

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 5/69
 'A'

PRELIMINARY SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 January 31, 1969 - February 7, 1969

January 31	e Pn	10 14(32)	
"	i Pg	10 26 47.2	
	i Sg	27 03.4	
"	e (Pn)	13 00(08)	
	ei Sg	(37)	
"	e (Pn)	14 00(48)	
"	e P	14 05(17)	
	i S	09 57.8	
"	e P	14 37(55)	
	ei S	44(02)	
"	<u>i P</u>	15 18 46.8	
"	<u>i P</u>	15 36 25.8	
	i S	38 32.8	
"	i	17 43 46.8	
	Seismic?		
February 1	i Pg	12 17 08.2	
	i Sg	24.2	
"	ei	14 03(48)	
	Seismic?		
"	e (P)	16 43(13)	
"	i Pg	17 21 41.6	CW
	ii Sg	46.6	
"	e (S)	20 39(11)	
February 2	<u>i P</u>	01 52 02.6	
	i S	55 46.6	
	i	02 02 34.6	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 5/69
 'B'

PRELIMINARY SEISMOGRAM READINGS

February 2	e Pn	04 10(08)	
	i Sg	11 08.6	
"	e Pg	08 48(37)	
	i Sg	53.7	
"	i Pg	09 37 07.7	(CSW)
	i Sg	25.7	
"	i Pg	10 05 01.7	CSW
	i Sg	18.7	
"	ei Pn	10 21(37)	
	i Sg	22 08.7	
"	e Pn	11 27(02)	
	ei (Sg)	(56)	
"	e (L)	14 01(05)	
"	i (P)	16 45 10.7	
"	e Pn	17 38(30)	
	i Sg	39 16.7	
"	i Pg	19 40 18.2	C
	i Sg	33.2	
"	e (P)	20 13(31)	
	e (S)	21(19)	
"	i Pg	23 23 21.2	
	i Sg	43.5	
February 3	<u>i</u> P	08 10 07.3	C
	ei S	12(25)	
"	<u>i</u> P	08 36 54.8	C
"	e Pn	10 42(35)	
	e Sg	43(45)	
"	e P	19 14(44)	
	e S	18(27)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 5/69
 'C'

PRELIMINARY SEISMOGRAM READINGS

February 3	<u>ii</u> P	21 54 53.9	
	i S	58 40.9	
	T: 0.7 sec.	0.048 mic.	
"	i Pg	22 54 31.7	D
	i Sg	38.1	
"	ei P	01 51(30)	
	e S	55(07)	
	e	02 01(31)	
February 4	ei Sg	01 53(20)	
"	e P	04 28(42)	
	ei (S)	31(31)	
"	ei Pn	19 18(35)	
"	i Pg	23 45 32.9	C
	ii Sg	54.1	
February 5	i Pg	02 04 33.2	
	i Sg	52.2	
"	e Pn	09 40(51)	
	i Pg	41 02.3	
	ii Sg	32.3	
"	i Pg	09 59 26.3	C
	ii Sg	41.3	
"	i Pg	19 06 10.4	DS
	ii Sg	29.5	
"	e (S)	20 31(17)	
"	ei Pn	22 45(20)	
	i Pg	41.0	
	i Sg	46 36.5	
"	i Pg	23 50 13.6	
	ii Sg	19.6	
"	ei Pb	23 56(35)	
	i Pg	40.6	CSE
	ii Sg	57 14.6	

Continued

20 MAR 1969

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 4/69
 'A'

PRELIMINARY SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 January 24, 1969 - January 31, 1969

January 25 Strong microseisms during the week.

	ei Pg	05 28(40)	
	i Sg	29 01.6	
"	<u>i P</u>	05 32 39.1	C
	i S	43 07.6	
"	e (P)	08 30(26)	
"	e (P)	09 58(21)	
	i (PPP)	38.6	
	e (S)	10 00(40)	
"	ei	13 10(14)	
	Seismic?		
"	i Pg	16 56 20.5	DN
	i Sg	42.7	
"	e (S)	21 01(30)	
"	ei Pn	21 09(13)	
	i Sg	46.0	
"	i Pg	21 36 54.4	D
	i Sg	37 16.4	
January 26	<u>i P</u>	02 30 31.9	
	T: 0.8 sec.	0.03 mic.	
"	e Pn	06 57(09)	
	i Pg	29.3	
	i Sg	58 21.3	
"	e (P)	09 42(38)	
	e	43(29)	
	T: 0.6 sec.	0.019 mic.	
"	<u>i P</u>	15 27 04.2	
	e	33(18)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 4/69
 'B'

PRELIMINARY SEISMOGRAM READINGS

January 26	i Pg	21 42 18.1	CN
	i Sg	41.4	
January 27	e (P)	03 29(29)	
	i (S)	40 07.0	
"	e Pn	04 06(49)	
	i Sg	07 20.9	
"	ei Pn	12 01(01)	
"	e	12 21(02)	
"	i (Sg)	12 57 54.1	
January 28	e Pn	14 17(50)	
	i Sg	18 36.7	
"	i Pn	21 39 16.2	
	i Sg	48.1	
January 29	e Sg	00 09(17)	
	"	i Pg	01 53 54.0
"	i Sg	54 15.0	
"	i Pg	01 57 49.2	(DNE)
	i Sg	58 11.5	
"	i Pg	02 09 46.0	
	i Sg	10 08.0	
"	i Pg	02 24 11.5	
	i Sg	33.3	
"	ei Pg	02 42(09)	
	i Sg	31.0	
"	i Pg	04 07 07.9	D
	ii Sg	29.9	
"	ei Pg	08 50(19)	
	i Sg	34.7	
"	ei Pn	09 48(38)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 4/69
 'C'

PRELIMINARY SEISMOGRAM READINGS

January 29	e Pn	15 39(11)	
"	i Sg	40.7	
"	e P	18 04(14)	
"	i	20.7	
January 30	e Pn	00 12(49)	
"	ei Sg	13(45)	
"	e P	01 21(56)	
"	ei (S)	23(01)	
"	T: 0.8 sec.	0.04 mic.	
"	e Pn	01 33(44)	
"	i Pg	02 36 12.6	D
"	ii Sg	19.1	
"	i Sg	02 37 12.1	
"	e (Pb)	02 50(09)	
"	i Pg	13.6	
"	i Sg	44.6	
"	<u>i P</u>	10 42 48.4	
"	e S	46(28)	
"	e Pn	18 07(52)	
"	i Sg	08 16.3	
"	i Sg	18 39 36.2	
"	i Pg	23 10 18.7	
"	i Sg	40.2	
January 31	<u>i P</u>	00 57 30.1	C
"	i S	01 01 13.1	

Chief
 Dr. N. Öcal

January 31, 1969
 R. Can - E. Alsan

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 5/69
'D'

PRELIMINARY SEISMOGRAM READINGS

February 6	e (S)	00 18(24)
"	e (P)	01 15(55)
	e (S)	16(43)
"	i Pg	06 19 56.7
	ii Sg	20 12.7

Strong microseisms from 08^h of February 6 to 08^h of February 7

"	i Pg	11 43 52.8
	i Sg	44 08.8
"	i Pg	23 31 26.1
	i Sg	40.6

February 7	e P	01 06(10)
	e (S)	10(18)

Chief
Dr. N. Ücal

February 7, 1969
R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 6/69
 'A'

PRELIMINARY SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 February 7, 1969 - February 14, 1969

February 7	Strong microseisms during the week.		
"	e (Pn)	16 55(55)	
	e Sg	56(39)	
	Masked by microseisms.		
"	e (Pn)	19 53(32)	
	i Sg	54 03.1	
	Masked by microseisms.		
February 8	e Pn	00 10(23)	
"	e Pg	03 59(10)	
	i Sg	24.4	
	Masked by microseisms.		
"	e Pb	07 59(42)	
	i Pg	47.5	
	ii Sg	08 00 22.0	
"	i Pg	23 00 30.5	
	i Sg	48.0	
"	<u>i P</u>	23 28 15.5	DE
	e (S)	36(11)	
	T: 0.5 sec. 0.024 mio.		
February 9	i Pg	02 49 03.6	(C)
	i Sg	13.6	
"	i	10 34 52.4	
	Local		
"	e Pn	11 37(07)	
	i Sg	41.9	
"	i Pn	11 41 51.7	D
	i Sg	42 24.9	
"	e (Pn)	14 10(50)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 6/69
 'B'

PRELIMINARY SEISMOGRAM READINGS

February 9	e (L)	16 10(50)	
"	e Pn	20 19(33)	
	i Pb	40.7	
	ei Pg	(50)	
	ii Sg	20 36.2	
"	ei Pn	21 01(40)	
	ei Sg	02(39)	
"	i (P)	21 14 12.2	C
	i (S)	15 11.7	
	T: 0.6 sec.	0.02 mic.	
"	e Pn	22 10(03)	
"	e	22 14(20)	
	Seismic?		
"	e Pn	22 17(34)	
February 10	e Pn	00 54(59)	
	ei Sg	55(07)	
"	e Pg	03 06(03)	
	i Sg	18.4	
"	i (Sg)	12 49 34.6	
"	i Pg	15 34 22.7	DNE
	ii Sg	33.2	
"	<u>i</u> P	23 16 34.0	D
	i S	19 04.8	
	T: 0.9 sec.	0.048 mic.	
February 11	e Pn	08 07(39)	
	i Sg	08 22.0	
"	ei Pg	09 40(23)	
	i Sg	40.5	
"	i Pg	16 19 07.6	D
	i Sg	30.1	

Continued

KANDILLI OBSERVATORY
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 İSTANBUL TURKEY

No: 6/69
 'C'

PRELIMINARY SEISMOGRAM READINGS

February 11	<u>i</u> P	16 26 20.1	(C)
	T: 0.4 sec.	0.012 mic.	
"	<u>i</u> P	22 16 06.1	C
	i (S)	17 39.1	
"	e P	22 29(21)	
	ei (S)	30(53)	
February 12	i Sg	02 13 49.0	
"	ei Pg	02 44(02)	
	i Sg	18.0	
"	i Pg	06 10 50.2	C
	i Sg	11 26.7	
"	i Pg	08 41 28.2	
	i Sg	46.2	
"	i Pg	08 43 22.7	DNE
	ii Sg	36.2	
	Epicentral distance 115-120 km.		
	Felt at İstanbul, İzmit and Adapazarı.) D.T.		
"	i Pg	08 51 25.2	DNE
	ii Sg	39.2	
"	i	10 11 18.7	D
	Local		
"	e Pg	10 45(02)	
	i Sg	16.3	
"	e Pg	15 36(22)	
	i Sg	36.9	
"	i Pg	16 35 19.4	D
	i Sg	40.9	
"	e Pg	19 29(58)	
	i Sg	30 08.9	
"	i Pg	19 34 55.9	(D)SE
	ii Sg	35 06.4	

Continued

KANDILLI OBSERVATORY
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No: 6/69
 'D'

PRELIMINARY SEISMOGRAM READINGS

February 12	e (Pg)	20 53(18)
	i Sg	35.6
"	ei Pn	22 07(42)
	i Sg	08 14.2
"	ei Pg	23 22(21)
	i Sg	34.0
"	ei Pn	23 58(45)
	i Pg	54.5
	i Sg	59 29.0
February 13	ei P	01 48(33)
	i	44.7
	T: 0.8 sec.	0.017 mic.
"	e P	02 54(57)
"	ei Pg	02 32(35)
	i Sg	47.5
"	e Pn	03 35(41)
	i Pg	50.0
	ii Sg	36 24.5
"	i Pg	08 21 07.1
	ii Sg	23.6
"	e (S)	10 28(37)
"	e Pn	13 14(44)
	ei Sg	15(03)
"	e Pn	13 55(10)
	e Sg	56(01)
"	e (L)	15 13(52)
"	i Pn	16 28 19.4
	i (Sg)	29 04.0
"	e (Pn)	16 56(26)
	i Sg	57.3

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 6/69
 'E'

PRELIMINARY SEISMOGRAM READINGS

February 13	i Pg	17 24 17.3	C
	i Sg	39.8	
"	i Pg	17 34 09.3	
	i Sg	30.8	
"	e Pg	18 44(55)	
	i Sg	45 05.3	
"	e Pn	19 58(47)	
	i Sg	59 29.8	
"	ei Pg	23 57(26)	
	i Sg	30.9	
February 14	e (S)	01 38(18)	
"	i Pg	05 11 01.5	DNE
	i Si	15.5	
	M _L : 3,4	Epicentral distance 115-120 km.	
"	ei Pg	05 39(32)	
	i Sg	47.0	

Chief
 Dr. N. Öcal

February 14, 1969
 R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 7/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 February 14, 1969 - February 21, 1969

February 14	Strong microseisms during the week.		
"	i Pg	10 37 29.1	CS
	ii Sg	34.4	
	M _L : 2,7	Epicentral distance 45 km.	
"	e Pn	17 31(32)	
	i Pg	41.2	
	i Sg	32 16.2	
"	ei Pg	17 33(50)	
	ei Sg	(26)	
February 15	i Pg	14 24 23.2	D
	i Sg	35.7	
"	<u>i P</u>	15 21 50.2	(D)
	T: 0.6 sec.	0.01 mic.	
"	e Pn	17 57(08)	
	e Sg	(50)	
"	i Pg	18 17 40.8	CW
	ii Sg	54.4	
	M _L : 3,6	Epicentral distance 110-115 km.	
February 16	e Pg	01 03(35)	
	i Sg	53.5	
"	e Pn	04 41(35)	
"	i Pg	05 27 05.6	
	i Sg	17.6	
"	i (Sg)	09 16 58.7	
February 17	<u>i P</u>	00 56 19.8	
	e S	01 00(09)	
"	i Pg	01 46 53.6	
	ii Sg	47 02.1	
"	.		

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 7/69
 'B'

SEISMOGRAM READINGS

February 17	i Pn	16 31 47.5	
	i Pg	49.0	
	ii Sg	32 07.0	
"	i (Pg)	17 10 58.3	
	i (Sg)	11 18.9	
"	ei Pn	19 02(33)	
	i Sg	03 28.9	
"	e Pn	22 49(43)	
	i Pg	53.2	D
	ii Sg	50 27.2	
"	i Pg	22 51 36.9	D
	ii Sg	52 10.2	
February 18	i (Pg)	02 38 03.6	
	i Sg	26.2	
"	e Pn	06 21(56)	
	e Sg	22(04)	
"	e (L)	19 50(23)	
February 19	i Pn	03 31 52.1	
	i Sg	32 33.1	
"	e Pn	03 41(49)	
"	i Pn	04 06 33.1	
	i Sg	07 13.6	
"	e Pn	15 01(19)	
"	e Pn	22 59(11)	
February 20	e Pn	03 33(51)	
	ei (Sg)	34(34)	
"	e P	10 08(46)	
	e S	12(47)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 7/69
'C'

SEISMOGRAM READINGS

February 20	<u>i</u> P	10 43 36.3	C
	i	46 44.3	
	i S	47 28.6	
"	e P	17 11(31)	
	e S	15(16)	

Chief
Dr. N. Öcal

February 21, 1969
R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 8/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 February 21, 1969 - February 28, 1969

February 21	Strong microseisms during the week.	
"	e Pn	17 20(03)
"	e Pn	18 41(22)
"	e P	21 06(10)
"	e Pn	21 35(50)
"	e (P)	21 49(03)
February 22	i Pg	08 07 42.1
	i Sg	08 03.1
"	i Pg	14 43 26.2
	ei Sg	(48)
"	e Pg	23 05(23)
	i Sg	42.4
February 23	ei P	00 49(06)
	i	50 04.5
"	i Pg	03 39 30.1
	i Sg	47.6
"	i Pg	03 41 51.1
	ii Sg	42 09.1
"	e (P)	06 27(33)
"	ei Pg	14 01(38)
	ei Sg	(58)
"	e Pg	15 17(01)
	i Sg	12.4
"	i Pg	20 26 31.0
	i Sg	41.0

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 8/69
 'B'

SEISMOGRAM READINGS

February 23	i Pg	22 20 02.2
	i Sg	29.2
February 24	e P	00 25(17)
	e PP	26(59)
	ei S	33(05)
"	i Pg	03 44 24.8
	i Sg	40.3
"	i Pg	11 48 33.0
	i Sg	49 03.7
"	e (Pn)	16 03(30)
"	e (S)	16 23(40)
February 25	e (P)	01 50(56)
"	i Sg	03 43 45.6
"	e (S)	04 27(12)
"	i Pg	06 05 37.6
	i Sg	59.6
"	e Pn	11 04(05)
	e Sg	(59)
"	i Pn	13 44 30.9
"	e Pn	13 57(26)
"	e (P)	14 26(36)
"	e Pn	16 53(37)
"	i Pn	17 07 11.2
"	e Pn	22 58(42)
February 26	i (P)	01 36 53.7
"	i (Sg)	02 51 46.7

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KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 8/69
 'C'

SEISMOGRAM READINGS

February 26	e (S)	05 55(34)
"	i Pn	06 10 58.7
	i Sg	11 31.7
"	<u>i P</u>	12 37 14.6
	i (S)	38 18.6
	T: 0.7 sec. 0.07 mic.	
"	i Pg	17 41 30.5
	ii Sg	46.0
"	i Pg	23 52 00.3
	i Sg	23.6
February 27	ei Pn	05 11(36)
"	e (P)	08 31(13)
	e (S)	32(18)
"	i Pg	09 13 40.1
	e Sg	14(01)
"	i Pn	09 49 07.0
	i Sg	50 04.0
"	i Sg	11 39 02.6
"	e Pg	11 40(40)
	ei Sg	(58)
"	e Pn	11 51(42)
"	e Pn	12 46(39)
	i Sg	47 39.3
"	i Pg	13 03 02.5
	ii Sg	18.3
"	i Pg	17 40 24.9
	i Sg	32.1
"	e (Pn)	19 25(02)
	i Sg	25.0

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 8/69
'D'

SEISMOGRAM READINGS

February 28	<u>ii</u> P	02 46 51.3
	i S	50 56.8
	T: 0.7 sec.	0.24 mic.
"	e Pn	04 27(55)
	i Sg	28 10.7
"	<u>i</u> P	04 31 53.2
	T: 0.6 sec.	0.036 mic.
"	i Pg	07 16 09.4
	i Sg	23.1

Chief
Dr. N. Özal

February 28, 1969
R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 9/68
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 February 28, 1969 - March 7, 1969

February 28	Strong microseisms during the week.	
"	e (P)	13 34(52)
	e (S)	41(36)
"	i Sg	14 01 00.8
"	e Pn	16 08(53)
"	i Pg	16 52 38.5
	i Sg	51.5
"	i Pg	20 26 58.2
	ii Sg	27 13.5
"	i Sg	20 28 09.5
"	ei Pg	20 52(49)
	i Sg	53 04.7
March 1	i Pg	05 59 57.8
	i Sg	06 00 18.8
"	i Pg	13 28 19.3
	i Sg	40.0
"	ei Pn	14 15(01)
"	i (Pb)	16 54 10.8
	i Pg	13.2
	ii Sg	23.3
March 2	e Pg	05 39(07)
	i Sg	24.0
"	e Pn	09 16(03)
	i Sg	53.2
"	e (Pb)	12 14(36)
	i Pg	43.0
	i Sg	15 23.5

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 9/69
 'B'

SEISMOGRAM READINGS

March 2	i Sg	20 46 21.0
"	<u>i P</u>	22 35 35.4
	T: 1.0 sec.	0.04 mic.
March 3	i Pg	00 59 39.2
	ii Sg	58.7
	M _L : 4,9	Epicentral distance 160-165 km.
	20 houses collapsed, 1 wounded at the villages of Gönen (40°06'N - 27°39'3E)	
	Strongly felt at Balıkesir, Bursa and İstanbul.	
	Approximately 35 aftershocks following the main shock to 08 ^h of March 4	
"	e Pn	01 10(58)
	i Pg	11 03.3
	i Sg	23.6
"	i	06 06 50.2
	Local	
"	i	06 50 38.2
	Seismic?	
"	i Pg	06 57 01.2
	ii Sg	20.2
"	i Pg	07 39 16.0
	ii Sg	36.2
"	i Pg	08 33 23.2
	ii Sg	43.7
"	<u>i P</u>	15 01 26.7
	i (PP)	38.5
"	e P	16 50(01)
"	e Pn	23 58(28)
March 4	e Pn	01 48(18)
	i	32.2

Continued

KANDILLI OBSERVATORY
 Seismological Section
 ISTANBUL TURKEY

No: 9/69
 'C'

SEISMOGRAM READINGS

March 4	i Pg	01 59 41.3	
	i Sg	02 00 04.0	
"	e Pn	02 37(55)	
	i Sg	38 29.1	
"	i Pg	10 07 27.0	
	i Sg	49.0	
"	i Pg	21 19 27.5	
	i Sg	48.0	
March 5	i Pg	00 09 36.8	
	i Sg	58.0	
"	e Pg	11 38(32)	
	i Sg	45.0	
"	e P	14 05(02)	
	i S	09 03.0	
"	i Pn	14 41 41.0	
	ii Sg	42 03.0	
	M _L : 4.0	Epicentral distance 155-160 km.	
"	e Pg	17 23(08)	
	i Sg	28.5	
"	i Pg	18 25 46.5	
	i Sg	26 07.0	
"	e Pg	18 26(33)	
	i Sg	53.5	
"	i Pg	19 24 29.5	
	i Sg	50.5	
"	<u>i P</u>	19 39 06.4	
	i	40 19.4	
March 6	e (P)	01 29(35)	
"	e Pn	02 25(12)	
	e Sg	(36)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 9/69
'D'

SEISMOGRAM READINGS

March 6	i Pn	04 51 31.0
"	i Local	12 52 28.5
March 7	i Pg i Sg	05 02 01.0 21.5
"	i Pn	06 53 31.0
"	i Pg ii Sg M _L : 3,4	06 53 48.0 54 07.0 Epicentral distance 160 km.

Chief
Dr. N. Öcal

March 7, 1969
R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 10/69
 'A'

2 JUN 1969

SEISMOGRAM READINGS

at

(ISK) Kandilli - İstanbul

March 7, 1969 - March 14, 1969

March 7		Strong microseisms from 07 ^h of March 7 to 22 ^h of March 9.	
"	i P	08 33 52.9 (D)	
	T: 0.6 sec.	0.03 mic.	
"	i Pg	09 07 19.3	
	i Sg	36.0	
"	e Pg	20 36 (33)	
	i Sg	54.8	
March 8	e Pn	00 20 (21)	
	i Sg	21 06.6	
"	e Pn	03 43 (44)	
	ei Pg	(48)	
	i Sg	44 06.5	
"	i (P)	10 41 14.8	
"	i Pn	11 27 22.9	
"	e (P)	11 54 (11)	
"	e (P)	12 13 (33)	
"	e Pn	12 54 (28)	
March 9	i (Pg)	10 26 31.4	
	i Sg	51.9	
"	e Pn	13 37 (50)	
	i Sg	38 40.0	
"	e P	14 06 (29)	
"	i (Pb)	17 53 56.2	CNE
	i Pg	58.2	
	i Sg	54 19.2	

Continued

KANDILLI OBSERVATORY
Seismological Section

No: 10/69
'B'

SEISMOGRAM READINGS

March 9	e (Pb)	23 14(42)	
	i Pg	42.5	
	i Sg	15 05.5	
March 10	e (Pg)	04 19(21)	
	i Sg	41.7	
"	e Pn	04 32(18)	
	i Sg	33 07.7	
"	i (Pn)	04 48 07.7	
"	<u>i P</u>	05 47 05.5	
"	e Pn	06 09 (39)	
"	e P	07 13 (18)	
"	e Pg	10 51 (11)	
	i Sg	33.0	
"	ei Pn	10 55 (25)	
"	i Pn	23 49 04.8	
	i (Sg)	38.5	
"	i Pg	23 49 58.7	
	i (Sg)	28.0	
March 11	e Pn	01 52 (02)	
"	e Pg	19 04 (09)	
	i Sg	31.4	
"	i Pg	19 31 28.9	D
	i Sg	42.9	
March 12	i Pg	03 14 49.0	D
	i Sg	15 05.3	
"	i Pn	14 55 15.2	D
	i Sg	56 05.4	
"	e Pn	17 19 (59)	
	e Sg	20 (46)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 10/69
 'C'

SEISMOGRAM READINGS

March 12	i Pg	17 35 40.1	
	i Sg	55.1	
March 13	ei (Pb)	02 26(29)	
	i Pg	40.0	
	ii Sg	27 28.5	
"	e Pn	05 53(18)	
	i Sg	54 08.4	
"	i Pg	07 09 39.3	DSE
	ii Sg	53.8	
"	i Pg	18 25 30.0	
	i Sg	47.5	
"	e P	18 55(25)	
"	e Pg	19 43(11)	
	i Sg	34.9	
"	<u>i</u> P	20 52 04.6	D
March 14	e Pn	00 14(20)	
	ei Sg	(41)	
"	e (Pg)	02 45(38)	
	ei Sg	(56)	
"	ei (Pg)	02 56(14)	
	i Sg	35.4	
"	e Pn	05 30(24)	
	i Sg	31 17.6	

Chief
 Dr. N. Öcal

March 14, 1969
 R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 11/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 March 14, 1969 - March 21, 1969

March 14	ei P	09 03(50)	
"	i Pg	17 08 48.3	
	i Sg	09 11.3	
"	e Pn	18 55(15)	
	ei Sg	56(38)	
"	i Pg	21 55 31.1	
	i Sg	56 17.6	
"	e P	23 04(09)	
March 15	i Pg	01 02 05.4	N
	i Sg	27.2	
"	i Pg	04 43 41.7	
	i Sg	58.9	
"	i Sg	05 45 24.8	
"	i Pg	06 20 57.0	
	i Sg	21 14.5	
"	i Pg	06 30 52.4	
	i Sg	31 09.5	
"	i Pn	10 45 39.3	DS
	ii Sg	46 00.8	
"	ei Pg	11 08(54)	
	i Sg	09 26.3	
"	e Pg	11 45(15)	
	i Sg	31.9	
"	ei P	12 08(51)	
"	<u>i P</u>	13 48 05.9	
	e	58(13)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 11/69
'B'

SEISMOGRAM READINGS

March 15	i Pg	19 42 45.3
	i Sg	43 03.8
"	e Pg	21 03(12)
	i Sg	26.4
March 16	e P	00 26(04)
"	<u>i (P)</u>	14 18 28.4
"	i Pg	15 55 37.8
	i Sg	53.5
"	<u>i P</u>	16 06 25.5
	i (S)	16 30.0

Strong microseisms from 20^h of March 16
to 08^h of March 21

March 17	e (Sg)	05 07(12)
"	e Pn	06 06(14)
	e Sg	(51)
"	i Pg	12 11 09.2
	i Sg	33.7
"	e (Pg)	13 19(44)
	i Sg	57.7
"	e Pn	14 42(28)
	i Pg	32.8
	i Sg	51.8
"	e Pn	20 36(39)
	i Sg	37 12.2
March 18	e P	03 48(20)
"	i Pg	05 46 01.2
	i Sg	24.7
"	e (P)	16 28(36)
"	e (L)	21 20(46)

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 11/69
 'C'

SEISMOGRAM READINGS

March 19	e	14 07(14)	
	Seismic?		
"	e P	14 11(08)	
	i	49.3	
"	i Pg	18 26 39.4	
	i Sg	27 06.1	
"	e Pg	19 48(33)	
	i Sg	44.7	
"	i (Sg)	19 51 13.7	
"	i Pg	23 06 46.4	
	e Sg	07(09)	
March 20	i Pg	07 52 48.5	D
	i Sg	53 14.0	
"	e Pn	10 18(07)	
	ei Sg	(45)	
"	e Pn	18 32(11)	
	i Sg	33 18.2	
March 21	i Pg	04 41 28.9	
	e Sg	(53)	

Chief
 Dr. N. Öcal

March 21, 1969
 R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 12/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 March 21, 1969 - March 28, 1969

March 21	e (L)	07 26(40)	
"	e (L)	11 07(20)	
	Approximately 30 Foreshocks of the Earthquake of March 23, 21 ^h 09 ^m 15. ^s 4 from 18 ^h of March 21 to Main shock.		
March 22	e (L)	08 22(40)	
"	i Pn	18 01 25.3	C
	i Pg	30.8	
	i Sg	55.8	
	M _L : 4,0 Epicentral distance 210-215 km. Damage at the villages of Demirci.		
March 23	i (Pb)	00 16 16.8	C
	i Pg	21.8	
	i Sg	47.4	
	M _L : 3,7 Epicentral distance 215-220 km.		
"	i Pg	01 51 21.2	C
	ii Sg	28.8	
"	i (Sg)	01 52 06.8	
"	i Pg	05 20 12.7	
	ii Sg	18.7	
"	i	06 07 20.0	
	Local		
"	i Pn	21 09 15.4	CNE Main shock
	i Pg	20.6	
	i Sg	45.4	
	M _L : 5,5 Epicentral distance 210 km.		

Severe earthquake in western part of Anatolia. According to the preliminary information: 1100 houses completely destroyed at Demirci(39°02'6N-28°39'7E), Gördes(38°54'2N-28°18'2E) Sındırgı(39°13'8N-28°10'3E) and surrounding villages. It is felt as far as Uşak, Aydın, Denizli, İzmir, Bursa, Balıkesir, Çanakkale and İstanbul.

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 12/69
'C'

SEISMOGRAM READINGS

March 24	e Pn	11 35(01)	
	i Pg	08.7	
	i Sg	33.2	
	$M_L: 4,0$	Epicentral distance 210-215 km.	
"	i (Pb)	12 13 49.1	CNE
	i Pg	54.1	
	i Sg	14 20.1	
	$M_L: 3,8$	Epicentral distance 220 km.	
"	<u>i P</u>	12 46 09.5	
	i (S)	47 10.0	
"	i Pn	16 05 49.0	
"	e (Pn)	19 59(24)	
"	e Pn	20 33(01)	
"	e Pn	21 20(49)	
	i	57.5	
March 25	Approximately 75 aftershocks from 08 ^h of March 25 to 07 ^h of March 26.		
"	i Pn	10 06 03.8	
"	i Pn	13 21 43.7	C
	Further damage at Sındırgı and Demirci.		
"	i Pg	13 29 27.2	
	ii Sg	52.2	
	Felt at İstanbul, İzmir, Ankara, Adapazarı, Çanakkale, Bolu, Afyon, Denizli, İsparta, Muğla and Kastamonu.		
"	i Pg	13 50 10.2	
	i Sg	35.7	
	$M_L: 3,8$	Epicentral distance 215-220 km.	
"	i (Pb)	14 19 23.1	
	i Pg	27.6	
	i Sg	53.6	
	$M_L: 4,3$	Epicentral distance 220 km.	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 12/69
 'D'

SEISMOGRAM READINGS

March 25	e Pg	14 41(05)	
	e Sg	(31)	
	M _L : 3,7		Epicentral distance 220 km.
"	i Pg	14 51 52.4	
	i Sg	52 18.1	
"	i Pg	16 14 05.5	
	i Sg	31.5	
	M _L : 4,1		Epicentral distance 220 km.
"	i (Pb)	17 51 53.0	
	i Pg	57.5	
	i Sg	52 23.5	
	M _L : 3,8		Epicentral distance 220 km.
"	i (Pb)	18 55 06.5	
	i Pg	11.5	
	i Sg	36.5	
	M _L : 3,5		Epicentral distance 210-215 km.
March 26	i (Pb)	03 31 57.1	
	i Pg	32 02.9	
	i Sg	27.4	
	M _L : 4,0		Epicentral distance 215-220 km.
"	i (Pb)	09 00 39.8	
	i Pg	44.8	
	i Sg	01 09.8	
	M _L : 3,4		Epicentral distance 210-215 km.
"	i (Pb)	13 51 12.8	
	i Pg	16.8	
	i Sg	41.8	
	M _L : 3,7		Epicentral distance 215-220 km.
"	e (P)	15 49(58)	
"	e (P)	17 15(12)	
	e	16(18)	
"	i (Pb)	18 45 54.0	
	i Pg	58.5	
	i Sg	46 24.0	
	M _L : 3,4		Epicentral distance 215-220 km.

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 12/69
'E'

SEISMOGRAM READINGS

March 27

i	Pg	01 18 37.0	
i	Sg	48.0	
M _L : 3,1 Epicentral distance 90-95 km.			

"

e	(P)	05 03(28)	
---	-----	-----------	--

"

Approximately 15 aftershocks from 07^h of March 27 to 07^h of March 28.

"

<u>i</u>	<u>P</u>	12 54 47.8	
e	S	58(33)	

"

i	(Pb)	18 07 32.6	
i	Pg	37.1	
i	Sg	42.6	
M _L : 4,6 Epicentral distance 215-220 km.			

March 28

i	Pn	01 49 11.5	DS
i	Pg	21.0	
i	Sg	57.0	
M _L : 5,5 Epicentral distance 300-310 km.			

According to the preliminary information: 53 killed and heavy damage at Alaşehir (38°20'5N-28°31'7E) and Sarıgöl(38°20'4N-28°48'E).

"

e	Pn	05 40(56)	
i	Pg	41 05.5	
i	Sg	42.0	
M _L : 4,1 Epicentral distance 300-310 km.			

Approximately 20 aftershocks following the main shock to 08^h of March 28.

Chief
Dr. N. Öcal

March 28, 1969
R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 13/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 March 28, 1969 - April 4, 1969

March 28	i Pn	10 02 48.3	C
	i Pg	53.3	
	i Sg	03 19.3	
"	e Pn	11 42(27)	
	i Pg	32.1	
	ii Sg	57.8	
"	i Pg	14 32 40.6	
	i Sg	33 17.7	
"	e (S)	16 03(15)	
"	e Pn	19 38(25)	
	i Pg	32.3	
	i Sg	58.6	
"	i Pg	22 57 56.2	
	i Sg	58 33.0	
"	i Pg	23 23 11.5	
	i Sg	38.0	
March 29	<u>i P</u>	01 46 06.4	(C)
	T: 0.7 sec	0.05 mic.	
"	e Pn	06 27(45)	
	i Pg	49.9	
	i Sg	28 14.4	
"	<u>i P</u>	09 22 10.4	
	e (S)	25(47)	
"	e P	11 11(04)	
	e S	13(47)	
"	i Sg	11 49 42.7	
"	i Sg	11 50 20.7	

Continued

SEISMOGRAM READINGS

March 29	e Pn	13 14(09)	
	i Pg	13.6	
	i Sg	39.1	
"	<u>i P</u>	13 56 24.5	D
"	ei (Pg)	15 11(12)	
	i Sg	40.0	
"	i Pg	17 00 43.5	
	i Sg	01 23.0	
Strong microseisms from 18 ^h of March 29 to 08 ^h of March 31.			
March 30	i (Pg)	00 43 31.7	
"	ei Pn	09 58(49)	
	ei Sg	59(43)	
"	e Pn	11 00(41)	
	i Sg	01 09.8	
"	ei Sg	11 09(40)	
"	i (Sg)	12 10 13.8	
"	i	14 41 47.7	
	Seismic?		
"	i (Sg)	18 12 43.6	
"	e Pn	18 26(02)	
	i Pg	07.1	
	i Sg	33.1	
"	e Pn	19 03(32)	
	i Sg	04 22.1	
"	ei (Sg)	19 16(53)	
March 31	i Pg	02 29 37.3	
	i Sg	57.3	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 13/69
 'C'

SEISMOGRAM READINGS

March 31	e Pn	04 53(24)	
	i Pg	31.7	
	i Sg	54 08.2	
"	i Pg	05 50 15.2	
	i Sg	41.2	
"	i Sg	06 32 47.2	
"	<u>i P</u>	07 19 14.3	
"	i Pn	10 45 04.0	
	i Pg	09.0	
	i Sg	34.5	
"	i Pg	15 59 42.8	C
	i Sg	16 00 08.3	
"	e Pn	19 17(02)	
	i Pg	06.7	
	i Sg	32.7	
"	<u>i P</u>	19 36 28.5	C
	i	32.7	
	i (S)	45 40.7	
	T: 0.7 sec.	0.02 mic.	
"	e (P)	21 49(39)	
"	e (P)	22 48(08)	
April 1	i Pg	00 30 09.5	CNW
	ii Sg	19.5	
"	ei Pn	01 07(50)	
"	i Sg	01 39 57.5	
"	i Pg	02 25 47.4	
	i Sg	26 31.4	
"	e (L)	04 31(22)	
"	e P	14 11(01)	
	i S	12 42.0	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 13/69
'D'

SEISMOGRAM READINGS

April 1	ei Pn	19 00(15)	
	i Pg	19.8	
	i Sg	45.8	
"	e (S)	21 16(28)	
"	e (L)	22 09(24)	
"	e (Pn)	23 20(55)	
	i Pg	21 00.7	
	i Sg	27.2	
April 2	e Pn	01 11(22)	
	i Pg	27.1	
	i Sg	52.6	
"	e (S)	01 37(49)	
"	e Pn	03 31(20)	
"	e Pn	04 59(18)	
"	<u>i P</u>	07 36 49.7	
	i	37 13.9	
"	ei (Pn)	12 02(47)	
	i Pg	52.3	
	ii Sg	03 18.8	
"	e Pn	12 47(53)	
"	i Sg	12 48 47.8	
"	i Pn	13 04 18.3	
	i Pg	27.8	
	ii Sg	05 09.3	
"	i Pn	16 00 15.2	D
	i Sg	46.2	
"	ei P	18 58(47)	
"	e (L)	20 23(17)	
"	i (Sg)	22 48 59.5	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 13/69
 'E'

SEISMOGRAM READINGS

April 3	e Pg	00 51(40)	
	i Sg	51.9	
"	e Pg	03 49(39)	
	i Sg	56.3	
"	e (P)	04 03(43)	
Strong microseisms from 11 ^h of April 3 to 08 ^h of April 4.			
"	e Pn	14 02(48)	
	i Pg	53.5	
	ii Sg	03 18.5	
"	e Pn	16 39(28)	
	i Pg	33.5	
	ii Sg	59.7	
"	ei Pg	16 52(59)	
	i Sg	53 30.5	
"	<u>i</u> P	22 14 04.5	CS
	i (PPP)	19.8	
	e S	16(01)	
	T: 0.6 sec.	0.024 mic.	
"	<u>i</u> P	23 46 52.3	CE
	T: 0.5 sec.	0.03 mic.	
April 4	i Pg	00 49 27.2	CSW
	ii Sg	38.2	
"	e P	04 24(32)	
"	ei (Sg)	05 17(15)	
"	e (P)	06 50(28)	

101 aftershocks of Demirci earthquake from 08^h March 28 to 08^h April 4.
 19 " " Alaçehir " " " " " " " " " "
 2 foreshocks of the earthquake of April 6, 03^h50^m24^s.2 from 02^h of April 1 to 08^h of April 4.

Chief
 Dr. N. Öcal

April 4, 1969
 R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 14/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 April 4, 1969 - April 11, 1969

April 4	i Pg	08 32 46.0	
	i Sg	57.0	
"	e (S)	12 23(38)	
"	i (Sg)	12 34 01.0	
"	i (Sg)	13 54 07.0	
"	i Pg	14 38 41.4	CE
	i Sg	39 07.4	
"	i Pg	14 42 36.2	
	e Sg	43(01)	
"	ei (Pg)	15 07(51)	
	e Sg	08 25.9	
"	i Pg	16 44 14.9	
	i Sg	32.9	
"	e (S)	16 54(22)	
"	e (Pb)	17 34(03)	
	i Pg	11.9	D
	i Sg	55.8	
"	i Pg	19 24 43.3	D
	i Sg	25 27.8	
"	i Pb	20 12 59.8	C
	i Pg	13 06.3	
	i Sg	37.8	
"	i Pg	23 16 36.8	
	e Sg	17(03)	
"	i Pg	23 21 29.3	
	i Sg	54.8	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 14/69
'B'

SEISMOGRAM READINGS

April 5	<u>i</u> P	02 24 49.7	
	ei S	29(58)	
"	i Pg	07 02 07.1	
	e Sg	40.6	
"	e (P)	18 09(23)	
"	e (L)	20 19(41)	
"	e P	23 50(31)	
	e S	53(51)	
April 6	i Pn	03 50 24.2	DSW
	i Pg	33.7	
	i Sg	51 18.7	
	Epicentral distance 380-385 km. West Anatolia - 443 houses destroyed at the villages of Karaburun(38°37'2 N - 26°30'3 E) and Çeşme(38°18'1 N - 26°18'8 E) provinces. (Press.)		
"	ei Pg	07 49(16)	
	e Sg	50(01)	
"	e Pn	12 51(17)	
	i Pg	25.2	
	ii Sg	52 10.0	
"	i Pg	16 32 29.9	
	i Sg	56.4	
"	i Pg	16 51 27.9	
	i Sg	53.4	
"	e P	16 57(57)	
	i S	17 03 06.9	
April 7	i Pg	03 15 23.7	
	i Sg	58.7	
"	i Pg	03 58 37.7	C
	i Sg	59 03.7	
"	e (L)	04 18(21)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 14/69
 'C'

SEISMOGRAM READINGS

April 7	e (P)	06 35(19)	
	e (S)	40(38)	
"	i (Pg)	06 53 03.6	
"	i Pg	06 53 46.6	
	i Sg	54 12.6	
"	e Pg	11 01(50)	
	i Sg	02 16.5	
"	i Pg	11 56 59.7	
	i Sg	57 25.0	
"	ei Pg	18 46(06)	
	i Sg	30.5	
"	<u>i P</u>	20 35 45.4	
	e (S)	43(20)	
"	i Pg	22 43 56.4	
	i Sg	44 41.4	
April 8	e Pn	00 27(19)	
	i Sg	28 13.4	
"	i Pg	01 09 03.6	CN
	i Sg	29.9	
"	ei Pg	01 46(35)	
	e Sg	47(01)	
"	e (Pg)	02 06(59)	
	i Sg	07 46.4	
"	e (S)	02 30(54)	
"	e (S)	05 34(48)	
"	ei Pg	06 10(07)	
	e Sg	(53)	
"	ei P	10 35(06)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 14/69
'D'

SEISMOGRAM READINGS

April 8	e (Pn)	10 50(37)	
	i Sg	51 06.8	
"	ei Pg	11 24(07)	
	i Sg	51.3	
"	e (Pb)	13 00(49)	
	i Pg	56.7	
	i Sg	01 42.2	
"	<u>i</u> P	15 50 34.7	
	e (S)	51(40)	
	T: 0.7 sec.	0.02 mic.	
"	i Pg	16 57 44.2	CNE
	i Sg	58 11.7	
"	i Pg	17 12 47.2	CN
	i Sg	13 13.7	
"	i Pg	18 53 01.7	C
	i Sg	28.2	
"	i (Pb)	20 20 49.2	
	i Pg	53.4	CNE
	i Sg	21 19.2	
April 9	e (Pb)	01 40(31)	
	i Pg	35.9	
	i Sg	41 01.6	
"	ei Pg	13 22(44)	
	i Sg	23 11.0	
"	e (L)	16 31(46)	
"	i Pg	17 41 11.3	DSW
	ii Sg	16.0	
"	i Pg	22 22 26.4	CNE
	i Sg	52.9	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 14/69
 'E'

SEISMOGRAM READINGS

April 10	ei Pg	02 47(06)	
	i Sg	44.4	
"	i Sg	06 04 41.8	
"	i Pg	12 34 13.7	NE
	i Sg	40.7	
"	i Pg	12 50 45.7	
	i Sg	51 06.2	
"	<u>i P</u>	15 04 28.7	
	i (S)	12 56.6	
"	i Pg	20 04 52.6	
	i Sg	05 13.1	
"	e Pn	20 13(50)	
	ei Sg	14(51)	
"	ei Pg	21 58(35)	
	i Sg	59 19.6	
"	e (P)	22 18(48)	
April 11	ei (P)	02 11(19)	
"	i Pg	02 35 31.8	
	ii Sg	36 15.5	
"	i Pg	05 43 10.5	CNE
	i Sg	36.0	
"	e Pg	06 19(35)	
	i Sg	20 01.5	

Chief
 Dr. N. Öcal

April 11, 1969
 R. Can - E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 April 11, 1969 - April 18, 1969

April 11	i Pg	11 32 05.8	
	ei Sg	(26)	
"	i Pg	11 47 55.3	
	i Sg	48 21.1	
"	e (Pb)	12 24(09)	
	i Pg	28.3	
	i Sg	25 03.3	
"	e (S)	13 54(29)	
"	i Pg	14 24 28.3	(C)
	ii Sg	44.3	
"	e Pn	14 40(20)	
	i Pg	29.8	CN
	i Sg	55.8	
"	i Sg	15 05 29.3	
"	i Pg	18 17 53.8	
	i Sg	18 10.8	
"	e	18 30(01)	
	Seismic?		
"	i Pg	20 05 01.2	
	i Sg	27.2	
"	i Pb	20 31 23.7	(D)
	ii Pg	33.2	
	ii Sg	32 17.7	
"	i Pb	20 35 41.2	
	ii Pg	50.7	
	ii Sg	36 34.7	
"	ei Pg	20 49(50)	
	ei Sg	50(35)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'B'

SEISMOGRAM READINGS

April 11	i Pg	21 28 57.2	
	i Sg	29 17.2	
"	oi Pg	22 15(21)	
	ei Sg	16(06)	
"	i Pg	22 49 51.2	G
	i Sg	50 07.2	
April 12	i (P)	00 36 44.2	
"	i Pg	01 31 56.2	
	i Sg	32 17.2	
"	e (Pn)	01 46(19)	
	i Sg	47.2	
"	i Pg	02 22 14.7	C
	i Sg	41.2	
"	e Pn	02 26(08)	
	i Sg	36.2	
"	e Pn	02 34(01)	
	ii Pg	06.2	CN
	ii Sg	33.2	
"	e Sg	03 13(48)	
"	e Pg	03 31(19)	
	i Sg	40.7	
"	i Pg	03 48 16.9	C
	i Sg	43.2	
"	ei Pg	03 58(40)	
	i Sg	59 05.6	
"	e (Pg)	04 18(25)	
	i Sg	51.1	
"	i Pg	05 25 30.1	
	ei Sg	(56)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 15/69
'C'

SEISMOGRAM READINGS

April 12	i Pg	05 28 39.1	
	ii Sg	55.1	
"	e Pb	05 32(12)	
	i Pg	22.1	
	i Sg	33 06.1	
"	i Pg	12 23 28.1	C
	i Sg	53.1	
"	i Pg	15 21 42.1	C
	i Sg	22 08.8	
"	i Pb	15 33 39.0	DSE
	ii Pg	43.3	
	ii Sg	34 08.4	
"	i Pg	15 41 23.1	CN
	i Sg	47.3	
"	i Sg	16 12 41.9	
"	e Pn	16 34(23)	
	i Pb	32.0	(D)
	i Pg	40.0	
	i Sg	35 23.2	
"	i Pg	16 59 40.0	
	i Sg	17 00 06.5	
"	e Pg	17 24(46)	
	ei Sg	25(12)	
"	e Pb	17 55(13)	
	i Pg	18.5	CNE
	i Sg	44.0	
"	i Pg	18 28 52.3	CN
	i Sg	29 18.0	
"	<u>i P</u>	20 39 57.0	DS(E)
	i (S)	40 11.0	
"	e Pg	20 47(27)	
	e Sg	(52)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'D'

SEISMOGRAM READINGS

April 12	i Pb	21 16 37.5	
	i Pg	42.0	CNE
	i Sg	17 08.5	
"	i Pg	23 47 24.9	
	i Sg	51.0	
April 13	i Sg	01 36 10.0	
"	e Pn	09 37(10)	
	e Sg	(46)	
"	e Pg	10 14(51)	
	i Sg	15 11.4	
"	i Sg	10 39 31.9	
"	e Sg	15 07(21)	
"	e P	15 33(46)	
	i S	40 53.9	
"	e Pn	20 54(06)	
	i Sg	47.9	
"	i Pg	22 38 05.7	DS
	ii Sg	10.9	
"	i Pg	23 17 42.8	
	i Sg	18 08.8	
"	i Pg	23 19 18.3	C
	i Sg	44.7	
"	<u>i P</u>	23 46 53.4	
	e	50(57)	
	e (S)	54(55)	
April 14	e Pg	00 54(30)	
	i Sg	53.8	
"	e (Pb)	01 17(01)	
	i Pg	04.6	CNE
	i Sg	30.8	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'E'

SEISMOGRAM READINGS

April 14	e (Pn)	02 17(57)	
"	e Pg i Sg	03 45(24) 51.8	
"	e Pn	05 13(14)	
"	e Pg i Sg	05 30(15) 40.3	
"	ei Pg i Sg	05 39(50) 40 16.8	
"	i Sg	06 51 41.4	
"	e Pn	07 11(19)	
"	i Pg i Sg	11 36 03.8 29.8	CN
"	e Pg i Sg	11 38(01) 25.7	
"	i Pg i Sg	12 13 26.8 14 06.8	
"	<u>i P</u>	13 18 41.7	D
"	i Pg i Sg	13 29 32.3 57.8	
"	i Pg i Sg	13 40 59.7 41 42.7	
"	i Pg i Sg	13 43 37.2 44 19.7	
"	e (Pg) ei Sg	13 48(22) 49(02)	
"	i Pg ei Sg	14 10 00.7 (27)	DS
"	e Pn i Pg i Sg	16 30(11) 25.7 31 08.2	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'F'

SEISMOGRAM READINGS

April 14	ei Sg	16 44(49)	
"	i Pg	17 12 09.2	
	i Sg	35.2	
"	i Pg	17 35 27.7	
	ei Sg	(57)	
"	e Pg	18 41(29)	
	e Sg	42(10)	
"	e Pb	19 52(12)	
	ii Pg	16.3	C
	i Sg	41.2	
April 15	i (Pb)	02 12 33.7	
	i Pg	42.7	
	i Sg	13 28.2	
"	i Pg	04 35 10.9	
	i Sg	37.0	
"	e Sg	11 11(26)	
"	ei Sg	13 54(37)	
"	i Sg	14 26 18.6	
"	e (Pg)	14 27(06)	
	i Sg	27.3	
"	i Sg	16 11 10.1	
"	<u>i</u> P	17 43 04.6	D
	e (S)	46(07)	
"	i Sg	18 16 49.1	
"	ei Pg	18 44(42)	
	i Sg	56.1	
"	e Pb	19 45(37)	
	i Pg	43.0	CNE
	i Sg	46 07.8	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'G'

SEISMOGRAM READINGS

April 15	e Pn	20 41(01)	
	e (Sg)	(40)	
"	i Sg	21 25 03.1	
"	e Pg	22 02(49)	
	i Sg	03 02.4	
"	<u>i P</u>	22 27 06.4	G
	i S	29 13.4	
	T: 0.7 sec. 0.033 mic.		
April 16	e P	01 42(19)	
	e (S)	49(39)	
"	i (P)	02 09 02.1	
"	ei Pn	04 55(38)	
"	e (P)	05 11(14)	
"	e (P)	08 22(03)	
"	i Pg	12 01 10.6	(DSW)
	i Sg	36.1	
"	e P	12 41(11)	
"	i Pg	16 43 06.4	
	i Sg	31.6	
"	i Pg	17 53 23.8	CNE
	i Sg	49.6	
"	ei Pg	21 30(45)	
	e (Sg)	31(24)	
"	i (P)	21 47 30.6	
"	e Pn	22 57(05)	
"	e Pg	23 16(21)	
	i Sg	34.1	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 15/69
 'H'

SEISMOGRAM READINGS

April 16	e Pn	23 22(31)	
April 17	e Pn	00 56(04)	
"	ei Pg	03 13(45)	
	ei Sg	14(30)	
"	e Pb	03 56(22)	
	i Pg	31.6	
	i Sg	57 11.7	
"	e Pn	04 09(28)	
	i Pg	34.7	
	i Sg	10 01.2	
"	ei (P)	05 18(35)	
"	e Pn	05 29(52)	
"	e Pn	05 35(24)	
"	i Pg	06 52 18.7	
	i Sg	45.2	
"	e (P)	08.04(13)	
"	e (S)	09 19(53)	
"	i Pg	12 15 27.5	D
	i Sg	53.7	
"	i Pb	12 24 04.7	
	i Pg	08.9	
	i Sg	34.7	
"	e Pn	12 40(06)	
"	e Pn	13 29(52)	
	i Sg	30 45.2	
"	i Sg	15 22 10.3	
"	e Pg	15 46(52)	
	i Sg	47 17.6	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 15/69
'I'

SEISMOGRAM READINGS

April 17	e (P)	15 55(49)	
"	i Pg	18 55 17.7	C
	i Sg	43.8	
3 "	i Pb	19 22 37.3	DSW
	i Pg	41.8	
	i Sg	23 07.6	
"	i Pg	20 55 36.3	
	i Sg	56 11.8	
"	e (P)	22 10(29)	
"	i Pg	23 31 21.3	
	i Sg	46.3	
April 18	e Sg	01 14(32)	

Chief
Dr. N. Öcal

April 18, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 16/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 April 18, 1969 - April 25, 1969

April 18	e (Pn)	14 35(35)	
"	e (Pn)	15 48(01)	
April 19	e Pb	00 04(06)	
	i Pg	10.3	CNE
	i Sg	36.1	
"	e (Pg)	00 11(38)	
	i Sg	59.6	
"	e Pb	01 49(44)	
	i Pg	49.1	
	i Sg	50 15.1	
"	i Sg	01 58 06.6	
"	e Pb	03 31(58)	
	i Pg	32 03.1	
	i Sg	28.6	
"	e Pg	05 16(12)	
	i Sg	37.2	
"	<u>i</u> P	08 57 36.7	
	e (S)	09 07(49)	
"	i Pg	10 09 42.1	
	i Sg	10 08.3	
"	i	10 47 02.3	DE
	Local		
"	i Pg	13 31 15.9	
	i Sg	42.9	
"	e Pb	15 48(25)	
	i Pg	30.4	C
	i Sg	55.9	
"	<u>i</u> P	19 38 19.6	D

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 16/69
 'B'

SEISMOGRAM READINGS

April 19	e Pn	22 15(57)	
	i Sg	16 28.9	
"	i (Pg)	23 26 19.4	
	i Sg	57.4	
April 20	i Pb	05 00 01.5	C
	ii Pg	05.5	
	ii Sg	30.5	
"	i (Pg)	08 17 14.1	
	i Sg	58.6	
"	e Pg	12 14(01)	
	i Sg	27.1	
"	e Pn	15 10(13)	
	i Pg	19.7	C
	i Sg	45.3	
"	e Sg	22 36(24)	
April 21	e P	02 35(08)	
	e S	43(20)	
"	e Pb	04 38(28)	
	i Pg	33.4	
	i Sg	39 00.1	
"	<u>i P</u>	07 31 23.9	(DSW)
	e (PP)	34(18)	
	ei (PPP)	36(12)	
	i (S)	41 19.9	
"	ei Pg	10 11(05)	
	i Sg	20.1	
"	e (Pn)	11 00(55)	
	i Sg	01 19.9	
"	e (Pg)	15 07(58)	
	i Sg	08 20.0	
"	e Pn	17 37(43)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 16/69
 'C'

SEISMOGRAM READINGS

April 21	i Pg	17 55 43.0	
	i Sg	56 29.1	
"	e Pn	18 20(45)	
	i Pg	21 01.9	
	i Sg	46.1	
"	e Pg	18 35(48)	
	i Sg	36 35.1	
"	i Pn	20 37 34.6	C
	i Pg	52.1	
	i Sg	38 37.1	
"	i Pn	20 58 51.1	D
"	e1 Pg	21 39(08)	
	i Sg	21.1	
"	e Pg	22 01(38)	
	i Sg	02 24.1	
"	e P	23 34(50)	
	e (S)	40(18)	
April 22	e Pn	03 16(07)	
	i Sg	57.2	
"	e Pb	03 21(17)	
	i Pg	23.2	CNE
	i Sg	49.7	
"	e Pg	04 05(36)	
	i Sg	06 02.7	
"	e (Pg)	04 37(14)	
	e Sg	(58)	
"	i Pg	04 54 44.2	
	i Sg	55 01.2	
"	<u>i P</u>	04 57 44.9 (C)	
"	<u>i P</u>	06 51 39.2	
	e (L)	07 05(20)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 16/69
 'D'

SEISMOGRAM READINGS

April 22	<u>i</u> P e (S)	08 23 26.7 (C) 26(25)
"	i Local	09 29 58.2 DS
"	i Pg i Sg	10 49 22.0 C 47.2
"	ei Pg i Sg	12 05(34) 59.3
"	e (S)	15 57(30)
"	i Sg	16 57 11.0
"	i Pg i Sg	18 56 13.1 40,3
"	ei Pg e Sg	21 39(22) 40(07)
"	i Pg i Sg	22 09 29.3 54.3
"	<u>i</u> P i (PP) i (S) T: 0.8 sec. 0.08 mic.	22 41 55.3 CNW 43 22.3 47 48.3
April 23	ei Pb i Pg i Sg	03 58(39) 43.5 C 59 08.5
"	e Pg i Sg	08 24(37) 25 22.4
"	i Pg i Sg	09 07 36.4 08 02.9
"	e Sg	11 07(02)
"	e Seismic?	12 04(55)

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 16/69
 'E'

SEISMOGRAM READINGS

April 23	i Pb	13 00 26.4	
	i Pg	30.4	
	i Sg	54.9	
"	e Pg	13 32(50)	
	i Sg	33 16.4	
"	<u>i P</u>	13 40 42.9 (0)	
"	e (Pn)	14 41(12)	
	i Sg	45.4	
"	e Pn	14 50(40)	
	i Sg	51 12.4	
"	i Pg	15 00 56.4	C
	i Sg	01 21.9	
"	e Pg	15 23(02)	
	i Sg	28.9	
"	i Pg	15 54 34.4	
"	e Pb	20 26(53)	
	i Pg	27 03.3	
	i Sg	47.4	
"	i Pg	21 03 30.4	
	i Sg	56.4	
"	i Pb	21 20 19.4	
	i Pg	28.9	
	i Sg	21 12.9	
"	e Pb	22 12(03)	
	i Pg	12.9	
	i Sg	56.4	
April 24	i Pb	02 50 27.0	D
	i Pg	36.5	
	i Sg	51 21.5	
"	i Pg	04 53 58.0	C
	i Sg	54 24.5	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 16/69
 'F'

SEISMOGRAM READINGS

April 24	e Pg	06 45(01)	
	i Sg	26.5	
"	e Pg	12 04(08)	
	i Sg	34.5	
"	e Pn	14 46(53)	
	i Pg	47 16.5	
	i Sg	48 23.0	
"	e Pb	18 15(09)	CN
	i Pg	14.4	
	i Sg	40.5	
"	i Pg	19 20 51.5	C
	i Sg	21 17.0	
"	e Pg	19 45(55)	
	i Sg	46 22.0	
"	e Pg	21 33(40)	
	i Sg	56.4	
"	ei (Pn)	23 31(42)	
	i Sg	32 20.5	
April 25	e Pn	02 14(07)	
	i Sg	43.5	
"	<u>i P</u>	03 58 16.5	
"	e Pg	06 10(55)	
	i Sg	11 10.5	

Chief
 Dr. N. Öcal

April 25, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 17/69
 'A'

SEISMOGRAM READINGS

at
 (ISK) Kandilli - İstanbul

April 25, 1969 - May 2, 1969

April 25		Strong microseisms from April 25, 08 ^h to April 28, 17 ^h	
"	i Pg i Sg	08 12 14.3 58.5	
"	i Local	10 23 06.0	D
"	i Local	10 23 58.8	DNW
"	ei Local	10 25(11)	
"	i Local	10 25 45.0	DNW
"	i Local	10 26 23.9	DNW
"	e Local	10 27(01)	
"	i Local	10 28 45.0	DNW
"	e Pb i Pg i Sg	11 26(15) 21.5 55.0	
"	e (Pg) i Sg	11 45(03) 29.5	
"	e Pb i Pg i Sg	12 40(11) 16.1 50.1	
"	i Local	14 51 47.6	D
"	e Pn e Sg	19 33(36) 34(38)	
April 26	i Pg i Sg	03 23 37.9 24 04.1	CN
"	i Pg i Sg	05 57 52.6 58 18.6	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 17/69
'B'

SEISMOGRAM READINGS

April 26	e P	06 18(41)	
	i	22 38.6	
	i (S)	28 26.6	
"	e Pg	08 13(22)	
	i Sg	14 06.1	
"	ei Pg	08 26(36)	
	ei Sg	27(35)	
"	i	10 40 07.7	
	Seismic?		
"	i Pg	13 17 17.2	CN
	i Sg	43.2	
"	e Pn	15 55(39)	
	i Sg	56 28.2	
"	i Pg	19 56 05.7	(C)
	i Sg	31.7	
"	e (Pn)	19 59(54)	
	e Sg	20 00(23)	
"	e Pn	20 54(31)	
	i Sg	55 03.7	
"	ei Pb	21 33(22)	
	i Pg	31.2	C
	i Sg	34 15.7	
"	e (Pn)	23 14(59)	
	e Sg	15(45)	
April 27	<u>i</u> P	01 20 40.7	
"	i Pg	03 45 20.2	
	i Sg	45.7	
"	e Pb	04 29(53)	
	i Pg	30 02.8	D
	i Sg	46.8	
"	ei Pg	06 06(59)	
	i Sg	07 41.8	
"	i Pn	10 59 32.8	
	i Pg	50.6	
	i Sg	11 00 55.8	
"	e Pg	11 45(11)	
	i Sg	37.3	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 17/69
 'C'

SEISMOGRAM READINGS

April 27	e Pn	12 03(47)	
	i Sg	04 36.8	
"	i Pg	13 10 38.8	DW
	i Sg	52.6	
"	e Pb	13 59(25)	
	i Pg	34.8	
	i Sg	14 00 19.8	
"	e Pg	15 05(58)	
	i Sg	06 16.4	
"	i Pg	15 09 18.9	C
	i Sg	56.4	
"	i Pg	18 40 06.9	
	i Sg	32.9	
April 28	ei P	01 10(41)	
"	i Pg	02 49 49.4	D
	i Sg	50 00.4	
"	e Pg	03 52(59)	
	i Sg	53 25.4	
"	e Pb	05 15(48)	
	i Pg	53.0	
	i Sg	16 19.5	
"	e Pb	06 40(50)	
	i Pg	54.8	
	i Sg	41 20.0	
"	i	07 44 48.0	
	Seismic?		
"	e (P)	08 57(41)	
"	ei Pg	10 34(17)	
	ei Sg	(43)	
"	ei (P)	12 59(49)	
"	e Pn	16 50(21)	
"	e Pn	17 16(05)	
	i Sg	40.6	
"	e (P)	23 45(09)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 17/69
 'D'

SEISMOGRAM READINGS

April 29	i Pg	00 03 16.9	
	i Sg	38.7	
"	e (P)	03 30(25)	
"	<u>ii</u> P	04 42 29.7	D(S)E
	ei S	46 25.2	
	T: 0.7 sec.	0.067 mic.	
"	e (S)	10 15(51)	
"	e Pn	10 20(50)	
	ei Sg	21(20)	
"	i Pg	15 22 55.4	
	ei Sg	23(40)	
"	e Pn	16 28(21)	
	i Sg	29(10)	
"	e (P)	18 42(18)	
"	e P	21 30(12)	
	e (S)	40(24)	
April 30	i Pg	09 14 56.1	
	i Sg	15 04.7	
"	ei Pb	09 48(45)	
	i Pg	48.7	
	i Sg	49 14.2	
"	i Pg	10 30 13.7	
	i Sg	47.7	
"	i	14 05 14.8	
	Local		
"	i Pg	14 30 24.3	
	i Sg	49.8	
"	i Pg	19 02 49.3	
	i Sg	03 14.8	
"	i Pb	20 21 06.3	DSW
	ii Pg	10.8	
	ii Sg	36.8	

Epicentral distance 220 km.
 10-15 wounded and 50 houses destroyed at
 Demirci(39°02'6 N - 28°39'7 E)
 Strongly felt throughout Western Anatolia and
 at İstanbul.
 Approximately 35 aftershocks up to May 2, 08^h

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 17/69
 'E'

SEISMOGRAM READINGS

April 30	ei Pb	20 28(20)	
	i Pg	24.3	
	i Sg	49.8	
"	i Pb	21 33 28.5	D
	ii Pg	33.3	
	ii Sg	58.8	
"	i Pb	23 08 43.8	D
	ii Pg	48.0	
	ii Sg	09 14.4	
May 1	i Pb	01 15 15.8	DS
	ii Pg	20.3	
	ii Sg	45.0	
"	i Pg	03 57 06.3	
	ii Sg	12.8	
"	e (L)	04 02(32)	
"	i Pg	12 19 18.8	
	i Sg	20 05.6	
"	i Pg	12 43 20.8	
	i Sg	44 06.8	
"	ei P	18 03(40)	
"	<u>i P</u>	19 24 43.8	C
	i	47.5	
	i (S)	28 15.8	
"	ei P	20 08(08)	
"	e P	20 45(46)	
"	e (P)	23 21(18)	
"	e (P)	23 54(06)	
May 2	i (P)	01 28 33.8	
	ei	29 13.8	

Chief
 Dr. N. Öcal

May 2, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 18/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 May 2, 1969 - May 9, 1969

May 2	e Pn	07 35(15)	
	i Sg	36 13.8	
"	e Pn	09 46(52)	
"	e Pn	13 09(58)	
	i Pg	10 04.7	
	i Sg	23.7	
"	ei Pb	13 53(04)	
	i Pg	09.2	
	i Sg	34.7	
"	i Pg	16 40 52.2	
	i Sg	41 17.7	
"	e P	18 40(06)	
	i	35.7	
	e (S)	42(21)	
"	i Pg	21 08 58.6	C
	i Sg	09 16.1	
"	i Pg	22 59 05.1	
	i Sg	31.6	
"	e Pg	23 35(51)	
	i Sg	36 13.6	
May 3	i Pg	00 11 11.6	
	i Sg	55.6	
"	i Pg	00 19 35.1	
	ii Sg	20 00.6	
"	i Pg	02 17 00.3	C
	i Sg	25.6	
"	e Pn	03 26(59)	
"	e (P)	04 58(27)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 18/69
 'B'

SEISMOGRAM READINGS

May 3	e Pn	08 54(19)	
	i Pg	27.5	
	i Sg	52.7	
"	i Sg	10 06 17.5	
"	e Pg	11 37(50)	
	i Sg	38 16.5	
"	ei Pg	13 19(26)	
	i Sg	52.7	
"	i Pb	16 08 30.5	(D)
	ii Pg	34.7	
	ii Sg	59.0	
"	e Pb	16 16(48)	
	i Pg	53.0	(D)
	i Sg	17 19.5	
"	i Pg	17 36 53.5	
	ei Sg	37(21)	
"	i Pg	17 41 56.5	CN
	e Sg	42(23)	
"	e Pn	20 32(31)	
"	e Pg	20 52(18)	
	i Sg	31.5	
May 4	ei Pg	00 57(57)	
	i Sg	58 23.4	
"	e Pb	03 06(26)	
	i Pg	31.9	
	i Sg	07 05.4	
"	e Pn	11 56(16)	
"	i Pg	12 49 44.0	
	i Sg	50 10.4	
"	e P	12 55(59)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 18/69
 'C'

SEISMOGRAM READINGS

May 4	ei Pg	14 08(27)	
	ei Sg	09(14)	
"	i Pg	20 06 39.6	CN
	i Sg	07 05.4	
May 5	ei Pb	01 54(42)	
	i Pg	46.8	CNE
	i Sg	55 12.0	
"	e P	02 49(21)	
	e S	56(57)	
"	i Pg	04 33 42.8	
	i Sg	55.3	
"	<u>ii P</u>	05 40 39.9	DSW
	T: 0.7 sec.	0.07 mic.	
"	i Pg	10 20 00.3	
	i Sg	33.3	
"	e (P)	14 22(11)	
"	i Pg	15 03 50.7	CN
	ii Sg	04 04.2	
"	i Pg	16 29 31.7	CN
	i Sg	57.7	
"	e (P)	18 32(41)	
"	i Pn	19 25 19.5	
	ii Pg	26.6	CNE
	ii Sg	52.4	
"	i Pg	21 34 33.9	
	i Sg	56.1	
"	e (P)	22 00(21)	
"	ei Pg	22 27(02)	
	ei Sg	(47)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 18/69
 'D'

SEISMOGRAM READINGS

May 6	i Pg	00 18 11.5	
	l Sg	38.0	
"	i Pb	06 36 37.0	(D)
	ii Pg	41.5	
	ii Sg	37 07.0	
"	e Pg	11 24(31)	
	i Sg	57.0	
"	e Pg	13 15(50)	
	i Sg	16 14.9	
"	e Pg	18 32(37)	
	ei Sg	33(03)	
"	e Pg	19 46(05)	
	i Sg	30.8	
"	i Pb	22 06 13.7	
	ii Pg	18.5	C
	ii Sg	44.7	
"	ei Sg	22 07(51)	
"	e P	22 20(48)	
"	i Pb	22 35 10.7	C
	ii Pg	15.2	
	ii Sg	40.7	
May 7	ei Pb	00 48(24)	
	i Pg	28.2	
	i Sg	53.7	
"	ei Pg	03 44(05)	
	ei Sg	(30)	
"	e (S)	05 44(41)	
"	e	13 24(10)	
	Seismo?		

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 18/69
 'E'

SEISMOGRAM READINGS

May 7	ei Pg	15 46(39)	
	ei Sg	47(25)	
"	e Pb	16 23(10)	
	i Pg	17.2	
	i Sg	24 03.2	
"	e (P)	22 34(46)	
"	i Pg	23 51 46.5	C
	i Sg	52 21.0	
May 8	i Pg	11 58 50.4	C
	i Sg	59 16.1	
"	e Pg	16 43(45)	
	i Sg	44 11.0	
"	i Pg	18 14 34.4	
	ei Sg	56.4	
"	i Pg	18 46 05.9	C
	i Sg	31.4	
"	e (P)	20 27(09)	
May 9	ei Pg	05 18(02)	
	i Sg	20.1	
"	i Pg	05 50(06)	C
	i Sg	32.6	

Chief
 Dr. N. Öcal

May 9, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 19/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 May 9, 1969 - May 16, 1969

May 9	ei Pg	10 29(08)	
	i Sg	33.0	
"	ei Pg	13 52(28)	
	i Sg	44.0	
"	e Pb	19 22(48)	
	i Pg	52.0	
	i Sg	23 18.0	
"	e Pg	22 05(07)	
	ei Sg	(33)	
May 10	e Pn	09 31(14)	
"	i (P)	09 34 17.0	
"	i Pg	13 25 05.3	C
	i Sg	30.8	
"	e Pn	17 31(58)	
"	e (Pg)	19 17(57)	
	e (Sg)	18(36)	
"	e Pn	21 12(17)	
	i Sg	14 24.5	
"	i Pg	21 50 13.0	C
	ii Sg	32.5	
"	e Pg	22 01(33)	
	i Sg	02 00.4	
May 11	<u>i</u> P	00 25 43.3	D
"	e P	00 31(22)	
"	e Pn	00 43(57)	
"	e Pn	10 00(01)	
	e (Sg)	01(54)	
"	e Pn	11 36(03)	
"	e P	14 37(02)	
"	e Pn	15 28(42)	
	ei (Sg)	30(26)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 19/69
'B'

SEISMOGRAM READINGS

May 11	e Pn	15 32(36)	
	e (Sg)	33(53)	
"	i (Sg)	15 35 23.7	
"	i Pg	16 17 19.6	
	i Sg	45.6	
"	e Pn	16 24(38)	
	e (Sg)	26(22)	
"	e Pg	17 08(39)	
	i Sg	09 05.6	
"	e Pg	19 39(16)	
	i Sg	40 00.5	
"	e (P)	19 58(28)	
"	i Pg	21 52 22.4	
	ei Sg	(48)	
May 12	e Pb	01 12(27)	
	i Pg	31.2	CN
	i Sg	56.7	
"	ei Pg	03 42(42)	
	ei Sg	43(09)	
"	e (P)	05 01(17)	
"	i Pg	05 27 14.1	
	e Sg	28(01)	
"	ei P	16 38(52)	
	e (S)	41(37)	
"	ei (P)	19 14(42)	
	e	19(26)	
"	i Pg	21 45 55.3	CNE
	i Sg	46 20.3	
May 13	ei Pb	03 47(48)	
	i Pg	51.5	CNE
	i Sg	48 17.0	
"	i Pg	11 05 11.1	
	i Sg	37.6	
"	e (P)	11 21(06)	
"	e (P)	14 34(26)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 19/69
 'C'

SEISMOGRAM READINGS

May 13	e Pb	14 39(54)	
	i Pg	40 01.7	
	i Sg	38.5	
"	ei P	14 42(44)	
"	i Pb	17 48 33.6	C
	ii Pg	38.1	
	ii Sg	49 03.9	
"	e Pg	17 52(49)	
	i Sg	53 15.9	
"	ei Pg	18 02(10)	
	i Sg	47.3	
"	i Pg	19 19 06.3	
	ei Sg	(27)	
"	ei Pg	23 13(49)	
	i Sg	14 15.1	
May 14	e (P)	00 50(25)	
"	e Pn	01 59(06)	
	i Sg	38.0	
"	i Pb	07 48 27.3	(D)
	ii Pg	29.4	
	ii Sg	49.8	
"	e Pn	08 14(10)	
"	i Pn	10 06 42.7	
	ei Pg	07(01)	
	ei Sg	08(17)	
"	<u>i P</u>	19 45 27.3	D
	e (PP)	48(42)	
	ei (S)	55(52)	
	T: 0.9 sec. 0.1 mic.		
"	e Pn	22 58(05)	
	e Sg	(41)	
"	i Pb	23 58 06.2	CNE
	ii Pg	10.2	
	ii Sg	35.2	
	M _L : 4.2 Epicentral distance 220 Km.		
May 15	i Pg	03 14 51.0	CNE
	i Sg	15 17.0	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 19/69
 'D'

SEISMOGRAM READINGS

May 15	e Pn	08 05(11)	
"	ei (S)	08 15(40)	
"	e Pn	12 07(19)	
	i	49.6	
"	e Pg	12 31(20)	
	i Sg	47.6	
"	e Pg	13 00(45)	
	i Sg	01 11.6	
"	e P	13 09(49)	
	ei (S)	11(24)	
"	e Pn	13 56(46)	
"	e Pg	18 19(20)	
	ei Sg	(49)	
"	<u>i P</u>	20 46 25.4	D
	ei	49(06)	
"	<u>i P</u>	20 55 36.4	
	i	46.9	
	i (S)	21 05 33.4	
"	i Sg	21 54 17.4	
"	<u>i P</u>	22 51 00.3	
	ei	52(34)	
"	i (S)	23 00 56.2	
"	i Pg	23 14 55.7	
	i Sg	15 32.2	
May 16	i Pg	01 30 29.9	
	i Sg	48.1	
"	e Pn	03 42(28)	
"	<u>i P</u>	04 09 54.0	
	ei	11 13.0.	
"	<u>i P</u>	05 11 18.9	
	e (S)	13(33)	
"	e Pn	06 12(43)	

Chief
 Dr. N. Ünal

May 16, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 20/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 May 16, 1969 - May 23, 1969

May 16	e P	07 23(23)	
"	<u>i</u> P i	07 28 26.5 31.3	
"	i Seismic?	10 16 49.7	
"	ei (Pg) i Sg	14 33(54) 34 14.5	
"	i Sg	20 38 20.2	
"	i Sg	20 42 50.2	
"	i Pg i Sg	22 13 55.1 14 21.1	
"	e Pn i Sg	23 43(27) 44 05.1	
May 17	ei Pg i Sg	00 44(38) 55.0	
"	ei Pg i Sg	05 06(24) 36.8	
"	i Pg i Sg	07 55 16.8 42.8	
"	<u>i</u> P	08 49 23.7	
"	i Seismic?	14 11 07.7	
"	e P	14 24(01)	
"	i Pg ii Sg	14 27 08.7 17.2	CNW
"	e Pn i	18 57(08) 15.8	
"	ei Pg i Sg	22 54(59) 55 38.8	
May 18	e P	00 36(24)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 20/69
 'B'

SEISMOGRAM READINGS

May 18	e Pb	01 52(39)	
	i Pg	42.9	CNE
	i Sg	53 09.4	
"	ei Pg	05 13(08)	
	i Sg	53.9	
"	<u>i</u> P	08 56 09.0	
	i (S)	09 06 02.0	
"	e Pn	13 23(46)	
	i Pg	54.0	
	i Sg	24 19.0	
"	i Pg	19 32 40.1	CN
	i Sg	33 07.1	
"	i Pg	23 08 22.2	
	i Sg	48.2	
May 19	e Pb	04 02(13)	
	i Pg	17.7	
	i Sg	43.2	
"	i Pb	05 13 39.2	
	ii Pg	44.2	
	ii Sg	14 09.7	
"	i Pg	05 44 29.2	
	i Sg	54.7	
"	i Pg	09 54 04.3	
	i Sg	30.3	
"	i Pg	14 28 49.9	
	i Sg	29 25.4	
"	i Pb	15 27 55.4	
	ii Pg	59.9	
	ii Sg	28 25.4	
"	e Pn	17 18(54)	
"	e Pn	18 15(49)	
	ei Pg	16(11)	
	ei Sg	17(04)	
"	e Pg	19 34(01)	
	i Sg	26.4	
May 20	i Sg	00 50 18.5	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 20/69
 'C'

SEISMOGRAM READINGS

May 20	e Pb	01 30(46)
	i Pg	54.0
	ei Sg	31(34)
"	ei Pg	03 45(13)
	i Sg	38.5
"	e (S)	09 40(23)
"	ei Pg	22 47(01)
	i Sg	15.1
May 21	i Pg	02 05 25.1
	i Sg	51.4
"	e Pn	02 39(28)
"	<u>i</u> P	03 09 35.0
	e (S)	13(03)
	i L	19 59.0
"	e Pg	11 01(10)
	i Sg	42.6
"	i Pg	11 03 48.9
	i Sg	04 00.6
"	ei Pg	12 22(32)
	i Sg	58.7
"	ei Pb	21 07(26)
	i Pg	30.0
	i Sg	55.4
May 22	e (S)	04 36(01)
"	e Pg	10 26(44)
	i Sg	53.2

Strong microseisms from May 22, 13^h to
 May 23, 08^h.

"	ei Pg	22 43(57)
	i Sg	44 22.5

Chief
 Dr. N. Öcal

May 23, 1969
 E. Alsan

15 JUL 1969

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 21/69
'A'

SEISMOGRAM READINGS
at
(ISK) Kandilli - İstanbul
May 23, 1969 - May 30, 1969
.....

May 23	ei P	11 57(50)	
"	<u>i</u> P e (S)	13 17 13.4 27(24)	
"	ei Pb i Pg i Sg	15 42(49) 51.8 43 17.5	
May 24	e Pn	00 45(40)	
"	ei Pn	03 53(04)	
"	e (P)	06 05(21)	
"	e Pn	11 51(02)	
	Strongly felt at Adana (37°00'.7N-35°18'.3E)		
"	i Pg i Sg	17 08 12.0 C 37.1	
"	i (Sg)	17 25 56.1	
"	i Pg ei Sg	21 34 35.2 35(01)	
"	ei Pg i Sg	23 09(25) 52.3	
May 25	ei Pg e Sg	10 15(07) (45)	
"	e (S)	11 35(10)	
"	e Pn i Pg i Sg	13 41(18) 25.6 51.6	
"	e Pg i Sg	13 43(41) 44 07.1	
"	i Pg ii Sg	16 10 51.8 11 04.1	
"	e Pg e Sg	17 00(24) 50.7	
"	i (Sg)	17 05 22.7	

Continued



KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 21/69
'B'

SEISMOGRAM READINGS

May 25	e (Sg)	17 07(54)	
"	i (Sg)	17 10 46.0	
"	i (Sg)	18 24 45.2	
"	i Pg	19 27 53.7	
	i Sg	28 19.2	
May 26	i (Pg)	00 59 25.6	C(N)
	i (Sg)	01 00 20.7	
"	ei Pg	02 29(03)	
	i Sg	27.8	
"	i Pg	08 43 58.5	
	i Sg	44 18.0	
"	e (Pg)	12 08(04)	
	i Sg	31.1	
"	e P	15 50(03)	
	e (S)	16 00(26)	
"	ei Pg	16 01(19)	
	i Sg	46.1	
"	i Pg	17 27 41.1	
	ii Sg	48.1	
"	e (Pn)	17 32(46)	
	i Sg	33 16.1	
"	i Sg	18 24 16.7	
"	ii Pg	20 34 20.1	DS(W)
	ii Sg	26.2	
"	i Pg	20 55 57.2	
	i Sg	56 19.7	
"	i Pg	21 30 04.2	DS
	ii Sg	10.7	
"	e (Pg)	21 41(02)	
	i Sg	22.2	
"	i Pg	21 55 25.8	DS
	ii Sg	32.2	
"	i Pg	23 01 59.8	CN
	i Sg	02 27.3	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 ISTANBUL TURKEY

No: 21/69
 'C'

SEISMOGRAM READINGS

May 26	e (Pg)	23 04(58)	
	ei Sg	05(26)	
"	e Pn	23 37(54)	
	ei Sg	38(35)	
"	i Pg	23 39 13.2	
	i Sg	19.3	
May 27	e L	01 09(36)	
"	e Pn	08 04(36)	
"	e (S)	09 06(40)	
"	e Pg	10 32(12)	
	i Sg	39.4	
"	e (L)	13 09(46)	
"	e (Pn)	14 37(34)	
"	ei Pb	16 43(27)	
	i Pg	31.0	
	ii Sg	56.9	
"	e Pn	19 08(17)	
"	i Pg	19 23 13.6	
	i Sg	39.1	
"	i Pg	20 09 59.6	
	i Sg	10 26.6	
May 28	e Pb	01 47(34)	
	i Pg	36.5	CNE
	i Sg	48 01.7	
"	i Pg	01 53 04.2	C
	i Sg	30.2	
"	e (L)	02 07(37)	
"	e P	03 53(47)	
	e (S)	04 04(13)	
"	ei Pg	04 49(37)	
	i Sg	55.7	
"	i Pg	10 59 26.3	
	i Sg	51.8	
"	e P	13 48(02)	
	i S	54 16.8	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 21/69
 'D'

SEISMOGRAM READINGS

May 28	i Pg	14 46 08.7	
	ii Sg	15.1	
"	ei (Pg)	18 55(18)	
	i Sg	44.9	
"	i Pg	19 50 24.9	
	i Sg	50.9	
May 29	e (Pn)	00 17(58)	
	i Sg	18 49.5	
"	e Pb	19 54(18)	
	i Pg	22.7	CNE
	i Sg	48.8	
May 30	e Pn	00 11(21)	
	e Sg	12(27)	
"	ei Pb	04 33(10)	
	i Pg	14.8	
	i Sg	40.3	
"	ei Pb	05 29(07)	
	i Pg	11.8	
	i Sg	37.6	

Chief
 Dr. N. Öcal

May 30, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 22/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 May 30, 1969 - June 6, 1969

May 30	e Pg i Sg	08 09(25) 48.4	
"	e Pn i Pg ii Sg	14 08(42) 48.9 09 09.4	CNE
"	i Pg ii Sg	15 07 19.4 45.4	
"	e P i (S)	16 15(27) 23 07.4	
"	e P e (S)	16 42(40) 46(45)	
"	i Pg ei Sg	21 55 10.4 (52)	
"	e Pn	23 46(58)	
May 31	i Pg i Sg	03 23 06.3 16.4	CNW
"	i Pg i Sg	05 03 19.4 34.4	
"	<u>i</u> P i	05 08 50.9 (C) 10 10.4	
"	e Pg i Sg	05 36(44) 54.4	
"	i (Pb) i Pg i Sg	14 21 24.3 35.5 22 27.5	
"	i Pg i Sg	14 44 18.0 47.0	
"	e P	22 29(04)	
"	ei P	22 44(20)	
June 1	ei Seismic?	00 14(24)	
"	i Pb ii Pg ii Sg	04 44 12.9 17.1 42.9	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 22/69
 'B'

SEISMOGRAM READINGS

June 1	i Pn	08 45 42.8	
"	e (S)	19 20(28)	
June 2	e (Pg)	07 32(47)	
	i Sg	33 27.7	
"	ei P	10 10(15)	
"	e Pb	20 02(52)	
	i Pg	56.0	
	i Sg	03 21.5	
"	e Pn	20 58(37)	
June 3	ei Pg	02 40(29)	
	i Sg	55.2	
"	e (S)	04 26(15)	
"	i Pg	08 59 04.3	
	i Sg	25.3	
"	i Pg	09 43 26.3	C
	i Sg	52.3	
"	i Pg	12 03 07.4	
	i Sg	47.9	
"	i	13 07 14.5	
	Seismic?		
"	e (L)	22 35(40)	
June 4	e (L)	05 12(50)	
"	i	11 03 59.9	D
	Local		
"	i (Sg)	11 05 26.7	
"	e (L)	15 38(25)	
"	e L	16 38(50)	
"	e (S)	16 50(08)	
"	e (S)	18 26(20)	
"	e (S)	20 33(26)	
June 5	i	10 14 19.7	
	Seismic?		

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 22/69
'C'

SEISMOGRAM READINGS

June 5	<u>i</u> P	10 56 50.8 D
	T: 0.6 sec.	0.02 mic.
"	e (L)	11 18(21)
"	ei P	20 50(57)
	e (L)	21 00(25)
June 6	e (Pn)	01 02(50)
	i Sg	03 31.4
"	e L	05 05(32)
"	i Pg	05 09 51.3
	i Sg	10 14.6
"	i Pg	06 17 10.4
	i Sg	24.6

Chief
Dr. N. Özal

June 6, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 23/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 June 6, 1969 - June 13, 1969

June 6	i Pb	12 50 43.7	
	ii Pg	48.0	
	ii Sg	51 14.6	
"	ei Pn	21 14(08)	
"	e Pg	21 32(05)	
	ei Sg	(17)	
June 7	ei (Pg)	03 11(32)	
	i Sg	12 08.4	
"	ei Sg	03 42(37)	
"	i	14 25 08.8	
	Seismic?		
"	ei P	15 33(04)	
	e (S)	35(23)	
"	e (S)	18 05(13)	

Strong microseisms from June 7, 19^h to
 June 9, 08^h

June 8	e Pb	00 42(31)	
	i Pg	36.7	
	i Sg	43 11.2	
"	e Pb	01 27(43)	
	i Pg	46.4	
	i Sg	28 12.2	
"	i Pg	03 40 20.3	D
	i Sg	35.3	
"	i (Sg)	08 19 22.9	
"	ei Pg	08 41(01)	
	i Sg	21.4	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 23/69
 'B'

SEISMOGRAM READINGS

June 8	ei Pg	16 16(23)	
	ei Sg	(41)	
"	e (Pg)	17 11(51)	
	i Sg	12 17.7	
"	i Pg	21 31 26.9	
	i Sg	58.9	
"	e (S)	22 53(44)	
June 9	i Pg	06 25 15.7	dG
	i Sg	41.7	
"	i Pg	20 24 23.3	
	i Sg	25 02.7	
"	e Pg	20 46(53)	
	i Sg	47 19.7	
"	e P	22 12(51)	
June 10	e (Pg)	15 15(09)	
	i Sg	35.0	
"	e P	17 27(52)	
"	e (S)	17 37(55)	
"	e P	22 58(22)	
	i	59 08.6	
	i (S)	23 03 26.9	
"	ei P	23 37(06)	
	ei	38(25)	
June 11	e (Pg)	00 07(33)	
	i Sg	38.5	
"	<u>i</u> P	04 59 52.3	
	e (S)	05 08(35)	
	T: 0.7 sec.	0.038 mic.	
"	i Pg	08 36 36.7	
	ii Sg	49.7	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 23/69
 'C'

SEISMOGRAM READINGS

June 11	i Pg	10 42 36.7	
	i Sg	43 02.7	
"	i Pg	10 57 41.7	
	i Sg	58 07.7	
"	i Pg	13 15 16.6	
	i Sg	32.6	
"	e Pn	21 17(52)	
	i Pg	56.4	
	i Sg	18 16.5	
June 12	e (Pn)	04 44(25)	
	i	43.4	
"	i Sg	04 44 53.9	
"	ei P	07 53 30.7	
	i	08 03 32.2	
"	e (L)	09 58(40)	
"	<u>i</u> P	15 15 19.3	(C)
	e (S)	16(48)	
"	i Pg	16 34 28.8	
	i Sg	55.2	
"	e (Pg)	17 53(30)	
	i Sg	45.7	
"	e Pn	18 02(12)	
"	<u>i</u> P	19 10 59.0	
"	e (S)	20 47(44)	

Strong microseisms from June 12, 22^h to June 13, 05^h

June 13	<u>i</u> P	01 25 02.2	
"	i Pg	04 32 26.0	CNW
	ii Sg	36.0	

Chief
 Dr. N. Özal

June 13, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 24/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 June 13, 1969 - June 20, 1969

June 13	<u>ii</u> P	09 00 22.7	D
	e (S)	03(13)	
	e (L)	09(53)	
"	e Pg	15 18(23)	
	i Sg	49.6	
"	ei Pg	15 19(12)	
	i Sg	39.6	
"	i Pg	18 39 18.1	CN
	i Sg	44.6	
"	e (S)	19 46(33)	
June 14	e (S)	01 03(07)	
"	<u>i</u> P	03 41 50.2	D
	i S	43 39.5	
"	<u>i</u> P	13 49 15.9	D
	i (PP)	23.9	
	e (S)	51(01)	
	T: 0.5 sec.	0.04 mic.	
"	e (P)	13 55(32)	
"	i Pn	14 34 44.4	
"	<u>i</u> P	17 47 35.3	
	e (S)	51(07)	
	T: 0.9 sec.	0.06 mic.	
"	e Pn	21 40(55)	
	i Sg	41 51.1	
"	i Pg	22 51 26.3	D
	ei Sg	(49)	
June 15	i Pg	00 44 57.2	
	i Sg	45 20.7	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 24/69
 'B'

SEISMOGRAM READINGS

June 15	i Pg	01 00 37.2	CN
	i	50.2	
	i Sg	01 03.2	
"	e (Pg)	02 58(38)	
	i Sg	59 05.7	
"	<u>i</u> P	06 00 31.7	(C)
	e (S)	02(38)	
	T: 0.6 sec.	0.013 mic.	
"	e Pn	14 53(28)	
"	ei P	17 08(41)	
	i	55.6	
"	e L	17 35(22)	
"	e (Pg)	17 55(49)	
	i Sg	56 16.1	
"	e (Pn)	22 29(25)	
	ei Sg	(57)	
"	e Pg	22 39(07)	
	i Sg	29.5	
"	e Pn	23 43(14)	
	i Sg	47.0	
June 16	i Pg	03 13 23.0	
	i Sg	49.0	
"	i Pg	05 08 08.0	
	ii Sg	22.0	
"	e Pg	05 09(36)	
	i Sg	50.0	
"	e Pg	05 20(04)	
	i Sg	30.0	
"	i Pg	05 54 46.0	
	i Sg	55 02.4	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 24/69
 'C'

SEISMOGRAM READINGS

June 16	e P	16 08(22)	
"	ei Pg	16 22(15)	
	i Sg	41.0	
"	e Pn	23 58(04)	
June 17	e P	05 20(32)	
	e (S)	22(58)	
"	ii Pg	06 38 27.0	
	ii Sg	32.0	
"	e Pn	13 26(23)	
"	ei Pb	13 49(51)	
	i Pg	55.0	
	i Sg	50 17.4	
"	ei Pg	14 19(50)	
	i Sg	20 16.4	
"	e (Pg)	18 44(59)	
	ei Sg	45(43)	
"	<u>i</u> P	19 39 32.3	
	i (PPP)	40 17.3	
	i (S)	43 31.3	
	i (L)	49 47.3	
"	i Pg	20 11 22.0	
	i Sg	44.1	
"	i Pg	22 16 54.0	
	i Sg	17 20.3	
"	e P	23 27(38)	
	ei (S)	30(35)	
June 18	e P	00 17(41)	
	i	45.3	C
"	e Pg	00 54(38)	
	ei Sg	55(08)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 24/69
 'D'

SEISMOGRAM READINGS

June 18	e P	01 50(51)	
"	e Pg	01 53(12)	
	e Sg	(38)	
"	e L	04 17(29)	
"	ei Pb	04 28(33)	
	i Pg	37.2	
	ii Sg	29 04.0	
"	e Pn	14 33(10)	
"	i	14 37 08.6	
	Seismic?		
"	e P	20 56(42)	
	e (S)	21 07(16)	
"	e (Sg)	22 22(06)	
"	<u>i P</u>	23 56 49.1	dC
	i S	00 07 15.1	
June 19	i Pg	00 12 41.0	CNE
	ii Sg	51.0	
"	e (Pn)	00 54(54)	
	i Sg	55 37.1	
"	i Pg	03 10 04.0	
	i Sg	30.2	
"	e (Pg)	05 02(12)	
	i Sg	32.0	
"	e (S)	05 53(33)	
"	ei P	06 54(24)	
	e (S)	56(31)	
"	e Pn	07 14(23)	
"	ei (S)	07 25(07)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 24/69
 'E'

SEISMOGRAM READINGS

June 19	i Pg	11 19 35.0	
	i Sg	20 02.0	
"	e P	13 55(21)	
	i	28.5	
"	e (L)	15 29(21)	
"	i Pg	16 00 03.0	
	i Sg	29.0	
"	i (Sg)	16 06 38.0	
"	ei P	19 08(37)	
	T: 0.7 sec.	0.018 mic.	
"	e L	19 37(41)	
"	i	20 45 22.0	
	Seismic?		
"	e L	21 09(43)	
June 20	ei Pg	01 16(21)	
	i Sg	48.0	
"	<u>i</u> P	02 50 26.0	D
	i S	03 00 49.0	
"	i (P)	07 03 05.0	

Chief
 Dr. N. Öcal

June 20, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 25/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 June 20, 1969 - June 27, 1969

June 20	i Pg	10 41 22.1	
	i Sg	47.4	
"	<u>i</u> P	15 49 45.9	D
"	e	17 29(52)	
	Seismic?		
June 21	ei (P)	07 59(59)	
"	ei P	15 23(55)	
	i	25 57.3	
"	i	15 41 24.8	
	i Pb	26.8	
	i Pg	34.8	
	i Sg	42 15.8	
"	ei P	16 40(46)	
	i	41 03.8	
	i (S)	45 06.8	
"	i	17 58 45.3	
	Local		
"	i Pg	19 17 17.8	
	i Sg	23.9	
June 22	ei (PKP)	01 41(13)	
"	e (S)	01 50(31)	
"	e P	02 45(58)	
	i S	56 01.8	
"	ei Pg	03 00(36)	
	ei Sg	01(05)	
"	e (L)	10 20(13)	
"	<u>i</u> P	10 57 44.7	
	i	52.3	
	e (S)	11 08(02)	
"	i (S)	14 54 06.8	
"	i Pg	15 05 00.3	(DS)
	ii Sg	06.3	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 25/69
'B'

SEISMOGRAM READINGS

June 22	e Pn	15 12(33)	
	i Sg	13 29.3	
"	e (L)	16 44(05)	
"	i Pb	17 28 06.6	
	ii Pg	10.8	
	ii Sg	37.8	
"	e Pb	20 18(59)	
	i Pg	19 02.9	
	i Sg	28.8	
June 23	<u>i P</u>	00 37 38.9	
	Strong microseisms from June 23, 05 ^h to June 24, 09 ^h		
"	e (L)	05 58(07)	
"	i Pg	10 34 15.7	
	i Sg	42.8	
"	i Pg	17 43 54.9	C
	i Sg	44 20.9	
"	e (S)	22 29(55)	
June 24	e (S)	01 01 50.9	
"	ei Pb	01 03(48)	
	i Pg	50.4	
	i Sg	04 12.9	
"	i Pg	01 06 52.9	
	i Sg	07 15.4	
"	e Pb	01 10(52)	
	i Pg	55.2	
	i Sg	11 17.9	
"	e Pb	01 50(28)	
	i Pg	30.9	C
	i Sg	54.1	
"	i Pg	02 48 58.4	
	i Sg	49 20.9	
"	e (L)	03 55(41)	
"	i Pg	04 24 35.9	
	ii Sg	50.9	

Continued .

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 25/69
 'C'

SEISMOGRAM READINGS

June 24	e Pn	08 08(16)	
"	e Pn	08 44(17)	
	i	21.5	(DSE)
	i Pg	24.0	
	ii Sg	47.0	
"	e P	11 10(34)	
	e (S)	20(57)	
"	e Pb	13 31(21)	
	i Pg	23.2	
	i Sg	44.0	
"	e P	15 59(43)	
	e (S)	16 01(07)	
June 25	<u>i P</u>	00 21 13.3	
	<u>ei (S)</u>	31(24)	
"	i Sg	00 42 11.2	
"	i Pg	02 57 37.6	C
	i Sg	58 03.6	
"	e P	06 13(10)	
	i	33.5	
	e (S)	14(42)	
"	e P	07 35(59)	
	i (S)	45 07.1	
"	e (Pn)	08 44(48)	
"	e (Pn)	13 08(51)	
"	i Sg	16 02 05.6	
"	i Pg	19 40 03.3	DSW
	ii Sg	09.6	
"	i Pg	19 52 11.6	
	i Sg	28.3	
"	i Sg	20 03 42.9	
"	e L	22 22(11)	
June 26	e (P)	03 56(07)	
	e (S)	59(31)	

Continued



KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 25/69
'D'

SEISMOGRAM READINGS

June 26	e S	14 07(27)
June 27	e Seismic?	00 00(05)
"	e (P)	02 27(21)
"	e P i S	04 51(36) 53 41.2

Chief
Dr. N. Öcal

June 27, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 26/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 June 27, 1969 - July 4, 1969

June 27	Strong microseisms from June 27, 08 ^h to June 28, 23 ^h		
"	ei Seismic?	09 12(14)	
"	ei P ei (S)	10 36(56) 37(55)	
"	i Pb ii Pg ii Sg	10 41 00.7 05.0 29.7	(D)
"	i Sg	14 06 27.7	
"	e Pg i Sg	20 33(15) 42.2	
June 28	ei Pb i Pg i Sg	01 15(26) 30.2 56.2	
"	i Pg ii Sg	10 11 29.1 54.1	DS
"	e (Pg) i (Sg)	18 15(33) 16 06.1	
"	e L	18 28(45)	
"	i Pg ei Sg	20 41 00.2 (26)	
"	i Sg	20 46 40.2	
"	e (S)	22 41(21)	
"	i Pg ii Sg	23 18 33.9 52.2	CSE
June 29	ei (P)	08 15(48)	
"	e P i	10 53(55) 54 07.1	
"	e Pn i Pg i Sg	16 24(06) 13.4 38.7	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 26/69
'B'

SEISMOGRAM READINGS

June 29	e P	17 28(50)
"	e P	18 21(26)
"	i i Pg ei Sg	21 14 52.2 57.2 15(22)
"	ei Pg i Sg	22 03(14) 27.7
"	e Pn	22 51(51)
"	ei Pg i Sg	23 42(22) 44.7
June 30	e Pg i Sg	03 34(31) 38.2
"	e Pn i Sg	07 06(15) 59.2
"	e Pg i (Sg)	16 12(43) 13 10.2
"	e Pg i Sg	17 03(19) 31.1
"	e Pg i Sg	18 17(07) 18.2
"	e P	18 47(46)
"	e (L)	19 23(31)
"	e (S)	20 28(31)
"	e (S)	21 28(07)
July 1	i Sg	02 41 05.7
"	e (Pg) i Sg	05 44(05) 21.7
Strong microseisms from July 1, 18 ^h to July 2, 13 ^h		
"	ii Pg ii Sg	19 39 24.7 40.9
July 2	e L	00 11(21)
"	e (S)	02 21(16)

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 26/69
 'C'

SEISMOGRAM READINGS

July 2	e (S)	08 01(51)
"	e (S)	10 36(21)
"	e P ei (S)	12 51(56) 53(03)
"	e L	16 29(31)
"	e L	18 57(55)
"	i Pg i Sg	22 13 07.5 19.6
"	i Pg i Sg	22 44 52.4 45 11.6
July 3	ei P i (S)	09 43(31) 44 58.1
"	i Pg ii Sg	10 31 32.2 52.7
"	e L	18 54(40)
"	e (S)	20 24(31)
"	e L	22 08(21)
"	e (P)	23 17(44)
"	e (Pn) i Sg	23 27(47) 28 19.7
July 4	e Pn ei Sg	00 17(11) (49)
"	e (Pn)	02 54(04)

Chief
 Dr. N. Öcal

July 4, 1969
 E. Alsan

15 AUG 1969

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 27/69
'A'

SEISMOGRAM READINGS
at
(ISK) Kandilli - İstanbul
July 4, 1969 - July 11, 1969
.....

July 4	e Pn	08 30(51)
	ei Sg	31(39)
"	e P	10 15(18)
	i (PPP)	33.1
	e S	17(03)
"	e (Pn)	19 04(54)
	i Sg	05 29.1
"	i Pg	20 21 39.1
	i Sg	22 04.9
"	e (P)	23 17(11)
July 5	e (P)	01 52(17)
	i	25.1
"	e (S)	02 08(13)
"	e (P)	22 33(36)
July 6	i Sg	03 28 17.6
"	e	08 09(41)
	Seismic?	
July 7	e (Pg)	04 12(33)
	i Sg	59.1
"	e P	05 00(17)
	e (S)	07(05)
"	i	09 20 25.1
	Local	
"	e (S)	18 16(07)
July 8	e P	04 20(02)
"	<u>i</u> P	08 11 08.5
	ei S	12(45)
"	i Pg	20 02 18.8
	i Sg	44.0
July 9	e (S)	02 18(31)
	e L	04 24(05)

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 27/69
 'B'

SEISMOGRAM READINGS

July 9	e Pb	10 19(59)	
	ei Pg	20(07)	
	i Sg	52.0	
"	<u>i</u> P	17 29 38.0	eDE
	i	42.5	
	e (S)	31(36)	
	T: 0.5 sec.,	0.05 mic.	
"	i (P)	19 32 18.0	
"	e Pg	20 03(16)	
	e Sg	(43)	
"	i Pg	22 47 54.0	
	i Sg	48 19.2	
July 10	i Pg	07 17 08.5	D
	i Sg	32.0	
"	i Local	08 58 00.8	C
"	i Local	09 10 27.1	CE
"	i Local	09 16 34.1	
"	i Local	09 29 38.1	CSE
"	e Pn	09 33(13)	
	i Pg	17.6	
	i Sg	42.6	
"	i Local	09 34 57.1	CSE
"	i Local	09 42 49.1	
"	i Local	09 51 47.1	CSE
"	i Local	09 57 41.1	CSE
"	i Pg	18 37 19.9	C
	i Sg	26.1	
"	i Sg	21 46 52.6	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 27/69
'C'

SEISMOGRAM READINGS

July 10	i Pg	22 27 40.6	D(S)E
	i Sg	28 12.1	
"	i Pg	23 34 23.6	
	i Sg	30.1	
July 11	e Pn	00 07(15)	
	i Pg	19.1	
	i Sg	44.6	
"	e Pn	01 46(53)	
	i	47 24.8	

Chief
Dr. N. Öcal

July 11, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 28/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 July 11, 1969 - July 18, 1969

July 11	ei Pg	08 54(20)
	i Sg	46.1
"	e Pn	12 42(35)
	ei Pg	(49)
	i Sg	43 40.1
July 12	e (S)	00 23(11)

Strong microseisms from July 12, 02^h
 to July 14, 17^h.

"	i Sg	02 39 27.0	
"	e Pn	02 40(31)	
	e (Sg)	41(02)	
"	e L	03 03(51)	
"	i	03 07 25.5	C
	i Pg	29.0	
	ii Sg	08 37.5	
"	e (L)	05 01(21)	
"	i Pg	06 34 13.0	
	i Sg	27.0	
"	e (Pg)	08 16(34)	
	i (Sg)	51.5	
"	i Sg	08 17 17.5	
"	ei Pg	12 44(29)	
	i Sg	50.1	
"	<u>i P</u>	13 12 46.1	
	e (S)	17(56)	
"	i	13 35 40.8	
	Seismic?		
"	i	13 59 16.1	CN(W)
	Local		
"	i Sg	15 27 43.1	
"	ei (Pg)	17 21(09)	
	ei Sg	(49)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 28/69
 'B'

SEISMOGRAM READINGS

July 12	i P	19 28 36.1	
	ei (PP)	31(41)	
	i (S)	38 43.1	
July 13	i Pg	03 39 28.1	
	i Sg	45.1	
"	i Sg	03 39 58.6	
"	i Pg	09 29 52.9	
	ii Sg	30 10.2	
"	e Pg	12 53(08)	
	i Sg	25.2	
"	e Pn	12 55(49)	
	i Pg	55.2	
	i Sg	56 26.7	
"	i	21 04 19.2	
"	e Pn	22 19(14)	
	ei (S)	20(47)	
July 14	i Pg	02 04 56.7	
	i Sg	05 23.2	
"	e L	04 28(31)	
"	i Sg	09 39 35.8	
"	e Pg	14 23(03)	
	i Sg	29.3	
"	i (Sg)	16 38 29.3	
"	i (P)	17 23 04.3	
"	i Pg	22 31 58.1	cD
	i Sg	32 23.8	
"	e Pg	23 12(29)	
	i Sg	45.3	
July 15	e Pn	01 42(31)	
	i Sg	43 07.3	
"	i Pg	03 15 27.9	cD
	i Sg	53.9	
"	e Pn	05 08(28)	
	i Sg	09 01.2	

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 28/69
 'C'

SEISMOGRAM READINGS

July 15	ei Pg	12 39(47)	
	e Sg	40(03)	
"	e (P)	15 34(46)	
"	<u>i P</u>	18 04 44.4	
	i	05 19.4	
	T: 0.5 sec. 0.035 mic.		
"	e Pn	19 49(41)	
	i Sg	50 08.4	
"	ei Pg	19 54(43)	
	i Sg	55 02.4	
July 16	ei (P)	05 11(08)	
"	<u>i P</u>	08 28 41.9	
	i (S)	38 23.4	
"	ei Pn	11 55(33)	
	i S	56 24.4	
"	i Pg	13 18 40.8	
	i Sg	19 07.3	
"	e Pg	18 14(07)	
	ei Sg	(37)	
July 17	i (P)	03 49 04.3	
"	ei Pg	09 15(05)	
	i Sg	30.2	
"	ei Pg	20 19(19)	
	ei Sg	(44)	
"	ei Pn	23 02(30)	
	ei S	03(51)	
"	e Pn	23 30(49)	
	i Sg	31 22.2	
July 18	<u>i P</u>	05 35 35.9	C
	ei (PP)	39(37)	
	ii (S)	44 27.2	

Chief
 Dr. N. Öcal

July 18, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 29/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 July 18, 1969 - July 25, 1969

July 18	e Pn	10 00(35)	
	e Sg	01(24)	
"	e (S)	11 24(41)	
"	e Pn	12 22(55)	
	i	23 27.6	
"	i Pg	12 44 35.1	
	i Sg	53.1	
"	i (P)	18 28 28.1	
"	e (S)	21 02(16)	
"	e (S)	23 41(51)	
July 19	ei Pg	03 09(16)	
	i Sg	43.3	
"	e (S)	03 40(51)	
"	e P	05 09(16)	
	ei (S)	13(46)	
	i (L)	19 53.1	
"	e Pn	05 24(46)	
	i Sg	25 18.6	
"	<u>i P</u>	05 30 20.4	C
	T: 0.5 sec.	0.016 mic.	
"	e Pg	06 33(54)	
	i Sg	34 20.6	
"	ei Pg	09 17(36)	
	ii Sg	46.1	
"	e (S)	10 33(49)	
"	e Pn	11 36(37)	
	i Pg	41.0	D
	i Sg	37 08.1	
"	i Pg	14 19 25.9	D
	i Sg	43.1	
"	e L	19 25(21)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 29/69
 'B'

SEISMOGRAM READINGS

July 19	e Pg	21 46(46)	
	i Sg	47 05.1	
July 20	e (Pg)	02 03(11)	
	i Sg	37.1	
"	e (S)	02 18(47)	
"	e Pg	03 58(21)	
	i Sg	33.1	
"	e L	04 25(19)	
"	i Sg	06 08 16.6	
"	i Pg	06 21 04.1	D
	ei Sg	(51)	
"	e (P)	15 25(41)	
"	e Pn	15 53(44)	
"	i Pg	16 15 20.9	DSE
	ii Sg	34.4	
"	e (Pn)	19 40(10)	
"	<u>i P</u>	20 24 17.8	
	e (S)	26(51)	
	T: 0.5 sec.	0.018 mic.	
July 21	ei Pn	02 43(07)	
	ei Pg	(20)	
	ei Sg	44(04)	
"	i Pg	04 15 13.1	
	i Sg	33.3	
"	i Pg	05 30 56.6	
	i Sg	31 41.1	
"	i Pg	07 08 46.3	C
	i Sg	51.1	
"	i Pg	09 58 50.0	C
	i	59.1	
	i Sg	59 21.1	
"	e P	17 47(19)	
	e (S)	54(16)	
"	i	19 16 05.0	CNW
	Local		

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 29/69
 'C'

SEISMOGRAM READINGS

July 21	i Local	19 20 20.4
"	e (L)	20 31(57)
"	ei	20 32(09)
"	ei P	22 19(41)
July 22	e (S)	00 52(13)
"	ei Pg i Sg	01 16(26) 37.8
"	i (S)	17 35 39.0
"	e L	20 25(09)
"	i Pb i Pg i Sg	20 55 30.5 35.5 56 15.5
"	ei Pn i Pg i Sg	21 15(28) 30.0 51.5
July 23	i Local	00 04 10.0
"	e (Pn) ei Sg	00 33(55) 34(26)
"	ei P e (S) T: 0.6 sec. 0.014 mic.	02 53(54) 57(45)
"	i Pg i Sg	05 54 33.0 (D) 49.5
"	i (P)	08 20 39.0
"	i Pg i Sg	11 19 34.2 40.0
"	e P	13 26(38)
"	i Pg i Sg	15 41 57.3 42 12.0
July 24	i (Pg) i i Sg	08 45 41.1 55.1 46 14.6

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 29/69
'D'

SEISMOGRAM READINGS

July 24	<u>i</u> P	12 54 27.1
"	i Pg ei Sg	14 34 32.1 (53)
"	i Pg ei Sg	19 28 15.1 (41)
"	i Pg i Sg	22 35 26.9 C 48.6
"	e P e (S)	23 22(53) 24(16)

Strong microseisms from July 24, 04^h
to July 25, 08^h

July 25	ei Local	06 06(08)
"	e P i (S)	06 24(36) 29 41.1

Chief
Dr. N. Öcal

July 25, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 30/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 July 25, 1969 - August 1, 1969

July 25	Strong microseisms from July 25, 08 ^h to July 27, 20 ^h		
"	i (P)	13 47 25.4	
"	i (Sg)	20 07 59.2	
"	<u>i P</u> e (S)	23 00 56.7 09(57)	
July 26	i Pg ii Sg	00 02 34.7 52.0	CNW
"	e Pn	01 21(38)	
"	ei Pg i Sg	01 41(26) 43.2	
"	i Pg ei Sg	18 28 33.1 (59)	
July 27	<u>ii P</u> ei (S)	09 02 41.3 03(38)	C
"	e Pg ei Sg	09 14(15) (41)	
"	i Local	15 42 08.7	
"	ei Pg i Sg	16 38(04) 23.3	
"	e P i	17 19(29) 39.8	
July 28	i Pg ei Sg	01 59 25.2 02 00(04)	
"	e Pn e Sg	06 34(19) 35(01)	
"	i Seismic?	10 12 29.1	
"	e Pn i Pg i Sg	13 19(36) 42.3 20 09.2	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 30/69
 'B'

SEISMOGRAM READINGS

July 28	i Pg	13 33 03.6	
	i Sg	28.8	
"	i Sg	13 42 40.3	
"	i	15 22 43.3	CSW
	Local		
"	i Pg	23 01 44.8	
	i Sg	59.4	
July 29	e (Pg)	03 23(41)	
	ei Sg	24(27)	
"	i Pg	04 27 52.4	
	ei Sg	28(17)	
"	e (Pg)	05 29(16)	
	i Sg	55.3	
"	e Pg	09 45(17)	
	i Sg	32.4	
"	ei Pg	22 08(21)	
	i Sg	48.4	
"	i Pg	23 54 33.2	
	ii Sg	50.0	
July 30	i	06 02 43.3	CSE
	Local		
	Strong microseisms from July 30, 11 ^h to August 1, 08 ^h		
"	i	16 08 53.4	
	Seismic?		
July 31	ei Pg	06 25(54)	
	i Sg	26 17.5	
"	i Pg	11 24 47.5	D
	i Sg	25 10.1	
"	e (S)	11 46(31)	
"	i	16 59 54.8	CS
	Local		

Chief
 Dr. N. Öcal

August 1, 1969
 E. Alsan

16 SEP 1969

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 31/69
'A'

SEISMOGRAM READINGS
at
(ISK) Kandilli - İstanbul
August 1, 1969 - August 8, 1969
.....

August 1		Strong microseisms from August 1, 08 ^h to August 3, 11 ^h	
"	i Pg	21 02 40.1	D
	i Sg	03 07.1	
"	<u>i</u> P	23 55 48.4	dC
	e S	00 05(34)	
August 2	ei P	00 46(24)	
"	e Pg	00 34(28)	
	i Sg	39.6	
"	e Pn	02 32(22)	
"	ei P	04 56(09)	
"	ei Pg	14 13(13)	
	i Sg	18.8	
"	ei Pg	20 39(59)	
	i Sg	40 12.1	
"	ei Pg	21 44(10)	
	i Sg	31.6	
"	e Pn	21 46(34)	
	e S	47(40)	
August 3	e P	00 41(48)	
	ei S	47(59)	
	e L	51(52)	
"	ei Pg	01 39(59)	
	i Sg	40 35.6	
"	i (P)	04 31 28.1	
"	e (S)	05 05(14)	
"	e Pn	08 29(09)	
	i	16.6	D
	e S	30(12)	
"	i Pg	15 15 10.2	DSE
	i Sg	20.7	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 31/69
 'B'

SEISMOGRAM READINGS

August 3	i Pg	21 14 38.7	D
	i Sg	48.7	
"	i Pg	22 18 34.2	
	i Sg	48.7	
"	e P	23 58(27)	
August 4	e (S)	04 14(42)	
"	ei Pg	08 44(21)	
	i Sg	34.2	
"	e (S)	10 46(12)	
"	ei Pg	11 16(46)	
	i Sg	17 03.7	
Strong microseisms from August 4, 13 ^h to August 6, 20 ^h			
"	e P	17 34(12)	
	ei	35(13)	
	i PP	36 10.8	
	i S	41 47.8	
"	e (L)	22 19(12)	
"	e L	22 50(06)	
August 5	<u>i P</u>	02 26 27.8	
	i (PP)	30 37.8	
	e (S)	36(22)	
"	i Seismic?	06 31 57.0	D
"	e P	16 51(10)	
	e	52(22)	
	e (S)	58(17)	
	i (L)	17 02 15.9	
August 6	<u>i P</u>	15 53 02.1	
	e (S)	56(22)	
"	i Pg	23 49 35.9	D
	i Sg	50 02.1	
August 7	ei Pg	01 31(07)	
	i Sg	46.9	
"	i Pn	01 59 00.8	D

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 31/69
'C'

SEISMOGRAM READINGS

August 7	e S	22 43(42)
"	i Pg	23 38 59.4 D
	i Sg	39 24.9
August 8	ei Pg	03 14(56)
	i Sg	15 05.6
"	<u>i</u> P	06 37 11.9 D
	i PP	38 16.9
	i S	42 16.0

Chief
Dr. N. Öcal

August 8, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 32/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 August 8, 1969 - August 15, 1969

August 8	i Pg	09 34 19.8	D
	i Sg	44.9	
"	i S	11 32 19.9	
"	e L	17 15(42)	
"	i Pg	20 05 53.9	
	i Sg	06 01.7	
"	ei P	20 57(53)	
	e	21 01(57)	
	i (S)	08 09.9	
"	ei Pg	21 16(48)	
	ii Sg	17 09.9	
August 9	i Pn	00 43 05.7	
	i Pg	12.9	
	ii Sg	44.4	
"	e Pn	00 45(31)	
	i Pg	38.4	
	i Sg	46 07.9	
"	i	16 27 25.2	
"	e P	16 27(42)	
	e S	29(28)	
"	i Pn	17 02 51.9	D
	ei S	05(08)	
August 10	i (Pn)	01 11 51.9	
	ii Sg	12 20.9	
"	e	15 59(05)	
	Seismic?		
"	i Sg	17 44 50.9	
August 11	e P	13 53(11)	
	e S	54(27)	
"	i P	21 38 41.3	
	ii	39 32.8	
	ii S	49 39.8	
	T: 0.6 sec.	0.018 mic.	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 32/69
 'B'

SEISMOGRAM READINGS

August 11	<u>i</u> P	23 06 01.3	D
"	i (P)	23 14 59.8	
"	e (P)	23 33(47)	
"	ei (P)	23 54(06)	
August 12	<u>i</u> P	00 06 13.8	D
	e S	16(49)	
	T: 0.7 sec.	0.03 mic.	
"	e P	02 35(05)	
"	e P	03 45(44)	
	e S	55(42)	
"	ei P	05 05(41)	
"	<u>i</u> P	05 15 31.8	C
	e S	25(36)	
"	e P	06 05(29)	
	e S	15(40)	
"	i P	09 37 44.8	(C)
"	ei (P)	09 45(46)	
"	ei P	11 33(27)	
	i S	43(30)	
"	e P	12 34(32)	
"	e (P)	12 43(55)	
"	e P	13 30(07)	
"	i	16 54 13.1	
	Local		
"	e (S)	21 38(12)	
"	e P	23 17(01)	
	ei S	28(04)	
August 13	<u>i</u> P	03 41 18.3	
	i S	51 17.8	
"	ei P	04 07(33)	
	e S	09(17)	
"	ei (Pg)	05 50(06)	
	e Sg	(51)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 32/69
 'C'

SEISMOGRAM READINGS

August 13	$\frac{i}{i} \frac{P}{S}$	08 43 34.8 53 31.8	C
"	e (S)	17 29(12)	
"	$\frac{i}{i} \frac{P}{S}$	23 09 10.9 19 11.9	C
August 14	ei Pg i Sg	00 25(38) 59.9	
"	ei Pg ei Sg	02 10(04) (36)	
"	i Pg i Sg	02 57 15.9 42.4	(D)
"	i Pg i Sg	03 59 34.4 59.9	D
"	$\frac{i}{i} \frac{P}{S}$	14 31 07.6 41 09.9	C
"	i Pg i Sg	17 42 49.9 43 14.9	
"	i Pb ii Pg ii Sg	21 51 34.4 36.7 52 00.8	CNE
Epicentral distance 190-200 km. Strongly felt at Balıkesir provinces.			
"	e Pb i Pg i Sg	22 55(34) 37.0 56 01.5	
August 15	i Pg i Sg	00 19 45.2 20 09.5	
"	i Pb i Pg i Sg	01 55 26.0 28.4 52.5	CNE
"	i Pb i Pg i Sg	03 29 10.7 13.0 37.0	
"	ei Pg i Sg	03 42(34) 59.0	
"	e (P)	03 57(12)	
"	$\frac{i}{i} \frac{P}{S}$	04 44 07.7 54 11.0	CS

Chief
 Dr. N. Öcal

August 15, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 33/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 August 15, 1969 - August 22, 1969

August 15	ei P	08 54(31)	
	e (S)	09 04(22)	
"	i	09 33 34.2	CS
	Local		
"	e P	10 14(19)	
	i S	24 31.0	
"	i Pg	13 02 16.6	
	i Sg	41.0	
"	ei	13 47(20)	
	i Pg	25.7	DSW
	i Sg	50.0	
"	i Pg	17 34 59.5	
	i Sg	35 41.0	
"	e (S)	17 42(32)	
"	ei Pg	19 45(26)	
	i Sg	46 10.8	
"	i Pg	21 29 18.0	
	i Sg	44.0	
"	i Pg	21 59 51.0	
	i Sg	22 00 16.6	
"	<u>i P</u>	23 05 52.0	
August 16	i	01 14 48.0	
	Seismic?		
"	i Pg	02 13 05.0	
	i Sg	26.0	
"	e (S)	05 16(18)	
"	i Pg	08 45 02.2	
	i Sg	24.5	
"	ei Pg	13 04(59)	
	i Sg	05 26.0	
"	<u>i P</u>	15 27 34.5	C
	i S	37 36.1	
"	i Sg	17 24 37.1	
"			

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 33/69
 'B'

SEISMOGRAM READINGS

August 16	<u>i</u> P 47.2	17 25 47.1	D
	i S	35 48.1	
"	i Pb	19 20 38.7	C
	ii Pg	41.3	
	ii Sg	21 05.4	
August 17	e Pn	04 04(37)	
	i Pg	45.1	
	i Sg	05 23.1	
"	e Pn	04 18(21)	
"	e (S)	04 44(42)	
"	e Pn	11 05(20)	
	i Pg	29.6	
	i Sg	06 12.1	
"	<u>i</u> P	12 06 33.1	C
	i S	16 10.1	
"	e (S)	18 15(32)	
"	e P	20 31(19)	
August 18	e P	01 24(17)	
	i S	34 52.3	
"	<u>i</u> P	11 55 35.4	D
"	i Local	13 14 03.9	CNE
"	e L	15 13(04)	
"	i (P)	17 27 13.1	D
"	e Pg	19 38 02.2	
	i Sg	18.5	
"	e Pn	23 06(50)	
	i Sg	07 45.9	
August 19	ei P	01 51(35)	
	e S	02 01(43)	
"	<u>i</u> P	09 01 58.7	
"	e (P)	17 50(29)	
"	i Pn	21 56 23.9	CN
	i Pg	28.4	
	i Sg	54.4	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 33/69
 'C'

SEISMOGRAM READINGS

August 20	i Pg	00 13 18.4	
	i Sg	44.4	
"	i Pg	04 42 52.5	
	i Sg	43 16.0	
"	i P	08 02 02.2	C
	ei (PP)	04(44)	
	i S	11 26.2	
"	e (P)	17 41(43)	
August 21	i (S)	00 50 44.9	
"	i Pn	02 05 26.9	C
"	e L	03 28(23)	
"	e P	03 44(07)	
	e S	54(13)	
"	ei Pg	10 13(24)	
	i Sg	50.5	
"	e P	13 36(04)	
	i S	46 07.1	
"	e (L)	21 01(49)	
August 22	ei P	04 52(30)	
	i S	05 02 35.4	
"	i Pg	05 51 45.8	D
	i Sg	52 09.4	

Chief
 Dr. N. Öcal

August 22, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 34/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 August 22, 1969 - August 29, 1969

August 22	e (S)	10 24(10)	
"	e L	16 14(26)	
"	<u>i P</u>	17 53 49.8	
"	ei (Pg)	20 29(52)	
	i Sg	30 13.1	
"	ei Pn	22 18(17)	
	i Pg	23.7	
	i Sg	58.7	
August 23	i Pg	02 47 56.9	DSE
	i Sg	48 15.3	
"	e (S)	03 16(14)	
"	i Pg	04 26 55.0	
	i Sg	27 12.2	
"	ei Pg	14 15(32)	
	i Sg	50.5	
"	e (P)	18 55(20)	
	e (S)	19 00(28)	
"	<u>i P</u>	19 21 37.1	
	e	25(30)	
"	i Pg	19 48 22.1	dCNW
	i Sg	48.1	
August 24	e S	00 41(39)	
"	i Pg	02 30 27.2	
	i Sg	53.2	
"	e L	04 20(19)	
"	i	12 12 36.8	
	i Pg	38.3	
	i Sg	51.8	
"	i	12 15 12.2	D
	i Pg	14.0	
	i Sg	26.9	
"	ei Pg	15 44(02)	
	i Sg	16.1	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 34/69
 'B'

SEISMOGRAM READINGS

August 24	ei P	22 15(14)	
	e S	25(22)	
August 25	e (S)	01 28(35)	
"	e (L)	01 51(45)	
"	i Pn	03 14 12.6	C
	i Pg	16.6	
	i Sg	15 00.6	
"	e Pn	14 04(35)	
	i Pg	40.3	
	i Sg	05 02.2	
"	i Pg	21 35 10.0	
	i Sg	28.0	
"	e (S)	21 56(06)	
August 26	i Pn	02 17 15.6	
	i	39.1	
	ei S	18(55)	
"	<u>i</u> P	17 16 42.3	
"	e Pn	18 01(21)	
	ei Sg	(52)	
"	e P	20 47(44)	
"	e (S)	21 09(35)	
August 27	<u>i</u> P	01 22 31.4	
	i	24 56.5	
	e S	32(32)	
"	e P	01 40(38)	
"	e Pn	02 37(01)	
"	e P	02 43(18)	
"	<u>i</u> P	03 38 17.5	
	i	44 40.1	
	ei S	48(20)	
"	i Pg	05 38 32.0	
	ii Sg	47.0	
"	e Pn	07 08(11)	
	i Pg	16.6	
	i Sg	50.6	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 34/69
 'C'

SEISMOGRAM READINGS

August 27	ei Pn i Sg	09 38(18) 39 10.6	
"	<u>i</u> P e S	13 35 12.7 45(05)	dC
"	e (P)	19 46(21)	
August 28	i Pg i Sg	01 19 16.3 42.1	D
"	e Pg i Sg	03 58(05) 29.8	
"	e P e S	04 05(18) 10(36)	
"	e Pn i Pg i Sg	05 14(59) 15 04.7 29.9	
"	e Pg i Sg	11 15(27) 52.5	
"	e (S)	16 34(58)	
"	e P i S	21 47(21) 57 30.0	
August 29	e (S)	01 50(46)	
"	e (S)	02 50(14)	
"	ei Pg i Sg	03 10(34) 49.0	
"	e (S)	03 31(08)	

Chief
 Dr. N. Ücal

August 29, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 35/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 August 29, 1969 - September 5, 1969

August 29	ei P e (S)	10 12(25) 20(07)	
August 30	e P e S	07 23(40) 33(44)	
"	<u>i</u> P	08 06 29.2	(D)
"	<u>i</u> P	08 40 10.5	C
"	i Pg i Sg	17 14 57.3 15 14.3	
"	i Pg i Sg	18 16 26.3 41.3	
"	ei Pg i Sg	19 05(30) 41.8	
August 31	e Pg i Sg	02 04(27) 39.4	
"	e Pn	03 02(15)	
"	i Pg i Sg	11 51 48.4 52 30.4	
"	<u>i</u> P ei (S)	13 17 14.6 27(12)	C
"	<u>i</u> P ei T: 0.6 sec.	14 18 24.4 (58) 0.036 mic.	
"	e Pg i Sg	15 44(38) 53.4	
September 1	e (S)	00 14(22)	
"	e Pg i Sg	08 18(49) 19 03.5	
"	i Pg i Sg	13 04 11.6 29.6	
"	e Pg i Sg	20 05(01) 07.2	
"	e Pg i Sg	22 10(08) 21.7	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 35/69
 'B'

SEISMOGRAM READINGS

September 1	i Pg i Sg	22 35 33.7 57.2	
"	e (S)	23 24(15)	
September 2	e (P)	04 12(49)	
"	e (S)	13 40(03)	
"	i Pg i Sg	19 57 20.5 46.0	D
September 3	ei Pg ei Sg	01 08(21) (46)	
"	i Pn	01 50 32.4	DS
"	e L	05 57(32)	
"	e P i S	16 32(55) 43 15.3	
"	e L	23 52(28)	
September 4	ei Pn i Pg i Sg	01 58(15) 18.5 44.4	
"	<u>i P</u> i S	03 20 55.5 31 01.5	
"	i Pg i Sg	15 11 55.0 12 39.0	
"	e S	17 23(43)	
"	ei Pn e S	19 26(55) 28(30)	
"	<u>i P</u> i S	21 24 38.5 34 38.3	
"	i Pg ii Sg	23 46 39.9 50.4	
September 5	e Pg i Sg	03 40(24) 40.6	

Chief
 Dr. N. Ücal

September 5, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 36/69
 16 OCT 1969

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 September 5, 1969 - September 12, 1969

September 5	e P	11 54(05)	
"	<u>i P</u> i S	17 55 25.5 57 19.0	
"	e Pn i Sg	19 58(44) 59 22.5	
September 6	e (Pn)	04 05(31)	
"	ei P ei S	07 55(32) 08 05(19)	
"	<u>i P</u> i S	14 37 05.0 42 11.0	
"	e P	15 10(49)	
"	i Pg i Sg	17 22 37.4 49.4	
"	ii Pn	20 31 45.3	DS(W)

Strong microseisms from September 6, 21^h
 to September 12, 07^h.

September 7	i Pg ii Sg	07 14 20.9 35.9	
"	e Pg i Sg	08 12(37) 55.4	
"	i Pg i Sg	13 22 54.2 23 05.2	D
"	ei Pg i Sg	17 14(54) 15 19.3	
"	i Pg i Sg	20 38 59.0 39 23.0	
September 8	i Pg i Sg	01 10 20.9 47.4	W
"	e (Pn) i Sg	01 56(18) 43.9	
"	e Seismic?	10 04(41)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 36/69
 'B'

SEISMOGRAM READINGS

September 8	ei Pn	21 33(23)	
	i Sg	53.9	
"	i Pg	21 58 32.3	
	i Sg	48.8	
"	ei Pg	22 31(23)	
	i Sg	40.3	
"	i Pg	22 45 56.3	
	i Sg	46 12.3	
"	i Pg	23 07 34.3	
	i Sg	51.3	
"	ei Pg	23 19(06)	
	i Sg	20.3	
"	e (Pn)	23 24(57)	
"	e (Pn)	23 52(13)	
September 9	i Pg	03 54 05.1	
	i Sg	21.8	
"	i Pg	03 55 14.1	
	i Sg	30.1	
"	i Pg	04 05 55.6	C
	i Sg	06 08.1	
"	ei Pg	05 11(26)	
	ei Sg	(43)	
"	ei P	05 27(43)	
	i S	37 39.1	
"	i Pg	09 00 37.4	
	i Sg	59.9	
"	ei Pb	19 33(45)	
	e Pg	(49)	
	i Sg	34 30.2	
September 10	i Pg	02 50 14.2	
	i Sg	40.5	
"	i Pg	05 11 33.0	
	i Sg	48.5	
"	i Pg	05 14 35.5	
	i Sg	52.5	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 36/69
 'C'

SEISMOGRAM READINGS

September 10	i Pg	11 25 36.3	
	i Sg	50.3	
"	<u>i P</u>	12 16 19.3	DE
	i S	19 16.3	
September 11	e (S)	03 39(11)	
"	i Pg	05 29 04.8	DSE
	i Sg	21.3	
"	i Pg	12 54 02.4	D
	ei Sg	(19)	
"	ei	13 49(51)	
	Seismic?		
September 12	i Pg	00 59 20.4	D
	ii Sg	30.7	

Chief
 Dr. N. Öcal

September 12, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

NO: 37/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 September 12, 1969 - September 19, 1969

September 12	i P	09 09 39.6	
	e PP	12(56)	
	i S	20 14.1	
	T: 0.6 sec.	0.04 mic.	
"	ei Pg	10 40(35)	
	i Sg	59.4	
"	i Pg	11 20 58.0	
	i Sg	21 13.5	
"	e (L)	15 22(54)	
"	e Pn	17 46(25)	
	e S	47(31)	
"	e Pg	19 33(50)	
	i Sg	34 14.6	
"	e Pn	22 31(20)	
	e Sg	(54)	
September 13	e Pn	08 50(28)	
	No record from September 13, 10 ^h till September 14, 07 ^h 45 ^m .		
September 14	ei Pg	11 03(47)	
	ei Sg	04(04)	
"	e P	14 53(10)	
"	<u>i P</u>	16 22 12.4	
	<u>i</u>	23 28.4	
"	ei Pg	19 22(17)	
	i Sg	42.7	
September 15	e Pb	05 35(24)	
	i Pg	27.7	C
	i Sg	58.2	
"	<u>i P</u>	11 40 18.4	(D)
	<u>i</u>	23.4	
	ei	41(14)	
	T: 0.6 sec.	0.02 mic.	
"	e P	14 58(01)	
	e PP	15 01(10)	
	e S	08(15)	

Continued

KANDILLY OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 37/69
'B'

SEISMOGRAM READINGS

September 15	i Pn	16 13 23.1	D
	i Pg	26.1	
	i Sg	49.1	
"	ei P	18 59(44)	
	e (S)	19 09(10)	
September 16	e (S)	00 27(22)	
"	ei P	01 29(18)	
	e (S)	39(15)	
"	i Pg	03 37 03.6	C
	i	08.4	
	i Sg	22.4	
"	i Pg	09 34 48.0	
	i	50.9	
	i Sg	35 12.0	
"	i Pn	12 55 31.8	D
	i Pg	35.3	
	i Sg	59.3	
"	e Pn	14 43(22)	
	i	27.7	
	i	47 18.7	
"	i Pg	21 15 52.3	
	ii Sg	16 10.8	
September 17	i Pb	02 58 37.0	
	i Pg	40.0	
	i Sg	59 09.0	
"	ei Pg	11 33(01)	
	i Sg	24.4	
"	i P	18 52 50.0	D
	ei (PP)	55(45)	
	ei (S)	19 02(43)	
"	e (Pn)	19 02(50)	
September 18	e Pn	01 32(31)	
	i (Sg)	33 12.7	
"	ii Pg	12 29 39.5	CNE
	ii Sg	56.5	
September 19	e P	01 42(25)	
	e (PP)	46(05)	
	i S	53 15.4	

Chief
Dr. N. Öcal

September 19, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 38/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 September 19, 1969 - September 26, 1969

September 19	e Pn	07 32(53)	
	i Sg	40.1	
"	e Pn	17 17(23)	
	i Sg	55.9	
"	e (Pg)	18 08(15)	
	i Sg	49.9	
"	i Pg	21 03 07.8	C
	i Sg	24.9	
September 20	e L	01 07(31)	
"	e1 P	05 16(44)	
	i	47.8	
	i (pP)	17 03.8	
	i PP	18 22.8	
	i S	23 04.8	
"	i Pg	06 30 44.3	DW
	i Sg	31 10.3	
"	i Pg	06 51 28.6	DSE
	ii Sg	42.8	
"	e (S)	13 45(10)	
"	e P	15 46(41)	
	e S	56(19)	
"	i (Pg)	17 30 06.7	
	i Sg	25.7	
"	i Pg	19 04 47.2	
	i Sg	05 05.2	
"	e Pn	22 37(12)	
	i Sg	52.7	
September 21	i Pn	01 24 41.7	
	ii Pg	42.9	
	ii Sg	25 00.7	
"	e L	02 14(35)	
"	e P	07 31(13)	
"	i Pg	10 44 08.7	
	i Sg	22.2	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 38/69
 'B'

SEISMOGRAM READINGS

September 21	e Pn	15 19(25)	
"	i Pg	20 58 22.4	
	i Sg	48.3	
"	e L	21 40(01)	
"	e Pg	23 32(12)	
	i Sg	31.7	
September 22	<u>i P</u>	01 57 27.3	(C)
	i (pP)	36.8	
	i S	02 06 36.6	
"	i Pg	02 35 14.8	
	i Sg	33.8	
"	ei P	02 47(46)	
"	i P	08 18 50.8	DSW
"	i Pn	11 39 27.3	
	i	34.8	
	i Pg	39.7	
	i Sg	40 21.3	
"	<u>i P</u>	13 58 32.8	
	ei PpP	14 02(35)	
	i S	07 25.8	
"	i (P)	16 23 08.8	D
September 23	e P	01 41(39)	
	i	46.8	
"	<u>i P</u>	03 33 27.8	
	i S	35 14.3	
	T: 0.8 sec.	0.02 mic.	
"	i	03 59 4.4	
	Seismic?		
"	i Pg	14 49 07.8	
	i Sg	25.6	
"	e L	15 05(15)	
"	i Pn	20 56 47.3	
	i Pg	51.2	C
	i Sg	57 17.6	
"	i Pg	21 55 32.4	
	i Sg	58.8	D

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 38/69
 'C'

SEISMOGRAM READINGS

September 23	e Pg	22 40(56)	
	i Sg	41 15.8	
"	e (P)	23 02(40)	
	ei	05(50)	
"	ei Pg	23 09(17)	
	i Sg	42.8	
September 24	ei Pg	04 01(44)	
	ei Sg	02(13)	
"	<u>i</u> P	04 06 50.8	
	i	07 03.8	
	e (PP)	08 (29)	
	i S	13 12.8	
	i L	16 12.8	
	T: 0.7 sec.	0.018 mic.	
"	<u>i</u> P	04 28 43.8	
	i	53.2	
	T: 0.8 sec.	0.018 mic.	
"	<u>i</u> P	18 14 21.8	
	ei	15 (50)	
	i (PP)	16 48.8	
	e (PPP)	18 (23)	
	i S	23 28.8	
September 25	e (Pn)	14 20 (50)	
September 26	ei Pg	05 13 (45)	
	i Sg	14 03.9	
"	<u>ii</u> P	07 02 33.9	C
	ei (S)	04 (35)	

Chief
 Dr. N. Ücal

September 26, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 39/69
 'A'

40 DEC 1969

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 September 26, 1969 - October 3, 1969

September 26 Some of the instruments were not in operation due to repair from September 26, 08^h till September 28, 08^h.

" ei (S) 19 08(20)

" ei (S) 23 47(18)

September 27 e (P) 09 24(28)

" e P 16 59(43)
 i S 17 02 11.5

Felt in Southeastern part of Anatolia., Slight damage at Batman, Bitlis (38°21.9 N - 42°05.6 E) and surrounding villages.

" e S 19 35(17)

September 28 e S 01 56(19)

" i Pg 13 45 37.2
 i Sg 44.2

" e Pn 14 29(26)
 i Sg 59.2

" ei Pg 15 50(14)
 i Sg 42.2

" e 18 11(58)
 Seismic?

" e L 18 47(23)

" e Pg 21 17(24)
 i Sg 41.1

" ii P 22 56 57.6 DSW
 ii S 59 07.9
 T: 0.7 sec. 0.042 mic.

" ei Pg 23 02(20)
 i Sg 47.1

September 29 03 Pn(39) 03 33(39)

Strong microseisms from September 29, 05^h till October 1, 08^h

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 39/69
 'B'

SEISMOGRAM READINGS

September 29	i Pn	12 17 33.9	
	i Pg	35.0	
	i Sg	56.0	
"	ei P	18 10(44)	
	e S	20(41)	
"	ei P	20 15(08)	
	e (PPP)	19(37)	
	i S	24 43.0	
"	e (S)	23 52(43)	
September 30	e (Pn)	00 23(16)	
"	e (S)	02 43(43)	
"	ei Pg	03 33(59)	
	i Sg	34 24.0	
"	e (P)	04 31(33)	
	e (S)	41(55)	
"	ei P	18 11(31)	
"	ei Pn	21 20(25)	
	i Pg	29.4	
	i Sg	53.4	
"	i Pg	23 20 23.9	
	i Sg	36.9	
October 1	e (P)	00 21(28)	
	e (S)	28(23)	
"	e L	01 21(25)	
"	i Pg	04 38 44.8	D
	i Sg	57.8	
"	e	05 23(29)	
	e (P)	24(33)	
	i S	30 55.8	
"	i Pg	10 48 13.8	
	i Sg	39.8	
"	e Sg	14 51(51)	
"	e P	17 28(08)	
	i	29 41.0	
	i S	39 05.0	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 39/69
'C'

SEISMOGRAM READINGS

October 1	e P	20 35(48)
	i S	38 33.0
"	i Sg	22 02 49.0
"	e (S)	23 34(23)
October 2	e L	05 42(19)
"	e (S)	22 29(13)
"	e (S)	23 16(33)

Chief
Dr. N. Ücal

October 3, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 40/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 October 3, 1969 - October 10, 1969

October 3	Strong microseisms during the week.		
"	e (P)	15 51(46)	
"	e L	18 23(24)	
October 4	i Sg	03 02 21.7	
"	i Local	13 27 23.0	CNW
"	i Local	13 50 53.0	C
"	i Pg ii Sg	17 16 36.1 52.1	C
"	i Pg i Sg	21 58 16.1 42.1	
"	i Pg i Sg	22 23 56.1 24 22.1	
October 5	e L	04 26(19)	
"	ei Pg i Sg	07 35(35) 52.7	
"	e Seismic?	15 55(53)	
"	e (S)	16 57(48)	
"	e L	17 16(44)	
"	e Pg i Sg	22 30(23) 39.3	
October 6	i Pn i Sg	02 33 09.4 39.4	
"	i (S)	15 47 30.5	
October 7	ei Pn i Pg i Sg	05 09(45) 49.1 10 15.6	Main shock
	Epicentral distance 200-220 Km.		
	M _L : 5,0		
	Strongly felt in Northwestern part of Anatolia.		

H = 05 09 13
~~X~~

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 40/69
 'B'

SEISMOGRAM READINGS

October 7	i Pg	10 25 43.6	
	i Sg	26 09.4	
"	i Pg	10 49 07.6	
	i Sg	33.1	
"	e (S)	14 45(35)	
"	i Pg	16 37 46.6	
	i Sg	38 12.6	
"	i Pg	16 54 27.0	
	i Sg	53.0	
"	e Pg	17 16(04)	
	i Sg	29.7	
"	i Pn	18 49 34.2	dC
	i Pb	36.5	
	i Pg	38.4	
	i Sg	50 05.2	
	Epicentral distance 210-220 Km.		
"	e Pn	19 59(44)	
	i Pg	47.7	DSW
	i Sg	20 00 13.2	
"	i Pg	20 08 31.3	D
	i Sg	56.2	
"	i Pg	21 49 04.7	DS
	i Sg	30.7	
"	i Pg	22 14 03.4	D
	i Sg	29.7	
October 8	i Pg	00 34 09.7	DS
	i Sg	35.7	
"	i Pg	02 59 08.4	DSW
	i Sg	34.7	
"	i Pg	03 33 40.5	
	i Sg	34 05.7	
"	ei Pn	05 28(01)	
	i Pg	04.3	
	i Sg	30.6	
October 9	ei	16 01(20)	
	Seismic?		

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 40/69
'C'

SEISMOGRAM READINGS

October 9	e (Pn)	21 27(34)
October 10	e L	01 04(35)
"	e (S)	01 46(25)
"	e Pn	02 42(05)
	i	28.9
	e (S)	43(40)

Chief
Dr. N. Öcal

October 10, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 41/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 October 10, 1969 - October 17, 1969

October 10	e L	17 58(21)	
"	e Seismic?	21 29(01)	
October 11	i Local	09 08 02.0	
"	i Local	16 12 00.6	
October 12	i Pg i Sg	00 35 16.9 42.0	
"	i Pg i Sg	12 25 11.0 37.0	D
"	<u>i</u> P	13 35 57.9	
"	e Pn	14 30(42)	
"	i Pg i Sg	22 59 23.0 44.5	C
October 13	<u>i</u> P ei S	01 04 09.0 05(23)	
"	i Pn i Pg i Sg	03 25 01.0 05.5 31.0	DS
"	e Pn i Pg i Sg	06 07(25) 29.0 55.5	
"	e P i	07 14(56) 15 06.7	
"	ei Pn	18 51(22)	
"	i Pn i Pg i Sg	20 45 48.0 58.0 46 40.0	
October 14	i Pn	01 29 11.5	
"	e L	05 31(14)	
"	<u>ii</u> P i	07 06 59.3 08 01.0	CSW

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 41/69
 'B'

SEISMOGRAM READINGS

October 14	<u>i</u> .C Local	13 34 36.0	D
October 15	e (P)	00 29(34)	
"	i (Pb) i Pg i Sg	11 00 05.2 07.7 30.2	C
"	i Pg i Sg	15 51 22.2 43.2	
"	i Pg i Sg	15 54 52.2 55 14.2	
"	i Pg i Sg	18 52 55.4 53 16.2	
"	i Pg i Sg	23 08 16.4 42.0	DS
October 16	i Pg i Sg	00 17 43.2 18 09.7	DS
"	e Pn i Sg	01 09(21) 55.2	
"	<u>i</u> P ei S	02 53 49.7 55(01)	
"	i	02 57 52.2	
"	<u>i</u> P i S	06 59 29.7 07 00 39.2	
"	i Pg i Sg	18 37 43.6 38 09.0	D
"	<u>i</u> P i i S	20 10 23.0 29.5 11 16.0	eDN
"	e Pn	22 57(15)	
October 17	<u>i</u> P i ii (pP) ii S	01 34 46.0 48.0 35 22.0 42 30.0	
"	<u>i</u> Seismic?	05 01 57.5	D

Chief
 Dr. N. Ücal

October 17, 1969
 E. Alsan

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 42/69
'A'

SEISMOGRAM READINGS
at
(ISK) Kandilli - İstanbul
October 17, 1969 - October 24, 1969
.....

There are no time marks on the records of short period instruments from October 17, 10^h till October 20, 07^h.

October 18	e (S)	22 15(05)	
October 19	i Sg	03 47 45.5	
"	e (S)	11 01(04)	
"	e (S)	12 24(40)	
"	e	12 49(15)	
"	e L	20 04(46)	
October 20	i Pg	16 49 45.0	D
	i Sg	50 10.6	
October 21	e (Pg)	02 21(58)	
"	i Sg	22 25.1	
"	i (Pn)	04 52 57.7	
"	i Sg	53 29.2	
"	<u>i P</u>	21 06 17.7	D
October 22	i Pg	00 36 42.7	
"	i Sg	37 18.7	
"	e (Pn)	01 19(35)	
"	i Pg	01 47 51.8	D
October 23	i Sg	22 48 17.8	
October 19	e Pg	02 49(54).5	
"	i Sg	50 18.8	
"	i	15 36 40.8	
"	Local		
"	i Pn	20 53 16.8	D
"	ei Pn	21 25(09)	
"	e Pg	(17)	
October 20	i Sg	56.9	

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 42/69
'B'

SEISMOGRAM READINGS

October 22	e P	23 08(46)	
	ei S	18(22)	
October 23	i Pg	02 23 13.5	D
	i Sg	39.9	
"	e Pn	04 50(30)	
"	i	13 38 01.9	
	Seismic?		
"	i Pn	23 48 18.5	
October 24	i Sg	00 30 58.5	
"	i	01 30 59.8	
	Local		
"	i Pg	04 58 17.8	
	i Sg	41.6	

Chief
Dr. N. Öcal

October 24, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 43/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 October 24, 1969 - October 31, 1969

October 24		Strong microseisms from October 24, 08 ^h till October 26, 20 ^h .		
"	e L	09 20(01)		
"	i Pg	18 21 30.2	DSW	
	i Sg	56.0		
"	e Pn	20 29(02)		
"	e Pn	23 01(34)		
	ei	(46)		
	i	02 24.0		
October 25	i Pg	06 47 24.5		
	i Sg	45.0		
"	i	14 12 15.7	CN	
	Local			
"	i Pg	14 33 15.2		
	i Sg	39.7		
"	i	15 57 19.4		
	Local			
"	i Pg	16 34 34.1	D	
	ei Sg	(59)		
October 26	e Pb	01 44(21)		
	i Pg	24.5		
	ei Sg	(58)		
"	e P	06 57(25)		
	i	38.5		
"	i Pn	15 39 05.0		
"	e (S)	19 49(09)		
"	e (P)	21 51(34)		
"	i Pg	23 28 53.0		
	e Sg	29 21.0		
October 27	ei P	01 13(59)		
	i	14 07.0		
"	e Pn	02 57(54)		

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 43/69
 'B'

SEISMOGRAM READINGS

October 27	i Pn	08 13 11.5	DNW
"	e Pn	08 55(57)	
	i	56 07.9	
October 28	ei Pn	00 12(38)	
	i Sg	13 17.0	
"	i	12 40 10.5	
	Local		
"	ei Sg	22 12(27)	
October 29	i Sg	05 14 38.5	
"	e Pn	15 28(37)	
	e (S)	31(09)	
"	i	21 37 05.0	
	Seismic?		
"	ei Pg	23 10(25)	
	i Sg	11 10.0	
October 30	e Pg	00 54(13)	
	i Sg	28.0	
"	i Pn	03 29 37.8	
	ii Pg	42.0	DS
	ii Sg	30 07.5	
"	i Sg	20 17 38.0	
"	i Pn	21 18 10.0	
	i	12.8	

Chief
 Dr. N. Öcal

October 31, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 44/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 October 31, 1969 - November 7, 1969

October 31	e (S)	09 03(44)	
"	i Pg i Sg	09 57 59.6 58 17.0	
"	<u>i P</u> i PP i S	11 45 36.0 48 56.0 55 59.0	DNE
November 1	i Pg i Sg	01 30 45.3 31 12.2	
"	e P e (S)	11 26(56) 36(19)	
"	i Seismic?	17 51 51.5	
November 2	i (P)	02 52 19.1	
"	e (S)	09 57(37)	
"	i Pg i Sg	11 58 37.2 44.2	
"	e Pn i Sg	18 35(34) 36 11.7	
"	e P i	19 05(33) 40.6	
"	<u>i P</u>	20 06 31.0	
November 3	<u>i P</u> i (S)	09 26 32.5 27 46.3	
"	i Pn	22 01 27.9	
November 4	ei Pn	01 15(37)	
"	e L	05 50(09)	
"	<u>i P</u>	10 59 40.4	D
"	e Pg i Sg	13 07(27) 48.4	
"	<u>i P</u> i	16 01 41.1 17 30.4	D

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 44/69
 'B'

SEISMOGRAM READINGS

November 4	i Pg	19 44 03.3	DE
	i Sg	17.3	
"	e (S)	20 24(39)	
"	e Pn	20 36(49)	
	i Pg	52.4	
	i Sg	37 15.4	
"	i Sg	21 00 35.9	
"	<u>i P</u>	22 17 30.4	D
"	<u>i P</u>	23 59 03.9	D
	i (S)	24 01 23.4	
November 5	i Pg	03 37 03.0	
	i Sg	17.5	
"	i Pg	05 45 53.0	
	i Sg	46 05.5	
"	i Sg	05 46 49.2	
"	e P	18 11(45)	
	•	21(05)	
November 6	e L	02 40(39)	
"	e (P)	04 45(39)	
	e (S)	50(15)	
"	e (P)	06 40(35)	
	e (S)	46(04)	
"	i Pg	12 27 07.9	D
	i Sg	26.0	
"	i Pg	12 35 12.6	
	i Sg	31.2	
"	i	20 03 58.2	C
	Local		
"	<u>i P</u>	20 32 49.7	D
"	e Pn	20 57(46)	
	i Sg	58 32.2	
November 7	i Pg	01 00 16.2	DN
	i Sg	22.2	
"	e P	03 49(34)	

Chief
 Dr. N. Öcal

November 7, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 45/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 November 7, 1969 - November 14, 1969

November 7		Strong microseisms from November 7, 07 ^h till November 8, 15 ^h .	
"	i	07 22 49.7	
"	e (Pn) i Sg	12 44(59) 45 30.5	
"	<u>i P</u> i S	18 39 55.0 44 54.5	DE
"	i Seismic?	23 45 27.9	
November 8	i Pg i Sg	00 09 37.5 10 04.0	
"	i Pg i Sg	01 05 50.5 06 05.0	C
"	e (S)	02 03(45)	
"	e L	02 48(20)	
"	ei Pg i Sg	05 48(14) 35.0	
"	<u>i P</u>	08 42 30.2	D
"	i Pg i Sg	22 01 27.7 53.5	D
"	e (P)	22 12(26)	
"	e Pn i Pg i Sg	23 20(15) 17.5 42.5	
November 9	ei Pn i Pg i Sg	00 03(12) 13.3 31.5	C
"	e (P) e	09 30(09) 31(15)	
"	i Local	16 47 03.2	CN
November 10	i Pg i Sg	13 53 34.6 52.6	

Continued

ERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 45/69
 'B'

SEISMOGRAM READINGS

November 10	e Pn	18 14 46.2	
	i Pg	50.6	
	i Sg	15 16.6	
"	i Pg	19 26 00.6	
	i Sg	23.6	
November 11	$\frac{i}{e} \frac{P}{(S)}$	00 35 29.7	(D)
		39(31)	
"	ei Pg	05 57(28)	
	i Sg	38.3	
"	i Pn	20 51 45.5	
	i Pg	50.2	
	i Sg	52 15.8	
November 12	i Pn	07 05 57.6	
	i Sg	06 39.4	
"	i Pn	12 41 45.4	
"	$\frac{i}{e} \frac{P}{(S)}$	19 21 33.9	c
		31(54)	
"	e Pn	22 25(53)	
	i Sg	26 36.5	
November 13	i Pn	01 05 06.0	
	i Sg	59.0	
"	i Pg	03 23(25)	
	i Sg	33.7	
"	i Pn	07 43 56.5	
	ii Pg	44 00.3	DSW
	ii Sg	25.5	
"	e L	08 20(50)	
"	i Pg	16 51 41.0	DSW
	i Sg	52 07.5	
"	i (Sg)	20 53 39.5	
"	i Pg	22 14 54.0	
	i Sg	15 14.8	
November 14	i Pn	06 50 32.9	
	e (S)	53(50)	

Chief
 Dr. N. Ünal

November 14, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 46/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 November 14, 1969 - November 21, 1969

November 14	i P	07 57 07.0	
	i	19.9	
"	e Pg	14 05(15)	
	i Sg	28.0	
November 15	ei (Pn)	02 39(17)	
	i	20.6	
	i	26.0	
	i Sg	40 04.0	
"	ei Pn	02 55(30)	
	i Pg	40.0	
	i	46.0	
	i	51.0	
	i Sg	56 29.0	
	M _L : 4.5	Epicentral distance 400 Km.	
"	i Pg	05 51 40.7	(D)
	i Sg	52 30.0	
"	e (S)	08 50(55)	
November 16	e (P)	00 08(26)	
"	e (S)	09 36(59)	
"	e L	11 19(40)	
"	e (S)	15 32(50)	
"	i (Pg)	21 45 57.0	C
	i Sg	46 37.0	
"	ei Pg	21 50(18)	
	i	24.7	
	i Sg	59.7	
November 17	e (S)	00 52(40)	
"	e L	13 13(30)	
"	e	14 16(55)	
	Seismic?		
"	i P	19 28 46.3	
	e (S)	30(45)	
November 18	e L	11 49(30)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 46/69
 'B'

SEISMOGRAM READINGS

November 18	e Pn	13 11(12)	
	e S	14(26)	
"	ei P	14 38(15)	
	ei (S)	40(14)	
"	e	14 47(58)	
	Seismie?		
"	ei Pg	19 02(16)	
	i Sg	30.9	
"	e L	21 19(40)	
November 19	<u>i P</u>	08 55 51.2	D
"	i Pg	09 39 53.5	
	i Sg	59.0	
"	e L	12 26(40)	
"	ei P	13 23(15)	
	i	27.1	
"	i Pg	20 16 27.9	D
	i Sg	43.0	
"	i Pg	20 39 44.5	
	i Sg	40 27.5	
"	e Pn	23 00(18)	
	i Sg	01 29.0	
"	i Pg	23 50 45.0	D(S)E
	ii Sg	59.5	

No record from November 20, 08^h till November 21, 08^h.

Chief
 Dr. N. Öcal

November 21, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 47/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 November 21, 1969 - November 28, 1969

November 21	ei P	13 51(58)	
	i	52 02.0	
	e S	54(07)	
"	i Local	18 32 41.1	CN
"	i Pg	18 46 22.1	
	i Sg	27.1	
"	i Pg	19 04 45.1	C
	i Sg	51.0	
November 22	ei Pg	00 14(14)	
	i Sg	34.1	
"	e (Pn)	02 56(21)	
"	i Pg	08 44 29.2	
	i Sg	48.2	
"	e (Pb)	11 02(52)	
	i Pg	56.7	
	i Sg	03 35.2	
"	i Pg	13 00 57.1	
	i Sg	01 22.1	
"	e Pn	16 56(51)	
	i Sg	57 39.6	
"	ei Pg	19 42(14)	
	i Sg	26.1	
"	e P	19 47(41)	
"	i Pn	20 36 02.1	
"	<u>i P</u>	23 21 13.7	
	ei S	30(59)	
November 23	ei (Pg)	01 02(47)	
	ei Sg	03(14)	
"	i Pg	01 19(31)	
	i Sg	36.8	
"	i Pg	05 47 19.4	D
	i Sg	45.4	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 47/69
 'B'

SEISMOGRAM READINGS

November 23	i Pg	07 51 14.0	
	i Sg	32.0	
"	i Pg	08 13 30.0	D
	i Sg	48.4	
"	ei Seismic?	10 56(50)	
"	e P	11 45(21)	
	e S	49(13)	
"	ii Pg	16 30 23.6	CN
	ii Sg	32.1	
"	e Pn	21 54(25)	
November 24	Strong microseisms from November 24, 02 ^h till November 28, 08 ^h .		
"	i Pb	07 25 16.3	
	i Pg	20.8	
	i Sg	52.3	
"	i Pg	07 46 50.3	
	i Sg	47 15.6	
"	<u>i P</u>	17 29 46.3	
	i	30 25.3	
	e (S)	34(55)	
	e	35(56)	
"	ei	21 34(48)	
	i Pg	50.4	
	i Sg	35 35.7	
"	e P	21 49(50)	
	ii	55.7	D
"	e P	23 04(13)	
	ei S	14(36)	
November 25	i Seismic?	17 20 55.0	
"	i Pg	23 10 51.7	
	i Sg	11 07.2	
November 26	i Local	05 33 07.7	CN
"	i Pg	05 37 21.4	C
	i Sg	26.4	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 47/69
 'C'

SEISMOGRAM READINGS

November 26	e Pn	08 19(41)	
	i Sg	20 30.7	
"	i	11 10 33.2	(C)
	i Pg	34.2	
	i Sg	11 04.7	
"	<u>i P</u>	17 56 06.7	
	<u>i</u>	55.7	
"	e L	18 54(17)	
November 27	ei (Pn)	02 30(48)	
	ei	31(38)	
"	i	11 56 24.9	CS
	Local		
"	e (Pn)	15 39(13)	
	i Sg	45.9	
November 28	e	01 35(12)	
"	i Pg	03 08 13.2	
	i Sg	40.9	

Chief
 Dr. N. Öcal

November 28, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 48/69
 'A'

23 JAN 1970

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 November 28, 1969 - December 5, 1969

November 28	e (Pn)	16 47(41)	
	i Sg	48 03.1	
"	e Pg	19 03(55)	
	i Sg	04 03.6	
November 29	i (P)	12 59 32.4	C
	i	37.9	
"	i Pg	20 35 17.7	
	i Sg	37.2	
November 30	<u>i P</u>	00 41 11.6	C
	i	42 30.5	
	e (S)	43(06)	
"	<u>ii P</u>	03 39 58.6	CSW
	i	40 01.6	
"	e Pg	05 34(14)	
	i Sg	30.1	
"	ei	09 26(05)	
	Seismic?		
"	i Pg	14 54 39.2	
	i Sg	55 02.7	
"	i Pg	20 47 52.2	
	i Sg	48 06.9	
December 1	e Pn	05 07(24)	
	ei Sg	08(07)	
"	i Pg	05 38 46.7	
	i Sg	56.8	
"	i Pg	14 22 37.0	
	i	53.0	
	i Sg	54.0	
"	i Pg	18 42 32.2	C
	i	48.8	
	i Sg	50.0	
"	<u>ii P</u>	20 19 51.9	CNE
	e (S)	22(10)	
"	ei P	22 25(56)	
	i	26 13.0	
	ei (S)	35(52)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 48/69
 'B'

SEISMOGRAM READINGS

December 2	ei Pg	04 41(16)	
	i	26.0	
	i Sg	29.0	
"	e Pn	05 56(57)	
	i Sg	57 35.0	
"	e	06 08(50)	
	Seismic?		
"	ei	12 06(57)	
	Seismic?		
"	i Pg	12 45 27.3	
	i Sg	58.5	
"	ei (P)	18 09(54)	
	e (S)	13(52)	
	i (L)	20 13.0	
December 3	Some of the instruments were not in operation due to repair from 07 ^h till 12 ^h 30 ^m .		
"	i Pg	13 14 32.6	D
	i Sg	58.7	
"	e Pn	13 43(44)	
"	i Pg	15 44 42.5	
	i Sg	55.0	
December 4	<u>i P</u>	00 45 22.0	D
	i	47.5	
"	e Pn	05 07(02)	
	i Sg	34.8	
"	e P	09 02(27)	
	i S	12 33.0	

There are no records of short period instruments from December 4, 15^h till December 5, 07^h.

Chief
 Dr. N. Öcal

December 5, 1969
 E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 49/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 December 5, 1969 - December 12, 1969

December 5	e Pn	18 25(45)
	i Sg	26 42.2
"	ei Pg	18 44(58)
	i Sg	45 08.3
"	e Pg	23 56(07)
	i Sg	17.4
December 6	<u>i</u> P	07 07 23.5
December 7	e L	13 09(03)
"	e L	22 34(25)
December 8	e Pg	03 02(04)
	i Sg	16.2
"	i Pg	03 05 25.2
	i Sg	46.2
"	e L	05 53(43)

There are no records from December 8, 08^h
 till December 9, 07^h.

December 9	i (Pn)	16 59 21.1	C
	ei	(30)	
	i Sg	54.4	
"	i Pg	22 32 14.7	
	i Sg	40.9	
December 10	i Pn	01 35 05.0	
	i (Sg)	32.5	
"	i Pg	06 45 18.0	
	i Sg	40.5	
"	e Pn	13 58(09)	
	i	59 17.1	
	i	25.1	
"	e Pn	20 13(19)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 49/69
'B'

SEISMOGRAM READINGS

December 11	ei Pg	06 18(16)
	i Sg	27.7
"	e Pn	06 28(39)
"	e (S)	10 54(33)
December 12	e (P)	00 45(23)

Chief
Dr. N. Öcal

December 12, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 50/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 December 12, 1969 - December 19, 1969

December 12	i Pg	11 33 48.2	
	i Sg	56.8	
December 13	<u>i P</u>	03 30 37.3	D
"	e Pg	04 00(57)	
	ei Sg	01(24)	
"	i Pg	08 54 33.4	
	i Sg	45.0	
"	ei Pn	10 04(16)	
	ei Sg	05(12)	
"	i Pg	10 39 19.5	C
	i Sg	31.0	
"	i Pg	11 36 08.5	D
	i Sg	19.5	
"	i Pg	11 37 25.0	
	i Sg	36.5	
"	i Pg	12 44 57.7	
	i Sg	45 09.5	
"	ii Pg	14 26 48.5	CNE
	ii Sg	59.5	
"	ei Pn	16 27(18)	
	i Sg	56.0	
"	i	17 41 15.5	
	Seismic?		
"	i Pg	18 42 13.5	
	i Sg	35.3	
December 14	e P	02 55(26)	
	i	35.9	
"	i Pg	13 50 54.5	
	i Sg	51 20.5	
"	<u>i P</u>	18 44 58.5	(D)
	i (S)	46 37.0	
"	e Pn	22 03(39)	
"	e Pn	22 40(51)	
	ei	42(34)	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 50/69
 'B'

SEISMOGRAM READINGS

December 14	e (Pn)	23 41(08)	
December 16	i Pg	09 22 32.0	
	i Sg	42.0	
"	i	11 49 08.5	
	Seismic?		
"	e (S)	11 51(39)	
"	e (S)	12 27(24)	
"	e (S)	13 28(44)	
December 17	<u>i P</u>	02 41 05.8	C
	i	09.4	
"	ii Pg	13 30 36.9	C
	i Sg	31 21.1	
"	e	17 58(19)	
	Seismic?		
December 18	i Pg	03 36 08.1	
	i Sg	20.9	
"	i	11 32 51.7	DN
	Local		
"	i	11 37 09.6	D
	Local		
"	i Pg	13 38 51.2	
	i Sg	54.9	
"	ei P	13 43(07)	
	i	12.0	
	i	44 27.7	
	e	48(54)	
	i S	52 17.7	
"	e Pn	18 18(35)	
"	e Pn	19 06(34)	
"	e Pg	21 50(09)	
	i Sg	34.7	
"	ei Pn	22 13(46)	
	i Sg	14 33.7	
"	i Pg	22 33 40.7	
	ei Sg	34(07)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 50/69
'C'

SEISMOGRAM READINGS

December 18	e Pn	23 22(26)
December 19	e L	05 17(16)

Chief
Dr. N. Öcal

December 19, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 51/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 December 19, 1969 - December 26, 1969

December 19	ei (Pg) i Sg	09 00(11) 25.9	
"	i Local	09 05 01.9	
"	i Local	09 15 12.3	C
"	i Pg i Sg	22 34 15.2 25.9	
"	i Pg i Sg i	23 35 46.0 56.5 36 01.5	
"	e (s)	23 57(39)	
December 20	i Seismic?	02 39 06.5	
"	ei Pn i	17 42(09) 43 17.0	
December 21	e P i	00 49(10) 35.5	
Strong microseisms from December 21, 05 ^h till December 26, 08 ^h .			
"	i Pg i Sg	08 48 06.5 22.5	
"	i Pg i Sg	16 37 46.1 38 11.6	
"	i Pn i i i Sg	19 07 34.0 44.1 46.8 08 26.1	
"	i Pg i Sg	20 55 51.7 56 18.2	
"	i Pn i i	22 02 11.7 33.2 49.1	
December 22	ei Pn i	04 48 52.4 49 44.4	

Continued



KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 51/69
'B'

SEISMOGRAM READINGS

December 22 There are no time marks on the records of short period instruments from December 22, 08^h till December 23, 14^h.

December 23 e (S) 02 16(23)

 " e 14 16(38)

 Seismic?

 " i 14 20 11.9

December 24 ii Pg 08 41 52.3 DSW

 ii Sg 42 07.5

 M_L: 4.2 Epicentral distance 120 Km.

December 25 e L 02 13(01)

 " i P 04 09 23.2 C

 i (S) 10 03.0

 " i Pg 09 01 29.4

 ii Sg 43.7

 " i (P) 21 44 33.0

 ei (S) 54(43)

 " e P 22 43(06)

Chief
Dr. N. Öcal

December 26, 1969
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 52/69
 'A'

SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 December 26, 1969 - January 2, 1970

December 26	i (Local)	18 22 23.0	
"	i	18 23 26.7	
"	i Pg i Sg	19 01 12.3 28.0	
"	e L	20 45(25)	
December 27	e Pn ei Sg	03 42(59) 44(03)	
"	i Pn i i	07 33 01.1 18.3 34 22.3	C(E)
"	i Pg i Sg	10 07 14.3 29.8	C
December 28	<u>i</u> P i i (S)	03 53 52.1 56.9 55 11.4	CW
"	e L	04 15(19)	
"	i Pg i Sg	09 57 14.1 28.6	
"	ei Pn i i (S)	17 40(58) 41 39.4 42 07.4	
"	i (Pn)	22 04 19.0	
"	i	23 01 11.3	
December 29	ei Pg i Sg i	00 31(45) 32 01.9 03.3	
"	i Pg i i Sg	09 47 47.2 58.5 48 04.5	(C)
"	i Pb i Pg i Sg	11 15 52.8 56.7 16 29.2	

Continued

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No: 52/69
 'B'

SEISMOGRAM READINGS

December 29	e Pn	14 43(38)	
	ei	44(29)	
"	i Pg	16 20 57.2	
	i Sg	21 03.2	
December 30	e (P)	05 16(21)	
	e (S)	19(33)	
"	e Pg	17 08(29)	
	i Sg	41.3	
December 31	i Sg	01 41 29.8	
"	i Sg	01 51 01.8	
"	ii Pg	02 08 09.0	(C)SW
	ii Sg	18.3	
"	e Pg	02 12(27)	
	i Sg	48.3	
"	e Pg	03 21(12)	
	i Sg	31.8	
	i	35.8	
"	ei P	05 38(48)	
	e (S)	41(10)	
December 29	i Pg	08 25(17.4)	
	ii Sg	44(43.9)	
"	ei P	13 20(47.2)	
	i	22 33.9	
	i (S)	23 43.9	
December 30	e (P)	05 16(21)	
"	i P	19 13 55.9	
	i (PP)	16 56.9	
"	e (S)	17 23(50)	
	i Sg	41.3	
January 1	e P	00 00(59)	
December 31	ei PPP	01 01(39)	
	i S	05 06.0	
"	i Sg	01 51 01.8	
"	e Pn	00 41(24)	
"	i Pg	01 08 09.0	(C)S
"	e Pn	01 31(32)	
"	i Pg	02 59 09.0	DE
	i Sg	19.5	
	i	23.5	
"	e Pg	03 21(12)	
	i Sg	31.8	
	i	35.8	
"	ei P	05 38(48)	
	e (S)	41(10)	

Continued

KANDILLI OBSERVATORY
Seismological Section
İSTANBUL TURKEY

No: 52/69
'C'

SEISMOGRAM READINGS

January 1	ei Pg	08 43(36)	
	i Sg	55.5	
"	e Pn	14 19(34)	
"	ei Pg	23 29 01.5	
	i Sg	16.5	
January 2	i Pg	02 19 52.5	D
	i Sg	20 19.0	
"	<u>ii</u> P	07 32 49.0	DE

All the very best for 1970.

Chief
Dr. N. Öcal

January 2, 1970
E. Alsan

KANDILLI OBSERVATORY
 Seismological Section
 İSTANBUL TURKEY

No:1/68
 'A'

PRELIMINARY SEISMOGRAM READINGS
 at
 (ISK) Kandilli - İstanbul
 December 29, 1967 - January 5, 1968

December 29	e Pn	16 18 (12)
	i Sg	19 26,8
	i L	55,8
"	i Pn	19 50 58,4 D
	i Pg	51 24,4
	i Sn	52 09,4
	i Sg	23,9
	i L	43,4
"	e (P)	20 49(30)
"	e (P)	22 56(39)
December 30	ei Pn	04 22 18,7
	i L	26 23,7
"	i Pg	04 44 56,2
	i Sg	45 11,7
"	e (P)	12 21 00
"	i Pg	12 25 52,6
	i Sg	26 08,6
"	ei P	21 28 44,0
December 31	ei Pn	19 56 32,4
"	e (P)	21 06(07)
"	i Pg	22 56 45,1 CW
	i Sg	57 01,6

Continued