USCGS
.40

SEISMOLOGICAL BULLETIN

December, 1959

MSI - 228

COAST & GEODETIC SURVEY
LIBRARY & ARCHIVES
JAN 24 1961
ACC. NO.

CONTENTS

World Epicenter Map 1959 I
List of stations 1
Provisional epicenters 2
Seismogram interpretations 6
Local and minor earthquakes 22

U. S. DEPARTMENT OF COMMERCE

Frederick H. Mueller, Secretary

COAST AND GEODETIC SURVEY—WASHINGTON

H. Arnold Karo, Director

FOR OFFICIAL DISTRIBUTION

National Oceanic and Atmospheric Administration

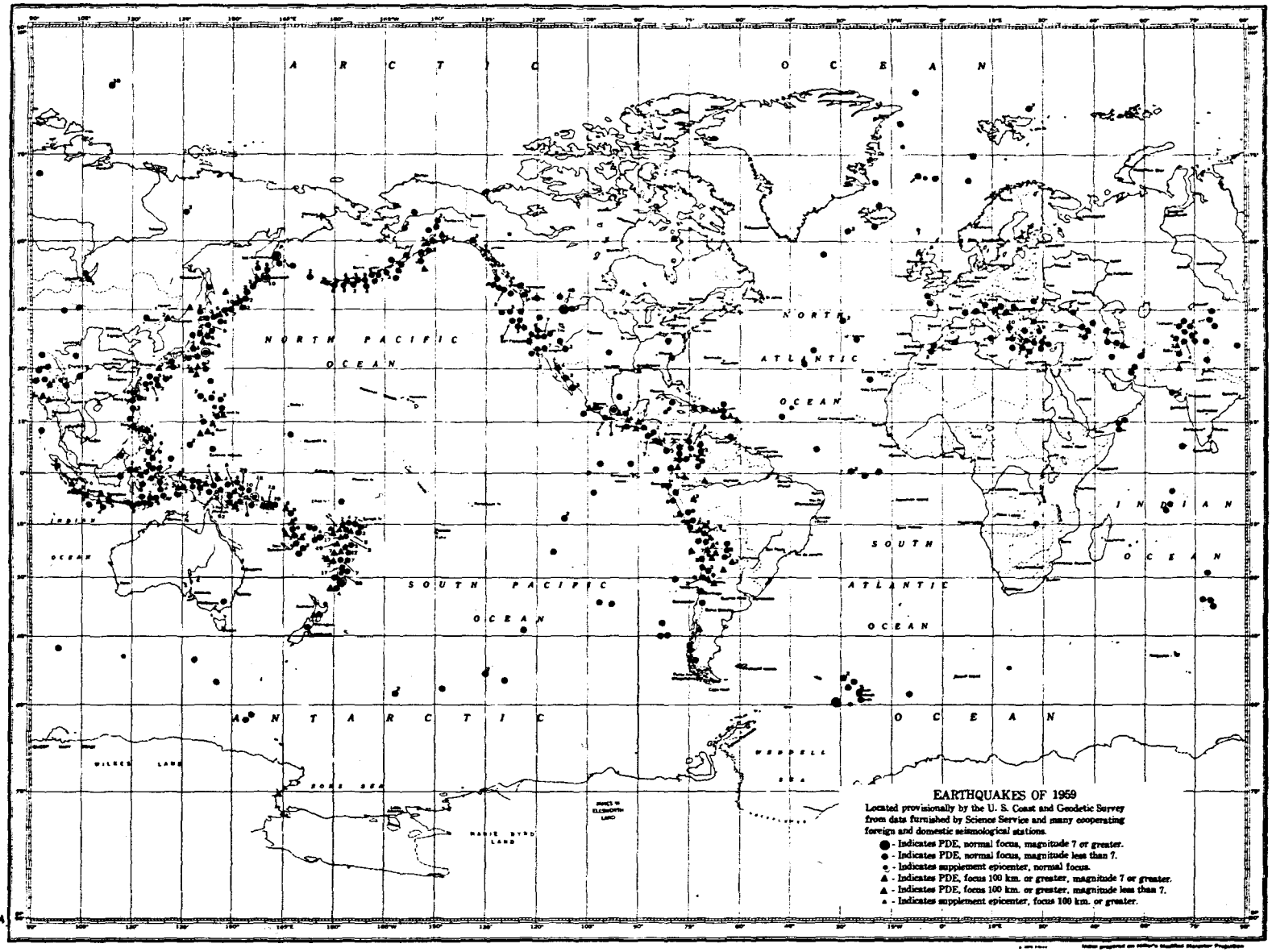
ERRATA NOTICE

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


ARCTIC OCEAN
NORTH PACIFIC OCEAN
NORTH ATLANTIC OCEAN
INDIAN OCEAN
SOUTH PACIFIC OCEAN
SOUTH ATLANTIC OCEAN
ANTARCTIC OCEAN
WILKES LAND
ROSS SEA
MARIE BYRD LAND
PRINCE ELIZABETH LAND
WEDDELL SEA
EARTHQUAKES OF 1959
Located provisionally by the U. S. Coast and Geodetic Survey from data furnished by Science Service and many cooperating foreign and domestic seismological stations.
- Indicates PDE, normal focus, magnitude 7 or greater.
- Indicates PDE, normal focus, magnitude less than 7.
- Indicates supplement epicenter, normal focus.
- Indicates PDE, focus 100 km. or greater, magnitude 7 or greater.
- Indicates PDE, focus 100 km. or greater, magnitude less than 7.
- Indicates supplement epicenter, focus 100 km. or greater.

1959

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
Guam, M. I. (GUAM)
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. D. (RC)
South Dakota State School of Mines
*Salt Lake City, Utah (SLC)
University of Utah
San Juan, Puerto Rico (SJ)
Sitka, Alaska (SIT)
*Thule, Greenland (THULE)
U. S. Army Ionosphere Station
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, 1959 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 location 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 Height, Canal Zone.

Date 1959	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Dec.	h m s	°	°	
1	12 38 46*	38 N.	21½ E.	Near west coast of Greece. Felt.
1	12 51 58*	38 N.	21 E.	Greece aftershock. Felt on Zante.
1	14 19 30**			Caribbean Sea, about 250 miles west of Jamaica.
1	14 59 40*	63 S.	154 E.	Balleny Islands region.
1	15 38 07*	31½ S.	67½ W.	San Juan Province, Argentina. h about 200 km.
1	18 11 19*	5 N.	125 E.	Near south coast of Mindanao, Philippine Islands. h about 400 km.
1	18 54 48*	9 S.	124½ E.	Timor Island region. h about 150 km.
2	07 02 52*	9 S.	80 W.	Off coast of Peru.
2	07 30 05*	5 S.	104 E.	Near coast of Sumatra. h about 150 km.
2	07 43 55*	21½ N.	94½ E.	Burma. h about 150 km.
2	09 34 00*	1 S.	123 E.	Celebes. Mag. 6-1/2 - 6-3/4.
2	18 20 11*	45 N.	16 E.	Yugoslavia. Felt at Perusic, Ljubljana, and Trieste.
2	19 57 55*	4½ S.	140 E.	New Guinea.
2	22 52 45*	52 N.	174 E.	Near Islands, Aleutian Islands.
3	01 55 05*	56½ S.	24½ W.	Sandwich Islands.
3	13 16 26*	16½ S.	177½ W.	Fiji Islands region.
4	01 06 13*	15 S.	174½ W.	Samoa Islands region. h about 150 km.
4	09 24 04*	21 S.	178½ W.	Fiji Islands. h about 650 km.
5	08 13 36*	40½ N.	126 W.	Off coast of northern California. Felt in Humboldt County. Mag. 5 (Berk).
5	22 01 10**			Off coast of Mindanao, Philippine Islands.
6	17 14 20**			New Britain region.
7	01 12 05*	6 S.	146½ E.	Near northeast coast of New Guinea. h about 100 km.
7	03 01 44*	18 S.	178 W.	Fiji Islands. h about 600 km.
7	04 10 45**			Northern Gulf of California.
7	05 15 24*	32½ N.	139½ E.	South of Honshu, Japan.
8	02 59 56*	36½ N.	141½ E.	Near east coast of Honshu, Japan. Felt at Tokyo.
8	04 30 06*	1 S.	124 E.	Celebes region.
8	08 08 21*	67 N.	18 W.	Off north coast of Iceland.
8	12 20 55*	37½ N.	72½ E.	Afghanistan-Tadzhik border.
8	12 50 45*	31 N.	57 E.	Southern Iran.
8	13 33 59*	42 N.	44½ E.	Georgia S.S.R.
9	14 04 28*	17 S.	177½ W.	Fiji Islands. h about 450 km.
9	21 28 57*	5 S.	153 E.	New Britain region. Felt at Rabaul and Gavit.
10	14 03 01*	44½ N.	111 W.	Hebgen Lake.
11	00 31 40*	5 S.	130 E.	Banda Sea.
11	01 38 33*	23 S.	175 W.	Tonga Islands region.
12	06 24 20*	48½ N.	123½ W.	Puget Sound, Washington. Felt.

Date 1959	Origin Time G. C. T.	Lat.		Long.		Region, Focal Depth, and Remarks
Dec.	h m s	°		°		
13	03 20 38*	42	N.	142	E.	Hokkaido, Japan.
13	05 39 31*	9½	S.	106½	E.	Off south coast of Java.
13	07 50 20*	45	N.	110½	W.	Hebgen Lake, Montana.
13	17 36 07*	18	S.	173½	W.	Tonga Islands.
14	17 58 33*	5½	N.	125½	E.	Near south coast of Mindanao, Philippine Islands. Felt at Davao, General Santos, and Hinatuan. h about 200 km.
14	21 49 10*	1	N.	125	E.	Celebes.
14	22 00 50*	52½	N.	168	W.	Fox Islands, Aleutian Islands. Mag. 6.
14	23 21 56*	59½	S.	31	W.	Sandwich Islands. Mag. 7.
15	01 35 23*	17½	N.	145	E.	Mariana Islands.
15	05 04 14*	17	N.	145	E.	do.
15	08 56 20*	17½	N.	145	E.	do.
15	09 30 22*	5½	N.	125½	E.	Near south coast of Mindanao, Philippine Islands.
15	09 38 23*	45	N.	111	W.	Hebgen Lake, Montana.
15	10 47 42*	37	N.	70	E.	Hindu Kush.
15	11 25 07*	17	N	145	E.	Mariana Islands.
15	12 15 45*	59	S.	24	W.	Sandwich Islands.
15	15 24 14*	31½	N.	116½	W.	Near west coast of Baja California.
15	17 05 30*	50½	N.	179	E.	Rat Islands, Aleutian Islands.
15	23 01 57*	44½	N.	11½	E.	Italy. Felt in Tuscany region.
16	02 28 44*	38½	N.	122	W.	California. Felt in Sonoma County. Mag. 4½ (Berk).
16	11 21 47*	47½	N.	152	E.	Kurile Islands.
17	02 31 02*	21½	N.	121	E.	Off south coast of Formosa.
17	02 55 58*	24	S.	177	W.	Tonga Islands region. h about 100 km.
17	05 04 46*	40½	N.	142½	E.	Near east coast of Honshu, Japan. Felt at Tokyo.
17	05 53 46*	5½	S.	102½	E.	Off south coast of Sumatra.
17	16 48 55*	36½	S.	101½	W.	South Pacific Ocean. Mag. 6.
18	09 11 55*	45½	N.	111	W.	Hebgen Lake, Montana.
18	09 57 07*	18	S.	178½	W.	Fiji Islands. h about 600 km.
18	16 24 50*	53	N.	168½	W.	Fox Islands, Aleutian Islands. Mag. 6½.
19	13 46 14*	19	N.	71½	W.	Haiti-Dominican Republic border.
19	15 07 00*	27½	N.	112½	W.	Near east coast of Baja California.
20	08 05 34**					South of Kermadec Islands.
20	12 53 37*	10½	N.	126½	E.	North of Mindanao, Philippine Islands.
20	14 16 52*	17½	S.	174½	W.	Tonga Islands region.
21	02 23 58*	45	N.	111½	W.	Hebgen Lake, Montana.
21	10 20 33*	27½	S.	176	W.	Kermadec Islands region. Mag. 6.
21	11 14 17*	27½	S.	176	W.	Kermadec Islands region. Mag. 6½.

Date 1959	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
Dec.	h m s	°	°	
21	11 19 14*	14 N.	52 E.	Gulf of Aden. Mag. 6-1/2 - 6-3/4.
22	02 39 02*	40½ N.	124 W.	California. Felt in Humboldt County. Mag. 4½ (Berk).
22	17 20 19*	37½ N.	141½ E.	Off east coast of Honshu, Japan. Felt at Tokyo. Depth slightly greater than normal.
23	03 49 00*	56½ N.	158 W.	Alaska Peninsula.
23	04 31 00*	28 S.	176 W.	Kermadec Islands region.
23	09 28 56*	38 N.	14½ E.	Near north coast of Sicily. Minor damage at Catania and Palermo.
23	13 59 02*	27½ S.	176 W.	Kermadec Islands region.
24	08 09 32*	18½ N.	95 W.	Vera Cruz, Mexico. Felt at Coatzacoalcos and Jaltipan. h about 200 km.
24	09 14 24*	27½ S.	176½ W.	Kermadec Islands region.
24	12 50 35*	13½ S.	74½ W.	Southern Peru.
24	13 08 34*	9 N.	126½ E.	Near north coast of Mindanao, Philippine Islands.
25	03 48 58*	27½ S.	176 W.	Kermadec Islands region.
25	10 18 47*	25½ S.	68½ W.	Chile-Argentina border region. Felt at Antofagasta, Chile. h about 100 km. Mag. 6-1/2 - 6-3/4.
26	12 11 09*	52 S.	101½ E.	South Indian Ocean.
26	18 19 10*	59½ N.	151½ W.	Kenai Peninsula Alaska. Mag. 6-1/4.
26	22 02 35*	53 N.	160 E.	Near southeast coast of Kamchatka.
27	04 47 45*	52½ N.	160½ E.	do.
27	05 01 55*	52½ N.	160 E.	do.
27	05 06 14*	52½ N.	160 E.	do.
27	05 22 39*	35 N.	26 E.	Near east coast of Crete. Felt.
27	06 18 08**			Near southeast coast of Kamchatka.
27	06 51 35*	52½ N.	159½ E.	do.
27	07 45 25*	52½ N.	159½ E.	do.
27	08 05 30*	52½ N.	160 E.	do.
27	11 48 55*	52½ N.	160 E.	do.
27	11 54 48*	52½ N.	160 E.	do.
27	12 39 09*	28 S.	63 W.	Santiago del Estero Province, Argentina. h about 650 km.
27	15 52 55*	56 N.	162½ E.	Near east coast of Kamchatka. Mag. 6-3/4 - 7.
27	19 28 39*	56 N.	162 E.	Near east coast of Kamchatka.
28	02 12 18*	37 N.	70½ E.	Hindu Kush. h about 200 km.
28	07 20 32*	52½ N.	160 E.	Near southeast coast of Kamchatka. Mag. 6½.
28	10 03 08*	22½ S.	67½ W.	Chile-Bolivia border. Felt at Antofagasta. h about 100 km.
28	13 04 30*	52½ N.	160 E.	Near southeast coast of Kamchatka. Mag. 6.
28	13 29 15*	18 S.	170 E.	New Hebrides Islands.
29	02 32 53*	37 N.	121½ W.	California. Felt at Hollister and San Francisco. Mag. 4-1/2 - 4-3/4 (Berk).

Date 1959	Origin Time G. C. T.	Lat.		Long.		Region, Focal Depth, and Remarks
Dec.	h m s	°		°		
29	07 04 14*	2	S.	126	E.	Spice Islands.
29	12 07 12*	51	N.	130	W.	Queen Charlotte Islands region.
29	17 14 40*	21½	S.	174	W.	Tonga Islands
29	20 35 08*	18	N.	145	E.	Mariana Islands. h about 350 km. Mag. 6 - 6-1/4.
29	21 27 17*	8½	S.	122	E.	Flores Island.
30	13 55 45*	6	S.	105½	E.	Sunda Strait. h about 150 km.
31	10 29 23*	3	S.	139½	E.	Northern New Guinea.
31	20 52 55*	37½	N.	25	W.	Azores Islands.

Date and Station		Phase (GCT)
		h m s
Dec. 1		
BOZ	eP	01 13 51
	e	14 00
	eL	14 38
BUT	iP	01 13 43
	eL	14 44
HH	iP	01 14 14
	iL	14 45
Dec. 1		
SJ	eP	07 45 16
Dec. 1		
EUR	iP	09 57 41
Dec. 1		
BOZ	eP	12 51 30
BUT	eP	12 51 31
COL	iP	12 50 43
EUR	iP	12 52 03
HH	iP	12 51 24
THULE	iP	12 48 08
	iPcP	49 09
TUC	eP	12 52 22
TUC-T	e(P)	12 52 21
	e	52 28
WASH	eP	12 50 16
Dec. 1		
COL	iP	13 03 56
HH	iP	13 04 37
THULE	iP	13 01 21
Dec. 1		
COL	iP	14 02 19
HH	iP	14 01 31
Dec. 1		
COL	eP	14 30 04
EUR	iP	14 26 39
HH	iP	14 27 10
SJ	eP	14 23 07
	e	23 36
THULE	eP	14 29 36
TUC	eP	14 25 47
TUC-T	e(P)	14 25 39
	e	25 46
	e	26 02

Date and Station		Phase (GCT)
		h m s
Dec. 1		
COL	eP'	15 19 05
EUR	eP'	15 18 47
GUAM	eP	15 11 36
THULE	eP'	15 19 50
	ePP	24 10
Dec. 1		
HH	eP	15 34 03
Dec. 1		
EUR	iP	15 50 20
	ipP	50 49
	isP	51 01
HH	e(P)	15 50 48
SJ	e(P)	15 46 44
TUC-T	e(P)	15 50 04
Dec. 1		
COL	eP	18 23 42
Dec. 1		
HH	e(P)	20 39 26
Dec. 2		
COL	eP	00 07 52
EUR	eP	00 11 34
Dec. 2		
COL	iP	04 25 08
EUR	iP	04 28 45
	ipP	29 00
HH	iP	04 28 11
TUC	eP	04 29 37
TUC-T	e(P)	04 29 36
	iP	30 29
Dec. 2		
COL	eP	04 30 51
EUR	iP	04 30 30
TUC	iP	04 30 29
Dec. 2		
BC	eP	07 12 31
COL	iP	07 15 49
	i	16 00
COLU	eP	07 10 53
EUR	iP	07 12 55
HH	iP	07 13 33
SJ	eP	07 09 00

Date and Station		Phase (GCT)
		h m s
THULE	iP	07 15 34
TUC	eP	07 11 55
TUC-T	iP	07 11 55
	e	12 08
Dec. 2		
EUR	eP	07 45 54
Dec. 2		
COL	eP'	07 48 09
COLU	eP'	07 49 46
EUR	eP'	07 49 01
	iP'	49 06
HH	iP'	07 48 55
TUC-T	eP'	07 49 12
	e	49 20
Dec. 2		
COL	eP	07 56 01
	i	56 29
EUR	iP	07 52 28
	ipP	52 49
THULE	iP	07 56 02
Dec. 2		
COL	iP	08 33 04
Dec. 2		
BC	eP'	09 52 51
BOZ	eP'	09 52 49
	ePP	53 45
	e	55 26
	ePKKP	10 02 51
BUT	eP'	09 52 41
	ePKKP	10 03 38
COL	iP	09 47 06
	iP'	50 15
	iSKS	57 35
	eS	58 30
	e	10 03 49
	ePKKP	04 30
	eP'P'	12 42
	eL	13 15
COLU	eP'	09 53 31
EUR	iP'	09 52 46
	ePKKP	10 03 27
GUAM	eP	09 39 38
	iP	39 40
	iS	44 17
	eL	45 05
HONO	eP	09 46 17

Date and Station		Phase (GCT)
		h m s
HH	e(P)	09 49 25
	i	49 43
	iPP	53 23
	iPKKP	10 03 43
KIP	eP	09 46 19
SLC	iP'	09 52 51
	iPP	54 00
SJ	eP'	09 54 05
	iP'	54 47
	iPP	58 32
THULE	eP	09 48 08
	ePP	52 28
	ePKKP	10 04 04
	eP'P'	12 06
TUC	iP'	09 52 59
	e	53 25
	eL	10 36 24
TUC-T	iP'	09 52 57
	ePP	54 26
	i	55 26
Dec. 2		
BOZ	eP	13 52 06
	e	52 16
Dec. 2		
COL	e(P)	18 31 03
HH	iP	18 32 02
Dec. 2		
COL	iP	20 10 41
SJ	eP'	20 17 50
Dec. 2		
COL	iP	22 57 55
EUR	eP	23 01 31
HH	eP	23 00 58
	iPcP	02 43
TUC-T	eP	23 02 42
Dec. 3		
COL	iP	02 14 59
HH	eP	02 14 12
Dec. 3		
COL	iP	03 37 48
Dec. 3		
EUR	eP	06 42 53
HH	eP	06 42 19
	iL	43 24
Dec. 3		
COL	iP	06 58 51

Date and Station		Phase	(GCT)
			h m s
EUR	iP		07 02 43
	ipP		03 05
Dec. 3			
COL	e(P)		07 15 22
Dec. 3			
COL	eP		08 22 34
Dec. 3			
COL	iP		08 27 39
EUR	eP		08 31 39
Dec. 3			
EUR	eP		10 55 11
Dec. 3			
EUR	iP		11 51 39
Dec. 3			
COL	iP		12 45 20
EUR	iP		12 48 38
Dec. 3			
COL	iP		13 28 58
EUR	eP		13 28 37
HH	e(P)		13 29 10
TUC	eP		13 28 40
	i		28 43
TUC-T	eP		13 28 40
	i		28 45
Dec. 3			
COL	e(P)		13 36 09
Dec. 3			
COL	iP		15 05 15
EUR	eP		15 08 56
Dec. 3			
EUR	iP		15 36 57
	i		38 46
HH	iP		15 37 50
TUC-T	eP		15 38 35
UK	eP		15 35 43
	i		36 12
	eL		36 43
Dec. 4			
COL	iP		01 18 22
EUR	iP		01 17 55
HH	eP		01 18 25
TUC	eP		01 17 55
TUC-T	iP		01 17 56
Dec. 4			
HH	iP		09 13 55
Dec. 4			
EUR	eP		09 28 07
Dec. 4			
COL	iP		09 35 57
EUR	iP		09 35 36
HH	iP		09 36 03
TUC	iP		09 35 36
	e		35 53
TUC-T	iP		09 35 36
Dec. 4			
EUR	iP		09 57 02
TUC	eP		09 55 54
TUC-T	eP		09 55 53
Dec. 4			
COL	eP		12 03 52
EUR	eP		12 07 08
Dec. 4			
EUR	eP		19 59 32
Dec. 4			
BOZ	iP		20 56 40
	iS		56 54
	iL		57 16
BUT	iP		20 56 47
	eS		57 04
	eL		57 45
EUR	e(P)		20 58 08
HH	iP		20 57 25
	iL		58 22
RC	eP		20 58 17
	e		58 28
	eL		59 27
SLC	iP		20 57 46
	iL		58 42
Dec. 4			
EUR	eP		21 45 38
Dec. 4			
EUR	eP		23 53 08
	i		53 43
Dec. 5			
SJ	iP		00 48 14
	i		48 35
	eL		49 34
Dec. 5			
EUR	eP		08 02 17
SJ	eP		07 56 37
	i		58 56
TUC	eP		08 01 23
TUC-T	eP		08 01 23
Dec. 5			
BOZ	eP		08 16 32
BUT	eP		08 16 20
	eL		19 48
COL	eP		08 19 35
EUR	iP		08 15 31
HH	iP		08 16 27
	eL		20 05
RC	iP		08 17 37
	eS		20 52
SLC	iP		08 16 14
	eL		19 18
SJ	e(P)		08 23 17
	e		23 26
TUC	iP		08 17 09
	i		17 27
	eL		22 02
TUC-T	iP		08 17 09
	eL		22 06
UK	iP		08 14 17
	i		14 33
	eL		15 14
Dec. 5			
COL	iP		09 06 50
Dec. 5			
BOZ	eP		11 51 10
	eL		51 53
BUT	iP		11 51 21
	eL		52 21
EUR	eP		11 52 29
HH	eP		11 51 57
	iL		53 02
Dec. 5			
SLC	iP		12 08 44
Dec. 5			
HH	eP		16 15 46
Dec. 5			
EUR	eP		18 14 48
TUC-T	e(P)		18 12 47
	e		13 30
Dec. 5			
COL	eP		19 46 46
EUR	eP		19 47 19
Dec. 5			
COL	iP		22 13 35
Dec. 6			
BOZ	eP		01 53 29
	eL		54 46
HH	iP		01 54 11
	iL		55 06
Dec. 6			
COL	iP		04 08 58
EUR	eP		04 12 26
Dec. 6			
EUR	eP		08 05 18
	eS		06 12
	eL		06 16
Dec. 6			
HH	e(P)		09 34 11
Dec. 6			
COL	e(P)		10 15 55
Dec. 6			
EUR	eP		13 52 05
Dec. 6			
COL	iP		17 26 50
Dec. 6			
COL	iP		17 39 48
	i		40 07
EUR	iP		17 43 29
THULE	eP		17 43 19
Dec. 7			
EUR	eP		01 16 22
Dec. 7			
COL	iP		01 24 35
	epP		25 06
SJ	eP'		01 31 37
	epP'		32 07
Dec. 7			
COL	iP		01 39 22
	iL		40.19
Dec. 7			
COL	iP		03 13 25
	ipP		15 31
EUR	iP		03 13 05
	ipP		15 07
GUAM	iP		03 09 38

Date and Station		Phase (GCT)
		h m s
TUC	iP	03 13 07
	epP	15 11
TUC-T	iP	03 13 07
	epP	15 09
	ipP	15 12
Dec. 7		
EUR	eP	03 57 14
HH	iP	03 56 30
	iL	57 34
Dec. 7		
BC	eP	04 12 17
BOZ	eP	04 14 42
BUT	eP	04 14 41
COL	eP	04 18 30
	eL	32 50
EUR	eP	04 13 11
	iP	13 16
HH	eP	04 15 06
SLC	iP	04 13 35
	eL	17 01
TUC	eP	04 11 39
	iP	11 42
	iL	12 56
TUC-T	iP	04 11 41
	i	11 43
Dec. 7		
EUR	eP	05 23 23
Dec. 7		
COL	iP	05 24 50
EUR	iP	05 27 36
HH	iP	05 27 16
THULE	e(P)	05 26 40
Dec. 7		
COL	e(P)	08 21 49
Dec. 7		
COL	eP	09 03 39
EUR	eP	09 06 54
Dec. 7		
EUR	eP	09 15 29
TUC	eP	09 14 03
TUC-T	e(P)	09 14 00
	e	14 06
Dec. 7		
EUR	e(P)	09 46 57

Date and Station		Phase (GCT)
		h m s
Dec. 7		
COL	iP	18 41 37
Dec. 8		
BUT	eP	03 11 35
COL	iP	03 08 47
EUR	iP	03 11 45
	i	11 56
HH	iP	03 11 22
THULE	eP	03 10 38
TUC	e(P)	03 12 42
TUC-T	eP	03 12 28
	i	12 42
Dec. 8		
TUC	eP	03 26 56
TUC-T	eP	03 26 55
	i	27 05
Dec. 8		
HH	eP	04 35 25
Dec. 8		
BC	eP'	04 48 54
BOZ	eP'	04 48 54
COL	eP	04 43 10
	e(P')	46 26
EUR	iP'	04 48 51
GUAM	eP	04 35 47
	i(S)	39 38
HH	eP'	04 48 46
	iPP	49 35
SJ	eP'	04 50 50
	iP'	50 57
TUC	iP'	04 49 04
	e	49 11
TUC-t	iP'	04 49 04
	i	49 10
Dec. 8		
COL	iP	08 10 50
Dec. 8		
COL	iP	08 16 26
EUR	eP	08 18 08
HH	eP	08 17 07
THULE	iP	08 12 30
	eL	18 11
TUC	eP	08 18 43

Date and Station		Phase (GCT)
		h m s
TUC-T	eP	08 18 40
	iP	18 42
Dec. 8		
COL	iP	08 53 18
	e	57 15
EUR	iP	08 56 37
	i	56 51
HH	iP	08 56 09
Dec. 8		
COL	iP	09 47 13
EUR	eP	09 48 46
HH	iP	09 48 06
THULE	eP	09 44 50
Dec. 8		
EUR	eP	11 25 21
HH	iP	11 29 18
Dec. 8		
COL	iP	12 32 28
THULE	eP	12 31 29
Dec. 8		
COL	iP	13 03 12
THULE	iP	13 01 46
Dec. 8		
BOZ	eP	13 47 06
COL	iP	13 45 34
	ePP	48 03
EUR	eP	13 47 35
HH	iP	13 46 54
THULE	eP	13 43 30
Dec. 8		
COL	iP	17 12 14
	iS	12 26
	iL	12 30
Dec. 8		
BC	e(P)	17 16 34
EUR	iP	17 17 05
HH	iP	17 18 06
TUC-T	eP	17 16 03
	i	16 08
Dec. 8		
HH	e(P)	19 04 14
Dec. 8		
HH	e(P)	22 42 54

Date and Station		Phase (GCT)
		h m s
Dec. 9		
COL	eP	04 03 17
EUR	eP	04 05 19
HH	e(P)	04 04 41
Dec. 9		
COL	e(P)	08 42 03
EUR	eP	08 45 35
Dec. 9		
KIP	eP	11 20 13
Dec. 9		
BC	iP	14 15 54
BOZ	eP	14 16 30
COL	iP	14 16 19
EUR	iP	14 15 58
	i	16 19
	iPP	19 06
GUAM	eP	14 12 32
HH	iP	14 16 26
	ePP	19 51
KIP	eP	14 11 50
RC	iP	14 16 50
SLC	iP	14 16 16
TUC	iP	14 16 01
TUC-T	iP	14 16 01
UK	eP	14 15 31
Dec. 9		
HH	e(P)	16 04 22
Dec. 9		
COL	eP	17 05 44
EUR	eP	17 07 37
HH	iP	17 06 56
Dec. 9		
COL	eP	18 35 51
THULE	eP	18 35 23
Dec. 9		
HH	e(P)	19 33 49
Dec. 9		
BC	eP	20 11 47
	e	13 13
EUR	eP	20 11 35
	eL	15 15

Date and Station		Phase (GCT)
		h m s
HH	eP	20 13 27
TUC	iP	20 09 49
	i(S)	11 10
	iL	11 24
TUC-T	iP	20 09 50
	i	10 12
	iS	11 08
	iL	11 18
Dec. 9		
COL	iP	21 31 05
EUR	iP	21 34 48
Dec. 9		
COL	iP	21 41 18
EUR	iP	21 42 19
GUAM	eP	21 33 34
HH	e(P)	21 42 26
Dec. 9		
HH	i(P)	22 47 25
Dec. 10		
SJ	eP	00 17 46
	i(S)	18 16
	iL	18 24
Dec. 10		
COL	eP	01 16 19
EUR	iP	01 20 22
Dec. 10		
BOZ	iP	01 41 30
	eL	42 31
BUT	iP	01 41 43
	eL	42 59
COL	iP	01 47 04
	i	47 41
EUR	eP	01 43 01
HH	iP	01 42 19
	iL	43 25
RC	eP	01 43 05
	i	44 09
SLC	eP	01 42 24
	e(S)	42 58
	eL	43 16
Dec. 10		
SJ	iP	06 46 47
	i	48 02
Dec. 10		
GUAM	iP	07 00 33
	iS	01 18
Dec. 10		
HH	e(P)	07 33 31

Date and Station		Phase (GCT)
		h m s
Dec. 10		
HH	e(P)	07 33 31
Dec. 10		
GUAM	iP	08 02 08
	iS	02 23
EUR	iP	08 14 31
HH	eP	08 14 26
Dec. 10		
HH	eP	13 15 38
Dec. 10		
EUR	eP	13 56 13
Dec. 10		
BOZ	eP	14 03 20
	eL	04 29
BUT	iP	14 03 30
	eL	04 50
EUR	eP	14 04 34
HH	iP	14 04 05
	iL	05 16
RC	e(P)	14 04 48
	e	05 47
SLC	eP	14 04 01
	i	04 37
	eL	04 55
Dec. 10		
EUR	eP	14 45 34
Dec. 10		
EUR	iP	19 08 08
Dec. 10		
HH	e(P)	21 17 22
Dec. 11		
COL	iP	00 44 48
COLU	eP'	00 51 13
EUR	eP	00 46 26
	iPP	50 19
	ePKKP	01 01 16
HONO	iP	00 43 28
	i	43 37
HH	e(P)	00 46 29
	ePP	50 18
	iPKKP	01 01 27
RC	eP'	00 51 35
SJ	iP'	00 52 22
	i	52 31
TUC	eP'	00 50 42

Date and Station		Phase (GCT)
		h m s
Dec. 11		
BOZ	eP	01 20 55
	eL	21 56
BUT	iP	01 21 05
	eL	22 10
EUR	eP	01 22 11
	i	22 22
	eS	23 26
	eL	23 46
HH	eP	01 21 39
	iL	22 48
SLC	e(P)	01 21 41
	e(S)	22 13
	eL	22 28
	iL	22 36
Dec. 11		
BC	e(P)	01 50 54
COL	iP	01 51 38
EUR	iP	01 51 05
HH	eP	01 51 36
TUC	eP	01 51 04
	e	51 26
	eL	02 17 48
TUC-T	iP	01 51 03
Dec. 11		
EUR	eP	03 36 42
Dec. 11		
EUR	eP	03 51 40
TUC-T	eP	03 51 24
Dec. 11		
RC	eP	05 56 49
EUR	eP	05 56 49
Dec. 11		
TUC	eP	07 09 21
TUC-T	eP	07 09 21
Dec. 11		
EUR	iP	07 42 03
TUC	eP	07 40 53
TUC-T	eP	07 40 52
Dec. 11		
SJ	e(P)	08 55 04
Dec. 11		
BC	eP	10 19 50
COL	eP	10 20 17

Date and Station		Phase (GCT)
		h m s
EUR		
EUR	eP	10 19 48
	i	20 00
HH	eP	10 20 16
TUC	e(P)	10 19 53
TUC-T	iP	10 19 54
Dec. 11		
EUR	eP	11 50 28
Dec. 11		
BOZ	eP	13 37 35
	eL	38 35
BUT	iP	13 37 49
	eL	38 48
EUR	eP	13 39 06
HH	eP	13 38 24
	iL	39 29
RC	eP	13 39 07
	e	40 07
Dec. 11		
TUC	eP	16 08 36
	e	09 24
TUC-T	e(P)	16 08 26
	e	08 36
	e(S)	09 23
	eL	09 29
Dec. 11		
EUR	eP	20 58 50
Dec. 11		
EUR	eP	23 20 15
Dec. 12		
COL	iP	04 27 22
EUR	eP	04 26 59
Dec. 12		
COL	iP	05 50 16
	i	50 21
	i(S)	50 50
	iL	51 00
EUR	eP	05 55 40
Dec. 12		
EUR	eP	06 20 19
TUC	eP	06 19 02
TUC-T	iP	06 19 01
Dec. 12		
BOZ	iP	06 22 21
	iL	23 24
EUR	eP	06 23 46

3 4297-4.

Date and Station		Phase (GCT)
		h m s
HH	iP	06 23 10
	iL	24 12
SLC	eP	06 23 11
	iP	23 22
	i	23 27
	e	23 52
	e	24 11
Dec. 12		
BOZ	eP	06 28 17
	eL	29 26
COL	eP	06 29 07
EUR	iP	06 26 52
	eL	29 53
HH	iP	06 25 51
	i(S)	26 54
	iL	27 17
TUC	eP	06 28 40
TUC-T	eP	06 28 39
Dec. 12		
EUR	eP	13 19 52
TUC	e(P)	13 19 05
	e	19 29
TUC-T	eP	13 19 04
	e	19 29
Dec. 12		
BC	eP	17 41 19
BOZ	eP	17 39 56
	iP	39 16
	eL	40 08
COL	eP	17 46 45
EUR	e(P)	17 40 24
	iP	40 42
HH	e(P)	17 39 52
	i	40 08
	iL	41 10
RC	eP	17 40 51
	i	41 54
SLC	eP	17 40 07
	iP	40 16
	i	40 33
	i	41 12
	i	41 18
TUC-T	eP	17 45 37
Dec. 12		
BOZ	iP	18 28 41
	eL	29 44
EUR	eP	18 30 04
HH	eP	18 29 32
	iL	30 35

Date and Station		Phase (GCT)
		h m s
Dec. 12		
EUR	eP	18 53 30
TUC	eP	18 52 20
TUC-T	eP	18 52 20
	e	53 06
Dec. 12		
EUR	iP	20 12 41
TUC-T	iP	20 12 50
Dec. 12		
EUR	eP	21 25 05
Dec. 12		
EUR	eP	22 41 42
Dec. 13		
EUR	iP	01 43 01
	i	43 17
	i	44 38
HH	iP	01 42 26
	iL	43 31
RC	eP	01 43 09
	e	43 14
SLC	eP	01 42 21
	iP	42 32
Dec. 13		
COL	iP	03 28 52
EUR	eP	03 32 04
HH	eP	03 31 37
THULE	eP	03 30 44
Dec. 13		
EUR	eP	05 37 17
Dec. 13		
HH	eP'	05 58 37
Dec. 13		
EUR	eP	06 22 34
Dec. 13		
BC	eP	07 52 40
BOZ	eP	07 50 42
	eL	52 54
BUT	iP	07 50 53
	iS	51 15
	eL	51 59
EUR	e(P)	07 52 00
	iP	52 05
HH	iP	07 51 29
	iL	52 35
RC	eP	07 52 02
	i	52 15

Date and Station		Phase (GCT)
		h m s
SLC	eP	07 51 23
	iP	51 25
	i	51 35
	i	52 27
	i	52 45
TUC	eP	07 53 32
	eL	57 00
TUC-T	e(P)	07 53 28
	e	54 14
	eL	56 38
Dec. 13		
EUR	eP	09 38 31
RC	eP	09 39 15
	e	39 28
TUC	eP	09 39 39
	e	39 55
Dec. 13		
EUR	eP	11 07 41
Dec. 13		
BUT	eP	17 48 39
COL	iP	17 48 43
EUR	eP	17 48 08
HH	eP	17 48 40
SLC	eP	17 48 32
TUC	eP	17 48 13
TUC-T	iP	17 48 10
	i	48 13
Dec. 13		
EUR	eP	18 49 25
HH	eP	18 48 50
	iL	49 55
SLC	e(P)	18 48 47
Dec. 13		
COL	eP	23 30 15
EUR	iP	23 32 32
HH	iP	23 32 21
THULE	iP	23 32 04
Dec. 14		
COL	iP	00 25 56
EUR	iP	00 29 23
Dec. 14		
COL	iP	01 08 08
EUR	iP	01 11 39

Date and Station		Phase (GCT)
		h m s
EUR	e	01 12 25
	i	12 31
Dec. 14		
COL	eP	05 22 40
Dec. 14		
COL	eP	05 31 40
Dec. 14		
EUR	eP	06 36 17
Dec. 14		
BOZ	eP	07 19 38
	eL	20 39
EUR	eP	07 21 02
HH	eP	07 20 25
	iL	21 30
Dec. 14		
COL	eP	07 30 03
Dec. 14		
EUR	eP	09 20 23
Dec. 14		
BOZ	iP	14 04 37
	eL	05 32
EUR	eP	14 06 01
HH	eP	14 05 26
	iL	06 28
RC	eP	14 06 08
	e	07 23
Dec. 14		
BC	eP	18 12 57
	epP	13 57
BOZ	eP'	18 16 00
BUT	eP	18 12 37
	eFP	15 53
	eFKKP	28 10
COL	iP	18 10 47
	ipP	11 22
	i	13 44
	iFF	14 01
	iS	20 54
COLU	eP'	18 17 35
	epP'	18 13
	eFP	20 00
	epPP	20 50
EUR	iP	18 12 39
	iPP	15 54
	iPKKP	28 12
GUAM	iP	18 02 58
	ePcP	06 55
	eScP	10 11
	eScS	14 08

Date and Station		Phase (GCT)
		h m s
HONO	iP	18 10 04
HH	iP	18 12 29
	ePP	15 40
	ipPP	16 46
	ePKKP	28 00
	e	28 21
KIP	iP	18 10 03
RC	e(P)	18 16 35
	i	17 56
	iPKKP	27 44
THULE	eP	18 11 53
TUC-T	eP'	18 17 01
	ipP'	17 59
	iPKKP	28 42
	e	29 09
	ipPKKP	29 18
UK	eP'	18 16 29
WASH	iPP	18 20 44
	i	21 30
Dec. 14		
COL	eP	18 55 46
Dec. 14		
EUR	eP	19 47 46
Dec. 14		
BOZ	eP	20 23 07
	e	25 02
EUR	e(P)	20 24 29
Dec. 14		
COL	eP	22 02 04
	iPKKP	19 27
	eP'P'	28 37
EUR	eP'	22 07 48
GUAM	iP	21 54 23
	i	54 30
	i	54 44
	eS	58 26
HONO	eP	22 01 13
	iP	01 22
RC	e(P)'	22 08 02
SJ	iP'	22 09 46
	i	09 55
THULE	eP	22 03 18
Dec. 14		
BC	eP	22 08 34
BUT	eP	22 08 00
COL	iP	22 04 42

Date and Station		Phase (GCT)
		h m s
	e(S)	07 57
	iL	08 24
COLU	eP	22 11 19
EUR	iP	22 08 11
GUAM	eP	22 10 11
	i	10 24
HONO	eP	22 07 20
HH	iP	22 07 39
	i	10 16
KIP	iP	22 07 19
RC	iP	22 08 56
SJ	iP	22 13 19
	i	13 33
SLC	eP	22 08 27
	iP	08 28
	e(S)	14 27
	iL	17 35
SIT	eP	22 05 26
THULE	iP	22 08 45
	ePP	10 17
UK	eP	22 07 35
	eL	18 09
Dec. 14		
BOZ	eP'	23 41 02
	e	41 32
	ePP	43 53
	eSKKP	54 54
BUT	eP'	23 41 03
COL	eP'	23 41 44
	eSKKP	55 17
COLU	eP'	23 40 08
	iP	40 18
EUR	iP'	23 40 55
	iPKKP	50 49
GUAM	iP'	23 41 16
	ePP	43 30
	iPP	43 47
HONO	eP'	23 41 03C
	iP	41 10
HH	eP'	23 40 52
	i	41 06
	iPP	44 26
	e(SKKP)	53 47
KIP	eP'	23 41 07D
	i	41 09
RC	iP'	23 40 51D

Date and Station		Phase (GCT)
		h m s
RC	e	23 42 19
	iPP	44 32
	ePKKP	50 56
	eSKKP	54 40
SLC	e(P')	23 40 43
	i(P)	40 44
	i	41 46
	iPP	44 33
SJ	iP	23 34 30C
	iPP	38 13
	eP'P'	00 00 47
SIT	eP'	23 41 36
THULE	eP'	23 41 13
	i	41 24
	i	41 37
	iSKP	44 57
TUC	iP'	23 40 44
	e	40 24
	ePKKP	51 21
TUC-T	e(P)	23 37 06
	iP'	40 43
	i	41 40
	iPKKP	51 23
	eSKKP	54 45
	iP'P'	59 03
UK	iP'	23 41 05D
	iPP	43 15
	eL	00 24 23
WASH	eP'	23 40 42
	i	41 03
	eL	00 04 50
Dec. 15		
COL	eP	00 11 13
THULE	eP	00 14 16
Dec. 15		
BUT	eP	01 48 09
COL	eP	01 46 08
COL	i(P)	01 48 17
EUR	iP	01 48 08
GUAM	eP	01 36 26
	iP	36 33
	e(L)	37 47
HH	e(P)	01 48 00
THULE	eP	01 47 58
TUC-T	eP	01 48 48
Dec. 15		
EUR	eP	02 23 10
Dec. 15		
COL	iP	02 42 38
	i(S)	43 31

Date and Station		Phase (GCT)
		h m s
COL	eL	02 43 46
HH	eP	02 46 36
Dec. 15		
COL	iP	04 08 58
Dec. 15		
BUT	eP	05 17 00
COL	eP	05 14 59
EUR	iP	05 17 00
GUAM	e(P)	05 04 55
	iP	05 07
	eL	06 27
HH	eP	05 16 52
Dec. 15		
COL	e(P)	05 43 22
Dec. 15		
BUT	eP	09 09 04
COL	eP	09 07 02
EUR	eP	09 09 03
GUAM	eP	08 57 21
	eS	58 08
HH	eP	09 08 56
RC	eP	09 09 40
THULE	eP	09 08 54
TUC-T	e(P)	09 09 34
	e	09 49
Dec. 15		
COL	iP	09 42 52
SJ	eP'	09 50 36
Dec. 15		
BOZ	eP	09 38 43
	eL	39 56
BUT	iP	09 38 54
	eL	39 53
EUR	iP	09 40 05
HH	iP	09 39 29
	iL	40 34
RC	e(P)	09 40 06
	i	40 16
	e	41 16
SLC	eP	09 39 25
	iP	39 33
	e	40 21
	i	40 27

6 4297-4

Date and Station		Phase (GCT)
		h m s
Dec. 15		
COL	iP	10 59 24
HH	e(P)	11 08 53
THULE	eP	10 58 18
Dec. 15		
BUT	eP	11 37 51
COL	eP	11 35 51
EUR	iP	11 37 51
GUAM	eP	11 26 11
	eL	27 37
HH	iP	11 37 45
RC	eP	11 38 27
TUC-T	eP	11 37 26
Dec. 15		
COL	iP'	12 35 48
	i	36 00
EUR	eP'	12 34 46
	iPKKP	44 40
HH	eP'	12 34 58
THULE	eP'	12 35 12
	iP'	35 17
Dec. 15		
BOZ	eP	15 16 49
	eL	17 39
BUT	iP	15 16 48
	iS	17 11
	iL	17 45
EUR	iP	15 18 00
HH	iP	15 17 23
	iL	18 28
RC	iP	15 18 07
SLC	e(P)	15 17 19
	eP	17 21
	iP	17 30
	e	18 13
	i	18 19
Dec. 15		
BC	iP	15 25 27
EUR	iP	15 26 13
TUC-T	eP	15 25 32
	i	25 52
	eL	26 48
Dec. 15		
EUR	eP	16 30 13

Date and Station		Phase (GCT)
		h m s
Dec. 15		
BC	eP	17 14 17
COL	iP	17 10 26
	i	14 32
EUR	iP	17 13 52
HH	iP	17 13 21
	i	15 24
RC	iP	17 14 30
	i	14 41
TUC-T	iP	17 14 53
	e	15 03
Dec. 15		
BC	eP	19 00 59
EUR	iP	19 00 52
TUC-T	eP	19 03 54
	e	04 26
Dec. 15		
BOZ	eP	20 07 56
BUT	eP	20 01 56
EUR	eP	20 01 52
HH	eP	20 02 00
TUC-T	eP	20 01 37
Dec. 15		
COL	eP	21 30 08
EUR	iP	21 33 46
Dec. 15		
EUR	eP	23 14 26
HH	eP	23 13 44
Dec. 16		
HH	iP	02 13 25
	iL	14 25
RC	eP	02 15 23
Dec. 16		
BC	eP	02 30 44
EUR	iP	02 29 57
RC	e(P)	02 32 27
	eP	32 32
TUC	e(P)	02 32 14
	eL	35 09
UK	iP	02 29 00
	iL	29 22

Date and Station		Phase (GCT)
		h m s
Dec. 16		
EUR	eP	02 43 24
Dec. 16		
COL	eP	05 25 16
Dec. 16		
COL	iP	11 28 52
EUR	iP	11 32 21
	i	33 02
HH	iP	11 31 50
RC	iP	11 32 46
TUC	eP	11 33 11
TUC-T	iP	11 33 11
Dec. 16		
EUR	eP	13 25 24
Dec. 16		
EUR	eP	16 52 42
TUC	eP	16 51 01
TUC-T	iP	16 51 01
Dec. 16		
COL	iP	16 57 36
EUR	iP	16 57 14
TUC	eP	16 57 15
TUC-T	eP	16 57 15
Dec. 16		
RC	eP	17 31 07
EUR	iP	17 31 44
	i	32 08
RC	eP	17 32 28
TUC	eP	17 30 17
	e	30 33
TUC-T	eP	17 30 10
	e	30 17
Dec. 17		
COL	eP	00 13 47
Dec. 17		
COL	iP	02 42 22
EUR	eP	02 44 46
HH	iP	02 44 27
THULE	eP	02 43 23
Dec. 17		
COL	e(P)	02 58 22

Date and Station		Phase (GCT)
		h m s
Dec. 17		
COL	iP	03 08 58
EUR	iP	03 08 29
	ipP	09 01
TUC	iP	03 08 27
	epP	08 58
TUC-T	iP	03 08 27
	ipP	08 59
Dec. 17		
COL	eP	05 13 11
	i	13 18
EUR	eP	05 16 19
HH	iP	05 15 52
RC	eP	05 16 42
	e	16 54
TUC-T	eP	05 17 03
Dec. 17		
COL	iP	05 25 14
Dec. 17		
BUT	eP'	06 13 01
COL	eP'	06 12 06
	ePP	15 04
COLU	eP'	06 13 45
EUR	iP'	06 13 04
	iPP	16 28
HH	iP'	06 12 56
RC	eP'	06 13 13
	ePP	15 41
TUC	e(P')	06 13 11
	e	13 22
	eSKP	17 16
TUC-T	eP'	06 13 11
	i	13 21
	eSKP	17 03
WASH	eP'	06 13 33
Dec. 17		
HH	iP	09 05 42
	iL	06 45
Dec. 17		
COL	iP	09 59 45
EUR	iP	09 59 35
TUC	eP	09 59 38
TUC-T	iP	09 59 39

Date and Station		Phase (GCT)
		h m s
Dec. 17		
RC	e(P)	11 20 53
Dec. 17		
BC	eP	17 00 27
BUT	eP	17 01 20
COLU	eP	17 00 24
EUR	iP	17 00 46
HH	iP	17 01 33
RC	eP	17 01 08
	i	01 19
SLC	eP	17 00 50
SJ	e(P)	17 02 22
TUC	e(P)	17 00 11
	e	00 22
TUC-T	eP	16 59 59
	i	17 00 03
UK	eP	17 00 58
	i	01 05
Dec. 17		
EUR	eP	17 21 49
HH	iP	17 21 08
	iL	22 09
Dec. 18		
TUC-T	e(P)	02 07 05
Dec. 18		
COL	eP	03 33 28
Dec. 18		
HH	e(P)	04 35 10
Dec. 18		
SJ	eP	05 14 06
TUC-T	eP	05 17 37
Dec. 18		
EUR	e(P)	07 21 15
Dec. 18		
HH	e(P)	08 20 47
	iL	21 50
Dec. 18		
BC	eP	09 14 14
	e	16 57
BOZ	iP	09 12 14
	eL	13 09
BUT	eP	09 12 11
	iP	12 25
	eL	13 42

Date and Station		Phase (GCT)
		h m s
EUR	e(P)	09 13 31
	iP	13 35
HH	iP	09 13 00
	iL	14 06
RC	e(P)	09 13 27
	e	13 44
SLC	eP	09 14 02
	iP	14 04
Dec. 18		
BC	eP	10 08 26
COL	iP	10 08 48
	epP	10 55
EUR	iP	10 08 30
	i	09 08
HH	eP	10 08 56
TUC	iP	10 08 32
	epP	10 34
TUC-T	iP	10 08 32
	ipP	10 34
	ePKKP	26 09
Dec. 18		
EUR	eP	10 28 19
HH	eP	10 27 36
	iL	28 39
Dec. 18		
RC	eP	16 33 37
BOZ	eP	16 32 06
	ePP	33 02
BUT	eP	16 31 55
	ePcP	34 25
COL	iP	16 28 39
	iS	31 54
	iL	33 58
COLU	eP	16 35 14
	eS	43 38
EUR	iP	16 32 10
HONO	eP	16 31 19
	ePP	32 32
	eS	36 36
	eL	40 48
HH	iP	16 31 38
	iPcP	34 15
	e(S)	37 57
KIP	eP	16 31 18
	i	31 26
RC	iP	16 32 50
	e(ScP)	38 30

Date and Station		Phase (GCT)
		h m s
SLC	eP	16 32 23
	iP	32 25
	iS	38 28
	iL	46 08
SJ	iP	16 37 16
SIT	iP	16 29 21
THULE	iP	16 32 42
	eS	38 27
TUC	iP	16 33 16
	i	34 13
	eS	39 53
	e	43 41
	eL	47 54
TUC-T	iP	16 33 14
	i	33 31
UK	eP	16 31 33
	i	31 40
	ePP	32 42
WASH	iP	16 34 05
Dec. 18		
EUR	eP	16 53 52
GUAM	iP	16 42 40
	eL	44 07
Dec. 18		
EUR	eP	17 04 13
Dec. 18		
COL	iP	18 19 38
Dec. 18		
SJ	iP	19 36 49
	e(S)	37 12
	eL	37 15
Dec. 18		
BUT	eP	20 00 18
COL	eP	19 58 15
EUR	eP	20 00 16
GUAM	eP	19 48 59
	eL	49 59
THULE	eP	20 00 08
Dec. 18		
EUR	eP	20 25 11
Dec. 18		
EUR	iP	21 41 36
HH	e(P)	21 41 22
RC	eP	21 42 05
Dec. 18		
EUR	eP	21 53 18

Date and Station		Phase (GCT)
		h m s
HH	e(P)	21 53 12
Dec. 19		
BUT	eP	03 35 37
COL	eP	03 33 28
EUR	eP	03 35 36
Dec. 19		
HH	eP	07 43 55
	iL	44 58
Dec. 19		
BUT	eP	09 21 40
COL	iP	09 21 32
EUR	iP	09 21 13
HH	iP	09 21 40
TUC	iP	09 21 16
	e	21 31
TUC-T	iP	09 21 16
Dec. 19		
BUT	eP	13 54 19
COL	iP	13 57 10
EUR	eP	13 54 20
HH	iP	13 54 32
RC	eP	13 53 19
SJ	eP	13 47 39
	i	47 49
	iL	48 43
THULE	eP	13 56 05
TUC	eP	13 53 44
TUC-T	eP	13 53 32
Dec. 19		
COL	iP	14 32 34
Dec. 19		
RC	eP	15 09 11
	iP	09 16
BOZ	eP	15 11 20
BUT	eP	15 11 24
COL	iP	15 15 09
	eL	31 44
EUR	iP	15 10 02
HH	iP	15 11 46
	eL	19 22

Date and Station		Phase (GCT)
		h m s
RC	iP	15 11 17
	e	16 32
	iL	17 55
SLC	iP	15 10 14
	eS	14 07
	eL	15 55
SJ	iP	15 15 07
TUC	iP	15 08 17
	e(S)	09 31
	iL	09 35
UK	iP	15 10 35
	eL	15 57
Dec. 19		
EUR	eP	16 02 32
Dec. 19		
BOZ	eP	18 37 18
	eL	38 19
COL	eP	18 40 46
EUR	eP	18 38 47
Dec. 19		
EUR	eP	18 44 11
Dec. 19		
EUR	eP	21 21 43
Dec. 19		
TUC-T	eP	21 21 38
Dec. 19		
COL	iP	22 57 32
	iL	23 01 17
EUR	iP	23 01 44
HH	e(P)	23 01 06
Dec. 19		
COL	i(P)	23 04 34
HH	eP	23 11 45
Dec. 20		
TUC	iP	00 34 11
TUC-T	iP	00 34 11
Dec. 20		
COL	eP	01 16 42
EUR	eP	01 20 14
Dec. 20		
EUR	iP	06 36 16
TUC	iP	06 36 17
TUC-T	iP	06 36 18
	e	38 18

Date and Station		Phase (GCT)
		h m s
Dec. 20		
EUR	eP	07 12 27
TUC-T	iP	07 12 26
Dec. 20		
EUR	eP	08 18 47
TUC	eP	08 18 44
	e	19 06
TUC-T	eP	08 18 48
Dec. 20		
COL	iP	09 11 52
	iS	12 51
	iL	13 06
EUR	eP	09 17 54
HH	e(P)	09 16 52
THULE	e(P)	09 16 36
Dec. 20		
COL	eP	09 29 23
EUR	eP	09 29 46
HH	eP	09 28 44
	e	32 18
RC	e(P)	09 30 41
	e	31 04
SIT	e(P)	09 26 57
	eL	27 49
TUC	eP	09 31 14
TUC-T	eP	09 31 13
Dec. 20		
SJ	iP	10 06 47
	eL	07 17
Dec. 20		
COL	iP	13 05 42
EUR	eP	13 07 49
HH	e(P)	13 07 38
SJ	eP'	13 13 31
	i	13 37
Dec. 20		
EUR	eP	13 39 00
TUC	eP	13 38 56
TUC-T	eP	13 38 57
Dec. 20		
COL	iP	14 29 27
EUR	eP	14 28 58

Date and Station		Phase (GCT)
		h m s
TUC-T	eP	14 29 00
Dec. 20		
EUR	eP	14 32 12
HH	eP	14 31 52
RC	eP	14 32 40
Dec. 20		
COL	e(P)	16 24 30
Dec. 20		
COL	e(P)	16 29 52
Dec. 20		
BC	eP	16 46 48
COL	iP	16 49 16
EUR	iP	16 47 58
	i	48 18
	i	49 12
HH	eP	16 47 02
RC	iP	16 45 56
SJ	iP	16 38 57
	i	39 01
	i(S)	39 50
	iL	40 08
TUC	iP	16 46 20
TUC-T	iP	16 46 19
Dec. 20		
HH	e(P)	16 58 48
Dec. 20		
BC	eP	21 05 40
COL	iP	21 06 15
EUR	iP	21 05 45
HH	e(P)	21 06 18
TUC	eP	21 05 45
TUC-T	eP	21 05 45
Dec. 20		
SJ	e(P)	23 58 01
Dec. 21		
COL	eP	01 44 12
EUR	iP	01 47 27
Dec. 21		
RC	e(P)	02 26 12
BOZ	eP	02 24 22
	eL	25 24

Date and Station		Phase (GCT)
		h m s
BUT	iP	02 24 24
	eL	25 40
EUR	eP	02 25 30
	eS	26 32
	eL	26 37
HH	iP	02 25 00
	iL	26 02
RC	e(P)	02 25 44
	i	26 00
SLC	eP	02 24 59
	iL	26 11
TUC-T	e(P)	02 27 11
	e	28 05
Dec. 21		
COL	e(P)	07 08 51
EUR	iP	07 12 29
RC	eP	07 12 53
TUC	eP	07 13 36
TUC-T	eP	07 13 35
	i	13 39
Dec. 21		
BC	eP	10 26 26
TUC-T	eP	10 26 31
Dec. 21		
BC	eP	10 33 17
BUT	eP	10 33 50
COL	eP	10 33 57
EUR	iP	10 33 22
HONO	eP	10 29 56
HH	eP	10 33 55
KIP	eP	10 29 45
RC	eP	10 34 14
	i	34 32
THULE	eP'	10 39 30
	e	39 46
TUC	iP	10 33 18
TUC-T	iP	10 33 19
	eP'P'	59 33
Dec. 21		
BC	eP	11 27 01
BUT	eP	11 27 34

Date and Station		Phase (GCT)
		h m s
COL	iP	11 27 40
EUR	iP	11 27 06
HH	eP	11 27 36
	ePP	31 18
RC	iP	11 27 54
SLC	e(P)	11 27 20
	iP	27 22
	eS	38 18
	ePPS	40 06
TUC	iP	11 27 02
	i	28 02
	e	28 31
TUC-T	iP	11 27 03
UK	eP	11 26 43
Dec. 21		
BC	eP'	11 38 30
BOZ	eP'	11 38 09
	ePP	39 19
BUT	eP'	11 38 10
	ePP	39 20
COL	e	11 35 35
	i(P')	36 27
	iPP	37 13
EUR	iP'	11 38 20
HH	e(P')	11 38 16
	iPP	39 01
	e	41 36
RC	eP'	11 38 11
THULE	iP	11 31 43
TUC	eP'	11 38 33
	ePP	40 54
	i	41 08
TUC-T	iP'	11 38 32
	iPP	40 50
	i	41 03
Dec. 21		
TUC	eP	11 49 42
TUC-T	iP	11 49 42
Dec. 21		
COL	iP	12 03 18
	i	03 37
HH	e(P)	12 06 16
Dec. 21		
COL	iP	12 49 50
HH	iP	12 49 01
Dec. 21		
COL	e(P)	13 45 46
EUR	eP	13 49 12
Dec. 21		
COL	iP	14 06 11
Dec. 21		
TUC-T	eP	14 14 00
Dec. 21		
BUT	iP	15 49 35
HH	iP	15 50 11
	iL	51 15
RC	e(P)	15 50 51
	e	51 57
Dec. 21		
COLU	eP	16 27 27
RC	eP	16 28 33
	iL	30 42
Dec. 21		
HH	e(P)	16 35 11
Dec. 21		
BH	iP	17 27 06
	iS	27 27
Dec. 21		
BC	eP	17 36 32
COL	iP	17 32 45
EUR	eP	17 36 08
HH	e(P)	17 35 37
TUC-T	eP	17 37 12
Dec. 21		
COL	iP	22 14 58
	i(S)	16 19
	iL	16 35
EUR	iP	22 19 16
HH	iP	22 18 28
SIT	iP	22 15 23
	eL	17 01
TUC-T	eP	22 20 26
Dec. 21		
COL	iP	22 40 44
Dec. 22		
BC	eP	00 28 53
THULE	eP	00 22 08
TUC	eP	00 29 05
TUC-T	eP	00 28 56
	i	29 05
	e	32 21
Dec. 22		
TUC	e(P)	01 49 34
TUC-T	eP	01 49 34
Dec. 22		
BC	eP	02 41 13
BOZ	eP	02 41 39
	e	42 44
	eL	45 19
BUT	eP	02 41 29
COL	eP	02 44 59
EUR	iP	02 40 36
HH	iP	02 41 37
	eL	44 28
SLC	e(P)	02 41 19
	iP	41 20
	iL	44 26
THULE	eP	02 47 05
TUC	iP	02 42 16
	eL	46 44
TUC-T	iP	02 42 16
	eL	46 19
UK	iP	02 39 23
	iL	39 49
Dec. 22		
EUR	eP	03 15 01
TUC	eP	03 14 11
TUC-T	eP	03 14 14
Dec. 22		
COL	iP	04 44 02
HH	eP	04 43 13
Dec. 22		
COL	eP	05 14 05
Dec. 22		
EUR	eP	06 03 20
Dec. 22		
EUR	eP	10 11 41
HH	iP	10 11 27
Dec. 22		
EUR	eP	11 31 07
TUC	eP	11 29 47
	eL	35 36
TUC-T	iP	11 29 46
	iL	35 39
Dec. 22		
GUAM	iP	11 50 21
	iS	50 33
Dec. 22		
COL	iP	11 50 43
Dec. 22		
COL	eP	13 01 37
EUR	eP	13 05 50
Dec. 22		
BC	eP	17 32 21
BUT	eP	17 31 50
COL	iP	17 29 04
EUR	iP	17 32 03
HH	iP	17 31 39
	ipP	31 51
THULE	iP	17 30 55
	ipP	31 11
TUC-T	eP	17 32 46
	ipP	33 00
Dec. 22		
EUR	iP	20 35 52
Dec. 23		
BUT	eP	00 58 00
COL	iP	00 54 44
EUR	iP	00 58 14
HH	iP	00 57 43
	i	58 08
	i	01 00 02
TUC	iP	00 59 17
TUC-T	iP	00 59 17
Dec. 23		
THULE	eP	01 27 55
	iS	28 39
Dec. 23		
BUT	eP	01 43 36

Date and Station	Phase (GCT)
Dec. 23	h m s
SJ iP	02 03 12
Dec. 23	
EUR eP	02 51 11
Dec. 23	
SJ iP	03 48 21
Dec. 23	
BC eP	03 56 00
BUT eP	03 55 10
COL iP	03 51 26
iS	53 15
iL	53 33
iScP	04 01 03
EUR iP	03 55 31
HH iP	03 54 50
iPcP	58 06
eScP	04 01 40
RC eP	03 56 04
THULE iP	03 56 03
TUC iP	03 56 41
TUC-T iP	03 56 41
ePcP	58 43
Dec. 23	
BOZ ePP	04 49 12
COL eP	04 44 25
EUR eP	04 43 50
TUC eP	04 43 45
TUC-T iP	04 43 45
Dec. 23	
COL iP	06 34 13
i(S)	34 50
iL	35 16
EUR eP	06 38 47
TUC eP	06 38 39
TUC-T eP	06 38 40
Dec. 23	
HH iP	07 48 18
Dec. 23	
COL eP	09 41 05
EUR eP	09 42 21
HH iP	09 41 22
RC eP	09 41 28

Date and Station	Phase (GCT)
	h m s
SJ eP	09 40 19
e	40 36
THULE eP	09 38 05
TUC-T e(P)	09 42 14
e	42 36
Dec. 23	
COL e(P)	12 48 40
i	48 53
EUR eP	12 52 09
HH e(P)	12 51 01
THULE eP	12 46 21
TUC eP	12 53 00
TUC-T iP	12 51 59
Dec. 23	
BC eP	14 11 45
BUT eP	14 12 20
COL eP	14 12 27
EUR iP	14 11 50
RC eP	14 12 41
THULE eP'	14 17 55
TUC iP	14 11 47
TUC-T iP	14 11 47
Dec. 23	
COL e(P)	17 58 28
Dec. 23	
HH iP	21 52 02
THULE eP	21 48 47
Dec. 24	
COL iP	01 17 20
EUR eP	01 16 45
TUC eP	01 16 43
TUC-T eP	01 16 44
i	16 50
Dec. 24	
TUC-T eP	02 00 22
e	00 59
Dec. 24	
HH iP	02 12 56
Dec. 24	
COL eP	02 16 27

Date and Station	Phase (GCT)
	h m s
HH eP	02 19 25
e	22 01
TUC eP	02 21 01
TUC-T eP	02 21 01
Dec. 24	
COL e(P)	05 40 05
Dec. 24	
EUR e(P)	07 36 32
HH eP	07 37 43
RC eP	07 38 16
TUC eP	07 36 41
e	38 01
TUC-T eP	07 36 42
iP	36 43
e	38 02
Dec. 24	
COL iP	08 03 21
TUC-T e(P)	08 03 01
Dec. 24	
BC eP	08 14 43
BOZ eP	08 15 31
BUT eP	08 15 38
COL iP	08 19 10
ipP	20 01
EUR iP	08 15 09
HH eP	08 15 59
RC eP	08 14 54
SLC eP	08 14 59
TUC iP	08 13 52
epP	14 48
TUC-T iP	08 13 11
Dec. 24	
COL iP	09 27 49
EUR iP	09 27 14
Dec. 24	
HH e(P)	10 27 24
Dec. 24	
COL eP	11 10 18
Dec. 24	
BUT e(P)	11 27 00

Date and Station	Phase (GCT)
	h m s
EUR iP	11 24 52
SLC e(P)	11 25 50
Dec. 24	
EUR eP	12 40 19
TUC-T eP	12 39 25
Dec. 24	
BC eP	13 01 03
BOZ eP	13 01 36
BUT eP	13 01 42
COL eP	13 04 02
EUR iP	13 01 22
HH iP	13 01 56
RC iP	13 01 06
SJ eP	12 57 10
THULE eP	13 03 37
TUC iP	13 00 28
e	01 39
TUC-T iP	13 00 28
Dec. 24	
COL iP	13 20 45
EUR eP'	13 26 12
HH e(P)	13 22 33
RC ePP	13 27 51
SJ iP'	13 28 28
THULE eP	13 21 55
TUC ePP	13 27 56
TUC-T ePP	13 27 53
Dec. 24	
COL e(P)	13 52 42
Dec. 24	
EUR eP	16 46 44
TUC-T e(P)	16 49 31
Dec. 24	
COL eP	21 04 00
HH iP	21 06 27
Dec. 24	
BOZ eP	23 53 41

Date and Station		Phase (GCT) h m s
BUT	iP	23 53 44
	iL	54 42
HH	eP	23 54 20
	iL	55 20
SLC	eP	23 54 13
	i	55 30
Dec. 25		
HH	e(P)	00 35 13
	e	36 04
SJ	e(P)	00 38 29
Dec. 25		
BC	e(P)	01 09 14
COL	iP	01 05 25
EUR	iP	01 08 54
HH	iP	01 08 23
RC	eP	01 09 30
THULE	eP	01 08 50
TUC	e(P)	01 09 53
	e	10 21
TUC-T	eP	01 09 53
Dec. 25		
BC	e(P)	01 24 47
BOZ	eP	01 24 52
	eL	25 54
HUT	iP	01 24 55
	iL	26 06
EUR	eP	01 26 02
HH	iP	01 25 31
	iL	26 35
RC	e(P)	01 26 15
	i	26 31
SLC	eP	01 25 29
	iP	25 31
	e	26 32
Dec. 25		
BC	eP	04 01 40
HUT	eP	04 02 17
COL	iP	04 02 23
EUR	iP	04 01 48
KIP	eP	03 58 11
RC	eP	04 02 43

Date and Station		Phase (GCT) h m s
THULE	eP'	04 07 51
TUC	eP	04 01 45
	i	01 50
	eL	36 35
TUC-T	iP	04 01 46
	e	02 19
Dec. 25		
COL	iP	05 17 02
Dec. 25		
TUC	eP	06 18 28
	e	18 39
TUC-T	eP	06 18 28
Dec. 25		
GUAM	iP	06 42 46
	iS	42 57
Dec. 25		
COL	eP	07 20 02
Dec. 25		
TUC	e(P)	09 06 10
Dec. 25		
TUC	eP	10 14 33
TUC-T	eP	10 14 34
Dec. 25		
BC	eP	10 30 25
BOZ	iP	10 30 55
	epP	31 24
BUT	iP	10 31 00
	ipP	31 25
COL	iP	10 33 02
	ePP	37 05
COLU	eP	10 28 50
	ipP	29 17
EUR	iP	10 30 42
	ipP	31 10
	ePKKP	48 10
	eP'P'	57 34
GUAM	iP'	10 38 21
HH	iP	10 31 11
	ipP	31 39
RC	iP	10 30 29
	ipP	30 56
SLC	iP	10 30 34
SJ	iP	10 26 43
	ipP	27 10
	i	28 35
	e	28 54

Date and Station		Phase (GCT) h m s
THULE	eP	10 32 33
	ePP	36 48
	e	37 06
	ePKKP	48 36
TUC	iP	10 29 55
	isS	39 47
	e	40 12
	eP'P'	57 55
	e	58 34
TUC-T	iP	10 29 55
	iP'P'	57 55
	i	58 23
UK	iP	10 31 02
	ipP	31 31
WASH	iP	10 29 18
	ipP	29 47
Dec. 25		
HH	eP	11 04 39
	iL	05 36
Dec. 25		
COL	eP	11 50 43
Dec. 25		
EUR	eP	16 14 05
Dec. 25		
EUR	eP	16 55 25
RC	eP	16 54 28
	eL	55 14
TUC	eP	16 58 36
TUC-T	eP	16 58 27
Dec. 25		
COL	e(P)	17 10 17
Dec. 25		
EUR	eP	20 39 50
Dec. 25		
COL	iP	21 26 25
EUR	iP	21 29 57
Dec. 26		
BOZ	eP	02 34 38
	eL	35 33
EUR	eP	02 35 53
HH	eP	02 35 13
	iL	36 18
SLC	eP	02 34 07
Dec. 26		
EUR	iP	05 55 07

Date and Station		Phase (GCT) h m s
Dec. 26		
EUR	eP	05 56 59
HH	e(P)	05 59 56
Dec. 26		
TUC	e(P)	08 07 05
Dec. 26		
COL	eP	08 23 48
Dec. 26		
SJ	eP	09 04 45
Dec. 26		
EUR	eP	10 17 15
Dec. 26		
EUR	eP	11 02 13
Dec. 26		
COL	eP	11 58 00
Dec. 26		
BC	eP'	12 31 03
BUT	eP'	12 31 37
COL	eP'	12 30 41
EUR	eP'	12 31 00
	iP'	31 06
HH	eP'	12 31 37
SJ	iP'	12 30 49
TUC	eP'	12 31 02
	i	31 08
TUC-T	iP'	12 31 02
	i	31 08
	i	31 17
Dec. 26		
COL	eP	14 30 37
Dec. 26		
COL	iP	15 04 21
Dec. 26		
COL	iP	15 07 18
	iS	07 33
	iL	07 39
Dec. 26		
EUR	eP	16 28 04
TUC	eP	16 28 02
	e	28 24
TUC-T	eP	16 28 01
Dec. 26		
EUR	iP	17 11 08

Date and Station		Phase (GCT)
		h m s
TUC-T	eP	17 10 24
	e	10 47
Dec. 26		
EUR	eP	17 45 47
	eS	46 33
	eL	46 37
Dec. 26		
EUR	iP	17 51 52
HH	e(P)	17 54 52
Dec. 26		
BC	eP	18 25 50
BOZ	eP	18 25 00
	eL	34 31
BUT	eP	18 24 49
	e(S)	29 30
	eL	32 54
COL	iP	18 20 34
	iS	21 55
	iL	22 00
COLU	eP	18 28 14
EUR	iP	18 25 20
	i	25 36
HH	iP	18 24 29
	e	26 45
	ePcP	28 12
	eScP	31 44
SLC	iP	18 25 27
SJ	eP	18 30 39
SIT	eP	18 21 15
	iS	22 50
	eL	24 24
THULE	eP	18 25 32
TUC	iP	18 26 32
	e	27 29
	eS	32 23
	eL	39 07
TUC-T	iP	18 26 31
	i	26 47
	ePP	28 08
	e(S)	32 39
UK	eP	18 24 55
	e	25 44
WASH	eP	18 28 02
	eL	44 52

Date and Station		Phase (GCT)
		h m s
Dec. 26		
COL	iP	20 23 05
HH	eP	20 25 16
Dec. 26		
EUR	eP	22 00 58
Dec. 26		
BOZ	e(P)	22 12 09
BUT	eP	22 12 01
COL	eP	22 08 35
COLU	eP	22 14 36
EUR	iP	22 12 19
	i	12 46
HH	eP	22 11 50
	ePcP	12 37
SLC	eP	22 12 27
TUC	eP	22 13 14
	e	13 41
TUC-T	eP	22 13 13
	e	13 28
Dec. 26		
COL	e(P)	22 42 17
EUR	eP	22 44 32
HH	e(P)	22 45 07
Dec. 26		
EUR	iP	23 16 00
HH	e(P)	23 18 53
Dec. 27		
COL	eP	01 30 01
Dec. 27		
EUR	iP	04 29 34
Dec. 27		
BC	eP	04 57 59
BUT	eP	04 57 16
COL	eP	04 53 46
EUR	iP	04 57 31
	i	58 01
HH	eP	04 56 58
	e	58 35
THULE	eP	04 56 23
TUC	e(P)	04 58 29
	e	58 43

Date and Station		Phase (GCT)
		h m s
TUC-T	eP	04 58 33
Dec. 27		
COL	iP	05 07 55
EUR	iP	05 11 41
HH	e(P)	05 11 15
THULE	e(P)	05 10 33
	eP	10 41
TUC	e(P)	05 12 36
Dec. 27		
COL	eP	05 12 15
EUR	eP	05 16 00
HH	e(P)	05 17 00
THULE	eP	05 14 51
Dec. 27		
THULE	e(P)	05 16 21
Dec. 27		
COL	eP	05 34 51
HH	iP	05 35 39
THULE	eP	05 32 27
Dec. 27		
COL	eP	06 24 09
EUR	eP	06 27 54
THULE	eP	06 26 49
Dec. 27		
EUR	eP	06 54 20
Dec. 27		
BUT	eP	07 01 00
COL	eP	06 57 35
EUR	eP	07 01 20
HH	e(P)	07 00 46
THULE	eP	07 00 11
TUC	eP	07 02 15
	e	02 22
TUC-T	e(P)	07 02 15
	e	02 24
Dec. 27		
COL	eP	07 51 26
EUR	eP	07 55 11
THULE	eP	07 54 02

Date and Station		Phase (GCT)
		h m s
Dec. 27		
COL	eP	08 00 59
EUR	iP	08 04 39
HH	eP	08 04 31
THULE	eP	08 03 32
Dec. 27		
COL	eP	08 11 31
EUR	iP	08 15 16
HH	eP	08 15 36
THULE	eP	08 14 07
TUC	e(P)	08 16 17
	e	17 12
Dec. 27		
EUR	eP	10 26 15
Dec. 27		
COL	eP	11 54 59
EUR	iP	11 58 40
HH	eP	11 58 12
TUC	eP	11 59 45
TUC-T	eP	11 59 45
Dec. 27		
BC	eP	12 04 59
BOZ	eP	12 04 28
BUT	eP	12 04 25
COL	iP	12 00 49
	i	01 01
EUR	iP	12 04 34
HH	eP	12 04 06
RC	eP	12 04 56
	i	05 09
SLC	eP	12 04 48
THULE	eP	12 03 26
TUC	eP	12 05 28
	i	05 39
Dec. 27		
BOZ	eP	12 49 46
BUT	eP	12 50 53
	epP	53 02
COL	eP'	12 56 42
	iPP	57 45

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

B-4297-4

Date and Station	Phase (GCT)
	h m s
Dec. 28	
EUR eP	10 50 30
Dec. 28	
EUR iP	12 10 13
Dec. 28	
EUR eP	13 03 19
Dec. 28	
BC eP	13 14 38
BOZ eP	13 14 04
COL iP	13 10 30
EUR iP	13 14 14
HH iP	13 13 40
SLC eP	13 14 26
THULE iP	13 13 07
TUC eP	13 15 10
i	15 15
TUC-T eP	13 15 10
Dec. 28	
COL eP	13 16 03
HH e(P)	13 19 13
THULE eP	13 18 39
Dec. 28	
COL eP	13 42 13
EUR eP	13 42 19
TUC eP	13 42 26
TUC-T eP	13 42 26
Dec. 28	
EUR eP	14 30 51
Dec. 28	
BUT iP	16 11 59
iS	12 22
eL	13 02
EUR eP	16 13 07
HH eP	16 12 34
iL	13 44
Dec. 28	
BOZ eP	19 12 28
Dec. 28	
COL eP	19 48 29
EUR iP	19 52 12
Dec. 28	
EUR eP	19 56 06

Date and Station	Phase (GCT)
	h m s
Dec. 28	
BOZ eP	20 05 18
Dec. 28	
COL eP	20 33 00
Dec. 28	
EUR eP	21 39 12
Dec. 28	
EUR iP	23 41 07
Dec. 29	
BC eP	02 34 19
e(S)	35 09
eL	35 44
BUT e(P)	02 35 44
eL	38 53
EUR iP	02 34 11
HH eP	02 36 00
eL	39 44
SLC e(P)	02 35 12
TUC e(P)	02 35 19
e	35 25
eL	38 22
TUC-T eP	02 35 19
iL	38 32
UK e(P)	02 33 34
e	33 43
iL	34 32
Dec. 29	
COL e(P)	02 59 28
EUR eP	03 03 09
HH e(P)	03 02 47
Dec. 29	
EUR eP	05 41 03
Dec. 29	
COL eP	07 17 18
EUR eP'	07 22 57
TUC eP'	07 23 09
TUC-T iP'	07 23 09
Dec. 29	
BC e(P)	12 11 34
BOZ eP	12 10 33
BUT eP	12 10 16
eL	14 02
COL eP	12 11 09
EUR eP	12 10 51

Date and Station	Phase (GCT)
	h m s
HH eP	12 09 50
eL	12 58
TUC eP	12 12 27
TUC-T iP	12 12 28
Dec. 29	
COL eP	12 43 02
EUR eP	12 46 31
Dec. 29	
EUR eP	12 50 57
Dec. 29	
COL eP	14 46 23
Dec. 29	
BC eP	17 26 56
COL iP	17 27 35
EUR iP	17 27 02
HH eP	17 27 34
TUC e(P)	17 27 06
TUC-T eP	17 27 00
iP	27 02
UK eP	17 26 40
Dec. 29	
EUR iP	19 54 55
TUC-T eP	19 53 58
Dec. 29	
COL iP	20 21 25
EUR iP	20 25 02
HH e(P)	20 24 18
Dec. 29	
BC eP	20 47 23
e	47 56
epP	48 53
BOZ eP	20 47 18
epP	48 50
BUT iP	20 47 12
i	48 07
COL iP	20 45 11
i	49 30
eS	53 15
eL	21 02 03
EUR iP	20 47 12
eS	57 12
GUAM iP	20 36 23
eS	37 17

Date and Station	Phase (GCT)
	h m s
HH iP	20 47 04
ipP	48 23
i	49 09
eS	56 48
RC iP	20 47 44
SLC eP	20 47 24
iP	47 25
THULE iP	20 47 04
TUC iP	20 47 43
TUC-T iP	20 47 43
UK iP	20 46 45
Dec. 29	
COL e(P)	21 40 52
EUR iP'	21 46 10
HH eP'	21 46 06
e	47 25
TUC-T iP'	21 46 22
Dec. 30	
COL iP	02 48 23
EUR eP	02 47 49
TUC-T eP	02 47 47
Dec. 30	
COL eP	03 11 52
EUR iP	03 15 49
Dec. 30	
EUR eP	05 19 47
Dec. 30	
COL iP	06 42 47
Dec. 30	
HH e(P)	07 06 26
Dec. 30	
COL iP	07 47 27
EUR iP	07 46 54
HH eP	07 47 28
TUC e(P)	07 46 53
e	47 05
TUC-T eP	07 45 58
Dec. 30	
BUT eP	11 35 16
COL e(P)	11 32 34
EUR eP	11 35 18

Date and Station	Phase	(GCT)
		h m s
HH	eP	11 34 54
THULE	eP	11 34 22
Dec. 30		
EUR	iP'	14 14 48
HH	iP'	14 14 40
Dec. 30		
SLC	eP	18 21 21
	iP	21 22
Dec. 31		
COL	iP	02 58 46
EUR	iP	03 01 52
HH	iP	03 01 18
Dec. 31		
HH	eP	03 38 42
Dec. 31		
EUR	eP	04 43 17
Dec. 31		
EUR	eP	06 23 24
Dec. 31		
EUR	eP	08 08 40
Dec. 31		
EUR	eP	10 10 35
Dec. 31		
COL	iP	10 42 03
EUR	eP	10 43 25
SJ	eP'	10 49 21
	iP'	49 34
	e	50 12
Dec. 31		
EUR	iP	13 38 33
Dec. 31		
BOZ	eP	16 03 03
EUR	eP	16 04 30
Dec. 31		
EUR	eP	17 03 09
Dec. 31		
EUR	eP	19 30 05
Dec. 31		
EUR	eP	19 57 38
Dec. 31		
EUR	iP	20 57 21
Dec. 31		
BOZ	eP	21 03 18

Date and Station	Phase	(GCT)
		h m s
BUT	eP	21 03 24
COL	iP	21 04 06
EUR	iP	21 03 59
HH	iP	21 03 22
RC	eP	21 02 47
THULE	eP	21 01 03
TUC-T	eP	21 04 01
	i	04 10
Dec. 31		
BC	eP	23 22 25
Dec. 31		
EUR	iP	23 42 59
EUR	eP	23 46 11
Dec. 31		
EUR	iP	23 54 36

Date and Station	Phase	(GCT)
		h m s

Date and Station	Phase	(GCT)
		h m s

Date and Station	Phase (GCT)
	h m s
Local and Minor Earthquakes	
Dec.	
POZ	
1	16.9
3	06.7
6	00.5
7	01.9
8	06.0
12	01.4
	21.4
	22.7
13	01.7
	08.1
	18.8
15	02.2
	15.8
17	17.3
18	08.3
	10.5
19	07.7
	13.4
21	15.8
	22.0
23	23.7
24	01.8
	10.4
	14.2
25	11.8
28	16.2
30	18.1
Dec.	
BUT	
1	17.9
2	13.5
	13.9
3	03.8
	06.1
	06.7
4	07.6
5	19.3
	23.5
6	01.9
	21.7
7	03.9
	07.5
	09.7
8	03.5
	06.0
	07.2
9	05.4
11	17.3
12	06.4
	06.5
	17.7
	18.5
	22.7
13	01.7
	08.1
	18.8
14	07.3
	14.1
15	02.3
	16.8
16	02.2
	21.5

Date and Station	Phase (GCT)
	h m s
BUT	
17	06.4
	09.1
	14.4
	17.3
	17.5
18	08.3
	08.8
	10.5
19	07.7
	18.6
	19.2
20	15.4
	19.8
21	22.0
23	23.3
	23.7
24	10.4
	14.1
25	00.0
	00.6
	11.1
	17.9
27	04.9
28	19.2
	20.1
29	00.9
	14.0
30	18.1
	20.2
31	08.1
	16.0
Dec.	
COL	
1	21.5
	23.2
2	01.5
6	01.5
8	11.6
9	03.6
10	14.9
11	12.7
12	15.2
13	09.6
	20.3
14	00.1
17	17.9
19	12.3
	12.6
20	06.1
21	19.7
22	08.2
	22.0
23	14.4
24	19.3
29	10.3
	20.9
31	13.2
Dec.	
EUR	
7	02.5
8	22.6
11	21.1

Date and Station	Phase (GCT)
	h m s
EUR	
12	09.1
18	05.1
23	20.1
24	01.1
	01.3
	02.7
25	01.7
26	06.1
29	14.9
30	18.4
31	02.4
Dec.	
SJ	
2	17.2
4	09.8
5	13.2
	18.9
	20.3
6	10.0
	12.5
	15.1
7	08.5
8	06.9
12	04.0
13	01.1
14	21.0
17	22.0
19	22.8
20	10.5
	15.3
21	13.8
23	03.0
	05.0
	08.6
25	19.6
	19.6
30	12.9
Dec.	
SIT	
1	23.2
Dec.	
TUC	
1	12.4
2	08.1
4	13.7
8	03.9
	04.2
13	12.0
	14.0
16	00.6
17	08.0
18	06.5
19	15.4
21	02.1
24	10.7
	11.4
25	08.5
	10.3
26	07.1
27	08.9
Dec.	
UK	
6	08.1

Date and Station	Phase (GCT)
	h m s
UK	
12	08.5
15	16.5
27	04.5

B-4297-4