USCGS
.40

Duplicate

SEISMOLOGICAL BULLETIN

December, 1958

MSI - 216

COAST & GEODETIC SURVEY
LIBRARY & ARCHIVES
AUG 11
ACC. NO.

CONTENTS

World Epicenter Map 1958 1
List of stations 1
Provisional epicenters 2
Seismogram interpretations 5
Local and minor earthquakes 19

U. S. DEPARTMENT OF COMMERCE

Lewis L. Strauss, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

FOR OFFICIAL DISTRIBUTION

National Oceanic and Atmospheric Administration

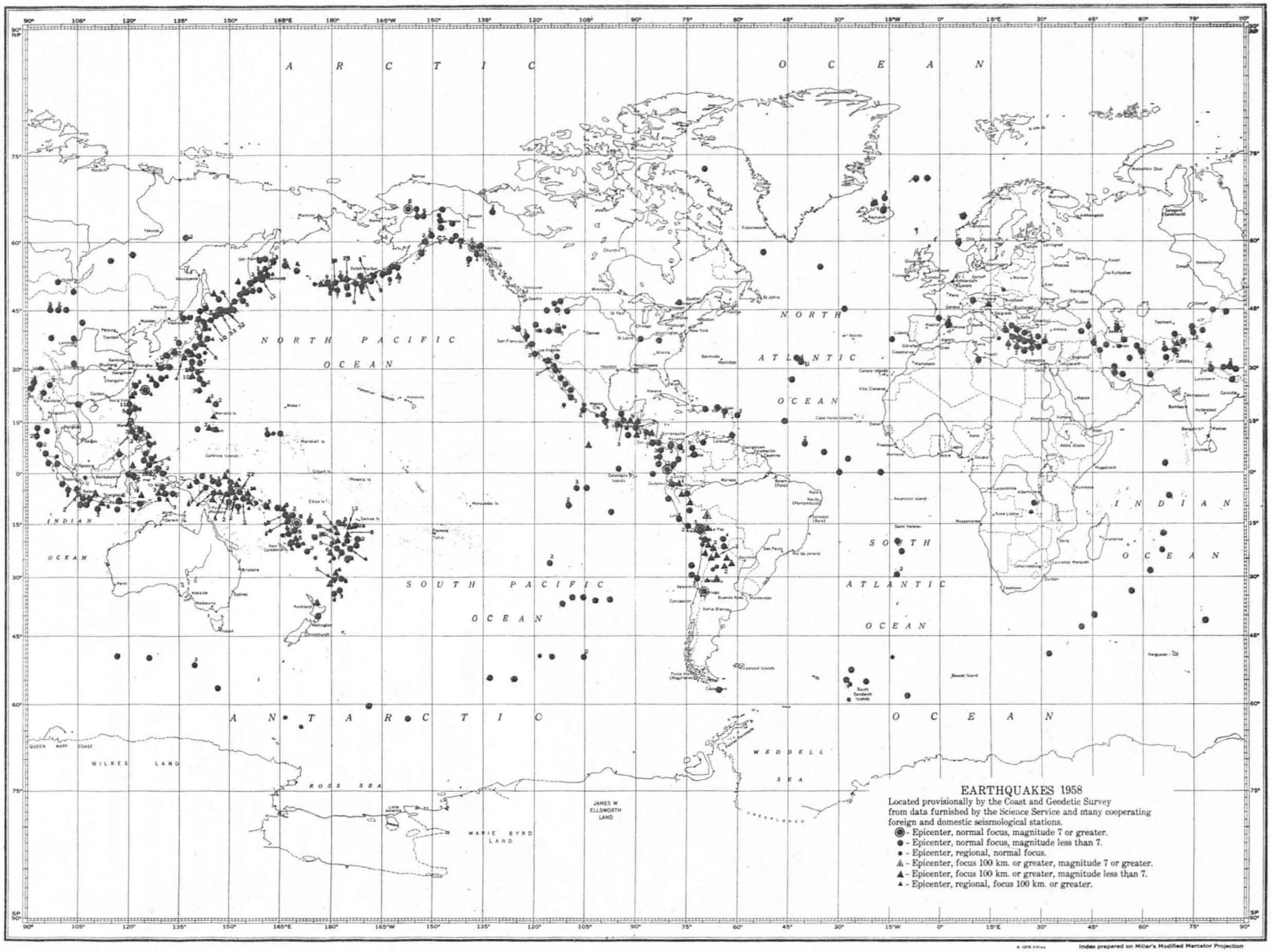
ERRATA NOTICE

One or more conditions of the original document may affect the quality of the image, such as:

Discolored pages
Faded or light ink
Binding intrudes into the text

This has been a co-operative project between the NOAA Central Library and the Climate Database Modernization Program, National Climate Data Center (NCDC). To view the original document, please contact the NOAA Central Library in Silver Spring, MD at (301) 713-2607 x124 or Library.Reference@noaa.gov

HOV Services
Imaging Contractor
12200 Kiln Court
Beltsville, MD 20704-1387
March 4, 2011



Index prepared on Miller's Modified Mercator Projection

1958

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
*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
Kipapa, T. H. (KIP)
*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)
Tucson, Ariz. Telemeter (TUC-T)
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. Beginning January 1, 1958 the data from the horizontal components of the seismographs at all stations except College, Honolulu, and Tucson will not be published for earthquakes occurring outside the United States. The horizontal instruments will continue in operation and the seismograms for the local and regional earthquakes will be scaled and the data published.

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, which may be obtained on loan by addressing the Seismograph Station Director, Meteorological and Hydrographic Office, Panama Canal Company, Balboa Heights, Canal Zone.

Tucson telemeter is located 9 miles northeast of Tucson at 32°20.1' North, 110°43.4' West. It was established in December 1957 to serve as an outpost station.

Date 1958	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Dec.	h m s	°	°	
1	03 21 17	32.3 N.	115.8 W.	California-Mexico border. Minor damage at Calexico, El Centro and San Diego. Felt throughout southern California and western Arizona. Mag. 5.7.
1	03 50 06*	32½ N.	115½ W.	California-Mexico border aftershock. Felt. Mag. 5.0.
1	04 26 48*	32½ N.	115½ W.	California-Mexico border aftershock. Felt. Mag. 4.7.
1	04 45 28**			Pacific Ocean, about 700 miles southeast of Easter Island.
1	06 02 30*	32½ N.	115½ W.	California-Mexico border aftershock. Felt. Mag. 5.6.
1	07 21 53*	30½ N.	41 W.	North Atlantic Ocean.
1	14 15 37*	44½ N.	150 E.	Kurile Islands.
1	20 50 48*	40½ N.	112½ W.	Northern Utah. Felt at Nephi.
1	22 30 15*	40½ N.	112½ W.	do.
2	01 12 22*	44 N.	149 E.	Kurile Islands.
2	17 43 30*	40½ N.	125 W.	Off coast of northern California. Mag. 4 - 4¼ (Berk).
3	02 23 40*	27 N.	86 E.	Nepal.
3	09 48 26*	19 N.	121½ E.	Near north coast of Luzon, Philippine Islands. Felt at Aparri and Tuguegarao.
3	16 00 58*	29 N.	138½ E.	South of Honshu, Japan. h about 550 km.
4	12 34 34*	14 N.	91½ W.	Near coast of Guatemala. Felt in western El Salvador. h about 100 km.
4	19 19 23*	11½ N.	86½ W.	Near coast of Nicaragua. h about 100 km.
6	09 33 45*	6½ N.	83 W.	South of Panama. Mag. 6 - 6¼.
6	15 31 30**			Near north coast of Iceland. Felt.
6	22 35 43*	33 N.	141 E.	South of Honshu, Japan.
7	00 06 07*	54 N.	169 E.	Komandorskie Islands region.
7	01 09 18*	21½ N.	121 E.	Off south coast of Formosa.
7	01 43 51*	21½ N.	121½ E.	do.
7	02 46 38**			Hindu Kush.
7	02 45 49*	4 N.	127 E.	Talaud Islands
7	06 21 46**			Bismarck Sea.
7	17 42 00*	18½ N.	105½ W.	Off coast of Mexico.
7	17 58 08*	18 N.	105 W.	Off coast of Mexico. Mag. 6 (Berk).
8	03 10 17*	13 S.	167 E.	New Hebrides Islands. h about 200 km.
8	07 17 19*	38 N.	97½ E.	Tsaidam Basin, China.
8	11 42 10*	44 N.	149 E.	Kurile Islands.
8	12 08 23*	44 N.	149½ E.	Kurile Islands.
9	00 40 05**			Sumba Island region.
9	08 00 30*	8 S.	118 E.	Flores Sea.
9	12 17 47*	14½ S.	167 E.	New Hebrides Islands. Felt at Luganville.
9	19 03 05*	8½ N.	83 W.	Costa Rica-Panama border.

Date 1958	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Dec.	h m s	°	°	
9	20 41 31*	35 N.	28 E.	Dodecanese Islands region.
10	03 43 43*	36½ N.	71½ E.	Hindu Kush. h about 150 km.
10	07 02 59*	37 S.	176½ E.	Off North Island, New Zealand. Felt. h about 300 km. Mag. 6-3/4.
10	07 21 56*	33 N.	139 E.	South of Honshu, Japan. h about 300 km.
10	14 39 00*	5 N.	126 E.	Off south coast of Mindanao, Philippine Islands. h about 200 km.
10	16 11 02*	3 N.	83 W.	Off west coast of Colombia.
10	21 49 20*	24½ N.	109 W.	Gulf of California. Mag. 5-3/4.
11	08 22 20*	23½ N.	109 W.	Gulf of California.
11	09 52 16*	37½ N.	123 W.	Near coast of California. Felt at San Francisco. Mag. 4.6.
11	15 33 25*	30½ N.	140 E.	South of Honshu, Japan.
11	18 38 12*	30 N.	140 E.	do.
13	09 06 09*	4½ S.	153½ E.	New Britain region. Felt at Rabaul.
13	09 07 30*	55½ S.	22 W.	Sandwich Islands region.
13	14 28 33*	44½ N.	149 E.	Kurile Islands.
14	07 11 28*	35 S.	108½ W.	South Pacific Ocean. Mag. 6.
14	13 26 51*	23 N.	108 W.	Gulf of California.
14	15 35 35*	3½ N.	83 W.	South of Panama.
15	07 50 48*	5½ N.	82½ W.	do.
15	11 46 25*	44½ N.	149 E.	Kurile Islands. h about 60 km.
15	12 40 27*	31 S.	177½ W.	Kermadec Islands.
16	02 32 24*	44½ N.	148½ E.	Kurile Islands.
16	03 18 38**			About 450 miles south of Fiji Islands.
17	02 25 55*	55 N.	162 W.	Off coast of Alaska Peninsula. Depth slightly greater than normal.
17	08 57 10*	33 N.	137 E.	South of Honshu, Japan. Felt at Tokyo. h about 400 km.
17	15 34 15*	28½ N.	127½ E.	Ryukyu Islands region.
17	20 33 58*	4½ S.	153½ E.	New Ireland region. Felt at Rabaul.
18	01 39 26**			Loyalty Islands region. h about 100 km.
18	07 18 05*	11 S.	117½ E.	South of Sumbawa Island.
18	07 26 16*	18 N.	120½ E.	Near north coast of Luzon, Philippine Islands. Felt at Laoag and Baguio.
18	19 23 53*	16 S.	173 W.	Tonga Islands region.
19	03 27 26*	38 N.	30 E.	Western Turkey.
19	11 14 40*	16 S.	72 W.	Southern Peru. h about 100 km.
19	14 36 46*	5 N.	83 W.	South of Panama.
19	18 36 23*	51½ N.	177½ W.	Andreanof Islands, Aleutian Islands.
20	19 20 43*	28½ N.	127½ E.	Ryukyu Islands region.
20	21 12 50**			Sumbawa Island.

Date 1958	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Dec.	h m s	°	°	
21	05 46 26*	44½ N.	81 E.	Western Sinkiang Province, China.
21	13 03 30**			Fiji Islands region.
22	02 17 14*	6 S.	155 E.	Solomon Islands.
22	02 41 29*	66 N.	147 W.	Central Alaska. Felt at Fairbanks.
22	07 56 06**			Tonga Islands region.
23	03 30 18**			do.
23	06 27 15*	2 N.	79 W.	Near west coast of Colombia.
24	01 13 17*	6½ S.	150½ E.	Near south coast of New Britain. h about 100 km.
24	07 17 08*	35½ N.	29 E.	Off south coast of Turkey.
24	20 35 20*	18 S.	169 E.	New Hebrides Islands. Slight damage at Port-Vila. Felt at Epi, Nguna, and Vate.
24	22 10 56*	18 S.	169 E.	New Hebrides Islands. Felt at Port-Vila, Nguna, and Vate.
25	08 05 38*	5½ S.	151 E.	New Britain. Felt at Rabaul and Pomio. h about 60 km. Mag. 6-3/4.
25	09 11 46*	51½ N.	175 W.	Andreanof Islands, Aleutian Islands.
26	05 51 04**			South of Fiji Islands. h about 600 km.
28	05 13 15*	9½ N.	70 W.	Northwestern Venezuela.
28	05 34 36*	29½ N.	80 E.	Western Nepal-India border.
28	06 44 55*	18½ S.	178 W.	Fiji Islands. h about 550 km.
28	11 46 56*	71½ N.	7½ W.	Jan Mayen Island.
29	10 44 50**			Off coast of Jalisco, Mexico.
29	22 38 22*	2½ N.	99 E.	Northern Sumatra.
30	08 37 56*	35½ S.	105½ W.	South Pacific Ocean. Mag. 6.
30	16 06 40*	15 S.	173 E.	New Hebrides Islands region.
31	01 34 15*	15½ S.	172½ W.	Samoa Islands region.
31	01 45 52*	23 S.	178½ W.	Tonga Islands region. h about 400 km.
31	03 45 18*	30½ N.	79½ E.	Northern India.
31	10 30 49*	46½ N.	154 E.	Kurile Islands. h about 100 km.

Date and Station		Phase	(GCT)
Dec. 1			h m s
COL	eP		01 58 36
EUR	eP		01 59 28
Dec. 1			
BC	iP		03 22 18
BOZ	eP		03 24 44
	e		25 02
BUT	eP		03 24 41
	e		25 14
COL	eP		03 28 40
COLU	eP		03 27 21
	eL		36 55
EUR	iP		03 23 05
HH	iP		03 25 09
	iL		29 45
RC	eP		03 25 01
	e		25 51
	eS		27 54
	eL		28 15
SLC	eP		03 23 34
TUC	iP		03 22 19
	iS		23 02
	eL		23 04
TUC-T	iP		03 22 20
UK	e(P)		03 24 11
	eL		25 53
Dec. 1			
BC	eP		03 51 07
	eS		51 52
	eL		52 16
EUR	iP		03 51 55
HH	eP		03 53 56
RC	e(P)		03 53 51
	e		54 14
TUC	eP		03 51 10
	e		51 15
	i		51 28
	iL		52 34
TUC-T	eP		03 51 11
	i		51 28
Dec. 1			
BC	eP		04 27 48
EUR	iP		04 28 36
	eL		30 22
TUC	eP		04 27 52
	i		28 09
	eL		28 52
TUC-T	eP		04 27 54
	i		28 11
Dec. 1			
BC	eP		04 56 57
BUT	eP		04 57 50
EUR	iP		04 57 16
HH	iP		04 58 03
RC	eP		04 57 36
TUC	iP		04 56 31
TUC-T	iP		04 56 31
Dec. 1			
COL	iP		05 15 46
Dec. 1			
BC	eP		06 03 31
	e		03 43
	eS		04 15
BUT	eP		06 05 54
COL	eP		06 09 52
EUR	iP		06 04 18
	iL		06 33
HH	iP		06 06 21
RC	eP		06 06 12
	e		06 21
SLC	eP		06 04 47
	e(S)		05 32
TUC	eP		06 03 33
	i		03 41
	eL		05 38
TUC-T	eP		06 03 34
	i		03 49
UK	e(P)		06 07 40
Dec. 1			
COL	iP		06 25 16
EUR	eP		06 24 46
TUC	eP		06 24 47
	e		24 58
Dec. 1			
BC	eP		07 32 12
COL	eP		07 33 06
EUR	eP		07 32 07
HH	eP		07 31 47
RC	eP		07 30 55
SJ	e(P)		07 27 42
TUC	eP		07 32 03
TUC-T	e(P)		07 31 57
Dec. 1			
TUC	e(P)		08 44 51
	e		45 03
	eL		45 58
TUC-T	e(P)		08 44 55
	e		45 05
	eL		45 58
Dec. 1			
HH	e(P)		12 06 54
Dec. 1			
COL	e(P)		12 25 12
Dec. 1			
COL	iP		14 23 12
EUR	iP		14 26 30
	i		26 43
HH	eP		14 26 03
	i		26 15
RC	eP		14 27 09
Dec. 1			
COL	eP		20 20 26
	e		20 48
Dec. 1			
BC	eP		20 52 00
BOZ	eP		20 52 15
EUR	eP		20 51 32
	iP		51 38
	i		52 07
	eS		52 12
	iL		52 18
RC	e(P)		20 53 03
	eL		54 29
SLC	eP		20 51 01
TUC	e(P)		20 52 55
	eL		54 36
TUC-T	e(P)		20 52 54
	eL		54 32
Dec. 1			
BC	eP		22 31 29
BOZ	eP		22 31 43
EUR	eP		22 30 59
	iP		31 06
	i		31 31
	eS		31 38
	iL		31 43
HH	e(P)		22 32 30
SLC	eP		22 30 28
TUC	eP		22 32 22
	eL		34 06
TUC-T	eP		22 32 20
Dec. 2			
EUR	eP		00 03 45
HH	e(P)		00 03 16
TUC	eP		00 04 53
TUC-T	eP		00 04 52
Dec. 2			
BC	iP		00 56 00
	e		56 13
	e		57 04
EUR	iP		00 56 49
	i		57 29
	iL		59 06
TUC	e(P)		00 56 01
	e		56 13
	i		56 22
	iS		57 18
	iL		57 19
TUC-T	e(P)		00 56 09
	i		56 22
	iS		57 14
	eL		57 16
Dec. 2			
BC	eP		01 23 36
BOZ	eP		01 23 25
BUT	eP		01 23 13
COL	iP		01 19 59
EUR	iP		01 23 18
	i		23 30
	i		23 36
HH	iP		01 22 50
	i		23 07
RC	eP		01 23 42
	e		23 57
SLC	e(P)		01 23 24
TUC	eP		01 24 06
	e		24 25
TUC-T	eP		01 24 06
	i		24 24
Dec. 2			
BC	eP		03 24 39

Date and Station		Phase (GCT)
		h m s
BOZ	eP	03 24 43
EUR	e(P)	03 23 59
	iP	24 06
	iS	24 31
	iL	24 48
RC	e(P)	03 25 05
	eL	26 57
SLC	eP	03 23 28
TUC	eP	03 25 22
	eL	27 04
TUC-T	eP	03 25 21
	e	25 31
	eL	27 08
Dec. 2		
COL	iP	04 17 54
EUR	eP	04 14 06
	eL	15 58
HH	iP	04 15 54
RC	eP	04 16 03
Dec. 2		
COL	eP	04 21 36
EUR	iP	04 21 23
	i	21 42
HH	iP	04 20 52
	i	23 02
RC	eP	04 22 02
	e	22 17
TUC	iP	04 22 23
TUC-T	eP	04 22 23
Dec. 2		
COL	eP	05 09 57
HH	iP	05 12 24
Dec. 2		
COL	eP	07 23 51
EUR	eP	07 23 23
TUC	eP	07 23 28
TUC-T	eP	07 23 25
Dec. 2		
COL	eP	07 31 36
EUR	eP	07 31 12
Dec. 2		
COL	iP	07 50 29
HH	iP	07 52 19

Date and Station		Phase (GCT)
		h m s
RC	eP	07 52 23
	e	58 19
Dec. 2		
COL	eP	09 26 25
Dec. 2		
BC	eP	09 58 53
BUT	e(P)	10 02 15
EUR	eP	09 59 29
TUC	e(P)	09 58 42
	i	58 56
	i(S)	59 43
	eL	59 44
TUC-T	e(P)	09 58 43
	e	58 58
	eL	59 46
Dec. 2		
COL	iP	10 13 21
EUR	iP	10 17 00
	i	17 17
Dec. 2		
RC	eP	11 09 35
Dec. 2		
RC	eP	11 36 31
Dec. 2		
EUR	eP	15 42 25
HH	e(P)	15 41 40
Dec. 2		
BC	eP	17 45 48
BOZ	e(P)	17 46 16
EUR	iP	17 45 13
	i	45 21
	eL	46 53
HH	iP	17 46 14
UK	iP	17 44 03
	eL	44 43
Dec. 2		
COL	eP	20 25 32
EUR	iP	20 28 22
HH	iP	20 28 00
Dec. 2		
COL	iP	21 27 44
	i	29 25
Dec. 2		
COL	eP	21 50 42
Dec. 2		
COL	eP	22 09 24

Date and Station		Phase (GCT)
		h m s
EUR	iP	22 12 43
HH	eP	22 12 16
Dec. 2		
HH	e(P)	23 19 17
Dec. 2		
EUR	eP	23 34 42
Dec. 3		
HH	eP	00 51 10
Dec. 3		
COL	iP	02 35 47
EUR	iP	02 38 43
Dec. 3		
RC	eP	08 45 53
	e	46 17
SJ	iP	08 41 11
	e	41 31
TUC	eP	08 45 33
	e	45 57
TUC-T	eP	08 45 33
	e	45 57
Dec. 3		
COL	iP	09 59 58
EUR	iP	10 02 19
	ePP	05 28
HH	iP	10 02 00
Dec. 3		
COL	eP	10 09 26
EUR	eP	10 12 44
Dec. 3		
EUR	iP	10 23 47
HH	e(P)	10 25 21
	i	26 08
TUC	eP	10 22 08
	e	23 23
	eL	24 50
	e	24 59
TUC-T	eP	10 22 01
	e	24 52
Dec. 3		
EUR	eP	10 55 09
Dec. 3		
SJ	eP	13 24 30
Dec. 3		
COL	iP	14 03 43
Dec. 3		
EUR	eP	15 30 13

Date and Station		Phase (GCT)
		h m s
Dec. 3		
COL	iP	16 09 58
EUR	iP	16 12 32
	epP	14 29
HH	iP	16 12 15
	epP	14 10
RC	eP	16 12 58
TUC-T	iP	16 13 09
Dec. 3		
COL	eP	18 28 01
EUR	iP	18 31 20
Dec. 3		
TUC	e(P)	19 18 41
	e	18 46
	eL	20 21
TUC-T	eP	19 18 23
	eL	20 06
Dec. 4		
EUR	eP	01 43 55
TUC	eP	01 43 22
	e	43 28
	eL	44 24
TUC-T	eP	01 43 21
	e	43 29
	eL	44 25
Dec. 4		
COL	iP	03 42 02
EUR	iP	03 45 21
	e	47 27
TUC	eP	03 46 36
TUC-T	eP	03 46 36
Dec. 4		
COL	i(P)	07 49 09
Dec. 4		
EUR	iP	10 44 53
Dec. 4		
COL	iP	12 44 57
	ipP	45 34
EUR	iP	12 41 11
	ipP	41 25
HH	eP	12 41 54
	i	44 06
	e(S)	47 51
RC	eP	12 41 53
SLC	eP	12 41 00

Date and Station		Phase	(GCT)
			h m s
TUC	eP	12	40 00
	iP		40 02
TUC-T	eP	12	40 00
	iP		40 02
	ipP		40 16
Dec. 4			
EUR	eP	12	44 07
TUC-T	eP	12	43 30
Dec. 4			
EUR	eP	12	47 32
TUC	eP	12	47 08
TUC-T	eP	12	47 08
Dec. 4			
EUR	eP	17	22 09
Dec. 4			
COL	eP	17	30 50
Dec. 4			
COL	eP	17	38 10
EUR	eP	17	41 17
Dec. 4			
BH	iP	19	21 12
	iS		22 43
BOZ	eP	19	26 56
BUT	e(P)	19	27 01
COL	iP	19	30 15
COLU	eP	19	24 28
EUR	eP	19	26 10
	ipP		26 40
	iPcP		28 55
HH	eP	19	27 22
	iPcP		29 12
RC	eP	19	26 16
SLC	eP	19	25 28
	e		26 27
SJ	eP	19	24 02
	e		24 15
TUC	eP	19	25 36
	e		25 43
	eL		37 05
TUC-T	eP	19	25 35
	e		25 42
Dec. 4			
EUR	eP	19	32 37
HH	eP	19	33 02

Date and Station		Phase	(GCT)
			h m s
Dec. 4			
EUR	eP	21	42 12
Dec. 4			
UK	eP	22	36 34
Dec. 4			
EUR	iP	23	48 49
Dec. 5			
COL	eP	03	02 26
Dec. 5			
SLC	eP	05	24 16
Dec. 5			
COL	e(P)	07	06 33
Dec. 5			
COLU	eP	08	38 03
Dec. 5			
HH	e(P)	11	21 06
Dec. 5			
COL	e(P)	13	46 13
Dec. 5			
BH	eP	14	21 06
	eS		21 46
EUR	eP	14	28 35
Dec. 5			
COL	eP	14	48 42
	i		48 52
	i		49 04
EUR	eP	14	52 15
Dec. 5			
COL	eP	19	50 45
EUR	eP	19	54 20
HH	iP	19	53 47
Dec. 5			
COL	iP	21	58 49
EUR	iP	21	56 18
HH	iP	21	56 50
RC	eP	21	56 01
Dec. 5			
COL	eP	23	45 04
Dec. 6			
COL	eP	01	08 03
EUR	e(P)	01	11 37
Dec. 6			
BC	e(P)	03	25 14
EUR	eP	03	25 48
	eL		28 08

Date and Station		Phase	(GCT)
			h m s
TUC	e(P)	03	25 03
	e		25 21
	eL		26 20
TUC-T	e(P)	03	25 14
	e		25 23
	eL		26 24
Dec. 6			
BC	e(P)	03	32 31
EUR	eP	03	33 07
	eL		35 22
TUC	e(P)	03	32 21
	e		32 38
	eL		33 35
TUC-T	e(P)	03	32 20
	e		32 37
	eL		33 35
Dec. 6			
TUC	eP	03	43 31
TUC-T	eP	03	43 29
Dec. 6			
COL	eP	06	33 56
EUR	iP	06	33 26
TUC	eP	06	33 24
TUC-T	eP	06	33 24
Dec. 6			
COL	eP	07	32 39
Dec. 6			
COL	eP	07	45 20
EUR	eP	07	48 39
HH	e(P)	07	48 11
Dec. 6			
BH	iP	09	34 48
	iS		35 33
BC	eP	09	41 39
BOZ	eP	09	42 14
	e		42 42
BUT	eP	09	42 20
	e		43 09
COL	iP	09	45 21
	i		45 36
	iPP		48 06
	eS		54 56
	eSS		59 38
	eL	10	08 08
COLU	eP	09	39 34
	eS		44 18

Date and Station		Phase	(GCT)
			h m s
EUR	iP	09	42 00
HH	iP	09	42 40
RC	iP	09	41 36
SLC	eP	09	41 49
	e		42 23
SJ	iP	09	38 22
TUC	iP	09	40 57
	i		41 17
	ePcP		43 20
	eS		46 44
	eL		51 46
TUC-T	iP	09	40 57
	ePP		42 25
	eL		53 14
UK	e(P)	09	42 35
	e		42 52
Dec. 6			
COL	eP	09	56 40
EUR	eP	09	52 57
TUC-T	eP	09	51 42
Dec. 6			
COL	iP	10	01 36
	i		01 44
EUR	eP	10	04 54
HH	eP	10	04 28
RC	eP	10	05 30
Dec. 6			
COL	iP	15	11 09
EUR	eP	15	07 22
TUC	eP	15	06 15
	e		06 54
TUC-T	eP	15	06 13
Dec. 6			
RC	e(P)	15	15 10
Dec. 6			
COL	e(P)	15	41 27
Dec. 6			
COL	eP	17	54 17
Dec. 6			
EUR	eP	20	22 43
Dec. 6			
BC	e(P)	21	51 49
Dec. 6			
COL	eP	22	45 03

B-4297-4

Date and Station		Phase (GCT)
		h m s
EUR	iP	22 47 50
HH	iP	22 47 29
Dec. 7		
BC	e(P)	00 15 36
COL	iP	00 11 25
EUR	iP	00 15 13
HH	eP	00 14 39
	i(SoP)	17 56
RC	eP	00 15 48
TUC	eP	00 16 13
Dec. 7		
COL	iP	00 50 51
EUR	iP	00 54 10
RC	eP	00 54 46
Dec. 7		
COL	eP	01 18 48
EUR	eP	01 15 47
Dec. 7		
COL	iP	01 20 40
EUR	eP	01 23 03
HH	iP	01 22 44
Dec. 7		
COL	iP	01 55 12
EUR	eP	01 57 35
HH	iP	01 57 17
Dec. 7		
COL	eP	02 58 16
Dec. 7		
COL	eP	02 58 25
	e(PKKP)	03 17 38
EUR	e(P)	03 00 13
	ePKKP	15 35
HONO	iP	02 57 37
HH	e(PP)	03 04 31
KIP	eP	02 57 38
SJ	eP'	03 06 10
	e	06 34
Dec. 7		
EUR	iP	04 48 35
HH	iP	04 49 06
RC	eP	04 48 17

Date and Station		Phase (GCT)
		h m s
Dec. 7		
COL	iP	06 34 12
HH	eP	06 35 27
Dec. 7		
TUC-T	eP	06 53 33
Dec. 7		
COL	eP	09 02 37
Dec. 7		
BC	eP	17 46 29
BOZ	eP	17 47 47
BUT	eP	17 47 50
EUR	iP	17 47 04
HH	eP	17 48 14
RC	eP	17 47 28
SLC	eP	17 47 05
TUC	iP	17 45 28
	eL	49 42
TUC-T	iP	17 45 28
Dec. 7		
BH	eL	18 10 05
BC	eP	18 02 24
	e	03 09
BOZ	eP	18 03 56
BUT	eP	18 03 59
COL	eP	18 07 31
	e	07 51
	e	08 15
COLU	eP	18 03 44
	eS	08 20
EUR	iP	18 03 13
HH	iP	18 04 22
	ePP	05 38
RC	eP	18 03 36
	e	03 40
	eL	11 56
SLC	eP	18 03 12
	e	04 07
TUC	iP	18 01 37
	eS	04 40
	eL	05 24
TUC-T	iP	18 01 37
	eL	06 44
UK	eP	18 03 42
	eL	10 44

Date and Station		Phase (GCT)
		h m s
WASH	eP	18 04 31
Dec. 8		
BC	eP	00 52 26
	e	52 44
EUR	eP	00 53 14
	eL	55 09
TUC	e(P)	00 52 38
	e	52 48
	e(S)	53 43
	eL	53 48
Dec. 8		
COL	eP	02 32 51
Dec. 8		
BC	eP	03 22 51
	epP	23 45
COL	iP	03 22 32
	ipP	23 23
EUR	iP	03 22 52
	ipP	23 44
TUC	eP	03 23 52
Dec. 8		
COL	iP	06 14 20
	iL	15 23
Dec. 8		
COL	iP	07 28 05
Dec. 8		
EUR	e(P)	08 14 30
Dec. 8		
EUR	eP	08 58 17
Dec. 8		
EUR	eP	09 20 12
Dec. 8		
COL	iP	11 49 48
EUR	iP	11 53 07
	ipP	53 24
RC	eP	11 53 34
TUC	eP	11 53 56
TUC-T	eP	11 53 56
	e	54 13
Dec. 8		
BC	eP	12 19 35
BOZ	eP	12 19 11
BUT	eP	12 19 03
	e	19 16
COL	iP	12 15 57
	eS	21 54
	eL	25 17

Date and Station		Phase (GCT)
		h m s
EUR	iP	12 19 17
	ipP	19 33
RC	iP	12 19 42
SLC	eP	12 19 27
TUC	eP	12 20 05
	e	20 18
TUC-T	eP	12 20 04
	e	20 17
Dec. 8		
COL	e(P)	13 06 40
Dec. 8		
COL	eP	18 47 09
Dec. 8		
COL	e(P)	19 33 47
Dec. 9		
COL	eP	01 04 50
Dec. 9		
EUR	eP	02 52 39
TUC	eP	02 52 33
	e	52 44
TUC-T	e(P)	02 52 33
	eP	52 36
Dec. 9		
COL	eP	03 18 09
Dec. 9		
COL	eP	03 28 06
Dec. 9		
COL	eP	07 43 44
	i	43 59
	i(S)	45 08
	iL	45 21
EUR	eP	07 49 21
HH	eP	07 48 13
	i	49 37
Dec. 9		
EUR	eP	07 47 17
TUC	eP	07 46 12
TUC-T	eP	07 46 11
Dec. 9		
COL	eP	08 18 20
EUR	eP	08 19 28
HH	eP	08 19 33
Dec. 9		
HH	i(P)	09 07 27

Date and Station		Phase	(GCT)
Dec. 9			h m s
BC	eP		12 30 48
COL	eP		12 30 33
	i		30 43
EUR	iP		12 30 49
TUC	eP		12 30 57
TUC-T	eP		12 30 58
Dec. 9			
EUR	eP		14 17 26
TUC-T	eP		14 15 48
Dec. 9			
BH	eP		15 15 12
	iS		16 24
EUR	eP		15 22 19
HH	e(P)		15 22 45
RC	eP		15 21 41
SJ	eP		15 16 43
	e		18 56
TUC-T	eP		15 21 24
Dec. 9			
EUR	eP		15 45 59
HH	eP		15 47 54
TUC-T	eP		15 47 34
Dec. 9			
BH	eP		19 04 00
	iS		04 46
COL	iP		19 14 31
EUR	eP		19 11 08
HH	iP		19 11 46
Dec. 9			
EUR	eP		19 30 13
Dec. 9			
BC	eP		19 29 48
BOZ	eP		19 31 03
BUT	eP		19 31 10
	e		31 43
EUR	iP		19 30 53
	i		31 39
HH	iP		19 31 23
	i		32 11
RC	iP		19 30 37
	e		31 10
SJ	eP		19 26 39
TUC	eP		19 30 04
TUC-T	iP		19 30 04
	i		30 50
	e		31 27
Dec. 9			
COL	eP		20 53 44
EUR	eP		20 55 14
HH	iP		20 54 35
Dec. 9			
TUC-T	eP		22 26 13
Dec. 9			
BC	eP		22 52 28
	e		53 42
EUR	e(P)		22 53 01
	eL		55 57
TUC	eP		22 51 36
	i		51 43
	e(S)		52 20
	eL		52 24
TUC-T	eP		22 51 31
	i		51 45
	eL		52 26
Dec. 9			
EUR	eP		23 11 25
Dec. 9			
COL	eP		23 54 48
HH	e(P)		23 56 58
Dec. 10			
EUR	eP		02 58 23
Dec. 10			
COL	iP		03 55 10
EUR	eP		03 57 38
	ePP		04 00 55
	ePKKP		13 22
HH	eP		03 56 57
	ePP		04 00 46
TUC	e(P')		04 02 41
TUC-T	e(P')		04 01 36
	epP'		02 48
Dec. 10			
EUR	eP		05 09 42
HH	e(P)		05 10 48
TUC	eP		05 08 28
TUC-T	iP		05 08 29
Dec. 10			
COL	eP		06 17 36
COL	eP		06 17 30
Dec. 10			
BH	i(SKKS)		07 27 46
BC	eP		07 16 00C
	ePP		19 56
BOZ	eP		07 16 38D
	ePP		20 57
BUT	eP		07 16 34D
	ePP		20 48
COL	eP		07 16 36C
	iPP		20 50
	eSKS		26 40
	e(SKKS)		27 30
	esS		30 12
	e(PKKP)		31 59
	ePKKP		32 22
	e(SSS)		40 22
	eL		45 22
COLU	eP'		07 21 15D
	ePP		22 36
	ePKKP		31 37
EUR	eP		07 16 06C
	iP		16 08C
	ipP		17 09
	iPP		20 14
	e		32 04
	iPKKP		33 11
	ipPKKP		34 32
	e		37 04
	eP'P'		40 49
	eSKPP'		43 57
	eP'P'P'		08 00 56
	i		01 28
HONO	iP		07 12 55D
	iPcP		13 35
	i(pP)		14 06
	e(S)		22 01
	isS		23 22
	esSS		27 08
	eL		34 52
HH	eP		07 16 39
	iP'		20 51
	eSKKS		27 30
	e(PKKP)		32 20
	iPKKP		32 38
	epPKKP		34 03
	eP'P'		40 32
RC	eP		07 16 54
	eP'		20 57
	iPP		21 26
SLC	eP		07 16 22
	eP'		20 33
	ePKKP		32 30
SJ	eP'		07 21 22
	iP'		21 23
	epP'		22 37
TUC	eP		07 15 59C
	iP		16 02
	epP		17 14
	ePP		19 55
	iPP		20 02
	iS		27 03
	eSP		28 16
	iPKKP		32 46
	i		33 17
	eL		37 42
	eP'P'		40 53
TUC-T	eP		07 16 00C
	iP		16 02
	e		19 15
	ePP		19 56
	eS		27 04
	iSP		28 21
	iPKKP		32 45
	i		33 17
	eP'P'		40 53
UK	iP		07 15 47C
	ePP		19 38
WASH	e(P')		07 21 00
	ipP'		22 48
Dec. 10			
COL	eP		07 30 57
Dec. 10			
COL	eP		08 01 33
Dec. 10			
EUR	iP		09 23 26
	ipP		24 06
HH	i(P)		09 23 14
Dec. 10			
BC	eP		13 38 24
	iP		38 30
	e		38 55
EUR	eP		13 39 04
Dec. 10			
COL	iP		14 51 12
	ipP		52 00
	e		15 01 14
EUR	eP		14 53 06
	ePKKP		15 08 24
	i		08 37
HH	e(P')		14 58 48
RC	ePKKP		15 08 09
TUC	ePKKP		15 08 08
TUC-T	ePKKP		15 08 07
Dec. 10			
BH	iP		16 12 42
	eS		14 16

Date and Station		Phase (GCT)
		h m s
EUR	iP	16 19 38
HH	iP	16 20 17
RC	eP	16 19 17
SJ	eP	16 16 04
	e	16 20
TUC-T	iP	16 18 33
Dec. 10		
COL	e(P)	16 56 47
Dec. 10		
EUR	eP	19 42 28
Dec. 10		
EUR	eP	20 53 32
HH	eP	20 55 17
TUC	e(P)	20 52 31
	eL	54 06
TUC-T	eP	20 51 55
	eL	54 06
Dec. 10		
SJ	iP	21 04 34
Dec. 10		
EUR	eP	21 17 49
	i	18 02
HH	iP	21 19 27
RC	eP	21 18 49
TUC	e(P)	21 16 06
	eL	18 14
TUC-T	eP	21 15 52
	eL	18 18
Dec. 10		
TUC-T	e(P)	21 40 52
	e	41 10
	eL	44 41
Dec. 10		
BC	eP	21 52 26
	e	53 12
	eL	55 52
BOZ	eP	21 54 13
BUT	eP	21 54 17
	eL	22 00 49
COL	iP	21 57 59
	i	58 09
	iPcP	59 40
	eL	22 08 36
COLU	eP	21 55 04

Date and Station		Phase (GCT)
		h m s
EUR	iP	21 53 13
	eS	56 39
	eL	57 33
HH	iP	21 54 41
RC	iP	21 54 03
	eS	57 03
	eL	22 00 06
	iL	01 51
SLC	eP	21 53 18
	eL	58 00
SJ	eP	21 57 02
TUC	eP	21 51 17
	iP	51 20
	eL	53 16
TUC-T	eP	21 51 17
	iP	51 20
	eL	53 18
UK	iP	21 53 46
	eL	59 12
WASH	eP	21 55 22
	eS	22 00 16
	eL	05 14
Dec. 10		
HH	eP	22 00 02
Dec. 10		
HH	e(P)	22 03 26
Dec. 10		
BC	eP	22 13 02
BOZ	eP	22 14 50
COL	eP	22 18 27
EUR	eP	22 13 33
	i	13 53
	eL	18 30
HH	iP	22 14 58
SJ	eP	22 17 45
Dec. 10		
HH	iP	22 15 16
Dec. 10		
EUR	eP	22 40 51
HH	iP	22 42 16
Dec. 10		
BC	eP	22 43 44
BOZ	eP	22 45 38
EUR	eP	22 44 31
HH	iP	22 46 00

Date and Station		Phase (GCT)
		h m s
RC	eP	22 45 20
	e	47 20
TUC	e(P)	22 41 03
	eL	44 57
Dec. 10		
EUR	eP	22 46 09
	e(L)	49 33
HH	eP	22 47 29
	i	47 36
	i	47 47
Dec. 10		
COL	eP	22 49 14
HH	iP	22 51 16
	i	51 22
Dec. 10		
BC	eP	23 17 24
BOZ	eP	23 19 36
COL	eP	23 23 19
COLU	e(P)	23 20 20
EUR	eP	23 16 02
HH	eP	23 17 28
RC	eP	23 19 21
	i	19 27
	e	25 27
SLC	eP	23 18 40
TUC	eP	23 16 38
	e(S)	18 35
	eL	18 56
TUC-T	e(P)	23 16 39
	e	16 45
	eL	18 55
UK	eP	23 19 11
Dec. 10		
EUR	iP	23 18 32
HH	iP	23 19 59
Dec. 10		
EUR	eP	23 37 10
HH	iP	23 38 35
TUC	e(P)	23 37 36
	e	38 20
	eL	41 34
TUC-T	e(P)	23 37 38
	e	41 40
Dec. 10		
EUR	eP	23 41 06

Date and Station		Phase (GCT)
		h m s
HH	i(P)	23 42 31
	i	42 48
Dec. 11		
EUR	eP	00 08 27
Dec. 11		
EUR	iP	00 15 20
TUC-T	eP	00 13 23
	eL	16 38
Dec. 11		
EUR	eP	01 05 21
TUC	eP	01 05 37
TUC-T	eP	01 05 30
Dec. 11		
EUR	eP	02 08 10
HH	eP	02 09 36
TUC	eP	02 06 14
	eL	08 25
TUC-T	eP	02 06 15
	eL	08 29
Dec. 11		
COL	eP	06 06 57
EUR	iP	06 10 15
HH	eP	06 09 46
	i	09 58
RC	eP	06 10 52
TUC	e(P)	06 11 03
	eP	11 14
TUC-T	eP	06 11 03
Dec. 11		
BC	eP	08 25 30
	eL	29 06
BOZ	eP	08 27 20
BUT	eP	08 27 22
COL	eP	08 31 06
EUR	iP	08 26 19
	eL	30 44
HH	iP	08 27 47
RC	eP	08 27 06
	eL	33 16
SLC	eP	08 26 21
TUC	eP	08 24 24
	e(S)	26 08
	eL	26 38

B 4297-4

Date and Station	Phase	Phase (GCT) h m s
TUC-T	eP	08 24 25
	iP	24 27
	e(S)	26 26
	iL	26 41
Dec. 11		
TUC-T	eP	09 40 09
Dec. 11		
BC	eP	09 54 06
BOZ	eP	09 55 23
COL	eP	09 58 45
EUR	iP	09 53 48
	iS	54 59
	iL	55 10
HH	iP	09 55 26
	eL	59 11
RC	iP	09 56 16
SLC	eP	09 54 40
	eL	57 10
TUC	eP	09 55 06
	e	55 10
	eL	58 20
TUC-T	eP	09 55 05
	e	55 26
	eL	58 22
UK	iP	09 52 52
	eS	53 17
	eL	53 21
Dec. 11		
EUR	eP	10 44 36
HH	eP	10 46 06
TUC	e(P)	10 42 42
	eL	44 57
TUC-T	eP	10 42 44
	eL	44 56
Dec. 11		
BUT	e(P)	12 47 07
EUR	eP	12 47 03
HH	eP	12 47 10
Dec. 11		
COL	eP	15 20 09
EUR	eP	15 22 49
HH	iP	15 22 31
Dec. 11		
BUT	eP	15 45 34
COL	iP	15 43 02
	i	43 08
EUR	iP	15 45 43
HH	iP	15 45 24
RC	eP	15 46 09
Dec. 11		
EUR	eP	18 26 23
Dec. 11		
COL	iP	18 47 50
EUR	iP	18 50 30
HH	iP	18 50 11
RC	eP	18 50 56
	e	51 04
TUC-T	eP	18 51 08
Dec. 11		
COL	e(P)	19 07 54
Dec. 11		
COL	eP	21 00 24
	i	00 45
EUR	eP	21 03 51
HH	iP	21 03 20
Dec. 11		
TUC-T	eP	22 52 32
	e	52 38
Dec. 12		
COL	e(P)	02 24 21
EUR	eP	02 23 49
TUC-T	eP	02 23 51
Dec. 12		
COL	i(P)	02 30 12
EUR	eP	02 29 46
Dec. 12		
BC	eP	05 27 23
COL	iP	05 32 06
	e	32 26
EUR	iP	05 27 50
HH	eP	05 28 39
TUC	iP	05 26 38
TUC-T	iP	05 26 38
Dec. 12		
COL	eP	05 48 41
Dec. 12		
TUC	eP	06 17 54
Dec. 12		
COL	eP	07 50 06
Dec. 12		
COL	e(P)	08 26 51
Dec. 12		
COL	eP	13 22 52
	i	22 56
	e	27 21
EUR	eP	13 26 26
HH	eP	13 25 52
Dec. 12		
COL	eP	13 42 14
Dec. 12		
COL	eP	18 00 55
HH	eP	18 03 33
Dec. 12		
EUR	eP	19 07 08
HH	iP	19 06 38
TUC	eP	19 08 10
TUC-T	eP	19 08 10
Dec. 13		
COL	eP	01 21 00
EUR	eP	01 24 26
	ipP	24 42
HH	eP	01 23 57
	i	27 32
RC	eP	01 25 06
TUC	eP	01 25 32
	e	25 45
TUC-T	eP	01 25 32
EUR	eP	01 28 00
Dec. 13		
EUR	eP	02 59 39
Dec. 13		
COL	eP	06 17 59
	i	18 21
EUR	eP	06 21 25
	i	22 25
HH	iP	06 20 52
	i	21 33
RC	eP	06 22 02
TUC	eP	06 22 24
TUC-T	eP	06 22 28
Dec. 13		
COL	iP	09 18 14
	e	18 42
EUR	eP	09 19 13
Dec. 13		
BUT	eP'	09 26 40
COL	eP'	09 27 21
	i	27 31
EUR	iP'	09 26 33
	iPP	28 10
HH	iP'	09 26 42
RC	eP'	09 26 26
SJ	eP	09 19 59
TUC	eP'	09 26 17
TUC-T	eP'	09 26 18
	ePP	27 17
Dec. 13		
EUR	eP	09 36 27
RC	eP	09 36 36
TUC	eP	09 37 08
TUC-T	eP	09 36 56
Dec. 13		
EUR	eP	09 40 25
Dec. 13		
TUC-T	e(P)	12 49 53
Dec. 13		
COL	eP	14 36 08
EUR	iP	14 39 25
HH	eP	14 38 57
RC	e(P)	14 39 59
Dec. 13		
EUR	eP	14 49 45
	iP	49 50
	iS	50 27
	iL	50 31
Dec. 13		
HH	i(P)	23 14 43
Dec. 14		
BC	e(P)	00 09 01
Dec. 14		
HH	iP	03 27 30
Dec. 14		
EUR	iP	04 07 07
	ipP	07 40

Date and Station		Phase (GCT)
Dec. 14		h m s
COL	iP	06 15 53
EUR	iP	06 19 10
HH	eP	06 18 43
RC	eP	06 19 35
TUC	e(P)	06 19 58
	e	20 09
Dec. 14		
BH	iP	07 20 38
	iS	28 05
BC	eP	07 22 46
BOZ	eP	07 23 42
BUT	eP	07 23 43
COLU	eP	07 23 01
	eS	32 24
EUR	iP	07 23 09
HH	iP	07 23 55
RC	iP	07 23 32
SJ	e(P)	07 22 24
TUC	iP	07 22 22
	e	22 44
	eL	40 22
Dec. 14		
EUR	eP	07 36 50
HH	eP	07 37 49
RC	eP	07 37 25
TUC	eP	07 36 14
Dec. 14		
COL	eP	08 34 42
Dec. 14		
BC	eP	13 30 12
	eL	34 20
BOZ	eP	13 32 00
BUT	eP	13 32 04
COL	eP	13 35 43
EUR	eP	13 30 58
	eL	36 35
HH	eP	13 32 25
RC	eP	13 31 45
	eL	39 49
SLC	eP	13 31 01

Date and Station		Phase (GCT)
		h m s
TUC	eP	13 29 07
	eL	31 29
TUC-T	iP	13 29 08
	eL	31 24
Dec. 14		
COL	iP	14 55 51
Dec. 14		
BH	iP	15 37 15
	iL	39 16
EUR	eP	15 44 09
HH	iP	15 44 49
RC	eP	15 43 50
SJ	eP	15 40 36
TUC	eP	15 43 06
Dec. 14		
COL	e(P)	18 02 28
EUR	eP	18 04 58
HH	e(P)	18 04 51
Dec. 14		
COL	iP	19 05 56
EUR	eP	19 09 23
Dec. 14		
HH	i(P)	20 47 35
Dec. 14		
HH	e(P)	22 28 42
Dec. 15		
EUR	eP	00 04 00
Dec. 15		
COL	eP	01 52 31
EUR	iP	01 55 54
Dec. 15		
COL	eP	02 24 31
EUR	eP	02 27 52
HH	e(P)	02 27 26
Dec. 15		
EUR	eP	03 38 50
Dec. 15		
EUR	eP	03 54 07
Dec. 15		
BC	eP	06 22 09
	e	22 22
EUR	eP	06 22 56

Date and Station		Phase (GCT)
		h m s
TUC	e(P)	06 22 14
	i	22 28
	eL	23 21
TUC-T	e(P)	06 22 16
	e	22 29
	i(S)	23 19
	eL	23 26
Dec. 15		
BH	eP	07 05 33
	iS	05 57
Dec. 15		
BH	iP	07 52 02
	iS	53 29
BUT	e(P)	07 59 30
EUR	eP	07 59 11
HH	iP	07 59 50
RC	eP	07 58 47
SLC	eP	07 59 00
SJ	iP	07 55 33
TUC	eP	07 58 07
TUC-T	iP	07 58 07
Dec. 15		
BC	eP	11 57 34
	epP	57 52
BOZ	eP	11 57 11
BUT	eP	11 57 01
	epP	57 19
COL	iP	11 53 58
EUR	iP	11 57 15
	ipP	57 32
HH	eP	11 56 48
	ipP	57 05
RC	eP	11 57 42
	ipP	57 58
SLC	eP	11 57 27
	epP	57 43
TUC	eP	11 58 09
	epP	58 23
TUC-T	e(P)	11 58 16
	ipP	58 22
Dec. 15		
HH	e(P)	12 25 52
Dec. 15		
COL	eP	12 54 08

Date and Station		Phase (GCT)
		h m s
EUR	iP	12 53 35
	i	53 51
TUC	iP	12 53 30
	e	53 47
TUC-T	iP	12 53 31
	e	53 42
	i	53 46
Dec. 15		
HH	e(P)	13 10 44
Dec. 15		
EUR	eP	13 20 40
TUC	e(P)	13 21 36
Dec. 15		
COL	iP	17 06 33
EUR	eP	17 09 50
Dec. 15		
TUC	eP	17 39 52
	e	40 49
Dec. 15		
EUR	eP	18 37 14
	e	37 46
Dec. 15		
COL	iP	19 04 42
HH	eP	19 05 00
	e	05 54
Dec. 15		
COL	eP	19 41 20
EUR	e(P)	19 44 50
Dec. 15		
COL	iP	20 00 18
HH	eP	20 03 09
Dec. 15		
COL	eP	20 09 15
EUR	eP	20 12 27
Dec. 15		
COL	eP	21 17 30
	i	17 42
	i(S)	18 53
	iL	19 02
Dec. 16		
COL	iP	02 40 01
	i	40 10
EUR	iP	02 43 19
	i	43 30
HH	iP	02 42 52
TUC	e(P)	02 44 08

Date and Station		Phase	(GCT) h m s
TUC-T		eP	02 44 08
Dec. 16			
COL		iP	03 17 11
Dec. 16			
EUR		eP	03 31 29
TUC		iP	03 31 29
TUC-T		iP	03 31 29
Dec. 16			
COL		iP	05 25 52
HH		e(P)	05 28 02
Dec. 16			
COL		iP	07 45 44
EUR		eP	07 49 02
Dec. 16			
COL		iP	10 22 14
		e	26 28
Dec. 16			
COL		eP	10 54 45
Dec. 16			
COL		eP	12 11 49
		i	12 03
EUR		eP	12 15 07
HH		eP	12 14 40
Dec. 16			
COL		e(P)	15 10 22
Dec. 16			
EUR		eP	17 16 48
Dec. 16			
HH		e(P)	19 12 18
Dec. 16			
COL		eP	21 44 10
		e	46 27
TUC		e(P)	21 46 56
Dec. 16			
EUR		eP	23 59 55
TUC		e(P)	00 01 40
Dec. 17			
BC		eP	02 33 14
COL		eP	02 28 53
		i	29 01
		eS	31 43
		eL	32 10
EUR		iP	02 32 41
		i	32 52
HH		eP	02 32 05
		ePP	33 03
		iPcP	35 06
		iScP	38 45
RC		eP	02 33 20
SJ		eP	02 37 57
		e	38 08
TUC		eP	02 33 55
		e	34 02
TUC-T		eP	02 33 58
Dec. 17			
EUR		eP	02 35 18
Dec. 17			
EUR		eP	02 38 59
Dec. 17			
COL		iP	03 21 09
HH		e(P)	03 24 13
Dec. 17			
BC		eP	09 09 02
BUT		iP	09 08 39
COL		iP	09 06 03
		i	06 19
		iPcP	07 02
		esP	08 09
EUR		iP	09 08 48
		i	09 08
		esP	11 19
HONO		eP	09 06 29
HH		iP	09 08 28
KIP		eP	09 06 29
RC		iP	09 09 11
		e	09 19
SLC		eP	09 08 58
TUC		eP	09 09 27
		esP	11 46
TUC-T		eP	09 09 27
Dec. 17			
BC		e(P)	13 32 13
EUR		eP	13 32 47
Dec. 17			
EUR		e(P)	15 43 27
TUC-T		eP	15 42 08
Dec. 17			
BC		eP	15 47 33
BOZ		eP	15 47 15
BUT		eP	15 47 09
COL		iP	15 44 40
		i	44 59
EUR		iP	15 47 20
HH		iP	15 46 58
RC		eP	15 47 38
SLC		eP	15 47 28
Dec. 17			
BC		e(P)	20 47 31
COL		iP	20 46 02
		i	46 32
EUR		eP	20 47 01
		i	47 26
HH		eP	20 47 34
Dec. 18			
EUR		iP	01 52 33
		ipP	52 58
TUC-T		e(P)	01 52 38
Dec. 18			
EUR		eP	03 15 52
HH		e(P)	03 16 21
Dec. 18			
COL		iP	04 29 50
HH		e(P)	04 32 09
Dec. 18			
COL		iP	05 16 40
		e	17 09
EUR		eP	05 17 40
Dec. 18			
COL		eP	05 23 12
Dec. 18			
EUR		eP	07 18 51
Dec. 18			
EUR		eP'	07 37 12
		i	37 27
HH		eP'	07 37 08
TUC		eP'	07 37 40
TUC-T		eP'	07 37 25
		e	37 40
Dec. 18			
COL		iP	07 37 57
		i	38 57
EUR		eP	07 40 15
HH		iP	07 39 55
Dec. 18			
COL		iP	07 46 10
TUC		eP	07 45 22
TUC-T		eP	07 45 20
Dec. 18			
BH		eP	07 45 08
		iS	45 20
EUR		eP	07 56 36
TUC-T		eP	07 56 02
Dec. 18			
EUR		e(P)	08 02 52
Dec. 18			
COL		eP	08 12 26
Dec. 18			
TUC		eP	08 38 12
TUC-T		eP	08 38 13
Dec. 18			
COL		eP	09 01 16
Dec. 18			
SLC		eP	11 06 09
		e	06 27
Dec. 18			
COL		eP	12 48 57
Dec. 18			
EUR		eP	13 14 08
Dec. 18			
COL		iP	13 28 10
		i	28 35
Dec. 18			
BH		iP	15 26 27
		iS	27 11
Dec. 18			
COL		eP	16 43 57
Dec. 18			
COL		iP	17 17 36
Dec. 18			
COL		iP	18 14 19
		i	14 28
EUR		iP	18 15 11
Dec. 18			
BC		eP	19 35 41
BUT		iP	19 36 18

Date and Station		Phase (GCT)
		h m s
COL	iP	19 36 21
EUR	iP	19 35 48
HH	iP	19 36 20
RC	eP	19 36 42
SLC	eP	19 36 07
TUC	iP	19 35 47
	e	36 28
	eL	58 51
TUC-T	iP	19 35 48
	ePP	38 44
UK	iP	19 35 22
Dec. 18		
COL	e(P)	19 42 42
Dec. 18		
COL	eP	20 43 58
	i	44 09
Dec. 18		
COL	eP	21 37 28
	eL	41 05
EUR	eP	21 39 21
HH	eP	21 38 11
	e	42 30
SIT	eP	21 35 13
	i	35 20
	eL	35 40
Dec. 19		
COL	iP	00 06 20
EUR	eP	00 09 55
RC	eP	00 10 33
Dec. 19		
BC	eP	01 15 35
EUR	eP	01 16 15
TUC	iP	01 14 38
	i	14 44
TUC-T	eP	01 14 37
	iP	14 38
Dec. 19		
COL	iP	02 00 20
	i	00 32
EUR	eP	02 04 08
Dec. 19		
COL	eP	03 39 25
EUR	eP	03 40 58
HH	e(P)	03 40 21

Date and Station		Phase (GCT)
Dec. 19		h m s
EUR	eP	03 42 56
Dec. 19		
EUR	eP	03 57 45
Dec. 19		
COL	iP	04 34 26
EUR	eP	04 35 29
HH	eP	04 35 35
Dec. 19		
COL	eP	05 35 48
EUR	eP	05 39 06
Dec. 19		
BUT	e(P)	10 02 10
EUR	eP	10 01 15
HH	eP	10 02 04
	e	02 22
TUC	eP	10 00 34
TUC-T	eP	10 00 35
Dec. 19		
BH	iP	11 20 11
BC	eP	11 25 19
	e(pP)	25 49
BUT	eP	11 26 00
COL	eP	11 28 12
	epP	28 29
	ePP	32 14
COLU	eP	11 23 35
	ipP	23 50
	iS	30 46
EUR	iP	11 25 40
	ipP	26 04
	isP	26 17
HH	iP	11 26 13
	epP	26 35
RC	iP	11 25 24
	ipP	25 39
SLC	eP	11 25 32
SJ	iP	11 21 28
	e(PP)	23 16
TUC	iP	11 24 46
TUC-T	iP	11 24 46
UK	eP	11 26 03
	epP	26 19
	e	26 46
Dec. 19		
EUR	eP	11 53 49

Date and Station		Phase (GCT)
Dec. 19		h m s
EUR	eP	12 43 55
Dec. 19		
BC	eP	13 22 42
EUR	eP	13 23 25
HH	e(P)	13 24 45
RC	eP	13 24 08
TUC	iP	13 21 41
TUC-T	iP	13 21 41
Dec. 19		
EUR	eP	14 39 37
	eL	41 55
Dec. 19		
BH	eP	14 38 04
	eS	39 00
EUR	eP	14 45 10
HH	iP	14 45 49
RC	eP	14 44 49
SLC	eP	14 45 00
SJ	iP	14 41 33
TUC	eP	14 44 07
TUC-T	iP	14 44 07
Dec. 19		
COL	iP	15 11 17
	iS	11 49
	iL	12 01
EUR	eP	15 18 24
RC	eP	15 19 53
	i	23 27
TUC	eP	15 17 38
Dec. 19		
BC	eP	18 44 54
BUT	eP	18 44 23
COL	eP	18 41 04
	iP	41 07
	eS	45 06
	eL	45 44
COLU	eP	18 47 26
EUR	eP	18 44 32
HH	iP	18 44 02
SLC	eP	18 44 46
SJ	eP	18 49 20
	e	49 31

Date and Station		Phase (GCT)
		h m s
TUC	eP	18 45 37
	eL	19 02 46
TUC-T	eP	18 45 32
	i	45 38
Dec. 19		
HH	iP	19 30 50
Dec. 20		
BC	eP	00 07 45
	e	08 37
EUR	eP	00 08 33
HH	eP	00 09 52
TUC	eP	00 07 57
	eL	08 53
TUC-T	e(P)	00 07 53
	i	08 08
	eL	08 54
Dec. 20		
EUR	eP	00 46 49
TUC	eP	00 46 20
TUC-T	eP	00 46 19
	i	46 22
Dec. 20		
BH	eP	02 13 49
EUR	eP	02 21 16
SJ	iP	02 14 58
	e	16 55
Dec. 20		
BC	e(P)	03 06 57
COL	i(P)	03 07 00
TUC	eP	03 06 39
TUC-T	eP	03 06 39
Dec. 20		
BC	eP	03 07 13
	eL	08 02
EUR	eP	03 07 46
	iL	10 02
TUC	eP	03 07 02
	e	07 11
	e	07 19
	eL	08 14
TUC-T	e(P)	03 07 03
	i	07 20
	eL	08 14
Dec. 20		
TUC	e(P)	10 14 44
	eP	14 47

Date and Station	Phase	(GCT)
		h m s
TUC-T	eP	10 14 47
Dec. 20		
EUR	eP	17 14 49
TUC	eP	17 10 08
Dec. 20		
TUC-T	eP	18 44 34
Dec. 20		
BC	eP	19 34 01
BOZ	eP	19 33 43
BUT	eP	19 33 38
COL	eP	19 31 09
	eS	39 31
	eL	53 27
EUR	iP	19 33 49
HH	iP	19 33 27
RC	eP	19 34 06
TUC	eP	19 34 24
TUC-T	eP	19 34 24
	ePP	38 21
Dec. 20		
EUR	iP	21 00 51
	i	01 00
	eS	01 41
	eL	01 45
HH	e(P)	21 02 12
SLC	eP	21 00 13
Dec. 20		
BC	eP'	21 31 56
COL	eP'	21 31 16
EUR	iP'	21 31 52
	ePP	34 30
	iPP	34 39
HH	iP'	21 31 48
RC	eP'	21 32 03
	e(PP)	35 14
TUC	eP'	21 32 05
TUC-T	iP'	21 32 05
	i(PP)	35 17
Dec. 20		
UK	eP	22 47 51
Dec. 21		
COL	eP	04 29 10
Dec. 21		
COL	iP	05 29 36
Dec. 21		h m s
BC	eP	06 00 11
BOZ	eP	05 59 26
COL	iP	05 57 04
	iPcP	57 55
	eS	06 05 49
	i	06 05
	e	09 27
	eL	13 06
	eP' P'	25 53
EUR	iP	05 59 52
	e	06 02 02
	i	03 09
HH	iP	05 59 12
RC	iP	05 59 37
SLC	eP	05 59 49
TUC	e(P)	06 00 29
	e	04 06
	ePKKP	16 48
	eL	43 52
TUC-T	eP	06 00 28
	ePP	04 37
	ePKKP	16 48
Dec. 21		
TUC	eP	10 10 24
TUC-T	eP	10 10 24
Dec. 21		
COL	iP	13 16 24
EUR	eP	13 16 04
HH	iP	13 16 32
	i	18 55
TUC	iP	13 16 05
TUC-T	iP	13 16 05
Dec. 21		
EUR	eP	20 46 25
TUC	e(P)	20 47 58
Dec. 21		
HH	e(P)	21 25 18
Dec. 22		
BC	eP	02 30 38
COL	iP	02 29 39
EUR	iP	02 30 34
Dec. 22		
EUR	iP	02 34 11
Dec. 22		
COL	iP	02 41 50
	iS	42 05
COL	iL	02 42 14
EUR	iP	02 47 57
HH	eP	02 46 52
	eL	54 38
TUC	eP	02 49 09
TUC-T	iP	02 49 09
	i	49 13
Dec. 22		
HH	eP	03 29 00
Dec. 22		
HH	eP	03 31 43
Dec. 22		
EUR	iP	08 08 54
SLC	eP	08 09 10
TUC	iP	08 09 54
TUC-T	iP	08 09 54
Dec. 22		
COL	eP	17 46 41
Dec. 23		
COL	eP	03 42 45
HH	eP	03 42 49
TUC	eP	03 42 16
TUC-T	iP	03 42 17
	e	42 24
Dec. 23		
COL	e(P)	03 47 58
Dec. 23		
RC	iP	05 35 48
Dec. 23		
BH	eP	06 29 02
	eS	30 10
BC	eP	06 35 53
BOZ	eP	06 36 25
BUT	eP	06 36 32
COL	iP	06 39 22
COLU	eP	06 33 42
HH	iP	06 36 49
SLC	eP	06 36 03
	e	36 13
SJ	iP	06 31 55
	eS	36 10
TUC	iP	06 35 13
TUC	e	06 35 28
TUC-T	iP	06 35 13
	e	36 36
	ePcP	36 57
Dec. 23		
COL	eP	07 08 36
HH	eP	07 11 46
Dec. 23		
COL	eP	09 25 03
	e	28 29
Dec. 23		
BC	eP	11 17 04
	e	17 50
Dec. 23		
EUR	eP	17 33 05
Dec. 23		
COL	eP	18 58 28
Dec. 23		
TUC-T	eP	22 05 36
Dec. 23		
HH	e(P)	22 27 15
Dec. 24		
COL	i(P)	00 01 47
Dec. 24		
EUR	eP	00 58 21
TUC	eP	00 57 11
TUC-T	eP	00 57 10
Dec. 24		
COL	eP	01 25 41
EUR	eP	01 26 45
Dec. 24		
COL	iP	04 44 13
EUR	eP	04 48 05
HH	eP	04 47 00
TUC-T	eP	04 48 17
Dec. 24		
COL	iP	04 51 58
Dec. 24		
COL	iP	05 19 17
Dec. 24		
COL	eP	06 45 47
EUR	eP	06 45 13
TUC	eP	06 45 11

Date and Station	Phase (GCT)
	h m s
TUC-T iP	06 45 12
e	45 20
Dec. 24	
COL eP	07 29 20
HH eP	07 30 12
RC eP	07 30 11
Dec. 24	
EUR eP	12 24 36
HH e(P)	12 25 04
RC eP	12 24 20
TUC eP	12 23 46
Dec. 24	
EUR eP	13 12 04
Dec. 24	
EUR eP	16 06 07
Dec. 24	
EUR eP	17 25 23
Dec. 24	
EUR e(P)	19 29 58
TUC e(P)	19 26 30
e	26 41
eL	27 24
TUC-T eP	19 26 31
i	26 44
eL	27 24
Dec. 24	
HH e(P)	19 37 28
Dec. 24	
TUC e(P)	20 29 23
eL	30 19
TUC-T e(P)	20 29 16
e	29 24
eL	30 19
Dec. 24	
COL eP	20 48 21
EUR eP	20 48 30
TUC-T eP	20 48 38
Dec. 24	
EUR eP	22 14 15
Dec. 24	
COL eP	22 23 56
EUR iP	22 24 07
Dec. 25	
EUR iP	01 28 54
iL	31 14

Date and Station	Phase (GCT)
	h m s
TUC eP	01 28 17
i	28 25
eL	29 24
TUC-T eP	01 28 13
i	28 27
eL	29 19
Dec. 25	
COL iP	06 43 31
EUR iP	06 43 38
TUC iP	06 43 43
TUC-T iP	06 43 44
Dec. 25	
BOZ eP	08 19 20C
e	19 31
BUT eP	08 19 14D
COL iP	08 18 01C
i	18 13
eS	28 11
eSeS	29 01
eSS	32 39
eL	40 22
eP' P'	44 29
COLU eP	08 24 37D
EUR iP	08 19 04C
ipP	19 27
ePP	22 40
e	26 06
e	29 43
ePKKP	35 41
iPKKP	36 07
eP' P'	44 07
HONO eP	08 15 19C
ipP	15 35
eS	23 10
eL	28 50
HH iP	08 19 10C
ePP	23 03
e(PKKP)	35 54
eP' P'	44 10
RC iP	08 19 45C
e	19 57
ePP	24 29
ePKKP	35 28
SLC eP	08 19 17C
SJ iP'	08 25 08C
i	25 20
ePP	28 08
SIT eP	08 18 16D
e	18 28
TUC eP	08 19 23C
e	19 37

Date and Station	Phase (GCT)
	h m s
TUC ePP	08 23 11
iPP	23 24
e(SKS)	30 27
ePS	32 19
ePKKP	35 44
eP' P'	44 06
eL	48 31
TUC-T iP	08 19 23C
e	19 35
iPP	23 24
ePKKP	35 41
e	36 08
eP' P'	44 03
Dec. 25	
COL eP	09 16 16
EUR eP	09 19 42
HH eP	09 19 12
ePeP	21 26
RC e(P)	09 20 21
e	20 34
TUC e(P)	09 20 44
Dec. 25	
EUR eP	09 50 01
Dec. 25	
COL eP	10 55 24
i	55 31
iL	56 39
Dec. 25	
TUC iP	11 25 21
TUC-T eP	11 25 22
Dec. 25	
COL eP	18 46 09
e	46 33
Dec. 26	
HH e(P)	02 42 53
Dec. 26	
COL iP	04 13 43
EUR eP	04 17 04
HH eP	04 16 35
TUC eP	04 17 51
Dec. 26	
BC eP	06 02 41
COL iP	06 03 06
epP	05 13
eP' P'	30 48
EUR eP	06 02 47
epP	04 56
HH epP	06 05 28

Date and Station	Phase (GCT)
	h m s
SLC eP	06 03 02
TUC iP	06 02 46
ipP	04 58
TUC-T iP	06 02 47
epP	04 54
ipP	04 58
Dec. 26	
EUR eP	06 34 18
Dec. 26	
COL e(P)	08 01 19
Dec. 26	
COL iP	14 41 07
Dec. 26	
COL e(P)	16 46 20
EUR eP	16 49 42
Dec. 26	
EUR eP	17 30 34
epP	31 10
TUC-T eP	17 31 18
Dec. 26	
COL eP	17 54 30
EUR eP	17 55 08
Dec. 26	
COL iP	18 28 20
Dec. 26	
TUC-T eP	21 16 37
Dec. 27	
COL eP	00 04 18
EUR eP	00 07 17
Dec. 27	
TUC eP	02 04 09
TUC-T eP	02 04 10
Dec. 27	
SJ eP	03 47 46
eL	48 39
Dec. 27	
COL eP	06 26 15
TUC eP	06 25 58
TUC-T eP	06 25 58
Dec. 27	
COL eP	08 37 54
EUR eP	08 38 14
TUC-T eP	08 38 24

Date and Station		Phase (GCT)
		h m s
Dec. 27		
KIP	iP	09 18 09
	iS	18 40
	iL	18 44
Dec. 27		
COL	eP	13 38 02
	iL	40 21
EUR	iP	13 41 16
HH	eP	13 40 09
	eL	45 05
SIT	iP	13 36 07
	eL	38 00
TUC	eP	13 42 31
TUC-T	eP	13 42 31
Dec. 27		
COL	e(P)	14 32 25
Dec. 27		
TUC	e(P)	15 47 31
Dec. 27		
COL	eP	18 36 32
Dec. 27		
HH	e(P)	19 08 04
	e	08 16
	iL	09 05
Dec. 27		
EUR	e(P)	19 33 44
Dec. 27		
EUR	eP	20 06 08
Dec. 27		
HH	eP	21 36 43
Dec. 27		
COL	e(P)	22 35 23
Dec. 27		
EUR	eP	23 35 17
Dec. 27		
EUR	eP	23 53 54
Dec. 28		
EUR	eP	02 26 00
Dec. 28		
RC	eP	05 22 07
BOZ	eP	05 22 17
BUT	eP	05 22 27
COL	iP	05 25 06
	i	25 33
EUR	iP	05 22 19
	i	22 39
	eP' P'	52 30
	i	53 11

Date and Station		Phase (GCT)
		h m s
EUR	i	05 53 40
HH	iP	05 22 40
RC	eP	05 21 39
	e	23 29
	eP' P'	52 38
	e	53 15
SLC	eP	05 22 09
SJ	iP	05 15 39
	e(S)	17 18
	eL	17 26
TUC	e(P)	05 21 27
	e	21 32
TUC-T	eP	05 21 27
	i	21 32
Dec. 28		
COL	iP	05 46 40
	eS	56 44
	eP' P'	06 13 28
	eL	16 23
EUR	e(P)	05 49 01
	e(P')	52 31
	iPP	53 48
	ePKKP	06 04 17
HH	eP	05 48 29
	e	52 19
	ePP	52 38
SIT	eP	05 47 33
TUC	eP'	05 53 27
TUC-T	eP'	05 53 27
	iP'	53 28
	ePP	54 37
	ePKKP	06 04 51
COL	eP	06 17 01
SJ	iP	06 47 38
	eL	48 09
Dec. 28		
COL	iP	06 56 42
	epP	58 36
EUR	iP	06 56 22
HH	eP	06 56 49
TUC	iP	06 56 23
TUC-T	iP	06 56 23
Dec. 28		
COL	iP	08 38 14
EUR	eP	08 39 32
Dec. 28		
EUR	iP	09 24 48

Date and Station		Phase (GCT)
		h m s
HH	eP	09 25 26
Dec. 28		
EUR	eP	11 46 17
TUC-T	eP	11 45 43
	e	45 49
Dec. 28		
COL	eP	11 43 41
EUR	eP	11 47 19
HH	eP	11 46 07
RC	eP	11 46 28
Dec. 28		
COL	iP	11 54 46
	i	54 53
EUR	eP	11 56 55
HH	eP	11 55 51
RC	e(P)	11 56 04
SLC	eP	11 56 39
TUC	eP	11 57 31
	e	57 38
TUC-T	eP	11 57 30
	i	57 37
Dec. 28		
COL	eP	14 36 02
Dec. 28		
COL	eP	15 34 18
Dec. 28		
COL	eP	17 34 39
	i	34 44
EUR	eP	17 35 52
Dec. 28		
COL	eP	23 14 56
Dec. 28		
COL	eP	23 48 47
EUR	e(P)	23 52 06
Dec. 29		
COL	eP	02 44 13
Dec. 29		
COL	eP	03 09 17
Dec. 29		
COL	eP	03 09 08
Dec. 29		
COL	eP	08 52 28
EUR	eP	08 55 51

Date and Station		Phase (GCT)
		h m s
HH	eP	08 55 24
Dec. 29		
COL	e(P)	10 11 22
Dec. 29		
BC	eP	10 49 09
BOZ	eP	10 50 31
BUT	eP	10 50 34
COL	eP	10 54 12
EUR	iP	10 49 44
HH	eP	10 50 51
RC	eP	10 50 20
	e	50 35
SLC	eP	10 49 47
TUC	eP	10 48 09
	eL	54 33
Dec. 29		
COL	iP	14 38 12
	i	39 36
EUR	eP	14 31 21
	i	31 27
	eS	31 56
	iL	31 59
SLC	eP	14 31 29
TUC	eP	14 32 21
	eL	33 42
TUC-T	eP	14 32 20
	i	32 26
	eL	33 34
Dec. 29		
COL	iP	16 46 05
Dec. 29		
COL	eP	20 38 15
	e	39 02
EUR	iP	20 34 46
	ipP	36 27
HH	iP	20 35 47
RC	iP	20 35 17
	i	35 24
TUC-T	eP	20 33 40
	e	33 47
Dec. 29		
HH	i(P)	21 01 47
Dec. 29		
HH	i(P)	21 15 16

Date and Station		Phase (GCT)
		h m s
Dec. 29		
HH	eP	22 24 07
Dec. 29		
COL	eP	22 52 00
	e	55 20
EUR	iP'	22 57 30
HH	iP'	22 57 18
RC	eP'	22 57 38
	e	58 19
TUC-T	eP	22 57 37
	e	57 48
	i	58 24
Dec. 29		
EUR	eP	23 00 35
RC	eP	23 00 47
TUC-T	iP	23 01 03
	e	02 12
Dec. 30		
EUR	eP	01 46 06
Dec. 30		
HH	e(P)	04 42 32
Dec. 30		
COL	e(P)	06 52 18
Dec. 30		
BC	eP	08 49 20
BOZ	eP	08 50 15
BUT	eP	08 50 16
COLU	eP	08 49 30
EUR	iP	08 49 42
	i	49 58
HH	iP	08 50 28
RC	iP	08 50 11
SLC	eP	08 49 46
	e	50 00
SJ	eP	08 48 44
	e	49 25
TUC	iP	08 48 55
TUC-T	eP	08 48 55
	iP	48 56
UK	eP	08 49 45
	e	49 49
Dec. 30		
BOZ	e(P)	10 29 21
COL	eP	10 26 01
	i	26 49

Date and Station		Phase (GCT)
		h m s
EUR	eP	10 29 25
	i	29 44
HH	iP	10 28 55
RC	eP	10 30 09
	e	30 24
TUC	e(P)	10 30 42
Dec. 30		
HH	e(P)	11 47 05
	e	47 27
Dec. 30		
COL	e(P)	15 18 44
EUR	eP	15 22 44
Dec. 30		
COL	eP	16 19 14
EUR	iP	16 19 25
Dec. 30		
HH	eP	16 32 01
Dec. 30		
EUR	eP	19 18 17
Dec. 30		
HH	e(P)	21 37 33
Dec. 31		
COL	e(P)	01 20 12
Dec. 31		
EUR	eP	01 46 06
COL	eP	01 46 40
Dec. 31		
EUR	eP	01 52 29
TUC	iP	01 52 28
TUC-T	iP	01 52 29
Dec. 31		
BC	eP	01 57 47
	epP	59 13
BUT	eP	01 58 18
	epP	59 45
COL	iP	01 58 16
	i	58 26
	epP	59 42
EUR	iP	01 57 52
	i	58 02
	ipP	59 18
	ePKKP	02 03 00
HH	iP	01 58 19
	epP	59 49
	iPKKP	02 15 39
	eP' P'	23 48

Date and Station		Phase (GCT)
		h m s
RC	e(P)	01 57 35
	e	58 45
	i	02 00 15
SLC	eP	01 58 07
TUC	iP	01 57 50
	ipP	59 19
TUC-T	eP	01 57 50
	iP	57 51
	ipP	59 17
Dec. 31		
EUR	eP	02 24 00
Dec. 31		
COL	iP	03 57 18
	i	04 00 22
HH	e(P')	04 03 08
Dec. 31		
COL	eP	05 12 28
TUC-T	eP	05 15 32
Dec. 31		
BC	eP	10 41 29
BOZ	eP	10 41 03
BUT	eP	10 40 57
COL	iP	10 37 44
	ipP	37 57
EUR	iP	10 41 09
	ipP	41 28
	isP	41 39
HH	iP	10 40 39
RC	iP	10 41 41
SLC	eP	10 41 20
TUC	iP	10 41 59
TUC-T	iP	10 41 59
Dec. 31		
EUR	eP	13 08 09
Dec. 31		
EUR	eP	17 11 59
TUC	eP	17 12 09
Dec. 31		
HH	e(P)	21 47 59

Date and Station		Phase (GCT)
		h m s

Date and Station	Phase (GCT)
	h m s
Local and Minor Earthquakes	
Dec.	
BUT	
4	11.8
Dec.	
COL	
1	15.2
2	12.6
5	07.4
7	20.2
10	04.3
	10.4
11	08.9
	22.8
13	07.3
14	23.8
15	03.1
	07.1
	11.2
	23.0
16	06.2
22	05.7
	14.7
23	04.9
	17.7
24	04.3
27	03.7
Dec.	
EUR	
5	05.4
6	20.9
15	15.0
	15.4
16	21.3
17	03.0
	22.7
18	00.2
	04.6
	11.1
22	15.2
28	13.7
29	14.5
30	06.3
Dec.	
HONO	
9	01.9
11	01.5
28	09.3
Dec.	
KIP	
9	01.9
16	01.5
Dec.	
SJ	
5	10.3
	11.2
	13.5
11	16.7

Date and Station	Phase (GCT)
	h m s
SJ	
12	05.6
16	03.7
19	10.8
22	08.9
23	22.6
24	06.6
	18.1
25	07.7
29	14.6
Dec.	
SIT	
20	06.0
Dec.	
TUC	
1	03.5
	03.7
	04.4
	04.6
	06.7
	09.0
	09.5
	11.4
	11.7
	11.8
	12.5
	12.9
2	00.3
	02.2
	02.3
	06.0
	08.2
	10.3
	11.9
	13.3
	14.0
4	00.6
	03.2
5	07.5
	10.6
	13.4
6	21.8
7	00.4
	02.8
	04.2
8	01.1
	04.4
9	04.6
	06.2
	11.5
	19.4
10	00.1
	01.2
	02.7
	13.7
11	03.9
	04.4
	11.2
	19.6
12	00.6
	11.6
	18.8
13	05.1

Date and Station	Phase (GCT)
	h m s
TUC	
13	09.1
	09.3
	16.1
14	00.1
15	13.6
16	07.7
	18.5
17	13.5
18	07.3
	09.2
	11.1
19	04.4
	05.1
	06.3
	07.2
	07.4
	09.9
	14.6
20	01.2
	01.3
	04.3
	04.8
	04.9
21	09.5
23	06.9
	07.9
	10.0
	11.3
25	03.6
	05.5
	06.6
26	08.6
	13.5
28	02.4
	03.3
	16.3
31	06.4
	08.6
	08.9
	09.9
Dec.	
UK	
3	09.4
11	21.7