

24 FEB 1969

PRELIMINARY REPORT
 KARBI/AFGHANISTAN EARTHQUAKE
 FACULTY OF ENGINEERING, YAMULI
 R.A. JAIN, DIRECTOR

Station: 21
 Epicentre: 26° 2.15' N S.P. Mag. 4.09 K. at 1.0 sec.
 92° 12.59' E I.P. Mag. 5 K. at 15.0 sec.
 Epicentre: 21.98 KM

Period: 5 AM 01 19 00 To 5 AM 31 00

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mi)	Day	Phase	Time (U.T.) hr. min. sec.
01	1PC e	00 33 11.5 33 41.9			01	e(P) s	00 33 11.5 33 41.9
01	e(P)	01 16 47.5			01	eP e	01 16 47.5 16 52.5
01	eP	01 52 06.5			01	eP	01 52 06.5
01	1PC	04 32 25.8			01	e(P)	04 32 25.8
01	ePC e	05 05 12.0 06 24.4			01	e(P) e	05 05 12.0 06 24.4
01	eP	07 54 12.6			02	eP	07 54 12.6
01	e(P)	08 30 40.0			02	e(P)	08 30 40.0
01	1PD	09 18 47.5			01	eP	09 18 47.5
01	1PD	11 57 53.5			02	eP e	11 57 53.5 12 02.5
01	eP	12 28 31.5			02	e(P)	12 28 31.5
01	eP e	13 21 10.0 21 46.3			02	eP e	13 21 10.0 21 46.3
01	eP	13 42 34.4			02	eP	13 42 34.4
01	eP e	15 13 20.3 14 15.0			01	eP e	15 13 20.3 14 15.0
01	eP	16 17 21.5			02	eP	16 17 21.5
01	eP	18 56 11.7	0.6	18.0	02	eP	18 56 11.7
01	eP	19 12 30.5			02	eP	19 12 30.5
01	1PD e	19 24 01.8 24 35.3			01	eP e	19 24 01.8 24 35.3

Day	Phase	Time (U.T.) hr., min., sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr., min., sec.
02	eFD e	21 06 22.2 06 53.6			04	e(P) e	01 12 51.0 13 06.0
02	e(P)	23 07 33.0			04	iFD	06 08 29.0
03	eP e	00 25 40.4 25 48.5			04	eP e	06 11 07.0 11 25.0
03	eP	00 37 12.5			04	eP	09 22 50.0
03	eP	02 55 19.6			04	eP e	10 37 42.0 18 12.0
03	e(P) e	03 02 08.7 02 45.0			04	e(P) e	12 20 46.0 29 30.0
03	ePD e(S)	03 18 58.5 30 08.0			04	eP	16 19 05.0
03	eP	04 06 33.5			04	eP e	16 16 02.0 16 41.0
03	eP e	07 13 18.7 13 46.9			04	eP e	16 31 46.0 31 51.0
03	e(P)	11 05 55.7			04	e(P)	17 09 01.0
03	e(P)	11 37 32.7			04	eP	17 12 02.0
03	eP	11 42 05.8			04	eP	18 21 02.0
03	iPD	12 30 00.0			04	eP	19 07 16.0
03	eFD	13 39 56.7			04	eP	20 15 12.0
03	eP	13 49 36.0			04	e(F)	22 19 01.0
03	ePD	14 45 24.2			04	iFD	22 47 53.0
03	eP e	17 12 53.0 13 15.4			05	e(F)	01 09 12.0
03	eP e	18 10 12.6 10 48.0			05	eP	01 13 11.0
03	eP	19 19 17.7	0.6	11.4	05	eP	03 10 47.0
03	eP	23 46 36.8	0.7	12.0	05	iPD	06 55 46.0
04	e(P) e	01 20 36.8 21 13.1			05	eP e	07 19 00.0 09 55.0

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
05	e(P)	12 00 10.5			06	eP	11 40 21.7		
05	iPG	12 28 23.5				e	40 48.4		
05	e(P)	13 14 50.5			06	eP	15 49 14.0		
05	ePC	13 39 55.0				e	52 47.5		
05	e(P)	15 09 38.1				e(S)	56 00.2		
05	e(P)	15 14 36.6			06	iPD	17 30 27.7		
05	ePD	16 08 00.6			06	eP	17 37 27.5		
05	eP	16 24 54.4			06	e(P)	17 49 16.0		
05	ePD	17 01 36.5			06	iPD	19 38 50.0		
05	eP	17 10 18.0			06	eP	19 52 40.0		
05	ePC	18 56 44.4				e	53 14.2		
05	eP	21 20 09.3			06	e(P)	20 10 09.0		
	e	20 42.0			06	e(P)	20 37 56.0		
06	eP	00 03 15.0			06	e(P)	21 47 22.2		
	e	03 40.1			06	eP	23 08 09.0		
06	e(P)	00 52 21.7			06	eP	23 37 34.1		
06	ePC	02 22 56.5				e	37 59.5		
	e	23 33.2			07	eP	01 26 30.7		
06	eP	02 32 40.3			07	eP	03 06 20.0		
	e	33 33.7				e	06 55.2		
06	e(P)	03 04 07.7			07	eP	06 39 46.4		
06	eP	05 59 31.2	0.8	9.0		e	40 24.2		
06	e(P)	06 53 05.0			07	e(P)	06 54 27.0		
	e	53 36.6			07	eP	07 11 02.2		
06	ePD	06 57 32.0			07	eP	14 39 20.5		
06	eP	07 06 27.3			07	e(P)	16 18 45.8		
	e	06 48.0			07	eP	16 32 42.5		
06	ePC	08 46 28.8				e	33 04.5		
	e	46 53.4			07	iPD	16 34 45.5		
						e	35 15.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
07	eP e	16 45 02.8 45 29.0			08	e(P) e	19 25 25.6 26 50.6		
07	e(P)	19 33 36.6			08	e(P)	19 39 51.7		
07	e(P) e	21 28 26.0 28 59.5			08	e(P) e	21 02 17.7 02 48.3		
07	eP e	22 02 37.2 03 08.3			08	eP e	22 07 01.4 07 34.8		
07	eP e	22 07 27.2 07 36.7			08	e(P) e	23 35 18.0 36 09.5		
07	e(P) e	23 22 01.4 22 35.5			08	e(P)	23 48 15.0		
07	e(P) e	23 52 49.0 53 28.0			09	eP	00 22 02.7		
08	ePD e	01 57 47.2 58 09.4			09	e(P)	07 46 23.5		
08	eP	03 24 16.0			09	e(P)	08 14 32.6		
08	eP	03 46 08.0			09	eP e	08 23 02.7 23 26.0		
08	e(P) e	04 14 48.0 15 36.6			09	eP	11 20 00.3 20 33.0		
08	e(P)	05 04 22.5			09	eP	12 36 02.6		
08	eP e	06 07 23.4 07 35.0			09	e(P) e	14 06 04.9 06 46.4		
08	eP e	07 42 13.5 42 46.2			09	eP	16 00 28.2		
08	eP	08 02 30.7	0.7	8.5	09	eP	18 42 55.3		
08	e(P)	11 58 33.5			09	eP	19 10 50.7		
08	eP e	12 24 08.9 24 33.8			09	eP	21 24 11.4		
08	ePC	14 07 16.6	0.8	9.5	09	eP e	22 45 42.0 46 07.0		
08	ePC	16 44 14.4			09	eP	23 39 07.9		
08	eP e	19 20 08.1 20 42.4			10	ePC e	00 05 07.2 05 42.5		

Day	Phase	Time (U.T.) hr, min, sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr, min, sec.	T (sec.)	2A (mm)
10	eP	00 59 40.6	0.6	4.5	11	eP	11 09 07.0		
10	e(P)	01 28 21.2				e	09 43.3		
10	eP	03 30 02.0			11	eP	17 40 31.5		
10	e(P)	13 29 31.4			11	e(P)	18 17 38.0		
10	eP	13 46 21.1			11	e(P)	19 40 57.7		
10	eP	14 39 13.5			11	e(P)	19 47 48.3		
10	ePD	18 18 35.5			11	eP	21 35 00.3		
	e	19 00.0				e	35 34.2		
10	e(P)	20 15 30.9			11	eP	22 00 26.8		
	e	15 53.3			11	e(P)	22 05 05.8		
	e	16 51.0			11	ePG	22 25 39.5		
10	eP	20 37 58.8	0.6	9.0	11	ePD	22 51 04.4		
10	eP	23 20 33.6	1.1	11.5	11	e(P)	23 22 48.5		
11	eP	02 10 28.5			11	ePG	23 57 05.2	0.8	14.7
	e	11 00.9							
11	eP	02 17 18.6			12	eP	00 56 41.0		
11	ePD	02 40 26.8			12	e(P)	03 29 45.0		
						e	30 39.0		
11	eP	03 38 41.4			12	e(P)	12 15 24.4		
11	eP	04 45 19.5			12	eP	15 29 45.4		
11	eP	05 06 36.6				e	30 20.1		
11	eP	05 21 48.5			12	eP	16 37 33.3		
11	eP	05 26 38.0				e	38 13.1		
11	e(P)	07 16 43.4			12	ePG	17 50 39.4		
						e	51 00.0		
11	eP	12 11 42.5			12	eP	18 18 19.3		
11	e(P)	12 17 55.0			12	e(P)	19 53 16.0		
	e	18 30.6			12	ePD	21 24 55.0		
11	eP	12 44 40.4			12	eP	21 34 22.4		
	e	45 11.2				e	35 00.5		
11	e(P)	13 02 54.5							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
12	e(P)	22 18 27.3			14	ePC	00 58 02.9	1.0	14.0
12	1FC	22 22 12.4			14	e(P) e	02 05 00.0 05 20.8		
12	eFD e	23 32 57.0 33 22.0			14	eP	02 58 15.0		
13	eP e	00 39 13.1 39 43.1			14	e(P) e	03 40 15.8 40 49.2		
13	eFD	01 00 46.6	0.7	7.0	14	eP e	06 45 14.0 45 19.0		
13	eP	03 12 19.0	0.8	7.5	14	e(P) e	07 20 36.0 21 02.0		
13	e(P)	03 29 30.4			14	ePC	15 50 55.9		
13	e(P)	03 44 39.5			14	eFD	16 11 44.0	0.9	26.0
13	e(P) e	04 03 02.5 03 32.0			14	e(P)	16 43 42.0		
13	eFD	05 46 21.5	0.8	19.0	14	e(P) e	17 50 37.2 51 00.8		
13	eP	06 56 24.4			14	eP	19 25 14.8		
13	ePC	09 08 19.0	0.9	21.0	14	1FD	23 10 50.2		
13	e(P)	09 32 21.5			14	eFD e(S)	23 18 35.6 23 49.5		
13	eP	10 17 43.3			15	eP e	00 46 44.8 47 00.6		
13	eP	10 47 14.2	0.8	10.0	15	eP e	04 45 50.0 46 17.0		
13	e(P) e	11 05 30.5 05 57.5			15	e(P)	05 16 01.6		
13	eP	12 40 12.6			15	e(P)	07 42 46.7		
13	e(P) e	19 46 18.0 46 57.0			15	eP e	07 48 01.1 48 39.0		
13	e(P) e	20 04 16.3 05 00.0			15	eP	08 53 04.8		
13	eFD	21 55 42.6			15	e(P)	09 30 32.5		
13	eP e	23 21 19.5 21 54.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (Sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (Sec.)	2A (mm)
15	e(P)	11 39 16.3			16	eP	13 23 02.0		
15	e(P)	12 24 27.6				e	24 37.5		
15	eP	13 09 11.6	1.0	24.0	16	eP	13 53 14.9		
15	eP	13 17 25.1				e	54 01.2		
15	e(P)	19 49 07.0			16	ePD	15 04 32.0		
	e	49 41.4			16	e(P)	15 44 58.7		
15	eP	20 39 22.9			16	ePD	17 17 18.2		
	e	40 18.4			16	e(P)	18 23 50.5		
15	e(P)	20 57 14.0				e	24 24.2		
	e	57 40.7			17	eP	02 40 29.5		
15	e(P)	23 01 10.4				e	41 04.4		
15	e(P)	23 08 45.4			17	e(P)	03 02 04.4		
					17	eP	03 11 25.8		
16	eP	00 37 13.3			17	eP	03 40 03.5		
	e	37 40.9			17	e(P)	03 47 12.5		
16	eP	01 49 08.9			17	eP	07 08 20.0		
16	e(P)	06 15 06.0				e	08 45.7		
	e	16 03.0			17	e(P)	07 18 57.0		
16	eP	06 57 13.8			17	eP	08 37 13.7		
	e	57 47.5			17	e(P)	09 49 25.3		
16	e(P)	07 14 58.0			17	e(P)	16 29 46.0		
	e	15 34.0				e	30 20.5		
16	eP	07 22 15.8			17	e(P)	16 34 18.0		
16	e(P)	07 38 14.5			17	e(P)	16 48 35.2		
16	e(P)	08 44 26.0			17	eP	17 08 26.2		
16	eP	09 06 52.0				e	08 58.5		
16	eP	10 40 33.5			17	eP	18 38 24.0		
16	eP	11 25 28.9	1.0	13.5	17	e(P)	19 45 22.5		
16	e(P)	12 41 38.0				e	47 07.5		
	e	42 17.5							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
17	iPD	20 41 28.8			18	e(P)	19 11 44.0		
17	eP	21 09 17.7			18	eP e	20 43 17.0 43 44.0		
18	eP	02 05 29.4			18	e(P) e e	22 39 47.5 39 50.3 42 12.5		
18	e(P) e e	02 33 12.3 33 31.6 33 52.3			18	e(P)	23 41 37.5		
18	ePD	03 21 15.2			19	e(P)	00 19 11.4		
18	e(P) e	03 30 10.6 30 34.7			19	e(P)	00 26 58.0		
18	eP	04 00 00.2			19	e(P) e	02 15 34.2 15 55.5		
18	e(P)	04 05 48.5			19	eP	03 31 12.1		
18	ePD	06 38 37.0			19	iPD e	06 15 57.5 19 22.0		
18	eP e	07 28 55.6 29 24.9			19	ePC	07 11 22.9		
18	e(P)	08 15 00.0			19	e(P) e	08 09 05.5 09 42.7		
18	e(P) e	08 36 08.0 37 23.2			19	ePC	17 29 44.4		
18	ePD	08 45 17.5	0.8	8.0	19	eP	18 14 05.0		
18	eP e	12 13 26.9 13 59.0			19	e(P) e	19 04 03.6 04 35.2		
18	e(P) e	15 57 26.5 58 11.3			19	eP	19 35 20.2		
18	eP	16 47 52.0	0.7	4.5	19	e(P) e	21 37 05.0 37 30.6		
18	eP	17 33 16.0	0.8	8.5	19	eP e	22 19 52.2 20 26.8		
18	eP	17 35 25.2			19	eP e	23 43 39.3 44 24.5		
18	ePC	17 56 59.2			20	eP	04 16 43.0		
18	eP e	18 02 53.5 03 30.0							
18	ePC	18 10 07.4	0.7	6.0					

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	e(P) e	04 51 52.6 52 30.4			21	ePD	12 53 01.0		
20	eP	06 30 50.5			21	ePD	14 13 03.4		
20	e(P)	09 48 05.6			21	e(P)	14 22 04.0		
20	eP e	10 38 41.0 39 12.3			21	e(P) e	14 26 39.5 27 09.0		
20	e(P)	12 36 50.1			21	eP	14 38 13.6		
20	iPD	14 30 57.6			21	eP e	14 52 10.5 52 42.5		
20	e(P) e	18 28 09.5 28 51.8			21	eP	15 26 08.7		
20	eP	18 36 23.3			21	eP	15 51 36.4		
20	eP	18 40 46.0			21	eP	19 18 17.2		
20	ePC	18 59 12.2			21	eP	21 51 51.4	1.0	12.4
20	eP	20 34 35.0			21	eP	23 22 42.5	0.7	8.5
20	e(P) e	21 06 07.0 06 46.5			22	eP	00 53 01.0	1.0	33.0
20	eP e	22 12 11.4 12 49.1			22	eP	01 01 37.2		
20	eP	22 41 39.3			22	eP	03 08 23.4		
20	eP	23 34 58.0			22	eP e	03 17 18.7 17 58.2		
20	e(P) e	23 38 08.0 38 34.0			22	eP	03 28 04.5	0.8	10.0
21	e(P) e	01 53 43.3 54 14.0			22	eP	04 05 02.4		
21	ePD	01 56 15.0	1.1	33.5	22	ePC	04 16 40.0		
21	ePD	07 51 35.7	0.5	7.5	22	iPD	06 00 09.5	0.7	15.0
21	eP	08 18 41.2			22	iPD	07 35 24.2		
21	iPC	10 25 38.8			22	eP	12 11 46.9		
21	ePC e	10 33 29.4 33 46.4			22	eP	17 25 02.6	0.9	15.0
					22	eP	18 11 44.2	0.6	10.8
					22	ePD	19 43 01.3		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
23	eP e	09 13 02.0 13 36.0			25	ePD	07 56 07.8		
23	ePC	14 36 09.1			25	e(P)	10 49 03.0		
23	eP	15 18 03.5			25	eP	11 24 51.4		
23	eP	18 43 05.7			25	e(P) e	11 36 21.9 36 43.8		
23	e(P)	20 02 51.1			25	eP	12 20 44.7	0.8	13.0
23	eP e	21 43 05.1 43 31.5			25	e(P) e	12 53 43.0 54 23.0		
23	eP	23 47 58.6			25	eP e	12 56 18.3 56 49.3		
24	iPD	00 21 16.8			25	e(P)	13 22 22.2		
24	eP e	06 22 20.1 22 57.7			25	eP	15 47 45.8		
24	ePC	10 50 16.5			25	eP e	16 17 18.6 17 49.9		
24	e(P)	13 05 42.5			25	eP e	22 21 30.4 21 35.5		
24	eP e	14 05 28.9 05 59.1			25	ePC	23 25 25.7		
24	iP	17 17 02.0			25	eP	23 39 35.3		
24	e(P) e	18 57 37.4 58 21.6			26	eP	02 28 47.2		
24	eP	19 20 02.9	0.7	11.6	26	e(P) e	02 53 45.0 54 15.5		
24	eP	19 53 01.0	0.7	8.0	26	eP	04 40 51.3		
24	ePD e	20 06 05.5 06 36.7			26	eP	05 26 43.5		
24	e(P)	23 11 42.8			26	iPC	06 16 11.0	0.8	37.5
25	eP e	04 27 47.0 28 23.2			26	eP	07 32 48.7		
25	e(P)	05 58 39.8			26	eP	10 00 31.6		
25	eP e	07 19 15.5 19 43.5			26	eP	11 41 59.3		
					26	e(P)	12 36 39.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
26	iPC e(S)	12 42 58.7 51 05.7			27	iPD	14 48 25.0	0.9	39.0
26	eP	14 35 16.2			27	ePD	15 28 24.4		
26	ePD eS	15 16 06.1 24 44.0	0.6	36.5	27	eP	18 46 51.0	0.8	10.0
26	ePD	16 36 41.2	0.8	8.0	27	e(P)	21 10 04.0		
26	iPD	16 49 07.1	0.8	26.5	27	eP e	21 28 50.5 29 08.5		
26	eP	16 59 23.8	0.8	12.0	28	eP	00 34 04.7		
26	eP	20 37 40.8			28	e(P)	00 46 27.0		
26	eP	21 27 46.8			28	eP e	04 26 49.0 27 19.3		
26	eP	22 21 12.2			28	eP	07 16 49.5		
26	e(P)	22 41 02.1			28	eP	09 02 33.6		
27	e(P)	01 26 52.4			28	e(P) e	09 16 50.4 17 27.4		
27	eP	03 13 38.3			28	eP	09 35 09.5		
27	eP	03 28 15.5			28	eP e	10 19 31.3 20 20.0		
27	eP e	05 30 43.7 31 20.3			28	e(P) e	11 41 10.8 41 57.4		
27	eP	06 46 50.3			28	eP e	12 01 10.5 01 47.0		
27	eP e e	06 54 28.9 55 16.2 55 30.0			28	eP	13 26 34.2		
27	eP	10 19 27.6			28	eP e	15 33 43.5 34 20.0		
27	eP	10 44 18.2			28	eP e	17 44 22.1 45 07.5		
27	iPC	11 00 23.5			28	e(P)	18 31 52.2		
27	eP e	12 22 04.2 23 01.0			28	eP	19 39 46.9	0.9	13.0
27	iPD eS	13 26 24.0 35 22.5			28	eP e	20 14 06.0 14 27.7		
27	e(P) e	13 52 01.5 52 51.4							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	eP e e	21 07 22.5 07 54.1 08 58.0			30	iFD e	06 00 35.0 01 06.5		
28	e(P) e	22 33 48.5 34 30.2			30	eP e	07 16 18.7 18 00.0		
29	e(P)	00 43 55.0			30	ePD e	07 44 55.2 45 39.2		
29	eP	05 29 39.4			30	eP	09 39 32.7		
29	e(P) e	07 29 20.2 29 47.4			30	ePC	10 39 51.5		
29	eP	08 47 34.3			30	ePD	12 48 40.5		
29	eP e	09 17 44.3 18 08.3			30	ePC	12 55 39.5		
29	eP	09 17 44.3 18 08.3			30	eP	15 12 10.0		
29	eP	11 31 04.4			30	eP	16 12 36.7		
29	eP	12 11 19.5			30	ePD	16 50 05.8		
29	eP e	12 23 02.3 23 32.6			30	ePC	17 23 54.4		
29	e(P)	13 35 40.0			30	eP	17 29 45.8		
29	eP	14 31 36.7			30	eP	18 22 02.0		
29	e(P)	16 04 34.4			30	eP	18 41 20.6		
29	eP	17 10 34.0			30	iPC	18 45 45.1		
29	eP	18 03 27.3			30	iPD	18 55 44.9	0.7	10.0
29	ePD e(S)	18 03 27.3 05 10.3	1.1	27.0	30	ePC	21 04 10.9		
29	e(P)	19 05 47.7			30	eP e	21 06 49.4 07 49.4		
29	e(P)	19 47 07.5			30	iP	21 19 30.9		
29	eP e	20 13 30.4 14 08.0			30	e(P) e	22 00 55.5 01 33.5		
29	eP e	21 06 09.2 06 46.4			30	eP	22 22 00.2		
30	ePD	02 43 42.5			30	eP	22 30 15.5		
					30	eP	22 42 57.2		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
30	eP	22 53 35.5			31	ePD	20 48 11.0		
30	e(P)	23 02 07.5			31	eP	20 56 34.0		
31	ePD	00 54 35.1			31	e(P) e	22 54 33.0 55 07.5		
31	eP	01 30 07.6			31	eP	23 49 27.5		
31	eP	02 19 52.9							
31	eP	03 10 57.4							
31	eP	03 55 50.0							
31	eP	05 09 53.2							
31	eP e	07 52 50.4 53 15.0							
31	ePD	09 07 04.6							
31	eP	09 15 27.4							
31	eP	10 56 03.4							
31	eP	11 31 48.9							
31	e(P)	11 58 29.3	0.7	8.0					
31	e(P)	13 29 27.5							
31	e(P) e(S)	13 58 42.9 11 38.7							
31	eP	14 46 59.0							
31	eP	15 06 09.0							
31	eP	15 17 56.0							
31	eP	15 25 13.6							
31	eP	15 48 30.5							
31	eP e	15 51 09.7 51 55.7							
31	eP	17 26 39.0							
31	ePD	20 17 32.0							



Via Air Mail

WWSS: KBL
Latitude: 34° 32.45' N
Longitude: 69° 02.59' E
Elevation: +1.92KM

S.P.Mag. 4.00 K.at 1.0 sec.
L.P.Mag. 6 K.at 15.0 sec.

Bulletin# 9
Dated MAR. 05, 19 69

Period: FEB. 01, 19 69 To FEB. 28, 19 69

i = Impulsive; e = Emergent; C = Compression; D = Dilatation

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
01	eP	02 51 24.1			01	eP	16 48 20.9		
01	eP	07 33 28.5	0.8	12.0	01	eP	17 04 12.3		
01	eP	07 34 55.9			01	e(P)	21 11 24.4		
01	ePD	07 51 13.8			01	eP	22 25 33.0	1.1	10.5
01	ePC	08 23 33.5			01	ePD e	22 50 34.6 51 06.4		
01	eP	08 30 46.7			01	eP e	23 21 39.3 22 13.9		
01	eP	11 17 23.6			01	e(P)	23 29 21.0		
01	eP e	11 42 40.4 43 03.2			01	iPD	23 57 46.0		
01	e(P)	13 05 48.2							
01	ePD	13 34 23.1			02	ePD	00 27 51.7		
01	eP	13 48 33.5			02	e(P)	00 35 46.5		
01	e(P) e	14 02 14.7 02 43.5			02	eP eS	01 49 07.3 57 37.7		
01	eP e	14 34 21.5 34 53.8			02	eP	02 17 24.4		
01	eP	14 45 35.6			02	eP	02 24 52.0		
01	eP	15 12 56.0			02	eP	02 44 34.3		
01	eP e	15 16 46.9 17 38.4			02	eP	02 53 01.0		
01	iPD	15 34 35.0			02	eP	03 19 21.8		
01	iP e(S)	16 29 36.2 38 02.9			02	eP	04 10 27.9		
					02	eP	04 21 54.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
02	eP	05 08 13.0			02	eP	20 56 30.7	0.6	8.5
02	eP e(S)	05 31 50.0 40 17.3			02	ePD	21 00 42.5	0.6	21.0
02	e(P)	07 11 49.9			02	eP	21 06 37.9		
02	eP	08 00 41.5			03	eP	03 14 06.7		
02	e(P)	08 06 21.9			03	e(P)	03 50 53.4		
02	eP	09 55 52.0			03	e(P)	04 10 44.2		
02	eP	10 39 01.3			03	eP	04 33 29.7		
02	eP	15 09 42.5			03	eP	04 40 01.6		
02	e(P) e	15 52 49.1 52 55.3			03	e(P)	05 08 06.0		
02	eP	15 58 59.4	0.7	4.0	03	eP	05 27 36.2		
02	eP e	16 27 10.3 27 41.0			03	ePC	08 09 05.6		
02	eP	16 31 40.9			03	eP e	08 27 51.0 28 22.0		
02	eP	16 42 48.6			03	eP	08 31 25.5		
02	eP e	16 55 58.2 56 30.2			03	eP	08 35 52.8		
02	eP	16 59 09.9			03	eP	08 41 17.0		
02	e(P)	17 48 35.1			03	eFD	09 05 47.6		
02	eP	17 51 12.4			03	e(P) e	09 28 22.4 28 32.0		
02	e(P) e	18 48 04.5 48 44.7			03	ePD	09 54 31.0		
02	1PC	18 51 36.3			03	eP	11 01 26.4		
02	eP	18 55 36.0			03	eP e	12 39 58.2 41 03.0		
02	eP	19 47 54.4			03	eP e	14 00 11.5 00 45.5		
02	eP	20 02 59.2			03	ePC	15 08 39.4		
02	eP	20 33 21.9			03	eP	16 09 05.5		
02	e(P)	20 47 30.4			03	ePD	17 22 13.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
03	ePD eS	19 11 51.4 20 22.4			05	e(P)	01 44 24.5		
03	ePD	19 41 25.5	1.0	21.0	05	eP	05 00 27.2		
03	ePC	21 51 58.0			05	e(P) e	06 39 30.0 39 54.4		
03	e(P) e	22 57 23.1 57 59.5			05	e(P) e	06 46 14.4 46 34.3		
04	e(P)	01 39 31.0			05	e(P) e	07 36 57.7 37 23.3		
04	eP	01 48 33.0			05	e(P) e	08 26 28.2 27 03.5		
04	e(P)	01 56 45.0			05	e(P)	10 46 50.5		
04	e(P)	04 12 20.3			05	e(P)	10 56 50.2		
04	eP	04 29 40.0			05	eP	13 54 33.8		
04	1PD	04 55 41.0			05	e(P)	16 16 21.0		
04	eP	05 46 18.5			05	eP e	17 03 33.0 04 05.0		
04	e(P)	05 56 43.0			05	ePD	20 07 59.3		
04	e(P) e	06 35 24.3 35 54.2			05	eP	20 28 20.0		
04	eP	11 11 56.5			05	eP e	21 31 23.0 31 49.5		
04	eP	17 05 34.4			06	ePD	02 24 06.5		
04	eP	17 18 20.4	0.7	17.0	06	e(P)	04 03 41.0		
04	e(P) e	19 26 06.0 26 49.3			06	ePD	07 43 51.8		
04	eP	19 32 52.5			06	ePD	08 45 29.4	0.7	5.5
04	eP	19 59 32.7			06	eP e	09 01 27.2 02 25.5		
04	eP e	22 02 41.4 04 12.5			06	ePD	09 45 33.5		
04	eP	22 35 38.1			06	ePD	14 54 14.4	0.7	16.0
04	eP e	23 21 07.6 21 52.1							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
06	eP	17 35 38.0			07	e(P) e	18 26 00.0 26 28.5		
06	e(P)	18 38 48.4			07	e(P)	20 07 39.5		
06	eP e	19 45 19.4 45 50.5			07	e(P) e	21 48 37.0 49 08.0		
06	iFD	19 49 07.8			08	ePC	01 41 18.9		
06	e(P) e	20 17 43.4 18 14.8			08	eP	04 18 54.6		
07	ePD e(S)	01 07 10.0 13 18.0	1.1	66.0	08	eP	06 58 01.3		
07	eP	01 14 20.6	1.0	11.0	08	eP	10 33 34.7		
07	e(P) e	03 13 31.4 14 32.0			08	eP e	11 30 49.0 32 01.1		
07	e(P) e	04 24 54.6 25 21.0			08	eP	12 35 35.3		
07	e(P)	05 04 32.3			08	e(P)	18 41 21.0		
07	e(P)	05 08 35.5			08	eP	19 25 38.8		
07	e(P)	05 46 11.6			08	e(P) e	21 49 41.5 50 23.0		
07	e(P) e	06 24 41.9 26 11.5			08	e(P)	23 23 39.5		
07	ePD	09 30 36.0	0.6	36.0	08	eP	23 27 18.9		
07	eP	09 34 41.7			09	eP e	01 11 53.8 11 59.3		
07	e(P) e	10 09 05.0 10 30.6			09	iPC	03 49 16.0		
07	ePD	12 25 31.5			09	e(P)	04 03 22.5		
07	eP e	16 23 24.0 23 45.5			09	iFD	04 22 26.6		
07	eP e	16 55 31.5 56 02.7			09	e(P)	05 24 59.3		
07	eP e	17 05 00.5 05 40.2			09	eP e	07 37 08.8 37 33.0		
07	eP e	17 05 00.5 05 40.2			09	eP e	09 00 05.0 00 49.0		
07	e(P)	17 09 41.4			09	eP	10 36 54.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
09	eP e	11 13 08.0 14 01.2			10	e(P) e	23 12 17.0 13 30.0		
09	e(P)	14 13 33.6			10	eP	23 20 42.0		
09	ePD	14 37 20.3	0.8	16.0	11	eP e	00 43 09.5 43 28.7		
09	eP	15 41 02.4	1.5	18.5	11	e(P)	03 22 22.0		
09	e(P) e	21 11 16.0 11 43.7			11	e(P)	08 38 09.7		
09	eP	22 14 54.6			11	e(P)	11 07 30.5		
09	eP	23 11 58.0			11	e(P)	11 59 24.4		
10	eP	00 10 06.0			11	eP	13 40 01.1		
10	eP e	01 52 22.5 52 52.2			11	eP	14 36 39.9		
10	ePC	06 17 29.9			11	eP	15 32 50.5		
10	eP	06 39 02.3			11	ePD	20 26 53.2		
10	eP	08 24 02.0			11	eP	20 43 13.4		
10	e(P) e	09 45 43.0 46 14.0			11	eP	21 25 09.2		
10	e(P) e	13 57 08.2 57 53.0			11	eP	22 11 26.2		
10	eP e	14 18 56.7 19 37.0			12	eP	00 25 09.2		
10	eP	14 27 21.0			12	e(P)	00 53 25.0		
10	eP	14 30 02.3			12	eP	04 19 53.5		
10	eP	16 32 37.0			12	eP	07 27 23.8		
10	e(P)	17 30 54.0			12	eP	08 12 54.6		
10	ePD	18 08 54.4			12	eP	08 25 06.0	0.6	4.0
10	eP	18 58 48.6			12	e(P)	10 52 01.0		
10	eP e	01 01.5			12	eP	11 36 50.9		
10	eP	21 58 01.0			12	e(P)	13 09 55.0		
10	ePD	21 58 01.0			12	ePD	15 50 24.3	1.0	24.5

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
12	eP	16 17 47.1			13	eP	20 20 07.0		
12	c(P)	16 58 53.5			13	eP	21 40 15.7		
12	e(P) e	18 38 06.0 38 35.0			13	eP	22 26 41.6		
12	eP e	18 51 44.0 52 20.5			14	e(P)	00 59 59.6		
12	eP e	19 00 04.0 00 40.0			14	eP	03 22 58.0		
12	eP	19 19 15.5			14	eP e	04 39 14.4 39 45.0		
12	ePD	21 04 39.8			14	eP e	04 48 24.3 49 00.3		
12	e(P)	23 53 16.7			14	e(P)	07 58 12.5		
13	eP	01 47 58.9			14	ePC	08 00 37.0		
13	eP	02 51 50.3			14	eP e	10 31 16.4 31 41.5		
13	eP	02 58 44.4			14	eP e	11 58 52.5 59 10.8		
13	eP	03 24 52.1			14	e(P)	13 19 15.6		
13	eP e	10 21 35.5 32 40.3			14	e e	19 48.7 20 21.0		
13	1PC	10 38 37.6			14	eP	13 29 43.4		
13	e(P)	10 44 44.0			14	eP	13 39 01.4	0.7	10.0
13	eP	11 14 02.0			14	e(P)	15 11 00.0		
13	e(P)	12 10 23.7			14	ePC i	15 20 42.9 21 17.0		
13	e(P)	13 51 19.7			14	ePC e	15 38 41.0 39 14.5		
13	eP	15 04 33.6			14	e(P) e	16 29 50.6 30 22.5		
13	e(P) e	15 16 53.0 17 56.5			14	eP	17 35 13.5		
13	e(P)	18 33 42.5			14	e(P)	18 44 01.9		
13	e(P) e	18 43 27.0 44 44.0			14	e(P)	18 44 23.0		
13	eP e	19 35 58.0 36 28.5			14	e(P)	18 52 31.4		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	PA (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	PA (mm)
14	e(P)	19 00 57.2			15	1PC	17 14 39.6		
14	e(P)	19 16 59.0			15	eP	20 32 40.0		
14	eP e	19 23 42.0 24 04.4			15	ePD	22 49 06.1		
14	e(P)	20 36 35.2			16	eP	00 01 43.4	0.8	9.0
14	eP e	21 21 43.7 22 25.6	0.5	7.5	16	e(P)	04 35 34.5		
14	ePD e	21 58 44.4 59 55.1			16	e(P)	05 49 12.3		
14	e(P)	23 51 28.5			16	eP	07 03 03.4	0.8	9.0
15	e(P)	02 40 49.5			16	ePC e	07 52 14.0 52 47.1		
15	e(P)	03 10 11.0			16	eP e	09 23 09.8 23 34.0		
15	ePD	07 10 42.5			16	eP e	10 57 33.2 57 58.6		
15	ePD	09 01 24.9	0.7	13.0	16	e(P) e	12 16 46.6 17 15.5		
15	e(P)	09 43 54.8			16	eP	13 55 03.5		
15	e(P)	09 54 28.3			16	eP	15 04 50.8		
15	e(P) e	10 16 00.0 16 32.5			16	eP	15 18 02.1		
15	e(P)	11 43 51.9			16	eP	15 20 55.4		
15	ePC e	12 59 40.0 00 13.5			16	e(P)	15 30 07.1	1.1	9.0
15	e(P) e	14 06 09.4 07 13.0			16	eP	16 41 31.0		
15	eP e	14 41 07.0 41 39.0			16	1PC	20 23 45.4		
15	eP e	15 31 02.0 31 39.0			16	ePC	21 51 31.4		
15	e(P)	16 12 39.5			16	e(P) e	23 27 55.4 28 24.4		
15	eP	16 33 32.0			17	eP eS	00 53 24.4 01 51.6		
					17	eP	01 26 14.2		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
17	eP	01 34 43.7			18	eP	02 06 17.2		
17	eP	01 48 55.0			18	e(P) e	02 11 25.0 12 06.5		
17	e(P)	02 40 52.4			18	iPC e	06 58 01.5 58 34.3		
17	eP	02 45 37.5			18	eP e	08 34 39.3 35 14.6		
17	eP	03 14 35.5			18	ePC	10 09 08.5		
17	e(P)	03 20 07.0			18	eP	13 36 26.7		
17	eP	04 15 38.0			18	eP	16 29 55.0		
17	eP	04 29 39.9			18	iPD	19 52 39.6		
17	e(P)	04 47 32.0			18	eP	21 00 57.9	0.7	11.5
17	iPD	06 34 08.4			18	eP e	21 08 48.9 14 10.0		
17	eP	06 37 37.7			19	ePD	08 46 58.7	1.0	22.5
17	ePD	06 50 33.0	0.9	9.5	19	e(P)	12 40 43.2		
17	eP	06 58 23.3			19	iPD e	15 21 13.4 21 58.0		
17	eP	07 38 44.0			19	eP e	16 20 13.2 20 46.0		
17	eP	07 47 09.3			19	eP	18 33 17.0		
17	eP	11 26 44.7			19	e(P) e	21 12 57.5 13 26.7		
17	e(P) e	13 43 10.0 43 31.7			20	eP	03 18 09.9		
17	eP	15 06 40.0			20	iPC	03 46 17.9		
17	eP	16 41 51.0 42 26.2			20	eP e	05 03 39.1 04 16.0		
17	ePC	17 53 57.0	0.3	15.0	21	e(P) e	06 21 02.4 21 42.0		
17	eP	17 59 22.8	0.7	6.5	21	eP	07 20 40.0	0.9	11.5
17	ePD	19 13 10.5							
17	eP	19 54 07.5							
17	ePD	20 24 11.2							
17	eP e	20 46 47.2 47 21.5							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
21	1FD e	07 24 22.4 24 53.7			22	eFD	18 16 02.0		
21	eP	08 30 57.0			22	1FD	18 29 42.7	0.6	24.5
21	eP	09 09 37.5	0.9	8.0	22	e(P) e	18 41 10.4 41 45.0		
21	eP e	09 16 39.0 17 18.6			22	e(P) e	20 00 05.8 00 44.7		
21	eP	10 50 40.0			22	eFD	20 41 54.4		
21	eP e	16 02 17.9 03 02.5			22	ePC	20 54 03.4	0.8	10.5
21	eP	16 40 31.5			22	ePC e eS	23 08 45.0 10 35.5 16 54.4	0.6	23.5
21	e(P)	16 44 49.0							
21	e(P)	20 38 52.9			23	eFD eS	00 47 04.2 55 16.5		
21	eP	21 05 20.4			23	ePC	02 27 05.5		
21	e(P) e	23 53 03.5 53 33.0			23	ePC	00 36 35.5		
22	e(P) e	00 07 20.0 08 29.6			23	e(P)	03 01 02.2		
22	eP e	01 48 02.7 48 47.0			23	e(P) e	05 10 49.4 11 23.0		
22	eP	02 24 24.2			23	eP	06 13 57.6		
22	e(P)	04 45 52.9			23	e(P)	08 18 06.0		
22	eFD	08 20 44.0			23	1FD	09 02 33.5		
22	e(P) e	13 14 08.8 14 40.5			23	eFD e	09 50 16.5 51 17.3		
22	eP	13 39 11.0			23	eP	10 19 41.7		
22	eP e	14 26 31.5 27 06.5			23	eP	10 36 07.5		
22	e(P)	16 52 12.0			23	eP e	12 50 06.8 50 38.8		
22	eP	18 04 08.9	0.6	8.5	23	eP e	13 23 55.4 24 28.9		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
23	eP	18 02 56.6			25	eP	01 35 13.8		
	e	03 18.2			25	ePD	01 45 06.2	0.7	32.0
23	e(P)	20 40 54.0				e	48 56.8		
	e	41 52.9			25	e(P)	02 09 19.0		
23	e(P)	22 14 10.0			25	eP	04 10 04.0		
23	eP	23 04 47.1			25	ePD	04 13 08.3	1.0	6.0
	ePD	00 20 02.0			25	ePD	04 20 28.0		
	e	29 14.4			25	e(P)	05 07 42.9		
24	eP	01 11 34.9			25	eP	07 48 45.6		
24	e(P)	02 57 21.8			25	eP	07 58 03.5		
	e	58 20.5			25	eP	08 54 35.0		
24	ePD	04 28 09.3				e	55 03.0		
24	eP	07 18 13.9			25	ePG	10 54 20.7	0.8	6.0
24	e(P)	07 46 41.0			25	eP	11 56 20.2		
	e	48 20.5				e	57 00.5		
	e	49 21.5			25	eP	13 49 55.7		
24	eP	08 19 32.0			25	eP	14 19 19.9		
	e	20 02.2			25	ePG	14 49 59.2		
24	e(P)	10 40 48.0			25	e(P)	15 00 40.1		
24	e(P)	11 05 30.6			25	eP	15 50 55.1		
	e	05 59.0			25	eP	16 26 59.0		
24	eP	15 35 13.0			25	e(P)	16 42 52.5		
24	e(P)	16 52 12.0			25	eP	16 57 26.0		
24	e(P)	17 26 15.4			25	eP	22 44 36.4		
24	ePG	18 34 46.9			26	ePG	01 40 11.4		
	e	35 17.5			26	eP	02 06 09.8		
24	e(P)	19 23 25.5				e	06 46.1		
24	eP	20 20 21.3							
24	ePD	20 53 39.5	3.0	16.0					
24	eP	23 02 59.2							

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
26	ePC e	03 25 57.4 26 07.0			27	eP	02 06 51.6		
26	eP	03 46 58.0			27	iPD	03 08 27.3		
26	e(P) e	05 40 18.5 40 48.2			27	e(P)	03 20 45.4		
26	eP e	06 05 55.5 06 57.0			27	eP	05 28 50.9		
26	iPD e	07 17 41.5 13 15.0			27	iPD	09 08 12.4		
26	eP e	07 26 51.7 27 33.5			27	e(P)	10 23 38.6		
26	eP	08 30 33.5			27	e(P)	11 15 56.3		
26	e(P) e	10 03 55.0 12 45 21.0 45 33.5			27	ePC	18 50 26.2		
26	eP	15 08 00.2			27	eP	21 14 45.4		
26	e(P) e	16 08 58.5 09 52.7			27	eP	21 29 22.2		
26	e(P) e	18 51 04.0 51 35.5			27	e(P)	21 37 08.0		
26	e(P) e	19 07 40.9 08 19.4			27	e(P)	22 14 21.5		
26	e(P)	19 18 31.0			27	iPD	22 55 19.5		
26	iPD	21 14 11.6			27	eP	23 35 40.5		
26	ePD e	21 46 38.5 47 12.5			28	eP a	00 14 08.3 14 43.3		
26	e(P)	22 38 07.7			28	ePD	02 51 00.4		
26	e(P)	22 58 15.9			28	eP	04 21 03.0	1.0	90.5
26	ePC	23 58 31.5			28	e(P)	05 36 14.4		
27	eP	01 35 32.0			28	ePC	13 23 12.0		
					28	eP	13 57 33.9		
					28	eP	14 56 47.2		
					28	eP a	18 14 17.0 14 53.5		
					28	e(P) e	18 22 13.4 23 01.0		
					28	e(P)	20 52 16.1		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	eP e	20 57 17.5 57 57.0							
28	eP	21 44 49.0							
28	ePD	22 49 42.0							
28	e(P) e	23 27 48.0 28 15.5							
28	e(P) e e	23 53 38.0 54 41.0 55 31.6							



22 APR 1969

PRELIMINARY SEISMOGRAM ANALYSIS

Page 1 of 1

KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A. KARIM - DIRECTOR

WWNSS: ICBL

Via Air Mail

Latitude: $34^{\circ}32.45'N$ S.P. Mag. 4.00 K. at 1.0 sec.Longitude: $69^{\circ}02.59'E$ L.P. Mag. 5 K. at 15.0 sec.

Elevation: +1.92KM

Bulletin# 10Dated April 15 19 69Period: March 01, 19 69 To March 31, 19 69

i = Impulsive; e = Emergent; C = Compression; D = Dilatation

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
01	e(P)	00 46 06.5			02	eP	10 39 44.8		
01	ePD e	01 37 25.9 37 53.0			02	eP e	12 21 53.6 22 23.5		
01	ePD	02 12 19.4	0.8	10.5	02	eP	13 08 15.0	1.0	10.0
01	e(P)	03 43 03.3				eP	13 50 36.9		
01	eP	06 58 16.0			02	eP	14 07 27.4		
01	ePD	08 02 29.8	0.5	5.0	02	e(P)	14 15 49.0		
01	e(P) e	08 24 23.2 25 51.8			02	iPC	15 09 10.5		
01	eP	10 48 24.6			02	eP	15 54 17.5		
01	eP	12 19 10.9			02	e(P) e	17 58 30.0 00 33.9		
01	ePC e	13 42 57.9 43 33.0			02	e(P) e	18 54 19.0 55 01.9		
01	eP	15 02 53.1			02	e(P)	19 20 08.4		
01	e(P)	15 17 29.4			02	eP e	19 27 06.4 27 54.5		
01	eP e	18 26 57.8 27 27.7			02	e(P)	19 31 28.1		
01	iPC	19 46 38.3			02	eP e	21 24 12.0 24 45.1		
01	iPD	21 45 24.8			02	ePD i	22 30 26.2 32 16.0		
02	e(P) e	02 00 21.7 01 09.0			02	eP	22 46 04.9		
02	eP	06 37 54.6	1.1	13.5					

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
03	ePD ^m	01 05 51.1			05	eP	03 17 28.4		
03	eP	02 56 50.9			05	eP	04 45 52.3		
	e	57 23.9				e	47 05.3		
03	eP	06 22 48.5			05	eP	09 01 02.7	0.8	10.0
03	eP	09 03 21.2			05	eP	11 17 39.5		
03	eP	13 31 38.5			05	e(P)	13 18 35.4		
03	ePC	14 04 03.2			05	eP	14 02 23.3		
03	ePD	15 00 00.6				e(S)	10 49.0		
03	e(P)	15 19 27.1			05	e(P)	14 46 06.5		
03	eP	15 43 16.7			05	ePD	16 21 32.9		
03	eP	16 49 09.0			05	ePD	16 28 30.9		
03	eP	19 26 23.2				e(S)	30 00.0		
	e	26 54.3			05	e(P)	16 44 05.4		
03	eP	20 32 29.0			05	eP	17 59 15.7		
03	eP	21 24 39.1				e	59 40.9		
	e	25 17.0			05	eP	18 20 27.0		
03	eP	21 31 05.3			05	iPD	19 34 06.0		
04	eP	01 53 34.1	0.7	9.5	06	e(P)	07 50 29.9		
04	e(P)	10 19 44.0			06	iPD	10 34 43.5		
04	e(P)	12 37 16.5			06	e(P)	11 06 13.4		
04	ePD	15 50 50.0	1.0	10.5	06	iPC	11 25 25.0		
	e	25 55.0				e	25 55.0		
04	e(P)	17 38 22.6			06	eP	12 22 39.0		
	e	41 40.9			06	eP	14 48 41.2		
04	eP	18 12 04.4				e	48 49.6		
04	eP	18 27 59.7				e	49 44.0		
04	e(P)	19 43 07.5			06	ePD	14 54 11.3		
05	eP	02 21 31.0				e	54 30.2		
	e	22 08.5			06	iPD	15 24 05.1		
						e	24 47.2		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
06	eP	16 23 03.4			07	eP	18 33 24.3		
06	ePD e	18 44 15.3 44 46.6			07	eP i	20 54 45.0 55 21.4		
06	eP	19 34 11.4			07	ePC e	21 24 20.1 24 50.6		
06	eP	20 32 07.4			07	1PD	23 05 43.3	0.6	12.0
06	eP e	20 44 19.3 44 37.6			07	eP			
06	eP e	21 18 35.8 18 46.5			08	eP	00 00 08.5	0.7	16.5
06	eP	23 04 58.2			08	ePC i	01 26 19.6 26 39.0		
06	eP e	23 26 23.8 27 07.1			08	eP	04 10 01.4		
07	eP	00 33 54.5			08	eP	08 29 31.8		
07	e(P) e	01 18 42.3 19 50.3			08	eP	08 37 17.4		
07	ePD	01 55 28.5	1.0	9.7	08	eP e	08 50 02.5 50 34.5		
07	eP e	06 23 58.7 24 29.3			08	1PC eS	10 29 22.2 36 48.2		
07	e(P) e	07 19 53.4 20 36.6			08	ePC	11 07 37.5	0.5	11.0
07	eP	08 09 46.5	0.9	21.5	08	eP	11 40 38.0		
07	eP	08 30 52.5			08	eP	12 00 10.0		
07	1PD	09 28 19.2			08	e(P)	12 08 37.2		
07	eP e	10 50 24.4 51 06.5	0.5	11.5	08	eP e	13 59 03.6 59 46.2		
07	ePC e	16 57 59.6 58 32.5	0.6	16.0	08	eP e	14 33 43.0 34 00.6		
07	eP	17 11 12.9			08	eP e	14 52 58.9 53 31.1		
07	eP	18 17 50.5	1.0	6.0	08	eP e	15 49 36.5 50 00.0		
07	e(P)	18 28 48.5			08	e(P) e	16 57 21.1 58 00.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
08	eP e	17 03 23.7 04 06.5			09	eP	16 05 25.0		
08	eP e	17 10 54.2 10 16.5			09	eP	16 11 45.4		
08	eP	18 27 38.0			09	eP i	16 16 31.9 16 56.7		
08	eP	21 16 36.0	0.6	19.5	09	eP	16 32 38.0		
08	eP	21 24 17.3			09	ePG	17 37 23.7		
08	e(P)	21 51 22.4			09	e(P)	19 11 41.4		
08	e(P)	22 32 39.5			09	eP	23 01 58.0		
08	ePD e	22 59 13.3 59 41.0			09	iPD	23 37 11.6		
08	eP e	23 03 38.9 04 13.7			10	ePG	04 42 43.3	0.7	7.0
08	eP e	23 47 33.8 47 57.1			10	eP e(S)	07 06 22.1 16 24.5	1.0	85.0
09	e P	04 23 45.8	0.7	14.5	10	iPD	08 28 04.4		
09	ePD	10 17 28.2			10	eP e	08 38 38.1 38 51.0		
09	eP	10 52 47.0			10	eP e	09 45 10.2 45 45.5		
09	ePG	11 59 49.5	1.0	17.0	10	e(P)	17 43 09.3		
09	e(P)	12 07 20.3			10	eP e	17 49 18.0 49 46.4		
09	eP	13 16 47.5	1.1	22.5	10	e(P) e	18 09 04.4 09 37.4		
09	eP eS	13 59 32.3 09 47.6			10	iPG	18 51 43.3		
09	eP	14 14 31.5	0.9	13.0	10	iPG	19 04 46.9		
09	eP e	14 33 58.0 36 23.4			11	e(P) e	00 52 42.5 53 07.5		
09	eP	14 44 34.2			11	eP	01 44 37.4		
09	eP	14 50 34.0			11	e(P) e	02 48 49.3 49 15.3		
09	iPD	15 37 03.7							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
11	e(P) e	03 01 30.5 01 43.2			12	eP	17 47 08.8		
11	eP	09 42 30.6			12	e(P)	20 34 03.5		
11	ePD	10 43 17.0	0.6	41.0	12	eP e	21 13 07.0 13 51.0		
11	eP	11 19 01.0			12	e(P) e	21 30 59.0 31 29.4		
11	eP	12 41 34.3	0.9	7.0	12	eP	21 55 48.9		
11	eP e	13 18 21.9 19 02.4			12	eP	22 43 58.0		
11	eP	15 42 10.0			13	eP	00 22 02.3		
11	e(P)	18 18 52.5			13	e(P)	04 22 00.3		
11	eP e	18 42 30.1 42 01.9			13	e(P) e	09 18 59.0 19 31.0		
11	eP	19 23 01.9			13	eP	12 10 21.3		
11	e(P) e	22 27 46.9 28 24.4			13	iPD	15 51 16.5		
12	e(P)	01 46 15.2			13	eP i	16 17 56.4 18 33.0		
12	e(P)	02 16 30.8			13	e(P) e	17 21 00.0 21 22.1		
12	eP e	02 28 32.7 29 23.1			13	eP e	17 42 39.4 42 47.9		
12	e(P)	06 06 51.4			13	e(P)	18 56 03.4		
12	iPD	06 35 04.8			13	eP e	19 09 10.0 09 43.6		
12	e(P) e	08 40 41.5 41 08.5			13	eP e(S)	20 49 02.1 56 04.4	0.7	26.0
12	eP	10 54 43.5			13	e(P)	21 06 30.2		
12	e(P)	12 03 21.0			13	e(P)	22 39 05.5		
12	eP	13 21 48.7			14	e(P)	00 51 28.6		
12	eP	13 57 22.9			14	eP e	01 37 45.4 38 31.0		
12	ePG	14 12 55.8							
12	eP	17 18 36.7							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
14	eP e	02 56 47.4 57 09.1			15	eP	15 41 44.5		
14	eP e	06 29 58.5 30 32.8			15	eP e	17 05 40.7 06 15.2		
14	eP e	08 29 58.4 30 32.0			15	eP	18 00 00.2		
14	eP	09 06 01.4			15	eP	19 09 54.4		
14	e(P)	09 15 28.7			15	e(P) e	22 45 09.8 45 48.3		
14	eP e	11 09 14.0 09 35.5			16	eP i	00 27 18.1 27 53.1		
14	eP	12 34 10.0			16	eP e	01 07 54.8 08 31.5		
14	e(P)	16 36 21.3			16	eP	01 33 14.4		
14	IPD	19 21 54.3			16	e e	34 16.6		
14	eP e	21 37 53.2 38 41.9			16	e(P)	02 17 27.8		
14	eP	22 14 03.2			16	eP	02 38 21.1		
14	eP	23 00 51.1			16	e(P)	04 09 11.8		
15	eP e	00 01 00.1 01 45.0			16	e(P)	05 04 11.4		
15	eP	01 01 46.4			16	eP e	07 12 21.6 13 19.5		
15	e(P)	06 35 03.1			16	ePD	09 49 09.5		
15	eP e	06 45 02.0 45 38.0			16	ePG	10 25 57.5		
15	eP	08 30 11.2			16	eP	12 37 29.9		
15	e(P)	10 52 49.8			16	eP	14 16 33.3		
15	IPD e(S)	11 55 25.2 04 09.5	1.0	103.0	16	ePD eS	16 04 06.4 12 04.6		
15	eP	12 25 43.8			16	eP	17 06 51.7		
15	eP	13 47 17.2	0.8	81.0	16	eP	19 30 00.5		
					16	eP	23 52 06.2	0.9	15.5

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
17	eP	03 23 01.7			19	eP	14 08 05.6	1.5	61.0
17	eP e	05 18 01.2 18 35.8				e	13 04.2 17 39.6		
17	ePD e	17 03 37.8 03 45.2			19	iPD	15 45 28.0	0.6	13.0
17	eP e	17 15 11.4 15 48.6			19	eP	15 53 11.7		
18	iPC	00 36 52.6	0.7	26.5	19	ePC	16 16 01.5		
18	eP	03 37 19.0			19	eP	18 29 13.2	0.8	16.0
18	e(P)	03 44 10.0			19	eP	19 43 00.7		
18	e(P)	04 43 48.0			19	eP e	21 28 04.5 21 43 52.3 44 27.2		
18	eP	05 19 32.0	0.7	7.0	19	ePC	22 48 15.9	0.5	16.5
18	eP	12 51 20.9			20	e(P) e	01 49 31.0 49 53.2		
18	e(P)	13 22 30.3			20	e(P)	03 17 30.5		
18	ePC e	15 07 51.7 08 22.2			20	eP e	04 52 19.3 53 16.8		
18	iPC	16 26 53.9			20	e(P)	09 52 45.0		
18	e(P)	16 35 22.0			20	ePC i	13 09 18.0 09 49.1		
18	eP e	17 46 49.0 47 31.5			20	ePC	13 40 18.4	0.8	22.0
18	eP e	18 12 37.8 13 12.0			20	e(P)	13 44 13.9		
18	eP e	21 51 45.0 52 24.0			20	ePD e(S)	16 28 54.8 36 57.4		
18	eP	22 54 22.5	0.7	14.0	20	e(P) e	16 42 54.9 43 27.0		
18	eP	23 02 24.0			20	e(P)	16 48 58.8		
18	eP	23 40 58.4			20	e(P)	16 58 04.4		
19	e(P)	12 36 27.2			20	eP	17 17 43.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	eP	18 27 57.5	1.0	32.0	21	eP	21 31 12.1		
20	eP	20 57 13.8				e	32 11.0		
20	e(P)	23 22 34.6			22	iPC	01 55 48.1		
20	eP	23 48 39.3			22	eP	02 32 21.4		
21	eP	00 07 38.0			22	ePD	04 14 34.1		
	e	08 20.3			22	e(P)	05 57 38.0		
21	e(P)	02 51 43.7			22	e(P)	06 02 45.0		
21	iPD	03 15 02.3			22	eP	08 14 28.5		
21	eP	04 27 54.8			22	e(P)	08 50 38.5		
	e	28 16.0			22	eP	10 14 22.0		
	e	28 25.0			22	eP	10 34 02.4		
21	e(P)	05 30 48.0			22	ePD	13 46 07.2	1.0	41.0
21	eP	06 52 10.6			22	iPC	17 13 57.0		
21	e(P)	07 03 50.0				e	14 28.0		
	e	04 36.5			22	eP	17 41 18.7		
21	eP	07 39 39.0			22	ePD	17 48 27.9	0.5	29.0
	e	40 10.4				e	48 56.5		
21	e(P)	07 46 05.5			22	eP	18 01 42.1	0.8	8.0
	e	46 35.5			22	eP	18 15 09.0		
21	eP	07 54 05.7			22	eP	18 40 07.2		
21	eP	10 33 52.3	0.8	14.5		e	40 48.1		
21	e(P)	11 12 55.4			22	eP	18 48 05.0		
21	eP	12 15 36.5				e	48 39.0		
21	iPD	13 34 04.2			22	iPC	22 45 54.2		
	i	34 27.0				e	46 24.0		
21	e(P)	14 11 26.0			23	e(P)	01 47 39.0		
21	eP	17 35 10.3			23	eP	03 16 16.3		
21	ePG	20 35 05.6				e	16 53.2		
	e	35 39.2							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
23	e(P)	03 45 31.9			24	eP e	22 57 10.6 57 13.0		
23	e(P)	04 23 58.4			24	eP e	23 35 30.9 36 01.8	0.4	11.0
23	e(P)	08 24 16.3							
23	eP	12 19 09.2			25	ePD e	00 28 55.6 29 26.4	0.3	31.0
23	eP	13 59 34.4			25	eP e	01 05 33.6 06 04.3	0.6	11.0
23	eP e	14 11 11.3 11 46.5			25	eP	01 09 42.3		
23	e(P) e	14 18 10.0 18 40.5			25	eP	01 14 14.6		
23	e(P)	15 47 54.0			25	eP e	01 17 53.2 18 28.9		
23	eP	18 57 30.0			25	eP	02 34 14.3		
23	eP e(S)	21 15 16.4 21 42.5			25	eP	02 38 36.5		
24	e(P) e	00 11 22.0 11 32.0			25	e(P)	08 59 02.0		
24	1PC	00 18 12.4			25	e(P)	09 46 41.5		
24	e(P) e	01 18 33.0 19 13.5			25	eP e	13 26 55.5 27 13.0		
24	eP	02 06 05.6			25	e(P)	13 42 18.0		
24	eP e e	08 40 11.0 40 46.2 41 48.0			25	eP	14 24 32.4		
24	e(P)	10 43 31.0			25	eP	16 49 37.8		
24	ePD 1	11 54 49.4 55 12.0			25	e(P) e	18 58 50.6 00 22.4		
24	eP	11 59 40.8			25	eP e	22 31 47.6 31 50.6		
24	eP	12 56 13.9			26	e(P)	01 44 13.9		
24	eP	15 08 16.3	0.8	8.5	26	e(P)	04 49 08.9		
24	eP e	19 13 36.7 14 36.2			26	eP e	10 07 46.9 08 56.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
26	e(P) e	12 03 56.5 08 06.0			27	eP	18 39 18.1		
26	eP	12 42 16.0			27	eP e	18 43 00.4 43 42.0		
26	eP	15 35 47.4			27	eP e	19 30 49.4 31 20.4		
26	eP	17 48 14.5			27	e(P) e	20 00 31.0 00 58.0		
26	e(P)	18 03 23.2			27	eP	20 57 43.4		
26	eP	19 31 16.2			27	1PC e	21 27 50.6 28 15.9		
26	eP e	20 58 49.7 59 34.6			27	1PD	21 55 22.1		
26	eP e	21 28 11.4 29 58.6			27	eP	22 50 41.4		
26	eP	22 12 49.4			28	eP e(S)	01 54 12.8 03 22.6		
26	1PD e	22 18 58.9 19 29.0			28	eP e	02 47 34.6 47 57.4		
27	eP e	00 32 37.5 33 04.8			28	e(P)	05 35 09.2		
27	eP	03 37 37.3			28	eP	05 38 05.2		
27	1PD	06 20 05.5			28	1PD	09 33 47.0	0.6	34.0
27	e(P)	07 38 12.3			28	eP	10 07 57.7		
27	e(P) e	08 29 17.0 29 41.0			28	eP e	10 53 41.5 54 03.0		
27	1PD	08 32 42.3			28	e(P)	11 29 53.1		
27	ePC	11 19 56.2			28	eP	11 41 44.1		
27	eP	11 52 29.9			28	eP	18 58 22.0		
27	1PC	12 51 02.1			28	eP e	20 12 38.4 13 12.4		
27	eP	14 16 40.0			28	eP	22 14 10.9		
27	eP e	14 29 30.7 30 32.0			28	eP	22 55 33.1		
27	eP	15 36 23.9							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	eP	23 47 41.0			31	eP	07 21 15.6		
	e	48 13.3				31	ePD 1	08 15 04.7 15 36.4	
29	e(P)	06 17 43.6			31	eP	12 28 14.5	0.6	10.1
	e	18 11.1				31	ePD	18 31 54.9	
29	eP	09 21 43.5	1.6	29.6	31	eP	19 33 03.2		
	e(S)	27 01.4				31	eS	39 47.1	
29	eP	10 45 39.9			31	eP	21 49 51.1		
	i	46 11.5							
29	eP	11 09 04.0							
	e	10 41.4							
	eS	14 31.9							
29	eP	13 14 06.3							
	e	15 16.3							
29	ePC	13 53 45.2	1.0	37.4					
29	a(P)	16 16 00.0							
	e	16 40.5							
29	eP	16 32 17.0							
	e	32 51.8							
29	eP	18 36 31.0							
29	eP	21 30 24.5	0.6	9.9					
	e	31 00.5							
29	e(P)	21 33 59.0							
	e	34 34.2							
30	e(P)	07 20 29.0							
30	ePD	08 04 37.0	0.9	15.0					
30	eP	08 12 59.9							
30	e(P)	09 10 17.0							
30	e(P)	10 46 20.0							
	e	46 46.2							
30	eP	11 08 56.4							



20 MAY 1969

PRELIMINARY SEISMOGRAM ANALYSIS
 KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A.KARIM - DIRECTOR

Page 1 of 11

WNSS: KBL

Latitude: $34^{\circ}32.45'N$ S.P. Mag. 4.00 K. at 1.0 sec.

Via Air Mail

Longitude: $69^{\circ}02.59'E$ L.P. Mag. 6 K. at 15.0 sec.

Elevation: +1.92KM

 Bulletin# 11
 Dated: May 13 1969
IMPORTANT: Please see note on page 11.

Period: Apr 01 19 <u>69</u> To Apr 30 19 <u>69</u>									
i = Impulsive; e = Emergent; C = Compression; D = Dilatation									
Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
01	e(P)	01 27 20.0			02	eP	19 38 44.0	0.6	12.5
01	eP	02 56 55.0			02	eP	21 45 48.9		
01	ePC	05 48 58.5			02	eP	23 33 17.5		
01	e(P)	08 52 01.0			03	eP	00 03 27.1		
	e	52 44.0			03	eP	00 27 29.1	0.6	6.0
01	eP	11 43 30.5			03	eP	02 54 33.2		
	e	44 02.0			03	eP	04 14 06.0		
01	EPC	16 36 45.5			03	eP	09 42 37.9		
01	eP	17 41 34.7				e	43 12.0		
	e	42 10.0			03	iPC	14 57 12.7		
01	iP	20 35 50.0				e	57 44.0		
01	e(P)	21 19 32.4			03	iPC	15 08 06.2		
02	e(P)	00 48 19.5			03	eP	17 51 44.7		
02	eP	02 20 46.4				e	52 09.5		
	e	21 07.4			03	e(P)	18 07 20.0		
02	eP	02 36 58.8				e	07 45.4		
02	iPC	04 58 54.0			03	eP	18 14 08.3		
02	eP	07 32 54.4	0.6	5.0	03	eP	19 30 12.8	0.7	6.5
02	e(P)	11 21 35.2			03	eP	20 36 24.4		
	e	21 59.1				e	37 00.0		
02	eP	12 42 32.3			03	eP	20 39 10.0		
02	eP	17 07 35.0			03	eP	21 14 02.4		
	e	07 59.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
03	eP	21 32 39.2			04	e(P) e	17 42 23.1 43 09.3		
03	e(P)	22 17 21.4			04	e(P)	18 49 43.0		
03	eP	23 50 03.4			04	eP e	19 45 05.4 45 43.0		
03	eP	23 58 27.5			04	ePD	20 13 43.7	0.8	13.5
04	iPC	00 42 23.5			04	iPC	23 07 23.9		
04	eP e	05 39 43.0 40 13.3			04	eP	23 55 33.9		
04	e(P)	06 08 46.8			05	eP	01 39 00.3	0.6	10.0
04	eP e	06 20 59.0 21 27.5			05	e(P) eS	02 24 18.0 32 17.0		
04	e(P)	07 00 11.0			05	e(P)	03 53 41.5		
04	eP e	08 34 02.2 34 32.8			05	eP	04 13 42.5		
04	iPD	08 55 49.3	0.7	32.0	05	e(P) e	06 26 50.7 27 31.5		
04	iPD	09 14 14.0			05	eP	08 56 51.5		
04	eP	11 23 03.5			05	eP	10 30 34.2		
04	iPD	11 39 38.0			05	eP	10 45 32.9		
04	e(P)	12 24 13.0			05	e(P)	12 47 46.4		
04	eP	12 41 06.5	0.5	7.0	e e	47 53.7 48 16.5			
04	eP	14 03 31.6			05	e(P)	17 05 17.5		
04	e(P) e	14 17 36.3 18 12.3			05	e(P)	20 21 04.5		
04	eP	16 21 05.0			06	ePD	03 07 09.5		
04	eP	16 34 18.5			06	eP	03 55 30.0		
04	e(P) e	16 42 57.6 43 31.9			06	eP	04 14 30.0		
04	e(P) e	16 51 17.5 52 02.0			06	eP	05 27 02.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
06	ePD e	06 24 41.5 24 53.6			07	ePD	18 10 24.7		
06	e(P)	08 36 23.4			07	eP	18 49 07.5	0.7	10.0
06	e(P)	08 59 34.0			07	eP	20 34 33.4	0.9	21.0
06	eP	09 58 34.7			07	eP e	20 59 35.2 00 09.5		
06	eP	11 42 37.5			07	e(P)	22 45 53.4		
06	e(P)	12 32 43.1			08	eP	02 19 48.0		
06	eP	14 10 33.5			08	eP	02 54 53.9	0.7	13.4
06	eP e	14 45 27.3 46 00.5			08	eP	09 04 17.7	0.5	5.0
06	eP	16 08 26.0			08	e(P) e	10 05 22.2 05 57.5		
06	e(P) eS	16 57 35.5 58 47.5			08	e(P) e	10 19 13.4 19 36.3		
06	e(P) e	17 44 54.4 45 47.0			08	e(P)	10 28 49.0		
06	eP	19 26 47.2	1.0	11.0	08	eP	10 31 19.6	0.5	37.0
06	e(P) e	21 35 40.6 36 13.5			08	eP	10 37 18.6		
07	eP	01 08 11.4			08	ePD	11 41 56.5		
07	eP	03 49 12.9			08	e(P)	15 00 59.5		
07	eP e	10 03 10.2 03 43.3			08	ePD e	17 12 25.8 12 56.0		
07	eP	10 18 30.5			08	e(P)	18 40 50.0		
07	eP	11 18 13.0			08	eP	21 26 32.7		
07	eP e	12 33 00.5 33 32.2			08	e(P)	21 29 38.0		
07	e(P)	14 46 13.8			08	eP	21 35 49.0	0.5	7.5
07	e(P)	15 19 08.9			08	e(P) e e	22 53 21.0 53 51.0 54 00.5		
07	e(P)	16 28 33.0			09	eP e	00 59 41.9 00 17.9		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
09	eP e	07 46 23.8 46 52.0			11	e P e	05 39 12.1 39 45.5		
09	eFD	12 05 55.2			11	e(P) e	09 17 04.4 17 42.0		
09	iFD	13 06 02.5			11	e(P)	09 27 55.3		
09	e(P)	13 13 40.6			11	eP	09 54 27.2		
09	e(P)	14 19 20.4			11	e e	54 58.6		
09	eP	14 51 31.5			11	eP	10 02 41.0		
09	eP e	17 00 35.3 01 05.8			11	e(P)	13 36 15.7		
09	e(P) e	20 45 35.2 46 11.4			11	e(P) e	13 49 28.4 50 20.0		
09	eP	22 57 17.3			11	e(P) e	14 49 48.0 50 29.5		
10	e(P)	00 54 08.7			11	eP e	15 18 15.0 19 01.2		
10	e(P)	03 08 30.7			11	e(P)	17 27 06.5		
10	eP	05 38 09.5	1.0	44.0	11	eP e	17 47 14.2 48 28.7		
10	e(P)	06 05 24.4			11	eP	18 52 37.7		
10	eP	11 48 41.5			11	eP	20 52 56.0		
10	e(P)	13 10 52.9			11	e e	53 29.5		
10	e(P)	14 30 05.5			11	eP e	22 14 06.4 14 28.5		
10	iFD	15 01 05.0			11	eP	23 54 33.0	0.6	13.0
10	e(P) e	15 23 03.0 23 31.2			12	eP e	02 07 44.0 08 22.3		
10	iPC	15 58 30.5			12	eFD	07 51 17.0		
10	eP 1	16 42 23.3 42 49.5			12	eP	10 54 20.0		
10	eFD	17 18 57.5	0.5	41.5	12	e(P) e	11 01 47.0 02 23.0		
10	e(P) e	18 27 57.0 28 32.5			12	eP	13 19 35.9		
10	iFD	22 05 19.8							

Day	Phase	Time(U.T.) hr,min,sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr,min,sec.	T (sec.)	2A (mm)
12	e(P)	18 28 17.5			14	ePD e	06 35 00.3 35 36.6		
12	eP	20 44 49.5			14	eP	06 44 31.5		
12	eP e	21 20 48.3 21 18.5			14	eP e(S)	07 08 00.3 15 12.0		
12	iPD	22 17 53.5			14	eP	08 02 32.0		
12	e(P) e	22 28 00.7 28 25.4			14	eP e	09 33 47.5 34 21.6		
12	eP	23 11 35.5			14	eP	10 05 47.0		
13	eP e	00 36 45.8 37 32.2			14	eP	13 15 44.0	1.1	16.0
13	ePD e	00 39 37.3 40 08.0			14	iPD i	17 11 48.0 12 22.0		
13	eP	01 02 35.5			14	iPC	16 06 51.1		
13	eP	03 43 14.4			14	ePD	19 43 21.7	0.5	29.0
13	eP	05 50 17.5	0.6	19.0	14	eP	20 07 34.8		
13	eP	08 19 19.0			14	eP e	20 31 57.2 32 23.0		
13	e(P)	08 52 19.4			14	e(P)	21 29 39.1		
13	e(P)	11 59 55.8			15	e P e	03 59 01.5 59 34.4		
13	eP	13 20 50.9			15	eP	05 33 07.1		
13	e(P) e	15 02 56.8 03 31.0			15	eP e	07 28 13.5 28 46.0		
13	eP	15 28 38.3			15	e(P)	08 25 12.3		
13	eP e	17 32 51.1 33 09.2			15	e(P)	12 53 43.0		
13	eP e	20 15 13.5 15 20.4			15	e(P) e	17 13 49.0 14 22.0		
13	e(P)	23 16 49.6			15	ePC	17 39 49.0	1.4	29.0
13	eP	23 43 28.0			15	iPD e	22 23 09.2 30 22.9		
14	e(P) e	01 20 46.8 21 46.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
16	e(P)	00 25 34.0			17	e(P) e	07 14 27.3 15 09.0		
16	eP	01 34 23.0			17	eP e	12 31 09.0 31 39.0		
16	e(P)	04 59 53.0			17	ePC	12 58 27.6	0.6	24.0
16	e(P)	08 49 08.5			17	e(P)	14 32 44.5		
16	e(P) e	12 32 27.4 36 45.4			17	eP e	14 36 02.0 36 20.0		
16	e(P)	15 05 36.5			17	iPC i	16 27 17.3 27 47.8		
16	iPD e	18 32 00.3 32 30.0			17	eP e	17 27 41.0 28 22.0		
16	eP e	18 38 17.4 38 44.5			17	e(P)	17 55 47.5		
16	e(P)	20 29 09.0			17	ePD e	18 46 43.5 47 26.0		
16	e(P)	20 58 56.0			17	eP	19 04 10.4		
16	e(P)	21 05 57.4			18	eP e	00 46 25.5 46 51.0		
16	e(P)	21 20 41.5			18	eP	05 55 29.0		
16	eP	22 49 32.0			18	eP	06 22 31.4		
16	e(P)	23 01 20.5			18	e(P) e	06 38 55.5 39 34.0		
16	eP	23 19 38.4			18	eP	08 09 07.5		
16	eP	23 26 46.0			18	e(P) e	08 59 27.0 00 03.5		
17	e(P)	01 00 18.0			18	ePC	12 43 17.5		
17	eP	01 03 55.4			18	eP e	14 42 00.3 42 45.0		
17	eP	03 21 29.4			18	eP	15 35 31.0		
17	eP	05 05 08.0	0.6	16.0	18	e(P)	16 17 14.0		
17	e(P) e	06 06 01.0 06 25.5							
17	eP	07 01 38.0							
17	e(P)	07 08 20.4							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
18	e P e	16 48 29.5 50 19.2			19	eP e e	20 06 12.0 06 43.0 07 22.0		
18	e(P)	17 33 21.0			19	eP	22 16 26.0		
18	e(P)	17 56 35.5			19	e(P)	23 06 56.0		
18	eP e	18 39 37.2 40 11.0			19	1PC e	23 21 08.0 21 40.0		
18	eP	20 34 26.0			20	eP e	00 15 29.1 15 55.5		
18	e(P) e	22 19 46.0 20 44.0			20	1PC	02 01 45.0		
18	eP	22 32 12.5			20	eP e	02 15 19.5 15 44.0		
18	e(P)	23 45 26.0			20	e(P)	05 53 28.0		
19	eP	01 33 01.5	0.7	20.0	20	e(P) e	09 13 39.0 14 20.2		
19	e(P) e	07 34 13.4 34 53.5			20	1PC e	13 09 49.8 11 54.8		
19	eP e eS	08 54 32.5 54 47.0 02 07.0			20	eP	14 31 58.1		
19	eP e	11 22 48.8 23 29.0			20	e(P)	15 47 37.1		
19	eP e	14 47 09.0 47 53.5	0.5	23.5	20	eP e	16 09 36.2 10 11.5		
19	eP	15 27 56.5	0.8	11.5	20	ePD e	17 28 47.7 29 19.0		
19	eP e	15 37 54.4 38 24.4			20	1PD	19 19 28.7		
19	e(P) e	17 19 15.5 19 46.6			20	e(P) e	19 21 35.0 22 09.0		
19	eP	17 30 58.3			20	eP	20 18 09.4		
19	eP	18 28 17.0			20	eP e	20 24 38.0 25 12.5		
19	eP	19 38 41.0			20	e(P)	21 19 20.0		
19	eP	19 46 20.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
21	e(P) e	01 03 06.8 03 42.3			22	iPD	13 37 03.0		
21	eP	02 38 15.0	0.7	15.0	22	eP e	14 11 11.0 11 38.9		
21	eP e	02 45 18.0 45 53.3			22	ePD	16 11 45.9	0.4	8.0
21	eP e	02 48 21.5 48 45.3			22	eP	18 07 21.5	0.5	18.5
21	eP	04 17 38.0			22	eP	20 27 13.2		
21	eP i	05 28 13.4 28 47.1	0.5	56.3	22	iPC e(S)	22 39 52.5 44 14.6	0.7	43.5
21	ePC	05 34 03.2			23	eP	02 29 40.0		
21	eP	06 38 17.3			23	eP e	04 12 00.7 12 36.8		
21	ePC	07 28 31.9	0.5	55.1	23	eP e	06 06 47.0 07 20.0		
21	e(P) e	08 32 24.0 32 54.0			23	eP e	07 20 17.5 20 53.0		
21	eP	11 52 59.4	0.4	13.8	23	eP e	07 51 53.0 52 35.0		
21	eP	22 36 43.1			23	eP	08 25 30.2		
22	e(P) e	02 45 12.5 45 42.3			23	eP e	11 24 01.0 24 31.7		
22	iPC eS	08 21 10.1 29 10.9	0.6	67.8	23	eP e	13 41 46.3 42 29.0		
22	eP	09 12 07.1			23	eP e	14 05 11.0 05 38.0		
22	e(P) e	09 16 23.0			23	eP	14 59 18.0		
22	e(P) e	11 03 12.4 03 42.0			24	eP	00 42 55.1	0.7	35.0
22	ePD e e	12 50 25.0 56 49.4 57 17.6	0.5	138	24	e(P)	01 00 38.0		
22	ePD i	12 59 24.4 59 52.4	0.6	38.0	24	eP e	01 04 17.0 04 44.0		
22	eP	13 23 10.9			24	eP	02 30 28.0	0.9	29.5

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
24	eP e e	02 47 43.0 47 57.0 48 32.5			24	e(P)	20 26 53.5		
24	eP e	03 26 14.5 26 42.0			24	e(P)	22 51 37.2		
24	eP e	04 16 57.2 17 25.2			25	eP e	01 49 48.6 50 15.5		
24	eP e	04 43 05.5 43 33.0			25	e(P)	02 44 29.4		
24	iPD	06 30 07.1	1.0	12.0	25	eP	03 39 08.0		
24	eP	07 44 45.1			25	e(P)	03 45 24.4		
24	eP e	08 25 17.0 25 44.4			25	e(P)	03 53 31.5		
24	eP	08 32 18.9	0.6	24.0	25	eP e	03 55 42.0 56 07.0		
24	e(P)	11 01 49.0			25	e(P)	04 01 22.1		
24	eP	11 52 26.0	0.8	9.0	25	ePC	07 37 36.6		
24	eP e	12 04 35.2 05 02.5			25	eP	09 07 38.6		
24	eP e	14 47 41.5 48 13.0			25	eP	09 25 49.8		
24	eP	14 52 20.4			25	e(P)	11 01 24.5		
24	eP e	15 07 14.5 07 56.0			25	eP	11 56 07.5		
24	eP e	15 55 53.0 56 21.0			25	eP e	13 34 57.4 35 18.8	0.6	12.5
24	e(P)	16 26 39.4			25	eP e	17 27 43.7 28 08.0		
24	iPD	16 41 31.0			25	eP	18 01 05.0		
24	e(P) e	18 26 27.0 27 04.5			25	eP	01 40.0		
24	eP	18 43 53.2			25	eP	19 43 05.7		
24	e(P)	19 32 43.2			25	eP	20 19 16.0		
					25	eP e	20 29 22.4 30 07.3		
					25	eP	21 30 15.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
25	eP	21 45 11.3	1.0	34.0	26	eP	22 04 45.0		
25	eP e	22 51 46.8 53 34.0			26	eP	23 05 49.0	0.7	7.0
25	eP	23 20 50.2			27	iPC	01 45 10.4	0.8	69.0
25	ePD	23 52 38.5	0.5	9.0	27	eP e	10 02 18.5 02 42.2		
26	iPC	01 30 48.2			27	eP	11 05 04.2		
26	eP e	02 50 59.1 51 24.1			27	eP e	11 29 06.9 29 48.5		
26	eP	03 55 41.0			27	e(P)	13 17 56.0		
26	iPC e	04 05 57.0 12 35.2			27	e(P) e	16 07 06.6 07 43.0		
26	eP e	05 56 05.0 56 33.5			27	eP e	16 29 34.5 29 59.0		
26	eP e	06 18 29.0 22 32.0			27	ePD	20 12 08.0	0.5	105
26	eP	06 43 24.0			27	eP e	20 57 49.5 58 17.5		
26	eP	06 55 24.0			27	eP e	23 30 38.4 30 58.0		
26	eP	11 32 25.5			27	eP e	23 34 09.0 34 37.0		
26	eP	12 13 37.2			28	eP	00 15 07.9		
26	eP	12 20 22.2			28	eP	00 57 42.0		
26	eP	18 09 52.0			28	eP	01 39 17.2		
26	eP e	18 40 11.7 40 53.0			28	eP e	04 33 19.5 33 44.0		
26	ePD	19 17 01.5			28	ePD e	07 43 48.5 46 58.7	0.6	52.0
26	e(P)	20 25 43.0			28	e(P) e	08 38 30.0 38 54.4		
26	e(P)	20 32 31.0			28	eP	10 23 05.0		
26	iPD e	20 55 25.2 55 56.0	0.4	13.0					
26	eP	21 14 05.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	e(P)	11 51 29.0			30	e(P)	12 59 52.5		
28	eP	12 16 20.5			30	e	00 22.0		
	e	16 45.0			30	e(P)	15 23 37.4		
28	iPD	12 55 29.0	0.7	96.0		e	24 41.0		
28	eP	17 38 40.4			30	iPD	15 28 41.5		
	e	39 16.0			30	eP	15 50 50.3		
28	iPD	18 16 46.8	0.7	15.5	30	e(P)	16 00 50.1		
28	eP	19 52 17.2	0.7	18.0	30	e(P)	16 07 18.2		
28	e(P)	22 55 00.0				e	07 50.5		
28	e(P)	23 39 29.0			30	eP	16 41 32.0		
29	e(P)	03 50 37.5			30	e(P)	19 02 02.4		
29	ePG	04 41 22.2	1.1	65.0		e	02 34.7		
29	eP	06 35 03.0			30	e(P)	19 27 05.5		
29	iPD	09 35 58.4			30	eP	20 27 07.5		
29	eP	09 44 51.0			30	eP	21 41 14.4		
29	iPG	17 17 33.7							
29	e(P)	20 11 38.5							
29	eP	20 50 41.5							
29	ePG	21 28 28.0	0.7	45.0					
30	eP	01 19 12.0	0.6	19.0					
30	e(P)	01 55 05.6							
30	e(P)	03 38 26.0							
30	e(P)	07 09 09.5							
30	eP	07 13 53.0							
30	eP	08 15 10.0							
	e	15 52.5							

Note: Arrival times of all events from March 24 to April 17 suspected as being incorrect owing to instrumental problems. Error is random but always less than one minute early.



18 JUL 1969

PRELIMINARY SEISMOGRAM ANALYSIS

Page 1 of 11

KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A.KARIM - DIRECTOR

WWNSS: KBL

Latitude: $34^{\circ}32.45'N$ Longitude: $69^{\circ}02.59'E$

Elevation: +1.92KM

Via Air Mail

S.P. Mag. 4.00 K. at 1.0 sec. Bulletin# 12
 L.P. Mag. 6 K. at 15.0 sec. Dated: June 19 69

Period: <u>May 01 19 69</u> To <u>May 31 19 69</u>									
i = Impulsive; e = Emergent; C = Compression; D = Dilatation									
Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
01	eP e	00 18 02.1 18 34.0			01	ePD	19 14 33.5	0.9	11.5
01	e(P) e	02 10 16.2 11 33.4			01	iFD	19 23 55.3	1.0	71.0
01	eP e	02 22 01.0 22 31.1			01	e(P)	20 13 23.0		
01	e(P)	03 05 16.0			01	eP e	20 15 48.0 16 28.5		
01	eP	03 30 54.6			02	eP e	01 48 14.5 48 38.0		
01	ePD	04 02 54.5			02	eP	02 38 45.5		
01	eP	06 05 15.0			02	eP	03 23 42.0		
01	e(P)	07 50 35.0			02	e(P)	08 45 12.0		
01	eP e	08 09 08.5 09 51.0			02	ePC e	09 54 20.2 54 56.5	0.5	11.0
01	e(P) e	09 14 06.3 14 47.6			02	e(P)	10 16 59.0		
01	iPC	10 26 43.0	0.5	40.0	02	eP	10 43 30.0		
01	eP	12 02 11.0	0.5	115.0	02	iPC e	13 08 22.1 08 53.0	0.4	45.0
01	eP	12 45 29.8			02	eP e	14 09 24.5 09 59.0		
01	eP e	15 52 52.0 53 26.0			02	e(P) e	16 14 45.0 15 33.5		
01	eP	16 44 49.4	0.9	23.0	02	e(P)	16 19 43.0		
01	e(P)	16 52 50.0			02	e(P)	17 11 38.5		
01	eP	18 08 55.0				e	12 15.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
02	eP e	17 19 06.5 19 34.5			04	iPD	03 22 48.0		
02	eP	18 45 09.0			04	e(P)	04 30 18.5		
02	eP e	19 08 47.7 09 19.5			04	eP	06 49 07.9	0.7	7.5
02	eP	20 49 54.6			04	eP	07 07 04.5		
02	e(P)	22 01 02.6			04	e(P) e	08 45 28.5 46 04.5		
02	e(P) e	22 03 08.7 03 39.0			04	e(P)	12 54 13.7		
02	eP	22 20 42.5			04	eP e	13 14 05.5 14 31.0		
02	e(P) e	22 39 44.0 40 08.0			04	eP	13 52 12.0	0.9	39.5
02	iP	22 55 26.0	0.7	107.0	04	eP	15 22 42.5	0.7	15.0
03	eP	00 38 17.5			04	ePC	17 43 38.5		
03	e(P)	09 50 25.5			04	eP	18 46 41.0		
03	eP e	11 25 23.3 25 54.5			04	iPD	19 23 55.3		
03	e(P)	13 27 58.8			04	eP e	20 24 43.1 25 16.5		
03	iPD i	17 43 00.5 43 19.0			04	eP e	23 15 46.2 16 11.6		
03	eP	19 00 23.9	0.6	11.0	04	eP	23 36 24.4		
03	eP	19 02 08.0			05	eP eS	02 52 20.1 53 32.0		
03	e(P)	21 03 47.2			05	ePC	05 59 49.4	0.9	47.5
04	eP	01 07 59.0			05	eP e	08 50 17.5 50 51.5		
04	eP e	01 26 48.1 27 19.8			05	eP	09 58 33.0		
04	iPD e	01 29 35.9 30 07.0	0.5	26.0	05	eP e	10 11 09.0 11 45.2		
04	eP	02 49 17.6			05	eP e	11 54 38.6 55 08.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec)	2A (mm)
05	eP e	14 12 19.0 12 54.0			07	eP e	07 10 33.2 11 51.0		
05	eP	15 09 13.5	0.7	7.5	07	e(P)	08 00 54.5		
05	eP e	17 49 32.1 50 05.0			07	iPD	09 02 10.8	0.6	32.0
05	e(P) e	18 36 50.0 37 20.5			07	eP	09 39 58.0		
05	iPD	21 21 05.4			07	eP e	13 41 08.0 41 39.0		
05	eP	21 57 21.5			07	e(P)	13 59 04.4		
05	iPD	23 27 56.9			07	e(P) e	14 38 34.0 39 23.6		
05	eP	23 54 24.4			07	eP e	14 50 54.2 51 24.0		
06	ePG e	03 48 27.6 49 00.5	0.5	11.5	07	eP e	15 39 15.0 39 56.0		
06	eP e	06 42 24.0 42 58.2	0.5	9.0	07	eP e	18 10 58.8 11 31.1		
06	eP	11 21 07.3			07	eP e	18 30 04.4 30 38.0		
06	eP e	12 18 41.6 19 35.0			07	eP e	19 04 53.7 05 27.5		
06	eP i	19 58 27.5 59 14.2			07	ePD	20 41 19.3	0.5	20.0
06	e(P) e	21 18 48.0 19 28.0			07	eP	22 30 20.8	0.6	8.0
06	e(P) e	22 33 20.0 33 43.0			07	e(P)	22 34 16.1		
06	eP e	23 42 29.5 43 15.0	0.7	16.0	07	eP e	22 57 01.0 57 43.0		
07	eP e	00 04 25.5 05 05.5			07	eP e	23 03 47.6 04 21.5		
07	iP	02 38 38.0	0.4	23.0	08	eP	02 01 18.5		
07	eP e	06 25 55.5 26 29.0			08	e(P)	02 33 18.8		
					08	eP	08 16 54.4	0.8	17.0
					08	eP	13 57 42.3		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
08	e(P) e	15 32 23.0 33 07.6			10	e(P) e	07 45 11.5 45 54.0		
08	eP e	16 09 42.3 10 43.6			10	eP	08 59 59.5		
08	1PC	16 19 47.0			10	eP	09 32 18.5	0.8	15.0
08	e(P) e	17 20 44.0 22 06.0			10	e(P) e	10 33 24.8 33 34.8		
08	1PD	17 50 58.5			10	ePC	12 25 02.4		
08	eP	17 59 32.1			10	ePC	13 08 13.3		
08	eP	19 02 59.0			10	e(P)	13 25 02.5		
08	e(P) e	19 50 54.6 51 30.0			10	eP e	13 28 09.8 28 55.2		
08	e(P)	20 48 12.5			10	eP	14 32 33.4		
08	eP	22 49 33.0	0.6	7.5	10	eP e	16 19 48.2 20 29.4		
08	eP	23 45 04.8			10	eP	20 24 26.9		
09	eP e	03 11 35.1 12 24.4			11	e(P)	00 04 34.4		
09	e(P) e	12 08 47.5 09 12.5			11	eP	00 23 48.0	1.0	24.0
09	eP	13 40 47.0	0.6	14.0	11	eP	00 58 07.5		
09	ePD	17 10 00.7	0.9	16.5	11	eP	03 39 42.3	0.8	9.5
09	eP	17 37 37.0			11	e(P)	03 47 07.4		
09	eP e	17 48 49.2 49 20.2			11	eP e	05 01 21.9 01 52.3		
09	eP	18 56 50.7			11	e(P) e	05 21 35.5 22 01.1		
10	1PC	01 38 12.0	0.5	52.0	11	e(P) e	05 41 46.6 42 25.5		
10	eP e	02 41 09.4 41 49.0			11	e(P)	07 51 12.0		
10	ePD	03 49 57.4			11	eP	08 56 57.5		
					11	eP	10 52 41.0	0.8	12.0

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
11	ePD	10 58 29.0			12	eP	22 32 41.0		
11	e(P)	12 21 03.0				e	33 12.0		
11	ePD	13 17 16.0			13	e(P)	00 04 26.0		
11	eP	14 36 08.0			13	iPD	00 45 22.2		
11	eP	14 41 29.0			13	eP	04 04 19.4		
11	e(P)	16 08 03.0			13	eP	05 47 33.5		
	e	08 36.6			13	eP	06 10 34.0		
11	iPD	16 24 50.7			13	eP	10 06 03.3		
11	e(P)	18 36 14.5			13	eP	10 17 39.9		
	e	36 29.0			13	eP	12 29 06.0		
11	eP	19 17 38.0			13	eP	14 29 23.5	1.0	29.0
	e	18 03.5			13	e(P)	14 35 55.0		
11	eP	20 51 19.0			13	iPC	14 39 58.0		
12	e(P)	07 42 44.0				e(S)	47 45.0		
12	e(P)	09 13 15.0			13	e(P)	15 08 15.0		
12	ePC	10 56 33.2	0.6	23.0	13	eP	15 55 41.0		
	e	56 56.7				e	56 08.0		
12	eP	13 58 13.6			13	eP	17 57 32.0		
	e	58 49.5			13	eP	19 41 03.0		
12	eP	14 44 22.5			13	eP	22 58 58.0		
	e	44 37.0			14	eP	00 38 25.4		
12	eP	14 47 38.0				e	38 57.5		
12	eP	15 17 26.5	0.5	10.5	14	eP	00 48 09.2	0.5	8.5
12	eP	18 40 21.4			14	e(P)	02 11 22.0		
	e	40 56.0			14	ePC	06 18 49.5		
12	eP	18 44 45.3			14	e(P)	08 44 45.0		
12	e(P)	19 12 10.4				e	45 21.0		
12	eP	19 34 18.4							
12	e(P)	21 14 01.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
14	eP	09 11 57.0			15	eP	13 02 38.6		
14	eP e	11 21 28.7 22 34.0			15	eP	14 44 11.5	0.5	19.0
14	eP	14 08 06.6			15	eP	16 47 33.0		
14	eP e	14 55 49.6 56 24.0			15	eP	17 20 39.0		
14	eP	17 04 11.4			15	eP	17 38 57.7		
14	e(P)	19 30 42.0			15	eP e	18 10 16.5 10 55.0		
14	eP eS	19 44 38.0 54 14.5			15	1PC	20 40 11.8		
14	eP	20 44 07.7	1.0	39.0	17	e(P) e	08 46 09.0 47 41.0		
14	eP e	21 24 12.5 24 46.7			17	e(P)	10 51 59.0		
14	eP	22 58 13.2			17	e(P) e	11 24 34.6 25 04.0		
14	eP	23 48 06.5			17	1PC	11 34 43.5		
15	eP e	00 36 59.0 37 33.0			18	e(P)	08 41 36.5		
15	eP e	00 50 15.0 50 39.5			18	ePC	08 56 20.5	0.8	30.5
15	eP	02 05 51.0			18	e(P) e	09 29 32.4 30 41.0		
15	eP	02 33 22.9	1.0	17.5	18	e(P)	09 55 57.4		
15	eP e	03 13 37.0 14 20.0			18	e(P)	13 10 08.5		
15	ePC	08 01 59.6	0.7	49.0	18	eP	13 39 17.5		
15	eP e	11 20 42.1 21 16.0			18	e(P)	14 24 19.5		
15	eP e	11 50 29.5 50 53.9			18	eP e	15 20 49.5 21 19.5		
15	e(P)	12 12 36.5			18	e(P)	18 12 54.0		
15	e(P)	12 51 49.5			18	eP e	20 01 51.0 02 09.6		
					18	eP	21 06 02.5		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
18	eP e	21 12 15.5 12 56.0	0.5	22.0	20	eP	14 06 29.0		
18	e(P)	23 06 10.0			20	eP e	14 11 46.1 12 37.0		
18	e(P) e	23 13 10.5 14 50.0			20	eP	14 31 25.0	0.7	9.5
18	eP	23 33 12.0			20	eP	15 09 42.5	0.7	20.0
					20	ePD	16 37 19.0		
19	eP e	00 45 42.5 46 28.0			20	eP	19 25 00.0		
19	e(P)	01 16 02.0			20	eP	22 27 28.5		
19	e(P) e	08 45 54.0 46 16.0			21	e(P) e	00 08 14.6 08 47.0		
19	eP	08 47 53.0			21	eP e	01 19 42.1 20 17.7		
19	ePD	09 17 29.0			21	eP	03 06 28.0		
19	eP e	09 24 13.0 24 53.0			21	e(P)	06 41 16.5		
19	eP e	12 42 29.4 43 15.0			21	eP e	09 40 27.0 42 00.5		
19	eP e	17 00 13.3 00 59.0			21	1PD	11 44 35.5		
19	eP	18 20 09.0			21	e(P) e	12 15 09.0 16 31.5		
19	eP e	20 54 05.0 54 51.5			21	1PC	15 32 41.5		
20	eP	01 20 16.0			21	eP e	15 51 30.9 17 25 17.0 25 51.0		
20	eP	02 47 17.4	0.7	25.5	21	eP e	19 26 01.0 26 34.4		
20	e(P)	03 53 22.0			21	eP	19 50 44.4		
20	eP	04 02 40.0			21	eP e	20 33 43.3 34 18.0		
20	e(P)	07 43 30.0			21	eP	21 55 28.7	0.9	15.0
20	e(P)	09 14 08.5							
20	1PC	09 34 48.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
22	e(P)	00 45 29.5			23	ePC	16 21 18.5	0.7	12.0
22	eP	02 32 13.0			23	eP	17 15 09.3		
22	eP	03 27 38.8			23	eP	17 20 13.5		
22	eP	07 09 45.0			23	e	20 49.5		
22	eP	08 54 21.5			23	ePC	17 57 20.1		
	e	54 50.0			23	e(P)	18 35 41.6		
22	eP	09 43 26.0			23	eP	19 09 07.0		
22	eP	09 46 36.6	0.8	18.0	23	e	09 42.0		
22	eP	11 08 39.0			23	iFD	19 14 54.0		
22	eP	14 00 57.0			23	e(P)	20 45 04.4		
	e	01 33.2			23	e(P)	21 25 27.0		
22	iPC	18 30 55.5			24	eP	01 31 23.4		
	e	31 26.4				e	31 57.5		
22	eP	20 31 11.4			24	eP	02 51 25.0		
	e	31 41.9			24	eP	03 41 09.0		
22	eP	20 40 49.4			24	eP	07 53 52.0		
	e	41 21.0				e	54 32.0		
22	eP	21 04 53.4			24	ePD	09 51 19.4	0.5	17.5
22	eP	21 44 05.2	1.0	14.0	24	eP	11 29 21.6		
22	eP	22 39 29.0			24	e(P)	12 45 20.5		
23	iPC	05 56 29.0			24	eP	13 34 41.5		
23	e(P)	09 19 58.6			24	eP	14 09 13.9		
23	eP	11 38 36.0			24	e(P)	14 43 38.0		
23	e(P)	12 11 14.4			24	eP	17 50 30.0		
	e	11 59.4				e	50 56.0		
23	iPD	13 16 57.6			25	eP	00 04 19.5		
	e	20 00.6				e	04 44.4		
23	eP	15 20 05.5			25	e(P)	03 32 26.5		
	e	20 51.0							
23	eP	16 00 54.5							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
25	eP	03 42 06.4			26	1PC eS	15 46 57.6 54 47.0	1.0	28.0
25	eP	07 48 58.5			26	eP	16 49 16.0		
25	e(P)	09 45 19.2			26	eP e	18 06 19.2 06 54.6		
25	eP	11 38 53.4			26	e(P)	18 57 45.6		
25	eP e	13 04 10.6 04 42.2			26	eP	19 56 29.7		
25	e(P) e	14 58 14.6 00 09.0			26	e(P)	20 30 08.7		
25	eP	15 11 20.5	1.0	9.0	27	eP	00 08 56.2		
25	e(P) e	17 31 59.5 32 34.7			27	1PC e	00 45 38.7 46 14.2		
25	eFD	20 37 21.7	0.8	18.5	27	e(P)	01 08 11.3		
25	eP	21 49 29.2			27	eP e	01 11 40.4 12 12.1		
25	eP	22 49 32.6			27	eP e	01 56 40.3 57 06.6		
25	e(P)	23 02 44.0			27	eP	06 20 28.6		
25	eP	23 10 03.7			27	e(P)	08 59 14.4		
25	eP	00 57 28.0			27	1PC e(S)	09 37 25.5 45 50.1		
26	eP	01 36 32.4			27	eP	10 48 23.7		
26	eP e	01 41 57.0 42 29.5			27	e(P)	14 20 07.4		
26	eP	02 43 53.4			27	eP	15 04 51.6		
26	eP e	03 26 44.5 27 22.5			27	eP	15 07 55.7		
26	eP	06 50 17.8			27	1PC eS	16 40 26.3 49 15.0	0.8	71.0
26	eP	07 51 05.5			27	eP	19 08 02.3		
26	1PD	11 01 30.5	1.0	8.5	27	eP	20 29 11.2		
26	eP	13 40 14.2			27	e(P)	20 56 55.7		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
27	eP	21 02 41.3	0.8	7.5	28	eP	23 10 05.5		
27	eP	21 48 37.7			28	eP	23 52 13.0		
28	e(P)	00 28 29.5			29	eP	00 12 46.6		
28	iPC e(S)	03 50 44.3 58 31.6	1.1	33.0	29	eP	01 06 21.9		
28	e(P)	07 06 48.7			29	e(P)	01 12 26.7		
28	ePD	08 41 46.1	0.9	16.5	29	eP	02 48 53.2		
28	eP	09 07 29.5			29	eP	02 59 54.7		
28	eP e	10 52 00.5 52 35.5			29	e(P)	03 36 31.4		
28	eP e	11 48 47.7 49 32.5			29	eP	03 44 54.7		
28	eP	12 31 08.0			29	e(P)	07 35 53.8		
28	ePD	13 18 51.2	1.0	40.0	29	eP e	07 57 24.9 57 55.5		
28	iP	13 27 54.0			29	eP e	08 05 45.9 06 23.5		
28	eP	13 35 14.0			29	ePC	08 50 10.3	1.0	9.0
28	eP e e(S)	13 48 28.6 49 09.1 58 21.0			29	eP	12 00 58.8		
28	e(P) e	14 13 03.7 14 35.9			29	eP	13 09 07.0		
28	e(P)	16 11 19.7			29	iP I	13 25 30.1 26 10.3		
28	eP	17 15 54.6			29	ePC	13 55 53.8	0.9	11.5
28	eP	17 21 59.6			29	eP	15 14 53.0		
28	eP	18 56 19.5 56 56.3			29	eP	15 21 29.2	0.7	61.8
28	eP e	20 00 46.0 01 35.7			29	iPD	15 35 31.1	0.8	25.5
28	e(P)	22 35 17.6	1.0	14.0	29	eP	17 11 26.1		
	ePC				29	eP	21 01 45.7		
					29	e(P)	21 54 02.9		
					29	eP e	22 30 28.7 31 02.6		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
30	eP	01 49 10.6			31	eP	13 35 43.0		
30	eP e	02 13 53.7 14 24.7			31	eP	15 29 44.0		
30	eP	02 37 06.6			31	iPC	22 00 22.3		
30	eP	03 44 58.2			31	eP	22 43 29.0		
30	e(P)	05 30 32.0			31	e(P)	23 17 19.0		
30	ePC	06 07 16.0	0.9	16.0					
30	eP	06 23 15.6							
30	eP e	09 17 10.0 17 37.0							
30	eP e	09 35 50.0 36 22.8							
30	eP	10 31 28.0							
30	eP	12 18 54.4							
30	eP e	15 04 05.0 04 49.4							
30	eP e	16 14 35.2 18 04.4							
30	e(P)	16 41 45.6	1.1	23.0					
30	eP	19 35 40.5							
30	eP e	21 28 06.0 28 22.9							
30	eP	23 30 44.4	0.9	14.0					
31	eP	00 35 52.0							
31	eP	03 37 19.0							
31	eP	08 19 07.0							
31	e(P) e	08 37 20.6 37 45.5							
31	e(P)	12 55 47.2							

PRELIMINARY SEISMOGRAM ANALYSIS

KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A.KARIM - DIRECTOR

WWNSS: KBL

Latitude: $34^{\circ}32.45'N$ S.P. Mag. 4.00 K. at 1.0 sec. Bulletin# 13
 Longitude: $69^{\circ}02.59'E$ L.P. Mag. 6 K. at 15.0 sec. Dated 19 69
 Elevation: +1.92KM

Period: Jun 01 19 69 To Jun 30 19 69

i = Impulsive; e = Emergent; C = Compression; D = Dilatation

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
01	eP	00 08 31.9	0.9	9.5	01	eP	20 51 21.4		
	e	10 07.0				e	51 59.0		
	e(S)	18 20.0							
01	iPD	02 07 24.0			01	eP	21 12 29.6		
					01	eP	23 32 38.6		
01	eP	03 55 21.4			02	eP	03 38 27.0		
	e	55 58.2		e		38 59.0			
01	eP	04 35 32.3			02	eP	05 50 40.6		
	e	35 56.0			02	eP	07 40 01.0		
01	e(P)	07 14 00.4			02	eP	07 40 01.0		
01	e(P)	07 31 00.0			02	eP	08 00 28.5	0.6	8.5
01	ePC	08 40 12.7	0.6	75.0	02	e(P)	09 34 48.5		
01	e(P)	08 49 02.0			02	eP	10 00 19.0		
01	eP	08 55 03.5			02	e(P)	11 07 33.0		
01	eP	10 21 15.0			02	eP	13 30 59.1		
	e	21 47.2			e	31 30.0			
01	eP	12 39 05.5			02	iPD	17 53 50.4		
01	ePC	13 59 21.6	0.8	21.5	02	eP	18 35 18.4		
01	eP	14 02 39.0			03	ePD	00 29 50.5	0.6	20.5
	e	03 10.0				e	30 12.0		
01	eP	15 15 26.2			03	eP	00 35 42.0	0.9	13.5
01	eP	15 54 09.5			03	eP	08 45 07.0		
01	eP	16 54 16.0			03	e(P)	09 31 06.5		
	e	54 47.6							
01	eP	20 12 13.0	0.8	5.0					

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
03	e(P)	10 20 34.0			04	eP	19 12 47.0		
03	eP	13 35 41.5	0.9	11.0	04	eP	19 48 27.0		
03	eP	14 13 29.0			04	eP	20 26 31.0		
	e	14 06.5				e	26 39.0		
03	iP	18 14 19.3			04	eP	22 35 14.0		
03	eP	19 28 10.9			05	eP	01 45 09.4		
	e	28 45.0				e	45 37.0		
03	eP	17 33 35.5	0.5	18.5	05	eP	02 01 00.0		
03	eP	21 04 36.0			05	e(P)	02 41 49.4		
04	eP	21 44 49.8			05	iPD	06 01 19.0		
	e	45 19.0			05	eP	09 34 30.6		
03	iPG	22 02 57.5	1.0	26.5	05	eP	10 53 06.5	0.6	15.0
04	ePD	00 42 30.1	0.7	12.0	05	eP	10 59 02.0		
04	eP	00 50 13.0			05	eP	11 10 57.0		
04	e(P)	02 57 07.5			05	eP	11 38 18.2		
04	eP	03 00 05.4	0.6	10.0	05	eP	14 05 42.5		
04	eP	04 57 36.4			05	e(P)	15 00 37.0		
04	e(P)	07 54 25.0			05	eP	15 53 18.0		
04	iPG	12 07 36.9				e	53 39.5		
04	e(P)	12 21 14.0			05	eP	16 08 50.2		
	e	22 30.0				e	09 26.5		
04	eP	14 23 41.9			05	e(P)	17 20 15.4		
04	eP	16 24 17.0			05	ePD	17 30 37.0		
04	eP	16 52 23.7	1.0	28.5	05	e(P)	17 39 00.0		
04	eP	17 31 05.0			05	ePD	18 47 32.5		
04	eP	17 48 40.0			05	e(P)	19 36 57.0		
	e	49 11.5				e	37 32.0		
04	iPD	19 00 59.4	1.0	33.5	05	e(P)	21 04 03.0		
	e	01 06.0							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
06	eP	01 41 49.0			07	eP	08 53 46.2		
06	eP	04 41 38.9			07	eP	10 49 24.0		
06	iPD	05 05 05.0			07	e(P)	11 46 46.5		
06	ePD	05 52 34.8			07	iPD	16 13 37.5		
06	eP	07 09 13.2	0.8	12.0	07	ePC	22 59 19.2	1.0	59.0
06	eP	07 48 33.0			07	ePC	23 11 38.7	1.0	16.5
06	eP	08 58 13.5			08	eP	01 01 08.1		
06	eP	10 56 52.0				e	01 41.2		
06	eP	12 19 11.6			08	eP	01 29 09.5		
06	eP	16 19 07.2			08	eP	03 05 32.5		
06	eP	16 24 20.9				e	06 33.3		
	e	24 40.8			08	eP	05 16 11.3		
06	eP	17 12 56.7				e	16 52.0		
	e	13 40.4			08	eP	05 41 34.0		
06	eP	17 43 01.0				e	42 08.2		
	e	43 23.1			08	e(P)	05 47 24.4		
06	eP	19 40 54.5	0.8	11.0	08	eP	06 18 24.5		
06	eP	20 29 17.7			08	ePC	06 20 17.5	0.9	20.0
	e	30 26.2			08	e(P)	06 26 28.2		
06	eP	21 49 25.1				e	27 08.0		
	e	50 17.0			08	eP	11 03 15.2	0.7	19.0
06	eP	22 40 52.9			08	eP	12 20 34.5		
	e	41 24.0			08	ePC	14 24 32.0		
07	e(P)	03 09 14.5			08	ePC	14 59 55.5	0.7	50.0
	e	09 50.0			08	eP	15 12 05.5		
07	eP	05 43 06.5			08	eP	15 55 48.7	0.5	11.0
07	eP	07 28 33.7				e	56 25.0		
	e	29 11.5			08	eP	18 22 20.7		
07	eP	08 43 50.4							

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
08	iPD	19 38 47.4			10	e(P)	17 24 38.0		
08	eP	20 33 44.4			10	iPC	22 52 55.5		
08	eP	22 20 57.5	0.4	7.0	11	eP	05 55 00.5	1.1	7.3
09	ePC	00 34 40.0			11	e(P)	07 03 41.2		
09	eP	02 03 27.0	1.0	17.0	11	e(P) i	08 45 47.5 46 20.5		
09	iPD	05 14 14.9	0.7	43.5	11	eP	10 20 13.8		
09	eP	05 56 49.0			11	e(P)	10 57 37.4		
09	ePC e	07 03 19.5 05 52.5	0.9	11.0	11	e(P)	12 27 06.5		
09	eP e	07 50 25.5 50 54.0	0.5	8.5	11	eP i	14 35 05.3 35 33.0		
09	eP	18 24 08.3			11	iPD	15 20 38.1		
09	eP	18 55 48.0			11	e(P)	15 28 04.7		
09	eP e	18 49 04.9 49 45.5			11	e(P)	16 47 56.2		
09	eP e	22 11 07.8 11 58.5			11	e(P)	19 08 23.0		
09	eP	23 19 49.0	0.9	26.5	11	eP	21 48 52.7		
10	eP e	06 05 11.0 05 48.5			11	eP	23 40 03.0		
10	e(P) e	09 55 54.0 55 17.0			12	eP e	00 27 59.7 28 37.0		
10	eP e	11 57 12.5 57 47.0			12	eP e	00 34 49.5 35 29.0	0.5	25.5
10	eP e	15 38 14.0 39 01.2			12	eP	02 58 42.6		
10	eP e	16 54 11.0 54 45.1			12	eP e	07 07 25.0 07 58.6		
10	eP e	17 12 25.5 13 04.5			12	ePC eS	07 51 15.3 59 15.0	1.0	43.0
					12	eP	10 35 38.5		
					12	e(P)	11 24 57.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
12	eP	12 32 25.0			13	eP	22 14 02.7		
12	eP	13 01 43.5			13	eP	22 28 47.0		
12	eP	13 11 10.0			14	eP	00 34 52.0		
12	ePC e	14 09 08.6 09 29.0	0.5	5.0	14	eP	03 33 20.0		
12	ePC i e(S)	15 20 00.5 20 33.4 30 45.0	0.5	7.5	14	eP	06 07 48.5		
12	ePC i	16 00 31.0 01 00.5			14	eP	06 16 06.5		
12	eP e	18 02 16.5 02 47.4			14	eP	06 22 51.0		
12	eP	18 49 51.7			14	eP	06 51 32.0		
12	ePC	19 07 41.7	1.0	65.0	14	eP e	09 35 42.5 11 27.5		
12	eP	19 31 46.4			14	eP	09 38 20.0		
13	eP	01 30 15.0			14	eP	10 10 55.0		
13	eP	02 29 07.5			14	eP	11 14 37.0		
13	eP e	03 39 48.4 40 30.8			14	eP	11 49 23.0		
13	ePC e(S)	08 58 46.8 07 12.0	1.0	52.0	14	iPD	12 55 34.0		
13	eP e	10 25 19.5 25 54.4			14	eP	13 54 29.5		
13	eP e	12 20 55.0 21 18.5			14	e(P)	16 44 20.0		
13	eP	13 52 45.0			14	eP	17 49 48.4		
13	eP	15 22 43.3	0.5	11.5	14	e(P)	18 34 56.0		
13	eP	16 25 41.0			14	eP	22 02 26.7		
13	eP e	20 02 36.9 03 13.9			15	iPC	01 09 19.4		
13	eP	21 37 45.9			15	eP e	01 26 44.0 27 20.0		
					15	iPD i	02 50 01.0 50 36.0		
					15	eP	03 57 00.6		
					15	ePC	04 35 53.0		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
15	eP e	12 05 20.0 05 53.4			16	eP e(S)	15 56 40.1 05 30.0	1.0	48.0
15	e(P)	15 03 20.4			16	eP	21 40 08.0		
15	eP e	15 59 51.1 00 33.0			16	eP	22 51 34.0		
15	e(P)	16 19 58.3			16	eP	23 23 51.5		
15	iPC eS	17 05 24.0 12 31.6	1.0	28.0	17	eP	00 02 23.1		
15	e(P)	18 34 18.1			17	e(P)	02 40 10.0		
15	eP e	18 36 19.4 36 45.1	0.7	15.0	17	e(P)	08 12 23.0		
15	ePD e	18 42 33.4 43 05.0			17	e(P) e	10 41 35.5 41 59.0		
15	eP	18 42 33.4 43 05.0			17	ePD e	14 21 44.0 22 17.0		
15	eP	19 22 47.0			17	eP	15 10 10.9		
15	e(P)	19 28 22.6			17	e(P) e	16 26 43.5 27 13.0		
16	ePD e	00 39 36.0 40 09.4			17	e(P)	19 16 39.5		
16	eP	02 32 13.1			17	ePC eS	19 37 11.3 45 54.9		
16	eP	05 38 33.4	0.9	13.0	17	e(P)	20 05 09.0		
16	eP	05 59 41.6			17	e(P)	23 26 36.0		
16	e(P) e	06 38 52.0 39 36.0			17	eP	23 29 23.9	1.0	73.0
16	eP	09 10 28.0			17	iPD	23 53 45.0		
16	e(P)	11 16 31.4			18	e(P)	00 16 55.4		
16	eP e	11 55 50.0 56 31.5			18	eP	01 51 04.6		
16	e(P) e	12 51 09.4 51 37.1			18	e(P)	02 31 58.5		
16	eP	12 59 44.4	0.7	19.0	18	e(P) e	02 41 24.0 42 07.0		
16	eP	15 52 45.0	0.5	22.5	18	eP	06 58 35.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
18	eP	08 36 38.6			19	iPD	09 39 40.2	0.5	7.5
18	ePD	08 45 31.5			19	e(P)	12 01 35.5		
18	eP	09 23 02.8			19	eP	13 54 33.5	0.7	15.0
	e	23 24.4			19	eP	15 56 28.4		
18	eP	11 30 58.3			19	eP	18 20 05.0		
18	e(P)	12 00 05.0			19	eP	19 07 14.0		
18	eP	12 33 09.5	0.5	11.0	19	iPC	20 37 10.2	0.7	33.0
18	ePC	15 28 51.5			19	eP	21 45 27.0	0.9	19.5
18	eP	17 18 24.4			19	e(P)	21 47 13.4		
18	eP	20 15 42.5				e	47 33.6		
18	eP	20 53 48.6			19	e(P)	23 19 00.5		
	eS	02 15.5							
18	eP	21 40 00.4			20	iPD	02 50 07.2	1.0	61.5
18	eP	22 28 01.5				e(S)	00 19.0		
	e	28 32.0			20	e(P)	04 30 27.2		
18	e(P)	22 05 08.0			20	iPC	06 50 46.5	0.8	14.0
18	eP	23 35 33.0				eS	58 42.3		
18	eP	23 56 20.5			20	e(P)	10 48 39.0		
	eS	06 22.0				e	49 46.0		
19	iPC	00 01 37.4	0.7	24.0	20	eP	11 48 15.3		
19	eP	02 13 47.6			20	eP	13 25 10.5	0.9	12.0
	e	14 29.5			20	iPD	15 05 58.2		
19	eP	02 43 55.4			20	iPC	15 47 28.0		
19	eP	04 46 03.0			20	ePD	16 15 34.5		
19	eP	06 40 11.7			20	ePD	17 27 47.9	0.5	13.5
19	e(P)	06 51 06.0			20	eP	17 31 41.4		
19	eP	07 12 09.3			20	iPC	17 58 24.9		
19	e(P)	07 21 22.5			20	eP	21 27 18.4		
						e	28 18.4		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	e(P)	22 22 02.0			22	eP	06 31 22.4		
20	1P	22 47 37.3			22	eNG	06 46 24.0		
21	e(P)	04 07 16.5			22	eP	07 12 24.7		
21	eP	04 32 33.0	0.7	14.0	22	e(P)	07 22 09.0		
21	ePC	06 46 16.5	0.8	45.0	22	e(P)	07 32 44.1		
21	e(P)	06 56 35.7			22	e(P)	10 09 19.5		
21	e(P)	07 01 52.0			22	eP eS	10 51 02.4 06 38.4		
21	eP	07 56 39.4			22	eP e	12 08 17.0 08 47.2		
21	ePD	13 37 50.1			22	e(P)	13 31 50.0		
21	eP e	14 08 05.6 11 20.0	0.9	17.0	22	1PC	16 09 56.2	0.7	32.5
21	1PD	14 42 40.5			22	eP	18 51 00.0		
21	ePD e(S)	15 20 51.0 27 50.0			23	eP	00 16 44.0		
21	1PC	16 38 02.9			23	e(P)	02 07 27.0		
21	e(P)	17 35 30.0			23	e(P)	02 10 35.5		
21	eP	19 07 00.1			23	eP	03 23 10.9		
21	e(P)	19 50 00.0			23	ePC	06 06 53.3	1.7	32.0
21	eP	20 24 19.5			23	e(P) e	07 07 08.5 07 41.0		
22	e(P)	00 49 14.3			23	eP	07 27 30.7		
22	ePC	01 35 42.5			23	eP	09 34 03.0		
22	ePC e(S)	02 44 27.0 53 07.5	0.5	18.0	23	eP	10 00 27.0		
22	e(P)	02 57 49.0			23	e(P) e	10 54 09.0 54 44.0		
22	e(P)	05 32 16.0			23	ePD	11 15 13.0	0.6	19.5
22	e(P)	06 24 12.6			23	e(P)	13 38 58.6		

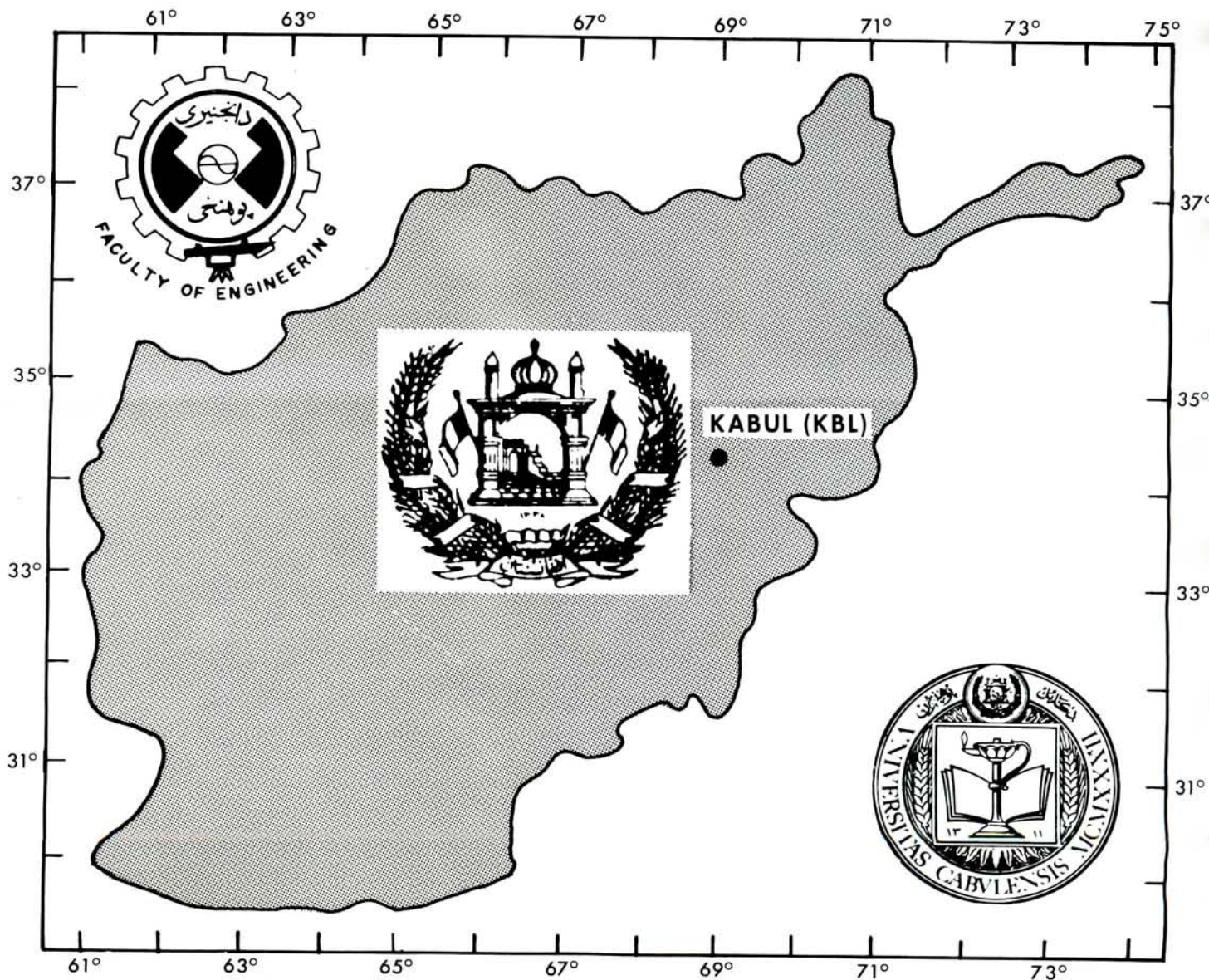
Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
23	eP	14 07 22.0			25	eP	04 45 14.5		
23	e(P)	16 17 31.0			25	ePC e	06 52 40.0 53 10.5		
23	eP	22 28 38.7			25	e(P) e(S)	07 32 19.4 38 18.3		
24	e(P)	00 54 02.0			25	eP	08 01 53.5		
24	e(P)	01 15 03.5			25	eP	08 13 21.3		
24	ePD	01 29 58.5			25	eP	13 48 44.7		
24	eP	03 41 32.5	0.6	9.5	25	e(P)	14 37 40.8		
24	e(P)	03 51 41.0			25	e(P)	16 25 14.0		
24	1PC	06 24 12.8			25	eP	19 40 27.5		
24	eP	08 47 44.0			25	e(P) e	20 07 22.6 07 49.9		
24	e'	09 16 19.0			26	eP	01 57 26.0		
24	ePC	11 00 20.2			26	e(P)	04 27 19.0		
24	eP e(S)	11 07 22.3 14 53.5			26	e(P)	06 29 18.0		
24	eP	11 39 20.5			26	eP e	06 54 10.4 54 46.5		
24	e(P)	12 34 13.0			26	eP	07 09 18.5		
24	e(P)	15 01 06.1			26	eP e	07 33 15.3 33 52.0		
24	eP	17 27 06.2			26	eP	08 01 30.7	1.0	10.0
24	eP	17 48 34.0			26	e(P)	10 14 20.5		
24	e(P)	20 00 55.1			26	eP	11 38 07.4		
24	eP	23 58 18.0			26	ePD	11 41 07.0	0.7	9.5
25	eP	00 11 27.5			26	eP	15 54 26.7	1.0	24.0
25	eP e(S)	00 17 52.4 25 07.5	0.9	13.5	26	eP	18 25 37.9		
25	eP	01 24 11.4			26	e(P)	19 08 25.0		
25	eP	04 24 14.5							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
26	e(P)	19 33 10.0			28	e(P)	00 03 30.0		
26	ePC	21 30 40.0			28	e(P)	00 27 04.0		
26	eP	21 47 26.5			28	eP	02 17 29.0		
27	eP	00 27 22.4			28	e(P)	05 08 47.2		
	e	24 43.0			28	eP	07 19 41.0		
27	1PC	02 25 28.0	0.9	31.0	28	eP	08 28 28.9	0.6	13.0
	e(S)	33 23.0			28	e(P)	11 55 20.0		
27	eP	02 55 24.0			28	1PC	14 32 09.8		
27	eP	07 23 47.0			28	e(P)	17 01 35.0		
27	eP	07 56 14.1				e	01 51.0		
27	eP	08 04 55.0			28	eP	17 52 07.5		
27	e(P)	11 54 02.7			28	e(P)	18 39 13.5		
27	eP	12 49 40.4			28	e(P)	19 06 21.6		
	e	50 13.0			28	e(P)	20 18 18.4		
27	e(P)	13 22 17.0			28	eP	20 58 21.0		
27	e(P)	15 36 42.0			28	eP	22 19 02.5		
27	eP	15 48 55.7	0.5	30.0		e	19 35.0		
27	e(P)	17 21 04.5			28	eP	22 34 54.7		
27	1PD	17 56 17.0	0.5	45.0		e(S)	38 25.0		
27	eP	18 51 15.5			29	eP	00 06 54.8		
27	eP	18 59 17.0				e	07 31.0		
27	eP	19 01 10.5			29	e(P)	00 57 55.0		
27	e(P)	19 25 08.9			29	eP	03 42 17.2		
27	eP	20 09 35.5			29	eP	06 51 42.4		
27	eP	21 39 12.5			29	eP	08 29 54.5		
27	e(P)	23 02 22.6			29	eP	08 43 24.5	0.7	8.0
					29	eP	10 53 01.4		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
29	iPD	12 44 46.2							
29	eP e	16 21 11.5 21 46.6							
29	eP	17 28 08.5							
29	e(P) e	17 46 50.5 47 16.5							
29	eP	18 20 47.0							
29	eP	18 26 08.0							
29	eP e	22 02 45.9 03 25.2							
30	eP	00 17 17.8							
30	eP	06 59 30.0							
30	iPD	07 43 34.4	1.0	28.0					
30	eP e	07 50 38.4 51 03.2							
30	eP	08 56 44.6							
30	eP	09 49 39.5							
30	e(P)	13 58 16.8							
30	iPC e	14 59 48.5 00 18.3							
30	iPC	16 26 40.8							
30	eP	18 32 14.2	1.0	16.5					
30	e(P)	20 42 36.0							

2 AUG 1969

MONTHLY BULLETIN
PRELIMINARY SEISMOLOGICAL ANALYSIS
KABUL, AFGHANISTAN SEISMOLOGICAL OBSERVATORY
FACULTY OF ENGINEERING—KABUL UNIVERSITY
R.A. KARIM, DIRECTOR



MONTH OF _____
BULLETIN NO. _____ 19 _____

PRELIMINARY SEISMOGRAM ANALYSIS
 KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A.KARIM - DIRECTOR

 Page 1 of 12

Via Air Mail

WWSS: KBL

 Latitude: $34^{\circ}32.45'N$

 S.P.Mag. 4.00 K. at 1.0 sec.

 Bulletin# 14

 Longitude: $69^{\circ}02.59'E$

 L.P.Mag. 6 K. at 15.0 sec.

 Dated Aug 19 19 69

Elevation: +1.92KM

 Period Jul 01 19 69 To Jul 31 19 69

i = Impulsive; e = Emergent; C = Compression; D = Dilatation

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
01	eP	00 27 54.0	0.9	12.0	02	eP	01 27 34.4		
01	eP	00 31 26.0			02	eP	02 52 16.2		
01	e(P)	04 19 36.0			02	e(P)	04 37 49.0		
01	e(P)	06 04 01.5			02	e(P)	07 27 46.0		
01	eP	06 09 02.1			02	eP	08 23 27.0		
01	eP	07 33 26.6			02	eP	08 37 19.4		
01	e(P)	10 29 12.2			02	eP	08 39 18.8		
01	e(P)	12 57 06.0			02	e(P)	09 11 25.0		
01	e(P)	13 00 00.5				e	12 10.0		
01	e(P)	13 22 29.3			02	eP	10 06 02.0		
01	e(P)	13 38 07.0			02	eP	10 24 36.3		
01	e(P)	20 08 10.0			02	e(P)	10 39 45.5		
01	e(P)	21 00 25.2				e	40 18.5		
01	e(P)	21 09 04.1			02	eP	15 50 37.0		
	e	09 43.3			02	e(P)	16 08 00.9		
01	eP	21 18 54.5			02	eP	16 46 10.6		
01	ePD	22 24 22.4			02	e(P)	16 55 10.0		
	e	24 47.3			02	e(P)	17 46 17.7		
01	eP	23 40 06.0			02	eP	18 49 09.6		
02	e(P)	00 23 13.0			02	eP	21 37 46.0		
					02	eP	22 15 11.5		
						e	15 38.0		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
02	eP	22 59 28.4			04	e(P)	06 52 08.5		
02	eP	23 59 11.0			04	eP	07 07 14.4	0.7	14.0
03	eP	01 09 38.0			04	eP	08 17 49.8		
	e	10 21.1			04	e(P)	11 37 01.6		
03	e(P)	05 29 06.5			04	ePD	12 30 48.5	0.9	10.0
	e	29 46.0			04	e(P)	13 49 06.6		
03	iPC	06 44 46.5			04	e(P)	13 51 00.7		
03	eP	07 19 25.2			04	eP	15 50 27.4		
03	e(P)	08 29 54.4			04	e(P)	17 35 30.0		
03	e(P)	08 54 03.4			04	eP	17 50 28.6		
03	e(P)	09 20 34.0			e	51 03.5			
03	eP	12 36 46.4	0.8	12.0	04	eP	18 10 00.9		
	e	37 11.4			04	eP	18 49 24.5		
03	e(P)	14 10 19.1			04	eP	19 25 05.0		
	e	10 49.5			04	eP	20 41 48.5		
03	ePD	14 17 13.0	0.7	30.5	04	ePD	21 25 40.0		
03	e(P)	15 36 46.0			05	e(P)	00 47 54.9		
	e	37 18.0			05	eP	01 51 22.5		
03	eP	15 42 26.4			05	ePC	01 55 11.0		
03	e(P)	16 35 10.0			e(S)	04 18.0			
	e	35 41.4			05	eP	04 50 38.3		
03	eP	17 1 3 47.5			05	e(P)	04 56 23.6		
03	ePC	18 13 16.0			05	ePD	06 26 36.5	0.6	16.0
03	eP	19 40 04.1			05	eP	09 15 18.0		
03	e(P)	21 27 05.5			05	eP	11 23 51.4	0.7	40.5
04	e(P)	01 26 18.4			05	eP	14 23 52.4		
04	eP	02 50 52.5			e	24 21.5			
04	eP	06 11 42.0							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
05	eP	15 33 11.9			06	eP	20 08 59.7		
05	eP e	16 40 35.2 41 11.4			06	eP	21 06 14.0	1.1	12.5
05	eP e	16 46 12.0 46 24.1	0.5	12.0	06	eP	21 35 02.0		
05	eP	17 05 13.5			06	e(P)	21 40 06.0		
05	ePD e	17 10 05.5 10 36.4	0.5	10.0	06	eP	22 48 24.0		
05	eP e	19 34 20.0 34 51.2			07	eP	01 21 33.5		
05	eP	20 36 36.5			07	eP	02 04 29.0		
05	eP e	20 46 02.0 46 38.4			07	eP e	02 46 21.5 47 01.0		
05	eP	20 54 47.0			07	eP	03 22 48.4		
05	eP e	22 10 55.0 11 22.0			07	eP e	03 44 39.0 48 15.5		
05	eP	23 10 21.2			07	eP	04 46 30.5		
06	eP e	00 57 21.0 57 57.0			07	e(P)	05 48 17.2		
06	eP e	02 03 00.0 03 36.1			07	eP	05 57 01.9 57 46.5		
06	eP	08 26 09.5			07	eP	09 39 08.2	0.7	10.0
06	e(P)	08 38 33.0			07	1PD	10 08 44.5		
06	eP	11 44 56.5	0.5	21.5	07	e(P)	12 19 08.0		
06	ePC e	11 49 38.6 50 09.0			07	eP	12 40 10.5		
06	e(P) e	12 56 45.0 57 12.3			07	eP	21 52 56.0	0.7	4.5
06	eP	14 50 09.0			07	e(P)	22 10 44.7		
06	eP e	16 45 48.0 46 28.2	0.6	10.5	07	e(P)	23 50 03.4		
					08	e(P)	00 53 33.8		
					08	eP	03 45 49.3		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
08	e(P)	03 52 42.5			09	1PC	04 38 53.4		
08	eP	04 00 00.0			09	eP	05 48 44.0		
08	eP	04 17 03.0			09	e(P)	07 24 49.2		
08	ePD	07 29 22.7			09	eP	08 22 30.5		
08	1PC eS	08 16 44.2 22 44.2	0.7	51.0	09	eP	09 37 06.0		
08	1PD	11 29 42.3			09	eP	10 13 45.7		
08	eP	13 08 31.0	0.7	11.0	09	eP	15 54 45.6		
08	eP	14 28 50.5	0.7	30.0	09	eP e	17 49 46.0 50 29.0		
08	eP e	16 30 09.0 32 10.5			09	e(P)	18 08 06.0		
08	eP e	17 30 31.8 31 02.4			09	e(P)	18 11 53.0		
08	e(P) e	17 43 56.6 44 06.0			09	1PC	19 55 21.7		
08	eP	18 16 12.3			09	e(P)	21 44 04.0		
08	eP	18 54 17.0	0.6	12.0	09	1PC e	23 03 06.5 05 17.4		
08	e(P)	19 14 37.0			09	e(P) e	23 09 16.5 11 52.0		
08	eP	19 36 00.6			10	e(P)	01 13 21.0		
08	e(P)	20 11 34.4			10	eP e	01 22 02.8 22 38.5		
08	eP	21 13 53.4			10	eP	02 47 02.3		
08	e(P)	22 00 19.4			10	eP	04 40 31.0		
09	ePC	02 07 05.5	0.6	33.0	10	eP	04 43 27.0		
09	e(P)	02 12 08.0			10	e(P)	05 37 29.0		
09	e(P)	02 22 55.0			10	eP	07 06 09.5		
09	eP	03 21 56.6			10	eP	08 21 49.0		
09	eP	04 16 40.5	0.5	9.0	10	e(P)	09 02 00.7		
09	eP	04 24 05.5			10	eP	09 44 00.0		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
10	eP	10 35 20.2			12	eP	00 34 54.6		
10	e(P)	10 48 18.1			12	eP	00 51 33.0		
10	ePC	15 12 48.5				e	52 03.5		
10	ePD	15 32 16.0	1.0	12.0	12	e(P)	01 35 07.4		
10	eP	18 01 47.0			12	e(P)	03 11 19.4		
10	e(P)	19 23 42.6			12	eP	05 00 41.3		
10	eP	19 37 03.4			12	ePD	05 23 02.7	0.8	21.5
	e	37 36.5			12	eP	06 04 49.9	1.0	19.0
10	eP	21 11 25.4			12	eP	06 46 12.7		
11	eP	01 14 16.3			12	eP	06 56 17.6		
11	eP	04 14 14.5	0.5	9.0	12	eP	07 15 28.4		
	e	14 47.0			12	e(P)	10 07 43.7		
11	iPC	06 04 21.5			12	eP	10 52 56.5		
	e	04 51.5			12	eP	11 54 31.0	1.0	8.5
11	ePD	06 27 21.7	0.7	18.5	12	eP	13 11 00.8		
11	eP	06 59 06.7	1.0	18.0		eS	19 28.1		
11	eP	08 10 12.0			12	eP	13 34 39.6	0.6	19.0
11	eP	09 09 11.4			12	eP	14 37 21.9		
	e	09 34.3				e	37 56.0		
11	eP	10 44 39.5			12	eP	15 21 08.5	0.9	13.5
11	iPD	11 41 10.0	0.3	20.0	12	eP	15 56 47.6		
11	e(P)	11 46 44.0			12	e(P)	17 24 56.6		
11	iPD	13 22 41.5			12	eP	17 30 19.5		
11	e(P)	15 26 10.5			12	eP	17 50 16.2		
11	eP	18 38 03.2			12	iPC	19 26 23.8	1.0	36.0
	e	38 18.0				eS	34 24.9		
11	e(P)	20 42 18.0			12	e(P)	19 52 56.2		
12	e(P)	00 26 55.0				e	53 28.0		
					12	e(P)	23 27 51.1		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
13	eP	00 23 42.5	0.8	8.0	14	eP	17 14 02.0	0.5	12.5
13	eP	00 39 31.3	0.9	14.0		e	14 48.0		
13	eP	03 14 15.4	0.9	7.5	14	eP	17 53 08.8		
						e	53 16.0		
13	eP	04 19 54.6			14	eP	18 38 29.4		
	e	20 41.7			14	eP	20 11 24.0	1.1	9.0
13	eP	05 51 05.4			14	eP	21 03 24.1		
13	eP	07 12 46.4							
13	e(P)	09 04 11.0			15	ePD	01 04 34.0	0.9	37.5
	e	04 52.5			15	iPC	03 22 04.4	0.8	33.0
13	eP	14 00 09.5			15	eP	03 26 10.0		
13	eP	15 55 06.0				e	26 43.0		
13	eP	16 09 22.4			15	e(P)	11 44 53.0		
13	eP	20 27 08.3			15	eP	13 49 47.0	0.7	9.0
13	e(P)	20 35 36.0			15	e(P)	13 54 01.0		
13	eP	21 36 45.2	0.6	7.5	15	eP	17 12 33.0		
					15	eP	18 37 11.5		
14	iPD	03 34 42.4			15	e(P)	20 53 12.0		
14	eP	07 38 19.2				e	53 44.5		
	e	38 51.0			15	eP	23 49 36.9		
14	eP	09 35 22.2							
14	e(P)	11 24 19.7			16	eP	01 14 56.0		
14	iPD	12 40 44.2	0.5	24.0	16	e(P)	01 35 36.0		
	i	41 15.5			16	eP	02 29 35.5		
14	eP	14 25 49.6	0.9	9.0	16	e(P)	02 51 04.5		
						e	51 47.0		
14	e(P)	14 30 41.0			16	eP	04 48 17.0		
14	eP	15 02 02.5			16	eP	04 57 42.2	0.7	47.0
	i	02 27.5							
14	eP	16 05 46.0			16	ePC	08 27 16.4	1.0	74.5
	i					eS	35 42.7		
14	e(P)	16 39 43.7							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
16	eP eS	12 52 08.5 02 34.7			18	eP	03 55 13.0		
16	ePD	13 05 27.4	1.0	13.0	18	ePC	04 19 37.2	0.9	32.0
16	e(P)	18 53 21.7			18	e(P)	04 36 35.5		
16	eP e	22 05 39.7 06 10.5			18	e(P)	04 44 53.0		
16	eP e	22 56 31.5 56 49.7	0.8	8.0	18	ePC	04 47 11.9		
17	e(P)	00 06 25.5			18	eP	05 26 00.9		
17	eP	01 02 45.0			18	ePC	05 32 24.5		
17	eP	01 16 16.7			18	eP e	07 39 22.2 40 03.5		
17	e(P)	01 22 46.6			18	eP	07 48 55.8	1.0	6.0
17	e(P)	01 58 09.0			18	e(P)	09 54 36.7		
17	ePC	04 15 18.1	0.9	65.0	18	eP	10 40 04.9	1.0	7.0
17	eP	05 22 24.5	0.8	7.5	18	eP	11 35 58.0		
17	eP e	07 40 36.0 41 11.2			18	eP e	13 15 12.3 15 41.0		
17	eP	20 22 21.7			18	iPD	13 41 24.9	0.9	21.0
17	e(P)	20 37 18.9			18	eP	14 44 03.8		
17	eP	20 43 26.2			18	e(P) e	16 11 18.3 12 42.0		
17	eP e	20 46 12.5 46 53.7			18	eP	18 08 10.2		
17	eP	21 03 31.0			18	eP	18 15 45.8		
17	eP	21 07 16.0			18	eP i	19 26 02.3 26 37.3		
17	eP	22 22 15.8			18	e(P)	19 45 45.6		
17	e(P)	22 50 12.5			18	eP	21 02 29.0		
17	e(P)	23 40 23.0			18	eP	21 56 48.4		
18	e(P)	00 13 43.5			18	eP e	22 17 54.6 18 26.1		
					18	eP	23 36 30.8		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
18	e(P)	23 55 40.5			20	eP e	09 13 58.3 14 29.5		
19	eP	00 30 07.4			20	e(P)	10 19 40.2		
19	ePG	01 44 45.7			20	e(P)	10 56 13.7		
19	eP	01 59 43.0	0.9	32.5	20	e(P)	13 20 27.0		
19	e(P)	05 07 22.5			20	eP	16 17 15.3		
19	eP	05 14 15.3			20	eP	16 51 52.0		
19	e(P)	06 27 04.8			20	e(P)	20 21 49.4		
19	1PD	08 47 27.2	0.8	40.0	20	e(P)	20 51 20.0		
19	eP	09 25 03.8			20	eP	21 49 14.0		
19	eP	09 34 26.5			20	eP	22 40 19.7		
19	ePG	10 42 33.0			20	e(P)	23 15 46.0		
19	eP	11 33 33.5			20	eP	23 49 13.3		
19	eP	12 11 00.7			21	eP	00 02 06.6		
19	e(P) e	14 34 25.0 35 10.0			21	eP	02 39 48.5		
19	eP	15 41 03.0			21	1PG	03 04 34.0		
19	e(P)	16 57 28.6			21	e(P) e	07 28 43.0 29 15.6		
19	eP	19 30 15.2			21	eP	10 47 00.0		
19	e(P) e	22 51 14.5 51 37.7			21	eP	13 13 39.6		
19	e(P) e	23 58 53.3 59 36.7			21	e(P)	14 20 31.5		
20	eP e	01 06 48.0 07 22.0			21	eP e	14 54 35.0 55 00.4		
20	e(P) e	02 50 30.0 51 16.8			21	e(P) e	16 47 43.0 48 14.0		
20	e(P)	04 24 30.2			21	eP e	17 07 33.3 08 07.1		
20	1PD	04 26 22.4	1.0	20.5	21	ePD	17 56 37.4		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
21	eP	18 13 44.0			23	e(P)	23 21 59.0		
21	ePC	19 54 03.6	0.5	33.0	24	eP	00 14 31.2		
21	eP	21 10 17.2			24	eP	00 17 33.0		
21	iFD	22 16 46.3			24	i	17 52.0		
21	iPD	23 23 52.5			24	eP	01 26 34.6		
22	eP	04 33 19.4			24	eP	01 36 10.0		
23	eP	06 28 46.8			24	e	36 19.0		
23	e	29 08.0			24	eP	03 18 55.0		
23	e(P)	06 41 26.6			24	eP	06 47 01.3	1.0	11.5
23	e(P)	07 00 04.4			24	eP	07 59 06.0		
23	ePD	08 19 39.5	0.6	45.0	24	e	59 40.0		
23	eP	11 52 18.7			24	eP	12 54 16.0		
23	e(P)	12 11 04.7			24	e(P)	13 00 19.9		
23	e	11 43.1			24	eP	13 03 23.5		
23	eP	12 29 01.1			24	e	04 00.0		
23	iPC	13 24 19.8	1.0	65.0	24	eP	15 06 35.5		
23	ePD	16 36 28.6	0.7	16.0	24	eP	15 21 46.0	1.0	11.0
23	eP	17 41 11.1			24	eP	16 29 29.8		
23	e	41 53.4			24	eP	16 35 25.6	0.8	11.0
23	eP	18 19 32.1			24	eP	18 14 24.4		
23	e	20 14.0			24	eP	20 04 09.0		
23	eP	20 09 07.0			24	ePC	20 22 43.0		
23	eP	20 43 00.6			24	e	23 18.0		
23	eP	21 18 10.1			24	e(P)	21 49 41.0		
23	eP	22 13 49.0			24	e	50 37.5		
23	i	13 34.0			24	eP	22 09 13.0		
23	eP	23 13 27.5			24	eP	23 28 11.0		
23	i	13 45.2			24	eP	23 54 27.0		
					24	e	55 26.0		

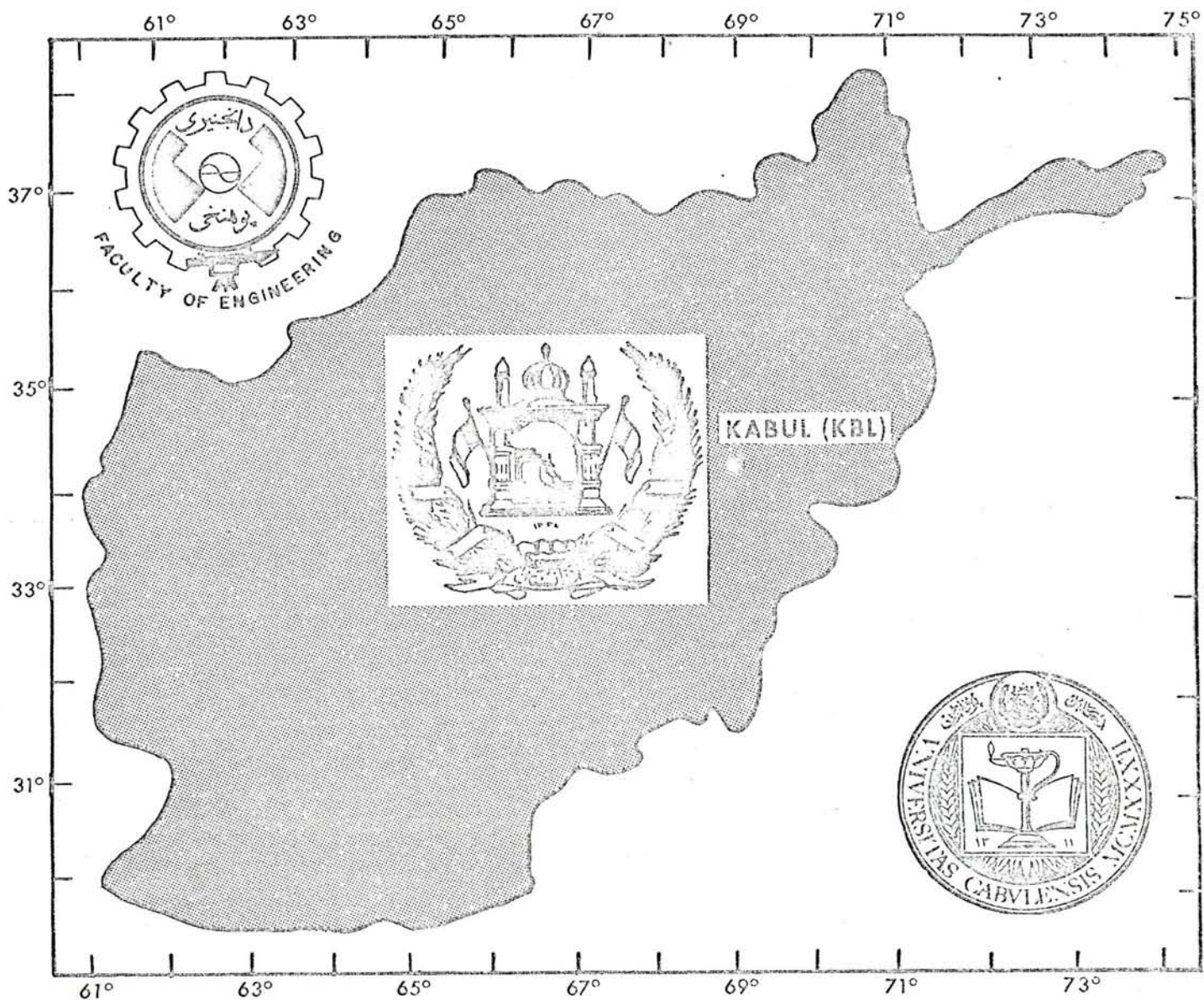
Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
25	ePC e	00 37 45.9 38 19.6			26	e(P)	14 42 28.0		
25	ePD	01 09 08.1	0.6	23.0	26	eP	15 25 09.5	0.6	7.0
25	eP	04 47 52.6			26	eP	15 44 12.3		
25	eP e	06 24 55.0 27 43.5			26	eP	15 49 15.4		
25	eP e	07 55 19.2 55 50.5			26	eP e	15 50 57.0 51 32.5		
25	eP e	10 20 25.5 21 00.5			26	eP	17 51 11.3		
25	eP	13 06 33.0	1.0	26.5	26	eP	21 07 17.6		
25	e(P)	13 44 30.5			26	eP	21 35 32.0		
25	e(P)	13 52 50.5			27	eP e	00 02 15.2 02 36.5		
25	1PD	17 39 05.4			27	eP e	00 16 27.8 17 02.0		
25	eP e	19 14 08.9 14 40.0			27	ePD	02 32 52.2	1.0	5.5
25	eP e	19 22 21.0 22 52.5			27	eP	10 33 11.0	1.0	6.0
25	e(P)	21 11 22.0			27	eP	11 12 11.0	1.0	5.5
25	eP e(S)	22 57 10.0 03 05.0	0.8	91.0	27	eP	15 39 35.5		
26	1P1	04 22 38.2			27	e(P)	18 25 36.1		
26	e(P)	05 32 02.0			27	eP 1	19 16 20.7 16 24.0		
26	e e	08 04 40.5 05 04.6	0.7	7.5	27	eP	19 39 15.1	1.0	7.0
26	e(P)	08 54 56.5			27	eP	21 33 59.0	1.4	14.5
26	e(P)	11 38 20.0			27	ePD	22 35 17.5		
26	e(P)	11 56 39.0			27	eP e	22 41 51.7 42 16.0		
26	e(P) e	12 16 21.4 17 04.0			27	eP	22 49 17.0		
					27	e(P)	23 47 41.0		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	iPG i	00 09 59.7 10 33.6	0.4	6.5	29	e(P)	13 08 03.5		
28	e(P)	00 31 31.1			29	eP e	14 53 33.0 54 03.7		
28	e(P)	08 21 01.0			29	eP	16 55 55.4	0.8	11.0
28	eP e	08 49 49.4 50 12.0			29	eP e	18 22 35.3 23 10.1		
28	e(P)	09 11 36.0			29	iPG i	23 43 51.0 44 22.5	0.5	35.0
28	eP	13 12 34.1	1.5	25.0					
28	eP e	13 40 55.7 41 27.5	0.7	7.5	30	eP	00 41 20.2		
28	eP	15 39 53.0			30	e(P)	00 56 05.8		
28	eP	15 48 28.2			30	eP	01 01 05.0		
28	e(P) e	17 34 05.0 34 33.0			30	eP	01 25 31.6	1.0	11.5
28	iPD e	20 42 53.8 43 23.9			30	eP e	02 11 32.5 02 16 48.0 17 12.5		
29	eP e	01 03 04.0 03 58.7	0.6	5.5	30	eP	02 48 59.6		
29	eP	02 07 34.5			30	iPD	03 34 17.0	0.6	32.5
29	eP	02 30 00.5			30	eP	03 51 26.0		
29	eP	02 57 09.2			30	eP	04 29 02.5	0.7	13.5
29	e(P)	03 06 53.0			30	eP	11 49 17.0	0.8	8.0
29	ePD i	05 55 11.4 55 39.4	0.5	14.0	30	e(P)	14 24 53.5		
29	eP e	06 20 11.5 20 42.6			30	eP	14 36 23.6		
29	e(P)	06 42 31.9			30	eP e	15 27 39.0 15 29 16.6 29 48.0		
29	e(P) e	08 32 00.5 32 36.6			30	eP	16 43 41.5		
29	ePD	11 38 32.4	0.5	37.0	30	eP	17 20 27.7	0.7	14.5
					30	eP	17 54 38.0	0.5	43.0

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
30	iPD e	19 20 10.7 20 41.1	0.4	15.0					
30	iPD	19 55 40.0							
30	eP e	21 39 54.0 40 28.0	0.5	18.0					
30	eP	21 49 27.0							
31	iPD e	02 06 19.1 06 40.6							
31	iPD	02 45 35.0	0.9	33.5					
31	eP	05 15 21.6	0.8	22.0					
31	eP	10 19 45.8	0.5	11.5					
31	e(P) e(S)	11 35 02.0 38 03.0							
31	eP e	16 01 51.0 02 32.2							
31	e(P)	18 17 56.0							
31	e(P)	19 58 58.4							
31	eP	21 37 13.0							

24 OCT 1969

MONTHLY BULLETIN
PRELIMINARY SEISMOLOGICAL ANALYSIS
KABUL, AFGHANISTAN SEISMOLOGICAL OBSERVATORY
FACULTY OF ENGINEERING—KABUL UNIVERSITY
R.A. KARIM, DIRECTOR



MONTH OF August
BULLETIN NO. 15 1969



PRELIMINARY SEISMOGRAM ANALYSIS
 KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A.KARIM - DIRECTOR

Page 1 of 14

WWSS: KBL

Via Air Mail

Latitude: $34^{\circ}32.45'N$
 Longitude: $69^{\circ}02.59'E$
 Elevation: +1.92KM

S.P. Mag. 4.00 K. at 1.0 sec.
 L.P. Mag. 6 K. at 15.0 sec.

Bulletin# 15
 Dated Sept 15 19 69

Period: <u>AUG 01</u> 19 <u>69</u> To <u>AUG 31</u> 19 <u>69</u>									
i = Impulsive; e = Emergent; C = Compression; D = Dilatation									
Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
01	eP e	01 01 51.9 02 37.4			02	ePC	10 28 06.7	1.0	40.5
01	ePC	05 15 16.8			02	e(P)	13 47 06.5		
01	eP e	05 41 45.5 42 17.0			02	eP	17 49 51.6	1.0	22.5
01	e(P)	06 42 50.5			02	ePC e(S)	20 23 28.0 32 11.0	0.9	57.5
01	eP	10 08 44.6			03	ePC e(S)	00 35 13.5 45 38.8	0.8	66.0
01	ePD	12 24 07.6	1.0	29.5	03	eP	04 28 12.5	1.0	50.0
01	ePD e	14 00 01.6 00 33.0			03	eP	06 55 36.0		
01	eP	19 45 15.0			03	iPC e(S)	07 58 30.9 06 51.0	1.0	64.5
01	eP	20 48 05.4			03	iPD	15 40 39.0		
01	eP	21 15 34.1			03	eP	18 26 28.5		
01	e(P)	23 26 59.9			03	iPC e	22 05 11.4 05 42.3		
01	ePC e(S)	23 53 55.7 02 13.5	0.6	130	04	eP	02 07 19.3		
02	iPC	00 44 32.5	0.7	120	04	eP e	02 40 46.7 41 07.0		
02	iPD	01 02 09.0	0.9	11.5	04	iPD	03 02 22.8	0.5	22.0
02	eP	01 23 49.0	0.9	18.0	04	eP e	05 21 13.0 21 49.5		
02	e(P)	05 00 12.4			04	iPD	07 56 39.0		
02	eP	06 14 23.0	0.8	27.0					

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
04	ePG	10 35 09.7			06	e(P)	02 18 37.0		
04	iPD	17 29 19.2			06	eP e	03 52 59.5 53 21.5		
04	iPG	19 57 20.2			06	ePD	08 50 24.1	0.7	21.0
04	eP e	21 03 10.2 03 52.0			06	eP e	09 46 51.7 47 27.5		
04	eP	22 09 37.0			06	eP	10 20 32.0		
04	eP	22 18 15.0			06	e(P)	13 53 28.4		
04	eP e	22 36 28.0 36 59.9			06	e(P) e	19 47 03.0 47 34.2		
04	iPG	22 50 32.2			07	e(P)	00 18 33.6		
05	eP	02 10 25.0			07	ePG	02 02 15.1	0.7	15.5
05	iPG	02 23 32.0			07	e(P)	05 00 26.6		
05	e(P)	03 31 13.0			07	eP	06 56 30.8	0.6	9.0
05	e(P) e	05 46 34.0 47 05.5			07	eP	11 28 30.3		
05	e(P) e	07 01 55.5 04 23.1			07	e(P)	14 10 13.9		
05	e(P)	09 27 58.5			07	ePD	15 41 50.7	0.7	28.5
05	eP	09 28 06.5			07	e(P) e	18 19 22.2 19 47.2		
05	eP	13 14 50.3	0.7	30.0	07	e(P) e	23 30 00.0 30 30.5		
05	eP	15 38 28.1			08	eP	00 31 50.0		
05	eP e(S)	16 45 12.4 55 44.4	0.7	50.0	08	eP	05 11 54.7	0.7	35.0
05	eP	18 28 11.6	0.8	11.0	08	eP	06 05 23.5		
05	eP	18 44 04.5	1.0	14.0	08	ePG	06 31 41.0		
05	eP e	19 02 27.0 02 47.0			09	ePD e	07 10 21.4 10 55.5	0.6	36.5
05	e(P)	21 38 57.2			09	eP	07 28 10.0		



Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
09	eP e	09 45 26.9 45 51.0			10	ePD	18 51 15.5	0.6	8.0
09	eP	10 42 58.5			10	eP	19 38 08.6		
09	eP e	11 02 46.0 03 19.0			10	e(P)	19 48 24.6		
09	eP i	11 08 50.2 09 27.5			10	eP	21 19 31.5	0.8	9.0
09	e(P)	11 44 15.0			11	eP	01 27 11.0	0.8	13.0
09	eP	13 46 16.0			11	eP	03 02 37.4		
09	e(P)	13 50 38.2			11	e(P)	03 09 24.5		
09	eP	15 03 07.4			11	eP e	04 37 51.5 38 25.5		
09	eP	15 10 34.4			11	eP i	11 58 08.5 58 36.3		
09	eP	16 33 03.5			11	eP e	13 17 12.0 17 29.6		
09	eP	21 41 07.5	0.5	32.0	11	eP e	14 56 01.1 56 31.0		
09	eP	23 09 45.0			11	eP	15 08 43.0		
10	iPD i	07 28 09.0 28 41.0	0.5	41.0	11	eP e	19 01 06.5 01 33.0		
10	eP e	07 59 13.6 59 46.5			11	eP	21 18 00.8		
10	iPC e	13 15 25.0 15 56.0	0.3	12.0	11	eP	21 31 51.4		
10	e(P)	14 24 36.2			11	iPC	21 36 39.5		
10	eP	15 47 37.7			12	eP	01 38 28.0		
10	eP i	16 36 44.7 37 05.0			12	eP	01 45 00.2		
10	eP e	16 49 50.5 50 21.6			12	eP	02 06 59.0		
10	iPD i	17 30 23.5 30 55.5	0.6	39.0	12	eP	02 16 46.0		
10	eP	18 38 32.6			12	eP	02 38 59.6		
					12	eP	02 46 54.7		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
12	eP	03 19 11.0			12	eP	14 43 09.0		
12	eP	04 58 30.0			12	eP	15 22 24.6		
12	ePD	05 03 39.0			12	eP	15 38 06.5	0.7	67.0
12	ePC	06 03 34.5	0.9	90.0	12	eP e	15 59 29.5 00 01.7		
12	eP	06 10 19.0	1.0	10.0	12	ePD	16 53 42.5	0.7	25.0
12	ePD	06 48 52.5	0.9	33.0	12	eP	17 18 43.5	0.9	19.0
12	eP	06 52 56.0			12	eP	17 45 08.9		
12	eP	06 59 30.0			12	eP	19 30 40.0		
12	eP	07 13 49.0	1.0	22.0	12	1PC	21 26 10.7	0.7	98.0
12	eP	07 05 46.0			12	eP	22 06 37.0	0.5	18.0
12	eP	07 48 13.4	0.8	30.0	12	ePC	23 16 01.0	0.9	81.0
12	eP	08 04 49.0	0.7	14.5	12	eP	23 25 54.0	1.0	30.0
12	eP	08 13 02.5	0.8	13.0	12	eP	23 58 25.0		
12	eP	08 15 02.8	0.8	13.5					
12	eP	08 51 56.4			13	eP	00 38 07.9		
12	eP	09 15 59.0			13	eP	00 42 16.0		
12	ePC	09 35 42.2	1.0	61.0	13	eP	02 17 13.7	0.9	47.5
12	ePC eS	09 40 48.7 43 44.8			13	eP	03 39 15.5	1.0	50.0
12	eP eS	11 31 27.5 39 42.0	0.7	39.0	13	eP	03 57 21.0		
12	eP	12 21 57.5			13	eP	04 38 22.6	0.7	55.0
12	eP	12 31 41.0			13	eP	06 20 25.5	0.8	28.0
12	eP	13 05 58.1			13	eP	07 34 06.0		
12	eP	13 26 43.0	0.9	21.5	13	1PC e(S)	08 41 34.7 48 53.7		
12	eP	13 35 08.5 36 22.0	1.0	17.0	13	eP	09 30 41.5	0.7	9.5
12	e(P)	14 39 00.0			13	eP e	09 55 18.7 55 45.5		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)
13	eP	10 22 02.4			14	eP	08 24 23.0		
13	eP	12 23 13.0			14	eP	09 09 54.5		
13	eP	12 40 52.2	0.7	41.0	14	e(P)	11 10 47.5		
13	eP	14 38 53.0	0.7	14.0	14	eP	12 01 15.2	0.8	19.0
13	eP	17 17 13.1	1.0	17.0	14	ePC	13 41 46.6		
13	ePC	17 26 07.7			14	ePC e(S)	14 29 05.5 37 12.0		
13	eP e	18 07 40.9 07 50.9			14	eP	15 37 47.0		
13	ePC	18 19 07.1	1.0	25.0	14	eP	15 48 22.8	1.0	8.5
13	ePC	19 43 39.5	0.5	63.0	14	eP	15 54 09.0		
13	eP	20 19 21.2			14	eP e	16 10 25.9 11 08.0		
13	eP	21 22 57.9			14	eP	16 37 44.3	0.9	29.0
13	eP	22 52 15.2			14	eP	17 08 45.1		
13	iPC e(S)	23 07 11.7 15 24.4			14	eP	17 15 56.0		
13	eP	23 22 39.0			14	eP	18 31 40.4	0.7	7.0
14	eP	00 39 53.4			14	ePD	19 58 28.8		
14	eP	01 57 31.4			14	eP	20 25 45.4	0.7	6.5
14	e(P) e	02 10 35.8 11 04.4			14	eP	21 21 02.0	1.0	16.0
14	eP	03 04 14.9			14	eP e	23 26 59.0 27 09.1		
14	eP	03 17 33.4	1.0	17.0	14	e(P)	23 42 48.9		
14	eP	04 57 56.4			14	eP	23 59 10.2	0.5	14.0
14	eP	05 51 34.3			15	eP	00 19 29.4		
14	eP	06 16 49.5	0.8	25.0	15	ePD	02 22 44.9	1.0	24.0
14	e(P)	06 21 14.5			15	iPC e(S)	04 42 06.5 50 17.5		
14	e(P)	06 28 30.2							



Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
15	iPC	06 28 40.7			16	eP	13 07 23.5		
15	eP	07 20 34.0			16	ePC eS	15 25 33.4 33 40.2	0.8	84.0
15	ePC	07 31 56.0			16	eP eS	17 23 45.5 31 53.0	0.9	44.0
15	iPC	08 52 06.6			16	iPD	21 40 18.9		
15	eP	09 58 00.1			16	eP	21 44 23.4		
15	eP	10 12 24.4			16	e(P) e	22 23 15.5 23 37.5		
15	e(P)	11 33 40.0			16	eP	23 11 07.5		
15	eP	11 39 57.4			17	e(P)	03 26 18.0		
15	eP	15 17 30.9			17	eP	06 02 21.7	0.8	8.5
15	eP	15 36 28.4			17	e(P) e	06 15 06.4 15 42.7		
15	eP	17 06 23.0			17	eP	07 10 40.4 11 22.0		
15	eP	19 22 02.5			17	ePD	07 39 49.1	1.1	15.5
15	ePC	20 16 21.0	0.8	25.0	17	eP	08 37 16.5	0.8	16.0
15	eP	20 57 46.4	1.0	10.0	17	e(P)	09 24 13.9		
15	eP	22 53 50.4			17	eP	11 46 49.2	0.7	19.0
15	eP	23 23 23.4			17	eP e(S)	12 04 18.5 11 52.5	0.7	25.0
16	eP	01 25 21.0			17	eP	12 42 06.7	0.5	28.0
16	eP	03 38 07.5			17	eP	15 12 46.3		
16	eP	06 34 51.7	0.9	19.0	17	ePC	18 19 01.5		
16	ePD	07 24 55.8			17	e(P) e(S)	20 32 05.0 35 21.3		
16	eP	08 57 52.5	0.8	18.0	17	eP	20 43 55.8		
16	eP	09 13 17.6	0.8	63.0	17	e(P)	20 55 03.1		
16	eP	10 12 57.3	0.9	14.5					
16	eP	10 15 01.7							
16	e(P)	11 00 34.0							
16	eP	12 54 11.0	0.9	23.0					

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
17	eP	21 55 14.5			19	eP	06 25 20.3		
18	eP	00 20 32.6	0.8	15.5	19	eP	08 43 11.1		
18	e(P)	01 23 58.5			19	ePD	08 59 58.4	1.0	95.0
18	e(P)	02 37 53.3				e	04 38.0		
18	e(P)	03 15 11.9				eS	08 10.0		
18	ePD	05 35 38.6			19	eP	09 40 17.5		
18	eP	07 01 20.5			19	eP	10 28 53.5	1.0	12.5
18	eP	09 07 38.1			19	ePC	12 17 04.9	1.0	9.5
	e	08 02.0			19	eP	15 10 18.2	0.9	8.0
18	eP	09 19 45.5			19	e(P)	16 00 30.0		
	e	20 07.0			19	eP	17 45 55.7		
18	iPD	10 59 47.5	0.7	23.0	19	eP	17 58 58.5		
18	ePC	11 53 36.7	1.0	48.0	19	eP	18 08 18.5		
	eS	01 46.9			19	eP	19 52 23.5		
18	eP	14 28 41.1	0.7	63.5	19	iPD	20 24 33.8		
18	eP	14 59 14.0			19	eP	21 28 09.8		
18	ePC	16 02 27.4			19	eP	22 06 18.0		
	e	02 36.6				e	06 53.5		
18	ePD	17 23 53.0	0.7	33.0	19	eP	23 46 35.2	0.9	8.5
	eS	30 39.0							
18	eP	18 39 30.7			20	e(P)	01 36 56.6		
18	eP	18 50 16.9				e	37 56.1		
	e	50 25.4			20	eP	01 58 11.9	1.0	4.0
18	e(P)	19 33 17.0			20	iPC	05 00 34.5		
	e	33 52.0			20	iPC	05 15 23.0		
19	eP	01 48 23.0			20	ePD	06 29 12.9		
	eS	55 50.5			20	eP	06 40 42.1		
19	eP	02 33 27.0			20	iPC	08 00 19.8	0.8	84.0
19	eP	06 09 57.5				eS	08 36.8		



Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	e(P)	08 25 38.5			21	eP	07 17 40.5	1.0	7.5
20	eP	10 22 06.3	1.0	13.5	21	e(P)	07 44 06.3		
20	eP	11 33 54.5	0.8	19.0	21	1PC	08 01 29.9	0.9	38.0
20	eP	11 52 49.9	0.8	57.0	21	eP e	09 07 08.6 07 45.0		
20	eP	13 22 01.5	1.0	17.0	21	eP	10 15 58.8		
20	e(P)	13 57 34.4			21	e(P)	13 29 56.7		
20	eP	14 30 42.0			21	1FD eS	13 34 05.6 42 15.3	0.8	73.5
20	eP	15 31 51.2			21	eP	13 58 00.5		
20	eP	16 43 41.6			21	eP e	17 12 00.7 12 25.7		
20	eP	17 01 18.8			21	eP	17 24 28.0		
20	eP	17 34 51.0			21	eP	20 38 56.3		
20	1FD	18 03 59.5			21	eP	22 52 22.9		
20	1FD	18 33 42.7	0.7	12.5					
20	ePC	20 27 23.0							
20	eP	20 35 23.2			22	eP	02 00 09.2		
20	eP	21 13 31.7			22	eP	03 31 18.3		
20	eP	22 55 24.5			22	ePC	04 50 30.2		
21	1PC	00 38 41.0	1.0	37.0	22	eP	05 31 09.0		
21	e(P)	02 10 43.1			22	ePC	05 40 20.1	1.0	8.0
21	1PC	02 54 03.7	0.8	46.0	22	e(P)	06 01 55.5		
21	1PC eS	03 42 12.6 50 22.0	0.9	48.5	22	1FD	06 34 02.8		
21	1PC	04 57 29.7	0.8	32.0	22	ePC	07 22 26.6	0.9	9.0
21	eP e	05 36 16.6 36 50.8			22	eFD	07 59 02.9	0.7	11.5
21	eP e	07 10 02.5 10 21.9			22	eP	08 49 31.2		
					22	eP	10 36 06.4		
					22	eP	12 06 45.0	1.0	24.5

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
22	eP	13 14 20.4			23	e(P)	08 46 18.5		
22	eP	15 12 42.5			23	eP	08 50 09.5	0.9	9.0
22	eP	15 58 06.0				e	52 49.2		
22	eP	17 12 52.5			23	eP	09 18 17.8		
22	iPC	17 52 58.1	0.8	33.5	23	ePC	13 37 42.4	1.0	17.0
22	eP	18 04 58.4			23	e(P)	13 44 19.7		
22	eP	19 16 30.2			23	eP	15 03 03.2		
22	eP	19 49 51.1			23	e(P)	15 08 23.3		
22	eP	21 22 15.7			23	eP	15 17 25.5		
22	e(P)	21 40 44.6			23	eP	15 44 06.2		
22	eP	22 16 41.2			23	eP	15 56 24.7		
22	eP	23 39 42.2			23	e(P)	16 42 38.7		
23	eP	00 29 25.2			23	e(P)	17 31 29.0		
23	eP	00 35 15.5			23	eP	19 18 22.2		
23	eP	00 58 11.0			23	eP	19 49 19.7		
23	eP	01 28 04.5			23	eP	20 06 42.8		
23	eP	02 01 46.9	0.8	5.5	23	eP	21 28 42.9		
23	eP	02 12 07.0	0.9	7.0	23	eP	23 11 18.5		
23	eP	02 45 37.7			23	eP	23 34 20.5		
23	e(P)	02 54 29.0			24	eP	00 04 05.7		
23	eP	03 04 16.2			24	eP	00 18 33.1		
23	e(P)	03 59 22.8			24	eP	02 13 01.8		
23	e(P)	05 17 03.0			24	eP	03 43 58.2		
23	eP	05 26 22.5			24	e(P)	05 00 06.8		
23	iFD	06 49 20.6	0.7	32.0	24	eP	07 09 27.6	0.8	6.0
23	ePC	06 57 54.3	0.9	12.0					

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
24	eP	07 42 48.0			25	e(P)	02 57 57.7		
24	eP	09 36 55.1			25	eP	07 04 45.2		
24	eP	10 56 56.7			25	e(P)	07 54 15.3		
	e	00 13.7			25	eP	08 08 26.7		
	e(S)	06 23.6				e	09 07.7		
24	eP	12 52 06.9			25	iPC	08 50 45.8		
24	eP	13 19 21.5			25	eP	10 08 09.3		
24	eP	13 52 35.2			25	eP	11 55 22.6		
24	eP	14 18 44.2	0.9	5.5	25	eP	13 10 23.3		
24	eP	14 49 31.4	0.8	6.5	25	e(P)	13 21 42.3		
24	eP	15 14 22.8			25	eP	13 55 52.0		
24	eP	15 19 01.3			25	eP	14 14 08.6	1.0	6.5
24	eP	17 55 33.5			25	eP	15 27 53.1	0.8	7.5
24	e(P)	18 07 56.5			25	eP	16 11 01.1		
24	eP	18 36 00.2			25	eP	17 12 12.3		
24	e(P)	20 27 04.2			25	eP	17 23 05.2		
24	eP	20 32 00.8			25	eP	17 42 00.2		
24	eP	22 13 00.2	0.7	20.0		e	42 33.3		
	eS	21 16.7			25	eP	18 17 33.2		
24	eP	22 34 26.3			25	eP	18 33 26.0		
24	eP	23 11 24.5			25	eP	19 18 36.6	1.0	18.4
24	eP	23 52 35.5			25	eP	20 32 40.5		
25	eP	00 07 57.5			25	eP	20 51 23.8	0.9	6.5
25	iPD	00 44 11.5			25	iPC	21 42 39.5	0.8	18.5
25	eP	01 16 16.7				e(S)	51 05.7		
25	iPD	01 22 03.5	1.0	8.5	25	eP	23 03 03.0		
25	e(P)	02 29 48.3				e	03 35.6		
					25	eP	23 08 32.9		
						e	09 03.5		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
26	eP	00 37 26.5			27	eP	01 38 36.9	1.0	19.0
26	iPD	01 35 39.1	0.7	25.5	27	eP	02 39 54.2	0.9	6.5
26	e(P)	02 22 59.2			27	eP	02 41 19.8	1.0	20.0
26	eP	03 24 18.5			27	eP	02 47 23.6	0.8	5.0
26	iPD	05 31 32.0			27	iPC	03 36 16.8		
26	eP	11 04 54.0			27	iPC	03 42 38.1		
26	eP	11 40 54.3			27	eP	03 53 56.0	1.0	6.0
26	eP	12 46 49.2			27	eP	06 15 42.0		
26	eP	13 44 08.2				e	16 16.1		
26	eP	15 17 30.6			27	eP	06 47 36.4		
26	eP	16 08 46.2			27	eP	08 33 18.3		
26	eP	16 37 54.7			27	eP	10 55 44.7	1.0	8.5
26	eP	17 10 41.6	1.0	15.0	27	eP	11 08 47.6		
	eS	21 05.6			27	eP	12 14 51.1		
26	eP	18 29 13.6			27	eP	13 31 57.9	0.9	58.0
	e	29 43.9				eS	38 57.6		
26	eP	19 25 38.5			27	ePD	15 01 01.7		
26	eP	20 46 57.0	1.0	11.5	27	eP	18 19 47.1		
26	ePC	20 53 09.7	1.0	24.5	27	iPD	19 33 37.0	0.9	18.5
26	iPD	21 13 31.4			27	eP	20 00 51.4	1.0	8.0
26	eP	22 54 26.7			27	eP	21 07 18.6		
26	eP	23 49 03.4				e	07 54.6		
					27	eP	21 29 49.0		
27	e(P)	00 12 03.2				e	30 30.0		
27	iPC	00 26 19.8	0.9	20.0	27	iPC	22 36 27.4		
27	iPC	01 20 30.1	1.0	50.0	27	eP	23 41 10.1		
	e	22 56.0			27	iPC	23 53 49.8		
27	eP	01 27 14.6	1.0	8.5					

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	eP	00 15 29.3			28	eP	18 52 14.3		
28	eP	00 51 13.6			28	eP	19 54 36.4		
28	eP	01 19 07.4			28	eP	20 45 52.0		
28	eP	03 23 14.4			28	iPC e(S)	21 45 25.5 53 37.8	1.0	35.0
28	eP	04 00 06.5			28	eP	22 18 52.1	1.0	7.0
28	iPC	04 21 09.4			28	iPC e(S)	23 19 41.0 27 56.5	1.0	31.0
28	eP	04 32 46.1							
28	e(P)	05 38 40.0			29	eP	00 30 38.4		
28	e(P)	07 08 07.5			29	iPC	00 39 41.7		
28	eP	08 30 01.0			29	eP	01 12 05.7		
28	ePC	09 32 42.5			29	e(P)	02 18 09.8		
28	eP	11 26 45.0			29	iFD	03 15 29.4		
28	e(P)	11 46 50.9			29	iPC	03 19 11.3	1.0	37.5
28	eP	12 41 07.9			29	e(P)	03 42 03.8		
28	eP	13 14 50.0			29	eP	06 05 02.2		
28	e(P)	13 18 15.0			29	eP	06 22 18.5		
28	eP	14 13 11.8			29	eP	06 36 37.0		
28	eP e	14 29 37.7 30 10.9			29	eP	07 04 05.5		
28	eP	15 03 48.6	1.0	10.5	29	iP	07 18 54.3		
28	eP	15 29 05.2			29	eP e	08 21 56.6 22 29.5		
28	e(P)	15 51 51.7			29	eP e e	10 08 08.5 12 17.2 19 00.6	0.8	142.0
28	eP	16 14 09.3							
28	eP	16 25 50.9	1.0	9.5	29	eP	11 08 30.6		
28	eP	16 34 54.4			29	eP	12 26 19.5		
28	eP	16 51 30.1	1.0	6.5					
28	eP	17 08 58.3	1.0	17.0	29	iFD	13 53 35.7		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
29	eP e	14 13 29.3 14 14.6			30	eP	08 04 27.5		
29	e(P)	15 34 54.3			30	ePD	08 26 38.0		
29	e(P)	16 36 22.0			30	eP e(S)	08 38 10.7 46 23.6		
29	ePC	16 53 09.3			30	ePC	08 47 24.0		
29	eP	18 04 35.6			30	e(P)	08 51 19.5		
29	eP	18 36 47.8			30	eP	08 55 08.2		
29	iPC	19 13 58.1	0.7	29.0	30	eP	08 58 10.2		
29	e(P)	20 08 00.5			30	e(P)	10 09 48.3		
29	ePC e	21 41 46.7 42 11.2			30	ePC	10 12 04.7	0.9	16.0
29	ePD	23 59 46.5			30	e(P)	10 43 12.6		
					30	ePC	10 55 12.1	0.7	17.5
30	eP e	01 13 53.1 14 28.3			30	eP	11 36 08.3	0.8	6.8
30	e(P)	01 46 02.5			30	ePD	11 46 16.8	0.9	6.6
30	e(P)	01 54 03.6			30	ePD	13 04 13.5	0.7	6.4
30	e(P)	02 22 17.3			30	eP	16 48 10.7		
30	e(P)	04 36 08.0			30	eP	16 54 22.5		
30	ePC	05 59 27.6	0.8	5.2	30	ePC	18 50 57.5	0.8	19.6
30	e(P)	06 21 28.2			30	eP	19 22 13.6		
30	iPC	06 45 50.0			30	ePD	19 49 46.3	1.0	8.5
30	iPC	07 02 38.9	0.8	40.5	30	eP	21 38 15.9		
30	iPC eS	07 21 43.7 29 56.5	0.8	87.5	31	eP	00 07 39.8		
30	eP	07 32 14.3	1.1	19.3	31	eP	01 10 23.6	0.9	7.5
30	eP	07 34 22.2			31	eP	01 47 09.3		
30	ePC	07 38 10.5			31	eP	04 18 14.2		
30	iPC	07 51 48.1			31	e(P)	05 42 42.0		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
31	ePG	07 06 00.3							
31	e(P)	11 11 03.6							
31	ePG	11 52 19.4							
31	eP	13 13 59.5							
	eS	21 04.5							
31	eP	13 36 04.4							
31	e(P)	14 30 03.7							
31	e(P)	15 02 44.3							
31	eP	17 04 48.5							
31	eP	19 30 56.5							
31	eP	19 37 23.8							
31	eP	20 20 35.8	0.8	3.5					
31	ePD	21 06 30.0	1.0	4.0					
31	ePG	22 27 01.7							

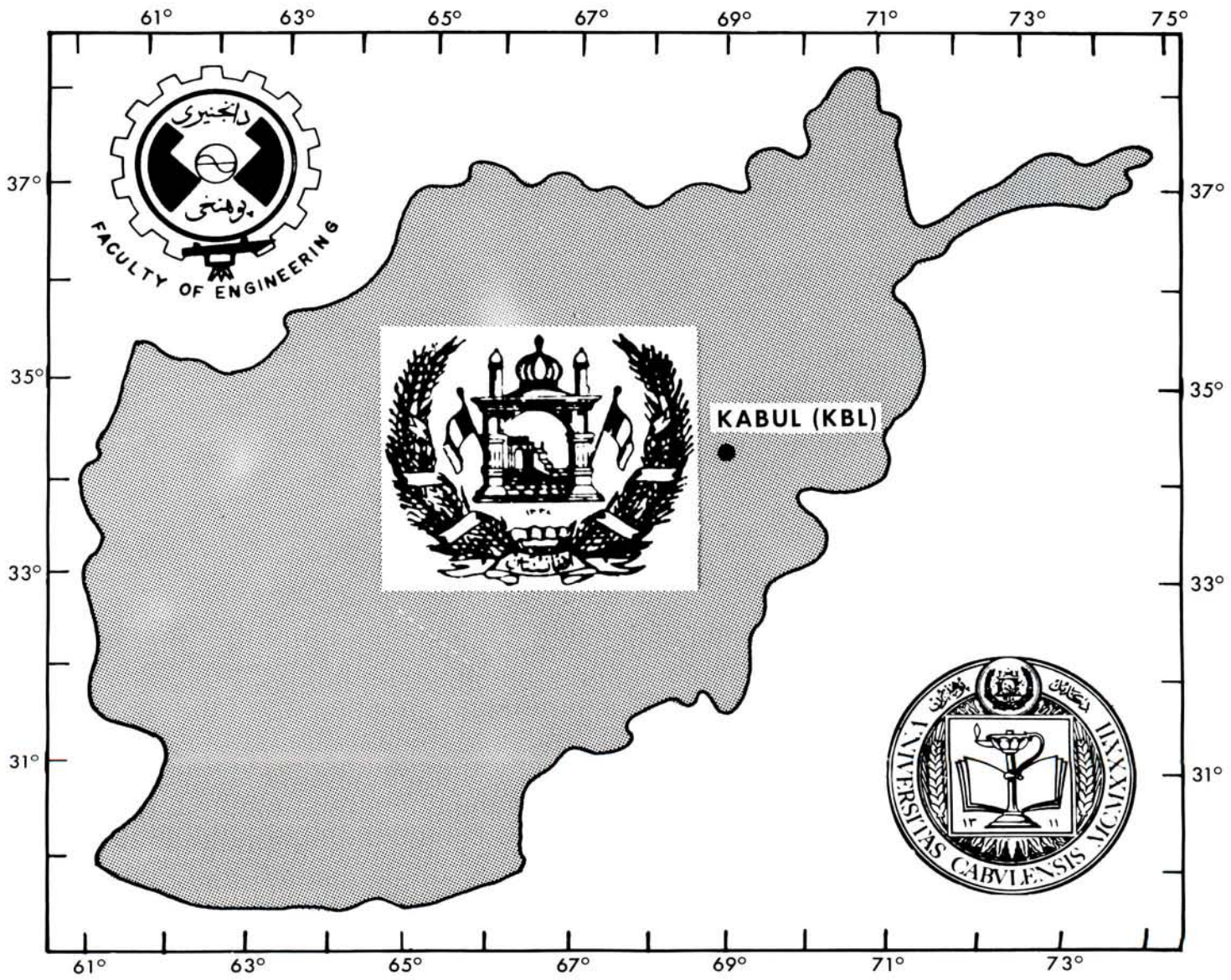
MONTHLY BULLETIN

PRELIMINARY SEISMOLOGICAL ANALYSIS

KABUL, AFGHANISTAN SEISMOLOGICAL OBSERVATORY

FACULTY OF ENGINEERING—KABUL UNIVERSITY

R.A. KARIM, DIRECTOR



MONTH OF September
BULLETIN NO. 16 1969

PRELIMINARY SEISMOGRAM ANALYSIS
KABUL/AFGHANISTAN SEISMOLOGICAL OBSERVATORY
FACULTY OF ENGINEERING - KABUL UNIVERSITY
R. A. KARIM - DIRECTOR

Page 1 of 15

Via Air Mail

WVNSS: KBL

Latitude: $34^{\circ}32.45'N$
 Longitude: $69^{\circ}02.59'E$
 Elevation: +1.92KM

S.P. Mag. 4.00 K. at 1.0 sec.
 L.P. Mag. 6 K. at 15.0 sec.

Bulletin# 16
 Dated: 13 Oct. 1969

Period: SEP. 01, 1969 to SEP. 30, 1969

i = Impulsive; e = Emergent; c = Compression; d = Dilatation

Day	Phase	Time(U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time(U.T.) hr. min. sec.	T (sec.)	2A (mm)
01	e(P)	00 05 35.5			01	ePD	18 57 36.1	1.0	4.6
01	e(P)	00 25 29.3			01	eP	19 16 59.0		
01	iPD	00 26 40.7			01	eP	20 02 48.5		
01	e(P)	01 18 30.3			01	eP	20 58 04.1	0.7	5.0
	e	21 24.1			01	eP	21 44 02.8		
01	e(P)	03 35 36.5			01	eP	23 20 10.2	1.2	21.0
01	e(P)	05 41 22.9							
01	eP	06 13 11.6			02	ePC	02 25 21.0	0.8	6.5
01	eP	07 15 02.8			02	eP	04 06 18.1		
01	eP	08 39 15.6				e(S)	16 07.8		
01	eP	09 38 16.0			02	eP	04 48 31.2		
01	eP	09 51 23.2				e	49 01.4		
	e	52 11.0			02	ePC	05 05 21.5		
01	eP	09 55 49.9			02	eP	07 32 00.4		
	e	57 17.9			02	iPC	08 47 57.8	0.8	13.0
	e	59 56.8			02	e(P)	11 54 35.9		
01	ePD	10 51 22.0	1.0	14.0	02	eP	12 11 56.3		
01	e(P)	12 22 47.4				e	12 35.4		
01	ePD	12 28 24.7			02	e(P)	12 16 51.6		
01	eP	17 47 46.1			02	ePD	12 46 06.2		
01	eP	17 56 07.0							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
02	eP	12 48 54.2	0.7	12.5	03	eP	08 00 37.1		
02	eP	12 51 22.8				e	01 09.0		
02	eP	13 32 42.2			03	eP	09 07 16.6		
	e	36 08.8			03	ePC	09 19 59.5		
02	eP	15 14 23.9			03	eP	10 18 05.3		
02	iPD	15 24 32.9			03	eP	10 44 02.0		
	i	25 04.0			03	e(P)	11 33 41.2		
02	eP	15 30 06.8			03	eP	12 56 35.2		
02	eP	16 55 14.4			03	eP	13 19 55.0		
02	e(P)	19 35 15.2				e	20 41.7		
02	iPD	20 13 38.8			03	eP	14 12 18.2		
02	eP	20 46 03.0				e	12 54.6		
02	eP	23 02 00.8			03	e(P)	14 41 32.0		
03	eP	01 02 46.5				e	42 02.6		
03	e(P)	01 19 50.3			03	eP	16 20 31.6		
03	eP	01 33 42.7							
03	iPC	01 42 21.7			03	eP	16 39 20.5		
					03	eP	20 35 33.7		
					03	ePC	21 45 13.2	0.9	5.0
03	ePC	01 54 53.8	0.7	8.0	03	eP	22 11 34.6	1.0	5.0
03	ePC	04 25 12.7			03	eP	22 18 18.0	1.0	9.5
03	ePC	04 29 25.0	0.9	10.0	03	eP	23 41 17.6		
03	eP	05 24 48.5			04	eP	02 46 31.7		
03	eP	05 32 33.6			04	ePC	02 58 04.7		
03	eP	05 34 49.9			04	ePC	03 19 13.5		
03	eP	05 43 28.5				e(S)	28 02.8		
03	eP	07 06 39.4	1.0	9.0	04	iPC	05 49 05.7	0.8	41.0
					04	iPD	05 58 18.8	0.8	47.0

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
					05	eP	00 18 11.3	1.0	11.5
04	iPC e	08 40 13.4 40 44.7	0.6	27.0	05	eP	00 44 54.1		
04	iPC	09 03 14.2			05	e(P) e	01 20 40.6 21 33.6		
04	ePD	11 43 56.3	1.0	8.0	05	e(P) i	01 25 31.6 26 17.3		
04	e(P)	14 12 22.3			05	e(P)	01 31 48.2		
04	eP e	14 30 55.7 31 19.5			05	ePD	02 42 02.3		
04	ePD	14 32 53.1	1.0	5.0	05	eP	02 48 40.7		
04	eP e	14 43 24.2 43 52.5			05	eP	03 01 38.8		
04	eP	15 09 27.6			05	eP e	03 40 00.1 40 36.1		
04	eP e(S)	16 39 57.5 48 54.8	0.8	11.0	05	e(P)	06 46 22.9		
04	eP	17 07 09.5	1.0	5.0	05	eP	07 25 45.5		
04	eP	17 24 07.6			05	eP	09 14 18.7		
04	ePD	18 19 17.3	1.0	11.0	05	e(P)	09 18 14.0		
04	eP	19 32 10.3			05	eP	09 21 04.8		
04	eP e	19 43 39.1 44 16.2			05	eP	10 07 40.1		
04	eP	21 04 24.3			05	e(P)	10 32 58.8		
04	iPC eS	21 22 36.8 30 40.8	0.8	112.5					
04	eP	21 38 54.2							
04	eP	22 54 27.1							
04	eP e	23 00 56.8 01 32.5							
04	iPC	23 56 41.8	0.8	15.5					

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
05	eP	11 25 06.9			05	eP	19 42 31.2		
05	iPC eS	11 50 47.0 57 41.8	1.0	123.5	05	eP	20 22 00.9		
05	e(P)	12 14 08.8			05	eP e	21 06 49.0 07 25.1		
05	eP	12 23 30.1 24 05.7			05	eP	21 14 22.5		
05	eP	13 15 11.2			05	eP	21 19 45.8	0.8	8.5
05	eP	13 30 07.0			05	e(P)	21 23 45.7		
05	eP	13 39 38.5			05	eP	22 15 06.7		
05	eP	13 54 08.4			05	e(P)	23 08 06.2		
05	eP	15 46 49.7			06	ePC	01 16 13.7	1.0	9.0
05	eP	15 54 41.5			06	eP	01 19 05.8		
05	eP e	15 56 11.9 56 42.7			06	e(P)	01 43 44.2		
05	eP	17 14 02.2			06	e(P) e	06 31 05.7 32 30.1		
05	eP	17 59 18.0							
05	eP	18 32 07.1							
05	eP	19 27 18.7							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
06	eP	07 23 27.4			07	eP	04 52 57.6		
06	ePC e(S)	07 53 30.0 01 41.6			07	e	54 08.2		
06	eP	10 13 04.4			07	ePC	05 10 55.2	0.8	5.0
06	eP	10 22 38.7			07	eP	05 49 06.2		
06	ePD	11 51 48.7	1.0	26.2	07	ePD	06 50 43.5	0.9	7.0
06	ePC e(S)	14 41 10.2 49 55.3	1.0	55.3	07	e(P)	08 53 13.2		
06	eP e(S)	15 03 14.3 13 44.3			07	e(P)	12 04 29.3		
06	eP	15 43 58.3			07	iPC	12 43 50.9	0.9	12.5
06	eP	16 27 10.8	0.9	5.2	07	eP	14 00 32.4	0.8	7.2
06	eP e(S)	17 21 23.0 31 56.8	1.1	7.5	07	e(P)	14 30 30.5		
06	eP	17 40 15.1			07	eP	16 14 21.3		
06	eP e	18 10 03.0 10 54.8			07	eP	17 41 03.0		
06	eP	19 08 37.7	0.9	9.4	07	eP	18 25 51.2		
06	eP	19 14 19.3			07	iPD	18 29 36.8		
06	e(P)	20 22 15.1			07	eP	18 34 41.5		
06	ePD	20 37 11.4	1.0	8.0	07	eP	18 53 42.7	1.0	20.5
06	ePC	23 36 12.2			07	e(P)	19 08 32.9		
06	eP	23 52 49.9			07	eP	19 32 29.0		
07	iPC	00 32 39.8	0.8	37.5	07	eP	20 14 08.3		
07	eP	01 35 13.2			07	eP	22 35 44.0		
07	eP e	03 19 17.6 23 09.7			07	e	36 11.2		
07	e(P)	04 42 13.9			08	e(P)	00 11 11.7		
					08	e(P)	02 48 01.3		
					08	e(P)	03 43 41.4		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	A (sec.)	2A (mm)
08	ePC	05 05 18.8			09	eP	17 31 05.1		
08	eP e	07 08 35.7 09 12.2			09	eP	17 45 46.5		
08	eP eS	12 58 21.8 08 46.6			09	1PC	18 21 52.7	0.7	44.0
08	eP	16 22 09.7			09	eP i	20 18 22.9 18 43.8		
08	e(P)	16 36 36.5			09	eP	20 33 39.7		
08	eP	17 48 37.7			09	eP	20 37 56.5		
08	eP	18 16 42.7			09	eP	20 46 58.0		
08	e(P)	20 43 21.7			09	eP	21 24 58.0		
08	1PD	21 01 41.5	1.0	90.0	09	eP	22 14 05.1		
08	eP	21 07 41.2			10	ePC	00 02 35.2	0.9	7.0
08	eP	23 42 52.8			10	ePD	00 21 30.6		
09	eP e	01 05 53.7 06 27.0			10	eP	02 18 54.1		
09	eP	01 14 30.8	1.0	34.0	10	eP	06 04 30.4		
09	eP	03 44 34.8			10	e(P)	06 46.11.9		
09	1PC	04 04 40.0			10	eP	07 56 58.2	0.8	30.0
09	ePC	07 46 53.8	0.9	10.0	10	ePD	11 57 51.4		
09	eP e	07 59 37.7 00 04.7			10	ePC e(S)	12 18 58.6 23 14.6		
09	eP	08 19 10.1			10	eP	12 52 53.7		
09	eP	09 57 16.3			10	1PD	13 11 47.1		
09	e(P)	10 26 02.7			10	e(P)	15 39 38.6		
09	eP	10 40 37.4			10	e(P)	15 43 39.2		
09	eP	11 10 38.5	0.8	6.2	10	eP	16 10 42.0		
09	eP	15 43 01.5			10	e(P)	16 29 47.0		
09	ePC	15 55 41.4			10	eP	16 40 15.0		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
10	eP e	16 42 43.8 43 17.0			11	e(P)	13 24 50.6		
10	eP i	17 32 03.7 32 35.5			11	eP	14 50 11.5		
10	eP	18 22 57.5			11	iPC	15 14 58.7		
10	eP	20 02 19.0			11	ePD	16 05 02.4		
10	eP	20 04 26.1			11	eP	16 20 50.2		
10	eP	20 26 27.7	0.9	7.0	11	eP	19 01 52.2		
10	e(P)	21 27 02.7			11	eP	19 33 23.2		
11	eP	00 35 46.4			11	eP	20 21 24.0		
11	eP	01 09 11.5			11	eP	20 31 09.0		
11	e(P)	02 58 17.6			11	e(P)	20 47 45.3		
11	eP	03 03 32.5			11	e(P)	22 05 50.9		
11	eP	03 12 20.6			12	eP	00 24 41.3		
11	eP	03 26 04.5 33 23.5	0.8	64.5	12	eP	00 56 30.2		
11	iPC eS	03 26 04.5 33 23.5			12	e(P)	01 08 20.2		
11	eP	04 05 52.0			12	ePC	02 25 25.2	0.9	16.0
11	eP	05 03 18.6			12	e(P) e(S)	02 46 52.6 49 08.5		
11	eP	05 11 38.5 12 21.4			12	ePD	03 33 25.1	1.0	22.6
11	e(P)	06 27 43.4			12	iP	05 08 45.4		
11	eP	07 27 27.6			12	iPC	07 54 25.8		
11	e(P)	07 47 46.3			12	iPC	08 11 59.2		
11	e(P)	10 53 10.2			12	iPC	08 17 50.7	1.0	45.4
11	e(P)	12 40 47.2 41 34.8			12	eP	08 21 07.1	0.9	68.5
11	eP i	12 40 47.2 41 34.8			12	e(P)	08 56 24.9		
11	eP i	13 12 29.0 13 05.0			12	iPC e(S)	09 08 47.4 18 21.8		
11	eP	13 21 44.4	1.1	5.0	12	e(P)	09 20 29.0		
					12	eP	09 22 22.5		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
12	ePD	09 39 52.6			13	ePD	12 02 14.6	1.0	30.0
12	ePD	09 41 27.4	0.5	20.5		eS	10 22.0		
12	eP	11 51 04.3			13	eP	13 17 15.3		
12	ePD	11 57 44.6	1.0	9.0	13	eP	14 36 15.2		
12	eP	12 29 24.3				e	36 49.7		
12	eP	14 50 42.5			13	eP	16 06 51.7		
12	iPC	15 12 00.0	0.7	51.0	13	eP	17 48 11.6		
	e(S)	21 41.2				e	48 46.0		
12	eP	15 18 51.7	0.8	10.0	13	e(P)	19 04 55.3		
12	e(P)	16 07 22.4			13	ePC	20 10 14.0	0.9	11.5
12	e(P)	19 43.23.4			13	iPD	20 21 08.3	0.8	60.0
12	eP	20 53 40.2			13	eP	22 49 20.2		
12	eP	21 43 03.3				e	50 08.4		
12	e(P)	22 35 40.4			13	eP	23 13 08.6	0.9	7.8
13	eP	00 44 19.3	1.0	18.4	13	eP	23 23 10.4		
13	eP	00 52 26.4	1.0	36.1	14	eP	00 07 02.8		
13	ePC	02 12 16.7			14	iPD	00 34 36.5		
13	eP	02 42 51.0			14	e(P)	02 24 30.6		
	e	43 13.0			14	eP	06 21 58.3		
13	eP	03 25 51.4			14	eP	06 50 04.5		
13	eP	04 06 39.6			14	iPC	08 47 27.4		
13	eP	04 32 48.8			14	eP	10 12 19.7	0.9	20.0
13	eP	07 56 02.3			14	eP	10 20 36.0		
13	e(P)	09 24 21.3			14	eP	11 01 28.7	1.0	26.0
13	eP	11 12 18.1			14	e(P)	12 25 55.5		
13	e(P)	11 28 59.4	1.1	8.5	14	ePC	12 59 12.1	0.9	33.0
						e(S)	07 16.0		
13	3P	11 53 59.1			14	iPD	14 48 05.6		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
14	eP	15 02 08.3			15	eP	07 09 18.8		
14	eP	15 40 33.3	1.0	7.5	15	e(P)	07 33 34.6		
14	e(P)	15 59 55.4			15	eP	10 52 04.1		
14	ePC	16 17 09.0			15	eP	14 07 45.0		
14	eP	16 37 49.0			15	ePC	14 39 58.6	0.8	10.5
14	eP	17 03 15.5			15	iP	14 57 05.7		
14	eP	17 06 59.6				eS	06 25.6		
14	iP	17 58 53.6			15	e(P)	15 55 15.1		
14	eP	18 47 42.0			15	iPD	16 37 13.7	0.7	43.5
14	eP	19 37 02.2			15	eP	17 03 53.5		
14	eP	19 39 58.2			15	eP	17 09 33.9		
14	eP	19 44 22.0			15	eP	17 54 19.9		
14	e(P)	20 39 25.3			15	eP	18 47 19.0		
14	eP	21 54 47.6			15	iPC	18 57 55.6	1.0	99.0
14	eP	22 27.21.1				eS	06 16.0		
14	eP	22 38 08.5			15	eP	21 06 29.1		
14	eP	22 51 29.2			15	eP	21 15 22.9		
14	e(P)	23 13 38.0			15	eP	21 36 49.0		
14	eP	23 21 30.0			15	eP	23 06 52.7		
14	eP	23 24 40.7			16	eP	01 23 20.8		
14	eP	23 46 50.2			16	iPC	01 27 26.4	1.0	69.0
15	eP	00 42 12.1				eS	35 46.3		
15	eP	01 28 18.2			16	eP	02 26 01.7		
15	eP	02 49.17.1			16	ePC	02 32 52.1	1.0	18.5
15	eP	03 31 15.5			16	eP	05 21 25.2		
15	eP	04 31 14.4				e	21 59.0		
15	eP	04 31 14.4			16	eP	07 28 00.5		
15	eP	05 01 10.1			16	eP	07 55 29.6		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
16	eP	08 09 22.5	0.9	66.5	19	iPD	12 01 57.2	0.8	11.0
16	eP	08 19 54.7			19	eP	21 34 40.0		
16	eP	10 18 22.3			20	e(P)	00 09 48.2		
16	eP	11 01 20.7			20	ePC	00 53 53.7		
16	eP	11 34 15.7			20	e(P)	01 18 27.0		
16	e(P)	13 16 56.0			20	e(P)	01 23 55.5		
16	eP	14 11 57.2			20	eP	03 04 36.4		
	e	12 26.5			20	eP	04 13 03.8		
16	eP	14 44 24.7				e	13 48.4		
16	e(P)	14 59 35.8			20	eP	04 50 00.5		
16	eP	17 48 00.5			20	eP	05 19 46.7	1.0	35.0
16	eP	19 27 41.5				e	24 18.7		
16	eP	21 06 01.2				e(S)	28 53.4		
16	eP	21 18 28.8			20	e(P)	05 55 22.7		
16	eP	21 21 13.4			20	e(P)	06 52 17.6		
16	eP	21 30 56.5			20	iPD	08 43 56.8		
17	e(P)	03 46 20.5			20	iPD	09 08 41.0	0.8	35.0
19	eP	08 31 26.4			20	eP	11 19 09.3		
19	ePD	09 00 41.2	0.8	6.1		e	19 52.5		
19	iPC	12 21 41.4	1.0	13.4	20	eP	11 32 36.9		
19	ePC	12 46 44.0			20	e(P)	13 07 43.0		
	e	47 16.6			20	ePD	14 08 58.1		
19	eP	13 12 48.0	0.7	8.0	20	eP	15 46 09.9	1.2	34.0
19	ePD	14 47 09.8				e(S)	49 54.7		
19	iPC	18 32 42.0			20	eP	19 33 12.6		
19	eP	19 37 49.6			20	eP	20 05 25.8		
19	e(P)	20 23 28.2				e	06 12.7		
19	ePD	20 50 38.7	1.0	15.0	20	eP	20 55 48.3		
						e	56 13.8		
					20	eP	22 44 02.4		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	e(P)	22 55 41.6			22	eP	01 16 48.0		
20	e(P)	23 18 40.5			22	eP	01 28 33.2		
21	eP	01 00 54.3			22	ePC	01 47 57.8		
21	eP	02 20 08.9			22	ePC e(S)	01 53 48.3 59 39.2		
21	eP	03 18 13.4			22	ePC	02 45 44.7		
21	eP	06 10 47.4			22	ePC	02 50 28.6	0.9	12.2
21	e(P)	06 15 41.6			22	eP e(S)	04 00 10.8 06 12.6		
21	eP e	06 38 19.0 38 51.4			22	eP	04 33 11.6		
21	iPC	07 30 21.0	1.0	33.0	22	eP	06 58 53.2		
21	eP	08 16 32.0			22	eP	09 14 06.0		
21	e(P)	08 40 35.4			22	eP	09 20 02.5		
21	e(P)	09 01 13.7			22	eP	10 52 59.6		
21	eP	10 49 03.7	0.7	18.0	22	e(P)	11 52 35.6		
21	eP	13 10 39.2			22	e(P)	13 25 07.2		
21	iPD	19 10 19.2			22	e(P)	14 01 24.0		
21	iPD e	19 37 36.8 38 12.7			22	iPD e	16 18 53.0 21 57.6		
21	eP	19 47 28.2			22	eP	16 48 08.1		
21	e(P)	20 33 32.6			22	e(P)	18 30 36.2		
21	e(P)	21 07 59.1			22	e(P)	21 58 19.6		
21	iPD	21 34 26.0	0.9	9.0	23	e(P)	01 42 16.6		
21	e(P)	21 36 57.9			23	e(P)	01 47 17.5		
21	e(P)	21 41 43.5			23	eP e	02 00 58.5 01 30.8		
21	eP	22 59 29.0			23	ePC	02 33 56.1	1.0	15.0
21	iPC	23 15 51.6			23	e(P)	04 11 49.3		
22	eP	00 56 32.3							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
23	eP	04 53 42.6	1.0	6.5	24	eP	08 50 59.8		
23	eP	05 34 13.7			24	eP	10 31 47.2		
23	ePD e	05 44 24.5 44 49.7			24	e(P)	10 45 26.1		
23	eP	05 54 11.6			24	e(P)	11 46 28.3		
23	e(P)	07 05 31.2			24	eP	11 56 06.2		
23	eP	08 56 14.5			24	eP e	12 36 38.2 37 10.0		
23	eP	09 17 44.1			24	eP	12 49 10.7		
23	eP	10 37 17.0			24	eP	13 32 48.2		
23	eP	10 50 29.5			24	eP	18 17 08.0		
23	ePD	12 32 59.7	0.8	30.0	24	e(P)	20 26 02.6		
23	iPD	16 58 38.6			24	eP	23 28 59.6		
23	eP	19 34 29.4			25	e(P)	01 58 13.1		
23	e(P)	22 27 22.0			25	e(P)	03 19 53.2		
23	eP	22 38 52.1			25	eP	03 49 37.2		
23	e(P)	22 56 36.5			25	eP	04 21 23.0		
23	e(P)	23 05 55.2			25	eP	04 30 55.5		
23	e(P)	23 10 52.5			25	eP	05 46 49.2		
24	eP	00 37 28.1			25	eP	06 40 06.8		
24	eP	01 09 58.9			25	e(P)	08 26 18.5		
24	eFC	02 22 33.8			25	e(P)	08 58 37.9		
24	eP	02 28 58.1			25	eP	10 44 43.2		
24	eP e(S)	04 10 07.5 19 20.0			25	e(P)	11 53 04.9		
24	eP	04 31 59.5			25	e(P)	12 57 15.2		
24	iFC	04 43 19.0			25	eP	13 35 09.0		
24	e(P)	05 46 28.7			25	eP	14 57 21.2		
					25	eP	15 19 38.3		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
25	ePD e	15 28 16.0 32 11.7	1.1	9.0	26	eP	22 15 26.7		
25	eP	16 35 42.0			26	eP	22 33 05.2		
25	eP	17 47 55.2			27	eP	00 19 30.1		
25	e(P)	18 02 44.7			27	eP e(P)	03 10 52.8 03 48 49.5		
25	eP	20 38.36.2			27	IPC	04 12 12.6		
25	ePC	21 45 26.1	1.0	15.0	27	eP	05 08 14.5		
25	eP e	23 16 26.1 21 27.0	1.0	15.5	27	IPD	06 20 54.0		
25	eP	23 34 33.0			27	eP	07 21 47.1		
26	ePD	01 21 48.7	1.0	10.0	27	eP	09 00 59.1		
26	ePD e(S)	05 00 52.6 06 03.2	1.1	9.6	27	eP	09 23 23.7		
26	eP	06 31 34.1			27	e(P)	10 06 41.7		
26	eP	06 51 32.0			27	eP	11 46 54.1	1.0	4.5
26	eP	07 05 06.0			27	eP	12 33 37.3		
26	IPC	08 36 22.3			27	eP	14 31 48.5		
26	eP	08 51 27.5			27	IPD	15 37 47.9		
26	e(P)	11 37 14.1			27	eP	15 59 29.3		
26	eP	12 01 59.0			27	eP	16 14 37.2		
26	eP	13 41 20.1			27	eP	16 48 01.3		
26	eP	14 19 06.6			27	ePC	18 53 54.5		
26	eP e	16 08 48.1 09 19.3			27	eP eS	19 23 33.0 31 22.6		
26	eP	16 47 18.7			27	eP	19 35 10.8		
26	eP	19 43 32.4			27	eP	19 48 51.8		
26	eP	20 46 07.1			27	e(P)	20 32 31.6		
26	eP	21 01 13.7			27	e(P)	20 39 00.5		
					27	ePD	20 49 41.9	0.9	10.0
					27	eP	21 28 37.1		

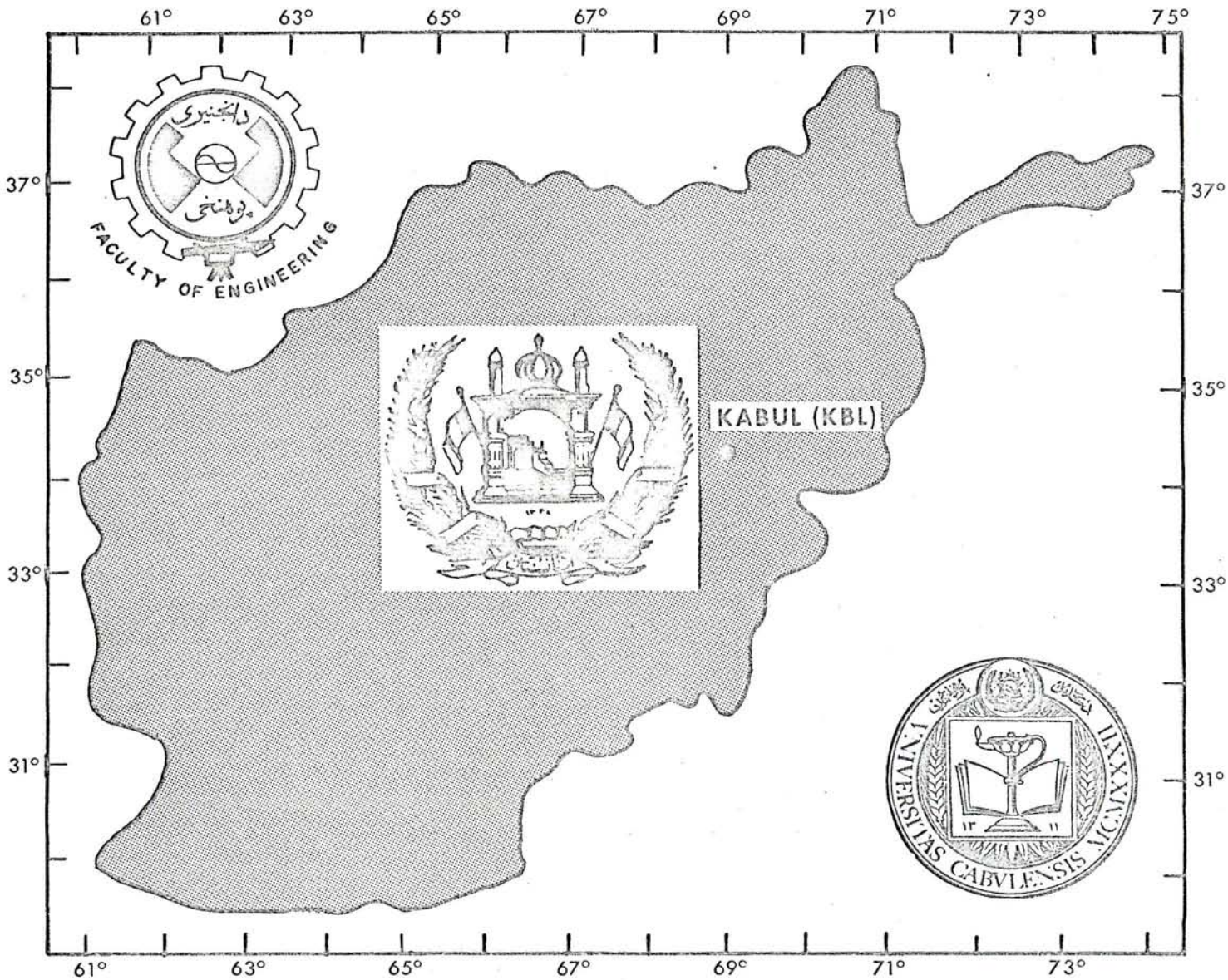
Day	Phase	hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
28	e(P)	01 22 00.2			29	eP	04 38 20.4		
28	eP	06 35 58.8			29	1PC	07 01 34.5		
28	e(P)	06 47 35.7			29	1PD	07 04 08.8	0.8	45.0
28	ePC	07 30 33.0			29	eP e(S)	08 44 25.6 47 32.8	1.0	57.0
28	1PD	07 39 08.5			29	eP	09 25 14.7		
28	eP	08 00 32.6				e	25 40.3		
28	eP	09 01 45.7			29	eP	09 48 48.0		
28	eP	09 09 23.0	0.7	6.0	29	e(P)	10 36 29.8		
28	1PD	09 51 15.2			29	eP	14 28 15.4		
28	eP	10 35 56.0	1.0	20.0	29	eP e	15 33 42.1 34 35.8		
28	e(P)	10 57 16.9			29	e(P)	15 51 26.1		
28	eP	14 10 33.8	1.0	13.0	29	eP	16 15 08.8		
28	1PC	16 27 55.7			29	1PC eS	16 30 58.8 39 58.0	0.8	131
28	eP	18 09 02.1			29	e(P)	16 58 55.2		
28	e(P)	18 17 28.2			29	1PC e e(S)	18 08 41.8 13 38.4 16 50.2	1.0	100
28	ePD	18 54 57.8			29	eP	18 32 32.3		
28	1PC	20 01 21.6	1.0	22.0	29	eP	19 26 06.7		
28	eP	21 42 49.2			29	e(P)	19 40 45.8		
28	ePC eS	23 01 09.1 06 56.7			29	eFC e	20 03 04.1 07 25.2	1.0	40.5
28	eP	23 26 17.5			29	eP e(S)	20 15 49.5 26 08.7		
29	eP	00 20 27.5			29	eP	21 49 20.2		
29	eP	01 05 09.5			29	e(P)	23 14 50.6		
29	e(P)	02 50 21.3			30	eP i	00 36 50.4 37 21.4		
29	e(P)	03 17 14.2							
29	e(P)	04 12 03.3							

		hr.min.sec.	T	2A	Day	Phase	Time (U.T.)	T	2A
			(sec.)	(mm)			hr.min.sec.	(sec.)	(mm)
30	eP	01 07 15.8							
30	ePD	03 30 12.4	0.8	9.0					
30	eP e	04 25 07.9 25 37.7							
30	eP	04 27 03.8							
30	eP i	04 53 15.8 53 44.6							
30	eP	07 44 24.5							
30	eP	08 08 17.1							
30	eP	09 19 10.7							
30	e(P)	09 53 56.8							
30	eP	11 06 19.3							
30	eP	11 25 57.5	1.0	7.5					
30	eP	11 56 06.0							
30	eP	13 03 31.3							
30	eP e	13 24 08.0 24 48.8							
30	iPC	15 02 19.8							
30	eP	15 42 01.4							
30	eP	15 45 52.9							
30	ePC	17 17 21.0	0.8	14.5					
30	eP e(S)	18 10 39.0 17 58.6	1.0	59.0					
30	e(P)	18 33 53.3							
30	e(P)	19 11 41.7							
30	eP	21 35 22.0							
30	ePC e	23 18 42.1 22 55.6							

MONTHLY BULLETIN

28 NO.

PRELIMINARY SEISMOLOGICAL ANALYSIS KABUL, AFGHANISTAN SEISMOLOGICAL OBSERVATORY FACULTY OF ENGINEERING—KABUL UNIVERSITY R.A. KARIM, DIRECTOR



MONTH OF October

BULLETIN NO. 17 19 69

WNSS: KBL

 Latitude: $34^{\circ}32.15'N$

 Longitude: $69^{\circ}02.59'E$

 S.P. Mag. 4.00 K. at 1.0 sec.

 L.P. Mag. 6 K. at 15.0 sec.

 Bulletin # 17

Dated: November 15, 1969

 Period: Oct. 01, 1969 to Aug. 01, 1969

i = Impulsive; s = Emergent; e = Compression; d = Dilation

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
01	eP	00 13 57.6			01				
	e	14 56.2							
	e	16 34.0			01	e(P)	20 11 22.7		
01	e(P)	00 33 02.6				e	14 03.3		
01	eP	02 43 53.0			01	eP	20 38 44.6		
01	e(P)	03 33 05.5			01	eP	20 49 19.7		
01	eP	04 06 52.5	0.9	69.5	01	eP	20 57 11.0		
01	eP	04 41 03.3			01	eP	21 03 55.7		
01	eP	05 25 17.3			01	eP	22 05 34.8		
01	e(P)	06 06 52.0			01	iPD	22 48 59.0		
01	e(P)	06 17 44.5			01	e(P)	23 15 57.1		
01	eP	08 47 46.5			02	e(P)	00 26 33.0		
01	ePD	10 20 48.7	1.0	28.0	02	e(P)	01 35 36.5		
01	eP	11 17 22.3			02	eP	02 21 51.0		
01	eP	15 18 28.6			02	eP	03 13 45.9		
01	e(P)	15 43 45.0			02	eP	08 58 02.2		
01	e(P)	17 24 13.1				e	59 27.1		
01	e(P)	17 30 12.0			02	IP	09 11 10.5		
	e	33 56.1			02	e(P)	10 23 52.7		
01	e(P)	17 59 13.2			02	e(P)	11 26 09.8		
01	ePC	18 53 11.3	1.0	21.0	02	eP	13 05 32.6		
01	e	57 08.6				e	05 06.6		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
02	eP	13 17 02.9			03	ePC	07 51 43.4		
02	eP	13 36 57.2				e	52 56.9		
02	eP	14 15 03.2			03	eP	08 26 02.3		
	e	15 35.7				e	26 56.0		
	e	17 05.9			03	ePC	09 16 19.6	0.8	8.0
02	e(P)	15 43 43.7			03	eP	10 15 36.2		
02	eP	15 56 58.5				e	15 57.7		
02	eP	16 45 23.7			03	eP	10 45 32.3		
02	e(P)	19 03 20.8			03	eP	11 12 02.5		
02	eP	20 28 09.0			03	e(P)	11 51 20.6		
02	e(P)	21 02 42.1			03	e(P)	12 13 01.4		
02	e(P)	21 13 48.5			03	iPC	13 29 45.4		
02	eP	22 01 31.9			03	eP	13 51 58.1	0.8	9.5
02	iPD	22 15 30.8	0.8	37.0	03	eP	14 55 04.2		
02	ePC	22 17 40.0			03	eP	15 13 52.5		
	e(S)	27 17.9			03	ePC	15 48 21.8		
02	e(P)	22 43 49.5				e(S)	55 21.7		
02	eP	22 45 44.2			03	eP	16 00 46.1		
03	eP	00 01 25.3			03	iP	16 33 05.0		
03	eP	00 34 47.2			03	eP	16 43 45.2		
03	eP	00 44 53.8			03	eP	17 31 21.5		
03	iPC	01 52 19.8	1.0	51.0	03	eP	17 59 11.3		
03	iPD	02 02 12.7	1.0	26.0	03	ePC	20 43 07.6		
	e	04 41.1			03	e(P)	21 00 44.7		
	e(S)	11 52.8			03	e(P)	21 34 28.0		
03	e(P)	03 11 36.2			04	eP	01 57 43.2		
03	eP	05 35 07.5				e	35 50.5		
03	eP	07 44 46.3			04	eP	03 54 06.3		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
04	ePD	04 07 48.5			05	eP	21 36 36.0		
04	iPC	04 10 14.2			05	eP	22 19 30.8		
04	eP	06 37 50.3				e	20 02.3		
04	eP	10 16 53.9			05	eP	23 15 24.5		
04	e(P)	12 27 31.0			06	eP	00 08 37.1		
04	eP	12 53 19.3			05	e(P)	02 10 39.4		
04	e(P)	13 14 02.7			05	eP	03 09 17.6		
04	eP	13 36 27.7			06	iPC	04 17 20.0		
04	eP	14 23 36.0			06	eP	06 45 27.9		
	e	27 19.6			06	e(P)	06 56 17.6		
	e(S)	30 55.2			06	e(P)	07 08 11.5		
04	eP	15 56 21.5			06	eP	10 11 00.3		
04	eP	18 50 48.1			06	eP	10 20 36.3		
04	eP	19 32 42.3			06	eP	10 46 19.0		
04	eP	20 58 58.5			06	eP	11 46 52.2		
04	eP	21 06 56.3			06	iPC	12 56 53.7	1.0	31.0
04	eP	22 15 45.6				eS	03 58.7		
05	e(P)	00 34 11.2			06	eP	17 55 37.5		
05	eP	00 59 43.8			06	eP	18 21 21.4		
05	eP	02 07 50.1			06	eP	18 44 19.2		
05	eP	03 36 04.5			06	eP	19 31 33.1		
05	eP	05 30 33.1			06	e(P)	19 43 38.2		
05	eP	07 44 39.1			06	ePC	20 30 47.0	1.0	10.0
05	eP	09 51 27.9			06	ePC	20 41 18.8		
05	eP	11 11 59.8				e	41 42.1		
05	iPC	16 44 02.1	1.0	30.5	06	eP	21 35 49.7		
05	iPD	18 00 10.5				e	36 12.6		
05	e(P)	18 42 10.5			06	ePC	21 56 18.2	1.1	13.0
05	eP	21 04 56.2				e(S)	04 27.3		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
07	e(P)	00 59 14.5			08	iPC	02 29 59.2		
07	e(P)	02 07 54.0			08	e(P)	03 03 11.3		
07	eP	03 36 28.5			08	eP	03 31 26.6		
07	eP	03 06 25.6			08	eP	04 17 49.0		
	e	06 56.5			08	iPC	06 43 28.0	0.9	24.0
07	eP	03 40 14.1			08	eP	07 29 13.1		
07	ePC	03 57 04.7			08	iPD	10 50 04.0	0.6	112
	eS	04 26.5			08	eP	11 23 24.8		
07	eP	08 09 15.4			08	eP	14 24 05.7		
07	eP	09 39 36.6			08	eP	14 27 13.2		
07	eP	09 43 45.8			08	eP	14 57 43.3		
07	eP	10 20 31.8			08	eP	16 01 00.2		
07	eP	12 07 21.2				e	01 32.6		
	e	07 56.3			08	eP	16 11 19.0		
07	eP	13 42 53.2			08	eP	17 09 16.3		
07	eP	14 44 08.7			08	eP	18 37 31.1	0.6	57.0
07	eP	14 47 24.2			08	eP	18 57 33.7		
07	eP	16 09 42.5			08	iPC	19 02 39.5		
07	eP	17 46 42.3			08	eP	20 26 31.2		
07	eP	20 13 51.6			08	e(P)	21 30 56.7		
07	eP	22 24 20.2	0.9	48.5	08	eP	21 50 03.3		
07	eP	22 55 46.6			08	eP	22 59 23.1		
07	eP	23 15 35.7			09	eP	00 44 48.3		
07	eP	23 54 46.7			09	eP	01 06 49.1		
08	eP	00 03 44.2			09	e(P)	06 11 24.0		
08	e(P)	00 32 19.1			09	eP	07 31 13.8		
08	eP	01 56 59.5			09	eP	08 11 47.7	0.8	51.5
08	ePD	02 20 18.7	0.7	10.0		e(S)	22 05.2		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
09	iPD	10 26 25.2	0.8	18.0	10	eP	04 32 15.8		
09	eP	11 05 20.8	0.6	56.0		e	33 05.1		
09	e(P)	12 09 02.3			10	iPD	06 36 29.3		
09	e(P)	13 00 58.1			10	ePC	06 47 48.5		
09	eP	13 50 42.5			10	eP	07 22 45.2		
09	iPC	14 17 42.7	0.9	39.0	10	e(P)	08 22 07.5		
09	eP	15 13 04.6			10	e(P)	10 47 36.4		
	e	13 39.6			10	e(P)	15 24 51.3		
09	eP	17 23 12.1			10	ePD	17 19 05.9	1.0	20.0
09	iPC	17 36 40.4			10	ePD	17 55 48.6	1.0	10.0
	i	37 11.3							
09	e(P)	17 58 31.0			10	iPD	19 57 18.7		
09	eP	18 41 25.3			10	eP	20 44 22.7		
09	eP	19 56 04.9			10	eP	21 18 00.1		
						e	18 37.8		
09	eP	20 57 13.2			10	eP	22 45 32.8		
	e	57 47.3							
09	eP	21 33 07.9			10	eP	22 51 18.3		
09	eP	22 43 06.5			10	e(P)	22 59 41.7		
09	eP	23 20 05.0				e	00 27.6		
09	eP	23 22 47.2			11	eP	01 41 14.6		
10	ePC	00 07 16.6	0.8	20.0	11	iPD	03 01 02.9		
10	iPC	00 23 48.7	0.8	32.0	11	eP	04 39 26.4		
	e(S)	32 03.5			11	eP	06 30 36.4	0.6	13.0
10	eP	00 30 23.1			11	eP	10 05 00.3		
	e	30 46.5							
10	eP	00 37 59.0			11	ePD	11 31 25.9	1.0	10.0
10	e(P)	01 13 30.8			11	eP	13 46 02.5		
10	eP	02 49 21.8			11	e(P)	14 03 39.9		
10	e(P)	03 29 54.7			11	e(P)	16 21 36.5		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
11	eP	17 40 08.8	0.8	33.0	12	eP	21 00 45.4		
11	e(P)	17 49 38.8			12	eP	23 29 40.0		
11	eP	18 38 08.0			13	e(P)	00 02 12.4		
11	eP	19 11 19.7			13	iPC eS	01 09 53.1 15 50.8		
11	iPD	19 15 04.5			13	eP	01 26 28.0		
11	eP	19 54 01.5			13	e(P)	02 29 16.6		
11	eP	21 20 59.9			13	ePD	03 54 21.0	1.0	21.5
11	e(P)	21 49 45.8			13	eP	06 11 30.0		
11	eP	22 03 53.7			13	e(P)	07 10 02.7		
11	ePD	22 34 11.1			13	eP eS	07 14 04.8 20 13.5		
12	e(P)	01 58 13.1			13	ePC	07 48 27.3	1.0	13.0
12	e(P)	02 50 03.5			13	e(P)	09 47 28.6		
12	e(P)	03 19 13.5			13	eP	10 47 10.0		
12	e(P)	03 36 12.0			14	iPC	07 07 41.2		
12	iPC eS	03 41 11.7 49 22.5	1.0	118	14	ePC e	07 31 53.2 32 24.1		
12	eP	04 28 15.2			14	eP	09 28 57.0	0.9	8.0
12	eP	12 14 02.1			14	eP	09 34 45.2		
12	eP e(S)	13 41 40.5 51 48.0			14	eP	09 45 48.7		
12	eP	14 23 33.5			14	eP	18 56 18.2		
12	eP	14 32 37.4			14	eP	19 43 40.8		
12	e(P)	15 34 34.4			14	ePD	20 47 47.6	0.7	28.0
12	iPD eS	16 14 30.2 21 37.4	0.9	37.0	14	eP	21 08 31.6		
12	eP	17 08 04.1			14	eP	21 44 29.8		
12	iPC	19 22 28.1	0.8	18.5	14	eP	22 26 47.1		
12	e(P)	19 51 31.4			14	eP	22 58 26.1	0.9	14.0

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
14	eP	23 01 29.5			16	ePD	14 52 09.0		
14	eP	23 14 34.1			16	iPD	14 56 45.7		
14	eP	23 32 31.0			16	eP	17 04 50.8		
14	eP	23 59 49.9			16	eP	18 35 39.0		
15	ePD	00 18 20.5			16	eP	18 37 45.9		
15	eP	01 27 09.3	0.8	6.0	16	e(P)	18 57 53.8		
15	e(P)	02 50 33.1			16	e(P)	19 21 40.3		
15	eP	05 36 39.3			16	eP	19 26 02.7		
15	eP	05 51 21.1			16	eP	21 04.04.3		
15	ePC	07 37 22.0			16	eP	21 12 34.8		
15	eP	10 35 00.6			16	e(P)	22 51 33.5		
	e	36 00.3			16	e(P)	23 03 03.2		
15	eP	16 33 07.7			16	eP	23 50 12.6		
15	eP	18 04 42.3			17	eP	01 09 10.4		
15	eP	21 18 07.6			17	iPD	01 30 27.5		
15	eP	21 48 30.5				e(S)	34 29.3		
	e	49 16.8			17	e(P)	01 57 47.7		
15	e(P)	22 27 04.4			17	eP	01 59 50.8		
16	eP	02 33 56.3			17	eP	02 30 49.6		
16	eP	03 05 37.6			17	iPC	04 19 28.2		
16	eP	04 18 38.2			17	iPD	06 56 41.8		
16	eP	04 31 50.9			17	iPD	07 13 33.3		
16	ePC	05 27 48.8			17	e(P)	10 34 39.9		
	e	28 27.4			17	eP	11 31 52.1		
16	eP	11 06 18.5			17	eP	11 36 20.4		
16	eP	11 31 12.0			17	eP	12 24 12.3		
16	ePC	12 11 18.3	1.0	10.5		e	24 58.2		
	e(S)	18 24.5							

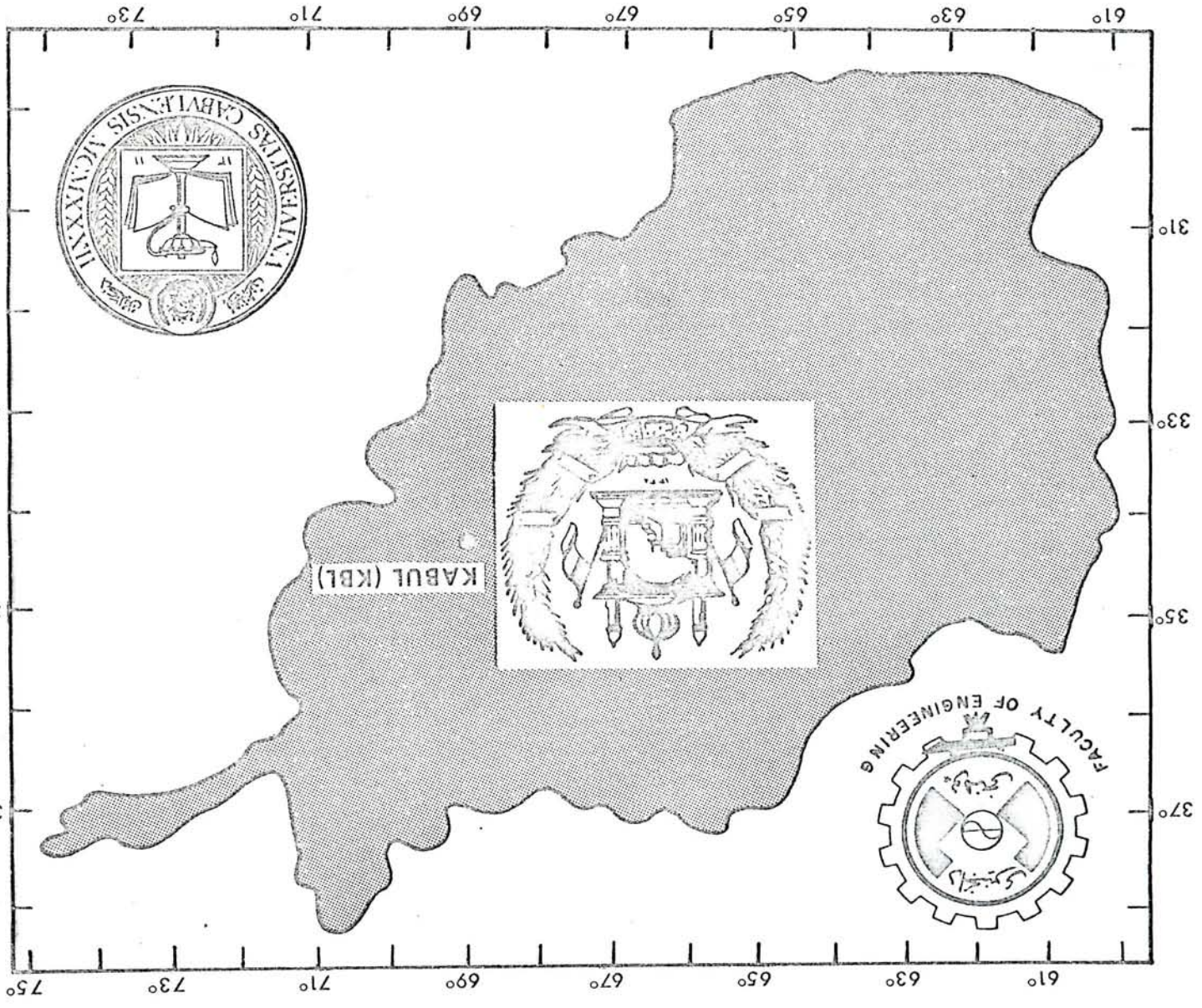
		hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
17	iP	12 28 37.5			18	eP	14 58 35.8		
17	eP	13 54 20.0			18	eP	16 11 53.4		
17	eP	16 28 25.1			18	eP	18 37 39.2		
17	eP	16 56 09.6			18	eP	23 42 48.2		
17	eP	19 05 49.0			19	eP	04 30 00.3		
17	eP	19 13 14.2				e	30 30.5		
17	eP	20 22 22.5			19	iPD	06 29 51.3		
17	eP	20 45 22.0				e	30 15.5		
17	eP	21 09 53.8			19	eP	07 24 31.6		
17	eP	22 50 44.3	0.9	8.5	19	eP	07 47 10.9	1.0	7.5
17	eP	23 03 03.6			19	eP	09 16 57.4	1.0	6.0
18	iPC	01 23 33.1	1.0	17.4	19	eP	09 19 12.7		
	eS	31 14.8			19	eP	10 48 30.5	0.9	10.5
18	eP	01 57 20.3			19	ePD	11 28 22.5		
18	eP	04 13 28.2				e	28 44.1		
18	eP	05 53 29.0			19	ePD	12 35 37.8		
	e	54 10.3				e(S)	43 48.7		
18	EP	06 12 29.8			19	eP	12 51 53.3		
18	iPC	06 50 54.7	0.7	61.0	19	eP	15 20 49.4		
18	iPC	08 55 18.3	1.0	90.0	19	eP	18 06 23.8		
	eS	04 30.7			19	e(P)	19 46 21.2		
18	eP	09 17 59.4			19	eP	21 05 03.8		
18	e(P)	09 50 02.3			19	eP	21 56 28.1		
18	eP	10 23 04.1			19	e(P)	23 20 39.2		
18	eP	11 50 22.7			19	eP	23 58 11.7		
18	e(P)	12 13 47.6			20	eP	01 25 11.8		
18	iPD	13 41 56.3			20	eP	03 23 18.5		
	e	42 24.8			20	iPD	06.43 41.0	0.7	22.0

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	eP	06 59 19.4			25	eP	22 12 28.3		
20	eP	09 06 08.7			25	eP	22 46 21.4		
20	eP	09 26 37.8			26	iPC	02 11 57.7	0.8	10.0
20	eP	10 25 57.6			26	eP	03 09 51.4		
20	e(P)	13 30 24.2			26	eRC	04 03 47.6	1.0	14.5
20	eP	13 55 35.5			26	e(P)	05 37 49.2		
20	eP	15 39 30.4			26	eP	07 58 36.4		
20	e(P)	15 51 30.0			26	eP	08 54 50.1		
20	eP	16 31 12.5			26	eP	11 35 19.2		
20	eP	17 05 40.7			26	e(P)	12 21 06.3		
20	iPD	22 12 13.6	0.8	22.7	26	eP	13 22 56.0		
20	eP	22 51 31.0			26	eP	14 29 50.1		
20	eP	23 02 12.0			26	eP	14 32 58.7		
21	eP	00 57 26.3			26	eP	14 51 56.9		
21	eP	01 50 06.2			26	eP e(S)	15 44 30.1 50 43.2		
25	eP	14 08 54.4			26	e(P)	16 01 12.2		
25	iPD	14 12 14.2			26	eP	17 09 56.0		
25	e(P)	14 22 07.8			26	eP	17 21 27.9		
25	e(P)	14 47 08.0			26	iPC e(S)	19 25 55.2 34 05.8	0.9	47.5
25	eP	17 12 53.7			26	eP	20 07 30.3		
25	eP	17 22 13.1			26	eP	21 18 28.2		
25	eP	18 16 39.1	0.7	10.0	26	eP	21 32 37.7		
25	eP	19 15 10.7			26	eP	21 39 31.8		
25	iPD	20 22 37.8			26	e(P)	21 44 27.6		
25	eP	20 57 54.4			26	eP	21 52 45.7		
25	iPC	21 35 19.6			26	eP e(S)	21 52 45.7 03 50.1		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
26	eP	23 28 05.2			28	eP	02 02 21.4		
26	eP	23 52 56.0			28	eP	02 16 04.5		
27	eP	00 38 59.5			28	eP	03 02 35.5		
27	eP	00 48 25.6			28	ePC	07 28 04.7	0.9	18.0
27	eP	01 46 00.9			28	e(P)	09 08 20.3		
27	eP	02 18 42.8			28	eP	12 02 29.7		
27	ePD	02 24 39.0			28	eP	13 01 41.1		
27	eP	03 03 16.3			28	IPD	16 04 30.8		
27	IPC	03 52 58.7			28	eP	17 27 57.4		
27	eP	08 18 36.9	1.0	25 T	28	eP	17 56 24.8		
	eS	24 49.8			29	eP	07 22 18.1		
27	eP	09 01 22.5			29	eP	12 30 15.4		
27	e(P)	10 08 28.8			29	eP	12 36 33.9		
27	e(P)	11 00 23.9			29	eP	13 19 21.6		
27	e(P)	12 05 52.1			29	eP	13 56 27.8		
27	eP	13 02 44.9			29	ePD	14 41 22.1		
27	e(P)	13 30 06.6			29	eP	15 42 40.5		
27	eP	15 43 32.9			29	eP	16 03 00.7		
27	ePD	18 09 23.3			29	eP	16 44 07.0		
27	IPC	18 30 32.9			29	eP	16 50 23.9		
27	eP	19 07 30.5			29	eP	16 55 09.0		
27	eP	19 18 10.9			29	ePD	18 21 40.1	1.0	24.5
27	eP	20 53 32.9			29	ePD	18 49 33.6		
27	eP	20 56 25.8			29	IPC	22 29 38.6		
27	eP	21 35 24.5				e(S)	34 11.9		
27	eP	22 51 41.5			29	eP	23 46 04.2		
28	eP	00 53 11.5			29	eP	23 55 13.1		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
30	iPD eS	00 15 05.3 22 42.6	1.1	24.0	31	eP	09 20 11.6		
30	eP	00 39 46.1			31	ePD	11 08 36.6	0.8	8.0
30	eP	00 56 30.4			31	ePC eS	11 44 46.8 54 27.5		
30	eP	06 58 50.2			31	eP	11 59 14.5		
30	eP	08 01 23.7			31	eP	12 45 07.2	1.0	12.5
30	eP	08 44 00.4			31	eP	22 02 19.8		
30	eP	10 48 47.2			31	eP	22 46 04.5		
30	ePD	12 22 54.1			31	eP	22 59 23.6		
30	iPC	13 46 12.9			31	eP	23 20 44.7		
30	eP	15 20 14.7			31	e(P)	23 28 35.2		
30	eP	15 33 12.1							
30	eP	17 25 58.7							
30	eP	17 45 27.6							
30	ePC	18 51 24.5	1.0	13.0					
30	ePD	22 31 23.7	1.0	15.0					
30	eP	23 00 47.5							
31	ePD	00 35 14.7							
31	eP	00 48 08.5							
31	eP	02 58 06.3							
31	eP	04 41 51.7							
31	eP	05 28 51.0							
31	iPC e(S)	06 53 32.4 01 42.7							
31	ePC eS	07 10 03.3 18 12.5							
31	e(P)	07 46 32.5							
31	ePC	08 57 29.7	1.1	13.0					

BULLETIN NO. 10
MONTH OF Nov



MONTHLY BULLETIN
PRELIMINARY SEISMOLOGICAL ANALYSIS
KABUL, AFGHANISTAN SEISMOLOGICAL OBSERVATORY
FACULTY OF ENGINEERING—KABUL UNIVERSITY
R.A. KARIM, DIRECTOR



PRELIMINARY SEISMOGRAPH ANALYSIS
 KABUL/VISUAL SEISMOLOGICAL OBSERVATORY
 FACULTY OF ENGINEERING - KABUL UNIVERSITY
 R.A. Karim - Director

WANS: KBL
 Latitude: 34°32'45"N
 Longitude: 69°02'59"E
 Elevation: +1,92KM
 S.P. Mag: 4.00K at 1.0 sec.
 Bulletin # 18
 Dated: December 20, 1969
 at 15.0 sec.

Period: November 01, 1969 to November 30, 1969
 1 - [Impulsive]; e - Divergent; c - Compression; d-Dilatation

Day	Phase	Time (U.T.) hr.min.sec.	Time (U.T.) I (sec.)	Time (U.T.) 2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	Time (U.T.) I (sec.)	Time (U.T.) 2A (mm)
01	epc	02 47 07.3			02	ep	10 51 23.1		
01	ep	04 26 10.1	1.0	12.5	02	e	51 53.5		
01	e(P)	05 43 03.4			02	ep	14 01 22.5		
01	ep	16 54 17.4			02	ep	14 10 49.7		
01	e	54 54.5			02	ep	14 54 53.0		
01	ep	20 04 05.2			02	ep	16 56 49.1		
01	ep	20 33 52.0			02	e(P)	17 02 05.4		
01	ep	20 47 31.4			02	ep	17 24 21.8		
01	ep	20 46 28.1			02	ep	19 02 20.7		
01	epd	21 11 35.7			02	gs	19 02 11.3		
01	ep	21 19 26.3			02	ep	20 03 19.5		
01	e(P)	23 43 21.1			02	ep	21 45 15.7		
02	ep	00 48 13.3			02	epc	23 01 58.8		
02	e	49 10.8			02	ep	23 22 40.2		
02	ep	01 44 55.7			02	epc	23 42 05.3		
02	ep	03 51 45.0			02	e	44 42.5		
02	ep	08 55 13.3			03	ep	01 40 30.3		
02	ep	10 06 13.4			03	ep	03 43 21.4		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
03	EP	08 57 43.8		
03	EP	11 06 02.3		
03	EP	13 28 00.2		
03	ERC	14 44 38.8		
03	EP	16 50 35.7		
03	EP	17 08 08.1		
03	EP	17 15 13.2		
03	EP	16 33.6		
03	EP	18 49 07.0		
03	EP	18 53 37.3		
03	I	54 10.7		
03	EPD	20 17 19.5	0.8	
03	EP	20 40 26.7		
03	IPC	20 43 45.1		
03	EP	21 56 58.8		
03	EP	22 40 59.3		
03	EP	23 06 38.6		
03	EP	07 20.2		
03	EP	23 26 16.7		
04	EP	01 22 01.8		
04	EP	01 59 37.0		
04	EP	02 21 28.2		
04	EP	22 04.6		
04	ERC	04 08 36.3	1.0	
04	EPD	08 59 46.6	0.8	
04	EP	02 49.0		
04	EP	07 05.1		
04	EP	09 09 33.3		
04	EP	09 30 53.8		
04	EP	09 45 23.9		
04	EP	09 53 30.6		
04	EP	12 17 07.2		
04	EP	12 21 58.3		
04	EP	13 38 02.7		
04	EP	14 42 10.0		
04	EP	14 52 08.4		
04	EP	15 40 29.8		
04	EP	16 34 56.5		
04	EP	35 25.0		
04	EP	17 29 17.8		
04	EP	17 37 01.3		
04	EP	37 35.9		
04	EPD	18 49 26.4		
04	EP	49 59.2		
04	EP	19 42 54.1		
04	EP	43 24.1		
04	EP	20 21 33.3		
04	EP	21 09 41.9		
04	EP	21 21 02.7		
04	EP	22 08 21.4		
04	EP	09 07.3		
04	ERC	22 14 33.8	0.9	
04	EPD	23 58 05.5	0.8	
04	EP	04 09.9		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)
05	EP	00 04 49.9			09	EP	01 32 45.0	
05	EP	00 25 54.5			09	EP	01 41 13.5	
05	EP	02 17 32.5			09	EP	08 18 22.9	
08	e(P)	14 25 37.3			09	EP	09 09 50.8	
08	EP	14 46 41.0			09	EP	12 06 12.9	
08	EP	17 11 48.1			09	EP	14 25 00.2	
08	EP	17 28 21.7			09	EP	15 20 51.3	
08	EP	17 32 55.7			09	e	22 19.0	
08	e	33 17.8			09	EP	15 31 49.8	
08	e(P)	18 05 45.8			09	EP	18 44 34.3	
08	EP	18 20 09.8			09	EPD	19 47 51.7	
08	EP	19 34 11.0			09	EP	19 58 32.6	
08	EP	20 18 28.8			09	EP	21 25 41.5	
08	e(P)	20 40 55.2			09	EP	22 00 05.3	
08	EP	20 45 44.6			09	EP	22 48 37.8	
08	EP	21 59 39.7			09	EP	22 54 50.6	
08	EP	22 05 30.7			10	EP	00 33 53.5	
08	ES	14 25.8			10	EP	01 47 21.1	
08	EP	22 33 55.5			10	EP	01 50 21.2	
08	EP	22 56 09.8			10	e	50 50.8	
08	EP	22 59 40.0			10	EP	05 48 36.0	
08	EP	23 36 35.5			10	EP	06 16 24.8	
08	EP	23 54 58.2			10	e	10 14 59.4	
09	EP	00 07 36.6			10	EP	10 48 40.4	
09	EP	00 19 38.2			10	EP	10 52 41.3	
09	EP	01 20 04.3			10	EP	28 44.9	

32.1 1.0

Day	Phase	Time (U.T.) hr.min.sec.	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	2A (mm)
10	ep	13 23 19.7		11	ep	14 26 26.3	
10	ep	14 54 22.0		11	ep	15 13 12.2	
10	e(P)	15 04 53.6		11	ep	15 36 35.4	
10	e	15 13 00.9		11	ep	15 51 15.3	
10	e	13 31.1		11	ep	16 14 48.2	
10	ep	15 54 05.5		11	ep	16 25 40.7	
10	ep	18 08 47.2		11	ep	17 00 15.3	
10	ep	18 17 07.3		11	ep	18 37 40.5	
10	ep	18 24 43.7		11	ep	18 55 49.3	
10	ep	18 42 33.6		11	ep	19 48 58.8	
10	ep	18 51 13.4		11	ep	20 07 06.8	
10	ePD	19 23 08.5		11	ep	20 57 00.8	
10	ep	20 13 04.2		11	ep	21 32 44.5	
10	ep	20 21 36.0		12	ep	01 37 02.4	
10	e(P)	22 53 24.7		12	ep	07 23 50.7	
11	ep	00 25 51.3		12	e	24 35.7	
11	ep	00 33 25.3		12	e(P)	11 20 17.7	
11	ep	36 57.9		12	ep	12 29 34.0	
11	ep	00 53 13.7		12	e	30 15.8	
11	ePC	01 48 11.3		12	1PC	12 39 34.5	
11	ep	02 38 41.4		12	es	47 33.2	
11	ep	07 14 57.5		12	ep	13 37 32.2	
11	ep	08 27 01.8		12	ep	15 52 40.4	
11	ep	12 24 20.2		12	ep	16 40 41.7	
11	1PD	12 25 27.8		12	ep	17 07 14.7	
11	ep	13 26 04.5		12	ePC	18 33 09.6	
11	ep	13 42 07.5		12	ep		

Day	Phase	Time (U.T.) hr:min:sec.	F	2A (mm)
12	LPC	19 21 04.6	1.0	25.0
12	ES	31 02.7		
12	EP	19 45 57.9		
12	EP	20 07 40.9		
12	e	08 14.4		
12	EP	20 26 44.6		
12	EP	20 49 57.4		
13	EP	01 13 22.1		
13	e	13 59.7		
13	EP	05 16 21.7		
13	LPC	08 11 07.3	1.1	25.0
13	e(s)	14 30.0		
13	EP	08 37 43.5		
13	EP	11 14 45.1		
13	e	15 27.7		
13	EP	12 33 38.3		
13	EP	14 30 00.2		
13	e	30 36.0		
13	EP	15 39 17.2		
13	EP	18 26 41.5		
13	EP	19 19 37.6		
13	LPC	19 26 15.2		
13	EP	19 43 15.3		
13	EP	20 47 09.8		
13	EP	21 51 36.0		
13	EP	22 17 23.2		
13	e(P)	22 32 17.5		
13	EP	23 42 46.0		
15	LPC	01 11 35.3		
15	e(P)	02 54 45.7		
15	EP	06 27 15.0		
15	e(P)	06 34 03.7		
15	EP	07 56 15.6		
15	e	59 33.0		
15	ES	02 58.8		
15	EP	09 42 28.9		
15	LPC	10 50 58.1		
15	e(P)	11 02 06.2		
15	EP	11 55 56.5		
15	LPC	12 17 47.4		
15	EP	16 55 31.5		
15	e	55 54.6		
15	EP	17 17 04.9		
15	EP	18 41 46.1		
15	EP	20 26 26.5		
15	EP	21 03 56.8		
15	EP	21 36 41.0		
15	e(P)	22 15 08.9		
15	EP	22 34 41.5		
15	EP	00 22 37.5		
15	EP	01 00 24.4		
15	EP	01 51 43.8		
15	e	52 19.2		
15	EP	02 29 08.3		

46.0 0



Time (UTC)	Phase	Duration (sec)	Time (UTC)	Phase	Duration (sec)
01 01 11.5	e	16	01 01 11.5	e	16
01 04 21.6	e	16	01 04 21.6	e	16
07 30 28.6	e	16	07 30 28.6	e	16
08 58 29.5	e(P)	16	08 58 29.5	e(P)	16
11 56 30.0	e	16	11 56 30.0	e	16
11 58 09.5	e	16	11 58 09.5	e	16
12 32 18.9	e(P)	16	12 32 18.9	e(P)	16
11 55 27.4	e	16	11 55 27.4	e	16
15 03 16.5	e(P)	16	15 03 16.5	e(P)	16
03 30.3	e	16	03 30.3	e	16
16 57 07.0	e	16	16 57 07.0	e	16
16 11 30.0	e(P)	16	16 11 30.0	e(P)	16
19 03 30.5	e	16	19 03 30.5	e	16
19 08 32.6	e	16	19 08 32.6	e	16
17 40 34.0	e(P)	16	17 40 34.0	e(P)	16
20 09 31.5	e	16	20 09 31.5	e	16
20 01 30.5	e	16	20 01 30.5	e	16
22 05 31.3	e	16	22 05 31.3	e	16
22 16 52.3	e	16	22 16 52.3	e	16
23 40 34.7	e(P)	16	23 40 34.7	e(P)	16
00 46 52.3	e	17	00 46 52.3	e	17
00 49 38.5	e	17	00 49 38.5	e	17
01 03 30.3	e	17	01 03 30.3	e	17
01 31 24.7	e	17	01 31 24.7	e	17
01 07 07.7	e	17	01 07 07.7	e	17
05 51 00.0	e	15	05 51 00.0	e	15
06 51 07.6	e	15	06 51 07.6	e	15
08 58 24.5	e	15	08 58 24.5	e	15
12 44 24.0	e	15	12 44 24.0	e	15
13 07 12.0	e	15	13 07 12.0	e	15
13 39 44.6	e	15	13 39 44.6	e	15
14 15 49.2	e	15	14 15 49.2	e	15
15 28 24.3	e	15	15 28 24.3	e	15
15 36 51.5	e	15	15 36 51.5	e	15
15 40 02.2	e(P)	15	15 40 02.2	e(P)	15
17 10.1	e	15	17 10.1	e	15
16 50 17.1	e	15	16 50 17.1	e	15
17 00 19.8	e	15	17 00 19.8	e	15
17 54 38.5	e	15	17 54 38.5	e	15
18 00 04.0	e	15	18 00 04.0	e	15
18 17 45.7	e(P)	15	18 17 45.7	e(P)	15
19 20 13.8	e	15	19 20 13.8	e	15
19 30 36.5	e	15	19 30 36.5	e	15
19 46 03.5	e	15	19 46 03.5	e	15
21 17 58.1	e	15	21 17 58.1	e	15
22 18 49.5	e	15	22 18 49.5	e	15
22 46 05.0	e	15	22 46 05.0	e	15
23 26 48.4	e	15	23 26 48.4	e	15
00 02 09.7	e	16	00 02 09.7	e	16
00 30 12.5	e	16	00 30 12.5	e	16
01 07 07.7	e	16	01 07 07.7	e	16

Building 41/A

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Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
17	ep	02 13 46.6		
17	ep	02 56 32.5		
17	ep	05 11 55.1		
17	epc	05 30 30.8		
17	ep	09 01 27.2		
17	ep	10 22 11.0		
17	e	23 52.2		
17	ep	11 10 31.0		
17	epd	12 44 35.6		
17	ep	13 01 40.5		
17	ep	15 11 24.6		
17	ep	16 20 48.0		
17	ep	17 35 50.5		
17	epc	18 06 46.5		
17	ep	18 53 55.2		
17	fpd	19 02 36.7		
17	ep	21 30 35.3		
17	ep	22 33 06.5		
18	ep	00 50 04.5		
18	epc	00 54 25.5		
18	ep	04 10 25.8		
18	ep	05 10 33.2		
18	ep	07 40 14.1		
18	ep	08 30 58.2		
18	ep	08 38 37.5		
18	ep	08 48 56.2		
18	ep	11 11 10.6		
18	ep	13 25 35.2		
18	ep	13 37 33.0		
18	ep	14 11 32.8		
18	ep	14 42 15.0		
18	ep	16 22 11.5		
18	ep	16 59 09.5		
18	e	01 49.0		
18	fpd	17 27 47.7		
18	ep	17 48 51.0		
18	ep	20 29 24.0		
18	ep	21 04 36.1		
19	ep	00 18 23.0		
19	fp	04 17 43.7		
19	ep	07 45 43.5		
19	ep	08 53 20.2		
19	ep	59 58.8		
19	ep	10 56 26.5		
19	ep	12 57 00.0		
19	ep	13 03 06.0		
19	ep	13 19 41.6		
19	ep	15 04 32.3		
19	ep	16 04 29.2		
19	ep	17 06 13.5		
19	ep	19 06 10.1		
19	epc	19 14 43.5		
19	ep	21 18 34.5		
20	ep			
20	ep			
20	ep			

Day	Phase	Time (U.T.) hr.min.sec.	(sec.)	(mm)	Day	Phase	Time (U.T.) hr.min.sec.	(sec.)	(mm)
20	ePD	03 51 22.1	1.0	21.5	21	eP	00 12 13.0	0.8	6.0
20	e	53 29.5			21	eP	00 51 56.2		
20	eP	07 43 17.8			21	eP	01 33 07.8		
20	eP	09 46 17.7			21	e	33 41.8		
20	eP	09 54 05.6			21	LPD	02 13 11.0		
20	eP	10 00 38.3			21	eP	07 38 20.2		
20	ePC	11 02 10.0	0.7	13.5	21	eP	08 22 30.6	0.7	17.0
20	ePD	13 20 33.7	0.7	7.0	21	e(S)	25 49.6		
20	eP	13 26 42.0	0.5	22.3	21	ePC	09 07 19.0	0.7	19.0
20	eP	15 51 08.5			21	eP	11 30 42.0	0.8	14.0
20	eP	16 11 42.6			21	e(P)	13 48 37.4		
20	eP	16 14 09.0			21	eP	14 29 50.0		
20	e	15 21.0			21	e	30 31.5		
20	e(P)	16 48 43.7			21	eP	14 36 31.4		
20	e(P)	17 06 43.7			21	ePC	14 44 20.4		
20	e(P)	17 24 15.5			21	e(P)	16 20 45.6		
20	eP	17 41 49.2			21	eP	16 50 54.5		
20	e(P)	19 45 04.5			21	ePC	17 31 32.5		
20	eP	20 53 02.0			21	eP	18 28 21.6		
20	ePC	21 10 30.3	0.9	33.0	21	eP	18 38 57.0		
20	eP	21 18 47.2			21	eP	18 42 08.5		
20	ePD	21 33 46.9			21	eP	19 46 42.0		
20	ePD	22 53 09.0			21	eP	20 28 43.7		
20	eP	23 33 26.8			21	e	30 22.7		
20	eP	23 57 34.0			21	eP	20 40 42.6		
21	e	58 27.2			21	eP	22 27 26.4		
21	eP	00 25 08.0			22	eP			
21	e	26 33.2			22	eP			

13.5

1.0

Day	Phase	Time (U.T.) hr. min. sec.	1 (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	1 (sec.)	2A (mm)
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22	e(p)	00 21 37.0			23	ep	03 38 51.6		
22	ep	00 37 13.6			23	ep	06 42 51.8		
22	e(p)	01 00 02.2			23	e(p)	07 10 02.9		
22	epc	02 40 04.3			23	ep	07 18 46.3		
22	epd	03 38 26.6			23	ep	09 21 23.0		
22	ep	06 57 56.6			23	e(p)	09 34 37.7		
22	epc	09 20 11.1			23	ep	10 12 41.0		
22	epc	14 08 17.2			23	ep	11 43 21.0		
22	e(p)	14 37 37.0			23	es	17 21.8		
22	e(p)	14 30 42.2			23	ep	13 24 34.0		
22	epd	15 12 54.6	0.7	38.0	23	ep	15 21 13.6		
22	es	21 29.8			23	ep	15 30 08.0		
22	epd	15 57 58.8			23	e	30 53.0		
22	ep	17 11 36.8			23	e(p)	15 48 25.0		
22	e	12 14.8			23	ep	16 05 49.0		
22	e(p)	18 51 42.0			23	ep	16 16 58.6		
22	ep	18 57 50.0			23	e	17 40.3		
22	e	58 26.5			23	epd	16 56 44.6		
22	ep	19 46 42.0			23	ep	18 31 53.0		
22	ep	20 37 04.5			23	ep	21 23 57.8		
22	ep	20 43 24.5			23	epc	22 05 42.8		
22	ep	20 59 19.6			23	ep	22 29 28.6		
22	ep	21 44 09.3			23	ep	22 45 08.0		
22	ep	22 09 30.0			24	ep	00 33 28.7		
22	ep	22 46.6			24	epc	02 06 38.5		
22	e(p)	23 15 16.0			24	es	11 19.5		
22	ep	23 20 05.0			24	e(a)			
23	epc	01 11 00.0			24	ep			

Day	Phase	Time (U.T.) hr. min. sec.	2A (mm)	I (sec.)	Phase	Time (U.T.) hr. min. sec.	I (sec.)	2A (mm)
27	epd	08 32 16.5			ep	23 02 10.4		
27	ep	09 28 30.0			epd	00 00 10.6	0.9	8.5
27	ep	09 46 57.2			e(p)	01 22 03.5		
27	e(s)	47 05.5			epd	01 47 40.5		
27	ep	10 24 45.0			epd	08 02 08.0		
27	ep	10 48 19.5			ep	09 10 30.9		
27	ep	11 24 13.4			ep	09 14 53.0		
27	ep	08 51 34.0			e(s)	19 47.3		
27	ep	09 18 52.0	1.0		ep	10 38 16.4		
27	ep	23 09.9			e	39 20.0		
27	ep	10 12 36.6			ep	12 43 25.4		
27	epd	11 00 48.0	0.6	20.5	epd	12 57 38.0	0.7	8.0
27	ep	12 29 51.0			e(p)	13 01 33.7		
27	ep	14 10 47.5			ep	13 59 48.0		
27	ep	14 52 41.0			ep	14 28 16.6		
27	ep	15 47 41.1			e	28 51.5		
27	e(p)	16 06 16.4			ep	17 18 20.5		
27	ep	17 04 30.0			ep	17 33 18.0		
27	ep	17 10 34.3			ep	18 45 00.0		
27	epd	17 47 40.5			ep	21 31 01.5		
27	ep	18 26 56.3			e(p)	21 41 50.0		
27	ep	19 43 02.0			ep	22 47 07.9		
27	ep	20 21 43.7			ep	23 52 56.5		
27	ep	21 02 14.7			ep	00 34 56.5		
27	epd	22 02 43.7			ep	00 39 38.5		
27	ep	22 23 30.5			ep			
27	e(p)	33 42 54.0						

Day	Phase	Time (U.T.) hr:min:sec.	Phase	Day	2A (mm)	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr:min:sec.	Phase	Day	2A (mm)	T (sec.)
27	EPD	01 54 10.6	EPD	28				28	LFC	19 03 40.8		27	17.6	0.8
27	I	54 56.2	EPD	28				28	EPD	19 17 32.4		27	13.5	0.8
27	LFC	03 40 40.5	EP	28				28	EP	20 21 11.8		27		
27	EP	03 54 26.0	EP	28				28	EP	20 29 40.5		27		
27	LFC	03 59 32.5	LFC	28	16.0	0.6		28	EP	22 25 31.2		27		
27	EPD	05 22 36.5	EPD	28				28	EP	00 42 47.2		27		
27	e	23 06.8	e	29				29	EP	01 48 32.1		27		
27	EP	05 41 08.6	EP	29				29	EP	04 28 41.1		27		
27	EP	08 05 35.2	EP	29				29	LFPD	07 10 05.5		27		
27	LFPD	14 08 32.8	EP	29				29	EP	08 13 10.9		27		
27	EP	15 56 01.4	EP	29	21.5	0.8		29	EP	10 49 02.8		27		
27	EPD	16 03 31.7	EPD	29	9.0	0.8		29	EP	16 16 33.8		27		
27	EP	16 39 26.7	EP	29				29	EP	16 45 27.1		27		
27	e	41 26.2	e	29				29	EP	16 52 18.5		27	18.0	0.9
27	EP	17 03 52.8	EP	29				29	EP	18 39 21.7		27	31.0	0.8
27	EPD	18 23 48.4	EPD	29				29	EP	18 39 21.7		27		
27	EP	18 52 23.5	EP	29				29	EP	18 39 21.7		27		
27	EP	21 07 11.8	EP	29				29	EP	18 39 21.7		27		
27	EP	22 07 43.8	EP	29				29	EP	18 39 21.7		27		
27	EP	23 27 49.5	EP	29				29	LFPD	21 14 01.0		27		
28	e	30 14.5	e	29				29	e	15 15.0		28		
28	EP	00 40 08.3	EP	30				30	EP	00 34 03.2		28		
28	EP	01 33 58.7	EP	30				30	EPD	00 45 05.1		28		
28	EP	06 14 47.0	EP	30				30	EP	01 19 47.1		28		
28	EP	13 07 10.1	EP	30				30	EP	03 36 39.0		28		
28	LFC	13 58 18.1	LFC	30				30	EPD	04 21 23.8		28		
28	EP	07 20.5	EP	30				30	EP	07 50 13.0		28		
28	EP	14 42 11.4	EP	30				30	EP	07 50 13.0		28		
28	EP	18 57 14.3	EP	30				30	EP	07 50 13.0		28		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
30	ep	09 51 22.1							
30	ep	11 06 37.3							
30	ep	12 13 10.8							
30	ep	12 40 25.2							
30	ep	12 58 30.8							
30	ep	14 15 16.2							
30	ep	15 16 27.8							
30	1PC	16 23 25.2							
30	ep	17 32 27.4							
30	ep	19 15 05.0	0.9						
30	e (P)	20 11 16.9		7.6					
30	e	20 12 47.0							
30	ep	20 17 59.1							
30	ep	20 53 18.5							
30	ep	21 10 47.8							

MONTHLY BULLETIN

PRELIMINARY SEISMOLOGICAL ANALYSIS KABUL, AFGHANISTAN SEISMOLOGICAL OBSERVATORY FACULTY OF ENGINEERING—KABUL UNIVERSITY R.A. KARIM, DIRECTOR



MONTH OF DEC
 BULLETIN NO. 19 19 69

WINGS: KRL

 Latitude: $34^{\circ} 32.45' N$

 Longitude: $69^{\circ} 02.55' E$

 Elevation: $+3,920 M$

S.P.Mag. 4.00K. at 1.0 sec.

 L.P.Mag. 6 K. at 15.0 sec.

 Bulletin # 19

Dated: 31 December 1969

 Period: DECEMBER 01, 1969 - DECEMBER 31, 1969

i = Impulsive; e = Emergent; c = Compression; d = Dilatation

Day	Phase	Time (P.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
01	B(P)	01 57 52.2			01	e(P)	22 32 04.5		
01	iPD	02 34 25.7	0.9	26.0	02	ePC	02 18 43.5		
01	eP	02 44 20.0			02	eP	02 42 37.6		
01	eP	03 25 29.8			02	ePC	04 23 04.9	0.9	14.5
01	eP	10 28 13.7			02	iPD	05 28 30.1		
01	eP	12 52 57.7			02	eP	08 34 59.6		
01	eP	13 08 14.3				i	35 44.9		
01	eP	13 11 14.6			02	e(P)	08 38 00.1		
01	eP	13 22 00.0			02	eP	08 45 00.6		
01	eP	14 21 56.5			02	eP	09 38 05.6		
01	e(P)	14 31 22.5			02	eP	10 18 41.1		
01	e(P)	14 36 02.7			02	eP	11 08 05.4		
01	e(P)	15 55 50.5			02	eP	12 46 16.3		
01	eP	17 52 17.5			02	eP	13 39 15.9		
01	eP	19 31 24.6			02	eP	17 37 36.7		
02	eP	20 00 23.1			02	eP	18 06 52.5		
01	eP	20 10 33.5				eS	14 43.9		
01	eP	20 25 02.3			02	ePC	18 17 43.3		
01	eP	20 53 42.0			02	ePC	19 11 31.9	1.0	9.6
01	eP				02	e(P)	19 45 27.7		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
02	eP	19 54 49.9			04	iPD e	00 41 20.2 47 38.5	0.9	31.0
02	e(P)	20 30 42.5			04	eP	01 40 37.5		
02	iPD	22 48 24.5	1.2	16.0	04	eP	03 04 38.6		
02	eP	22 58 55.1			04	ePD	03 14 11.7	1.0	22.0
02	eP	23 28 27.5			04	eP	04 56 58.5		
03	eP	00 44 40.2			04	ePD	08 10 22.9	0.9	22.5
03	ePC	02 34 13.1			04	ePD	09 00 17.1	0.9	37.5
03	eP e	02 45 35.9 46 07.1			04	eP	10 39 34.3		
03	eP	07 26 46.5			04	eP	12 31 00.2		
03	eP	08 46 49.1			04	eP	14 13 17.2		
03	eP	10 53 26.6			04	e e	13 13 38.0		
03	eP	12 16 11.2			04	eP	14 42 42.5		
03	eP	12 45 22.1	0.9	12.0	04	eP	18 00 31.5		
03	iPD	13 00 10.2	0.9	36.0	04	iPC	19 14 43.7		
03	eP	14 12 06.3			04	eP	21 12 10.9		
03	eP	14 21 59.5			04	eP	21 56 37.4		
03	eP	15 17 24.3			04	eP	22 16 11.5		
03	iPD	16 45 05.8			04	eP	22 26 05.3		
03	eP	17 32 29.1			05	eP	00 12 11.8		
03	eP	19 03 48.0			05	eP	01 05 31.4		
03	eP	20 01 00.6			05	eP	02 01 45.6		
03	eP	20 42 00.4			05	eP	03 47 16.8		
03	eP	22 20 33.0			05	eP	09 13 28.4		
03	eP	22 46 19.8			05	eP	10 01 25.8		
03	eP	23 12 26.7			05	eP	11 44 00.2	1.0	17.0

Day	Phase	hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
05	eP	13 38 35.1			06	eP	16 21 50.4		
05	eP	14 15 08.3				e	22 31.9		
05	eP	14 24 29.6			06	eP	17 32 46.3		
05	eP	15 12 47.9			06	e(P)	18 27 21.8		
05	eP	15 23 33.2			06	eP	19 52 35.7		
05	eP	15 47 40.2			06	iPD	21 08 14.0		
	e	48 25.7			06	eP	23 34 32.0		
05	eP	16 50 38.4			07	eP	02 16 42.6		
05	e(P)	17 35 24.9			07	e(P)	04 13 01.1		
05	eP	17 38 19.3			07	iPD	04 15 48.4		
05	e(P)	17 56 19.0			07	e(P)	07 22 02.7		
05	eP	18 47 55.8			07	eP	08 30 06.2		
05	eP	19 22 59.6			07	eP	08 39 03.3		
	e	23 44.5			07	ePC	09 29 42.6		
05	eP	22 17 55.7			07	eP	09 54 02.7		
05	eP	23 40 14.9			07	e(P)	10 07 27.6		
	e	40 48.2			07	iPC	10 58 50.6		
06	eP	01 57 07.8			07	eP	12 50 58.8		
06	e(P)	02 52 01.3			07	iPC	13 43 47.5	1.0	29.0
06	eP	03 13 13.0				eS	52 42.7		
06	eP	03 42 55.3			07	iPD	14 50 21.9		
06	iPC	04 34 26.2			07	eP	18 23 52.5		
06	ePC	07 06 22.7			07	eP	19 48 45.4		
06	ePD	09 16 13.8			07	eP	21 56 00.2	1.0	24.0
06	eP	12 24 03.3				e(S)	03 52.5		
06	eP	15 04 48.8			07	ePD	22 44 30.9	0.8	13.0
06	e(P)	15 12 50.5			07	eP	22 52 35.1		
06	eP	15 40 39.7			08	eP	00 40 46.6		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
08	eP	00 46 10.0			09	iPD	12 07 59.0		
08	eP	01 55 34.9	1.0	7.6	09	ePD	13 42 34.2		
08	eP	03 14 05.8			09	eP	14 00 28.4		
08	iPD	05 14 40.2			09	e(P)	16 03 49.9		
08	eP	05 58 53.3			09	eP	16 13 51.7		
08	eP	09 00 14.4				e	14 38.6		
08	ePC	09 47 33.0	0.8	43.5	09	eP	17 22 39.8		
	e(S)	55 39.6			09	eP	17 28 19.7		
08	eP	14 49 31.2				i	28 54.9		
08	eP	15 22 02.6			09	eP	17 45 50.7		
08	eP	17 06 02.6			09	eP	18 59 33.6		
	e	06 32.6			09	eP	19 04 35.2		
08	eP	17 27 53.3				e(S)	13 09.0		
08	eP	17 36 42.7			09	eP	19 57 27.5		
08	eP	18 13 52.5			09	eP	21 49 51.8		
08	eP	21 38 12.0			09	ePC	22 09 15.6	0.8	13.5
08	eP	21 50 23.3			09	eP	23 23 24.0		
08	eP	23 00 02.4			10	eP	00 06 14.0		
09	eP	02 17 28.5			10	ePC	00 21 26.6	0.8	8.5
09	ePD	03 35 38.7			10	eP	00 33 16.5		
	e	36 07.7			10	eP	00 50 47.3		
	e(S)	45 23.3			10	eP	01 44 00.2		
09	eP	04 52 06.4			10	eP	03 51 55.0		
09	eP	07 03 55.8			10	e(P)	05 52 48.8		
	e	04 32.7			10	eP	06 29 04.6		
09	eP	08 31 13.2			10	eP	06 55 21.0		
09	eP	08 41 42.1				e	56 02.3		
09	eP	09 17 09.5			10	eP	11 07 08.2		
09	iPD	10 07 41.0							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
10	eP	11 19 04.7			11	eP	18 40 56.7		
10	eP	12 01 16.5			11	eP	19 25 15.5		
10	eP	12 14 26.0			11	eP	20 06 43.0		
10	iPC	15 16 58.0			11	eP	20 36 04.8		
10	eP e	15 41 19.1 41 54.5			11	eP	22 43 41.0		
10	eP	17 43 11.8			11	eP e	22 47 51.5 48 22.0		
10	iPC	19 03 17.2			11	eP	22 58 18.9		
10	eP	19 23 29.8			11	eP	23 43 27.2		
10	eP	20 08 05.3			12	e(P)	00 42 07.0		
10	eP	21 13 33.5			12	iPC	01 23 06.5		
10	eP	21 51 38.8			12	eP	01 30 05.7		
10	eP	23 55 41.7			12	eP	02 09 13.0		
11	eP	01 03 03.2			12	iPC	03 43 15.5		
11	eP	02 00 47.8			12	iPC	04 05 26.5		
11	eP	03 08 25.9			12	eP	06 15 31.5		
11	eP	07 07 30.5			12	eP	08 41 36.6		
11	iPD	09 59 03.8			12	eP	10 25 19.1		
11	eP	10 21 31.3			12	eP	12 40 45.9		
11	eP	10 40 53.0			12	eP	13 46 04.6		
11	e(P)	10 53 22.7			12	eP	14 51 25.4		
11	iPD	13 59 21.6			12	eP	15 39 01.8		
11	eP	16 25 55.2			12	eP	16 42 12.7		
11	eP	16 53 59.5			12	eP	17 27 07.2		
					12	eP	17 42 05.4		
11	eP	18 26 10.3			12	eP	17 48 16.5		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
12	eP	19 46 35.1			13	eP	23 24 21.2		
12	eP	20 06 13.7			14	IPD	01 57 23.2		
12	iPD	22 35 10.3			14	ePD eS	02 52 32.3 00 52.5		
12	eP	22 44 53.3			14	e(P)	03 21 26.2		
13	eP	01 06 05.0			14	eP	04 39 58.8		
13	e(P) e(S)	03 30 04.0 03 37 11.9			14	iPC	06 42 05.6		
13	eP	03 46 34.5			14	eP	11 46 00.2		
13	eP	04 14 17.2			14	eP	13 33 36.2		
13	eP	06 22 26.1			14	eP	14 27 06.4		
13	eP	08 25 49.8			14	eP	16 13 42.8	0.8	26.0
13	e(P)	08 54 15.3			14	iPC	17 32 31.5		
13	eP	09 34 49.1			14	ePD e(S)	18 43 00.5 47 48.3		
13	eP	12 11 01.0							
13	eP	12 59 47.7							
13	ePD	13 38 57.8							
13	eP	14 49 03.6							
13	eP	15 18 51.4			14	iPD	19 27 48.6		
13	eP	15 58 57.7			14	eP	20 25 55.7		
13	eP	16 52 31.6			14	eP	23 07 43.4		
13	eP	18 06 09.5			14	eP	23 59 22.7		
13	eP	18 52 51.7			15	eP	00 20 24.6		
13	eP	18 57 59.6			15	eP	00 26 05.1	0.8	30.0
13	iPC	21 46 06.7			15	eP	00 27 41.8		
13	ePD	21 52 50.6	0.8	17.0	15	eP	00 49 41.7		
13	eP	22 17 06.5			15	eP	01 29 13.5		

Mag	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Date	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
15	eP	02 24 56.7			16	ePD	01 27 08.9		
15	e(P)	03 03 37.2			16	eP	01 45 32.3		
15	iP	03 46 48.6			16	eP	02 49 52.5		
15	iPD	04 03 58.0			16	eP	03 21 39.7		
15	eP	06 48 14.2			16	eP	04 06 16.0		
15	eP	09 02 59.1			16	eP	06 51 30.6		
15	eP	09 37 19.3			16	ePD	09 30 12.2		
15	eP	11 56 58.8			16	e(P)	11 54 52.1		
15	eP	13 44 38.1			16	iPD	11 02 45.2		
15	e(P)	13 48 07.8			16	eP	15 10 58.7		
15	e(P)	14 34 56.7			16	oP	15 12 58.4		
15	eP	15 15 12.0			16	eP	15 25 18.2		
15	eP	15 58 11.2			16	e(P)	16 20 16.3		
15	eP	17 29 16.7			16	e(P)	17 24 03.2		
	e	29 46.7			16	eP	19 06 08.6		
15	oP	17 46 32.8			16	ePD	20 07 30.5		
15	eP	18 57 37.6			16	eP	21 51 49.1		
15	iPD	20 09 34.8			17	eP	00 35 37.4		
15	ePC	21 04 33.5			17	ePC	02 37 27.8		
15	eP	21 34 43.3				e	41 57.2		
15	eP	21 43 45.2			17	eP	02 50 48.1		
15	eP	21 52 48.2			18	eP	07 53 10.8		
15	eP	22 05 10.8			18	eP	08 17 43.2		
15	eP	22 21 24.0			18	eP	09 16 44.3		
15	eP	23 14 09.3			18	eP	10 31 10.9		
16	eP	01 04 30.7			18	eP	13 05 02.2		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
18	eP i eS	13 40 22.1 41 04.5 48 09.4			19	eP	03 09 49.0		
					19	eP	04 40 03.8		
					19	eP e	07 03 10.3 06 09.5		
18	e(P)	14 10 54.6			19	eP	08 10 48.4		
18	eP	14 35 01.7			19	eP	11 38 32.6		
18	eP	15 33 37.5			19	eP	12 20 47.1		
18	iPC	15 47 08.5			19	eP	12 44 16.7		
18	eP	16 08 33.7			19	ePC	13 43 09.2		
18	eP	16 54 42.2			19	ePD	14 35 02.7		
18	eP	17 10 46.4			19	eP eS	14 46 26.2 50 43.0		
18	eP	17 34 11.1			19	eP	15 54 49.3		
18	eP	17 40 34.3			19	eP	16 02 03.1		
18	eP	17 49 18.7			19	eP	16 38 40.6		
18	eP eS	18 35 04.7 42 24.0			19	eP	17 16 38.1		
18	eP	20 48 34.0			19	eP	18 52 00.1		
18	eP	22 35 12.5			19	iPC	21 14 54.6		
18	eP	22 38 38.1			19	eP	21 24 19.4		
18	iPC	23 47 53.2			19	e(P)	22 36 44.0		
19	eP	00 19 16.3			19	eP	23 00 45.5		
19	ePD	00 25 34.1			20	eP	00 23 45.4		
19	eP	01 27 13.7			20	eP	01 21 00.7		
19	eP	01 50 45.2			20	eP	02 15 47.0		
19	eP	02 27 12.0			20	eP	02 28 41.8		
19	eP	03 03 56.6			20	eP	02 50 12.0		
					20	eP	04 01 18.2		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
20	eP	04 24 11.0			21	eP	09 19 00.1		
20	eP	07 41 24.0			21	eP	10 27 14.4		
20	eP	08 23 52.4			21	eP	11 35 45.3		
20	eP	09 31 14.7			21	ePC	12 30 07.7		
20	eP	10 14 04.8			21	eP	13 51 20.2		
20	eP	11 42 54.6			21	eP	14 48 32.0		
20	iPC eS	13 16 24.6 25 24.3			21	eP	15 08 22.6		
20	ePD	14 35 47.0			21	eP e(S)	15 20 27.7 27 49.3		
20	eP	15 39 40.7			21	eP	15 24 00.9		
20	iPD	17 47 39.4			21	ePD	15 40 57.2		
20	eP	19 09 33.2			21	eP	15 59 54.2		
20	eP	19 40 38.5			21	eP	17 22 12.6		
20	eP	19 43 12.1			21	e(P)	17 34 39.5		
20	eP	20 31 26.6			21	e(P)	18 44 50.4		
20	eP	20 44 34.0			21	eP	18 45 56.6		
20	eP	21 28 37.0			21	eP	19 13 05.3		
20	e(P)	22 27 50.4			21	iPC	19 14 24.6		
20	eP	22 49 46.9			21	eP	19 45 31.2		
20	eP	23 20 53.4			21	eP	20 08 26.9		
21	eP	00 09 34.3			21	eP	20 54 31.8		
21	eP	00 31 35.7			21	eP	21 16 26.0		
21	ePD	00 48 16.3			21	eP	21 30 54.4		
21	eP	03 20 52.9			21	eP	21 40 40.1		
21	eP	08 33 04.7			21	eP	23 48 03.1		
21	eP	08 44 15.9			22	eP	00 18 50.1		

Day	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)	Bay	Phase	Time (U.T.) hr. min. sec.	T (sec.)	2A (mm)
22	eP	00 25 25.9			22	eP	19 43 25.3		
22	eP e	01 23 23.2 25 06.0			22	eP	20 00 17.8	1.1	15.0
22	eP	01 33 45.3			22	eP	20 16 12.3		
22	eP	01 36 28.2			22	eP	20 20 41.2		
22	eP	04 54 07.8			22	ePD	21 10 40.2		
22	eP	05 15 29.3			22	eP	23 37 43.6		
22	eP	06 21 51.7			22	eP	23 57 03.9		
22	iPD	06 25 22.2			23	ePD	01 04 18.6		
22	eP	06 45 50.1			23	eP	01 58 40.7		
22	e(P)	06 54 57.9			23	eP	02 31 29.7		
22	iPC	10 14 09.9			23	e(P)	02 37 13.6		
22	ePD	10 27 22.3			23	eP eS	03 01 51.3 04 54.4		
22	iPC	11 31 27.0			23	ePC	03 14 07.7		
22	iPD	12 49 43.3			23	iPC	04 50 55.3		
22	eP	12 54 12.8			23	eP e	08 27 50.0 30 08.5		
22	eP	14 10 23.3			23	eP	13 18 22.7		
22	eP e	14 19 36.7 20 18.6			23	eP	13 29 07.7		
22	eP	14 41 47.5			23	iPC e eS	13 33 22.7 35 44.0 42 10.2		
22	ePC	14 49 04.6			23	iPC eS	14 16 51.4 23 58.7		
22	eP	17 03 31.1			23	eP e	15 08 12.7 08 42.6		
22	eP	17 45 42.3			23	ePD	16 00 08.8		
22	eP e	18 26 47.0 27 48.2			23	eP	16 29 09.0		
22	e(P)	19 04 51.3			23	eP	17 12 32.9		
22	eP	19 23 58.1							

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
23	eP	18 51 21.6			24	eP	22 06 35.1		
23	eP	19 25 08.6			24	eP	22 49 34.1		
23	ePD e	20 04 17.4 04 47.5			24	eP	22 58 42.2		
23	eP	20 53 41.6			25	eP	00 38 18.7		
23	eP	23 14 18.1			25	eP	01 05 11.6		
24	eP e	01 13 24.0 13 54.1			25	eP	01 37 58.0		
24	eP	01 26 43.2			25	e(P)	02 11 58.0		
24	eP e	02 41 09.0 42 05.1			25	eP	02 52 50.6		
24	e(P)	12 06 34.3			25	eP	04 00 47.7		
24	eP	12 29 51.1			25	eP	06 48 22.1		
24	eP e	12 37 19.0 38 18.6			25	eP	07 39 19.4		
24	ePD e	13 53 57.1 54 33.4			25	iPD	08 41 40.2	0.8	8.7
24	eP	14 59 32.6			25	eP	09 25 18.0		
24	eP	15 40 14.2			25	iPC	10 16 49.2		
24	eP e	17 17 01.5 17 36.2			25	eP	12 41 50.7		
24	eP	17 44 25.6			25	eP	13 13 21.2		
24	IPC	18 40 07.3			25	eP	15 47 56.0		
24	ePC	18 44 50.6	0.8	13.0	25	eP	16 40 55.2		
24	eP e	18 50 52.9 51 18.6			25	eP	17 15 35.2		
24	eP	20 38 41.5			25	iFD	18 08 33.0		
24	eP	20 43 55.0			25	eFD	19 24 25.9	0.9	21.0
24	eP	21 01 23.3			25	ePC i	19 57 45.4 58 15.6		
					25	eP	20 28 50.2		
					25	eP	20 49 16.3		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
25	eP e(S)	21 46 52.8 51 11.2			27	eP	00 35 31.1		
25	eP	23 34 54.1			27	eP	02 15 36.9		
26	iPC e(S)	00 30 33.1 40 39.1	0.9	44.0	27	eP e	03 05 54.3 06 34.9		
26	eP	01 23 24.9			28	eP	09 06 31.6		
26	eP	01 43 56.4			28	eP e	10 13 25.9 14 00.3		
26	iPC	01 57 14.6			28	eP	12 21 57.7		
26	eP	02 20 37.4			28	eP	14 37 08.5		
26	eP	02 32 30.7			28	iPC	14 47 59.3	0.0	26.0
26	eP e	08 34 17.7 36 05.2			28	eP	16 10 07.0		
26	e(P)	08 49 27.0			28	iPD	16 50 45.2		
26	eP	10 50 51.6			28	eP	17 01 11.7		
26	eP i	11 35 02.7 35 33.2			28	eP	17 50 20.6		
26	e(P)	13 35 16.5			28	eP e	18 27 27.9 28 00.7		
26	eP	15 40 57.7			28	eP	18 37 35.0		
26	eP	16 37 43.0	1.0	9.3	28	eP	19 16 02.8		
26	eP	18 00 33.2			28	eP	20 14 15.2		
26	eP	18 38 19.3			28	eP e	20 16 57.7 17 40.5		
26	eP	20 16 26.4			28	eP e	20 43 37.0 44 11.8		
26	eP e	21 02 28.7 05 12.1			28	eP	20 59 47.7		
26	eP	21 16 35.0			28	e(P)	21 18 10.6		
26	eP	22 12 56.7			28	eP	21 47 06.5		

Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
28	eP	21 54 45.3			30	eP	00 16 37.6		
28	eP	22 09 04.5				e	17 21.9		
28	ePC	22 56 15.5			30	eP	00 23 23.3		
28	eP	23 36 28.7				e	23 56.0		
29	eP	01 14 35.8	0.6	5.0	30	eP	01 07 36.3		
29	eP	01 27 58.0			30	eP	02 09 06.2		
29	iP	01 32 49.0	0.5	10.0	30	e(P)	02 17 52.9		
29	ePD	04 05 54.7			30	eP	06 53 26.9		
29	eP	06 20 07.0				e	53 57.4		
29	eP	09 34 20.4			30	iPD	06 58 41.6		
29	eP	13 09 33.0			30	eP	08 31 42.0		
29	eP	16 03 53.6			30	eP	08 40 42.1		
29	ePD	17 08 38.0			30	eP	08 58 53.7		
29	eP	18 09 47.2				i	59 37.9		
29	eP	18 18 20.4			30	eP	09 15 40.6		
29	eP	19 28 23.6			30	iPC	11 27 40.5		
29	e	29 06.9				e(S)	35 58.3		
29	eP	20 16 42.7			30	eP	11 36 58.3		
29	e	17 26.8			30	eP	12 47 59.7		
29	eP	21 02 45.7			30	eP	13 29 57.5		
29	iPD	21 53 07.8				e	31 16.3		
29	eP	22 07 41.2			30	iPC	13 55 59.2		
29	eP	22 24 01.7				e	00 22.3		
30	eP	00 05 29.9			30	eP	15 09 52.5		
30	e(P)	00 08 15.3			30	eP	16 18 03.1		
						e	18 40.4		
					30	eP	17 53 39.4	0.8	9.5
					30	eP	18 24 16.7		
					30	eP	19 31 49.1		
						e	32 14.6		

Day	Phase	Time(U.T.) hr.min.sec.	T (sec.)	2A (mm)	Day	Phase	Time (U.T.) hr.min.sec.	T (sec.)	2A (mm)
30	eP	19 39 28.7			31	e(P)	12 09 04.3		
30	eP	19 42 26.6			31	eP	12 13 17.6		
30	eP	20 13 08.2			31	eP	13 26 12.1		
30	eP	20 31 08.4			31	eP	14 10 30.9		
	i	31 42.5				e	11 13.7		
30	eP	20 37 39.6			31	iPD	15 00 19.6		
	e	37 48.9							
30	eP	23 19 00.5			31	eP	15 09 19.5		
						i	09 55.2		
31	eP	00 13 40.1			31	e(P)	16 33 57.7		
	i	14 06.6			31	eP	17 01 15.2		
31	eP	00 34 59.0			31	eP	17 31 58.2		
31	eP	00 52 22.2			31	eP	18 06 29.2		
	i	52 53.9			31	eP	19 10 54.7		
31	iPD	00 58 01.3	0.9	16.0		e(S)	18 01.5		
31	eP	01 10 54.1			31	ePC	20 55 14.8	0.8	17.0
	i	11 29.9			31	eP	21 17 23.9		
31	eP	02 22 34.5			31	eP	22 10 01.5		
	e	22 57.2			31	eP	22 21 03.2		
31	eP	03 01 00.3			31	eP	22 44 43.7		
31	iPD	03 29 23.2			31	iPD	23 48 25.5		
31	eP	05 42 21.0				eS	56 06.0		
	e	43 56.6							
31	e(P)	05 49 06.5							
31	eP	07 11 44.5							
31	eP	08 28 18.2							
31	iPD	09 11 33.9							
31	iPD	10 52 49.7							
31	eP	11 32 27.4							