	30.8	1.5				1.2	0.3			
25	A	17.57	07.1	1.0				2.7	5.8			
	H	17.57	05.1	1.0				3.0	4.2	5.2	3.3	
	Z	17.57	07.1	1.4				3.8	1.8			
25	A	18.01	13.8	1.0				0.6	0.8			
	H	18.01	14.4	1.5				1.0	1.0	4.8	2.5	
	Z	18.01	13.6	0.8				3.0	4.8			
26	A	00.08	17.2	1.4				1.0	1.2			
	H	00.08	17.7	1.7				0.6	0.5	7.4	2.6	
	Z	00.08	17.0	1.2				3.7	3.3			
26	A	01.24	01.4	1.0				1.2	3.9			
	H	01.24	00.8	0.9				7.3	9.1	3.7	3.3	
	Z	01.24	01.4	1.0				2.5	2.0			
26	A	01.26	06.1	1.0				5.6	9.4			
	H	01.26	05.2	0.5				9.0	7.8	2.3	3.4	
	Z	01.26	06.5	1.2				2.5	3.6			
26	A	01.56	18.8	1.1				1.4	4.2			
	H	01.56	17.7	0.7				4.4	4.1	4.1	3.1	
	Z	01.56	19.1	1.3				1.0	0.8			
26	A	02.12	29.1	0.7				3.3	5.0			
	H	02.12	29.4	0.9				2.5	4.0	3.5	3.0	
	Z	02.12	30.4	1.1				2.2	1.2			
26	A	02.22	19.8	1.0				2.0	4.1			
	H	02.22	19.1	0.6				6.0	4.9	3.5	3.1	
	Z	02.22	20.5	1.3				1.5	1.2			
26	A	03.04	12.0	2.0				19.0	26.0			
	H	03.04	10.7	1.2				33.0	48.0	6.0	4.8	
	Z	03.04	12.2	2.2				15.0				
26	A	03.11	44.6	1.7				0.8	1.6			
	H	03.11	43.5	1.2				5.3	5.4	7.1	3.2	
	Z	03.11	45.0	1.9				1.4	1.5			

Oct. 1966 - Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
28	A	04.25	58.3	0.5				0.8	2.2			
	H	04.25	58.8	1.0				3.2	2.3	4.8	2.9	
	Z	04.25	59.0	0.9				0.8	0.4			
28	A	05.56	13.1	0.9				1.2	1.6			
	H	05.56	13.9	1.5				3.2	2.9	1.6	2.6	
	Z	05.56	12.7	0.8				2.2	1.6			
28	A	06.08	29.9	1.3				0.8	1.2			
	H	06.08	30.9	1.8				0.5	0.6	5.1	2.3	
	Z	06.08	29.8	1.0				0.3	0.1			
28	A	08.11	11.0	1.1				0.6	1.0			
	H	08.11	10.8	1.0				0.8	1.3	5.8	2.6	
	Z	08.11	10.8	1.1				0.2	0.1			
28	A	10.57	54.0	1.5				0.4	1.3			
	H	10.57	52.9	0.9				3.1	3.3	7.6	3.1	
	Z	10.57	54.1	1.5				0.4	0.2			
28	A	15.30	58.4	0.9				2.0	1.0			
	H	15.30	58.2	1.0				0.5	0.9	2.9	2.1	
	Z	15.30	58.1	0.9				0.4	0.2			
28	A	16.51	01.2	1.8				0.8	0.4			
	H	16.51	00.3	1.2				1.5	1.1	2.5	2.3	
	Z	16.51	01.3	1.9				1.6	1.1			
28	A	17.04	56.7	0.7				1.5	1.3			
	H	17.04	56.6	0.7				8.0	6.0	4.6	3.0	
	Z	17.04	56.8	0.7				0.8	0.6			
28	A	17.06	57.6	1.8				0.5	0.6			
	H	17.06	56.2	1.1				1.4	2.0	6.2	2.6	
	Z	17.06	57.6	1.8				0.9	0.4			
28	A	17.26	36.7	1.8				0.9	0.4			
	H	17.26	35.5	1.3				0.9	0.4	2.3		
	Z	17.26	37.0	1.9				0.2				
28	A	17.54	39.1	1.8				0.4	1.0			
	H	17.54	38.0	1.2				0.5	1.6	2.6		
	Z	17.54	39.4	1.9				0.2	0.1			
28	A	20.03	11.5	1.9				0.2	0.8			
	H	20.03	12.2	2.5				2.4	2.6	3.9	2.5	
	Z	20.03	11.5	2.2				0.2				
28	A	20.03	34.3	2.4				1.0	1.2	3.7	2.8	
	H	20.03	34.9	3.2				7.4	6.3			
	Z	20.03	33.8	2.4				0.7	2.6			
28	A	20.46	22.2	1.7				5.4	3.4	5.6	3.4	
	H	20.46	20.7	1.1				1.4	1.0			
	Z	20.46	22.3	1.8				0.9	2.7			
28	A	20.47	09.3	1.1				1.1	2.4			
	H	20.47	09.2	1.1				5.8	3.3	5.4	3.4	
	Z	20.47	08.8	0.9				1.3	2.4			
28	A	21.24	05.2	0.5				0.7	1.1			
	H	21.24	06.1	1.0				0.4	0.9	4.3	2.3	
	Z	21.24	05.3	0.6				0.4	0.3			
28	A	23.12	30.9	1.2				0.8	0.8			
	H	23.12	31.4	1.7				3.0	2.8	3.5	2.6	
	Z	23.12		0.9				5.0	2.9			
29	A	17.46	22.6	1.0				0.9	0.9			
	H	17.46	22.9	1.1				0.2	0.2	4.1	1.9	
	Z	17.46	23.7	1.4				1.8	2.2			
29	A	20.23	29.5	1.9				1.1	1.8			
	H	20.23	28.5	1.2				1.1	1.0	2.4	2.6	
	Z	20.23	29.8	1.8				3.8	5.0			
29	A	20.28	06.2	1.0				8.0	6.4			
	H	20.28		1.0				23.0	28.0	5.7	4.1	
	Z	20.28	06.3	1.0				12.6				
29	A	20.32	46.2	0.9				0.8	2.3			
	H	20.32	45.6	0.6				6.2	5.1	2.9	3.1	
	Z	20.32	46.6	0.9				5.0	3.5			
29	A	22.13	27.9	1.0				8.1	15.0			
	H	22.13	27.7	0.8				1.2	1.2	2.3	2.9	
	Z	22.13	28.0	1.0				1.2	1.6			
30	A	00.54	20.1	0.8				0.6	1.4			
	H	00.54	19.4	0.5				1.2	0.9	2.0	2.2	
	Z	00.54	20.2	1.0				1.2	0.8		</	

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											P-Time (J.S.T.)		
01	A H Z	08.04	03.3	1.0				0.4	0.7	3.0	2.1		
	A H Z	08.04	02.3	0.7				0.9	1.2				
	A H Z	08.04	03.7	1.1				0.5	1.0				
01	A H Z	10.06	13.7	1.3				3.3	2.4	4.1	3.3		
	A H Z	10.06	13.0	0.8				6.8	7.3				
	A H Z	10.06	13.5	1.3				2.8	3.1				
01	A H Z	15.35	39.0	1.2				0.4	1.0	4.0	2.4		
	A H Z	15.35	38.3	0.9				1.0	1.4				
	A H Z	15.35	38.7	1.1				0.6					
01	A H Z	17.19	20.4	0.7				1.1	1.8	3.0	2.4		
	A H Z	17.19	21.1	1.1				0.9	0.7				
	A H Z	17.19	20.2	0.7					4.5				
01	A H Z	21.25	16.5	0.5				3.0	5.0	2.1	2.7		
	A H Z	21.25	17.3	1.3				1.0	1.0				
	A H Z	21.25	16.4	0.6									
01	A H Z	22.28	39.2	1.2				0.2	0.6				
	A H Z	22.28	38.3	0.8				1.1	2.0	3.7	2.4		
	A H Z	22.28	39.1	1.2				0.3	0.6				
01	A H Z	23.22	36.3	1.0				1.0	0.4				
	A H Z	23.22	36.2	0.9				1.4	1.2	3.2	2.4		
	A H Z	23.22	36.4	0.9				2.2	1.8				
01	A H Z	23.49	04.5	0.9					0.8				
	A H Z	23.49	04.0	0.7				1.5	1.6	3.4	2.2		
	A H Z	23.49	05.0	1.3									
01	A H Z	23.52	05.5	1.2				1.2	1.1				
	A H Z	23.52	05.3	1.4				1.8	1.8	5.4	2.8		
	A H Z	23.52	04.9	0.9					20.6				
02	A H Z	00.36	12.4	2.7				0.2	0.9	11.6	3.2		
	A H Z	00.36	11.5	2.0				2.3	2.0				
	A H Z	00.36	13.0	2.7				0.5	0.2				
02	A H Z	01.05	55.9	0.8				0.4	0.7				
	A H Z	01.05	55.3	0.8				1.0	1.0	3.5	2.0		
	A H Z	01.05	55.8	1.0				0.8	0.2				
02	A H Z	01.38	32.3	1.1				0.4	0.4				
	A H Z	01.38	32.2	1.3				0.4	0.4	3.7	1.9		
	A H Z	01.38	31.6	0.8				2.0	5.2				
02	A H Z	03.28	44.4	0.8				0.2	1.2				
	A H Z	03.28	44.1	0.6				0.5	0.7	2.5	2.0		
	A H Z	03.28	44.9	1.0				0.3					
02	A H Z	08.39	22.3	1.5				0.8	0.6				
	A H Z	08.39	22.9	1.8				0.6	0.4	7.9	2.5		
	A H Z	08.39	22.1	1.3				1.9	3.3				
02	A H Z	12.43	58.0	1.0				1.2	1.9				
	A H Z	12.43	57.7	1.0				2.8	3.6	4.1	2.9		
	A H Z	12.43	57.7	1.0				10.0	6.8				
02	A H Z	13.08	54.2	0.9				0.8	1.2				
	A H Z	13.08	53.8	0.6				1.2	2.4	3.4	2.5		
	A H Z	13.08	54.9	1.2				0.7	0.2				
02	A H Z	13.21	13.4	1.4				0.2	0.4				
	A H Z	13.21	14.3	2.2				0.6	0.8	6.5	2.5		
	A H Z	13.21	13.4	1.4				1.0	0.6				
02	A H Z	14.28	49.9	1.0				0.6	0.7				
	A H Z	14.28	49.9	1.0				0.3	0.3	1.9	1.9		
	A H Z	14.28	51.5	0.7				0.2					
02	A H Z	21.46	34.0	1.1				4.0	2.1				
	A H Z	21.46	33.5	0.9				12.5	9.0	4.7	3.5		
	A H Z	21.46	34.4	1.2				4.7	4.7				
02	A H Z	23.26	42.8	1.1				2.2	2.4				
	A H Z	23.26	42.5	1.1				4.8	3.0	4.6	3.1		
	A H Z	23.26	42.8	1.0					5.6				
02	A H Z	23.44	48.7	1.8				0.6	1.4				
	A H Z	23.44	47.5	1.2				3.4	2.8	6.2	3.1		
	A H Z	23.44	49.2	1.7				0.6	0.6				
03	A H Z	01.55	06.3	1.0				2.8	2.9				
	A H Z	01.55	05.4	1.0				6.0	7.2	4.3	3.2		
	A H Z	01.55	06.4	1.0				17.5	11.6				
03	A H Z	01.56	32.0	1.0				0.9	0.8				
	A H Z	01.56	31.2	0.9				1.0	0.6	3.4	2.3		
	A H Z	01.56	32.2	0.9				3.0	1.2				
03	A H Z	04.09	38.4	1.0				2.3	4.0				
	A H Z	04.09	38.0	1.1				3.3	3.7	5.1	3.1		
	A H Z	04.09	39.4	1.4				2.9	2.5				
03	A H Z	04.10	17.0	0.9				2.4	0.6				
	A H Z	04.10	16.4	1.0				0.5	0.6	4.7	2.0		
	A H Z	04.10	18.0	1.4				0.4	0.1				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											P-Time (J.S.T.)		
05	A H Z	11.01	18.6	1.1				0.2	0.2				
	A H Z	11.01	18.4	0.9				0.5	0.4				
	A H Z	11.01	18.8	1.0				0.6	0.6	3.2	1.6		
05	A H Z	11.07	28.4	1.5				0.5	0.7				
	A H Z	11.07	29.2	2.0				0.8	0.4	5.6	2.6		
	A H Z	11.07	28.5	1.0				1.3	2.9				
05	A H Z	11.32	15.6	2.9				0.5	2.4				
	A H Z	11.32	14.7	2.2				4.0	3.5	11.7	3.7		
	A H Z	11.32	16.2	3.0				0.8					
05	A H Z	12.48	35.4	1.2				0.3	1.0				
	A H Z	12.48	34.2	1.2				0.8	0.4	6.5	2.4		
	A H Z	12.48	35.9	1.4				0.2					
05	A H Z	12.59	40.6	1.1				0.2	0.4				
	A H Z	12.59	40.3	1.3				0.3	0.2	6.4	1.8		
	A H Z	12.59	41.6	1.5				0.2					
05	A H Z	16.49	24.2	1.8				0.2	0.4				
	A H Z	16.49	23.0	1.1				2.3	1.6	3.0	2.6		
	A H Z	16.49	24.7	1.7				0.4	0.2				
05	A H Z	18.07	37.7	1.0				0.9	1.4				
	A H Z	18.07	37.5	1.2				1.9	2.2	5.3	2.7		
	A H Z	18.07	38.6	1.6				0.8	0.8				
06	A H Z	02.43	31.3	2.8				0.4	2.1				
	A H Z	02.43	30.5	2.2				3.4	2.4	13.5	3.6		
	A H Z	02.43	32.2	2.8				0.8	1.0				
06	A H Z	02.54	08.5	2.0				1.8	3.4				
	A H Z	02.54	07.4	1.4				10.0	15.9	7.6	4.0		
	A H Z	02.54	08.9	2.1				1.8	2.2				
06	A H Z	05.54	33.6	3.0					0.7				
	A H Z	05.54	32.8	2.2				0.8	1.1	9.0	3.1		
	A H Z	05.54	34.6	3.0				0.4					
06	A H Z	05.59	09.8	3.1				0.2	0.4				
	A H Z	05.59	08.8	2.5				1.4	2.4	14.3	3.2		
	A H Z	05.59	10.4	3.1				0.4					

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
08	A	00.05	56.8	0.9				1.3	2.1			
	H	00.05	56.3	0.6				2.6	3.0	1.9	2.7	
	Z	00.05	57.2	1.0				1.8	2.6			
08	A	01.17	19.5	1.0				0.6	1.0			
	H	01.17	19.5	1.0				1.0	0.9	4.0	2.4	
	Z	01.17	20.8	1.6				0.9	0.3			
08	A	01.29	25.1	1.3				0.6	1.2			
	H	01.29	24.4	0.8				1.8	1.8	4.2	2.6	
	Z	01.29	25.6	1.4				1.7	0.9			
08	A	01.37	45.5	1.1				1.8	4.2			
	H	01.37	45.0	0.7				5.4	4.4	3.2	3.1	
	Z	01.37	46.2	1.2				1.6	4.1			
08	A	01.46	21.5	0.9				2.0	4.7			
	H	01.46	20.9	0.6				5.2	3.7	2.7	3.0	
	Z	01.46	21.7	1.1				1.4	1.9			
08	A	03.59	05.2	1.0				3.2	4.5			
	H	03.59	05.0	1.0				6.6	5.6	3.7	3.3	
	Z	03.59	05.4	0.9					13.5			
08	A	03.59	36.4	1.0				0.8	1.0			
	H	03.59	36.3	0.9				2.4	1.4	2.9	2.6	
	Z	03.59	36.7	0.9				2.4	1.6			
08	A	06.12	52.1	0.9				1.4	3.5			
	H	06.12	51.6	0.6				5.4	4.0	2.4	2.9	
	Z	06.12	52.6	1.0				0.9	0.6			
08	A	08.56	51.7	0.8				0.4	1.5			
	H	08.56	51.0	0.5				0.6	0.6	1.8	1.9	
	Z	08.56	52.1	1.0				0.3	0.1			
08	A	12.01	51.0	1.6				0.6	1.6			
	H	12.01	49.9	1.0				1.0	1.5	5.0	2.7	
	Z	12.01	51.4	1.6				1.2	1.3			
08	A	12.15	39.9	1.1				0.4	1.0			
	H	12.15	39.7	1.2				0.4	0.4	5.7	2.2	
	Z	12.15	40.9	1.6				0.3	0.2			
08	A	13.24	40.5	1.6				9.0	7.9			
	H	13.24	39.3	1.1				4.6	6.4	5.6	3.7	
	Z	13.24	40.6	1.6				1.4	1.8			
08	A	14.15	09.0	1.0				0.2	0.4			
	H	14.15	08.2	0.6				0.3	0.3	3.3	1.5	
	Z	14.15	09.2	1.2				0.2				
08	A	14.50	59.6	0.9				1.6	2.5			
	H	14.50	59.0	0.7				2.4	2.0	2.5	2.7	
	Z	14.50	59.6	0.9				1.6	2.0			
08	A	16.36	05.6	1.1				0.4	1.3			
	H	16.36	04.8	0.7				1.5	2.2	2.8	2.6	
	Z	16.36	05.6	1.1				0.8	0.8			
08	A	18.08	43.6	1.4				4.5	6.1			
	H	18.08	43.8	1.9				2.9	4.2	7.4	3.6	
	Z	18.08	43.2	1.3				7.2				
08	A	18.09	25.4	1.4				7.1	6.0			
	H	18.09	26.0	2.1				5.7	8.4	6.1	3.9	
	Z	18.09	25.1	1.2					21.6			
08	A	19.16	03.5	1.4				0.4	0.6			
	H	19.16	03.9	1.9				0.2	0.2	7.8	2.1	
	Z	19.16	03.3	1.3				0.6	0.4			
08	A	19.41	29.4	1.1				1.2	2.0			
	H	19.41	29.1	1.0				3.4	3.2	3.4	2.9	
	Z	19.41	29.2	0.9				5.9	7.9			
09	A	04.31	39.0	1.1				0.4	1.6			
	H	04.31	38.1	0.6				1.6	2.6	3.2	2.6	
	Z	04.31	39.7	1.3				0.6	0.7			
09	A	04.34	36.4	1.1				0.6	3.4			
	H	04.34	35.7	0.5				5.2	5.0	2.3	3.0	
	Z	04.34	36.9	1.2				0.9	1.2			
09	A	04.45	07.7	1.2				0.6	0.6			
	H	04.45	07.2	0.9				2.2	1.3	2.3	2.5	
	Z	04.45	07.7	1.0				3.4	3.6			
09	A	05.07	24.8	1.2				0.8	1.3			
	H	05.07	25.3	1.1				1.0	1.6	6.1	2.7	
	Z	05.07	26.1	1.5				1.0	0.7			
09	A	07.02	17.8	1.2				0.9	1.3			
	H	07.02	18.2	1.2				0.7	0.6	3.0	2.5	
	Z	07.02	18.0	0.8				5.9	5.7			
09	A	07.06	12.7	0.7				1.6	1.5			
	H	07.06	12.5	0.8				2.5	3.0	2.7	2.6	
	Z	07.06	12.7	0.8				4.4	8.0			

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
11	A	01.08	33.6	1.0				0.8	0.7			
	H	01.08	33.5	0.9				0.8	0.8	3.3	2.2	
	Z	01.08	33.6	0.9				2.5	1.5			
11	A	05.42	56.7	0.6				2.9	6.2			
	H	05.42	56.9	1.0				1.2	1.2	3.5	2.7	
	Z	05.42	57.2	1.0				1.0	0.7			
11	A	06.03	44.0	1.5				6.7	4.2			
	H	06.03	43.1	1.1				3.4	4.6	6.3	3.6	
	Z	06.03	44.3	1.6				1.1	2.3			
11	A	08.33	07.5	1.1				6.1	7.3			
	H	08.33	06.7	0.9				12.1	8.3	3.5	3.7	
	Z	08.33	07.4	1.0				10.2	5.6			
11	A	09.55	16.2	1.2				0.8	0.3			
	H	09.55	15.5	0.9				1.0	1.6	3.8	2.4	
	Z	09.55	16.3	1.2				0.6	0.2			
11	A	11.25	10.9	2.0				0.3	0.6			
	H	11.25	12.1	2.7				0.9	0.6	10.0	2.9	
	Z	11.25	10.6	1.9				1.0	1.6			
11	A	13.54	55.6	1.2				0.3	0.8			
	H	13.54	54.6	0.7				3.8	2.7	3.7	2.6	
	Z	13.54	56.1	1.4				0.2				
11	A	14.36	30.8	0.8				0.6	0.2			
	H	14.36	30.7	0.7				1.8	2.7	2.0	2.2	
	Z	14.36	30.8	0.8				2.5	3.8			
11	A	14.46	13.9	0.8				0.7	0.6			
	H	14.46	13.6	0.7				0.8	0.9	1.4	1.9	
	Z	14.46	13.9	0.8				2.0	1.6			
11	A	16.13	27.7	0.6				16.8	16.8			
	H	16.13	28.7	1.1				1.0	1.2	3.5	3.1	
	Z	16.13	28.4	0.9								
11	A	17.26	47.0	1.3				0.5	1.2			
	H	17.26	46.5	0.9				1.2	1.6	3.5	2.6	
	Z	17.26	46.9	1.2				0.7	0.6			
11	A	19.21	14.2	0.7				0.7	1.3			
	H	19.21	15.0	1.5				0.2		3.0	1.9	
	Z	19.21	14.2	0.7				2.9	2.2			
11	A	23.03	00.3	1.2				3.0	7.4			
	H	23.03	00.4	1.6				6.4	8.0	3.0	3.4	
	Z	23.03	00.8	1.3					8.2			
11	A	23.48	41.5	1.1				0.5	0.5			
	H	23.48	42.7	1.8				0.8	0.5	5.2	2.3	
	Z	23.48	41.6	0.9				1.4	3.6			
12	A	00.04	16.5	1.8				10.7	13.0			
	H	00.04	15.7	1.1				20.2	15.8	6.2	4.3	
	Z	00.04	16.9	1.9				7.3	12.7			
12	A	04.53	27.3	1.3				0.4	0.4			
	H	04.53	26.8	0.8				0.6	0.5	2.3	1.9	
	Z	04.53	27.5	1.2				0.6	0.6			
12	A	12.00	52.2	1.1				0.4	0.5			
	H	12.00	52.0	1.0				1.6	1.4	4.0	2.3	
	Z	12.00	52.2	1.0				2.2				
12	A	12.50	10.0	1.0				1.2	0.5			
	H	12.50	09.8	0.8				1.7	1.8	2.1	2.4	
	Z	12.50	09.9	0.9				4.4				
12	A	20.55	27.2	1.4				1.3	2.8			
	H	20.55	26.3	0.8				4.2	3.0	3.8	3.1	
	Z	20.55	27.4	1.4								
13	A	02.07	05.4	1.2				0.2	0.5			
	H	02.07	04.8	0.9				1.2	1.4	3.9	2.2	
	Z	02.07	05.5	1.1				0.6				
13	A	02.57	53.1	1.2				0.8	1.0			
	H	02.57	53.5	1.4				0.9	1.2	4.2	2.6	
	Z	02.57	52.6	0.8								
13	A	03.00	04.7	1.1				0.4	0.4			
	H	03.00	05.0	1.5				1.0	0.4	4.0	2.1	
	Z	03.00	04.1	0.9				0.6	0.1			
13	A	04.15	40.6	1.1				0.9	0.8			
	H	04.15	39.8	0.8				0.6	0.4	3.5	2.1	
	Z	04.15	40.5	1.1				0.7	0.4			

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
15	A	01.04	08.4	1.1				0.2	0.6				
	H	01.04	08.6	0.9				2.5	2.3		3.5	2.5	
	Z	01.04	08.3	1.0				4.2	4.5				
15	A	01.06	16.5	1.2				1.6	1.4				
	H	01.06	16.6	1.0				5.1	4.0		3.0	3.0	
	Z	01.06	16.3	1.0				4.4	4.7				
15	A	01.56	59.9	0.8				1.0	1.7				
	H	01.57	01.3	1.3				1.6	2.2		3.3	2.7	
	Z	01.56	59.8	0.6				2.7	5.6				
15	A	02.03	21.7	1.0				0.5	1.0				
	H	02.03	22.1	1.2				0.8	1.2		5.4	2.5	
	Z	02.03	22.4	1.5				0.5	0.4				
15	A	02.08	08.3	0.7				1.8	1.5				
	H	02.08	09.6	1.2				1.0	1.0		3.2	2.5	
	Z	02.08	08.1	0.6				4.4	5.6				
15	A	02.14	06.7	1.2				1.3	4.0				
	H	02.14	07.2	1.2				4.3	3.8		6.6	3.3	
	Z	02.14	07.4	1.6				1.2	1.4				
15	A	02.21	12.5	0.7				0.7	1.1				
	H	02.21	13.9	1.4				0.6	0.8		3.3	2.3	
	Z	02.21	12.4	0.7				4.0	2.0				
15	A	04.04	58.7	1.0				1.6	4.4				
	H	04.04	59.2	0.7				10.5	10.1		2.1	3.3	
	Z	04.04	58.8	1.0				4.0	3.6				
15	A	07.55	36.5	0.9				0.4	0.8				
	H	07.55	37.0	1.0				0.4	0.5		2.7	2.0	
	Z	07.55	36.2	0.7				2.4	2.2				
15	A	09.01	52.7	1.0				0.6	1.8				
	H	09.01	52.7	1.0				3.6	6.1		4.5	3.0	
	Z	09.01	53.6	1.6				1.1	1.8				
15	A	10.25	30.8	1.0				1.5	1.8				
	H	10.25	30.4	1.1				1.0	1.8		4.4	2.7	
	Z	10.25	30.8	1.0				3.9	6.6				
15	A	17.52	35.8	1.1				3.4	3.0				
	H	17.52	36.1	1.2				3.0	2.6		6.3	3.1	
	Z	17.52	36.8	1.5				3.6	3.6				
15	A	18.34	25.7	1.1				1.4	0.8				
	H	18.34	26.2	1.1				1.2	1.0		5.7	2.6	
	Z	18.34	26.8	1.5				0.6	0.6				
15	A	18.38	09.4	1.5				1.0	0.9				
	H	18.38	08.9	1.0				3.2	1.6		5.9	2.8	
	Z	18.38	09.7	1.6				1.0	0.8				
15	A	18.58	02.5	1.8				1.6	2.2				
	H	18.58	01.4	1.2				4.6	2.5		4.2	3.3	
	Z	18.58	02.7	1.7				1.3	2.6				
15	A	20.14	51.0	1.1				0.8	0.7				
	H	20.14	51.7	0.8				0.6	0.8		4.8	2.2	
	Z	20.14	51.8	1.5				0.6	0.6				
16	A	00.06	19.2	1.1				0.8	1.0				
	H	00.06	19.1	1.0				1.6	0.7		3.7	2.5	
	Z	00.06	19.1	1.0				6.6	3.6				
16	A	02.50	36.0	1.0				1.2	1.2				
	H	02.50	35.4	0.7				2.5	2.4		2.0	2.1	
	Z	02.50	35.9	0.9				2.6	1.6				
16	A	05.21	21.9	1.2				0.3	0.8				
	H	05.21	20.4	0.7				1.5	1.4		3.9	2.3	
	Z	05.21	21.9	1.3				0.4	0.4				
16	A	06.48	51.4	0.6				2.8	3.4				
	H	06.48	51.4	0.9				1.0	1.2		3.0	2.5	
	Z	06.48		1.0				1.2	1.0				
16	A	08.02	18.2	1.1				12.0	19.6				
	H	08.02	17.5	0.9				16.8			4.9	4.2	
	Z	08.02	18.4	1.4				20.6					
16	A	08.04	34.4	1.0					1.0				
	H	08.04	33.9	0.6				0.4	0.5		2.8	1.9	
	Z	08.04	34.7	1.1				0.4	0.3				
16	A	08.05	38.6	1.0				0.2	1.1				
	H	08.05	37.5	0.6				0.8	1.5		2.8	2.3	
	Z	08.05	38.6	1.2				0.6	0.4				
16	A	08.06	32.7	1.1				0.5	1.0				
	H	08.06	31.7	0.6				1.1	1.4		2.3	2.3	
	Z	08.06	32.7	1.1				1.0	0.4				
16	A	08.25	43.6	1.0				1.0	4.2				
	H	08.25	42.7	0.7				2.3	4.5		3.8	3.1	
	Z	08.25	43.7	1.2				2.3	2.9				

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
19	A	00.59	07.8	1.6				0.1	0.6				
	H	00.59	06.8	0.9				1.0	1.2		4.3	2.4	
	Z	00.59	08.0	1.6				0.6	0.3				
19	A	02.15	19.2	2.2				1.3	1.4				
	H	02.15	19.8	3.1				1.4	1.5		9.3	3.3	
	Z	02.15	18.6	2.2				2.9	4.7				
19	A	05.10	47.6	1.1				0.8	3.9				
	H	05.10	47.9	1.2				3.4	2.8		5.5	3.2	
	Z	05.10	48.5	1.6				1.0	2.2				
19	A	20.12	23.2	1.3				0.8	0.7				
	H	20.12	22.4	0.6				6.0	4.0		2.1	2.7	
	Z	20.12	23.8	1.4				0.3	0.7				
19	A	22.36	00.4	0.9				1.2	1.5				
	H	22.36	00.2	0.9				0.6	1.6		4.3	2.5	
	Z	22.36	01.0	1.3				0.3	0.4				
20	A	00.07	32.8	1.5				0.4	0.4				
	H	00.07	33.6	1.8				0.1			7.6	1.8	
	Z	00.07	32.8	1.3				0.9	4.0				
20	A	04.20	32.3	1.2				0.4	0.3				
	H	04.20	32.5	1.3				0.3	0.3		3.2	1.9	
	Z	04.20	31.6	0.7				2.2	2.6				
20	A	06.27	12.8	1.0				0.4	0.6				
	H	06.27	12.7	0.4				1.2	1.7		2.1	1.9	
	Z	06.27	13.1	1.3				0.4	0.5				
20	A	06.58	17.7	1.1				0.3	0.5				
	H	06.58	17.0	0.6				2.5	2.6		2.9	2.3	
	Z	06.58	18.1	1.2				0.4	0.4				
20	A	09.03	25.8	1.2				1.3	2.1				
	H	09.03	25.8	0.7				3.0	2.7		3.7	2.8	
	Z	09.03	25.9	1.4				0.8	1.4				
20	A	10.34	04.7	0.9				1.6	1.8				
	H	10.34	04.5	0.8				1.5	1.8		2.7	2.5	
	Z	10.34	04.4	0.9				1.8	2.0				
20	A	14.55	19.3	2.2				0.8	0.6				
	H	14.55	20.1	3.1				0.8	0.4		8.4	3.0	
	Z	14.55	18.9	2.2				1.4	5.7				
20	A	15.19	47.3	0.9				0.5	0.4				
	H	15.19	47.0	0.8				0.4	0.4		2.3	1.7	
	Z	15.19	47.1	0.8				1.0	0.8				
20	A	17.23	08.1	0.8				23.2	21.6				
	H	17.23	07.2	1.0				17.4	15.8		4.4	4.1	
	Z	17.23	08.1	1.2				14.6	16.0				
20	A	17.24	42.9	1.1				0.5	1.2				
	H	17.24	42.0	0.5				0.8	1.6		1.3	2.3	
	Z	17.24	42.8	1.1				0.8	0.3				
20	A	17.27	52.5	1.1				4.3	7.7				
	H	17.27	51.7	0.6				9.6	9.2		3.4	3.4	
	Z	17.27	52.8	1.3				2.1	1.6				
20	A	17.28	06.7	1.0				1.3	2.6				
	H	17.28	05.9	0.4				2.0	2.2		1.3	2.4	
	Z	17.28	06.7	1.2				1.4	1.4				
20	A	17.29	44.6	1.0				0.5	1.5				
	H	17.29	43.9	0.5				2.2	2.0		2.6	2.4	
	Z	17.29	44.7	1.3				0.5	0.4				
20	A	19.24	13.7	1.0				3.5	6.4				
	H	19.24	14.4	1.5				3.4	3.4		5.6	3.4	
	Z	19.24	13.6	1.0				5.9	4.2				
20	A	19.28	59.6	1.0				0.4	1.1				
	H	19.28	58.5	0.5				1.2	1.2		2.6	2.2	
	Z	19.28	59.7	1.2				0.3	0.1				
20	A	20.47	17.3	1.1				0.2	0.6				
	H	20.47	16.6	1.0				0.7	0.1				



Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
23	A	07.50	40.7	2.0				0.8	0.8				
	H	07.50	39.8	1.4				4.4	5.5	8.0	3.2		
	Z	07.50	40.2	2.2				0.6	0.4				
23	A	09.06	24.6	1.8				4.2	6.2	5.8	3.8		
	H	09.06	23.4	1.1				10.9	9.8				
	Z	09.06	24.8	1.9				3.2	5.8				
23	A	12.29	07.3	0.9				1.1	1.2	4.6	2.4		
	H	12.29	07.6	1.5				0.4	0.6				
	Z	12.29	06.7	0.8				5.0	4.2				
23	A	12.58		1.5				0.4	0.6				
	H	12.58	03.7	2.2				0.7	0.6	7.0	2.6		
	Z	12.58	03.3	1.3				0.7	2.7				
23	A	17.38	58.1	1.6				1.2	0.7	7.7	2.6		
	H	17.38	58.6	2.1				0.4	0.3				
	Z	17.38	57.7	1.3				2.7	3.7				
23	A	17.50	44.5	0.9				1.0	1.7	2.7	2.4		
	H	17.50	44.1	0.7				1.5	1.4				
	Z	17.50	44.5	1.0				2.0	1.7				
23	A	18.19	20.4	1.5				1.6	2.4				
	H	18.19	21.2	1.9				1.2	1.3	8.3	3.1		
	Z	18.19	20.2	1.4				4.0	3.4				
23	A	19.38	15.5	0.5				7.7	8.2				
	H	19.38	17.0	1.2				1.1	1.2	2.0	2.8		
	Z	19.38	15.2	0.5				5.6	5.1				
23	A	20.40	44.6	0.6				4.3	8.4				
	H	20.40	45.4	1.2				2.2	2.0	2.7	3.1		
	Z	20.40	44.5	0.6				25.0					
23	A	20.45	00.9	0.6				1.2	2.0				
	H	20.45	01.9	1.3				0.4	0.4	2.7	2.2		
	Z	20.45	00.8	0.6				3.3	3.9				
23	A	22.33	59.6	1.6				2.2	1.1	7.9	3.0		
	H	22.34	00.1	2.0				1.0	1.0				
	Z	22.33	59.3	1.3				7.6	6.8				
23	A	23.06	24.8	1.6				0.5	0.8				
	H	23.06	25.7	1.9				0.4	0.4	8.0	2.4		
	Z	23.06	24.7	1.3				1.9	1.3				
24	A	00.49	21.4	1.7				0.7	0.6				
	H	00.49	20.3	1.2				3.7	4.8	7.1	3.0		
	Z	00.49	21.7	2.1				0.8	0.6				
24	A	00.49	31.4	0.9				2.1	1.4				
	H	00.49	31.2	0.5				1.9	2.4	1.0	2.6		
	Z	00.49	31.8	1.0				3.1	4.0				
24	A	03.22	53.0	0.9				0.5	0.8				
	H	03.22	52.7	0.7				0.7	1.4	2.7	2.2		
	Z	03.22	53.4	1.0				0.9	0.9				
24	A	06.28	49.2	0.9				3.5	3.4				
	H	06.28	49.9	1.4				2.6	1.8	4.9	3.1		
	Z	06.28	49.1	0.9				6.0	5.2				
24	A	07.39	50.2	1.0				9.5	16.3				
	H	07.39	51.0	1.5				11.8	11.2	4.8	4.1		
	Z	07.39	49.9	0.8				53.6					
24	A	07.47	50.4	0.7				7.7	6.9				
	H	07.47	50.8	1.0				8.7	7.2	3.7	3.4		
	Z	07.47	51.3	1.0				4.1	4.0				
24	A	16.10	05.8	1.0				0.8	0.7				
	H	16.10	05.7	1.0				2.3	1.4	3.9	2.5		
	Z	16.10	05.8	0.9				7.0	5.5				
24	A	16.10	19.7	1.0				6.8	4.0				
	H	16.10	19.7	1.0				5.4	8.2	4.2	3.5		
	Z	16.10	19.7	1.0									
24	A	16.14	24.4	1.0				1.2	1.0				
	H	16.14	24.4	1.0				3.0	1.8	4.0	2.7		
	Z	16.14	24.5	0.9				3.2	2.4				
24	A	16.19	32.4	0.9				0.4	0.8				
	H	16.19	32.2	0.5				1.7	3.0	2.1	2.3		
	Z	16.19	33.1	1.1				0.3	0.4				
24	A	19.50	00.6	1.1				1.0	1.2				
	H	19.50	00.9	1.1				1.0	0.8	5.6	2.5		
	Z	19.50	01.5	1.6				0.8	1.0				
24	A	20.52	25.1	1.0				0.6	1.0				
	H	20.52	25.4	1.3				0.4	0.4	3.4	2.2		
	Z	20.52	24.3	0.6				2.0	2.8				
24	A	20.56	53.6	1.1				0.4	0.6				
	H	20.56	53.8	1.2				0.2	0.2	2.3	1.8		
	Z	20.56	53.1	0.7				4.3	7.4				

Nov. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
											S-P (sec)		
26	A	07.22	04.1	2.5				0.5	0.6				
	H	07.22	04.8	2.0				0.8	0.5	7.5	2.6		
	Z	07.22	03.7	1.3				3.6	6.2				
26	A	08.12	14.3	1.1				0.6	0.6				
	H	08.12	14.4	1.1				1.0	1.5	4.8	2.4		
	Z	08.12	14.9	1.7				0.6	0.6				
26	A	09.54	17.7	1.0				2.8	2.5				
	H	09.54	17.2	1.0				2.4	2.4	2.7			
	Z	09.54	17.8	1.0				5.0	5.2				
26	A	11.52	36.9	0.9				1.0	1.4				
	H	11.52	37.7	1.5				0.4	0.9	4.1	2.5		
	Z	11.52	36.8	0.7				2.3	3.0				
26	A	17.34	10.4	1.0				0.6	0.6				
	H	17.34	09.9	0.7				1.2	1.2	2.6	2.1		
	Z	17.34	10.4	1.0				1.6	1.1				
26	A	19.20	33.9	1.0				1.3	2.2				
	H	19.20	34.7	1.7				0.5	0.4	4.7	2.5		
	Z	19.20	33.5	0.9				3.6	4.2				
26	A	21.18	47.2	0.9				0.6	0.5				
	H	21.18	47.0	0.8				0.4	0.2	1.6			
	Z	21.18	47.4	0.8				0.5	0.7				
26	A	22.43	05.8	1.0				0.8	1.8				
	H	22.43	05.5	0.8				1.2	1.8	4.0	2.6		
	Z	22.43	06.3	1.5				1.1	1.9				
26	A	23.15	48.1	1.4				1.3	2.9				
	H	23.15	47.3	0.8				1.9	2.1	3.4	2.9		
	Z	23.15	48.1	1.3				1.9	1.9				
27	A	06.00	31.1	1.2				0.4	0.6				
	H	06.00	30.3	0.7				0.4	0.3	3.6	1.8		
	Z	06.00	31.3	1.3				0.8	1.0				
27	A	09.37	53.6	1.1				0.6	0.7				
	H	09.37	54.0	1.7				0.3	0.2	4.3	2.1		
	Z	09.37	53.0	0.7				3.7	5.1				
27	A	10.01	03.0	1.5				2.5	2.0				
	H	10.01	02.3	1.0				12.0	9.1	6.1	3.5		
	Z	10.01	03.4	1.6				6.2	5.7				
27	A	20.42	10.8	0.6				0.6	1.1				
	H	20.42	12.0	1.3				0.3	0.2	3.5	1.9		
	Z	20.42	11.1	1.0				0.7	0.7				
27	A	23.37	19.3	1.5				8.7	12.4				
	H	23.37	19.1	0.9				15.0	9.2	4.4	4.0		
	Z	23.37	19.7	1.5				4.8	4.8				
28	A	02.55	53.0	1.0				4.0	3.8				
	H	02.55	52.9	0.9				12.1	11.3	3.0	3.4		
	Z	02.55	53.1	0.9				19.4					
28	A	03.13	18.0	1.0				0.8	1.1				
	H	03.13	17.8	0.8				2.9	1.9	1.9	2.6		
	Z	03.13	17.7	0.8				5.7	4.1				
28	A	03.20	46.0	0.7				1.6	1.3				
	H	03.20	47.1	1.3				0.6	0.4	3.6	2.3		
	Z	03.20	46.0	0.6				10.0	6.4				
28	A	04.52	58.4	1.0				0.6	0.8				
	H	04.52	59.5	1.5				0.4	0.4	5.8	2.2		
	Z	04.52	58.5	1.0				1.6	2.0				
28	A	12.56	16.8	0.9				0.7	0.6				
	H	12.56	16.7	0.7				1.6	1.3	1.9	2.2		
	Z	12.56	16.6	0.9				2.5	1.4				
28	A	13.12	13.0	0.8				0.8	1.8				
	H	13.12	14.2	1.2				0.4	0.2	3.3	2.2		
	Z	13.12	12.8	0.6				0.9	1.8				
28	A	21.24	55.1	0.9				0.3	0.8				
	H	21.24											

Seismological Data of Matsushiro Earthquake Swarm (Report II)

Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
1966 December													
01	A	05.08	08.7	1.0				0.2	0.6				
	H	05.08	09.5	1.7				0.2	0.2			4.4	1.9
	Z	05.08	08.5	0.8				2.0	1.8				
01	A	05.27	12.8	1.0				0.6	0.7				
	H	05.27	12.6	0.9				0.8	0.6			3.6	2.1
	Z	05.27	12.6	1.0				3.5	1.9				
01	A	08.17	42.6	1.1				0.5	0.6				
	H	08.17	41.6	0.6				0.6	0.5			3.0	1.8
	Z	08.17	42.6	1.3				0.4	0.3				
01	A	09.52	14.8	0.7				1.1	2.1				
	H	09.52	15.5	1.3				0.6	0.4			3.2	2.4
	Z	09.52	14.5	0.6				4.5	7.6				
01	A	12.21	13.9	1.0				1.8	2.4				
	H	12.21	14.8	1.7				3.2	1.2			4.5	3.2
	Z	12.21	13.9	0.8				13.6					
01	A	16.55	07.5	0.9				0.6	0.5				
	H	16.55	07.5	1.4				0.2	0.2			3.8	1.8
	Z	16.55	06.8	0.7				1.7	3.8				
01	A	18.34	20.6	2.0				7.4	9.4				
	H	18.34	21.7	2.6				7.6	9.2			9.9	4.3
	Z	18.34	21.5	1.8				7.2					
01	A	19.08	01.4	0.5				8.0	8.2				
	H	19.08	02.1	1.1				4.0	4.7			2.9	3.2
	Z	19.08	01.7	0.9				18.4	8.2				
01	A	19.36	39.7	1.1				20.0	8.4				
	H	19.36	39.4	0.9				24.2	15.4			3.9	4.2
	Z	19.36	39.6	1.1				48.1					
01	A	19.37	04.8	1.0				1.1	1.4				
	H	19.37	04.4	0.9				3.2	2.2			3.0	2.7
	Z	19.37	04.6	0.9				7.6					
01	A	19.37	34.9	1.0				2.4	5.3				
	H	19.37	34.8	0.9				4.4	4.6			3.3	3.2
	Z	19.37	34.9	0.9				15.6					
01	A	19.39	58.7	1.0				0.7	0.3				
	H	19.39	58.3	0.8				0.7	0.8			2.1	
	Z	19.39	58.6					1.2					
01	A	20.09	13.8	1.8				3.6	2.6				
	H	20.09	14.6	2.5				4.6	5.8			8.2	3.8
	Z	20.09	13.5	1.6				12.0	12.3				
01	A	21.23	26.2	1.1				1.4	0.3				
	H	21.23	25.7	1.0				0.8	0.4			2.3	2.4
	Z	21.23	25.8	0.8				2.0	1.5				
01	A	21.58	48.6	1.0				2.8	3.7				
	H	21.58	48.6	0.9				4.6	3.2			1.3	3.1
	Z	21.58	48.3	0.8				8.2	6.7				
02	A	01.06	36.7	0.9				1.4	1.4				
	H	01.06	36.2	0.7				1.4	0.8			2.3	2.3
	Z	01.06	36.7	0.9				2.0	1.4				
02	A	01.07	04.3	0.9				11.0	9.2				
	H	01.07	04.0	0.8				8.0	4.6			3.6	3.5
	Z	01.07	04.4	1.0				9.5	8.6				
02	A	01.16	03.8	0.8				0.3	0.4				
	H	01.16	03.4	0.6				0.6	0.4			1.2	1.6
	Z	01.16	03.8	0.8				1.0					
02	A	02.38	09.0	0.8				2.5	1.8				
	H	02.38	08.8	0.7				2.0	2.4			1.7	2.6
	Z	02.38	08.8	0.8				3.6	3.5				
02	A	02.59	31.3	0.8				0.4	0.4				
	H	02.59	31.0	0.7				0.8	0.8			2.6	1.7
	Z	02.59	31.5	0.9				1.7	1.0				
02	A	03.26	41.2	1.7				0.4	0.4				
	H	03.26	42.0	2.3				0.2	0.3			8.1	2.3
	Z	03.26	40.8	1.5				1.1	1.8				
02	A	03.36	03.4	1.1				1.0	1.8				
	H	03.36	03.5	1.4				1.4	1.4			6.5	2.8
	Z	03.36	04.0	1.5				2.4	3.6				
02	A	07.30	12.2	0.8				0.4	1.0				
	H	07.30	11.8	0.5				1.1	1.6			2.1	2.1
	Z	07.30	12.4	1.1				0.4	0.7				
02	A	08.16	06.4	1.1				2.0	2.6				
	H	08.16	05.7	0.7				7.4	7.2			3.7	3.1
	Z	08.16	06.5	1.3				3.2	2.7				

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)			Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S			
02	A	09.22	15.5	1.7				1.0	0.9				
	H	09.22	16.2	1.5				0.5	0.5			7.3	2.7
	Z	09.22	15.2					1.8	3.1				
02	A	12.00	09.4	0.9				0.3	0.5				
	H	12.00	08.7	0.6				1.0	0.7			0.9	1.8
	Z	12.00	09.4	0.9				0.7	0.6				
02	A	12.17	51.4	1.0				3.4	6.4				
	H	12.17	50.6	0.6				9.6	8.6			3.6	3.4
	Z	12.17	51.9	1.3				4.6	3.5				
02	A	12.29	49.2	1.2				0.6	0.7				
	H	12.29	49.4	1.4				1.3	1.5			7.1	2.6
	Z	12.29	49.8	1.5				0.8	1.2				
02	A	17.45	56.4	0.9				1.8	0.9				
	H	17.45	56.0	0.9				1.6	1.6			3.0	2.6
	Z	17.45	56.2	0.8				4.0	3.1				
02	A	17.51	24.2	0.8				0.3	0.6				
	H	17.51	24.1	0.8				1.0	0.8			2.2	2.0
	Z	17.51	24.0	0.8				2.4	1.0				
03	A	01.29	47.5	0.9				1.0	3.6				
	H	01.29	46.9	0.7				2.8	2.6			3.0	2.8
	Z	01.29	47.9	1.1				1.0	0.3				
03	A	02.00	49.4	1.0				0.6	0.8				
	H	02.00	49.8	1.5				0.3	0.2			3.4	2.1
	Z	02.00	48.8	0.6				3.4	4.0				
03	A	04.44	43.7	1.3				0.4	1.8				
	H	04.44	43.0	0.9				1.4	1.4			4.7	2.7
	Z	04.44	43.9	1.4				0.5	0.5				
03	A	05.55	52.1	0.7				1.1	2.4				
	H	05.55	52.3	0.9				1.0	1.4			3.5	2.5
	Z	05.55	52.7	1.2				0.7	0.8				
03	A	05.56	20.0	0.7				7.4	8.6				
	H	05.56	20.5	1.0				3.7	5.3			3.8	3.3
	Z	05.56	20.6	1.0				5.4	6.7				
03	A	05.58	56.0	0.6				1.6	2.4				
	H	05.58	56.6	1.0				0.8	0.7			3.2	2.3
	Z	05.58	57.1	1.1				0.6	1.1				
03	A	07.36	02.9	0.9				0.7	0.7				
	H	07.36	03.7	1.6				0.6	0.5			4.1	2.2
	Z	07.36	02.5	0.8				2.4	4.8				
03	A	07.48	17.9	1.0				0.4	1.0	</			

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
08	A	14.29	18.7	0.8				11.8	5.6			
	H	14.29	18.2	0.6				7.1	6.7	1.9	3.4	
	Z	14.29	18.9	0.9				2.6	4.1			
08	A	15.42	44.4	0.6				0.6	1.0			
	H	15.42	45.3	1.4				0.3	0.3	3.1	1.9	
	Z	15.42	44.6	0.8				0.2	0.4			
08	A	16.59	31.1	1.0				0.6	0.4			
	H	16.59	31.8	1.4				0.2	0.3	4.7	2.0	
	Z	16.59	30.6	0.8				1.2	2.8			
08	A	19.53	27.9	0.9				0.2	0.4			
	H	19.53	27.3	0.5				0.3	0.6	1.8	1.5	
	Z	19.53	28.3	1.0				0.3	0.5			
08	A	20.08	43.5	1.0				0.5	0.7			
	H	20.08	43.2	1.1				0.6	1.3	3.5	2.3	
	Z	20.08	43.2	0.8				2.0	2.7			
08	A	20.11	39.0	0.7				1.4	2.4			
	H	20.11	39.8	1.0				0.2	0.3	3.7	2.0	
	Z	20.11	40.1	1.1				0.5	0.4			
08	A	21.44	51.8	0.5				0.8	2.4			
	H	21.44	52.4	1.3				0.4	0.4	2.1	2.2	
	Z	21.44	51.5	0.6				2.2	2.9			
08	A	22.10	41.9	1.0				0.6	0.6			
	H	22.10	41.5	0.9				1.5	1.2	3.3	2.2	
	Z	22.10	41.7	1.0				4.2	4.4			
09	A	00.14	53.0	0.9				1.8	3.6			
	H	00.14	52.8	1.2				2.4	3.4	4.9	3.1	
	Z	00.14	53.8	1.4				2.4	2.7			
09	A	00.16	42.0	0.9				0.2	0.5			
	H	00.16	42.2	1.0				0.2	0.2	4.4	1.5	
	Z	00.16	43.3	1.4				0.3	0.3			
09	A	00.31	50.5	0.8				0.4	0.5			
	H	00.31	50.1	0.8				1.2	0.8	1.8	2.0	
	Z	00.31	50.5	0.7				1.2	1.4			
09	A	00.42	48.2	1.1				0.4	0.4			
	H	00.42	47.7	0.9				1.4	1.0	3.6	2.1	
	Z	00.42	48.1	1.0				3.0	3.0			
09	A	00.54	12.3	0.6				1.4	1.4			
	H	00.54	12.5	0.8				0.5	0.2	2.9	1.9	
	Z	00.54	13.2	1.1				0.4	0.5			
09	A	01.36	00.0	1.1				1.2	1.0			
	H	01.35	59.6	1.1				2.0	1.6	4.0	2.6	
	Z	01.35	59.7	0.9				2.6	3.2			
09	A	02.50	09.4	1.0				0.5	1.0			
	H	02.50	10.4	1.6				0.6	0.4	4.2	2.4	
	Z	02.50	09.1	0.7				3.3	4.3			
09	A	05.13	19.3	1.0				4.6	5.1			
	H	05.13	19.3	0.9				10.6	9.0	3.0	3.5	
	Z	05.13	19.4	0.9				27.3	27.0			
09	A	05.13	32.2	1.0				1.8	1.4			
	H	05.13	32.1	0.9				2.0	2.0	2.7	1.1	
	Z	05.13	32.3	0.9				4.3	4.4			
09	A	05.37	21.4	1.0				2.1	1.8			
	H	05.37	21.4	0.9				2.2	2.1	2.9	2.7	
	Z	05.37	21.2	0.8				5.2	3.0			
09	A	09.12	47.8	1.0				0.5	0.4			
	H	09.12	47.8	0.9				0.8	0.8	1.7	2.0	
	Z	09.12	47.8	0.8				2.2	3.0			
09	A	10.52	23.9	1.0				2.4	1.6			
	H	10.52	23.8	0.9				1.4	1.8	2.8	2.7	
	Z	10.52	24.2	0.8				5.3	3.6			
09	A	12.47	35.1	1.0				3.2	3.0			
	H	12.47	34.9	1.0				6.6	4.7	4.5	3.2	
	Z	12.47	35.3	1.0				20.8	16.9			
09	A	15.09	29.7	0.8				2.1	2.8			
	H	15.09	29.7	0.6				1.4	2.2	2.6	1.1	
	Z	15.09	30.5	0.8				3.0	2.5			
09	A	17.38	41.8	1.0				0.4	0.7			
	H	17.38	42.9	1.8				0.3	0.4	4.2	2.2	
	Z	17.38	42.3	0.8				2.4	3.3			
09	A	21.13	12.7	0.9				1.0	1.3			
	H	21.13	12.6	0.8				2.6	5.4	2.8	2.8	
	Z	21.13	13.1	0.9				4.8	3.8			
10	A	02.16	33.0	1.9				0.1	0.2			
	H	02.16	32.1	1.3				0.4	0.5	7.2	2.0	
	Z	02.16	33.5	2.0				0.3	0.6			

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
12	A	05.15	32.9	1.0				1.0	2.8			
	H	05.15		0.6				2.0	1.8	3.5	2.7	
	Z	05.15	33.4	1.3				2.2	1.0			
12	A	05.44	57.1	1.1				2.4	5.8			
	H	05.44		0.5				8.0	6.0	2.2	3.2	
	Z	05.44	57.7	1.2				2.8	2.0			
12	A	06.02	42.0	1.0				0.5	0.6			
	H	06.02		1.0				0.8	0.4	3.5	2.1	
	Z	06.02	41.9	0.9				3.1	1.8			
12	A	18.44	00.9	0.7				1.0	1.9			
	H	18.44		1.3				0.4	0.4	3.4	2.2	
	Z	18.44	00.9	0.7				2.8	3.5			
12	A	20.29	21.6	1.3				0.4	0.6			
	H	20.29		0.9				0.4	0.4	4.8	1.9	
	Z	20.29	21.6	1.3				0.8	1.3			
12	A	22.10	41.0	1.0				0.4	0.4			
	H	22.10		0.7				0.8	0.6	1.8	1.4	
	Z	22.10	41.2	1.0				0.9	0.8			
12	A	22.49	40.7	1.4				0.8	1.0			
	H	22.49		1.9				1.4	1.7	7.8	2.9	
	Z	22.49	40.5	1.3				2.8	2.4			
12	A	23.35	57.7	1.5				0.5	0.4			
	H	23.35		2.0				0.2	0.2	7.2	2.1	
	Z	23.35	57.5	1.2				0.9	1.0			
13	A	00.27	40.8	1.6				0.6	0.4			
	H	00.27		2.0				0.2	0.1	8.6	2.2	
	Z	00.27	40.8	1.4				2.6	1.8			
13	A	05.43	42.5	1.0				1.0	1.2			
	H	05.43		0.9				4.6	3.2	3.3	2.8	
	Z	05.43	42.5	0.9				5.2	3.3			
13	A	06.40	43.7	0.9				0.2	0.3			
	H	06.40		0.9				0.9	0.6	2.7	1.8	
	Z	06.40	43.8	0.8				0.8	0.6			
13	A	06.49	36.2	0.9				0.4	0.4			
	H	06.49		0.7				0.4	0.3	1.5	1.5	
	Z	06.49	36.4	0.9				0.4	0.4			
13	A	08.05	37.3	1.3				0.6	0.4			
	H	08.05		0.7				0.6	0.4	2.3	2.0	
	Z	08.05	37.6	1.3				1.0	0.8			
13	A	08.24	46.0	1.6				0.9	0.8			
	H	08.24		1.9				1.0	1.0	7.8	2.8	
	Z	08.24	45.8	1.3				2.3	1.8			
13	A	09.04	59.2	1.3				0.6	0.8			
	H	09.04		1.8				0.4	0.4	7.5	2.4	
	Z	09.04	58.9	1.3				1.6	1.0			
13	A	11.48	17.5	1.5				0.4	0.5			
	H	11.48		1.7				0.3	0.2	7.4	2.2	
	Z	11.48	17.0	1.3				2.4	3.0			
13	A	13.50	28.1	1.0				0.8	1.2			
	H	13.50		1.7				0.5	0.6	4.9	2.5	
	Z	13.50	28.0	0.9				2.6	4.7			
13	A	18.30	19.7	1.0				1.0	2.0			
	H	18.30		1.7				2.0	2.4	4.4	3.0	
	Z	18.30	19.4	0.8				8.2	12.1			
13	A	20.37	36.7	0.9				0.4	0.4			
	H	20.37		1.3				0.6	0.6	4.5	1.9	
	Z	20.37	35.9	0.8				3.0	3.9			
13	A	22.32	27.9	1.3				0.6	1.0			
	H	22.32		0.9				1.2	1.4	3.8	2.5	
	Z	22.32	28.0	1.3				0.8	0.9			
14	A	00.18	01.0	1.2				0.9	1.7			
	H	00.18		1.1				2.6	4.6	4.5	3.1	
	Z	00.18	00.6	1.0				3.8	3.6			
14	A	04.09	19.5	0.7				0.4	0.7			
	H	04.09		0.7				0.7	1.2	2.2	2.0	
	Z	04.09	19.4	0.9				0.8	1.0			
14	A	04.37	54.2	0.8				0.5	1.0			
	H	04.37		0.7				1.0	1.0	1.9	2.0	
	Z	04.37	54.2	0.9				0.6	0.5			

Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
16	A H Z	21.53	17.6	1.2	-	1.3	0.6	3.7	2.9			
16	A H Z	23.23	06.1	0.8	+	1.6	2.6	2.3	2.6			
17	A H Z	00.56	47.4	0.9		1.4	1.5	4.2	2.1			
17	A H Z	01.35	44.6	1.0		1.4	1.0	3.1	2.8			
17	A H Z	02.55	43.8	1.0	-	4.2	3.4	5.3	3.5			
17	A H Z	03.23	21.4	1.1	-	0.8	2.2	6.0	2.7			
17	A H Z	03.51	15.0	1.1	+	0.6	1.0	4.6	2.7			
17	A H Z	11.15	18.3	0.9		1.8	1.8	2.3	2.6			
17	A H Z	19.32	32.8	0.4	+	0.3	1.5	2.3	1.7			
18	A H Z	00.13	07.7	1.0		0.3	0.3	2.4	1.6			
18	A H Z	02.46	11.3	1.3	+	1.4	2.2	3.8	3.0			
18	A H Z	03.12	15.6	1.3	-	1.0	2.0	3.3	2.9			
18	A H Z	06.17	22.8	1.1	+	0.8	0.9	3.7	2.6			
18	A H Z	07.53	52.5	4.2		0.4	1.0			3.7		
18	A H Z	08.49	50.2	0.9	+	0.5	0.6	3.1	1.7			
18	A H Z	11.32	18.6	0.9	+	2.1	2.0	0.9	2.8			
18	A H Z	17.05	20.5	0.8		0.2	0.6	2.0				
18	A H Z	17.52	49.1	0.8	-	2.4	4.1	3.4	2.9			
18	A H Z	17.56	07.3	1.3	-	7.8	6.6	4.0	3.3			
18	A H Z	17.57	14.5	0.6		1.0	1.3	2.3	1.6			
18	A H Z	19.06	11.8	0.9		0.3	0.2	1.0	1.7			
18	A H Z	20.48	32.0	1.2		0.2	0.4	1.9				
18	A H Z	21.04	42.2	0.8		0.4	0.4	1.7				
19	A H Z	04.32	04.4	1.0		0.8	1.1	2.4				
19	A H Z	11.52	21.8	0.9		0.6	1.5	2.0	2.4			

Dec. 1966

Date	Station	P-Time (J.S.T.)			S-P (sec)	Initial Motion (mm)			Half of Max. Amplitude (mm)		Depth (km)	Magnitude
		h	m	s		E	N	U	E-W	N-S		
22	A H Z	12.33	03.5	0.7		2.6	3.0	4.1	2.6			
22	A H Z	12.40	23.1	0.7		0.6	0.8	2.8	2.0			
22	A H Z	12.52	39.4	1.3		2.0	2.0	5.9	3.2			
22	A H Z	12.55	28.8	1.3		1.7	1.8	6.0	3.1			
22	A H Z	14.43	28.0	0.9		1.4	2.6	3.9	2.6			
22	A H Z	17.12	21.8	1.2	-	0.8	0.8	3.5	2.5			
22	A H Z	20.44	09.8	1.1		0.5	0.4	4.8	2.1			
22	A H Z	00.33	08.6	1.5		0.4	0.5	6.5	2.4			
23	A H Z	02.48	01.4	1.0		0.8	0.6	1.6	2.3			
23	A H Z	03.22	10.3	1.0		0.3	0.2	1.8	1.7			
23	A H Z	04.04	30.7	1.2	-	3.2	2.9	6.1	3.5			
23	A H Z	04.43	36.9	1.1		1.2	1.1	3.2	2.7			
23	A H Z	05.20	46.6	1.0		0.4	0.3	3.7	2.1			
23	A H Z	06.53	06.4	1.1		0.4	0.6	5.6	2.0			
23	A H Z	15.50	52.9	1.7		0.4	0.8	7.7	2.5			
23	A H Z	16.37	46.7	0.9	-	0.8	0.8	2.4	2.4			
23	A H Z	17.15	07.8	0.9		0.8	0.4	1.1	2.3			
23	A H Z	17.30	47.9	0.9		18.4	9.6	2.6	3.5			
23	A H Z	23.24	49.8	1.0	+	3.6	4.8	2.3	3.2			
24	A H Z	00.42	22.9	0.9		0.4	0.4	2.2	1.6			
24	A H Z	00.42	48.9	0.9	-	1.4	1.4	2.6	2.4			
24	A H Z	04.44	56.1	1.1		1.3	2.0	4.5	3.1			
24	A H Z	07.46	26.4	0.9		0.3	0.4	3.1	1.6			
24	A H Z	07.47	43.0	1.0	-	7.3	6.5	4.8	3.6			
24	A H Z	09.39	00.0	1.6		0.6	0.8	8.3	2.5			
24	A H Z	09.39	59.2	1.4		4.5	3.3					
24	A H Z	10.46	32.9	1.4		1.0	1.0					
24	A H Z	15.40	05.6	1.0		0.4	0.8					
24	A H Z	17.57	56.5	1.1	+	1.0	1.0					
24	A H Z	19.31	23.0	1.1		1.4	1.0					
24	A H Z	19.31	22.3	0.8		2.0	2.0					
24	A H Z	19.31	22.9	0.9		2.8	1.4					
24	A H Z	19.36	54.0	1.1		0.4	0.5					
24	A H Z	21.41	30.5	1.2		0.2	0.4					
24	A H Z	02.03	28.6	1.2		0.7	0.6					
24	A H Z	02.03	29.0	1.9		0.4	0.4					
24	A H Z	06.28	57.0	0.9	+	0.6	1.0					
24	A H Z	08.32	57.7	1.4		1.4	1.2					
24	A H Z	08.32	58.3	1.9		1.5	1.2					
24	A H Z	08.32	57.6	1.2		2.4	4.3					
24	A H Z	08.33	18.4	1.3		1.1	1.3					
24	A H Z	08.33	19.1	1.9		0.6	0.7					
24	A H Z	08.33	18.5	1.2		3.4	2.7					
24	A H Z	09.21	10.2	1.0		0.8	1.4					
24	A H Z	09.21	10.8	1.3		1.3	1.1					
24	A H Z	12.45	49.9	1.0	+	1.5	1.4					
24	A H Z	12.45	50.2	1.1	-	2.4	1.1					
24	A H Z	15.06	16.6	0.6	+	0.7	1.2					
24	A H Z	15.06	17.4	1.2	+	1.3	2.0					
24	A H Z	17.15	43.6	1.0		1.0	0.7					
24	A H Z	17.15	44.2	1.4		2.6	2.9					
24	A H Z	17.15	43.1	0.8	+	25.0	15.6					
24	A H Z	17.17	17.8	1.0		2.0	2.7					
24	A H Z	17.17	18.2	1.5		2.7	3.0					
24	A H Z	17.17	17.6	0.8	-	5.3	8.0					
24	A H Z	19.38	02.2	0.9		2.2	0.9					
24	A H Z	19.38	01.6	0.6		3.3	4.2					
24	A H Z	19.38	02.6	0.9	-	1.0	0.9					
24	A H Z	24.24	09.6	0.9	-	1.0	1.4					
24	A H Z	20.24	10.3	1.4		1.7	2.2					
24	A H Z	20.24	09.3	0.8		4.5	7.4					
24	A H Z	20.37	31.7	0.9		1.0	0.4					
24	A H Z	20.37	31.1	1.0	-	2.5	2.6					
24	A H Z	20.37	31.1	1.0		2.5	2.5					
24	A H Z	20.45	32.1	1.0	-	0.5	0.7					
24	A H Z	20.45	32.3	0.6		0.4	0.4					
24	A H Z	20.45	33.0	1.5		0.8	0.7					
24	A H Z	23.35	16.6	1.1	+	13.0	5.9					
24	A H Z	23.35	16.5	0.9	-	15.8	10.8					
24	A H Z	23.35	16.6	1.0	+	13.3	16.8					
24	A H Z	00.30	43.0	1.0		0.7	1.4					
24	A H Z	00.30	43.5	1.5		0.6	0.4					
24	A H Z	00.30	42.8	0.7		4.2	6.0					
24	A H Z	00.35	01.1	0.8		0.8	0.5					
24	A H Z	00.35	00.7	0.8		1.3	1.0					
24	A H Z	00.35	01.9	0.9		0.3	0.2					
24	A H Z	06.00	33.1	1.0		0.5	0.8					
24	A H Z	06.00	33.9	1.8	-	0.3	0.5					
24	A H Z	06.00	32.8	0.9	-	2.8	3.5					
24	A H Z	06.13	20.1	1.9		0.5	0.6					
24	A H Z	06.13	19.5	0.8	-	4.1	4.4					
24	A H Z	06.13	20.1	1.1		2.0	1.9					
24	A H Z	07.27	54.7	1.1	+	1.0	1.7					
24	A H Z	07.27	54.4	0.9	-	2.5	2.1					
24	A H Z	07.27	54.7	1.1		9.0	6.8					



Seismological Data of Matsushiro Earthquake Swarm (Report II)

Dec. 1966

Table with columns: Date, Station, P-Time (J.S.T.), S-P (sec), Initial Motion (mm), Half of Max. Amplitude (mm), Depth (km), Magnitude. Contains multiple rows of seismic data for stations A, H, and Z.

Observations by the Network of the Earthquake Research Institute during the Period from Oct. 1965 to Dec. 1966

Dec. 1965

Table with columns: Date, Station, P-Time (J.S.T.), S-P (sec), Initial Motion (mm), Half of Max. Amplitude (mm), Depth (km), Magnitude. Contains multiple rows of seismic data for stations A, H, and Z.



Observations at the Network of the International Seismological Centre
The Period from Oct 1900 to Dec 1900

Station	Date	P			S			T			M	F	G
		Time	Amplitude	Phase	Time	Amplitude	Phase	Time	Amplitude	Phase			
100	1900.10.01												
100	1900.10.02												
100	1900.10.03												
100	1900.10.04												
100	1900.10.05												
100	1900.10.06												
100	1900.10.07												
100	1900.10.08												
100	1900.10.09												
100	1900.10.10												
100	1900.10.11												
100	1900.10.12												
100	1900.10.13												
100	1900.10.14												
100	1900.10.15												
100	1900.10.16												
100	1900.10.17												
100	1900.10.18												
100	1900.10.19												
100	1900.10.20												
100	1900.10.21												
100	1900.10.22												
100	1900.10.23												
100	1900.10.24												
100	1900.10.25												
100	1900.10.26												
100	1900.10.27												
100	1900.10.28												
100	1900.10.29												
100	1900.10.30												
100	1900.10.31												

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