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SEISMOLOGICAL BULLETIN

October, 1957

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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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1957

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
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 (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.

Kipapa is located in Kipapa Gulch, Oahu, T. H., and was established in April, 1957 to serve as an outpost station for Honolulu.

US COMM-CGS-DC-

Date 1957	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Oct.	h m s	°	°	
1	07 12 26*	5½ S.	155 E.	Solomon Islands. Felt at Rabaul. h about 100 km.
1	23 20 50*	7 S.	74 W.	Peru-Brazil border.
2	11 25 02*	5½ N.	127 E.	Mindanao aftershock.
2	12 27 55*	11 N.	63 W.	Venezuela foreshock. Felt at Trinidad. Mag. 6-1/2 - 6-3/4.
2	20 42 52**			Bouvet Island region.
2	20 58 39*	6½ S.	69½ E.	Chagos Islands.
3.	01 34 35*	43 N.	144 E.	Hokkaido, Japan.
3	05 58 12*	4 S.	134 E.	New Guinea.
3	06 39 08*	10½ N.	62½ W.	Venezuela foreshock.
4	00 21 07*	30½ N.	42 W.	Mid-Atlantic Ocean.
4	01 01 00*	21½ S.	178 W.	Fiji Islands region. h about 400 km.
4	05 26 09*	11 N.	63 W.	Near coast of Venezuela. h about 60 km. Mag. 6-3/4.
4	06 05 50*	11 N.	62½ W.	Venezuela aftershock.
4	06 17 45*	11 N.	62½ W.	Do.
4	23 55 45*	53 N.	178 E.	Rat Islands, Aleutian Islands.
5	11 36 46*	34½ N.	26½ E.	Near Isle of Crete.
5	15 51 48*	34½ N.	27 E.	Crete aftershock.
5	16 05 38*	10½ S.	122½ E.	Timor Island region.
5	22 40 44*	38 N.	69½ E.	Afghanistan-Tadzhik border.
6	00 54 05*	11 N.	62½ W.	Venezuela aftershock.
6	21 27 51*	49½ N.	155 E.	Northern Kurile Islands. h about 60 km.
6	23 27 00*	52 N.	174 W.	Andreanof Islands, Aleutian Islands.
7	03 53 53*	21 S.	174½ W.	Tonga Islands.
7	05 10 17*	53½ N.	165 W.	Unimak Island region.
7	07 31 14*	7 S.	155 E.	Solomon Islands. h about 150 km.
7	13 19 45*	51 N.	159 E.	Off southeast coast of Kamchatka.
7	16 48 47*	20 S.	179 W.	Fiji Islands. h about 650 km.
8	01 27 28**			Off southeast coast of Mindanao, Philippine Islands.
8	05 31 53*	46 N.	153 E.	Kurile Islands.
8	06 53 31*	23½ S.	68 W.	Northern Chile. Felt at Antofagasta. h about 150 km.
9	01 25 35*	53½ S.	134½ W.	South Pacific Ocean.
10	01 43 00*	52½ N.	169½ W.	Fox Islands, Aleutian Islands.
10	03 39 11*	52½ N.	166½ W.	Do.
10	03 46 59*	22 S.	178½ E.	South of Fiji Islands. h about 700 km.
10	05 44 32*	52 N.	174½ W.	Andreanof Islands, Aleutian Islands.
10	06 54 44*	71 N.	52½ E.	Novaya Zemlya.
10	07 38 18*	52 N.	174 W.	Andreanof Islands, Aleutian Islands.

Date 1957	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Oct.	h m s	°	°	
10	18 44 30*	23 S.	179 W.	Fiji Islands region. h about 400 km.
10	18 53 59*	54 N.	166 W.	Fox Islands, Aleutian Islands. Mag. 5-3/4 (Berk).
11	00 21 50*	52½ N.	170 W.	Fox Islands, Aleutian Islands.
12	16 46 30*	59 S.	16 W.	Sandwich Islands region.
12	17 35 26*	14 N.	145 E.	Mariana Islands. h about 100 km.
12	18 57 02*	8 S.	111 E.	Near south coast of Java.
12	22 03 00*	3 S.	146½ E.	Bismarck Sea.
13	04 19 17*	52½ N.	160 E.	Off southeast coast of Kamchatka.
13	20 33 01*	60 S.	151 E.	Antarctic Ocean, southwest of Macquarie Island.
14	08 17 36*	11 N.	63 W.	Near coast of Venezuela.
14	13 27 42*	51½ N.	173 W.	Andreanof Islands, Aleutian Islands.
15	04 02 07*	9 N.	84 W.	Near south coast of Costa Rica.
15	05 55 21*	30 S.	179 W.	Kermadec Islands. h about 150 km.
15	09 11 04**			Central Bolivia.
16	21 37 19**			Andreanof Islands, Aleutian Islands.
17	10 14 12*	39½ N.	118½ W.	Nevada. Felt at Fallon. Mag. 4-1/2.
17	14 21 44*	31 N.	141½ E.	South of Honshu, Japan.
17	14 29 18*	46 N.	27 W.	North Atlantic foreshock.
17	14 37 36*	47 N.	27½ W.	North Atlantic Ocean.
17	15 20 26*	10 N.	126 E.	Near north coast of Mindanao, Philippine Islands.
17	17 36 25*	46 N.	27½ W.	North Atlantic aftershock.
18	01 50 48*	38½ N.	21½ E.	Central Greece. Felt.
18	07 41 02**			New Britain region. Felt at Rabaul.
18	19 08 53*	22 S.	172 E.	Loyalty Islands region.
18	21 43 58*	17 N.	95 W.	Oaxaca, Mexico. Felt. h about 150 km.
19	06 13 58**			Guerrero, Mexico. Felt.
19	18 28 50*	23½ N.	122 E.	Near east coast of Formosa. Several killed at Hotai and slight damage at Taipei. Mag. 6-1/2 - 6-3/4.
19	21 41 59*	44½ N.	146 E.	Off northeast coast of Hokkaido, Japan. h about 150 km. Mag. 6-1/2 - 6-3/4.
20	02 54 48*	14½ S.	76 W.	Near coast of Peru.
20	12 04 22*	11½ N.	42 W.	Atlantic Ocean.
21	00 17 25*	11 S.	167 E.	Santa Cruz Islands. h about 100 km.
21	07 04 39*	22 S.	179½ W.	Fiji Islands region. h about 600 km.
21	14 25 46*	34 N.	38 W.	North Atlantic Ocean.
22	20 44 38*	43½ N.	146 E.	Near northeast coast of Hokkaido, Japan.
23	04 38 30*	19 N.	64 W.	Puerto Rico. Felt.
23	05 56 52*	52½ N.	169½ W.	Fox Islands, Aleutian Islands. Mag. 6-1/4.
23	12 13 36**			Kermadec Islands.

Date 1957	Origin Time. G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks.
Oct.	h m s	°	°	
23	23 51 33*	32 S.	67 W.	San Luis Province, Argentina.
24	00 17 37*	14½ S.	168 E.	New Hebrides Islands. Mag. 6-1/2.
24	02 33 13*	40 N.	29½ E.	Northwestern Turkey. Felt.
24	09 07 30*	20½ S.	179 W.	Fiji Islands. h about 550 km.
24	20 07 15*	29 S.	68 W.	La Rioja Province, Argentina. Moderate damage at Jague, Vinchina and Villa Castelli.
24	21 44 28*	25 N.	109½ W.	Gulf of California. Mag. 6.
25	01 42 52*	21½ N.	121½ E.	Formosa foreshock.
25	02 18 18*	38 N.	22½ E.	Greece. Felt.
25	03 16 03*	22 N.	121½ E.	Batan Islands.
25	04 37 35*	52½ N.	169½ W.	Fox Islands, Aleutian Islands.
25	06 19 06*	21½ N.	121½ E.	Off coast of Formosa.
25	10 03 32*	50½ N.	156½ E.	Near south coast of Kamchatka. Mag. 6-3/4.
25	11 39 52*	51½ N.	171 W.	Fox Islands, Aleutian Islands.
25	22 44 51*	14 N.	120½ E.	Luzon, Philippine Islands. h about 200 km.
26	04 31 03*	0	125 E.	Molucca Passage.
26	08 26 12*	20½ S.	178 W.	Fiji Islands. h about 600 km. Mag. 6 - 6-1/4.
26	14 16 57*	2 S.	116 E.	Borneo.
27	05 40 56*	13½ S.	167½ E.	New Hebrides Islands. h about 150 km.
27	18 29 04*	16 N.	88 W.	Near north coast of Honduras.
27	22 32 25*	56 N.	161 E.	Kamchatka. Mag. 6-1/2 - 6-3/4.
27	22 56 55*	11½ S.	166½ E.	Santa Cruz Islands.
28	05 55 35**			Panama foreshock.
28	14 18 20**			Off coast of Oaxaca, Mexico.
29	00 09 07*	53½ N.	160 E.	Near east coast of Kamchatka.
29	02 21 30*	2 S.	116 E.	Borneo aftershock.
29	08 02 05*	50 N.	179 W.	Andreanof Islands, Aleutian Islands.
30	01 43 03*	36 N.	27½ E.	Dodecanese Islands. Felt on Karpathos.
30	02 13 08*	53 N.	167 W.	Fox Islands, Aleutian Islands.
30	02 50 26*	50½ N.	179 W.	Andreanof Islands, Aleutian Islands.
30	07 30 20*	36 N.	27½ E.	Dodecanese Islands. Felt on Karpathos.
30	23 24 40*	7 N.	72 W.	Colombia-Venezuela border. h about 100 km.
31	02 36 56*	39 N.	140 E.	Honshu, Japan. Felt at Tokyo.
31	02 47 45*	39 N.	123½ W.	Mendocino County, California. Felt in Mendocino and Humboldt Counties. Mag. 5 - 5-1/4.(Berk).
31	04 24 04*	8 S.	161 E.	Solomon Islands region.
31	10 07 54*	6½ N.	83 W.	Off coast of Panama. Felt at Balboa Heights, Canal Zone and on board "S. S. Hai Huang". Mag. 6-1/2 - 6-3/4.
31	15 29 10*	55 S.	148 E.	South of Tasmania.
31	16 24 17*	1½ N.	86 W.	Galapagos Islands region.
31	19 47 05*	37½ N.	122½ W.	San Mateo County, California. Felt.

Date and Station		Phase	(GCT) h m s
Oct. 1			
HH		eP	00 41 28
Oct. 1			
COL		eP	03 18 10
Oct. 1			
HH		eP	06 59 08
Oct. 1			
COL		iP	07 24 41
		ipP	25 05
EUR		iP	07 25 38
Oct. 1			
COL		eP	07 43 25
HH		e(P)	07 39 23
		e	39 45
Oct. 1			
COL		eP	08 20 32
Oct. 1			
COL		eP	09 35 34
Oct. 1			
COL		eP	09 57 15
Oct. 1			
COL		iP	12 34 21
		i	34 30
Oct. 1			
BC		eP	12 57 35
EUR		eP	12 57 19
		i	57 33
		eS	58 17
		eL	58 36
UK		eP	12 57 09
		e	57 49
Oct. 1			
COL		iP	13 12 25
Oct. 1			
EUR		eP	15 17 51
Oct. 1			
HH		eP	21 39 02
Oct. 1			
EUR		eP	22 37 16
Oct. 1			
EUR		eP	23 17 09
Oct. 1			
COL		iP	23 33 36
EUR.		eP	23 31 03
HH		iP	23 31 32
SJ		eP	23 26 30

Date and Station		Phase	(GCT) h m s
Oct. 2			
HH		eP	00 39 19
		i	39 45
Oct. 2			
HH		eP	03 59 59
		e	04 06 02
Oct. 2			
COL		eP	04 11 41
		epP	12 27
HH		e(P)	04 12 59
		e	18 18
Oct. 2			
COL		eP	06 05 18
		e	08 14
EUR		eP	06 09 26
Oct. 2			
COL		eP	06 29 46
Oct. 2			
COL		eP	08 45 15
Oct. 2			
COL		eP	11 37 29
EUR		ePP	11 42 49
KIP		eP	11 36 51
Oct. 2			
EUR		eP	11 55 07
Oct. 2			
BH		iP	12 31 48
BC		iP	12 37 15
		i	37 21
		eS	44 53
		eL	50 06
BOZ		iP	12 37 20
		i	37 25
		i	37 54
		iPcP	38 30
BUT		iP	12 37 26
		eS	45 05
		eL	51 58
CHI		eP	12 35 15
		eS	41 03
		eL	45 11
COL		eP	12 39 53
		i	40 01
		i	40 43
		iPP	42 55
COLU		iP	12 33 51
		ePP	34 45
		e(PcP)	35 50
		iS	38 36
		iL	39 23
EUR		iP	12 37 28

Date and Station		Phase	(GCT) h m s
HH		iP	12 37 39
		e(P'P')	13 07 16
PHIL		eP	12 34 16
		ePP	35 14
		iS	39 22
		iL	43 18
SLC		iP	12 37 09
		i	37 28
		iPP	39 08
		eS	44 32
		eL	48 56
SJ		eP	12 29 54
		i	30 12
		iS	31 21
		iL	31 30
SIT		iP	12 39 20
TUC		iP	12 36 44
		ePcP	38 26
		ePPP	39 54
		eS	43 49
		eL	48 14
UK		iP	12 38 07
WASH		iP	12 34 10
		e(S)	39 19
		eL	43 33
Oct. 2			
COL		iP	12 48 08
Oct. 2			
COL		eP	13 21 52
Oct. 2			
SJ		eP	14 16 03
		eL	18 44
TUC		eP	14 27 50
Oct. 2			
COL		iP	15 37 11
EUR		eP	15 40 40
HH		eP	15 40 09
Oct. 2			
EUR		eP	17 39 34
Oct. 2			
EUR		eP	19 58 18
Oct. 2			
COL		iP	21 01 36
		i	02 02
EUR		eP	21 02 17
HH		eP	21 02 34
TUC		eP	21 02 19

Date and Station		Phase	(GCT) h m s
Oct. 2			
BC		eP'	21 18 34
		e	18 56
BOZ		eP'	21 18 20
		e	21 17
EUR		iP'	21 18 24
		e	21 46
SLC		eP'	21 18 22
		i	18 35
TUC		eP'	21 18 50
UK		eP'	21 18 21
Oct. 3			
COL		iP	01 42 38
EUR		eP	01 45 53
Oct. 3			
COL		eP	02 48 18
Oct. 3			
COL		eP	06 11 08
EUR		e(P)	06 12 43
HONO		iP	06 09 39
KIP		iP	06 09 40
SJ		iP'	06 18 38
Oct. 3			
BC		iP	06 48 34
		e	48 55
BOZ		eP	06 48 37
BUT		iP	06 48 44
		i	48 59
COL		eP	06 51 10
		i	51 24
		iPP	54 09
COLU		eP	06 45 09
EUR		iP	06 48 45
		e	49 03
HH		eP	06 48 57
		ePPP	52 15
SLC		iP	06 48 27
SJ		eP	06 41 13
		i	41 25
		i	42 27
		iS	42 38
		eL	43 02
TUC		iP	06 48 02
Oct. 3			
COL		eP	13 56 34
		i	57 20

Date and Station		Phase (GCT)
		h m s
EUR	eP	13 56 48
Oct. 3		
COL	iP	14 29 11
Oct. 3		
COL	eP	17 41 10
	i	41 21
EUR	eP	17 44 47
Oct. 3		
EUR	eP	18 12 28
Oct. 3		
EUR	eP	19 30 01
Oct. 4		
BOZ	eP	00 30 38
COL	iP	00 32 15
EUR	eP	00 31 13
SJ	eP	00 26 32
TUC	e(P)	00 30 31
	e	31 19
Oct. 4		
BOZ	e(P)	01 13 26
COL	iP	01 13 18
	ipP	14 49
EUR	iP	01 12 55
	ipP	14 21
TUC	iP	01 12 54
	epP	14 28
Oct. 4		
EUR	eP	04 49 32
TUC	eP	04 47 40
	e	50 08
	i	50 17
Oct. 4		
EUR	eP	05 02 08
Oct. 4		
BH	iP	05 29 56D
	iS	33 28
BC	iP	05 35 24C
	ipP	35 37
	eS	43 02
	eL	50 36
BOZ	iP	05 35 27C
	i	35 50
	eS	43 06
	eL	50 38
BUT	iP	05 35 36C
	eS	43 18
	eL	51 22

Date and Station		Phase (GCT)
		h m s
CHI	iP	05 34 22S,E
	e	35 38
	iPcP	35 58
	e(PPP)	37 10
	iS	40 10
	e	42 42
	eL	45 38
COL	eP	05 38 02C
	ipP	38 20
	iPP	41 01
	i	42 53
	eS	48 13
COLU	iP	05 32 03C
	ipP	32 36
	iPP	33 11
	iPcP	34 20
	e	35 44
	iS	36 49
	iL	37 44
EUR	iP	05 35 37C
	ipP	35 55
	e(S)	44 03
HONO	eP	05 39 11
	iPP	42 51
	eS	49 58
	iPPS	51 42
	i	52 26
	eSS	55 45
	eSSS	06 00 11
	eL	03 19
PHIL	iP	05 32 25
	iS	37 31
	eL	41 12
SLC	iP	05 35 18C
	eS	42 47
	eSS	47 11
	eL	49 47
SJ	iP	05 28 02D
	iS	29 32
	iL	29 41
SIT	eP	05 37 25
	i	37 30
	ipP	38 06
	ePP	40 07
	iS	46 42
	eSS	51 23
	eL	54 29
TUC	iP	05 34 53C
	iPP	36 50
	e	41 27
	eS	41 59
	iS	42 02
	eL	46 22
UK	iP	05 36 18C
	ePPP	40 14
	eS	44 34
	eL	56 22
WASH	iP	05 32 21C

Date and Station		Phase (GCT)
		h m s
WASH	iPP	05 33 17
	eS	37 35
	iL	41 18
Oct. 4		
SJ	eP	05 54 04
	i	55 26
TUC	iP	06 00 53
Oct. 4		
BC	iP	06 15 11
BOZ	eP	06 15 14
BUT	iP	06 15 22
COL	eP	06 17 59
	ePP	20 47
EUR	iP	06 15 24
SJ	eP	06 07 51
	iS	09 13
	iL	09 21
TUC	iP	06 14 40
Oct. 4		
COL	eP	06 29 54
	ePP	32 48
EUR	eP	06 27 21
SJ	eP	06 19 48
	iS	21 12
	iL	21 22
TUC	eP	06 26 39
	e	27 26
Oct. 4		
SJ	eP	06 35 52
Oct. 4		
EUR	eP	06 56 58
SJ	eP	06 49 25
	iS	50 48
	iL	50 57
TUC	eP	06 56 15
Oct. 4		
SJ	eP	06 56 02
Oct. 4		
COL	eP	09 43 50
	ePP	46 45
EUR	eP	09 41 21
SJ	eP	09 33 47
	i	34 06
	iS	35 10
	iL	35 22
Oct. 4		
COL	iP	12 36 18
	i	36 52

Date and Station		Phase (GCT)
		h m s
Oct. 4		
EUR	eP	16 57 37
Oct. 4		
EUR	eP	17 36 03
TUC	eP	17 34 47
	e	34 57
	e(S)	35 28
	eL	35 34
Oct. 4		
BC	e(P)	17 52 00
EUR	eP	17 50 05
TUC	e(P)	17 49 46
	e	49 56
	e(S)	50 33
	eL	50 39
Oct. 4		
EUR	eP	18 27 03
Oct. 4		
EUR	eP	18 34 11
SJ	eP	18 29 03
Oct. 4		
EUR	eP	19 18 21
Oct. 4		
BC	eP	19 35 40
	e	36 37
BOZ	eP	19 37 25
EUR	eP	19 36 10
	e	37 42
Oct. 4		
EUR	eP	19 42 21
TUC	eP	19 57 49
	e	59 02
Oct. 4		
BC	eP	20 58 22
	epP	58 55
EUR	eP	20 58 32
SLC	eP	20 58 16
SJ	eP	20 50 58
	e(S)	52 15
	iL	52 23
Oct. 4		
COL	iP	22 59 00
	iS	59 24
	iL	59 32
EUR	iP	23 04 23
Oct. 4		
COL	eP	23 27 26

Date and Station		Phase	(GCT) h m s
EUR		eP	23 30 56
Oct. 5			
BC		eP	00 04 34
		e	05 14
BOZ		eP	00 04 06
COL		iP	00 00 37
		i	01 14
		eS	04 20
		i	04 28
		eL	05 11
EUR		iP	00 04 12
		i	04 51
SLC		eP	00 04 24
		e	05 07
SJ		eP	00 08 48
TUC		iP	00 05 12
		e	05 54
Oct. 5			
EUR		eP	00 09 11
Oct. 5			
COL		eP	00 30 36
Oct. 5			
EUR		iP	01 03 40
Oct. 5			
EUR		eP	02 18 15
Oct. 5			
EUR		eP	05 30 09
HH		eP	05 30 10
		e	30 22
RC		eP	05 30 28
		e	31 05
Oct. 5			
COL		eP	07 05 59
Oct. 5			
COL		iP	07 52 23
Oct. 5			
RC		eP	08 02 13
Oct. 5			
EUR		eP	08 27 30
Oct. 5			
EUR		eP	08 39 16
Oct. 5			
BH		iP	09 07 31
		eS	08 17
COL		eP	09 18 26
EUR		eP	09 15 18
HH		eP	09 15 50
RC		eP	09 14 40
SJ		iP	09 10 44
Oct. 5			
COL		eP	11 38 25
Oct. 5			
BUT		eP	11 49 54
COL		iP	11 49 01
EUR		eP	11 50 28
HH		iP	11 49 49
RC		iP	11 49 41
Oct. 5			
EUR		eP	11 54 00
Oct. 5			
EUR		eP	14 44 56
TUC		e(P)	14 43 34
Oct. 5			
COL		eP	16 04 03
EUR		iP	16 02 58
HH		eP	16 03 55
		i	04 51
RC		e(P)	16 03 01
		e	04 53
TUC		eP	16 01 35
		i	01 46
		eL	07 26
Oct. 5			
EUR		e(PKS)	16 28 06
HH		eP'	16 24 32
RC		eP'	16 25 10
Oct. 5			
EUR		eP	21 04 30
Oct. 5			
COL		iP	21 18 56
EUR		iP	21 19 15
HH		eP	21 19 33
TUC		iP	21 19 27
Oct. 5			
EUR		eP	22 36 54
Oct. 5			
COL		eP	22 52 19
Oct. 5			
EUR		eP	23 42 25
Oct. 6			
BH		iP	00 58 02
		iS	01 02 44
BC		eP	01 03 28
BOZ		eP	01 03 33
BUT		iP	01 03 39
		i	04 14
COL		eP	01 06 09
		i	06 26
		ePP	09 05
HH		e(P)	01 03 54
RC		eP	01 02 49
SLC		eP	01 03 21
		e	03 44
SJ		eP	00 56 05
		iS	57 27
		iL	57 38
TUC		iP	01 02 57
Oct. 6			
BOZ		eP	01 39 25
COL		eP	01 36 12
EUR		iP	01 39 29
HH		eP	01 38 58
TUC		eP	01 40 33
Oct. 6			
COL		eP	02 48 22
Oct. 6			
COL		eP	03 27 52
Oct. 6			
COL		eP	04 34 03
Oct. 6			
COL		eP	07 44 37
Oct. 6			
COL		eP	08 56 46
		i	57 05
Oct. 6			
COL		eP	09 06 00
EUR		eP	09 09 07
Oct. 6			
COL		eP	09 34 48
		i	35 12
Oct. 6			
COL		eP	12 25 41
Oct. 6			
BC		eP	12 43 06
		e	43 26
		e	44 28
EUR		eP	12 43 56
Oct. 6			
COL		eP	15 03 05
		eL	04 03
Oct. 6			
EUR		eP	16 58 41
Oct. 6			
EUR		eP	17 28 30
		i	28 44
		eS	29 46
		eL	29 58
UK		eP	17 27 46
		e(S)	28 17
		iL	28 20
Oct. 6			
COL		eP	20 47 33
		e	47 40
Oct. 6			
BC		eP	21 38 20
BOZ		eP	21 37 52
BUT		iP	21 37 43
COL		iP	21 34 26
		i	34 38
EUR		iP	21 38 00
RC		iP	21 38 26
TUC		eP	21 38 53
		e	39 06
Oct. 6			
TUC		eP	22 15 26
Oct. 6			
BOZ		eP	23 34 34
BUT		eP	23 34 36
COL		eP	23 31 21
EUR		iP	23 34 49
RC		eP	23 35 27
SJ		eP	23 39 44
TUC		eP	23 35 51
Oct. 7			
COL		eP	00 38 03
EUR		iP	00 41 33
TUC		eP	00 42 33
Oct. 7			
COL		eP	04 06 46

Date and Station		Phase (GCT) h m s
EUR	eP	04 06 13
TUC	eP	04 06 11
Oct. 7		
BC	eP	05 17 44
COL	eP	05 13 41
	i	13 53
EUR	eP	05 17 18
HH	eP	05 16 55
	e	19 52
RC	eP	05 18 03
SIT	eP	05 15 15
TUC	iP	05 18 24
Oct. 7		
EUR	eP	05 25 54
SJ	eP	05 22 31
	i	22 43
TUC	eP	05 27 01
Oct. 7		
COL	eP	06 48 29
Oct. 7		
BC	eP	06 53 36
	i	54 17
EUR	e(P)	06 53 48
	i	54 05
	iL	55 08
TUC	e(P)	06 56 25
	e	56 45
Oct. 7		
COL	eP	07 03 17
Oct. 7		
COL	eP	07 43 27
EUR	eP	07 44 20
Oct. 7		
COL	eP	08 28 24
Oct. 7		
COL	eP	08 53 42
	i	54 13
Oct. 7		
EUR	eP	12 35 24
HH	eP	12 35 20
Oct. 7		
BC	iP	12 59 28
	i(S)	13 00 48
	iL	01 19

Date and Station		Phase (GCT) h m s
EUR	iP	13 00 41
	iS	01 17
	iL	01 24
SLC	eP	13 01 38
	e	02 52
TUC	eP	13 02 08
Oct. 7		
BC	eP	13 30 00
	e	30 16
BOZ	eP	13 29 34
BUT	eP	13 29 26
	e	29 37
COL	eP	13 25 57
EUR	iP	13 29 38
	i	29 55
HH	eP	13 29 05
KIP	eP	13 28 07
RC	iP	13 30 01
	eP'P'	59 20
SLC	eP	13 28 26
	i	29 37
SIT	eP	13 27 07
TUC	eP	13 30 33
	i	30 50
UK	eP	13 29 14
	e	29 28
Oct. 7		
RC	e(P)	14 12 06
Oct. 7		
EUR	eP	15 16 10
Oct. 7		
COL	iP	17 00 36
	epP	02 56
EUR	iP	17 00 16
HONO	eP	16 56 20
KIP	eP	16 56 21
Oct. 7		
EUR	eP	18 48 59
Oct. 7		
COL	eP	23 47 41
Oct. 8		
TUC	eP	01 11 00
Oct. 8		
EUR	eP	01 27 31

Date and Station		Phase (GCT) h m s
Oct. 8		
COL	eP	03 53 34
Oct. 8		
SLC	eP	04 23 05
TUC	eP	04 24 50
	e	26 33
Oct. 8		
BC	eP	05 08 23
COL	eP	05 13 04
EUR	iP	05 08 55
HH	eP	05 09 56
TUC	eP	05 07 30
	eL	12 53
Oct. 8		
BC	eP	05 42 46
	e	43 08
COL	iP	05 39 03
EUR	iP	05 42 27
HH	eP	05 41 59
	e	42 12
RC	eP	05 42 57
TUC	eP	05 43 18
	e	43 30
Oct. 8		
COL	eP	06 52 00
Oct. 8		
BC	eP	07 04 55
	epP	05 27
BOZ	eP	07 05 24
BUT	eP	07 05 33
COL	eP	07 11 43
COLU	iP	07 03 16
	epP	03 47
EUR	iP	07 05 14
	ipP	05 47
HH	iP	07 05 44
	ipP	06 17
RC	iP	07 05 02
	ipP	05 34
SJ	eP	07 01 06
	i	01 17
	ipP	01 37
TUC	iP	07 04 26
	ipP	04 58
	iPcP	05 14

Date and Station		Phase (GCT) h m s
Oct. 8		
COL	eP	09 14 45
HH	eP	09 17 43
Oct. 8		
EUR	eP	12 11 26
HH	eP	12 11 29
TUC	e(P)	12 11 07
Oct. 8		
HH	eP	19 43 24
Oct. 8		
COL	eP	21 04 58
Oct. 8		
COL	eP	22 28 54
EUR	iP	22 29 09
Oct. 8		
HH	eP	22 55 51
Oct. 8		
COL	eP	23 04 05
HH	iP	23 07 40
	e	09 30
Oct. 9		
EUR	eP	01 38 59
Oct. 9		
HH	iP	01 49 56
	i	50 03
	ePcP	52 28
TUC	eP	01 53 30
	e	53 41
Oct. 9		
HH	eP	02 33 46
	e	35 09
Oct. 9		
HH	iP	03 45 52
	ePcP	48 33
Oct. 9		
HH	eP	05 51 54
Oct. 9		
HH	iP	07 04 55
Oct. 9		
COL	eP	11 23 21
TUC	e(P)	11 21 22
	e	29 06
Oct. 9		
EUR	eP	11 30 18
Oct. 9		
EUR	eP	14 22 55

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Date and Station		Phase	(GCT) h m s
Oct. 9			
RC		eP	19 04 49
Oct. 9			
TUC		e(P)	22 37 54
Oct. 9			
COL		eP	23 05 27
EUR		iP	23 07 57
RC		eP	23 08 22
Oct. 10			
COLU		iP	01 33 31
Oct. 10			
BC		eP	01 50 50
BOZ		eP	01 50 22
		iP	50 28
BUT		eP	01 50 19
COL		eP	01 46 59
		i	47 09
		eS	50 19
		eL	51 18
EUR		iP	01 50 27
HONO		eS	01 54 34
		eL	57 50
RC		eP	01 51 07
		ePP	53 10
SJ		eP	01 55 31
SIT		eP	01 47 38
		iP	47 47
		eS	51 26
		eL	53 23
TUC		iP	01 51 29
		eL	02 07 54
Oct. 10			
BC		iP	03 46 47
BOZ		iP	03 46 19
COL		eP	03 42 55
COLU		iP	03 49 28
EUR		iP	03 46 22
RC		iP	03 47 05
SJ		iP	03 51 32
SIT		iP	03 43 33
		i	43 56
		i	44 17
TUC		iP	03 47 27
Oct. 10			
BC		eP	03 58 32
COL		iP	03 58 54
EUR		iP	03 58 37
TUC		iP	03 58 37
		epP	04 01 03
Oct. 10			
COL		eP	04 01 16
		iP	01 22
Oct. 10			
EUR		eP	04 55 45
Oct. 10			
COL		iP	05 04 53
Oct. 10			
BC		eP	05 52 46
BOZ		eP	05 52 21
		e	52 29
COL		eP	05 48 56
		iS	52 46
		iL	53 02
COLU		eP	05 55 21
EUR		iP	05 52 23
RC		eP	05 53 04
		i	53 16
SJ		eP	05 57 18
SIT		iP	05 49 40
		i	49 49
		iPP	50 08
		eS	54 15
TUC		eP	05 53 25
		e	53 39
Oct. 10			
BC		eP	07 06 14
COL		iP	07 02 48
EUR		iP	07 05 54
RC		eP	07 05 17
TUC		eP	07 06 35
Oct. 10			
BC		eP	07 46 31
		e	46 44
BOZ		eP	07 46 05
		e	46 18
		e	46 33
BUT		eP	07 46 00
COL		iP	07 42 41
		i	43 17
		i	44 12
		iS	46 32
		iL	46 45
COLU		eP	07 49 46
EUR		iP	07 46 08
HH		iP	07 45 43
		ePcP	47 56
		eS	51 30
		e	51 48
		eL	55 54
RC		iP	07 46 47
SLC		eP	07 46 22
		e	46 36
SJ		eP	07 51 03
SIT		iP	07 43 25
		i	43 38
		iPP	43 55
		eS	47 41
TUC		eP	07 47 10
		e	47 23
Oct. 10			
EUR		eP	07 51 51
Oct. 10			
EUR		eP	10 18 07
Oct. 10			
EUR		eP	11 21 21
Oct. 10			
COL		eP	12 39 39
Oct. 10			
COL		eP	14 08 43
Oct. 10			
EUR		eP	14 17 29
Oct. 10			
COL		eP	14 33 23
Oct. 10			
COLU		eP	17 40 40
TUC		e(P)	17 41 39
Oct. 10			
BC		eP	18 56 25
		epP	57 48
COL		eP	18 56 53
EUR		eP	18 56 31
		ipP	57 55
SIT		iP	18 58 04
		eS	19 01 21
TUC		eP	18 56 29
		ipP	57 56
Oct. 10			
BC		eP	19 01 28
		e	01 40
		eS	07 24
BOZ		iP	19 00 58
COL		iP	18 57 25
		eS	19 00 14
		eL	00 40
COLU		iP	19 04 06
EUR		iP	19 01 03
		i	02 23
		eS	07 09
HONO		eS	19 05 43
		i	06 06
		eL	08 10
KIP		eP	19 00 36
		ePP	01 39
RC		iP	19 01 42
		eS	07 53
SLC		eP	19 01 17
SJ		eP	19 06 14
		i	06 35
TUC		iP	19 02 09
		e	02 43
		eL	12 20
Oct. 10			
EUR		eP	20 36 10
TUC		eP	20 35 25
Oct. 11			
COL		eP	00 25 49
EUR		eP	00 29 17
RC		eP	00 29 58
SJ		eP	00 34 33
TUC		eP	00 30 20
Oct. 11			
COL		iP	02 40 44
Oct. 11			
COL		eP	07 55 46
SJ		e(P)	07 52 29
Oct. 11			
COL		eP	12 49 15
EUR		e(P)	12 52 25
		eP	52 37
Oct. 11			
BC		iP	20 40 28
BOZ		eP	20 41 00
BUT		iP	20 41 04

Date and Station		Phase (GCT)
		h m s
EUR	iP	20 40 47
	i	41 22
RC	iP	20 40 38
SJ	iP	20 37 19
	i	37 49
TUC	iP	20 40 02
UK	eP	20 41 03
Oct. 11		
COL	iP	20 42 39
	iS	43 34
	iL	43 50
EUR	eP	20 48 04
Oct. 11		
COL	eP	21 19 20
Oct. 11		
COL	eP	21 20 23
	iP	20 25
	eS	21 22
	eL	21 47
EUR	e(P)	21 25 20
	i	25 44
RC	eP	21 26 05
Oct. 11		
EUR	eP	21 31 44
Oct. 11		
COL	eP	21 32 48
EUR	iP	21 36 30
	i	36 40
RC	eP	21 37 09
Oct. 11		
EUR	eP	21 43 06
Oct. 11		
EUR	eP	23 14 24
	eL	16 52
TUC	eP	23 13 03
	i	13 05
	iS	13 44
	eL	13 49
Oct. 12		
COL	iP	05 29 11
	i	29 37
Oct. 12		
EUR	eP	10 51 06
Oct. 12		
COL	eP	12 04 48
Oct. 12		
COL	eP	13 48 41

Date and Station		Phase (GCT)
		h m s
EUR	eP	13 52 12
RC	eP	13 52 51
Oct. 12		
EUR	eP	17 34 55
Oct. 12		
EUR	iP	17 48 13
	i	48 35
Oct. 12		
BC	eP'	19 16 17
	e	16 29
	ePKS	19 27
BOZ	eP'	19 16 14
	e	16 31
BUT	eP'	19 16 10
	e	16 26
COLU	iP'	19 17 01
EUR	iP'	19 16 12
	i	16 30
	iPP	18 11
RC	eP'	19 16 22
	ePP	19 46
SLC	eP'	19 16 17
	ePKS	19 37
SJ	eP'	19 17 11
	i	18 25
	ePP	22 23
	i	22 41
TUC	eP'	19 16 20
	ePKS	19 50
Oct. 12		
BOZ	e(P)	19 29 15
	eP	29 17
	eS	29 46
	eL	29 51
BUT	eP	19 29 55
	i	29 58
	eS	30 19
	iL	30 23
RC	e	19 32 20
	e	32 34
Oct. 12		
COL	eP	20 41 15
EUR	eP	20 40 31
Oct. 12		
COL	eP	22 15 27
Oct. 12		
COL	eP	22 17 52

Date and Station		Phase (GCT)
		h m s
Oct. 12		
COL	iP	23 04 51
	eS	05 25
	eL	05 35
Oct. 13		
COL	iP	01 34 15
Oct. 13		
BC	eP	04 29 23
BOZ	eP	04 28 51
BUT	eP	04 28 56
COL	iP	04 25 17
	i	25 27
	eS	30 04
	eL	32 10
EUR	iP	04 29 01
HONO	e(P)	04 27 31
	eS	34 13
	eL	37 40
HH	eP	04 28 29
	i	28 37
RC	iP	04 29 27
	i	29 37
	e	42 58
SLC	eP	04 29 12
	e	29 35
TUC	eP	04 29 56
	eL	49 12
Oct. 13		
EUR	eP	04 42 30
Oct. 13		
EUR	eP	05 22 46
Oct. 13		
COL	eP	05 31 42
EUR	eP	05 32 05
Oct. 13		
EUR	eP	05 53 17
Oct. 13		
COL	eP	06 00 37
	i	01 15
Oct. 13		
EUR	eP	06 10 12
	i	10 34
HH	eP	06 09 47
Oct. 13		
COL	eP	08 35 25
	iS	36 03
	iL	36 13
Oct. 13		
EUR	eP	18 13 47

Date and Station		Phase (GCT)
		h m s
Oct. 13		
EUR	iP	20 35 22
Oct. 13		
EUR	eP'	20 52 06
HONO	eS	20 57 20
	i	58 30
	eSS	21 03 10
	eL	10 30
HH	e(P')	20 52 20
RC	e(P')	20 52 25
TUC	e(P)	20 48 45
	e	21 07 44
	eL	28 24
Oct. 13		
COL	iP	21 57 15
Oct. 13		
EUR	eP	22 12 42
Oct. 13		
SLC	eP	23 57 49
Oct. 14		
COL	eP	00 01 20
	eS	02 02
	eL	02 08
Oct. 14		
COL	eP	01 27 25
	i	27 37
EUR	eP	01 30 41
HH	eP	01 30 11
RC	eP	01 31 17
TUC	eP	01 31 39
Oct. 14		
COL	iP	01 52 39
Oct. 14		
COL	eP	03 33 51
EUR	eP	03 34 17
Oct. 14		
COL	eP	06 34 08
	eS	35 04
	iL	35 07
Oct. 14		
BC	eP	08 26 54
BUT	iP	08 27 09
EUR	iP	08 27 07
HH	eP	08 27 21
SLC	eP	08 26 48

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

Date and Station		Phase (GCT)
		h m s
HH	eP	12 21 20
RC	e(P)	12 21 20
	e	21 55
	e	23 13
TUC	eP	12 21 39
	e	21 43
	e	23 21
Oct. 17		
EUR	eP	12 56 24
HH	e(P)	12 55 39
	e	13 00 48
Oct. 17		
COL	eP	13 21 24
EUR	iP	13 21 40
HH	iP	13 20 55
RC	eP	13 20 25
TUC	e(P)	13 21 50
Oct. 17		
HH	eP	13 59 27
Oct. 17		
BOZ	eP	14 33 53
BUT	iP	14 33 46
COL	iP	14 31 13
EUR	iP	14 33 53
HH	iP	14 33 36
	e	33 46
	e	33 57
RC	eP	14 34 22
Oct. 17		
BC	eP	14 39 52
COL	eP	14 39 25
EUR	iP	14 39 41
HH	eP	14 38 56
RC	eP	14 38 27
Oct. 17		
BC	e(P)	14 48 07
BOZ	eP	14 47 11
COL	iP	14 47 39
EUR	iP	14 47 56
HH	iP	14 47 11
	e	48 17
RC	eP	14 46 40

Date and Station		Phase (GCT)
		h m s
SJ	eP	14 45 38
TUC	eP	14 48 07
Oct. 17		
COL	iP	15 32 32
EUR	e(P')	15 37 20
SJ	eP'	15 40 21
Oct. 17		
COL	iP	15 50 43
	e	51 11
Oct. 17		
EUR	eP	16 00 54
HH	eP	16 00 08
Oct. 17		
COL	iP	17 46 34
EUR	eP	17 46 51
HH	iP	17 46 05
RC	iP	17 45 35
TUC	eP	17 47 02
Oct. 17		
EUR	eP	18 11 46
HH	eP	18 11 00
Oct. 17		
COL	iP	19 02 35
Oct. 17		
COL	eP	19 29 16
Oct. 17		
HH	eP	20 38 35
Oct. 17		
HH	eP	21 19 08
SJ	eP	21 11 55
	eS	12 38
	eL	12 50
Oct. 17		
HH	eP	22 09 18
EUR	eP	22 38 09
Oct. 18		
COL	eP	01 38 21
	eS	38 51
	eL	38 59
Oct. 18		
BOZ	eP	02 03 34
COL	eP	02 02 42
HH	eP	02 03 27
	i	03 30

Date and Station		Phase (GCT)
		h m s
RC	eP	02 03 22
Oct. 18		
EUR	eP	02 29 26
HH	eP	02 28 38
Oct. 18		
SJ	eP	02 52 55
	eS	53 35
	eL	53 50
Oct. 18		
HH	eP	03 04 13
Oct. 18		
COL	eP	03 24 24
EUR	eP	03 27 45
HH	eP	03 27 29
Oct. 18		
TUC	eP	04 57 37
	i	57 41
Oct. 18		
COL	eP	05 39 06
	eS	39 40
	eL	39 52
Oct. 18		
EUR	eP	06 13 45
Oct. 18		
COL	iP	07 53 19
	epP	53 43
Oct. 18		
BC	eP	08 02 31
COL	iP	07 59 05
EUR	iP	08 02 13
HH	eP	08 01 44
RC	eP	08 02 29
TUC	eP	08 02 55
Oct. 18		
EUR	eP	08 22 32
HH	eP	08 21 46
Oct. 18		
EUR	iP	09 42 00
HH	eP	09 41 24
	e	41 31
Oct. 18		
EUR	eP	11 42 09
Oct. 18		
EUR	eP	12 06 32

Date and Station		Phase (GCT)
Oct. 18		h m s
COL	eP	12 24 28
Oct. 18		
COL	iP	12 36 26
	eS	37 42
	eL	37 56
EUR	eP	12 41 33
HH	eP	12 40 29
	e	40 46
Oct. 18		
COL	eP	12 47 04
SJ	eP	12 54 04
Oct. 18		
EUR	eP	14 23 44
HH	eP	14 22 15
	e	22 59
Oct. 18		
COL	eP	14 54 41
HH	eP	14 54 26
Oct. 18		
COL	eP	15 43 20
EUR	eP	15 42 48
HH	eP	15 43 19
Oct. 18		
COL	eP	17 32 22
HH	iP	17 34 28
Oct. 18		
COL	eP	19 11 47
HH	eP	19 13 08
Oct. 18		
BC	eP	19 22 00
COL	eP	19 22 07
EUR	iP	19 22 04
TUC	eP	19 22 07
Oct. 18		
COL	eP	20 33 29
Oct. 18		
BC	eP	21 49 22
	epP	49 53
BOZ	e(P)	21 50 13
	epP	50 44
COL	iP	21 53 49
	ipP	54 22
COLU	iP	21 48 34
	i	48 52

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Date and Station		Phase (GCT) h m s
EUR	iP	21 49 50
	ipP	50 22
HH	eP	21 50 40
	ipP	51 11
	ePcP	53 08
RC	eP	21 50 17
	ePcS	56 49
TUC	iP	21 48 35
	ipP	49 04
	eL	55 26
Oct. 18		
COL	iP	22 33 39
EUR	eP	22 33 21
TUC	eP	22 33 23
Oct. 18		
COL	eP	23 09 32
Oct. 18		
COL	iP	23 11 10
Oct. 18		
COL	eP	23 24 51
Oct. 19		
EUR	eP	00 12 05
HH	iP	00 12 35
RC	eP	00 11 46
Oct. 19		
HH	eP	01 09 54
	e	10 09
Oct. 19		
HH	eP	03 52 30
Oct. 19		
COL	iP	06 14 57
Oct. 19		
BC	eP	06 19 08
COL	iP	06 23 52
EUR	eP	06 19 37
HH	eP	06 20 43
RC	eP	06 19 51
TUC	eP	06 18 15
	eL	24 04
Oct. 19		
EUR	eP	06 31 59
Oct. 19		
COL	eP	07 23 56
	eS	24 30
	eL	24 35

Date and Station		Phase (GCT) h m s
Oct. 19		
COL	eP	09 43 54
EUR	eP	09 47 35
Oct. 19		
HH	e(P)	12 37 14
Oct. 19		
COL	iP	13 25 21
	ipP	25 48
Oct. 19		
COL	eP	13 44 27
EUR	eP	13 47 22
Oct. 19		
COL	eP	18 13 15
EUR	iP	18 12 07
HH	eP	18 11 35
RC	eP	18 13 12
TUC	eP	18 13 45
Oct. 19		
BOZ	eP	18 42 21
	e	42 32
BUT	iP	18 42 17
	i	42 37
	eSKS	53 00
	eL	19 05 01
COL	iP	18 39 57
COLU	e(P')	18 47 53
	ePP	49 16
	eSSS	19 10 41
	eL	22 24
EUR	iP	18 42 28
	i	42 41
	ePKKP	59 34
HONO	i	18 40 42
	iS	49 57
	iScS	50 46
	e(SS)	55 34
	eL	59 40
HH	iP	18 42 08
	e	45 30
	eS	53 00
	i	53 37
	ePKKP	59 17
	e	19 01 16
KIP	eP	18 40 28
PHIL	ePP	18 48 45
	ePS	58 09
	eL	19 19 51
RC	e(P)	18 42 47
	e	42 55
	e	46 01

Date and Station		Phase (GCT) h m s
RC	e(S)	18 54 16
	eL	19 23 23
SLC	eP	18 42 37
SJ	e(P')	18 48 27
	ePP	51 05
	ePPS	19 03 24
	eSS	09 23
	eSSS	14 28
	eL	25 12
SIT	iP	18 40 48
TUC	eP	18 43 12
	e	46 20
	iPP	47 29
	e	49 08
	eSKS	54 06
	e(S)	54 56
	iPS	56 34
	iPPS	57 38
	e	19 05 40
	eL	13 26
UK	eP	18 42 18
WASH	ePS	18 57 47
Oct. 19		
COL	eP	19 08 02
Oct. 19		
COL	eP	19 08 16
Oct. 19		
BC	iP	21 53 10
	e	53 24
	eS	22 02 20
BOZ	iP	21 52 42
	epP	53 07
	e	54 19
BUT	iP	21 52 36
	i	53 26
	iPP	55 05
COL	iP	21 49 31
COLU	iP	21 54 51
	iSKS	22 05 06
	i	05 34
EUR	iP	21 52 51
	iS	22 01 50
HH	iP	21 52 23
	eS	22 00 47
	iScS	02 03
	eP'P'	21 12
PHIL	eSKS	22 04 50
	ePS	06 18
RC	iP	21 53 14
	ePP	55 55
	eS	22 02 28

Date and Station		Phase (GCT) h m s
SLC	iP	21 53 12
	e	53 23
	ipP	53 43
SJ	iPP	22 00 57
SIT	iP	21 50 33
TUC	iP	21 53 37
	isP	54 26
	e(PP)	57 17
UK	iP	21 52 24
	epP	52 56
Oct. 19		
EUR	eP	22 53 17
Oct. 20		
EUR	eP	03 05 31
TUC	eP	03 04 35
Oct. 20		
COL	eP	03 59 45
Oct. 20		
EUR	eP	04 19 55
Oct. 20		
COL	eP	04 58 48
Oct. 20		
HH	eP	06 51 57
Oct. 20		
COL	eP	09 56 35
EUR	eP	10 00 04
Oct. 20		
EUR	eP	11 19 04
Oct. 20		
BH	iP	12 11 34
BC	eP	12 15 36
	e	16 05
	e(S)	25 00
BOZ	iP	12 15 23
	e	16 11
BUT	iP	12 15 29
	i	16 31
	eS	24 34
	eL	32 00
CHI	e(P)	12 13 26
	eS	20 42
	eL	26 50
COL	eP	12 17 08
COLU	iP	12 12 19
	iPP	13 56
	iPcP	14 11
	iS	18 49
	eL	21 22

Date and Station		Phase (GCT)
		h m s
EUR	iP	12 15 42
HH	iP	12 15 36
PHIL	eP	12 12 13
	iPP	14 06
	iS	18 30
	iL	21 36
RC	iP	12 14 43
	ePP	16 48
	eS	23 12
	eL	36 07
SLC	iP	12 15 22
	i	15 39
SJ	eP	12 09 44
	iS	14 10
	iL	14 57
TUC	iP	12 15 14
	ePP	17 32
	e(PPP)	19 38
	e(S)	24 07
	eSS	28 06
	eL	33 50
UK	iP	12 16 22
WASH	iP	12 12 20
	iPcP	14 24
	eS	18 28
	eL	23 40
Oct. 20		
EUR	eP	14 54 01
Oct. 20		
COL	eP	16 12 27
HH	eP	16 16 17
	e	16 37
Oct. 20		
COL	eP	16 17 03
Oct. 20		
BOZ	e(P)	16 51 34
	eL	52 09
BUT	i(P)	16 51 09
	i	51 12
	i(S)	51 38
	iL	51 41
EUR	eP	16 52 14
HH	eP	16 51 35
	i	51 37
	iS	52 19
	iL	52 21
Oct. 20		
EUR	eP	18 29 46
Oct. 20		
EUR	eP	19 28 02

Date and Station		Phase (GCT)
Oct. 20		h m s
HH	eP	20 31 06
Oct. 20		
EUR	eP	21 15 54
Oct. 20		
EUR	eP	21 19 25
Oct. 20		
EUR	eP	21 45 44
Oct. 20		
TUC	e(P)	22 37 06
Oct. 21		
COL	eP	00 09 05
Oct. 21		
BC	eP	00 30 06
	epP	30 28
BOZ	eP	00 30 31
BUT	iP	00 30 26
COL	iP	00 29 42
EUR	iP	00 30 07
	epP	30 28
	ePP	33 36
HONO	eP	00 25 37
	e(S)	32 55
	eL	38 32
HH	iP	00 30 24
RC	eP	00 30 55
SLC	iP	00 30 22
	ipP	30 51
TUC	iP	00 30 18
	eL	58 24
Oct. 21		
COL	eP	03 03 08
SJ	eP	02 54 12
Oct. 21		
COL	eP	03 17 30
EUR	eP	03 17 08
Oct. 21		
HH	eP	06 51 14
Oct. 21		
COL	eP	06 51 40
EUR	iP	06 55 07
HH	iP	06 54 38
RC	iP	06 55 47
TUC	eP	06 56 07

Date and Station		Phase (GCT)
Oct. 21		h m s
BC	eP	07 16 15
COL	iP	07 16 41
	epP	18 56
EUR	iP	07 16 20
HH	eP	07 16 48
TUC	iP	07 16 21
Oct. 21		
EUR	iP	10 37 45
Oct. 21		
COL	eP	13 12 37
Oct. 21		
BC	eP	14 36 08
BOZ	eP	14 35 26
BUT	eP	14 35 30
EUR	iP	14 36 04
HH	eP	14 35 35
Oct. 21		
COL	eP	17 47 32
	iP	47 34
EUR	iP	17 51 21
HH	iP	17 50 45
	e	51 09
RC	eP	17 52 02
Oct. 21		
EUR	eP	22 58 05
Oct. 22		
COL	eP	02 44 09
COLU	eP	02 51 03
Oct. 22		
EUR	iP	04 47 20
Oct. 22		
SJ	eP	05 36 08
Oct. 22		
COL	iP	05 39 58
	ipP	40 30
EUR	iP	05 43 18
	ipP	43 52
RC	eP	05 43 44
TUC	eP	05 44 07
Oct. 22		
EUR	eP	06 27 51

Date and Station		Phase (GCT)
Oct. 22		h m s
EUR	eP	07 36 14
	e	36 41
Oct. 22		
COL	eP	09 34 45
	i	34 52
Oct. 22		
COL	eP	13 10 34
Oct. 22		
COL	eP	17 40 06
	eS	41 09
	eL	41 16
Oct. 22		
EUR	eP	18 26 01
Oct. 22		
EUR	eP	18 33 33
TUC	e(P)	18 32 22
	i	33 00
Oct. 22		
BC	iP	20 56 06
	i	56 24
BUT	iP	20 55 33
COL	iP	20 52 31
	i	52 47
EUR	iP	20 55 48
HH	iP	20 55 20
	ePKKP	21 13 35
RC	iP	20 56 21
SIT	iP	20 53 31
TUC	iP	20 56 34
Oct. 22		
EUR	iP	21 10 09
	iS	10 33
Oct. 22		
EUR	eP	22 19 07
Oct. 23		
BC	eP	04 47 10
BUT	iP	04 47 15
COL	iP	04 49 48
COLU	iP	04 43 22
	i	44 00
	eS	47 02
	eL	47 16
EUR	eP	04 47 20
HH	iP	04 47 26

Date and Station		Phase	(GCT) h m s
PHIL	e(P)		04 44 22
	iS		47 33
	eL		51 17
RC	iP		04 46 17
	eL		55 43
SLC	eP		04 46 58
	e		47 16
SJ	iP		04 39 05
	iS		39 24
	iL		39 30
TUC	iP		04 46 41
Oct. 23			
EUR	eP		04 52 37
Oct. 23			
BC	iP		06 04 43
	e		05 33
	e(S)		10 59
	eL		14 42
BOZ	eP		06 04 06
	i		04 25
	e(S)		10 03
	eL		14 03
BUT	iP		06 04 04
	eS		09 48
	eL		14 15
CHI	eP		06 06 27
	eS		13 43
	eL		19 23
COL	eP		06 00 48
	i		00 50
	i		01 16
	iS		04 12
	iL		05 14
COLU	iP		06 07 21
	i		07 31
	iS		15 45
	i		16 00
	iScS		17 08
	i		17 29
	eL		22 30
EUR	iP		06 04 18
	i		04 33
	eP'P'		36 14
HONO	iP		06 03 22
	i		03 40
	iS		08 38
	i		10 00
	i		10 35
	iL		11 42
HH	iP		06 03 47
	i		05 24
	ePcP		06 18
	iS		09 16
	e		11 40
	iScS		14 04

Date and Station		Phase	(GCT) h m s
KIP	eP		06 03 22
	i		03 39
PHIL	eP		06 07 15
	iS		15 36
	e		17 01
	eSS		19 47
	eSSS		22 44
	eL		27 29
RC	iP		06 04 57
	i		05 09
	ePPP		06 52
	eS		11 24
	eScS		14 56
	eL		21 14
SLC	eP		06 04 34
	i		04 46
	iPcP		06 29
	eL		12 38
SJ	iP		06 09 22
	i		09 34
	iS		19 42
	i		20 02
	i		20 38
	eSS		25 05
	eL		31 02
SIT	iP		06 01 30
	i		02 12
	i		02 35
	i		03 38
	iS		05 16
	eL		06 03
TUC	iP		06 05 21
	i		06 16
	e(PP)		07 16
	e(PPP)		08 09
	eS		11 48
	iS		12 10
	eSS		15 44
	iL		20 09
UK	e(P)		06 04 02
	eS		09 13
	e		11 39
	eL		13 18
WASH	iP		06 07 13
	i		07 25
	eL		27 44
Oct. 23			
COL	iP		07 17 32
TUC	iP		07 17 12
Oct. 23			
COL	eP		10 27 49
EUR	eP		10 27 16
TUC	eP		10 27 15
Oct. 23			
EUR	eP		10 37 32

Date and Station		Phase	(GCT) h m s
Oct. 23			
EUR	eP		12 26 58
Oct. 23			
COL	eP		12 42 27
	iP		42 28
	i		42 47
EUR	iP		14 25 38
	e		27 18
HH	eP		14 26 33
RC	iP		14 26 11
Oct. 23			
EUR	iP		14 50 50
HH	eP		14 51 37
Oct. 23			
HH	eP		16 04 11
	e		04 41
Oct. 23			
EUR	eP		16 18 14
Oct. 23			
EUR	eP		16 18 41
	epP		19 10
RC	eP		16 18 50
Oct. 23			
EUR	iP		16 55 15
HH	eP		16 56 15
TUC	eP		16 53 53
	e		59 22
	i		59 26
Oct. 23			
EUR	iP		20 39 08
HH	eP		20 38 58
	e		39 18
Oct. 23			
COL	eP		23 15 40
HH	iP		23 18 06
Oct. 24			
BC	eP		00 03 49
BOZ	eP		00 04 20
BUT	iP		00 04 25
COLU	iP		00 02 28
EUR	iP		00 04 07
	i		04 41
HH	iP		00 04 35
RC	iP		00 03 57
	i		04 26

Date and Station		Phase	(GCT) h m s
TUC	iP		00 03 21
	e		03 47
Oct. 24			
BC	eP		00 30 36
COL	eP		00 30 21
	eS		40 49
	ePS		42 12
	eSS		46 11
	eL		53 16
EUR	iP		00 30 37
HONO	eP		00 26 33
	eS		33 41
	i		36 51
	eL		37 55
HH	eP		00 30 58
PHIL	eSKS		00 43 36
	ePS		47 43
	eSS		54 45
	eL		01 14 21
SLC	eP		00 30 54
TUC	iP		00 30 46
	eL		58 50
Oct. 24			
COL	iP		01 15 16
	i		15 34
Oct. 24			
EUR	eP		02 33 54
Oct. 24			
COL	eP		02 44 56
EUR	iP		02 46 38
HH	iP		02 45 55
RC	eP		02 45 54
Oct. 24			
EUR	eP		03 28 52
Oct. 24			
EUR	eP		03 58 51
	eL		04 01 32
TUC	eP		03 57 08
	e		57 13
	i		57 18
	iS		58 10
	iL		58 14
Oct. 24			
HH	eP		06 20 02
Oct. 24			
BC	iP		09 19 00
	ipP		21 00
BOZ	iP		09 19 35

Date and Station		Phase (GCT)
		h m s
BOZ	epP	09 21 38
	iPP	23 14
BUT	iP	09 19 31
	epP	21 35
	iPP	23 07
COL	iP	09 19 27
	ipP	21 28
	eSKS	29 04
	iS	29 24
	eSP	30 36
EUR	iP	09 19 04
	ipP	21 03
	iPP	22 24
HONO	eP	09 15 09
HH	iP	09 19 33
	i	19 43
	ipP	21 35
	iPP	23 11
	eSKS	29 12
	iPKKP	37 08
KIP	iP	09 15 10
RC	iP	09 19 54
	epP	21 57
	iPP	23 46
SLC	eP	09 19 21
TUC	iP	09 19 05
	epP	21 02
	ipP	21 04
	e	22 14
	iSKS	28 38
	eS	28 44
	eSP	29 29
	e(PKKP)	37 22
	eP'P'	45 33
UK	iP	09 18 40
Oct. 24		
EUR	eP	10 31 42
Oct. 24		
COL	eP	12 17 54
HH	eP	12 20 52
Oct. 24		
EUR	eP	15 29 23
Oct. 24		
COL	iP	16 54 02
	i	54 12
EUR	eP	16 57 33
HH	iP	16 57 01
RC	eP	16 58 12
Oct. 24		
HH	eP	19 01 09

Date and Station		Phase (GCT)
		h m s
Oct. 24		
BC	eP	20 19 16
COLU	eP	20 17 54
EUR	eP	20 19 34
	e	21 53
HH	iP	20 20 03
RC	eP	20 19 23
	e	19 28
SLC	eP	20 19 36
TUC	eP	20 18 56
Oct. 24		
COL	eP	20 38 58
EUR	eP	20 38 10
Oct. 24		
HH	eP	20 58 13
Oct. 24		
BH	iP	21 51 02
	iS	56 24
BC	eP	21 47 26
	e(S)	50 22
	eL	51 11
BOZ	eP	21 49 15
	i	49 52
	iS	53 20
	eL	56 08
BUT	iP	21 49 19
	eS	53 27
	eL	56 07
CHI	eP	21 49 49
	eS	54 17
	eL	57 05
COL	eP	21 53 04
	eS	22 00 24
	eSS	03 52
	eL	06 45
COLU	iP	21 50 07
	i	50 16
	iS	54 19
	i	54 46
	eL	57 05
EUR	iP	21 48 14
	eS	52 54
	eL	53 24
HONO	eP	21 53 02
	eL	22 03 05
HH	iP	21 49 44
	eS	54 05
	eL	57 09
LIN	eP	21 50 00
	eS	53 28
	eL	55 32

Date and Station		Phase (GCT)
		h m s
PHIL	eP	21 51 09
	e	56 14
	eL	58 16
RC	eP	21 49 04
	i	49 06
	eS	52 51
	iL	54 54
SLC	iP	21 48 18
	e	48 55
	eS	51 38
	eL	53 14
SJ	iP	21 52 11
TUC	iP	21 46 19
	i	47 03
	e	47 24
	iS	48 06
	iL	48 38
UK	iP	21 48 48
	eS	52 30
	eL	53 20
	iL	56 50
WASH	eP	21 50 46
	eL	58 35
	iL	22 00 39
Oct. 24		
EUR	iP	22 45 51
Oct. 24		
HH	eP	22 57 49
Oct. 24		
HONO	eP	23 20 02
Oct. 24		
HONO	eP	23 23 05
Oct. 25		
TUC	eP	00 24 34
Oct. 25		
HONO	eP	01 10 17
Oct. 25		
BC	e	01 27 13
BOZ	eP	01 25 25
EUR	eP	01 24 24
	eL	29 04
HH	iP	01 25 52
RC	eP	01 25 13
	e	31 15
	eL	33 01
TUC	eP	01 22 29
	eL	24 25
	iL	24 46
Oct. 25		
TUC	eP	01 31 18

Date and Station		Phase (GCT)
		h m s
TUC	e	01 31 32
	e	31 41
Oct. 25		
COL	eP	01 54 11
HH	eP	01 56 16
TUC	e(P')	01 59 26
Oct. 25		
COL	eP	02 30 20
	iP	30 24
HH	eP	02 31 09
RC	eP	02 31 04
Oct. 25		
EUR	eP	02 51 25
HH	eP	02 52 54
TUC	eP	02 49 30
	eL	51 50
Oct. 25		
COL	eP	03 27 22
HH	eP	03 29 28
Oct. 25		
RC	eP	03 59 13
TUC	eP	03 57 19
Oct. 25		
BOZ	eP	04 44 55
COL	iP	04 41 30
	i	41 42
	i	42 38
	iS	44 50
	iL	46 10
EUR	iP	04 44 59
	i	45 14
HONO	eP	04 44 48
	eL	52 40
HH	iP	04 44 29
	iPcP	47 02
RC	eP	04 45 57
SJ	iP	04 50 05
TUC	iP	04 46 04
	i	46 17
Oct. 25		
COL	iP	06 30 26
EUR	eP	06 32 51
HH	iP	06 32 31

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Date and Station		Phase (GCT) h m s
Oct. 25		
TUC	e(P)	07 03 41
Oct. 25		
EUR	eP	07 35 51
HH	e(P)	07 34 40
Oct. 25		
COL	eP	07 52 55
Oct. 25		
BC	iP	10 13 58C
	e	14 05
	eS	22 51
BOZ	iP	10 13 27C
	eS	21 48
	eL	28 20
BUT	iP	10 13 20C
	eS	21 35
	eL	29 07
CHI	e(P)	10 15 04
	e	19 24
	eS	24 12
	eL	28 28
COL	iP	10 09 59C
	iS	15 06
	i	15 30
	iL	17 14
	eP'P'	41 29
COLU	iP	10 15 51C
	e	16 18
	iS	25 58
	i	26 23
	eL	29 29
EUR	iP	10 13 36C
	eP'P'	42 52
HONO	eP	10 11 54
	i	12 13
	i	12 49
	e	14 16
	iS	18 38
	iSS	22 12
	iL	24 12
HH	iP	10 13 04C
	iS	20 43
	i	21 15
	eP'P'	42 51
PHIL	eP	10 15 38
	iS	25 30
	eSS	30 23
	e(SSS)	34 31
	eL	35 02
RC	iP	10 14 02D
	ePP	15 53
	iS	22 33
	i	23 00
	eL	35 18
	iP'P'	43 01

Date and Station		Phase (GCT) h m s
SLC	iP	10 13 46C
	eS	22 06
	eL	28 50
SIT	iP	10 11 03D
	iPoP	12 45
	i	13 43
	iS	17 02
	i	17 24
	eL	19 48
TUC	iP	10 14 29C
	i	14 43
	iS	23 25
	e	26 25
	eSS	28 02
	eL	31 14
	iL	35 33
	eP'P'	42 49
UK	eP	10 13 07C
	eS	20 54
	e	21 23
WASH	iP	10 15 41D
	i	15 54
	eS	25 37
	eL	42 21
Oct. 25		
COL	eP	11 44 01
EUR	iP	11 47 27
HH	eP	11 46 59
	e	47 16
	e	49 24
RC	eP	11 48 15
TUC	iP	11 48 30
	i	48 44
Oct. 25		
BC	eP	15 42 20
	e(S)	43 13
	eL	43 19
EUR	iP	15 41 26
	iS	41 55
	iL	41 59
HH	eP	15 45 53
Oct. 25		
BC	eP	16 28 11
BOZ	eP	16 28 14
EUR	eP	16 27 47
	i	27 59
	i	28 48
HH	iP	16 28 56
	e	30 33
RC	eP	16 28 56
	i	30 38

Date and Station		Phase (GCT) h m s
SLC	iP	16 27 06
	i	28 09
TUC	eP	16 28 55
	e	30 39
Oct. 25		
TUC	eP	17 58 08
Oct. 25		
HH	eP	20 41 10
Oct. 25		
COL	iP	22 56 34
	ipP	57 17
HONO	eP	22 56 30
HH	eP	22 58 28
Oct. 25		
HH	eP	23 14 34
SJ	eP	23 04 18
TUC	e(P)	23 10 06
Oct. 26		
BC	e(P)	01 47 55
EUR	eP	01 47 36
	i	47 48
	i	48 37
HH	eP	01 48 44
RC	eP	01 48 46
	e	50 16
SLC	eP	01 46 56
TUC	e(P)	01 48 42
	i	48 50
	e	50 22
Oct. 26		
COL	iP	04 43 59
	ePP	47 15
EUR	eP'	04 49 44
HONO	eP	04 43 05
HH	eP'	04 49 41
RC	eP'	04 49 56
Oct. 26		
HH	eP	05 01 04
EUR	eP	05 00 47
Oct. 26		
BC	iP	08 37 41
	epP	39 49
BOZ	iP	08 38 18
	epP	40 30

Date and Station		Phase (GCT) h m s
BUT	iP	08 38 13
	ipP	40 23
COL	iP	08 38 08
	ipP	40 18
	ipPP	43 28
	iS	48 03
	iSP	49 16
	epS	51 50
EUR	iP	08 37 47
	ipP	39 58
	e(PKKP)	56 02
	eSKPP'	09 06 35
HH	iP	08 38 14
	epP	40 26
	ePP	41 55
KIP	iP	08 33 52
RC	eP	08 38 38
	epP	40 49
	ePP	42 31
SLC	eP	08 38 02
	epP	40 10
TUC	iP	08 37 47
	epP	39 55
	eS	47 16
	iS	47 28
	iPKKP	56 03
	iP'P'	09 04 13
UK	eP	08 37 23
Oct. 26		
HH	eP	08 46 24
	e	48 56
RC	eP	08 47 37
TUC	eP	08 48 01
Oct. 26		
HH	iP	08 55 46
	e	09 03 56
Oct. 26		
EUR	eP	09 46 58
Oct. 26		
EUR	eP	10 57 21
Oct. 26		
EUR	eP	12 01 06
Oct. 26		
BC	eP'	14 35 56
BOZ	iP'	14 35 53
	ePP	37 21
COL	iP	14 30 19
	i	31 04
	ePP	34 04

Date and Station		Phase (GCT)
		h m s
EUR	iP'	14 35 51
	iPP	37 14
HONO	eP	14 29 48
HH	iP'	14 35 45
	ePP	36 48
RC	iP'	14 36 00
	iPP	37 50
SLC	eP'	14 35 57
	e	37 27
SJ	eP'	14 37 03
	i	37 55
	ePP	41 41
TUC	eP'	14 36 07
Oct. 26		
EUR	eP	14 46 01
	iP	46 03
	e	49 41
HH	eP	14 46 11
	e	48 49
TUC	e(P)	14 49 11
Oct. 26		
COL	eP	16 05 49
EUR	eP	16 08 43
HH	eP	16 08 19
Oct. 26		
COL	eP	17 33 11
Oct. 26		
BC	eP	17 59 37
	e	59 47
EUR	iP	17 59 40
HH	eP	17 59 37
	e	18 00 07
RC	eP	17 59 54
TUC	eP	17 58 43
Oct. 26		
EUR	eP	21 05 26
	i	05 40
Oct. 27		
EUR	eP	05 42 46
HH	eP	05 42 35
Oct. 27		
COL	eP	05 53 22
	ipP	54 10
EUR	iP	05 53 39
TUC	eP	05 53 50

Date and Station		Phase (GCT)
		h m s
Oct. 27		
EUR	eP	06 56 52
HH	eP	06 57 17
Oct. 27		
COL	iP	07 47 32
EUR	eP	07 47 15
Oct. 27		
COL	iP	08 32 24
EUR	eP	08 32 57
Oct. 27		
COLU	eP	18 33 31
EUR	eP	18 35 49
TUC	eP	18 34 43
	e	35 15
Oct. 27		
COL	eP	20 19 19
RC	eP	20 20 56
Oct. 27		
HH	eP	21 04 39
Oct. 27		
BC	eP	22 42 20
	e	42 45
	eS	50 10
	e	51 19
	eL	55 24
BOZ	iP	22 41 45
	i	42 04
	i	42 14
BUT	iP	22 41 37
	iPP	43 07
	iS	48 47
	i	51 15
	eL	56 19
CHI	eS	22 51 51
	e	52 19
	eScS	52 55
	eL	59 39
COL	iP	22 38 01
	i	39 44
	iS	42 24
	i	43 16
	iL	43 38
COLU	iP	22 44 12
	i	44 48
	i	46 16
EUR	iP	22 41 58
	eS	49 30
HONO	iP	22 40 50
	i	41 22
	iS	47 26
	i	48 20
	iL	51 44

Date and Station		Phase (GCT)
		h m s
HH	iP	22 41 18
	e	41 56
	iPcP	42 44
	eS	48 15
	iS	48 16
	iScS	50 56
RC	iP	22 42 18
	i	42 50
	iS	50 07
	eScS	51 53
	eP'P'	23 11 57
SLC	iP	22 42 07
	e	42 34
	eS	49 44
	eL	56 24
SJ	iP	22 45 52
	i	46 27
SIT	iP	22 39 13
	i	39 45
	iPP	40 30
	iPPP	41 00
	iS	44 27
	eL	47 00
TUC	iP	22 42 55
	ePcP	43 26
	iPcP	43 32
	i(PP)	44 55
	eS	51 18
	eL	59 02
	iP'P'	23 11 54
UK	iP	22 41 31
	i	42 10
Oct. 27		
BC	eP	23 09 55
	e	11 40
COL	eP	23 09 28
	i	10 49
EUR	eP	23 09 52
	i	11 58
HH	eP	23 10 12
	e	10 26
Oct. 27		
BC	eP	23 28 38
EUR	eP	23 28 42
Oct. 28		
BC	eP	00 07 09
EUR	iP	00 07 12
HH	eP	00 07 27
RC	e(P)	00 07 27
Oct. 28		
HH	eP	01 51 21

Date and Station		Phase (GCT)
		h m s
Oct. 28		
BH	iP	05 56 45
BC	eP	06 03 18
COL	iP	06 07 11
COLU	iP	06 01 20
EUR	iP	06 03 41
HH	iP	06 04 21
RC	eP	06 03 18
	ePcP	04 51
SJ	e(P)	06 00 45
TUC	iP	06 02 36
Oct. 28		
EUR	eP	13 07 32
Oct. 28		
BC	eP	14 24 58
BUT	eP	14 25 07
COL	eP	14 28 34
EUR	eP	14 24 28
HH	eP	14 25 31
RC	e(P)	14 24 42
TUC	eP	14 23 10
	eL	29 26
Oct. 28		
COL	eP	16 20 44
EUR	eP	16 24 25
HH	eP	16 23 33
	e	23 57
Oct. 28		
COL	iP	16 23 13
Oct. 28		
HH	eP	20 09 34
Oct. 28		
EUR	eP	22 18 00
Oct. 29		
COL	eP	00 15 05
EUR	eP	00 18 51
	i	19 02
HH	eP	00 18 22
	ePcP	19 29
RC	iP	00 19 15
	i	19 27

Date and Station		Phase (GCT)
Oct. 29		h m s
BC	eP'	02 40 32
BOZ	eP'	02 40 29
COL	iP	02 34 54
COLU	iP'	02 41 09
EUR	iP'	02 40 27
HH	iP'	02 40 20
RC	eP'	02 40 37
	ePP	42 26
TUC	eP'	02 40 42
Oct. 29		
COL	iP	06 00 28
HH	iP	06 02 37
Oct. 29		
BOZ	eP	06 46 34
BUT	eP	06 46 37
EUR	iP	06 45 32
HH	eP	06 47 04
TUC	iP	06 43 37
	e(S)	45 29
	eL	45 42
Oct. 29		
BC	eP	08 10 44
COL	eP	08 07 01
	iP	07 06
EUR	iP	08 10 21
HH	iP	08 09 53
	e	11 53
RC	eP	08 11 01
TUC	eP	08 11 21
	e	11 36
	e	11 46
Oct. 29		
COL	eP	08 54 51
EUR	iP	08 58 19
HH	eP	08 57 49
RC	eP	08 58 56
TUC	eP	08 59 18
Oct. 29		
HH	eP	15 33 07
Oct. 29		
BC	eP	16 42 19

Date and Station		Phase (GCT)
		h m s
EUR	iP	16 41 31
	ipP	42 36
HH	eP	16 43 27
TUC	eP	16 41 27
Oct. 29		
HH	eP	23 21 09
Oct. 30		
BUT	iP	01 56 07
Oct. 30		
COL	iP	01 55 11
EUR	eP	01 56 39
HH	iP	01 56 00
RC	iP	01 55 57
SJ	eP	01 55 25
Oct. 30		
COLU	eP	02 10 32
Oct. 30		
BC	eP	02 20 45
	e	20 59
BOZ	eP	02 20 13
	e	20 27
COL	eP	02 16 46
	i	17 03
	eS	19 56
	eL	20 36
COLU	iP	02 23 35
EUR	iP	02 20 20
	i	20 35
	eS	26 25
HH	iP	02 19 48
	iPcP	22 30
	iS	26 12
RC	iP	02 21 00
	i	21 13
SJ	iP	02 25 29
	i	25 43
SIT	iP	02 17 26
TUC	eP	02 21 25
	e	21 39
	e	22 26
	eL	36 12
Oct. 30		
BC	eP	02 59 06
BOZ	eP	02 58 39
	e	58 49

Date and Station		Phase (GCT)
		h m s
BUT	eP	02 58 29
COL	iP	02 55 18
	i	55 33
	i	56 06
EUR	iP	02 58 44
HH	iP	02 58 14
	eS	03 04 09
RC	iP	02 59 22
	i	59 31
SLC	eP	02 58 57
SJ	eP	03 03 29
TUC	eP	02 59 43
Oct. 30		
COLU	iP	03 01 37
HH	eP	03 08 56
Oct. 30		
COL	eP	03 22 41
	i	23 28
Oct. 30		
HH	eP	03 44 28
Oct. 30		
COL	eP	07 01 43
Oct. 30		
BOZ	eP	07 43 27
BUT	eP	07 43 26
COL	eP	07 42 30
	i	42 43
COLU	eP	07 42 55
EUR	eP	07 44 00
HH	iP	07 43 20
RC	iP	07 43 18
Oct. 30		
COL	eP	08 34 21
Oct. 30		
HH	eP	12 02 06
	e	02 13
Oct. 30		
COL	eP	16 10 05
Oct. 30		
BC	eP	17 25 03
EUR	iP	17 25 40
TUC	eP	17 24 07

Date and Station		Phase (GCT)
Oct. 30		h m s
COL	eP	17 53 50
	i	54 07
HH	eP	18 16 50
Oct. 30		
COL	iP	19 51 25
EUR	iP	19 54 52
HH	eP	19 54 22
RC	eP	19 55 30
TUC	eP	19 55 55
Oct. 30		
EUR	eP	20 24 08
Oct. 30		
EUR	eP	20 32 05
Oct. 30		
EUR	eP	20 39 34
Oct. 30		
COL	eP	21 17 11
EUR	eP	21 21 17
RC	eP	21 21 33
Oct. 30		
COL	eP	21 42 37
Oct. 30		
HONO	eP	22 18 32
Oct. 30		
BC	eP	23 33 16
EUR	iP	23 33 34
	ipP	34 05
RC	eP	23 32 54
SJ	eP	23 27 38
TUC	eP	23 32 39
	e	32 47
Oct. 30		
EUR	eP	23 43 12
Oct. 31		
BC	iP	02 48 54
	e	49 13
	i	49 24
BOZ	iP	02 48 33
BUT	iP	02 48 27
	i	48 48
COL	iP	02 45 38
	i	46 01

Date and Station		Phase (GCT)
		h m s
EUR	iP	02 48 39
	i	49 08
	i	49 43
HH	iP	02 48 15
	i	48 44
	i	50 34
	e	54 11
RC	iP	02 49 02
	e	51 36
SLC	iP	02 48 47
TUC	iP	02 49 20
	e	49 50
	e	50 24
	eL	54 43
UK	iP	02 47 53
	i(S)	47 56
	iL	47 57
Oct. 31		
BOZ	eP	02 50 46
COL	eP	02 53 52
Oct. 31		
EUR	eP	02 59 13
Oct. 31		
HONO	eP	03 30 38
Oct. 31		
BC	eP	04 37 07
BOZ	eP	04 37 28
EUR	iP	04 37 06
HH	iP	04 37 19
RC	iP	04 37 51
SLC	iP	04 37 22
TUC	eP	04 37 20
Oct. 31		
TUC	eP	06 43 48
Oct. 31		
EUR	eP	07 55 09
HH	eP	07 55 41
RC	eP	07 55 01
TUC	e(P)	07 54 23
Oct. 31		
BH	iP	10 08 57
	iS	09 40
BC	iP	10 15 46
	i	16 10
	i(PP)	16 50
	eS	22 10
	eL	29 35

Date and Station		Phase (GCT)
		h m s
BOZ	iP	10 16 22
	i	17 09
	eS	23 10
	eL	26 22
BUT	iP	10 16 29
	iPP	18 24
	eS	23 22
	eL	26 30
CHI	eP	10 14 50
	ePP	16 14
	eS	20 18
	eL	22 42
COL	iP	10 19 30
	i	19 50
COLU	iP	10 13 43
	iS	18 22
	iL	19 46
EUR	iP	10 16 09
HONO	eP	10 19 41
	e	20 23
	iS	29 48
	eL	40 20
HH	iP	10 16 48
	iS	23 59
PHIL	iP	10 14 43
	iPP	15 59
	iS	20 02
	iL	22 23
RC	iP	10 15 44
	ePP	17 19
	iPP	17 24
	iS	22 01
	eScS	25 19
	eL	26 28
SLC	iP	10 15 56
	i	16 55
	eS	22 28
	eL	25 32
SJ	iP	10 12 28
	i	13 12
	iS	16 13
	iL	17 40
TUC	iP	10 15 05
	iPP	16 30
	iS	20 52
	iScS	23 23
	iL	25 46
UK	iP	10 16 45
	ePP	18 42
	eS	24 01
	eL	27 46
WASH	iP	10 14 29
	iS	19 49
	eL	23 51

Date and Station		Phase (GCT)
Oct. 31		h m s
COL	eP	10 39 28
EUR	eP	10 39 54
HH	iP	10 40 11
TUC	eP	10 40 06
Oct. 31		
EUR	iP	10 59 54
HH	eP	10 57 41
TUC	eP	10 58 46
Oct. 31		
COL	eP	11 03 45
Oct. 31		
COL	iP	13 42 48
EUR	eP	13 43 15
Oct. 31		
TUC	e(P)	13 56 42
Oct. 31		
COL	eP'	15 48 24
EUR	eP'	15 48 18
Oct. 31		
BC	eP	16 32 25
BOZ	eP	16 33 09
	e	33 44
BUT	eP	16 33 17
COL	eP	16 36 15
COLU	iP	16 30 52
EUR	eP	16 32 50
HH	eP	16 33 35
	i	33 38
PHIL	i	16 37 50
	iSS	40 46
	eL	43 34
RC	eP	16 32 37
SLC	eP	16 32 41
	e	33 07
SJ	iP	16 29 47
TUC	iP	16 31 50
	eS	37 50
	eL	43 18
EUR	eP	19 48 26
	i	48 45
	e(S)	49 40
	eL	49 51

Date and Station		Phase (GCT)
		h m s
UK	e(P)	19 47 44
	i	47 48
	iS	48 04
	eL	48 12
Oct. 31		
COL	eP	22 01 53

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LOCAL AND MINOR EARTHQUAKES

Date and Station	Hour (G.C.T.)
BOZ	
Oct.	
8	10.7
12	19.5
BUT	
Oct.	
6	04.2
8	10.6
12	19.5
14	02.7
17	21.0
18	03.0
20	16.8
	22.3
COL	
Oct.	
3	11.0 (2)
9	04.6
12	09.5
	13.7
	20.9
14	05.1
15	10.8
	14.9
16	02.7
19	04.0
22	01.3
	18.8
23	19.7
25	09.4
	14.8
	19.3
28	10.6
	16.0
	20.4
29	20.2
30	20.5
	22.9
31	04.7
	16.2
	19.4
EUR	
Oct.	
4	12.0
4	22.1
5	15.7
16	01.1
HONO	
Oct.	
2	01.4
4	21.5
7	00.1
	21.4
10	19.6
15	01.4
16	01.4
17	19.7
	20.3
24	01.3
29	01.5
30	01.6
31	05.4

Date and Station	Hour (G.C.T.)
SLC	
Oct.	
11	11.4
18	15.9
25	03.9
SJ	
Oct.	
1	23.2
12	21.6
13	14.1
16	15.0
	17.5
17	17.5
18	02.1
23	06.1
	06.3
24	23.3
25	08.8
26	01.2
27	06.6
31	05.4
TUC	
Oct.	
4	05.3
	12.0
	19.6
	20.3
5	23.3
6	12.7
7	01.9
	13.6
	13.7
	13.8
11	05.5
	12.8
	23.3
	23.7
14	14.2
16	02.9
	09.8
17	05.1
18	08.5
24	05.0
	05.5
28	13.1
30	07.1
	07.2
	07.4
	10.5
	11.5
	12.5
UK	
Oct.	
10	16.8
16	01.1
30	17.0
31	02.2
	03.3
	14.6
	15.4