

Pw

TIR

15 MAY 1969

P/S and xPP

PG SG

PKP/SKS xPPKP

P* S*

PN SN

Buletin Paraparak

Preliminary Bulletin

SEPTEMBER 1968

STATE UNIVERSITY OF TIRANA

Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL
BULLETIN

September 1968

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V Drumm speed mm/min |
|-----------|-----------------|-------|-----------|-----------|------|------|-------------------------|
| 41°20,8'N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 30 |
| 19°52' E | SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 30 |

Ground condition : Tortonian sandstone

NOTE : Upward trace motion on the seismogramm corresponds to N , E and upward ground motion.
 m= magnitudes calculated from body waves
 M= magnitudes calculated from surface waves

8. Z e PKP₁ 15 31 09,4
Z i PP 32 19,4
D=116,2° m=7

USCGS: H=15:12:23,8; 3,7°S 143°E
h=29R M=6,1(Pas) 6,7(Pal) Near North
Coast of New Guinea

8. Z e Pg 23 21 01
NE e Sg 05
weak D=33km Albania
H=23 : 20:55

9. Z i P 00 51 13 C

USCGS: H=00:37:43,2; 8,7°S, 74,5°W
h=120km M=6,3 (Pas) Peru Brazil Border
Region

11. Z e Pg 14 10 05,7
N i Sg 12,7
weak D=60km Albania
H=14:09:51

11. Z e iP 19 23 39
Z e iPP 24 47
N M 36,8 A = 5,5 μ T=14 sec
D=32,5° M=5,2

USCGS: H=19:17:12,9; 33,9°N 59,4°E;
h=33R Mb=5,2 Ms=5,4 Iran

12. Z i PKP₁ 23 02 47 D
Z i 03 15
Z i pPKP₁ 05 17

USCGS: H=22:44:06,5; 21,6°S, 179,4°W
h=635R Mb=5,9 Fiji Islands Region

14. Z i P 13 54 40,8 D
Z i P 49,3
Z e PP 55 39,3
Z e PPP 52,3
E e S 59 34,3
N i 14 05 50,3
N M 06,8 A = 23 μ T=15 sec

D=29,9°; M=5,7; USCGS: H=13:48:31,2; 28,4°N, 53,1°E;
h=33km Mb=5,8 Ms= 5,6 Iran

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15. Z i Pn 04 57 57 C
Z e Pg 58 33
N i Sn 59 24
N i 36
E e Sg 05 00 11
NE i(L) 29
N M 42 A = 43μ T=10sec
D=830km M=5,2

BCIS: H=04:56:05, 35,0°N, 25,2°E h=60km
ML=4,3 (Athens) Greece

15. Z i P 11 02 40,5 C
N i S 13 00,5
D=83,2° m=6,0;

USCGS: H=10:50:11,8; 40,9°N 143,2°E
h=15km Mb=5,4 Japan

16. Z e Pg 02 56 58,4
N i Sn 57 26,4
N e Sg 45,4
D=400km

Athens: H=02:55:45; 37,8°N 20,0°E ML=4,0
Greece

16. Z e PKP1 14 14 26,7
Z i PP 16 07,2
M 15 10,9 AN= 7,4μ TN= 22sec

D=122,5° M=6,1-6,4 AZ=14,3μ TZ= 21sec
USCGS: H=55:36,1; 6,1°S 148,7°E h= 59km
Mb= 5,8 New Britain Region

17. Z e Pg 05 49 55,7
N i Sg 58,7
weak D=25km Albania
H=05:49:51

18. Z e P 04 03 53,3
NE e S 05 22,3
N i(L) 59,3
N M 06.7 A=6,7μ T=12 sec
D=870km M=4,2

BCIS: H=04:01:59; 34,7°N 25,1°E h=50± 15km

18. Z e Pg 04 46 56
NE i Sg 47 13
D=144km H=04:46:30

19. Z e P 22 18 46
USCGS : H=22:12:38,2; 28,4°N, 53,2°E;
h=34km Mb=5,1 Southern Iran

20. Z i P 06 II 51 C
Z i PcP 59,5
N i 12 05,5
Z i 13
Z i 35,5
N i S 21 35,5
D=78,7° h=135km m=6,9
USCGS: H=06:00:03,5; 10,7°N 62,7°W;
h=107km Mb=6,2 M=7 (Pas) Near Coast of
Venezuela.

21. Z i P 13 18 16,2 C
Z i PP 21 28,2
N i S 28 26,2
D=82° m=6,8
USCGS: H=13:05:58,2; 42,2°N, 142,6°E
h=33km Mb=5,9 Ms=6,4 M=6,2 (Pas) 6½-6¾ (Gol)
Japan

25. Z i Pg 06 38 25,2
N i Sg 36,2
D=60km Albania
H=06:38:14,8

25. Z e (PKP₁) 07 22 44,8
USCGS: H=07:02:51,8; 46,4°S, 166,8°E; Mb=5,5
Ms=6,3 Off West Coast of S. Island N.Z.

25. Z i P 10 51 53,5
Z i 52 45,7
N i SKS 11 02 42,7
D=95,7° M=6,1
USCGS: H=10:38:38,4; 15,6°N, 92,6°W
h=138km Mb=5,7 M=6 (Pas) 6¼ - 6½ (Pal). Mexico
Guatemala Border Region

25. Z e P 20 55 51,5
Z i PP 56 04

D=15,5°

BCIS: H=20:52:14; 39,2°N, 40,2°E Turkey

26. Z i PKP₁ 14 57 11,1

USCGS :H=14:37:46,2; 20,9°S, 177,0°W

h=251km Mb=5,8 M=6-6¼ (Pas)Fiji Islands
Region

26. Z i PKP₁ 18 22 48,7 C

Z i 53,2

Z i PKP₂ 23 40,7

Z i 55,2

Z i 25 07

Z i PP 27 21,2 A_{max} = 9,7μ T_{max} = 14sec

D=162° m=6¾

USCGS: H=18:02:50,1; 30,5°S 178,2°W

h=33km Mb=5,8 Ms=6,8 M=6¾ -7 (Pal) (Gol),
7 (Pas) Kermadec Islands Region

27. Z i 04 16 38

Z i PP 17 41

E i SKS 23 34

E i 24 26,8

D=108,9° m=6¾

USCGS : H=03:58:55,1; 6,8°S 129,1°E h=127km
Mb=6,1 M=5¾ -6 (Pal) Banda Sea

27. Z i PPP 10 47 39

USCGS: H=10:37:55,9; 37,8°N 72,3°E h=119km
Mb=5,2 Tadzhik SSR.

27. Z e 13 17 23,3 weak

27. Z e PKP₁ 17 01 07

Z i PP 05 40

D=162° m=5,9

USCGS: H=16:41:07,8; 30,7°S 178,2°W;

h=33km Ms=5,4 M=5,4 M=5,7-5,8 (BRK); 6 (Pas)
Kermadec Islands Region

27. Z e (PKP₁) 19 25 31
Z e PP 26 41
D=116,2° M=5,8

USCGS: H=19:06:42,2; 3,7°S 143,3°E
h=7km Mb=5,9 Ms=6,5 M=5¾ -6 (Pal)
6,2 (Pas) Near New Guinea

28. Z e Pn 00 54 44
Z i 58,5
NE i Sn 55 46, 5
N i S* 56 03
N i Sg 15,5
N M 56,7 A = 4,5^μ T = 3sec
D=5,3° M=4,4

BCIS: H=00:53:26; 40,4°N, 26,7°E Greece
Mb=4,4 (USCGS)

28. Z i PP 14 11 44,6
NE i SKS 18 05,6
N e S 19 03,6
D=103,3°

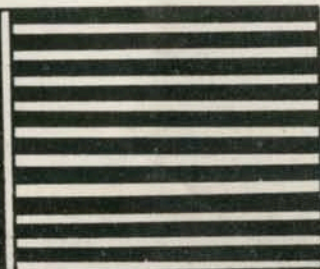
USCGS: H=13:53:35,3; 13,2°S 76,4°W
h=70km Mb=6 M=5½ -5¾ (Pal) 6 (Pas)
Near Coast of Peru

30. Z e 11 58 04 weak

Koçiaj S. Sulstarova E.

15 MAY 1969

Buletin Paraparak



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BULLETIN

October 1968

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drumm speed mm/min |
|-----------|-----------------|-------|-----------|-----------|------|------|------|-----------------------|
| 41°20,8'N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' E | SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition : Tortonian sandstone

NOTE : Upward trace motion on the seismogramm corresponds to N , E and upward ground motion.

m= magnitudes calculated from body waves

M= magnitudes calculated from surface waves

- 1. Z i Pg 18 18 56,8 D
NE i Sg 19 15,8
D=155km
H=18:18:28,8
Albania
felt in Saranda (VI at Borshi, V at Lukove, III at Konispol); in Gjirokaster (IV-V at Erind, Shtëpez, Blongo, Klishar, Krionere, Vrisera, Zervat, Jergucat, Dervican; IV at Glina, Bodrishte, III-IV at Hllomo), in Tepelena (VI at Nivice, V at Salari); in Përmeti (IV at Podgoran, maleshove) Not felt at Gorush (Fieri) Vagalat (Tepelena), Karroq (Saranda).
Athens : H=18:18:29 $M_L=4,1$
- 4. Z e 04 23 17,2
weak
- 4. Z i 06 22 56
N ; 29 04 A = 3M T = 10 sec
USCGS : Sud of Sandwich Islands MLV=6,1 (Wien -H).
- 6. Z e Pg 00 42 15,3
N e Sg 43 18,8
E i 44 01
D=540 km weak
BCIS: H=00:40;45 $36\frac{3}{4}^{\circ}$ N, $22\frac{1}{4}^{\circ}$ E; Mb=4,3
(USCGS) Greece.
- 6. Z e 05 34 45,6
USCGS: Tonga Islands
- 6. Z e 09 06 53,5
USCGS: Region of Samoa Islands
- 6. Z e Pg 10 50 03,6
E i Sg 07,6
D=25 km weak Albania
H = 10:49:59

5. Z i 45,3
 N i Sn 09 44,3
 N i Sg 10 24,3
 N M 11 00 A = 5 μ T = 6sec
 D=655km M=4,5

BCIS : H=15:06:38 36,9°N 26,7°E
 Dodecanese Islands

6. N i 22 12 42
 very weak

BCIS : H=22:07:11 38,7°N 32,5°E Turkey

7. Z i P 19 32 40 D
 Z i P 34 36
 Z i PP 36 38
 Z i PPP 38 48
 Z i 40 29
 NE i eSKS 42 23
 NE i PS 45 34
 M 20 18.9
 D=94° m=8 M=6,7

USCGS: H=19:20:20,3; 26,3°N, 140,6°E
 h=516km Mb=6,1 M=7,5 (Pas) Bonin Is.Reg.

7. Z i P 21 01 22 C
 Z i PP 04 33
 NE i eS 11 38
 D=82,3°

USCGS: H= 20:49:01,3; 42°N, 142,4°E, h=32km
 Mb=5,7 Ms=6,1 Hokkaido Japan Region

8. Z i 07 57 12
 Z i 08 01 22

USCGS: India

9. Z e 03 58 43,5

USCGS: H=03:38:39,9; 14,7°S 175,5°W h=11km
 Mb=5,2 Ms=5,6 Samoa Islands Region

11. M e Sg 03 06 04
 very weak

USCGS: H=03:02:33,1 36,6°N 25,9° E h=21km
 Mb=4,3 Greece

From 19:00, October 13, to 17:00, October 14, The station was out of operation, on account of a trouble in the recording system.

14. Z e 09 24 13,4
weak

USCGS: East Coast of Honshu

14. N e 2303 03
very weak

Athens: H=23:00:19; 40,1°N 24,3°E Greece

17. Z i Pn 23 56 55
Z i Pg 57 07,5
D=360km

BCIS: H=23:56:02; 38,1°N 20,2°E
M_L=4,2 (Athens) Ionian Sea.

19. Z eP 09 59 48

USCGS: H=09:52:03,4; 37,5°N, 73,3°E,
Mb=5,5 Tadzhik SSR.

19. Z e Pn 15 36 41
Z i P* 57
N i S* 38 17
N i Sg 47
N M 39.2 A = 5,5μ T=7 sec
D=655km M=4,4

BCIS: H=15:34:57; 35,3°N 23,6°E Greece
South of Crete Island

20. ZN e 07 20 42

USCGS : Taiwan, China

21. Z i Pg 18 18 52
E i Sg 20 23
D=655km M=4,3

BCIS: H=18:16:40; 35,2°N 23,5°E Greece
M_L=4,4 (Athens) South of Crete Island

22. Z e Pn 07 24 09
E i Sn 46
D= 336 km

USCGS: H=07:23:18; 43,5°N 17°E
Yugoslavia.

23. Z e 21 23 33,5

Z i 24 40

NZ M 23 19.3 $A_N=17\mu$ $T_N=18\text{sec}$; $A_Z=13,5\mu$ $T_Z=18\text{sec}$

USCGS : H=21:04:41,3; $3,3^\circ\text{S}$ $143,3^\circ\text{E}$ Mb=6,1
Ms=6,8 M=6,8 (Pas) h=12km Near North Coast
of New Guinea.

24. N e 16 04 53,3

Z i 14 26,3

USCGS: H=15:51:18,5; $5,9^\circ\text{N}$ 127°E h=70km
Mb = 5,4 Philippine Islands

26. Z e Pg 13 12 16

Weak Albania

26. Z e 20 52 28,5

weak Albania

27. Z e 00 48 27

Weak Albania

27. Z e 22 10 49

weak Albania

28. Z e Pn12 55 52

NE e Sn 56 56,6

NE i 57 38,6

D=610km M=4,00

BCIS :H=12:54:29; $38,9^\circ\text{N}$ $26,0^\circ\text{E}$
Aegean Sea

28. Z e 22 53 25,5

very weak

28. Z i PKP₁ 23 51 52,6

Z e PP 54 48,6

ZNE i 55 25,6

D=139° M=6,2

USCGS: H=23:32:28,7; $12,5^\circ\text{S}$ $166,5^\circ\text{E}$ h=606km
Mb=5,9 M=6,5 (Pas) Santa Kruz Islands.

29. Z e Pg 01 19 32,4

NE e Sg 39,4

weak Albania

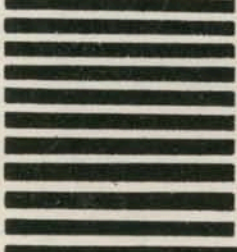
D=60km H=01:19:21,6

29. Z i P 22 27 52 D
 Z i PcP 58
 NE i S 37 21
 E M 59.2 A = 24 μ T = 20sec
 D=73,4 $^{\circ}$ M=6,3 USCGS: H=22:16:15,6; 65,4 $^{\circ}$ N 150,1 $^{\circ}$ W; h=7km
 Mb = 6 Ms=6,5 M=6,8 (Pas) Alaska.
30. N e 14 00 42,3
 weak Albania
30. Z i eP 16 55 12
 NE e S 58 01
 E M 17 01.4 A = 11 μ T=7,5sec
 D=15,1 $^{\circ}$ M= 5,2
USCGS: H=16:51:33,5 37,9 $^{\circ}$ N 38,6 $^{\circ}$ E h = 3km
 Mb=4,9 Turkey
30. Z e Pg 18 00 07
 weak
Athens : H= 17:58:58; 37,8 $^{\circ}$ N 20 $^{\circ}$ E M_L= 4,0
 Ionian Sea
31. Z i Pn 03 24 08,3 D
 NE e Sn 25 35,8
 E i S* 26 00,3
 NE i Sg 25
 NE M 27.4 A_N=28,5 μ T_N=10sec; A_E=26 μ T_E= 9sec
 D=7,5 $^{\circ}$ M=5
BCIS : H=03:22:17; 36,6 $^{\circ}$ N 27,1 $^{\circ}$ E M_{1H}=4,8
 (Prh); 5,3 (Coll) 5,5 (Rom) Aegean Sea
 Dodecanese Islands
31. Z e P 09 20 28,2
 E i SKS 31 03,2
 D=101 $^{\circ}$
USCGS: H=09:06:36,4 1,2 $^{\circ}$ N 116,3 $^{\circ}$ E h=N
 Mb=6,1 Ms=6,0 Molucca Passage.
31. Z e Pg 10 26 33,2
 NE e Sg 39,2
 D=50km weak Albania
 H=10:26:24

15 MAY 1969

Pad

Buletin Paraparak 

 **Preliminary Bulletin**

NOVEMBER 1968

STATE UNIVERSITY OF TIRANA

Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL BULLETIN

November 1968

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drumm speed mm/min |
|-----------|-----------------|-------|--------|--------|------|------|------|--------------------|
| 41°20,8'N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' E | SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition : Tortonian sandstone

NOTE : Upward trace motion on the seismogramm corresponds to N , E and upward ground motion.
 m= magnitudes calculated from body waves
 M= magnitudes claculated from surface waves

TIRANA (Tir)

N o v e m b e r 1 9 6 8

Page 2

2. Z i 05 49 52,5
weak

3. ZNE i Pg 04 49 45,5 D The shock was felt: in Shkodra (VII at Zogaj, Kozmaç; VI½ at Shkodra, Spathar, Mjede, Myselim, Rragam, Drishte, Mnellë, Renc, Kuç, Grudë-fushe, Grue e mirë, Luarez; VI at Bogë, Mes Vilza; V+ at Selcë). in Lezhë (VI½ at Gocaj; VI at Lezhë, Kakariq, Trashan, Krajni, Zejmen, Gajusht, Pllane, Berzanë). The shock was further reported: V at Milot (Kruja), V-VI at Bisakë and V at Helshan (Kukës); V at Bajram Curri, Zogaj, Luzhë (Tropoja; IV+ at Tomin, Brest, Ostren i Madh (Peshkopi); V at Likmetaj and IV at Rreth Greth, Bogo (Durrës); IV-V at Shkopet Madhesh, German and at Peshk, Lene (Burrel); V½ at Fierrez (Reshen) IV at Tirana. Slight damage in region of Shkodra.

BCIS: H = 04:49:33; 42,0°N
19,3°E M_L = 5,7 (Moxa) Albania-
Yugoslavia Border Region.

3. Z i Pg 05 16 23,5
NE i Sg 35,5
D=103km

H=05:16:05 Aftershock

Athens: H=05:16:06; 42,0°N
19,3°E Albania.-Yugoslavia
Border Region.

3. Z i Pg 05 39 33,2
E i Sg 46

Aftershock

D=110km H=05:39:13

- 2. NE e 08 44 15,3
weak
- 3. E i Sg 06 52 32,5
weak
- 3. N e 07 13 27
weak
- 3. ZNE e 09 50 35,5
weak
- 3. N e 13 32 02
weak
- 3. NE i Sg 19 16 30,5
aftershock

Athens: H=19:15:58; 42,0°N, 19,3°E
Albania - Yougoslavia Boder Region.

- 3. E e 21 40 07
- 4. N e Sg 00 01 09,3
weak
- 4. N e Sg 01 58 27
weak
- 4. Z i PKP₁ 09 26 07,5 D
Z i 13,5
NE i 24,5
Z i_pPKP₁ 28 29,5

USCGS : H=09:07:38,5; 14,2°S 172,0°E
New Hebrides Islands Region

- 4. NE e 16 34 19
weak
- 4. E i Sg 20 10 17,7
Z i 11 07,2

BCIS: H=20:05:58; 36°N 27°E
Dodecanese Islands

- 5. NE e Sg 00 47 57,2
E i 48 27,2

Athens : H=00:46:23; 37,8°N 20,3°E
M_L=3,8 Ionian Sea.

5. Z e Pg 04 50 36
NE i Sg 49
D=110km H=04:50:16

6. Z e Pg 05 13 30
NE e Sn 14 00
N e Sg 18
D=400km

USCGS: H=05:12:17,9; 39°N 23,5°E h=21km
Mb=4,3 Greece.

6. Z e P 13 43 56,4
N i S 46 22,4
D=12°

BCIS: H=13:41:06; 35,2°N 32,9°E h=70km
Cyprus.

7. Z e 03 52 50

USCGS: H=03:32:50,8; 16.6°S 172,7°W
Mb=5,1 M_S=5,5 Region of Samoa Islands

7. Z i P 10 09 10 C

USCGS: H=10:02:05,3; 73,4°N 54,9°E
Mb=6,0 Novaya Zemlya

7. Z e Pg 11 14 14
NE i 32
weak

7. Z e 11 36 24,7
weak

8. N e Sg 15 29 19
NZ i 33

BCIS: H=15:26:49; 39,7°N 25,5°E M_L=4 (Athens)
Aegean Sea

8. Z e Pg 17 12 46,6
E e Sg 13 53,6
D=580km.

Athens: H=17:11:03; 36,7°N 22,9°E Greece

9. NE i Sg 12 42 40,5

BCIS: H=12:38:56; 40,3°N 28,7°E Turkey

9. E e (S) 13 57 41,5
USCGS: H=13:43:38,4; 23,8°N 64,7°E
 Mb=5,2 Ms=5,3 Near East Coast of West Pakistan
9. E e (S) 20 55 11
USCGS: H=20:30:41,9; 24°N 126,8°E
 M=6,1 (Pas) Molucca Passage
10. NE ieSg 12 54 51
 N M 55.7 A = 3,5 μ T=7sec
BCIS: H=12:50:42; 34,5°N 24°E M_L=4,0
 (Athens) South of Grete Island
10. NE e Sg 14 33 40,5
 NE i 34 30
Athens: H=14:29:31; 34,5°N 24,1°E M_L=4,1
 South of Crete Island
10. NE e (S) 17 25 03
USCGS: H=17:01:59,2; 20°N 121,4°E
 Mb=5,2 Ms=5,5 Philippine Islands Region
10. Z e 19 49 31
 weak Albania
11. Z i P 14 53 44 C
 Z i PP 57 00
 N i S 15 04 05
 M 05,7 A_N=15 μ T_N=16sec; A_E=7 μ T_E=16sec;
 D=84° A_Z=24 μ T_Z=16 sec.
 m=6,4 M=6,3
USCGS: H=14:41:15,9; 40,1°N 143°E
 h=35km Mb=5,5 Ms=5,9 Off East Coast of Honshu Japan
11. Z i Pn 23 36 11 D
 Z i P* 27,5
 Z i Pg 43,5
 N i Sn 37 37,5
 E i S* 38 01,5
 N i Sg 21,5
 M 39.7 A_N=33 μ T_N=11s; A_E=12 μ T_E=10s; A_Z=14 μ
 D=800km M=5,0 T_Z=8s
BCIS: H=23:34:21; 36,8°N 27°E M_L=4,8 (Athens)
 Dodecanese Islands

- 11. NE e Sg 23 57 08,5
BCIS : H=23:53:03; 36,5°N 27,1°E
 Dodecanese Islands
- 12. Z i P 00 56 44,5 C
USCGS: H=00:44:12,8; 27,5°N 128,4°E
 h=48km Mb=5,8 Ms=5,6 Ryukyu Islands
- 12. Z i Pn 03 39 28
 N e Sn 40 54
 N i Sg 4I 40
 N M 43,1 A = 14μ T=11 sec
 D=810km M=4,7
BCIS : H=03:37:37; 36,8°N 27,1°E M_L=5,1
 (Athens) Dodecanese Islands
- 12. Z i Pg 05 07 29
 weak
- 12. Z i Pn 06 10 44
 NE e Sn 12 13
 NE i Sg 13 00
 NE M 14,3 A_N= 11μ T_N=11sec; A_E=8,5μ T_E=9sec
 D=840km M=4,6
BCIS: H=06:08:49 36,5°N 27,6°E Mb=4,7
USCGS)Dodecanese Islands
- 12. ZN ei 09 09 54
 N i(S) 20 25
USCGS: Region of Hokkaido, Japan.
- 12. Z i 22 20 52
USCGS: H=22:00:39,1; 15,6°S 172,8°W
 h=47km Mb=5,2 Samoa Islands Region
- 13. Z e Pg 03 20 27
 NE i Sg 40
 E i 5I
 D=110km H=03:20:07
- 13. E e 05 08 5I
 weak

12. Z e (Pn) 15 18 42,5
NE i Sg 21 02,5
E i (L) 34
D=890km M=4,0

Athens : H=15:16:41; 36,8°N 28,4°E
Turkey

13. NE e Sg 17 52 3I

Athens: H=17:48:29; 36,8°N 27,2°E
Dodecanese Islands

13. Z i P 18 54 14,3 C
Z i pP 29
N e S 19 04 34
N i 48
NZ M 05.6

D=84° h=52km
m=6,2 M=5,9

$A_N=6,5\mu$ $T_N=16\text{sec}$; $A_Z=9,8\mu$ $T_Z=16\text{sec}$

USCGS: H=18:41:47,9; 40,2°N 142,5°E
h=49km Mb=5,5 Ms=5,8 Near East Coast of
Honshu.

14. NE e 21 10 5I
weak

14. ZNE iePg 03 09 45
NE ieSg 54,5
D=80km H=03:09:30,5
Albania.

Athens : H=03:09:34; Propably 41³/₄°N 20¹/₄°E

14. Z i Pg 12 06 28,4 C No record on EW comp.
N i Sg 38,4
N M 06.7 A = 2,5 μ T = 2sec
D= 85 km
H=12:06:13

14. Z iPKP₁ 23 28 30 C No record on EW comp.
Z ipPKP₁ 29 04

USCGS: H=23:08:54,4; 21,5°S 170,1°E
h=103km Mb=5,4 Loyalty Island

14. Z i Pg 23 15 33,4 C No record on EW comp.
N e Sg 46
D=110km Albania
H=23:15:13,4

Athens: H=23:15:18; 41,9°N 19,1°E

14. Z e (Pg) 23 53 48,5 No record on EW comp.
weak

15. Z e (Pg) 02 20 27 No record on EW comp.
N i 43
weak

15. Z e 06 31 43 No record on EW comp.

15. Z e (Pg) 11 55 31
weak

16. Z e Pg 00 45 04
NE e Sg 17
D=110km
H=00:44:44

16. Z e (PKP₁) 08 05 34

USCGS: H=07:45:51,7; 16,6°S 175,9°E
h=66km M=6-6 1/4 (Pas) Mb=5,6 Fiji
Islands Region

17. NE i (S) 07 58 00

USCGS: H=07:41:16,1; 1,3°S 13,6°W
Mb=5,3 M=6 1/2 (Gol) North of Ascension
Islands

18. Z e Pg 14 52 43
N e Sg 54
NE i 53 00
D=95km Albania

Athens: H=14:52:26; 42°N 19,1°E

18. Z e Pg 21 40 12
NE e Sg 18
D=50km Albania

Athens: H=21:40:03; 41,7°N 20,0°E

19. Z e Pg 14 19 02
N i Sg 08
D=50km H=14:18:52,5
Albania

22. Z i P 09 12 16 D
E i S 22 56
D=87,5° M=5,5

USCGS: H=08:59:23,1; 16,3°N 122,3°E
h=26km Mb=5,3 Ms=5,8 Luzon, Philippine
Islands

24. Z i P 2I 33 22,5 C
 Z i pP 36,5
 N i S 43 40,5
 NZ i 44 06,5
 D=83,4° h=48km
 m=6,4

USCGS: H=2I:20:59,9; 40,3°N 142,3°E
 h=51km Mb=5,9 Near East Coast of
 Honshu Japan.

25. N e (Sg) 06 16 2I
 weak

Athens: H=06:13:32; 39,0°N 25,7°E
 Ms=4,2 Aegean Sea.

25. Z e P 18 50 37

USCGS: Philippine Islands, Minandao

26. N e (S) 04 33 28,5

USCGS: H=04:30:02; 36,4°N 27,5°E
 h=56km Mb = 4,2 Dodecanese Islands

26. Z i Pg 15 35 42,8 D
 NE i Sg 55,8
 D=110km H=15:35:23

27. Z i Pg 0I 19 13 D
 N i Sg 28
 D=122km H=0I:18:5I

Albania.

Athens : H=0I:18:47; 40¼°N 19¾°E

28. Z i P 10 49 40 C
 NE i (SKS) II 00 22

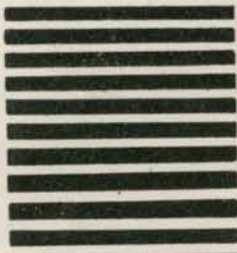
USCGS: H=10:36:07,7; 15,4°N 94,6°W
 h=33km M=6,1 (Pas) Mb=5,2 Ms=6,4 Near
 Coast Oaxaca Mexico

28. Z e Pg 18 2I 4I
 weak Albania

Athens : H=18:2I:25 40,5°N 19,5°E

P.W.

Buletin Paraparak 

 **Preliminary Bulletin**

DECEMBER 1968

STATE UNIVERSITY OF TIRANA

Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL

BULLETIN

December 1968

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drumm speed mm/min |
|-----------|-----------------|-------|-----------|-----------|------|------|------|-----------------------|
| 41°20,8'N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' E | SSj-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| H=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition : Tortonian sandstone

NOTE : Upward trace motion on the seismogramm corresponds to N , E and upward ground motion.

m= magnitudes calculated from body waves

M= magnitudes claculated from surface waves

1. NE e Sg 08 00 37
weak Albania

2. ZNE e 01 56 22
weak Albania

2. Z i P 02 43 16,5 D

USCGS: H=02:33:41,6; 13,9°S 23,8°E
h=7km Mb=6,0 Zambia

3. Z i Pg 20 58 36,5

N i 56,6

N e Sn 59 08,5

NE i Sg 22,5

E M 59,7 A = 9 μ T=4 sec

D=350km.

M=4,4

BCIS: H=20:57:33; 44,4°N 18,5°E
Yougoslavie Mb=4.7 (USCGS)

4. Z e Pn 18 45 19,3

E e Sg 47 31,3

Z i 55,3

Z M 48.7 A=5,5 μ T=9 sec

D=820km

USCGS: H=18:43:28; 36,4°N 27,1°E h=49km
Mb=4,4 Dodecanese Islands

4. Z e Pn 18 54 09

Z i Sg 56 22

Z M 57.5 A=2,2 μ T = 8sec

D=820km

BCIS: H=18:52:19; 36,4°N 26,9°E
Dodecanese Islands

4. Z e Pn 19 39 14

E i Sg 41 27,5

Z M 42.6 A=5 μ T=8sec

D=820km.

BCIS: H=19:37:23; 36,5°N 27,0°E
Dodecanese Islands

5. 'quake lost during change of paper
(07 52- 08 02)

5. Z i P 09 50 48 D
E I S 56 13
E M 10 07.2 A=22 μ T=13 sec
D=33 $^{\circ}$ M=5,9

BCIS :H=09:44:09; 63,9 $^{\circ}$ N 22,0 $^{\circ}$ W M=6,3
(Moxa) M_L = 5,8 (Prh)M=5,9 (Pas)

Iceland Region.

5. Z e Pg 22 34 3I
E i Sg 35 19
D=420km.

BCIS: H=22:33:15; 44,7 $^{\circ}$ N 17,4 $^{\circ}$ E Bosnie
Yougoslavie

5. E e S* 23 09 50
E i 10 44
weak

Athens: H=23:06:49; 35,6 $^{\circ}$ N 22,1 $^{\circ}$ E

6. Z i (Pg) 15 43 29
Albania

7. Z i PP 05 17 55
Z i 20 25,5
M 06 10.2

A_N=8 μ T_N=20s; A_E=7 μ T_E=19s; A_Z=17 μ
T_Z=22s.

USCGS: H=04:57:49; 3,4 $^{\circ}$ S 145,9 $^{\circ}$ E
h=15km M=6,2 (Pas) Near North Coast of
New Guinea

7. Z e (P) 15 53 27,5

USCGS: Aleutian Islands

7. Z i PKP₁ 21 55 22 C
Z ipPKP₁ 39
Z i 47

USCGS: H=21:35:44,8; 20,7 $^{\circ}$ S 169,4 $^{\circ}$ E;
h = 61 km M=6 (Pas) Mb=5,6 New Hebrides
Islands.

10. Z i Pn II 29 22
 Z i Pg 33
 Z i 40
 NE i Sn 57
 E i 30 05
 NE i Sg 10
 N M 30.3 A = 14 μ T=4sec

D=320km M=4,5

BCIS : H=11:28:35; 38,7°N 21,5°E
 Ms=4,5 (Athens) Greece.

14. Z e Pg 09 06 39
 NE i Sg 45

D=50km

H=09:06:30

Albania

Athens: H=09:06:33; 41½° N 19¼° E

14. Z e (Pg) 09 43 45
 weak

14. NE i 10 22 13

USCGS: Aleutian Islands

15. Z i P 02 26 50,5 C

Z i PcP 59,5

N i 37 11

NE i S 22,5 A_N=9 μ T_N=14sec

D=85,6° m=6,3

USCGS: H=02:14:17,5; 51,6°N 175,8°E

h=N Mb=5,7 Ms=6,2 M=6¼ -6½ (Pas)

Rat Islands Aleutian Islands

15. Z i P 02 41 05,5 C

USCGS: H=02:28:32,4; 51,7°N 175,8°E

h=N Mb=5,4 Ms=6,1 Rat Islands, Aleutian Islands

16. ZN i 22 17 24

17. Z e (P) 12 14 08
Z i 35
Z i 48
NE i S 23 54

D=78,5°

USCGS: H=12:02:15;60,2°N 152,8°W h=86km
Mb=5,9 M=6½(Pas) Southern Alaska

21. Z e Pn 00 38 33
NE i Sg 40 45
N M 42.2 A = 9μ T =10sec

D=820km M=4,5

BCIS: H= 00:36:36 36,5°N 27,0°E M_L=5
(Athens)Mb=4,6 (USCGS). Dodecanese Islands

21.N e Sg 03 08 41
weak

BCIS: H=03:04:43; M_L=4,3
Athens: 36,8°N 27,0°E Dodecanese Islands

21.NE ieSg 03 58 39

Athens: H=03:54:27 36,6°N 27,3°E
M_L=4,1 Dodecanese Islands

21.N e Sg 06 47 35

Athens: H=06:43:31; 36¾°N 27¼°E
M_L=4,1 Dodecanese Islands

22.Z e (P) 09 16 59,5

USCGS: H=09:06:36,3; 36,2°N 101,9°E
h=N Mb=5,5 Tsinghai Province, China.

22.Z e (P) 16 57 01,5

USCGS: H=16:44:44,2; 56,3°N 153,8°W
h=N Mb=5,3 M=5,1(Brk) Kodiak Island Region

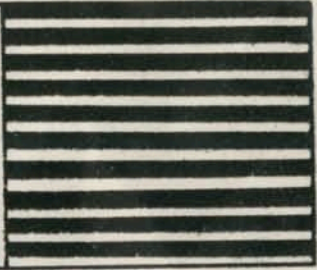
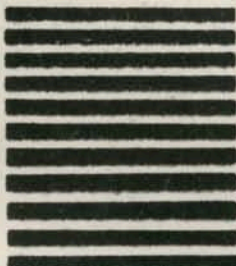
23. Z e Pn II 35 24,5
 Z i Pg 34
 NE i Sn 58,5
 N i Sg 36 08
 NE i (L) 13
 NE M 36.9 $A_N=5,5\mu$ $T_N=3\text{sec}$; $A_E=5,3\mu$ $T_E=3\text{sec}$.
 D=300km M=4,2
BCIS: H=11:34:40; $39,8^\circ\text{N}$ $17,0^\circ\text{E}$
 $M_L=4,7$ (Athens) Italy.
24. NE i Sg 07 38 17
 weak
Athens: H=07:37:24 $40,4^\circ\text{N}$ $21,5^\circ\text{E}$
 $M_L=3,8$ Greece.
25. Z e P 04 09 06,5
USCGS: H=03:56:39,2; $41,7^\circ\text{N}$ $142,8^\circ\text{E}$
 h=36km Mb=5,3 Ms=4,8 Hokkaido Japan
 Region.
25. Z e Pn 12 19 06
 Z i P* 35
 Z e Pg 43
 NE e Sn 20 31
 N i 43
 NE i Sg 21 18
 NE M 22.3 $A_N=12\mu$ $T_N=5\text{sec}$; $A_E=5\mu$ $T_E=4\text{sec}$
 D=815km M=4,9
BCIS: H=12:17:19 $34,9^\circ\text{N}$ $24,4^\circ\text{E}$ h=80km
 $M_L=4,8$ (Ath) South of Crete Island
30. Z e P 10 34 04
 Z e 35 21
USCGS: H = 10:27:09,7 $76,2^\circ\text{N}$ $7,5^\circ\text{E}$
 h=23km Mb=5,0 Ms=5,5 Svalbard region.

April 1969

Koçiaj S. Sulstarova E.

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

30 JUN 1969

Buletin Paraparak 
 **Preliminary Bulletin**

JANUARY 1969

— ALBANIA —

| TIRANA (Tlr) | | | January | 1969 | Page 2 |
|--------------|-----------------------------|---|--|------|--|
| 2. | N | i Sg M | 15 21 51 23.6 | | <u>BCIS</u> :H=15:17:31 35,3°N 28,1°E M _L = 4,4 (Athens) |
| 3. | N | i SS | 03 29 19 | | <u>USCGS</u> :H=03:16:38 37,1°N 57,9°E h=11 km Mb=5,6 Ms=5,2 Iran-USSR Border Region |
| 4. | Z NE | e Pn e Sn M | 09 31 33 32 16 33.2 | | <u>Athens</u> : H=09:30:38 37,9°N 20,1°E M _L =4,0 D=380 km |
| 5. | Z Z NE M | i PKP ₁ i PP i(PKS) | 13 45 50 48 07 49 15 14 47.7 | | A _N =49 ^μ T _N =21s A _E =29 ^μ T _E =21s A _Z =88 ^μ T _Z =22s <u>USCGS</u> :H=13:26:39,9 8,0°S 158,9°E h=47 km Mb=6,4 Ms=7,1 M=7,5(Pas) 6 ³ / ₄ -7 (Brk) Solomon Islands |
| 5. | Z E | e Pg i Sg | 18 52 32,6 40,6 | | D=65 km H=18:52:20,6 <u>Athens</u> :H=18:52:17 41,5°N 19,4°E |
| 6. | Z Z Z Z NE N | i PKP ₁ i PP i i(PKS) i M | 15 58 22,5 D 16 01 00 34 02 08 11 38 59,2 | | A= 22 ^μ T=2Isec D=136° M=6,6 <u>USCGS</u> :H=15:39:00,9 10,5°S 164,5°E h=32km Mb=6,2 Ms=6,8 M=7,1(Pas) 6 ³ / ₄ -7(Brk) 6,0(Pal) Santa Kruz Islands Region |

- 6. Z e Pg 22 05 42
weak
Athens: H=22:04:34 37,9°N 20,1°E
Italy

- 7. Z i Pg 00 51 48,9
N i Sn 52 14,9
N i S* 21,4
NE i Sg 30,9
N M 53,5
D= 350 km M=4,2
A=6,6^u T= 5 sec
BCIS:H=00:50:46 38,2°N 20,1°E
M_L=4,2(Athens) Ionian Sea

- 8. N i 03 10 13,5

- 10. Z i Pg 04 32 45 D
N i Sg 33 14
NE i Lg 33 21
D=240 km
BCIS:H=04:32:03 39,2°N 19,8°E
M_L=4,3 (Athens)

- 11. Z a PKP₁ 04 46 25
Z i PP 50 59 D
D=162°
USCGS:H=04:26:26,8 28,4°S
177,0°W h=68km Mb=5,4 M=6¹/₂-6³/₄
(Pas) 5³/₄-6(Gol) Kermadec
Islands

- 11. Z i Pn 10 22 43,5
Z e Pg 54
E e Sn 23 25
N e Sg 38
E i 49
D=345km
BCIS:H=10:21:52 38³/₄°N 20¹/₄°E
M_L=4,3 (Athens) Ionian Sea

- 11. N i S* 13 09 42
weak
Athens:H=13:06:57 38,6°N 26,4°E
M_L= 3,8

13. Z e Pn 05 47 40
 Z i P^{*} 48 0
 Z i 53,5
 Z i 59,5
 Z i 48 08
 E i Sn 27
 E i Sg 47
 E M 49.4
 D=440 km M=4,5

A=10^μ T = 4sec
BCIS:H=05:46:38 38,0°N 22,5°E
 M_L=4,3 (Athens) Greece

14. ZNE i P 23 14 20,5
 NE i S 16 07,5
 D= 9,3° m=7,9

CNW A_N=12^μ T_N= 6sec; A_E=10^μ
 T_E=6 sec A_Z=16^μ T_Z= 6sec
BCIS:H=23:12:09 36,2°N 29,1°E
 h=50km m=6,8(Uppsala); M_{LH}=6,5
 (Wien-H):6,4(Upp) M_{SH}=6,4(Collm);
 6,2(Roma) M_{LH}=6,1(Prh) Strasbourg;
 5,8(Istanbul-K).
 South Turkey Coast

17. NE i(L) 08 38 12,6
 weak

Athens: H=08:35:28 37,7°N
 23,2°E M_L=4,0

19 ZNE i P 07 13 53,7
 Z i pP 14 40
 Z i 15 20
 Z i PP 17 04
 Z i 18 20
 NE i S 23 36
 E i 34 35
 D=80° 2 M=6,7
 m=6;8

CSW A_{Zmax} = 14^μ T_{Zmax} = 7 sec
 A max = 58^μ T max = 22 sec
USCGS:H=07:02:04,4 45,0°N
 143,2°E h=204 km Mb=6,4 M=7(Pas)
 6 1/4-6 3/4(Gol) Hokkaido, Japan Re-
 gion

TIRANA (Tir)

January 1969

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19. Z i PKP₁ 19 10 06,2 C
 Z i pPKP₁ 38,2
 Z i 11 25
 Z i PP 13 13
 ZN i PKS_E 44
 Z i 15 19

D=141,3° h=117 km
 m=6,6

USCGS:H=18:50:52,1 14,9°S
 167,2°E h=112km Mb=6,2
 M=63/4(Pas) 61/4-61/2(Gol)
 New Hebrides Islands

21. NE i 08 22 28

24. Z i PKP₁ 02 51 50,5 D
 Z i PKHKP 59,5
 Z i PKP₂ 52 17,5
 Z i pPKP₁ 54 08
 ZNE i PP 55 52
 NE i 03 01 45

D=155° h=587km
 m= 6,6

USCGS:H=02:33:03,5 21,9°S
 179,5°W h=595km Mb=5,9
 M=7,0(Pas) Fiji Islands
 Region

25. NE eIS 05 43 49

USCGS:H=05:19:17,1 0,8°N
 126,1°E h=24km Mb=5,9 Ms=5,7
 M=6,2 (Pas) Molucca Passage

25. Z e Pg 11 38 24,5
 Weak

25. Z e Pg 20 59 00
 NE e Sg 38
 NE i 48

D=320km
 H=20:58:04,1

Athens:H=20:58:06 38,9°N
 21,5°E M_L=3,7

26. Z e PP 13 42 20,5

USCGS:H=13:23:46,9 56,3°S
27,2°W h=N M=5,1 South Sandwich
Islands Region

26. Z i P 15 17 33,5 C
E e S 27 29,5
N M 58,3
D=78,5° M=6

A = 10,6^M T = 17 sec
USCGS:H=15:05:32,7 55,8°N
162,9°E h=16km Mb=5,5 Ms=5,5
M=5½-5¼ (Gol). Near East Coast
of Kamchatka

27. Z e P 13 29 30,5
Z e PP 33 53,5
Z e PPP 36 07,5
D=105°

USCGS:H=13:15:24,4 8,8°N
137,7°E h=5km Mb=5,5 Ms=5,6
West Caroline Islands

30. Z e P 10 43 19,6
Z i 41,6
Z e PP 47 25,6
Z i pPP 45,6
E i SKS 53 54,6
E i S 54 44,6
D=100° m= 7,4

A= 21^M T= 16sec
USCGS:H=10:29:40,4 4,8°N
127,4°E h=70 km Mb=5,9 M=7,2
(Pas) 7-7¼ (Brk) Talaud
Islands

31. Z eiP 00 57 57,5 C
Z i 01 02 11,5
E i SKS 08 36,0
D=100,2° M=6,1

USCGS:H=00:44:13,3 4,2°N
128,1°E h=N Mb=5,7 Ms=6,3
M=6,6 (Pas) 6¼-6½(Brk)North
of Halmahera

TIRANA (Tir)

January 1969

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| | | | |
|-----|----|--------|----------|
| 31. | Z | e P | 14 42 09 |
| | N | e(S) | 43 54 |
| | NE | i | 45 12 |
| | | D=8,7° | |

BCIS:H=14:40:04 34,1°N
 26,0°E M_L= 4,3 (Athens)
 Mb=5,1(USCGS)

| | | | |
|-----|----|------|----------|
| 31. | N | i Sg | 15 35 26 |
| | NE | i | 51 |

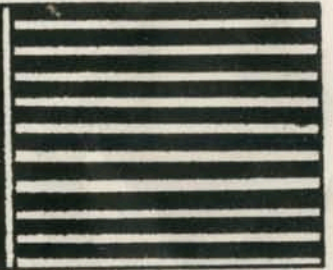
BCIS:H=15:34:31 39,0°N
 20/4°E M_L=3,9 (Athens)

May 1969

Koçiaj S.
 Sulstarova E.

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

30 JUN 1969

Buletin Paraparak**Preliminary Bulletin****FEBRUARY 1969****- ALBANIA -**

STATE UNIVERSITY OF TIRANA

Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL

BULLETIN

February 1969

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drumm speed mm/min |
|------------|-----------------|-------|--------|--------|------|------|------|--------------------|
| 41°20,8' N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' E | SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition : Tortonian sandstone

NOTE : Upward trace motion on the seismogram corresponds to N , E and upward ground motion.

m= magnitudes calculated from body waves

M= magnitudes calculated from surface waves

Tirana

1969

2. E i 02 03 13,5

3. ZNE i P 21 55 24 GSE $A_{Zmax} = 4^{\mu}$ $T_{Zmax} = 6,5$ sec
 Z i PP 59 29
 E i SKS 22 06 01,6
 NE i S 47 $A_{max} = 13^{\mu}$ $T_{max} = 11$ sec
 $D = 97,7^{\circ}$ $m = 7,5$
 USCGS:H=21:41:41,9 $4,9^{\circ}$ N
 $127,4^{\circ}$ E Mb=6,1 Ms=6,4 M=6,8
 (Pas) 63/4(Brk)
 Talaud Islands

4. N e 02 02 42
 Z i 09 51

The station was out of operation from 08 03, February 7, till 19 26 February 12.

17. Z i PP 01 01 07

USCGS:H=00:42:59 $03,8^{\circ}$ N $128,4^{\circ}$ E
 $h=14$ km Mb=5,6 Ms=6,5 Mag=6½
 (Pas) North of Halmahera

20. NE i SKS 10 20 02

USCGS:H=09:55:33,8 $3,5^{\circ}$ N
 $128,2^{\circ}$ E $h=33$ km Mb=5,7 Ms=6,4 M=6½
 (Pas) North of Halmahera

20. Z e (P) 10 44 07
 Z i pP 19
 Z e PP 48 19
 $D=101,5^{\circ}$

USCGS:H=10:30:22,1 $3,5^{\circ}$ N
 $128,4^{\circ}$ E $h=77$ km Mb=6,0 North
 of Halmahera

20. E i S 17 23 30

USCGS:H=16:58:13,8 $3,7^{\circ}$ N
 $128,2^{\circ}$ E $h=48$ km Mb=5,3 Ms=5,8
 North of Halmahera

| TIRANA | (Tir) | February | 1969 | Page | 3 |
|--------|----------------|----------|--------|---|-------------------------|
| 21. | Z i Pn | 18 40 | 44,5 D | | |
| | Z i Pg | | 55,0 | | |
| | NE i | 41 | 16 | | |
| | NE i Sn | | 20,5 | | |
| | N i Sg | | 32 | | |
| | E i | | 36 | | |
| | D=320km; M=4,2 | | | <u>BCIS</u> :H=18:39:57 39,1°N 21,9°E M _L =4,0 (Athens); Mb=4,6; h=41km (USCGS) Greece | |
| 22. | Z i Pg | 00 35 | 39,6 D | | |
| | E i Sg | | 54,6 | | |
| | N M | 36.0 | | A= 6,8 ^m | T= 1 sec |
| | D= 125 km | | | The shock was felt IV at Himara | |
| | Albania | | | | |
| 23. | Z e P | 00 50 | 35,4 C | A _{max} =2,8 ^m | T _{max} =9 sec |
| | Z i | 54 | 20,4 | | |
| | Z i PP | | 42,9 | A _{max} = 8,3 ^m | T _{max} =7 sec |
| | Z i PPP | 56 | 51,4 | | |
| | E i S | 01 02 | 05,4 | | |
| | D=99,5° M=6,6 | | | <u>USCGS</u> :H=00:36:56,6 3,1°S 118,9°E h=13km Mb=6,1 Ms=6,9 M=6/4-7 (Pas) 7,2 (Brk) Celebes | |
| | m=7-7/4 | | | | |
| 24. | Z i PS | 00 37 | 13 | | |
| | | | | <u>USCGS</u> :H=00:08:45,6 6,2°S 131°E Mb=5,8 Ms=5,9 h=38 km Tanimbar Islands region | |
| 26. | E i | 01 34 | 04 | | |
| 26. | N e(S) | 12 39 | 50 | | |
| | | | | <u>USCGS</u> :H=12:35:47,8 36,6°N 27,2°E h=27km Mb=4,8 | |
| 27. | NE e Sg | 09 50 | 35 | | |
| | | | | <u>Athens</u> :H=09:48:08 39,3°N 24,8°E M _L =3,9 Greece | |

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28. ZNE i P 02 45 49,3 GSE BCIS:H=02:40:33 36,2°N
10,5°

USCGS:H=02:40:32,5 36,0°
10,6°W h=22km Mb=7,3 Ms=8,0
M_{PV}=7,2 (Bns) 7/4(Pal);
7,7(Gol) 7/4(Pru) 7,9(Brk),
8,0(Pas, Upp, Moxa, Bns)
8,1(Str) 8,2(Gol) 8,3(Wien)
North Atlantic Ocean

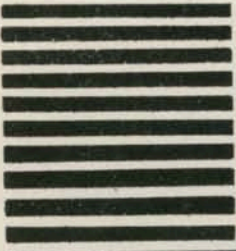
28. Z e Pn 16 08 32,5
N e Sn 09 13,5
N e Sg 29,0

Athens:H=16:07:39 8°N
23,1°E M_L= 3,4

JUNE 1969

Koçiaj S.
Sulstarova E.

Buletin Paraparak 

 **Preliminary Bulletin**

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| | | | | | | |
|----|-----|-----------|-------|----------------|-----|---|
| 2. | Z | Im | 15 | 04.2 | | |
| 3. | Z | i Pn | 01 00 | 46 | DSE | $A_Z = 5,9\mu$ $A_N = 4,7\mu$ $A_E = 3\mu$ $T_Z = 4 \text{ sec}$ $T_N = T_E = 3 \text{ sec}$ |
| | ZE | i | 01 | 01 | | |
| | Z | i Pg | | 16,5 | | |
| | NE | i Sn | | 58 | | |
| | E | i Sg | 02 | 35 | | |
| | N | Im | | 04.2 | | $A = 52,5\mu$ $T = 8 \text{ sec}$ BCIS:H=00:59:14 40°2 N 27°4 E h=N Western Turkey |
| | | D= 660 km | | $M_{LH} = 5,2$ | | |
| 3. | Z | i P | 15 01 | 42,5 | C | |
| | ZNE | Im | 16 | 13 | | $A_Z = 12\mu$ $A_E = 5,7\mu$ $A_N = 9\mu$ $T_Z = T_E = T_N = 14 \text{ sec}$ USCGS: Off East Coast of Kamchatka |
| 3. | Z | i | 16 50 | 34,5 | C | USCGS: Samoa Islands Region |
| 3. | ZNE | i Sg | 18 22 | 44 | | weak |
| 4. | N | e | 01 14 | 22 | | |
| 5. | NE | i Sn | 14 44 | 01 | | strong microseismes |
| | E | i Sg | | 38 | | |
| | | D= 670 km | | | | BCIS:H= 14:41:16 40°1N 27°5 E Western Turkey |
| 5. | E | i | 19 43 | 14 | | strong microseismes |
| | E | i S | 46 | 07 | | |
| | E | i | | 20 | | |
| | NE | i | 47 | 39 | | |
| | NE | i SS | 49 | 24 | | USCGS: Hindu-Kush |

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|--------------|-----|-------|------------|------|------|---|
| 6. | Z | e(P) | 19 | 29 | 02 | <u>BCIS</u> : Atlantic Ocean near Portugal |
| 8. | ZNE | i | 10 | 42 | 05,5 | |
| 8. | Z | e Pn | 15 | 21 | 14 | |
| 9. | Z | e(PP) | 14 | 07 | 28 | <u>USCGS</u> : West New Guinea Region |
| 10. | Z | e(PP) | 07 | 14 | 15,5 | <u>USCGS</u> : East New Guinea Region |
| 11. | N | i Sg | 18 | 24 | 58 | weak |
| 14. | Z | i(P) | 09 | 00 | 19 | |
| | Z | i PP | | 04 | 00 | <u>USCGS</u> : H=08:47:16,3 12°09N 86°08W h=178 km Nikaragua. |
| 15. | N | Lm | 15 | 32,6 | | <u>USCGS</u> : Aleutian Islands Region |
| 16. | Z | e P | 16 | 06 | 51 | |
| | NE | i(S) | | 17 | 18 | |
| | NEZ | Lm | | 48,8 | | $A_Z=5,3\mu$ $A_N=4,4\mu$ $A_E=3,5\mu$ |
| | | | | | | $T_Z = T_N = T_E = 15 \text{ sec}$ |
| | | | | | | <u>USCGS</u> : H=15:54:17,2 38°5N 142°07E h=40 km Near East of Honshu |
| 18. | Z | i(P) | 03 | 45 | 20 | D <u>USCGS</u> : Loyalty Islands Region |
| 18. | Z | i(P) | 03 | 52 | 36 | <u>USCGS</u> : Loyalty Islands Region |
| 18. | Z | i P | 16 | 29 | 09 | <u>USCGS</u> : Kurile Islands Region |

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| | | | | | | | |
|-----|-----|-----------|-----------|------|------|---|---|
| 19. | Z | i P | 14 | 11 | 39 | G | |
| | Z | i pP | | 12 | 19 | | |
| | NE | i SKS | | 21 | 46 | | |
| | | D= 84° | h= 135 km | | | | |
| | | | | | | | <u>USCGS</u> : H=13:59:22,7 28°8N 128°2E h= 136 km Ryukyu-Islands Region |
| 20. | ZE | Lm | 09 | 13 | 00 | | <u>USCGS</u> : Gulf of Kalifornia |
| 20. | Z | i P | 16 | 32 | 29,8 | | |
| | NE | i SKS | | 43 | 01,8 | | |
| | | D= 96° | | | | | |
| | | | | | | | <u>USCGS</u> : H=16:18:56,4 8°7N 127°3E h=N Philippine Islands |
| 20. | Z | i Pg | 23 | 27 | 23,5 | | |
| | E | i Sg | | | 29,5 | | |
| | | D= 50 km | Albania | | | | |
| 21. | NE | e S | 03 | 28 | 06 | | <u>USCGS</u> : Near East Coast of Honshu |
| 21. | NE | Lm | 05 | 49 | | | |
| | Z | Lm | | 55 | 00 | | <u>USCGS</u> : Gulf of Kalifornia |
| 21. | NE | Lm | 07 | 27 | | | |
| | Z | Lm | | 33 | | | <u>USCGS</u> : Gulf of Kalifornia |
| 21. | ZE | Lm | 11 | 06 | | | <u>USCGS</u> : Gulf of Kalifornia |
| 22. | Z | i PP | 05 | 01 | 28 | | <u>USCGS</u> : Afghanistan-USSR border region. |
| 22. | E | Lm | 08 | 21 | | | |
| | Z | Lm | | 24 | | | <u>USCGS</u> : Gulf of Kalifornia |
| 22. | Z | e Pn | 18 | 02 | 39,5 | | |
| | ZE | e Sg | | 04 | 42,5 | | |
| | ZNE | Lm | | 05.6 | | | |
| | | D= 760 km | | | | | |
| | | | | | | | <u>USCGS</u> : H=18:00:54,5 39°1N 28°6E h=N Greece |

| | | | | | | |
|-----|-----|------------------------|----|------|------|--|
| 23. | NE | e Sg | 00 | 19 | 29 | |
| | NZ | Im | | 20.4 | | <u>USCGS</u> : Greece |
| 23. | N | i | 12 | 19 | 02 | |
| | Z | Im | | 37 | | <u>USCGS</u> : Near West Coast of Colombia |
| 23. | ZNE | i Pn | 21 | 10 | 28 | $A_Z=5,3\mu$ $A_N=2,7\mu$ $A_E=3,2\mu$ |
| | Z | i P* | | 43 | | $T_Z=2,5$ sec; $T_N=T_E=3$ sec |
| | Z | i | | 51 | | |
| | Z | i Pg | | 11 | 00 | |
| | NE | i Sn | | 47 | | |
| | NE | i | | 58 | | |
| | NE | i S* | 12 | 10 | | |
| | E | i | | 21 | | |
| | E | i Sg | | 30 | | |
| | E | i Ig | | 52 | | |
| | E | Im | | 13,5 | | $A = 111\mu$ $T = 11$ sec |
| | | D= 770 km | | | | |
| | | $M_{LH} = 5,5$ $m=5,9$ | | | | <u>BCIS</u> :H=21:08:41 39°1N 28°4 E |
| | | | | | | Western Turkey |
| 24. | Z | e Pn | 02 | 01 | 17,5 | |
| | Z | i | | 36 | | |
| | Z | i Pg | | 50 | | |
| | N | i(Sn) | 02 | 46 | | |
| | Z | i(Sg) | 03 | 27 | | |
| | NE | i | | 36 | | |
| | N | i | | 41 | | |
| | ZNE | Im | | 04.2 | | $A_Z = 13\mu$ $A_N = 18\mu$ $A_E = 14\mu$ |
| | | | | | | $T_Z = 10$ sec $T_N = 8$ sec $T_E = 9$ sec |
| | | | | | | <u>BCIS</u> :H=01:59:31 39°1N 28°5 E |
| | | | | | | Western Turkey |
| 24. | Z | i | 03 | 00 | 44 | |
| | Z | i Pg | | 01 | 06 | <u>USCGS</u> : Greece |
| 24. | N | i Sg | 08 | 17 | 09 | <u>BCIS</u> : Western Turkey |

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| | | | | | | |
|-----|-----|-----------|----|------|-----------------------|---|
| 24. | E | i S | 11 | 38 | 34 | |
| | ZNE | i | | 39 | 08 | <u>BCIS</u> : Western Turkey |
| 24. | NE | e i S | 12 | 01 | 50 | <u>BCIS</u> : Red Sea |
| 24. | Z | e Pg | 12 | 15 | 38 | |
| | N | e Sg | | 17 | 13 | |
| | | D= 800 km | | | | <u>BCIS</u> : H=12:13:15 39°N 28°7 E Western Turkey |
| 25. | Z | e Pg | 08 | 40 | 09,5 | |
| | NE | e Sg | | | 23,5 | |
| | | D= 120 km | | | | Ionian Sea |
| 25. | Z | i Pn | 13 | 23 | 17,5 | DSE |
| | Z | i | | | 27,5 | |
| | Z | i Pg | | | 53,5 | |
| | ZNE | i | | 24 | 17,5 | |
| | N | i Sn | | | 40 | |
| | E | i S* | | 25 | 03,5 | |
| | E | i Sg | | | 22,5 | |
| | E | Lm | | 26,3 | | A= 133 μ T = 10 sec |
| | | D= 760 km | | | M _{LH} =53/4 | <u>BCIS</u> : H=13:21:17 39°N 28°9 E Western Turkey |
| 25. | N | e Sn | 14 | 21 | 52,5 | |
| | NZ | e i | | | 58,5 | |
| | N | i | | 22 | 54,5 | |
| | ZNE | i(Lm) | | 23 | 22,5 | A _N = 6 μ T _N = 7 sec |
| | NE | i | | 24 | 13,5 | |
| | | D= 760 km | | | M _{LH} = 4,4 | <u>BCIS</u> : H=14:18:47 39°1N 28°3 E Western Turkey |
| 25. | ZNE | Lm | 16 | 18.0 | | <u>USCGS</u> : Western Turkey |

| | | | | | | | |
|-----|-----|-------------------|--------|------|------------|-----------------------------------|------------------------|
| 26. | N | i Sg | 03 | 35 | 10 | | |
| | N | i | | | 28 | | |
| | ZE | Lm | | 36 | | <u>BCIS</u> : Western Turkey | |
| 27. | Z | e PP | 05 | 04 | 29 | <u>USCGS</u> : North of Halmahera | |
| 27. | Z | i Pn | 05 | 17 | 22,3 | | |
| | ZNE | i Sn | | | 43,3 | | |
| | | D= | 180 km | | | | |
| 27. | Z | i P | 12 | 55 | 20 | G | |
| | Z | i | | | 44 | | |
| | Z | i PP | | 59 | 26 | | |
| | E | i(SKKS) | 13 | 06 | 21 | | |
| | E | i | | | 35 | | |
| | N | Lm | | 36.9 | | $A_N = 18_\mu$ | $T_N = 20 \text{ sec}$ |
| | Z | Lm | | 37.2 | | $A_Z = 23,5_\mu$ | $T_Z = 20 \text{ sec}$ |
| | | D= | 98°,5 | | M = 6,5 | <u>USCGS</u> : H=12:41:35,9 | 4°8 N 127°5E |
| | | | | | | h= 32 km | Talaud - Islands |
| 28. | ZNE | i Pn | 01 | 50 | 19 | $A_Z = 8_\mu$ | $T_Z = 6 \text{ sec}$ |
| | Z | i P* | | | 35 | | |
| | Z | i Pg | | | 52 | | |
| | E | i | | 51 | 00 | | |
| | NE | i Sn | | | 42 | | |
| | Z | i | | | 47 | | |
| | E | i | | | 56 | | |
| | E | i S* | | 52 | 06 | | |
| | E | i | | | 15 | | |
| | E | i Sg | | | 27 | | |
| | E | Lm | | 57.0 | | A = 130 μ | T = 8 sec |
| | | D= | 800 km | | | | |
| | | M _{LH} = | 6 | | m= 6,8-7,1 | <u>BCIS</u> : H=01:48:29 | 38°6N 28°4 E |
| | | | | | | Western Turkey, | Alasehir |
| 28. | Z | e Pn | 05 | 42 | 09 | | |
| | N | e Sg | | 44 | 29 | <u>USCGS</u> : Western Turkey | |
| | | D= | 850 km | | | | |
| | | | | | | H=05:40:14 | 38°2N 29°E h=3km |

| | | | | | | | |
|-----|-----|-----------|----|----------------|--------|--------------------------------------|------------------------------------|
| 28. | Z | i Pn | 10 | 04 | 02 | | |
| | N | i Sn | | 05 | 25 | | |
| | E | i S* | | | 49 | | |
| | N | e Sg | | 06 | 08 | | |
| | N | i | | | 20 | | |
| | ZNE | Lm | | 06.8 | | $A_N = 5,6\mu$ | $T_N = 7 \text{ sec}$ |
| | | D= 770 km | | $M_{LH} = 4,4$ | | <u>BCIS</u> : H=10:02:17 39°1N 28°4E | |
| | | | | | | Western Turkey | |
| 28. | Z | Lm | 16 | 14.9 | | <u>USCGS</u> : Gulf of Kalifornia | |
| 29. | Z | i P | 01 | 44 | 45 D | | |
| | Z | i | | | 58 | | |
| | ZNE | i S | | 45 | 35 | | |
| | | D= 430 km | | | | <u>BCIS</u> : H=01:43:38 39°9N 15°1E | |
| | | | | | | Italy | |
| 29. | ZNE | i P | 09 | 22 | 43 DSE | $A_{Z_{max}} = 4,5\mu$ | $T_{Z_{max}} = 4 \text{ sec}$ |
| | Z | i PP | | 23 | 59 | | |
| | Z | i(PPP) | | 24 | 22 | | |
| | NE | i S | | 28 | 12 | | |
| | ZNE | Lm | | 38.8 | | $A_Z = 70\mu$ | $A_N = 85\mu$ |
| | | D=34°6 | | $M_{LH} = 6,4$ | | $A_E = 41\mu$ | $T_Z = T_N = T_E = 16 \text{ sec}$ |
| | | | | m= 6,7 | | <u>BCIS</u> : H=09:16:00 12°0N 41°3E | |
| | | | | | | Ethiopian | |
| 29. | Z | i P | 11 | 11 | 49 D | $A = 2\mu$ | $T = 4 \text{ sec}$ |
| | Z | e PP | | 13 | 10 | | |
| | NE | i S | | 17 | 21 | | |
| | N | Lm | | 26.8 | | $A = 19\mu$ | $T = 15 \text{ sec}$ |
| | | D= 35°4 | | $M_{LH} = 5,8$ | | <u>BCIS</u> : H=11:04:58 12°0 N | |
| | | | | m= 6,2 | | 41°3 E Ethiopian | |
| 29. | Z | i P | 13 | 57 | 11,5 | <u>USCGS</u> : Carlsberg ridge | |
| 30. | Z | e Pn | 12 | 18 | 04 | | |

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|----------------|-----|------------------|----------------|-----------|--|---|
| 31. | N | e(S) | 00 | 21 | 58 | |
| 31. | N | e(Sn) | 01 | 50 | 38 | |
| 31. | Z | e(P) | 03 | 26 | 00 | <u>BCIS</u> : Italy, Sicily |
| 31. | ZNE | i P | 07 | 19 | 59,5 | DSE $A_Z = 53_\mu$ $T_Z = 5$ sec |
| | E | i | | 20 | 28,5 | A_{max} T_{max} |
| | Z | i | | | 45,5 | |
| | E | i | | 21 | 00 | |
| | ZNE | i | | 22 | 05,5 | |
| | Z | i S | | 23 | 22 | |
| | E | Lm | | | 29.6 | $A_{max} = 116_\mu$ $T = 9$ sec |
| | | $D = 18,5$ | $M_{LH} = 6,3$ | $m = 7,0$ | <u>BCIS</u> : H=07:15:51 $27^{\circ}7'N$ $33^{\circ}9'E$ Red Sea near golf of Suez h=N | |
| 31. | ZNE | i P | 19 | 37 | 00 | DNE $A_Z = 7,1_\mu$ $T_Z = 6$ sec |
| | Z | i pP | | 38 | 30 | |
| | Z | i sP | | 39 | 15 | |
| | Z | i PP | | 40 | 12,5 | |
| | NE | i S | | 46 | 32 | $A_N = 15_\mu$ $A_E = 12,4_\mu$ $T_N = 9$ sec |
| | NE | i | | 58 | 24 | $T_E = 8$ sec |
| | | $D = 81^{\circ}$ | $m = 6,6$ | | <u>USCGS</u> : H=19:25:27,2 $38^{\circ}3'N$ $134^{\circ}6'E$ h=417 km Sea of Ja- pan. | |

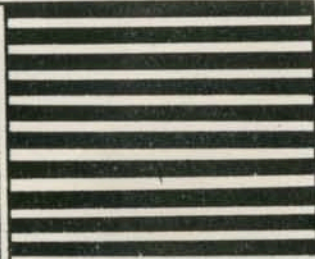

July 1969

Koçiaj S.
Sulstarova E.



STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

11 SEP 1969

Buletin Paraparak 
 **Preliminary Bulletin**

APRIL 1969

- ALBANIA -

STATE UNIVERSITY OF TIRANA

Tirana Sismological Station

PRELIMINARY SEISMOLOGICAL

BULLETIN

April 1969

| Location | Type of instrum. | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drum speed mm/min |
|-----------|------------------|-------|--------|--------|------|------|------|-------------------|
| 41°20,8'N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' E | SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition: Tortonian Sandstone

NOTE: Upward trace motion on the seismogram corresponds to N,E and upward ground motion.

m= magnitudes calculated from body waves

M= magnitudes calculated from surface waves

Tirana

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A P R I L 1 9 6 9

Page 2

2. Z i P 01 39 09,2 C
NE i S 59

D= 470 km

BCIS:H=01:38:01 38° 9' N 15° 3' E
Southern Italy h= 275 ± 10 km.

2. Z e Pn 04 58 21,3
Z i 33,3
Z i Sn 59 04,3
E i 06,8
ZE i Sg 20,3

D=390 km

USCGS:H=04:57:29,5 38° N 20° 2' E
Greece

2. Z e Pg 16 44 24,2
ZNE e Sg 39,2

D=125 km

Athens:H=16:44:03 40° 4' N 19° 9' E

3. At 22 12 23,6 (BCIS), disastrous earthquake occurred in Mallakastira region (dep of Tepelena, Fieri and Berati). The shock produced heavily damage in several localities of dep Fieri and Tepelena, particularly in villages Rabijs, Izvor, Allkomemaj (dep of Tepelena); Ninesh, Kremenare, Cerrile, Kapaj (dep of Fieri). Were seriously damaged or collapsed 247 houses in dep of Fieri; 390 in dep of Tepelena, 119 in dep of Vlora, 133 in dep of Berati, 80 in dep of Skrapari, 15 in dep of Permeti. Slight damage: 950 houses in dep of Fieri; 458 in dep of Tepelena; 190 in dep of Vlora, 180 in dep of Berati; 264 houses in dep of Skrapari; 20 houses in dep of Permeti. Casualties 1 dead (dep of Berati); 23 injured (dep of Fieri); 25 injured (dep of Tepelena); 5 injured (dep of Berati); ^{3 injured (dep of Vlora)} 5 slightly injured (dep of Skrapari). According to our preliminary data macroseismic epicenter is situated near villages: Rabijs Cerrile and Osmanzezë (40° 30' N 19° 50' E). Maximum intensity in epicenter VII+ (MCS).

In detail the shock was felt in dep of Fieri: (VII + at Ninesh, Kremenare, Cerrile, Kapaj, Garburove; VII at Ballsh, Bejar, Gjerbes, Bardhaj, Drizar, Dames, Hekal, Greshice, V I ½ = VII at Kutë, Usojë, Grecan, Aranitas, Panahor, ; VI + at Çorush, Sigeç, Gjynagare, Ruzhdie, Dukas, Kalenje, Drenove, Belishove, Patos (fshat), ;

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A P R I L

1 9 6 9

Page 3

VI at Fier, Lavdar, Patos, Roskovec, Marinzë, Kuman, Suku, Luar, Vidhishtë; V-VI at Velmisht, Mujalli, Levan.)

in dep of Tapelena : (VII+ at Rabijs, Izvor, Levan ; VII at Luftinjs, Zhapokikë, Allkomemaj, Khaxhaj, Toç, Krahës, : VI½-VII at Xhafaj, Kurtëz, Buz-Golemaj, Shalës, Gllavë, Zhulaj, Kalivac, Amanikaj, Qeserat, Memaliaj, Dhëmbllan, Matohasanaj, Sinanaj; VI+ at Maricaj, Toskë-Maratilloz, Buz i Vogel, Arrëza e Vogel, Arrëza e Madhe, Selckë, Koman, Buz i Madh, Koshtan, Väsjari, Luzat, Salari, Tapelanë ; VI at Lap-Martaloz). in dep of Berati : (VII+ at Osmanzezë ; VI½ - VII at Starovë, Hallambres, Tërpan, Gorogjath, Tozhar, Rehovë, Plashnikë, Vokopola, Dodovec, Velcan, Mbollan, Mbjeshevë, Molisht, Sadovicë, ; VI+ at Berat, Duhanas, Velabish, Remonice, Veterik, Vodice, Gjiroven, Teman, Trobolik, Vilza, Zhitom, Kamçisht, Levan, Fushë Peshtan, Zgërbonjë, Mbrakull, Malinot, Vërtop ; VI at Kapinovë, Pobrat, Kutalli, Goriçan, Pisuku, Hingë).

in dep of Vlora : -(VI½-VII at Gorisht, Karbunarë, Romës, Dushkarak, Trebillovë, Sevaster, Golimbas, Kocul ; VI+ at Peshkëpi, Veshdanisht, Amonicë, Petë, Kropisht; VI at Vlora, Mavrovë, Panaja ; IV-V atv Qeparo ; IV at Himare, Dhërmi.)

in dep of Skopari : -(VI½-VII at Spathar, Vendreshe, Kakrukë, Velë, Therapel ; VI+ at Nishica, Veleshnja, Serova, Vërzeshta, Dobrusha, Stora, Selani, Osoja, Çorovoda, Munushtir, Grepcka, Radash, Çepani, Rehovicë, Rog, Prisht, Blezenckë, Zabërzan, Strelec, Lavdar ; VI at Muzhakë, Malind, Muzhenckë, Zaloshnjë V-VI at Gjergjovë, Leshnja, Vlushë, Nikollarë, Backë, Gjerbës, Greve, Ujanik, Gradec).

in dep of Përmeti : (VI+ at Bënjë, Senicë, Topojan, Luar, Leskovec, Këlcyrë, Bubës, Kajca, Zhepovë, Ballaban, Suka, Fratar, Senican, ; VI at Malëshovë, Alipostivan, Odrican, Përmet V-VI at Patran ; V at Gostivisht).

The shock was also reported from the departaments of Gjirokastra : (VI at Topovë ; V-VI at Zhej, Llongo ; V at Erind , Golem ; IV-V at Glinë, Selo, Peshkëpi ; IV at Jergucat) ; Saranda (V at Dhrovjan , Kardhikaq ; IV-V at Muzina, Sopik, Lukovë, Borsh); Lushnjë : (V at Këmishtaj, Lushnjë ; IV-V at Hysgjokaj); Elbasan: (IV-V at Shalës, Kajen, Peqin ; IV at Branesh, Precë Elbasan ; Grahsh : (V-VI at Jancë ; IV-V at Sult) ; Lezhë: (III-IV at Zejmen,

Pllane, Bërzan, Gajusht); Ersekë : (IV at Vëdicë, Barmash, Gërmënj) ; Durrës : (IV+ at Rogozhinë, Lekaj ; IV at Shkallnuer ShenaVlash, Arapaj, Rushkull, Ru monatë, Likmetaj) ; Tiranë : (III-IV at Tiranë, Shënmëri) ; Korcë: (IV-V at Voskopojë, Kapështicë; IV at Moglicë, Pojan Vishocicë; Maliq, Pirg, Bilisht, Dardhë .) Librazhd : (III-IV at Librazhd).

According to BCIS and Seismological Institute of Athens : The shock was felt in southern Italy (Bari, Brindisi, Taranto) ; in southern territory of Yougoslavia (IV-V at Ohrid, Struga ; III-V at Skopje) ; in northern Greece, particukary in Janina : (VI at Konitsa, IV+ at Delvinaki, IV at Janina, Kouklia, Terovo, Raptanaea, Doliana, III+ at Kouronta, Parakalamos, III at Melissopetra) ; Thesprotia: (IV+ at Saghida, IV at Egoumenitsa, III at Graekochori, Philiates), Fhlorina (IV at Aetos, III at Sklethron, Polupotamos, II+ at Fhlorina) ; Preveza: (III+ at Louros) ; Kastoria (III at Kastoria) , Pele (III at Edesa) ; Island of Corfu:(V at Pagoe, Episkepsis, Perivoli ; IV+ at Aphra, Korakiana, Ano-Korakiana, Kanali, Ghianades, IV at Neochori, Moraitika, Synarades, Karousades, Gastourion, III at Chlomon, II+ at Argyrades).

| | | | | | | |
|----|-----|------|----|----|-----------|------------------|
| 3. | Z | e Pg | 23 | 17 | 16,7 | aftershock |
| | Z | e Sg | | | 29,7 | |
| | ZNE | i Lg | | | 31,7 | |
| | | | | | D=110 km | |
| | | | | | | |
| 3. | Z | e Pg | 23 | 25 | 03,2 | aftershock |
| | Z | e Sg | | | 15,7 | |
| | | | | | D= 105 km | |
| | | | | | | |
| 3. | Z | i Pg | 23 | 45 | 22,5 | DSW aftershock |
| | E | i Sg | | | 34 | |
| | E | Lm | | | 57,5 | A=10μ T = 1 sec |
| | | | | | D=100 km | |
| | | | | | | |
| 4. | Z | e Pg | 00 | 26 | 42,5 | aftershock |
| | ZNE | i Sg | | | 55,5 | |
| | E | Lm | | 27 | 01,5 | A = 6μ T = 1 sec |
| | | | | | D= 110 km | |

| | | | | | | |
|----|-----|-------|----|----|------------|---|
| 4. | Z | e Pg | 01 | 06 | 35,5 | aftershock |
| | Z | i Pn | | | 38,5 | |
| | Z | i(Sn) | | | 52,5 | |
| 4. | Z | e Pg | 03 | 12 | 22,5 | aftershock |
| | Z | e Sg | | | 35,5 | |
| | | | | | D= 110 km | |
| 4. | Z | i Pg | 04 | 20 | 59,5 | DSW aftershock |
| | Z | i | | 21 | 03 | |
| | E | i Sg | | | 12 | |
| | NE | i Sn | | | 15 | |
| | N | Lm | | 21 | | A = 16 μ T = 1 sec |
| | | | | | D=105 km | |
| 4. | Z | e(Pg) | 08 | 27 | 23,5 | aftershock |
| | Z | i Pn | | | 24,5 | |
| | N | i Sg | | | 36,5 | |
| | NE | i Sn | | | 38,5 | |
| | Z | Lm | | | 40,5 | A = 5,5 μ T = 1 sec |
| | | | | | D = 110 km | |
| 4. | Z | e Pg | 12 | 34 | 50,5 | aftershock weak |
| | E | i(Lg) | | 35 | 05 | |
| 4. | Z | i Pn | 16 | 19 | 49,5 | aftershock |
| | ZNE | i(Lg) | | 20 | 07,5 | |
| 4. | Z | i Pg | 17 | 02 | 18,5 | D |
| | E | i Sg | | | 31,5 | |
| | E | i Sn | | | 34,5 | |
| | E | Lm | | 39 | | A = 12 μ T = 1 sec |
| | | | | | D= 110 km | |
| 5. | E | e Pg | 00 | 20 | 45 | aftershock weak |
| 5. | ZNE | i P | 02 | 25 | 22 | CNW A _Z = 3,8 μ T _Z = 6 sec |

TIRANA (Tir)

A P R I L 1 9 6 9

Page 6

| | | | | | | |
|----|---------------|------|---------------------|---------|---------------------------------------|--------------------------------------|
| | NE | i S | 30 | 56 | | |
| | ZNE | Lm | 41,5 | | $A_Z = 38\mu$ | $A_N = 73\mu$ |
| | | | D=35 ⁰ 3 | | $A_E = 19\mu$ | $T_Z = T_N = T_E = 17\text{sec}$ |
| | | | $M_{LH} = m = 6,3$ | | <u>BCIS</u> : H=02:18:48 12°1N 41°6 E | |
| | | | | | Ethiopian | |
| 5. | Z | i PP | 23 | 44 | 04 | |
| | E | i | 50 | 42 | | <u>USCGS</u> : Off Coast of Ecuador |
| 6. | ZNE | i Pn | 03 | 51 | 03 DSE | $A_{Zmax} = 5,8\mu$ |
| | Z | i | | | | $T_{Zmax} = 4\text{ sec}$ |
| | Z | i P* | | | 11,5 | |
| | Z | i Pg | | | 15,5 | |
| | ZNE | i Sn | 52 | 16 | 29 | |
| | ZNE | i S* | | | 32 | |
| | ZNE | i | | | 42,5 | |
| | NE | i Sg | | | 51 | |
| | NE | i Lg | 53 | 02 | | |
| | E | Lm | | | 43 | $A = 66,5\mu$ T = 11 sec |
| | | | $M_{LH} = 5,2$ | D=650km | | |
| | | | | | | <u>BCIS</u> : H=03:49:33 38°5N 26°5E |
| | | | | | | Western Turkey |
| 6. | Z | e Pg | 10 | 27 | 37,6 | aftershock of Mallakastra's |
| | NE | i Sg | | | 53,6 | earthquake |
| | | | | | D=130 km | |
| 6. | Z | i P | 16 | 58 | 36,5 | |
| | ZN | Lm | 17 | 15.0 | | <u>BCIS</u> : Ethiopian |
| 7. | E | e | 03 | 01 | 40,4 | <u>Athens</u> : Greece |
| 7. | Z | i P | 20 | 35 | 58 D | |
| | Z | Lm | 21 | 03.0 | | $A = 5\mu$ T = 17 sec |
| | Z | Lm | | 05.5 | | $A = 3,8\mu$ T = 13 sec |
| 7. | Z | e | 21 | 33 | 26 | <u>Athens</u> : Greece |
| 8. | Z | e P | 05 | 31 | 49,7 | <u>Athens</u> : Greece |

8. Z e P 10 35 58,4
 Z i 36 39,4
 E i(S) 39 27,4
 D=18°

BCIS: H=10:31:50 27°5'N 33°8'E
 North of Red Sea

8. Z i Pg 15 49 05
 N i Sg 16
 M_{LH} = 4½ D=92 km

✓ Macroseismic epicenter is situated between villages: izvor, Rabijs, Luftinje, Gllave, Osmanzezë (40°30'N 19°56'E). Maximal intensity in epicenter VI + .Slight damage. The shock was felt VI at Corogjat Teman, Tozhar, Rehovë, Plashnik, Paraspuar, Zhapokikë (dep of Berati), Zhapokikë, Allkomemaj, Levan, Krahës, Shalës, Buz (dep. of Tepelena; V at Vërtop, Mbrakull, Berat, Q. Stalin (dep. of Berati) Tepelena (dep. of Tepelena).

8. Z e Pg 17 53 19
 N e Sg 53
 E Lm 53.6
 D=120 km

aftershock

9. N e Pg 02 20 09,7
 N e Sg 27,7
 D=150km

weak
Athens: H=02:19:33 Propably
 39°3/4 N 20°½ E

9. Z e Pg 16 28 53,3
 ZE i Sg 29 41,3
 E i Lg 52,3
 D=360 km

BCIS: H=16:27:47 38° 1' N 19°9' E
 Ionian Sea

| | | | | | | | |
|-----|----|-------|----|----------------------|------|--------------------|-------------|
| 9. | N | e Sg | 20 | 36 | 22 | | |
| 9. | Z | e Pg | 20 | 52 | 44 | | |
| | N | e Sg | | | 53 | | |
| | E | Lm | | 53.0 | | A = 2 μ | T = 0,5 sec |
| | | | | D=75 km | | | |
| 10. | Z | e(Pg) | 04 | 33 | 45 | | |
| | E | i Sg | | | 57 | | |
| | | | | D=105km | | | |
| 10. | Z | e Pg | 13 | 28 | 06 | | |
| | E | e(Sg) | | | 16 | | |
| | | | | D=85 km | | | |
| 10. | Z | e Pg | 13 | 31 | 08 | | |
| | E | e Sg | | | 20 | | |
| | | | | D=100 km | | | |
| 12. | Z | e Pn | 20 | 40 | 23 | | |
| | Z | i | | | 31 | | |
| | Z | i P* | | | 38 | | |
| | Z | i Pg | | | 49 | | |
| | NE | i | | 41 | 24 | | |
| | NE | i Sn | | | 39 | | |
| | NE | i | | | 50 | | |
| | NE | i S* | | 42 | 01 | | |
| | NE | i | | | 11 | | |
| | NE | i Sg | | | 19 | | |
| | N | Lm | | 42.7 | | A = 16 μ | T = 5 sec |
| | | | | D=730km | | | |
| | | | | M _{LH} =5,0 | | | |
| | | | | | | BCIS: H=20:38:41 | 45°3N 25°1E |
| | | | | | | Rumania | |
| 13. | N | e(Pg) | 09 | 37 | 33,5 | | |
| | N | e Sg | | 38 | 34 | | |
| | | | | D=510km | | Athens: H=09:36:04 | 38°1N 24°1E |
| | | | | | | Greece | |

| TIRANA (Tir) | | | A P R I L | | | 1 9 6 9 | | | Page 9 | | |
|----------------|-----|------|-----------|----------------------|------|---------|---|--|--------|--|--|
| 13. | Z | i P | 15 | 34 | 39,5 | C | | | | | |
| | N | i S | | 42 | 29,5 | | | | | | |
| | E | Lm | 16 | 02.4 | | | | | | | |
| | | | | D=56 ⁰ 4 | | | USCGS:H=15:24:55,6 17 ⁰ 9N 80 ⁰ 6 E | | | | |
| | | | | | | | h=N India | | | | |
| 14. | ZNE | i Pn | 05 | 12 | 35 | DSE | | | | | |
| | N | i Sn | | 13 | 14 | | | | | | |
| | E | i Sg | | | 27 | | | | | | |
| | | | | D=330km | | | BCIS:H=05:11:49 39 ⁰ 1N 21 ⁰ 9 E | | | | |
| | | | | | | | h=80 km+25 km Greece | | | | |
| 14. | N | Lm | 13 | 32.5 | | | BCIS: Central Iran | | | | |
| 15. | ZNE | eiS | 17 | 53 | 50 | | | | | | |
| | ZNE | Lm | 18 | 25.6 | | | A _Z =9 ^M A _N =5,6 T _Z =T _N =14 sec | | | | |
| | | | | | | | USCGS: Off East Coast of Honshu. | | | | |
| 16. | Z | e | 01 | 43 | 29,5 | | | | | | |
| | Z | Lm | 02 | 06,5 | | | | | | | |
| 16. | ZNE | i P | 04 | 56 | 22,5 | DSE | | | | | |
| | N | i | | 57 | 14 | | | | | | |
| | ZNE | i S | | 58 | 01,5 | | | | | | |
| | N | Lm | 05 | 00.2 | | | A = 16 ^M T = 10 sec | | | | |
| | | | | D=950 km | | | | | | | |
| | | | | M _{LH} =4,9 | | | BCIS:H=04:54:13 35 ⁰ 3N 27 ⁰ 9 E | | | | |
| | | | | | | | h = 60 km ca . Near Karpathos Island | | | | |
| 16. | Z | i P | 22 | 57 | 53,5 | D | | | | | |
| | NE | i S | | 59 | 31,5 | | | | | | |
| | N | Lm | 23 | 01.8 | | | A _N =17 ^M T = 11 sec | | | | |
| | | | | D=940 km | | | | | | | |
| | | | | M _{LH} =4,9 | | | BCIS:H=22:55:39 35 ⁰ 2 N 27 ⁰ 8 E | | | | |
| | | | | | | | Near Karpathos Island | | | | |

TERABA (Tir)

A P R I L 1 9 6 9

| | | | | | | | |
|-----|-----|------|----|------|--------------|----------|--|
| 16. | ZNE | i P | 23 | 23 | 15,5 | | |
| | NE | i S | | 24 | 55,5 | | |
| | N | Lm | | 27.1 | | A = 25M | T = 12 sec |
| | | | | | D=960km | | |
| | | | | | $M_{LH}=5,0$ | | |
| | | | | | | | <u>BCIS</u> :H=23:21:03 35°1N 27°9E |
| | | | | | | | Near Karpathos Island |
| 17. | Z | i P | 00 | 56 | 47,5 | | |
| | N | i S | | 58 | 30,5 | | |
| | N | Lm | 01 | 00.6 | | A = 8,3M | T = 11 sec |
| | | | | | D=980km | | |
| | | | | | $M_{LH}=4,5$ | | |
| | | | | | | | <u>BCIS</u> :H=00:54:39 35°2N 27°9E |
| | | | | | | | Near Karpathos Island |
| 17. | Z | Lm | 05 | 50.8 | | | |
| | | | | | | | The station was out of operation from 08 ^h 21 ^m to 15 ^h 00 ^m , April 17, on account of trouble in the Chronometer. |
| 19. | Z | i(P) | 08 | 58 | 25 | | |
| | NE | e(S) | 09 | 08 | 38 | | |
| | | | | | D=81°8 | | |
| 20. | ZNE | i Pg | 01 | 32 | 42 | | |
| | NE | i Sg | | | 45 | | |
| | | | | | D=30km | | |
| | | | | | | | X The shock was felt III-IV at Fushe Kruja, Laç (dep. of Kruja) |
| 20. | Z | e Pn | 12 | 20 | 38 | | |
| | ZN | e Sg | | 21 | 56,5 | | |
| | | | | | | | <u>Athens</u> : Greece |
| 21. | Z | i P | 02 | 43 | 01,5 | | |
| 21. | Z | i P | 07 | 31 | 52 C | | |
| | NE | i S | | 42 | 13 | | |
| | E | Lm | 08 | 12.3 | | A = 60M | T = 17 sec |

| TIRANA (Tir) | | | A P R I L | | | 1 9 6 9 | | | Page 11 | | |
|----------------|-----|--------------------|-----------|----------------------|------|---------|--|--------------|---------|--|---|
| | Z | Lm | | 13.0 | | | | A = 66 μ | | | T = 17 sec |
| | | | | D= 83 ⁰ 4 | | | | | | | |
| | | | | M _{LH} =6,9 | | | | | | | |
| 21. | Z | e(Pn) | 20 | 37 | 51 | | | | | | |
| | N | i Sn | | 38 | 46 | | | | | | |
| | NE | i S* | | | 59 | | | | | | |
| | NE | i Sg | | 39 | 11 | | | | | | |
| | NE | i Lg | | | 28 | | | | | | |
| | N | Lm | 20 | 39.5 | | | | A = 24 μ | | | T = 9 sec |
| | | | | D= 510 km | | | | | | | |
| | | | | M _{LH} =4,7 | | | | | | | |
| | | | | | | | | | | | <u>BCIS</u> :H=20:36:45 39 ⁰ 4N 25 ⁰ 2E |
| | | | | | | | | | | | Aegean Sea. |
| 22. | Z | i PKP ₁ | 06 | 51 | 28,2 | | | | | | |
| | Z | i PP | | 54 | 21,2 | | | | | | |
| | | | | D= 139 ⁰ | | | | | | | |
| | | | | | | | | | | | <u>USCGS</u> :H=06:31:57,5 26 ⁰ 8 S |
| | | | | | | | | | | | 114 ⁰ 1W Eastern Island Re- |
| | | | | | | | | | | | gion |
| 22. | NE | i ScS | 08 | 34 | 41 | | | | | | |
| | | | | | | | | | | | <u>USCGS</u> :Off East Coast of |
| | | | | | | | | | | | Honshu |
| 22. | ZN | e Pg | 15 | 54 | 07 | | | | | | |
| | ZN | i Sn | | | 39 | | | | | | |
| | N | e Sg | | | 55 | | | | | | |
| | ZE | i Lg | | 55 | 03 | | | | | | |
| | | | | D=370km | | | | | | | |
| | | | | | | | | | | | <u>Athens</u> :H=15:52:58 38 ⁰ N |
| | | | | | | | | | | | 19 ⁰ 9 E Greécé |
| 22. | Z | i P | 22 | 42 | 43,8 | | | | | | |
| | Z | Lm | 23 | 04.0 | | | | | | | |
| | | | | | | | | | | | <u>USCGS</u> : Arabian Sea. |
| 23. | Z | i Pg | 01 | 57 | 22,8 | | | | | | |
| | NE | i Sg | | | 26,8 | | | | | | |
| | | | | D= 35 km | | | | | | | |
| 23. | ZNE | Lm | 21 | 25.8 | | | | | | | |
| | | | | | | | | | | | <u>USCGS</u> : Turkey |

TIRANA (Tir) A P R I L 1 9 6 9 Page 12

| | | | | | | |
|-----|-----|----------------|----|-----------------------|------|--|
| 24. | ZNE | Lm | 02 | 56 | | <u>Athens:</u> Turkey |
| 24. | Z | i P | 14 | 47 | 51 | C |
| | Z | i | | 48 | 13 | |
| | NE | i S | | 49 | 34 | |
| | N | Lm | | 51.1 | | A = 4,5 μ T = 4 sec |
| | | | | D= 950 km | | |
| | | | | $M_{LH}=4\frac{3}{4}$ | | <u>BCIS:</u> H=14:45:51 36°2 N 28°5 E h=90 km±20 km East of Rhodes Island |
| 25. | Z | e P | 03 | 47 | 38,5 | |
| | N | e S | | 58 | 48,5 | |
| | | | | D=95° | | <u>USCGS:</u> H=03:34:17,7 7°5N 82°1 W h= 25 km South of Panama |
| 26. | Z | i x | 06 | 17 | 56 | |
| | Z | i PP | | 21 | 54,5 | The shock was interrupted during change of paper (06 ^h 25 ^m -06 ^h 33 ^m) |
| | N | Lm | 07 | 08.2 | | A= 12 μ T = 19 sec |
| | Z | Lm | | 11.2 | | A= 20 μ T = 19 sec |
| | | | | | | <u>USCGS:</u> Near Coast of Central Chile. |
| 27. | Z | e P | 11 | 00 | 28 | |
| | E | e S | | 02 | 07 | |
| | | | | D=840km | | <u>BCIS:</u> H=10:58:21 36°5 N 28°4 Near Coast of Turkey |
| 27. | Z | e Pg | 15 | 00 | 33 | |
| | E | i Sg | | | 44 | |
| | | | | D= 92 km | | The station was out of operation from 07:03 to 19:03, April 28, on account of trouble in the recording system. |

| | | | | | |
|-----|-----|------------------|------------|-------------------------------|--|
| 29. | Z | i P | 04 43 31,6 | <u>USCGS</u> :Southern Iran | |
| 29. | Z | i P | 21 30 32 | | |
| | | Lm | 22 12.2 | <u>USCGS</u> : Kurile Islands | |
| 30. | ZNE | i Pn | 20 22 21 | CNW | |
| | Z | i P* | | 38 | |
| | Z | e Pg | | 58 | |
| | NE | i S _n | 23 49 | | |
| | NE | i S* | 24 15 | | |
| | NE | i Sg | | 38 | |
| | ZNE | Lm | 26.2 | | |

$M_{LH}=5,1$ $D=790km$

$A_Z=31\mu$ $A_N=28\mu$ $A_E=27\mu$ $T_Z=T_N=$
 $=10s$ $T_E=8$ sec.

BCIS:H=20:20:30 39°1 N 28°7 E
 Western Turkey

August 1969

Koçiaj S.
 Sulstarova E.

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

19 MAY 1970

Buletin Paraparak 

 **Preliminary Bulletin**

MAY 1969

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL
BULLETIN

May 1969

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drum speed mm/min |
|------------|-----------------|-------|--------|--------|------|------|------|-------------------|
| 41°20,8' N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' | E SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition: Tortonian sandstone

NOTE: Upward trace motion on the seismogramm corresponds to N, E and upward ground motion.
m = magnitudes calculated from body waves
M = magnitudes calculated from surface waves

Tirana
1969

1. Z e Pg 10 26 40
 NE e Sg 45,5
 D= 50 km

3. Z e Pg 10 56 21
 NE i Sg 27,5
 D= 55 km

1. Z i P : 18 04 24 C
 Z i PP 32,5
 Z i 50
 NE i Sn 06 05
 N i 08,5
 N i 50
 E i Sg 07 02
 N Lm 08,3
 D=8⁰⁸

A = 9,2 μ T = 10 sec

M_{LH} = 4,7

BCIS: H=18:02:16 35⁰³ N 27⁰⁸ E
 Near Karpathos Island

1. Z i PKP₁ 19 24 50,5 D

USCGS: Tonga Islands

1. Z i P 20 08 54 D
 NE i S 10 32
 NE i 11 40
 N Lm 11.8
 D = 8⁰⁵

A = 26 μ T = 10 sec

M_{LH} = 5,1

BCIS: H=20:06:36 35⁰² N 27⁰⁷ E
 Near Karpathos Island

2. Z e P 18 40 24,5
 ZN Lm 44,2

USCGS: South of Crete Island

3. Z e P 03 27 44,5
 N e S 29, 25,5
 D=8⁰⁸

USCGS: H=03:25:33,3 35⁰³ N
 27⁰⁹ E h=45 km Near Karpathos
 Island

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M A Y 1969

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-
3. N e P 20 33 22
N e S 35 04
D=8°9 BCIS:H=20:31:10 35°1 N 27°6 E
Near Karpathos Island
4. Z °e PKP₁ 12 56 10,5
Z i PP 59 32,5
D=145° USCGS:H=12:36:33,4 17°4 S 168°9 E
New Hebrides Island h= 11 km
5. Z i P 05 39 37,5 C
Z i 48
Z i PPP 40 20
D=24°3 BCIS:H=05:34:25 36°N 10°3 W
North Atlantic Ocean.
5. Z e 14 23 47 USCGS: Near Coast of Chile
5. N e S 22 00 14,5
E e SS 02 35
Z Im 08.7 A = 4,5^μ T = 20 sec
D= 36°
M_{LV} = 5,1 BCIS:H= 21:47:30 67°N 19° W Island
6. Z i Pg 05 30 21,5
ZE i 38,5
ZE i 44,5
6. ZN e S 22 23 11,5 USCGS: Near Karpathos Island
9. Z e Pn 07 10 34
N i Sg 11 27
ZN i 44 USCGS: Greece
9. Z e Pg 15 22 12
NE i Sg 17
Region of Librazhd D=42km Forshock .
10. NE e 09 35 33,5

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| | | | | | | |
|-----|-----|------|----|----------------------|------|------------------------------------|
| 11. | Z | i Pg | 01 | 15 | 45 C | |
| | N | i Sg | | | 50 | |
| | E | i | | | 52 | |
| | | | | D=42 km | | aftershock |
| | | | | | | <u>BCIS</u> :H= 01:15:38 41°2 N |
| | | | | | | 20°3 E |
| 11. | Z | e Pg | 04 | 03 | 09 | aftershock |
| 11. | N | e Sn | 16 | 26 | 34 | |
| | NZ | i S* | | 27 | 06 | <u>BCIS</u> : East of Crete Island |
| 12. | Z | e Pg | 07 | 01 | 50 | |
| | NE | i Sg | | 02 | 11 | |
| | | | | D=180 km | | |
| 12. | Z | e Pg | 16 | 38 | 37 | <u>Athens</u> : Greece |
| 12. | Z | Lm | 23 | 52,8 | | <u>Athens</u> : Greece |
| 13. | Z | e Pn | 11 | 19 | 07,5 | |
| | NE | i Sn | | | 43,5 | |
| | N | Lm | | 20.1 | | A = 8 μ T = 3 sec |
| | | | | D=320 km | | |
| | | | | M _{LH} =4,4 | | |
| 13. | Z | e P | 14 | 30 | 05,5 | |
| | Z | i PP | | 33 | 53,5 | |
| | E | e S | | 41 | 01,5 | |
| | E | i PS | | 42 | 33,5 | |
| | | | | D=94°3 | | |
| | | | | M _{LH} =6,2 | | <u>USCGS</u> :H=14:16:52,8 11,5 N |
| | | | | | | 86°4 W h=79 km near coast of |
| | | | | | | Nicaragua |
| 13. | ZNE | i | 14 | 52 | 57,5 | <u>USCGS</u> : Flores Sea |

| | | | | | |
|-----|-----|------|---------|------------------------|---|
| 14. | ZNE | e Sg | 08 17 | 18,5 | USCGS: Greece |
| 14. | Z | i P | 10 07 | 25,5 | |
| | Z | i | | 36,5 | |
| | Z | i | | 52,5 | |
| | Z | i | 08 | 36,6 | |
| | Z | i | | 55,5 | |
| | NE | i Sn | 09 | 06,5 | |
| | E | i S* | | 40,5 | |
| | NE | i Sg | 10 | 07,5 | |
| | ZE | Lm | | 11,4 | |
| | | | | D= 8 ⁰⁸ | |
| | | | | M _{LH} =4,9 | |
| | | | | M _{LV} =5,0 | |
| | | | | A _E = 15,2μ | T _E = 10,5 sec |
| | | | | A _Z = 20μ | T = 10.5 sec. |
| | | | | BCIS:H=10:05:15 | 35°4N 27°7E |
| | | | | h=70 km | Near Karpáthos Island. |
| 14. | Z | i P | 19 45 | 34,5 | C A _{max} = 15μ T = 10 sec |
| | NE | i S | | 56 07,5 | |
| | N | Lm | 20 27,9 | | A = 67μ T = 21 sec |
| | | | | D= 85 ⁰⁹ | |
| | | | | M _{LH} = 6,8 | |
| | | | | m = 7,2 | |
| | | | | USCGS:H=19:32:54,2 | 51°3 N |
| | | | | 179°9 W | h=15 km Andreanov Islands Aleutian Islands. |
| 15. | Z | e Pg | 00 00 | 01,5 | |
| | Z | e | 02 04,5 | | BCIS: Turkey |
| 15. | Z | e Pg | 04 49 | 24,5 | |
| | NE | i Sg | | 41,5 | |
| | E | i Lm | | 46,5 | |
| | | | | D=145 km | |
| | | | | Albania-Yougoslavia- | |
| | | | | border region near | |
| | | | | Prespa lake. | |

- 15. Z e P 12 08 04
 NE e S 09 43
 N Lm 11.3 A = 4,5 μ T = 7 sec
 D= 8^o6
 M_{LH} = 4,5 BCIS: H=12:05:52 35^o3 N 27^o7 E
 h= 80 km Near Kárpáthos Island

- 15. NE i 14 01 15 BCIS: Near Karpathos Island

- 15. Z i P 20 55 02 C
 Z i 09
 NE e S 21 04 23
 D= 72^o5 USCGS: H= 20:43:33,4 16^o8 N
 61^o3 W h= 50 km Leeward Islands

- 16. N e (S)05 12 57 BCIS: South of Crete Island

- 16. Z ~~e (S)07~~ 23 16 USCGS: Kermadec Island

- 16. Z i Pn 07 27 42,5 D
 Z i P* 46,5
 Z i Pg 52
 Z i 55
 Z i 28 04
 ZE i Sn 19
 E i S* 24
 E i Sg 31
 E i 39
 E Lm 28,9 A = 36,4 T = 3 sec
 D=320 km
 M_{LH} = 5,0 BCIS: H=07:26:58 38^o8 N 21^o6 E
 Greece.

- 17. Z e Pg 04 36 33,5

- 18. ZNE e 05 58 43,5 Athens: South of Crete Island

- 19. N i Sg 01 45 15

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| | | | | | | |
|-----|----|--------------------|-----|---------|------|--|
| 19. | N | Lm | 18 | 21,8 | | |
| | Z | Lm | | 22,5 | | strong microseismes <u>BCIS</u> : Turkey |
| 21. | E | i(S) | 03 | 20 | 40,5 | <u>USCGS</u> : Philippine Islands |
| 23. | ZN | i P | 13 | 17 | 15,5 | <u>USCGS</u> : South of Alaska |
| 24. | N | e S | 11 | 53 | 32 | <u>USCGS</u> : Turkey |
| 25. | Z | e Pg | 04 | 22 | 19 | |
| 26. | Z | e(P) | 15 | 50 | 35 | |
| | NE | e(S) | 16 | 01 | 07 | |
| | | | | D=85°7 | | <u>USCGS</u> : Philippine Islands |
| 27. | N | i Sg | 05 | 09 | 13 | weak |
| 28. | Z | e P | 13 | 43 | 20,5 | |
| | Z | i PP | | 47 | 14 | |
| | NE | i S | | 53 | 43 | |
| | | | | D=96° | | <u>USCGS</u> : H=13:30:08,9 2°1 S 76°9 W h= 177 km Peru-Ecuador border region |
| 28. | Z | e Pn | 211 | 54 | 45,5 | |
| | E | i Sg | | 55 | 34 | <u>BCIS</u> : aftershock of 16 may, H= 07:26:58. Greece. |
| 30. | Z | i PKP ₁ | 16 | 15 | 35 G | |
| | Z | i PP | | 20 | 13 | |
| | | | | D=163°2 | | <u>USCGS</u> : H=15:55:37,1 32°2 S 178°1 W h= 34 km South Kermadec Islands |

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30. Z i PKP₁ 16 42 47 C
 Z i PKP₂ 43 37 D
 Z i PP 47 25
 NE i SKKS 54 50

D = 163°2

M_{LH} = 6,1

m = 6,5

USCGS: South of Kermadec Islands

31. N i Sg 14 22 04

Athens: Greece

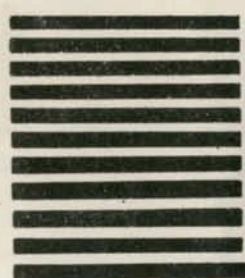
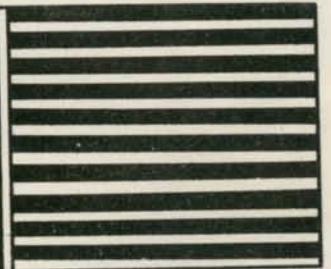
October 1969

Koçiaj S.

Sulstarova E.

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

Buletin Paraparak



Preliminary Bulletin

MAY 1969

- ALBANIA -

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL
BULLETIN

May 1969

| Location | Type of instrum | Comp. | Ts sec | Tg sec | Ds | Dg | V | Drum speed mm/min |
|------------|-----------------|-------|-----------|-----------|------|------|------|----------------------|
| 41°20,8' N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' | E SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h=196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition: Tortonian sandstone

NOTE: Upward trace motion on the seismogramm corresponds to N, E and upward ground motion.
m = magnitudes calculated from body waves
M = magnitudes calculated from surface waves

1. Z e Pg 10 26 40
 NE e Sg 45,5
 D= 50 km

2. Z e Pg 10 56 21
 NE i Sg 27,5
 D= 55 km

1. Z i P : 18 04 24 C
 Z i PP 32,5
 Z i 50
 NE i Sn 06 05
 N i 08,5
 N i 50
 E i Sg 07 02
 N Lm 08,3
 D=8⁰8

A = 9,2 μ T = 10 sec

M_{LH} = 4,7

BCIS: H=18:02:16 35⁰3 N 27⁰8 E
 Near Karpathos Island

1. Z i PKP₁ 19 24 50,5 D

USCGS: Tonga Islands

1. Z i P 20 08 54 D
 NE i S 10 32
 NE i 11 40
 N Lm 11.8
 D = 8⁰5

A = 26 μ T = 10 sec

M_{LH} = 5,1

BCIS: H=20:06:36 35⁰2 N 27⁰7 E
 Near Karpathos Island

2. Z e P 18 40 24,5
 ZN Lm 44,2

USCGS: South of Crete Island

3. Z e P 03 27 44,5
 N e S 29, 25,5
 D=8⁰8

USCGS: H=03:25:33,3 35⁰3 N
 27⁰9 E h=45 km Near Karpathos
 Island

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3. N e P 20 33 22
 N e S 35 04
 D=8°9

BCIS:H=20:31:10 35°1 N 27°6 E
 Near Karpathos Island

4. Z e PKP₁ 12 56 10,5
 Z i PP 59 32,5
 D=145°

USCGS:H=12:36:33,4 17°4 S 168°9 E
 New Hebrides Island h= 11 km

5. Z i P 05 39 37,5 C
 Z i 48
 Z i PPP 40 20
 D=24°3

BCIS:H=05:34:25 36°N 10°3 W
 North Atlantic Ocean.

5. Z e 14 23 47

USCGS: Near Coast of Chile

5. N e S 22 00 14,5
 E e SS 02 35
 Z Lm 08.7
 D= 36°

A = 4,5^μ T = 20 sec

M_{LV} = 5,1

BCIS:H= 21:47:30 67°N 19° W Island

6. Z i Pg 05 30 21,5
 ZE i 38,5
 ZE i 44,5

6. ZN e S 22 23 11,5

USCGS: Near Karpathos Island

9. Z e Pn 07 10 34
 N i Sg 11 27
 ZN i 44

USCGS: Greece

9. Z e Pg 15 22 12
 NE i Sg 17

Region of Librazhd D=42km Forshock .

10. NE e 09 35 33,5

10. ZNE 1 Pg 21 10 41 CNW
NE 1 Sg 46

D= 42 km

M_{LH}=4,1

The shock was felt in dep of Librazhdi: (VI at Librazhdi, Lunik, Letëm, Zgosht, Floq, Zdrajc; V at Mirakë, Spathar; V at Qës-kës, Hotolisht, Vulcan, Kokrevë, Dardhë, Polis, IV at Perrenjas, Berzeshte; IV at Kotodesh, Rajcë). In dep of Peshkopi: (VI at Fushe-Studen; V-VI at Llenjë; V at Zabzun, Streblevë, Lejcan, Okshtun). In dep of Elbasan: (V at Labinot-Fushë, IV at Elbasan, III-IV at Gracen, Luga, Shalqizë). In dep of Pogradeci: (IV at Proptisht, Piskupat; III at Memelisht Hudenisht). In dep of Tirana (V at Vakumone; III-IV at Tirana). Macrossismic epicenter is situated in region of Librazhdi: 41° 15' N 20° 20' E. Io = VI (MSK).
BCIS:H=21:10:37 41° 2' N 20° 3' E ✓

10. Z 1 Pg 22 01 11 C
NE 1 Sg 16

D= 42 km aftershock

BCIS:H=22:01:04 41° 2' N 20° 3' E

10. Z e Pg 22 09 53 aftershock

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| | | | | | |
|-----|-----|------|----------------------|------|------------------------------|
| 11. | Z | i Pg | 01 15 45 | C | |
| | N | i Sg | | 50 | |
| | E | i | | 52 | |
| | | | D=42 km | | aftershock |
| | | | | | BCIS:H= 01:15:38 41°2 N |
| | | | | | 20°3 E |
| 11. | Z | e Pg | 04 03 09 | | aftershock |
| 11. | N | e Sn | 16 26 34 | | |
| | NZ | i S* | 27 06 | | BCIS: East of Crete Island |
| 12. | Z | e Pg | 07 01 50 | | |
| | NE | i Sg | 02 11 | | |
| | | | D=180 km | | |
| 12. | Z | e Pg | 16 38 37 | | <u>Athens</u> : Greece |
| 12. | Z | Lm | 23 52,8 | | <u>Athens</u> : Greece |
| 13. | Z | e Pn | 11 19 07,5 | | |
| | NE | i Sn | | 43,5 | |
| | N | Lm | 20.1 | | A = 8μ T = 3 sec |
| | | | D=320 km | | |
| | | | M _{LH} =4,4 | | |
| 13. | Z | e P | 14 30 05,5 | | |
| | Z | i PP | 33 53,5 | | |
| | E | e S | 41 01,5 | | |
| | E | i PS | 42 33,5 | | |
| | | | D=94°3 | | |
| | | | M _{LH} =6,2 | | USCGS:H=14:16:52,8 11°5 N |
| | | | | | 86°4 W h=79 km near coast of |
| | | | | | Nicaragua |
| 13. | ZNE | i | 14 52 57,5 | | USCGS: Flores Sea |

14. ZNE e Sg 08 17 18,5 USCGS: Greece

14. Z i P 10 07 25,5
 Z i 36,5
 Z i 52,5
 Z i 08 36,6
 Z i 55,5
 NE i Sn 09 06,5
 E i S* 40,5
 NE i Sg 10 07,5
 ZE Lm 11,4

D= 8°8

$M_{LH}=4,9$

$M_{LV}=5,0$

$A_E = 15,2 \mu$ $T_E = 10,5$ sec

$A_Z = 20 \mu$ $T = 10,5$ sec.

BCIS: H=10:05:15 35°4N 27°7E

h=70 km Near Karpáthos

Island.

14. Z i P 19 45 34,5 C $A_{max} = 15 \mu$ T = 10 sec
 NE i S 56 07,5
 N Lm 20 27,9 A = 67 μ T = 21 sec

D= 85°9

$M_{LH} = 6,8$

m = 7,2

USCGS: H=19:32:54,2 51°3 N

179°9 W h=15 km Andreanov

Islands Aleutian Islands.

15. Z e Pg 00 00 01,5
 Z e 02 04,5 BCIS: Turkey

15. Z e Pg 04 49 24,5
 NE i Sg 41,5
 E i Lm 46,5

D=145 km

Albania-Yougoslavia-
 border region near
 Prespa lake.

TIRANA (Tir)

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-
15. Z e P 12 08 04
 NE e S 09 43
 N Lm 11.3 A = 4,5 μ T = 7 sec
 D= 8^o6
 M_{LH}= 4,5 BCIS: H=12:05:52 35^o3 N 27^o7 E
 h= 80 km Near Kárpáthos Island
15. NE i 14 01 15 BCIS: Near Karpathos Island
15. Z i P 20 55 02 C
 Z i 09
 NE e S 21 04 23
 D= 72^o5 USCGS: H= 20:43:33,4 16^o8 N
 61^o3 W h= 50 km Leeward Islands
16. N e (S)05 12 57 BCIS: South of Crete Island
16. Z e ~~(PKP)~~07 23 16 USCGS: Kermadec Island
16. Z i Pn 07 27 42,5 D
 Z i P* 46,5
 Z i Pg 52
 Z i 55
 Z i 28 04
 ZE i Sn 19
 E i S* 24
 E i Sg 31
 E i 39
 E Lm 28,9 A= 36,4 T = 3 sec
 D=320 km
 M_{LH}=5,0 BCIS: H=07:26:58 38^o8 N 21^o6 E
 Greece.
17. Z e Pg 04 36 33,5
18. ZNE e 05 58 43,5 Athens: South of Crete Island
19. N i Sg 01 45 15

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| | | | | | | |
|-----|----|--------------------|----|------|---------|--|
| 19. | N | Lm | 18 | 21,8 | | |
| | Z | Lm | | 22,5 | | strong microseismes <u>BCIS</u> : Turkey |
| 21. | E | i(S) | 03 | 20 | 40,5 | <u>USCGS</u> : Philippine Islands |
| 23. | ZN | i P | 13 | 17 | 15,5 | <u>USCGS</u> : South of Alaska |
| 24. | N | e S | 11 | 53 | 32 | <u>USCGS</u> : Turkey |
| 25. | Z | e Pg | 04 | 22 | 19 | |
| 26. | Z | e(P) | 15 | 50 | 35 | |
| | NE | e(S) | 16 | 01 | 07 | |
| | | | | | D=85°7 | <u>USCGS</u> : Philippine Islands |
| 27. | N | i Sg | 05 | 09 | 13 | weak |
| 28. | Z | e P | 13 | 43 | 20,5 | |
| | Z | i PP | | 47 | 14 | |
| | NE | i S | | 53 | 43 | |
| | | | | | D=96° | <u>USCGS</u> : H=13:30:08,9 2°1 S 76°9 W h= 177 km Peru-Ecuador border region |
| 28. | Z | e Pn | 21 | 54 | 45,5 | |
| | E | i Sg | | 55 | 34 | <u>BCIS</u> : aftershock of 16 may, H= 07:26:58. Greece. |
| 30. | Z | i PKP ₁ | 16 | 15 | 35 C | |
| | Z | i PP | | 20 | 13 | |
| | | | | | D=163°2 | <u>USCGS</u> : H=15:55:37,1 32°2 S 178°1 W h= 34 km South Kermadec Islands |

TIRANA (Tir)

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30. Z 1 PKP₁ 16 42 47 C
 Z 1 PKP₂ 43 37 D
 Z 1 PP 47 25
 NE 1 SKKS 54 50

D = 163°2

M_{LH} = 6,1

m = 6,5

USCGS: South of Kermadec Islands

31. N 1 Sg 14 22 04

Athens: Greece

October 1969

Koçiaj S.

Sulstarova E.

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

19 MAY 1970

Buletin Paraprak 

 **Preliminary Bulletin**

JUNE 1969

— ALBANIA —

STATE UNIVERSITY OF TIRANA
Tirana Seismological Station

PRELIMINARY SEISMOLOGICAL
BULLETIN

June 1969

| Location | Type of instrum. | Comp. | Ts sec. | Tg sec. | Ds | Dg | V | Drumm speed mm/min |
|-------------|------------------|-------|---------|---------|------|------|------|--------------------|
| 41°20', 8 N | | Z | 20 | 1,27 | 0,5 | 7,87 | 1050 | 30 |
| 19°52' | E SSJ-1 | N | 20 | 1,54 | 0,49 | 6,49 | 1050 | 30 |
| h= 196,8 m | | E | 20 | 1,34 | 0,5 | 7,46 | 1000 | 30 |

Ground condition: Tortonian sandstone

NOTE: Upward trace motion on the seismogramm corresponds to N,E and upward ground motion

m = magnitudes calculated from body waves

M = magnitudes calculated from surface waves

Tirana

1969

1. E Lm 23 24.5

BCIS:H=23:20:29 47°N 14°2 E

2. Z e(P) 10 00 04
N e(S) 10 03
N i 10

3. Z e 04 51 45,8

4. Z e Pg 04 16 05
NZ e Sg 11
D= 45 km

4. Z i Pg 18 22 35,5
NZ i Sg 47,5
D= 100 km

7 Z i Pn 15 32 08 D
Z i Pg 21
Z i 33
Z i 46
N i Sn 54
NE i Sg 33 10
N Lm 34.0

A = 26 micron T = 4 sec.

D = 385 km

$M_{LH} = 4,9$

BCIS:H=15:31:12 37°9 N 20°2 E
Ionian Islands

7. ZN e Pg 16 59 08
NE e Sg 51
Z i 17 00 04
D= 385 km

Athens:H=15:58:00 37°9N 19°9 E
Greece

7. N e Pg 18 02 10
NE i Sg 58
N i Lg 03 13
D= 385 km

Athens:H=18:01:00 37°9N 19°9E

TIRANA (Tir)

June 1969

| | | | | |
|-----|-----|-------------------|--------------------------|-------------------------------------|
| 8. | Z | i Sg | 08 52 51 | <u>Athens</u> : Greece |
| 9. | NE | e(Sg) | 00 41 35 weak | |
| | Z | i | 44 | <u>Athens</u> : Greece |
| 9. | Z | iPKP ₁ | 22 12 58,5 C | <u>USCGS</u> : Tonga Islands Region |
| 10. | Z | e P | 22 59 27 | <u>BCIS</u> : Hindukush Region |
| 10. | Z | e P | 23 38 01 | <u>BCIS</u> : Hindukush Region |
| 11. | Z | e P | 01 10 16 | |
| | N | e S | 20 13 | |
| | | | D= 78°7 | <u>USCGS</u> : Golf of Alaska |
| 12. | Z | i | 07 53 55 | |
| 12. | Z | e P [≠] | 09 55 35 | |
| | Z | e Pg | 42 | |
| | NE | i Sn | 56 12 | |
| | NE | i Sg | 27 | |
| | ZNE | i | 40 | |
| | NE | Lm | 57.1 | A = 4 micron T= 3 sec. |
| | | | D = 380 km | |
| | | | M _{LH} = 4,3 | <u>Athens</u> : H=09:54:35 |
| | | | | 37°9 N 20°1 E Greece |
| 12. | ZNE | i P | 15 15 26 CNW | |
| | Z | i(PPP) | 42,5 | |
| | Z | i | 16 03,5 | |
| | Z | i | 14,5 | |
| | Z | i | 41,5 | |
| | NEZ | i | 54,5 | |
| | E | i S | 17 01,5 | |
| | NE | i(SSS) | 21,5 | |
| | E | Lm | 19.2 | A = 140 micron T= 7 sec. |
| | | | D= 950 km | |
| | | | M _{LH} =6,0-6,1 | <u>BCIS</u> :H=15:13:33 34°6N 25° E |
| | | | | South of Crete Islands. |

12. Z Lm . 18 06.1 BCIS: South of Crete Island

13. Z e P 01 25 24
NE e S 27 02
D= 950 km BCIS: South of Crete Island

13. ZNE i P 09 00 40,5 CSW
Z i 53
Z i 01 06
Z i 23
Z i PPP 05 44
ZN i 07 30
E i S 10 45
D= 81°5
M_{LV}= 6,6
USCGS:H=08:48:29,5
49°4 N 155°3 E h=64D Kurile
Islands.

13. Z e Pg 19 43 24,5
Z i 34,5
N e(S)^{*} 57,5
N e Sg 44 05,5
~~NE~~ i 19
NE i 31
D= 370 km Athens:H=19:42:16 38°N 20°2E
Greece

14. Z e P 01 01 26 USCGS: South of Crete Island

14. Z iPKP₁ 03 42 03,5
Z e PP 44 44 17,5
D= 129,5° USCGS:H=03:22:56,8 7°9S 159°E
h= 62D Solomon Islands

14. Z e Pg 05 55 40
NE e Sg 56 24
ZNE i 37,5
N i 53,5
D= 380 km Athens:H=05:54:32 38°N 20°1E
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| | | | | |
|-----|----|------------------|-----------------------|---------------------------------------|
| 14. | Z | e P | 13 49 36 | |
| | Z | i | 42 | |
| | Z | i | 50 00 | |
| | N | i | 47 | |
| | NE | i | 51 11 | |
| | NE | i Sn | 18 | |
| | NE | i | 31 | |
| | NE | i S [≠] | 43 | |
| | Z | Lm | 53.1 | A=7,5 micron T= 6 sec. |
| | | | D= 940 km | |
| | | | M _{LV} = 4.9 | <u>BCIS</u> :H=13:47:28 34°4N 25° E |
| | | | | South of Crete Island |
| 14. | N | e(S) | 14 36 44 | <u>BCIS</u> : South of Crete Island |
| 14. | NE | e Sg | 15 09 37 | <u>Athens</u> : Greece |
| 15. | NE | i S | 06 03 21 | <u>BCIS</u> : South of Crete Island |
| 16. | Z | e P [≠] | 04 54 22 | |
| | Z | e Pg | 29 | |
| | NE | i Sn | 55 00 | |
| | E | i S* | 12 | |
| | NE | i Sg | 23 | |
| | NE | i | 36 | |
| | Z | Lm | 55.8 | A= 6,2 micron T= 5 sec. |
| | | | D= 420 km. | |
| | | | M _{LV} =4,3 | <u>Athens</u> :H=04:53:15 37°6N 20° E |
| | | | | Greece |
| 16. | Z | e Pg | 07 51 09 | |
| | NE | i(Sg) | 52 00 | |
| | E | i | 14 | <u>Athines</u> : Greece |
| 16. | Z | e Pn | 15 16 02 | |
| | N | e Sn | 43 | |
| | NE | i | 17 27 | |
| | | | D= 380 km | <u>BCIS</u> :H=15:15:26 38°N 20°3 E |
| | | | | Greece |

| | | | | | |
|-----|-----|------------------|-----------------------|------|---|
| 16. | ZN | i Pn | 16 07 14 | CN | |
| | ZNE | i | | 27 | |
| | Z | i Pg | | 32 | |
| | ZNE | i | | 42 | |
| | NE | i Sn | | 59 | |
| | E | i S ³ | 08 | 06 | |
| | NE | i Sg | | 14 | |
| | NE | i Lg | | 33 | |
| | Z | Lm | ←08.8 | | A= 30 micron T = 5 sec. |
| | | | D= 375 km | | |
| | | | M _{LV} =5,0 | | <u>BCIS</u> :H=16:06:25 38°N 20°3 E Greece |
| 17. | Z | Im | 03 43.7 | | <u>Athens</u> : Greece |
| 177 | Z | e Pn | 05 19 35,5 | | |
| | Z | i Pg | | 48,5 | |
| | Z | i | 20.03 | | |
| | NE | i Sn | | 09,5 | |
| | NE | i S | | 18,5 | |
| | NE | i Sg | | 36,5 | |
| | E | i Lg | | 44,5 | |
| | Z | Lm | 21. | | A=14 micron T= 6 sec |
| | | | D= 375 km | | |
| | | | M _{LV} = 4,6 | | <u>BCIS</u> : H=05:18:46 38°N 20°3E Greece |
| 17. | Z | e P | 19 39 56,5 | | |
| | Z | i | 40 49,5 | | |
| | Z | i PP | 44 14,5 | | |
| | NE | i SKS | 50 15,5 | | |
| | | | D=102°5 | | <u>USCGS</u> :H=19:26:28,9 19°N 145°5E Mariana Islands |
| 17. | Z | e P | 23 29 05,5 | | |
| | NE | i | 33 03,5 | | |
| | | | | | <u>BCIS</u> : Eastern Caucasus |
| 17. | E | e Sn | 23 58 23,5 | | <u>Athens</u> : Greece |

| | | | | |
|-----|-----|------|--------------|---|
| 18. | Z | i P | 00 18 02,5 | |
| 18. | Z | e Pg | 04 14 26,5 | |
| | N | e Sg | 15 13,5 | |
| | Z | Lm | 15.4 | |
| | | | D= 390 km | <u>Athens</u> : H=04:13:18 37°9' N 20°3' E Greece |
| 18. | Z | i Pg | 20 43 22,5 D | |
| | NE | i Sg | 25,5 | |
| | | | D= 25 km | The shock was felt III-IV at Tirana ✓ |
| 18. | Z | e Pg | 20 52 01 | |
| 19. | Z | i | 06 58 09,5 | <u>Athens</u> : South of Crete Islands |
| 19. | N | e Sg | 15 27 19,5 | |
| | Z | Lm | 27.7 | |
| | | | | <u>Athens</u> : Greece |
| 19. | ZN | e Pg | 16 46 29,5 | |
| 19. | Z | e Pg | 20 46 19,5 | |
| 19. | Z | e Pg | 23 54 19 | |
| | E | i | 40 | |
| | Z | i | 44 | |
| 20. | Z | i P | 02 50 27 D | |
| | Z | i PS | 03 01 53,5 | |
| | | | D= 85° | <u>USCGS</u> : H=02:57:51,5 53°2' N 162°4' W h= 44 km South of Alaska |
| 20. | ZNE | e Pg | 21 51 40,5 | |
| | NE | e Sg | 52 21 | |
| | | | D=330 km | <u>Athens</u> : H=21:50:42 39°N 22°E Greece |

21. Z e Pg 15 41 55
N e Sg 42 45
E i 53
D= 440 km Athens:H=15:40:35
42°1 N 25°1 E
21. Z i Pg 16 18 20,5
E i Sg 33,5
ZNE Lm 18.7
D= 110 km $A_N= 11$ micr. $A_E= 12$ micron;
 $A_Z= 11$ micron $T_N=T_E=T_Z= 2$ sec
 $M_{LH}=4,1$
21. ZE e P 16 41 55
E e S 47 05
D= 34° BCIS:H=16:35:04 27°2N 57°9E
h=50±12 km Southern Iran.
22. Z e P 02 46 20,5
Z i PS 57 20,5
D= 82° USCGS:H=02:33:52,8
49°2 N 158°5 E h=N Kurile
Islands Region
22. Z i P 10 58 00 C
E e S 11 08 31
D= 86° USCGS:H=10:45:24,5 51°5 N
179°9W h= 56 km Andreanof
Islands; Aleutian Islands
24. At the moment of change of paper (07 21 - 07 27) oc-
cured a slight earthquake near Tirana. The shock was felt
IV-V at Tirana.
25. E e Sg 06 16 16 USCGS: Greece
27. ZNE i Pg 16 11 04 DSE
Z i Sg 11,5
D= 70 km The shock was felt V at Be-
rati.

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23. Z e PKP₁ 10 54 01,5 0
Z e PP 58 32,5
D= 161°5

USCGS: H=10:34:06,5

30°5 S 178°2 W

Kermadec Islands Region

29. Z e PKP₁ 17 28 57,5
Z e PKP₂ 29 09,5
D= 150°2

USCGS: H=17:09:13,9

62°8 S 156°3 E

K-N Balleny Islands Region.

October 1969

Koçiaj S; Sulstarova E.