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中国地震台网观测报告

BULLETIN OF SEISMOLOGICAL
OBSERVATIONS OF CHINESE STATIONS

1984

上册



国家地震局地球物理研究所编

地震出版社出版

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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)。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Flin, 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 M_s 的测定,从1966到1982年的“中国地震台网观测报告”都采用北京台1965年的面波震级公式^[5]:

$$M_s = \log(A/T) + \sigma_{PEK}(\Delta)$$

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

$\sigma_{PEK}(\Delta)$ 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

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

在 $\Delta = 20^\circ - 130^\circ$ 的范围内偏高0.2级,用此量规函数测定的 M_s 比世界上两个最大的台网(国际地震中心ISC使用的全球台网和美国地震情报服务处NEIS使用的WWSSN台网)测报的震级系统地偏高0.2级。此外,量规函数 $\sigma_{PEK}(\Delta)$ 代表的面波衰减 $\Delta^{-1.66}$ 在近距离处($\Delta = 1^\circ - 20^\circ$)过大,使得近距离测得的 M_s 偏小。尽管如此,为使资料连续,仍给出用它测定的震级,用 $M_s(PEK)$ 表示。与此同时,也给出文献[6,7]提出的量规函数 $\sigma_{300}(\Delta)$ 测定的震级,用 $M_s(CHN)$ 表示。

$\sigma_{300}(\Delta) = 4.0 + 0.14(\Delta/T_p) + \frac{1}{3} \log(\Delta) + \frac{1}{2} \log(\sin \Delta) + \log(T_p) \quad (3^\circ < \Delta < 177^\circ)$
 T_p 是面波最大振幅对应的平均周期。在 $\Delta = 20^\circ - 160^\circ$ 的范围内,量规函数 $\sigma_{300}(\Delta)$ 与IASPEI推荐的量规函数 $\sigma_{IASPEI}(\Delta)$ 一致, $\sigma_{300}(\Delta)$ 具有更大的震中距使用范围,从 $3^\circ - 177^\circ$ 。用它测定的震级 M_s 与ISC和NEIS测报的震级统计上是一致的^[7]。

4. 近震震级 $M_L(CHN)$ 的测定,采用葛焕称等人给出的公式^[8-10]

$$M_L = \log A_\mu + R_6(\Delta)$$

$$R_6(\Delta) = \begin{cases} 2.46 & (\Delta \leq 15 \text{ km}) \\ \log(\Delta) + 0.0013\Delta + 1.27 & (15 \text{ km} < \Delta < 1000 \text{ m}) \end{cases}$$

这个量规函数与李希特关于 M_L 的原始定义在 $\Delta = 100 \text{ km}$ 处保持一致。它与李善邦教授确定的量规函数在最常用的震中距范围内 $\Delta = 50 \text{ km} - 400 \text{ km}$ 也保持一致。仅在 $\Delta < 50 \text{ km}$ 和 $\Delta > 400 \text{ km}$ 有些改进。用此量规函数测定的震级与以往测定的震级没有系统差。

5. 为便于使用和对比,报告中还给出了NEIS测定的面波震级 $M_{sz}(NEIS)$ 和短周期地震仪测定的体波震级 $mb(NEIS)$ 。

6. 为避免混乱,各种震级之间一律不换算。

7. 报告中的震相符号采用了国际地震电报符号^[4]。为便于使用,请注意下列对照表:

C 代表短周期仪记录压缩。

D 代表短周期仪记录膨胀。

U 代表长周期仪记录压缩。

R 代表长周期仪记录膨胀。

$$IPC = +iP \quad EPD = -eP$$

$$PU = +P \quad PKPR = -PKP$$

$$PG = \bar{P} \text{ or } P_g \quad SG = \bar{S} \text{ or } S_g$$

$$PB = P^* \quad SB = S^*$$

$$AP = {}_pP \quad XP = {}_sP$$

$$APKP = {}_pPKP \quad XPKP = {}_sPKP$$

$$XS = {}_sS \quad LG = L_g$$

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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 Chinese places and persons are spelt with Chinese phonetic alphabets while foreign names are all given in English.

2. All focal parameters are processed with a VAX/780 computer. Jeffreys and Bullen's travel time tables are used in this Bulletin^[1]. The observational data, in addition to the data listed in this Bulletin, include that of many other stations inside and outside China for computer revision of 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 M_s 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)^[5].

$$M_s = \log(A/T) + \sigma_{PEK}(\Delta)$$

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

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

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

Therefore, the magnitude M_s calculated by $\sigma_{PEK}(\Delta)$ is systematically 0.2 units larger than that measured by ISC and NEIS which possess the largest aperture seismic network. The rate of attenuation of surface wave amplitude $\Delta^{-1.66}$ in the range $\Delta = 1^\circ - 20^\circ$ characterized by $\sigma_{PEK}(\Delta)$ is so large that the M_s measured for smaller epicentral distance is too small. In spite of this, in order to maintain continuity of data, the values of M_s computed by $\sigma_{PEK}(\Delta)$ are still given, marked by $M_s(PEK)$. At the same time, the values of M_s computed by the calibration function $\sigma_{300}(\Delta)$ ^[6,7] are also given, marked by $M_s(CHN)$.

$$\sigma_{300}(\Delta) = 4.0 + 0.14\Delta/T_p + \frac{1}{3} \log(\Delta) + \frac{1}{2} \log(\sin\Delta) + \log(T_p) \quad (3^\circ < \Delta < 177^\circ)$$

where T_p is the average period corresponding to maximum surface wave amplitude.

The $\sigma_{300}(\Delta)$ is consistent with $\sigma_{IASPEI}(\Delta)$ in the range $\Delta=20^{\circ}-160^{\circ}$ and has a greater useable range of $3^{\circ}-177^{\circ}$ than $\sigma_{IASPEI}(\Delta)$. The values of M_s (CHN) computed by $\sigma_{300}(\Delta)$ agree statistically with those measured by ISC and NEIS^[7].

4. The local magnitude M_L (CHN) is determined with the formula given by Ge Huancheng et al.^[3-10].

$$M_L = \log(A_\mu) + R_6(\Delta)$$

$$R_6(\Delta) = \begin{cases} 2.46 & (\Delta \leq 15 \text{ km}) \\ \log(\Delta) + 0.0013\Delta + 1.27 & (15 \text{ km} < \Delta < 1,000 \text{ km}) \end{cases}$$

This calibration function is consistent with Richter's original definition of local magnitude M_L at $\Delta=100 \text{ km}$, and consistent with that determined by professor Lee Shanbang (S.P.Lee) in the most used range $\Delta=50-400 \text{ km}$. There is only some improvement for $\Delta < 50 \text{ km}$ and $\Delta > 400 \text{ km}$. So the local magnitudes measured in this Bulletin have no systematic difference with that measured in the past.

5. For convenience of use and comparison, the surface wave magnitude M_s (NEIS) and body wave magnitude m_b (NEIS) measured by NEIS 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.

7. The Bulletin is compiled with international earthquake telegraphic symbols to present seismic phase^[4]. For convenience, a short reference table is given. C represents compression and D represents dilation recorded on short period seismographs. U represents compression and R represents dilatation recorded on long period seismographs, such as

IPC = + iP	EPD = - eP
PU = + P	PKPR = - PKP
PG = $\bar{P}$ or Pg	SG = $\bar{S}$ or Sg
PB = P*	SB = S*
AP = pP	XP = sP
APKP = pPKP	XPKP = sPKP
XS = sS	LG = Lg

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台 站 目 录

List of seismological observatories

Station	Code	Geographical Coordinates		Altitude	Foundation	Instruments
Name		φ_N	λ_E	m		
Baotou (Faotow)	BTO (PT)	40°36'20"	110°01'15"	1114	Granite- Gneiss	SK, 64
Beijing (Peking)	BJI (PK)	40 02 25	116 10 30	43	Gravel Soil	SK, 62, JD2, DK-1
Changchun	CN2	43 48 05	125 26 54	230	Slate	SK, DK-1, DD-1, 473
Chengdu (Chengtū)	CD2 (CU)	30 54 36	103 45 28	628	Conglome- rate	SK, DD-1,
Dalian	DL2	38 54 22	121 37 42	62	Silicilith	SK, DD-1
Gaotai (Kaotai)	GTA	39 24 38	99 48 52	1341	Granite	SK, 62, DD-1
Guangzhou (Canton)	GZH (CT)	23 05 13	113 20 38	11	Sandstone	SK, DD-1, 513
Guiyang	GYA (HS)	26 27 31	106 39 50	1162	Dolomite	SK, DD-1
Hohhot (Huhehot)	HHC	40 50 58	111 33 49	1154	Rhyolite	SK, DD-1
Kashi (Kashi)	KSH (KS)	39 31 00	75 58 23	1314	Alluvial clay	SK
Kunming	KMI (KM)	25 07 24	102 44 24	1945	Basalt	SK, 62
Lanzhou (Lanchow)	LZH (LC)	36 05 12	103 50 48	1550	Lehm	SK, 64, 513
Lhasa	LSA (LS)	29 42 00	91 09 00	3789	Granite	SK, VGK
Mudan Jiang (Mutan River)	MDJ	44 36 59	129 35 31	250	Granite	SK, DD-1,
Nanjing	NJ2	32 03 06	118 51 16	45	Silicarenite	SK, DD-1, 513
Quanzhou	QZH (CCW)	24 56 35	118 35 30	21	Granite	SK, 64
Qiongzong	QZN	19 01 46	109 50 36	230	Granite	DD-1
Shenyang	SNY	41 49 40	123 34 41	54	Granite	SK, DD-1
Sheshan (Sose)	SSE (ZS)	31 05 44	121 11 12	10	Andesite	SK, DD-1
Tai'an	TIA (TA)	36 12 41	117 07 28	300	Amphibole- Granite	SK, 64, 513
Taiyuan	TIY	37 42 47	112 26 03	850	Limestone	SK, 64, DD-1
Urumqi (Urumchi)	WMQ (UM)	43 49 16	87 41 42	970	Sandstone	SK, 62
Wuhan (Wuchang)	WHN (WC)	30 32 37	114 21 01	26	Silicarenite	SK, DD-1
Xian (Sian)	XAN (SA)	34 02 22	108 55 17	630	Granite	SK, DD-1, 513

仪 器 常 数

Constants of Seismographs

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
BTO	SK	N-S	12.5	1.2	0.45	5.0	0.106	2.12×10^3	1983.4.28	30	照像纸
		E-W	12.5	1.2	0.45	5.2	0.098	1.62×10^3	1984.3.16		Photo paper
		U-D	12.5	1.2	0.63	5.0	0.376	1.11×10^3			
		N-S	12.5	1.2	0.45	5.1	0.108	2.44×10^3			
		E-W	12.5	1.2	0.45	5.1	0.106	2.34×10^3			
		U-D	12.5	1.2	0.58	5.1	0.291	1.30×10^3			
	473	N-S	1.5		0.5			0.96×10^4	1983.8.26	120	熏烟纸
		E-W	1.5		0.5			0.88×10^4	1984.8.4		Smoked paper
		U-D	1.5		0.5			0.53×10^4			
		N-S	1.5		0.5			2.03×10^4			
		E-W	1.5		0.5			1.80×10^4			
		U-D	1.5		0.5			1.03×10^4			
BJ1	SK	N-S	12.5	1.1	0.45	5.4	0.090	1.68×10^3	1983.8.11	30	照像纸
		E-W	12.5	1.1	0.45	5.4	0.074	1.57×10^3	1984.8.11		Photo paper
		U-D	12.5	1.1	0.59	5.4	0.303	0.907×10^3			
		N-S	12.5	1.1	0.44	5.5	0.088	1.70×10^3			
		E-W	12.5	1.1	0.46	5.6	0.080	1.51×10^3			
		U-D	12.5	1.1	0.58	5.5	0.278	0.878×10^3			
	62	N-S	1.5	0.41	0.70	1.5	0.058	3.03×10^4	1983.9.1	60	照像纸
		E-W	1.5	0.40	0.70	1.5	0.058	3.11×10^4			photo paper
		U-D	1.5	0.40	0.70	1.5	0.058	3.81×10^4			
CN2	SK	N-S	12.5	1.2	0.45	5.0	0.070	2.13×10^3	1983.12.31	30	照像纸
		E-W	12.5	1.2	0.45	5.0	0.070	2.15×10^3			photo paper
		U-D	12.5	1.2	0.45	5.0	0.330	1.41×10^3			
	473	N-S	1.5		0.45			2.16×10^4	1984.1.1	120	熏烟纸
		E-W	1.5		0.45			2.19×10^4	1984.8.1		
		U-D	1.5		0.45			4.12×10^4			
		N-S	1.5					2.15×10^4			
		E-W	1.5					1.98×10^4			
		U-D	1.5					4.47×10^4			
		N-S	1.5		0.45			2.32×10^4	1984.12.11		
		E-W	1.5		0.45			1.63×10^4			
		U-D	1.5		0.45			4.49×10^4			
CD2	SK	N-S	12.5	1.2	0.45	5.0	0.039	1.40×10^3	1983.12.26	30	照像纸
		E-W	12.5	1.2	0.45	5.0	0.041	1.40×10^3	1984.12.26		photo paper
		U-D	12.5	1.2	0.53	5.0	0.168	1.00×10^3			
		N-S	12.5	1.2	0.45	5.0	0.010	1.40×10^3			
		E-W	12.5	1.2	0.45	5.0	0.039	1.40×10^3			
		U-D	12.5	1.2	0.53	5.0	0.170	1.00×10^3			

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 deter mined as used	记录纸速 R mm/min	记录方式 Recorder type
CD2	DD1	N-S	1.0		0.45			5.80×10^{-1}	1983.9.9	120	墨水笔 Pen and ink
		E-W	1.0		0.45			5.96×10^{-1}			
		U-D	1.0		0.45			5.90×10^{-1}			
		N-S	1.0		0.45			8.20×10^{-1}	1984.3.10		
		E-W	1.0		0.45			5.90×10^{-1}			
		U-D	1.0		0.45			7.16×10^{-1}			
DL2	SK	N-S	12.5	1.2	0.45	5.0	0.110	1.70×10^{-3}	1983.10.21	30	照像纸 Photo paper
		E-W	12.5	1.2	0.45	4.9	0.100	1.70×10^{-3}			
		U-D	12.5	1.2	0.57	5.0	0.256	1.32×10^{-3}			
		N-S	12.5	1.2	0.45	5.0	0.109	1.70×10^{-3}	1984.10.17		
		E-W	12.5	1.2	0.45	4.9	0.100	1.70×10^{-3}			
		U-D	12.5	1.2	0.59	5.0	0.245	1.34×10^{-3}			
	DD1	N-S	1.0		0.45			1.94×10^{-1}	1984.3.23	120	墨水笔 Pen and ink
		E-W	1.0		0.45			1.33×10^{-1}			
		U-D	1.0		0.45			0.94×10^{-1}			
		N-S	1.0		0.45			1.75×10^{-1}	1984.8.18		
		E-W	1.0		0.45			1.10×10^{-1}			
		U-D	1.0		0.45			0.78×10^{-1}			
GTA	SK	N-S	12.5	1.2	0.45	5.0	0.083	1.84×10^{-3}	1983.9.1	30	照像纸 Photo paper
		E-W	12.5	1.2	0.45	5.0	0.102	1.91×10^{-3}			
		U-D	12.5	1.2	0.65	5.0	0.323	1.50×10^{-3}			
		N-S	12.5	1.2	0.45	5.0	0.069	1.92×10^{-3}	1984.11.5		
		E-W	12.5	1.2	0.45	5.0	0.092	1.89×10^{-3}			
		U-D	12.5	1.2	0.65	4.9	0.312	1.73×10^{-3}			
	DD1	N-S	1.0		0.45			3.31×10^{-5}	1983.9.3	120	墨水笔 Pen and ink
		E-W	1.0		0.45			5.15×10^{-5}			
		U-D	1.0		0.45			3.79×10^{-5}			
		N-S	1.0		0.45			2.22×10^{-5}	1984.4.6		
		E-W	1.0		0.45			2.08×10^{-5}			
		U-D	1.0		0.45			1.56×10^{-5}			
		N-S	1.0		0.45			2.34×10^{-5}	1984.9.26		
		E-W	1.0		0.45			1.72×10^{-5}			
		U-D	1.0		0.45			1.93×10^{-5}			
	62	N-S	1.0	0.6	0.6	1.5	0.25	2.45×10^{-5}	1983.3.10	120	照像纸 Photo paper
		E-W	1.0	0.6	0.6	1.5	0.25	2.18×10^{-5}			
		U-D	1.0	0.5	0.6	1.5	0.25	1.44×10^{-5}			
		N-S	1.0	0.6	0.6	1.5	0.25	2.72×10^{-5}	1984.4.10		
		E-W	1.0	0.5	0.6	1.5	0.25	2.26×10^{-5}			
		U-D	1.0	0.4	0.6	1.5	0.25	1.52×10^{-5}			

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
GZH	SK	N-S	12.5	1.2	0.45	5.0	0.067	2.02×10^3	1983.9.22	30	照像纸 phot paper
		E-W	12.5	1.2	0.45	5.0	0.069	2.01×10^3			
		U-D	12.5	1.2	0.54	5.0	0.278	1.27×10^3			
		N-S	12.5	1.2	0.45	5.0	0.068	1.78×10^3	1984.2.22		
		E-W	12.5	1.2	0.45	5.0	0.069	1.89×10^3			
		U-D	12.5	1.2	0.54	4.9	0.279	1.17×10^3			
	DD1	N-S	1.0		0.45			4.84×10^4	1983.9.2	120	墨水笔 pen and ink
		E-W	1.0		0.45			3.28×10^4			
		U-D	1.0		0.45			4.94×10^4			
		N-S	1.0		0.45			8.03×10^4	1984.2.26		
		E-W	1.0		0.45			3.42×10^4			
		U-D	1.0		0.45			9.71×10^4			
		N-S	1.0		0.45			3.45×10^4	1984.8.20		
		E-W	1.0		0.45			3.11×10^4			
		U-D	1.0		0.45			5.64×10^4			
GYA	SK	N-S	12.5	1.2	0.45	5.0	0.091	1.56×10^3	1983.9.26	30	照像纸 photo paper
		E-W	12.5	1.2	0.45	5.0	0.071	1.51×10^3			
		U-D	12.5	1.2	0.56	4.9	0.296	0.803×10^3			
		N-S	12.5	1.2	0.45	5.0	0.091	1.61×10^3	1984.9.14		
		E-W	12.5	1.2	0.45	5.0	0.073	1.48×10^3			
		U-D	12.5	1.2	0.56	5.0	0.316	0.878×10^3			
	DD1	N-S	1.0		0.45			7.71×10^4	1983.9.22	120	墨水笔 pen and ink
		E-W	1.0		0.45			6.42×10^4			
		U-D	1.0		0.45			5.10×10^4			
		N-S	1.0		0.45			8.70×10^4	1984.9.26		
		E-W	1.0		0.45			6.61×10^4			
		U-D	1.0		0.45			5.62×10^4			
HHC	SK	N-S	12.5	1.2	0.45	5.1	0.100	2.84×10^3	1983.9.6	30	照像纸 photo paper
		E-W	12.5	1.2	0.45	4.9	0.100	2.53×10^3			
		U-D	12.5	1.2	0.60	5.2	0.300	1.15×10^3			
		N-S	12.5	1.2	0.45	5.2	0.100	2.52×10^3	1984.2.19		
		E-W	12.5	1.2	0.45	5.2	0.100	2.71×10^3			
		U-D	12.5	1.2	0.60	5.2	0.300	1.39×10^3			
	DD1	N-S	1.0		0.45			5.15×10^4	1983.9.16	120	墨水笔 pen and ink
		E-W	1.0		0.45			4.58×10^4			
		U-D	1.0		0.45			3.98×10^4			
		N-S	1.0		0.45			4.13×10^4	1984.3.31		
		E-W	1.0		0.45			4.05×10^4			
		U-D	1.0		0.45			4.76×10^4			
KSH	SK	N-S	12.5	1.2	0.45	5.0	0.083	1.33×10^3	1983.8.1	30	照像纸 photo paper
		E-W	12.5	1.2	0.45	5.0	0.093	1.34×10^3			
		U-D	12.5	1.2	0.58	5.0	0.279	1.36×10^3			
		N-S	12.5	1.2	0.45	5.0	0.082	2.50×10^3	1984.6.30		
		E-W	12.5	1.2	0.45	5.0	0.088	2.66×10^3			
		U-D	12.5	1.2	0.56	5.0	0.246	1.36×10^3			

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	
KMI	SK	N-S	12.5	1.1	0.45	5.5	0.092	1.47×10 ³	1984.1.1	30	照像纸 photo paper	
		E-W	12.5	1.1	0.45	5.5	0.081	1.40×10 ³				
		U-D	12.5	1.1	0.60	5.5	0.315	0.900×10 ³				
	62	N-S	3.5	0.1	0.60	5.0	0.048	2.12×10 ⁴	1984.1.1	60	照像纸 photo paper	
		E-W	3.0	0.1	0.60	5.0	0.056	2.23×10 ⁴				
		U-D	2.0	0.1	0.30	4.0	0.064	2.36×10 ⁴				
LZH	SK	N-S	12.5	1.2	0.45	5.0	0.084	1.54×10 ³	1983.9.8	30	照像纸 Photo paper	
		E-W	12.5	1.2	0.45	5.0	0.077	1.99×10 ³				
		U-D	12.5	1.2	0.59	5.0	0.342	0.950×10 ³				
		N-S	12.5	1.2	0.45	5.0	0.085	1.49×10 ³	1984.1.17			
		E-W	12.5	1.2	0.45	5.1	0.077	2.11×10 ³				
		U-D	12.5	1.2	0.59	5.0	0.336	0.937×10 ³				
		N-S	12.5	1.2	0.45	5.1	0.085	1.49×10 ³	1984.5.25			
		E-W	12.5	1.2	0.45	5.0	0.075	2.11×10 ³				
		U-D	12.5	1.2	0.59	5.0	0.336	0.937×10 ³				
		N-S	12.5	1.2	0.45	5.0	0.083	1.79×10 ³	1984.9.20			
		E-W	12.5	1.2	0.45	5.0	0.076	2.06×10 ³				
		U-D	12.5	1.2	0.61	5.1	0.362	0.973×10 ³				
	64	N-S	2.5	0.10	0.50	6.0	0.25	2.60×10 ⁴	1983.9.8	60	照像纸 photo paper	
		E-W	2.5	0.10	0.50	6.0	0.25	2.64×10 ⁴				
		U-D	2.5	0.10	0.50	6.0	0.25	2.80×10 ⁴				
	513	N-S	5.0		0.34			4.1×10	1983.3.31	30	熏烟纸 Smoked paper	
		E-W	5.0		0.33			4.76×10				
	LSA	SK	N-S	12.5	1.0	0.45	4.8	0.082	1.51×10 ³	1983.10.31	30	照像纸 photo paper
			E-W	12.5	1.0	0.45	5.1	0.087	1.73×10 ³			
			U-D	12.5	1.0	0.45	4.9	0.243	0.771×10 ³			
			N-S	12.5	1.2	0.48	5.0	0.084	1.58×10 ³	1984.4.28		
			E-W	12.5	1.2	0.45	5.0	0.120	1.96×10 ³			
			U-D	12.5	1.2	0.59	5.2	0.271	0.882×10 ³			
	MDJ	SK	N-S	12.4	1.2	0.45	4.9	0.078	2.18×10 ³	1984.1	30	照像纸 photo paper
E-W			12.6	1.2	0.45	5.0	0.090	2.06×10 ³				
U-D			12.4	1.2	0.60	5.1	0.260	1.24×10 ³				
DD1		N-S	1.0		0.45			5.25×10 ⁴	1983.3.8	120	墨水笔 pen and ink	
		E-W	1.0		0.45			4.90×10 ⁴				
		U-D	1.0		0.45			4.97×10 ⁴				
		N-S	1.0		0.45			5.14×10 ⁴	1984.2.10			
		E-W	1.0		0.45			4.17×10 ⁴				
		U-D	1.0		0.45			5.24×10 ⁴				

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 detemined	记录纸速 R _v mm/min	记 录 方 式 Recorder type	
NJ2	SK	N-S	12.5	1.2	0.45	5.1	0.078	2.13×10^3	1983.6.1	30	照像纸 photo paper	
		E-W	12.5	1.2	0.45	5.0	0.088	2.28×10^3	1984.12.19			
		U-D	12.5	1.2	0.60	5.0	0.265	1.46×10^3				
		N-S	12.5	1.2	0.45	5.0	0.082	2.21×10^3				
		E-W	12.5	1.2	0.45	5.0	0.093	2.31×10^3				
		U-D	12.5	1.2	0.61	5.0	0.284	1.46×10^3				
	DD1	N-S	1.0		0.45			3.69×10^4	1983.12.24		墨水笔 pen and ink	
		E-W	1.0		0.45			4.23×10^4				
		U-D	1.0		0.45			4.77×10^4				
	QZH	SK	N-S	12.5	1.2	0.45	5.1	0.078	2.17×10^3	1983.12.10	30	照像纸 photo paper
			E-W	12.5	1.2	0.45	5.0	0.075	1.95×10^3	1984.12.11		
			U-D	12.5	1.2	0.45	5.1	0.094	1.08×10^3			
N-S			12.5	1.2	0.45	5.1	0.083	2.22×10^3				
E-W			12.5	1.2	0.45	5.1	0.076	1.89×10^3				
U-D			12.6	1.2	0.45	5.1	0.094	1.05×10^3				
473		N-S	1.5		0.45			1.23×10^4	1983.7	120	熏烟纸 Smoked paper	
		E-W	1.5		0.45			1.94×10^4	1984.10.12			
		U-D	1.5		0.45			0.975×10^4				
		N-S	1.5		0.45			2.02×10^4				
		E-W	1.5		0.45			1.94×10^4				
		U-D	1.5		0.45			1.81×10^4				
QZN	SK	N-S	12.5	1.2	0.45	5.0	0.039	1.48×10^3	1983.12.30	30	照像纸 photo paper	
		E-W	12.5	1.2	0.45	5.0	0.039	1.52×10^3	1984.12.30			
		U-D	12.5	1.2	0.59	5.0	0.292	1.09×10^3				
		N-S	12.5	1.2	0.45	4.9	0.037	0.869×10^3				
		E-W	12.5	1.2	0.45	5.0	0.038	1.45×10^3				
		U-D	12.5	1.2	0.59	5.0	0.290	1.15×10^3				
QZN	DD1	N-S	1.0		0.45			1.86×10^4	1983.12.17	120	墨水笔 pen and ink	
		E-W	1.0		0.45			1.93×10^4	1984.5.23			
		U-D	1.0		0.45			2.34×10^4				
		N-S	1.0		0.45			2.16×10^4				
		E-W	1.0		0.45			2.30×10^4				
		U-D	1.0		0.45			2.32×10^4				1984.12.25
		N-S	1.0		0.45			2.40×10^4				
		E-W	1.0		0.45			2.60×10^4				
		U-D	1.0		0.45			2.74×10^4				