

4 SEP 1969

Bulletin of the Urakawa Seismological Observatory

No. 5

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Urakawa Seismological Observatory

Faculty of Science, Hokkaido University

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Urakawa Seismological Observatory

Station: Kamikineusu (KMU)

Location Latitude: $42^{\circ}14'19''$ N, Longitude: $142^{\circ}58'02''$ E,
Height: 185 m.

Instruments

	Abbr.	Comp.	T_s (sec)	h_s	T_g (sec)	h_g	σ^2	V_{max}^*
Film-recording Seismograph	N	N-S	0.94	0.70	0.28	3.1	0.003	15,000
	E	E-W	0.93	0.73	0.25	3.0	0.003	15,000
	Z	U-D	0.91	0.70	0.34	1.8	0.003	19,000
	ZX	U-D	0.89	2.02	0.30	1.4	0.018	120,000
Tape-recording Seismograph	T-1	U-D	1.0	1.4	1.4 } Forming a tripartite array	1.4 }	Forming a tripartite array	Forming a tripartite array
	T-2	U-D	1.0	1.4				
	T-3	U-D	1.0	1.4				

* When measured on a film-viewer of magnification 6.

For magnification curves see No. 3 of this bulletin.

Readings

- (1) All earthquakes with maximum trace amplitude 0.5 mm or larger on the Z records measured on the $\times 6$ film-viewer are interpreted and listed in this bulletin, though many smaller shocks are recorded on the ZX records and the magnetic tapes.
- (2) Times of P and other phases except S are indicated using the Japanese Standard Time (JST).

JST = GMT + 9 hours.

The time of S phase can be obtained by adding P-S to the time of P. A mark i attached to the figures indicating P-S means that the corresponding S phase is iS.

(3) Amplitudes are the trace amplitudes for the maximum waves in the Z, N, and E records measured on the film-viewer. When the maximum waves appear in P or other phases except S, the names of the phases are attached to the figures indicating the periods of the maximum waves.

(4) Figures in the column "Initial motion" indicate the directions and amplitudes of the initial motions of P waves in the ZX records measured on the film-viewer. A Plus sign means upward or compressional motion.

(5) Communications relating to this bulletin should be addressed to the director, Urakawa Seismological Observatory, Kamikineusu, Urakawa, Hokkaido, Japan.

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Date	Phase	Time(JST)			P-S	Amplitude(mm)		Period(sec)		Initial motion(mm)		
		h	m	s		Z	N	E				
1	iPZX	04	16	19.7	12.3	5.4	0.5	9.6	0.5	3.9	0.5	-2.0
1	ePZX	04	53	08.8	26.8	2.0	0.5	2.7	0.5	2.6	0.6	+1.5
1	iPZX	05	33	11.2								
	iZXZ	33	26.8		15.6	1.0	0.6	1.8	0.4	1.0	0.5	
1	ePZX	05	48	35.2	12.1	2.0	0.6	4.6	0.2	2.4	0.3	
1	ePZX	12	01	48.0	43.8	0.7	0.8	0.7	1.0	0.6	0.7	
1	iPZX	14	33	20.7	10.8i	0.5	0.6	0.9	0.4	0.7	0.2	+0.5
1	iPZX	14	34	53.9	07.6i	0.6	0.5	0.9	0.3	0.7	0.4	-1.6
1	ePZX	15	19	01.6	12.2i	1.0	0.6	1.3	0.4	1.1	0.6	
1	ePZX	16	23	40.3	11.2	0.5	0.5	0.6	0.6	0.4	0.3	
1	iPZX	16	40	35.1	12.4i	6.4	0.7	7.5	0.4	6.5	0.6	-50
1	iPZX	17	53	22.7	09.1	1.1	0.6	1.9	0.4	0.9	0.6	-3.2
1	ePZX	18	05	03.6	20.1	0.6	0.6	0.8	0.6	0.8	0.6	
1	iPZX	18	12	49.1	08.7	0.9	0.5	1.4	0.3	0.9	0.3	-3.1
1	iPZX	18	56	16.4	17.1	2.5	0.6	2.6	0.2	1.9	0.5	+0.5
1	ePZX	19	41	52.2	32.0	0.6	0.7	0.8	0.5	0.5	0.7	
2	ePZX	03	46	01.7	27.5	0.8	0.5	1.1	0.4	0.8	0.7	
2	ePZX	03	50	29.4	27.5	1.2	0.5	1.3	0.9	1.2	0.9	
2	iPZX	13	36	17.1	11.8	0.8	0.6	1.4	0.3	1.0	0.4	+1.1
2	ePZX	18	13	06.9								
	eXZ	13	17.5	246.6		0.8	0.5P	1.0	0.6S	0.6	0.6S	
2	ePZX	19	35	52.3	113.7	0.5	0.8	0.7	1.1	0.7	0.8	
3	ePZX	06	40	53.8	20.5	0.5	0.5	0.7	0.5	0.6	0.5	
3	ePZX	11	57	18.3	19.3i	1.0	0.5	1.9	0.4	1.6	0.4	
3	ePZX	16	05	39.9	11.9	1.8	0.3	2.3	0.3	1.7	0.5	
3	ePZX	17	13	24.2								
	epPZX	13	50.2			0.6	1.3P	0.3	1.0P	0.4	1.1P	
3	iPZX	18	52	17.2	08.5i	2.4	0.5	7.4	0.3	3.9	0.5	+3.5
3	iPZX	22	18	07.3	18.7i	1.3	0.4	1.6	0.4	1.4	0.5	+1.1
4	iPZX	03	53	06.3	11.8	11.0		22.8	0.5	12.5	0.4	+3.7
4	iPZX	04	00	12.4	10.9	0.6	0.5	1.3	0.6	0.6	0.5	+1.0
4	iPZ	09	40	12.4		S0		S0		S0		+0.6
4	ePZX	09	46	38.0	08.3i	0.8	0.3	2.0	0.4	1.9	0.4	
4	iPZX	09	53	49.7	08.6i	0.6	0.5	2.2	0.3	1.3	0.6	+3.2
4	iPZX	10	29	19.0								+1.4
	iZXZ	29	25.0		08.4i	1.3	0.3	5.4	0.2	4.5	0.4	
4	ePZX	10	38	06.4	08.4i	2.3	0.5	8.5	0.3	6.5	0.5	
4	iPZX	10	59	26.2	08.5i	4.2	0.5	22.8	0.4	10.5	0.5	-1.6
4	ePZX	11	21	46.6	124.5	0.7	0.8	1.2	0.8	1.5	0.7	
4	ePZX	13	16	33.1								
	iZXZ	16	35.5		17.1	0.5	0.5	0.9	0.4	0.5	0.3	
4	iPZX	13	24	40.9	22.1	26.5	1.0	35.5	1.1	25.3	1.2	+1.4
4	iPZX	13	31	52.2	08.2i	1.1	0.5	5.5	0.3	2.3	0.4	-1.6
4	ePZX	15	20	21.1	13.5i	1.4	0.6	2.6	0.6	1.9	0.6	
4	iPZX	17	20	50.2	17.5	5.2	0.5	8.6	0.5	7.4	0.4	+1.0
4	iPZX	17	35	18.2	08.7	1.3	0.5	2.9	0.3	1.9	0.5	-3.7
4	iPZX	19	02	36.7	08.4i	3.1	0.6	8.5	0.5	7.3	0.4	+2.0
4	ePZX	21	41	47.1	12.7	0.9	0.4	1.3	0.5	0.9	0.4	
4	ePZX	22	17	58.9								
	iZXZ	18	08.5		11.7	0.5	0.5	1.5	0.3	0.9	0.4	
5	ePZX	02	41	36.2	11.0	0.5	0.6	1.0	0.2	0.6	0.7	
5	ePZX	04	10	52.0	38.5	1.1	0.8	2.0	0.6	1.0	0.8	
5	iPZX	09	06	01.1	07.5i	1.2	0.5	2.6	0.2	1.7	0.4	+0.8
5	iPZX	10	38	02.9								+2.6
	iZXZ	38	09.2		08.9i	3.6	0.4	5.8	0.4	5.8	0.3	
5	ePZX	10	56	27.2	11.3	0.6	0.5	0.9	0.4	0.6	0.6	
5	iPZX	11	55	41.1	13.2	0.9	0.4	1.7	0.5	0.8	0.4	+0.2
5	iPZX	17	52	48.0	14.0i	2.1	0.9	2.9	0.6	2.0	0.8	-1.0
5	iPZX	19	10	31.1	08.4i	0.5	0.5	2.4	0.3	1.1	0.3	+0.2
5	ePZX	23	21	33.3	13.9i	0.8	0.6	1.2	0.2	0.6	0.2	
6	ePZX	03	44	45.7	16.4i	0.6	0.5	0.8	0.5	0.5	0.4	
6	ePZX	04	28	30.5								
	eXN	28	45.0		24.3	8.2	0.5	8.8	0.6	8.0	0.5	
6	ePZX	05	23	10.7	100.0	0.5	1.0	0.9	0.6	0.6	1.0	
6	iPZX	09	50	37.1								+2.1
	eZXZ	50	46.0		19.6i	13.8	1.0	13.2	1.0	12.4	1.2	

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	s	Z	N	E				
6	ePZX	10	24	01.0	14.9i	5.0	0.5	4.8	0.4	3.6	0.5	
6	ePZX	13	55	02.0	16.3	1.7	0.5	1.7	0.5	1.2	0.5	
6	ePZX	14	34	44.4	12.1i	0.5	0.5	0.8	0.4	0.4	0.3	
6	ePZX	14	53	59.5	13.1	1.0	0.6	1.6	0.6	0.9	0.6	
6	ePZX	16	52	42.4	12.8i	1.9	0.7	4.1	0.5	3.1	0.5	
6	ePZX	18	22	36.9	31.1	4.0	0.5	7.5	0.7	4.0	0.5	
6	iPZX	18	59	03.0	12.1	11.3	0.6	12.5	0.7	11.2	0.8	-8.4
6	iPZX	19	24	03.8	12.2	11.6	0.6	11.4	0.7	11.8	0.5	-7.8
7	iPZX	04	12	58.6	08.7i	0.9	0.5	2.2	0.3	1.3	0.4	+0.6
7	ePZX	04	42	52.7	1 51.1	2.5	0.5	4.2	0.7	3.7	0.5	
7	ePZX	04	51	07.1	19.4	0.8	0.5	0.8	0.3	0.9	0.4	
7	iPZX	08	57	09.9	08.3i	0.7	0.2	1.5	0.3	1.5	0.3	+0.9
7	ePZX	12	39	20.2	18.2	0.7	0.5	0.8	0.3	0.7	0.5	
7	iPZX	14	28	54.4	07.3	>25		>40		>28		+50
7	iPZX	17	23	29.4	09.9	1.5	0.5	1.9	0.5	1.2	0.5	+1.2
7	ePZX	18	04	07.5	1 56.0	0.8	0.5P	0.7	0.5P	0.5	0.4P	
8	iPZX	04	23	41.5								
8	eScSN	34	29.5	2 51.1i	>50	>68		>84				-3.8
8	eX1ZX	04	38	40								
8	eX2N	40	02.7		0.5	0.9X2	0.5	0.7X2	0.4	0.6X2		
8	iPZX	05	33	09.8	25.2i	4.3	0.7	5.5	0.9	4.5	1.1	-0.7
8	iPZ	05	49	15.6		S0		S0		S0		+50
8	ePZ	05	52	07.3								
8	eXN	52	20.4		>3	0.5	>9	0.3	>3	0.4		
8	ePZX	06	05	19.2	07.3i	1.0	0.6	1.9	0.4	0.7	0.7	
8	iPZX	06	12	10.7	07.6i	1.7	0.4	3.1	0.3	1.2	0.5	-4.0
8	iPZX	06	30	22.2	07.5i	19.3	0.5	30.4	0.3	33.8	0.5	-15.2
8	iPZX	07	42	25.6	07.6i	0.5	0.5	1.3	0.3	1.0	0.2	+2.4
8	iPZX	09	52	19.5	1 41.7	9.0	0.8	9.0	1.0	7.8	0.9	+5.6
8	iPZX	09	53	17.4	07.1	24.5	0.6	56.5	0.5	38	0.3	+32.0
8	iPZX	11	30	56.5	08.0i	4.1	0.5	7.3	0.3	6.9	0.3	+2.7
8	ePZX	19	57	46.4	11.9	1.3	0.6	2.0	0.3	1.0	0.5	
8	ePZX	20	50	38.3	1 17.0	0.6	0.7	1.0	0.7	0.5	0.5	
8	iPZX	21	45	36.2	10.4i	3.7	0.6	5.4	0.7	3.3	0.4	-1.8
8	ePZX	23	44	11.5	23.8	0.8	0.7	1.3	0.8			
9	ePZX	00	13	00.0		2.6	1.4P	0.6	1.1P			
9	ePZX	00	25	18.2	11.0i	0.8	0.5	1.1	0.2			
9	iPZX	02	48	47.6	06.5i	5.9	0.3	15.1	0.2	11.7	0.2	-4.5
9	ePZX	05	17	00.2								
9	iXZ	17	04.0	09.1i	6.9	0.6	15.0	0.6	6.3	1.1		
9	ePZX	05	48	20.4	06.8i	1.3	0.3	3.4	0.2	1.7	0.2	
9	ePZX	07	32	46.8	58.7	1.3	0.6	1.6	0.6	0.9	0.5	
9	iPZX	09	23	18.0	10.8	0.9	0.5	1.7	0.5	0.8	0.5	-0.6
9	ePZX	10	54	14.7	48.8	5.1	0.5	5.3	0.9	4.0	0.6	
9	iPZX	11	16	25.6	12.7i	7.1	0.5	10.9	0.3	7.7	0.5	+3.0
9	iPZX	15	44	20.2	09.1i	0.6	0.3	0.9	0.2	0.8	0.3	+0.2
9	ePZX	16	59	04.7								
9	iXZX	59	11.7	09.3i	1.6	0.6	2.2	0.3	1.9	0.4		
9	iPZX	17	59	38.7	12.5	0.7	0.5	1.0	0.7	0.5	0.4	+0.9
9	ePZX	19	23	54.7	09.7	0.5	0.3	0.9	0.2	0.4	0.2	
10	iPZX	01	21	31.5	13.6i	2.3	0.9	4.4	0.6	3.1	0.6	-1.4
10	ePZX	04	33	04.1	45.9	0.5	0.4	0.7	0.7	0.7	0.4	
10	iPZX	05	16	40.1	12.5	0.5	0.5	1.2	0.2	0.6	0.4	-0.8
10	iPZX	07	20	57.1	11.3i	2.2	0.6	2.8	0.2	2.2	0.3	-2.2
10	iPZX	09	11	12.9	09.9i	1.1	0.7P	2.7	0.5S	0.9	0.4S	+3.6
10	ePZX	11	58	09.7	11.1	0.5	0.5	0.8	0.3	0.5	0.3	
10	ePZX	14	35	40.7								
10	eXZ	36	23.5		0.6	0.8X	0.8	0.7X	0.4	0.7X		
10	iPZX	15	30	02.7	13.8	2.3	0.7	4.0	0.5	2.5	0.6	+1.0
10	ePZX	21	58	19.8	09.5	0.5	0.7	0.7	0.5	0.5	0.4	
10	iPZX	23	04	28.5								-1.3
10	iXZX	04	31.0	44.2	5.1	1.0	7.9	1.0	3.6	1.0		+
11	ePZX	00	14	03.3								
11	ipPZX	14	29.6		1.5	1.4pP	1.0	1.3pP	0.9	1.5pP		
11	iPZ	08	25	28.6	10.1i	8.0	0.5	>19	0.2	14.0	0.2	+2.6

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E			

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)	
		h	m	s	m	s	Z	N	E			
16	ePZX	00	47	33.5	58.5		1.3	0.7	1.4	1.0	1.2	1.3
16	ePZX	02	42	17.4	18.6		0.8	0.5	1.5	0.4	0.8	0.5
16	ePZX	03	19	35.3	13.5i		1.6	0.5	2.3	0.5	2.3	0.4
16	iPZX	05	16	09.0								-1.7
16	epPZX	16	35.2				1.9	1.2P	1.3	1.0P	0.9	1.2P
16	ePZX	07	21	26.0	14.0		4.6	0.7	6.4	0.8	4.0	0.7
16	ePZX	11	40	09.7	14.0		0.6	0.6	1.3	0.5	0.9	0.5
16	ePZX	15	17	09.1	24.5		2.8	0.9	2.9	0.7	2.1	0.7
16	ePZX	15	44	05.0	24.3		1.2	0.9	1.3	0.6	1.0	0.7
16	ePZX	16	49	43.2			0.9	1.1P	0.7	0.9P	0.5	1.5P
16	iPZX	17	06	36.9								+1.4
16	iXZ	06	44.5	09.5	1.3	0.3	3.0	0.2	2.2	0.3		
16	ePZX	17	19	35.4	55.6		1.0	0.5	1.8	0.5	1.1	0.7
16	ePZX	17	43	46.7	10.3i		1.4	0.6	3.1	0.2	2.2	0.2
16	ePZX	18	49	47.4	31.9		0.8	0.7	0.5	0.6	0.4	0.6
16	iPZX	22	56	01.9	11.4		1.9	0.6	3.9	0.2	2.5	0.4
17	ePZX	03	08	33.9								-2.0
17	iXZ	08	43.6	12.3i	1.4	0.5	3.0	0.5	2.1	0.3		
17	iPZX	06	27	45.3	07.9	3.1	0.1P	3.5	0.3S	2.2	0.6S	-6.3
17	ePZX	07	56	15.4	46.5i	5.2	0.7	10.5	0.7	8.1	0.7	
17	ePZX	09	26	26.7	44.8	2.0	0.7	4.4	0.6	2.7	0.6	
17	iPZX	12	21	12.5	13.0	14.6	0.9	23.2	0.7	14.0	0.7	-2.6
17	iPZX	13	01	53.3	11.1	0.5	0.5	0.8	0.3	0.4	0.5	-0.5
17	ePZX	14	34	17.5	23.2i	2.0	0.3	3.9	1.1	3.7	1.1	
17	iPZX	15	58	25.5		0.7	1.5P	0.6	1.4P	0.3	1.3P	-1.5
17	iPZX	16	30	11.3	10.3i	12.4	0.7	20.0	0.4	16.0	0.6	+5.4
17	iPZX	17	15	48.0								-0.5
17	iXZX	15	55.1	09.5i	0.5	0.4	0.9	0.2	0.6	0.3		
17	iPZX	17	35	28.3	11.3i	3.9	0.5	7.7	0.6	6.0	0.5	+0.8
17	iPZX	19	50	57.5	10.6i	29.8	0.5	37.4	0.5	19.9	0.7	-3.0
17	iPZX	21	39	28.9	06.2	>19	0.7	>35	0.8	>20		-5.0
17	ePZX	22	29	09.1	35.4	9.3	0.8	10.5	1.0	13.5	1.0	
17	ePZX	23	00	42.0	55.5	1.2	0.5	1.6	0.7	1.3	0.7	
18	ePZX	02	00	38.5	11.1	0.6	0.5	1.1	0.4	0.4	0.4	+0.5
18	iPZX	02	10	47.6	11.1i	2.2	0.6	1.0	0.3	0.9	0.5	+13.2
18	iPZX	04	16	27.8								
18	iXZX	16	34.5	08.7i	6.5	0.6	12.9	0.3	9.6	0.5		
18	ePZX	06	34	52.5	39.1	1.4	0.6	2.3	0.8	1.5	0.7	
18	ePZX	14	59	18.5		0.5	1.7P	0.5	0.7P	0.3	0.5P	-1.4
18	iPZX	16	11	07.3	09.6	0.7	0.5	1.0	0.3	0.7	0.5	
18	ePZX	17	36	14.9	11.3i	0.8	0.5	1.5	0.2	0.8	0.3	
18	iPZX	18	16	14.9	16.9	15.9	0.6	15.5	0.5	11.5	1.1	+4.9
18	iPZX	18	57	16.8		SO	SO	SO	SO	SO	+SO	
18	ePZX	20	42	07.1	25.2	1.1	0.7	1.2	0.5	1.2	0.5	
18	iPZX	21	08	52.8		SO	SO	SO	SO	SO	+SO	
18	ePZX	21	48	00.8	10.9i	3.7	0.5	9.0	0.5	4.0	0.5	
18	ePZX	23	28	27.5	19.5	2.5	0.5	2.9	0.5	3.0	0.4	
19	ePZX	03	07	12.3	12.1i	16.8	0.7	20.0	0.5	20.0	0.5	+2.6
19	ePZX	06	23	44.3	06.5i	5.5	0.2	20.0	0.3	9.8	0.2	
19	iPZX	06	24	29.9	09.6i	7.0	0.4	12.7	0.7	8.2	0.3	
19	ePZX	08	57	44.9	10.1	1.9	0.7	1.9	0.6	1.6	0.5	
19	ePZX	09	09	13.9	10.0	0.9	0.7	1.4	0.4	1.0	0.6	
19	ePZX	10	18	01.1	13.7i	2.1	0.5	2.6	0.4	2.0	0.5	
19	ePZX	13	34	27.7								
19	iXZX	34	29.3	37.6	1.0	0.9	1.8	1.2	1.4	0.7		
19	ePZX	14	58	45.8	47.2	2.1	0.9	2.9	1.5	2.3	1.1	
19	iXZX	58	47.2	41.0	2.1	0.9	2.9	1.5	2.3	1.1		
19	ePZX	22	42	18.6	38.9	9.0	0.7	16.8	0.7	10.5	0.7	
19	eXZX	22	43	42.0								
19	eSN	44	13.0		5.2	0.5	9.8	0.6	7.0	0.5		
19	ePZX	22	57	05.6	39.4	0.7	0.6	1.2	0.8	0.8	0.7	
20	iPZX	00	21	51.7	09.5	0.6	0.6	0.6	0.3	0.5	0.4	+1.8
20	iPZX	04	16	55.3		>90	>94	SO		-6.4		
20	ePZX	06	05	04.7	36.3	0.7	0.9	1.0	0.9	0.6	0.7	
20	iPZX	09	00	37.5	13.9i	0.7	0.6	0.9	0.3	0.7	0.3	+2.0

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E		
20</											

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
		h	m	s	m	s	Z	N	E	N	E	S	S	
25	iPZX	15	22	51.8	04.0i		1.0 <0.1P	1.1	0.2S	1.2	0.2S		-1.1	
25	ePZX	17	31	58.4	11.2i		0.7 0.5	1.2	0.4	0.9	0.4			
25	ePZX	17	59	52.7	26.7		1.5 0.5	2.0	0.7	1.3	0.6			
25	ePZX	19	12	22.4	09.5i		0.6 0.4	1.9	0.2	1.3	0.2			
25	iPZX	19	39	06.6			0.7 0.7P	1.0	0.8P	0.3	0.6P	+1.7		
25	ePZX	20	56	42.6	13.5i		1.1 0.5	1.9	0.6	1.2	0.6			
25	iPZX	21	26	30.5	10.9i		1.3 0.5	1.8	0.4	1.2	0.3	-1.0		
26	iPZX	01	28	40.0								+0.8		
	iXZX	28	44.2		11.7i		1.4 0.4	5.5	0.3	2.1	0.3			
26	iPZX	06	56	29.4	08.8i		0.9 0.5	2.1	0.3	1.9	0.4	+2.8		
26	ePZX	07	38	52.5	09.2		0.5 0.6	0.6	0.3	0.4	0.4			
26	iPZX	11	14	50.5	18.9i		2.3 0.4	3.8	0.3	2.6	0.4	-0.8		
26	iPZX	12	43	56.1	14.9i		14.3 0.7	23.7	0.7	20.9	0.7	+2.3		
26	ePZX	13	05	35.0	28.2		0.5 0.9	0.8	0.7	0.6	0.5			
26	ePZX	16	36	55.0	21.4		0.8 0.8	0.9	0.6	0.6	0.5			
26	iPZX	17	59	17.7	08.9		0.7 0.5	1.2	0.4	1.1	0.2	-0.7		
26	iPZX	20	42	40.8	09.6i		2.1 0.7	3.4	0.8	2.8	0.5	-3.0		
26	iPZX	21	16	55.7	06.0i		1.3 0.5	3.1	0.2	1.9	0.3	-1.7		
27	iPZX	00	57	00.0	26.0		SO	SO	SO			-2.6		
27	ePZX	01	59	12.5	24.9		1.4 0.6	2.6	0.6	1.4	0.6			
27	ePZX	02	13	44.4	108.8		0.6 1.0	0.6	0.9	0.4	1.2			
27	ePZX	02	25	33.1	11.1		0.7 0.5	0.9	0.5	0.5	0.5			
27	iPZX	04	59	08.3	10.3		0.5 0.5	1.3	0.3	0.8	0.5	-1.9		
27	eXZX	08	01	43.1			0.7 1.9X	0.5	1.3X	0.4	2.0X			
27	ePZX	10	02	14.5	11.6		0.8 0.4	1.2	0.6	0.9	0.4			
27	ePZX	13	19	03.4	21.6i		0.5 0.4	0.8	0.5	0.3	0.6			
27	iPZX	14	18	48.1	09.1i		0.5 0.5	1.9	0.3	1.2	0.3	-0.2		
27	iPZX	15	32	20.6	09.7i		1.5 0.5	2.8	0.2	2.1	0.2	-0.8		
27	ePZX	18	13	06.0	131.6		1.1 1.2	1.3	1.1	0.9	1.0			
27	ePZX	23	52	08.0	09.0		0.6 0.7	0.9	0.2	0.6	0.5			
28	ePZX	00	43	48.8	130.5		0.8 1.5	1.3	1.7	1.1	1.6			
28	iPZX	03	40	52.9	08.4i		0.5 0.5	2.9	0.2	1.3	0.4	-0.6		
28	iPZX	05	39	04.5			22.3	0.9X	27.0	1.1X	23.2	1.1X	+2.5	
28	ePZX	05	49	29.7			50 29.6			0.7 1.0X	1.5 0.5X	0.8 0.2X		
28	ePZX	07	49	28.5	21.2		0.8 0.6	2.2	0.4	0.9	0.4			
28	iPZX	08	43	21.2	09.9i		5.8 0.7	8.5	0.6	7.8	0.4	+8.0		
28	iPZX	08	58	49.0	09.6i		14.3 0.6	26.8	0.5	18.4	0.4	+18.9		
28	ePZX	09	33	30.5	09.0i		2.6 0.8	4.2	0.5	2.7	0.5			
28	ePZX	11	21	44.0	124.6		3.5 1.0	4.3	0.7	2.5	1.1			
28	iPZX	12	50	13.4	09.0i		0.8 0.4	1.6	0.3	1.3	0.5	-0.7		
28	iPZX	16	03	55.2	08.3		6.8 0.5	16.0	0.6	8.8	0.5	+20.0		
28	ePZX	16	04	55.4	08.6i		1.2 0.5	2.9	0.6	1.5	0.7			
28	iPZX	16	24	05.3	06.1i		10.5 0.5	17.6	0.5	15.9	0.6	-14.0		
28	ePZX	17	22	18.6	127.4		0.5 0.8	0.8	1.2	0.5	1.7			
28	ePZX	18	21	54.5	13.3		0.5 0.5	0.8	0.4	0.4	0.5			
28	ePZX	23	42	45.9	127.1		5.7 0.6	9.5	0.9	5.5	1.1			
29	iPZX	07	11	22.2	11.4i		20.0 0.2P	18.5	0.4S	13.4	0.2P	+18.7		
29	iPZX	08	42	21.1			1.5 1.7P	1.2	1.3P	0.9	1.4P	+1.4		
29	iPZX	12	43	36.1	10.5		0.6 0.6	0.6	0.4	0.4	0.6	+0.6		
29	ePZX	13	08	40.0	154.8i		4.9 0.8	6.2	0.8	4.2	1.0			
29	ePZX	15	29	25.5	156.0		1.2 0.8	1.7	1.0	0.9	1.2			
29	ePZX	15	47	48.7	154.5		1.1 0.6	1.5	1.0	1.0	0.5			
29	ePZX	16	51	23.7	107.3		0.5 0.8	0.5	0.5	0.7	0.6			
29	ePZX	21	16	03.1	11.3		1.5 0.6	1.9	0.4	1.3	0.7			
29	iPZX	22	02	29.7	08.2		1.1 0.6	1.5	0.5	1.3	0.8	-0.4		
29	ePZX	23	27	57.7	10.3i		0.9 0.6	1.2	0.4	1.1	0.7			
30	ePZX	02	03	19.1	08.3		1.2 0.5	2.1	0.3	1.4	0.5			
30	ePZX	02	08	38.3			0.8 0.7P	0.4	1.0P	0.3	1.2P			
30	ePZX	04	46	15.3	40.2		0.8 1.1	1.0	0.8	0.9	0.6			
30	iPZX	05	02	44.5	11.0i		2.0 0.6	2.5	0.5	2.2	0.5	-1.3		
30	ePZX	07	24	16.6			2.3 1.6P	1.4	1.7P	0.9	1.7P			
30	ePZX	09	15	15.3			0.6 0.7P	0.4	0.9P	0.3	1.2P			
30	iPZX	13	35	51.8	12.1		1.7 0.5	2.5	0.2	1.8	0.2	+0.9</		

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	4.0	
4	iPZX	18 10 00.3		08.4i		2.5	0.6	5.1	0.5	4.0	0.5	+2.8
4	ePZX	18 17 05.3										
	ePcPZX	17 39.9										
	epPZX	19 00.2										
	ePPZK	46 09.0	7	43.2		0.7	0.7P	0.5	0.8P	0.3	0.7P	
5	iPZX	01 32 14.0										-0.6
5	iXZX	32 20.9		09.2i	0.9	0.5	2.3	0.2	1.6	0.4		
5	iPZX	01 46 42.6		09.3i	1.8	0.6	2.9	0.7	2.3	0.5		+4.6
5	ePZX	01 57 57.5		44.0	0.8	0.9	1.7	0.9	1.0	0.7		
5	ePZX	02 21 33.5		26.6	1.1	0.5	2.0	0.7	1.2	0.7		
5	ePZX	03 37 10.1		14.7i	1.8	0.6	2.7	0.6	2.4	0.6		
5	iPZX	03 47 58.8		08.4i	6.3	0.4	17.3	0.2	11.7	0.2		+11.0
5	iPZX	04 08 38.1		10.8i	1.4	0.5	2.1	0.4	1.4	0.6		-1.4
5	ePZX	04 32 48.4		24.1	0.6	0.8	0.7	0.8	0.7	1.0		
5	iPZX	13 15 11.0		06.4	0.6	0.7	1.5	0.7	0.8	0.4		-1.7
5	ePZX	15 22 09.0		12.3	1.0	0.7	1.8	0.3	1.0	0.4		
5	iPZX	20 40 27.2		09.7i	18.0	0.6	>21		23.2	0.8		-7.6
5	iPZX	20 44 12.3										-1.8
	eXN	44 34.5			6.7	0.4X	12.5	0.9X	9.4	0.6X		
5	iPZX	21 16 37.8		13.1	1.4	0.9	2.5	0.9	2.1	0.5		+0.3
5	ePZX	23 07 19.1										
	eXN	07 34.2			0.6	0.8	0.8	0.6	0.6	0.6		
5	ePZX	23 58 40.5		21.9	1.0	0.6	1.2	0.7	1.0	0.8		
6	ePZX	01 41 30.0		18.4	0.9	0.6	0.8	0.5	0.8	0.5		
6	iPZX	04 17 16.8		07.2i	1.9	0.2	2.6	0.2	2.2	0.4		-3.0
6	ePZX	05 56 19.0		10.9i	0.9	0.6	1.7	0.2	1.0	0.4		
6	eXZX	06 58 31.0			0.6	0.4X	0.4	0.5X	0.4	0.4X		
6	iPZX	09 50 50.6			0.7	0.6P	0.4	1.0P	0.4	0.6P		-0.8
6	ePZX	10 29 16.7		28.3	40.0	1.0	26.6	0.7	25.3	0.9		
6	iPZX	10 41 34.1										
	iXZX	41 41.5		09.5i	0.6	0.4	1.0	0.3	0.7	0.3		
6	iPZX	12 35 53.7		11.1	0.6	0.5	1.1	0.5	0.5	0.4		-0.9
6	ePZX	13 22 04.3										
	iXZX	22 10.9		08.6i	0.6	0.3	1.3	0.2	1.3	0.2		
6	ePZX	14 44 26.2		26	6.5	1.1	5.8	1.2	3.5	1.1		
6	iPZX	15 22 22.2		12.3	>40		>58		45.5	1.0		-5.4
6	ePZX	16 07 35.0										
	eXN	08 07.5			1.3	0.8X	1.5	0.7X	1.5	1.1X		
6	iPZX	16 46 02.5		10.5i	3.2	0.8	7.8	0.6	4.2	0.7		+2.2
6	ePZX	17 06 08.4										
	eXN	06 31.1			1.8	0.6X	1.9	0.7X	1.7	0.8X		
6	ePZX	18 07 22.7		18.8	0.7	0.6	0.8	0.5	0.5	0.6		
6	ePZX	19 40 06.3		23.6	0.7	0.4	1.2	0.6	0.8	0.5		
6	iPZX	20 51 52.7		08.7i	0.5	0.6	1.8	0.2	0.7	0.2		+0.6
6	ePZX	22 38 03.7		17.7	0.5	0.6	0.7	0.2	0.5	0.6		
7	iPZX	04 52 11.8		13.5i	1.3	0.6	3.3	0.5	1.7	0.5		-0.6
7	iPZX	10 32 09.1		11.4i	0.8	0.4	1.8	0.4	0.8	0.5		+0.4
7	ePZX	13 55 59.4		12.1	0.6	0.6	0.4	0.3	0.3	0.4		
7	ePZX	18 19 39.8		31.7	SO		SO		SO			
7	eXZX	18 47 32.1			0.9	0.5X	0.8	0.3X	0.5	0.5X		
7	ePZX	19 10 58.7										
	iXZX	12 11.0			1.5	0.7P	2.8	0.6P	1.7	0.8P		
7	iPZX	20 47 08.1										-1.7
	iXZX	47 15.1		09.2i	0.8	0.5	1.8	0.2	1.2	0.3		
7	iPZX	21 36 02.0		04.5i	1.3	0.4	2.4	0.2	2.5	0.3		+4.0
7	iPZX	23 38 02.1		1 03.4	10.3	0.7	19.8	0.6	18.3	0.7		+2.0
8	ePZX	02 43 12.5		15.8	0.8	0.7	1.4	0.7	0.9	0.5		
8	ePZX	02 48 13.8		21.7	0.6	0.8	0.7	0.7	0.6	0.5		
8	ePZX	04 45 14.1		13.5i	0.8	0.6	1.6	0.5	1.0	0.5		
8	iPZX	07 30 45.0		06.0	2.0	0.4	4.0	0.2	2.2	0.5		-2.4
8	ePZX	08 20 00.3		09.4	1.4	0.4	2.8	0.3	1.2	0.2		+1.2
8	iPZX	14 29 41.5		11.1	0.9	0.5	2.0	0.2	1.0	0.3		
8	ePZX	15 05 49.7		1 19.1	0.8	0.9	1.0	0.6	0.8	0.9		
8	ePZX	19 36 37.0		12.8	0.5	0.6	0.5	0.2	0.3	0.4		

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Date	Phase	Time(JST)	P-S	Amplitude(mm)	Period(sec)	Initial motion(mm)						
		h	m	s	Z	N	E					
9	ePZX	02 15	08.4	45.5	0.8	0.2P	1.5	0.6S	0.8	0.4S		
9	ePZX	09 28	35.4	11.9i	0.7	0.5	1.8	0.4	0.6	0.4		
9	ePZX	15 46	39.9	20.6	1.3	0.5	1.4	0.6	1.3	0.5		
9	ePZX	17 02	29.6	06.5	0.							

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E	0.8	0.3	1.3	0.5	0.9	
14	iPZX	08	53	49.2	08.9i	0.8	0.3	1.3	0.5	0.9	0.2	+0.6			-1.4
14	ePZX	15	02	03.5	10.0	1.1	0.5	1.3	0.4	1.4	0.3				
14	ePZX	18	51	31.4	22.7	1.2	0.7	1.4	0.6	1.0	0.5				
14	ePZX	19	51	07.7	12.7	0.7	0.5	0.8	0.3	0.6	0.5				
14	iPZX	20	19	10.6	07.9i	2.7	0.4	13.4	0.3	4.2	0.5	+7.2			
14	eXZX	21	15	11.0		0.5	1.2X	0.6	1.3X	0.4	1.4X				
14	iPZX	22	23	49.2	10.4	2.0	0.5	2.7	0.6	2.3	0.3	-1.1			
15	ePZX	01	11	18.8	42.5	0.5	0.6	1.1	0.4	0.6	0.6				
15	eX1ZX	01	54	42.7		0.5	0.5X1	0.8	0.3X2	0.3	0.4X2				
15	ePZX	06	48	31.1											
	eXN	48	55			1.4	0.6X	1.1	0.6X	0.9	0.6X				
15	iPZX	08	16	18.4	05.9i	0.6	0.2	1.3	0.2	1.4	0.3	+2.2			
15	iPZX	10	47	30.0		S0		S0		S0		-8.0			
15	ePZX	10	56	26.2	09.8	0.7	0.5	1.3	0.5	0.8	0.3				
15	ePZX	13	37	42.4	53.3	1.0	0.6	1.1	0.8	1.3	0.8				
15	ePZX	14	22	34.0	08.2	1.7	0.6	3.6	0.5	2.0	0.5				
15	ePZX	15	59	09.7	12.7	0.5	0.5	0.9	0.6	0.5	0.6				
15	ePZX	19	09	37.8	1 06.6	0.5	0.7	0.8	0.9	0.5	0.7				
15	iPZX	20	42	56.8								+1.6			
	iXZX	43	04.5		09.9i	0.7	0.5	1.2	0.3	1.0	0.6				
15	iPZX	22	13	48.3	09.7	1.1	0.6	2.1	0.3	1.4	0.2	-0.6			
15	ePZX	22	38	14.1	11.9i	0.8	0.4	1.9	0.3	1.2	0.3				
15	ePZX	23	24	11.5	09.0	3.3	0.3	4.3	0.3	3.0	0.2				
15	ePZX	23	29	39.5	08.2	0.7	0.7	1.1	0.6	0.9	0.6				
16	iPZ	03	12	16.6	10.0i	6.8	0.4	10.0	0.3	5.4	0.8	+2.3			
16	iPZX	08	45	28.9	14.4	7.5	0.6	11.0	0.5	7.8	0.6	-1.2			
16	iPZX	10	18	44.5	07.5	3.4	0.5	7.1	0.3	4.4	0.7	+3.6			
16	ePZX	11	13	29.8	22.2	0.5	0.8	0.4	0.5	0.4	0.9				
16	ePZX	12	33	30.8	11.3	0.9	0.6	1.5	0.4	0.9	0.4				
16	iPZX	14	53	18.9	10.2i	0.5	0.5	0.5	0.2	0.6	0.4	-0.5			
16	iPZX	15	15	37.2	09.2	0.7	0.5	1.5	0.2	0.9	0.2	+2.3			
16	ePZX	16	40	09.6	1 19.7i	0.6	0.5	1.0	0.5	0.6	0.7				
16	iPZX	19	25	07.4	11.1	1.5	0.5	1.9	0.3	1.6	0.5	-1.0			
16	ePZX	20	22	45.6	35.4	0.5	0.6	0.5	0.7	0.3	0.5				
16	iPZX	20	31	53.8	14.8	9.5	0.7	19.8	0.4	13.0	0.6	-0.9			
17	iPZX	02	40	51.7	08.8i	3.9	0.7	6.1	0.5	3.8	0.6	+2.0			
17	iPZX	03	27	07.0	08.9	0.5	0.7	0.9	0.3	0.6	0.4	+0.5			
17	iPZX	04	40	17.1	09.4i	1.9	0.3	4.6	0.3	3.5	0.2	+1.0			
17	iPZX	04	50	10.6	10.9i	0.7	0.4	1.5	0.3	1.2	0.4	+0.9			
17	iPZX	14	52	51.2	09.2	0.8	0.5	1.2	0.5	1.2	0.4	+1.1			
17	iPZX	17	10	27.9	10.4i	1.3	0.7	2.5	0.3	1.3	0.4	-1.0			
17	ePZX	18	47	24.7	35.8	0.5	0.7	0.9	0.8	0.5	0.9				
17	ePZX	19	40	07.8	1 08.2	0.5	1.1	1.0	0.8	0.5	0.8				
17	iPZX	21	59	48.7	30.3i	15.0	1.0	19.1	1.1	15.1	1.1	-1.6			
18	ePZX	00	18	08.4	14.4i	3.8	0.6	6.4	0.9	2.5	0.4				
18	ePZX	01	33	10.1	46.3	0.8	0.7	1.0	0.8	0.5	0.4				
18	iPZX	03	24	01.7	13.6i	1.5	0.6	3.3	0.2	1.7	0.3	+0.6			
18	ePZX	05	00	49.3	43.3	1.0	0.5	1.9	0.6	0.8	0.3				
18	ePZX	08	08	19.5		0.5	1.0P	0.5	1.0P						
18	ePZX	08	39	13.6	17.2	2.7	0.5	2.4	0.5	2.4	0.4				
18	iPZX	11	49	37.5	07.5i	1.1	0.5	3.2	0.3	1.8	0.2	-1.0			
18	ePZX	15	03	44.0	58.5	4.5	0.7	7.3	0.8	4.9	0.9				
18	ePZX	21	34	42.1	10.9	0.8	0.6	1.2	0.2	0.5	0.4				
18	iPZX	21	38	33.8	09.2	2.2	0.6	2.7	0.3	2.2	0.4	+2.0			
18	ePZX	22	16	09.9	09.4	0.7	0.5	0.9	0.3	0.7	0.3				
18	iPZX	23	01	10.0	12.3	0.6	0.5	1.3	0.3	0.7	0.5	-0.8			
19	iPZX	00	23	29.7	30.8i	3.9	0.5	7.1	0.9	3.2	0.6	-2.0			
19	iPZX	01	24	16.0	21.5	4.0	1.6	4.9	0.6	3.2	0.6	+1.4			
19	ePZX	02	18	44.6	1 08.2	3.2	0.7	4.4	0.7	3.6	0.7				
19	iPZX	09	50	07.0	09.7	1.2	0.5	2.4	0.5	1.5	0.3	-0.8			
19	iPZX	20	15	40.3	06.6i	2.2	0.6	3.9	0.7	3.4	0.6				

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	1.8	
27	iPZX	12 24 17.2		09.7		1.5	0.6	2.9	0.3	1.8	0.2	-0.8
27	ePZX	14 48 45.7	2	08.9		0.8	0.6	1.1	0.6	0.9	0.9	
27	ePZX	15 33 54.0		11.0i		0.5	0.5	0.8	0.2	0.7	0.3	
27	ePZX	18 59 56.9		11.3		0.6	0.6	0.4	0.4	0.4	0.4	
27	ePZX	20 13 16.2		28.8		1.7	0.9	2.3	1.2	2.1	1.0	
28	iPZX	00 40 48.4	1	00.4		1.4	0.4P	1.4	0.5S	0.9	0.5S	+0.8
28	iPZX	03 35 31.6		25.7		0.5	0.5	0.7	0.3	0.4	0.7	+0.5
28	ePZX	06 59 23.7		22.6		1.8	0.5	2.5	0.6	1.8	0.5	
28	iPZX	12 53 41.9		11.1i		1.3	0.4	1.7	0.4	1.0	0.4	-0.2
28	ePZX	13 22 35.8		39.7		1.7	0.9	3.2	1.0	2.9	1.1	
28	iPZX	14 09 11.1		23.0		0.9	0.7	1.1	0.6	0.9	0.6	-0.7
28	ePZX	14 30 59.1		42.2		1.8	0.8	2.0	0.9	1.9	0.9	
28	ePZX	15 18 52.2		26.8		2.3	0.6	4.3	0.6	2.2	0.9	
28	ePZX	16 00 42.0		30.5		S0		S0		S0		
28	ePZX	16 08 57.6	1	15.6		0.5	0.8	0.7	0.7	0.5	0.9	
28	ePZX	18 06 38.4		30.1		0.5	0.8	0.8	1.0	0.4	0.5	
28	ePZX	19 03 21.2		29.9		0.5	1.0	1.0	0.9	0.6	0.5	
29	ePZX	00 31 23.4		25.3		2.1	0.6	3.0	0.3	1.8	0.3	
29	iPZX	01 39 13.0				0.7	1.0X	0.6	1.2X			-1.4
29	eZXX	39 51.5										
29	iPZX	02 56 22.9		09.8i		1.9	0.6	3.7	0.3	2.8	0.3	+1.0
29	iPZX	03 38 38.8		09.0i		0.6	0.5	1.1	0.6	0.6	0.1	+0.8
29	ePZX	06 26 02.0		12.1		0.5	0.5	0.6	0.2	0.4	0.2	
29	iPZX	10 28 26.2		28.3		0.7	0.6	1.1	0.7	0.8	0.3	+1.0
29	ePZX	14 05 52.4		10.5i		0.6	0.7	1.2	0.3	0.9	0.2	
29	iPZX	15 09 51.5		30.3		2.0	0.5	3.8	0.8	1.7	0.8	+0.7
29	iPZX	15 14 39.2										+0.6
29	iZXX	14 49.0		22.8		3.9	0.6	4.8	0.4	3.3	0.6	
29	ePZX	16 09 11.7		21.3		0.5	0.5	1.1	0.4	0.5	0.6	
29	ePZX	21 19 30.1		22.0		0.6	0.6	1.2	0.4	0.6	0.2	
29	iPZX	21 57 26.3		13.3		2.0	0.5	3.2	0.4	2.3	0.2	+1.1
30	ePZX	02 20 36.3	1	41.6		0.9	1.0	1.3	1.4			
30	iPZX	09 36 16.1		06.0		6.0	0.4	14.0	0.3	6.9	0.2	-2.8
30	ePZX	11 34 51.3		09.0		0.6	0.5	0.9	0.4	0.7	0.3	
30	ePZX	16 28 28.6		52.5		0.5	0.4	0.8	0.3	0.5	0.4	
30	eZXX	21 00 03.7				0.5	1.3X	0.9	1.0X	0.5	1.0X	

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	1.8	
3	iPZX	01 33 25.3		14.2		1.4	0.5	2.1	0.3	1.3	0.3	+0.6
3	iPZX	07 03 47.2				09.8i		2.2	0.4	3.8	0.2	+4.6
3	iZXX	03 54.7						11.9	0.7	0.5	0.4	
3	ePZX	11 44 03.0				18.3		6.2	0.8	5.6	0.7	
3	ePZX	13 47 52.8				12.2		0.5	0.5	0.7	0.5	
3	ePZX	14 34 41.0				29.1		7.4	0.5	10.7	0.8	
3	ePZX	16 08 38.9				16.10		30.1				
3	eZXX	10 43.7										
3	eZXX	10 57.1						1.0	0.5X2	1.8	0.3X2	
3	ePZX	18 52 03.0		25.1i		3.7	0.6	4.5	0.4	2.5	0.5	
3	ePZX	22 50 14.2	2	04.4		0.5	0.6P	0.4	0.3P	0.3	0.5P	
4	ePZX	04 36 34.6		40.4		1.4	0.6	2.1	0.7	1.5	0.7	
4	ePZX	05 55 39.1				55		52.7				
4	iZXX	56 02.2						1.4	0.5X2	2.4	0.4X2	
4	ePZX	06 07 15.0				41.2		16.9	0.8	34.7	0.8	
4	iZXX	07 17.5				08.9		11.2	0.2P	19.8	0.4S	
4	iPZX	06 47 09.9				10.0		0.5	0.5	1.1	0.5	+8.6
4	iPZX	14 23 54.6				16.4		0.6	1.1	0.6	0.6	+0.9
5	iPZX	01 14 48.0				09.7i		0.8	0.5	1.0	0.4	
5	iPZX	02 41 07.7				10.4		0.5	0.7	0.8	0.3	
5	ePZX	03 08 42.5				18.5		2.2	0.7	2.2	0.8	
5	ePZX	04 18 43.3				29.7		1.5	0.6	2.5	0.3	
5	iPZX	07 09 39.9				13.1		1.2	0.6	1.4	0.5	
5	ePZX	09 45 31.0				33.3		0.7	0.5	1.0	0.4	-1.0
5	iPZX	10 31 41.0				13.1		2.0	0.5	3.7	0.7	
5	ePZX	11 16 23.2				42.3		0.9	0.6	1.4	0.8	
5	ePZX	11 58 47.2				12.0i		0.5	0.5	1.0	0.3	
5	ePZX	13 22 53.3				10.1i		2.0	0.5	3.9	0.3	
5	ePZX	13 46 20.4				10.4		1.2	0.5	2.9	0.2	
5	iPZX	16 42 38.9										

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E			
9	ePZX	00	39.	42.2	40	10.1	1.0	0.9	1.4	0.8	1.0	1.2
9	eXZ	01	45	01.4	1	20.1	0.6	0.8	0.7	0.9	0.5	0.7
9	ePZX	02	21	43.4		09.2	0.5	0.4	1.1	0.2	0.9	0.2
9	ePZX	02	51	36.1		09.1	1.3	0.6	1.2	0.7	1.2	0.9
9	ePZX	02	54	10.9		42.7	1.1	0.7	1.9	0.4	1.1	0.6
9	ePZX	05	27	27.3		13.6	1.3	0.5	3.3	0.3	1.5	0.2
9	iPZX	05	35	21.8		13.6	0.5	0.5	1.2	0.3	0.4	0.5
9	iPZ	05	48	10.3		06.0i	4.5	0.2P	10.0	0.4S	5.8	0.4S
9	eXZ	06	14	52.8							-1.4	
9	eSN	15	13	13.3			1.7	0.5	2.5	0.5	2.3	0.7
9	iPZX	08	03	06.5							+0.8	
9	iXZX	03	08.7		16.1i	4.1	0.6	6.9	0.6	4.8	0.9	
9	iPZX	12	23	51.7		13.3i	4.0	0.5	4.9	0.5	3.3	0.5
9	iPZX	12	27	17.5		11.8	0.9	0.6	0.9	0.5	0.7	0.7
9	iPZX	14	38	20.7							-0.5	
9	iXZX	38	24.6		11.3i	1.1	0.3	3.5	0.3	2.0	0.3	
10	iPZX	00	54	02.7		11.6	1.5	0.5	1.8	0.5	1.4	0.6
10	iPZX	13	30	49.6		06.9i	1.2	0.4	2.4	0.3	1.1	0.5
10	iPZX	13	49	44.6							+2.8	
10	iPZX	13	50	04.8		26.9i	10.9	1.0	13.3	1.0	12.3	0.9
10	iPZX	14	23	17.3		26.9	0.8	0.6	1.3	0.6	0.8	0.5
10	iPZX	14	48	55.5		09.5i	4.1	0.6	7.5	0.4	7.2	0.4
10	ePZX	16	48	48.8							-0.1	
10	eXN	49	04.5			6.5	1.0X	9.0	1.1X	7.8	1.1X	
10	ePZX	16	53	46.3								
10	eXN	54	16.0			0.8	0.8X	1.1	0.9X	0.8	1.6X	
10	iPZX	18	31	57.9		10.0i	1.3	0.5	2.1	0.5	2.1	0.4
10	ePZX	19	51	36.8		20.2	0.6	0.4	0.6	0.3	0.4	0.6
10	ePZX	20	35	42.6		13.6	0.7	0.6	1.0	0.3	0.6	0.3
10	ePZX	22	31	10.6								
10	iXZX	31	13.3		51.9	4.4	0.5	6.3	0.9	4.4	0.7	-
10	iPZX	23	11	39.5		09.7i	5.4	0.3	12.7	0.2	7.0	0.4
10	ePZX	23	23	27.2		10.0	0.5	0.4	0.7	0.3	0.4	0.3
10	ePZX	23	54	25.0		10.8	0.6	0.6	0.7	0.3	0.5	0.3
11	iPZX	02	54	36.2		10.8	6.4	0.6	6.3	0.4	6.1	0.6
11	ePZX	03	36	42.6		42.9	1.1	0.6	2.0	0.8	0.9	0.6
11	ePZX	03	44	18.8		08.0i	0.7	0.5	1.3	0.5	0.9	0.4
11	iPZ	04	14	34.3		10.7i	15.1	0.5	13.2	0.5	11.3	0.6
11	ePZX	04	16	20.0		10.0	0.9	0.5	0.9	0.2	0.6	0.5
11	ePZX	05	16	40.3		10.3	0.8	0.5	0.7	0.4	0.4	0.5
11	ePZX	05	16	56.1		09.2	1.2	0.5	1.0	0.5	0.8	0.4
11	ePZX	07	09	11.9		11.4i	1.4	0.4	2.3	0.5	1.5	0.4
11	iPZX	12	44	23.9		11.6i	1.8	0.5	3.7	0.2	1.6	0.4
11	ePZX	13	26	27.7		08.6	0.5	0.5	1.1	0.5	0.8	0.3
11	ePZX	15	43	26.2							-2.0	
11	eXN	43	40.6			0.8	0.7X	1.1	0.9X	0.9	1.0X	
11	ePZX	16	22	50.5		11.0	0.6	0.5	0.4	0.3	0.4	0.7
11	ePZX	18	24	05.5		1 11.5	0.5	0.5	0.7	0.8	0.6	0.6
11	ePZX	20	48	10.8								
11	iXZX	48	21.2			1.3	0.9X	1.5	1.0X	0.9	1.0X	
12	iPZX	01	15	25.9		09.2i	0.9	0.6	1.4	0.4	0.9	0.5
12	ePZX	05	22	21.6		05.0	0.8	0.5	1.6	0.3	1.2	0.5
12	iPZX	07	09	24.8		10.9	2.4	0.7	4.0	0.5	2.5	0.3
12	ePZX	07	38	08.5		12.5	0.9	0.6	1.3	0.7	1.0	0.6
12	iPZX	07	57	52.1		15.5	7.9	0.8	9.0	0.7	6.9	1.3
12	ePZX	08	29	00.7		10.3	0.6	0.5	1.5	0.3	0.8	0.4
12	iPZX	14	32	27.1			0.8	1.1P	0.7	1.2P	0.4	1.3P
12	ePZX	16	46	25.4		11.2	0.5	0.5	0.8	0.2	0.4	0.4
12	ePZX	19	43	43.3		13.8	1.4	0.5	1.2	0.6	1.0	0.6
12	ePZX	20	54	51.0		14.6	0.5	0.4	0.7	0.3	0.4	0.3
12	ePZX	21	18	49.3		36.6i	0.6	0.5	1.2	0.5	0.5	0.3
12	iPZX	23	45	28.8		08.3i	0.5	0.5	1.0	0.3	0.5	0.4
13	iPZX	05	49	38.1							+1.6	
13	iXZX	49	44.8		08.7i	2.2	0.3	5.0	0.5	4.4	0.5	
13	ePZX	16	56	49.6		12.4	0.6	0.5	0.7	0.2	0.4	

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E			
13	ePZX	17	20	30.2	11.1i	0.9	0.					

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E	0.4	2.3	0.3			
19	iPZX	01	14	37.4	10.2	4.4	0.5	5.3	0.4	2.3	0.3	+1.4			
19	iPZX	02	36	46.1	11.8	1.3	0.5	1.6	0.5	0.6	0.2	+0.4			
19	iPZX	04	40	57.8	22.7	>90	1.1	>90	0.9	>68	1.1	+1.6			
19	ePZX	05	14	27.3		0.8	0.9P	0.7	0.9P						
19	ePZX	07	24	24.2	1 06.3	0.5	0.7	0.9	1.4						
19	ePZX	12	20	51.6	12.9i	0.5	0.5	0.8	0.4	0.4	0.2				
19	ePZX	13	04	49.1											
	iXZX	04	51.6	08.9i	2.5	0.5	4.0	0.6	1.6	0.2					
19	iPZX	13	33	46.4	08.9	1.5	0.3	2.9	0.3	4.5	0.3	-3.8			
19	ePZX	14	56	33.7	56.1	0.8	0.7	1.0	0.8						
19	ePZX	15	40	47.4											
	iXZX	40	48.8	37.6	6.3	0.8	9.6	0.5	3.0	0.6					
19	iPZX	16	53	15.2								+0.3			
	iXZX	53	19.9	16.0i	0.8	0.4	1.5	0.5	0.9	0.5					
19	iPZX	18	13	44.0								+7.0			
	iXZ	13	50.3	08.7	4.4	0.5	7.6	0.5	4.9	0.7					
19	iPZ	22	19	05.3	09.0	6.8	0.5	9.4	0.4	7.5	1.0	-2.6			
19	ePZX	22	24	24.0	24.2	1.0	0.5	1.4	0.8	1.0	0.8				
19	iPZX	22	29	09.3								-2.0			
	iXZX	29	16.2	08.7i	2.0	0.6	2.6	0.4	2.4	0.5					
19	ePZX	22	46	45.5	10.1	0.7	0.4	1.0	0.3	0.7	0.4				
19	iPZX	23	06	47.8	07.7i	0.6	0.5	1.4	0.5	1.4	0.3	+1.8			
20	ePZX	00	19	35.2	2 52.9	4.9	0.5P	2.6	0.4P	3.8	0.6P				
20	iPZX	01	41	30.5		1.9	1.3P	1.2	1.5P			+2.9			
20	ePZX	02	54	27.3											
	eXLN	55	04.2												
	eX2N	56	17.0		0.6	0.5X2	0.7	0.4X2							
20	iPZX	11	22	54.3	10.8i	1.9	0.5	2.4	0.5	1.4	0.5	-2.0			
20	ePZX	11	24	09.7	12.3	0.8	0.7	0.8	0.5	0.4					
20	ePZX	11	33	07.3	23.2	0.6	0.5	0.9	0.5	0.3	0.2				
20	ePZX	13	07	24.6	51.6	0.5	0.5	0.8	0.4	0.4	0.7				
20	ePZX	20	05	06.7	43.5	0.5	0.6	0.9	0.8	0.5	0.8				
21	iPZX	03	12	59.6	13.7	0.6	0.3P	0.7	0.6S	0.6	0.6S	+1.8			
21	iPZX	03	37	30.7	11.2	1.5	0.5	2.0	0.2	1.1	0.5	+0.8			
21	ePZX	04	43	35.0	39.6	0.7	0.6P	0.9	0.5S	0.5	0.4S				
21	ePZX	06	41	15.5	12.2i	1.5	0.6	3.5	0.9	2.1	0.6				
21	iPZX	13	14	03.3	06.0i	1.6	0.5	2.3	0.6	1.9	0.4	-1.9			
21	ePZX	16	07	44											
	eXZ	08	19		0.8	0.9X	1.0	1.0X	0.5	1.0X					
21	iPZX	16	19	09.3	09.6	0.9	0.6	1.8	0.3	1.6	0.4	-1.0			
21	ePZX	17	32	34.9	10.3	0.7	0.6	1.4	0.4	0.8	0.5				
21	ePZX	17	36	53.5											
	eXN	37	28.5		0.5	0.8X	0.9	0.7X	0.5	0.9X					
21	iPZX	21	58	42.2	21.8	31.9	1.7	34.0	1.9	35.5	1.6	+7.6			
21	ePZX	22	06	39.2	21.3	4.1	1.7	3.6	0.9	2.9	1.2				
21	ePZX	22	12	23.8	21.1	0.6	0.6	1.4	0.3	0.7	0.5				
21	ePZX	22	37	59.5	13.4	0.5	0.3	0.6	0.3	0.5	0.3				
21	ePZX	22	44	50.0	22.0	0.5	0.9	0.6	0.5	0.3	0.5				
22	ePZX	00	03	41.2	13.9	2.8	0.7	4.6	0.3	3.1	0.6				
22	iPZX	01	30	23.4	07.6i	0.7	0.3P	3.3	0.2S	1.1	0.4S	+3.0			
22	ePZX	07	53	15.1	27.6	0.9	1.0	1.4	0.5	1.0	1.1				
22	eXZX	16	19	03.0		0.5	0.4X	0.3	0.3X	0.2	0.5X				
22	iPZX	21	13	28.9	11.4i	2.9	0.5	5.3	0.7	4.0	0.5	-0.4			
22	iPZX	23	28	55.9	05.0	0.9	0.5	2.0	0.3	1.3	0.2	+1.2			
22	iPZX	23	29	29.8	09.9i	0.7	0.7	1.4	0.2	1.2	0.2	-0.9			
23	ePZX	00	06	21.0	15.2	0.7	0.6	1.2	0.6	0.8	0.3				
23	ePZX	00	29	34.5											
	eXN	30	08.5		0.9	0.8X	1.0	0.6X	0.8	0.8X					
23	iPZX	00	34	55.2								+0.6			
	eXN	35	45.5		2.1	0.6X	2.4	0.7X	1.6	0.8X					
23	iPZX	01	52	33.1		1.0	0.8P	0.7	0.7P			+2.0			
23	ePZX	08	18	27.2	19.5i	3.9	0.5	5.3	0.9	3					
23	ePZX	09	33	05.1											
	eX1ZX	33	33.5												
	iX2N	33	46.4		0.5	0.6X2	0.9	0.4X2	0.5	0.2X2					
23	ePZ	13	51	27.6	12.4	0.8	0.5	1.6	0.5	0.9	0.5				

Kamikineusu, December 1968

Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm

Kamikineusu, December 1968

Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
			h	m	s	m	s	Z	N	E	1.4	0.7	0.8
29	ePZX	04 37 40.8		29.9	0.9	0.8	1.4	0.7			-0.2		
29	iPZX	08 08 21.9		09.0	0.5	0.3	1.6	0.2	0.8	0.2	-4.3		
29	iPZX	08 09 21.0		08.7i	1.9	0.5	4.1	0.2	2.2	0.2	+0.7		
29	iPZX	11 04 25.6		09.1	0.6	0.6	1.6	0.3	0.6	0.2	+0.9		
29	iPZX	11 16 02.3		07.6i	0.5	0.7	1.8	0.2	1.2	0.2	-1.8		
29	ePZX	11 16 44.5		10.4	2.4	0.8	4.0	0.4	1.5	0.2	+1.7		
29	iPZX	11 48 56.0		08.8	2.1	0.3	6.1	0.2	3.9	0.2	-0.5		
29	iPZX	14 12 52.2		09.3i							+49.0		
	iXZ	12 59.3			13.5	0.6	30.9	0.5	19.6	0.2	(-)		
29	ePZX	17 43 55.6		27.6	0.9	0.5	1.6	0.4	0.4	0.3			
29	ePZX	20 47 20.7		08.2	0.5	0.5	0.8	0.5					
29	ePZX	21 30 34.6		14.1	1.3	0.6	2.7	0.6	0.6	0.1			
30	ePZX	00 33 01.7		13.3i	0.7	0.6	0.9	0.4					
30	ePZX	01 48 57.2			0.8	0.7P	0.5	0.5P					
30	iPZX	04 19 54.6		10.4i	27.2	0.6	48.9	0.5	21.5	0.4	-15.0		
30	ePZX	05 47 23.6		26.4	0.6	0.4	1.3	0.6					
30	iPZX	10 25 57.6		14.0	0.7	0.5	0.8	0.5			+0.6		
30	iPZX	10 51 31.8		09.2	0.8	0.4	1.4	0.5	0.5	0.1	-0.3		
30	iPZX	16 11 10.5									+1.9		
	iXZK	11 19.6			1.2	0.8X	0.8	0.8X					
30	ePZX	17 51 36.2		59.3	0.7	0.8	0.9	0.7					
31	iPZX	03 51 30.7		07.7i	1.0	0.5	4.2	0.3	1.2	0.1	+4.8		
31	eX1ZK	11 59 25.2											
	iX2ZX	59 27.0											
	eSN	59 36.7											
31	iPZX	17 34 59.6		05.7i	1.4	0.3	3.8	0.2	1.9	0.3	-2.8		
31	ePZX	18 02 18.5		50.5	0.5	0.4	0.9	0.5	0.6	0.6			
31	iPZX	18 59 34.6		07.3i	5.2	0.7	19.0	0.3	11.9	0.6	-12.0		
31	iPZX	20 02 27.7		10.5	1.4	0.4	4.3	0.2	1.4	0.4	+0.9		

Kamikineusu, January 1969

Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
			h	m	s	m	s	Z	N	E	1.4	0.7	0.8
1	ePZX	00 25 28.6											
	eX1N	25 40.0											
	eX2Z	26 07.3											
1	iPZX	00 41 47.1		48.4	1.2	1.3	1.2	0.9			-1.4		
1	ePZX	05 53 19.5		07.5i	1.0	0.4	3.8	0.3	2.4	0.2			
1	iPZX	10 42 17.9		40.7	0.6	0.4	0.7	0.4			-0.9		
1	ePZX	11 04 53.0		09.2i	1.4	0.5	1.7	0.5	0.6	0.1			
1	iPZ	11 19 42.9		10.5	0.6	0.5	0.9	0.4			+10.0		
1	ePZX	12 33 39.9		07.8i	16.2	1.1	24.8	0.5	17.0	0.4			
1	iPZX	21 29 39.5		09.5i	0.6	0.3	1.7	0.2	1.5	0.2	+0.8		
2	iPZX	00 09 35.5		15.5	1.4	0.8	1.7	0.2	1.0	0.7	-0.8		
2	ePZX	00 13 02.7		12.3	1.0	0.5	1.4	0.2	0.8	0.3			
2	ePZX	00 16 05.7		12.5	0.5	0.4	0.5	0.2	0.3	0.5			
2	iPZX	00 18 10.1		11.7	0.8	0.5	0.9	0.5	0.5	0.4	-0.3		
2	iPZX	02 05 46.0		11.5	0.5	0.6	0.5	0.2	0.4	0.6	-0.1		
2	ePZX	02 53 13.2											
	iXZK	53 14.7		1 32.6	0.5	0.5	1.2	0.5	0.7	0.6			
2	iPZX	08 02 10.6		11.4i	2.9	0.5	3.0	0.5	2.0	0.6	-1.9		
2	ePZX	09 19 34.1		09.7i	0.5	0.7	0.7	0.3	0.8	0.3			
2	ePZX	13 03 31.1		10.6	0.9	0.7	1.2	0.3	0.9	0.5			
2	iPZX	15 15 11.3		10.3i	8.9	0.7	30.3	0.3	14.8	0.5	+2.8		
3	ePZX	00 41 28.3		09.9i	0.8	0.5	1.3	0.5	0.9	0.4			
3	iPZX	01 03 32.4											
	iXZK	03 39.0		08.2i	0.5	0.4	1.7	0.2	1.3	0.3	-0.5		
3	iPZ	03 07 19.2			S0		S0		S0		+49.0		
3	ePZX	14 11 06.2		1 01.8	1.8	0.5	1.9	0.3	1.4	0.5			

Kamikineusu, January 1969

Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)		
			h	m	s	m	s	Z	N	E	1.4	0.5	0.7	
3	ePZX	18 20 02.7				19.3	0.6	0.3	1.4	0.5	1.0	0.7		
3														

Kamikineusu, January 1969

Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	1.9	
10	ePZX	02 38 53.7		22.3		1.6	0.7	2.1	0.8	1.9	0.7	-2.6
10	ePZX	05 00 46.8		43.7		0.5	0.6	0.9	0.5	0.8	0.4	
10	iPZX	05 21 44.9										+9.4
	iZXZ	21 46.9		10.4		1.0	0.2X	0.8	0.3S	0.6	0.3S	
10	ePZX	06 34 02.6		27.0		8.1	0.5	>9		7.2	0.7	
10	iPZX	06 58 51.3		07.7i		2.0	0.4	6.5		4.9	0.2	
10	ePZX	08 14 54.5		14.9i		3.5	0.6	4.0	0.2	2.7	0.4	
10	ePZX	09 14 37.2		25.3		2.4	0.6	2.7	0.6	2.3	1.0	
10	ePZX	10 40 14.5		33.9		1.5	0.3	2.3	0.5	2.0	0.7	
10	iPZX	15 15 09.7		14.0		14.0	0.6	>10		15.1	1.0	+1.6
10	ePZX	17 11 35.6	1	05.9		1.2	0.9	1.5	0.9	1.4	0.8	
10	ePZX	19 03 29.1		11.6		0.8	0.2	1.8	0.2	1.0	0.2	
10	ePZX	23 30 03.6		34.4		1.6	0.6	1.8	0.9	1.6	0.6	
11	iPZX	00 28 49.7		09.6		1.5	0.5	4.4	0.3	2.5	0.2	-0.3
11	ePZX	02 07 53.2	1	19.0		0.8	0.9	1.3	0.9	0.9	0.8	
11	iPZX	03 57 22.6		08.4i		0.5	0.6	0.6	0.3	0.9	0.5	+0.8
11	iPZX	04 37 29.0										+0.7
	iZXZ	37 31.1		14.7		5.7	0.7	10.5	0.3	7.0	0.5	
11	iPZX	13 12 56.3		08.2i		11.5	0.4	>6		18.0	0.4	-3.8
11	eXZX	13 38 29.5				0.9	0.9X	0.6	1.2X	0.5	0.9X	
11	eXZX	13 59 54.1				0.8	1.5X	0.5	1.5X	0.2	1.2X	
11	ePZX	19 36 14.8		40.7		0.5	0.8	0.5	0.5	0.6	0.6	
12	iPZ	01 41 56.3		08.4i		20.0	0.8	>25		28.5	0.3	-8.0
12	ePZX	02 20 59.5										
	eXN	21 34.5		20.5		0.5	1.2	0.5	0.5	0.5	0.6	
12	iPZX	05 18 43.2		12.9		0.5	0.5	0.8	0.3	0.6	0.6	+0.4
12	ePZX	08 50 41.9	2	14.9		0.6	0.5P	0.7	1.2S	0.5	0.9S	
12	ePZX	10 14 54.5		25.8i		2.2	0.6	3.5	0.4	2.7	0.5	
12	ePZX	10 24 22.1		11.2		0.7	0.5	1.3	0.3	0.6	0.4	
12	iPZX	11 39 24.5										-0.9
	iZXZ	39 34.9		12.7i		0.8	0.4	1.8	0.1	0.8	0.2	
12	iPZX	14 05 41.3		09.2		14.0	0.8	>10		12.2	0.9	+7.0
12	iPZX	20 09 51.7										+1.0
	iXZ	10 02.3		13.1		6.3	0.5	>10		8.2	0.3	
12	ePZX	22 05 27.1		11.7		0.7	0.5	0.8	0.4	0.7	0.3	
12	ePZX	23 35 58.7		13.8		0.7	0.5	0.9	0.5	0.8	0.6	
13	iPZX	05 07 29.0		07.5		1.1	0.4	1.5	0.4	1.0	0.5	+1.8
13	ePZX	09 33 44.1		23.7		0.5	0.3	0.5	0.6			
13	ePZX	20 11 23.9		10.1								
	iXN	11 36.2				0.6	0.5	0.8	0.3	0.7	0.2	
13	ePZX	20 12 05.3		16.9		0.7	0.3	0.8	0.3	0.7	0.5	
14	ePZX	01 08 33.5		11.0		0.5	0.6	0.5	0.6	0.4	0.7	
14	ePZX	03 29 49.4		19.0		0.9	0.6	0.9	0.4	0.9	0.6	
14	ePZX	04 34 21.8										
	iZXZ	34 32.7		12.7		0.7	0.5	1.3	0.2	0.9	0.3	
14	iPZX	06 48 22.2		11.2		1.6	0.4	2.5	0.5	0.9	0.2	-0.6
14	iPZX	07 14 45.5		19.8		0.6	0.7	1.4	0.6			+1.0
14	ePZX	09 40 15.6		11.2		0.7	0.5	1.2	0.3	0.4	0.1	
15	ePZX	01 03 10.5		55.3i		10.4	0.8	15.0	0.7	8.5	0.8	-0.5
15	iPZX	05 29 47.7										
	iXZ	29 55.0		09.4i		1.3	0.2	2.3	0.3	1.5	0.2	
15	iPZX	05 58 07.1		11.0		1.0	0.5	2.7	0.2	1.0	0.1	+0.7
15	iPZX	06 01 05.8		10.5i		3.4	0.6	6.8	0.5	2.4	0.2	-1.3
15	iPZX	07 31 58.3		13.0		11.5	0.6	11.8	0.4	3.0	0.2	-1.6
15	iPZX	08 24 23.8										+0.4
	eX1N	24 40.0										
	eX2N	27 27.0			0.9	1.0X1	0.9	1.0X2				
15	iPZX	09 02 05.2		07.8i		1.1	0.4	2.8	0.2	1.1	0.2	-0.9
15	iPZX	12 23 34.4										+0.8
	eXZ	23 44.0			11.6		2.0	0.5	3.2	0.3	1.7	
15	ePZX	16 33 28.7		14.5		1.8	0.6	2.9	0.2	1.6	0.7	
16	iPZX	00 30 38.0		23.1i		0.6	0.5	1.0	0.5			+0.4
16	ePZX	03 55 14.6		13.5		0.5	0.6	0.7	0.6			

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	1.9	
16	ePZX	05 19 19.1				1.5	0.5	2.3	0.2	0.9	0.1	-0.6
16	iPZX	07 28 56.0				0.5	0.5	0.7	0.3	0.3	0.1	
16	ePZX	08 12 43.5				0.6	0.7	1.0	0.3			

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E	0.7	0.5	0.8	0.4	0.6	0.7
22	ePZX	14	46	02.2	14.5	0.7	0.5	0.8	0.4	0.6	0.7				
22	ePZX	16	48	02.4	38.6	0.5	0.6	0.8	0.6	0.6	0.7				
22	iPZX	19	34	39.3	10.7	0.8	0.5	0.9	0.3	0.5	0.4	-1.8			
22	ePZX	22	59	19.7	09.0	1.2	0.3	2.0	0.2	1.3	0.6				
23	iPZX	00	11	04.6	07.0	0.5	0.4	0.6	0.6	0.3	0.4	+0.4			
23	ePZX	02	17	20.9	204.1	3.3	0.8	3.7	1.2	3.6	1.1				
23	iPZX	11	02	23.5	230.0	0.7	0.6P	0.7	0.9P	0.4	0.7P	+0.4			
23	ePZX	12	21	28.0	31.0	0.5	0.5	0.5	0.2	0.5	0.6				
23	ePZX	16	07	24.9	13.1i	0.5	0.5	0.5	0.3	0.6	0.5				
24	iPZX	04	51	38.8	07.7	3.1	0.6	3.5	0.3	7.5	0.3	+3.7			
24	iXN	51	42.8												
24	iPZX	08	12	50.0								+0.6			
24	iZXZ	12	51.7												
24	iPZ	11	43	34.2								-6.3			
24	eZXZ	46	07.1												
24	ePZX	11	54	52.7	116.2	11.5	0.7	20.5	1.2	12.7	0.9				
24	ePZX	13	00	41.7	21.7i	4.7	0.5	5.0	0.3	3.6	0.5				
24	ePZX	13	33	56.1	25.8i	1.2	0.7	1.8	0.4	1.1	0.4				
24	ePZX	15	54	23.5	18.3	3.5	0.7	5.2	0.6	4.9	1.1				
25	iPZX	04	49	33.7	09.0	1.2	0.3	2.0	0.3	1.8	0.2	-1.8			
25	ePZX	08	02	16.0											
25	iXZ	02	20.2		22	28.5	1.0	>23		26.3	0.9				
25	iPZX	08	16	15.1	11.7i	2.0	0.4	3.7	0.4	1.6	0.3	-0.7			
25	iPZX	14	27	25.1		3.9	0.7P	1.9	1.5P	1.4	1.0P	+1.9			
25	ePZX	17	22	02.5											
25	iZXZ	22	04.1		37.5	0.6	0.7	1.2	0.3	0.7	0.4				
25	ePZX	17	37	44.5	08.2	0.8	0.6	1.7	0.4						
25	ePZX	19	08	51.3	47.4	0.7	0.8	0.8	0.7	0.7	0.7				
25	eZXZ	21	14	30		0.8	0.5X	0.4	0.5X	0.6	0.6X				
25	iPZX	21	15	39.6	13.9i	45.0	0.9	>45		>45		+2.1			
26	ePZX	03	35	04.0											
26	iX1ZX	35	07.7												
26	eX2ZX	35	15.2												
26	eX3ZX	35	19.4			6.6	0.6X3	4.6	0.5X3	4.8	0.7X3				
26	ePZX	06	07	43	21	0.9	0.8	1.3	0.7	0.8	0.6				
26	ePZX	09	52	03.1	09.0	0.6	0.5	0.8	0.6	0.8	0.3				
26	ePZX	15	13	22.4		0.6	1.1P	0.5	1.0P	0.4	1.1P				
26	ePZX	20	17	04.0											
26	eZXZ	18	09.2		44.1	1.3	0.7X	1.8	0.7X	1.2	0.6X				
27	ePZX	00	09	50.5											
27	eZXZ	12	02.8	3 27.2	2.0	0.7	1.8	0.6	1.3	0.7					
27	ePZX	00	35	14.8		0.5	0.5P	0.6	0.6P	0.5	0.5P				
27	eZXZ	01	30	38		0.5	0.5X	0.3	0.5X	0.3	0.5X				
27	ePZX	01	49	31		0.8	0.7P	0.8	0.7P	0.4	0.6P				
27	eZXZ	01	53	14		0.5	0.5X	0.5	0.5X	0.4	0.5X				
27	ePZX	05	39	36.6	42.1	0.6	0.6	0.9	0.3	0.6	0.3				
27	ePZX	18	57	33.1	11.5	0.5	0.4	0.7	0.2	0.6	0.3				
27	iPZX	19	14	14.5	12.1	8.7	0.5X	13.0	0.6S	11.5	0.6X	+2.6			
27	eZXZ	14	37.0												
27	eZXZ	22	22	10		0.6	1.2X	0.5	1.0X	0.5	1.1X				
27	ePZX	22	40	24.0	12.8	0.9	0.5	1.4	0.4	1.0	0.6				
27	ePZX	23	13	27.7	10.7	0.7	0.5	1.4	0.4	0.6	0.5				
28	ePZX	01	09	51											
28	iX1ZX	11	25.7												
28	eX2ZX	11	52			0.7	0.9X2	1.2	0.9X2	0.7	0.8X2				
28	ePZX	02	37	46.1	10.0	0.5	0.6	1.1	0.2	0.7	0.5				
28	ePZX	02	41	01.4	10.4	1.0	0.6	1.3	0.3	0.9	0.4				
28	iPZX	03	38	25.2	32.8i	18.2	0.8	>25		25.1	0.8	-1.4			
28	ePZX	10	17	05.4	11.5	0.5	0.5	0.8	0.3	0.5	0.6				
28	iPZX	10	39	46.7	12.2	0.9	0.4P	2.0	0.4S	1.0	0.4S	+2.2			
28	ePZX	14	39	20.5	29.2	>30	>30	>30							
28	ePZX	16	44	31.3	09.4	1.7	0.4	>2		2.2	0.4				
28	ePZX	19	07	20.1	34.9	2.5	0.6	2.8	0.7	2.3	0.5				
28	ePZX	20	41	12.6	24.7	4.0	0.8	4.8	0.7	4.2	0.9				

Kamikineusu, January 1969

| Date | Phase | Time(JST) | | |
<th colspan="3
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Kamikineusu, February 1969

Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(m)	
		h	m	s	m	s	Z	N	E				
2	ePZX	00	41	34.5			10.5	0.7	0.5	0.7	0.5	0.8	0.6
2	ePZX	06	13	01.6			10.3	0.8	0.3	1.9	0.3	1.1	0.3
2	ePZX	08	23	10.1			1 27.6	1.2	0.5	0.7	0.4	1.5	0.7
2	ePZX	09	36	57.7			11.7	0.6	0.6	0.8	0.4	0.5	0.6
2	ePZX	10	46	21.1				0.9	0.7P	0.6	1.2P	0.4	0.8P
2	eXZX	14	29	04				0.8	1.6X	0.7	1.5X	0.4	1.3X
2	iPZX	16	56	52.5			11.6i	> 35		> 40		> 30	
2	ePZX	19	47	39.0			11.2	1.3	0.5	1.9	0.3	1.3	0.4
2	ePZX	22	00	22.0			19.0	0.7	0.5	1.4	0.3	1.5	0.4
2	ePZX	23	41	47.5			26.1	0.9	0.6	1.1	0.4	0.9	0.6
3	ePZX	00	25	24.2			06.8	1.5	0.3	2.2	0.3	1.9	0.4
3	iPZ	09	49	49.3			08.7	9.8	0.4	> 9		7.0	0.4
3	ePZX	10	40	32.9									-5.0
	iXZX		40	33.8			21.0	1.9	0.5	4.5	0.5	3.1	0.6
3	ePZX	16	38	10.1			11.8	1.1	0.7	> 2		1.5	0.5
3	eXZX	17	04	12				1.2	1.2X	1.1	1.3X	0.6	1.3X
3	iPZX	17	28	55.0				1.2	1.0P	1.1	1.3P	0.6	0.6P
3	iPZX	17	31	50.0					S0	S0		S0	-SO
3	ePZX	17	59	47.8			1 02.7	3.6	0.6P	3.9	0.9S	2.9	1.2S
5	ePZX	00	09	54.6			12.1i	2.2	0.6	2.2	0.4	1.5	0.4
5	ePZX	01	58	43.5			11.9i	4.1	0.6	5.0	0.5	3.1	0.6
5	ePZX	04	10	27.2			08.6	0.6	0.8	1.3	0.3	0.6	0.4
5	ePZX	07	16	38.5			09.7	1.6	0.7	2.2	0.4	1.3	0.4
5	ePZX	08	55	09.1			09.2	1.1	0.5	1.6	0.3	1.7	0.2
5	iPZX	19	05	39.8			05.3i	2.6	0.7	4.4	0.8	3.1	0.5
6	ePZX	05	23	50.7			11.9	1.4	0.6	1.8	0.3	1.5	0.6
6	ePZX	06	10	32.0			09.6	1.7	0.5	3.1	0.2	1.8	0.3
6	ePZX	06	24	47.6			10.5	0.5	0.7	0.7	0.3	0.4	0.6
6	ePZX	09	44	08.9			10.0	2.0	0.6	1.7	0.4	1.2	0.6
6	ePZX	12	16	55.1			11.9	2.0	0.6	2.0	0.6	2.1	0.7
6	iPZ	13	30	39.6			04.9		S0	S0		S0	(-)
6	iPZX	14	31	30.9			07.3	0.7	0.2P	1.3	0.2S	1.0	0.2P
6	ePZX	14	43	13.2									(-)
	eXZX		44	40				0.6	0.7X	1.0	0.6X	0.7	0.8X
6	ePZX	16	37	42.5			3 34.3	1.0	0.8	1.2	0.8	0.9	0.8
6	iPZ	17	35	58.1			05.4		S0	S0		S0	(-)
6	iPZX	21	10	04.4			05.1	0.8	0.3P	1.0	0.5S	0.5	0.4S
7	ePZX	00	54	15.3			38.5	0.6	0.7	0.9	0.7	0.4	0.6
7	ePZX	02	01	31.8			05.9	0.5	0.4	0.7	0.4	0.4	0.6
7	iPZX	03	10	45.2			09.1	2.3	0.6	2.9	0.4	2.0	0.5
7	ePZX	04	53	00.5			20.5	0.9	0.6	1.9	0.6	0.9	0.6
7	ePZX	08	23	41.9			25.1	0.8	0.8	1.5	0.3	0.7	0.5
7	ePZX	12	50	53.0			10.7	1.0	0.6	2.3	0.4	1.3	0.4
7	ePZX	15	56	22.5			13.2	0.9	0.7	1.6	0.3	1.1	0.7
7	ePZX	19	49	03.2			22.4	1.0	0.5	1.7	0.7	1.1	0.4
7	ePZX	20	41	21.7			55.5	1.0	0.5	2.1	0.4	0.8	0.3
7	eXZX	22	46	34				1.2	0.6X	0.5	0.5X	0.9	0.6X
8	ePZX	08	46	21.3			09.9	0.9	0.6	1.4	0.3	0.9	0.4
8	ePZX	10	20	42.0			10.5	0.5	0.6	1.0	0.3	0.6	0.5
8	ePZX	12	49	04.4			09.0	0.5	0.4	1.1	0.3	1.0	0.2
9	ePZX	07	27	28.3			38.1	0.8	0.5	1.6	0.3	0.9	0.4
9	iPZX	11	43	51.8			10.4i	3.0	0.5	4.3	0.3	3.2	0.3
9	ePZX	14	19	59.7			05.5	0.7	0.7	1.3	0.3	0.6	0.5
9	ePZX	17	39	08.1			1 03.1	1.8	0.7	2.9	0.7	2.0	0.8
9	ePZX	19	13	55.5			22.0	2.6	0.6	3.0	0.4	2.6	0.4
9	ePZX	19	30	30.8			05.9	1.0	0.6	1.5	0.8	1.1	0.5
10	ePZX	00	58	26.7									
	eXN		50	00.0			26.4	1.7	0.6X	2.8	0.7X	1.9	0.8X
10	ePZX	15	10	42.3			2 06.0	0.5	0.8	1.1	0.8	0.8	0.9
10	ePZX	16	23	15.2			11.8	0.5	0.5	0.6	0.6	0.4	0.5
10	iPZX	23	05	03.8			09.2i	0.5	0.3	1.0	0.2	0.9	0.3
10	ePZX	23	27	45.3				0.6	0.9P	0.4	1.0P	0.2	0.7P

** Observation was interrupted
from 18h 30m, 3rd to 17h 51m, 4th.

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Kamikineusu, February 1969

Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E					
11	ePZX	06	49	07.1										
	eXN		50	25.6			54.8	21.3	1.0X	24.5	0.8X	17.8	0.9X	
11	iPZX	08	08	30.3									-4.8	
	ipPPZK		13	26.3										
	eSKPPZK	38	41		8	41.5	19.8	2.1P		11.5	1.3P	8.8	1.5P	
11	ePZX	08	11	42.2			28.9	1.7	0.9	2.8	0.7	1.8	0.7	
11	iPZX	11	37	07.0			09.6i	1.4	0.3	3.7	0.5	1.7	0.3	
11	ePZX	15	42	33.5			16.8	1.8	0.5	2.0	0.4	0.9	0.4	
11	iPZX	19	17	27.7			11.3	0.9	0.5	1.7	0.3	1.1	0.6	
11	iPZX	23	10	23.8			12.2	1.1	0.5	1.9	0.7	1.0	0.5	
12	ePZX	00	18	24.3			21.5	0.9	0.4	1.3	0.5	1.0	0.4	
12	ePZX	04	48	48.1			47.7	4.4	0.6	7.2	0.3	3.3	0.4	
12	ePZX	05	27	12.1			23.9	1.4	0.5	2.5	0.3	1.7	0.4	
12	ipZX	05	35	55.5			03.9i	1.1	0.6	1.8	0.4	1.3	0.5	
12	ePZX	07	17	18.2				3.4	1.2P	3.2	2.3P	2.2	1.1P	
12	iPZX	07	24	33.2									-4.6	
	epPN		25	43.5										
	ePPZ		26	34.5										
	ePcSZK		28	59.4										
	eScSN		33	40.1	6	55.4	22.3	1.5P		19.5	1.2P	15.4	1.8P	
12	ePZX	21	31	05.0			12.7i	1.4	0.7	2.9	0.5	1.5	0.5	
13	ePZX	00	37	21.6			25.3	1.5	0.7	2.0	0.3	1.6	0.6	
13	ePZX	00	44	07.8	3	20		0.6	0.6P	0.5	0.5P	0.4	0.5P	
13	ePZX	01	27	53.8			12.0	0.8	0.5	0.9	0.4	0.5	0.5	
13	ePZX	04	26	16.3			12.0i	0.7	0.6	2.3	0.3	1.0	0.3	
13	ePZX	04	55	47.4			14.5	0.5	0.4	1.0	0.3	0.7	0.3	
13	ePZX	06	02	19.2			29.2	1.4	0.8	1.9	0.5	2.0	0.7	
13	iPZX	18	22	21.4			09.7	0.6	0.5	1.1	0.5	1.0	0.3	
14	ePZX	08	22	22.9			11.2	3.4	0.7	5.4	0.5	4.4	0.6	
14	ipZX	09	29	52.2			21.4	0.5	0.4	0.8	0.3	0.7	0.4	
14	ePZX	15	54	20.9			19.4	2.8	0.6	2.8	0.5	2.4	0.4	
14	ePZX	15	59	11.1			14.5	1.1	0.7	1.4	0.7	1.5	0.8	
14	ePZX	16	51	59.8										
	eX1ZX		52	18.1										
	eX2N		53	48.5	1	16.6	2.4	0.9X2		3.2	0.8X2	2.8	0.8X2	
14	iPZX	17	46	24.1									-2.6	
	iXZX		46	30.6			08.6i	2.6	0.3	6.7	0.3	5.4	0.4	
14	ePZX	18	47	56.6			30.1	0.5	0.4	0.7	0.4	0.5	0.4	
14	ePZX	20	01	11.7			30.2i	4.9	0.5	14.2	0.3	12.0	0.3	
14	ePZX	20	22	01.8			17.4	1.2	0.7	1.3	0.4	1.1	0.6	
14	ePZX	22	23	08.6			09.8	0.7	0.3	1.5	0.3	0.9	0.3	
14	ePZX	22	29	51.8			36.1	14.4	0.8	14.5	0.8	14.3	0.8	
15	ePZX	03	50	17.5			14.1	1.9	0.7	3.4	0.6	2.6	0.8	
15	ePZX	08	42	50.2			10.2	0.9	0.6	1.4	0.4	0.9	0.8	
**	15	ePZ	09	03	13.2			22.6	0.8	0.6	1.4	0.6	1.1	0.4
15	ePZX	18	20	15.9	1	36.0	0.5	0.7	0.9	0.7	0.6	0.7		
15	iPZX	20	30	12.8			12.1	0.5	0.4	0.8	0.4	0.7	0.7	
16	ePZX	01	17	59.6										
	eXN		19	15.0			52.0	0.9	0.6X	1.4	0.9X	1.8	0.7X	
16	ipZ	05	32	30.0			06.0		S0		S0		-4.4	
16	ePZX	05	45	20.4	1	11.1	0.5	0.8		1.0	0.9	0.8	0.7	
16	iPZX	06	02	43.5			15.7	0.8	0.6	1.3	0.5	0.9	0.7	
16	ePZX	15	30	36.0			36.4	1.9	0.6	2.6	0.6	1.8	0.6	
16	ePZX	21	07	37.8			13.8	0.6	0.5	1.5	0.5	0.8	0.6	
16	iPZX	21	20	46.0			07.5i	1.0	0.3	4.9	0.3	1.5	0.3	
17	ipZX	00	35	32.4			09.0	0.5	0.3	0.8	0.3	0.9	0.4	
17	ePZX	05	51	41.1			11.8	0.5	0.5	0.8	0.3	0.4	0.5	
17	iPZX	09	33	40.4			14.1i	1.1	0.5	1.6	0.4	0.8	0.3	
17	ePZX	09	50	37.6				1.5	1.1P	1.3	1.4P	0.8	1.1P	
17	ePZX	10	23	26.7				0.7	0.8P	0.6	1.0P	0.5	1.1P	
17	ipZX	15	24	48.0			20.3		S0		S0		+1.6	
17	ePZX	16	00	45.5										
	eXN		02	46.6	1	31.2	3.0	0.6X		5.5	1.0X	4.0	1.1X	

** Observation was interrupted
from 12h 30m to 17h 41m, 15th.

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Kamikineusu, February 1969

Date	Phase	Time(JST) h m s	P-S m s	Amplitude(mm)			Period(sec) N E	Initial motion(mm)		
				Z	N	E				
17	ePZX	16 23 16.7	26.0i	5.7	0.5X	11.1	0.7X	8.0	0.7X	
	iZN	35 52.0								
17	ePZX	16 30 19.5	54.2	8.9	0.5	12.8	0.4	6.8	0.5	
17	ePZX	17 36 04.9	11.8	2.5	0.3	5.0	0.3	2.5	0.3	
17	ePZX	18 23 29.2								
	eXZX	24 22.0		1.4	0.9X	1.5	0.9X	1.2	0.9X	
17	iPZX	21 15 45.7	12.2	0.5	0.7	1.6	0.2	0.9	0.3	
17	iPZX	22 30 38.2	32.7i	>15		33.5	0.8	18.6	1.0	
18	ePZX	04 34 27.1	24.6	0.8	0.4	1.2	0.5	1.0	0.6	
18	ePZX	04 58 55.8	15.1	0.7	0.9	0.8	0.7	0.6	0.7	
18	ePZX	10 54 06.4	34.7	0.6	0.5	0.9	0.5	0.5	0.5	
18	iPZX	13 53 30.1	13.9i	8.0	0.6	9.2	0.6	6.5	0.6	
18	ePZX	14 30 53.5	20.3	0.5	0.4	1.0	0.4	0.9	0.3	
18	ePZX	17 50 48.2	27.5	1.8	0.9	1.9	0.7	1.4	0.7	
18	iPZX	19 13 26.5	07.5i	2.0	0.3	11.8	0.4	3.2	0.3	
18	ePZX	20 23 17.1	11.8	0.8	0.2P	0.8	0.3S	0.6	0.3S	
18	ePZX	21 18 43.8	28.4	2.4	0.7	2.5	0.6	2.4	0.6	
19	ePZX	00 47 34.1	33.8	1.1	0.5	1.1	0.4	0.9	0.4	
19	iPZ	01 22 26.6	12.3i	>8		18.1	0.4	12.4	0.4	
19	iPZX	04 09 16.6	12.5	1.3	0.5	2.3	0.2	1.7	0.3	
19	eXZX	04 22 41.8		0.5	0.6X	0.5	0.5X	0.6	0.6X	
19	ePZX	04 34 22.2	13.1	0.8	0.5	2.5	0.3	0.9	0.3	
19	ePZX	07 02 07.0	13.6	0.6	0.5	0.9	0.5	0.7	0.6	
19	ePZX	19 29 36.9	12.0i	0.6	0.5	2.0	0.3	0.6	0.2	
19	ePZX	23 59 38.6	17.6	3.2	0.7	3.7	0.5	3.2	0.6	
20	ePZX	00 01 26.4	07.9	1.4	0.5	3.9	0.4	1.9	0.5	
20	iPZX	00 53 36.0	13.8	1.3	0.7	1.9	0.7	1.2	0.5	
20	ePZX	04 45 02.4	09.2	0.6	0.4	1.4	0.3	0.9	0.2	
20	ePZX	06 05 06.9	42.2	0.7	0.6	1.2	0.6	0.8	0.7	
20	ePZX	07 01 59.1	08.7i	0.7	0.4	1.6	0.3	1.0	0.5	
20	iPZX	09 03 17.3	08.8i	2.3	0.5	4.0	0.5	2.6	0.4	
20	ePZX	12 20 27.7	10.4	0.9	0.5	2.0	0.3	1.3	0.2	
20	ePZX	13 18 24.3	58.8	0.5	0.8	0.9	0.7	0.7	1.0	
20	iPZX	13 33 38.4	10.1	1.1	0.5	2.1	0.4	1.8	0.4	
20	ePZX	18 18 05.6	09.8	0.8	0.5	1.4	0.2	1.1	0.2	
20	ePZX	19 03 13.2								
	eRZX	19 29 6 03.6		1.9	1.0P	1.7	1.5P	1.0	1.2P	
20	ePZX	19 37 56.0	6 30	1.4	1.4P	1.1	2.0P	1.0	1.3P	
20	ePZX	19 47 40.4	10.0	0.5	0.6	0.9	0.4	0.7	0.3	
20	iPZX	21 03 16.9	09.5	1.2	0.7	2.2	0.3	1.5	0.2	
21	ePZX	02 05 51		0.8	1.0P	0.6	1.2P	0.5	1.0P	
21	iPZ	02 14 39.3	10.5		SO		SO		-2.6	
21	ePZX	02 19 03.9	10.4	0.5	0.5	1.0	0.3	0.7	0.3	
21	ePZX	03 57 21.9	08.6	0.5	0.5	1.3	0.3	1.0	0.3	
21	ePZX	05 39 11.9	31.2i	1.3	0.7	2.8	0.3	0.9	0.3	
21	ePZX	09 44 37.4	08.6i	0.8	0.3	2.3	0.2	1.5	0.3	
21	ePZX	09 57 33.1	10.9	0.7	0.3	1.3	0.4	0.7	0.6	
21	iPZX	11 36 20.9	11.4	1.4	0.5	1.5	0.3	0.8	0.5	
21	ePZX	15 45 50.0	28.3	0.5	0.9	0.7	0.3	0.5	0.4	
21	ePZX	23 30 08.6	16.7i	8.7	0.7	18.1	0.7	11.5	0.5	
22	ePZX	01 00 09.1		11.2	0.7	0.4	1.2	0.4	1.0	0.6
22	eXZX	11 03 59.2		0.9	0.9X	1.5	0.9X	1.2	1.0X	
22	ePZX	11 31 00.2	14.2	0.8	0.5	1.5	0.3	1.1	0.3	
22	ePZX	12 07 59.6	1 02.1	0.6	0.9	0.7	0.9	0.7	1.2	
22	ePZX	13 10 18.7	11.0i	3.3	0.6	3.8	0.3	2.6	0.6	
22	ePZX	13 28 57.8	31.2	1.1	0.7	1.1	0.5	1.0	0.6	
22	ePZX	15 27 03.9	13.5	0.5	0.2P	0.5	0.3S	0.4	0.5S	
22	ePZX	18 19 53.8	07.9	0.5	0.4	1.0	0.4	0.6	0.3	
22	iPZX	19 39 16.3	08.7i	1.2	0.4	2.8	0.2	1.9	0.3	
22	iPZX	21 01 50.0	06.8i	1.1	0.3	3.4	0.3	1.1	0.2	
22	ePZX	22 09 38.9								
	eXZX	12 08.6	1 40.8	0.6	0.8X	0.9	0.8X	0.7	0.8X	
22	iPZX	23 05 48.8	13.5	1.0	0.3P	1.1	0.4S	0.8	0.6S	

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Date	Phase	Time(JST) h m s	P-S m s	Amplitude(mm)			Period(sec) N E	Initial motion(mm)	
				Z	N	E			
23	ePZX	07 03 54.1	10.2	0.8	0.7	1.4	0.3	1.1	0.2
23	iPZX	08 07 03.1		1.0	0.9P	0.7	1.0P	0.5	0.9P
23	iPZX	09 45 54.8		2.4	1.9P	1.8	2.6P	1.3	1.8P
23	iPZX	18 28 46.9	07.5i	2.5	0.4	4.1	0.4	3.4	0.3
23	ePZX	22 05 07.5	07.9	1.5	0.4	3.5	0.4	1.6	0.3
24	ePZX	04 49 29.2	25.0	1.9	0.7	2.8	0.4	1.9	0.4
24	ePZX	09 17 33.9							
24	eXZX	18 03.7	7 36	1.6	1.5X	1.3	1.2X	1.0	1.2X
24	iPZX	09 22 19.4	05.9	0.5	0.3	1.6	0.3	1.2	0.3
25	ePZX	04 47 53.6</							

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E				
3	ePZX	00	14	14.5	49.4	1.3	0.3P	1.9	0.5S	0.8	0.5S		
	iXZX		14	15.9									
3	ePZX	17	28	34.8	12.4	1.1	0.5	2.0	0.5	1.5	0.4		
3	ePZX	18	51	11.4	13.9	0.9	0.3P	0.9	0.5S	0.5	0.5S		
3	ePZX	21	51	25.3	14.3	0.5	0.5	1.3	0.3	0.7	0.3		
3	ePZX	23	52	49.1	2 49.8	1.1	0.6P	1.0	0.8S	0.8	0.6P		
4	ePZX	02	02	19.4	2 02.6	0.7	0.3P	0.7	0.4S	0.4	0.4P		
4	ePZX	08	20	08.6	09.4i	0.6	0.4	1.2	0.4	0.8	0.5		
4	ePZX	09	19	23.8	10.2	1.8	0.6	3.2	0.3	2.4	0.3		
4	ePZX	17	09	27.7	09.7i	1.1	0.5	2.1	0.2	1.8	0.3		
4	ePZX	18	25	26.2	24.1	0.7	0.5	1.3	0.5	0.8	0.6		
5	ePZX	03	03	26.4									
	eXN	05	13.2		1 22.9	3.3	0.8X	5.9	0.8X	4.1	0.9X		
5	ePZX	07	15	19.4	08.1	1.3	0.6	2.0	0.4	2.0	0.5		
5	ePZX	10	21	53.3	10.4	0.5	0.5	0.9	0.4	0.6	0.4		
5	iPZX	12	48	50.8	09.3	3.9	0.6	3.9	0.4	3.7	0.7	-0.8	
5	ePZX	13	48	41.9	09.2i	0.5	0.3	1.9	0.2	1.0	0.2		
5	ePZX	21	58	07.2	13.5	2.3	0.5	3.8	0.4	2.7	0.5		
5	ePZX	22	59	38.3		1.0	1.0P	0.8	1.0P	0.6	1.1P		
6	ePZX	00	21	57.0	06.0i	3.0	0.2P	6.4	0.2S	3.1	0.3S		
6	ePZX	01	18	46.1		0.5	1.2P	0.4	1.2P	0.4	1.3P		
6	ePZX	02	24	19.7	12.7	0.5	0.4	0.9	0.6	0.4	0.3		
6	iPZX	04	42	31.1		1.1	0.5P	1.1	1.2P	0.7	1.2P	+2.2	
6	ePZX	10	28	21.9		0.7	0.9P	0.4	1.4P	0.4	1.0P		
6	iPZX	11	21	27.0	08.4i	0.5	0.5	1.2	0.3	1.2	0.5	+0.5	
6	ePZX	14	30	45.4									
6	eXZ	31	59		1 46.5	0.9	1.1	1.2	0.9	1.2	1.0		
6	ePZX	15	10	59.3	24.3	1.0	0.6	1.7	0.6	1.1	0.7		
6	ePZX	16	28	33.8	20.0	1.1	0.3	1.3	0.4	1.1	0.2		
6	ePZX	23	37	17.6	09.0	2.2	0.6	2.1	0.4	1.3	0.5		
7	ePZX	02	18	02.6	10.8i	4.0	0.6	5.4	0.3	3.2	0.4		
7	ePZX	02	23	20.6	15.0	3.3	0.6	5.1	0.6	2.6	0.7		
7	iPZX	02	26	50.8	10.7i	5.6	0.7	7.0	0.4	4.4	0.3	-3.6	
7	iPZX	07	29	51.1	13.3i	2.2	0.6	3.3	0.6	1.9	0.5	-1.2	
7	ePZX	08	30	20.0	10.0i	0.6	0.6	1.9	0.3	1.5	0.6		
7	iPZX	14	45	20.7	09.7i	3.3	0.5	6.5	0.4	4.8	0.3	-4.8	
7	ePZX	16	55	10.3	12.6	0.9	0.3P	1.5	0.3S	1.0	0.5S		
7	iPZX	17	35	11.1		1.1	0.8P	0.6	0.7P	0.5	0.7P	+1.2	
7	iPZX	17	49	02.6	09.7i	17.0	0.6	29.6	0.6	11.4	0.6	-17.0	
7	ePZX	18	24	52.6	14.3	0.8	0.6	0.8	0.4	0.7	0.4		
7	ePZX	19	34	05.6	09.5	0.7	0.5	1.4	0.3	0.8	0.5		
7	ePZX	19	59	30.4	25.0	0.6	0.7	0.8	0.8	0.5	0.5		
7	ePZX	20	02	59.5	26.0i	1.6	0.4	2.2	0.4	1.5	0.4		
8	ePZX	01	10	49.3	35.9	0.9	0.6	1.3	0.6	1.2	0.7		
8	ePZX	02	48	13.3	11.3	1.5	0.6	2.3	0.4	1.6	0.5		
8	ePZX	06	26	16.2	10.0	0.6	0.6	1.7	0.3	0.7	0.3		
8	ePZX	08	44	40.8	35.2	1.3	0.6	1.6	0.6	1.2	0.6		
8	ePZX	09	42	14.8	13.2	0.7	0.5	0.6	0.5	0.6	0.5		
8	ePZX	11	09	42.1	17.6	1.9	0.5P	4.4	0.7S	3.4	0.7S		
8	ePZX	18	05	41.2	09.9	0.7	0.7	1.3	0.5	0.8	0.5		
8	iPZX	19	20	53.8	32.9i	S0	S0	S0	S0	-SO	-SO		
9	iPZX	08	54	33.2	17.8	2.3	0.8	5.3	0.7	2.6	0.7	-1.2	
9	ePZX	15	42	39.6	10.9	0.6	0.6	1.2	0.5	0.6	0.2		
9	ePZX	17	26	58.1	38.3	0.6	0.5	1.1	0.5	0.8	0.7		
9	ePZX	17	47	55.7	13.2	0.6	0.5	0.6	0.4	0.5	0.4		
9	iPZX	20	37	10.0									
	iXLZ	37	14.5										
	iX2Z	37	51.1	1 18.5i	40.0	0.7	>50		>45		+1.0		
9	ePZX	21	37	16.8	1 13.4	1.4	0.9	2.4	0.7	1.9	0.8		
9	ePZX	22	56	30.8		0.8	1.0P	0.8	1.1P	0.9	1.2P		
9	ePZX	23	28	52.4	2 00.8i	1.5	0.9	2.9	0.9	1.7	1.0	+1.6	
9	iPZX	23	47	30.5		0.8	0.8P	0.6	1.0P	0.5	1.1P		

Date	Phase	Time(JST)			P-S	Amplitude(mm)			Period(sec)			Initial motion(mm)

Kamikineusu, March 1969

Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	N	E	1.0	1.7X	1.0	
18	ePZX	03 18 33.8		15.2	0.5	0.7	0.5	0.3	0.4	0.5	-9.4	
18	iPZX	03 22 52.1		09.7i	30.5	0.7	>30		39.8	0.7		
18	ePZX	04 07 14.8		19.7	1.0	0.6	1.0	0.4	1.0	0.5		
18	iPZX	11 26 53.0		15.7i	7.8	0.6	8		8.3	0.7	+1.2	
18	ePZX	14 11 22.8										
18	eXE	13 26.9	1	45.2	0.8	1.3X	1.3	1.7X	1.0	1.6X		
18	ePZX	14 20 52.6		13.9	1.0	0.6	1.2	0.3	0.8	0.5		
18	ePZX	20 13 44.1		09.0	0.6	0.3	1.2	0.3	1.2	0.2		
18	ePZX	20 31 38.3		09.7	4.1	0.5	7.9	0.3	3.7	0.2		
18	iPZX	20 33 02.0		12.0i	6.5	0.3	12.2	0.3	8.0	0.2	-3.6	
19	ePZX	01 18 06.5	1	09.7i	17.8	0.4	>25		16.3	0.4		
19	ePZX	06 49 20.3		12.4	0.7	0.7	1.0	0.3	0.9	0.4		
19	ePZX	07 39 41.3		11.4	2.0	0.6	3.3	0.4	2.1	0.6		
19	iPZX	07 44 56.6		10.4i	1.4	0.5	3.1	0.6	1.8	0.3	-1.8	
19	ePZX	12 14 46.0		32.8i	1.9	0.5	2.8	0.5	2.0	0.5		
19	ePZX	12 41 35.3		13.1	0.6	0.6	1.5	0.6	0.9	0.6		
19	ePZX	20 30 15.7		09.1i	1.5	0.5	1.5	0.3	1.5	0.3		
19	ePZX	23 03 21.3	3	11.7i	2.8	1.0	2.5	1.0	2.5	1.2		
19	ePZX	23 11 14.7	3	13	0.5	1.5P	0.6	2.0S	0.6	1.4P		
19	ePZX	23 53 13.0		10.8	7.7	0.6	8.3	0.6	7.3	0.6		
20	ePZX	03 20 25.9	1	07.9	5.0	0.6	8.5	0.8	4.3	0.8		
20	ePZX	03 32 30		109	0.5	0.6	0.7	0.5	0.4	0.6		
20	iPZX	03 34 17.3		09.1	1.7	0.5	2.3	0.5	1.6	0.7	-1.8	
20	ePZX	06 34 36.2		25.4	0.5	0.4	0.8	0.4	0.5	0.6		
20	iPZX	10 07 46.3		09.2i	11.5	0.5	>15		12.5	0.4	+4.3	
20	iPZX	18 08 18.9		12.0	1.7	0.4	2.6	0.3	1.7	0.4	-0.4	
20	ePZX	22 33 57.0	2	25.7	0.9	0.7P	0.8	0.7P	0.5	0.7P		
20	ePZX	22 47 31.5		11.4	0.9	0.5	1.3	0.5	1.0	0.6		
21	ePZX	01 25 56.0	5	38.2	1.9	0.8P	1.6	1.0P	1.3	1.1P		
21	iPZX	02 38 00.5		06.5i	3.3	0.3	12.5	0.3	5.7	0.4	-2.0	
21	ePZX	05 35 02.4	1	16.6	0.7	0.7	1.4	0.7	1.1	0.8		
21	ePZX	06 58 05.6		09.5	1.0	0.5	1.7	0.5	1.3	0.4	+3.5	
21	iPZ	12 05 42.3		22.2i	S0		S0		S0			
21	IXZ	05 50.9										
21	ePZX	15 42 58.9		24.1	7.2	0.6	9.8	0.6	6.6	0.8		
21	ePZX	17 37 02.3		10.7	0.5	0.7	0.8	0.7	0.6	0.6		
21	ePZX	19 09 03.2		15.4	0.7	0.5	1.7	0.5	0.9	0.4		
21	ePZX	21 05 24.1		23.6	1.0	0.4	1.7	0.5	1.0	0.3		
21	ePZX	21 07 57.1	2	09.0	1.8	0.5P	1.7	0.8S	1.2	0.8S		
21	ePZX	23 32 30.5		26.0	3.2	0.8	2.6	1.1	1.3	1.0		
21	ePZX	23 53 20.9		25.7	1.9	1.0	1.7	0.8	1.2	0.7		
22	ePZX	01 09 17.1		22.8	0.9	0.5	1.1	1.0	0.7	0.6		
22	ePZX	02 54 15.3		15.6	1.3	0.6	1.2	0.5	1.0	0.6		
22	ePZX	04 29 41.5		12.1i	0.7	0.5	2.1	0.3	1.0	0.2		
22	ePZX	06 03 53.0		18.6	0.5	0.7	0.8	0.3	0.6	0.5		
22	iPZX	07 40 08.5		09.9i	6.7	0.6	10.9	0.5	7.4	0.5	-2.2	
22	ePZX	08 30 01.3		08.4	0.6	0.8	1.6	0.4	0.7	0.4		
22	ePZX	11 36 04.5		09.9i	0.5	0.5	1.1	0.4	1.0	0.3		
22	ePZX	14 10 26.4		27.0	1.1	0.5	1.4	0.4	1.1	0.4		
22	ePZX	17 02 47.4		12	>2		>3		>1			
22	iPZX	20 08 25.6		10.8i	2.0	0.6	2.3	0.4	1.8	0.3	-1.8	
22	iPZX	20 57 12.3		10.8i	4.0	0.6	6.2	0.5	5.1	0.3	-4.6	
22	ePZX	22 37 01.5		45.4	24.4	0.8	28.9	0.8	29.4	0.8		
23	iPZX	02 47 53.6		09.9i	27.6	0.6	>30		31.6	0.6	+7.4	
23	ePZX	04 41 08.1		11.0	0.5	0.7	1.0	0.5	1.3	0.5		
23	ePZX	14 00 58.9		55.6	1.1	0.5	2.0	0.6	1.7	0.6		
23	ePZX	14 13 35.8		31.2	0.6	0.6	0.6	0.5	0.6	0.6		
23	ePZX	15 44 13.3	1	09.5	1.0	0.6	1.1	0.9	0.8	0.6		
23	ePZX	22 30 24.3		07.8	0.7	0.6	0.9	0.3	1.3	0.5		
24	ePZX	01 58 24.1		10.4i	1.0	0.3	2.0	0.3	1.4	0.4		
24	iPZX	06 20 50.3		0.5	2.5P	0.3	1.3P	0.3	1.3P		-1.4	
24	iPZX	07 37 03.3		11.2	1.3	0.5	2.3	0.4	1.6	0.2	+0.5	
24	iPZX	13 08 48.5		14.9	2.6	0.5	1.6	0.5	1.3	0.5	-0.8	
24	ePZX	16 29 30.2		15.7	0.6	0.6	1.2	0.4	0.9	0.4		

Kamikineusu, March 1969

Date	Phase	Time(JST)	P-S		
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Kamikineusu, December 1968

Appendix 1

A large earthquake with magnitude 5.6 occurred off Urakawa on December 25, 1968 and many aftershocks were recorded. From December 25 to 28 all earthquakes on the ZX record were interpreted and listed.

Date 25				Date 26			
Phase	Time(JST)	P-S	A(mm)T(sec)	Phase	Time(JST)	P-S	A(mm)T(sec)
	h m	s	ZX		h m	s	ZX
eP	00 31	16.0	0.5 0.3	-iP	21 44	07.2	2.4 0.2
eP	01 07	A 11.8	3.4 0.5	eP	21 58	08.4	0.8 0.3
+iP	01 20	A 24.6	27.5 1.0	eP	22 08	A 12.3	2.8 0.3
eP	01 53	21.3	1.4 0.2	+iP	22 32	06.1	1.3 0.1
eP	03 57	26.5	0.6 0.4	eP	22 49		0.3 0.3
+iP	05 32	09.9	2.4 0.2	eP	23 45	07.8	1.4 0.2
eP	06 01	09.8	0.8 0.2	eP	23 46	07.0	0.8 0.2
-eP	07 00	A 31.7	3.5 0.3	eP	23 57		0.6 0.2
eS	07 03		1.8 0.4	not aftershock?			
eP	07 24	09.5	0.4 0.2	Date 26			
eP	07 27	12.1	0.7 0.4	eP	00 01	07.5	1.0 0.1
eP	08 08	08.8	1.0 0.2	eP	00 44		0.5 0.4
eS	08 21		0.6 0.3	+iP	01 53	A	SO off Urakawa M 4.0
eP	08 59	07.1	0.7 0.2	eP	01 59	A	05.5
eP	09 10	10.1	0.9 0.2	eP	02 00	A	45.2
-iP	09 15	10.4	1.8 0.3	eP	02 11		9.2 0.4
-iP	09 22	A 10.1	3.2 0.3	+iP	02 30	A	05.3
eP	09 24	09.4	1.3 0.3	eP	02 36		2
+iP	10 54	A 12.6	SO	eP	02 37		0.4 0.2
eP	11 54	A 09.0	2.5 0.3	iP	02 42		13.2 0.3
+iP	12 56	A	SO main shock, off Urakawa M 5.6	-iP	03 06		11.6 9.2 0.5
+iP	13 04	07.1	1.2 0.2	eP	03 14		0.8 1.1 0.2
+iP	06	A 07.1	29.1 0.4	eP	03 18		0.3 0.3 not aftershock
-iP	13	06.4	2.1 0.1	eP	04 00		1.5 0.1 interest
eP	19	03.6	0.9 0.1	eP	04 05		3.4 0.1 noise?
eP	32	06.8	1.2 0.2	eP	04 14		0.4 0.3
eP	37	06.6	5.0 0.2	eP	06 00		0.4 0.1
eP	38	07.1	1.5 0.2	eP	06 39		0.7 0.4 not aftershock?
eP	40	07.3	0.8 0.1	eP	06 42		0.5 0.4 not aftershock?
-iP	45	06.3	1.2 0.1	eP	07 17		11.6 0.5 0.2
eP	14 11	06.9	9.0 0.2	+iP	08 45	A	07.0 22.0 0.2
eP	12	A 07.4	2.3	eP	08 55		10.5 0.8 0.3
-iP	14	A 07.0	22.0 0.4	eP	09 01		0.7 0.3
+iP	19	A 06.7	4.5 0.2	eP	09 02		10.3 0.9 0.2
eX	20		0.7 0.1	+iP	09 08		0.6 0.1
eP	42	07.2	1.5	eP	09 34		1.2 0.3 not aftershock
+iP	45	A 07.2	6.4 0.2	+iP	10 14		0.8 0.2
-iP	55	A 06.9	5.5 0.3	eS	10 18		1.7 0.1 not aftershock
+iP	15 23	06.4	1.6 0.2	eP	10 56		13.2 1.5 0.4
eX	27		0.6 0.1	eP	11 07		06.4 0.3 0.1
+iP	44	A 06.8	14.5 0.3	+iP	11 48		06.3 2.8 0.2
eX	15 56		0.7 0.2	eP	11 53		28.2 0.7 0.6
eX	17 20		0.4 0.2	eP	11 57		23.2 0.7 0.3
-iP	23	A 07.1	23.8 0.3	eP	12 49		12.9 0.5 0.5
+iP	28	A 07.3	2.8 0.3	eP	12 53		20.5 0.5 0.4
eP	35	06.9	0.9 0.1	eP	13 04		08.1 1.5 0.1
eP	18 21	10.1	3.2 0.3	eP	13 48		12 0.5 0.3
iP	30	06.8	6.9 0.2	+iP	15 12	A	07.5 33.5 0.2
+iP	34	07.1	3.4 0.2	eP	17 01		10.2 0.4 0.2
eP	19 09	06.7	0.8 0.1	eP	17 14		08.9 0.7 0.2
eS	20		0.2 0.3	eS	17 21		0.5 0.2
+eP	50	A 13.5	8.0 0.2	eP	19 16	A	06.8 2.8 0.2
iP	20 18	10.7	0.7 0.6	eP	19 42		24.3 0.6 0.2
eP	31	09.6	2.1 0.3	eP	20 32		12.5 0.7 0.4
eX	35		0.4 0.3	+iP	20 36		07.2 1.1 0.2
eX	56		0.7 0.2	eP	20 43		07.1 0.7 0.1P
eP	21 18	08.4	0.9 0.2	+iP	21 28		07.0 2.6 0.2
-iP	19	07.1	14.3 0.1	eP	21 36		07.3 2.3 0.3
eP	29		0.7 0.6P	eP	21 38		06.6 0.7 0.3
eX	36		0.4 0.3	eP	21 39		08.3 0.6 0.2

Kamikineusu, December 1968

Date 27				Remarks				Date 27				Remarks				
Phase	Time(JST)	P-S	A(mm)T(sec)	Phase	Time(JST)	P-S	A(mm)T(sec)	Phase	Time(JST)	P-S	A(mm)T(sec)	Phase	Time(JST)	P-S	A(mm)T(sec)	
	h m	s	ZX		h m	s	ZX		h m	s	ZX		h m	s	ZX	
eP	02 28		10.2	1.6 0.3	eP	00 59		10.2	1.9 0.4	eP	00 59		10.2	1.9 0.4		
eP	02 38		05.5	0.5 0.2	eP	01 12		06.0	0.6 0.2	eP	01 54		06.5	1.5 0.2		
+iP	02 44	A	18.0	SO	+iP	04 17	A	06.0	2.5 0.4	eP	04 41		06.8	0.7 0.1		
eP	02 56		11.2	1.3 0.3	eP	05 21		1.0 0.3	-iP	05 03	A	09.2	6.5 0.3			
+iP	05 09	A	07.0	28.0 0.2	eP	05 36		1.0 0.3	eP	07 31	A	12.8	3.0 0.2			
eP	06 13	A	2.2	0.8	teleseism	eP	06 29	07.1	0.8 0.1	+iP	07 31	A	06.8	2.9 0.2	teleseism	
eP	06 29		SO	eP	07 05	A	81.1	7.5 0.7	+iP	07 45		10.8	1.8 1.4			
+iP	06 53	A	12.0		eP	07 34	A	12.0	4.4 0.3	-iP	07 51	A	07.2	9.5 0.2		
eP	08 06		09.7	1.4 0.3	eP	08 06		09.7	1.4 0.3	eP	09 30		07.0	2.4 0.2		
eP	08 23		07.6	1.3 0.2	eP	09 12		11.5	0.4 0.3	eP	10 37	A	10.0	4.3 0.4		
eP	09 50		10.0	0.8 0.2	eP	10 47		08.8	2.5 0.2	+iP	10 40	A	06.5	8.0 0.3		
eP	11 16		09.3	0.5 0.2	eP											

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Phase	Time(JST)	P-S	A(mm)	T(sec)	Remarks	Phase	Time(JST)	P-S	A(mm)	T(sec)	Remarks		
eP	14 49	07.3	0.8	0.4		-iP	21 54	A	19.0	9.5	0.1	T-K=39.8	
eP	16 10	17.1	0.7	0.1P		+eP	22 11						
eP	18 09	44.1	0.6	0.3		eX	13 50.9						
eP	21 24	19.2	0.7	0.4									
							April 18						
						eP	00 26	A	13.1	9.5	0.3	T-K=67.9	
April 14						eX	04 17			1.0	0.5X		
-iP	01 11	07.7	3.7	0.1P		eP	04 58			1.3	0.2P		
eX	02 42		0.8	0.8X	teleseism	+iP	07 15	A	19.3	8.0	0.4		
iP	03 35	41.6	0.8	0.6P	teleseism	eP	14 07			40	1.1	0.3	
-iP	06 06	A	05.9	SO		+iP	17 17	A	10.6	5.3	0.2		
+iP	06 28	A	24.0	16.6	E of Aomori	eP	19 06	A	23.1	2.6	0.3	T-K=32.9	
eP	07 53		09.5	0.9	0.1P	eP	19 10	20.8		0.4	1.0P	teleseism	
eP	11 32		09.0	1.2	0.1	eP	19 13						
+eP	17 39	A	91.5	9.5	1.1	Hachijojima			31.3	0.7	0.3		
eP	18 36		91	0.5	0.6								
eX	19 09			0.6	0.5X								
eP	19 12		10.0	0.6	0.3								
eP	20 01		76.0	0.6	0.3								
+iP	22 07	A	95.5	11.0	0.8	Hachijojima							
eP	22 56		72.5	1.0	0.7								
							April 19						
April 15							eP	05 23		09.2	0.5	0.5	
eP	00 07	A	11.0	2.5	0.6		eP	06 16		11.4	1.6	0.3	
eP	01 21	A	06.0	5.9	0.1		eP	06 27		09	0.8	0.3	
eP	02 33		51.0	0.9	0.5		+iP	07 28		08.0	1.8	0.1P	
eP	02 52	56.3A					eP	13 27		17.1	0.4	0.3	
+iX1	52 58.6						eP	14 34		25.0	1.3	0.6	
-iX2	53 10.4		40.8	4.7	0.3P		+iP	16 35		07.8	0.5	0.3	
eP	03 19		43.9	0.7	0.6		eP	17 12	33.3	98.0	0.8	0.3P	
eP	05 03		81.6	1.0	0.7		eP	19 06		21.3	0.7	0.4	
eP	05 12	A	56.0	4.0	0.5	Fukushima		eP	20 18		12	0.5	0.2
eP	05 58	31.0A					eP	20 54		03.5?	0.4	0.2	
+iX1	58 32.5												
eX2	58 44.7		51.2	1.8	0.3P								
eP	06 00		55.5	0.4	0.5								
eP	07 59		21.1	0.3	0.6								
eP	08 21		20.4	0.4	0.6								
eP	10 02		19.6	0.4	0.3								
eP	12 04		11.2	1.4	0.2								
eP	19 41		30.0	1.0	0.6								
							April 21						
April 16			11.8	1.0	0.3		eP	00 48		05.9	1.4	0.4	
eP	01 28		45.2A				eP	01 09		09.3	0.5	0.2	
eS	31 29.2			4.4	0.3P		eP	01 14		09.2	0.5	0.3	
eP	04 08		20.8	1.0	0.1P		eP	01 50		41.4	0.8	0.3P	
eP	06 31	29.5					+iP	04 04		32.8	1.8	0.2P	
eS	33 58.1			1.0	0.6P		eP	07 32		25.6	1.4	0.1	
eP	06 53		15.1	0.6	0.5		eP	09 54	40.5		0.4	0.6	
eP	09 13		16.0	0.9	0.7		eP	10 58		21.3	0.4	0.3	
-iP	10 03	A	14.0	22	.0.2		-iP	17 08		08.0	4.0	0.1P	
-iP	16 12	A	08.2	SO			-iP	17 34	A				
eP	17 31		09.3	1.0	0.5		eP	18 05			38.5	1.7	0.4
+iP	20 05		32.6	5.0	0.2P		eP	18 48			37.2	0.4	0.3
eP	21 58		52.7	1.3	0.3		eP	19 24	13.9A	39.1	14	0.1P	T-K=79.8
							eP	20 18	A	18.4	4.0	0.6	T-K=58.7
							eP	21 35	A	35.7	4.7	0.6	off Sanriku
							eP	22 30	53.1				
							eS	32 41.2				1.1	0.5
							eP	22 41	A	38.5	5.0	0.7	off Sanriku
							eP	23 31		55.3	0.8	0.3P	
							eP	23 51	03.6	89.9	0.7	0.4	
April 17													
+iP	01 13	39.0A											
iX	13 40.9		14	25	0.2	Kushiro							
eP	04 35		31.2	0.4	0.3								
eP	05 51	A	16	4.7	0.3	Kushiro							
eP	08 50		20.7	0.9	0.4	Kushiro							
eP	09 58	A	31.5	12.1	0.5	Nemuro							
eP	12 32	A	41.0	1.8	0.5								
+iP	18 04		12.2	1.4	0.1P								
eP	20 42		22.6	2.4	0.4								
eP	21 14		19.5	0.7	0.5								
eP	21 50		12.6	2.0	0.2P								

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Phase	Time(JST)			P-S	A(mm)	T(sec)	Remarks	Phase	Time(JST)			P-S	A(mm)	T(sec)	Remarks
	h	m	s						h	m	s				
eP	19	15	25.1A		19		P T-K=77.8	eP	12	00	53	56.5	0.4	0.5	
eP	19	53	43.5		0.3	0.3		eP	15	48	02.3	89	0.9	0.3	
eP	20	11	10.6	17.0	0.4	0.3		eP	19	59	54.3	19.0	0.4	0.4	
eP	23	30	15		0.7	0.5P	teleseism		April 26						
April 23								eP	01	57	24.1	65.2	1.0	0.7	
-iP	01	10	49.0	08.3	2.0	0.1		eP	02	50	03.9		0.9	1.1P	teleseism
eP	01	16	32.1	70.5	1.6	0.3		eP	03	50	58 A	38.0	2.0	0.5	
eP	03	58	21.2		0.3	0.7		eP	06	35	10.5	43.5	0.7	0.4	
eP	06	10	14.2	18.7	3.4	0.2		iP	08	17	47.0A	09.3	48		
eP	06	12	06.8	15.0	0.4	0.4		eP	11	28	51.3	51.7	0.7	0.5	
eP	06	34	48.2	73.5	1.8	0.2		eP	13	39	50.0A	22.0	3.2	0.1	Kushiro
eP	06	42	05.0A	61.0	9.8	0.6	off Ibaraki	eP	14	53	29.8	27.0	0.5	0.5	
eP	06	50	18.5	36.0	1.0	0.6		eP	15	21	28.5	14.2	0.6	P	
eP	06	54	31.0A	45.0	2.1	0.7		+iP	15	31	10.7A	31.0	8.5	0.9	Nemuro
eP	08	16	03.9	40.0	1.1	0.8		eP	17	33	06.2	27.0	0.4	0.5	
eP	08	53	22		0.3	0.4		eP	18	01	34.7	18.2	1.3	0.1P	
-iP	09	54	20.4	06.0	1.0	0.3		eP	18	37	07.0A	33.2	2.7	0.5	
eP	10	00	10.8	20.2	0.4	0.2		eP	20	12	29	37.6i	34	T-K=78.2	
eP	10	50	03.0		0.4	0.3		eP	20	39	26.0	12.0	0.2	0.2	
eP	10	56	33.2A	41.0	2.5	0.7	T-K=-1.4	eS	20	46	36		0.6	1.0	
eP	11	20	19.0	41.5	0.5	0.5		eP	22	22	23.5A	57.5	62		off Fukushima
eP	11	26	43.0		0.5	0.6P	teleseism		April 27						
eP	11	32	40.0		0.2	0.3P		iP	00	11	20.5A		6.4	1.5P	teleseism
eX	11	37	00.3		0.3	0.3X	teleseism	eP	04	00	57.5		0.2	0.2	
eP	11	44	50.7		0.4	0.5P	teleseism	eP	08	37	48.6	81.6	0.5	0.4	
eP	11	50	02.0		0.5	0.5		eP	11	46	36.0	06.0	0.5	0.2	
eP	11	54	47.6		0.3	0.3P		eP	13	32	05.2A	31.1	1.5	0.6	T-K=-2.2
eP	12	21	29.0		0.3	0.3		+iP	13	59	36.1	08.0	1.0	0.1	
-eP	14	23	33.1		0.5	0.6P	teleseism	eP	14	34	53.0	23.2	0.3	0.6	
eP	16	26	46.5	39.0	0.6	0.3		eP	14	54	17.5	13.3	1.2	0.1P	
eP	17	31	58	38.8	1.0	0.5		eP	17	36	49.5		0.3	0.5P	
eP	17	36	09.2	32.2	0.4	0.3		eP	17	57	53.5	32.9	0.6	0.2P	
eP	17	36	15.6	14.5	2.3	0.1P		eP	18	16	23.6	06.4P	0.2	0.1	
eP	17	53	16.8	57.0	0.8	0.5		eP	18	37	06.0		0.7	0.7X	
+iP	22	14	03.5A		10			eX	20	27	30		0.4	0.6	
eP	23	16	33.0A	23.5	5.5	0.6	Teshikaga	eP	23	08	12.3		0.7	1.5P	teleseism
April 24								eP	23	12	20.7	40	1.7	0.2P	
eP	04	12	06.8A	38.1	5.3	0.3	T-K=-3.0	eP	23	48	01.5A		7.0	0.8	off Sanriku
-iP	04	20	15.0A		1.4	0.8P	teleseism		April 28						
eP	05	37	18.5A		3.8	2.1P	teleseism	eP	04	13	14.2	12.5	0.5	0.3	
eP	06	35	42.3A	38	5.8	0.9	off Sanriku	eP	05	53	18.3	28.5	1.4	0.6	
eP	07	31	24.0	06.5	0.5	0.2		eP	06	25	55.7	10.2	0.5	0.1P	
eP	07	56	33.7		0.5	0.8		eP	11	06	00.2	07.5	0.4	0.3	
eS	58	58.5			0.5	0.8		eP	11	31	43.3	17.6	0.3	0.2	
eX	12	49	45		0.3	0.6		eP	11	58	35.0		0.6	0.7P	teleseism
eP	13	49	39.5		0.3	0.3		eX	12	14	55		0.3	0.4X	
eP	16	12	20.8A	36.8	2.0	0.1		eP	13	23	18.2A		2.7	1.1P	teleseism
eP	17	30	19.0		0.7	1.6P	teleseism	eP	13	25	06.5	09.1	3.7	0.1	
eP	19	23	53.4	53.5	1.4	P		eX	13	27	28.7		0.7	0.7X	
eP	19	44	11.0		0.6	0.7P	teleseism	eP	15	20	47.0	27.2	0.3	0.2	
eP	22	01	05.0	37.8	0.5	0.3		eP	16	42	31.8		0.3	0.2	
+iP	23	06	57.0		1.8	0.5P	teleseism	eP	16	53	35.0	29.0	0.4	0.4	
April 25								-iP	19	07	10.3A		23		Tomakomai; H=120km
eP	01	32	05.8	34.8	0.5	0.6		eP	20	52	04.0	27.6	0.5	0.3	
eP	04	52	26.2	33.1	0.4	0.5		-iP	23	08	23.0A	09.5	25.6		
eP	06	34	57.8	06.2	0.8	P			April 29						
eP	08	28	03.3	38.3	0.4	0.6		eP	01	25	25.8	40	0.3	0.2	
eP	08	39	18		0.5	0.7		eP	01	30	01.1	21.7	0.3	0.5	
eS	41	35			0.7			eP	05	01	33.0	64	0.9	0.3	
eP	08	53	42.5		0.7	1.7P	teleseism	eP	05	09	35.8	06.3	0.4	0.5	
eP	09	06	34.2	09.2	0.9	0.3		eP	09	32	36.3		0.7	0.7P	teleseism
eP	09	31	25.5		0.2	0.3		eP	12	31	27.9	31.0	0.9	0.5	
eP	10	39	54.5	18.8	1.0	0.5		-iP	13	40	32.5A	12.0	7.2		
eP	10	55	29.0		0.2	0.3P		eP	13	56	00.2	34.0	0.4	0.5	
eP	11	42	21.0	60.3	0.3	0.3		eP	15	05	48.5A	35.9	1.8	0.3	

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Phase	Time(JST)			P-S s	A(mm)T(sec) ZX	remarks	Phase	Time(JST)			P-S s	A(mm)T(sec) ZX	remarks	
	h	m	s					h	m	s				
eP	14	10	19.5	17.5	0.2	0.3	eP	19	45	46.8	27	0.3	0.4	
-eP	14	37	38.8A				eP	20	44	39.5	19.0	0.3	0.3	
eS	41	37					eP	21	28	00.2		0.2	0.1X	
eX	48	37		10	0.5P	Ryukyu Is.	eP	23	56	41.4	08.0	0.3	0.2P	
eP	15	02	25.8	17.0	0.7	0.6		May 6						
eP	15	53	32.5	30	0.3	0.5	eP	00	14	24.5A	41.0	3.8	0.6	
eP	16	17	24.0	28.5	0.4	0.3	eP	01	45	24.0	21.0	0.3	0.4	
eP	18	00	05.5	28.5	0.5	0.3	eP	04	29	44.2	19.0	0.4	0.1	
eP	18	36	25.3	49	0.7	0.1	eP	05	58	52		0.2	0.1	
eP	19	44	07.2	85	0.9	0.3	eP	07	18	05.8	06.8	0.3	0.3	
eP	21	32	55.0	73	0.3	0.5	eP	07	35	09.5A	60	4.7	0.6	
eP	22	10	18.3	64.5	0.7	0.6	eP	07	42	32.0	54.0	0.2	0.2	
eP	22	15	21.5	52	0.3	0.7	eP	11	52	13.2	63	0.6	0.5	
eP	22	51	56.5	89.5	2.0	0.3	eP	15	05	28.5	16.0	0.4	0.4	
eP	23	03	13.5	10.4	0.3	0.2	eP	16	45	32.5	20.5	0.2	0.3	
eP	23	53	55.6	19.8	0.2	0.4	eP	17	16	54	16.5	0.2	0.2	
eP	23	55	11.4	10.0	1.0	0.5	eP	17	36	23.0	12.0	1.2	0.1	
eP	23	56	16.5	18	0.3	0.3	eP	17	38	56.7	34.0	0.2	0.4	
May 4														
eP	00	00	42	84.5	0.6	1.0	eP	20	38	14.0		0.4	0.5X	
eP	00	12	52.4	19.5	0.5	0.4	eP	21	22	50.7		0.6	0.2P	
eP	00	21	28.5A	46.5	2.5	0.8	eP	21	49	09.5	36.3	0.4	0.4	
eP	01	20	47.6				eS	11	55.8			1.6	0.2	
eX	21	03.5		0.5	0.7X									
eP	01	46	22.3	04.5	0.3	0.2		May 7						
eP	02	06	04.5	19.0	0.3	0.5	-iP	00	15	23.3	08.1	2.8	0.2P	
eP	02	39	19.5A	17.0	4.4	0.3	eP	02	04	44.0	25	0.4	0.5	
eP	02	59	39	39.5	0.2	0.2	eP	04	15	47.3A	35.0	8.8	0.6	
eP	03	01	44.2	18.2	1.4	0.3	iP	05	54	29.3	19.2	1.6	0.5	
eP	03	13	06.5		0.3	0.3X	eP	05	56	23.8	27	0.7	0.6	
eP	03	36	26.0	66	0.9	0.5	eP	08	09	09.7	38.4	0.7	0.1P	
eP	03	50	57	20.5	0.3	0.4	eP	09	27	57.5	11.0	0.3	0.3	
-iP	03	55	42.0A	20.6	16.5	0.4	T-K=50.6	eP	10	34	40.7A	12.0	4.4	0.3
eP	04	09	07.3	11.5	1.5	0.4	iP	10	37	48.0A	12.3	5.0	0.1P	
eP	04	20	14.5	25.5	0.3	0.2	eP	10	57	49.5	30.5	0.3	0.4	
eP	04	31	11.5	17.5	1.1	0.3	eP	12	23	00.8		0.4	0.4P Teleseism?	
eP	04	37	21.5	21.0	0.4	0.5	eP	13	10	27.5	59.0	0.7	0.5	
eP	05	29	54		0.2	0.3X	eP	16	10	56.0	40.0	0.6	0.3	
eP	05	56	35.5	20	0.3	0.5	eP	16	16	35.5	31.0	0.5	0.1P	
eP	11	05	36.2	61	0.7	0.2	eP	17	09	25.3				
eP	12	24	19.1A				eS	11	22.0			0.5	0.4P	
eS	26	38.0		5.5	1.1	H=500km	eP	18	19	05		0.3	0.7P Teleseism?	
eP	13	31	10.5	59	0.3	0.3	eP	18	56	17.0	32.5	0.3	0.5	
eP	14	31	27		0.3	0.5X	eP	20	49	47.5	28	0.3	0.4	
eP	14	47	31		0.3	0.3X	eP	22	57	03.8A	68.7	2.4	0.5 S of Ibaraki	
eP	15	20	36.3A	68	8.4	0.3	-iP	23	29	52.0A				
eP	16	18	46.0	19.7	1.8	0.3	iX	29	54.2			10.1	0.1	
eP	16	49	15.0	11	0.4	0.5								
eP	18	03	13.5		0.7	0.2	P-X, 01.9s		May 8					
eP	18	04	25	10	0.2	0.3	eP	00	13	01.0				
eP	18	30	16.8	18.2	0.3	0.3	eX	13	08.0	66.8	1.5	0.2X		
+iP	20	30	38.9A	05.3	5.5	0.3	eP	01	14	04.2	37.2	0.3	0.5	
eP	22	43	42.0	14.5	1.7	0.4	eP	01	34	15.2		0.4	0.5P Teleseism?	
eS	23	18	04		0.2	0.2	eP	02	32	02.1	93.9	2.0	0.2P	
eP	23	44	40.5	13.5	0.6	0.3	eP	02	47	03.0		0.3	0.2X noise?	
May 5														
+iP	00	28	11.7	05.3	1.8	0.2		eP	03	18	28.2	43.8	0.8	0.4
eP	02	31	45.3A	51.8	2.0	0.5	T-K=-35.6	eP	03	20	36.0	20.2	2.2	0.3
eP	03	31	59.3	68	0.4	0.5		eP	04	17	29.0	36	0.2	0.5
eP	04	02	27.6	17.0	0.3	0.3		eP	07	02	55.5	16.0	0.4	0.3
eP	07	58	07.7A					eP	07	52	19.7		0.2	0.1X
eS	08	00	50.5		1.8	0.7P		eP	08	22	22.0.		0.5	0.4P Teleseism?
eP	09	25	43.5	18.5	0.3	0.3		eP	08	56	27.5		0.3	0.3X
eP	12	12	10.7		0.9	0.7P Teleseism?		eP	09	29	44.1	18.5	1.1	0.6
eP	16	23	37.0		0.3	0.7X off Kii pen.		eP	10	10	10.7	16.8	0.3	0.3
eP	18	18	13.5		0.8	1.0P Teleseism?		eP	10	44	55.8	86	0.9	0.5

Kamikineusu, May 1968

Phase	Time(JST)	P-S	A(mm)T(sec)	remarks	Phase	Time(JST)	P-S	A(mm)T(sec)	remarks						
			ZX					ZX							
eP	14 05 23.5	27	0.4 0.4		eX	09 14 11.5			0.5 0.7X	Teleseism					
eP	15 29 31	31.0	1.1 0.4		eP	10 20 24.5			2.0 0.3P						
eP	15 31 57.7	05.5	2.2 0.2		eS	22 18.0			2.0 0.3						
eP	16 18 03.5		0.4 0.2X		eP	11 30 34.2		20.2	0.5 0.3						
-iP	17 35 22.7	05.9	0.9 0.1P		eP	12 00 54.0			0.3 0.7P	Teleseism					
eP	19 04 15.5	46.5	0.3 0.2		eP	16 34 22.5		09.0	1.7 0.2						
eP	20 16 55.0		0.3 0.2		eP	17 01 17.5		17.6	0.2 0.2						
eP	21 27 31.8A		4.8 2.2P	Teleseism	eP	18 28 54.0			0.7 0.5P	Teleseism					
eP	22 46 17.5		0.5 0.3P		eP	19 20 16.4A		43.9	12.7 0.7	off Nemuro					
eP	23 30 54.0	09.2	1.0 0.4		eP	21 09 50.0		46.5	0.7 0.3P						
-iP	23 58 14.1	07.2	1.0 0.3												
May 11															
May 9															
eP	00 30 33.1				eP	00 14 42.5			0.8 1.4P	Teleseism					
iX	30 37.2	11.6	2.1 0.2		eP	02 15 57.5		43.0	1.3 0.6						
eP	01 52 31.1	11.1	0.5 0.5		eP	05 38 34.5			0.9 0.6P	Teleseism					
eP	04 30 20.8	20.8	0.8 0.6		eP	07 59 48.5			0.6 0.7P	Teleseism					
eP	04 53 29.3		0.4 0.3P		eP	11 33 34.0		41.5	0.7 0.3						
eP	05 50 31.0	19.5	0.6 0.4		eX	13 19 33			0.3 0.4X	Teleseism?					
eP	05 58 13.6	21.5	1.4 0.6		eP	14 05 04.0		26.0	0.3 0.3						
eP	06 14 33.5	21.6	1.4 0.7		eP	15 20 00.2									
eP	06 16 37.5	16.8	0.2 0.3		eX	20 01.8		10.0	1.2 0.3X						
eP	06 28 37.3	19.8	0.9 0.5		eP	16 25 09.3		62	0.3 0.5P						
eP	06 35 54.2	21.5	1.3 0.5		eP	18 10 34.2		15.0	0.3 0.3						
eP	06 44 23.1	18.9	2.3 0.6		eP	21 23 51.7A		17.5	6.7 0.4	T-K=54.7					
eP	07 53 07.1	17.8	0.3 0.3		eP	22 14 05.1		19.5	0.5 0.3						
eP	07 54 14.3	34	0.6 0.3P		eX	22 49 02									
eP	08 26 54.5		2.5 0.7	off Miyagi	eX	49 21			0.6 0.7X	Teleseism					
iP	08 53 57.6A	12.5	3.3 0.4												
eS	09 18 00		0.3 0.2												
eP	10 23 21.3	36.0	2.7 0.5	M of Iwate											
iP	11 59 51.5A	11.5	10.8 0.2												
eP	12 13 29.5		1.0 0.7P	Teleseism?											
eP	12 18		0.3 0.3												
eP	13 07 49.8	41.5	0.7 0.6												
eP	13 24 24.5	13.5	0.3 0.3												
eP	13 29 33.0	57.5	0.7 0.5												
eP	13 44 11		0.3 0.3X												
eP	13 54 42		0.3 0.2												
eP	13 56 44.5	31	0.4 0.4P												
eP	14 37 29	70	0.4 0.4												
eP	15 07 26.6	38	0.3 0.3X												
eP	15 14 31.6	09.5	0.4 0.3P												
eP	16 24 34.8	19.5	0.4 0.3												
iP	18 20 15.0	07.5	0.4 0.2												
eP	20 30 11.8	17.7	0.9 0.2												
+iP	21 24 29.9A	11.9	5.3 0.4												
eP	21 40 15.8	15.8	0.9 0.5												
-iP	22 02 41.6	04.5	1.5 0.1P												
eP	22 26 53.2	41.8	0.6 0.5												
eP	23 17 01.2	27.3	0.9 0.5												
eP	23 24 23.5		1.2 0.7P	off Shima pen											
eP	23 50 06.4	24.8	0.9 0.1P												
May 12															
May 10															
eP	01 28 55.5	10.0	0.4 0.3		eP	01 21 49.5		12.5	0.2 0.2						
eP	02 45 34.3	09.7	0.2 0.1		eP	01 59 45.3		17.0	0.2 0.4						
eP	03 23 14.0	31.0	0.9 0.4		eX	02 03 02.0			0.5 0.3						
-eP	04 23 14.1A	72.5	15.9 0.2P	deep?	eP	02 05 17.0		38	0.5 0.3						
eP	04 33 55.2	06.2	0.9 0.3		eP	02 54 58			0.2 0.2						
eP	04 36 54.0	18	0.4 0.3		eP	02 58 58.5		32.5	1.2 0.3	off Iwate					
eP	04 38 29.3	24.0	0.6 0.4		eP	03 28 32.3									
eP	06 01 40.3	20.5	0.4 0.3		eX	28 34.9		57.2	1.9 0.2X						
eP	07 32 38.3	27	0.5 0.1		eP	04 29 44			0.7 0.3P	Teleseism					
eP	07 53 08.8	21.5	0.3 0.2		eP	05 02 11.5			0.4 0.4	noise?					
eP	08 02 26.5	27.5	0.5 0.3		eP	07 16 16			0.3 0.4						
eP	08 30 30.6	47	0.3 0.5		eX	10 32 21.5			0.2 0.2						
eP	08 33 23.5				eX	11 09 41.0			0.2 0.2						

Kamikineusu, May 1968

Phase	Time(JST)	P-S	A(mm)	T(sec)	remarks	Phase	Time(JST)	P-S	A(mm)	T(sec)	remarks
	h m s	s	ZX				h m s	s	ZX		
eP	12 12 41.5		0.2	0.4			May 15				
eP	15 17 41.6	38.3	1.0	0.1P		eP	00 44 22.5		0.5	0.5	
eP	17 25 13.5	21.5	0.6	0.5		eP	00 50		0.3	0.4	
eP	19 36 36.0A	54.0	2.6	0.6		eP	02 38 47.0	05.1	0.7	0.3	
eP	22 45 37.6		0.4	0.3		-iP	03 19 08.2A	11.0	SO	T-K=77	
	May 14					+iP	04 58 02.0A	06.5	13.8	0.2	
eP	01 53 41.7	13.2	0.2	0.2		eP	05 31 37.0	28.6	0.4	0.3	
eP	03 31 33.2	32.7	0.4	0.2		eP	07 57 43.2	15.7			
eP	04 42 06.5	36.0	0.9	0.3		eP	08 24 47.0A	60.3	5.5	0.8	
eP	05 27 16.5		1.1	0.2P		eP	09 20 49.0		0.3	0.2	
eP	06 24 22.2	12.3	2.3	0.2		eP	09 48 47.2		0.4	0.2	
eP	09 08 08.5		1.2	0.3P		eP	11 21 08.0	07.2	1.0	0.3	
eP	09 33 17.0	19.5	0.3	0.3		eP	16 14 54.5	29.2	0.3	0.2	
eP	10 04 16.2	06.5	1.2	0.2		eP	18 35 58.5	30	0.3	0.2	
eP	10 11 00		0.5	0.2		eP	19 55 10.0	31.5	0.2	0.3	
eP	12 16 45		0.5	0.3			May 16				
eP	14 12 45.7	26	1.7	0.2P		eP	00 12 45 A		1.9	2.0P	Teleseism
eP	14 18 33.0		0.4	0.5P		eP	05 09 41.9	59	1.7	0.3	
eP	15 01 51.5	11.8	2.7	0.1		eP	06 42 11.5		0.2	0.2	
eP	15 19 29		0.4	0.2		eP	07 41 46.2		0.6	0.2	
eP	15 24 22.5	21.5	1.1	0.3		eP	08 52 52.9	07.9	1.2	0.2	
eP	19 30 03.2A	10.4	2			eP	09 34 04.0	16.0	1.5	0.2	
eP	20 30 23 A	20.0	6		T-K=72				SO	E off N Honshu,	
eP	22 34 39.2A	22.2	3.7	0.3	T-K=50.3					M 7.9	
eP	22 58 28.5	20.3	1.0	0.2							
iP	23 08 46.8A		21.0	0.6P	Yakushima						

Comments on NO-4 of this bulletin:

Errata

May 19,	08h 35m	read 36m 40.7s for 35m.40.7s
21,	05h 18m	read ePZX for eZXZ, The maximum waves are P.
26,	08h 12m	P-S is 09.7s.
26		delete the last earthquake on page 37.
27,	01h 02m	The amplitude of Z is 0.9mm.
28,	17h 42m	read 43m 29.5s for 42m 29.5s, The maximum waves are X.
30,	18h 26m	read 27m 10.5s for 26m 10.5s
June 7,	21h 36m	read 06m 12.8s for 36m 12.8s
8,	21h 33m	read the amplitude Z 9.3 for 0.3
11,	01h 05m	read 35m 54.7s for 05m 54.7s
24,	17h 58m	read 28m 56.6s for 58m 56.6s
26,	19h 42m	read P-S 06.li for 16.li
July 1,	03h 42m	P-S is 37.6s.
4,	04h 34m	The maximum waves are X.
7,	11h 40m	The maximum waves are X.
August 26,	12h 33m	read 34m 49.5s for 33m 49.5s

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Bulletin of the Urakawa Seismological Observatory

No. 6

April — December

1969

Urakawa Seismological Observatory

Faculty of Science, Hokkaido University

Japan

Urakawa Seismological Observatory

Station: Kamikineusu (KMU)

Location Latitude: $42^{\circ}14'19''$ N, Longitude: $142^{\circ}58'02''$ E,
Height: 185 m.

Instruments

	Abbr.	Comp.	T_s (sec)	h_s	T_g (sec)	h_g	σ^2	Vmax
Film-recording Seismograph	N	N-S	0.94	0.70	0.28	3.1	0.003	15,000*
	E	E-W	0.93	0.73	0.25	3.0	0.003	15,000*
	Z	U-D	0.91	0.70	0.34	1.8	0.003	19,000*
	ZX	U-D	0.89	2.02	0.30	1.4	0.018	120,000*
Ink-recording Seismograph	I	U-D	1.0	1.4	0.02	1.0		300,000
Tape-recording Seismograph	T-1	U-D	1.0	1.4	1.4 } Forming a tripartite array	1.0	0.02	300,000
	T-2	U-D	1.0	1.4				
	T-3	U-D	1.0	1.4				

* When measured on a film-viewer of magnification 6.

For magnification curves see No. 3 of this bulletin.

Readings

- (1) All earthquakes with maximum trace amplitude 0.5 mm or larger on the Z records measured on the X 6 film-viewer are interpreted and listed in this bulletin. Smaller shocks recorded on the ZX records and the magnetic tapes are interpreted in special cases.
- (2) Times of P and other phases except S are indicated using the Japanese Standard Time (JST).

JST = GMT + 9 hours.

The time of S phase can be obtained by adding P-S to the time of P. A mark i attached to the figures indicating P-S means that the corresponding S phase is IS.

(3) Amplitudes are the trace amplitudes for the maximum waves in the Z, N, and E records measured on the film-viewer. When the maximum waves appear in P or other phases except S, the names of the phases are attached to the figures indicating the periods of the maximum waves.

(4) Figures in the column "Initial motion" indicate the directions and amplitudes of the initial motions of P waves in the ZX records measured on the film-viewer. A plus sign means upward or compressional motion.

(5) Communications relating to this bulletin should be addressed to the director, Urakawa Seismological Observatory, Kamikineusu, Urakawa, Hokkaido, Japan.

Kamikineusu, April 1969

Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E			
1	iPZX	00	47	17.2	05.7i		3.1	0.4	5	5.6	0.6	+2.0
1	ePZX	03	42	25.5		12.6	1.6	0.4	2.4	0.3	2.0	0.6
1	iPZ	04	27	14.7								
	eXZX		39	36			S0	S0	S0			-11.2
1	ePZX	05	28	08.5	2	08.0	1.0	0.6	1.2	0.5	0.7	0.7
1	ePZX	14	03	52.4	1	00.8	0.8	0.8	0.8	0.9	0.7	1.0
1	ePZX	21	24	11.4		09.1i	1.0	0.2	3.9	0.2	2.7	0.2
1	ePZX	23	06	17.8		11.5	0.5	0.6	0.7	0.4	0.4	0.6
2	ePZX	01	53	21.4	1	00.4	0.5	0.4	1.1	0.4	0.7	0.5
2	ePZX	03	51	34.5		06.9	1.9	0.6	2.5	0.5	2.1	0.5
2	ePZX	04	48	23.5		05.1	0.5	0.6	0.9	0.6	0.7	0.4
2	ePZX	05	39	38.1			0.5	0.6P	0.4	0.8P	0.2	0.5P
2	iPZX	06	15	38.9		05.9i	1.5	0.5	2.5	0.3	2.4	0.2
2	ePZX	06	48	44.0		14.2i	2.1	0.6	3.3	0.6	3.4	0.6
2	ePZX	07	06	16.5		13.3	0.5	0.5	1.1	0.3	0.6	0.5
2	ePZX	10	37	30.4		16.0	0.8	0.6	0.7	0.5	0.6	0.4
2	ePZX	14	41	21.8		14.6	0.8	0.5	1.5	0.3	0.7	0.2
2	ePZX	15	01	12.5		14.1	1.1	0.5	2.2	0.5	1.0	0.4
2	iPZX	15	23	44.2		08.0i	0.9	0.8	1.2	0.5	1.5	0.3
2	ePZX	15	32	43	1	12	0.5	0.5	1.0	0.5	0.5	0.7
2	ePZX	16	31	41.9		12.0	0.8	0.5	1.1	0.5	0.8	0.5
2	iPZX	23	30	03.5								+0.4
	iXZX		30	05.0		11.3	2.4	0.6	3.4	0.5	2.0	0.5
3	ePZX	01	59	32.3		13.4	0.6	0.6	0.8	0.5	0.8	0.5
3	ePZX	02	10	35.4		12.5	1.0	0.5	1.5	0.6	0.6	0.6
3	ePZX	02	25	31.7		25.3	0.5	0.8	0.7	0.7	0.5	0.6
3	ePZX	09	30	42.7	1	35.8	1.1	0.7	1.3	0.9	1.6	0.6
3	ePZX	14	56	45.3		09.9i	11.4	0.5	20			
3	iPZX	22	10	16.2		07.0	0.5	0.3P	1.4	0.4S	0.5	0.4S
4	iPZX	00	55	26.9		18.6i	51.5	1.0	50		40	+3.8
4	ePZX	01	02	16.3		17.6	1.8	0.7	3.6	0.5	1.2	0.4
4	ePZX	01	33	20.9								
4	ePZX		34	00.6		22.6	4.4	1.1X	4.0	1.2X	2.4	1.0X
4	ePZX	02	41	47.0								
4	iXZX		41	48.9		18.9i	24.5	0.9	31.0	1.0	18.2	1.1
4	iPZX	12	47	48.2		12.5i	8.7	0.6	10		11.8	0.6
4	ePZX	14	56	46.4		13.3	1.0	0.5	1.4	0.4	1.0	0.5
4	ePZX	16	27	19.6		53.6	0.9	0.5	2.3	0.8	1.0	0.7
4	ePZX	17	50	19.5			1.1	1.5P	1.2	1.7P	0.6	1.1P
4	ePZX	22	38	10.1		43.2	0.9	0.4P	1.1	0.5S	0.9	0.5S
5	ePZX	04	25	05.4								
	iXZX		25	06.1		17.1	1.1	0.6	2.4	0.5	1.6	0.6
5	ePZX	08	02	01.5			2.3	0.7P	1.6	1.2P	1.0	0.8P
5	ePZX	10	53	47.7								
	iXZX		53	48.5		17.1	1.1	0.9	1.6	0.6	1.4	0.5
6	iPZX	12	18	13.1								-0.8
	iX1ZX		18	15.5								
	eX2N		19	27.4		57.4	4.1	0.7X2	6.0	0.7X2	4.9	0.7X2
6	ePZX	17	28	41		17	0.5	0.5	1.0	0.7	0.9	0.6
6	ePZX	18	22	56.7								
	iX1ZX		22	57.2								
	iX2N		23	03.7		08.9i	6.4	0.4	13.0	0.4	9.0	0.4
6	iPZX	18	28	34.4		08.4i	1.2	0.4	2.2	0.3	1.1	0.3
7	iPZX	03	07	57.9		08.0i	4.5	0.6	5.2	0.3	5.0	0.5
7	ePZX	07	15	05.9		13.0i	0.6	0.5	1.3	0.3	0.7	0.3
7	ePZX	22	42	42.6		12.0	0.5	0.5	1.0	0.3	0.6	0.5
8	ePZX	00	51	08		41	2.1	0.8	4.5	0.7	1.8	0.7
8	ePZX	03	01	32.0		22.8	0.7	0.5	1.5	0.4	1.0	0.4
8	iPZ	03	40	34.5								
	iPN		34.5									
	iPE		34.5		08.3		S0	S0	S0			+7.0
8	iPZX	04	38	46.9	11.1	0.6	0.4	1.1	0.3	0.7	0.5	(-)
8	ePZX	13	02	48.5	12.0	0.5	0.5	1.0	0.3	0.6	0.3	

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E	0.8	0.5	2.5	0.3	1.5	
8	ePZX	15	19	14.3	08.9i		0.8	0.5	2.5	0.3	1.5	0.3			
8	ePZX	19	20	22.6	28.5i		10.9	0.8	15.1	1.0	11.6	0.7			
8	ePZX	19	29	50.1			0.5	0.9P	0.4	0.9P	0.3	0.9P			
8	iPZX	19	46	32.0	09.3i		1.4	0.5	2.8	0.2	2.3	0.2	-0.6		
9	iPZX	01	20	37.7	13.5i		5.6	0.7	10.7	0.6	6.7	0.7	-2.2		
9	ePZX	02	18	00.9	40.2		3.1	0.7	6.4	0.9	3.7	1.0			
9	ePZX	04	01	54.1	26.6i		9.8	0.7	12.5	0.7	10.0	1.0			
9	ePZX	07	38	53.3	16.8i		2.8	0.6	3.7	0.5	2.9	0.6			
9	iPZX	10	00	05.9	10.9		1.3	0.6	1.1	0.7	1.0	0.5	-1.2		
9	ePZX	15	27	44.4											
9	eZXZ		27	55.4			0.6	0.4X	0.7	0.4X	0.7	0.4X			
9	iPZX	21	58	47.9	1 04.9i		37.2	0.7	35		34.8	0.7	-2.0		
9	iPZX	23	43	00.4	23.5		4.2	1.2	6.8	0.8	4.4	1.0	+2.4		
10	ePZX	14	22	30.3	09.8		0.6	0.6	1.0	0.4	0.5	0.5			
10	iPZX	19	19	58.9	14.3		2.4	0.6	3.8	0.5	2.3	0.6	+2.0		
10	ePZX	20	23	37.5	1 30.8		0.8	0.5P	0.9	0.7S	0.5	0.6S			
10	ePZX	23	17	25.2											
10	eZXZ		18	51.3	1 30.9i		5.7	0.6	11.3	0.5	8.9	0.6			
10	iPZ	23	56	09.2											
10	eZXZ	00	04	14.5	1 39.4i		41.3	0.5P	35	S	33.3	1.2S	-5.6		
11	ePZX	02	36	56.4	18.9		0.7	0.5	0.8	0.4	0.6	0.5			
11	ePZX	02	42	29.7	14.4		0.5	0.6	0.5	0.5	0.3	0.5			
11	ePZX	03	33	28.0	10.8		0.5	0.5	0.5	0.5	0.4	0.5			
11	ePZX	05	42	55.2	11.9		0.8	0.4	1.4	0.3	0.9	0.2			
11	ePZX	07	02	23.1											
11	eZXZ	03	33.2	3 58.4	1.5 1.3P		1.4	1.0S	0.9	1.0P			-2.2		
11	iPZX	20	18	07.5	07.4i		7.8	0.8	19.8	0.5	7.1	0.5			
12	ePZX	05	56	01.6	09.0		0.9	0.6	1.0	0.5	0.7	0.3			
12	ePZX	14	20	35.9	09.7		0.6	0.4	0.9	0.3	0.8	0.3			
12	ePZX	15	53	51	1 04		0.5	0.7	0.5	0.5	0.5	0.6			
12	ePZX	22	40	08.1	19.9		0.7	0.4	1.5	0.4	0.9	0.3			
13	ePZX	00	22	59.8	15.9		0.6	0.5	0.9	0.4	0.9	0.6			
13	ePZX	03	01	59.6	11.5		2.3	0.6	3.1	0.4	2.2	0.5			
13	ePZX	04	12	33.1											
13	iZXZ		12	41.8	14.5		2.4	0.4	6.5	0.4	2.5	0.5			
13	ePZX	04	50	00.1	08.1		2.4	0.4	5.1	0.4	2.8	0.3			
13	iPZX	05	00	55.4									+1.2		
13	eX1Z		00	59.5											
13	eX2N		01	09.4											
13	eX3N		01	16.2			3.1	0.2X1	2.6	0.5X3	1.8	0.5X3			
13	ePZX	09	19	18.5	56.2		0.5	0.4	0.9	0.3	0.6	0.4			
13	ePZX	12	14	11.6	36.4		0.5	0.4	1.6	0.5	0.8	0.3			
13	ePZX	19	28	09.2	24.9i		6.2	0.5	7.0	0.6	6.1	0.6			
13	ePZX	20	35	26.1											
13	eZXZ	33	28.2	36.9			1.4	1.0	2.4	0.7	2.3	1.0			
13	iPZX	23	03	36.6	1 59.2		1.1	0.7P	1.9	0.7S	1.3	0.7S	+1.0		
14	eZXZ	00	34	48			0.5	0.8X	0.4	0.9X	0.4	1.0X			
14	iPZX	03	51	46.9	09.4i		0.9	0.6	0.8	0.5	0.6	0.5	-0.8		
14	iPZX	04	48	25.3	14.0i		4.3	0.5	8.5	0.4	3.7	0.4	-0.4		
14	ePZX	05	42	21.2	08.7		0.8	0.7	1.2	0.7	0.9	0.5			
14	iPZX	08	41	53.1	6 54.6		2.4	0.8P	1.3	1.0P	1.1	0.5P	+1.2		
14	ePZX	12	22	42.2	19.8		0.5	0.5	0.6	0.3	0.4	0.4			
14	ePZX	14	39	28.1	13.1		0.6	0.5	1.0	0.4	0.7	0.4			
14	ePZX	16	09	52.4			0.6	0.5P	0.5	0.7P	0.3	0.4P			
14	ePZX	17	46	37.0	09.3		1.0	0.6	1.6	0.6	0.9	0.4			
15	ePZX	02	35	31.1											
15	iZXZ	35	33.1	1 20.9	0.6 0.5X		0.7	0.4S	0.5	0.5S					
15	ePZX	03	52	09.9	10.8		0.5	0.4	0.6	0.4	0.6	0.2			
15	ePZX	05	00	18.1											
15	iXN	02	32.6	1 28.6	3.0 0.9X		4.0	0.7X	2.4	0.8X			+13.2		
15	iPZ	05	17	29.4	29.4								-2.8		
15	iPN												-0.4		
15	iPE				29.4		06.3i	20	P	25	S	20			

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm) (-)	
		h	m	s	m	s	Z	N	E				
23	iPZX	02	16	05.2	08.0i		7.3	0.2	23.0	0.3	9.4	0.5	
23	ePZX	05	08	37.6	06.6i		1.5	0.2	1.6	0.2	1.4	0.3	
23	ePZX	11	20	59.4									
	iX1ZX	21	01.6										
	iX2Z	21	11.9		18.2i		1.8	0.6	1.7	0.7	1.0	0.6	
23	ePZX	12	15	12.0	24.4		2.7	0.6	3.0	0.7	2.5	0.6	
23	iPZX	15	29	26.4	10.6		0.6	0.6	1.2	0.5	1.0	0.7	+0.4
23	iPZX	19	29	41.1	13.8i		0.8		1.6	0.6	1.2	0.5	+2.0
24	iPZX	07	06	06.2									-0.2
	eXZX	06	12.0		30.6		0.6		0.7	0.6	0.6	0.6	
24	ePZX	08	20	23.0	10.4		1.6	0.5	2.1	0.5	1.7	0.3	
24	iPZX	09	27	28.0	12.0		1.0		2.0	0.5	1.3	0.5	+1.4
24	iPZX	09	39	02.7	14.2i		0.8		1.2	0.4	1.0	0.5	-0.4
24	iPZX	11	14	03.0	16.6		17.5	0.5	27.2	0.6	14	0.6	-5.0
24	iPZX	12	33	11.2	20.8i		4.5	1.7	4.6	1.0	2.8	1.1	+0.7
24	ePZX	12	36	38.3	21.6		1.2	0.8	1.5	0.7	0.9	0.8	
24	ePZX	12	39	23.8	19.2		1.3	0.5	2.4	0.2	1.7	0.5	
24	iPZX	16	05	10.7	09.2		0.9	0.3	2.5	0.2	1.8	0.2	-0.4
24	ePZX	21	31	39.2	26.1		0.8	0.7	0.9	0.4	0.8	0.5	
25	iPZX	08	37	53.7	09.2i		0.5	0.5	0.9	0.3	0.6	0.2	+1.0
25	ePZX	12	06	34.3	1 35.2		0.6	0.5	1.0	0.4	0.5	0.5	
25	iX1ZX	12	31	06.5									+0.3
	iX2Z	32	23.5				0.7	0.6X1	0.8	0.9X2	0.7	1.0X2	
25	ePZX	18	21	12.0			0.5	0.6P	0.1	0.5P	0.2	0.5P	
25	ePZX	23	41	11.4			0.6	0.5P	0.4	0.4P	0.3	0.6P	
26	ePZX	01	45	13.7	25.4		0.5	0.5	0.6	0.5	0.4	0.5	
26	iPZX	02	02	42.5	06.9i		2.5	0.5	4.9	0.2	2.7	0.3	+0.9
26	ePZX	04	02	34.5	46.6i		0.8	0.5	2.0	0.5	0.7	0.3	
26	ePZX	05	09	23.3	10.3i		1.0	0.5	2.0	0.2	1.2	0.3	
26	iPZX	05	59	12.8									
	iXZX	59	14.5		26.9		0.5	0.4P	0.6	0.3S	0.5	0.5S	
26	ePZX	06	35	59.8									
	eXZX	36	29				16.2	1.0X	18.4	0.7X	17.8	0.7X	
26	iPZX	11	51	59.1	08.9i		0.8	0.5	1.9	0.1	1.2	0.3	-0.6
26	ePZX	15	18	38.7									
	iXZX	22	37.0				1.6	1.3X	1.1	1.1X	0.7	1.3X	
27	ePZX	22	02	29.7									
	eXZ	02	36.6		09.1i		2.2	0.3	4.1	0.3	2.9	0.3	
27	ePZX	22	42	04.5	09.6i		0.8	0.5	1.3	0.2	0.8	0.6	
28	ePZX	01	59	16.2	1 41.0		1.3	0.4P	0.5	0.4P	0.6	0.6P	
28	iPZX	09	20	12.0	07.4i		1.8	0.1P	3.2	0.2S	2.2	0.2S	-3
28	iPZX	15	16	17.0	09.8i		0.9	0.3	1.5	0.3	1.0	0.5	-1.8
**	ePZX	04	14	02.9	11.4		0.7	0.5	1.5	0.2	0.6	0.4	
29	ePZX	04	22	14.6	08.6i		0.6	0.5	1.0	0.3	0.9	0.5	
29	ePN	06	50	51.0	09.2		0.9	0.4	1.3	0.5	1.1	0.3	
29	iPZX	16	44	18.9	09.6i		1.1	0.3	2.5	0.3	1.3	0.3	-0.2
29	iPZX	21	40	11.7	09.6i		3.5	0.5	3.0	0.5	2.9	0.4	+0.2
30	ePZX	01	09	44.0	32.8		0.5	0.6	0.6	0.5	0.3	0.6	
30	iPZX	02	12	07.3	06.3i		13.5	0.5	19.0	0.6	17	0.4	-8.0
30	iPZX	04	26	40.8	10.8i		4.6	0.8	7.0	0.5	4.8	0.4	-1.0
30	iPZX	04	31	01.7	10.8i		6.5	0.7	10.5	0.7	6.3	0.5	-1.8
30	iPZX	05	11	00.0	09.0i		12.8	0.7	18.3	0.4	11	0.5	(-)
30	ePZX	06	20	08.1	1 33.9		11.1	1.1	23.1	1.1	15.8	0.9	
30	ePZX	08	25	00.6	11.8		0.5	0.5	1.1	0.3	0.5	0.4	
30	ePZX	10	34	36.5	26.0i		2.1	0.3	7.4	0.2	2.2	0.3	
30	iPZX	12	34	28.1	06.3i		14.5	0.5	40.5	0.2	20	0.5	(-)
30	ePZX	14	04	29.1	14.1		1.7	0.5	1.9	0.9	1.5	0.6	
30	ePZX	14	17	57.0	09.2		0.5	0.4	0.6	0.6	0.5	0.4	
30	iPZX	14	37	30.2	09.1i		0.5	0.4	0.9	0.4	0.5	0.3	+2.5

** Observation was interrupted
from 17h 35m, 28th to 02h 02m, 29th.

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)	
		h	m	s	m	s	Z	N	E				
1	iPZX	06	30	50.5	09.3		2.8	0.3	4.5	0.3	3.6	0.5	+0.3
1	ePZX	12	00	37.0	12.9		1.0	0					

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E			
9	ePN	01	54	25.3	55.9		0.7	0.7	0.8	0.6	0.7	0.7
9	ePE	02	24	40.5	05.5i		0.7	0.5	1.0	0.4	0.5	0.4
9	ePZ	03	37	20.9	17.6		7.8	0.6	9.9	0.7	8.4	0.6
9	ePZ	05	53	17.2	57.1		18.7	0.9	32.3	0.8	25	0.9
9	iPZ	07	12	41.3								-0.4
9	iXZ		12	48.4	09.5i		1.5	0.4	3.7	0.3	1.7	0.4
9	ePZ	15	29	17.1	11.2		0.5	0.7	0.8	0.5	0.8	0.5
9	ePZX	22	29	00.3	11.7i		1.3	0.5	1.6	0.3	1.4	0.7
9	ePZX	23	30	18.6	14.6i		1.0	0.6	2.5	0.6	1.3	0.3
9	ePZX	23	59	14.5	14.6		1.5	0.6	1.2	0.6	1.0	0.7
10	ePZX	02	02	00.6	1 48		0.7	0.5	0.6	0.7	0.5	0.7
10	ePZX	02	38	08.9	10.0i		3.1	0.5	5.4	0.4	3.2	0.3
10	ePZX	04	39	00.7	09.7i		0.7	0.5	1.1	0.4	0.6	0.3
10	ePZX	07	03	19.6	12.9i		3.9	0.6	4.4	0.5	2.8	0.6
11	ePZX	01	23	01.2								
	iX1ZX		23	04.7								
	iX2N		23	11.3								
	eX3N		23	16.7			2.0	0.2X1	1.8	0.3X2	0.9	0.5X3
11	iPZX	01	56	27.7	26.0i		4.4	0.6	3.7	0.6	1.6	0.7
11	ePZX	05	11	15.5	07.6		0.7	0.5	1.0	0.2	0.7	0.3
11	ePZX	05	21	14.2								+1.2
	eXN		22	07.2	43.0		3.5	0.7X	4.9	0.5X	3.0	0.8X
11	ePZX	08	16	24.6	24.0		1.0	0.6	1.3	0.5	0.8	0.7
11	ePZX	10	22	54.3	35.3		0.6	0.6	0.9	0.7	0.7	0.8
11	ePZX	10	37	04.8	12.8i		2.5	0.6	2.7	0.4	1.9	0.5
11	iPZX	14	29	22.5	10.7		1.1	0.5	1.1	0.5	0.9	0.3
11	ePZX	17	36	02.6	14.7i		1.5	0.6	1.8	0.4	1.3	0.4
11	ePZX	17	49	01.8	12.1		0.8	0.4	1.4	0.3	0.7	0.4
11	ePZX	19	43	54.6								
	iX1ZX		43	57.3								
	iX2N		45	04.8	56.2		32.0	0.7X2	S0	32.6	0.9X2	
11	ePZX	21	16	11.7	09.4i		0.7	0.6	1.0	0.2	0.7	0.2
12	ePZX	01	05	07.4	30.1		1.8	0.6	2.4	0.6	2.2	0.5
12	iPZX	03	46	31.0	08.7		8.5	0.6	9.3	0.5	6	
12	ePZX	14	18	54.5	15.9		1.8	0.6	3.4	0.4	2	
12	ePZX	17	28	04.4	11.2		0.5	0.6	0.7	0.5	0.5	0.5
12	iPZX	17	39	59.4	13.6i		12.9	0.5	23.0	0.8	17.2	0.8
12	iPZX	18	26	59.2								+2.4
	iXN		27	10.7	12.2i		3.5	0.5	9.8	0.3	3.1	0.3
13	iPZX	01	02	33.5	16.0		0.9	0.3X	0.6	0.2S	0.5	0.3S
13	iXZX	02	35.6									+1.2
13	ePZX	01	23	19.3	08.8		0.6	0.6	1.2	0.5	0.5	0.4
13	iPZ	07	31	08.1								-3.6
	iPN		08.1		09.2i							-1.0
	iPE		08.1									-0.8
13	ePZX	23	21	09.7			20		30		25	
13	iXN	22	34.6		1 09.6		11.1	1.0X	11.9	1.3X		
13	ePZX	23	38	44.1								
	eX1ZX		40	43			0.9	0.6P	0.7	0.8P		
	eX2ZX		42	40								
14	ePZX	01	41	16.2								
	eXN		43	20.4	1 36.5		0.6	0.9X	0.8	0.7X		
14	ePZX	06	31	55.4	25.5i		1.1	0.5	2.5	0.3		
14	ePZX	07	19	27.9	10.4		0.7	0.5	0.7	0.5		
14	ePZX	16	23	50.1	24.1		0.5	0.7	0.7	0.5		
14	iPZX	17	04	17.5	12.3i		2.0	0.6	3.7	0.6		
14	ePZX	22	15	14.8	13.6		0.8	0.7	0.9	0.4		
15	iPZX	04	38	33.4								+1.3
	iPPN		39	31.3								
	eRZX		46	20								
	eX1ZX		46	34.3								
	eX2N		49	26.0	4 29		3.5	1.0P	3.1	1.6P		
15	ePZX	05	10	21.3	11.7		1.6	0.6	1.4	0.3		
15	iPZX	05	34	56.4	39.8i		31.9	1.2	S0			+0.8
15	iXZX		34	59.4								
	iPZX	07	57	59.2	09.2i		2.1	0.5	5.1	0.3		

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Date	Phase	Time(JST)	h	m	s	P-S	Amplitude(mm)	Z	N	Period(sec)	E	Initial motion(mm)
15	iPZX	08	32	12.4		08.4i	4.5	0.4	9.8	0.3		+6.8
15	ePZX	10	57	59.4		21.5	1.4	1.0	2.0	1.2		
15	ePZX	11	31	37.6								
15	iXZX		31	40.2		35.4	1.0	0.8	2.0	0.3		
15	ePZX	12	31	41.6								
	eXN		32	42.2		33.0	1.7	1.0X	3.3	0.8X		+2.2
16	ipZX	00	07</									

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E					
22	ePZX	09	28	56.2										
	eXN	30	35.0		1	07.0	1.7	0.8X	2.1	1.0X	1.8	0.7X		
22	ePZX	17	05	55			32	1.4	0.5	1.4	0.5	0.8	0.5	
22	ePZX	18	37	40.4										
	eXN	38	54.7		47.9		3.2	0.9X	4.3	1.1X	3.6	1.0X		
22	iPZX	19	47	09.7			1.1	0.5	2.2	0.3	2.1	0.4	+1.0	
22	ePZX	20	42	15.2										
	eXN	43	49.3		1	07.4	1.4	0.8X	1.4	0.4S	1.4	0.7X		
23	iPZX	04	18	38.0									+2.2	
	eXN	19	01.7		08.6i		14.1	0.9X	15.2	0.7S	19.1	0.5S		
23	ePZX	06	37	50	2	40	0.5	0.7	0.7	0.7	0.7	0.7		
23	ePZX	10	34	06.2			10.8	0.7	0.5	1.2	0.3	0.8	0.4	
23	iPZX	13	02	09.2			08.9	1.0	0.4	1.6	0.6	1.5	0.4	
23	iPZX	17	43	04.6			14.2	3.0	0.5	5.0	0.8	4.1	0.6	
24	ePZX	01	18	33.5				0.6	0.7P	0.4	0.9P	0.4	0.6P	
24	ePZX	02	17	25.7				0.5	0.7P	0.4	0.8P	0.3	0.8P	
24	ePZX	19	15	23.7			08.4	0.5	0.3	1.4	0.4	1.4	0.2	
24	ePZX	21	08	17.1			15.7	1.1	0.5	1.4	0.4	1.1	0.4	
24	ePZX	21	12	46.6			11.0	1.4	0.5	2.5	0.2	1.8	0.5	
25	ePZX	04	22	49.6			14.0	0.7	0.6	1.2	0.5	0.9	0.6	
25	ePZX	07	45	10.2			10.0	1.1	0.3	2.1	0.3	1.9	0.3	
25	ePZX	08	54	53.2										
	eXN	56	35.1		1	28.5	1.3	0.9X	1.9	0.8X	1.6	0.7X		
25	iPZX	09	46	54.3			23.6	4.4	0.5	5.3	0.5	3.6	0.5	
26	iPZX	00	13	11.1			12.7	1.6	0.5	4.9	0.2	2.1	0.2	
26	ePZX	00	29	22.4			18.1	0.5	0.5	0.8	0.3	0.7	0.6	
26	iPZX	02	20	38.8			08.6i	3.3	0.5	6.8	0.4	4.7	0.5	
26	iPZX	03	39	19.2			06.5	4.0	0.2P	8.3	0.4S	4.2	0.3S	
26	ePZX	04	08	13.0									(+)	
	iX1ZX	08	26.8		1	12.6	5.9	0.8X2	5.0	0.8X2	4.4	0.6X2		
26	eX2E	09	44.7				2.7	0.5	5.2	0.4	3.6	0.5	+2.4	
26	iPZX	06	52	52.9			13.8i	2.7	0.6	5.1	0.3	2.4	0.6	
26	ePZX	08	59	36.1			18.0	2.7	0.6	5.1	0.3	2.4	0.6	
26	ePZX	16	17	04.5			10.2	0.7	0.5	0.9	0.4	0.8	0.3	
27	iPZX	00	14	06.5			09.7	5.8	0.6	11.9	0.5	8.5	0.7	
27	ePZX	01	48	42.0			12.1	1.2	0.6	1.5	0.5	1.2	0.5	
27	ePZX	04	19	47.6			10.8	1.0	0.6	1.3	0.2	1.1	0.3	
27	ePZX	04	37	32.0			25.5	0.9	0.5	1.0	0.5	1.0	0.5	
27	ePZX	10	42	15.2			09.2	0.9	0.6	1.0	0.2	1.1	0.2	
28	ePZX	05	53	48.7										
	eXN	55	04.4		55.2		4.8	0.7X	11.4	1.1X	11.2	0.8X		
28	ePZX	06	01	11.2			12.3	3.6	0.5	4.8	0.5	3.1	0.3	
28	iPZX	06	37	13.9			11.1i	1.3	0.7	1.8	0.3	2.1	0.3	
28	ePZX	07	09	57.9			12.4	0.5	0.3	0.7	0.4	0.7	0.4	
28	ePZX	09	39	23.9			24.8	0.9	0.5	1.6	0.5	1.1	0.5	
29	iPZX	02	14	17.4									-0.8	
	iXZX	14	20.0		47.3i		13.1	0.8	16.5	0.7	12.6	1.1		
29	ePZX	07	26	13.2			26.3	8.1	1.0	10.9	0.8	8.4	0.5	
29	iPZX	10	27	17.3			18.7	1.7	0.4P	3.4	0.5S	2.2	0.5S	
29	ePZX	10	40	19.6			08.5	0.5	0.6	1.3	0.7	1.0	0.5	
29	iPZX	16	01	56.2			18.5i	1.7	0.5	3.5	0.7	2.4	0.7	
29	ePZX	20	28	44.7			09.6	0.5	0.5	1.2	0.2	1.4	0.3	
29	ePZX	22	16	58.2			5	S	5	S	5	S		
29	eSN	22	19	05			6.5	0.9	6.9	1.0	6.5	0.9		
29	ePZX	22	46	41.6			35.3	7.2	0.7	10.1	0.8	5		
30	ePZX	03	14	23.0			09.0	0.6	0.3	1.1	0.3	1.1	0.2	
30	ePZX	18	01	43.7			13.4	1.0	0.5	1.2	0.2	1.1	0.5	
30	iPZX	21	02	33.5			11.9	0.8	0.5	1.8	0.5	1.1	0.4	
30	ePZX	23	38	58.2			08.5	0.5	0.5	0.9	0.3	0.7	0.3	
31	ePZX	01	07	56.3				0.5	1.3P	0.5	1.2P	0.4	1.2P	
31	ePZX	01	35	09.0				0.6	1.4P	0.5	1.4P	0.5	1.6P	
31	ePZX	12	23	04.8			1	28.6	0.6	1.1	1.0	0.7	1.1	0.9
31	ePZX	19	18	08.1										
	iX1ZX	18	11.7											
	iX2ZX	18	23.8											
	eX3N	19	50.2		1	13.6	2.3	0.6X3	2.8	0.7X3	2.2	0.7X3		
31	ePZX	19	31	31.6			08.2	0.5	0.7	0.5	0.6	1.0	0.5	

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)
h	m	s	m	s	Z</th								

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)			
		h	m	s	m	s	Z	N	E							
7	ePZX	00	49	31.5			1	08.5		0.9	0.7X	1.5	0.7X	1.9	0.8X	
7	eXN		51	08.3												
7	ePZX	05	58	31.7			09.9			0.6	0.5	1.7	0.4	1.2	0.5	
7	iPZX	14	58	32.9			06.1i			2.0	0.5	2.4	0.4	2.6	0.3	
7	iPZX	15	59	42.4			11.3i			2.2	0.5	4.0	0.4	2.8	0.5	
7	ePZX	16	36	48.3			11.3			0.5	0.5	0.6	0.3	0.6	0.6	
7	iPZX	16	56	32.6			10.3i			19.4	0.5	19.0	0.6	15.5	0.5	
7	ePZX	20	32	01.3			11.7			0.9	0.3	1.9	0.2	1.3	0.3	
7	ePZX	23	04	39.5			09.5			0.9	0.5	1.2	0.3	1.1	0.5	
7	eSN	23	05	17.0						0.9	0.6	1.4	0.2	1.1	0.2	
8	ePZX	06	50	53.3			09.0			1.1	0.6	1.9	0.4	1.1	0.6	
8	ePZX	08	04	10.5			09.9i			1.3	0.5	2.7	0.3	2.1	0.3	
8	ePZX	11	21	14.5			16.6			1.8	0.6	1.9	0.6	1.5	0.7	
8	ePZX	15	55	26.2			11.6			0.8	0.6	0.9	0.4	0.9	0.4	
8	ePZX	16	08	45.2			10.6			0.9	0.6	1.2	0.5	1.0	0.6	
8	ePZX	23	53	05.1												
	eZXZ		53	39.5	2	58.2			3.5	0.4P	2.1	0.5P	2.5	0.5P		
9	iPZX	03	25	30.1			13.8i			28.6	0.7	58.0	0.9	42.6	0.9	
9	ePZX	12	36	43.6			18.8i			7.5	0.5	21.2	0.7	10		
9	ePZX	13	00	10.4			.			.		.				
	eXN		01	21.3			55.9			1.0	0.6X	1.6	0.8X	1.4	0.7X	
9	iPZX	13	12	13.1			09.3i			4.2	0.6	5.4	0.5	6.2	0.4	
9	iPZX	19	07	26.6			09.0i			1.8	0.3	2.6	0.3	2.1	0.5	
10	ePZX	00	20	18.7			13.4			0.5	0.5	1.1	0.6	0.6	0.3	
10	iPZX	06	18	23.0			11.2i			1.6	0.5P	2.2	0.3S		+4.2	
10	ePZX	07	04	49.5						0.5	1.8P	0.6	1.2P	0.3	1.1P	
10	ePZX	08	10	54.1												
	iZXZ		10	56.7			57.0									
10	ePZX	14	46	27.7												
	iXN		47	41.6			56.6			4.4	0.6X	5.7	0.8X			
10	ePZX	18	45	59.2												
	eZXZ		46	00.9	31.9											
11	iPZX	00	46	01.7			09.4i			2.3	0.5	3.3	0.5	3.7	0.4	
11	iPZX	00	51	44.4			09.2i			2.3	0.6	3.8	0.3	3.7	0.4	
11	ePZX	01	42	34.1											-2.2	
	eXN		43	33.0	47.5											
11	ePZX	05	14	30.9			11.5			4.4	0.6	6.8	0.3	4.8	0.6	
11	ePZX	06	19	20.9			31.1i			0.6	0.5	1.6	0.5	0.8	0.5	
11	iPZX	07	52	22.7											+2.2	
	iZXZ		52	37.1	26.5											
11	eSN	07	54	45.7						7.4	1.5	11.1	1.5	9.1	1.6	
11	ePZX	08	08	55.7			35.2			8.1	1.0	15.8	1.0	7.5	0.8	
11	ePZX	23	37	24.0			25.3			0.8	0.6	1.5	0.7	1.2	0.6	
12	ePZX	00	14	39.1	2	32			1.2	0.6P	0.7	0.8P	0.7	0.5P		
12	iPZX	14	41	55.6											+0.8	
	iXN		42	07.9												
12	ePZX	14	48	54.2			23.6			3.7	0.8	2.6	0.9	2.5	1.0	
12	iPZX	17	03	35.9			07.7			15		20		20	(-)	
12	ePZX	17	32	44			26			0.7	0.9	0.6	0.8	0.7	1.0	
12	ePZX	17	57	37.5			12.6			0.7	0.6	1.1	0.3	0.9	0.5	
12	ePZX	18	11	18.5			23.5			1.5	1.5	1.5	0.4	1.3	0.5	
12	ePZX	19	26	18.8												
	eXIN		26	48.4												
12	eX2N	27	01.1							8.0	1.2X2	9.5	1.1X2	7.8	1.2X2	
12	ePZX	19	33	07.2			24.3			0.9	0.8	1.4	0.7	1.2	0.9	
13	ePZX	00	26	06.4	3	15.4			1.6	0.8P	1.3	0.9P	1.2	1.0P		
13	iPZX	01	51	24.4			08.4i			1.7	0.5	3.7	0.4	3.9	0.5	
13	ePZX	03	58	45.8			24.8			3.8	0.8	4.5	0.6	4.4	1.6	
13	ePZX	17	25	58.9			10.7			1.7	0.6	4.3	0.3	1.6	0.5	
13	ePZX	17	51	06.5	2	02.9			13.5	0.6P	20.0	1.3S	16.5	1.9S		
13	ePZX	18	42	53.7			17.0			0.5	0.7	1.0	0.6	1.0	0.7	
13	ePZX	22	50	06			22			0.6	0.8	0.9	0.8	0.8	0.7	
13	ePZX	23	17	10.7			1	05.4		0.7	0.5P	0.6	0.5S	0.7	0.5S	

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)
h	m	s	m	s	Z	N	E						

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)	Initial motion(mm)
			h	m	s	m	s	Z		
23	ePZX	02 47 06.7	1	09.8		0.5	0.6	0.9	0.7	0.7 0.6
23	ePZX	04 31 38.5		09.7		0.7	0.5	1.2	0.3	1.0 0.2
23	iPZX	05 02 34.3		05.8i		2.3	0.3	12.5	0.3	3
23	ePZX	08 11 30.9		07.2		6.1	0.5	10.2	0.3	7.0 0.5
23	ePZX	14 58 20.4		58.0		13.4	0.8	11.2	0.9	10.5 0.9
23	iPZX	22 25 25.9		09.4		0.8	0.5	1.4	0.2	1.5 0.3
24	ePZX	02 57 59.3	1	15		0.5	1.2	0.9	1.0	0.5 1.0
24	iPZX	11 53 17.7								+0.5
24	iXZX	15 53 19.6		18.8		0.6	0.4	1.5	0.3	0.9 0.5
24	ePZX	12 30 32.1		08.3		2.7	0.4	6.0	0.5	4.7 0.5
24	ePZX	12 37 47.2				0.6	0.7P	0.4	1.2P	0.4 0.7P
24	iPZX	18 00 50.5		12.3		0.7	0.6	0.8	0.6	0.8 0.6
24	ePZX	23 55 18.8	1	15.5		0.5	0.6P	0.3	0.5P	0.4 0.5P
25	iPZX	00 17 36.0		08.6i		0.5	0.7	1.0	0.3	0.8 0.2
25	iPZX	02 00 48.1		10.9i		2.5	0.6	3.4	0.4	2.5 0.3
25	ePZX	04 18 39.6		36.4		4.6	0.7	8.3	0.6	4.6 0.6
25	iPZX	11 46 16.5		08.8i		1.7	0.3	4.2	0.3	2.2 0.3
25	iPZ	13 00 17.6								+0.3
25	iPN	17.6		08.4						-1.8
25	iPE	17.6				28.2		40.3		35
25	iPZX	13 38 49.6		09.4		0.9	0.4	2.2	0.4	1.3 0.4
25	ePZX	18 06 27.5		13.4		0.8	0.5	1.0	0.3	0.9 0.3
25	iPZX	20 11 35.9		10.0		1.0	0.5	2.2	0.2	1.7 0.2
26	ePZX	03 26 03.2		28.8		1.6	0.7	2.3	0.8	1.3 0.7
26	ePZX	08 01 54.6		46.4		0.8	1.0	1.3	0.9	1.1 1.0
26	ePZX	08 52 21.7								-0.6
26	eXZX	52 39.0				0.5	0.7X	0.7	0.8X	0.7 0.7X
26	iPZX	09 26 12.7		07.1		2.1	0.4	3.7	0.3	3.4 0.3
26	ePZX	12 19 54.9		47.1		0.5	0.7	1.0	0.9	0.8 0.8
26	ePZX	15 48 17.6		12.9		2.8	0.5	5.8	0.3	4.2 0.6
26	iPZ	23 23 42.4								-4.8
26	iPN	42.4		11.6i						+1.4
26	iPE	42.4				22.1	0.7	32.5	0.4	19.0 0.6
26	ePZX	23 43 31.4		11.8		0.5	0.4	0.8	0.3	0.6 0.3
27	ePZX	00 40 31.1		24.1i		0.6	1.0	1.2	0.7	0.7 0.5
27	ePZX	00 48 40.0	1	38.8i		2.2	0.7P	2.2	0.5S	2.1 0.8S
27	ePZX	08 05 36.2		10.0		0.6	0.5	1.0	0.4	0.8 0.6
27	iPZ	11 15 58.6								+24.2
27	iPN	58.6								-5.6
27	iPE	58.6				S0		S0		-2.0
27	ePZX	12 19 39.1		33.8		1.0	0.6	1.1	0.5	1.1 0.5
27	ePZX	19 14 24.0		10.2		0.6	0.6	1.2	0.3	1.0 0.3
27	ePZX	19 14 47.5		09.0i		1.2	0.5	2.5	0.3	1.9 0.5
28	ePZX	00 01 12.2		33.4i		0.7	0.5	2.3	0.4	1.0 0.5
28	ePZX	01 03 19.5		09.7		1.2	0.4	2.3	0.3	1.3 0.4
28	iPZX	04 15 32.6								-1.0
28	eXZX	15 35.3		40.9		0.5	0.3X	0.5	0.4S	0.4 0.4X
28	iPZX	04 35 28.6		12.8i		2.8	0.6	2.8	0.3	2.5 0.5
28	ePZX	06 30 43.7								-0.8
28	eXN	32 02.5		58.4		1.9	0.7X	2.1	0.5S	1.9 0.9X
28	ePZX	19 17 05.9		14.7		0.6	0.5	1.1	0.5	0.8 0.3
28	iPZX	23 29 25.4				0.6	1.2P	0.5	1.0P	0.3 1.0P
29	iPZX	02 54 01.7		07.8i		7.3	0.5	15.8	0.4	8.5 0.5
29	ePZX	06 41 17.6		10.4		0.8	0.5	1.6	0.3	1.2 0.3
29	ePZX	11 59 10.8		14.3		2.2	0.6	2.4	0.6	1.3 0.5
29	iPZ	18 40 45.0								+21.8
29	iPN	45.0		04.8i						-2.2
29	iPE	45.0				15	P	25	S	22.8 0.5S
29	ePZX	19 46 18.9				0.7	0.9P	0.6	1.0P	0.5 0.8P
30	iPZX	04 31 28.9		11.0i		5.3	0.5	9.5	0.5	5.0 0.5
30	ePZX	18 41 09.9		1 19.7		6.0	1.0X	9.8	1.2X	5.8 0.9X
30	eXE	42 49.9								-2.2
30	ePZX	20 01 31.1		13.9i		2.6	0.5	4.6	0.7	4.4 0.7
30	ePZX	22 02 03.0		31.0		1.0	0.5	1.4	0.6	0.9 0.7

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)	Initial motion(mm)
			h	m	s	m	s	Z		
1	ePZX	09 21 59.5				20.1		1.1	0.5	1.3 0.5
1	ePZX	16 37 28.0				10.6		1.1	0.4	1.3 0.5
1	iPZX	20 32 07.8				10.2		3.2	0.6	3.7 0.6
2	ePZX	03 18 49.7				24.1		0.5	0.5	0.5 0.6
2	ePZX	05 14 24.7				35.5		0.6	0.7	1.0 0.8
2	ePZX	05 44 16.2				34.2		1.2	0.6	1.1 0.7
2	iPZX	06 49 01.5				09.0		1.2	0.6	1.4 0.4
2	iPZX	12 12 40.6				06.6		20	30	2.9 0.4
2	ePZX	15 26 55.7				11.9		1.4	0.6	2.2 0.5
2										

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E			
11	ePZX	01	41	47.0	1	18.3	0.5	0.6	1.0	0.7	0.7	0.7
11	ePZX	04	15	59.3								
	eXN	18	50.4		2	03.7	1.1	0.4P	1.2	0.9X	1.0	0.7X
11	ePZX	05	05	16.3			8.0	0.7	10.2	0.6	8.6	0.6
11	ePZX	06	18	04.6			0.5	0.5	0.9	0.3	0.6	0.3
11	ePZX	16	09	12.5			1.1	0.8	1.1	0.7	1.3	0.6
11	iPZ	17	56	21.7								+8.0
	IPN			21.7								-5.8
	ipe			21.7		15.3		S0	S0	S0		(+)
11	ePZX	19	38	22.8		28.4	1.9	0.6	2.2	0.6	1.5	0.7
11	ePZX	20	49	54.2		25.3i	5.0	1.0	4.4	1.0	4.2	1.2
11	ePZX	21	38	48.2		10.0	0.6	0.6	0.7	0.4	0.6	0.5
11	iPZX	23	45	25.2		06.3	1.1	0.3	3.5	0.3	1.8	0.3
12	ePZX	22	02	40.8								
	IX1ZX			02	44.4							
	IX2N			04	40.6	1 34.4	23.3	1.5X2	51.5	1.5X2	39.0	1.0X2
13	ePZX	00	12	49.4								
	eXN	14	46.0		1	35.5	1.3	1.1X	1.9	1.4X	1.8	1.6X
13	iPZX	03	53	18.8		06.1i	3.3	0.5	4.0	0.3	3.8	0.4
13	ePZX	04	17	09.4								-11.4
	IX1N	17	23.5									
	IX2N	17	56.3									
	IX3N	18	03.1			30.7	41.6	1.1X3	54.5	1.5X3	53.3	1.7X3
13	ePZX	06	54	05.7		21.3	1.1	0.7	2.1	0.5	1.3	0.7
13	iPZX	07	31	36.9		14.6	3.8	0.6	4.3	0.4	2.2	0.9
13	ePZX	09	57	10.4		09.3i	1.3	0.5	2.3	0.3	1.8	0.4
13	ePZX	12	05	01.6		29.1	7.9	0.8	8.2	0.9	6.0	1.2
13	ePZX	12	09	49.3		15.6	1.7	0.3P	1.6	0.4S	1.0	0.7S
13	ePZX	14	42	20.9								
	IX1ZX	42	23.4									
	EX2N	43	20.4			43.8	5.7	0.7X2	9.1	1.0X2	9.5	1.0X2
14	ePZX	09	13	18.1		29.9	0.7	0.4	0.9	0.4	0.7	1.1
14	ePZX	16	34	09.8	1	29.1	0.5	1.1	0.7	1.3	0.6	1.2
14	ePZX	17	44	34.1		28.3	1.7	0.5	2.8	0.4	1.8	1.1
14	ePZX	19	32	48.4	1	12.9	0.6	0.4P	0.7	0.5S	0.5	0.6S
14	ePZX	21	28	49.2								
	eXN	29	38.4			29.0	1.2	1.1X	1.4	1.0X	1.5	1.0X
14	ePZX	23	16	57.6								
	IX1ZX	17	00.2									
	IX2N	18	25.8		1	00.7	6.6	0.8X2	9.5	0.7X2	6.3	1.0X2
15	ePZX	00	56	31.0								
	eXN	57	25.6			29.3	7.9	1.1X	9.2	1.3X	9.1	1.0X
15	ePZX	01	05	07.8		27.7	1.4	0.5	1.8	0.4	1.3	0.8
15	iPZX	03	38	32.5		10.4	0.6	0.5	0.7	0.5	0.7	+1.0
15	ePZX	05	02	04.1								
	eXN	02	43.5			25.5i	10.3	1.3X	12.2	1.0X	9.8	1.3X
15	ePZX	10	49	09.9		16.0	1.8	0.6	4.3	0.4	2.2	0.5
15	ePZX	12	04	06		40	0.5	0.6	0.6	0.7	0.9	0.8
15	ePZX	12	29	59.7	1	05.8	0.8	0.7	2.1	0.8	1.0	0.7
15	ePZX	14	44	37.4		58.4	0.7	0.6	0.9	0.5	0.8	0.7
15	iPZX	15	09	03.4		13.0	3.3	0.6	4.8	0.7	3.1	0.4
15	ePZX	16	20	09.8		30.4	1.9	0.7	2.0	0.7	2.0	0.7
16	ePZX	06	50	13.4		23.2	0.5	0.7	0.9	0.6	0.5	0.7
16	iPZX	07	22	13.1		06.1i	0.7	0.5	2.3	0.3	1.6	0.3
16	ePZX	11	25	38.4		22.8	1.7	0.7	3.7	0.6	2.0	0.6
16	ePZX	13	08	53.3		32.9	1.1	0.6	2.1	0.6	1.2	0.5
16	ePZX	14	36	33.4		14.7	0.5	0.6	0.6	0.3	0.5	0.4
16	iPZX	15	22	09.8		11.5i	1.7	0.3	6.3	0.3	2.1	0.4
16	iPZX	15	56	16.3		09.9	1.0	0.6	1.6	0.4	1.2	0.4
16	ePZX	17	20	11.1								
	IXZX	20	14.6									
	eXN	23	50.9		2	42.7	14.8	0.6P	7.0	0.8S	8.9	0.6P
16	EXZX	19	30	22			0.5	0.5	0.4	0.5	0.5	0.5
16	ePZX	22	12	00.9		10.0i	1.8	0.5	3.0	0.3	1.6	0.4
16	ePZX	22	15	21.0		06.0i	1.3	0.2P	3.4	0.4S	2.3	0.3S
16	ePZX	23	00	37.1		29.4	0.9	1.0	1.5	0.5	1.0	1.1
16	ePZX	23	33	18.7		23.1	1.1	0.4	2.6	0.5	1.7	0.5
16	ePZX	23	41	20.9		14.4	1.7	0.7	3.0	0.6	1.8	0.6

** Observation was interrupted
from 05h 36m to 06h 55m, 23th.

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)
		h	m	s	m	s	Z	N	E	1.0	0.5		
17	iPZX	02	18	55.4		11.3i	0.8	0.6	1.5	0.3	1.0	0.5	-0.6
17	ePZX	03	37	54.5			10.0i	1.0	0.3	2.9	0.3	1.7	0.2
17	iXZX		37	57.4			18.2	2.4	0.8	3.1	0.5	2.5	0.7
17	ePZX	15	17	26.0			12.5	1.5	0.5	2.2	0.3	1.5	0.4
17	ePZX	17	41	59.5			19.5	0.8	0.5	2.0	0.4	1.1	0.5
17	ePZX	22	35	35.9									
18	iPZX	02	29	54.7		13.9i	12.0	0.6	20.8	0.8	16.5	1.0	+2.0
18	iPZX	02	37	12.3		09.5i	1.4	0.6	1.7	0.3	2.6	0.5	-3.0
18	iPZX	06	03	22.0		08.3i	4.4	0.4	10.7	0.4	6.7	0.5	-3.0
18	iPZX	07	19	39.3		10.7	0.7	0.4	1.1	0.3	0.9	0.4	-0.4
18	iPZX	08	31	46.5		09.6	0.7	0.5	1.2	0.2	1.0	0.3	+1.2
18	ePZX	13	48	46.5		16.0	0.5	0.5	0.8	0.3	0.5	0.6	
18	iPZX	14	28	58.4									-2.6
	iXZX		31	40.2									
	eXN		36	11	3	25.4	14.2	1.2P	16.1	1.5P	13.9	1.2P	
18	ePZX	22	38	00.0	3	28.7	0.7	1.2P	0.8	0.9P	0.5	0.8P	
19	iPZX	03	43	43.5		11.7	0.6	0.4	1.2	0.2	0.9	0.3	+0.6
19	ePZX	08	36	52.6	3	30	0.5	1.6P	0.2	1.0P	0.3	0.9P	
19	ePZX	18	15	53.3									
	eXN		17	00.8	31.5		1.7	0.6X	2.5	0.4S	1.8	1.4X	
19	iPZX	18	25	16.5	31.2		2.8	0.7	3.7	0.8	3.1	0.8	-0.4
19	ePZX	20	32	02.3	13.2		0.6	0.8	0.8	0.3	0.6	0.6	
19	ePZX	20	40	47.2	27.0		0.6	0.7	0.6	0.8	0.6	0.9	
20	iPZX	03	31	08.1	16.2		16.1	0.5	15.2	0.6	10.6	0.6	+2.4
20	iPZX	05	08	58.3	10.9i		0.6	0.5	1.6	0.4	0.8	0.4	+0.6
20	ePZX	11	11	12.5		21.8	15.8	0.8	20.8	0.8	17.8	0.6	
20	ePZX	13	43	27.1									
	eXN		45	07.6	1	14.5	1.4	1.0X	2.0	0.8X	2.1	0.9X	
20	iPZX	15	09	58.4	14.0		0.8	0.5	2.4	0.3	1.2	0.4	-1.0
20	ePZX	18	41	05.8	09.5		0.6	0.5	1.1	0.2	1.1	0.3	
20	ePZX	22	25	54.2	.								
	eXN		27	44.5	1	31.3	1.1	0.7X	1.4	0.7X	1.1	0.7X	
21	ePZX	01	08	05.0	30.8		2.2	1.0	2.4	0.8	3.0	1.0	
21	iPZX	01	42	41.2	29.5		1.4	0.8	2.3	0.4	1.5	0.9	-0.4
21	ePZX	05	14	47.2			0.7	1.0P	0.6	1.0P	0.4	1.1P	(-)
21	ePZX	13	41	37.3									
	iX1ZX		41	40.3									
	iX2ZX		41	48.7									
	iX3ZX		41	59.9			1.7	0.8X2	1.9	0.9X2	2.0	0.7X3	
21	iPZX	22	49	56.3	09.9i		19.4	0.5	31.9	0.4	21.6	0.8	+3.8
21	ePZX	22	52	10.9	09.4		2.2	0.5	3.9	0.4	3.2	0.5	
21	ePZX	22	54	08.5	10.1		0.8	0.4	1.6	0.3	1.2	0.2	
22	iPZX	04	44	55.4	27.1		25.2	1.1	24.0	1.1	17.6	1.1	+2.2
22	iPZX	05	59	41.2	08.0i		1.7	0.4	6.6	0.3	5.0	0.2	-3.4
22	iPZX	07	14	32.9	6	05.9	2.1	0.8P	1.3	1.0P	0.9	1.1P	-3.4
22	ePZX	07	30	03.9	23.5		1.8	0.8	2.6	0.9	2.4	0.9	
22	iPZX	10	06	34.1	11.1i		7.5	0.5	14.8	0.3	8.4	0.7	-1.2
22	iPZX	10	07	51.8	10.3		1.1	0.3	2.0	0.3	1.0	0.6	(+)
22	ePZX	11	26	08.5	15.3		0.6	0.5	0.6	0.3	0.5	0.5	
22	iPZX	12	58	11.5	11.4		2.6	0.5	3.5	0.4	1.8	0.6	-2.4
22	ePZX	14	54	41.4	36		0.6	0.7	0.8	0.6	0.5	0.6	
22	ePZX	15	09	40.2	14.7		5.5	0.8	6.7	1.1	5.3	0.8	
22	ePZX	17	00	34.3	17.0		1.3	0.6	1.6	0.5	1.4	0.6	
22	iPZX	17	47	37.5	15.4		5		7		5		+1.0
22	ePZX	19	13	03.8	.								
	iX1ZX		13	06.4									
	eX2N		14	11.8	56.8		2.9	0.3X1	5.2	0.8X2	5.6	0.6X2	
22	iPZX	20	39	30.5	13.1i		1.6	0.5	3.3	0.3	1.8	0.4	-0.8
22	ePZX	21	53	28.1	33.5		1.3	0.8	1.7	0.8	1.2	1.0	
23	eSN	00	25	25.1			0.9	0.8S	1.5	1.2S	1.3	1.0S	
23	ePZX	03	26	54.7	09.9i		0.8	0.5	1.7	0.3	1.2	0.2	
23	ePZX	03	38	18.0									
	iXZX		38	22.3			0.6	0.6X	0.3	0.5X	0.3	0.5X	
23	ePZX	04	00	11.9	14.3		0.9	0.5	1.0	0.5	0.8	0.6	

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Date	Phase	Time(JST)			P-S		Amplitude(mm)				Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E	W	S	W	
23	iPZX	07	35	02.1			12.9	0.8	0.5	0.8	0.3	0.6	0.5
23	ePZX	10	19	43.5			46.2	0.5	0.6	0.8	1.0	0.7	0.8
23	ePZX	10	50	09.8									
	iXZX		50	11.4			12.2	1.7	0.6	1.9	0.6	1.4	0.6
23	iPZX	11	55	11.1				1.0	0.7P	0.5	0.6P	0.7	0.8P
23	ePZX	22	15	47.5									
	eZX		17	18.4			57.3	16.8	0.8X	24.1	1.0X	14.0	0.9X
24	ePZX	01	30	14.5	2	14.5		0.6	1.2	0.7	1.0	0.5	1.5
24	ePZX	09	26	28.1			27.9	0.6	0.6	0.7	0.3	0.6	1.1
24	ePZX	10	27	48.5									
	iX1ZX		28	07.3									
	iX2ZX		29	49.3	1	25.3		12.4	0.7X2	12.0	0.7X2	13.0	1.0X2
24	ePZX	10	36	14.0									
	eZXZ		38	11.6	1	24		0.5	0.8X	0.6	0.7X	0.4	1.0X
24	ePZX	11	01	30.6									
	eZN		03	20.1	1	22.4		1.3	0.8X	1.8	0.9X	1.3	1.0X
24	ePZX	11	41	59.2			07.9i	1.7	0.4	2.3	0.5	2.8	0.4
24	iPZX	14	11	24.5									
	eZXZ		11	34.8				0.5	0.7P	0.5	0.9P	0.3	0.8P
24	ePZX	15	38	32.9									
	eZN		40	28.1	1	22.2		4.9	0.8X	5.2	0.9X	4.7	0.7X
24	ePZX	16	38	38.2				0.5	0.5P	0.7	0.7P	0.7	0.6P
24	iPZX	23	57	10.6			09.2			SO	SO	SO	
25	ePZX	01	21	49.7									+9.4
	iXZX		21	52.1	2	07.6		2.1	0.4X	1.6	0.4X	1.2	1.0S
25	ePZX	07	40	33.0			58.7	0.6	0.8	0.7	0.8	0.7	1.0
25	ePZX	08	17	15.4			37.0	1.6	0.9	2.9	0.6	2.2	0.9
25	ePZX	15	25	30.3									
	iXZX		25	37.1	2	17		0.5	0.7X	0.7	0.9X	0.7	1.0X
25	ePZX	22	42	01.5				1.4	0.8P	1.4	0.8P	0.5	1.0P
26	ePZX	01	09	27.4			14.4	2.3	0.6	2.1	0.5	1.6	0.6
26	ePZX	02	22	09.2			15.3	0.8	0.4	0.8	0.4	0.5	0.5
26	iPZX	07	56	15.0				0.9	1.2P	1.2	1.0P	0.8	1.1P
26	ePZX	08	02	50.1				0.6	0.4P	0.3	0.5P	0.3	0.5P
26	ePZX	11	00	20.9			09.8	0.5	0.6	1.2	0.3	0.7	0.5
26	iPZX	19	48	40.0									-0.8
	iXZX		48	40.5			08.5i	3.9	0.5	9.7	0.5	6.5	0.4
27	iPZX	00	05	12.9			07.6i	5.4	0.7	11.0	0.6	7.6	0.6
27	ePZX	00	35	12.3			14	1.2	0.6	2		1.7	0.8
27	iPZX	06	29	58.4			08.4i	5.9	0.4	13.5	0.4	6.6	0.7
27	ePZX	07	13	11.1			09.2	0.9	0.3	2.0	0.4	1.6	0.3
27	iPZX	07	41	17.8			08.5i	2.2	0.3	6.1	0.3	3.8	0.4
27	ePZX	09	56	34.1			22.6	3.6	0.6	4.3	0.5	2.4	0.4
27	ePZX	11	12	24.7			10.1	0.5	0.5	0.8	0.3	0.7	0.3
27	iPZX	12	21	15.0			10.3i	1.9	0.5	3.6	0.2	2.1	0.3
27	iPZX	14	15	48.3			08.9	3.9	0.5	7.1	0.4	5.3	0.5
27	ePZX	14	26	16.5									+2.5
	iXZX		26	18.2			26.5i	1.1	0.3	1.9	0.3	1.1	0.3
27	ePZX	18	44	13.5				7.0	0.7	14.1	0.7	7.5	0.6
27	eZN	45	04.2				36.5						
27	ePZX	19	24	13.9									
	iX1ZX		24	16.1									
	iX2ZX		24	27.3									
	eX3N		25	44.1			57.3	2.4	0.5X1	1.9	1.0X3	1.5	0.5X1
27	iPZX	20	02	49.0			15.5i	12.8	0.5	15.7	0.5	9.7	0.8
28	ePZX	00	16	11.9			11.0	0.6	0.5	1.0	0.6	0.8	0.5
28	ePZX	01	44	45.5			59.2	0.9	0.5	0.9	0.4	0.9	0.5
28	ePZX	05	03	42.1			03.1	0.5	0.5	0.2	0.3	0.5	0.5
28	ePZX	05	19	00.3			1 31.4	1.1	0.8	1.7	0.8	1.5	0.8
28	ePZX	07	32	00.6				1.0	0.7P	0.5	0.7P	0.5	0.7P
28	iPZX	09	47	10.7			10.0i	3.5	0.5	5.3	0.5	4.0	0.5
28	ePZX	15	37	41.3									+0.6
	iXZX		37	54.1				0.8	0.6X	0.4	0.6X	0.5	0.6X
28	ePZX	17	43	11.4			13.5	0.5	0.6	0.7	0.6	0.5	0.6
28	ePZX	18	00	05.4			1 02.1	0.6	0.5	1.0	0.5	0.5	0.6
28	ePZX	22	06	42									
	iXZX		06	47.5				1.3	0.8X	1.2	1.0X	0.8	1.0X
	iPZX		19	19			39.2						
	iXZX		19	39.9			22.3i	35		40			

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)
		h	m	s	m	s	Z	N	E	N	E		
29	ePZX	00	44	28.1		05.9	0.8	0.5	1.3	0.6	1.0	0.7	
29	ePZX	02	55	56.3		18.9	0.5	0.5	0.5	0.5	0.4	0.8	
29	ePZX	08	32	02.0		12.1	2.3	0.5	3.4	0.3	2.0	0.6	
29	iPZX	11	03	43.1			0.5	0.8P	0.5	0.9P	0.5	1.0P	+1.0
29	ePZX	12	24	56.0	1	28.4	0.6	0.7	0.8	0.7	0.8	0.6	
29	iPZX	17	18	12.5		05.6i	15.0	0.5	23.9	0.5	15		(-)
29	iPZX	17	39	30.8		05.3i	38.1	0.5	40		30		(-)
29	ePZX	19	09	28.6		11.3i	0.7	0.5	1.8	0.4	0.9	0.3	
30	iPZX	05	57	46.0		05.5	1.8	0.3P	1.8	0.3S	1.6	0.3S	-6.8
30	iPZX	12	28	11.8	3	33.7	0.5	1.5P	0.6	1.2P	0.6	2.0P	+1.0
30	ePZX	13	21	55.3	2	23.7	0.7	0.7	0.8	0.8	0.6	0.7	
30	ePZX	19	46	57.2		11.5	1.0	0.5	1.4	0.5	1.0	0.5	
30	ePZX	21	47	48.1		15.4i	47.1	0.6		S0		S0	
31	ePZX	02	14	05.3	3	17.7	0.6	0.4P	0.4	0.5P	0.3	0.5P	
31	ePZX	03	44	03.5	1	34.5	0.5	0.6	0.6	0.5	0.6	0.6	
31	ePZX	09	20	59.6		10.1	1.0	0.5	1.6	0.2	1.3	0.4	
31	ePZX	10	52	48.9		24.9	0.5	0.5	1.0	0.7	0.8	0.8	
31	ePZX	15	51	27.9		54.4	1.0	0.6	1.4	0.7	1.2	0.7	
31	iPZX	16	11	12.5	06.2i		4.4	0.4	12.2	0.6	7.4	0.5	
31	ePZX	23	09	02.2		52.9	0.8	0.5	1.6	0.8	0.9	0.6	-2.2

Kamikineusu, August 196

Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)			Initial motion(mm)
		h	m	s	m	s	Z	N	E				
1	ePZX	06	16	22.2	37.5		0.8	0.5	0.9	0.6	0.9	0.9	-0.3
1	ePZX	06	59	32.0	09.6i		2.0	0.6	3.1	0.3	1.7	0.5	-7.0
1	ePZX	10	48	25.2	19.6		1.0	0.8	1.5	0.7	0.9	0.7	-1.0
1	iPZX	19	37	58.8	11.7i		0.8	0.5	2.1	0.2	0.6	0.7	-2.0
1	iPZ	21	20	38.4									
	iPN			38.7	05.6i								
	iPE			38.4			18.5	0.2P	21.7	0.3S	16	0.3S	
2	ePZX	08	07	37.6	22.6		2.3	0.5	4.9	0.5	2.2	0.6	
2	ePZX	08	45	19.8	1 16.2		S0		S0		S0		
2	ePZX	08	52	31.0	1 12.0		6.2	1.0	8.0	0.8	8.5	1.1	
2	iPZX	09	35	54.9	1 16.1		23.3	1.0	39.4	1.3	39	1.2	-0.8
2	ePZX	09	53	28.1	1 19.9i		3.7	0.7	5.7	0.9	4.1	1.1	
2	ePZX	10	15	12.3	1 14.8		6.0	1.0	5.6	0.9	4.7	0.8	
2	iPZX	11	27	21.6	05.6		1.3	0.1P	1.2	0.3S	0.4	0.2S	-2.5
2	ePZX	11	41	42.0	1 16.3i		7.6	1.0	12.2	0.8	11.6	1.0	
2	ePZX	12	33	47.6	1 14.0		2.5	1.0	2.8	0.9	2.6	1.4	
2	ePZX	12	38	43.3	25.2		0.5	0.7	0.5	0.7	0.6	0.8	
2	iPZX	13	53	46.1			0.7	0.6P	0.4	0.7P	0.3	0.6P	+0.2
2	ePZX	15	05	45.5	1 16.5i		10.6	1.0	10.6	1.0	7.4	1.3	
2	ePZX	17	03	44.2	1 18.4		2.0	0.8	1.7	0.9	1.4	0.6	
2	iPZX	19	19	29.4	1 16.2		10.9	0.7	14.6	1.6	16.0	1.3	-0.3
2	ePZX	23	12	45.2	13.6		0.6	0.5	0.8	0.4	0.4	0.5	
2	ePZX	23	17	38.3	17.9i		0.5	0.4	1.1	0.7	0.7	1.0	
3	ePZX	02	43	37.2									
	eXZX		47	03.0			0.6	0.4P	0.3	0.3P	0.4	0.4P	
3	iPZ	05	07	03.3									+0.7
	iPN			03.4		06.1i							-0.2
	iPE			03.4			3.5	0.1P	9.3	0.3S	4.4	0.1S	-0.1
3	iPZX	09	31	00.9			0.9	0.7P	0.6	0.7P	0.5	0.6P	+0.8
3	ePZX	09	31	22.5	1 20.5		4.7	0.9	7.3	1.0	5.6	0.9	
3	ePZX	11	20	27.8	1 23.6		0.6	0.9	0.8	1.1	0.7	1.1	
3	ePZX	16	49	56.2	1 18.4i		25.2	1.2	30.0	1.3	31.0	1.3	-0.6
3	iPZ	20	52	14.4									-0.2
	iPN			14.7		08.6i							+0.2
	iPE			14.8			6.7	0.4	13.5	0.3	9.9	0.4	

Kamikineusu, August 1969

Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)		
		h	m	s	m	s	Z	N	E				
4	iPZX	03	17	50.4	16.5	27.0	0.6	66.6	0.5	33.0	0.6	-1.0	
4	iPZX	03	41	11.9	09.4i	1.2	0.6	1.7	0.5	1.1	0.5	-0.2	
4	iPZX	07	26	21.5	13.7i	0.5	0.6	1.2	0.5	0.7	0.9	-0.3	
4	ePZX	08	25	27.9	1 42.8	0.7	0.7	1.4	0.7	0.8	0.7		
4	iPZX	09	09	32.1	10.7i	0.8	0.5	1.5	0.2	1.0	0.3	+0.6	
4	ePZX	09	12	53.8	10.4	0.6	0.6	0.7	0.3	0.4	0.4		
4	iPZX	17	01	58.0	10.2	2.2	0.5	3.4	0.5	1.8	0.4	+1.0	
4	ePZX	19	29	08.3		0.5	0.8P	0.5	1.4P	0.4	1.0P		
4	ePZX	23	13	18.0	27.3	1.1	0.5	1.5	0.4	1.3	0.5		
5	iPZ	02	27	30.7								+5.5	
	iPN			30.8	6 32.6i							+2.3	
	iPE			30.8								+1.2	
	eX1ZX			29 26.4									
	eX2Z			34 42.0									
5	ePZX	03	32	24.5	1 15.6	16.9	0.5P	11.0	0.9P	5.9	0.9P		
5	ePZX	04	35	19.5	09.7i	0.5	1.0	0.7	0.8	0.5	1.0		
5	eXZX	07	09	47.8		0.7	0.5	1.0	0.2	0.5	0.5		
5	ePZX	09	54	50.3	44.1	0.5	1.6	0.4	0.9	0.3	0.8		
5	iPZX	11	21	12.3		0.7	0.7	1.0	0.6	0.7	0.7	+3.2	
5	iXZX	21	23.7	6 29.9		7.9	0.6X	7.3	1.0X	4.5	1.2X		
5	iPZX	11	45	01.1	11.8i	1.4	0.5	1.8	0.2	1.6	0.4	-0.4	
5	ePZX	13	53	04.7	1 13.2	0.6	0.7	1.0	0.7	0.7	0.7		
5	ePZX	22	11	29.2									
	eXZX	11	41.1			0.5	1.4X	0.3	1.0X	0.3	1.0X		
** 6	ePZX	04	32	44.8									
6	eXZX	32	47.2	40.7		0.8	0.6	1.9	0.7	1.2	0.6		
6	ePZX	13	44	44.6	19.2	0.9	0.6	1.0	0.5	0.9	0.5		
6	iPZX	19	38	06.2	10.6i	1.0	0.5	1.4	0.2	1.6	0.3	+0.4	
7	ePZX	08	51	34.5		09.8i	0.5	0.5	0.8	0.3	0.7	0.2	
7	ePZX	15	49	27.8	2 39.2	2.3	0.5P	1.4	0.4P	0.9	0.5P		
7	ePZX	20	52	59.0	22.5	6.3	0.7	9.5	0.5	9.8	0.6		
8	iPZX	00	33	12.9	54.8	16.5	0.8	18.2	0.7	15.0	0.7	-0.8	
8	ePZX	07	54	03.7	1 12.6	0.6	0.8	1.0	0.9	0.8	1.2		
8	iPZX	15	40	04.8	45.9i	0.7	0.9	1.0	1.4	0.9	0.8	+0.9	
8	ePZX	16	04	00.0	12.0i	0.6	0.5	1.6	0.3	0.8	0.3		
8	ePZX	21	59	13.8	1 28.4	0.8	0.6	1.2	0.4	0.7	0.9		
9	iPZ	00	50	19.3								-1.4	
	iPN			19.2	10.4i							-0.6	
	iPE			19.2		5.8	0.5	7.7	0.3	4.4	0.7	-0.4	
9	iPZX	03	35	46.5	23.2i	3.6	0.6	8.2	0.4	3.1	0.4	-0.4	
9	iPZX	05	52	54.9		54	26.0	6 44.7	4.1	1.0P	3.4	1.1P	+3.2
9	eXZX			54 26.0		0.5	1.0	1.2	0.7	0.8	1.0		
9	ePZX	09	12	03.0	1 14.7	0.5	1.4	0.7	0.8	1.0			
9	ePZX	13	05	28.9	10.4	0.5	0.5	0.9	0.3	0.5	0.4		
10	ePZX	02	26	35.5	09.3	0.9	0.6	1.1	0.3	0.8	0.3		
10	ePZX	03	34	30.1	1 14.6	1.0	0.8	1.3	0.7	0.7	0.8		
10	ePZX	21	23	11.5	14.7	2.7	0.6	2.8	0.4	2.2	0.5		
10	iPZX	21	35	55.4	13.9	1.2	0.5	1.5	0.5	1.1	0.5	+0.6	
11	ePZX	00	54	43.0									
	iXZX			54 50.2	08.9i	0.5	0.5	0.6	0.5	0.6	0.4		
11	ePZX	02	22	18.9	14.7i	0.8	0.5	1.2	0.6	0.8	0.7	-1.0	
11	iPZX	05	29	52.0	06.1	0.5	0.6	0.7	0.7	0.8	0.6		
11	ePZX	06	10	25.5									
11	iXZX			10 27.7	46.5	4.0	0.5X	6.6	0.9S	4.8	1.0S		
11	ePZX	06	46	12.7	12.9	1.4	0.6	2.5	0.5	1.8	0.5		
11	ePZX	08	08	32.5	39.5	0.5	0.7	0.7	0.7	0.8	0.6	-1.0	
11	iPZX	08	34	35.5									
11	iXZX			34 44.2	10.7i	1.4	0.7	2.6	0.3	1.8	0.4		
11	ePZX	12	32	40.0	1 16.2	0.9	0.7	1.0	0.5	0.9	0.4		
11	ePZX	16	47	55.0	1 01.2	0.5	0.7	0.6	0.6	0.4	0.7		
11	iPZX	21	58	04.3	13.8	2.4	0.5	4.8	0.5	3.6	0.7	+0.4	
11	ePZX	23	07	08.5	19.4i	0.5	0.4	0.8	0.3	0.5	0.5		
** Addenda													
6	ePZX	01	41	02.8		0.5	0.6	0.6	0.9	0.4	0.7		
6	ePZX	02	11	39.3	13.9	1.6	0.6	2.6	0.8	1.5	0.5		
6	ePZX	03	21	11.1	2 02.8	0.8	0.8	1.0	0.7	1.1	1.2		
6	ePZX	03	35	43.3	54.5i	7.5	0.7	8.2	0.7	9.0	0.8		

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Kamikineusu, August 1969

Date	Phase	Time(JST)	
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Kamikineusu, August 1969

Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	Z	N	E	1.0	10.0	0.9			
12	ePZ	20	39	14.4	39.9		8.1	0.9	11.4	1.0	10.0	0.9			
12	ePZ	20	43	07.0			42.2	i		2.5	0.5P	2.5	0.5S	2.0	0.5P
12	iXZ		43	08.9						1.7	0.7	2.3	0.7	3.0	0.6
12	eSN	20	45	23.5											
12	ePZ	20	49	38.8			45.4			2.5	0.6P	3.5	0.7S	2.5	0.7S
12	ePZ	20	52	38.2											
12	iXN		52	13.4						5.5	0.8X	3.9	1.3X	2.4	0.7X
12	eSN	20	55	47						2.2	0.7	3.1	0.8	1.9	0.8
12	ePZ	20	57	57.8			51.2			37	1.0	SO	SO		
12	ePZX	21	04	06.9			40.1			3		3		8.5	1.7
12	ePZX	21	08	00.1			41.9			1.9	0.6	2.9	1.0	2.7	1.0
12	eSN	21	10	21.5						1.0	0.7	2.1	0.7	1.8	0.7
12	ePZX	21	14	13.8			42.2			2.7	0.7	3.7	0.6	3.0	0.8
12	ePZ	21	18	36.4			50.6			2.3	0.7	2.7	0.7	2.0	0.7
12	ePN	21	21	20.0			41.4			0.5	0.8	0.8	0.8	0.5	0.5
12	ePZ	21	24	24.8			43.4			1.3	0.6	2.2	0.5	1.6	0.6
12	eSN	21	26	55						0.5	0.8	0.7	1.5	0.9	1.4
12	ePZX	21	28	53.0											
12	iXZ	28	54.8				35.7i			2.5	0.7	3.4	0.7	3.0	0.5
12	ePZ	21	32	46.4			42.2			9.5	1.5	16.5	1.2	13.3	1.4
12	ePZX	21	39	55.3											
12	iXZX	39	58.0				49.2			1.4	0.5P	2.4	0.8S	1.8	0.7S
12	ePZ	21	45	34.5			40.8			8.5	0.5	12.5	0.8	13.3	0.7
12	ePZX	21	53	41.5			45.0			1.6	0.8	3.1	0.8	1.8	1.0
12	ePZX	21	55	51.8			41.5			1.0	0.8	2.5	1.0	1.9	0.8
12	ePZ	21	59	43.0	1	05.0				0.5	0.5P	0.8	0.9S	0.5	0.8S
12	iPZ	22	03	20.5			43.0			1.5	0.7	4.5	0.5	2.3	1.2
12	ePZ	22	07	32.8										-1.0	
12	eX1Z	07	56.5												
12	eX2N	08	42.3							1.5	0.8X2	1.7	0.6X2	1.5	0.8X2
12	ePZX	22	13	30.0			46.5			2.7	0.8	5.3	0.9	4.0	0.9
12	ePZ	22	16	06.5			44.8			2.3	0.4P	2.4	0.6S	1.7	0.7S
12	ePZ	22	17	42.8			51.9			4.2	0.5P	4.2	0.8S	4.3	0.6S
12	ePZ	22	19	11.7			57.8	42				SO	SO		
12	ePZ	22	24	25.1			52.9			9.3	1.0	17.0	1.2	12.0	0.8
12	ePZ	22	26	07.7			57.5			10.0	0.5P	20	0.7S	12.3	0.6S
12	eSE	22	28	40.0						3.0	0.7	9.0	1.1	7.5	1.2
12	eXZ	22	31	41						1.1	0.6	1.5	0.8	1.8	0.7
12	ePZX	22	38	53.9	36.4					0.8	0.5	1.0	0.6	0.6	0.7
12	eXN	22	40	28.0						0.7	1.0	1.1	0.7	1.0	0.9
12	ePZX	22	45	37.1											
12	iXZX	45	39.1				45.6			5.2	1.0	6.2	1.1	5.4	1.0
12	ePZ	22	56	19.6			41.6			1.5	0.5P	2.0	0.7S	1.5	0.6S
12	eSN	22	58	50.5						0.9	0.7	1.5	0.7	1.0	0.8
12	ePZ	23	10	48.6			38.0			2.8	0.7	5.8	0.7	4.4	0.8
12	ePZX	23	18	38.8			44.7			0.7	0.5	1.5	0.7	1.0	0.7
12	ePZ	23	20	42.5			43.8			2.8	0.9	3.8	0.7	3.2	1.2
12	ePZ	23	28	43.1			41.1			4.2	0.7	11.0	0.8	5.4	0.7
12	eSN	23	33	30.7						0.7	0.3	1.5	0.5	0.7	0.7
12	ePZ	23	34	08.5											
12	eX1N	34	38.5												
12	eX2Z	35	09.3							4.3	0.7X2	6.3	0.9X2	5.4	1.0X2
12	ePZ	23	39	40.9	39.6					3.2	0.6	4.2	0.9	3.2	1.0
12	ePZX	23	42	30.9			38.1			4.0	0.8	4.6	0.7	3.7	1.3
12	ePZX	23	54	48.0			38.0			0.5	0.8	0.9	0.6	0.6	0.8
13	ePZ	00	01	38.7			51.5			1.5	0.7	2.6	0.7	1.8	1.2
13	ePZ	00	05	10.8			46.9			2.5	0.8	3.6	0.8	3.0	0.8
13	ePZX	00	07	31.0			37.4			0.8	0.6	1.5	0.9	0.8	0.7
13	ePZ	00	11	34.8			51.2			2.0	1.0P	3.2	0.6S	2.4	0.7S
13	ePN	00	13	20.6			40.7			6.5	0.5	7.5	0.5	6.0	1.2
13	ePZ	00	26	52.3			39.3			2.7	0.4	5.4	0.3	3.3	1.4
13	ePZ	00	29	11.3			53.3			1.0	0.7P	15.8	0.9S	9.0	0.9S
13	ePZX	00	40	57.1			32.4			1.2	0.7	2.0	0.6	1.2	1.1
13	ePZ	00	42	35.2			35.1			3.4	0.9	4	0.7</		

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
		h	m	s	m	s	Z	N	E	3.3	1.2			
13	ePZ	06	55	51.7	39.3		3.5	0.7	5.1	0.7	3.3	1.2		
13	ePZ	06	57	31.8	43.4		25.2	1.0	36.8	1.0	30	1.1		
13	ePZX	07	07	59.0	37.5		1.7	0.8	2.7	0.8	2.8	0.9		
13	ePZX	07	11	10.7	33.2		1.6	0.8	1.9	0.8	1.8	0.7		
13	ePZ	07	14	57.4	47.6		1.8	0.8	3.2	0.8	2.2	0.9		
13	ePZX	07	19	22.7	43.0		0.6	0.8	0.8	0.8	0.8	0.7		
13	ePZX	07	24	44.7	40.3		1.0	0.7	2.0	0.7	1.4	0.7		
13	eSN	07	27	04.3			0.6	0.7	0.8	0.7	0.7	0.6		
13	ePZ	07	29	15.3	43.2		1.4	0.3P	2.3	0.8S	1.9	1.0S		
13	ePZX	07	31	11.8	36.7		2.4	0.6	2.5	0.6	2.5	1.0		
13	ePZ	07	34	13.1	48.6		1.3	0.6	2.5	0.6	1.3	0.5		
13	ePZ	07	36	25.8	52.4		1.3	0.8	2.7	0.7	1.9	1.2		
13	ePZ	07	46	05.7	39.3		2.2	1.0	3.2	1.5	4.3	1.2		
13	iPZ	07	52	01.8	45.2		1.9	0.6	2.4	0.6	2.3	0.7	+1.4	
13	ePZX	07	53	37.7	10.7		13.9	0.6	15	0.4	12.0	0.5		
13	ePZ	07	58	25.3	42.0		0.9	0.5	1.4	0.6	1.4	0.7		
13	ePZ	08	00	39.2	37.8		1.0	0.5	1.9	0.6	1.0	0.7		
13	ePZ	08	06	55.8										
13	iXZ	08	06	58.2	48.2		34	0.8	S0	41.8	0.9			
13	ePZX	08	16	37.1	1 14.1i		7.1	1.1	11.9	1.3	11.7	1.3		
13	ePZX	08	20	54.8	42.1		2.5	1.0	2.9	1.2	3.0	0.9		
13	ePZ	08	24	42.2	36.1		2.0	0.7	3.3	0.7	1.9	0.8		
13	ePZ	08	34	47.2	43.5		1.4	0.4P	2.5	0.9S	1.9	0.7S		
13	ePZ	08	41	35.7										
13	iXZ	08	41	39.1	51.0		4.2	0.6	8.5	0.7	7.5	1.0		
13	ePZX	08	44	31.4	35.6		3.0	0.8	4.2	0.8	3.5	0.8		
13	ePZX	08	50	18.7										
13	iXZ	08	50	23.2	38		20.8	0.6	28.1	0.7	20.2	0.6		
13	iPZ	08	53	43.2	52.8		14.2	1.4	19.2	0.9	19.7	0.9	+1.5	
13	ePZX	08	56	33.4	12.8		1.4	0.5	2.1	0.4	0.8	0.4		
13	ePZ	09	08	12.0	50.2		1.9	0.9	3.9	0.9	2.0	0.9		
13	ePZ	09	19	23.8	39.4		10.0	0.9	19	1.3	14.0	1.0		
13	ePZX	09	41	58.6	44.4		1.5	0.8	1.6	0.8	1.2	1.0		
13	ePZ	09	54	01.8	43.2		2.5	1.0	2.7	0.8	2.7	1.0		
13	ePZ	09	57	51.4	42.6		0.8	0.8	1.2	0.8	1.1	1.4		
13	ePZX	10	01	19.0	47.0		0.7	0.6	1.4	0.6	0.9	0.8		
13	ePZ	10	03	26.1										
13	iXN	10	03	49.5	54.2		2.1	1.0	6.1	0.8	2.3	0.9		
13	ePZ	10	13	55.7	40.4		1.0	0.7	1.9	0.8	1.3	0.7		
13	ePZX	10	34	47.8										
13	iXZ	10	35	58.5	49.2		1.1	0.4X	0.4	0.5X	0.7	0.5X		
13	ePZ	10	38	26.5	44.3		4.4	1.0	3.7	0.9	3.2	0.7	+0.4	
13	iPZX	10	58	48.0										
13	iXZ	11	58	50.6	46.2i		3.9	0.9	7.7	0.8	5.5	0.8		
13	ePZX	11	08	15.6	54.9		17.9	0.9	33	1.2	19.5	0.8		
13	eXN	11	12	26			1.1	0.6	1.8	0.6	0.8	0.9		
13	ePZX	11	14	13.5	41.0		0.5	0.5	0.8	0.6	0.5	0.6		
13	eSN	11	16	10.5			0.5	0.6	0.7	0.8	0.7	0.6		
13	ePZX	11	19	25.0										
13	iXZX	11	19	26.7	42.0		1.1	0.7	1.7	0.8	1.5	0.7		
13	ePZ	11	29	14.1										
13	iXZ	11	29	16.5	51.9		5.0	0.5X	5.0	0.6S	4.2	0.9S		
13	ePZX	11	40	05.5	50.5		0.9	0.8	1.5	0.7	1.2	0.6		
13	ePZX	11	51	52.2	41.1		0.5	0.5	0.9	0.6	0.7	0.7		
13	iPZ	12	07	14.3	56.5		1.5	0.4P	1.5	0.7S	1.0	0.6S	+0.9	
13	ePZ	12	14	15.2	48.6		3.4	0.5P	3.8	0.8S	3.0	0.8S		
13	ePZX	12	23	31.5	49.8		0.6	0.8	1.0	0.8	0.5	0.7		
13	ePZX	12	30	08.7										
13	iXZ	12	30	11.7	56.8		50		S0		S0			
13	ePZ	12	48	22.8										
13	iXZ	12	48	25.3	55.5		8.8	1.1	18.8	0.9	8.0	0.9		
13	ePZ	12	51	48.2	42.3		5.8	0.7	8.7	1.0	7.0	0.8		
13	ePZX	12	53	54.0	40.0		6.0	0.7	11.3	0.8	9.2	0.8		
13	ePZ	13	13	39.4	44.1		16.7	0.8	16.1	0.7	12.8	0.7		
13	ePZ	13	29	20.2										
13	iXZ	29	22.5		1 03.8		14	1.4	25		22.0	1.5		

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)			
		h	m	s	m	s	Z	N	E	1.4	0.8	2.2	0.7	1.6	0.7		
13	ePZX	22	38	11.8	41.8		3.0	0.8	4.5	0.9	4.2	0.7					
13	eSN	22	40	11.0			1.8	0.8	2.9	0.8	2.6	0.8					
13	ePZX	22	47	56.1	42.9		0.5	0.5	0.7	0.6	0.7	0.7					
13	ePZX	22	52	02.0	39.0		0.7	0.8	2.2	0.8	1.3	0.7					
13	ePZX	23	23	55.7													
	iXZX	23	57.9		46.7		2.5	0.7	5.2	0.8	5.8	0.9					
13	ePZX	23	26	22.4	53.1		1.6	0.7	2.3	1.0	1.5	0.8					
13	iPZX	23	29	55.1													
	iXZ	29	57.8		57.0		10.5	0.5X	7.2	0.9S	5.8	0.7S					
13	ePZX	23	59	44.5	42.8		0.6	0.5	1.8	0.9	1.2	0.7					
													-1.2				
14	ePZX	00	14	35.5													
	iXZX	14	37.8		54.8		2.5	0.4	3.3	0.8	1.8	0.6					
14	eSN	00	16	47.7			1.9	0.7	3.5	0.8	2.3	0.7					
14	ePZX	00	37	09.7	43.2		0.7	0.5	1.8	0.7	1.6	0.7					
14	ePZX	00	46	22.0	47.8i		4.8	0.5	9.0	0.7	7.0	0.7					
14	ePZX	00	50	13.8	40.9		0.7	0.6	1.5	0.6	0.8	0.8					
14	ePZX	01	02	11.2	43.2		0.5	0.6	1.4	0.7	0.8	0.8					
14	ePZX	01	12	51.1	38.9		3.3		3.9	0.5	3.1	0.5					
14	ePZX	01	28	50.2	38.9		1.5	0.7	2.8	0.7	2.1	0.8					
14	eSZX	01	31	13.5			1.5	0.5	2.6	0.4	2.2	0.9					
14	ePZX	02	04	47.6	40.6		16.8	0.6	20		14.0	0.7					
14	ePZX	02	08	00.0	53.3i		18.0	1.5	26.5	0.8	33.0	1.3					
14	iPZX	02	17	07.5													
	iXZX	17	10.0		55.8i		6.5	0.8	9.7	0.7	6.8	0.9					
14	ePZX	02	43	19.0													
	iXZ	43	31.2		50.0		2.5	0.7	4.4	0.7	3.3	1.0					
14	ePZX	02	52	33.5	37.8		1.4	0.7	2.4	0.9	1.7	0.8					
14	ePZX	03	10	10.1													
	iXZ	10	12.8		59.1		5.3	0.5X	10.8	0.8S	9.0	0.7S					
14	ePZX	03	23	04.0	39.7		1.8	0.5	4.0	0.6	2.4	0.6					
14	ePZX	03	34	11.0	40.3		0.9	0.5	1.7	0.7	1.3	0.6					
14	ePZX	03	37	16.7	42.0		1.4	0.5	3.0	0.7	2.0	0.7					
14	ePZX	03	49	00.3	38.7		2.7	1.3	5.8	1.3	4.8	1.2					
14	iPZX	03	56	23.7	05.3i		1.5	0.3	3.0	0.4	2.4	0.3					
14	ePZ	04	13	43.2	44.5		0.8	0.5	1.3	0.5	0.9	0.8					
14	ePZX	04	34	38.5													
	iXZX	34	41.2		52.0		28.0	0.6	49.5	1.3	37.0	1.5					
14	ePZX	05	10	21.5	48.5		5.2	0.5P	8.1	0.9S	7.4	0.9S					
14	ePZX	05	51	26.6	39.4		0.5	0.6	1.3	0.7	0.9	1.2					
14	ePZX	06	03	42.8	40.4		1.5	0.6	3.3	0.6	2.5	0.7					
14	ePZ	06	13	58.7	50.5		7.4	0.9	11.0	1.5	9.3	1.4					
14	ePZX	06	28	22.3	40.1		0.8	1.0	1.5	0.7	1.0	0.7					
14	eSN	06	30	37.7			0.6	0.8	1.3	0.6	0.9	0.8					
14	ePZX	06	43	01.5	38.5		1.9	0.6	3.3	0.7	1.8	0.8					
14	ePZX	06	55	04.5	41.6		1.4	0.8	2.2	0.7	2.2	0.9					
14	ePZX	07	01	38.5	38.5		1.7	0.4	3.5	1.0	2.5	1.2					
14	ePZ	07	08	38.6	38.4		3.8	0.6	7.5	0.6	5.5	0.6					
14	ePZX	07	33	13.8	49.3		4.4	0.6	6.6	0.7	4.4	0.6					
14	ePZX	07	43	20.4	56.6		7.0	0.8	15.3	0.9	7.5	0.9					
14	iPZX	07	58	13.8									+2.0				
	iXZ	58	16.7		59.2		S0		S0		S0						
14	ePZ	08	12	13.1	48.9		3.1	0.8	7.1	0.8	3.8	0.8					
14	ePZX	08	14	04.4	100.1		21.8	0.7	22.2	0.7	17.5	0.7					
14	ePZX	08	18	01.5	51.7		0.8	0.5	1.5	0.7	0.9	0.6					
14	ePZX	08	22	10.9	48.5		1.8	0.7	2.7	0.8	1.8	0.7					
14	ePZ	08	24	11.0													
	iXZ	24	19.6		51.0		3.0	0.7	4.8	0.9	2.5	0.7					
14	ePZX	08	27	50.9	56.1		1.3	0.7	1.5	0.6	1.0	0.8					
14	ePZX	08	38	07.6													
	iXZX	38	09.0		14.4i		3.3	0.3X	5.0	0.4S	2.0	0.4S					
14	ePZX	08	41	01.1													
	iXZ	41	02.6		39.7		1.3	0.5	2.2	0.8	1.9	0.5					
14	eSN	08	42	59.2			1.5	0.8	3.9	0.8	1.9	0.7	</				

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
			h	m	s	m	s	Z	N	E	0.5	0.6	
14	ePZ	22 59 28.4	41.6	1.5	0.6	3.3	0.7	2.0	0.8				
14	ePZX	23 18 06.1	48.1	0.5	0.6	0.6	0.6	0.5	0.7	-1.8			
14	iPZ	23 19 56.1				SO	SO	SO					
14	iXZ	19 59.1											
14	eXN	23 26				2.3	0.7	2.8	0.6	3.5	0.6		
14	eSN	23 30 06				2.2	0.7	5.5	1.2	4.1	0.7		
14	eSN	23 32 16				0.8	0.4	2.0	0.5	1.3	0.8		
14	eSE	23 34 07.8				0.7	0.6	1.0	0.5	1.2	0.6		
14	ePZX	23 35 33.5	46.7	1.1	0.5	2.4	0.8	1.4	0.8				
14	ePZ	23 39 17.5	40.7	3.3	0.7	5.0	1.0	4.9	1.1				
14	ePZ	23 43 15.1	41.1	0.7	0.6	0.8	0.7	1.0	0.7				
14	ePZX	23 46 43.7	55.8	0.8	0.5	1.2	0.9	0.8	0.7				
14	ePZX	23 52 42	44	0.9	0.4P	1.0	0.3S	0.7	0.5S				
14	eSE	23 54 06				1.7	0.7	4.9	0.8	2.5	1.0		
14	ePZX	23 58 29.4											
	iXZ	58 31.2	42.3	3	0.6	5	0.5	3.7	0.4				
15	eSN	00 01 24.5				2.0	0.7	3.5	0.7	2.5	0.7		
15	eX1N	00 08 19.7											
	iX2N	09 18.7				1.1	0.4X1	2.0	0.8X2	1.5	1.0X2		
15	eX1Z	00 11 29.1											
	iX2Z	12 22.0											
	iX3N	13 02.5				2.7	0.7X3	3.9	1.0X3	2.4	1.0X3		
15	ePZX	00 14 46.5	43.2	4.0	0.8	6.5	1.5	7.5	1.5				
15	iPZX	00 20 25.9								-1.0			
	iXZX	20 27.7	44.7i	3.5	0.5X	6.3	0.6S	3.7	0.7S				
15	ePZX	00 24 43.1											
	iXZ	24 45.3	41.4	1.7	0.4X	2.7	0.5S	1.3	1.0S				
15	ePZ	00 28 40.5	41.2	7.3	0.7	13	0.7	10.5	0.7				
15	ePZ	00 34 12.1	41.1	0.8	0.8	1.2	0.8	1.2	1.3				
15	ePZX	00 39 14.3											
	iXZ	39 16.2	42.9	14.5	0.9	31.5	1.5	34.2	1.5				
15	eSZ	00 41 32				3.6	0.6	7.4	0.8	4.5	0.6		
15	ePZX	00 44 10.3	41.8i	6.3	0.7	16.0	1.6	13.4	1.2				
15	ePZX	00 55 19.1	43.1	0.6	0.4	1.0	0.2	0.5	0.5				
15	eX1ZX	00 57 04.0											
	iX2N	57 44.2											
	iX3Z	58 18.8				1.4	0.5X3	2.1	0.8X3	1.2	1.3X3		
15	ePZX	01 02 04.4	39.8	0.6	0.5	0.9	0.5	0.8	0.3				
15	ePZX	01 07 02.3	38.4	0.8	0.5P	0.8	0.8S	0.8	0.8S				
15	ePZX	01 11 51.8	48.3	0.7	1.0	1.8	1.4	1.3	1.1				
15	ePZ	01 20 08.6	40.6i	1.8	0.5	3.2	0.7	3.7	0.7				
15	ePZX	01 23 43.0	39.0	2.2	0.8	4.4	1.3	3.0	0.7				
15	ePZ	01 28 45.2											
	iXZ	28 47.3	52.2	13.0	0.8	16.0	0.9	12.7	1.4				
15	ePZX	01 46 31.0	40.8	0.5	0.6	0.9	0.3	0.8	0.6				
15	ePZ	01 59 36.5											
	iXZ	59 38.0	43.3	9.5	0.9	13.5	1.0	15.0	1.4				
15	ePZX	02 06 46.7											
	iXZ	06 49.2	42.3	16.0	0.5	26.5	1.3	14.9	1.5				
15	ePZX	02 10 27.1	53.2	0.8	0.4	1.5	0.5	1.3	0.4				
15	ePZX	02 13 47.1											
	iXZ	13 49.2	41.7i	2.5	0.8	4.7	0.8	2.4	0.7				
15	eXN	02 23 29.0				0.9	0.7	1.8	0.6	1.0	0.7		
15	ePZX	02 39 56.7	39.5	1.3	0.5P	0.9	0.7S	1.0	0.6S				
15	ePZ	02 52 17.0	58.5	6.0	0.7	5		4.5	1.5				
15	eSN	03 01 36.2				1.4	0.6	1.9	0.6	0.9	0.7		
15	ePZ	03 21 45.2				1.2	0.5						
15	ePZ	03 22 32.0	52.3	4.8	1.1	8.7	1.0	10.7	1.0				
15	ePZX	03 38 41.1	42.2i	1.4	0.7	0.7	0.6	1.2	0.5				
15	ePZ	03 40 28.0	40.5i	2.1	0.5P	4.0	0.5S	2.3	0.4S				
15	eSN	03 41 57.0				3.0	0.5	5.1	0.6	4.7	0.5		
15	ePZX	03 47 36.5	41.0	1.5	0.7	2.2	0.6	2.0	1.0				
15	ePZX	03 52 47.4	43.1	1.8	0.7	2.6	1.2	1.8	0.8				
	iXZ	52 49.2											

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	0.5	0.6
15	ePZX	03 55 27.8	41.5</td									

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	N	E				
15	ePZX	14 07 45.6				55.2	1.3 0.4X	1.0 0.8S	1.0 0.8S			
15	iXZ	07 47.4				40.3	1.3 0.5	2.4 0.4	1.9 1.3			
15	ePZX	14 22 54.6				37.5	1.0 0.7	2.5 0.7	1.9 0.7			
15	ePZ	15 13 27.0										-1.0
15	iPZX	15 19 34.4										
15	iXZX	19 35.3				47.2i	35.3 1.0	S0	S0			
15	ePZX	15 34 09.3				20.1	0.6 0.4	0.7 0.3	0.5 0.5			
15	ePZX	15 48 56.5				45.5	1.0 1.1	2.7 1.0	2.4 1.4			
15	iPZX	15 57 05.2				07.8i	2.3 0.5	3.9 0.3	2.8 0.3			-2.4
15	ePZX	16 08 18.0				35.8	1.3 0.6	1.5 0.6	1.3 0.7			
15	ePZ	16 22 57.1				48.5i	17.0 0.9	24.4 1.0	15.8 1.0			
15	ePZX	16 43 17.8										
	iXZX	43 19.2				41.4	0.6 0.5X	0.4 0.2S	0.4 0.4X			
15	iPZX	17 15 53.9				10.8i	1.5 0.3	2.5 0.2	2.0 0.2	+0.7		
15	ePZ	17 27 57.1				46.5	1.3 0.4P	2.0 0.9S	1.0 0.8S			
15	iPZ	17 46 12.1								+1.3		
	ipPZ	46 23.5										
	ePcPZX	49 47.0	4	00.0		6.4	0.9P	8.2 0.9S	8.5 1.7S			
15	ePZX	18 04 25.1				37.6	1.4 0.7	2.0 0.7	1.6 0.8			
15	ePZX	18 17 14.6				40.8	3.0 0.4	4.3 0.7	3.3 0.4			
15	ePZX	18 48 53.1										
	iXZ	48 54.7				43.9	32.3 0.9	S0	S0			
15	ePZX	18 57 25.8				39.1	2.4 0.5	3.3 0.8	2.2 0.6			
15	ePZX	19 03 16.7										
	eXN	03 48.8					5.3 1.6X	11.2 1.0X	11.8 1.9X			
15	ePZX	19 10 00.5				40.6	0.5 0.5P	0.8 0.8S				
15	ePZ	19 12 23.0				41.8i	2.9 0.8	6.3 0.8	3.7 0.8			
15	ePZX	19 16 13.0				37.8	0.5 0.5	1.0 0.3	1.1 0.6			
15	ePZ	19 34 58.3				44.1	6.3 1.2	17.7 0.8	15.0 1.4			
15	ePZX	19 39 24.4				51.6	0.5 0.5P	0.9 0.6S	0.7 0.5S			
15	ePZX	19 55 52.5										
	iXZ	55 55.1				55.5	10.5 0.7	12.0 0.5	9.0 0.7			
15	ePZX	20 03 33.6				44.1	1.4 0.5	1.8 0.5	1.2 0.7			
15	ePZX	20 30 51.0										
	iXZX	30 53.1				47.1	21.2 0.7	25.5 0.7	15.0 0.7			
15	ePN	20 48 34.7				37.1	1.8 0.4	2.7 0.5	1.8 0.8			
15	eSN	20 50 53					1.2 0.7	2.0 0.7	1.5 0.9			
15	ePZ	21 08 01.0				39.0	0.7 0.6	1.5 1.0	1.0 0.7			
15	ePZ	21 44 20.8				43.7	1.9 1.0	3.0 1.4	2.5 0.9			
15	ePZ	22 02 05.2				44.7	0.9 0.6	1.3 0.6				
15	ePZX	22 08 26.7				45.8	0.6 0.7	1.1 0.9	0.8 0.8			
15	ePZX	22 45 54.1										
	iXZX	45 56.5				32.0	0.9 0.8	1.4 1.0	1.3 0.8	+1.0		
15	iPZX	23 10 50.2										
	iXN	11 06.0				42.5	2.5 0.5	4.2 0.5	3.0 0.6			
15	ePZX	23 17 57.9										
	iX1Z	19 29.2										
	eX2Z	19 39.4				38.8	1.4 0.6X2	2.8 0.7S	1.4 0.7S			
15	eSN	23 20 26					1.0 0.6	1.4 0.7	1.3 0.6			
16	ePZ	01 57 17.0				40.2	2.3 0.5P	3.2 1.0S	2.3 1.2S			
16	ePZX	02 01 43.0										
	iXZX	01 44.5				41.1i	2.0 0.7	3.6 1.1	3.8 0.9			
16	ePZX	02 53 45.6				41.4	0.5 0.5	0.8 0.5	0.8 1.0			
16	ePZX	02 55 12.5				39.7	4.4 0.7	5.2 0.6	4.3 0.7			
16	ePZX	03 38 40.7				43.0	0.6 0.5	0.9 0.7	0.8 0.6			
16	ePZX	04 24 04.3				49.7	0.7 0.7	1.4 0.9	1.0 0.7			
16	ePZX	04 29 54.2				44.9	1.3 0.5	2.0 0.7	2.0 0.6			
16	ePZ	04 44 33.1				55.0	3.0 0.8	4.8 0.8	3.0 0.9			
16	ePZ	05 07 16.1				41.8	19.8 1.0	27.0 0.9	16.0 0.8			
16	ePZX	05 48 36.3										
	iXZ	48 39.7				42.8	S0	S0	S0			
16	ePZ	05 52 42.9										
	iXZ	52 54.7	2	21.0		4.4 0.9	6.9 1.1	5.4 1.0				
16	ePZX	05 55 56.6				48.1	0.9 0.5	1.6 0.6	1.3 0.6			
16	ePZX	06 23 54.7				06.4i	11.5 0.5	36 0.3	20 0.2			
16	ePZX	06 27 46				39	0.8 0.6	1.4 0.8	1.0 0.8			
16	ePZX	06 43 32.9				47.0	0.5 0.6	0.8 0.7	0.4 0.9			

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	N	E				
16	iPZX	07 44										

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	m	s	Z	N	E	1.0	
17	ePZX	00 08 11.1	1	00.0		0.7	0.6	1.5	0.6	1.0	0.6	-2.4
17	ePZX	00 12 12.6		35.8		5.7	1.0	13.1	0.8	7.8	0.8	
17	iPZ	00 16 24.1				SO		SO		SO		
17	ePZX	00 27 39.6	43.4			0.5	1.2	0.7	1.0	0.8	1.0	
17	ePZX	01 13 42.7	43.71			1.6	1.1	1.9	0.8	1.9	1.1	
17	ePZX	01 16 16.9	45.7			1.3	0.8	1.7	0.9	1.8	0.7	
17	ePZX	01 22 52.3										
	iXZX	22 54.0	42.4			0.7	0.7	0.9	0.6	0.7	0.7	
17	ePZX	01 31 21.1	38.4			0.9	0.7	1.2	0.7	0.9	0.6	
17	ePZ	02 14 01.2				0.7	0.5	0.4	0.5	0.5	0.5	-1.0
17	iPZ	02 14 36.1										
	iXZ	14 39.1	45.4			65	0.7X	50.5	1.5S	49.0	1.4S	
17	ePZ	02 19 54.1	43.4			1.5	1.0	1.8	0.8	1.9	0.9	
17	ePZX	03 19 29.7	42.5			2.1	1.1	2.8	1.1	2.7	1.0	
17	ePZX	03 51 54.5	44.21			2.8	0.8	7.8	0.7	3.8	0.9	
17	eSN	03 53 56.5				0.8	0.5	1.0	0.3	1.0	0.5	
17	ePZX	05 20 42.0										
	iXZX	20 43.5	40.5			0.8	1.0	1.2	0.7	1.0	0.8	
17	ePZX	05 25 45.7	49.3			6.7	0.8	11.7	0.9	4.6	1.0	
17	ePZX	05 30 56.0	39.3			0.7	0.7	1.2	0.7	0.8	0.5	
17	ePZX	06 00 22.0	40.7			2.3	1.0	3.9	0.7	3.4	0.7	
17	ePZ	06 35 18.6	42.6			3.9	1.0	6.4	0.9	6.9	0.8	
17	ePZX	06 48 03.3	42.9			0.9	0.6	0.9	0.7	0.8	0.7	
17	iPZX	07 21 49.2										+1.4
	iXZX	21 51.5	40.1i			2.8	0.4X	3.6	0.7S	2.5	1.0S	
17	ePZ	08 26 24.1	44.4			2.5	0.4	4.8	0.8	3.9	0.8	
17	ePZX	09 39 37.0	32.6			1.0	0.7	1.9	0.7	1.4	0.9	
17	ePZX	10 18 52.7	09.5			0.9	0.4	0.8	0.3	0.9	0.4	
17	ePZX	10 38 56.7	46.4			2.4	0.7	3.3	1.0	2.3	0.7	
17	ePZX	10 54 27.8	48.2			0.8	0.5	1.0	0.6	0.9	0.7	
17	ePZX	11 03 47.8	50.6			0.5	0.8	1.1	0.6	0.5	0.8	
17	ePZX	11 06 24.1										
	eXN	07 21.3	57.2			1.2	0.9X	2.1	0.9X	2.1	0.7X	
17	ePZX	11 22 41.6	41.7			0.6	0.7	0.7	0.7	0.4	0.8	
17	eSN	11 24 37.0				0.8	0.6	0.9	0.6	0.8	0.7	
17	ePZX	12 30 45.3	41.8			0.6	0.6	1.1	0.8	1.0	0.7	
17	ePZX	13 02 01.2	38.3			0.5	0.6	0.9	0.7	0.7	0.9	
17	ePZX	13 06 00.1	36.5i			0.7	0.6	1.0	0.8	0.7	0.7	
17	ePZX	14 50 15.1	35.7i			1.5	0.6	2.8	0.4	1.7	0.6	
17	ePZX	14 53 12.6										
	iXZX	53 15.3	43.2i			7.9	0.5X	9.8	0.5S	6.1	0.6S	
17	ePZX	15 07 51.6	40.2			0.5	0.5	0.7	0.7	0.7	0.9	
17	ePZX	15 27 11.7	52.0			2.0	0.7	3.7	0.7	1.9	0.7	
17	iPZX	15 46 54.8	10.4			1.4	0.4	2.9	0.4	1.8	0.3	+1.8
17	ePZX	17 07 05.6	44.4			1.2	0.5	2.0	0.6	1.3	0.6	
17	ePZX	17 32 14.0	42.0			0.5	0.7	0.9	0.7	0.6	0.8	
17	ePZX	17 50 47.8										
	iXZX	50 49.5	41.6			0.9	0.6	1.4	0.5	0.9	0.7	
17	ePZX	18 14 36.5										
	iXZX	14 38.0										
	iXZX	14 49.8	42.5			0.5	0.4X	0.4	0.6S	0.4	0.5S	
17	ePZX	19 31 03.3	40.3			0.6	0.8	1.2	0.8	1.0	0.6	+0.6
17	iPZX	19 49 03.6										
	iXZX	49 05.3	39.3			1.2	0.9	1.8	1.1	1.6	0.7	
17	ePZX	20 10 07.0	42.9			1.8	0.7	3.8	0.8	2.3	0.7	
17	iPZX	20 37 41.5										+1.0
	iXZX	37 44.1	53.0i			7.2	1.0	13.1	1.1	10.7	1.2	
17	ePZX	20 40 34.1	41.6			1.5	0.4	1.8	0.5	1.8	0.9	+8.4
17	iPZ	20 55 21.6										-2.5
	iPN	21.6										
	iPE	21.5										+3.3
						SO		SO		SO		
17	eSN	21 00 57.5				2.4	0.5	1.0	0.3	1.3	0.7	
17	ePZX	21 07 28.5	40.3			0.8	0.9	1.1	0.7	0.9	0.6	
17	ePZX	22 03 06.0	44.5			0.6	0.8	0.7	0.8	0.7	1.0	

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
			h	m	s	m	s	Z	N	E	1.0		
17	ePZX	22 30 06.0				45.3		0.7	0.4X	1.0	0.8S	0.7	0.9S
17	iXZX	3											

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)		
		h	m	s	m	s	Z	N	E	0.7	0.9	1.0	0.7	0.8	0.7	
19	ePZX	00	18	36.0	44.3		0.7	0.9	1.0	0.7	0.8	0.7				
19	ePZX	01	30	35.7	52.5		10.7	0.5	13.5	0.7	8.9	0.6				
19	ePZX	01	40	28.6	39.5		0.9	0.4P	0.9	0.6S	0.7	0.5P				
19	ePZX	01	44	20.3	42.8		0.7	0.8	0.9	0.7	0.9	0.8				
19	ePZX	01	52	15.3												
	iZXX		52	25.8	49.4		1.0	0.7	1.7	0.7	1.0	0.7				
19	ePZX	03	17	35.7	51.3		0.6	0.9	0.9	0.7	0.7	0.6				
19	ePZX	03	30	29.4												
	iZXX		30	31.9	50.7		5.9	0.9	12.2	0.6	10.8	0.7				
19	ePZX	03	37	33.6												
	iZXX		37	35.5	41.6		1.0	0.7	1.2	0.9	0.9	0.8				
19	ePZX	03	43	53.5	42.0		1.8	0.5P	3.0	0.3S	2.2	0.5S				
19	ePZX	04	41	22.8	13.4i		1.4	0.5	2.5	0.5	1.7	0.5				
19	ePZX	04	51	07.0	24.5		1.5	0.5	2.4	0.6	2.0	0.5				
19	ePZX	05	09	47.6	54.4		1.4	0.7	1.3	0.7	1.2	0.6				
19	ePZX	05	38	41.2	31.3i		1.0	0.6	1.6	0.7	1.3	0.6				
19	ePZX	06	05	12.1												
	iZXX		05	13.6	53.7		1.0	0.5X	0.9	1.0S	0.9	1.0S				
19	ePZX	06	22	41.6	37.7		1.2	0.8	1.9	0.7	0.8	0.7				
19	ePZX	06	30	03.8												
	iZXX		30	05.7	43.0		1.6	0.5X	2.5	0.6S	1.5	0.7S				
19	ePZX	06	51	12.8												
	iZXX		51	14.9	44.9		2.1	0.9	2.8	0.8	2.1	0.8				
19	ePZX	07	06	52.9												
	iZXX		06	55.2	51.4		3.5	0.4X	3.8	0.8S	2.7	0.8S				
19	ePZX	08	28	32.9												
	iZXX		28	35.0	43.5i		2.3	0.5X	2.3	0.6S	1.6	1.0S				
19	ePZX	08	59	10.5												
	iZXX		59	12.5	40.5		1.8	0.5X	1.9	0.5S	1.7	0.5S				
19	ePZX	09	02	26.3	40.0		1.2	0.7	2.2	0.9	1.4	0.7				
19	ePZX	10	25	54.0												
	iZXX		25	55.7	48.6		1.0	1.1	2.8	0.8	1.8	0.9				
19	ePZX	10	41	22.5	38.8		0.8	0.8	1.4	0.7	1.3	0.8				
19	ePZX	11	09	13.1												
	iZXX		09	16.0	58.9		1.3	0.5X	0.7	0.7S	0.8	0.8S				
19	ePZX	11	20	03.7	37.8		2.5	0.7	3.4	0.7	2.6	0.8				
19	ePZX	11	24	28.0												
	iZLZX		24	30.5												
	eX2N		24	55.3												
	eX3N		25	30.0												
19	ePZX	11	29	03.5	42.5		3.7	0.8	5.0	0.9	4.1	0.9				
19	ePZX	11	48	44.0	38.1		0.6	1.0	1.0	0.7	0.9	0.7				
19	ePZX	11	51	01.1	48.5		0.9	0.9	1.4	0.8	1.0	1.0				
19	iPZX	11	57	32.7	09.3i		1.9	0.6	2.3	0.4	1.8	0.2	-1.5			
19	ePZX	12	57	53.1												
	iZXX		57	54.5	40.4		2.0	0.7	3.3	0.7	3.4	0.8				
19	ePZX	13	03	37.8	51.7		1.0	0.8	1.7	0.7	1.2	0.9				
19	ePZX	13	07	14.8												
	iZXX		07	16.6	40.2		0.8	0.5X	0.6	0.7S	0.6	0.6S				
19	ePZX	13	11	06.5												
	iZXX		11	08.4	42.7i		2.1	1.0	3.9	0.9	3.0	0.9				
19	ePZX	13	13	18.5	43.1		4.3	0.5	5.6	0.6	5.3	0.5				
19	ePZX	13	33	22.2	47.5		1.2	0.9	1.4	1.3	1.2	1.3				
19	iPZX	13	49	24.8									+0.6			
	iZXX		49	43.0	16.8		1.9	0.7	2.6	0.7	2.2	0.6				
19	ePZX	13	52	31.0												
	iZXX		52	33.1	41.9		0.7	0.4X	1.0	0.7S	0.9	1.0S				
19	ePZX	14	30	06.4	59.6		0.7	0.7	1.0	0.8	1.0	0.8				
19	ePZX	14	34	33.6	57.4		2.5	0.8	3.3	0.8	3.9	0.8				
19	ePZX	15	58	34.5												
	iZXX		58	36.3	56.3i		0.7	0.8	1.5	0.9	1.3	0.7				
19	ePZX	16	04	45.0												
	iZXX		04	47.0	45.2		2.8	0.7	6.7	0.9	5.1	0.8				
19	ePZX	16	09	33.7												
	iZXX		09	35.3	45.3		0.8	0.4X	0.5	0.8S	0.					

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)		
		h	m	s	m	s	Z	N	E				
20	iPZX	20	27	37.4							-0.4		
	eXN	28	24.0		3	08.4	1.4	0.6P	1.5	1.0P	0.9	0.9P	
20	ePZX	20	43	38.8			39.7	1.7	0.5	3.5	0.7	2.6	0.7
20	ePZX	20	45	39.2									
	iXZX	45	41.5		42.2		2.3	0.7	6.0	0.8	3.4	0.8	
20	ePZX	21	38	46.6			42.1	0.5	0.8	0.8	0.7	0.7	
20	iPZ	22	48	47.0							+0.8		
	iPN			47.0			11.7i				-0.4		
	iPE			46.8							-0.2		
	iXZX			48			4.7	0.3	6.7	0.3	4.5	0.4	
20	iPZX	23	21	18.0			18.7	10.5	0.7	13.5	0.9	9.6	0.8
20	ePZX	23	27	24.3			18.3	0.6	0.6	0.9	0.8	0.5	0.7
21	ePZX	00	08	11.9			32.0i	1.1	0.5	1.6	0.5	1.5	0.8
21	ePZX	00	40	28.6									
	iXZX	40	30.5		57.1		1.2	0.5X	0.5	0.7X	0.7	0.4X	
21	iPZX	01	11	55.7			31.0	0.9	0.4	1.8	0.4	1.5	0.6
21	iPZX	01	34	25.6							+0.2		
	iXZX	34	39.7		32.6i		3.1	0.5	5.1	1.3	4.5	0.5	
21	ePZX	01	44	02.2							+0.4		
	eXZX	44	05.1		37.6		0.7	0.5	1.2	0.6	0.8	0.7	
21	ePZX	02	30	49.5			0.8	0.9	0.5	1.0	0.5	1.0	
21	ePZX	02	43	19.1							(+)		
	iXZX	43	21.5		42.2i		4.0	0.6	7.0	0.7	5.3	0.6	
21	ePZX	03	30	42.9			36.3	0.5	0.8	0.4	0.8		
21	iPZ	04	23	50.1			12.0i						
	iPN			50.1							-1.0		
	iPE			50.2							-0.5		
21	iPZX	04	27	30.7			14.0i	0.5	0.5	0.6	0.3	0.4	
											-0.2		
21	iPZX	09	21	46.3							+0.2		
	iXZX	21	56.2		12.3i		2.5	0.4	3.3	0.3	1.5	0.5	
21	iPZX	09	29	33.9			112.6	15.8	1.2	24.3	1.0	25.2	1.3
21	ePZX	10	20	41.9							+0.8		
	iXZX	20	43.5		43.8		0.8	0.7	1.1	0.9	0.8		
21	ePZX	11	01	28.2									
	iXZX	01	30.5		48.9		1.2	0.6	1.7	0.7	1.8	0.6	
21	ePZX	11	43	38.5									
	iXZX	43	40.6		54.2		6.0	0.5	4.0	0.8	1.8	0.7	
21	ePN	11	44	56.3			53	29.3	1.3	60	32	1.3	
21	ePZX	12	12	11.7			39.6	1.3	0.7	2.6	0.8	1.5	0.8
21	ePZX	12	28	50.1									
	iXZX	28	51.5		40.5		1.2	0.6	2.5	0.7	2.1	0.7	
21	ePZX	12	33	01.8			49.2	S0	S0	S0	S0		
21	iPZX	13	48	17.6							+0.8		
	iXZX	48	20.1		50.9i		37	1.0	S0	S0	S0		
21	ePZX	14	11	23.3									
	eXZ	12	13.3		41.2		19.4	0.6	27		21.2	0.8	
21	iPZX	14	21	15.9			19.7i	0.6	0.6	1.1	0.7	0.8	
21	iPZX	15	44	32.2			08.4i	2.0	0.3	7.4	0.2	4.0	
21	ePZX	16	52	24.2			42.3	23	25	S0			
21	ePZX	17	24	34.0			46.5	1.0	0.8	1.7	0.7	0.9	
21	ePZX	17	29	02.7			47.8	0.7	0.5	1.2	0.5	0.7	
21	ePZX	18	00	29.2			43.3	3.8	0.5	5.8	1.0	4.4	
21	eSE	18	02	41.3				1.4	0.5	1.9	0.6	1.3	
21	ePZX	18	05	27.0			44.0	0.7	0.8	1.4	0.8	0.7	
21	ePZX	18	46	27.2									
	iXZX	46	29.0		47.6		1.8	0.4X	1.5	0.8S	1.1	1.1S	
21	ePZX	18	54	25.7									
	iXZX	54	33.3		09.5		1.1	0.4	2.9	0.1	1.8	0.2	
21	ePZX	18	59	37.0			42.0	1.2	0.9	1.5	0.7	1.9	
21	iPZX	19	07	24.5			30.0i	8.3	0.9	17.0	0.7	9.8	
21	ePZX	21	45	30.3			38.2	1.6	1.0	2.8	0.8	2.0	
21	ePZX	22	23	20.5							+1.6		
	iXZX	24	28.5										
21	ePZX	22	25	03.8			46	19.8	0.6P	22.0	0.8S	18.2	
21	eXZX	22	51	20.7				0.5	0.4	0.3	0.3	0.5	

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)		
		h	m	s	m	s	Z	N	E				
22	ePZX	00	04	31.3			39.4	1.0	0.8	1.3	0.8	1.3	1.0
22	ePZX	00	17				31.5	0.9	0.6	1.3	0.4	1.0	0.6
22	ePZX	00	26	41.0			57.1	0.5	0.7	0.7	0.7	0.7	0.8
22	ePZX	00	48				48	30.2		43.0i	5.5	0.5X	5.0
22	ePZX	01	15	53.0			41.4	0.5	0.4X	0.5	0.5S	0.3	0.3X

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
		h	m	s	m	s	Z	N	E					
23	ePZX	12	02	40.6	48.2		0.8	0.5	1.0	0.6				
23	ePZX	12	08	41.6										
	iXZX		08	44.4	41.5		2.5	0.5X	5.8	0.6S	3.8	0.6S		
23	ePZX	12	50	09.7	31.3		10.0	0.5	15.0	0.6	10.0	0.5		
23	ePZX	12	58	11.1	50.91		1.9	0.6	2.5	0.6	1.8	0.7		
23	ePZX	12	59	54.5	30.2		1.6	0.5	1.8	0.6	1.4	0.7		
23	iPZX	14	07	43.7	31.6		3.7	0.5	4.7	0.7	3.8	0.5	+1.2	
23	iPZX	15	40	04.6	32.1		13.0	1.0	24.5	0.9			-3.0	
23	ePZX	15	43	25.3	10.61		8.5	0.3	11.0	0.4	8.5	0.3		
23	ePZX	15	48	51.5										
	iXZX		48	53.7	51.0		11.9	0.6	21.7	0.8	15.7	0.8		
23	ePZX	16	00	01.7	30.9		0.8	0.5	1.0	0.6	0.7	0.5		
23	ePZX	16	10	24.5	28.5		0.7	0.6	0.7	0.7	0.6	0.7		
23	ePZX	16	18	12.1										
	iXZX		18	14.5	41.5		0.5	0.5X	0.7	0.6S	0.4	0.7S		
23	iPZX	16	25	34.3	05.61		1.7	0.2P	2.2	0.2S	2.6	0.3S	-6.4	
23	ePZX	16	56	41.7	37.3		0.8	0.5	1.4	0.4	1.5	0.6		
23	ePZX	17	37	02.5										
	eXN		37	14.8	30.5		1.8	0.5	2.8	0.7	2.0	0.7		
23	ePZX	17	39	01.7	30.0		0.5	0.5	0.8	0.7	0.5	0.5		
23	ePZX	18	10	01.4	30.1		0.8	0.5	0.9	0.5	0.8	0.5		
23	ePZX	18	26	03.5	31.01		5.7	0.5	6.3	0.6	5.0	0.7		
23	ePZX	19	25	39.0										
	eX1N		26	09.0										
	eX2ZX		26	40.1			1.0	0.5X2	1.8	0.8X2	0.9	0.6X2		
23	ePZX	19	34	30.7	38.4		2.4	0.5	0.7	0.7	1.2	1.0		
23	ePZX	22	17	15.0	29.6		1.0	0.5	1.5	0.5	1.1	0.6		
23	ePZX	22	28	35.3										
	iXZX		28	37.4	47.3		12.3	0.8	19.5	1.0	16.1	1.2		
23	ePZX	22	39	57.8	37.9		1.0	0.8	2.3	0.7	0.9	0.6		
23	ePZX	23	08	41.7	39.1		0.7	0.5	1.1	0.7	0.8	0.5		
23	ePZX	23	53	57.8	42.2		2.7	0.9	6.1	1.3	5.1	0.9		
24	ePZX	00	54	42.0	41.5		0.5	0.8	0.9	0.7	0.6	0.7		
24	ePZX	01	31	18.8	42.3		0.8	0.7	0.7	0.7	0.9	0.7		
24	ePZX	01	07	43.0	41.3		0.9	0.9	1.3	1.0	1.0	1.0		
24	ePZX	02	50	43.6	32.2		0.5	0.5	0.7	0.4	0.5	0.6		
24	iPZX	03	34	24.0	12.3		0.5	0.5	0.3	0.5	0.5	0.4	-1.0	
24	iPZX	04	57	28.1	32.4		18.4	0.5	31.5	1.0	12.1	0.8	+5.2	
24	ePZX	06	19	34.5	40.7		3.0	1.0	5.8	0.8	4.0	1.4		
24	ePZX	07	10	34.2	44.3		0.8	0.5P	1.6	0.8S	1.0	0.8S		
24	ePZX	08	07	18.0	40.61		2.4	0.6	3.8	0.6	2.4	0.6		
24	ePZX	08	24	15.3	14.2		0.7	0.5	1.2	0.7	0.8	0.7		
24	ePZX	08	44	11.6	44.8		0.6	0.8	1.0	0.6	0.9	0.8		
24	ePZX	11	01	46.4										
	eXZ		02	23.6	31.6		2.3	0.7	3.9	0.8	1.9	0.6		
24	ePZX	11	43	07.5	29.0		0.5	0.5	1.5	0.8	1.8	0.7		
24	ePZX	12	34	47.2										
	iXZX		34	48.3	43.5		7.4	0.5X	14	0.8S	9.1	1.0S		
24	ePZX	13	50	48.0	35.5		3.8	0.5	4.2	0.7	3.2	0.7		
24	ePZX	14	02	07.7	29.3		0.7	0.5	0.7	0.6	0.5	0.6		
24	ePZX	14	05	19.0	51.5		3.9	0.6	5.0	0.8	2.8	0.8		
24	ePZX	14	07	01.1	38.5		1.2	0.6	1.9	0.6	1.3	0.7		
24	ePZX	14	30	22.0										
	iXZX		30	23.5	52.5		2.0	0.7	3.0	0.8	2.3	0.7		
24	ePZX	14	48	40.4	28.7		0.5	0.5	0.5	0.6	0.4	0.7	+0.4	
24	iPZX	15	33	17.3										
	eX1Z		33	26.1										
	eX2Z		33	40.5			2.1	0.6X2	4.8	0.7X2	3.6	0.7X2		
24	ePZX	16	02	02.1	50.0		0.5	0.6	0.7	0.6	0.5	0.7		
24	ePZX	16	52	20.3										
	eXZX		52	24.3	46.3		0.6	0.5X	0.8	0.7S	0.6	0.6S		
24	ePZX	17	42	28.0	47.7		0.5	0.7	0.9	1.0	0.9	0.8		
24	ePZX	17	45	24.5	38.2		1.0	0.6	2.0	0.7	1.9	0.8		

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Date	Phase	Time(JST)			P-S		
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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion	
		h	m	s	m	s	Z	N	E						
26	iPZX	00	16	02.1				09.1	1.6	0.5	4.0	0.2	3.1	0.2	+1.8
	iXZX		16	09.0											
26	ePZX	00	18	46.5				42.0	5.0	0.6	9.8	0.8	6.3	0.7	
	iXZX		18	48.7											
26	ePZX	01	26	04.0				33.5	0.5	0.6	0.8	0.5	0.4	0.8	
	ePZX		01	54	04.1				17.7	3.0	0.6	3.1	0.5	3.0	0.5
26	iPZX	02	13	47.0				30.4	4.7	0.6	9.6	0.6	4.8	0.8	-0.6
	ePZX		03	08	32.0				52.0	4.3	0.8	6.3	0.8	3.9	0.7
26	ePZX	03	24	08.2				30.8	2.9	0.5	6.4	0.7	3.4	0.7	
	ePZX		05	24	25.0				31.4i	2.2	0.6	4.7	0.7	2.9	0.9
26	ePZX	05	42	08.6				30.8	3.0	0.7	8.0	0.7	4.2	1.2	
	eSE		05	43	56.2				2.4	0.7	4.8	0.8	2.5	0.7	
26	ePZX	05	46	11.0				33.7	0.8	0.3	1.1	0.6	0.8	0.6	
	ePZX		06	01	32.1				38.5	0.6	0.5	1.3	0.6	0.8	0.7
26	ePZX	06	27	31.5				29.5	0.5	0.5	1.0	0.5	0.8	0.5	
	ePZX		06	31	02.0				56.8	0.5	0.5	0.7	0.5	0.5	0.6
26	ePZX	08	12	23.0				30.1	0.8	0.6	0.7	0.7	0.6	0.7	
	ePZX		08	28	45.5				38.0	8.8	0.5	13.0	0.8	11.5	0.7
26	ePZX	09	47	36.5				10.9	0.5	0.6	0.6	0.4	0.5	0.5	
	ePZX		10	19	11.3				38.3	1.7	0.5	2.2	0.6	1.8	0.7
26	ePZX	11	38	51.0				43.6	1.9	0.8	3.9	0.8	3.7	0.8	
	ePZX		12	05	35.3				33.9	0.8	0.6	0.7	0.6	0.6	0.7
26	ePZX	12	15	53.0				29.5	1.2	0.5	1.2	0.6	1.0	0.5	
	ePZX		15	27	34.4				54.8	1.1	1.0	1.8	0.7	1.7	0.6
26	ePZX	19	12	06.2				29.4	0.5	0.5	0.3	0.6	0.4	0.6	
	iPZX		21	02	13.9				13.2i	1.3	0.5	1.9	0.5	1.2	0.4
27	ePZX	03	16	16.1				16.7i	0.5	0.5	0.9	0.5	0.9	0.3	+0.4
	ePZX		05	44	02.5				46.1	11.4	0.9	16.9	0.8	12.7	1.3
27	iXZX		04	05.2											
27	ePZX	06	09	15.3					46.2	0.7	0.8	1.0	0.7	0.7	0.5
	iXZX		09	16.7											
27	ePZX	08	10	22.3					40.8	0.9	0.7	1.5	0.8	1.0	0.7
	iPZX		08	39	46.0				30.5	14.6	0.9	36.3	0.7	16.5	0.8
27	iPZX	09	11	12.1											
	iXZX		11	14.0					40.4	10.0	0.8	20		14.0	0.9
27	ePZX	09	28	07.8					29.5	0.7	0.5	1.2	0.5	0.8	0.5
	ePZX		10	11	21.5										
27	iXZX		11	24.5					45.7	36.2	1.0	60.3	1.1	50	1.0
27	iSN	10	14	32.6					25			55		30	
27	ePZX	10	18	07.0											
	iXZX		18	08.8					40.0i	8.0	1.0	10.4	1.0	9.4	1.1
27	ePZX	10	29	29.1											
	iXZX		29	31.0					44.9	16.7	1.0	29.2	0.9	24.5	1.1
27	ePZX	10	56	30.5					35.3	2.6	0.5	4.3	0.6	2.6	0.7
	ePZX		11	21	50.5										
27	eXZX		22	17.0					1.09.3	0.7	0.9	0.8	0.8	0.9	
27	ePZX		11	30	46.6										
	iXZX		30	48.6					44.7i	5.8	0.5	7.5	0.8	4.8	0.8
** 27	eSN	11	33	01.5						9.6	0.5	28.5	0.8	16.8	1.0
** 27	iPZX	12	27	07.7											
	iXZX		27	10.8					46.3	31.0	1.2	66.0	1.0	36.5	1.0
27	eSZ	12	28	56.5						46.0	1.0	S0	1.5	42.2	0.9
27	ePZX	12	33	29.8											
	iXZX		33	32.0					54.7	27.0	1.2	56.3	1.2	40.0	1.2
27	ePZX	12	44	47.8											
	iXZX		44	49.8					41.9	3.7	1.0	8.5	0.9	4.9	0.8
27	ePZX	12	50	44.3											
	iXZX		50	45.8					41.7	3.0	1.0	4.2	0.9	3.6	0.9
27	ePZX	13	22	44.0					42.2	0.8	0.8	1.4	0.8	1.4	0.9
27	ePZX	13	40	37.5					38.0	1.3	0.6	2.2	0.7	1.5	0.6
27	ePZX	15	20	14.7					34.5	0.9	0.8	1.7	0.6	1.3	0.6
27	ePZX	17	06	31.8					44.9	0.5	0.8	0.8	0.8	0.7	0.9
27	ePZX	17	19	59.3											
	iXZX		20	05.0					46.7	0.7	0.7	1.0	0.9	1.1	-6.4
27	iPZX	18	42	36.5					07.5i	10.7	0.8	30.0	0.3	18.2	0.4
** Addendum		27	ePZX	11	38	53.3			31.4	1.2	0.6	1.9	0.6	1.3	0.8

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)	
		h	m	s	m	s	Z	N	E				
29	iPZX	05	44	04.5			14.3	2.5	0.1X	2.1	0.8S	1.4	0.5
29	iXZ		44	06.2			10.3	0.5	0.5	0.6	0.6	0.6	0.4
29	ePZX	05	54	13.3									
29	ePZX	06	36	17.0			46.5	18.0	0.7	33.0	0.9	28.3	0.6
29	iXZ		36	19.5									
29	ePZX	07	09	44.0			45.5i	4.9	1.1	8.5	1.3	6.3	1.0
29	iXZX		09	46.0									
29	ePZX	08	13	44.1			3 36.4	0.7	0.7X	0.9	0.7S	0.6	0.5S
29	ePZX	09	28	34.7			41.3	0.7	0.5X	0.4	0.7S	1.0	0.9S
29	ePZX	09	35	39.5			49.3	1.3	0.9	1.5	0.8	1.4	1.2
29	iXZX		35	41.4									
29	iPZX	10	02	57.8			46.9	4.0	1.0	7.2	0.9	5.0	1.3
29	iXZX		02	59.8									
29	iPZX	11	51	50.0			54.8	0.5	0.4X	0.5	0.7S	0.5	0.5X
29	iXZX		52	00.1									
29	iPZX	12	10	02.5			47.5	22.0	1.1	44.0	0.9	26.0	1.3
29	iXZ		10	05.4									
29	ePZX	13	23	47.1			58.2	0.5	0.7	0.5	0.9	0.5	1.2
29	iPZX	16	36	29.1			10.4i	1.8	0.5	2.1	0.3	2.0	0.3
29	ePZX	18	21	00.2			35.9	1.0	0.5	1.8	0.7	1.5	0.6
29	iPZX	19	10	29.5				0.6	0.5	0.5	0.5	0.4	0.5
29	ePZX	19	14	39.6			31.6	0.6	0.6	0.9	0.5	0.8	0.5
29	ePZX	22	29	58.3			12.1i	1.3	0.6	1.7	0.4	1.6	0.4
30	ePZX	01	20	47.3			11.8	1.4	0.7	1.8	0.5	1.5	0.5
30	ePZX	05	44	21.2			40.5	0.5	0.5	0.7	0.3	0.7	0.3
30	iPZX	11	31	03.6			05.2i	0.8	0.4	4.9	0.3	1.7	0.2
30	ePZX	11	47	53.1			42.9i	1.8	0.7	2.2	0.5	1.5	0.7
30	ePZX	11	51	17.5									
30	iXZX		51	25.5			45.0	1.0	0.6	1.8	0.5	1.4	0.7
30	ePZX	14	50	20.2									
30	iXZX		50	22.4			44.8i	2.3	0.4X	2.0	0.5S	1.9	0.5S
30	ePZX	14	50	37.8			43.3	4.8	0.7	7.0	0.7	5.0	0.8
30	ePZX	14	57	43.7									
30	iXZX		57	45.5			43.9	1.4	0.7	1.5	0.6	1.3	0.8
30	iPZX	15	53	31.2									
30	iXZ		53	34.1			47.3	31.9	1.2	41	1.2	S0	
30	ePZX	15	58	34.8									
30	iXZX		58	36.5			45.8	2.0	0.7	3.0	0.7	1.9	0.7
30	iPZX	16	12	36.6									-1.1
30	iXZ		12	40.8									
30	eXZ	16	18					2.8	0.7	3.0	0.8	2.3	0.8
30	ePZX	16	23	08.1			45.5	7.2	1.4	9.0	1.3	8	
30	ePZX	16	28	36.2									
30	eXN		29	41.7				1.5	0.8X	2.4	0.7X	1.8	1.0X
30	ePZ	16	29	05.4									
30	eXZ		30	12.5				4.1	0.8X	7.2	0.8X	7.0	1.3X
30	ePZX	16	31	01.5									
30	eXZ		32	10.8				2.0	0.6X	2.8	0.6X	2.5	0.8X
30	ePZX	16	37	50.5			46.5	1.0	0.5P	1.1	0.8S	1.3	0.7S
30	ePZX	16	40	56.0									
30	iXZX		40	57.8			46.3	2.5	1.0	6.7	0.8	4.2	0.8
30	ePZX	16	42	43.9									
30	iPZX	16	55	12.6									
30	iPZX	17	29	02.3									
30	iXN		29	06.4			47.7			SO		SO	
30	ePZX	17	36	13.6			45.1	1.2	0.7	2.3	0.7	1.6	0.9
30	ePZ	17	38	18.8			53.0	17.4	1.0	29	0.9	30	1.0
30	ePZX	17	43	58.7									
30	eX1N		44	44.7									
30	eX2N		45	07.5				1.0	0.7X2	1.8	0.7X2	1.1	0.8X2
30	ePZX	17	46	01.2			45.8i	6.4	1.0	11.1	0.9	6.8	0.9
30	iXZX		46	02.8									
30	ePZX	17	49	05.0			43.5	10.5	0.9	24.5	1.4	14.8	1.5
30	ePZX	17	52	56.3			58.2	0.8	0.6	1.6	0.8	0.8	0.7

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)
		h	m	s	m	s	Z	N	E		
30	ePZX	18	01	23.0							
	iX1ZX		02	02.0			0.9	0.9X2	2.3	0.7X2	1.3
	eX2N		02	24.0			1.5	0.9	2.0	0.7	1.3
30	ePZX	18	07	27.9	53.3		0.7	1.1	1.4	1.0	1.0
30	ePZX	18	18	21.3	1 03.2		0.5	0.7	0.9	0.7	0.8
30	ePZX	18	36	25.0	44.2		1.3	0.6	1.7	0.8	0.7
30	ePZX	18	38	38	35.2						
30	ePZX	18	45	34.1							
	iX1ZX		45	51.0							
	iX2ZX		46	02.2							
	eX3N		46	33.7			1.9	1.0X3	3.8	0.8X3	2.3
30	ePZX	18	52	15.9			0.8	0.7	1.5	0.8	1.1
	iXZX		52	17.2	44.6		1.6	0.5X	1.5	0.7S	0.9
30	ePZX	19	00	52.7			54.0				0.6X
	iXZX		00	54.7							
30	ePZX	19	02	58.7			5.5	0.5	9.5	0.7	7.7
	iXZ		03	00.2	47.8		5.4	0.5P	8.8	0.9S	5.3
30	ePZ	19	12	39.2	45.3						0.7S
30	ePZX	20	27	01.5							
	iXZX		27	02.8	48.2		2.6	0.7	4.0	0.9	3.8
30	ePZ	20	37	11.3	44.31		2.3	0.7	4.0	1.3	2.9
30	ePZX	20	51	21.1	1 05.7		0.6	0.4P	0.7	0.4S	0.5
30	ePZX	22	57	34							
	eXN		58	19.3			0.7	0.5X	1.0	0.6X	0.9
30	eXN	22	59	23.5			1.2	0.7	2.3	0.8	1.3
31	ePZX	01	08	49.7	46.3		0.5	0.7	0.5	0.5	0.5
31	iPZX	02	23	57.5	09.61		1.0	0.7	1.2	0.3	1.5
31	ePZX	03	08	00.4							-0.4
	iXZ		08	09.6	49.3		1.3	0.5X	1.4	0.7S	0.7
31	ePZX	03	41	50.6							
	iXZX		41	53.1	56.4		10.7	0.8	27.3	0.8	9.8
31	ePZX	04	04	38.1	47.4		0.5	0.4P	0.5	0.8S	0.4
31	ePZX	06	10	55.6							
	iXZ		11	01.6	44.0		1.2	0.5X	0.7	0.5X	0.5
31	ePZX	07	38	06.8	55.7		0.8	0.7	1.3	0.7	0.9
31	ePZX	07	41	09.8							
	iXZX		41	25.5	1 01.9		0.7	1.0	1.3	0.8	0.9
31	ePZX	07	57	47.8	55.8		1.4	0.7	1.9	0.8	1.3
31	ePZX	08	55	15.2	41.0		0.8	0.7	1.0	0.5	0.8
31	ePZX	10	01	14.4							
	iXZX		01	16.3	47.3		5.5	1.0	8.4	0.8	6.8
31	ePZX	10	18	53.7	1 28.3		1.9	0.7	2.9	0.7	2.0
31	ePZX	11	51	31.6	31.4		16.8	0.9	20.5	1.3	16.3
31	ePZX	12	16	10.8	31.31		14.5	1.0	23.8	1.2	17.3
31	ePZX	12	59	05.4	41.1		1.3	0.6	2.5	0.6	1.6
31	ePZX	13	11	23.7	44.8		0.5	0.7	1.4	1.0	0.8
31	ePZX	13	13	47.8							
	iXZX		13	49.2	39.7		0.5	0.4X	0.5	0.8S	0.3
31	ePZX	20	27	50.4	30.6		1.3	0.8	1.6	1.0	1.5
31	ePZX	21	24	45.0	41.7		1.2	0.4	2.5	0.6	1.3
31	ePZX	22	13	45.1	48.5		0.5	0.5	0.6	0.5	0.5

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Date	Phase	Time(JST)	P-S	Amplitude(mm)			Period(sec)			Initial motion(mm)	
				h	m	s	Z	N	E		
1	iPZX	00 36 35.0		10.2	0.9	0.5	1.1	0.2	0.7	0.5	+0.7
1	ePZX	00 41 24.6		38.5	1.3	0.6	1.9	0.7	1.7	0.6	
1	ePZX	03 08 35.0		31.0	1.0	0.5	1.5	0.5	1.4	0.5	
1	ePZX	05 52 20.8		22.2	0.9	0.6	1.1	0.3	0.9	0.3	
1	ePZX	05 54 12.3		36.8	1.8	0.6	3.5	0.5	1.8	0.7	
1	ePZX	07 17 49.6									
	iXZ	17 53.5		38.6	35	0.6	S0	S0			
1	iPZX	09 32 36.1		14.4	4.9	0.5	8.0	0.9	5.8	0.6	+1.5
1	ePZX	10 07 21.3		36.2	1.6	0.5	2.3	1.2	1.5	0.8	
1	ePZX	10 09 48.0		38.0	1.5	0.9	3.8	0.6	3.3	1.1	
1	ePZX	11 09 25.2		44.8	0.6	0.4P	1.0	0.8S	0.8	0.7S	
1	ePZX	12 10 33.1		28.5	2.3	0.6	3.5	0.5	2.5	0.4	
1	ePZX	12 36 46.0									
	iXZ	36 47.3		45.5	1.7	0.6	3.2	0.8	3.1	0.7	
1	ePZX	15 48 47.1		09.6	0.9	0.5	2.0	0.2	1.8	0.2	
1	ePZX	16 26 05.2		50.3	0.8	0.6	1.4	0.6	1.0	0.6	
1	ePZX	17 52 24.2		24.6	1.2	0.7	1.6	0.7	1.4	0.9	
1	iPZX	18 46 25.6									+1.2
	eXN	46 38.5		24.4	23.0	0.8	40.0	0.6	27.2	0.7	
1	ePZX	18 50 45.9		42.9	21.8	0.5P	S0	S	S0	S	
1	eSN	18 54 03.5			4.6	0.5	7.0	0.6	4.2	0.5	
1	ePZX	19 02 23.7									
	iXZX	02 25.9		41.6	0.6	0.5P	0.8	0.7S	0.6	0.5S	
1	ePZX	19 10 19.9		20.7	0.8	0.7	1.3	0.3	0.8	0.8	
1	ePZX	20 12 32.8		22.0	0.5	0.6	0.5	0.7	0.4	0.3	
1	ePZX	20 20 54.7									
	eXZ	21 07.9		20.3	2.5	0.7	3.1	0.6	1.7	0.4	
1	ePZX	21 01 45.2		23.3	1.1	0.3	1.8	0.6	1.0	0.3	
1	ePZX	21 13 40.8		49.7	0.7	0.8	1.5	1.6	1.4	1.4	
2	ePZX	00 03 32.7									
	eXZ	03 44.7		19.4	0.9	0.4	1.8	0.5	1.3	0.3	
2	ePZX	00 52 21.9		53.8	0.5	0.7	0.8	0.5	0.7	0.4	
2	ePZX	01 02 20.7		40.8	0.9	0.5	0.8	0.7	0.6	0.7	
2	ePZX	01 07 35.6		41.7	2.6	0.5	4.9	0.5	3.0	0.5	
2	ePZX	01 52 20.3		21.2	0.7	0.5	0.8	0.5	0.5	0.2	
2	ePZX	02 03 39.1									
	iXZX	03 41.9		42.5	1.7	0.5X	1.4	0.5S	1.0	1.0S	
2	ePZX	02 22 07.1		36.9	0.7	0.7	0.9	0.8	0.5	0.7	
2	ePZX	02 31 48.1		22.4	1.2	0.6	1.7	0.6	1.5	0.6	
2	ePZX	03 36 29.2		28.51	1.0	0.7	1.9	0.9	1.4	0.7	
2	iPZ	03 48 06.0									-1.4
	iPN	06.0			13.4						-1.2
	iPE	06.0				34.0	0.6	29.3	0.6	27	-0.4
2	iPZX	07 15 50.2									+0.8
	iXZX	15 51.1		22.3	10.8	0.6	19.0	0.6	15.5	0.7	
2	ePZX	10 28 12.8		29.2	0.7	0.4	0.9	0.9	0.6	0.6	
2	iPZX	12 15 47.3									+1.2
	iXZX	15 54.8		09.91	1.0	0.6	3.5	0.2	1.4	0.2	
2	ePZX	12 48 09.1		47.7	0.5	0.6	0.9	0.8	0.6	0.7	
2	iPZX	13 06 39.7									+0.5
	iX1ZX	06 45.0									
	iX2ZX	06 56.8									
	iX3ZX	07 30.3									
2	iPZX	16 16 52.8		25.81	1.3	0.5	1.5	0.5	1.0	0.6	+0.5
2	ePZX	16 19 49.7		1 05.5	0.5	0.6	0.5	0.4	0.5	0.6	
2	ePZX	16 22 43.5									
	iXZX	22 53.7		55.0	0.6	0.5X	0.8	0.7S	0.4	0.7S	
2	ePZX	17 43 34.0									
	iXZX	43 36.0		40.6	1.5	0.5	1.7	0.6	1.5	1.0	
2	ePZX	18 04 56.5		11.9	0.7	0.4	0.9	0.4	0.6	0.4	
2	ePZX	21 09 05.3									
2	ePZX	21 39 58.2		2 07.5	0.7	0.9	1.3	1.1	1.2	0.9	
2	ePZX	21 46 24.0			0.7	0.6	0.4	0.8	0.2	0.7	

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Date	Phase	Time(JST)	P-S	Amplitude(mm)			Period(sec)			Initial motion(mm)	
				h	m	s	Z	N	E		
3	ePZX	00 13 36.0		25.7	0.8	1.0	0.9	0.7	0.4	0.9	
3	ePZX	00 20 55.7		48.3	4.9	0.8	8.0	1.3	5.0	0.9	
3	iXZX	20 25 40.8		46.5	0.7	0.7	1.1	0.9	1.3	0.9	
3	ePZX	02 22 38.7		38.7	10.6	i	38.6	9.2	0.2P	10.7	0.4S
3	iPN										
3	iPE										
3	ePZX	04 39 19.8		50.6	1.5	0.6	2.5	0.6	2.0	0.7	
3	ePZX	06 27 41.6		51.9	1.9	0.7	3.1	0.7	2.9	1.1	
3	ePZX	09 16 27.3		21.9	1.2	0.4	1.8	0.3	1.1	0.3	
3	ePZX	10 33 30.7		38.1	0.5	0.6	0.8	0.7	0.5	0.5	
3	iPZX	11 02 46.8		08.7i	1.3	0.3	2.0	0.2	1.7	0.2	
3	ePZX	13 20									

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)			
		h	m	s	m	s	Z	N	E	2.3	0.6	2.8	0.7	2.3	0.7
7	ePZX	01	20	04.8	2	04.8	2.3	0.6	2.8	0.7	2.3	0.7			
7	ePZX	03	59	27.2			39.3i	10.8	0.7	15.3	0.6	14.4	0.9		
7	ePZX	05	13	18.1			54.1	2.3	0.5X	1.6	0.7S	0.8	0.6S		
7	ePZX	08	05	52.0			40.3	1.6	0.5	2.5	0.6	1.4	0.9		
7	iXZX	05	53.8				0.6	1.1	0.7	1.3	0.4	1.1			
7	ePZX	09	26	39.0			59.7	0.5	0.8	0.9	0.8	0.6	0.8		
7	ePZX	09	48	01.8			39.7	1.0	0.7	1.6	0.8	1.1	0.7		
7	ePZX	10	23	30.8			08.6i	0.5	0.5	1.5	0.2	0.8	0.3	+1.1	
7	iPZX	11	46	16.8			12.1	2.7	0.9	2.5	0.7	2.3	0.8	+0.5	
7	iPZX	14	07	49.3											
7	ePZX	15	35	14.0											
7	iXZX	35	15.9				40.8	0.7	0.5X	0.8	0.6S	0.5	0.8S		
7	iPZX	15	41	36.0										-0.7	
7	iXZX	41	38.0				44.2	3.3	0.5X	3.2	0.8S	2.8	1.0S		
7	ePZX	16	39	56.5			15.4i	1.1	0.6	1.4	0.3	1.3	0.6	-0.6	
7	iPZX	17	39	36.1				2.8	0.8X	4.0	0.8X	2.5	1.3X		
7	iXZX	39	47.1												
7	ePZX	21	34	39.0			46.7	15.0	0.7	22.9	1.0	21.5	0.8		
7	ePZX	23	32	21.2			43.5	1.0	0.5	1.5	0.6	1.2	0.7		
8	ePZX	03	44	39.8			1 07.4	9.8	0.7	19.3	1.0	10.5	1.3		
8	iXZX	44	41.4				50.2	1.0	0.8	1.6	0.9	0.9	0.7		
8	ePZX	03	48	26.8											
8	ePZX	03	59	29.6											
8	iXZX	59	31.0				51.0	1.4	0.7	3.0	0.8	1.4	0.7		
8	ePZX	05	05	01.8											
8	iXZX	05	03.9				44.9	2.9	0.7	4.9	0.9	3.9	0.7		
8	ePZX	05	37	52.2											
8	iXZX	37	54.2				50.8	1.4	0.5X	0.9	S	0.8	0.6S	*	
8	ePZX	06	03	06.6											
8	iXZX	03	08.5				45.1	0.8	0.5X	1.2	0.7S	0.7	0.7S		
8	ePZX	10	41	24.5			48.3	0.7	0.6	0.9	0.9	1.1	0.6		
8	ePZX	11	34	17.0			47.6	1.3	0.6	2.7	0.6	1.5	0.8		
8	ePZX	11	38	51.3											
8	iXZX	38	53.1				42.7	3.0	0.7	4.0	0.7	3.6	0.8	+0.7	
8	iPZ	11	44	21.8			10.1i	13.7	0.6	18.0	0.5	14.5	0.6		
8	iPZ	11	58	29.1										+1.6	
8	iXZ	58	30.7				13.4	5.5	0.3X	6.0	0.3S	3.2	0.2S		
8	iPZX	13	17	25.4			10.2	1.2	0.4	2.1	0.7	1.0	0.7	-1.8	
8	ePZX	13	57	57.5			45.5	2.3	0.6	3.8	0.6	2.5	0.7		
8	ePZX	18	48	46.0											
8	iXZX	48	47.4				48.2	0.9	0.5X	0.9	0.8S	0.7	0.7S		
8	ePZX	21	54	12.0			1 14.5	0.5	0.9	0.7	0.9	0.5	0.7		
8	ePZX	21	54	47.1			23.2	0.6	0.3	1.0	0.4	0.5	0.3	-4.2	
8	iPZX	22	02	17.3			09.5i	2.4	0.4	7.8	0.3	3.2	0.4		
9	ePZX	05	51	57.8											
9	ePZX	05	58	35.9			58.2	0.9	0.7	1.5	0.7	1.1	0.8		
9	ePZX	12	27	08			50.2	1.4	0.8	3.0	0.9	2.7	1.2		
9	iPZX	14	17	34.5			1 38.8	1.1	0.6	1.2	0.6	0.9	1.2		
9	iPZX	15	36	14.8			2 19.1	8.2	1.7P	10.7	1.6P	7.8	1.6P	+2.0	
9	iPZX	18	20	49.7			39.3	0.8	0.6	0.8	0.8	0.5	0.5	+0.4	
9	iPZX	20	36	18.7			09.8i	2.1	0.2P	2.5	0.6S	1.9	0.3S	-5.0	
9	iPZX	22	44	35.3										+1.0	
9	iXZX	44	42.0				08.7	2.4	0.5	2.8	0.6	2.8	0.4		
10	iPZX	00	06	38.2			28.8	0.5	0.4	1.4	0.4	1.3	0.5	+0.6	
10	ePZX	05	37	56.1											
10	iXZX	37	58.9				51.4	3.0	0.6X	3.2	1.0S	2.2	0.7S		
10	ePZX	08	51	29.0			44.0	1.2	0.7	2.8	1.0	1.8	0.7		
10	ePZX	08	53	28.7			41.6	4.7	0.6	10.5	0.9	6.1	0.8		
10	ePZX	13	22	23.1			38.6	1.2	0.6	1.9	0.5	1.4	0.6		
10	ePZX	16	16	41.0			40.7	1.1	0.5	2.8	0.7	1.9	0.7		

Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion
		h	m	s	m	s	Z	N	E	2.		

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)		
		h	m	s	m	s	Z	N	E	0.6	0.5	1.3	0.3	0.7	0.3	
15	ePZX	07	45	28.6	09.2		0.6	0.5	1.3	0.3	0.7	0.3				
15	ePZX	08	04	27.3												
	iZXZ		04	29.5	43.7i		8.9	0.6	8.5	0.7	5.9	0.6				
15	iPZX	11	11	41.6	09.9i		0.8	0.5	1.3	0.5	0.9	0.3	-0.6			
15	ePZX	19	18	01.3	37.5		2.0	0.5	3.5	0.6	2.3	0.6				
15	iZXZ	12	28	20.0	46.2		1.2	0.4X	1.7	1.0S	1.2	0.8S				
15	ePZX	20	27	31.8	54.4		1.8	0.5X	1.3	0.9S	0.8	0.9S				
15	iZXZ	27	33.7	43.0	1.9	0.9	3.8	0.9	1.9	1.1						
15	ePZX	21	00	56.7	34.0		1.8	0.6	2.3	0.6	1.5	0.9				
15	ePZX	23	11	10.0	1 26.7		5.8	0.7	14.9	0.8	8.8	0.8				
15	ePZX	23	31	25.3												
15	ePZX	23	50	51.9												
	eXN	51	13.5													
16	ePZX	02	02	35.4	2 07.6		0.7	0.7	0.9	0.7	0.8	0.6				
16	ePZX	03	49	22.3	1 22.7		13.8	0.9	26.2	0.7	19.9	0.7				
16	ePZX	03	52	55.5	1 16.9		0.7	0.7	1.4	0.7	1.0	0.8				
16	ePZX	05	21	13.3	38.4		0.9	0.9	1.3	0.7	1.2	0.6				
16	ePZX	10	18	53.3	1 26.2		19.2	0.9	30.3	0.8	26.9	0.8				
16	ePZX	10	27	19.1	1 18.1		1.6	0.8	2.4	0.9	1.9	0.9				
16	ePZX	10	34	49.0	1 16.1		0.8	0.7	1.4	0.8	1.2	0.7				
16	ePZX	11	24	18.8	1 20.0		4.4	0.9	9.6	0.7	6.0	0.9				
16	ePZX	11	31	32.5	37.2		1.3	0.6	2.2	0.5	1.9	0.9				
16	ePZX	16	23	49.7												
	iZXZ	23	51.9		36.3		1.8	0.5	3.5	0.7	2.4	0.8				
16	ePZX	22	35	36.8	32.5		0.5	0.7	1.0	0.7	0.5	0.7				
16	ePZX	22	44	07.4	43.6		0.5	0.7	0.9	0.6	0.8	0.7				
16	iPZX	23	34	09.9	12.8i		9.2	0.5	13.2	0.5	11.9	0.5	+1.1			
16	iPZX	23	41	30.2			1.7	0.7P	1.0	1.2P	0.8	1.1P	-1.0			
17	ePZX	02	10	12.0	34.5		1.0	0.4	1.8	0.5	1.3	0.5				
17	iPZX	04	43	02.7	18.6i		4.9	0.5	7.3	0.5	6.4	0.5	-0.6			
17	ePZX	06	19	32.8	40.5		1.2	0.6	2.0	0.8	1.7	0.8				
17	ePZX	08	09	03.7	44.2		0.5	0.5	1.0	0.6	0.5	0.5				
17	ePZX	09	03	34.6	1 39.4		0.7	1.0	0.9	1.1	1.0	1.0				
17	ePZX	10	07	42.2												
	eZX	07	51.5		20.4		0.7	0.6	0.9	1.0	0.6	0.6				
17	ePZX	11	57	26.7	49.2		3.4	0.5	4.2	0.9	2.3	0.8				
17	ePZX	14	36	02.6	39.1		0.5	0.5	1.0	0.6	0.5	0.5				
17	ePZX	17	28	27.0	48.0		0.6	0.4P	0.5	0.8S	0.4	0.7S				
17	ePZX	18	02	13.6	41.9		0.5	0.7	0.9	0.7	0.5	0.6				
17	ePZX	18	11	21.3	51.7		0.7	0.7	1.2	0.7	1.0	0.7				
17	ePZX	22	07	08.5												
	iZXZ	07	09.4		14.7		0.5	0.2X	0.2	0.5S	0.2	0.2S				
17	ePZX	22	20	05.0	52.6		0.9	0.5	1.4	0.8	1.2	0.7				
18	ePZX	00	06	13.2	39.3		0.7	0.5	1.2	0.6	0.8	0.6				
18	ePZX	01	07	12.0												
	iZXZ	07	14.3		44.1i		2.2	0.4	2.9	1.0	1.7	1.1				
18	ePZX	02	20	36.6	53.9		0.7	0.6	0.8	0.8	0.6	0.6				
18	iPZX	03	44	11.7			2.8	1.5	2.3	1.2	2.4	1.2	+1.2			
18	iPZX	03	54	31.6			0.8	0.6	0.9	0.9	0.5	1.3	+0.6			
18	ePZX	04	42	58.0	32.6		0.9	0.5	1.3	0.9	1.0	1.0				
18	iPZX	07	29	50.4	13.7i		0.8	0.4	1.4	0.2	1.1	0.4	+0.3			
18	ePZX	10	42	16.3												
	iZXZ	42	18.3		43.1		2.5	0.5X	2.3	0.7S	2.1	0.7S				
18	ePZX	11	21	14.5	29.2		0.7	0.5	0.8	0.6	0.7	0.5	+1.0			
	iZXZ	34	19.2													
	eX2N	34	27.0													
	eX3N	34	35.2													
18	ePZX	15	09	07.3	21.0		3.3	0.5	3.4	0.3	2.2	0.6				
18	ePZX	19	34	38.2	44.6		0.7	0.7	1.1	0.7	0.8	0.7				

** Observation was interrupted
from 20h 00m to 21h 30m, 18th.

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
h	m	s	m	s	Z	N	E	0.6	0.5	1.3	0.3	0.7		

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	N	E	1.4	0.5	0.7	
23	ePZX	05 55 36.6	34.6	0.5	0.4	1.4	0.5	0.7	0.7	0.7	0.7	
23	ePZX	11 25 26.8	1 22.6	0.8	0.3P	4.8	1.0S	3.0	0.7S			
23	ePZ	13 07 19.5	26.7	1.8	0.3	3.5	0.3	2.3	0.3			
23	ePZ	13 44 37.2	35.7	5.4	0.4	18.5	0.7	10.2	0.7			
23	ePZ	14 19 29.0	10.9	1.4	0.3	2.0	0.3	1.6	0.4			
23	ePZX	17 27 13.2	29.6	0.8	0.5	1.7	0.6	0.9	0.8			
23	ePZX	18 54 09.1	33.4	2.3	0.5	2.5	0.7	2.3	0.7			
23	ePZX	20 14 45.3		1.1	0.4	1.8	0.3	1.0	0.5			
24	ePZ	03 46 41.8	08.5i	2.1	0.2	2.7	0.2	2.1	0.5			
24	ePZ	07 18 25.0	52.8	0.8	0.3P	0.8	0.5S	0.8	0.5S			
24	iPZX	17 29 19.1	09.5	1.8	0.3	2.0	0.5	2.0	0.5	-1.1		
25	ePZX	17 31 01.2	48.9	0.9	0.6	2.0	0.9	1.5	0.8			
25	iPZX	21 29 44.4	07.1i	0.8	0.3	1.8	0.3	0.9	0.2	-2.7		
25	ePZX	21 33 58.9	41.3	0.7	0.4P	0.4	0.5S	0.2	0.5S			
25	ePZX	22 04 51.5	42.2	0.7	0.4P	0.5	0.5S	0.3	0.5S			
26	ePZX	02 19 52.5	1 43.5	0.5	0.3P	0.3	0.7S	0.3	0.6P			
26	ePZX	04 00 58.7	38.6	0.5	0.5	0.9	0.7	0.9	0.7			
26	ePZX	07 14 54.4	26.1	1.2	0.6	1.5	0.5	1.6	0.6			
26	ePZX	11 48 42.7	39.0	0.5	0.4	1.0	0.4	0.8	0.6			
26	ePZX	14 54 12.0	55.0	1.5	0.5P	2.7	0.7S	1.9	0.8S			
26	ePZX	17 39 52.0	11.2	0.5	0.4	0.7	0.3	0.8	0.3			
26	ePZX	19 17 17.9	39.8	3.3	0.5	6.5	0.6	4.3	0.5			
26	ePZX	20 39 00.1	40.6	0.8	0.2P	2.6	0.6S	2.0	0.9S			
26	iPZX	23 26 12.5	12.7i	2.4	0.3	3.6	0.3	3.0	0.5	-3.0		
27	iPZX	13 03 08.2	42.7	25		S0	15			+0.6		
27	ePZX	15 36 54.2	16.2	0.8	0.5	0.9	0.3	0.7	0.8			
27	ePZX	17 53 22.5	2 05.1	0.8	0.3P	0.8	0.7S	0.7	1.3S			
27	iPZX	21 38 41.6	10.4i	0.5	0.4	0.9	0.3	0.7	0.4	-0.4		
27	iPZX	23 22 31.4	29.2	0.7	0.5	2.2	0.6	1.2	1.1	-0.6		
28	ePZX	09 00 25.3	10.2	0.6	0.3	0.7	0.4	0.9	0.5			
28	iPZX	10 05 05.2	08.1i	1.3	0.4	5.0	0.3	2.0	0.6	+1.0		
28	ePZX	11 56 29.1										
	iXZX	56 30.7	44.5	0.5	0.3X	0.5	0.8S	0.5	0.8S			
28	ePZX	14 58 28.9	17.0	0.9	0.5	3.1	0.6	2.2	0.8			
28	iPZX	16 49 49.5	29.8i	1.3	0.5	3.4	0.5	2.0	0.7	-0.6		
28	iPZ	22 08 53.9	06.8	8.0	0.3	15.9	0.4	8		-0.8		
29	iPZX	00 11 14.0	10.4i	1.9	0.2	5.3	0.3	2.9	0.4	-6.0		
29	ePZX	01 17 53.5	37.0	2.5	0.5	5.6	0.6	3.4	0.7			
29	iPZX	03 06 40.2		0.5	0.7	0.8	0.8	0.4	0.7	+1.0		
29	iPZ	06 54 43.1								-13.6		
	iPN	43.2	05.8i							+2.6		
	iPE	43.1								-1.9		
29	ePZX	07 28 21.9	36.7	0.6	0.3	1.2	0.3	0.5	0.2			
29	iPZX	10 36 30.5	11.1i	3.0	0.4	7.0	0.3	4.0	0.5	-3.0		
29	ePZX	10 53 32.2	12.8	0.8	0.3	1.2	0.7	1.0	0.5			
29	ePZX	13 29 14.1										
	iXZX	29 15.6	43.7	0.5	0.3	1.7	0.8	1.8	1.1			
29	ePZX	15 09 17.0	12.8	0.5	0.3	0.7	0.3	0.5	0.6			
29	ePZX	16 16 26.4										
	iXZX	16 27.7	44.6	0.8	0.4X	1.9	0.8S	1.8	1.2S			
29	ePZX	17 04 36.7	42.8	0.5	0.3P	0.9	0.8S	0.8	1.0S			
										+2.0		
30	iPZX	02 59 34.4										
	iX1ZX	59 37.0										
30	iX2N	03 00 40.5	46.4			S0		S0				
30	ePZX	03 04 32.2	47.3i	5.6	0.9	20.8	1.3	20.5	0.9			
30	ePZX	03 23 25.7										
	iXZX	23 27.5	45.1	2.7	0.4X	4.7	0.8S	4.0	0.9S			
30	ePZX	05 15 15.8										
	iXZX	15 18.4	41.7	2.8	0.3X	4.6	0.9S	2.7	0.6S			
30	ePZX	05 42 29.6										
	iXZX	42 31.7	46.6	1.5	0.5X	1.9	0.9S	1.4	0.8S			
30	ePZX	06 37 06.0										
	iXZX	37 09.3	10.5i	0.8	0.3	2.2	0.4	0.8	0.6			
30	iPZX	07 11 55.7	09.6	1.7	0.2P	4.3	0.4S	1.8	0.5S	+6.6		

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	N	E	1.0	0.3X	1.9	
30	ePZX	08 51 11.8				42.0						

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
		h	m	s	m	s	ZX	N	E	2.5	0.7	+0.6	-0.8		
7	iPZX	01	20	06.4	08.7		9.5	0.5	3.2	0.7	2.5	0.7	+0.6		
7	iPZX	05	21	48.5									-0.8		
	iZXZ		21	50.9	50.3		37.5	1.1	18.9	0.8	8.0	0.9			
7	iPZX	06	51	15.6	09.71		7.2	0.2	4.1	0.2	2.0	0.5	-0.8		
7	iPN	22	33	46.3	10.7		S0	S0	S0	S0			+1.8		
8	ePZX	01	26	53.7	17.21		4.2	0.2P	1.4	0.4S	0.9	0.4S			
8	ePZX	10	24	15.4	33.8		3.0	0.6	1.3	0.8	1.3	0.6			
8	ePZX	12	51	52.4											
	iXN		52	03.0	22.81		15	0.3	3.3	0.6	2.8	0.6			
8	ePZX	19	22	25.0	09.61		4.0	0.3	1.3	0.3	1.2	0.2			
8	iPZX	22	25	35.7	06.61		4.5	0.1P	1.4	0.3S	0.8	0.6S	-2.3		
8	iPN	23	19	25.1	09.71		S0	50	0.5	15			-0.6		
9	ePZX	01	10	04.5	36.7		10.3	0.4	3.3	0.2	2.3	0.6			
9	ePZX	01	28	04.6											
	iZXZ		28	07.0	40.6		3.3	0.3P	1.0	0.5S	0.8	0.9S			
9	iPZX	02	51	23.6	09.41		6	0.3	3.1	0.4	1.5	0.3	+6.8		
9	iPZX	08	28	18.1	09.91		4.0	0.5	1.0	0.5	0.8	0.6	+1.6		
9	ePZX	15	33	52.7	12.1		3.7	0.3	1.7	0.4	0.9	0.5			
9	ePZX	18	14	39.1	36.8		2.8	0.7	2.2	0.9	1.3	0.6			
9	ePZX	19	53	51.1	09.7		2.5	0.5	0.7	0.6	0.5	0.7			
9	ePZX	20	02	27.6	09.4		2.8	0.5	0.9	0.6	0.6	0.6			
9	ePZX	23	08	35.8	44.2		38.2	1.0	21.9	1.2	19.8	1.4			
10	ePZX	02	14	04.2	30.8		14.9	0.7	7.7	0.6	8.0	0.8			
10	ePZX	03	57	21.7											
	eXN		59	37	33.6		2.8	0.4S	1.5	0.7S	0.8	0.8X			
10	iPZX	07	04	46.5	18.7		11.0	0.3	4.7	0.5	2.8	0.6	+1.5		
10	ePZX	08	58	18.9											
	iZXZ		58	21.3	57.11		28.3	0.7	12.0	1.1	9.0	0.7			
10	ePZX	09	14	51.6											
	iZXZ		14	54.5	56.41		21	0.3X	16.7	1.5S	12.2	1.5S			
10	ePZX	11	12	18.1											
	iX1ZX		12	20.0											
	iX2ZX		12	29.2	1 24.9		4.8	0.5X2	0.8	0.8S	0.4	0.4X2			
10	iPZX	11	28	37.4									-0.7		
	iZXZ		28	44.0	08.61		4.8	0.3	1.6	0.4	1.7	0.4			
10	iPZX	12	03	59.3	09.21		10.8	0.2P	2.7	0.4S	0.9	0.3S	+1.3		
10	ePZX	14	59	25.7											
	iXZX		59	27.1	47.0		3.7	0.4X	0.7	0.7S	0.5	0.8S			
10	ePZX	15	39	27.5	48.0		5.1	0.6	2.3	0.7	1.8	0.9			
10	ePZX	15	57	29.2											
	iX1ZX		57	30.7											
	iX2ZX		57	40.5	1 24.2		2.9	0.4X2	0.3	0.8S	0.3	0.3X2			
10	iPZX	16	53	53.3	10.2		2.6	0.4	0.8	0.5	0.8	0.5	+0.7		
11	ePZX	02	46	37.3											
	iZXZ		46	40.0	41.61		28.3	1.0	15.3	1.2	11.9	0.9			
11	iPZX	06	54	55.8	06.21		5.0	0.3	1.5	0.4	1.5	0.4	-1.4		
11	ePZX	09	05	50.8	47.0		4.5	0.5	1.3	0.8	1.2	0.7			
11	ePZX	09	21	13.0	41.0		2.5	0.5	1.6	0.7	1.5	0.8			
11	ePZX	09	44	17.8	25.81		7.9	0.3	4.0	0.4	1.8	0.4			
11	iPZX	16	16	09.1	11.9		4.8	0.3	1.8	0.4	1.1	0.5	-0.6		
12	ePZX	02	03	24.1											
	iZXZ		03	25.9	43.0		6.3	0.7	3.9	0.8	2.0	0.9			
12	iPZX	04	35	09.0											
	iXZX		35	16.0	09.01		8.9	0.2	2.0	0.4	2.5	0.3	-1.0		
12	ePZX	05	39	21.8	11.4		3.2	0.2	1.2	0.3	0.7	0.6			
12	ePZX	06	12	01.5	44.5		21.0	0.5	10.3	0.8	8.5	0.8			
12	ePZX	08	22	01.7	10.0		3.5	0.5	1.0	0.5	0.6	0.5	+1.2		
12	iPZX	13	25	53.0	11.71		24	0.5	11.8	0.5	4.6	0.7			
12	ePZX	15	03	13.0	07.11		3.2	0.3	0.8	0.2	1.1	0.2			
12	ePZX	18	51	34.5											
	iXZX		51	36.8	43.0		9.7	0.3X	7.1	0.8S	4.0	0.8S			
12	ePZX	19	23	40.6	41.5		2.7	0.9	1.4	1.2	1.4	0.7			
12	iPZX	20	28	54.0	11.21		5.3	0.5	1.6	0.5	1.2	0.4	+0.5		
12	eXZX	23	26	13.8			3.0	0.4	0.2	0.3	0.4	0.5			

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Date	Phase	Time(JST)			P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
h	m	s	m	s	ZX</th									

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)	
		h	m	s	m	s	ZX	N	E				
19	ePZX	01	04	57.0			19.0	3.9	0.2X	0.6	0.3S	0.3	0.6S
	iXZX		04	58.5			1 31.6	2.5	0.5P	0.2	0.4S	0.3	0.5P
19	ePZX	03	45	51.2			34.8	11.0	0.5	4.0	0.7	3.4	0.6
19	ePZX	04	23	22.7			06.3i	4.5	0.2	2.3	0.2	1.0	0.3
19	iPZX	12	28	10.1									-0.8
19	ePZX	12	48	03.3			39.0	8.5	0.7	3.0	0.9	1.8	0.7
19	ePZX	16	01	36.1			15.4	2.5		0.9	0.4	0.5	0.7
19	ePZX	16	38	08.0									
	iXZX		38	09.5			47.0	5.3	0.5X	2.8	0.8S	1.7	0.8S
19	ePZX	21	30	25.2				8.5	0.9X	5.6	0.8X	4.2	1.0X
	eXE		31	17.8									
19	ePZX	23	23	32.0			14.8	3.7	0.5	1.0	0.5	0.5	0.6
20	ePZX	00	38	16.3			32.6	2.3	0.4	1.1	0.7	0.7	0.7
20	iPZX	03	57	52.6			08.5	5.0	0.3	1.4	0.2	0.9	0.3
20	ePZX	09	40	43.0			11.7	2.5	0.5	0.9	0.5	0.5	0.5
20	ePZX	11	42	30.2			36.9	2.5	0.5	2.0	0.6	0.8	0.6
20	iPZX	13	10	57.0			24	25		25	10		-0.4
20	ePZX	15	22	12.7			39.5i	14.4	0.5	7.9	0.6	5.4	0.6
20	iPZX	21	31	22.8			05.9i	35		60	0.3	13	
20	iPZX	21	47	01.6			09.0i	9.5	0.3	3.8	0.4	2.5	0.5
20	ePZX	22	09	28.0			22.5	12.0	0.7	4.7	1.0	4.3	1.1
21	ePZX	07	05	32.0		2 05.5	5.0	0.6	3.8	0.5	2.8	0.8	
21	iPZX	08	55	52.5									-2.1
	iXZX		55	58.0			07.6i	3.3	0.1X	1.1	0.2S	0.3	0.6S
21	iPZX	10	40	58.1			18.9	51	0.7	34.0	0.6	20	
21	ePZX	11	20	46.1			17.4	4.0	0.4	1.2	0.5	0.9	0.5
21	ePZX	15	18	28.7			13.8	9.2	0.5	2.7	0.3	1.9	0.5
21	iPZX	15	43	04.3			13.2	8.2	0.4	2.8	0.2	2.4	0.6
21	iPZX	17	00	27.2			09.9i	4.5	0.3	1.4	0.5	0.8	0.5
21	ePZX	20	51	42.2			18.2	4.8	0.2	1.4	0.4	0.9	0.5
**													
22	ePZX	00	46	55.1			38.1	3.2	0.8	1.5	0.8	1.4	1.2
22	iPZX	04	02	59.6			08.6i	12.9	0.3	5.1	0.3	3.4	0.5
22	iPZX	04	31	37.9			06.6i	16	0.5	5.8	0.4	4.8	0.3
22	ePZX	07	59	27.5			19.5	2.7	0.2	0.7	0.5	0.8	0.5
22	iPZX	13	27	38.4			05.8i	11.8	0.1P	4.8	0.4S	2.2	0.3S
22	iPZX	14	07	13.9			11.4	2.9	0.4	1.3	0.3	0.6	0.3
22	ePZX	15	47	04.0									-1.2
	eXE		47	18.7									
	eXE		47	40.8				2.8	0.5X2	1.7	0.6X2	1.4	0.4X2
22	ePZX	16	39	34.3									
	eXE		39	45.5									
22	ePZX	16	53	57.7			29.5	12.2	0.7	6.7	0.7	4.1	0.7
22	iPZX	17	12	53.7			34.8i	8.7	0.3			3.5	0.6
22	ePZX	18	19	12.6			08.0	11	0.3			2.0	0.7
22	iPZX	18	48	02.2			2 44.4	2.6	0.3P	0.5	0.7S	0.4	0.7S
22	ePZX						1 07.8	7.0	0.2P	0.4	0.3P	0.3	0.5P
													-2.0
23	ePZX	02	46	51.1			42.0	7.3	0.7	3.4	0.6	2.6	0.8
23	eXZX	03	27	44.0				3.5	0.3	1.1	0.4	0.9	0.5
23	ePZX	04	09	35.5			44.3	3.0	0.3	1.4	0.5	1.0	0.5
23	ePZX	10	00	57.2			54.5	3.3	0.7	1.9	0.8	1.0	0.7
23	ePZX	11	34	21.3									
	iXZX		34	23.8			43.7	8.2	0.2X	4.0	0.7S	3.4	0.7S
23	iPZX	13	08	03.7									-1.1
	iXZX		08	11.0			09.3i	17.0	0.4	10.2	0.4	8.2	0.4
23	ePZX	18	27	37.3			09.2	2.5	0.3	0.9	0.2	0.7	0.3
23	ePZX	19	38	33.9									
	iXZX		38	35.6			44.9	11.5	0.3X	1.0	0.5S	1.5	0.5X
23	ePZX	20	16	40.8									
	eXE		16	52.0			02.2i	2.9	0.1S	0.4	0.4X	0.1	0.4X
** Addenda													
21	ePZX	22	02	01.4									
	eXE		02	40.8									
21	ePZX	22	35	18.6			35.7	9.8	0.5	3.8	0.7	1.9	0.5

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)
		h	m	s	m	s	ZX	N	E			
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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	X	N	E	1.6	0.4	
31	ePE	08 45 05.6		09.7i		7.2 0.3	2.4	0.3	1.6	0.4		
31	ePE	13 37 01.8		09.8		3.7 0.3	1.2	0.3	0.6	0.4		
31	ePE	13 44 02.7		32.4		3.8 0.5	1.6	0.6	1.0	0.7		
31	ePE	15 45 00.5	1	12.7		20	22.5	0.8	10			
31	ePE	16 01 30.1	1	01.4		18.8 1.2	12.0	1.0	8.5	1.4		
31	ePZX	20 38 45.5										
	iX1ZX	42 06.7										
	iX2ZX	45 43.8										
	eX3ZX	49 48.0										
31	ePZX	21 29 29.8	37.0			2.8 2.2P	1.9	2.0X3	0.9	1.5P		
31	ePZX	21 49 21.8	19.4			15.1 1.0	8.0	0.9	6.3	0.7		
31	ePZX	22 47 41.2	53.1			2.5 0.4	0.8	0.3	0.5	0.5		
						10.3 0.5	10.3	0.9	7.7	0.7		

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	X	N	E	1.0	0.3	
1	iPZX	12 57 17.0		07.4		5.0 0.3	3.2	0.2	1.0	0.3	-1.2	
1	ePZX	14 29 53.7		36.7		2.5 0.5	1.2	0.5	0.9	0.6		
1	iPZX	20 21 14.0				3.5 2.2	0.8	2.5	0.5	1.3	-1.4	
1	ePZX	20 22 56.8	1	36.3		5 P	4.0	0.3S	2.3	S		
1	ePZX	22 57 11.3		33.9		6.1 0.7	2.5	0.6	2.3	0.7		
1	ePZX	23 21 32.5										
	iXZX	21 34.7		49.3		6.8 0.6	4.6	0.8	3.7	0.7		
2	ePZX	00 50 12.1		37.7		5.5 0.7	2.9	0.8	2.4	0.6		
2	ePZX	09 22 27.3		21.7i		1.9 0.3	2					
2	iPZX	15 19 34.6		53.3		7.9 0.7	5				+0.6	
2	iPZX	19 02 50.0									-1.0	
	iXZX	02 56.5		09.7i		2.5 0.3	1.5	0.4	1.3	0.2		
2	ePZX	22 36 36.2		14.4i		3.5 0.5	1.2	0.6	0.9	0.9		
3	iPZX	00 54 46.5		17.9i		14.0 0.5	4.7	0.5	3.9	0.7	+2.0	
3	ePZX	10 48 40.0		06.1i		3.7	0.9	0.4	0.4			
3	ePZX	13 13 02.2				2.5 0.3P	0.4	0.6X	0.3	0.5P		
	eXN	13 48.0				2.9 0.4	1.4	0.4	0.6	0.4		
3	ePZX	17 09 01.8		24.2i		SO	50	0.3	30		(+)	
3	iPZX	19 19 02.5		09.3i								
3	ePZX	19 48 52.6		27.4i		3.6 0.2	1.6	0.3	0.4	0.6		
4	ePZX	00 30 00.0		10.0i		6	4.2	0.3	2.9	0.4		
4	ePZX	05 08 40.7										
	iXZX	08 43.1	1	09.7i		11.9 0.6	9.0	1.0	5.3	0.8		
4	ePZX	05 53 35.5		17.8i		3.3 0.5	0.8	0.5	0.8	0.5		
4	ePZX	06 26 12.3		11.8i		3.4 0.5	0.9	0.3	0.6	0.3		
4	ePZX	08 24 55.6		13.9		2.9 0.4	1.3	0.5	0.6	0.5		
4	ePZX	17 03 30.2		27.6		5.0 0.5	2.2	0.5	2.2	0.6		
4	ePZX	17 53 00.3										
	eX1N	53 46.3										
	iX2N	54 31.5										
4	ePZX	18 21 49.4		46.9		8	4.4	0.7	2.8	0.8		
4	iPZX	20 42 46.5		46.5		2.7 0.6	1.0	0.8	0.7	0.6	+0.8	
4	ePZX	21 25 33.1		25.1		5.2 0.6	1.7	0.5	1.8	0.5		
5	ePZX	00 39 37.4		47.1		7.8 0.5X	4.0	0.9S	2.6	0.6S		
5	ePZX	02 02 55.5		46.2		4.9 0.4X	2.3	0.9S	1.3	0.8S		
5	ePZX	02 07 26.4		47.9		3.4 0.7	1.5	0.8	0.9	0.7		
5	ePZX	02 20 12.7		52.8		13.2 0.7	7.5	0.8	7.4	1.0		
5	ePZX	06 59 35.8		46.0		4.5 0.3X	1.4	0.9S	1.3	0.9S		
5	iXZX	59 46.8		12.5		3.3 0.3	1.4	0.6	0.9	0.5		
5	ePZX	08 32 57.0		13.2i		2.7 1.5	0.9	1.1	0.5	1.1	-0.8	
5	iPZX	08 50 52.7									-3.0	
5	iPZX	21 26 09.8										
5	ePZX	22 28 35.5		37.5		2.6 0.3P	0.5	0.7S	0.4	0.7S		

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)
			h	m	s	Z	X	N	E	1.3	0.5	
6	iPZX	03 05 32.0				4.4	0.9	0.7	1.3	0.5	0.9	-3.0
6	ePZX	08 37 02.0				5.3	0.8	2.4	0.7	1.8	0.8	
6	ePZX	10 56 40.5				48.2		SO	35.4	1.1	20	
6	iXN	56 43.2										
6	ePZX	11 23 47.6				45.0		4.0	0.5X	0.8	0.7S	
6	iXZX	23 49.6										

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)	
		h	m	s	m	s	ZX	N	E			
11	ePZX	10	59	29.2	41.6		2.9	0.4P	1.5	0.8S	0.9	0.6S
11	ePZX	11	41	20.2								
	iXZX		41	22.0	1 03.3		2.8	0.4	0.9	0.4	0.6	0.5
11	ePZP	14	13	03	1 32		10.3	0.6	1.8	0.6	1.6	0.8
11	ePZX	21	15	12.0	38.4i		30		22.0	1.0	10.2	1.4
11	ePZX	22	58	13.5								
	iXZX		58	15.2	52.1		4.0	0.4X	1.5	0.7S	1.0	0.9S
12	ePZX	03	46	43.1								
	iXZX		46	44.1	42.4i		6.2	0.5X	4.0	1.0S	2.8	0.8S
12	ePZX	08	03	14.8	23.6		4.2	0.5	1.2	0.5	1.1	0.4
12	ePZX	10	27	54.9	40.6		45		30.3	0.6	16.0	0.7
12	ePZX	14	20	49.5	37.4		3.4	0.5	1.7	0.8	0.9	0.5
12	ePZX	18	59	58.0	41.9		20		11.5	0.7	8.0	0.6
12	ePZX	21	20	11.6	27.2		22.3	0.6	9.0	0.6	5.1	0.6
12	iPZX	21	30	10.1			SO		SO		SO	+3.8
13	ePZX	03	25	01.5	1 17.0		6.5	0.7	1.8	0.5	1.7	0.5
13	iPZX	05	08	24.7	08.7i		6.7	0.3	1.8	0.4	1.5	0.6
13	iPZX	10	32	20.0	08.6i		7.6	0.3	2.7	0.4	1.9	0.2
13	ePZX	10	52	35.8	12.6		3.3	0.4	2.2	0.3	0.5	0.4
13	iPZX	17	11	11.0			6.0	2.0P	1.0	1.1P	0.9	1.4
13	ePZX	20	08	12.3								-0.9
13	eXN	08	36.8				3.6	0.6X	1.9	0.8X	1.7	0.9X
14	ePZX	00	53	16.7								
	iXN		53	35.2	24.3		11.3	0.5	3.8	0.7	2.3	0.5
14	ePZX	01	13	48.0	13.5i		2.9	0.5	1.3	0.3	0.7	0.5
14	ePZX	01	21	10.1	28.1		2.9	0.5	2.0	0.6	1.4	0.8
14	iPZX	09	47	44.8	09.3i		20		12.5	0.2	8.1	0.5
14	iPZX	10	50	42.9	09.8i		8.2	0.5	2.8	0.4	2.0	0.4
14	iPZX	16	48	51.2			6.8	1.9	1.4	1.3	0.8	2.2
14	iPZX	17	42	50.2	10.7		4.3	0.3	2.6	0.3		+0.5
15	ePZX	05	18	32.2	39.6		3.0	0.5	1.6	0.6	1.0	0.5
15	ePZX	10	49	13.7	37.0		2.8	0.5	1.3	0.5	0.9	0.9
15	ePZX	10	58	07.2	10.6		4.1	0.6	1.5	0.7	1.3	0.7
15	iPZX	12	36	28.7								+1.0
	iXN		36	40.2	23.8i		19.8	0.5	8.2	1.3	7.5	1.1
15	ePZX	14	41	37.5								
	iXZX		41	49.8	52.7		5.2	0.8	3.4	0.7	2.5	1.3
15	ePZX	16	39	18.0	1 11.7		6	0.5P	2.8	0.5S	2.9	1.0S
15	ePZX	17	58	47.3	27.7		2.5	0.2	1.0	0.5	0.6	0.6
15	ePZX	18	17	03.4	46.0		3.1	0.2P	1.5	0.9S	1.0	0.8S
15	iPZX	22	44	21.6	06.0i		7.8	0.3	3.0	0.2	1.5	0.3
16	ePZX	01	05	40.3								+4.1
	iXZX		05	41.8	41.0		4.8	0.2X	0.4	0.7S	0.4	0.4X
16	ePZX	02	51	43.5	1 04.7		5.4	0.5	2.4	1.1	2.4	0.8
16	ePZX	04	35	36.0	11.1		4.3	0.2P	1.3	0.3S	0.8	0.7S
16	ePZX	07	12	33.7	2 58.5		2.7	0.7P	0.9	0.9P	0.7	0.9P
16	ePZX	12	10	09.0								
	iXZX		10	10.8	41.6		5.8	0.4	2.9	0.7		
16	iPZX	13	01	31.0	10.3		15		8.7	0.3	6.0	0.4
16	ePZX	17	06	54.6	25.4		5.3	0.7	2.0	0.9	1.8	0.6
16	ePZX	19	55	53.2								
	eXN		56	04.5	35.3		2.5	0.6	3.5	0.6	2.8	0.6
16	ePZX	21	42	09.0	43.4		1.0	0.7	0.9	0.5	0.8	0.5
16	ePZX	21	43	11.0	09.3i		1.5	0.5	2.6	0.3	1.6	0.4
17	ePZX	00	03	22.2			0.5	0.8	0.8	1.1	0.3	0.8
17	iPZX	03	10	54.2	09.1		0.8	0.4	2.0	0.3	1.0	0.5
17	ePZX	12	58	25.0	41.4		1.5	0.5	1.8	0.6	1.4	0.8
17	iPZX	17	55	13.2	07.7i		15.5	0.5	14.6	0.2	8.5	
17	ePZX	19	54	05.0								-8.0
	eXZ		54	07.8	08.0i		0.8	0.2	1.2	0.2	0.5	0.2
17	ePZX	21	52	31.7								
	iXZX		52	34.0	46.1		5.8	0.5X	2.8	0.6S	2.8	1.2S
17	ePZX	22	39	18.7	44.8		0.5	0.7	1.1	0.6	0.7	0.6

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Date	Phase	Time(JST)			P-S		Amplitude(mm)		Period(sec)		Initial motion(mm)	
		h	m	s	m	s	Z	N	E			
18	ePZX	02	57	36.2	41.1		26.3	0.5	54	1.0	36.4	0.6
18	iPZX	03	26	13.3			09.5i	1.8	0.2	1.7	0.2	+1.3
	eXZ						26	16.8	09.4i	1.1	0.7	+0.9
18	iPZX	05	17	20.2			05	17	20.2			

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Date	Phase	Time(JST)	P-S	Amplitude(mm)						Period(sec)	Initial motion(mm)	
				h	m	s	Z	N	E			
23	iPZX	00 10 54.1		1.1	0.5	0.6	1.0	0.4	1.1	-3.1		
23	iPZX	01 28 17.2		12.6i	2.3	0.5	2.4	0.5	1.9	+0.4		
23	iXZX	28 27.5										
23	ePZX	08 14 08.1										
	eX1N	15 15.8										
	iX2ZX	21 36.6	3 40.1	78.2 15.5X2 15.0 16.0X2 11.7 15.0X2								
23	ePZX	12 46 02.6		09.4i	ZX	7.5	0.3	2.3	0.6	1.6	0.8	
23	iPZX	12 46 10.0		10.0	2.5	0.3	0.7	0.5	0.6	0.5		
23	ePZX	12 59 36.3		48.9	18	0.5	16.0	1.1	13			
23	ePZX	16 09 41.9		45.2	0.9	1.0	1.5	0.8	1.0	0.7		
23	ePZX	17 43 42.3		33.9	0.7	0.5	1.8	0.7	0.7	0.7		
23	ePZX	17 48 42.5		44.4	0.7	0.5	1.2	0.7	1.0	0.7		
23	ePZX	19 16 01.6		24.0	0.7	0.5	0.9	0.5	0.7	0.7		
23	iPZX	20 12 58.2										
23	iPZ	20 40 11.9										
	iPN	11.9		11.1i								
	iPE	11.9										
23	ePZX	22 34 10.2	58.8i	16.7	0.5	25.7	0.5	18.8	0.5	-0.6		
24	ePZX	13 14 57.5	41.8	1.0	0.7	2.5	0.7	1.8	0.7			
24	ePZX	15 57 20.5	09.9	0.5	0.6	0.6	0.7	0.4	0.6			
24	iPZX	20 19 43.7	18.5	0.8	0.6	1.1	0.3	0.9	0.6	+0.6		
24	ePZX	22 53 00.3	38.2	2.0	0.5	2.4	0.5	1.7	0.5			
25	eXZX	02 28 10.2		0.5	0.4	0.8	0.3	0.8	0.5			
25	ePZX	02 32 31.4		0.5	0.5	0.5	0.5	0.4	0.7			
25	iPZX	05 14 27.0	09.3	2.4	0.3	2.5	0.5	2.5	0.6	-1.0		
25	ePZX	07 59 39.8		0.9	0.6	0.8	1.1	0.5	0.5			
25	iPZX	08 42 43.9								+2.0		
	iXZX	42 45.5	25.8	2.4	0.4X	1.6	0.3S	1.3	0.4S			
25	ePZX	10 45 50.4	38.2	0.8	0.5	1.1	0.7	0.8	1.0			
** 26	ePZX	04 33 55.4										
	iXZX	33 58.0	47.1i	15.5	0.9	39.4	1.1	21.5	1.1			
26	ePZX	05 56 19.0	12.3i	0.7	0.5	1.1	0.2	0.9	0.6			
26	ePZX	10 06 11.3	38.9i	6.1	0.6	14.7	0.7	6.2	0.8			
26	ePZX	11 02 22.1	1 02.2	0.8	0.5	1.4	0.8	1.3	0.6			
26	ePZX	11 12 31.3	09.3i	1.2	0.4	2.4	0.3	1.3	0.4			
26	ePZX	13 15 44.2										
	iXZX	15 45.3	12.0	0.5	0.1X	0.5	0.5S	0.4	0.5S			
26	ePZX	18 08 37.8	1 14.0	0.9	0.7	1.3	0.8	1.4	0.9			
26	ePZX	21 21 47.1	50.8	0.7	0.7	1.3	0.7	0.7	0.8			
26	ePZX	22 03 21.0	42.3	0.7	0.6	1.3	0.6	1.0	0.8			
26	ePZX	23 13 18.0	11.1	0.5	0.6	0.6	0.4	0.4	0.6			
27	iPZX	05 13 51.1	11.9	0.5	0.4	1.2	0.4	0.7	0.5	-0.5		
27	ePZX	10 12 06.9	27.0	4.3	0.8	11.0	0.7	5.6	0.6			
27	ePZX	12 31 53.0										
	iX1ZX	31 55.5										
	iX2ZX	32 05.6	55.3	1.0	0.4X2	0.7	0.7S	0.7	0.5X2			
28	iPZX	00 58 35.5										
	iXZ	58 46.6	13.4	2.4	0.4	3.9	0.2	2.0	0.5	+1.1		
28	iPZX	02 49 10.2	13.9i	0.9	0.5	1.8	0.5	0.7	0.5	+0.6		
28	ePZX	05 27 14.1		51.9	0.9	0.4	2.0	0.7	0.9	0.5		
28	ePZX	06 01 43.4	2 57.8	0.6	0.5P	0.3	0.9S	0.3	0.8S			
28	ePZX	19 26 26.3	38.0	0.8	0.6	1.4	0.6	1.1	0.6			
28	iPZX	19 38 18.7	51.5	0.8	0.4P	1.2	0.5S	0.9	1.0S	-1.9		
29	iPZX	01 02 07.7	06.6i	1.4	0.7	2.4	0.3	1.4	0.3	+1.0		
29	ePZX	03 34 50.5										
	iXZX	34 58.5	55.9	0.5	0.5	1.0	0.9	0.7	0.6			
29	ePZX	04 08 16.3	28.5	0.5	0.5	0.9	0.8	0.5	0.5			
29	ePZX	04 25 34.4	15.5	1.2	0.5	1.4	0.5	0.7	0.5			
29	iPZX	05 20 17.1	13.4	34.0	0.7	48.6	0.6	34.8	0.6	-4.6		
29	ePZX	11 29 34.0	45.3	0.9	0.6	1.5	0.5	0.8	0.6			
29	ePZX	13 04 23.5	40.2	0.9	0.5	2.1	0.7	1.7	0.7			
29	iPZX	14 41 33.2	15.8i	2.7	0.7	6.5	0.5	2.7	0.5	+0.6		
29	iPZX	17 57 48.7										
	iX1N	57 59.0										
	eX2Z	58 05.6	40.7	3.0	0.5	7.1	0.7	4.0	0.7	-0.5		

** Observation was interrupted from 14h 23m to 16h 14m, 25th.

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Date	Phase	Time(JST)	P-S	Amplitude(mm)						Period(sec)	Initial motion(mm)	
				h	m	s	Z	N	E			
30	ePZX	01 00 21.8		1	19.5		0.6	1.0	0.7	0.8	1.3	
30	ePZX	01 13 33.1		1</td								

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Date	Phase	Time(JST)			P-S		Amplitude(mm)			Period(sec)		Initial motion(mm)	
		h	m	s	m	s	Z	N	E				
5	iPZX	02	08	09.2			09.5	1.0	0.5	2.2	0.4	1.4	0.5
5	ePZX	03	51	04.5			15.6	0.5	0.5	0.7	0.6	0.7	0.7
5	ePZX	04	33	10.7			52.2	1.4	0.5	1.9	0.8	1.0	0.5
5	ePZX	07	25	15.6			24.7	0.5	0.5	0.8	0.7	0.7	0.6
5	iPZX	07	45	24.2			11.2i	11.5	0.5	21.3	0.5	20.7	0.6
5	iPZX	15	41	05.0			06.4i	2.3	0.5	7	0.6	4.0	0.5
5	ePZX	16	27	37.0			11.0	7.1	0.9	5.9	0.9	4.4	0.5
5	iPZX	20	32	09.0			08.7	1.8	0.4	2.4	0.4	2.7	0.3
6	ePZX	00	06	00.2			1 40.0	0.5	0.6	0.5	0.5	0.5	0.6
6	ePZX	00	13	18.3			1 15.6	1.2	0.5	2.3	0.5	1.1	0.5
6	ePZX	02	17	23.0			34.7	0.7	0.6	1.3	0.6	0.7	0.5
6	iPZX	08	19	01.5			09.2i	2.9	0.5	5.0	0.3	2.5	0.4
6	iPZX	10	29	49.3			08.8	1.5	0.6	1.6	0.6	1.2	0.6
6	ePZX	20	33	16.5			36.9	3.7	0.7	8.6	0.7	4.2	0.7
6	ePZX	20	56	26.2			13.0	1.8	0.5	2.3	0.3	2.0	0.4
6	ePZX	23	38	57.8			11.7	1.9	0.6	3.5	0.3	1.8	0.8
7	ePZX	03	19	02.3			1 26.4	0.8	0.8	1.7	0.8	1.4	0.9
7	ePZX	06	52	10.0			52	0.5	0.9	0.8	0.7	0.5	0.7
7	iXZX						40.2						
7	iPZX	10	40	12.9			12.9i	0.6	0.4	1.4	0.4	1.2	0.4
7	ePZX	13	20	08.5			24.8	0.8	0.6	1.2	0.4	(+)	
7	ePZX	15	20	38.9			28.9	0.5	0.7	0.6	0.6	0.5	0.6
7	iPZX	18	38	46.2									+0.6
7	iXZX						38	0.8	0.4X	0.9	0.4S	0.5	0.4S
7	iPZX	18	40	50.5			18.9	0.8	0.4X	0.9	0.4S	0.5	0.4S
7	iXZX						40	52.1	14.2i	11.5	0.6	20.5	0.7
8	ePZX	04	39	10.5			34.3	0.6	0.5	1.2	0.6	0.8	0.6
8	iPZX	07	02	11.0			08.3i	5.7	0.6	10.4	0.3	5.8	0.5
8	iPZX	14	12	09.9									+2.1
8	eZXZ						12	48.7					-4.0
8	ePZX	16	43	54.0			19.7	1.0	0.6	1.0	0.4	0.9	0.6
9	ePZX	01	02	14.3			52.7	0.5	0.7	0.8	0.5	0.8	0.8
9	iPZX	03	05	42.1			09.2i	1.7	0.4	2.4	0.3	1.5	0.5
9	ePZX	03	38	17.3			48.0	0.6	0.6	0.7	0.6	0.4	0.5
9	eZXZ						04	46	08.0	0.8	0.6	1.3	0.4
9	ePZX	07	38	21.5			41.2	0.5	0.5	0.9	0.5	0.7	0.8
9	iPZX	10	42	12.5			09.3i	2.0	0.5	2.9	0.3	2.0	0.4
9	iPZX	11	26	27.1			09.1i	5.9	0.6	8.5	0.4	9.0	0.6
9	ePZX	12	34	35.8									-3.6
9	eZXZ						35	21.3		0.6	0.9X	1.3	0.7X
9	iPZX	17	00	31.0			10.7i	0.9	0.7	2.1	0.3	1.8	0.4
9	ePZX	18	06	28.2			14.8	1.3	0.6	1.6	0.5	1.2	0.7
9	iPZX	19	22	11.2			06.2i	10.8	0.5	30		20	0.2
9	ePZX	21	25	32.2			36.3	3.5	0.5	6.8	0.6	3.7	0.5
9	iPZX	23	05	41.3			10.9i	2.4	0.5	1.9	0.6	1.5	0.5
10	ePZX	03	56	35.4			1 50.8	0.7	0.5	1.2	0.3	0.8	0.8
10	ePZX	07	00	15.3									
10	iXZX						49.4	8.5	0.9	15.0	0.7	8.2	0.9
10	iPZX	09	28	08.8			11.3i	1.8	0.4	2.5	0.5	2.4	0.5
10	iPZX	10	02	27.1			13.6i	1.8	0.4	4.0	0.3	1.4	0.4
10	ePZX	10	47	46.6			35.2	0.9	0.5	2.0	0.2	1.5	0.7
10	ePZX	11	05	37.4			21.1	0.9	0.5	2.0	0.6	1.2	0.7
10	ePZX	14	15	42.3			52.8	1.3	0.6	2.7	0.7	1.7	0.9
11	ePZX	01	44	09.6			38.4	3.9	0.6	8.6	0.7	6.7	0.7
11	iPZX	03	03	52.6			08.2i	1.0	0.2P	1.0	0.3S	0.8	0.6S
11	ePZX	07	41	37.8			10.9i	1.5	0.6	1.8	0.4	1.8	0.8
11	ePZX	09	56	43.0									-5.8
11	iXZX						56	45.2					
11	eX2N						58	58.4		1.1	0.5X1	0.8	0.8X2
11	iPZX	13	41	27.6									+1.6
11	iXZX						41	29.5	45.8	2.5	0.4	4.2	0.6
11	iPZX	16	45	01.5			11.0	1.2	0.5	1.8	0.5	0.9	0.6
11	ePZX	22	50	17.9			44.0	3.9	0.7	8.2	0.9	5.2	0.8

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Date	Phase	Time(JST)	h	m	s	P-S	m	s	Amplitude(mm)	Z	N	E	Initial motion(mm)	
12	ePZX	02	11	01.2			49.8			0.6	0.5	0.9	0.6	+2.0
12	iPZX	10	13	47.9			25.1			S0	S0	S0	S0	
12	ePZX	15												

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)	
			h	m	s	Z	N	E	1.0	0.3	1.4	0.4	
19	ePZX	03 50 43.3				09.9	0.8 0.5	1.4 0.4	1.0 0.3				-0.9
19	iPZX	04 23 56.6				51.1	1.4 0.4	2.9 0.4	1.5 0.7				
19	ePZX	06 03 09.4											
	iZXZ	03 19.2				18.3	1.3 0.4	2.3 0.4	1.7 0.5				
19	ePZX	13 30 56.0											
	iZXZ	30 57.9				43.0	10.5 1.0	17.9 1.1	12.6 1.1				
19	ePZX	13 35 06.2											
19	iPZX	14 04 52.2				43.0	1.1 0.4P	1.5 1.0S	0.9 0.7S				+0.7
19	ePZX	18 11 17.3				08.8	0.5 0.3	1.4 0.2	0.6 0.3				
	iZXZ	36.0				0.8 0.5	1.5 0.6	1.0 0.5					
20	iPZX	02 58 14.5											-1.0
20	ePZX	03 43 20.7				10.5	0.6 0.5	0.8 0.5	0.8 0.5				
	iZXZ	43 23.3											
20	ePZX	06 15 04.7				1 08.7	17.0 0.4	32.8 0.6	22.0 0.9				
20	ePZX	14 41 39.8				27.5	0.5 0.4	0.7 0.5	0.5 0.4				
20	ePZP	18 31 12.1				1 16.9	1.0 0.6	1.6 0.5	1.2 0.7				
20	ePZX	22 14 11.7				09.6	0.5 0.6	0.9 0.3	0.7 0.2				
20	ePZX	23 26 40.9											
	iZXZ	0.6 0.6				0.6 0.6	0.3 0.9	0.3 0.9					
21	ePZX	26 42.1				44.0	5.9 0.7	8.7 1.0	7.9 1.1				
21	ePZX	02 32 05.2				24.2	1.1 0.7	2.0 0.7	1.3 0.8				
21	ePZX	03 44 04.1				10.41	0.5 0.5	1.3 0.2	0.7 0.2				
21	iPZX	09 41 30.2					1.0 0.9	1.0 0.7	0.8 0.6				-2.0
21	iPZX	19 22 03.7					0.5 0.7	0.5 1.0	0.4 1.2				+2.5
21	ePZX	21 20 42.6				25.8	S0	S0	S0				
21	ePZX	22 00 24.2											
	eXN	00 36.5				14.3	0.7 0.7	0.6 0.4	0.8 0.4				
21	ePZX	23 39 01.4				10.01	0.5 0.5	1.2 0.2	0.4 0.5				
22	iPZX	01 26 50.3				13.7	7.8 0.6	8.5 0.7	4.8 0.4				-1.8
22	ePZX	02 17 59.6				36.5	2.7 0.8	5.6 1.5	4.2 0.9				
22	ePZX	02 30 33.8				18.9	3.5 0.3	7.7 0.3	3.0 0.3				
22	ePZX	07 27 17.0				11.0	0.5 0.5	0.6 0.4	0.8 0.5				
22	iPZX	09 03 14.1				10.91	2.0 0.5	2.7 0.5	2.8 0.5				+1.0
22	ePZX	09 12 11.3											
	iZXZ	12 13.1				44.7	4.4 0.5X	6.8 0.9S	4.3 0.8S				
22	ePZX	09 33 24.0				42.7	0.8 0.7	1.4 0.5	1.2 0.5				
22	ePZX	10 16 00.2											
	iZXZ	16 01.6				45.1i	7.4 0.9	9.2 0.9	6.5 0.8				
22	iPZX	21 07 19.81				22.7i	0.6 0.5	1.4 0.3	0.9 1.0				+2.0
22	ePZX	21 08 39.3				33.9	1.2 0.7	1.9 0.4	1.5 0.6				
**	23	ePZX	00 06 16.3			33.7	1.0 0.6	1.6 1.2	1.0 0.8				
23	iPZX	01 13 53.1				06.21	1.0 0.4	1.7 0.2	1.8 0.3				+1.4
23	ePZX	05 24 33.1				22.4	0.8 0.6	0.9 0.6	0.7 0.7				
23	ePZX	07 06 56.8				34.9	0.8 0.4	1.8 0.6	1.0 0.7				
23	ePZX	09 53 59.5				48.6	0.8 0.7	1.8 0.7	0.9 0.8				
23	ePZX	11 09 45.6				11.4	0.5 0.6	0.5 0.2	0.6 0.5				
23	ePZX	11 20 48.9				2 06.3	0.6 0.4P	0.5 0.7S	0.4 0.9S				
23	ePZX	11 29 10.0											
	iZXZ	29 11.4				17.2	1.0 0.2X	0.5 0.3S	0.4 0.3X				
23	ePZX	14 38 37.3				11.3i	1.5 0.5	2.0 0.5	2.3 0.7				
23	ePZX	15 16 46.8				13.8	0.5 0.5	0.7 0.4	0.7 0.3				
23	ePZX	16 39 22.5				35.0	4.8 0.5	6.8 0.7	7.0 0.6				
23	ePZX	19 11 51.1				1 23.9	0.6 0.5	1.0 0.8	0.7 0.7				
23	ePZX	22 07 41.0				09.4	1.0 0.6	1.2 0.4	0.7 0.3				
23	ePZX	22 27 21.0											
	ipPZX	27 32.4				3 34.8	1.7 0.6pP	1.5 0.6pP	0.8 0.6pP				
24	ePZX	00 51 17.3											
	iZXZ	51 19.8				44.7	4.5 0.7	9.4 0.7	4.9 0.8				
24	ePZX	02 56 52.1				37.5	0.8 0.5	1.5 0.9	1.0 0.7				
24	iPZX	03 07 54.6				09.6i	1.0 0.5	2.7 0.5	1.4 0.6				+4.5
24	ePZX	09 30 33.9				09.7	0.5 0.4	0.7 0.3	0.5 0.4				
24	iPZX	14 59 23.8											-2.0
	iZXZ	59 30.9				09.0i	2.4 0.6	4.5 0.3	3.0 0.2				

** Observation was interrupted
from 20h 05m to 20h 32m, 22th.

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Date	Phase	Time(JST)	P-S			Amplitude(mm)			Period(sec)			Initial motion(mm)

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Date	Phase	Time(JST)	P-S	Amplitude(mm)						Initial motion(mm)
				Z	0.6P	0.7	0.7S	0.6	0.7S	
31	iPZX	02 47 07.9	1 53.4	0.7	0.6P	0.7	0.7S	0.6	0.7S	-2.0
31	ePZX	05 18 03.3								
	iXZ	18 10.1	09.31	0.5	0.5	1.0	0.3	0.6	0.3	
31	ePZX	07 02 27.0	11.01	1.0	0.4	1.4	0.3	0.9	0.6	
31	ePZX	10 21 28.5	39.0	0.5	0.5	0.7	0.6	0.6	0.6	
31	ePZX	12 40 01.2	49.3	0.8	0.6	1.1	1.0	1.1	0.8	
31	iPZX	14 39 57.6	42.4	10.8	0.5P	7.4	1.0S	8.0	0.6P	-1.4
31	ePZ	15 38 31.7								
31	ePZ	15 38 43.0	1 12.7	2.5	0.4P	1.7	0.5S	1.6	0.5P	

At 06h 28m on August 12, an earthquake of magnitude 7.8 occurred E off Hokkaido and many aftershocks were observed. To avoid the incompleteness of the data due to overlapping of these aftershocks on photographic films, data were read on oscillogram reproductions of the magnetic tape within a half day from the main shock.

Time(JST)	Rank	Amplitude	Remark	Time(JST)				Rank	Amplitude	Remark	
				06 ^h	37 ^m -- ^s	NEM(II)	08 ^h	15 ^m 11 ^s			
39 25	A	S0					15 53	B	18	m 5.0	
41 50	A	S0	m 6.0(CGC)				17 52	D	S0	m 4.7	
47 00	D						20 06	C	18	m 5.1	
48 50	D						20 16	C	18		
52 30	D						22 42	A	S0	m 5.2	
53 15	D						25 28	D	18	m 4.8	
54 50	B						30 00	C	24		
56 50	C		m 5.5				iP 35 10.3	B	S0	m 5.1	
02 11	B	S0	m 5.3				35 30	B	24		
06 25	C	21mm					37 49	B	S0	m 4.9	
07 30	D	22					eP 40 18.5	A	S0	m 5.0	
08 10	D	19					42 35	D	13		
08 45	D						43 00	A	S0	m 5.6	
09 20	B	27					45 32	C	17		
11 16	C	20					47 44	C			
12 05	D	22	m 5.3				iP 49 12.6	B	23		
14 17	C	18					50 00	B	S0	m 5.3	
16 00	G	17					51 53	D	7		
16 55	C	19	m 4.8				52 00	C	19		
17 45	D	17					53 30	C	19		
18 27	C	17					53 45	D	19		
20 00	C	20					55 25	B	22		
22 00	C	22					59 00	B	23		
23 00	C	20					09	01 00	D	12	
23 30	C	18					01 50	D	12		
24 02	B	21					05 20	D	9		
25 42	C	18					08 33	C	16		
iP 28 38.5	C	S0	m 5.0				11 33	C	6		
30 50	B	21					12 05	C	11		
31 19	C	22					14 00	C	8		
36 00	C	18					15 42	C	8		
39 55	D	11					16 10	C	21		
40 22	C	16					iX 16 27.0	C	27	m 5.3	
iP 42 52.5	B	S0	m 5.1				eP 19 06.3	C	13		
45 00	C	24					IP 19 54.8	B	21	m 4.5	
50 33	D	15					21 40	C	12		
52 06	D	16					24 33	D	8		
53 18	C	22					25 53	C	9		
55 05	A	S0	m 5.4				eP 26 51.5	B	23	m 5.1	
58 02	D	18					30 20	C	14	m 4.8	
58 32	C	S0					31 00	D	16		
59 50	A	S0					31 45	D	14		
08	02 00	D	19				32 10	C	15		
03 55	A	S0	m 5.5				33 18	D	18		
10 45	B	17					36 28	D	7		
12 00	B	22					37 34	C	15		
							39 00	C	16		

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Time(JST)	Rank	Amplitude	Remark	Time(JST)				Rank	Amplitude	Remark	
				09 ^h	40 ^m 30 ^s	D	12mm				
42 20	C	15		44 30	D	8		41 35	C	9mm	
45 40	D	12		48 05	C	13		43 12	C	6	
50 40	D	9		51 30	D	14		44 30	C	5	
51 46	D	19		51 46	D	19		eX 45 40.8	C	11	m 4.4
54 26.0	A	S0	m 5.0	57 53	D	16		48 10	C	4	
59 03	C	14		59 03	C	14		eP 48 47.0	C	9	
10 02 33	D	8		10 02 33	D	8		50 49	D	7	
10 04 00	D	S0	m 4.8	10 04 00	D	8		51 13	D	7	
10 06 55	D	8		10 06 55	D	8		51 53	D	9	
10 07 13	D	20		10 07 13	D	20		52 20	D	8	
10 08 10	C	11		10 08 10	C	11		52 28	D	8	
10 11 00	C	14		10 11 00	C	14		53 05	B	14	
10 13 29	C	16		10 13 29	C	16		53 27	D	5	
10 15 27	D	11		10 15 27	D	11		53 5			

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	Time(JST)	Rank	Amplitude	Remark		Time(JST)	Rank	Amplitude	Remark	
13 ^h	33 ^m 19 ^s	C	12mm		15 ^h	27 ^m 11 ^s	D	10mm		
	36 00	D	6			30 29	C	11		
	37 24	D	6			31 41	C	12	m 4.1	
	38 01	C	7			38 44	C	7		
	38 24	C	8		eP 39	46.1	A	50	m 5.3	
	38 36	C	8			42 06		7	doubt	
	39 33	D	8			42 41	D	9		
	43 03	C	7		iP 43	51.8	B	21	m 4.6	
	43 43	C	7			47 20	C	6		
	45 01	C	9			48 24	C	11		
1P 45	58.4	B	16		eP 50	19.7	A	50	m 4.6	
46 54	C	19				53 12	C	10		
47 09	C	13				56 55	C	7		
48 44	C	8			eP 57	36.-	B	21		
1P 49	24.8	A	50	m 5.0		58 11	C	23		
51 06	C	22			eS 58	48.5	D	15		
53 43	C	7			16	00 23	D	6		
1P 54	32.1	A	50	m 5.7		02 15	C	7		
57 41	C	13				03 43	C	8		
14	eP 00	26.2	C	11		iP 04	44.8	C	18	m 4.8
	02 42	C	9			iP 07	54.0	B	19	
1P 04	30.5	A	50	m 6.0		iP 11	46.8	A	50	m 5.3
	09 13	D	5			15 58	D	6		
eP 09	51.0	A	50	m 5.4		17 18	D	4		
14 19	C	10				22 26	C	6		
14 47	D	6				22 52	C	16		
15 28	B	17				27 47	C	10		
1P 18	41.7	C	12			iP 29	50.7	C	13	
iP 20	51.0	C	15			31 30	C	9		
22 54	C	8				35 10	B	13		
24 45	D	6			eP 39	13.4	A	50	m 4.9	
eP 25	19.6	B	22	not aftershock?		41 52	C	10	m 4.7	
28 05	C	8				45 21	D	7		
30 47	C	7				46 40	C	8		
33 00	C	11				48 00		7	doubt?	
35 35	D	6				49 35	C	14		
1P 35	54.8	C	10			eP 52	28.1	D	5	
38 32	B	13				54 41	D	5		
41 49	C	7				55 30	C	12		
43 00	C	8			eP 55	36.5	C	50	m 4.7	
44 38	C	8			17	01 45	C	7		
46 05	B	13				03 00	C	12		
47 05	C	13				04 03	C	15		
48 05	C	10		m 4.3		04 30	C	16		
50 51	D	7				eP 06	07.0	B	18	m 4.6
52 05	C	7				09 10	D	6		
53 09	C	10				10 21	C	14		
53 33	D	5				eP 14	07.-	B	14	
eP 54	35.0	A	50	m 5.4		16 40		4	doubt?	
58 01	D	9				eP 20	03.0	D	6	
59 21	D	8				eP 21	45.3	C	13	
15	eP 00	04.-	D	8		24 05		6	doubt?	
	01 13	C	11			24 43		8	doubt?	
	01 23	D	13			27 47	C	7		
	06 41	D	5			iP 39	01.8	C	8	
	08 56	D	7			eP 42	58.6	C	14	m 4.5
	10 01	D	5			44 55	C	16		
	11 43	D	7			45 22	B	17		
	17 12	D	6			47 00	C	6		
	19 51	D	7			49 17	C	12		
	20 36	C	10			eP 55	02.8	C	11	
	22 44	C	13			eP 57	13.3	C	16	
	24 31	C	7			eP 59	22.9	C	11	
	eP 26	49.8	D	8						

Smaller aftershocks must still be obscured by larger ones within 5 hours from the main shock.