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SEISMOLOGICAL BULLETIN

July, 1956

MSI - 187

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U. S. DEPARTMENT OF COMMERCE

Sinclair Weeks, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

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National Oceanic and Atmospheric Administration

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SEISMOLOGICAL BULLETIN
1956

The instrumental results of the following stations are tabulated in this report.

**Balboa Heights, C. Z. (BH)
The Panama Canal Co.
*Boulder City, Nev. (BC)
Bureau of Reclamation
*Bozeman, Mont. (BOZ)
Montana State College
**Burlington, Vt. (BUR)
University of Vermont
*Butte, Mont. (BUT)
Montana School of Mines
*Chicago, Ill. (CHI)
University of Chicago and
U. S. Weather Bureau
College, Alaska (COL)
*Columbia, S. C. (COLU)
University of South Carolina
*Eureka, Nev. (EUR)
Eureka Corporation Limited
Honolulu, T. H. (HONO)
*Hungry Horse, Mont. (HH)
Bureau of Reclamation
*Lincoln, Nebr. (LIN)
Nebraska Wesleyan University
**Philadelphia, Pa. (PHIL)
The Franklin Institute
**Rapid City, S. Dak. (RC)
South Dakota State School of Mines
*Salt Lake City, Utah (SLC)
University of Utah
San Juan, Puerto Rico (SJ)
Sitka, Alaska (SIT)
Tucson, Ariz. (TUC)
Ukiah, Calif. (UK)
International Latitude Observatory
Washington, D. C. (WASH)

*Indicates a station maintained by a local institution in cooperation with the Coast and Geodetic Survey.
**Indicates a station operating on an independent basis.
Other stations are observatories of the Coast and Geodetic Survey.

All seismogram interpretations are made or revised at Washington except those for Balboa Heights.
All magnitude determinations are by Pasadena unless otherwise stated. Minor earthquakes are listed at the end of the bulletin.

One asterisk (*) following an origin time indicates probable error of one-tenth minute. Two asterisks (**) following an origin time indicates error of one quarter minute. All origin times and locations are determined from P data only. For Pasadena epicenters the time is given in one-tenth minute.

All seismograms are on file in the Coast and Geodetic Survey, except those from Balboa Heights and Burlington, which may be obtained on loan by addressing the Seismograph Station Director: - Meteorological and Hydrographic Office, Panama Canal Company, Balboa Heights, Canal Zone; University of Vermont, Burlington, Vermont.

Date 1956	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
July	h m s	° '	° '	
2	14 26 35*	8 S.	127 E.	Sawoe Sea.
3	00 31 29**			Colombia-Venezuela border.
3	10 17 57*	24 N.	84-1/2 E.	Nepal.
3	15 46 41*	13-1/2 N.	91 W.	Near coast of Guatemala.
3	23 26 17*	36-1/2 N.	71 E.	Hindu Kush. h about 250 km.
4	00 39 55*	18 S.	178-1/2 W.	Fiji Islands. h about 450 km.
4	03 04 14*	7 S.	155-1/2 E.	Solomon Islands. Felt at Aropa.
4	03 42 50*	7 S.	155-1/2 E.	Solomon Islands aftershock.
4	07 19 09*	7 S.	155-1/2 E.	Do.
4	11 08 28*	31 S.	71 W.	Central Chile. Felt at Curcio and Coquimbo.
4	16 10 48*	23-1/2 S.	180	Tonga Islands region. h about 450 km.
4	23 39 14**			Loyalty Islands.
5	05 54 35**			Near east coast of Kamchatka.
5	08 16 47*	43-1/2 N.	140 E.	Off coast of Hokkaido, Japan. h about 100 km.
5	13 01 05*	63-1/2 N.	151-1/2 W.	Alaska.
6	02 22 00*	42-1/2 N.	126 W.	Off coast of Oregon. Mag. 5 (Berk.)
6	03 31 35*	38-1/2 N.	118 W.	Near Fallon, Nevada. Felt at Fallon and Hawthorne. Mag. 5-1/4 (Berk.)
6	13 32 25*	23 S.	70 W.	Northern Chile. Felt at Antofagasta. h about 60 km.
8	02 01 30**			About 100 miles off coast of Oregon. Mag. 4.2 (Berk).
8	04 33 00**			Halmahera region.
8	06 01 56*	0	126-1/2 E.	Molucca Passage. h about 60 km.
8	20 29 52**			New Hebrides region.
9	03 11 39*	37 N.	26 E.	Aegean Sea. Forty-three killed and many injured. Several towns destroyed on Thira and Ios Islands. 10 ft. seismic sea wave reported on Aegean Islands. Mag. 7-1/2.
9	03 18 47**			Near Kodiak Island, Alaska.
9	03 24 05*	37 N.	26 E.	Aegean Sea aftershock.
9	04 33 22**			Do.
9	06 19 07**			Do.
9	06 22 49*	37 N.	25-1/2 E.	Do.
9	09 56 13*	20 N.	73 W.	Near coast of Haiti. Moderate property damage at Port de Paix. h about 100 km. Mag. 6-1/2 - 6-3/4.
9	20 10 25**			Aegean Sea aftershock.
9	20 13 56**			Do.
9	20 34 38**			Off coast of southern Sumatra.
9	21 28 42*	37 N.	26 E.	Aegean Sea aftershock.
10	03 01 27 *	37 N.	26 E.	Do.
10	17 56 03**			Marshall Islands.

Date 1956	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
July	h m s	° '	° '	
10	22 08 23*	36-1/2 N.	71-1/2 E.	Hindu Kush. Felt at Peshawar and Rawalpindi. h about 100 km.
11	19 22 06*	35-3/4 N.	117-3/4 W.	Kern County, California. Felt at China Lake. Mag. 4.2.
12	15 01 26*	23 N.	94-1/2 E.	Central Burma. h about 100 km.
13	13 36 03*	27 S.	70 W.	Northern Chile. Felt at Copiapo, Vallenar, and La Serena. h about 100 km.
14	03 29 21**			Ryukyu Islands.
14	03 38 27**			Near coast of Guerrero, Mexico.
14	17 09 30*	17 N.	45-1/2 W.	North Atlantic Ocean.
14	22 05 41*	20 N.	121-1/2 E.	Off north coast of Luzon, Philippine Islands. Felt at Basco and Calayan.
15	01 55 09*	44 N.	127-1/2 W.	Off coast of Oregon.
15	12 52 16*	28 N.	139 E.	Bonin Islands region. h about 500 km.
15	18 39 33*	42 N.	142 E.	Off coast of northern Honshu, Japan. h about 100 km.
16	06 27 43**			Near east coast of Honshu, Japan.
16	09 24 38*	55-1/2 N.	161-1/2 E.	Near east coast of Kamchatka.
16	15 07 10*	22 N.	95-1/2 E.	Central Burma. Thirty killed and major property damage at Mandalay and Sagaing. h about 100 km. Mag. 7.
16	20 40 25*	22-1/2 N.	96-1/2 E.	Burma aftershock. h about 100 km.
16	21 34 03*	52 N.	178-1/2 W.	Andreanof Islands, Aleutian Islands.
17	04 36 02**			Marianas Islands, about 200 miles northeast of Guam.
17	07 34 07*	7 S.	126-1/2 E.	Banda Sea. h about 450 km. Mag. 6-3/4.
17	15 19 38*	41 N.	27 W.	Azores region.
17	17 05 07**			Marianas Islands aftershock.
17	22 32 40**			About 300 miles off coast of Guerrero, Mexico.
18	00 27 27*	5 S.	151 E.	New Britain.
18	05 18 23*	21-1/2 S.	170 E.	Loyalty Islands.
18	06 19 15*	5 S.	130 E.	Banda Sea. Mag. 7-1/4 - 7-1/2.
18	10 58 18**			Near coast of Kamchatka.
19	20 40 54*	15 N.	120-1/2 E.	Near west coast of Luzon, Philippine Islands. Felt at Iba, Dagupan, Manila, and Baguio.
19	23 26 25*	9-1/2 N.	84-1/2 W.	Near coast of Costa Rica. Felt at San Jose. Mag. 6 (Berk).
19	23 38 04*	9-1/2 N.	85 W.	Costa Rica aftershock.
20	07 39 10*	20 S.	70 W.	Northern Chile. Felt at Antofagasta.
20	17 45 59**			Marshall Islands.
20	23 19 40**			Marianas Islands foreshock.
21	00 08 31*	1 N.	26 W.	Mid-Atlantic Ocean.
21	14 51 06*	50-1/2 N.	147-1/2 E.	Sea of Okhotsk. h about 600 km.
21	15 21 20*	22-1/2 S.	172-1/2 E.	Loyalty Islands region.
21	15 32 25*	23 N.	70 E.	Western India. Many killed and major property damage at Anjar. Mag. 6-1/2.
21	20 55 57*	15-1/2 N.	147 E.	Marianas Islands region.

Date 1956	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
July	h m s	° '	° '	
22	03 28 59**			Aegean Sea aftershock.
22	09 25 08*	19 S.	69 W.	Northern Chile. Felt at Arica. h about 100 km. Mag. 6 - 6-1/4.
23	08 03 51*	36-1/2 N.	122 W.	California. Felt at San Benito, and Paso Robles. Mag. 4-1/2 - 4-3/4.
23	14 25 46*	4-1/2 S.	154 E.	Solomon Islands region. Felt at Namatanai, Rabaul, and Kokopo, New Britain.
23	19 25 58*	24 S.	112 W.	Easter Island region. Mag. 6-3/4.
23	21 56 56*	6 S.	148 E.	Near north coast of New Guinea. Felt at Wau.
24	07 03 44**			Tonga Islands foreshock.
24	07 04 35**			Tonga Islands.
24	13 00 18*	30-1/2 N.	139 E.	South of Honshu, Japan. h about 500 km.
24	14 01 07*	38-1/2 N.	138-1/2 E.	Honshu, Japan.
24	18 56 32*	1 N.	126-1/2 E.	Molucca Passage.
26	06 13 29**			Near east coast of Hokkaido, Japan.
26	08 30 24*	23 S.	69 W.	Northern Chile. Felt at Antofagasta.
26	09 53 18*	39-1/2 N.	118-1/2 W.	Fallon, Nevada. Felt. Mag. 5.
26	17 49 12*	27 S.	178 E.	Kermadec Islands region. h about 650 km.
27	13 50 43*	54 N.	161 E.	Kamchatka.
27	21 36 52*	15 N.	147-1/2 E.	Marianas Islands.
27	23 23 54*	15-1/2 N.	147-1/2 E.	Marianas Islands aftershock.
28	02 01 58*	6 S.	154 E.	New Britain. Felt at Karoole, Namatanai, Rabaul, and Kokopo. h about 150 km.
28	11 09 05*	15-1/2 N.	147-1/2 E.	Marianas Islands aftershock.
28	11 21 43*	0	80-1/2 W.	Off coast of Ecuador.
29	07 13 44*	9 S.	85-1/2 E.	Eastern Indian Ocean.
29	13 28 56*	14-1/2 N.	90-1/2 W.	Guatemala. h about 100 km.
29	13 44 11**			Guatemala aftershock. h about 100 km.
30	05 41 01**			Aegean Sea aftershock. Felt on Crete and Thira.
30	09 15 00*	37 N.	26 E.	Aegean Sea aftershock.
30	10 39 56*	36-1/2 N.	26 E.	Do.
30	11 23 54**			Ryukyu Islands region.
30	14 43 33*	19 N.	121 E.	Near north coast of Luzon, Philippine Islands. Felt at Aparri, Tuguegarao, and Baguio.
31	16 38 24*	2-1/2 N.	128-1/2 E.	Halmahera.

Date and Station		Phase	(GCT) h m s
July 1			
BOZ	e(P)		01 19 47
July 1			
BOZ	eP		01 27 16
July 1			
EUR	eP		02 01 00
July 1			
BOZ	eP		06 44 14
July 1			
BOZ	eP		15 38 58
COL	eP		15 38 44
	i		38 52
July 1			
COL	eP		20 16 16
EUR	eP		20 17 10
July 1			
SIT	eP		20 52 40
July 1			
BOZ	eP		22 48 19
July 2			
BOZ	e(P)		01 24 17
EUR	eP		01 22 13
July 2			
EUR	eP		04 11 34
	e		12 57
July 2			
COL	eP		04 46 59
EUR	eP		04 38 04
July 2			
HH	eP		07 29 37
July 2			
EUR	eP		07 58 24
July 2			
COL	eP		14 40 07
	ePP		44 11
	e		44 29
COLU	iP'		14 46 16
EUR	eP'		14 45 25
	e(PP)		46 39
	e		48 07
HH	e(P')		14 45 22
RC	eP'		14 45 39
	e		46 00
July 2			
EUR	iP		17 37 06

Date and Station		Phase	(GCT) h m s
July 2			
COL	eP		18 16 29
EUR	iP		18 17 52
July 2			
COL	eP		20 37 47
July 3			
COL	eP		00 17 49
	i		17 56
	i		18 06
	i		18 15
EUR	eP		00 17 15
	i		17 27
	e		19 10
HH	e(P)		00 17 14
RC	eP		00 17 08
SIT	eP		00 17 41
July 3			
BH	eP		00 33 14
	eS		34 32
BUT	eP		00 40 32
COL	eP		00 43 16
COLU	eP		00 37 16
EUR	iP		00 40 21
	e		41 30
RC	eP		00 39 43
SJ	e(P)		00 34 31
	eS		36 51
	eL		37 00
TUC	eP		00 39 26
July 3			
COL	iP		06 40 50
EUR	iP		06 40 15
July 3			
COL	iP		10 30 01
July 3			
HH	e(P)		11 54 24
July 3			
BC	iP		15 53 03
	i		53 19
BOZ	eP		15 53 48
BUT	e(P)		15 54 11
	eS		16 00 06
	eL		04 04
COL	eP		15 57 14
	eS		16 06 04
	eScS		07 16

Date and Station		Phase	(GCT) h m s
COL	eL		06 14 38
COLU	eP		15 51 40
	eS		55 53
	eL		57 55
EUR	iP		15 53 29
	e(S)		59 54
HH	eP		15 54 15
RC	e(P)		15 53 11
	ePP		54 16
SLC	eP		15 53 18
TUC	iP		15 52 20
	e(S)		57 24
	eL		16 00 10
WASH	e(P)		15 53 07
	ePcP		55 01
	eL		58 07
July 3			
EUR	eP		18 45 24
	e		45 42
July 3			
BOZ	eP		20 00 33
July 3			
HH	e(P)		20 08 15
July 3			
BOZ	eP		23 39 31
	epP		40 26
	ePP		43 43
COL	iP		23 37 31
	ipP		38 24
EUR	eP		23 39 57
	e		43 18
	e		43 48
HH	eP		23 39 16
	epP		40 11
	e(PP)		42 56
RC	eP		23 39 37
	epP		40 33
	ePP		43 43
SIT	eP		23 38 24
	epP		39 19
July 3			
EUR	eP		23 55 42
	e		56 41
July 4			
BC	iP		00 51 24
BOZ	iP		00 52 02
	epP		53 42
	ePP		55 35

Date and Station		Phase	(GCT) h m s
BUT	iP		00 51 57
	e(pP)		53 37
COL	iP		00 51 50
	ipP		53 33
	eSKS		01 01 35
	eS		01 48
EUR	iP		00 51 30
	epP		53 09
	ePP		54 43
	iS		01 00 42
	eSKPP'		20 50
HONO	eP		00 47 27
HH	iP		00 51 57
	ePP		55 29
	eSKS		01 01 28
	iS		01 45
RC	eP		00 52 21
SLC	eP		00 51 46
	epP		53 26
SIT	iP		00 51 37
TUC	iP		00 51 31
July 4			
BOZ	eP		01 01 13
COL	eP		01 04 28
	i		05 03
COLU	eP		00 59 03
SLC	eP		01 00 29
TUC	eP		00 59 31
July 4			
COL	iP		03 16 39
	e		28 06
	eL		42 30
EUR	eP		03 17 31
	e		19 57
HH	e(P)		03 17 54
	e		20 43
TUC	e(P)		03 21 41
	eL		48 22
July 4			
EUR	eP		03 33 26
	e		33 42
July 4			
COL	eP		03 36 34
EUR	e(P)		03 37 26
July 4			
COL	iP		03 55 15

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Date and Station		Phase (GCT)
		h m s
EUR	iP	03 56 06
HH	e(P)	03 56 36
SLC	eP	03 56 22
TUC	e(P)	04 00 14
July 4		
BC	e(P)	04 35 59
	i	37 59
EUR	eP	04 36 09
	i	36 12
HH	e(P)	04 40 44
July 4		
COL	eP	05 25 16
EUR	eP	05 26 10
July 4		
COL	eP	05 51 52
EUR	eP	05 54 40
	e	55 42
TUC	e(P)	06 02 16
July 4		
TUC	eP	06 16 30
July 4		
COL	iP	07 31 34
	i	31 45
EUR	iP	07 32 26
July 4		
COL	eP	10 04 25
EUR	eP	10 07 23
HH	eP	10 06 58
July 4		
EUR	eP	10 45 21
	e	46 27
July 4		
BC	iP	11 20 32
	i	21 07
BOZ	eP	11 21 05
	i	21 30
BUT	eP	11 21 09
	iP	21 10
	i	21 26
COL	eP'	11 27 03
	e	27 21
COLU	iP	11 19 15
EUR	iP	11 20 50
HH	eP	11 21 20
RC	iP	11 20 47
SLC	iP	11 20 45
SJ	eP	11 17 22
	i	17 47
TUC	iP	11 20 03
July 4		
EUR	eP	11 47 19
July 4		
BUT	eP	13 18 55
July 4		
COL	iP	16 23 12
EUR	eP	16 22 49
SLC	eP	16 23 06
July 4		
BC	iP	17 32 35
	i	32 45
COL	eP	17 36 47
	i	37 24
EUR	iP	17 33 02
SLC	eP	17 32 51
TUC	eP	17 31 52
July 4		
COL	iP	18 58 06
EUR	e(P)	18 57 51
July 4		
COL	iP	19 00 25
EUR	e	19 00 44
July 4		
EUR	eP	20 49 40
July 4		
BC	iP	21 42 18
	i	42 38
	i	43 39
	iL	44 58
BOZ	eP	21 44 47
EUR	eP	21 43 08
TUC	eP	21 42 10
	e	42 25
	i	42 52
	iL	43 19
July 4		
COL	eP	23 52 19
EUR	eP	23 52 32
July 5		
COL	eP	00 30 18
July 5		
BOZ	e(P)	02 51 02
HH	eP	02 50 58
July 5		
BOZ	eP	03 14 36
July 5		
BOZ	eP	04 11 10
BUT	eP	04 11 25
July 5		
EUR	eP	04 21 14
July 5		
EUR	eP	05 52 50
July 5		
COL	iP	06 00 08
EUR	iP	06 04 04
RC	eP	06 04 27
SLC	eP	06 04 15
TUC	eP	06 05 01
July 5		
BOZ	eP	08 28 01
BUT	eP	08 27 53
COL	iP	08 24 49
EUR	iP	08 28 09
HH	eP	08 27 38
RC	iP	08 28 29
SLC	eP	08 28 18
SIT	eP	08 25 55
TUC	eP	08 28 54
July 5		
EUR	eP	09 20 23
TUC	eP	09 20 20
July 5		
COL	iP	12 54 09
	e(S)	54 34
	i(S)	54 38
	iL	54 40
HH	eP	12 59 02
July 5		
BC	iP	13 08 05
BOZ	eP	13 07 06
	eL	16 36
BUT	e(P)	13 06 43
	e	07 07
	eL	15 55
COL	iP	13 01 42
	i(S)	02 04
	iL	02 14
EUR	iP	13 07 34
	iPcP	10 24
HH	iP	13 06 35
	i	06 48
	ePP	07 25
	eL	14 50
RC	eP	13 07 47
SLC	eP	13 07 39
SIT	iP	13 03 33
	eS	06 06
	eL	06 57
TUC	eP	13 08 45
	ePcP	10 53
July 5		
SJ	iP	14 58 54
	i	15 00 02
July 5		
SIT	eP	16 56 40
July 5		
EUR	eP	21 41 00
July 6		
COL	iP	00 31 43
EUR	e(P)	00 30 42
	e	31 25
July 6		
BC	iP	02 24 43
	i	24 57
BOZ	iP	02 24 48
	i	25 03
	i	25 50
	e(S)	27 01
	eL	27 29
BUT	eP	02 24 34
	iP	24 35
	e(S)	26 38
	eL	26 48
CHI	eP	02 28 01
	eS	33 09
	eL	36 57
COLU	eP	02 29 08
	eS	34 48
	eL	40 40

8-4297-4

Date and Station		Phase (GCT)
		h m s
EUR	iP	02 24 04
	i	24 26
	iL	26 12
HONO	e(S)	02 34 54
	eL	36 38
HH	iP	02 24 34
	e(S)	26 43
	eL	27 09
FAIL	eS	02 35 26
	eL	40 54
RC	iP	02 25 57
	eL	31 58
SLC	iP	02 24 42
	i	25 06
	eS	26 47
	eL	27 22
SJ	eP	02 31 40
SIT	eP	02 25 44
	e	26 11
	eS	28 56
	eL	29 28
SIT	iP	02 25 51
TUC	iP	02 25 48
	i(S)	29 07
	eL	31 30
UK	iP	02 23 02
	eS	23 47
	eL	24 04
WASH	eP	02 29 22
	e(S)	35 23
	iL	42 20
July 6		
BC	iP	03 32 34
BOZ	e(P)	03 33 50
	e	34 27
	eL	36 13
BUT	e(P)	03 34 10
	eL	36 13
EUR	iP	03 32 10
HH	eP	03 34 07
	eL	37 03
RC	eP	03 34 46
SLC	e(P)	03 33 02
	eP	33 08
	e(S)	34 32
	eL	34 47
TUC	eP	03 33 45
	e	34 23
	iL	36 16

Date and Station		Phase (GCT)
		h m s
UK	eP	03 32 41
	e	32 47
	iS	33 34
	eL	33 44
July 6		
EUR	e(P)	03 55 37
	e	55 56
July 6		
EUR	eP	07 24 17
	i	24 18
	i	26 30
SLC	eP	07 26 28
July 6		
BC	eP	08 15 53
EUR	eP	08 15 14
HH	e(P)	08 15 47
TUC	eP	08 17 02
July 6		
EUR	iP	13 03 18
July 6		
BC	iP	13 43 48
BOZ	eP	13 44 19
BUT	iP	13 44 24
	ipP	44 44
EUR	iP	13 44 06
	ipP	44 26
	i	44 42
HH	iP	13 44 36
	epP	44 51
RC	eP	13 43 52
	epP	44 12
SLC	eP	13 43 59
SJ	eP	13 40 12
TUC	eP	13 43 17
	epP	43 37
July 6		
EUR	e(P)	16 49 47
HH	eP	16 48 14
July 6		
EUR	eP	20 29 52
July 6		
EUR	eP	22 46 22
	i	46 58
SLC	e(P)	22 50 08
July 6		
EUR	iP	23 12 12

Date and Station		Phase (GCT)
		h m s
HH	e(P)	23 11 37
TUC	eP	23 13 19
July 7		
EUR	e(P)	00 18 11
July 7		
EUR	eP	00 49 06
July 7		
COL	eP	09 33 51
	i(S)	34 22
	iL	34 36
HH	e(P)	09 38 45
July 7		
BUT	e(P)	10 37 24
COL	eP	10 42 31
HH	eP	10 44 00
July 7		
EUR	eP	10 54 33
July 7		
EUR	eP	15 29 21
July 7		
BC	e(P)	21 08 46
TUC	eP	21 07 37
July 7		
EUR	e(P)	21 19 28
	e	21 59
July 7		
EUR	iP	21 36 52
HH	eP	21 36 07
July 8		
COL	eP	01 30 56
EUR	eP	01 34 23
HH	e(P)	01 33 52
July 8		
BC	eP	02 04 11
BOZ	eP	02 04 15
BUT	eP	02 04 04
	eL	06 46
COL	eP	02 07 05
	e	07 16
EUR	iP	02 03 32
HH	eP	02 04 02
	eL	06 51
RC	eP	02 05 25

Date and Station		Phase (GCT)
		h m s
SLC	eP	02 04 10
	eL	07 12
TUC	eP	02 05 16
UK	eP	02 02 29
	e(S)	03 19
	eL	03 28
July 8		
EUR	iP	03 46 17
July 8		
HH	e(P)	04 09 54
July 8		
COL	eP	04 45 41
July 8		
BOZ	ePP	06 21 13
COL	eP	06 14 45
	epP	15 05
	e(PP)	17 48
EUR	eP'	06 20 28
July 8		
SJ	iP	06 27 56
July 8		
HH	eP	10 53 00
July 8		
EUR	eP	11 23 43
	i	24 01
July 8		
BOZ	eP	12 07 23
COL	iP	12 09 57
EUR	iP	12 07 11
	ipP	07 45
HH	iP	12 07 44
	epP	08 13
RC	eP	12 06 46
	epP	07 24
TUC	eP	12 06 15
July 8		
COL	eP	13 17 06
HH	eP	13 17 55
	e	18 18
July 8		
BOZ	eP	15 52 06
EUR	eP	15 51 36
July 8		
EUR	e(P)	16 38 59

Date and Station		Phase (GCT)
		h m s
July 8		
BOZ	eP	18 18 09
COL	iP	18 16 29
EUR	iP	18 17 50
	e	19 07
HH	iP	18 17 56
July 8		
EUR	i(P)	20 17 08
July 8		
BC	iP	20 42 45
COL	iP	20 42 45
EUR	iP	20 42 51
HH	ePP	20 47 06
TUC	eP	20 42 57
July 8		
EUR	eP	22 37 07
	e	39 41
TUC	eP	22 36 13
July 9		
COL	eP	02 29 11
EUR	e(P)	02 32 38
July 9		
BOZ	eP	02 39 39
BUT	eP	02 39 41
COL	eP	02 39 02
	e	41 04
EUR	eP	02 39 42
HH	eP	02 39 35
	e	43 16
RC	eP	02 39 40
SLC	eP	02 40 16
July 9		
EUR	e(P)	02 44 56
July 9		
COL	iP	03 20 34
EUR	iP	03 25 05
HH	iP	03 24 18
July 9		
BC	iP	03 25 24D
	i	26 27
	iP'	29 04
BOZ	iP	03 24 38D
	i	26 13

Date and Station		Phase (GCT)
		h m s
BOZ	ePP	03 28 18
	e	34 51
	iS	35 14
	i	36 48
	iSS	41 12
	i	42 59
	iSSS	45 12
	eL	48 08
BUT	eP	03 24 38D
	iP	24 40
	e	27 40
	iPP	28 17
	iPPP	30 12
	eSKS	34 46
	iS	35 14
	i	35 19
	i	36 48
	eSS	41 08
	eSSS	45 07
	eL	49 47
CHI	eP	03 23 57N,W
	ePP	27 11
	ePPP	28 53
	e	33 23
	iS	34 03
	iPPS	35 05
	eSS	39 21
	eSSS	42 35
	eL	46 01
COL	iP	03 23 44
	iPP	26 34
	iPPP	28 36
	i	29 58
	iS	33 16
	i	33 43
	iSS	38 53
	iSSS	42 24
	iPKKP	42 38
	iL	44 58
	iP'P'	50 35
COLU	eP	03 24 03
	ePP	27 04
	e	27 27
	e	28 25
	i	33 36
	iS	34 13
	eSS	39 48
	eSSS	43 10
	eL	46 40
HONO	eP'	03 30 35
	e	30 46
	ePP	32 16
	e	34 54
	eSKS	37 44
	ePS	42 10
	ePPS	43 30
	e	49 00
	eL	04 01 24
T_L = 20 sec. A = 4.5mm		
T_L = 24 sec. A_{max}=7.5mm		
HH	eP	03 24 31D
	iP	24 32C

Date and Station		Phase (GCT)
		h m s
HH	e	03 32 42
	eS	34 57
	e	36 29
	eP'P'	50 28
	iSKPP'	53 48
PHIL	eP	03 23 25N,W
	e	24 16
	ePPP	28 01
	eS	33 01
	iS	33 06
	eL	43 28
RC	iP	03 24 26C
	eS	34 56
	eL	52 05
SLC	eP	03 24 59D
	iP	25 00
	i	25 05
	i	26 12
	ePP	28 46
	e	32 28
	eS	35 31
	i	35 39
	iPPS	37 40
	i	38 24
	eSS	42 12
	eSSS	45 55
	eL	50 20
SJ	iP	03 23 56C
	ePP	27 02
	ePPP	29 06
	iS	34 04
	i	35 00
	eSS	39 34
	eL	45 30
SIT	iP	03 24 19D
	ePP	27 34
	ePPP	29 21
	eS	34 44
	iS	34 46
	iSS	40 32
	iSSS	43 19
	eP'P'	50 29
	eL	52 22
TUC	eP	03 25 30D
	i	25 35
	e	28 24
	ePP	29 36
	iPP	29 41
	ePPP	31 53
	eSKS	36 09
	iSKS	36 18
	i	38 43
	eL	55 10
UK	eP	03 25 25D
	iPP	29 29
	e(SKS)	36 09
	eL	50 17
WASH	eP	03 23 33D
	i	23 39
	ePP	26 29
	ePPP	28 17

Date and Station		Phase (GCT)
		h m s
WASH	iS	03 33 37
	i	36 01
	iL	42 23
July 9		
HH	iP	03 30 49
July 9		
BOZ	iP	03 37 04
BUT	eP	03 37 04
HH	iP	03 36 53
RC	iP	03 36 52
SLC	eP	03 37 23
	iP	37 28
SJ	iP	03 36 18
SIT	eP	03 36 44
	iP	36 50
	i	37 12
	e	38 04
UK	eP	03 37 54
July 9		
COL	eP	04 02 50
HH	eP	04 07 53
July 9		
HH	iP	04 28 04
July 9		
BOZ	eP	04 46 21
COL	eP	04 45 24
HH	eP	04 46 14
RC	eP	04 46 10
	e	46 39
July 9		
HH	e(P)	04 55 53
July 9		
HH	eP	05 07 40
July 9		
HH	eP	05 27 02
July 9		
BUT	eP	05 57 01
EUR	eP	05 57 32
	i	57 38
HH	iP	05 57 03
SLC	eP	05 57 10
July 9		
HH	e(P)	06 08 08

Date and Station		Phase	(GCT) h m s
July 9			
BOZ	eP		06 32 06
BUT	eP		06 32 06
COL	iP		06 31 10
	i		31 35
EUR	e(P)		06 32 38
HH	iP		06 32 00
	i		32 03
RC	iP		06 31 55
July 9			
BOZ	eP		06 35 46
BUT	eP		06 35 46
COL	iP		06 34 50
EUR	i(P)		06 36 18
HH	iP		06 35 39
RC	iP		06 35 34
SLC	eP		06 36 04
SJ	eP		06 35 03
July 9			
EUR	e(P)		06 42 38
July 9			
COL	iP		06 56 19
	i		58 22
EUR	iP		06 55 58
	e		58 00
July 9			
BUT	eP		07 49 26
HH	eP		07 48 59
	i		49 19
RC	eP		07 49 15
July 9			
HH	iP		09 57 58
July 9			
BH	iP		09 59 10
	iS		10 01 25
BC	iP		10 03 45
BOZ	iP		10 03 49
	ipP		04 18
	iPcP		05 42
	eS		09 46
	isS		10 22
	eL		13 37
BUT	iP		10 03 57
	i		04 18
	ipP		04 27

Date and Station		Phase	(GCT) h m s
BUT	i		10 06 37
	i		07 17
	iS		10 12
	i		10 30
	iL		13 12
CHI	iP		10 01 42
	i		03 07
	eS		06 06
	iS		06 12
	i		06 43
	iL		07 54
COL	iP		10 06 53
	e		08 22
	ePP		09 25
	eS		15 38
	e(ScS)		16 42
	eSS		20 20
	eL		24 00
COLU	iP		09 59 46
	i		59 55
	iS		10 02 26
	iL		02 40
EUR	iP		10 03 57
HONO	iP		10 08 12
	eS		18 12
	e		18 34
	eL		42 28
HH	iP		10 04 12
	ipP		04 31
	ePcS		09 49
	eS		10 38
PHIL	iP		10 00 45
	iS		04 28
	iL		06 03
RC	iP		10 03 00
	e(S)		08 29
	eL		13 22
SLC	iP		10 03 37
	isP		04 11
	i		04 37
	iPP		05 20
	i		05 35
	iS		09 35
	isS		09 58
	eL		12 43
	i(ScS)		14 07
SJ	iP		09 57 47
	iS		59 19
	iL		59 35
SIT	iP		10 06 05
	ipP		06 24
	ePcP		07 03
	ePP		08 13
	ePPP		09 31
	e(S)		14 22
	eScS		15 48
	i		16 18
	eSS		18 10

Date and Station		Phase	(GCT) h m s
SIT	eL		10 20 26
TUC	iP		10 03 12
	eS		08 48
	iS		09 12
	eL		14 06
UK	iP		10 04 42
	eL		21 10
WASH	iP		10 00 33
	iS		04 13
	iL		06 04
July 9			
HH	iP		10 32 33
RC	eP		10 32 30
July 9			
BUT	e(P)		11 43 53
HH	eP		11 43 42
RC	eP		11 43 40
July 9			
HH	e(P)		15 24 32
July 9			
COL	eP		17 11 33
EUR	iP		17 15 03
	e		16 34
July 9			
EUR	e(P)		17 43 52
July 9			
EUR	e(P)		18 03 38
	e		03 59
HH	i(P)		18 03 54
July 9			
EUR	eP		19 07 50
	i		08 25
July 9			
EUR	iP		19 40 11
	e		40 31
HH	eP		19 41 05
July 9			
EUR	e(P)		19 46 56
July 9			
BOZ	eP		20 23 26
COL	eP		20 22 28
HH	eP		20 23 18
July 9			
BOZ	eP		20 26 53
COL	eP		20 25 59

Date and Station		Phase	(GCT) h m s
EUR	eP		20 27 28
HH	eP		20 26 45
July 9			
EUR	e(P')		20 53 52
	i		54 09
HH	eP'		20 53 46
	e		54 00
July 9			
EUR	eP		20 57 15
HH	iP		21 00 54
July 9			
BOZ	eP		21 41 40
BUT	eP		21 41 41
COL	iP		21 40 45
HH	iP		21 41 34
July 9			
HH	eP		22 04 36
July 9			
COL	iP		22 53 46
	i		55 16
	eS		55 40
	iS		55 49
	iL		56 08
EUR	eP		22 58 05
HH	eP		22 57 19
July 10			
EUR	iP		00 01 57
July 10			
HH	e(P)		00 41 27
July 10			
BOZ	eP		02 12 39
COL	e(P)		02 11 42
HH	iP		02 12 32
RC	eP		02 12 30
July 10			
BOZ	eP		03 14 24
BUT	eP		03 14 25
COL	iP		03 13 28
	ePP		16 26
EUR	iP		03 14 36
HH	eP		03 14 18
RC	iP		03 14 15

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Date and Station		Phase (GCT)
		h m s
SJ	eP	03 13 44
TUC	e(P)	03 15 16
July 10		
SLC	eP	03 34 58
	epP	35 39
July 10		
BOZ	eP	05 25 31
EUR	iP	05 24 53
	i	25 17
HH	eP	05 25 46
SLC	eP	05 25 02
July 10		
RC	eP	05 40 26
July 10		
BOZ	eP	06 06 27
COL	eP	06 03 06
EUR	iP	06 06 31
HH	eP	06 06 01
RC	eP	06 07 11
TUC	e(P)	06 10 56
July 10		
EUR	eP	06 12 36
	i	12 49
July 10		
BC	iP	08 48 50
	i	49 53
EUR	iP	08 49 38
	i	51 51
July 10		
SLC	eP	09 22 23
July 10		
BUT	eP	09 37 35
COL	eP	09 35 17
HH	iP	09 37 24
July 10		
EUR	eP	10 24 06
July 10		
HH	e(P)	10 49 46
July 10		
HH	e(P)	12 49 59
July 10		
HH	eP	13 42 14
July 10		
BOZ	eP	15 21 56

Date and Station		Phase (GCT)
		h m s
EUR	iP	15 21 23
	i	21 48
July 10		
BOZ	e(P)	15 31 18
EUR	iP	15 30 50
	e	31 12
July 10		
HH	e(P)	17 03 18
July 10		
BOZ	eP	18 07 57
BUT	eP	18 07 52
COL	iP	18 06 21
	i	07 01
EUR	iP	18 07 38
HH	iP	18 07 45
RC	iP	18 08 28
SLC	eP	18 07 56
TUC	e(P)	18 08 05
July 10		
BC	iP	18 52 11
	i(S)	53 23
	iL	54 08
EUR	iP	18 52 37
	i	53 03
	iL	55 19
July 10		
SIT	eP	19 01 34
July 10		
COL	iP	22 19 53
	ipP	20 21
	isP	20 32
	i	20 48
July 10		
EUR	e(P)	23 02 35
July 10		
EUR	e(P)	23 40 29
July 11		
BH	iP	02 57 02
RC	eP	03 03 05
July 11		
COL	eP	05 03 15
July 11		
BOZ	eP	11 38 44
July 11		
SIT	eP	15 14 23

Date and Station		Phase (GCT)
		h m s
July 11		
EUR	e(P)	17 38 30
	i	39 04
July 11		
EUR	eP	18 49 49
July 11		
EUR	e(P)	19 06 14
	e	07 18
	i	08 21
RC	eP	19 08 15
July 11		
BC	iP	19 22 46
	iL	23 56
EUR	iP	19 23 09
	i	23 21
SLC	eP	19 24 24
	eS	25 45
	eL	25 52
TUC	eP	19 23 53
	eL	25 32
July 11		
EUR	e(P)	19 39 37
July 11		
BH	eP	21 38 27
	iS	39 00
SJ	eP	21 41 43
July 11		
COL	iP	23 14 50
EUR	eP	23 21 41
	e	22 17
July 12		
EUR	eP	00 34 29
	e	34 51
HH	e(P)	00 34 26
July 12		
BOZ	eP	01 48 55
July 12		
BOZ	eP	02 55 02
COL	eP	02 53 35
EUR	iP	02 55 03
HH	eP	02 54 34
RC	eP	02 55 44
July 12		
EUR	eP	04 28 13
July 12		
BC	i(P)	04 37 50

Date and Station		Phase (GCT)
		h m s
EUR	eP	04 38 16
July 12		
BOZ	e(P)	06 30 45
HH	eP	06 30 38
RC	eP	06 30 33
July 12		
COL	eP	09 14 32
July 12		
EUR	e(P)	11 25 23
	i	26 07
July 12		
BOZ	eP	14 37 59
COL	eP	14 37 00
EUR	iP	14 38 03
	i	38 14
	i	38 38
HH	e(P)	14 37 30
RC	eP	14 38 29
SLC	eP	14 38 14
July 12		
COL	iP	15 13 32
EUR	eP'	15 19 55
	e	20 05
	iPP	20 42
	i	20 55
SJ	e(PP)	15 24 02
RC	e(P')	15 19 56
July 12		
EUR	eP	15 23 23
July 12		
EUR	eP	15 30 54
	e	31 20
July 12		
BOZ	eP	15 37 57
COL	iP	15 39 42
EUR	iP	15 37 11
July 12		
EUR	e(P)	16 29 15
July 12		
COL	eP	17 15 16
SLC	eP	17 13 36
TUC	e(P)	17 09 05
	e	10 08
	e	15 36
	eL	35 42

Date and Station		Phase (GCT) h m s
July 12		
EUR	eP	18 01 34
	e	01 48
July 13		
SLC	eP	03 10 57
July 13		
EUR	eP	05 34 22
	e	34 50
July 13		
BC	e(P)	06 04 21
	i	04 32
	iL	05 30
EUR	iP	06 03 56
July 13		
COL	iP	10 06 46
EUR	eP	10 06 11
July 13		
COL	iP	12 03 27
July 13		
BC	iP	13 47 43
	ipP	48 13
	ePP	50 29
BOZ	iP	13 48 14
	epP	48 47
	ePP	51 23
COL	eP'	13 54 16
COLU	iP	13 46 15
	ipP	46 48
EUR	iP	13 48 01
	ipP	48 26
	i	48 33
	e	50 11
HH	iP	13 48 31
	ipP	49 03
RC	iP	13 47 49
	ipP	48 22
SLC	eP	13 47 56
	epP	48 28
	i	48 34
	ePP	51 16
SJ	eP	13 44 14
	ipP	44 45
	iPP	46 05
	i	46 36
TUC	iP	13 47 13
	epP	47 44
UK	eP	13 48 20
July 13		
COL	iP	14 04 25
	e	04 42

Date and Station		Phase (GCT) h m s
July 13		
COL	iP	14 16 13
July 13		
EUR	e(P)	16 43 05
	e	43 27
July 13		
EUR	eP	17 20 59
July 13		
EUR	eP	19 07 07
	e	07 33
July 13		
SLC	eP	21 49 36
July 13		
EUR	eP	22 41 47
	iL	42 45
July 13		
EUR	iP	23 03 10
	e	03 30
	iS	04 21
	eL	04 33
July 13		
EUR	iP	23 10 23
July 13		
EUR	eP	23 17 53
	iS	18 03
	eL	18 09
July 13		
EUR	eP	23 25 26
July 14		
COL	iP	00 26 12
July 14		
COL	iP	00 36 43
July 14		
COL	eP	01 28 06
July 14		
COL	iP	03 39 49
EUR	i(P)	03 42 26
HH	eP	03 42 07
July 14		
BC	iP	03 43 32
	eL	50 28
BOZ	eP	03 44 40
BUT	eP	03 44 41
	eL	55 48
COL	iP	03 48 18
	i	48 23
COLU	iP	03 43 54

Date and Station		Phase (GCT) h m s
EUR	iP	03 44 05
	i	45 06
HH	eP	03 45 07
	e	48 02
RC	eP	03 44 16
	eL	52 54
SLC	eP	03 44 01
	eL	49 47
TUC	eP	03 42 37
	iL	47 43
July 14		
BH	iP	05 07 46
	iS	08 07
July 14		
COL	iP	12 40 45
July 14		
COL	iP	13 21 39
July 14		
COL	iP	13 38 37
	iS	39 00
	iL	39 07
July 14		
BC	eP	17 20 03
BOZ	eP	17 19 49
COL	iP	17 21 40
EUR	iP	17 20 09
HH	eP	17 20 01
RC	eP	17 19 07
SJ	eP	17 14 01
TUC	eP	17 19 41
	i	19 47
July 14		
COL	iP	17 58 11
EUR	eP	17 56 40
RC	eP	17 55 38
July 14		
EUR	eP	18 32 52
July 14		
COL	e(P)	19 12 38
HH	eP	19 13 50
July 14		
EUR	eP	22 09 09
July 14		
COL	eP	22 17 10
	iP	17 14

Date and Station		Phase (GCT) h m s
EUR	ePP	22 23 47
HH	eP	22 19 18
July 14		
EUR	eP	22 53 56
July 15		
HH	e(P)	01 07 05
July 15		
BC	iP	01 58 11
	i	58 23
BOZ	iP	01 58 04
	i	58 21
BUT	eP	01 57 48
	eL	02 01 18
EUR	iP	01 57 33
	i	57 53
	i	58 17
	iS	59 04
	eL	59 14
HH	iP	01 57 42
	e(S)	59 49
	eL	02 00 11
RC	eP	01 59 17
	i	59 34
SLC	eP	01 58 04
	eL	02 01 55
TUC	eP	01 59 16
	iS	02 02 16
	eL	02 38
UK	eP	01 56 34
	eL	58 01
July 15		
SIT	eP	03 30 09
July 15		
EUR	iP	04 34 27
July 15		
EUR	eP	06 26 26
HH	e(P)	06 25 21
SIT	eP	06 21 19
	eS	22 10
	eL	22 20
July 15		
EUR	eP	10 13 11
HH	eP	10 13 16
RC	iP	10 13 31
July 15		
EUR	eP	11 36 10

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Date and Station		Phase (GCT) h m s
July 15		
EUR	e(P)	11 40 35
July 15		
BOZ	eP	11 43 51
EUR	iP	11 42 15
	ipP	43 09
	e	46 29
HH	e(P)	11 44 05
July 15		
BOZ	e(P)	11 49 20
EUR	iP	11 48 14
July 15		
EUR	e(P)	12 08 02
July 15		
BC	iP	13 04 08
	ipP	06 03
BOZ	iP	13 03 56
	ipP	05 49
BUT	iP	13 03 49
	epP	05 41
	iS	13 18
COL	iP	13 01 24
	i	01 40
EUR	iP	13 03 55
	i	04 24
	epP	05 42
	ipP	05 48
	eS	13 31
HH	iP	13 03 39
	epP	05 24
	ipP	05 31
	ePP	06 37
	eS	12 59
RC	iP	13 04 21
	epP	06 11
SLC	eP	13 04 06
	epP	05 55
SIT	iP	13 02 11
TUC	iP	13 04 31
	epP	06 27
	ePP	08 12
July 15		
COL	eP	13 33 46
July 15		
BC	iP	18 51 09
COL	iP	18 47 39
HH	iP	18 50 24
RC	eP	18 51 14

Date and Station		Phase (GCT) h m s
July 16		
BC	iP	00 41 00
	i	41 16
BOZ	eP	00 43 28
HH	e(P)	00 43 59
SLC	e(P)	00 44 20
	e	44 50
TUC	eP	00 40 54
	e	41 10
	iL	41 58
July 16		
RC	eP	03 29 30
	e	30 24
	e	32 43
July 16		
BC	iP	06 39 59
BOZ	eP	06 39 37
BUT	eP	06 39 30
HH	eP	06 39 16
RC	eP	06 40 03
SLC	eP	06 39 54
TUC	eP	06 40 26
July 16		
BC	iP	09 34 32
BOZ	eP	09 33 55
BUT	eP	09 33 47
COL	iP	09 30 14
	i	30 39
COLU	eP	09 36 26
HH	eP	09 33 30
	e	33 56
	e	38 42
RC	eP	09 34 31
	e	34 55
SLC	eP	09 34 19
SIT	iP	09 31 25
TUC	eP	09 35 06
July 16		
BOZ	e(P)	10 52 32
COLU	e(P)	10 50 36
	e	50 42
TUC	e(P)	10 51 11
	e	51 14

Date and Station		Phase (GCT) h m s
July 16		
BC	eP'	15 25 37
	ePP	26 54
BOZ	e(P)	15 21 43
	e	24 22
	iPP	26 05
BUT	ePP	15 25 46
	iPP	26 00
	i	27 38
	e	28 48
	e	30 09
	eSKS	32 10
	e(PS)	35 21
	i	36 38
	ePKKP	37 05
	i(PKKP)	37 26
	eSS	40 38
	eSSS	45 17
	eL	51 21
CHI	ePS	15 36 07
	e(PPS)	37 15
	eSS	41 51
	eL	54 34
COL	iP	15 19 17
	i	19 21
	i	19 47
	ePP	22 08
	i	22 54
	ePPP	24 39
	eS	29 17
	ePS	30 12
	eSS	34 40
	eSSS	39 36
	eL	39 57
COLU	eP'	15 26 04
	iPP	27 55
	eSKS	33 22
	e(SKKKS)	34 45
	ePS	37 43
	eSS	44 40
	e(SSS)	49 26
	eL	56 34
EUR	e(P)	15 22 11
	eP'	25 47
	iPP	26 28
	iPKKP	36 45
HONO	eSKS	15 31 23
	e(PPS)	34 16
	eSS	39 18
	eSSS	42 12
	eL	47 05
HH	e(P)	15 21 13
	e	24 00
	e	24 52
	ePP	25 35
PHIL	ePP	15 27 13
	e	29 17
	eL	58 55

Date and Station		Phase (GCT) h m s
RC	e(P)	15 22 19
	e	25 08
	eL	51 44
SLC	e(P)	15 24 14
	ePP	26 16
	e	28 41
	ePS	35 22
	e	36 13
	e(PPS)	37 21
	eSS	41 45
	eSSS	46 45
	eL	51 25
SJ	eP	15 26 46
	ePP	29 11
	iPKS	30 13
	e(PPP)	32 44
	e	37 45
	ePPS	42 02
	eSS	47 17
	eL	16 02 50
SIT	eP	15 20 06
	e(PP)	23 19
	ePP	23 48
	ePPP	25 48
	eSKS	30 39
	ePS	31 56
	ePPS	33 45
	eSS	36 58
	e	38 39
	eSSS	41 12
	eL	44 04
TUC	eP'	15 26 05
	iPP	27 33
	iPS	37 19
	eL	56 25
WASH	ePP	15 27 18
	i	29 30
	e	32 21
	eSKKS	34 14
	iPS	37 00
July 16		
HH	e(P)	15 53 24
July 16		
EUR	e(P)	16 37 06
HH	e(P)	16 38 37
	e	39 30
TUC	eP	16 37 23
July 16		
BOZ	eP	19 06 20
EUR	eP	19 06 30
	e	06 52
HH	e(P)	19 05 52
RC	eP	19 06 53
SLC	eP	19 06 38

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Date and Station		Phase (GCT) h m s
July 16		
TUC	eP	19 31 35
	e	32 40
July 16		
BOZ	eP	20 30 41
July 16		
BOZ	e(P)	21 04 38
COL	eP	20 52 30
HH	i(P)	21 04 44
RC	e(P)	21 04 28
July 16		
COL	iP	21 26 01
July 16		
BC	iP	21 42 37
BOZ	iP	21 42 09
	i	42 21
	i	42 46
BUT	iP	21 41 59
COL	iP	21 38 43
	ePP	39 06
	e	39 44
	e	41 12
	eS	42 28
	iL	42 38
COLU	iP	21 45 06
EUR	iP	21 42 18
	i	47 52
	i	48 41
HH	iP	21 41 42
	i	43 45
	iPcP	43 59
	iScP	47 29
	iPcS	47 54
RC	iP	21 42 50
SLC	iP	21 42 28
SJ	iP	21 46 59
SIT	eP	21 39 33
	e	39 46
TUC	iP	21 43 14
	e	43 26
UK	iP	21 41 38
July 16		
BOZ	eP	21 47 42
	e	48 10
BUT	eP	21 47 43
	epP	48 05
COL	iP	21 46 24

Date and Station		Phase (GCT) h m s
SIT	eP	21 46 37
July 16		
HH	e(P)	21 51 49
July 16		
COL	iP	23 19 02
EUR	eP	23 23 01
July 17		
HH	e(P)	02 16 17
July 17		
BOZ	eP	02 13 51
BUT	eP	02 14 07
EUR	e(P)	02 14 34
	e	16 06
July 17		
HH	iP	03 32 03
	e	32 11
July 17		
BC	iP	04 48 56
BOZ	eP	04 48 55
BUT	iP	04 48 50
COL	iP	04 46 52
EUR	iP	04 48 46
	i	49 01
	e	49 11
HH	iP	04 48 41
	i	48 55
RC	iP	04 49 22
SLC	iP	04 49 00
TUC	eP	04 49 16
	e	49 29
July 17		
EUR	iP	05 12 44
	e	14 47
TUC	eP	05 12 45
July 17		
COL	eP	06 49 16
July 17		
HH	e(P')	07 53 12
BC	iP'	07 52 05C
BOZ	e(P)	07 48 29
	iP'	52 08C
	iPP	53 26C
	ipP	55 01
	eSKS	58 07
	e(SKKS)	59 37
	eSP	08 02 24

Date and Station		Phase (GCT) h m s
BOZ	iPKKP	08 02 30
	ePPS	04 24
	i	06 27
	eSS	09 24
	esSS	11 36
	eL	26 57
BUT	eP	07 48 23
	epP	50 05
	iP'	52 04D
	iPP	53 18
	ipPP	54 58
	epPPP	57 10
	iPKKP	08 02 36
CHI	ePP	07 55 24
	iPKS	56 06
	ipPKS	57 51
	ePPP	58 33
	e	08 01 17
	e	04 19
	eSPP	06 33
	eL	32 55
COL	eP	07 46 39C
	iP	46 42D
	ipP	48 22
	e(PP)	50 18
	iPP	50 36
	ePPP	52 30
	iSKS	56 29
	eS	57 08
	eSP	58 34
	ePS	58 46
	iPKKP	08 03 13
	eSS	03 22
	esSS	06 20
	iP'P'	11 45
	eL	13 07
COLU	iP'	07 52 50C
	ipP'	54 41
	iPP	55 47
	iPKS	56 34
	ipPP	58 22
	e(pPKS)	58 24
	eSKKP'	08 03 57
	eSKKP	05 26
	eSPP	08 04
	i	10 16
	iSS	14 08
	esSS	17 40
	eL	34 30
EUR	eP	07 48 19D
	i	48 28
	iP'	52 00
	i	52 28
	iPP	53 11
	ipPP	54 42
	iPKKP	08 02 37
	iSKKP'	05 28
	i	06 28
	eP'P'	11 20
HONO	iP	07 45 30D
	ipP	47 05
	isP	48 08
	iPP	48 25

Date and Station		Phase (GCT) h m s
HONO	iS	07 54 52
	esPS	58 10
	eL	08 09 04
T_S = 4.0 sec. A = 1.5 mm.		
HH	eP	07 48 17C
	epP	49 55
	iP'	51 59
	iPP	53 06
	i	54 52
	ePPP	55 45
	eSKS	58 06
	iPKKP	08 02 41
	i	02 48
	eSKKP	05 42
	e(SSS)	12 49
PHIL	eP'	07 53 04
	eSKP	55 49
	ePKS	56 33
	epPKS	58 26
	eSKKS	08 02 03
	iSKKS	02 07
	eSKKP	05 18
	eP'P'	14 13
	iP'P'	14 30
	esSS	17 11
	eL	34 10
RC	iP'	07 52 17D
	i(pPP)	55 11
	iPKKP	08 02 11
SLC	e(P)	07 48 37C
	iP'	52 09
	iPP	53 38
	ipPP	55 02
	ipPPP	58 04
	eSKS	58 21
	e(SKKS)	59 43
	eS	08 00 42
	e	01 34
	iPKKP	02 28
	eSP	02 34
	iSKKP	05 35
	eSS	09 12
	eP'P'	11 04
	esSS	12 18
	e	13 14
	eL	22 54
SJ	iP'	07 53 22C
	iP'	54 18
	isP'	55 59
	esP'	56 10
	iPP	58 03
	e(pPP)	59 39
	epPP	08 00 10
	iSKKS	04 04
	e	04 07
	eSKKP	07 19
	ePSKS	08 21
	eSS	17 42
	esSS	20 52
	eL	54 40

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Date and Station		Phase (GCT) h m s
SIT	eP	07 47 06C
	epP	48 50
	e(sP)	49 49
	ePP	51 20
	esPP	53 50
	iSKS	57 03
	iSKKS	57 40
	eS	58 03
	iSP	59 34
	epS	08 00 15
	e	00 48
	esS	01 09
	esPS	02 43
	eSS	05 19
	eL	15 16
TUC	eP'	07 52 14D
	ePP	53 53
	epPP	55 08
	ipPP	55 25
	iPKKP	08 02 20
	iSKKP	03 01
	ePPS	05 16
	eP'P'	13 33
WASH	iP'	07 52 45C
	ipP'	54 30
	iPP	55 47
	ipPP	57 34
July 17		
BOZ	iP	08 06 27
	e	06 55
BUT	iP	08 06 34
	e	10 15
SLC	iP	08 06 26
	e	08 08
July 17		
EUR	iP	08 30 35
SLC	eP	08 30 47
July 17		
COL	iP	08 46 30
July 17		
BOZ	eP	08 56 35
COL	iP	08 53 14
	ipP	53 31
EUR	iP	08 56 42
	ipP	56 59
	i	57 05
HH	eP	08 56 11
	e	56 29
	e	57 00
RC	eP	08 57 07
	e	57 24
July 17		
BOZ	eP	11 00 10
EUR	eP	10 59 56
	e	11 00 09

Date and Station		Phase (GCT) h m s
RC	e(P)	11 00 58
July 17		
EUR	eP	12 46 45
	e	47 09
July 17		
COL	eP	14 32 00
July 17		
BC	iP	15 30 31
BOZ	eP	15 29 40
COL	iP	15 30 20
EUR	iP	15 30 22
	i	30 55
	e	32 39
HH	iP	15 29 42
	i	29 48
RC	eP	15 29 09
SLC	eP	15 30 00
July 17		
SIT	eP	16 27 46
	e	28 06
July 17		
SIT	e(P)	16 42 37
July 17		
BC	iP	17 18 00
BOZ	eP	17 18 00
	e	19 38
BUT	eP	17 17 53
	i	18 09
COL	iP	17 15 58
	i	16 12
EUR	iP	17 17 51
	i	18 05
	e	18 24
HH	iP	17 17 45
	i	17 59
RC	iP	17 18 27
	i	18 41
SLC	eP	17 18 05
	e	18 19
TUC	e(P)	17 18 21
	e	18 35
July 17		
BOZ	eP	19 07 16
BUT	eP	19 07 43
July 17		
EUR	iP	19 52 43

Date and Station		Phase (GCT) h m s
July 17		
COL	eP	20 49 03
July 17		
HH	eP	21 01 42
July 17		
HH	e(P)	21 48 40
July 17		
BC	iP	22 38 22
BOZ	e(P)	22 39 31
EUR	iP	22 38 54
	i	39 13
HH	eP	22 39 56
	e	42 50
RC	eP	22 39 08
	eL	47 36
TUC	e(P)	22 37 26
	e	42 34
July 18		
BOZ	eP	00 12 10
HH	e(P)	00 16 06
July 18		
BC	iP	00 40 59
	i	41 14
BOZ	eP	00 41 12
	e	41 28
BUT	eP	00 41 06
	eSKS	51 40
	eS	52 21
	eL	01 12 50
COL	eP	00 39 51
	e	42 36
	eS	50 00
	eL	01 02 11
EUR	iP	00 40 55
	ePP	45 00
	ePKKP	57 50
	e	57 08
	i	58 23
	eP'P'	01 05 56
HH	eP	00 41 00
	i	41 17
RC	eP	00 41 37
	e	41 53
SJ	iP'	00 46 55
	i	47 01
	ePP	50 07
SIT	eP	00 40 08
	e	40 22
	eS	50 30
	eL	01 06 20

Date and Station		Phase (GCT) h m s
TUC	eP	00 41 14
	e	44 47
July 18		
EUR	iP	00 47 43
July 18		
BOZ	eP	00 57 41
SLC	eP	00 58 07
July 18		
BOZ	eP	01 05 59
HH	eP	01 05 56
July 18		
BOZ	eP	03 35 45
EUR	eP	03 35 41
July 18		
COL	eP	05 31 34
EUR	eP	05 31 39
July 18		
BH	e(P')	06 39 11
BC	eP	06 34 08
	iP'	38 04
BOZ	eP	06 34 07
	iP'	38 04C
	iPP	38 57
	i	39 17
	i	40 08
	iSKS	44 32
	iSKKS	45 41
	eS	46 25
	ePS	48 25
	iPKKP	48 50
	ePPS	49 29
	iSS	54 51
	eP'P'	57 08
	eSSS	58 51
	i(SKPP)	07 02 15
	iL	06 03
BUT	eP	06 34 05
	iP'	37 56C
	iPP	38 35
	iSKS	44 32
	iSKKS	45 28
	iS	45 55
	iPS	48 04
	iPKKP	48 53
	iPPS	49 05
	iSS	54 01
	e	56 33
	eSSS	58 16
	eL	07 05 40
CHI	eP'	06 38 34
	ePP	41 12
	e	41 44
	ePKS	42 24
	eSKKS	47 08

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Date and Station		Phase	(GCT) h m s
CHI		ePS	06 51 26
		e	57 24
		eSS	58 46
		eSSS	07 03 10
		eL	14 46
COL		iP	06 32 22C
		e	33 16
		i	34 16
		i	34 40
		iPP	36 06
		ePPP	37 43
		e	40 05
		eSKS	42 36
		iSKS	42 47
		iS	43 12
		iPS	43 56
		i(PPS)	44 32
		i	48 51
		iPKKP	49 48
		eSSS	52 34
		iP'P'	57 55
		eSKPP'	07 01 04
COLU		eP'	06 38 39
		i	39 29
		ePP	42 08
		iPP	42 14
		iPKS	42 59
		eSKS	47 05
		eSKKS	48 17
		e(SKSP)	51 37
		eSKSP	52 08
		i(PS)	52 35
		eSS	07 00 20
		eSSS	05 12
		eL	16 08
EUR		iP	06 34 07C
		iP'	38 00
		iPP	38 39
		iPKKP	48 05
HONO		iP	06 31 02C
		i	32 24
		iPP	34 08
		iS	40 28
		iScS	41 22
		iSS	46 06
		eL	50 20
T_S = 6 sec. A = 3.5mm.			
T_L = 20 sec. $A_{max.}$=4mm.			
HH		eP	06 33 54D
		e	37 03
		e	37 31
		iP'	37 53
		iPP	38 40
		i	39 19
		ePPP	40 51
		eSKKS	45 23
		ePS	48 07
		iPKKP	48 53
		eP'P'	57 16
PHIL		eP'	06 38 54
		e	40 27
		ePP	41 36
PHIL		iPP	06 42 18
		eSKS	47 15
		eL	07 16 03
RC		eP	06 34 38D
		eP'	38 08
		i	38 14
		ePP	40 22
		iSKS	44 56
		iSKKS	46 18
		ePKKP	48 27
		ePS	49 08
		eL	07 15 52
SLC		e(P)	06 34 15
		eP'	38 00
		iP'	38 05C
		iPP	39 29
		i	39 53
		eSKS	44 37
		eSKKS	45 26
		eS	46 39
		i	47 25
		iPS	48 25
		iPKKP	48 46
		i	49 15
		ePPS	50 01
		i	52 31
		eSS	55 29
		e(SSS)	59 21
		eL	07 06 16
SJ		eP'	06 39 16C
		iP'	39 18
		i	39 56
		i	40 36
		iPP	43 37
		iPKS	44 22
		eSKSP	54 40
		ePPS	58 15
		eSS	07 04 18
		eL	29 26
SIT		eP	06 32 51
		iP	32 54
		e	33 44
		ePP	36 48
		iSKS	43 12
		eS	44 00
		ePS	45 15
		eSS	50 35
		eL	58 40
TUC		iP'	06 38 07C
		ePP	39 26
		eSKKS	46 06
		ePKKP	48 35
		iPS	48 50
		eSSS	07 00 09
		eL	07 25
UK		eP	06 33 36
		ePP	37 57
		eSKS	44 06
		eSS	52 52
		eL	07 12 03
WASH		iP'	06 38 45C
		i	39 19
		iPP	42 22
July 18 BUT		eP	08 25 29
July 18 HH		eP	09 59 24
July 18 EUR		eP	10 43 48
		e	43 57
RC		eP	10 44 12
July 18 COL		iP	10 52 12
July 18 BC		eP	11 08 26
COL		iP	11 04 14
EUR		iP	11 08 04
HH		eP	11 07 28
		e	08 40
RC		eP	11 08 27
July 18 COL		eP	13 13 47
July 18 COL		iP	14 17 36
July 18 COL		iP	15 26 21
		i	26 33
EUR		e(P)	15 29 25
July 18 COL		iP	15 33 16
July 18 HH		e(P)	20 52 46
July 19 EUR		e(P)	00 56 24
HH		e(P)	00 56 29
SJ		e(P)	01 02 18
July 19 SIT		eP	04 59 50
July 19 BC		iP	09 30 33
		i(S)	31 39
		iL	32 18
EUR		eP	09 31 18
		e(S)	33 14
July 19 HH		e(P)	14 55 59
July 19 EUR		eP	18 33 15
		e	33 26
July 19 COL		eP	20 52 52
		eS	21 02 39
		e	05 02
		eSS	07 32
EUR		iP	20 58 42
HH		eP	20 54 47
		ePP	58 38
SJ		iP'	21 00 36
		i	01 02
SIT		eP	20 53 34
July 19 EUR		eP	21 11 04
July 19 BOZ		eP	21 12 57
EUR		iP	21 12 50
		e	13 04
		e	13 41
HH		iP	21 12 44
July 19 EUR		iP	21 29 47
HH		e(P)	21 30 14
July 19 BH		iP	23 27 42
		eS	28 49
BC		iP	23 33 50
		i	34 40
		e	36 51
BOZ		eP	23 34 24
		iPcP	36 14
BUT		eP	23 34 41
		iPcP	36 15
		iPP	36 55
		eS	41 10
		eScS	44 38
		eL	45 11
COLU		iP	23 31 49
		i	32 00
		eS	36 15
		e	36 41
		eL	37 26
EUR		eP	23 34 11
		i	34 23
		i	35 01
HH		eP	23 34 51
		iPcP	36 29
PHIL		e(P)	23 33 51
		eS	39 21
		eL	41 12

Date and Station		Phase (GCT)
		h m s
RC	eP	23 33 48
	ePP	35 29
SLC	eP	23 33 59
	iPcP	36 08
SJ	iP	23 31 00
	eS	34 42
	iS	35 01
	eL	36 17
TUC	eP	23 33 07
	eS	38 42
	eL	45 44
WASH	eP	23 32 38
	ePP	33 45
	e	36 25
	iL	40 05
July 19		
BH	eP	23 39 19
	eS	40 25
BOZ	eP	23 46 08
COLU	iP	23 43 28
EUR	eP	23 45 50
	i	45 53
HH	eP	23 46 31
	i	46 41
	ePcP	48 08
RC	eP	23 45 34
SLC	eP	23 45 38
SJ	eP	23 42 40
TUC	eP	23 44 52
July 19		
BH	eP	23 57 01
HH	eP	01 00 59
July 20		
BOZ	eP	07 50 52
	e	51 51
COLU	eP	07 48 43
EUR	iP	07 50 44
	e	51 35
HH	eP	07 51 10
	e	52 12
RC	eP	07 50 26
SLC	eP	07 50 36
SJ	e(P)	07 46 36
TUC	eP	07 49 55

Date and Station		Phase (GCT)
		h m s
July 20		
BUT	eP	08 18 42
July 20		
EUR	eP	11 59 45
HH	eP	11 59 25
	i	59 35
July 20		
EUR	eP	12 03 29
July 20		
EUR	iP	12 28 01
	e	28 16
July 20		
HH	e(P)	13 42 31
July 20		
BH	eP	17 58 34
BC	iP	17 57 44
BOZ	iP	17 57 57
BUT	eP	17 57 51
EUR	iP	17 57 38
	i	57 52
	i	58 57
HH	iP	17 57 44
RC	iP	17 58 28
SLC	eP	17 57 56
July 20		
EUR	e(P)	18 04 52
July 20		
BC	iP	23 12 54
BOZ	eP	23 13 40
COLU	e(P)	23 11 54
EUR	iP	23 13 20
SLC	eP	23 13 09
TUC	eP	23 12 11
	eL	22 39
July 20		
BOZ	eP	23 32 30
BUT	eP	23 32 26
EUR	iP	23 32 23
HH	iP	23 32 17
RC	eP	23 32 58
July 21		
EUR	e(P)	00 14 14

Date and Station		Phase (GCT)
		h m s
July 21		
BC	eP	00 21 28
BOZ	eP	00 21 15
BUT	eP	00 21 21
COLU	eP	00 18 48
EUR	iP	00 21 32
	i	22 21
HH	iP	00 21 24
RC	eP	00 20 45
SLC	eP	00 21 17
TUC	eP	00 21 11
July 21		
EUR	e(P)	00 39 56
July 21		
EUR	iP	01 53 37
	i	55 16
July 21		
EUR	iP	05 44 37
July 21		
EUR	eP	06 51 27
July 21		
EUR	eP	08 43 15
July 21		
BC	e(P)	10 10 43
EUR	eP	10 09 48
	iP	09 51
SLC	e(P)	10 11 01
	i	12 09
July 21		
BC	iP	11 59 21
	i	12 00 40
EUR	eP	12 00 14
	e	01 08
TUC	eP	11 59 14
	e	59 31
	iL	12 00 13
July 21		
BC	iP	12 05 03
EUR	eP	12 05 53
	e	06 29
TUC	eP	12 04 56
	e	05 15
	eL	05 59
July 21		
BC	iP	15 01 07

Date and Station		Phase (GCT)
		h m s
BOZ	iP	15 00 36
	epP	02 39
	e(S)	08 16
COL	eP	14 57 20
	eS	15 02 11
COLU	iP	15 02 45
	i	04 17
	epP	05 04
EUR	iP	15 00 49
	i(PcP)	01 07
	i	02 29
	ipP	02 52
	iSP	03 59
HH	iP	15 00 14
	iPcP	00 54
	epP	02 14
	iScP	03 55
RC	iP	15 01 07
	ipP	03 13
	e(S)	09 18
SLC	iP	15 00 56
SIT	iP	14 58 25
TUC	iP	15 01 37
	epP	03 47
UK	iP	15 00 24
July 21		
BC	eP	15 34 20
	i	34 25
EUR	iP	15 34 27
	i	34 31
TUC	eP	15 34 30
	e	34 44
July 21		
BC	iP	15 51 22
	i	51 30
	iPP	52 54
	i	55 30
	ePKKP	16 01 25
BOZ	e(P')	15 50 26
	iP'	51 05
BUT	e(P')	15 51 03
	iPP	51 42
	e	53 55
	e(PS)	16 01 09
	ePKKP	02 03
	eSS	06 09
	eL	19 07
COL	eP	15 45 20
	e(PP)	48 40
	e	52 12
	eSKS	55 42
	e(S)	56 47
	e(PPS)	58 45
	eL	16 07 11

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Date and Station		Phase	(GCT) h m s
EUR		iP'	15 51 16
		iPP	52 35
		iPKKP	16 01 39
		i	01 43
HH		eP'	15 50 41
		ePP	51 21
		ePKKP	16 02 21
RC		iP'	15 51 07
		iPP	51 55
SLC		ePP	15 52 15
TUC		iP'	15 51 31
		ePP	53 14
July 21			
EUR		eP	18 27 52
July 21			
COL		eP	20 30 38
		i	30 55
		e	31 45
July 21			
COL		iP	20 38 34
		i	39 09
July 21			
BC		eP	21 08 45
BUT		eP	21 08 42
COL		iP	21 06 46
EUR		eP	21 08 40
HH		eP	21 08 34
		e	08 47
RC		eP	21 09 15
July 21			
EUR		e(P)	21 41 26
RC		eP	21 43 07
July 21			
EUR		eP	23 47 32
		e	47 44
July 22			
BOZ		eP	01 02 16
July 22			
BUT		eP	01 40 52
		eL	41 39
HH		eP	01 39 45
		e(S)	40 22
		eL	40 30
July 22			
COL		iP	03 12 05
		i	12 30

Date and Station		Phase	(GCT) h m s
July 22			
BOZ		iP	03 41 57
BUT		eP	03 41 58
COL		eP	03 41 01
EUR		iP	03 42 30
HH		iP	03 41 50
RC		iP	03 41 47
TUC		eP	03 42 48
July 22			
COL		iP	06 14 36
July 22			
COL		iP	08 35 23
July 22			
BOZ		iP	09 36 43
		ipP	37 09
BUT		iP	09 36 49
		ipP	37 15
COL		e(P)	09 39 17
		ePP	43 09
COLU		iP	09 34 27
		ipP	34 51
		iS	41 43
		esS	42 33
		isS	42 37
		i	44 07
		i	44 53
		eL	48 40
EUR		iP	09 36 32
		ipP	36 58
		i	37 21
HH		eP	09 37 02
		epP	37 28
RC		iP	09 36 16
		epP	36 45
SLC		eP	09 36 24
		ipP	36 49
SJ		iP	09 32 14
		isP	32 51
		eS	37 50
		eL	40 43
TUC		eP	09 35 42
July 22			
COL		iP	12 02 43
July 22			
COL		iP	12 28 41
July 22			
COL		iP	13 19 19

Date and Station		Phase	(GCT) h m s
July 22			
SLC		eP	20 30 14
July 22			
SJ		e(P)	21 03 05
July 22			
SLC		eP	22 32 14
July 23			
EUR		eP	03 16 49
July 23			
COL		iP	03 44 04
		epP	46 15
EUR		eP	03 43 43
July 23			
SIT		eP	04 52 30
July 23			
EUR		eP	07 10 24
July 23			
COL		eP	07 50 27
		i	50 34
		eS	55 16
		eL	58 07
EUR		eP	07 54 26
		i	54 35
HH		eP	07 53 54
RC		eP	07 54 52
TUC		e(P)	07 55 31
July 23			
BOZ		eP	08 06 54
		eL	10 11
BUT		eP	08 06 46
		eS	09 06
		eL	09 30
EUR		eP	08 05 13
		iS	05 53
		iL	06 04
HH		eP	08 07 05
		eL	10 42
RC		eP	08 07 43
SLC		eP	08 06 02
		e(S)	07 43
		eL	08 02
TUC		eP	08 06 19
		e(S)	07 36
		eL	08 12
UK		eP	08 04 42
		e	04 58
		e(S)	05 18
		iL	05 40

Date and Station		Phase	(GCT) h m s
July 23			
EUR		eP	08 22 15
		e	23 19
July 23			
COL		eP	09 28 41
EUR		eP	09 31 31
		e	31 47
July 23			
EUR		eP	10 25 55
		i	26 01
July 23			
COL		eP	12 57 58
		epP	58 31
July 23			
BOZ		eP	14 39 47
COL		iP	14 38 06
		i	38 10
EUR		eP	14 39 07
		i	39 29
		iPP	43 41
HH		eP	14 39 30
RC		e(P)	14 40 12
July 23			
EUR		eP	18 58 13
		e	58 59
July 23			
BC		eP	19 36(07)
		i	36(16)
BOZ		eP	19 37 15
		eS	46 17
		eSS	51 05
		eSSS	54 12
		eL	57 07
BUT		eP	19 37 110
		eS	46 19
		iSeS	47 16
		eSS	51 12
		eL	55 20
CHI		eP	19 37 07
		eS	46 15
		e(SS)	51 55
		eL	54 35
COL		eP	19 39 10
		eS	49 53
		ePPS	51 33
		eSSS	59 40
COLU		eP	19 36 40D
		i	36 52
		iS	45 24
		e	45 38
		eL	53 07

Date and Station		Phase (GCT) h m s
EUR	eP	19 36 29C
	i	37 12
	e	38 12
HONO	iP	19 36 31
	eS	45 18
	eL	52 50
HH	eP	19 37 25C
RC	eP	19 37 03C
	eS	46 10
	eL	50 20
SLC	eP	19 36 39C
	ePP	39 14
	eS	45 25
	eL	54 57
SJ	eP	19 36 23
	e(PP)	38 44
	eS	44 38
	e	46 19
	eL	51 42
SIT	eP	19 38 31
TUC	eP	19 35 41D
	eS	43 35
	eL	52 10
UK	e(P)	19 36 31
	eL	55 04
WASH	eP	19 37 17D
July 23		
EUR	eP	21 07 45
July 23		
COL	iP	22 09 31
	eS	19 53
	eScS	20 28
EUR	eP	22 10 39
SJ	eP'	22 16 35
July 23		
BOZ	eP	22 15 06
July 23		
HH	e(P)	22 27 47
July 23		
EUR	iP	23 33 30
July 24		
BOZ	eP	00 03 03
BUT	eP	00 04 07
July 24		
COL	iP	02 26 23
July 24		
COL	iP	07 16 18
EUR	eP	07 15 50
TUC	eP	07 15 50
July 24		
BOZ	eP	07 17 16
COL	iP	07 17 09
EUR	iP	07 16 41
HH	eP	07 17 13
SLC	eP	07 16 59
TUC	eP	07 16 41
July 24		
HH	iP	07 34 43
July 24		
BOZ	e	08 58 47
EUR	iP	08 58 08
	e	59 04
HH	e(P)	08 59 04
RC	eP	08 58 38
SLC	eP	08 58 14
July 24		
EUR	iP	11 24 00
July 24		
EUR	eP	11 45 56
July 24		
COL	eP	12 53 00
July 24		
BC	iP	13 12(05)
BOZ	iP	13 11 48
BUT	iP	13 11 41
	i(pP)	13 17
COL	iP	13 09 12
EUR	iP	13 11 50
	i	12 01
	epP	13 36
	isP	14 24
	ePP	15 04
HH	eP	13 11 32
	epP	13 13
RC	iP	13 12 15
	eS	22 16
SLC	eP	13 12 00
	iP	12 01
	epP	13 41
SIT	iP	13 10 01
July 24		
BOZ	e(P)	14 13 03
COL	eP	14 09 54
EUR	eP	14 12 47
HH	eP	14 12 33
RC	eP	14 13 21
July 24		
EUR	iP	15 30 22
	e	30 46
July 24		
EUR	eP	16 04 15
July 24		
COL	iP	16 37 50
	epP	38 15
EUR	eP	16 38 48
	e	39 12
July 24		
EUR	eP	17 13 14
SLC	eP	17 13 24
July 24		
COL	iP	19 09 18
	eSKS	19 52
	eS	20 26
	e(SS)	26 30
	eL	33 36
EUR	eP	19 11 12
	e	12 13
	eP'	15 11
HONO	eP	19 08 27
HH	eP'	19 15 09
RC	eP'	19 15 36
SIT	eP	19 09 52
SJ	iP'	19 17 01
July 24		
EUR	eP	19 26 29
	e	26 55
	e	27 08
July 24		
SLC	eP	20 35 13
July 24		
COL	iP	21 05 23
EUR	e(P)	21 09 22
	e	09 31
July 25		
EUR	iP	06 36 47
July 25		
EUR	eP	06 53 30
July 25		
EUR	iP	15 04 17
July 26		
EUR	eP	00 01 48
	e	02 01
July 26		
EUR	eP	00 33 48
July 26		
SLC	eP	05 38 38
July 26		
EUR	eP	06 24 47
	e	24 57
HH	eP	06 24 22
	e	24 36
July 26		
EUR	eP	06 35 40
	e	39 46
SJ	iP	06 37 35
July 26		
BUT	iP	08 42 31
	i	42 52
EUR	iP	08 42 13
HH	iP	08 42 43
	i	43 04
RC	eP	08 42 00
	e	42 21
SJ	iP	08 38 12
July 26		
BC	iP	09 53 38
	i	53 49
BOZ	eP	09 55 28
	i	55 47
	i(S)	57 20
	iL	57 40
BUT	eP	09 55 17
	i	55 40
	eS	56 59
	iS	57 07
	eL	57 18
COLU	eP	09 59 30
	eL	10 09 13
EUR	iP	09 53 50
HH	eP	09 55 38
	e(S)	57 37
	eL	58 15
RC	iP	09 56 17
	eL	10 00 11

Date and Station		Phase	(GCT) h m s
SLC	eP		09 54 40
	iP		54 42
	i		55 46
	iS		56 01
	iL		56 17
UK	e(P)		09 54 18
	i		54 25
	iS		55 02
	iL		55 15
July 26			
EUR	eP		13 01 13
July 26			
BC	iP		14 33 49
BOZ	eP		14 35 42
EUR	iP		14 35 04
	e		35 48
HH	eP		14 35 57
RC	eP		14 35 35
SLC	eP		14 35 11
July 26			
EUR	eP		15 42 45
July 26			
HH	e(P)		16 36 04
	i		36 09
July 26			
COL	eP		18 01 33
	epP		03 43
EUR	iP		18 01 11
	epP		03 21
July 26			
EUR	iP		18 16 10
SLC	eP		18 16 26
July 26			
SLC	e(P)		22 51 03
	e		52 55
July 26			
SLC	eP		23 56 19
July 27			
COL	iP		00 26 33
EUR	eP		00 26 03
HH	e(P)		00 26 35
July 27			
EUR	eP		00 57 50
SIT	eP		01 00 12
July 27			
SIT	eP		03 05 03

Date and Station		Phase	(GCT) h m s
July 27			
EUR	eP		07 19 06
July 27			
BH	eP		08 11 13
EUR	eP		08 18 38
SJ	e(P)		08 13 59
July 27			
COL	iP		09 14 30
July 27			
COL	iP		13 56 32
EUR	iP		14 00 22
	i		00 32
HH	e(P)		14 00 08
	ePcP		01 01
RC	iP		14 00 47
July 27			
COL	eP		15 26 55
July 27			
COL	eP		16 25 45
EUR	eP		16 25 18
July 27			
EUR	eP		16 36 24
July 27			
BUT	eP		16 59 30
July 27			
HH	i(P)		18 06 02
July 27			
EUR	e(P)		19 06 18
	e		06 52
July 27			
BC	iP		21 49 44
BOZ	iP		21 49 42
BUT	iP		21 49 36
COL	iP		21 47 39
EUR	iP		21 49 34
	i		49 49
HH	iP		21 49 29
RC	iP		21 50 10
SLC	eP		21 49 48
July 27			
BOZ	eP		22 10 28
EUR	iP		22 10 21
	e		10 34

Date and Station		Phase	(GCT) h m s
HH	iP		22 10 16
RC	eP		22 10 57
July 27			
BUT	eP		22 24 38
EUR	eP		22 25 53
HH	e(P)		22 25 34
July 27			
BUT	eP		23 36 37
COL	iP		23 34 41
EUR	eP		23 36 34
HH	eP		23 36 29
	e		36 42
July 27			
BC	eP		23 59 22
COLU	eP		23 58 24
	eS		00 02 34
	eL		03 08
EUR	eP		23 59 49
	e		00 00 48
RC	eP		23 59 39
SLC	eP		23 59 40
	eL		00 10 59
SJ	eP		23 59 31
TUC	eP		23 58 37
	e		00 03 08
	e		06 07
WASH	e		23 59 15
	eL		00 05 09
July 28			
BOZ	iP		00 00 14
BUT	iP		00 00 20
COL	iP		00 03 43
HH	eP		00 00 40
July 28			
BC	iP		01 21 51
BOZ	iP		01 22 42
BUT	eP		01 22 50
COL	iP		01 26 14
COLU	e(P)		01 21 01
	e(S)		25 05
	eS		25 12
	eL		26 09

Date and Station		Phase	(GCT) h m s
EUR	eP		01 22 19
HH	eP		01 23 10
TUC	eP		01 21 08
	e		24 03
	e		26 04
July 28			
BOZ	e(P)		02 15 47
COL	iP		02 14 07
	ipP		14 32
EUR	eP		02 15 03
	i		15 05
	ipP		15 28
	ePKKP		32 48
HH	eP		02 15 14
	e(pP)		15 48
	ePP		19 06
SLC	e(P)		02 14 23
July 28			
COL	iP		03 19 10
July 28			
EUR	eP		04 52 35
July 28			
HH	iP		08 17 24
July 28			
COL	eP		10 14 20
EUR	iP		10 12 11
HH	eP		10 16 07
July 28			
BC	iP		11 21 55
	i		22 08
BOZ	iP		11 21 54
	i		22 08
BUT	eP		11 21 48
	i		22 02
COL	iP		11 19 53
EUR	iP		11 21 46
	i		21 59
	i		22 21
HH	iP		11 21 41
	i		21 54
RC	iP		11 22 22
	i		22 35
SLC	eP		11 22 00
	e		22 13
July 28			
BUT	eP		11 31 07

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Date and Station		Phase (GCT) h m s
COLU	eP	11 28 28
EUR	iP	11 30 45
HH	iP	11 31 24
	ePcP	32 17
RC	eP	11 30 26
SLC	eP	11 30 35
SJ	eP	11 26 52
July 28		
HH	e(P)	12 24 29
July 28		
SLC	eP	13 25 50
July 28		
COL	iP	15 12 37
EUR	iP	15 13 03
HH	e(P)	15 13 19
July 28		
HH	e(P)	15 31 52
July 28		
COL	eP	17 39 40
EUR	eP	17 41 32
HH	eP	17 41 27
July 28		
HH	e(P)	18 36 14
July 28		
EUR	eP	19 08 43
	eS	09 38
	iL	09 48
HH	e(P)	19 08 19
	e(S)	09 06
	eL	09 26
July 28		
COL	iP	19 55 42
July 28		
BH	iP	20 06 21
	iS	06 32
EUR	iP	20 12 49
July 28		
EUR	eP	21 41 55
	e	43 22
July 29		
SLC	eP	02 30 51
July 29		
COL	iP	04 54 03
July 29		
COL	eP	06 38 56

Date and Station		Phase (GCT) h m s
EUR	i(P)	06 42 03
July 29		
BUT	eP	07 17 18
	e	17 46
July 29		
BC	iP'	07 33 30
	i	33 57
COL	eP'	07 32 21
	e	33 07
COLU	eP'	07 33 42
EUR	iP'	07 33 19
	i	33 56
HH	eP'	07 33 06
	ePP	35 53
RC	eP'	07 33 20
SLC	eP'	07 33 25
SJ	eP'	07 33 39
TUC	eP'	07 33 42
WASH	eP'	07 33 25
July 29		
COL	iP	08 01 31
	e	01 38
July 29		
BOZ	eP	08 41 28
BUT	eP	08 41 21
COL	iP	08 36 57
EUR	iP	08 41 54
	i	42 10
	e	44 54
HH	iP	08 40 58
RC	eP	08 42 13
July 29		
HH	e(P)	09 41 26
July 29		
BOZ	eP	12 00 53
	e	01 33
BUT	eP	12 00 48
	e	01 31
COL	iP	11 58 23
EUR	iP	12 00 57
	e	01 39
HH	iP	12 00 37
	e	01 18

Date and Station		Phase (GCT) h m s
July 29		
BC	iP	13 35 09
BOZ	iP	13 35 53
COL	iP	13 39 20
COLU	eP	13 33 43
	eL	38 16
EUR	iP	13 35 35
	ipP	35 59
HH	eP	13 36 21
	iPcP	38 25
SLC	ePcP	13 38 05
SJ	eP	13 34 05
TUC	eP	13 34 25
July 29		
BC	iP	13 50 22
BOZ	eP	13 51 07
COL	eP	13 54 34
COLU	e(P)	13 49 06
EUR	iP	13 50 48
	ipP	51 07
	iPP	51 50
HH	eP	13 51 34
	esPP	53 38
SLC	eP	13 50 37
TUC	eP	13 49 40
July 29		
HH	e(P)	17 51 55
July 29		
COL	iP	18 30 10
July 29		
EUR	iP	20 31 19
July 29		
EUR	eP	20 41 34
	iS	42 05
July 29		
COL	eP	21 19 35
EUR	iP	21 21 28
HH	eP	21 21 23
	e	21 38
July 29		
HH	e(P)	21 39 40
July 29		
HH	eP	22 15 21
	e(S)	15 48

Date and Station		Phase (GCT) h m s
HH	eL	22 16 04
July 29		
EUR	iP	23 25 03
	e	26 02
July 30		
BOZ	e(P)	05 54 05
BUT	eP	05 54 10
COL	eP	05 53 11
EUR	eP	05 54 41
HH	eP	05 53 55
RC	eP	05 53 57
July 30		
BOZ	eP	06 00 19
BUT	eP	06 00 14
HH	eP	06 00 04
RC	eP	06 00 07
SLC	eP	05 59 07
SJ	eP	05 53 22
July 30		
HH	eP	06 47 23
July 30		
HH	e(P)	08 55 25
July 30		
BOZ	iP	09 28 01
	e	32 33
	e	34 19
BUT	eP	09 28 03
	iP	28 06
	e	32 02
	eS	38 58
	e	40 46
	e	41 15
	eL	55 22
CHI	e(P)	09 37 32
	eL	53 32
COL	eP	09 27 04
	iP	27 07
COLU	eP	09 27 26
	eS	37 32
	iS	37 42
	e	43 12
	eL	54 12
EUR	eP	09 28 35
HH	eP	09 27 51
	eScS	38 42
	e	45 00

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Date and Station		Phase (GCT)
		h m s
PHIL	eS	09 36 29
	iS	36 33
	eL	51 14
RC	eP	09 27 49
	e	34 10
SLC	eP	09 28 22
SJ	eP	09 27 16
SIT	eP	09 28 42
WASH	eP	09 26 55
	e(S)	36 44
	e	39 09
	eL	48 27
July 30		
BUT	eP	09 34 20
COL	eP	09 33 24
HH	eP	09 34 12
SIT	eP	09 34 02
July 30		
BUT	e(P)	10 26 42
COL	iP	10 30 06
EUR	i(P)	10 26 11
HH	e(P)	10 27 09
TUC	eP	10 25 08
July 30		
BUT	eP	10 53 02
COL	eP	10 52 04
EUR	iP	10 53 39
HH	eP	10 52 52
RC	eP	10 52 49
SJ	eP	10 52 14
July 30		
COL	e(P)	11 28 00
July 30		
BUT	eP	11 36 40
COL	iP	11 34 06
EUR	iP	11 36 41
	i	37 01
	ePP	40 13
HH	eP	11 36 25
	i	36 29
SLC	eP	11 36 57

Date and Station		Phase (GCT)
		h m s
July 30		
HH	e(P)	13 17 48
July 30		
EUR	eP	13 30 45
RC	e(P)	13 35 18
July 30		
COL	iP	14 55 07
EUR	e(P)	14 57 30
HH	eP	14 57 07
SIT	eP	14 55 52
July 30		
EUR	eP	16 08 25
HH	e(P)	16 04 39
July 30		
BH	eP	17 51 46
July 30		
HH	e(P)	18 26 44
July 30		
COL	eP	21 45 40
EUR	eP	21 49 40
July 30		
EUR	iP	23 40 36
	e	41 46
July 31		
EUR	eP	00 32 26
July 31		
EUR	eP	00 42 15
	e	43 51
July 31		
COL	eP	03 35 32
July 31		
SLC	eP	04 26 33
July 31		
EUR	iP	05 32 44
July 31		
HH	e(P)	06 54 16
July 31		
COL	eP	11 09 44
	i	09 51
EUR	eP	11 13 28
July 31		
BUT	e(P)	11 16 11
	eP	16 41
EUR	e(P)	11 15 29

Date and Station		Phase (GCT)
		h m s
July 31		
COL	eP	12 11 31
July 31		
EUR	eP	12 54 56
July 31		
COL	iP	16 51 04
EUR	eP'	16 56 56
HH	eP'	16 56 51
SJ	eP'	16 58 46
July 31		
HH	i(P)	18 14 35
July 31		
COL	eP	22 52 31
	e	53 06
EUR	iP	22 49 44
	e	50 28
SJ	iP	22 59 39

Date and Station		Phase (GCT)
		h m s

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Local and Minor Earthquakes		Local and Minor Earthquakes		Local and Minor Earthquakes		Local and Minor Earthquakes
day	hour	day	hour	day	hour	
BUT		COL		SJ		
July		July		July		
13	18.4	27	17.7	9	17.9	
	20.6		18.4	13	15.3	
14	14.4		21.0	15	01.8	
16	00.7	28	08.3	17	08.6	
29	22.2		15.9	18	01.8	
		29	16.7	24	00.7	
COL		30	11.4	25	20.2	
July			17.0	27	13.9	
2	11.0	31	21.5	28	10.6	
	17.5					
3	09.5	EUR		TUC		
4	06.2	July		July		
	09.9	1	18.5	1	05.3	
	22.8	2	05.9		07.5	
5	02.7		07.8	4	03.9	
	12.9		07.8		05.9	
7	09.6	3	22.5		10.8	
8	05.1	4	03.2		13.3	
	22.7		04.3		18.8	
	23.5		06.0	6	05.4	
9	00.9		23.3		12.7	
	17.6	5	00.1	7	00.8	
	20.4		11.5		01.5	
10	01.9		15.5		11.4	
	05.2	6	05.0		15.0	
	12.9		07.3	9	19.4	
	15.3		07.4	10	08.1	
11	00.6		22.4		08.8	
	08.0	7	00.1		13.8	
	08.0		00.2		18.9	
	19.0		01.0	12	04.6	
	21.3	11	16.2		05.2	
12	08.5	12	10.9		06.5	
	16.0	13	15.7		11.1	
	21.0	14	15.6		11.7	
14	01.7		22.6	13	10.5	
	02.2	15	01.3		19.1	
	05.1	18	23.6		19.4	
	05.9	19	10.2	14	06.5	
	07.4		10.3	15	14.8	
	17.4	25	22.3		19.5	
	19.9	26	10.7		21.3	
	21.4	27	23.5	17	03.6	
15	03.0	29	02.2		04.0	
	06.1	30	20.9		09.1	
	11.6	31	16.7	18	05.1	
	20.7				11.1	
	21.3	HONO		19	05.2	
19	05.7	July			06.0	
	14.6	12	02.2		08.0	
21	22.9	23	22.7		09.5	
22	10.1			22	04.7	
23	00.6	SLC		23	06.6	
	00.7	July		29	20.5	
	01.9	2	23.8			
	04.8	4	00.0	UK		
	05.6	7	22.6	July		
	08.3	9	22.7	13	05.6	
	09.2	10	22.9		06.1	
24	08.6	11	01.5		23.0	
25	03.3	16	23.4	18	23.1	
	04.7	18	22.5	21	01.9	
	07.3	20	22.6	26	11.5	
	07.8	27	02.0			
26	14.6		23.7			
	15.6					