中国地震台网观测报告

BULLETIN OF SEISMOLOGICAL
OBSERVATIONS OF CHINESE STATIONS

1988

（1—6月）

国家地震局地球物理研究所编
地震出版社出版

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中国 北京

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目　　录

前言 …… (1)
台站目录 …… (4)
仪器常数 …… (5)
仪器放大倍率曲线 …… (11)
1988 年(1–6 月)地震目录 …… (13)
1. 世界地震目录 …… (15)
2. 中国及邻区地震目录 …… (71)
1988 年(1–6 月)震中分布图 …… (89)
1. 世界地震震中分布图 …… (91)
2. 中国及邻区地震震中分布图 …… (92)
1988 年(1–6 月)地震数据 …… (93)
1 月 …… (95)
2 月 …… (161)
3 月 …… (226)
4 月 …… (285)
5 月 …… (343)
6 月 …… (402)

Contents

Preface ..... (3)
List of seismological observatories ..... (4)
Constants of seismograph ..... (5)
Response curves of instruments ..... (11)
Catalogue of earthquakes of 1988 (January to June) ..... (13)
1. Catalogue of earthquakes all over the world ..... (15)
2. Catalogue of earthquakes within and near China ..... (71)
Map of epicentral distribution of 1988 (January to June) ..... (89)
1. Epicentral distribution of earthquakes of the world in 1988 ..... (91)
2. Epicentral distribution of earthquakes within and near China in 1988 ..... (92)
Observed seismological data of 1988 (January to June) ..... (93)
January ..... (95)
February ..... (161)
March ..... (226)
April ..... (285)
May ..... (343)
June ..... (402)

前　　言

1.“中国地震台网观测报告”是我国地震台网对发生在全世界、特别是发生在中国和邻近地区的地震观测数据的汇编．自 1979 年起,本报告采用协调世界时(UTC)．为方便中国读者在目录部分也给出北京时．采用汉语拼音拼写中国地名和人名,外国地名和人名沿用英文．

2.本报告列出的震源参数是用 VAX／780 计算机进行计算修定的．使用的走时表是 J-B 表[1]．使用的震相数据除报告中列出的 24 个一类台以外,还有许多国内台和部分国外台的数据．到时残差、总体标准误差和震源参数的标准误差都分别列出．震中位置,除给出经纬度外,还按 Flinn、Engdahl 和 Hill[2,3]划定的地震分区给出了大致的地理位置．应该强调指出,所有地震的地理区域名称仅作位置的参考,不包含任何政治意义．

3.面波震级 Ms 的测定,从 1966 到 1982 年的地震报告都采用北京台 1965 年的面波震级公式:

$$Ms = \log(A/T) + \sigma_{PEK}(\triangle)$$

$$\sigma_{PEK}(\triangle) = 1.66\log(\triangle) + 3.5 \qquad (1^\circ < \triangle < 130^\circ)$$

$\sigma_{PEK}(\triangle)$比 1967 年 IASPEI(国际地震学与地球内部物理学联合会)推荐的,现已被国际上广泛采用的量规函数

$$\sigma_{IASPEI}(\triangle) = 1.66\log(\triangle) + 3.3 \qquad (20^\circ < \triangle < 160^\circ)$$

在$\triangle = 20^\circ$—130°的范围内偏高 0.2 级．世界上两个最有权威的地震机构:国际地震中心(ISC,它使用全球台网资料)和美国地震情报中心(NEIC,它使用世界标准台网资料)都采用 $\sigma_{IASPEI}(\triangle)$测定面波震级 Ms,故此我国测定的 Ms 比国际上系统地偏高 0.2 级．此外,量规函数 $\sigma_{PEK}(\triangle)$ 代表的面波衰减 $\triangle^{-1.66}$ 在近距离处($\triangle = 1^\circ$ — 20°)过大,使得近距离测得的 Ms 偏小,尽管如此,为使资料连续,仍给出用它测定的震级．

4.体波震级 m_B 和 m_b 采用古登堡—李克特公式测定:

$$m_B \text{ 或 } m_b = \log(A/T) + Q(\triangle, h)$$

m_B 是用宽频带中周期 SK 仪或长周期 763 仪测定,m_b 是用短周期地震仪测定．

5.为便于使用和对比,报告中还给出了 NEIC 测定的面波震级 Msz 和短周期地震仪测定的体波震级 m_b．

6.为避免混乱,各种震级之间一律不换算．

参 考 文 献

[1] Jeffreys, H. and Bullen, K. E.,1940. Seismological tables, British Association, London (Reprinted, with additions, 1967).

[2] Flinn, E. A. and Engdahl, E. R.,1965. A proposed basis for geographical and seismic regionalization, Rev. Geophys., 3, 123–149.

[3] Flinn, E. A. Engdahl, E. R. and Hill, A. R., 1974. Seismic and geographical regionalization, Bull. Seism. Soc. Am., 64, 771–992.

[4] Willmore, P. L., 1979. Manual of seimological observatory practice, World Data Center A for Solid Earth Geophysics, Report SE–20.

Preface

1. The " Bulletin of Seismological Observations of Chinese Stations" is a summary of the observed data of earthquakes occurring all over the globe, especially those in China and its surrounding regions. Beginning from 1979, observational time and origin time are given in UTC. The names of Chinses places and persons are spelt with Chines phonetic alphabets while foreign names are all given in English.

2. All focal parameters are processed with a VAX / 780 computer. Jeffreys–Bullen travel time tables are used in this Bulletin[1]. In addition to the data listed in this Bulletin the observational data used include that of many other stations inside and outside China for computer revision of earthquake parameters. Arrival time residuals, gross standard deviations and standard errors of focal parameters are all listed. The location of every earthquake is expressed by its latitude and longitude, at the same time, is given by the corresponding geographical region proposed by Flinn, Engdahl and Hill[2,3]. It should be noted that the names used to classify seismic and geographic regions are only references to their locations and does not imply any political significance.

3. The surface wave magnitude Ms given in the Bulletin of Seismological Observations of Chinese Stations from 1966 to 1982 have all adopted the calibration function of the Beijing Station (BJI).

$$Ms = \log(A / T) + \sigma_{PEK}(\triangle)$$

$$\sigma_{PEK}(\triangle) = 1.66\log(\triangle) + 3.5 \qquad (1^\circ < \triangle < 130^\circ)$$

This calibration function in the range $\triangle = 20^\circ - 130^\circ$ is larger by 0.2 than $\sigma_{IASPEI}(\triangle)$ recommended by IASPEI in 1967 which has already been adopted by many nations and seismological institutions in the world.

$$\sigma_{IASPEI}(\triangle) = 1.66\log(\triangle) + 3.3 \qquad (20^\circ < \triangle < 160^\circ)$$

Both the most authoritative seismological institution in the world: ISC and NEIC have been adopting the $\sigma_{IASPEI}(\triangle)$ to determine magnitade Ms. Therefore, the magnitude Ms calculated by $\sigma_{PEK}(\triangle)$ is systematically 0.2 units larger than that determined by ISC and NEIC which possess the largest aperture seismic network. The rate of attenuation of surface wave amplitude $\triangle^{-1.66}$ in the range $\triangle = 1^\circ - 20^\circ$ characterized by $\sigma_{PEK}(\triangle)$ is so large that the Ms measured for smaller epicentral distance is too small. In spite of this, in order to maintain continuity of data, the values of Ms computed by $\sigma_{PEK}(\triangle)$ are still given.

4. Body–wave magnitudes m_B and m_b are computed by the Gutenberg–Richter formula

$$m_B \text{ or } m_b = \log(A / T) + Q(\triangle, h)$$

m_B being measured by broad–band intermediate (SK) or 763 long period seismographs and m_b measured by short period ones.

5. For convenience of use and comparison, the surface wave magnitude Msz (NEIC) and body wave magnitude m_b(NEIC) measured by NEIC recorded on short period seismograph, are also listed in this Bulletin.

6. In order to avoid confusion, no conversion is made among the various magnitudes.

References

[1] Jeffreys, H. and Bullen, K. E.,1940. Seismological tables, British Association, London (Reprinted, with additions, 1967).

[2] Flinn, E. A. and Engdahl, E. R.1965. A proposed basis for geographical and seismic regionalization, Rev. Geophys.,3, 123–149.

[3] Flinn, E. A. Engdahl, E. R. and Hill, A. R., 1974. Seismic and geographical regionalization, Bull. Seism. Soc. Am., 64, 771–992.

[4] Willmore, P. L., 1979. Manual of seimological observatory practice, World Data Center A for Solid Earth Geophysics, Report SE–20.

台 站 目 录

List of seismological observatories

Station name	Code	Geographic coordinates Lat N	Geographic coordinates Long E	Altitude (m)	Foundation	Instruments
Baotou	BTO	40° 36′ 20″	110° 01′ 15″	1114	Granite gneiss	SK,64,763
Beijing	BJI	40 02 25	116 10 30	43	Gravel soil	SK,62,JD2,DK-1,763
Changchun	CN2	43 48 05	125 26 54	230	Slate	SK,DK-1,473,763
Chengdu	CD2	30 54 36	103 45 28	628	Conglomerate	SK,DD-1,763
Dalian	DL2	38 54 22	121 37 42	62	Silicilith	SK,DD-1,763
Gaotai	GTA	39 24 38	99 48 52	1341	Granite	SK,62,DD-1,763
Guangzhou	GZH	23 05 13	113 20 38	11	Sandstone	SK,DD-1,513,763
Guiyang	GYA	26 27 31	106 39 50	1162	Dolomite	SK,DD-1,763
Hohhot	HHC	40 50 58	111 33 49	1154	Rhyolite	SK,DD-1,763
Kashi	KSH	39 31 00	75 55 23	1314	Alluvial clay	SK,DD-1
Kunming	KMI	25 07 24	102 44 24	1945	Sandstone	SK,DD-1,763
Lanzhou	LZH	36 05 12	103 50 48	1550	Lehm	SK,64,513,763
Lhasa	LSA	29 42 00	91 09 00	3789	Granite	SK,VGK
Mudanjiang	MDJ	44 36 59	129 35 31	250	Granite	SK,DD-1,513,763
Nanjing	NJ2	32 03 06	118 51 16	45	Silicarenite	SK,DD-1,513,763
Quanzhou	QZH	24 56 35	118 35 30	21	Granite	SK,64,763
Qiongzhong	QZN	19 01 46	109 50 36	230	Granite	DD-1,763
Shenyang	SNY	41 49 40	123 34 41	54	Granite	SK,DD-1,763
Sheshan	SSE	31 05 44	121 11 12	10	Andesite	SK,DD-1,763
Tai'an	TIA	36 12 41	117 07 28	300	Amphibole granite	SK,64,513,763
Taiyuan	TIY	37 42 47	112 26 03	850	Limestone	SK,DD-1,64,763
Urumqi	WMQ	43 48 49	87 42 17	901	Sandstone	SK,62,763
Wuhan	WHN	30 32 37	114 21 01	26	Silicarenite	SK,DD-1,763
Xi'an	XAN	34 02 22	108 55 17	630	Granite	SK,DD-1,513

仪 器 常 数

Constants of seismograph

台站代号 Station code	仪器型号 Type of instrument	分向 Comp.	T_1	T_2	D_1	D_2	σ^2	V_0	测定日期 Date determined	记录纸速 R_V (mm / min)	记录方式 Recorder type
BTO	SK	N–S	12.5	1.2	0.45	5.0	0.101	2.66E3	1987.5.9	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.101	2.41E3			
		U–D	12.6	1.2	0.58	5.0	0.302	1.37E3			
		N–S	12.5	1.2	0.45	5.07	0.102	2.46E3	1988.5.24		
		E–W	12.5	1.2	0.45	5.00	0.103	2.39E3			
		U–D	12.5	1.2	0.58	5.05	0.302	1.31E3			
	DD1	N–S	1.0		0.45			4.96E4	1988.9.20	120	墨水笔 Pen and ink
		E–W	1.0		0.45			5.05E4			
		U–D	1.0		0.45			5.45E4			
BJI	SK	N–S	12.5	1.1	0.45	5.5	0.090	1.77E3	1987.8.1	30	照像纸 Photo paper
		E–W	12.5	1.1	0.45	5.4	0.070	1.30E3			
		U–D	12.5	1.1	0.59	5.0	0.280	.905E3			
		N–S	12.5	1.1	0.45	5.47	0.091	1.74E3	1988.10.1		
		E–W	12.5	1.1	0.45	5.18	0.069	1.63E3			
		U–D	12.5	1.1	0.59	4.07	0.278	1.20E3			
	DD–2	N–S	1.0		0.60			1.02E5	1988.5.1	120	墨水笔 Pen and ink
		E–W	1.0		0.60			1.17E5			
		U–D	1.0		0.60			7.68E4			
CN2	SK	N–S	12.5	1.2	0.45	4.99	0.079	2.17E3	1988.1.12	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.97	0.075	2.01E3			
		U–D	12.5	1.2	0.65	4.98	0.349	1.50E3			
	DD1	N–S	1.0		0.45			7.92E4	1987.12.2	120	墨水笔 Pen and ink
		E–W	1.0		0.45			7.26E4			
		U–D	1.0		0.45			9.29E4			
		N–S	1.0		0.45			9.46E4	1988.6.23		
		E–W	1.0		0.45			7.74E4			
		U–D	1.0		0.45			10.3E4			
CD2	SK	N–S	12.5	1.2	0.45	5.0	0.038	1.40E3	1987.12.26	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.039	1.40E3			
		U–D	12.5	1.2	0.53	5.0	0.161	1.40E3			
	DD2	N–S	1.0		0.45			7.16E4	1988.3.15	120	墨水笔 Pen and ink
		E–W	1.0		0.45			7.22E4			
		U–D	1.0		0.45			7.26E4			
DL2	SK	N–S	12.5	1.2	0.45	4.90	0.109	1.70E3	1987.10.27	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.00	0.100	1.70E3			
		U–D	12.5	1.2	0.58	4.90	0.241	1.70E3			
		N–S	12.5	1.2	0.45	4.95	0.104	1.70E3	1988.10.27		
		E–W	12.5	1.2	0.45	5.08	0.102	1.70E3			
		U–D	12.5	1.2	0.58	4.99	0.251	1.33E3			
	DD1	N–S	1.0		0.45			3.14E4	1987.10.17	120	墨水笔 Pen and ink
		E–W	1.0		0.45			2.28E4			
		U–D	1.0		0.45			1.42E4			
		N–S	1.0		0.45			2.70E4	1988.10.14		
		E–W	1.0		0.45			2.35E4			
		U–D	1.0		0.45			1.54E4			

续表

台站代号 Station code	仪器型号 Type of instrument	分向 Comp.	T_1	T_2	D_1	D_2	σ^2	V_0	测定日期 Date determined	记录纸速 R_V (mm / min)	记录方式 Recorder type
GTA	SK	N-S	12.5	1.2	0.45	5.00	0.084	2.14E3	1987.11.7	30	照像纸 Photo paper
		E-W	12.5	1.2	0.45	5.00	0.076	2.00E3			
		U-D	12.5	1.2	0.45	5.00	0.349	1.14E3			
		N-S	12.5	1.2	0.45	5.01	0.082	2.26E3	1988.11.7		
		E-W	12.5	1.2	0.45	4.98	0.073	1.95E3			
		U-D	12.5	1.2	0.53	4.94	0.296	1.08E3			
	DD1	N-S	1.0		0.45			1.46E5	1987.9.26	120	墨水笔 Pen and ink
		E-W	1.0		0.45			1.54E5			
		U-D	1.0		0.45			1.30E5			
		N-S	1.0		0.45			1.73E5	1988.9.26		
		E-W	1.0		0.45			1.37E5			
		U-D	1.0		0.45			1.13E5			
	62	N-S	1.0	0.5	0.6	1.5	0.25	2.38E5	1987.3.8	120	照像纸 Photo paper
		E-W	1.0	0.5	0.6	1.5	0.25	2.25E5			
		U-D	1.0	0.5	0.6	1.5	0.25	1.97E5			
		N-S	1.0	0.6	0.659	1.5	0.25	1.83E5	1988.5.31		
		E-W	1.0	0.6	0.460	1.5	0.25	2.34E5			
		U-D	1.0	0.6	0.420	1.5	0.25	1.82E5			
GZH	SK	N-S	12.5	1.2	0.45	5.00	0.068	1.78E3	1987.3.7	30	照像纸 Photo paper
		E-W	12.5	1.2	0.45	5.00	0.065	1.96E3			
		U-D	12.5	1.2	0.56	5.10	0.025	1.23E3			
		N-S	12.5	1.2	0.45	4.99	0.068	1.84E3	1988.3.11		
		E-W	12.5	1.2	0.45	5.04	0.063	1.80E3			
		U-D	12.5	1.2	0.56	5.01	0.240	1.26E3			
	DD1	N-S	1.0		0.45			3.59E4	1987.8.10	120	墨水笔 Pen and ink
		E-W	1.0		0.45			2.14E4			
		U-D	1.0		0.45			2.46E4			
		N-S	1.0		0.45			3.70E4	1988.5.19		
		E-W	1.0		0.45			2.66E4			
		U-D	1.0		0.45			3.34E4			
GYA	SK	N-S	12.5	1.2	0.45	5.00	0.089	1.24E3	1987.7.9	30	照像纸 Photo paper
		E-W	12.5	1.2	0.45	4.90	0.069	1.29E3			
		U-D	12.5	1.2	0.56	5.10	0.297	.924E3			
		N-S	12.5	1.2	0.45	4.92	0.088	1.45E3	1988.7.12		
		E-W	12.5	1.2	0.45	4.95	0.070	1.45E3			
		U-D	12.5	1.2	0.56	5.03	0.286	.783E3			
	DD1	N-S	1.0		0.45			6.87E4	1987.7.12	120	墨水笔 Pen and ink
		E-W	1.0		0.45			5.88E4			
		U-D	1.0		0.45			5.92E4			
		N-S	1.0		0.45			6.09E4	1988.7.15		
		E-W	1.0		0.45			5.67E4			
		U-D	1.0		0.45			5.51E4			
HHC	SK	N-S	12.5	1.2	0.45	4.4	0.112	3.44E3	1987.7.8	30	照像纸 Photo paper
		E-W	12.5	1.2	0.45	4.7	0.119	3.40E3			
		U-D	12.5	1.2	0.58	4.9	0.290	1.49E3			

续表

台站代号 Station code	仪器型号 Type of instruments	分向 Comp.	T_1	T_2	D_1	D_2	σ^2	V_0	测定日期 Date determined	记录纸速 R_V (mm / min)	记录方式 Recorder type
HHC	SK	N–S	12.5	1.2	0.45	5.1	0.10	2.81E3	1988.7.7	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.9	0.10	2.73E3			
		U–D	12.5	1.2	0.60	5.1	0.31	1.33E3			
	DD1	N–S	1.0		0.45			5.77E4	1987.7.3	120	墨水笔 Pen and ink
		E–W	1.0		0.45			5.65E4			
		U–D	1.0		0.45			6.57E4			
		N–S	1.0		0.45			5.26E4	1988.7.3		
		E–W	1.0		0.45			5.75E4			
		U–D	1.0		0.45			7.14E4			
KSH	SK	N–S	12.5	1.2	0.45	5.00	0.038	1.58E3	1987.8.27	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.00	0.041	1.63E3			
		U–D	12.5	1.2	0.56	5.00	0.272	1.23E3			
		N–S	12.5	1.2	0.45	5.03	0.041	1.76E3	1988.10.16		
		E–W	12.5	1.2	0.45	4.91	0.044	1.53E3			
		U–D	12.5	1.2	0.59	5.06	0,300	1.28E3			
KMI	SK	N–S	12.5	1.1	0.45	5.53	0.090	1.54E3	1988.1.1	30	照像纸 Photo paper
		E–W	12.5	1.1	0.45	5.53	0.080	1.45E3			
		U–D	12.5	1.1	0.60	5.50	0.314	.910E3			
	62	N–S	3.1	0.1	0.60	5.0	0.11	3.07E4	1988.1.8	60	照像纸 Photo paper
		E–W	3.0	0.1	0.60	5.0	0.11	2.98E4			
		U–D	2.0	0.1	0.30	4.0	0.20	4.35E4			
LZH	SK	N–S	12.5	1.2	0.45	5.0	0.076	1.74E3	1987.10.14	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.079	2.13E3			
		U–D	12.5	1.2	0.49	4.9	0.337	1.29E3			
		N–S	12.5	1.2	0.45	4.96	0.077	2.12E3	1988.10.14		
		E–W	12.5	1.2	0.45	4.99	0.080	2.12E3			
		U–D	12.5	1.2	0.59	4.95	0.338	1.25E3			
	64	N–S	2.5	0.1	0.50	6.0	0.25	2.17E4	1987.7.9	60	照像纸 Photo paper
		E–W	2.5	0.1	0.50	6.0	0.25	2.55E4			
		U–D	2.5	0.1	0.50	6.0	0.25	2.81E4			
		N–S	2.5	0.1	0.50	6.0	0.25	2.43E4	1988.6.18		
		E–W	2.5	0.1	0.50	6.0	0.25	2.76E4			
		U–D	2.5	0.1	0.50	6.0	0,25	3.04E4			
LSA	SK	N–S	12.5	1.2	0.45	5.0	0.096	2.09E3	1987.8.22	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.091	1.49E3			
		U–D	12.5	1.2	0.56	5.0	0.275	.910E3			
		N–S	12.5	1.2	0.45	4.98	0.092	1.79E3	1988.8.30		
		E–W	12.5	1.2	0.45	5.0	0.110	1.96E3			
		U–D	12.5	1.2	0.56	5.0	0.305	1.02E3			
MDJ	SK	N–S	12.5	1.2	0.45	4.9	0.042	2.39E3	1987.2.20	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.8	0.059	2.05E3			
		U–D	12.6	1.2	0.45	5.1	0.249	1.33E3			
		N–S	12.4	1.2	0.45	4.97	0.068	2.44E3	1988.8.10		
		E–W	12.4	1.2	0.45	5.00	0.056	2.15E3			
		U–D	12.5	1.2	0.57	4.93	0.235	1.47E3			

续表

台站代号 Station code	仪器型号 Type of instrument	分向 Comp.	T_1	T_2	D_1	D_2	σ^2	V_0	测定日期 Date determined	记录纸速 R_V (mm / min)	记录方式 Recorder type
MDJ	DD1	N–S	1.0		0.45			4.97E4	1987.1.26	120	墨水笔 Pen and ink
		E–W	1.0		0.45			5.08E4			
		U–D	1.0		0.45			5.18E4			
		N–S	1.0		0.45			5.69E4	1988.4.17		
		E–W	1.0		0.45			5.78E4			
		U–D	1.0		0.45			4.56E4			
NJ2	SK	N–S	12.5	1.2	0.45	5.0	0.082	2.27E3	1988.6.3	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.091	2.42E3			
		U–D	12.5	1.2	0.45	5.0	0.285	1.75E3			
		N–S	12.5	1.2	0.45	5.04	0.076	2.27E3	1988.7.1		
		E–W	12.5	1.2	0.45	5.05	0.086	2.38E3			
		U–D	12.5	1.2	0.61	5.02	0.275	1.33E3			
	DD1	N–S	1.0		0.45			3.61E4	1987.6.28	120	墨水笔 Pen and ink
		E–W	1.0		0.45			3.41E4			
		U–D	1.0		0.45			3.69E4			
		N–S	1.0		0.45			2.94E4	1988.6.22		
		E–W	1.0		0.45			2.96E4			
		U–D	1.0		0.45			4.13E4			
QZH	SK	N–S	12.5	1.2	0.45	4.90	0.092	2.14E3	1987.11.20	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.99	0.076	2.07E3			
		U–D	12.5	1.2	0.61	4.96	0.100	1.12E3			
	473	N–S	1.5		0.45			.440E4	1988.3.25	120	熏烟纸 Smoked paper
		E–W	1.5		0.45			.650E4			
		U–D	1.5		0.45			.380E4			
QZN	SK	N–S	12.5	1.2	0.45	5.0	0.038	1.58E3	1987.12.16	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.9	0.040	1.62E3			
		U–D	12.5	1.2	0.62	4.9	0.310	1.22E3			
	DD1	N–S	1.0		0.45			3.18E4	1987.12.11	120	墨水笔 Pen and ink
		E–W	1.0		0.45			4.48E4			
		U–D	1.0		0.45			3.47E4			
		N–S	0.7		0.45			8.69E4	1988.6.11		
		E–W	0.7		0.45			1.11E4			
		U–D	0.7		0.45			8.60E4			
SNY	SK	N–S	12.5	1.2	0.45	5.1	0.085	2.30E3	1987.3.31	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.095	2.39E3			
		U–D	12.5	1.2	0.61	5.0	0.314	1.24E3			
		N–S	12.5	1.2	0.45	5.08	0.086	2.29E3	1988.3.31		
		E–W	12.5	1.2	0.45	4.99	0.095	2.35E3			
		U–D	12.5	1.2	0.61	4.97	0.317	1.26E3			
	DD1	N–S	1.0		0.45			5.25E4	1987.6.22	120	墨水笔 Pen and ink
		E–W	1.0		0.45			5.75E4			
		U–D	1.0		0.45			4.10E4			
		N–S	1.0		0.45			5.21E4	1988.5.30		
		E–W	1.0		0.45			6.03E4			
		U–D	1.0		0.45			4.78E4			

续表

台站代号 Station code	仪器型号 Type of instrument	分向 Comp.	T_1	T_2	D_1	D_2	σ^2	V_0	测定日期 Date determined	记录纸速 R_V (mm / min)	记录方式 Recorder type
SSE	SK	N–S	12.5	1.2	0.45	5.0	0.078	2.01E3	1987.12.24	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.9	0.086	2.00E3			
		U–D	12.5	1.2	0.54	5.0	0.242	1.08E3			
	DD1	N–S	1.0		0.45			5.53E4	1987.12.22	120	墨水笔 Pen and ink
		E–W	1.0		0.45			5.32E4			
		U–D	1.0		0.45			3.96E4			
		N–S	1.0		0.45			5.59E4	1988.7.1		
		E–W	1.0		0.45			6.26E4			
		U–D	1.0		0.45			4.33E4			
TIA	SK	N–S	12.5	1.2	0.45	5.0	0.083	2.26E3	1987.10.24	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	4.9	0.086	2.09E3			
		U–D	12.5	1.2	0.53	4.9	0.251	.807E3			
		N–S	12.5	1.2	0.45	5.10	0.084	2.22E3	1988.10.15		
		E–W	12.5	1.2	0.45	4.9	0.086	2.35E3			
		U–D	12.5	1.2	0.53	5.0	0.230	1.76E3			
	473	N–S	1.5		0.45			4.55E4	1987.10.30	120	熏烟纸 Smoked paper
		E–W	1.5		0.45			2.75E4			
		U–D	1.5		0.45			5.60E4			
		N–S	1.5		0.45			4.85E4	1988.10.26		
		E–W	1.5		0.45			4.40E4			
		U–D	1.5		0.45			3.65E4			
TIY	SK	N–S	12.5	1.2	0.45	5.10	0.085	1.67E3	1987.4.2	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.01	0.082	1.72E3			
		U–D	12.5	1.2	0.59	4.94	0.307	.832E3			
		N–S	12.5	1.2	0.45	4.96	0.087	1.66E3	1988.3.6		
		E–W	12.5	1.2	0.45	5.00	0.083	1.70E3			
		U–D	12.5	1.2	0.59	5.02	0.309	.866E3			
	DD1	N–S	1.0		0.45			1.35E4	1987.9.14	120	墨水笔 Pen and ink
		E–W	1.0		0.45			1.23E4			
		U–D	1.0		0.45			3.44E4			
		N–S	1.0		0.45			1.42E4	1988.3.13		
		E–W	1.0		0.45			1.17E4			
		U–D	1.0		0.45			3.63E4			
WHN	SK	N–S	12.5	1.2	0.45	5.10	0.085	2.36E3	1988.1.1	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.09	0.100	2.36E3			
		U–D	12.5	1.2	0.62	4.94	0.201	2.61E3			
	DD1	N–S	1.0		0.45			2.60E4	1988.1.1	120	墨水笔 Pen and ink
		E–W	1.0		0.45			2.29E4			
		U–D	1.0		0.45			4.15E4			
WMQ	SK	N–S	12.5	1.2	0.45	5.0	0.098	1.74E3	1987.12.2	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.094	1.37E3			
		U–D	12.5	1.2	0.57	5.0	0.329	.926E3			
		N–S	12.5	1.2	0.45	5.0	0.089	2.11E3	1988.9.23		
		E–W	12.5	1.2	0.45	4.95	0.093	2.09E3			
		U–D	12.5	1.2	0.59	5.0	0.302	1.20E3			

续表

台站代号 Station code	仪器型号 Type of instrument	分向 Comp.	T_1	T_2	D_1	D_2	σ^2	V_0	测定日期 Date determined	记录纸速 R_V (mm / min)	记录方式 Recorder type
WMQ	DD1	N–S	1.0		0.45			1.21E5			
		E–W	1.0		0.45			9.42E4	1988.9.21	120	墨水笔 Pen and ink
		U–D	1.0		0.45			1.34E5			
XAN	SK	N–S	12.5	1.2	0.45	5.0	0.091	2.26E3	1987.5.23	30	照像纸 Photo paper
		E–W	12.5	1.2	0.45	5.0	0.092	2.27E3			
		U–D	12.5	1.2	0.62	5.0	0.326	1.39E3			
		N–S	12.5	1.2	0.45	5.05	0.088	2.20E3	1988.8.9		
		E–W	12.5	1.2	0.45	5.04	0.089	2.23E3			
		U–D	12.5	1.2	0.62	4.98	0.308	1.32E3			
	DD1	N–S	1.0		0.45			8.15E4	1987.10.4	120	墨水笔 Pen and ink
		E–W	1.0		0.45			8.45E4			
		U–D	1.0		0.45			1.23E5			
		N–S	1.0		0.45			8.05E4	1988.7.7		
		E–W	1.0		0.45			8.30E4			
		U–D	1.0		0.45			1.20E5			

62 : Type 62 seismograph with galvanometer recording

64 : Type 64 seismograph with galvanometer recording or with electronic amplifier and pen recorder

SK : Type SK (Kirnos) seismograph with galvanometer recording

DD–1 : Type DD–1 seismograph with electronic amplifier and pen recorder

T_1 : Seismometer period in sec.

T_2 : Galvanometer period in sec.

D_1 : Damping coefficient of Seismometer

D_2 : Damping coefficient of galvanometer

σ^2 : Coupling coefficient

V_0 : Static magnification, asterisk indicates magnification at T_1

R_V : Paper speed in mm / min

仪器放大倍率曲线

Response Curves of Instruments