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Department of Commerce

Charles Sawyer, Secretary

U. S. Coast and Geodetic Survey

R. F. A. Studds, Director

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SEISMOLOGICAL BULLETIN

October, November, December, 1946

MSI - 128

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Washington 25, D. C.

National Oceanic and Atmospheric Administration

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DEPARTMENT OF COMMERCE

Charles Sawyer, Secretary

U. S. COAST AND GEODETIC SURVEY

R. F. A. Studds, Director

S E I S M O L O G I C A L B U L L E T I N

October, November, December, 1946

MSI-128

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Issued by the U. S. Coast and Geodetic Survey
Washington 25, D. C.

A-4351-4(54)+

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

**Balboa Heights, C. Z. (BH)
The Panama Canal
*Bermuda (BER)
Meteorological Station and International Union Geodesy and Geophysics
*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)
University of Alaska
*Columbia, S. C. (COLU)
University of South Carolina
*Grand Coulee, Wash. (GC)
Bureau of Reclamation
*Honolulu, T. H. (HONO)
University of Hawaii
*Huancayo, Peru (HUAN)
Carnegie Institution of Washington
*Lincoln, Nebr. (LIN)
Nebraska Wesleyan University
**Logan, Utah (LOG)
Utah State Agricultural College
**Montezuma, Chile (MONT)
Smithsonian Institution
**New Kensington, Pa. (NK)
Private station
*Overton, Nev.
Bureau of Reclamation and
National Park Service
**Philadelphia, Pa. (PHIL)
The Franklin Institute
*Pierce Ferry, Ariz. (PF)
Bureau of Reclamation and
National Park Service
*Rapid City, S. Dak. (RC)
South Dakota State School of Mines
*Salt Lake City, Utah (SLC)
University of Utah
San Juan, Puerto Rico (SJ)
**Seattle, Wash. (SEA)
University of Washington
*Shasta, Calif. (SH)
Bureau of Reclamation
Sitka, Alaska (SIT)
Tucson, Ariz. (TUC)
Ukiah, Calif. (UK)
International Latitude Observatory

*Indicates a station maintained by a local institution in cooperation with the U. S. Coast and Geodetic Survey.

**Indicates a station operating on an independent basis.

All seismogram interpretations are made or revised at Washington except those for Balboa Heights. Minor quakes are listed at the end of the report. All magnitudes are determined by Pasadena unless otherwise stated.

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

* * *

SEISMOGRAM INTERPRETATIONS

Date and Station		Phase (GCT) h m s
Oct. 1		
BC	eP	03 19 42
	i	20 30
OV	eP	03 20 03
	e	20 41
PF	eP	03 19 55
	i	20 06
	i	20 21
Oct. 1		
BC	iP	04 54 17
PF	iP	04 54 22
TUC	iP	04 54 21
	i	54 39
	ipP	56 27
	esP	57 21
Oct. 1		
PF	eP	05 14 54
	e(S)	15 43
Oct. 1		
BC	i(P)	07 32 13
OV	e(P)	07 32 29
Oct. 1		
PF	eP	09 26 07
	e	26 24
TUC	e	09 26 38
Oct. 1		
BC	eP	10 47 54
OV	eP	10 48 00
	e	48 52
PF	eP	10 47 59
	i	48 15
TUC	eP	10 48 02
Oct. 1		
BC	e	11 29 05
	e	29 45
Oct. 1		
TUC	i(P)	14 53 17

Date and Station		Phase (GCT) h m s
Oct. 1		
SJ	e	15 44 47
	e	45 12
	eL	45 28
Oct. 1		
SH	eP	18 08 27
TUC	e(P)	18 08 42
Oct. 1		
SH	eP	19 23 54
Oct. 1		
BC	e	23 00 56
Oct. 2		
SH	eP	00 03 25
Oct. 2		
TUC	e	01 23 06
Oct. 2		
TUC	eP	01 30 38
Oct. 2		
SJ	e	00 44 20
	iS	44 55
	eL	45 07
Oct. 2		
BER	eP	04 59 02
	e(PP)	05 02 50
	eS	09 26
	eSS	15 11
	eL	22 30

T_S = 12 sec. A = 1.0 mm.
T_L = 24 sec. $A_{max.}$=0.5mm.

BC	iP	04 56 19
	ipP	56 31
	iS	05 04 35
BOZ	e(P)	04 55 59
	eS	05 03 33
	eSS	07 32
	eL	09 59
BUT	eP	04 55 41
	eS	05 03 26
	eScS	05 53
	eSS	07 45
	eL	09 39

Date and Station		Phase (GCT) h m s
COL	eP	04 52 19
	eS	57 05
	eL	59 08
COLU	eS	05 08 12
	eL	19 22
GC	iP	04 55 04
	i	55 11
	eS	05 02 16
	e	02 40
HONO	eS	05 01 10
	eL	04 53

T_S = 12 sec. A = 1.5 mm.
T_L = 20 sec. $A_{max.}$=2.0mm.

HUAN	ePS	05 16 32
	eSS	22 46
	eSSS	27 46
	eL	38 12
LOG	eP	04 56 06
	i	56 13
	i	56 35
	eS	05 04 07
	i	05 30
	eScS	05 55
	eL	09 54
OV	iP	04 56 18
	i	56 37
PHIL	eP	04 58 00
	ePP	05 01 03
	eS	07 32
	eScS	08 17
	e(SS)	12 29
	eSSS	16 06
PF	iP	04 56 22
	iPP	58 53
RC	eP	04 56 27
	e	05 00 28
	i(S)	04 20
	i	05 07
	eL	11 24
SLC	eP	04 56 10
	eS	05 04 14
	e	05 52
	eSS	07 56
	eL	10 58

Date and Station		Phase (GCT) h m s
SH	iP	04 55 26
	ipP	--- 55 38
	eS	05 02 54
	esS	03 21
SIT	eP	04 53 22
	epP	53 35
	i(PP)	54 55
	iS	59 09
	e	05 00 00
	eL	01 25
TUC	eP	04 56 52
	ipP	57 07
	i	58 11
	ePP	59 30
	eS	05 05 36
	i	07 14
	eSS	09 52
	eL	12 42
	eP'P'	25 34
UK	eS	05 03 00
	eSS	06 52
	eL	09 00
WASH	e(P)	04 58 10
	e	58 20
	eS	05 07 39
	e(SS)	13 42
Oct. 2		
BC	e	05 25 41
Oct. 2		
BC	iP	05 55 09
GC	iP	05 53 57
OV	iP	05 55 07
PF	iP	05 55 12
	i	55 52
SH	iP	05 54 19
	eS	06 01 36
TUC	iP	05 55 41
	e	57 20
Oct. 2		
SH	eP	06 08 08

Date and Station		Phase (GCT) h m s
Oct. 2		
BER	e(P)	06 56 10
	ePP	59 35
	iS	07 06 40
	eSS	12 18
	eL	19 10
T_S = 10 sec. A = 1.0 mm.		
T_L = 22 sec. $A_{max.}$ = 0.5mm.		
BC	iP	06 53 28
	ipP	53 38
	iS	07 01 44
BOZ	eP	06 53 01
	iS	07 00 43
	eSS	04 39
	eL	07 05
BUT	eP	06 52 49
	eS	07 00 29
	e	00 57
	e	03 02
	eL	07 09
COL	eP	06 49 26
	eS	54 07
	eL	56 41
COLU	eS	07 05 20
	e(SS)	11 08
	eL	17 16
GC	iP	06 52 14
	ipP	52 24
	iPcP	53 19
	iS	59 24
	isS	59 48
HONO	eS	06 58 13
	eL	07 03 09
T_S = 10 sec. A = 1.5 mm.		
T_L = 20 sec. $A_{max.}$ = 1.5mm.		
HUAN	ePP	07 03 51
	ePS	13 35
	eSS	20 15
	eL	34 52
LOG	iP	06 53 16
	i	53 27
	i	53 37

Date and Station		Phase (GCT) h m s
LOG	iPP	06 55 20
	iS	07 01 18
	i	01 41
	i	03 18
	eL	11 47
OV	iP	06 53 27
	ipP	53 38
	i	54 36
	e	56 26
	iS	07 01 44
PHIL	eP	06 55 08
	iP	55 09
	ePP	58 03
	iS	07 04 52
	eScS	05 32
	e	08 45
	eSSS	13 28
PF	iP	06 53 31
	ipP	53 55
	i(PP)	55 39
	e(S)	07 01 21
RC	iP	06 53 34
	e	57 44
	iS	07 01 51
	i	02 14
	eSS	05 52
	eL	08 40
SLC	eP	06 53 18
	eS	07 01 23
	eScS	03 19
	eL	07 46
SH	iP	06 52 34
	ipP	52 45
	i	53 02
	eS	07 00 03
	esS	00 27
SIT	iP	06 50 29
	ipP	50 42
	ePP	51 58
	ePPP	52 26
	iS	56 18
	esS	56 47
	eL	59 03

Date and Station		Phase (GCT) h m s
TUC	iP	06 54 01
	ipP	54 12
	iPcP	54 37
	ePP	56 16
	ePPP	57 57
	eS	07 02 43
	iS	02 46
	i	03 11
	e	05 44
	e	06 18
	eSS	07 10
	eL	10 16
	eP'P'	22 39
UK	e(P)	06 53 06
	eS	07 00 13
	eSS	04 11
	eL	06 08
WASH	e(P)	06 55 13
	e	55 26
	eS	07 04 59
	e(SSS)	12 53
Oct. 2		
BC	e	07 22 44
PF	e	07 22 50
Oct. 2		
BC	iP	13 27 52
Oct. 2		
PF	e	22 28 55
Oct. 2		
BC	eP	23 00 57
PF	eP	23 00 59
	e	01 05
Oct. 2		
TUC	e	23 47 28
Oct. 3		
OV	eP	04 41 24
	e	41 51
PF	eP	04 41 27
SH	eP	04 40 34
TUC	e	04 42 01

Date and Station		Phase (GCT) h m s
Oct. 3		
TUC	eL	07 30 13
Oct. 3		
BC	e(P)	12 14 04
OV	e(P)	12 14 08
PF	e(P)	12 14 06
SH	e(P)	12 13 21
TUC	e(P)	12 14 31
Oct. 3		
PF	e	13 53 25
Oct. 3		
BER	e	15 59 05
	e	16 11 08
	eL	40 25
BC	eP	15 49 34
BOZ	e(SKS)	16 00 27
	e(PS)	02 22
	e	06 10
	eL	22 15
COL	e	15 59 37
	e	16 00 10
	eL	12 09
HONO	eL	16 00 56
PHIL	eL	16 37 16
PF	eP	15 49 22
RC	eL	16 28 36
SLC	e	16 01 27
	eL	15 24
SIT	e	15 59 21
	e	16 01 10
	e	12 02
	eL	13 32
TUC	e(P)	15 49 36
	e	52 04
	eSKS	16 00 26
	e	01 34
	eSS	07 09
	eL	16 38

Date and Station		Phase (GCT) h m s
Oct. 3		
BC	iP	17 27 02
Oct. 3		
TUC	e	19 44 56
Oct. 3		
SH	eP	19 58 08
Oct. 4		
SJ	e	00 57 27
	e(S)	57 40
	eL	57 58
Oct. 4		
BC	iP	01 16 25
Oct. 4		
PF	e	03 50 20
TUC	i	03 50 31
Oct. 4		
OV	eP	04 40 52
Oct. 4		
SH	e	07 59 56
Oct. 4		
BH	eP	14 48 55
	eS	51 26
BER	iP	14 48 40
	iS	51 15
	iL	52 15
BC	iP	14 53 35
	iS	59 44
BUT	eP	14 53 44
	iS	15 00 19
	eL	03 31
CHI	eP	14 51 17
	ePP	52 01
	i	52 10
	iS	54 55
	eL	58 21
COL	eP	14 56 33
	e	57 30
	eS	15 05 30
	eScS	06 29
	eSS	10 02
	eL	13 08

Date and Station		Phase (GCT) h m s
COLU	eP	14 49 45
	eL	— 53 14
GC	iP	14 54 19
	i	57 28
	i	59 33
	eS	15 01 28
HUAN	iP	14 51 47
	iS	56 59
	eL	59 08
LOG	iP	14 53 28
	i	53 51
	i	55 19
	iS	59 49
	eL	15 03 53
NK	e(P)	14 50 41
	i(S)	54 54
	eL	56 02
OV	eP	14 53 34
	iS	59 49
	eL	15 11 04
PHIL	i(P)	14 50(22)
	i	50(26)
	i	51(04)
	iL	57(25)
PF	iP	14 53 29
	iPP	55 11
	iPPP	55 46
	e(S)	59 26
RC	iP	14 52 48
	ePP	54 13
	iS	58 36
	eL	15 01 20
SLC	eP	14 53 24
	e	55 24
	eS	59 39
	iS	59 47
	eL	15 03 02
SH	iP	14 54 23.5
	eS	15 01 43
STT	eP	14 59 44
	eS	15 04 04
	e	05 16
	eScS	05 36
	e(SS)	08 40

Date and Station		Phase (GCT) h m s
TUC	iP	14 53 03
	iPP	54 30
	i	54 46
	i	55 42
	iS	59 11
	eL	15 02 05
Oct. 4 BH	e	15 00 14
Oct. 4 SJ	e	19 12 14
	eS	12 39
	eL	12 50
Oct. 4 BC	iP	23 17 03
Oct. 5 PF	e	03 35 39
	e	35 53
Oct. 5 SJ	e	04 54 02
	e	54 30
	iL	54 40
Oct. 5 TUC	e	07 11 14
	e	11 50
PF	e	07 11 40
Oct. 5 BC	iP	07 35 19
Oct. 5 BC	iP	07 45 33
Oct. 5 BC	iP	08 10 33
Oct. 5 BC	eP	09 27 39
PF	eP	09 27 37
TUC	eP	09 26 34
	e	27 55
	e	28 46
	e	29 23
	e	32 48

Date and Station		Phase (GCT) h m s
Oct. 5 PF	e	10 59 07
	i	59 51
Oct. 5 BC	iP	11 16 27
Oct. 5 BC	iP	17 58 51
HUAN	e	17 50 33
PF	eP	17 58 36
	e	58 48
TUC	iP	17 58 21
Oct. 5 SH	eP	18 59 20
Oct. 6 BC	eP	02 19 30
PF	iP	02 19 33
	e	20 06
TUC	eP	02 19 42
Oct. 6 TUC	e	06 32 06
Oct. 6 TUC	eL	08 41 33
Oct. 6 SH	eP	08 53 46
Oct. 6 BC	iP	10 23 09
Oct. 6 SH	eP	10 54 35
Oct. 6 SH	e	12 53 06
	e	53 17
Oct. 6 BC	e	18 15 42
PF	e(P)	18 13 56
	e	15 59
	eL	17 45

Date and Station		Phase (GCT) h m s
Oct. 6		
PF	e	18 36 57
Oct. 6		
BC	iP	19 45 59
PF	eP	19 46 09
Oct. 6		
PF	eP	20 09 16
Oct. 6		
BC	e(P)	22 46 21
PF	e	22 46 39
Oct. 7		
BER	eL	05 09 25
BC	eP	07 05 11
PF	eP	07 05 16
	i	05 22
TUC	iP	07 05 22
	eL	46 38
Oct. 7		
SH	eP	19 58 22
	i	58 29
	iS	58 59
	i	59 03
Oct. 8		
BC	e	01 22 18
OV	e(P)	01 21 58
PF	e	01 21 55
Oct. 8		
OV	e	05 47 26
PF	e	05 47 48
Oct. 8		
OV	eP	07 36 25
	e	36 35
PF	e	07 36 43

Date and Station		Phase (GCT) h m s
Oct. 8		
BC	iP	14 08 09
	epP	10 22
	e(S)	17 41
	iS	18 08
OV	iP	14 08 13
	epP	10 25
	e(S)	17 45
	eS	18 14
PF	iP	14 08 12
	epP	10 27
	e	11 33
	e(S)	17 41
	iS	18 13
	e	21 26
SH	iP	14 07 59
TUC	iP	14 08 14
	ipP	10 38
	iS	18 18
Oct. 8		
BH	e	23 10 37
	i	11 55
BER	eL	23 15 25
BC	e	23 16 48
HUAN	e	23 14 33
PHIL	eL	23 21 33
PF	iP	23 16 46
SLC	eL	23 33 56
TUC	eP	23 16 06
	eL	29 35
Oct. 9		
HUAN	eP	00 49 08
Oct. 9		
BER	eL	06 27 30
BC	e(P)	05 36 02
BOZ	eL	06 09 37

Date and Station		Phase (GCT) h m s
COL	eL	06 03 05
HONO	eL	05 49 25
OV	e(P)	05 36 32
PHIL	eL	06 27 27
PF	e(P)	05 36 32
	i(P)	36 41
	e	39 56
SLC	eL	06 08 51
TUC	eL	06 07 48
Oct. 9		
OV	e	09 03 33
PF	eP	09 03 22
Oct. 9		
PF	eP	18 41 42
Oct. 9		
BH	e	19 36 54
	e	37 46
Oct. 9		
BH	e	19 58 48
Oct. 9		
PF	e	20 29 17
Oct. 9		
BER	eL	20 43 45
BC	iP	20 37 33
COL	eL	21 17 14
GC	e	20 38 11
	e	38 30
HUAN	eP	20 29 33
	e	32 54
OV	eP	20 37 34
PHIL	eL	20 58(17)

Date and Station	Phase	(GCT) h m s
MONT	e	20 26 49
	e	27 10
	eL	27 39
PF	iP	20 37 31
	e(S)	47 25
SLC	eL	21 02 32
SH	iP	20 37 52
	i	38 01
	i	38 12
TUC	iP	20 37 04
	e	37 13
	e	46 33
	eL	55 18
Oct. 10		
BER	eL	05 27 13
BC	eP	04 36 31
	e	36 38
	e	40 14
	e(S)	44 33
BOZ	e	04 47 22
	e	59 21
	eL	05 06 22
COL	e	04 46 36
	eL	55 23
COLU	eL	05 24 23
GC	e	04 36 47
HONO	e	04 48 05
HUAN	e	04 42 19
OV	e	04 36 22
	e	40 10
PHIL	eL	05 26 34
PF	eP	04 36 42
	iP	36 55
	e	40 04
	i	40 47
	i(S)	47 12
RC	eL	05 14 10

Date and Station	Phase	(GCT) h m s
SLC	e	04 49 37
	eL	05 05 39
SH	e	04 36 07
SIT	i	04 37 33
	e	46 02
	eL	05 02 52
TUC	e	04 37 20
	e	41 05
	eL	05 02 36
Oct. 10		
SH	iP	06 00 31
	iS	00 55
Oct. 10		
BH	i	09 27 27
	e	28 31
BC	eP	09 34 02
HUAN	eP	09 30 03
OV	eP	09 34 03
PF	iP	09 35 00
TUC	eP	09 33 23
Oct. 10		
GC	iP	13 24 38
	i	25 00
	iS	25 07
Oct. 10		
HUAN	e	18 14 05
Oct. 11		
BC	eP	00 27 17
OV	iP	00 27 18
PHIL	eL	00 42(00)
PF	eP	00 27 09
	i	27 23
SH	iP	00 27 06
TUC	iP	00 27 23

Date and Station	Phase	(GCT) h m s
Oct. 11		
BOZ	eL	01 28 30
BUT	eL	01 28 08
COL	eL	01 27 48
GC	e	01 25 03
	i	25 34
	i	26 25
SLC	eL	01 30 10
SIT	eP	01 21 08
	eS	22 09
	iS	22 10
	eL	22 36
TUC	e	01 25 51
Oct. 11		
BC	eP	11 51 45
OV	eP	11 51 54
	e	53 13
PF	iP	11 51 42
TUC	iP	11 50 56
	eS	57 09
Oct. 11		
TUC	iP	16 58 37
Oct. 11		
HUAN	eL	21 36 54
Oct. 12		
PF	e	02 19 53
SH	eP	02 17 59
TUC	e	02 20 51
Oct. 12		
PF	e	03 04 10
Oct. 12		
BC	eP	03 37 20
	i	37 27
OV	eP	03 36 23

Date and Station		Phase (GCT) h m s
PF	eP	03 37 21
	i	37 29
	e	42 30
	e(S)	43 28
TUC	eP	03 33 01
Oct. 12		
BC	e	04 42 33
PF	e	04 41 50
	i	42 02
Oct. 12		
PF	e	06 04 27
Oct. 12		
PF	i	12 05 50
Oct. 12		
PF	e	16 14 32
Oct. 12		
BH	e	18 26 21
	e	27 35
Oct. 12		
BC	iP	19 00 21
	e	02 23
PF	iP	19 00 23
	e(pP)	02 26
SH	eP	19 00 06
	e	02 08
TUC	iP	19 00 27
	epP	02 28
Oct. 13		
BC	e	00 11 48
HUAN	e	00 15 21
	e	18 54
	eL	21 59
PF	e	00 11 48
TUC	eP	00 11 30
Oct. 13		
BC	e	00 57 55

Date and Station		Phase (GCT) h m s
COL	eL	00 56 56
PF	i	00 57 55
SH	eP	00 58 27
TUC	eP	00 57 29
Oct. 13		
BC	e	03 02 36
PF	e	03 02 39
Oct. 13		
BC	e	03 12 18
PF	e	03 12 16
TUC	eP	03 11 20
Oct. 13		
TUC	eP	10 29 05
Oct. 13		
BOZ	eL	14 11 53
BUT	eL	14 11 40
COL	eL	14 11 38
GC	e	14 09 04
	i	09 16
	i	09 37
PF	e	14 08 37
TUC	eP	14 09 35
Oct. 13		
SJ	e	17 44 25
	e	44 51
	eL	45 04
Oct. 13		
PF	ePP	21 42 37
TUC	e	21 58 17
Oct. 13		
BER	iS	23 29 42
	eL	35 45
BC	iP	23 24 24
	eS	33 45

Date and Station		Phase (GCT) h m s
GC	iP	23 25 19
HUAN	eP	23 16 19
	e	17 00
	e	17 41
	eS	18 55
	iS	19 00
	eL	19 34
PF	iP	23 24 23
	iPcP	24 37
	ipP	25 16
	e	26 48
SH	iP	23 25 03.5
	i	25 23
TUC	iP	23 23 54
	iPcP	24 15
	esP	25 00
	esPP	27 42
	eP'P'	52 01
Oct. 14		
SJ	e	04 29 12
	e	29 47
	eL	30 09
Oct. 14		
BER	eSKS	05 10 44
	eSS	21 35
	eSSS	26 46
	eL	36 29
BC	eP	04 57 35
BOZ	eSKS	05 09 04
	eS	09 41
	eL	27 44
BUT	eL	05 26 24
COL	eSKS	05 09 16
	eSS	16 20
	eSSS	20 10
	eL	28 49
COLU	eL	05 42 42
HONO	eS	05 02 05
	eL	08 18

Date and Station		Phase (GCT) h m s
HUAN	eSKS	05 08 37
	eS	09 15
	ePS	10 27
	eSS	15 42
	e	21 46
	eL	28 24
OV	e	04 57 53
PF	eP	04 57 39
	e	57 53
	e	58 37
	e	05 00 17
RC	eL	05 36 57
SLC	e(S)	05 08 34
	eL	25 29
SH	eP	04 57 28.5
TUC	iP	04 57 36
	i	57 56
	e(S)	05 08 05
	e	08 28
	eL	21 10
Oct. 14		
PF	e	10 38 10
Oct. 14		
BC	e	10 52 43
	e	53 41
PF	eP	10 52 27
	iP	52 37
	i	52 47
	e	53 27
Oct. 14		
SH	eP	21 50 45
Oct. 14		
PF	e	22 28 54
Oct. 14		
BC	e	22 59 34
PF	e	22 59 36
SH	eP	22 57 41
TUC	eP	23 00 32

Date and Station		Phase (GCT) h m s
Oct. 14		
BC	e	23 09 33
PF	e	23 09 36
SH	eP	23 07 42
TUC	e	23 10 37
Oct. 14		
PF	eP'	23 28 50
	iPP	29 46
TUC	ePP	23 30 09
Oct. 15		
BC	iP	05 13 36
Oct. 15		
PF	e	06 46 04
SH	eP	06 44 10
TUC	e	06 47 05
Oct. 15		
BC	eP	06 52 01
	ipP	52 41
	epPP	56 19
COL	e(S)	07 01 37
HONO	esS	06 56 08
	eL	07 02 07
PF	iP	06 52 05
	ipP	52 37
	e	54 34
	ePP	55 41
	epPP	56 20
SH	eP	06 51 44
	e	52 16
	epP	52 27
	e(pPP)	55 43
TUC	eP	06 52 09
	e	52 43
	ipP	52 54
	epPP	56 36
	esS	07 04 09
Oct. 15		
BC	eP	07 58 37

Date and Station		Phase (GCT) h m s
COL	e	08 09 24
	eL	21 31
HONO	eL	08 05 12
PF	eP	07 58 38
	iP	58 41
	e	59 47
	e	08 05 49
SLC	eL	08 26 46
SH	eP	07 58 19
TUC	eP	07 58 45
	e	08 05 54
	e	09 12
	eL	24 45
Oct. 15		
BH	e	08 21 24
	e	21 39
Oct. 15		
BH	e	08 30 53
	e	31 16
Oct. 15		
BC	eP	12 18 38
PF	eP	12 18 42
SH	eP	12 18 28
TUC	iP	12 18 43
Oct. 15		
BC	e	14 17 24
PF	e	14 14 06
	e	17 36
Oct. 15		
BC	e	15 00 01
BUT	eL	15 03 01
COL	eL	15 02 45
GC	e	14 57 51
	i	15 00 38
PF	eP	15 00 09

Date and Station		Phase (GCT) h m s
RC	e	15 00 12
	e	06 40
	e(L)	07 53
SLC	eL	15 05 31
SH	eP	14 58 43
SIT	iP	14 56 18
	eS	57 05
	iL	57 26
TUC	eP	15 00 53
Oct. 15		
PF	iP	20 49 45
SH	eP	20 49 26
TUC	eP	20 49 49
	e	50 05
	e	50 14
Oct. 16		
PF	e	06 16 00
Oct. 17		
BC	i	06 14 11
OV	i	06 14 42
PF	i	06 14 44
SH	eP	06 13 48
Oct. 17		
BH	e	07 47 51
	e	48 00
Oct. 17		
OV	eP	09 07 59
	iP	08 08
	e	08 50
PF	eP	09 07 57
	iP	08 09
	e	09 21
Oct. 17		
SH	eP	12 01 44
Oct. 17		
BC	e	12 40 16
	e	41 02

Date and Station		Phase (GCT) h m s
OV	e	12 40 13
	e	40 41
	e	41 03
PF	eP	12 40 10
	i	40 22
	i	41 15
Oct. 17		
BC	eP	13 59 12
Oct. 17		
GC	e	15 09 33
	e	14 04
	e	14 23
SIT	eP	15 06 26
	e	06 43
	eS	07 10
Oct. 17		
TUC	e	16 15 14
Oct. 17		
HUAN	e	20 42 53
OV	e	20 48 21
PF	e	20 48 45
Oct. 17		
BC	e	23 33 01
	e	33 36
PF	e	23 33 04
	i	33 21
Oct. 18		
HUAN	e	00 35 51
	e	43 04
OV	e	00 39 22
PF	e	00 39 18
TUC	e	00 38 48
Oct. 18		
BC	e	00 57 30
GC	eP	00 58 45
OV	eP	00 57 28

Date and Station		Phase (GCT) h m s
PF	iP	00 57 30
	e	57 41
SH	eP	00 58 03
TUC	eP	00 57 05
	eL	01 16 56
Oct. 18		
PF	e	02 51 10
TUC	e	02 51 15
Oct. 18		
BER	eL	10 18 28
Oct. 18		
PF	e	11 55 53
Oct. 18		
BC	e	14 25 55
Oct. 18		
SH	iP	18 06 29
Oct. 18		
PF	e	19 06 03
Oct. 18		
BC	iP	20 51 29
OV	iP	20 51 28
	e	53 02
PF	iP	20 51 26
	i	51 35
	e	56 08
SH	iP	20 51 33
	i	51 42
TUC	eP	20 51 23
	iP	51 25
	e	53 08
Oct. 18		
PF	i	22 36 02
	e	36 14
	e	39 49
SH	eP	22 35 19
TUC	e	22 36 18

Date and Station		Phase (GCT) h m s
Oct. 19		
SH	eP	04 07 27
Oct. 19		
BER	eL	09 59 31
Oct. 19		
OV	e	10 02 10
Oct. 19		
SJ	e	10 55 45
	iS	56 12
	i	56 20
	iL	56 41
Oct. 19		
BER	eL	14 45 20
BC	iP	14 29 45
BOZ	e	14 29 02
	e	33 21
	eL	37 27
BUT	e	14 29 01
	e	33 13
	eL	36 45
COL	e	14 22 26
	i	22 40
	e	23 12
	eL	23 22
COLU	e	14 49 12
GC	iP	14 27 56
	eS	34 24
LIN	eL	14 42 13
LOG	e	14 29 17
	e	38 13
	e	39 50
NK	eL	14 42 06
OV	iP	14 29 44
	i	29 53
	e	32 00
PF	iP	14 29 47
	i	29 57
	e	30 33
	e	31 33

Date and Station		Phase (GCT) h m s
RC	eP	14 29 56
	eL	39 16
SLC	e	14 29 21
	eL	36 41
SH	iP	14 28 43
	eS	33 25
SIT	eP	14 25 05
	iS	26 26
	eL	26 40
TUC	eP	14 30 27
	e	30 41
	eL	41 03
Oct. 19		
BER	eL	18 15 20
Oct. 19		
BH	e	19 47 20
	e	47 30
Oct. 20		
BC	e	00 02 26
PF	e	00 04 05
TUC	e	00 05 02
Oct. 20		
BC	eP	04 00 00
PF	eP	04 00 04
	i	00 10
	i(S)	00 47
Oct. 20		
BC	e	11 39 50
HUAN	iP	11 21 36
OV	e	11 39 46
PF	e	11 39 21
Oct. 20		
BH	e	13 46 07
	i	46 52
Oct. 20		
PF	eP	19 36 06
	i	36 32

Date and Station		Phase (GCT) h m s
Oct. 20		
BH	e	23 39 24
Oct. 21		
BC	iP	00 16 10
OV	iP	00 16 16
PF	iP	00 16 14
SH	eP	00 15 58
TUC	iP	00 16 16
	i	16 59
	e	17 16
Oct. 21		
HUAN	eP	06 10 19
Oct. 21		
BC	i	06 57 25
HUAN	eP	06 48 33
OV	iP	06 57 29
PF	eP	06 57 23
TUC	eP	06 56 53
Oct. 21		
PF	e	11 07 23
Oct. 21		
BH	eL	13 57 46
BER	e	13 53 40
BC	eP	13 52 51
	e	53 43
	e(PPP)	55 00
BUT	eL	14 14 42
COL	eL	14 22 05
COLU	e(S)	13 55 20
	eL	58 31
GC	iP	13 54 10
HUAN	eP	13 49 56
	e	52 46
	e(S)	54 05

Date and Station		Phase (GCT) h m s
OV	eP	13 52 54
	i	53 02
	i	54 42
PF	iP	13 52 48
	i	53 17
	ePP	54 23
RC	eP	13 52 37
	eL	14 08 11
SLC	eL	14 03 04
SH	eP	13 53 49
TUC	eP	13 52 06
	iP	52 10
	i	52 26
	eL	14 02 03
Oct. 21		
BC	i	19 04 52
PF	i	19 05 24
	i	05 34
Oct. 21		
BC	e	22 04 55
PF	e	22 05 13
Oct. 22		
BER	eL	04 01 34
BC	e	04 04 04
OV	e	04 04 06
PF	e	04 03 59
SJ	e	03 56 28
	e(S)	56 36
	i	56 58
	eL	57 00
Oct. 22		
BER	ePP	10 21 14
	i	23 19
	e	28 00
	eSS	38 20
	eL	51 51

Date and Station		Phase (GCT) h m s
BC	iP	10 12 50
	i	13 06
	i	13 40
	ipP	13 44
	isP	14 05
	e(PP)	16 47
	eSKS	23 09
	e(S)	23 34
	ePKKP	30 30
BOZ	e(P)	10 13 19
	eSKS	23 33
	eS	24 11
	ePS	25 38
	eSS	30 21
	esSS	31 48
	eL	38 59
BUT	eSKS	10 23 27
	eSS	30 28
	e(SSS)	33 43
	eL	38 16
COL	eP	10 12 37
	epP	13 19
	epPP	16 38
	eS	22 41
	eSP	23 46
	ePS	24 16
	eSS	28 32
	eL	35 25
COLU	eSKS	10 25 14
	e	26 18
	ePS	29 15
	e(PPS)	30 15
	eSS	35 16
	eL	52 34
GC	iP	10 12 54
	i	13 09
	ipP	13 46
	isP	14 14
HUAN	eP'	10 18 35
	epPP	20 13
	esPP	20 32
	ipPS	29 23
LIN	eSKS	10 24 21
	eSP	26 57
	eL	11 00 15

Date and Station		Phase (GCT) h m s
LOG	e	10 14 01
	ePP	16 57
	iSKS	23 28
	eSSS	32 52
	eL	36 56
OV	iP	10 12 52
	ipP	13 42
	i	14 24
	i(SKS)	23 29
	eSP	24 59
	ePKKP	30 31
PF	iP	10 12 52
	i	13 14
	ipP	13 45
	i(sP)	14 26
	epPP	17 06
	iSKS	23 11
	e(S)	24 04
	ePKKP	30 25
	eP'P'	38 31
RC	iSKS	10 24 00
	eS	24 58
	eL	42 48
SLC	e(P)	10 13 10
	epP	13 54
	eSKS	23 23
	eS	23 54
	eSP	24 57
	ePPS	26 32
	e	28 56
	eSSS	33 56
SH	eP	10 12 30
	i	12 47
	ipP	13 18
	i	13 24
	eS	22 12
	epS	23 36
SIT	e(P)	10 12 25
	ePPP	18 07
	iS	22 43
	esS	23 45
	e	24 32
	ePPS	25 08
	eL	35 38

Date and Station		Phase (GCT) h m s
TUC	iP	10 12 59
	ipP	13 49
	ePP	17 02
	e	18 43
	eSKS	23 15
	eS	23 43
	iS	23 46
	ePS	25 10
	eSS	30 04
	iPKKP	30 25
	eSSS	34 14
	eP'P'	38 27
Oct. 22		
BC	e	11 42 36
PF	e	11 42 38
Oct. 22		
PF	e	13 27 14
Oct. 22		
TUC	eP	13 52 45
Oct. 22		
BC	iP	17 40 01
	i	40 14
OV	iP	17 40 04
PF	iP	17 40 04
	i	40 17
	e	41 43
SH	eP	17 39 44
TUC	eP	17 40 06
Oct. 22		
BH	e	17 54 18
	e	55 10
HUAN	e	17 58 17
	e	18 02 17
	e	03 50
	eL	05 44
TUC	e	18 00 19
Oct. 22		
BC	e	21 04 28
OV	i	21 04 39

Date and Station		Phase (GCT) h m s
PF	eP	21 03 57
	iP	04 06
	iS	04 45
	e	05 00
Oct. 22		
BH	e(P)	21 16 51
	eL	17 44
BC	eP	21 23 32
HUAN	eP	21 19 59
	e(S)	23 34
	eL	24 53
PF	e(P)	21 23 28
	ePP	25 09
TUC	eP	21 22 50
	ePP	24 18
	eL	34 10
Oct. 23		
PF	e	03 31 27
Oct. 23		
PF	e	05 16 14
Oct. 23		
BC	e(P)	07 13 15
	eL	13 51
OV	iP	07 13 24
	i	13 57
	iS	14 05
	iL	14 19
PF	eP	07 13 17
	iP	13 27
	e(S)	14 05
	iS	14 12
Oct. 23		
BC	e	09 05 06
OV	i	09 05 14
	e	05 55
PF	e	09 05 17
Oct. 23		
PF	e	17 56 00
	i	56 03

Date and Station		Phase (GCT) h m s
Oct. 23		
OV	e	18 16 14
PF	e	18 16 07
Oct. 23		
PF	e	22 28 37
Oct. 23		
BC	i	23 32 53
Oct. 24		
BC	eP	01 11 35
	eS	12 11
PF	e(P)	01 11 43
	i	12 18
	i(S)	12 25
	i	12 35
Oct. 24		
BER	eL	02 39 30
BC	e	02 41 50
HUAN	e	02 40 33
OV	e	02 41 53
PF	e	02 41 45
SJ	e	02 34 48
	i(S)	35 23
	iL	35 43
TUC	e	02 41 18
Oct. 24		
BC	e	05 43 53
PF	e	05 43 49
TUC	eP	05 43 08
Oct. 24		
TUC	e	06 01 34
Oct. 24		
HUAN	e	07 37 55
	eL	45 32
Oct. 24		
BC	eP	07 55 52
	i(S)	56 31

Date and Station		Phase (GCT) h m s
PF	eP	07 55 51
	i(S)	56 48
	iL	57 01
Oct. 24		
BC	iP	08 49 36
	ipP	51 36
GC	iP	08 50 13
	ipP	51 55
OV	iP	08 49 40
	ipP	51 41
PF	iP	08 49 39
	ipP	51 38
	e	53 33
SH	iP	08 49 23
	ipP	51 22
	eS	58 32
TUC	iP	08 49 42
	ipP	51 41
	eS	59 12
Oct. 24		
OV	e	10 18 40
PF	i	10 18 19
TUC	e	10 16 03
Oct. 24		
BC	iP	18 44 03
OV	e	18 44 07
	i	44 48
PF	e	18 44 06
	i	44 34
SH	e	18 43 31
	e	43 40
Oct. 24		
OV	e	20 27 36
PF	e	20 27 31
TUC	e	20 27 31
Oct. 25		
BH	e	00 33 04

Date and Station		Phase (GCT) h m s
Oct. 25		
BC	e	04 49 57
OV	e	04 49 59
PF	e	04 49 55
TUC	eP	04 50 29
Oct. 25		
BC	e	11 10 14
OV	i	11 10 19
PF	i	11 10 13
TUC	eP	11 09 45
Oct. 25		
BC	e	15 52 11
PF	i	15 52 08
TUC	e	15 51 40
Oct. 25		
BC	i(P)	15 54 48
PF	eP	15 55 00
	iP	55 02
	i	55 40
	iS	55 45
	i	56 02
Oct. 25		
BC	e	16 22 39
OV	i	16 22 51
PF	e(P)	16 22 46
	i	22 53
	iS	23 30
	e	23 47
Oct. 25		
BC	e	20 14 59
	e	15 11
PF	e	20 14 55
TUC	eP	20 14 15
Oct. 25		
GC	eP	21 54 33

Date and Station		Phase (GCT) h m s
Oct. 25		
BER	eP	22 02 50
	e(S)	13 04
	i(PS)	14 06
BC	iP	22 00 08
	ipP	00 32
	eS	08 09
COL	eP	21 55(57)
	eL	22 00(23)
GC	iP	21 58 51
	i	59 01
	ipP	59 28
	iS	22 05 44
HUAN	ePP	22 10 32
LIN	eS	22 09 18
	eScS	10 15
	eL	22 20
PF	iP	22 00 12
	ipP	00 34
	iPP	02 21
RC	eP	22 00 10
	iS	08 10
	iScS	09 46
	e	10 45
	eL	26 16
SLC	eP	21 59 56
	eS	22 07 45
	e	08 36
	eScS	09 32
	e(SS)	12 21
	eL	14 26
SH	iP	21 59 14
	ipP	59 46
	ePPP	22 02 10
	eS	06 26
TUC	iP	22 00 41
	ipP	01 17
	i	02 33
	eS	08 48
	eP'P'	29 31
	iP'P'	30 08
	e	34 12

Date and Station	Phase	(GCT) h	m	s
Oct. 25				
BC	eP	22	29	34
	iP		29	45
	i		30	19
OV	e	22	29	51
PF	iP	22	29	44
	i		29	49
Oct. 25				
PF	e(P)	23	18	00
	i		18	43
	i		19	48
	i		20	35
Oct. 26				
BER	e(P)	00	34	41
	ePPP		40	27
	ePS		47	10
BC	e	00	39	14
	iP'		39	48
	iPP		40	52
BUT	e	00	53	12
	eSS		58	23
	eSSS	01	03	20
	eL		13	05
COL	eP'	00	40	50
	eSKSP	01	04	35
	e		10	20
	eSS		13	14
	eSSS		20	00
COLU	ePS	00	48	04
	eSS		53	44
	eSSS		57	42
	eL	01	08	14
GC	iP'	00	40	05
	i		40	54
	ePP		42	11
HUAN	iP	00	30	51
	ePP		33	13
	ePPP		34	29
	eS		38	42
	eSS		42	30
	eL		45	08
LOG	ePP	00	41	21
	e(SSS)	01	02	32
	eL		20	30
OV	eP'	00	39	53
	ePP		40	57
PF	eP'	00	39	44
	iP'		39	48
	ePP		40	50
	eSKS		46	31
	iS		48	44
RC	e(P')	00	40	26
	ePP		41	08
	ePS		50	52
	eSS		57	35
	eL	01	20	52
SLC	ePP	00	41	04
	ePS		50	54
	e		53	24
	eSS		57	42
	eSSS	01	02	05
	eL		10	31
SH	e	00	39	56
SIT	eSKKS	00	50	37
	e(SS)	01	02	42
	eSSS		07	40
	e		16	07
	eL		34	00
TUC	eP'	00	39	36
	ePP		40	16
	e(PPP)		42	54
	ePS		49	45
	ePKKP		50	36
	eSS		55	22
	e(SSS)	01	02	28
	eL		07	48
WASH	e	00	37	31
	eSKKS		46	35
	ePPS		50	01
	e(SSS)	01	09	21
Oct. 26				
BC	i	00	48	17
OV	i	00	49	02
SH	eP	00	49	48
TUC	eP	00	48	03
	i		48	07
Oct. 26				
TUC	e	04	39	35
Oct. 26				
BH	e	05	33	04
	e		33	50
Oct. 26				
BC	e	11	04	19
COL	e	11	00	21
GC	i	11	02	30
	eP		02	35
OV	e	11	04	37
PF	e	11	04	20
	e		07	15
SH	eP	11	03	24
TUC	e	11	06	34
	e		09	24
	eL	12	21	34
Oct. 26				
COL	eL	12	36	24
HUAN	eL	12	08	00
SLC	eL	12	26	44
TUC	eL	12	22	40
Oct. 26				
PF	eP	19	05	41
	eS		06	26
Oct. 26				
PF	e(P)	20	28	18
	e(S)		29	06
Oct. 26				
GC	eP	20	39	55
	i		40	41
	i		41	11
Oct. 26				
PF	i	22	39	05
Oct. 28				
SH	eP	02	01	05

Date and Station		Phase (GCT) h m s
TUC	eP	02 02 24
Oct. 28 SH	eP	07 37 08
Oct. 28 BC	e	08 36 38
HUAN	e	08 31 17
	eL	39 44
OV	e	08 37 04
PF	e	08 36 35
TUC	eP	08 36 09
Oct. 28 TUC	e	08 50 03
Oct. 28 OV	iP	09 11 08
PF	eP	09 10 22
Oct. 28 BC	e(P)	11 31 23
HUAN	e	11 22 51
	i	22 55
	e	25 55
OV	i(P)	11 32 19
PF	iP	11 30 51
SH	eP	11 31 32
TUC	iP	11 30 24
	i	30 55
Oct. 28 BER	eL	14 43 09
BC	iP	14 10 20
COL	eL	14 10 30
GC	eP	14 09 04
	i	11 03
PF	iP	14 10 23
	e	13 20

Date and Station		Phase (GCT) h m s
SH	iP	14 09 21
	eS	15 47
TUC	iP	14 10 57
	i	11 14
	i	11 55
Oct. 28 BC	e	21 54 54
GC	eP	21 53 38
PF	e	21 54 58
SH	iP	21 53 57
Oct. 28 BC	iP	22 03 27
	eS	04 17
PF	iP	22 03 34
	i	03 44
	iS	04 31
Oct. 28 PF	e	22 28 14
Oct. 29 OV	e	00 03(07)
PF	e	00 01 55
SLC	eL	00 21 40
TUC	e	00 02 02
Oct. 29 BC	e	03 35 23
BOZ	eL	03 37 39
BUT	eL	03 37 22
GC	eP	03 32 51
	i	32 57
OV	e	03 36(20)
PF	e	03 35 13
	i	35 19
	i	35 25
RC	iP	03 35 32

Date and Station		Phase (GCT) h m s
SLC	e	03 37 48
	eL	39 23
SH	eP	03 33 34
TUC	e	03 36 07
Oct. 29 BC	eP	11 35 40
	eS	36 18
PF	iP	11 35 49
	i	35 59
	iS	36 40
	iL	36 59
Oct. 29 BC	eP	11 52 11
COL	eL	11 52 21
GC	iP	11 50 58
OV	eP	11 53(35)
	i	53(53)
PF	eP	11 52 17
SH	iP	11 51 13
TUC	e	11 52 51
	i	53 27
Oct. 29 BC	eP	11 54 45
	eS	55 20
OV	eP	11 56(18)
	i	56(55)
PF	i	11 55 36
Oct. 29 BC	e	14 59 42
Oct. 29 PF	eP	22 07 34
Oct. 30 PF	e	03 24 41
TUC	eP	03 24 44

Date and Station	Phase	(GCT) h m s
Oct. 30		
BC	e	05 51 21
PF	i	05 51 23
TUC	eP	05 51 26
Oct. 30		
BER	eP	07 58 52
	i(S)	08 07 52
	iSS	12 19
	eL	16 00
T_S = 6 sec. A = 2.0 mm.		
T_L = 16 sec. $A_{max.}$ = 2.1mm.		
BC	iP	07 54 59
	i	55 20
	eS	08 00 55
BOZ	eP	07 54 33
	ePP	55 49
	iS	59 54
	eL	08 01 30
BUT	e(P)	07 54 20
	ePP	55 30
	e(S)	59 42
	eL	08 01 15
CHI	e	07 56 30
	ePP	58 21
	iS	08 03 41
	eSS	07 17
	eL	08 26
COL	eP	07 50 54
	iP	51 03
	eL	53 38
COLU	eP	07 57 36
	eS	08 05 43
	eScS	07 26
	eSS	09 52
GC	eP	07 53 33
	iP	53 34
	i	53 44
	iS	58 06
	eS	58 25
	iL	58 51

Date and Station	Phase	(GCT) h m s
HONO	iS	07 59 26
	eL	08 01 01
HUAN	e(P)	08 01 29
	ePP	05 27
	iSKS	11 49
	iS	12 42
	e	14 25
	eSS	19 31
	eSSS	23 31
	eL	27 16
LIN	iS	08 02 40
	eSS	05 48
	eL	06 51
LOG	eP	07 54 48
	iP	54 54
	iPP	56 03
	iPcP	56 55
	i(S)	08 00 30
	eL	03 21
NK	eP	07 57 12
	ePP	59 14
	ePPP	08 00 34
	eS	04 56
	e(SS)	08 20
	eL	10 22
OV	iP	07 54(59)
	i	55(15)
	eL	08 04(00)
PF	eP	07 55 01
	iP	55 02
	i	55 57
	i	57 28
	eS	08 00 56
	e	02 10
RC	eP	07 55 12
	iPcP	56 59
	i	57 33
	iS	08 01 15
	iL	04 20
SLC	eP	07 54 47
	iP	54 56
	ePP	56 08
	eS	08 00 31
	eL	03 21

Date and Station	Phase	(GCT) h m s
SH	eP	07 53 53
	iP	53 54
	e(S)	59 00
SIT	iP	07 51 31
	i	52 08
	i(S)	54 40
	eL	55 58
TUC	iP	07 55 39
	i	55 58
	i	56 07
	i	56 32
	i(PP)	57 34
	eS	08 02 05
	iS	02 09
	iScS	05 36
	eL	05 46
WASH	eP	07 57 26
	ePP	59 34
	e	08 00 33
	eS	05 20
	e(ScS)	07 13
	e(SS)	09 02
	eL	11 18
Oct. 30		
BC	iP	09 36 03
OV	e(P)	09 40(10)
PF	iP	09 36 08
	i	36 14
SH	eP	09 35 55
TUC	iP	09 36 07
Oct. 30		
BC	iP	14 23 11
COL	eL	14 23 15
GC	iP	14 21 50
OV	eP	14 23(18)
PF	iP	14 23 13
	i	23 20
SH	iP	14 22 23

Date and Station		Phase (GCT) h m s
TUC	iP	14 23 42
	i	23 51
	eP'P'	52 55
Oct. 30		
OV	e	15 27(22)
PF	e	15 27 13
TUC	e	15 27 41
Oct. 30		
BC	e	23 36 05
PF	eP	23 36 26
	eS	37 09
Oct. 31		
BC	e	03 13 19
PF	eP	03 13 27
	i	13 35
	eS	14 19
Oct. 31		
BC	iP	04 27 03
GC	eP	04 25 43
	iP	25 44
	ipP	26 04
PF	iP	04 27 06
	i	27 25
TUC	eP	04 27 37
Oct. 31		
SH	iP	04 46 08
Oct. 31		
BC	eP	11 52 15
PF	iP	11 52 17
	i	52 35
TUC	eP	11 52 49
	e	53 07
Oct. 31		
BC	iP	20 03 42
GC	iP	20 02 27

Date and Station		Phase (GCT) h m s
PF	iP	20 03 46
SH	iP	20 02 41
TUC	iP	20 04 20
Nov. 1		
BER	iP	11 26 14
	iPP	28 33
	iPPP	30 37
	iS	35 57
	iSS	40 41
	iL	44 03
BC	eP	11 22 37
	iP	22 38
	i	22 56
	eS	29 17
BOZ	eP	11 22 07
	ePP	23 30
	e	24 23
	eS	28 04
	iS	28 17
	eL	31 23
BUT	e	11 22 06
	e	23 42
	eS	28 08
	eL	31 11
CHI	eP	11 24 09
	ePP	26 08
	e(PPP)	27 46
	iS	31 59
	eSS	35 50
	eL	37 25
COL	iP	11 18 42
	eS	22 06
	eL	22 22
COLU	eP	11 25 12
	eS	33 56
	eScS	35 09
	eSS	38 18
	eL	41 14
GC	eP	11 21 20
	iP	21 21.5
	i	21 26
	iS	26 43.5
	eL	29 14

Date and Station		Phase (GCT) h m s
HONO	eS	11 26 19
	eL	28 22
HUAN	ePP	11 33 04
	iSKS	39 10
	iS	40 27
	eSS	47 52
	eSSS	51 48
	eL	55 42
LIN	eP	11 23 38
	ePP	25 32
	iS	31 02
	eScS	33 27
	eL	38 36
LOG	iP	11 22 30
	i	22 43
	iPPP	24 36
	eS	28 49
	iL	32 17
NK	iP	11 24 47
	e	28 33
	eS	33 00
	iS	33 11
	eSS	36 43
	iSS	37 31
	eL	38 51
PF	eP	11 22 40
	iP	22 41
	i	22 44.5
	i	23 02
	i(PPP)	25 35
	e(S)	29 22
RC	eP	11 22 56
	i(PP)	25 04
	iS	29 37
	iL	33 20
SLC	eP	11 22 31
	ePP	24 08
	eS	28 32
	iS	28 57
	e	29 51
	eL	32 15
SH	iP	11 21 35
	eS	27 25
	eL	30 13

Date and Station		Phase (GCT) h m s
SIT	iP	11 19 33
	e	— 21 38
	eS	23 37
TUC	eP	11 23 16
	i	23 22
	iPP	25 14
	iS	30 24
	iL	33 50
Nov. 1		
BC	eP	11 38 03
	i	38 16
GC	eP	11 36 24
PF	iP	11 37 39.5
	i	37 51.5
	i	38 31.5
TUC	eP	11 38 14
Nov. 1		
BC	eP	11 51 15
	i	51 27
GC	iP	11 49 35.5
PF	eP	11 50 52
	i	51 51.5
	i	12 38 31.5
SH	eP	11 49 47
TUC	eP	11 51 27
Nov. 1		
GC	eP	11 55 26
	i	55 27
PF	eP	11 56 40
	i	56 51.5
SH	eP	11 55 34
TUC	eP	11 57 16
Nov. 1		
BC	eP	12 14 39
SH	eP	12 12 58
TUC	eP	12 14 39

Date and Station		Phase (GCT) h m s
Nov. 1		
BC	eP	12 16 58
GC	e(P)	12 15 35
PF	eP	12 16 54
	e	17 23
	e	29 59
SH	iP	12 15 47
TUC	eP	12 17 28
Nov. 1		
BC	e(P)	12 18 28
GC	eP	12 17 08
	i	17 24
PF	i(P)	12 18 32
	i	18 44
SH	iP	12 17 25
TUC	eP	12 19 06
Nov. 1		
BC	eP	12 30 01
PF	eP	12 29 59
SH	iP	12 28 49
TUC	eP	12 30 29
Nov. 1		
BC	eP	12 50 02
GC	iP	12 50 02.5
PF	eP	12 49 56
	i	51 22.5
	i	51 42
SH	eP	12 48 47
Nov. 1		
SH	eP	12 58 53
TUC	e	12 59 37
Nov. 1		
BC	eP	13 25 31

Date and Station		Phase (GCT) h m s
GC	eP	13 24 13.5
PF	eP	13 25 28
	e	25 39
	e	30 05
SH	iP	13 24 24
TUC	eP	13 26 04
Nov. 1		
BC	eP	13 51 18
PF	eP	13 51 23
SH	eP	13 50 17
TUC	eP	13 51 58
	e	53 19
Nov. 1		
SH	eP	14 03 47
Nov. 1		
BC	eP	15 40 51
PF	eP	15 40 48
Nov. 1		
BC	e(P)	17 26 02
	e	26 23
PF	e(P)	17 25 06
SH	eP	17 24 10
Nov. 1		
PF	e(P)	19 12 37
SH	iP	19 11 39
Nov. 1		
BC	eP	19 45 05
GC	iP	19 43 48
PF	eP	19 45 08
Nov. 1		
BC	eP	20 22 33
	iP	22 34.5
	i	22 56.5

Date and Station	Phase	h m s
GC	iP	20 22 31
PF	iP	20 22 37
	e	23 52
	ePP	26 16
SH	iP	20 22 11
	i	22 34
	i	22 53
TUC	iP	20 22 47
	i	23 08
Nov. 1		
PF	e(P)	20 34 18
SH	eP	20 33 10
Nov. 1		
PF	e(P)	21 00 32
Nov. 1		
PF	e(P)	21 33 05
Nov. 1		
PF	e(P)	23 01 59
Nov. 1		
PF	e(P)	23 34 07
Nov. 2		
PF	iP	01 26 31.5
TUC	eP	01 26 06
Nov. 2		
TUC	iP	11 00 15
Nov. 2		
BH	eP'	14 23 57
BER	ePP	14 26 30
	e(SKS)	31 05
	e	41 18
	eSS	44 23
	eL	56 20
HONO	eL	14 48 44
HUAN	iP'	14 24 01
	eSKKS	35 00
	eSS	48 19
	eL	15 11 53

Date and Station	Phase	h m s
PF	eP'	14 22 32
	iPP	23 27
SJ	eP'	14 24 04
SH	eP	14 17 56
TUC	eP'	14 22 37
	ePS	33 23
	eSS	43 25
WASH	ePKS	14 26 34
	eSS	47 23
	eL	56 44
Nov. 2		
SH	eP	14 34 08
Nov. 2		
BH	eL	19 39 22
BER	iP	18 42 00
	iPP	45 58
	i	49 36
	iSKS	52 30
	iS	53 25
	ePS	54 30
	iPS	54 45
	eSS	59 32
	i(SSS)	19 02 55
	eL	08 00
BC	eP	18 42 29
	i	43 07
	iPP	46 23
	i	47 15
	i	48 04
	eSS	19 02 57
	e	06 50
BOZ	eP	18 41 43
	i	42 20
	iPP	45 30
	ePPP	47 58
	eSKS	51 55
	eS	52 48
	iS	52 55
	ePS	53 58
	eSS	58 47
	iSS	59 20
	eSSS	19 03 20
	eL	06 02

Date and Station	Phase	h m s
BUT	eP	18 41 39
	i	42 15
	iPP	45 20
	eSKS	52 16
	iS	53 22
	ePS	54 02
	iSS	59 20
	eSSS	19 02 36
	eL	06 06
CHI	e(P)	18 41 54
	e	42 46
	ePP	45 14
	ePPP	47 37
	eSKS	52 08
	eSKKS	52 35
	iPS	54 22
	iSS	59 21
	ePSPS	19 00 18
	eL	06 58
COL	eP	18 39 43
	iP	39 45
	ePP	42 08
	iPP	42 20
	ePPP	43 48
	iPPP	44 01
	eSS	53 28
	iL	56 40
COLU	eP	18 42 19
	ePP	46 27
	eSKS	53 06
	ePS	55 23
	eSS	19 00 29
	eSSS	04 49
	eL	11 07
GC	eP	18 41 31
	iP	41 32.5
	i	41 35
	i	42 01
	i	45 54
HONO	ePP	18 46 36
	ePS	55 19
	e	57 13
	eL	19 10 46
HUAN	iP'	18 48 03
	i	49 00
	iPP	50 49
	ePS	19 03 27

Date and Station		Phase (GCT) h m s
HUAN, cont.	iSS	19 09 17
	i	09 53
	iSSS	13 31
	iL	18 43
LIN	eP	18 42 13
	ePP	46 05
	eSKS	52 09
	eS	53 18
	eL	19 08 17
LOG	iP	18 42 07
	i	42 48
	iPP	46 01
	i(S)	52 47
	e	57 43
	eL	19 08 25
NK	eP	18 41 40
	ePP	45 45
	eS	53 05
	eL	06 47
PF	eP	18 42 30
	i	43 03.5
	i	43 49.5
	iPP	46 43
	e	50 31
	ePPS	19 06 49
SLC	iP	18 42 09
	ePP	46 17
	ePPP	48 05
	iSKS	52 53
	iPS	55 06
	iSS	19 00 01
	i	01 05
	eSSS	03 58
	iSSS	04 30
	eL	57 35
SJ	eP	18 42 58
	ePP	47 24
	iPP	47 25
	i	48 35
	i	49 44
	eSKS	52 59
	iSKS	53 42
	i	54 36
	eS	55 06
	ePS	56 40
	iPS	56 52

Date and Station		Phase (GCT) h m s
SJ	eSS	19 02 35
	eL	11 34
SEA	eP	18 41 47
	ePP	42 13
	ePS	53 09
	eSS	59 05
	eL	19 02 48
SH	iP	18 41 26
	i	42 01
	i	42 10
	i	42 31
	e(SKS)	52 45
	eS	53 01
	e	57 33
SIT	iP	18 40 35
	ePP	43 27
	iPP	43 43
	i(PPP)	45 36
	iS	50 40
	iSS	55 41
	eSSS	58 56
TUC	eP	18 42 42
	eP'	46 02
	iP'	46 10
	iP''	46 25
	ePP	46 58
	iPP	47 11
	iPP	47 27
	iPPP	49 13
	iSKS	53 19
	iPS	56 32
	iPSPS	56 40
	ePKKP	58 22
	eSS	19 01 43
	eSSS	06 17
	eL	11 01
WASH	iP	18 41 54
	e	44 54
	iPP	45 38
	e	48 37
	eSKS	52 06
	iPS	54 24
	i	54 44
	eSS	19 00 28
	eL	06 07
Nov. 2		
SH	e	19 40 56

Date and Station		Phase (GCT) h m s
Nov. 3		
BC	eP	05 05 51
GC	eP	05 04 41
PF	eP	05 05 58
	i	06 07.5
	i	06 13.5
SH	iP	05 04 49
TUC	eP	05 06 33
	i	06 46
Nov. 3		
BC	iP	13 25 49
OV	iP	13 25 33
PF	iP	13 25 56.5
Nov. 3		
BC	eP	14 07 14
OV	e(P)	14 04 31
PF	e(P)	14 07 16
Nov. 3		
COL	eL	19 00 36
Nov. 3		
PF	eP	18 59 49
	i	19 00 25.5
TUC	eP	19 00 36
Nov. 3		
BH	e	19 43 10
	e	52 45
BER	iP	19 42 11
	ipP	42 27
	i	46 52
	iS	49 58
	iScS	51 35
	eL	54 48
BC	eP	19 46 04
	ePP	49 59
BOZ	ePS	19 58 04
	eSS	20 03 18
	eL	11 30

Date and Station		Phase (GCT) h m s
BUT	eL	20 19 00
COLU	eP	19 42 30
	eS	52 40
	eL	20 00 54
GC	i(P)	19 46 09.5
HUAN	eP	19 42 35
	iP	42 40
	ePP	44 44
	ePPP	46 04
	eS	50 45
	eSS	54 34
	eL	56 17
LOG	eSS	20 03 17
	eL	14 18
SHO	ePP	19 49 47
	eSKS	56 25
	eS	56 59
	eSS	20 02 54
	eL	12 14
SJ	iP	19 41 43
	ePP	43 05
	eS	49 02
	iS	49 04
	eSS	52 04
	eL	53 12
TUC	iP	19 45 50
	ePP	49 13
	eSKS	56 21
	e	58 27
	eSS	20 03 08
	eL	11 35
Nov. 3		
BC	iP	23 31 52.5
GC	eP	23 32 43
PF	iP	23 31 49.5
SH	eP	23 31 41
TUC	iP	23 31 56
Nov. 4		
TUC	e	01 31 56

Date and Station		Phase (GCT) h m s
Nov. 4		
GC	iP	10 35 57
Nov. 4		
PF	e(P)	14 18 56
Nov. 4		
BER	eP	20 04 30
	iP	04 44
	e	08 40
	i	09 00
	eL	09 08
GC	iP	22 00 57.5
	i	01 10
	iS	11 52
PF	eP	20 10 07
SJ	eL	20 11 03
SIT	eL	20 22 15
TUC	iP	20 10 01
WASH	eL	20 02 00
Nov. 4		
BER	iP	22 00 38
	e	04 09
	iS	11 11
	iPS	12 40
	iPPS	13 28
	eL	24 06
BC	eP	22 01 50
	i	02 04
	iPP	06 09
	i	06 25
	ePPS	15 18
	i	17 09
	e	17 39
	eP'P'	25 57
BOZ	iL	22 42 00
BUT	eP	22 01 02
	ePP	04 43
	eSKS	11 16
	iS	11 50
	ePS	13 19
	eL	26 16

Date and Station		Phase (GCT) h m s
COL	iP	21 59 33
	iPP	22 02 15
	ePPP	04 06
	eS	08 56
	iS	09 04
	eSS	13 44
	eL	17 33
COLU	eP	22 01 12
	ePP	05 04
	eS	12 04
	ePS	13 48
	eSS	19 06
	eSSS	22 42
	eL	26 08
HUAN	iP'	22 06 55
	iPP	08 54
	iPKS	10 13
	e	15 48
	ePPS	20 27
	iP'P'	25 12
	eSS	26 00
	iSS	26 03
	eL	43 32
LIN	eS	22 12 04
	eL	21 38
LOG	iP	22 00 27
	i	02 49
	iPP	03 57
	iS	11 17
	iSS	17 20
	eL	26 24
NK	eP	22 01 09
	ePP	04 22
	iS	11 35
	ePS	12 30
	eSS	17 29
	eL	23 35
PF	eP	22 01 49
	iP	01 03.5
	i	02 29.5
	iPP	06 07
	ePS	14 58
	e	15 25
	ePPS	16 19
	e	17 39
	eP'P'	25 49

Date and Station	Phase (GCT)	h m s
BC	iP	22 01 05
	ePP	04 43
	ePPP	06 47
	e	08 24
	eSKS	11 14
	eS	12 10
	ePS	13 26
	eSS	18 27
	eL	25 32
SLC	eP	22 01 27
	ePP	05 25
	i	09 16
	iSKS	12 19
	iS	13 13
	iPS	14 15
	e	18 39
	eSS	19 34
	eSSS	23 34
	iL	26 58
SJ	eP	22 01 31
	iPP	05 30
	ePPP	07 50
	iSKS	12 07
	iS	13 00
	iPPS	15 28
	eSS	19 51
	iSS	19 54
	eL	28 25
SEA	eP	22 02 11
	ePP	05 52
	e	11 25
	iS	13 05
	iPS	13 42
	eSS	18 22
	eL	24 33
SH	eP	22 01 30
	iPP	05 36
	i	06 07
	iS	12 31
STT	eP	22 00 14
	iP	00 17
	e(PP)	02 58
	e	06 40
	iS	10 31
	iPPS	11 29
	eSS	15 57
	eL	21 07
	iL	21 55

Date and Station	Phase (GCT)	h m s
TUC	eP	22 02 05
	eP'	06 08
	iPP	06 28
	iPPP	08 46
	iSKS	12 24
	ePS	15 46
	e	16 06
	iPPS	16 55
	iPKKP	17 30
	iSS	21 30
	eSSS	26 07
	eL	29 58
Nov. 4		
SH	eP	22 17 50
	eS	26 01
Nov. 4		
BC	eP	23 57 48
LOG	iP	23 56 19
	iS	56 45
	iL	56 58
PF	eP	23 57 42
	i	58 24
	e	00 00 45
SH	eP	23 58 08
	i	58 13
	i	58 27
	i	00 01 22
Nov. 5		
SH	eP	05 28 07
	e	28 18
Nov. 5		
BC	iP	07 11 13
GC	iP	07 12 08
HUAN	eP	07 03 09
	iP	03 13
	epP	04 18
	iS	05 48
	eL	06 24
	e	06 29
MONT	iP	07 00 32
	iS	01 06
	eL	01 09
PF	iP	07 11 10.5

Date and Station	Phase (GCT)	h m s
SJ	e(P)	07 13 18
	i	16 39
SH	iP	07 11 52
	e	12 02
TUC	iP	07 10 43
	i	11 03
Nov. 5		
SH	eP	12 15 53
Nov. 5		
BC	iP	22 52 13
GC	iP	22 51 38
PF	iP	22 52 16.5
	i	53 04
	i	55 41
SH	iP	22 51 37
	eS	01 23
TUC	iP	22 52 34
	iPP	56 10
Nov. 6		
BH	e	02 46 28
	e	46 50
Nov. 6		
TUC	iP	05 57 57
Nov. 6		
BER	eL	21 49 05
BC	ePP	20 14 51
	ePKKP	26 00
BOZ	eL	21 49 05
COL	e(S)	20 18 05
	eScS	18 25
	eL	32 00
GC	iP	20 09 48.5
	e	10 11
HUAN	eP'	20 16 09
	iP'	16 12
	ePP	19 39

Date and Station	Phase	(GCT) h m s
PF	eP'	20 14 50
	ePKKP	26 00
SH	eP	20 10 17
SIT	eL	20 39 05
TUC	eP'	20 14 58
	iPP	15 44
	iPKKP	25 46
	eL	21 03 48
Nov. 7 SH	e(P)	02 24 31
Nov. 7 SH	e(P)	03 28 42
Nov. 7 PF	e(P)	05 55 02
PF	e(P)	05 52 49
	i	52 54
	i	54 14
SH	iP	05 57 43
Nov. 7 BC	iP	05 58 23
PF	iP	05 57 56
Nov. 7 BC	eP	09 54 08
HUAN	eL	10 05 08
PF	eP	09 53 33
TUC	iP	09 53 20
Nov. 7 PF	iP	14 01 11.5
SH	iP	14 00 58
TUC	iP	14 01 13
Nov. 7 GC	iP	16 07 05
TUC	e(P)	16 12 38

Date and Station	Phase	(GCT) h m s
Nov. 7 BH	eP	18 09 36
	eS	12 04
BER	eS	18 11 36
	eL	12 00
BC	iP	18 14 15
BOZ	eL	18 28 10
GC	eP	18 14 48
HUAN	eP	18 12 30
	ePP	13 38
	eS	17 38
	eL	20 25
PF	iP	18 14 00
SJ	iP	18 06 52
	iS	07 22
	iL	07 39
SH	eP	18 14 55
TUC	iP	18 13 33
	eL	32 02
Nov. 7 HUAN	eP	21 34 58
	ePP	37 00
	eS	40 35
	eL	43 08
TUC	eP	21 40 37
Nov. 8 BC	i	00 35 47
PF	iP	00 35 20
TUC	iP	00 35 20
Nov. 8 BC	i(P)	05 29 47
GC	eP	05 30 49
PF	iP	05 29 13.5
TUC	iP	05 28 31
	eL	38 11

Date and Station	Phase	(GCT) h m s
Nov. 8 BC	e(P)	22 01 56.5
Nov. 9 GC	iP	08 51 47.5
OV	eP	08 52 06
PF	eP	08 52 08
Nov. 9 BC	e(P)	17 58 56
PF	e(P)	17 58 50
Nov. 9 BC	eP	21 52 10
	epP	52 40
OV	eP	21 52 14
	epP	52 40
PF	iP	21 52 18
	ipP	52 40
SH	iP	21 51 37
	i	52 23
TUC	eP	21 52 15
	epP	52 42
Nov. 10 GC	iP	00 59 41.5
SH	eP	01 00 07
Nov. 10 OV	eP	05 13 23
	i	14 11
Nov. 10 BH	iP	08 26 04
	iS	26 14
Nov. 10 GC	i(P)	09 05 11.5
Nov. 10 BH	e	13 02 29
BER	e(S)	13 13 22
	i	14 12
	eL	21 28

Date and Station		Phase (GCT) h m s
BC	eP	13 06 51
	ipP	07 21
	e	16 42
	e	17 36
GC	eP	13 07 45
	ipP	08 17
HUAN	iP	12 59 19
	i	13 00 12
	iS	02 49
	eL	03 19
MONT	e(P)	12 56 54
	e(S)	58 20
	eL	58 36
OV	iP	13 06 53
	ipP	07 26.5
PF	iP	13 06 49.5
	ipP	07 25
SJ	eP	13 03 30
	e(pP)	04 16
	ePcP	04 41
	ePP	05 54
	eS	10 15
	esS	10 54
	eScS	13 11
	iSS	14 24
	isSS	14 54
	eL	15 21
SH	iP	13 07 27
	ipP	07 39
TUC	iP	13 06 22
	ipP	06 51
	i	07 10
	e	09 30
	eP'P'	34 42
Nov. 10		
BH	iP	17 46 57
	e	48 46
	iS	50 26
	e	51 29
	eL	52 12
BER	iP	17 50 52
	iPP	52 30
	ePPP	53 23
	iS	57 00
	eL	59 52

Date and Station		Phase (GCT) h m s
BER		
T_P = 8 sec. A = 3.0 mm.		
T_S = 16 sec. A = 7.0 mm.		
T_L = 19 sec. $A_{max.}$ = 23.0mm.		
BC	iP	17 52 55
	i	52 39
	i	53 28
	eS	18 00 43
	eP'P'	22 14
BOZ	eP	17 53 08
	e	55 04
	e	57 35
	eS	18 01 22
	iSS	05 40
	e	06 25
	iL	08 13
BUT	iP	17 53 16
	ePP	55 35
	eS	18 01 56
	eSS	05 44
	eL	08 11
CHI	iP	17 51 53
	e	52 19
	ePP	53 56
	iPP	54 02
	e	54 41
	e	57 34
	iS	59 08
	eSS	18 03 07
	eL	04 57
COL	eP	17 55 50
	ePP	59 30
	e(PPP)	18 01 54
	eSKS	06 21
	e	07 35
	e	08 57
	eSS	12 16
	eSSS	16 15
	eL	18 45
COLU	eP	17 50 49
	ePP	52 29
	iPcP	52 40
	e	54 41
	eS	57 08
	iL	18 00 29
GC	eP	17 53 45

Date and Station		Phase (GCT) h m s
HONO	eS	18 05 42
	eSS	11 33
	eL	18 09
T_L = 21 sec. $A_{max.}$ = 11mm.		
HUAN	iP	17 44 02
	iS	44 48
	iL	45 00
LIN	eP	17 52 03
	e(PP)	54 35
	iS	59 28
	iScS	18 01 51
	eL	03 25
LOG	iP	17 55 01
	i	56 02
	i	57 13
	i	18 04 25
	e	08 01
	eSS	12 55
	eL	16 20
NK	eP	17 51 45
	ePP	53 53
	i	55 32
	eS	58 40
	eL	18 04 05
OV	iP	17 52 31.5
	i	56 29
PF	eP	17 52 32
	iP	52 35.5
	i	55 34
	i	56 29
	e(S)	18 00 56
	eP'P'	22 06
RC	iP	17 52 42
	iS	18 00 34
	i	01 35
	iSS	04 48
	eL	05 49
SLC	iP	17 52 49
	eS	18 00 59
	eSS	04 19
	ePP	05 09
	iL	05 15
SJ	iP	17 48 54
	iS	52 59
	iL	53 53

Date and Station		Phase (GCT) h m s
SEA	e	17 54 57
	e(S)	18 03 37
	eL	11 39
SH	eP	17 53 24
	iP	53 27
	i	54 08
	eS	18 02 10
	e	02 44
SIT	eP	17 55 20
	ePP	58 00
	eS	18 05 27
	iS	05 31
	eSS	10 26
	eSSS	14 06
	eL	18 32
TUC	iP	17 51 57
	i	52 02
	iS	59 22
	eSS	18 02 31
	iL	03 13
	eP'P'	22 20
WASH	iP	17 51 29
	iPP	53 09
	iS	58 11
	iS	58 20
	eL	18 02 48
Nov. 10		
SH	eP	18 22 12
Nov. 10		
BH	eP	18 54 55
	eS	58 21
BC	iP	19 00 21
OV	iP	19 00 34
	e	02 07
PF	iP	19 00 18
	e	09 37.5
SH	eP	19 01 31
	iP	01 32.5
TUC	iP	18 59 42
Nov. 10		
HUAN	iP	19 32 42

Date and Station		Phase (GCT) h m s
PF	eP	19 41 14
Nov. 10		
BC	iP	20 00 37
GC	iP	20 01 47.5
HUAN	iP	19 52 10
	iL	53 08
OV	iP	20 00 40
PF	eP	20 00 35
SJ	eP	19 57 13
	ePP	58 08
	eL	20 01 42
TUC	eP	20 00 00
Nov. 10		
BH	eP	21 06 40
	eS	10 07
BC	iP	21 12 17.5
GC	eP	21 13 28
HUAN	iP	21 03 43
OV	iP	21 12 25.5
PF	iP	21 12 15.5
SJ	eP	21 08 33
	ePP	09 13
	eL	13 24
SH	eP	21 13 07
TUC	eP	21 11 40
Nov. 10		
BC	iP	22 12 13.5
GC	iP	22 13 25
HUAN	iP	22 03 38
OV	iP	22 12 26
PF	iP	22 12 21.5

Date and Station		Phase (GCT) h m s
SH	iP	22 13 03
TUC	eP	22 11 37
Nov. 10		
BC	iP	23 22 38
GC	iP	23 22 04.5
OV	iP	23 22 40
PF	iP	23 22 41.5
SH	eP	23 22 02
TUC	iP	23 22 58
Nov. 11		
BC	eP	01 05 04
HUAN	iP	00 56 36
	eS	57 25
	eL	57 40
OV	i(P)	01 05 13.5
PF	eP	01 05 02
Nov. 11		
BC	eP	06 55 01
OV	eP	06 55 04
PF	eP	06 55 04
TUC	iP	06 55 41
Nov. 11		
HUAN	eP	12 05 40
	eS	06 43
	eL	06 52
Nov. 11		
HUAN	iP	13 16 32
Nov. 11		
PF	eP	15 42 28.5
TUC	eP	15 43 12
	e	44 37
Nov. 11		
HUAN	eP	17 23 09

Date and Station	Phase	(GCT) h m s
Nov. 11		
BC	iP	21 07 09.5
GC	iP	21 05 33
OV	iP	21 07 09.5
	i	07 22.5
	i	07 58
PF	eP	21 07 13
	iP	07 25
	i	07 58.5
SH	eP	21 06 07
	i	06 20
TUC	eP	21 07 48
	i	08 00
Nov. 11		
HUAN	eP	21 55 54
Nov. 11		
BC	iP	23 00 32
GC	iP	23 00 54
OV	iP	23 00 36
	e	01 14
PF	iP	23 00 35
	i	01 11.5
	e	26 56
SH	iP	23 00 22
	i	01 02
TUC	iP	23 00 35
	i	00 53
	i	01 12
Nov. 12		
BC	eP	04 42 45
OV	eP	04 42 49
PF	eP	04 42 32
	i	42 58.5
SJ	eL	04 40 44
TUC	eP	04 42 02

Date and Station	Phase	(GCT) h m s
Nov. 12		
HUAN	eP	04 59 37
Nov. 12		
TUC	eP	05 07 33
Nov. 12		
BC	iP	06 03 41
	i	03 57
	eS	09 39
BOZ	eL	06 08 23
BUT	eL	06 11 00
CHI	eP	06 05 23
	eS	12 14
	eScS	15 31
	eL	17 05
COL	eP	05 59 47
	eS	06 02 23
	eL	02 51
COLU	eL	06 21 14
GC	eP	06 02 17
	iP	02 32
HONO	eP	06 03 05
	eL	09 36
LIN	eS	06 11 22
	eL	15 32
OV	eP	06 03 41
	i	03 57
	e	09 43.5
PF	eP	06 03 44
	iP	03 46.5
	i	04 01.5
	eS	09 45
RC	eP	06 04 01
	eS	09 55
	eL	12 54
SLC	eS	06 09 13
	eL	11 50
SJ	eP	06 08 36
	ePP	12 13
	iS	18 30

Date and Station	Phase	(GCT) h m s
SJ	eSS	06 23 31
	eL	30 38
SH	eP	06 02 37
	i	03 49
SIT	eP	06 00 20
	i(S)	03 28
	i	03 50
TUC	iP	06 04 21
	i	04 38
	eScP	10 02
	e	10 24
	eL	14 31
WASH	eS	06 14 19
	eL	24 17
Nov. 12		
BH	iP	06 38 04
	iS	39 08
BC	iP	06 44 40
GC	iP	06 45 40
HUAN	eP	06 41 30
	eL	45 34
OV	eP	06 44 41
PF	iP	06 44 36.5
TUC	iP	06 44 04
Nov. 12		
HUAN	eP	11 26 12
	e	28 51
TUC	iP	11 33 45
Nov. 12		
BER	e	14 46 25
	e	51 40
	e	55 40
	eL	59 20
BC	iP	14 39 38
BOZ	eP	14 38 40
	eL	41 57

Date and Station		Phase (GCT) h m s
BUT	eP	14 38 24
	eL	41 15
CHI	e	14 41 47
	e	42 31
	eS	46 32
	eL	50 19
COL	eP	14 40 12
	eS	43 48
	eL	44 04
GC	iP	14 37 20.5
	i	38 02.5
	i	38 34.5
	e	40 49
LIN	eP	14 41 00
	iS	45 19
	eL	47 36
LOG	iP	14 39 07
	i	40 15
	e	41 01
	eL	43 55
OV	iP	14 39 34
	e(S)	43 31
PF	iP	14 39 40
	e	40 21
	e(S)	43 03
RC	iP	14 39 58
	iS	43 47
	eL	46 26
SLC	iP	14 39 12
	eS	42 06
	eL	42 53
SEA	eL	14 37 40
SH	iP	14 38 02
	i	38 28
	e(S)	41 43
SIT	eP	14 37 55
	eS	40 08
	i	40 20
	eL	40 44

Date and Station		Phase (GCT) h m s
TUC	iP	14 40 34
	eS	43 01
	eL	44 58

Nov. 12

BER	e	17 47 07
	ePP	48 07
	e(SKS)	54 36
	eS	55 20
	iPS	59 00
	iSS	18 04 17
	iSSS	08 50
	eL	14 48

T_{PP} = 9 sec. A = 1 mm.
T_{PS} = 21 sec. A = 2.8 mm.
T_L = 20 sec. $A_{max.}$ = 3.0mm.

BC	iP	17 40 43
	eS	50 43
	eScS	51 03
BOZ	eP	17 41 20
	e	45 31
	eS	51 55
	eSS	57 24
	eSSS	18 01 20
	eL	03 52
BUT	eP	17 41 20
	eS	51 42
	e	55 10
	eL	18 03 08
CHI	eP	17 42 27
	ePP	46 18
	eSKS	53 18
	eS	54 03
	e	55 36
	eSS	18 00 39
	eSSS	04 44
	eL	10 08
COL	iP	17 41 29
	ePP	44 56
	eS	51 59
	iS	52 12
	eSS	57 26
	eSSS	18 01 08
	eL	03 24

Date and Station		Phase (GCT) h m s
COLU	e(SKS)	17 53 36
	e	54 32
	e	18 01 35
	e(SS)	05 06
	eL	15 20
GC	iP	17 41 07.5
	i	42 46
	i	47 43
HONO	iP	17 37 06
	eP	37 10
	ePP	39 18
	iS	43 14
	iL	46 40

T_L = 13 sec. $A_{max.}$ = 12mm.

HUAN	eP	17 41 59
	iP	42 02
	e	45 53
	iSKS	52 34
	iPS	54 11
	iPPS	55 09
	eSS	58 48
	i	59 31
	eL	18 05 31
LIN	eP	17 42 00
	eSKS	52 23
	iS	53 11
	eSS	58 43
	eL	18 06 30
LOG	iP	17 41 15
	i	43 01
	i(PP)	44 51
	iS	51 56
	eSS	57 11
	eSSS	18 00 52
	eL	03 36
MONT	eL	18 12 39
OV	eP	17 40 45
	iP	40 48
PF	iP	17 40 47
	i	40 59.5
	i	43 26.5
	i	47 03
	i(S)	50 51.5

Date and Station		Phase (GCT) h m s
RC	eP	17 41 42
	ePP	45 02
	eS	52 19
	ePS	53 38
	eSS	58 16
	eL	18 04 56
SLC	iP	17 41 10
	iS	51 29
	eSS	56 38
	eSSS	18 00 22
	eL	02 35
SJ	ePP	17 48 08
	e(SKS)	53 40
	eS	55 35
	ePS	57 34
	eSS	18 03 26
	i	03 47
	eSSS	07 30
	eL	12 03
SEA	e(P)	17 41 42
	e(PP)	44 44
	e(S)	51 46
	eSS	57 02
	e	59 52
	eL	18 03 44
SH	eP	17 40 33
	eS	50 48
	e	51 22
SIT	eP	17 41 08
	iS	51 34
	e	52 34
	iL	18 03 09
TUC	iP	17 40 47
	i	41 03
	i	42 30
	i	43 24
	iPP	44 10
	eS	50 48
	iS	50 50
	iPPS	51 32
	iSS	55 47
	iSSS	59 33
	iL	18 01 30
	iP'P'	07 47
Nov. 12		
OV	e(P)	17 59 38
PF	e(P)	17 59 21.5
Nov. 12		
BC	e(P)	18 07 50
GC	e(P)	18 07 34
OV	e(P)	18 07 48
PF	eP	18 07 39
Nov. 12		
GC	iP	23 44 07
SH	eP	23 44 20
	i	46 47
	e(S)	54 45
TUC	eP	23 46 00
Nov. 13		
BC	iP	04 09 18.5
GC	eP	04 09 42
OV	iP	04 09 22
PF	iP	04 09 21.5
	i	09 41.5
SH	eP	04 09 09
TUC	iP	04 09 21
Nov. 13		
OV	e(P)	23 32 42
Nov. 14		
BC	e(P)	01 16 39
OV	e(P)	01 16 51
PF	e(P)	01 16 45
TUC	e(P)	01 14 46
Nov. 14		
BC	e(P)	04 30 12
OV	e(P)	04 29 06
PF	e(P)	04 29 01
	e	29 53
Nov. 14		
PF	iP	08 05 38.5
Nov. 14		
BER	eP	11 38 02
	eL	40 27
BC	iP	11 42 47
	e	43 03
BUT	eL	11 57 10
COLU	e	11 38 57
	e	42 12
	eL	43 38
GC	eP	11 43 31
HUAN	eP	11 41 11
	iS	46 24
	eL	58 08
OV	iP	11 42 45.5
PF	iP	11 42 42.5
	i	43 36.5
RC	eL	11 54 23
SLC	eP	11 42 36
	e	52 16
	eL	53 52
SJ	iP	11 35 36
	iS	36 10
	iL	36 25
SIT	eL	12 07 10
TUC	eP	11 42 15
	eL	53 39
Nov. 14		
SH	e	12 44 37
Nov. 14		
BOZ	eL	15 52 16
Nov. 14		
SH	eP	22 00 13
Nov. 15		
GC	eP	01 33 06

Date and Station	Phase	(GCT) h m s
SH	eP	01 33 21
Nov. 15		
BC	e(P')	02 26 33
GC	e(P')	02 27 54
HUAN	iP'	02 16 33
	iPP	18 24
	e(S)	23 40
	e	27 16
	eL	31 32
OV	e(P')	02 26 15
PF	e(P)	02 26 31
	e	33 01
Nov. 15		
PF	e	06 49 32
Nov. 15		
OV	e	08 04 34
PF	e	08 05 00
SH	eP	08 04 20
Nov. 16		
BC	iP	01 01 20.5
PF	eP	01 01 23.5
TUC	iP	01 01 28
Nov. 16		
BC	e	05 49 47
PF	e	05 49 30
SH	eP	05 49 35
Nov. 16		
GC	eP	10 07 07
	e	08 02
Nov. 16		
OV	e	11 02 27
Nov. 16		
GC	eP	12 03 09
SH	eP	12 03 31

Date and Station	Phase	(GCT) h m s
TUC	iP	12 02 48
	i	03 07
	eL	17 06
Nov. 16		
HUAN	eP	21 32 41
Nov. 16		
OV	e	22 32 16
Nov. 17		
SH	eP	03 03 20
	e	18 49
TUC	iP'	03 07 45
	e	11 10
	iPKKP	19 31
Nov. 17		
BH	iP	04 49 29
	iS	50 21
TUC	eP	04 55 53
	e	56 07
Nov. 17		
BC	e	13 15 15
HUAN	iP	03 08 47
PF	e	13 15 54
Nov. 17		
OV	e	13 34 23
Nov. 17		
BER	e(S)	22 51 05
	e(SS)	59 40
	eL	23 08 20
BC	eP'	22 43 31
GC	eP'	22 43 20
	i	44 53
HUAN	eP	22 40 39
	eP'	43 48
	ePP	45 39
	eSS	23 04 00
	eL	22 50
PF	eP'	22 43 35

Date and Station	Phase	(GCT) h m s
SJ	ePP	22 44 26
	e	46 02
	eS	52 04
	eSS	23 00 15
	eL	13 23
SH	eP'	22 43 26
SIT	eP'	22 43 32
	eS	51 54
	ePPS	54 10
	eSS	58 44
	eSSS	23 03 09
	eL	11 14
TUC	eP'	22 43 38
	e	47 09
	eL	23 15 16
Nov. 18		
PF	e	01 36 10
Nov. 18		
BC	iP	02 52 04
	i	52 14
	epP	54 13
	eS	03 01 37
GC	eP	02 52 23
	epP	54 33
PF	iP	02 52 07.5
	epP	54 14
	e	55 34
SH	eP	02 51 53
	epP	53 59
TUC	iP	02 52 09
	ipP	54 12
	e	55 36
Nov. 18		
PF	e	10 00 37
Nov. 18		
TUC	eP	07 54 07
Nov. 18		
BC	eP	13 44 26
PF	eP	13 44 22
	e	45 30
	e	49 22

Date and Station		Phase (GCT) h m s
TUC	eP	13 44 21
	e	45 36
	e	49 31
Nov. 18		
BER	e	14 08 05
	e(SS)	19 30
	eL	31 24
BC	eP	13 57 15
	e	58 25
	e	14 02 18
BOZ	eL	14 52 48
PF	e(P)	13 57 15
	e	58 27
	i	14 02 22.5
SH	eP	13 58 00
SLC	eL	14 53 47
TUC	e(P)	13 57 13
	e	58 28
	e	14 02 18
Nov. 19		
BC	eP	01 35 42
PF	e	01 35 38
TUC	eP	01 34 58
	eL	02 15 25
Nov. 19		
PF	e(P)	03 13 12
Nov. 19		
BC	eP	05 49 09
TUC	eP	05 49 48
Nov. 19		
OV	e(P)	05 38(05)
PF	e(P)	05 39 10
	i	39 26
	i	39 39
Nov. 19		
HUAN	iP	08 48 52

Date and Station		Phase (GCT) h m s
Nov. 19		
BH	eP	17 35 28
	iS	36 11
Nov. 20		
TUC	eP	01 55 30
Nov. 20		
BOZ	eL	04 17 30
Nov. 20		
BC	i(P)	05 19 40
	i	19 56
	e	34 10
PF	e(P)	05 19 35
	i	19 51
	e	34 07
TUC	iP	05 18 54
	i	19 11
Nov. 20		
GC	e(P)	05 35 20
HUAN	eP	05 25 40
	iP	25 43
	i	26 22
	iS	26 40
	iL	27 00
TUC	iP	05 33 31
	e	41 12
	eL	51 48
Nov. 20		
HUAN	eP	12 55 40
	i	55 59
Nov. 20		
GC	iP	20 57 55.5
Nov. 21		
GC	eP	01 56 13
Nov. 21		
GC	eP	03 34 41
SIT	e	04 10 16
	eL	15 00
TUC	eP	03 34 25
	eL	04 11 04

Date and Station		Phase (GCT) h m s
Nov. 21		
BC	e(P)	13 05 11
OV	e(P)	13 04(04)
PF	e(P)	13 15 13
Nov. 22		
BC	iP	02 28 40
	e(S)	35 24
BOZ	eL	02 39 30
BUT	eL	02 40 07
GC	eP	02 30 28
OV	e(P)	02 28 44
	eS	35 24
PF	eP	02 28 38
	e	29 19
	eS	35 00
SLC	eL	02 37 06
TUC	eP	02 27 45
	i	28 11
	eS	30 08
	eL	31 08
Nov. 22		
PF	eP	05 05 25
Nov. 22		
BC	eP	08 20 08
OV	eP	08 20 25
PF	eP	08 20 17
Nov. 22		
BC	i(P)	09 37 12
OV	e(P)	09 36 12
PF	eP	09 37 07
SJ	eP	09 30 20
	eS	30 50
	eL	31 02
TUC	eP	09 36 40

Date and Station		Phase (GCT) h m s
Nov. 23		
BC	eP	01 53 19
OV	eP	01 53 19
PF	eP	01 53 24
	i	53 50.5
TUC	iP	01 53 59
	i	54 25
Nov. 23		
BC	eP	07 06 38
OV	eP	07 06 43
PF	iP	07 06 42.5
TUC	iP	07 06 45
Nov. 23		
BC	iP	08 37 02
	i	37 10
GC	eP	08 35 38
OV	iP	08 37 01.5
PF	iP	08 37 08
SH	iP	08 31 57
TUC	iP	08 37 43
	i	37 47
	i	37 51
Nov. 23		
BC	e(P)	09 29 03
PF	e(P)	09 29 07
Nov. 23		
BC	iP	11 25 12.5
OV	iP	11 25 26
PF	iP	11 25 15.5
SH	iP	11 20 01
TUC	iP	11 25 18
	e	27 34

Date and Station		Phase (GCT) h m s
Nov. 23		
PF	i(P)	13 55 47
Nov. 23		
PF	iP	16 01 52
Nov. 23		
TUC	eP	17 04 02
Nov. 23		
PF	iP	19 09 05.5
SH	iP	19 05 43
Nov. 23		
BC	eP	20 05 33
OV	iP	20 04 19.5
PF	i(P)	20 05 42
SH	iP	20 00 44
TUC	iP	20 06 13
Nov. 24		
TUC	eP	01 05 18
Nov. 24		
TUC	iP	16 01 55
Nov. 24		
BC	eP	21 30 59
	i	31 30
PF	eP	21 31 09
	iP	31 14
	i	31 32
	iS	31 57
	i	32 03
SH	eP	21 27 44
	e	29 01
Nov. 24		
TUC	eP'	23 37 53
	ePP	38 53
Nov. 25		
BC	iP	16 39 46
	i	40 00
PF	iP	16 39 49
	i	40 04

Date and Station		Phase (GCT) h m s
SH	eP	16 39 19
Nov. 26		
BC	e(P)	00 18 36
PF	i(P)	00 18 38
Nov. 26		
OV	eP	04 04 24
Nov. 26		
BC	i(P)	12 10 26.5
OV	e(P)	12 09 45
	i	10 27.5
TUC	iP	12 09 41
	i	09 49
Nov. 26		
GC	iP	23 06 24
	i	06 49.5
Nov. 27		
BC	e(P)	02 41 11
	i	51 56
OV	e(P)	02 41 11
PF	e(P)	02 41 07
	i	51 58
TUC	e(P)	02 41 52
Nov. 27		
TUC	iP	02 52 02
Nov. 27		
BC	iP	09 24 50
OV	iP	09 24 52
PF	iP	09 24 47
	i	25 16.5
SH	iP	09 26 04
TUC	iP	09 24 03
	i	24 09
	eL	30 00
Nov. 27		
OV	e(P)	10 10 16

Date and Station	Phase (GCT)	h m s
PF	e(P)	10 10 17
Nov. 27		
BC	e(P)	14 46 13
	i	46 25
OV	iP	14 46 17
	i	46 38
	i	47 35
PF	eP	14 47 17
	i	48 01
	i	48 16
Nov. 27		
BC	eP	15 07 04
	e(L)	13 52
BOZ	eL	15 18 02
OV	eP	15 07 05
PF	iP	15 07 05.5
	e(L)	13 41
TUC	eP	15 06 12
	eL	10 21
Nov. 28		
OV	e(P)	01 11 23
PF	eP	01 12 12
TUC	eP	01 10 18
	e	11 29
	eL	14 11
Nov. 28		
BER	e	16 12 14
	eSKS	16 10
	e	17 30
	eS	18 18
	e	19 32
	e	20 25
	e	21 25
	eSS	26 10
	e	26 40
	eL	40 00
BC	iP	16 03 03
	i(pP)	04 09.5
	iS	12 37
BOZ	eS	16 13 38
	iS	13 40
	e	15 43
	eL	26 30
HUAN	iP	16 04 33
	epP	05 40
	iPP	08 26
	iSKS	14 48
	iS	15 15
	i	15 36
	eSP	16 20
	i	16 48
	iPS	17 00
	ipPS	17 44
	eL	31 50
LOG	iP	16 03 33
	ipP	04 38
	e	06 47
	iS	13 29
	eL	26 31
OV	iP	16 03 07
	i	04 12.5
	eS	12 43
PF	iP	16 03 07
	i(pP)	04 13
	e(S)	12 36
RC	eP	16 04 05
	ipP	05 13
	e(PP)	07 23
	i	08 10
	iSKS	14 12
	iS	14 39
	iSP	15 39
	eSS	20 54
	e	27 00
SLC	eP	16 03 34
	epP	04 36
	epPP	08 14
	iS	13 26
	esS	15 12
	eL	26 34
SJ	e	16 07 10
	eP'	09 45
	iSKS	15 56
	e(S)	17 05
	e	20 10
	e	22 00
	eL	37 27
SH	iP	16 02 51
	ipP	03 56
	eS	12 01
	e	12 46
SIT	eP	16 03 24
	epP	04 26
	e	04 52
	ePPP	08 45
	iS	13 09
	i	13 27
	i	13 33
	isS	15 06
	eSS	18 24
	e	18 25
	eL	26 28
TUC	iP	16 03 09
	ipP	04 12
	isP	04 47
	ePP	05 14
	eS	12 44
	i	13 05
	eL	23 03
	eP'P'	29 58
Nov. 29		
OV	e(P)	05 01 18
PF	e(P)	05 01 15
Nov. 29		
BC	iP	06 56 06
GC	eP	06 54 07
	i	54 22.5
OV	iP	06 56 03
PF	iP	06 56 07
SH	eP	06 55 02
TUC	eP	06 56 48
Nov. 29		
BH	eP	10 31 29
	eS	31 53
Nov. 29		
BC	iP	11 39 58
	ipP	40 09

Date and Station		Phase (GCT) h m s
GC	eP	11 38 39
	ipP	38 56
OV	iP	11 39 56.5
	ipP	40 23.5
PF	iP	11 40 01
	i	40 52
SH	eP	11 38 54
	ipP	39 11
TUC	iP	11 40 37
	ipP	40 53
Nov. 29		
BC	eP	12 36 55
OV	iP	12 36 55
PF	eP	12 36 58
TUC	iP	12 37 30
Nov. 29		
BC	e(P)	13 25 49
OV	e(P)	13 25 49
PF	e(P)	13 25 52
Nov. 29		
PF	eP	19 26 28
SH	eP	19 26 16
TUC	eP	19 26 40
Nov. 30		
BC	iP	00 54 58
COLD	eP	00 53 45
	eS	57 21
	eL	58 39
GC	eP	00 56 23
	e	57 18
HUAN	iP	00 55 22
OV	eP	00 54 58
	iP	54 59
PF	iP	00 54 54

Date and Station		Phase (GCT) h m s
SH	eP	00 56 01
TUC	iP	00 54 13
	ipP	55 04
	i	55 52
	eS	59 26
Nov. 30		
OV	eP	13 28 19
	i	28 27.6
Nov. 30		
BC	iP	17 19 03
PF	iP	17 18 30
TUC	iP	17 19 23
Nov. 30		
BC	iP	22 19 51
Dec. 1		
SH	eP	03 08 18
Dec. 1		
BC	iP	05 17 15
	iS	17 48
OV	eP	05 17 17
	iS	17 50
PF	eP	05 17 19
	i	17 35
	iS	18 04
Dec. 1		
BC	iP	06 23 47
	iS	24 15
OV	eP	06 23 45
	iP	23 49
	iS	24 23
PF	eP	06 23 50
	i	23 56
	i	24 19
	iS	24 35
SH	eP	06 24 37
Dec. 1		
BC	iP	06 36 02

Date and Station		Phase (GCT) h m s
Dec. 1		
BC	iP	11 41 43
	e	41 56
MONT	e	11 30 48
	i	30 58
	iS	31 10
	eL	31 13
OV	iP	11 41 46
	e	12 08 21
	e	13 33
PF	iP	11 41 41
	eP'P'	12 08 25
	e	12 45
SH	iP	11 42 24
	i	42 37
TUC	iP	11 41 14
	i	41 26
Dec. 1		
BC	iP	11 55 19
	iS	55 52
OV	eP	11 55 20
	i	55 23
	iS	55 56
PF	iP	11 55 23
	i	55 29
	iS	55 58
	i	56 07
Dec. 1		
TUC	e	12 07 29
	e	09 23
Dec. 1		
OV	e	14 05 17
PF	e	14 04 28
Dec. 2		
PF	e	01 23 42
Dec. 2		
BC	iP	13 39 30
	iS	40 09

Date and Station		Phase (GCT) h m s
PF	eP	13 39 41
	i	39 59
	iS	40 24
	i	40 44
Dec. 2 PF	e	14 45 55
TUC	eP	14 46 55
Dec. 2 PF	iP	16 30 41
Dec. 2 SH	eP	20 05 03
Dec. 2 BH	e	23 21 53
	i	22 13
Dec. 3 PF	e	01 13 01
TUC	e	01 13 07
Dec. 3 HUAN	eP	03 22 31
	e	24 16
	eL	24 48
Dec. 3 BH	e	03 46 07
	i	46 53
Dec. 3 BC	eP	06 02 34
PF	eP	06 02 50
Dec. 3 BC	iP	07 06 05
	i	06 20
PF	eP	07 06 01
SJ	eL	07 10 22
TUC	eP	07 05 20
Dec. 3 HUAN	e	07 55 19
Dec. 3 HUAN	iP	07 58 19

Date and Station		Phase (GCT) h m s
Dec. 3 TUC	e	08 24 47
Dec. 3 HUAN	eP	09 03 42
	e	04 53
	eL	05 30
Dec. 3 TUC	e	12 22 10
Dec. 3 HUAN	e(P)	13 17 27
	eL	19 31
TUC	e	12 56 42
Dec. 3 TUC	eP	13 25 18
Dec. 3 TUC	eP	14 07 16
Dec. 3 BC	eP	19 25 21
PF	iP	19 25 22
SH	iP	19 24 44
TUC	eP	19 25 43
Dec. 3 BC	e(P)	21 31 00
PF	i(P)	21 31 03
TUC	e(P)	21 31 07
Dec. 3 BC	e	23 00 00
TUC	eP	22 58 55
Dec. 4 BH	i	03 10 15
Dec. 4 HUAN	e(P)	10 19 31
	e	20 51
Dec. 4 HUAN	eP	10 46 34
	e	47 29

Date and Station		Phase (GCT) h m s
Dec. 4 PF	e	12 22 04
Dec. 4 PF	e	12 57 25
Dec. 4 HUAN	e(P)	20 31 40
Dec. 4 BC	eP	21 59 03
HUAN	eP	21 52 00
	i	52 07
	e	53 49
	eS	56 16
	iS	56 18
	iL	57 12
PF	eP	21 59 03
SJ	e	22 03 43
	e	07 20
	eL	17 03
SLC	eL	22 34(31)
SH	eP	21 59 44
TUC	eP	21 53 38
Dec. 4 BER	eL	23 47 10
BCZ	eL	23 32 10
CHI	eL	23 34 20
COL	eS	23 07 12
	esS	07 48
	e	12 42
	eL	18 36
COLU	eL	23 49 27
LIN	eL	23 47 35
PHIL	e	23 45 07
	eL	52 25
RC	eL	23 44 40
SLC	eS	23 12(12)
	e	23(19)
	eL	37(38)

Date and Station		Phase (GCT) h m s
SIT	eS	22 08 54
	i	09 57
	e	15 07
	eL	27 56
TUC	ePP	22 05 40
	eL	44 00
Dec. 5		
SJ	eL	00 02 07
HUAN	eL	00 05 22
Dec. 5		
BC	e	01 14 33
OV	e	01 14 28
PF	e	01 14 24
TUC	e	01 14 12
Dec. 5		
PF	e	03 18 03
Dec. 5		
HUAN	e(P)	04 45 31
Dec. 5		
BER	eL	07 43 15
BC	ePP	07 02 34
	ePKKP	15 00
HUAN	eP'	07 04 01
OV	ePP	07 02 43
	ePKKP	15 00
PF	eP	06 58 34
	ePP	07 03 06
	ePKKP	14 58
SH	eP	06 57 00
SIT	e	06 57 53
	eS	07 08 13
	e	08 52
	e	14 44
	eL	25 17
TUC	e	06 59 12
	ePP	07 02 44
	ePKKP	14 43
	eL	32 48

Date and Station		Phase (GCT) h m s
Dec. 5		
HUAN	iP	07 54 11
	iS	54 33
	iL	54 52
Dec. 5		
BC	eP	09 00 13
OV	eP	09 00 14
PF	eP	09 00 15
TUC	e(P)	09 00 24
	e	00 41
	e	03 42
	e	04 17
Dec. 5		
BER	e	10 13 35
	eL	17 00
BC	e(P)	10 19 16
HUAN	e	10 18 18
OV	e(P)	10 19 18
PF	e(P)	10 19 12
SJ	e	10 18 42
	eL	19 30
TUC	eP	10 19 01
Dec. 5		
HUAN	e(P)	14 52 42
Dec. 5		
HUAN	e(P)	16 26 57
Dec. 6		
HUAN	e(P)	03 33 52
Dec. 6		
HUAN	eP	06 07 00
	e	07 22
	e	08 04
Dec. 6		
HUAN	e(P)	07 44 08
Dec. 6		
HUAN	e(P)	08 17 02
	e	17 11

Date and Station		Phase (GCT) h m s
HUAN	e	08 17 57
	e	36 30
	eL	39 30
Dec. 6		
BC	eP	08 32 45
GC	eP	08 34 07
OV	eP	08 32 44
PF	iP	08 32 46
SH	eP	08 33 11
TUC	eP	08 32 21
	e	32 27
	eL	49 22
Dec. 6		
PF	e	10 18 50
Dec. 6		
PF	e	10 54 46
Dec. 6		
BH	eP	14 50 46
	eS	51 14
Dec. 6		
OV	e(P)	23 03 40
Dec. 7		
SH	eP	00 59 39
Dec. 7		
PF	iP	01 58 48
	i	58 54
	iS	59 24
	i	59 34
Dec. 7		
OV	iP	02 03 15
	i	03 40
	i	03 44
PF	iP	02 03 18
	i	03 34
	i(S)	04 03
SH	eP	02 04 03
TUC	iP	02 04 20
	i(L)	04 52

Date and Station		Phase (GCT) h m s
Dec. 7		
OV	e	03 51 31
PF	e	03 51 51
TUC	e	03 51 05
Dec. 7		
BC	e	04 28 28
OV	e	04 28 24
PF	e	04 28 42
TUC	e	04 29 00
Dec. 7		
BC	eP	05 48 44
OV	eP	05 48 53
PF	eP	05 49 04
TUC	eP	05 45 10
	i	45 22
Dec. 7		
SH	eP	07 01 08
Dec. 7		
PF	e	08 01 45
Dec. 7		
BC	eP	09 42 48
Dec. 7		
BC	eP	17 04 12
Dec. 7		
BC	iP	17 31 03
	e	32 06
PF	iP	17 31 06
	ipP	31 39
	epPP	35 01
TUC	eP	17 31 13
	epP	31 44
	e	34 50
Dec. 7		
BC	iP	17 36 52
GC	iP	17 35 33

Date and Station		Phase (GCT) h m s
PF	iP	17 36 55
SH	iP	17 35 57
TUC	i(P)	17 37 26
	e	37 49
Dec. 8		
TUC	e	01 35 41
Dec. 8		
OV	e	04 07 39
Dec. 8		
TUC	eP	04 41 26
Dec. 8		
HUAN	eP	05 40 44
	i	41 33
Dec. 8		
PF	eP	08 21 25
TUC	eP	08 20 40
	e	20 47
Dec. 8		
HUAN	e(P)	09 53 21
Dec. 8		
HUAN	e(P)	11 51 04
Dec. 8		
BC	iP	12 18 46
	ipP	19 10
HUAN	eP	12 11 33
	i	11 54
	e	12 36
	eS	15 36
	eL	16 22
	e	16 25
PF	iP	12 18 44
	ipP	19 09
SH	iP	12 19 22
TUC	iP	12 18 19
	e	18 42
Dec. 8		
BC	e	12 25 45

Date and Station		Phase (GCT) h m s
HUAN	eP	12 19 52
	e	21 50
	e	25 03
	eL	26 18
PF	e	12 25 44
SH	eP	12 26 18
TUC	eP	12 25 20
	i	25 28
	e	25 48
Dec. 8		
SJ	e	17 18 53
	i	19 10
	i	19 27
	eL	19 35
Dec. 9		
BC	iP	00 57 23
PF	e	01 01 56
SH	eP	00 57 16
TUC	iP	00 57 27
	i	57 35
	i	01 01 00
Dec. 9		
HUAN	e	01 44 42
PF	iP	01 56 57
Dec. 9		
TUC	e(P)	05 27 32
Dec. 9		
HUAN	e(P)	05 58 07
Dec. 9		
BC	eP	08 38 45
HUAN	e	08 37 25
	e	41 47
	e	42 40
	eL	45 05
PF	eP	08 38 46
SLC	eL	09 02(22)
SH	eP	08 39 16

Date and Station		Phase (GCT) h m s
TUC	eP	08 38 20
	eL	56 48
Dec. 9		
TUC	e(P)	10 27 56
	e	31 35
Dec. 9		
BER	eL	11 07 09
BC	e(P)	11 08 54
PF	e(P)	11 09 15
SJ	eP	11 01 55
	eS	02 18
	iS	02 20
	iL	02 40
TUC	e(P)	11 07 36
Dec. 9		
HUAN	iP	12 12 46
	iS	13 15
	iL	13 20
Dec. 9		
SH	eP	12 40 08
Dec.		
BH	e	16 39 07
	e	39 33
Dec. 9		
HUAN	eP	20 01 21
	i	01 29
	i	02 36
Dec. 9		
GC	i(P)	23 46 48
Dec. 10		
BC	eP	02 39 02
HUAN	iP	02 30 38
	i	30 51
	i	31 04
	iS	31 38
	iL	31 56
PF	e(P)	02 39 00
TUC	eP	02 38 26

Date and Station		Phase (GCT) h m s
Dec. 10		
BC	iP	04 02 00
	e(S)	05 37
BOZ	eL	04 10 15
BUT	eL	04 11 33
CHI	eL	04 12 01
COLU	eL	04 13 40
GC	e(P)	04 04 21
	i	04 22
LIN	eL	04 09 08
PF	eP	04 01 57
	i	03 04
	e(S)	05 36
RC	e	04 03 38
	eL	09 30
SLC	e	04 03(05)
	eL	07(36)
SH	eP	04 03 29
TUC	eP	04 00 53
	e	02 39
	i	02 58
	iL	03 11
Dec. 10		
BH	iP	04 25 09
	iS	25 21
Dec. 10		
HUAN	eP	05 14 00
	i	14 12
Dec. 10		
BC	iP	07 34 25
	i	35 15
GC	iP	07 33 23
PF	iP	07 34 28
	i	34 49
SH	iP	07 33 40
	e(S)	42 25

Date and Station		Phase (GCT) h m s
TUC	iP	07 34 53
Dec. 10		
HUAN	iP	08 16 37
	i	16 48
	i	17 56
PF	e(P)	08 24 59
Dec. 10		
SH	iP	09 00 55
Dec. 10		
HUAN	eP	09 58 00
Dec. 10		
PF	e(P)	11 38 23
TUC	eP	11 37 18
	e	39 10
	i(L)	39 55
Dec. 10		
TUC	e	12 20 53
Dec. 10		
PF	e	13 12 17
Dec. 10		
BC	e(P)	15 29 56
	i	32 11
PF	eP	15 28 44
	i	29 00
	i	29 59
	i(S)	31 13
	i	32 16
SLC	eL	15 48(43)
TUC	eP	15 28 14
	i	28 17
	i	28 56
Dec. 10		
TUC	eP	15 30 23
	i	30 36
	i	30 58
	iL	31 19
Dec. 10		
BC	iP	15 44 28
	i	45 39

Date and Station		Phase (GCT) h m s
PF	iP	15 44 20
	i	44 24
	i	45 30
	i(S)	45 48
TUC	eP	15 43 53
	i	44 02
	i	44 46
Dec. 10		
BC	iP	16 44 42
GC	iP	16 45 01
	i	47 12
PF	iP	16 44 43
	i(S)	46 54
SH	iP	16 44 04
	i	44 21
TUC	iP	16 44 47
	e	45 05
	ipP	46 56
Dec. 10		
BC	iP	17 32 49
	i	34 10
PF	iP	17 32 51
	i	33 10
	i	34 12
SLC	eL	17 37(16)
TUC	eP	17 32 25
	i	32 28
	i	32 33
	iS	33 14
	iL	33 46
Dec. 10		
BC	i(P)	18 42 02
	i	42 06
PF	eP	18 42 14
	eS	42 52
Dec. 10		
BC	e(P)	18 46 48
HUAN	iP	18 49 40
	i	49 49

Date and Station		Phase (GCT) h m s
HUAN	i	18 50 04
	i	50 38
PF	e(P)	18 46 51
TUC	e(P)	18 46 52
Dec. 10		
BC	iP	18 58 14
PF	iP	18 58 11
TUC	eP	18 57 37
Dec. 11		
BH	iP	04 13 19
	iS	13 30
Dec. 11		
SH	iP	04 57 12
Dec. 11		
HUAN	eP	06 19 19
	e	19 54
Dec. 11		
HUAN	e(P)	09 56 04
PF	eP	10 03 14
	i	03 37
TUC	eP	10 02 49
	e	03 11
Dec. 11		
BC	e	10 20 08
PF	eP	10 18 52
	i	20 12
Dec. 11		
BOZ	eL	13 09 59
BUT	e(S)	13 09 12
	eL	09 33
GC	eP	13 09 16
	iP	09 25
	iS	10 07
PF	e(P)	13 11 39
	eL	14 53

Date and Station		Phase (GCT) h m s
RC	eS	13 11 08
	eL	12 49
SH	i(P)	13 10 47
TUC	e	13 12 23
Dec. 11		
SH	eP	22 55 47
Dec. 12		
TUC	e	08 24 16
Dec. 12		
BH	e	21 26 06
	e	26 31
Dec. 12		
BC	e	21 52 13
PF	e	21 52 17
TUC	eP	21 52 53
Dec. 12		
BC	eP	23 52 27
PF	eP	23 52 25
SH	eP	23 52 58
TUC	eP	23 52 02
Dec. 13		
BC	eS	00 42 09
PF	e(P)	00 41 31
	eL	42 43
Dec. 13		
BC	eP	05 25 36
OV	iP	05 25 36
PF	iP	05 25 35
SH	i	05 25 21
Dec. 13		
BC	iP	10 28 54
	i	29 20

Date and Station		Phase (GCT) h m s
GC	e	10 30 24
	i	30 55
HUAN	e	10 29 37
OV	iP	10 28 55
	i	29 35
PF	iP	10 28 50
	i	29 29
SH	iP	10 30 57.5
TUC	iP	10 28 09
	e	28 48
	e	30 31
	e	35 10
Dec. 13		
BH	e(P)	12 52 37
BEN	e(P)	12 56 46
	eL	13 02 15
BC	e(P)	12 58 16
HUAN	eP	12 51 08
	iP	51 13
	i	51 24
	iS	52 42
	i	52 56
	iL	53 31
OV	e	12 59 21
PF	e(P)	12 58 02
	i	58 36
SLC	eS	13 06(21)
	eL	15(25)
SJ	iP	12 55 00
	i	55 44
	eS	58 57
	eL	59 43
SH	eP	12 59 07
SIT	eL	13 33 40
TUC	eP	12 57 37
Dec. 13		
BOZ	e	13 57 52

Date and Station		Phase (GCT) h m s
BC	eP	13 54 14
	e	58 03
GC	iP	13 53 07
	i	53 09
	e	54 50
	i	55 37
LOG	e	13 56 45
	eL	58 04
OV	eP	13 54 11
PF	eP	13 54 18
RC	e	13 55 20
	eL	14 02 03
SLC	eL	13 57(24)
SH	e(P)	13 52 24
	e	53 09
	e	55 42
TUC	eP	13 55 20
Dec. 13		
HUAN	e	17 38 53
Dec. 13		
TUC	e	23 28 02
Dec. 14		
TUC	e	03 59 16
	e	59 21
Dec. 14		
HUAN	iP	07 03 55
	i	04 14
Dec. 14		
BC	e	19 19 59
Dec. 15		
BC	e(P)	00 42 23
OV	eP	00 42 10
PF	e(P)	00 42 24
	i	42 44
SH	eP	00 42 04

Date and Station		Phase (GCT) h m s
TUC	eP	00 42 31
	e	42 50
Dec. 15		
TUC	e	01 36 40
Dec. 15		
HUAN	eP	03 01 05
	e	01 25
	e	02 23
Dec. 15		
TUC	e	10 40 05
Dec. 15		
HUAN	e	11 49 05
TUC	e	11 56 03
Dec. 15		
TUC	e	21 25 08
Dec. 15		
BC	e	23 11 02
TUC	eP	23 10 17
	i	10 25
	eL	20 40
Dec. 15		
TUC	e(P)	23 16 17
Dec. 16		
BC	eP	01 06 15
	i	06 23
PF	eP	01 06 16
	i	06 27
SH	eP	01 05 41
TUC	e	01 06 34
Dec. 16		
BC	e	06 13 57
Dec. 16		
OV	e	06 14 19
PF	eP	06 11 49
Dec. 16		
OV	eP	11 26 59

Date and Station		Phase (GCT) h m s
PF	eP	11 26 53
	i	27 09
TUC	eP	11 26 03
	e	31 08
Dec. 16 TUC	e	17 52 05
Dec. 16 BC	eP	21 47 11
GC	eP	21 48 39
HUAN	eP	21 44 14
	e	48 00
OV	eP	21 47 12
PF	eP	21 47 08
	i	47 09
SJ	e	21 48 35
	e	49 04
	e	50 24
	eL	52 15
TUC	iP	21 46 29
Dec. 17 TUC	e	09 38 22
Dec. 17 OV	e	11 30 38
Dec. 17 PF	e	13 31 06
TUC	e	13 30 37
Dec. 17 GC	e	18 03 35
Dec. 17 HUAN	eP	21 14 38
	eL	15 55
Dec. 17 BC	iP	22 52 27
	ipP	54 31
GC	iP	22 52 47

Date and Station		Phase (GCT) h m s
HUAN	iSKS	23 03 33
	e	04 37
	e	05 00
	eSS	11 29
	eL	21 50
OV	iP	22 52 31
	i	53 51
	ipP	54 04
PF	iP	22 52 32
	ipP	54 35
	eS	23 02 34
	iPKKP	10 55
SLC	eS	23 02(45)
SJ	iSKS	23 04 45
	e	05 17
	eSKKS	05 56
	eSP	09 57
	eSS	15 26
SH	iP	22 52 17
	eS	23 01 33
TUC	iP	22 52 34
	i	52 44
	epP	54 38
	eS	23 02 08
	ePKKP	10 54
	iP'P'	19 04
Dec. 18 BER	eL	01 00 36
BOZ	eS	00 35 16
	eL	39 25
BC	iP	00 31 24
COL	e	00 27 16
	eL	28 52
GC	eP	00 29 49
	iP	29 50
	i	29 59
PF	iP	00 31 28
RC	eP	00 31 28
	ePPP	33 00
	eS	37 03
	eL	39 42

Date and Station		Phase (GCT) h m s
SLC	e(P)	00 31(26)
	eL	40(44)
SH	eP	00 30 19
SIT	eS	00 29 00
	eL	29 51
TUC	iP	00 32 07
	i	32 21
Dec. 18 TUC	e	01 07 25
Dec. 19 HUAN	eP	01 34 11
	i	34 13
	e	35 48
	eL	36 07
TUC	iP	01 40 31
Dec. 18 BC	eP	02 04 24
	i	04 25
GC	iP	02 04 23
OV	iP	02 04 26
PF	iP	02 04 26
	i	04 38
	i	08 06
SJ	e	02 14 08
SH	iP	02 04 03
TUC	eP	02 04 37
	e	04 48
Dec. 18 BH	e	06 21 45
	e	22 20
Dec. 18 BC	iP	14 22 36
	i	22 54
	eL	25 03
BOZ	eL	14 26 18
BUT	eL	14 25 09

Date and Station		Phase (GCT) h m s
CHI	eL	14 34 52
GC	eP	14 22 28
	eL	25 17
OV	iP	14 22 34
	i	23 31
	eL	25 07
PF	iP	14 22 41
	i	23 13
	eL	25 13
SLC	e(P)	14 23(07)
	eL	25(50)
RC	e(P)	14 24 26
	eL	30 10
TUC	eP	14 23 43
	i	23 52
	eL	27 58
Dec. 18		
TUC	e	20 54 10
Dec. 19		
BER	eP'	01 04 00
	e	26 21
BC	eP'	01 03 45
CHI	ePP	01 06 10
HUAN	eP'	01 03 47
	ePP	07 22
	e(SKS)	10 06
	e	23 13
	e	31 16
	eL	44 29
OV	e(P)	01 01 48
PF	eP'	01 02 43
	ePP	03 50
SJ	eP'	01 04 08
	ePP	08 23
	eSKS	10 48
	ePPP	12 14
	e	15 13
	e	16 07
	e	19 20

Date and Station		Phase (GCT) h m s
SJ	ePPS	01 22 07
	e(SS)	29 22
	eSSS	35 16
SH	eP'	01 02 58
TUC	eP'	01 02 50
Dec. 19		
BER	ePP	03 17 40
	e	24 40
	ePPS	29 12
	eL	48 31
BC	eP	03 10 51
	ePP	14 45
BOZ	eSKS	03 21 01
	eS	21 36
	e	25 47
	eSS	28 36
	eL	35 22
BUT	eP	03 10 29
	eSKS	20 53
	iS	21 30
	eSS	27 08
CHI	eSKS	03 22 05
	e	22 44
	eS	23 28
	eSP	25 14
	eSS	31 33
	eSSS	35 08
	eL	41 16
COL	eP	03 08 07
	eS	17 02
	eSS	21 16
	eL	25 12
GC	eP	03 10 00
	iP	10 06
	eS	20 26
	i(S)	20 48
HUAN	eP'	03 17 12
	i	17 46
	ePP	21 18
	ePPP	25 04
	eSKSP	31 27
	eSS	41 26
	eSSS	47 00
	eL	04 05 00

Date and Station		Phase (GCT) h m s
LIN	eSKS	03 21 53
	e	22 35
	e	26 03
	eL	52 20
OV	eP	03 10 55
	i	14 27
	ePP	14 46
PF	eP	03 10 53
	iP	10 58
	iPP	14 40
RC	eP	03 11 06
	iSKS	21 25
	eS	22 09
	eL	46 48
SLC	eP	03 10 48
	e	11 58
	iSKS	21 16
	eS	21 47
	e	26 53
	eL	38 48
SJ	ePP	03 19 12
	e	20 35
	ePPP	22 18
	eSKKS	25 14
	eSP	29 17
	e	30 37
	ePPS	31 17
	e(SS)	38 24
	e(SSS)	43 36
	eL	52 25
SH	iP	03 10 17
	ipP	10 45.5
	eS	20 39
	e	21 10
STT	iP	03 08 58
	iS	18 36
	isS	19 12
	eL	33 30
TUC	eP	03 11 13
	iPP	15 24
	ipPP	15 58
	eSKS	21 48
	ePS	24 30
Dec. 19		
COL	eL	09 45 08

Date and Station		Phase (GCT) h m s
Dec. 20		
TUC	e	08 46 04
Dec. 20		
HUAN	eL	04 45 00
Dec. 20		
HUAN	e	23 05 42
Dec. 20		
BH	eP'	19 38 20
	ePPS	51 19
	eL	20 12 24
BER	e	19 34 03
	eP'	38 02
	iPP	38 35
	iSKS	43 42
	i(PS)	46 15
	e	51 39
	iSS	54 22
	e(SSS)	57 33
	eL	20 05 08
T_L = 20 sec. $A_{max.}$ = 60mm.		
BC	eP	19 31 42
	eS	42 05
BOZ	eP	19 31 22
	i	31 39
	iPP	33 59
	iS	41 31
	iSS	46 59
	eSSS	50 19
	iL	56 19
BUT	eP	19 31 15
	i	31 32
	ePP	34 25
	e	37 36
	iS	41 22
	i	41 44
	e	43 59
	e	46 14
	eL	52 47
CHI	e(P)	19 32 46
	ePP	36 16
	ePPP	38 24
	eS	43 40
	iS	43 54
	i	47 03
	iSS	50 28
	iL	56 34

Date and Station		Phase (GCT) h m s
COL	eP	19 28 34
	ePP	30 15
	eS	35 54
	iS	36 16
	i	36 40
	e	40 38
	eL	42 04
COLU	e(P)	19 33 14
	ePP	37 44
	eS	45 17
	e	48 48
	eSS	52 38
	e	57 47
	eL	20 02 24
GC	eP	19 30 49
	iP	30 51
	i	32 41
	eS	40 19
HONO	eP	19 29 14
	iP	29 23
	eS	37 21
	iL	47 24
T_P = 5 sec. A = 2.1 mm.		
T_S = 15 sec. A = 21.2 mm.		
T_L = 16 sec. $A_{max.}$ = 32mm.		
T_L = 21 sec. A = 28.5mm.		
HUAN	eP'	19 38 44
	i	38 52
	i	39 27
	i(PP)	41 11
	iPPP	44 43
	iSKKS	48 14
	i	48 47
	i	50 36
	iPPS	55 29
	iSS	59 00
	i	20 01 03
	i	06 25
	iL	16 38
LIN	eP	19 32 15
	ePP	36 10
	iS	43 21
	i	44 08
	e	44 56
	i(SS)	49 38
	eSSS	53 46
	eL	58 10

Date and Station		Phase (GCT) h m s
LOG	iP	19 31 37
	iPP	34 38
	iS	41 55
	iSS	47 35
	eL	54 00
MONT	eP'	19 39 38
	e	44 59
	eSKKS	50 21
	eSS	20 03 23
	eL	17 30
OV	eP	19 31 41
	i	36 12
	e	40 21
	eP'P'	58 21
PHIL	eP	19 33 07
	iPP	37 19
	iPPP	39 15
	iSKS	43 12
	e(S)	44 15
	iS	44 49
	iSS	50 57
	iSSS	52 06
	iL	59 21
PF	eP	19 31 44
	i	32 27
	i	35 21
	e(S)	41 23
	eP'P'	57 28
RC	eP	19 31 48
	ePP	35 10
	i(S)	42 21
	eSS	48 20
	eSSS	51 56
	eL	55 00
SLC	eP	19 31 37
	ePP	34 49
	ePPP	36 56
	eS	41 44
	iS	42 00
	e	47 42
	eL	53 58
SJ	e(P)	19 34 53
	eP'	38 00
	ePP	39 50
	eSKS	45 28
	e	46 44

Date and Station	Phase	(GCT) h m s
SJ	i	19 47 57
	iPS	50 00
	i	51 50
	eSS	56 58
	eSSS	20 01 10
	eL	08 00
SH	iP	19 31 01
	e(S)	40 52
	e	41 50
SIT	iP	19 29 29
	iPP	31 32
	i	33 47
	iS	37 33
	iL	44 04
TUC	eP	19 32 06
	i	33 14
	iPP	35 29
	iPPP	37 20
	iS	42 41
	eSS	48 41
	i	49 08
	eSSS	52 44
	iL	55 36
Dec. 20		
BC	e(P)	22 59 00
OV	e(P)	22 58 41
PF	e(P)	22 58 41
SH	e(P)	22 57 58
TUC	e(P)	22 59 02
	ePP	23 02 30
Dec. 20		
PF	eP	23 41 50
	e(S)	44 51
TUC	eP	23 40 47
	i	41 15
	iL	42 34
Dec. 21		
OV	iP	00 39 07
PF	iP	00 39 04
TUC	e(P)	00 38 36

Date and Station	Phase	(GCT) h m s
Dec. 21		
BC	eP	03 21 10
PF	eP	03 21 08
TUC	eP	03 20 26
Dec. 21		
BER	eL	04 33 30
BC	iP	03 50 34
	i	50 50
COL	eP	03 47 03
	eS	53 03
	eL	56 12
OV	eP	03 50 33
	i	50 45
PHIL	eL	04 25 18
PF	iP	03 50 36
	i	50 48
SLC	eL	04 15 05
SJ	eL	04 36 08
SH	iP	03 49 45
SIT	eL	04 07 16
TUC	eP	03 51 03
	e(S)	04 00 40
	eL	10 18
Dec. 21		
BC	iP	04 56 06
OV	e(P)	04 56 09
PF	iP	04 56 04
TUC	eP	04 55 22
	iP	55 23
	e	05 00 15
	e	04 11
Dec. 21		
BC	i(P)	05 24 48
OV	e(P)	05 24 51

Date and Station	Phase	(GCT) h m s
PF	iP	05 23 41
	i	24 52
TUC	eP	05 24 57
Dec. 21		
BC	eP	07 39 48
OV	eP	07 39 49
PF	eP	07 39 51
SH	e(P)	07 39 08
Dec. 21		
BC	iP	10 22 56
OV	iP	10 22 57
PF	iP	10 23 00
SH	e(P)	10 22 09
TUC	eP	10 23 27
Dec. 21		
BER	eP	10 32 30
	ePP	36 30
	iSKS	43 50
	iPS	45 27
	i(SS)	50 45
	eL	58 36
T_L = 20 sec. $A_{max.}$ = 10mm.		
BC	iP	10 30 02
	e(S)	39 11
BOZ	eP	10 29 39
	ePP	32 07
	e	34 15
	iS	38 25
	e(SS)	42 51
	e	44 49
	eL	46 03
BUT	eP	10 29 48
	ePP	31 49
	eS	38 16
	eScS	39 24
	eSS	42 22
	eL	45 42

Date and Station		Phase (GCT) h m s
CHI	eP	10 31 07
	ePP	34 12
	eS	41 07
	eSS	46 14
	eSSS	49 29
	eL	56 04
COL	eP	10 26 24
	iS	32 32
	eL	35 38
COLU	e(PP)	10 35 30
	eS	42 17
	eSS	48 44
	e(SSS)	52 34
	eL	55 41
GC	eP	10 28 57
	iP	29 00
HOMO	eP	10 29 36
	e	31 22
	eS	34 44
	i	34 51
	eL	39 16
T_L = 18 sec. $A_{max.}$ = 16mm.		
HUAN	eP	10 34 23
	eP'	38 01
	e	39 35
	e(PP)	40 44
	e	44 28
	ePS	51 03
	ePPS	51 48
	eSS	57 49
	eL	11 12 23
LIN	e(S)	10 40 25
	eScS	41 01
	eSS	45 15
	eL	49 44
LOG	eP	10 29 54
	i	30 06
	i	31 09
	eS	38 55
	eScS	39 57
	i	40 18
	eSS	43 08
	eL	46 43
MONT	eL	11 26 23

Date and Station		Phase (GCT) h m s
OV	eP	10 30 01
	ipP	30 13
PHIL	eP	10 31 36
	e	34 38
	ePP	35 13
	eS	42 01
	iS	42 11
	i	42 32
	ePPS	43 26
	eSS	47 36
	eSSS	51 33
	eL	54 44
PF	iP	10 30 04
	i	30 16
RC	eP	10 30 12
	e(PP)	33 06
	iS	39 25
	iScS	40 10
	eSS	43 58
	e	47 45
	eL	49 18
SLC	eP	10 29 54
	eS	38 52
	eScS	39 52
	eSS	43 43
	eL	46 57
SJ	eP'	10 37 18
	ePP	38 00
	e	39 17
	e	42 42
	e(S)	45 34
	ePS	47 14
	ePPS	48 28
	eSS	53 07
	eSSS	57 29
	eL	11 04 56
SH	eP	10 29 13
SIT	eP	10 27 27
	i	29 36
	iS	34 24
	e	36 27
	iScS	37 17
	iL	38 04
TUC	eP	10 30 31
	i	30 44

Date and Station		Phase (GCT) h m s
TUC	ePP	10 33 18
	ePPP	34 55
	iS	40 12
	e	42 26
	eSS	44 40
	e	45 35
	e(SSS)	48 22
	eL	50 06
Dec. 21		
BC	eP	10 41 05
OV	eP	10 41 05
PF	eP	10 41 08
SH	eP	10 40 28
Dec. 21		
BC	eP	10 49 47
OV	eP	10 49 47
PF	eP	10 50 00
SH	eP	10 48 59
TUC	eP	10 50 25
Dec. 21		
BC	eP	10 57 55
OV	iP	10 57 55
PF	iP	10 57 58
SH	eP	10 57 07
TUC	eP	10 58 25
Dec. 21		
BC	iP	11 02 42
OV	iP	11 02 42
PF	iP	11 02 45
SH	eP	11 01 54
TUC	eP	11 03 12
Dec. 21		
BC	eP	11 28 31

Date and Station		Phase (GCT) h m s
OV	eP	11 28 01
PF	iP	11 29 04
Dec. 21		
OV	eP	12 01 18
PF	iP	12 01 20
Dec. 21		
BC	iP	12 18 53
PF	iP	12 18 58
SH	eP	12 18 05
TUC	e(P)	12 19 23
Dec. 21		
BC	iP	12 50 41
	i	55 31
GC	eP	12 54 39
	i	54 41
OV	iP	12 50 40
	i	55 04
PF	iP	12 50 43
	i	55 33
RC	e(P)	12 50 55
SH	i(P)	12 49 52
TUC	eP	12 49 02
Dec. 21		
TUC	eP	12 51 11
	i	51 24
Dec. 21		
RC	e(P)	12 55 53
SH	i(P)	12 54 42
TUC	eP	12 56 01
	i	56 10
Dec. 21		
BC	iP	13 07 29
OV	eP	13 07 28

Date and Station		Phase (GCT) h m s
PF	iP	13 07 32
	i	07 52
SH	eP	13 06 41
TUC	eP	13 07 59
Dec. 21		
BC	iP	13 33 43
OV	iP	13 33 42
PF	iP	13 33 51
SH	iP	13 32 56
TUC	eP	13 34 13
Dec. 21		
BC	eP	14 24 09
OV	e(P)	14 24 17
PF	eP	14 24 08
TUC	eP	14 23 35
Dec. 21		
PF	e(P)	15 00 51
TUC	eP	14 59 42
Dec. 21		
SH	e(P)	17 20 12
Dec. 21		
BER	e	20 03 16
	ePP	06 21
	eSKS	13 02
	eSS	20 40
	eL	36 02
BC	iP	19 59 58
	i	20 00 04
	i	05 22
	eS	09 11
BOZ	eP	19 59 35
	ePP	20 02 06
	eS	08 19
	eScS	09 33
	eSS	12 17
	eL	15 59

Date and Station		Phase (GCT) h m s
BUT	eP	19 59 27
	e(S)	20 08 12
	e	08 36
	eScS	09 18
	eL	15 48
CHI	eP	20 01 10
	ePP	04 12
	eS	11 06
	e(SS)	16 25
	eL	22 22
COL	eP	19 56 22
	eS	20 02 30
	e(ScS)	05 29
	eL	08 36
COLU	e(S)	20 12 41
	eL	32 52
GC	eP	19 58 54
	i	58 56
	i	59 09
HONO	eS	20 04 50
	eL	08 52
HUAN	eP'	20 07 57
	e	08 53
	ePKS	11 31
	e	17 03
	eSS	27 49
	e(SSS)	33 34
	eL	39 45
LIN	e	20 10 25
	eL	24 26
LOG	eP	19 59 50
	e(PP)	20 01 48
	eS	08 55
	iS	09 54
	eL	16 56
OV	iP	19 59 57
	ePP	20 02 58
	i	05 21
	eS	09 16
PHIL	eP	20 01 27
	ePP	04 38
	eS	11 52
	iS	12 15

Date and Station		Phase (GCT) h m s
PHIL	iPS	20 13 07
	eSS	17 38
	eL	23 38
PF	iP	20 00 00
	i	00 34
	iPP	03 00
	i	05 23
	eS	09 21
RC	eP	20 00 08
	ePP	03 14
	iS	09 27
	eSS	14 08
	eL	19 45
SLC	eP	19 59 49
	eS	08 53
	iScS	09 51
	eSS	12 55
	e	13 43
	eL	16 55
SJ	ePP	20 07 56
	e	11 07
	eS	15 33
	ePS	17 03
	e	18 00
	eSS	23 15
	eSSS	27 32
	eL	36 21
SH	iP	19 59 09
	i	59 38
	i	20 04 33
	eS	07 38
	eScS	09 02
SIT	i(P)	19 57 24
	ePP	59 06
	iS	20 04 24
	e	06 40
	iL	08 00
TUC	iP	20 00 27
	i	00 33
	ePP	03 26
	e	04 18
	e	10 11
	e	10 48
	eSS	14 52
	eL	20 32

Date and Station		Phase (GCT) h m s
Dec. 21		
BC	iP	20 16 06
OV	iP	20 16 05
PF	iP	20 16 08
SH	eP	20 15 17
TUC	eP	20 16 36
Dec. 21		
BC	iP	20 31 45
	e	41 00
GC	eP	20 30 42
OV	iP	20 31 44
	i	31 55
PF	iP	20 31 47
	i	34 05
	i	56 06
SH	iP	20 30 56
	i	31 14
TUC	eP	20 32 15
	i	32 25
Dec. 21		
COL	eL	22 41 56
Dec. 21		
BC	iP	23 23 43
GC	eP	23 24 03
	iP	24 04
OV	iP	23 23 45
PF	iP	23 23 46
SH	iP	23 23 32
TUC	iP	23 23 48
Dec. 21		
SH	eP	23 36 27
	e	37 33
Dec. 21		
BC	eP	23 59 48

Date and Station		Phase (GCT) h m s
PF	eP	24 00 01
SH	eP	23 59 00
Dec. 22		
BC	iP	02 37 59
OV	eP	02 38 01
	i(pP)	38 14
PF	eP	02 38 02
	i(pP)	38 21
TUC	eP	02 38 02
	ipP	38 20
Dec. 22		
BC	iP	03 07 39
OV	eP	03 07 37
PF	iP	03 07 41
SH	eP	03 06 50
SIT	e	03 23 23
	eL	35 40
TUC	e(P)	03 08 09
Dec. 22		
BC	iP	05 02 34
OV	eP	05 02 32
PF	iP	05 02 36
SH	eP	05 01 45
TUC	e	05 03 03
Dec. 22		
BC	eP	08 20 33
PF	eP	08 19 36
SH	eP	08 19 45
TUC	e(P)	08 21 03
Dec. 22		
SH	e	13 29 42

Date and Station		Phase (GCT) h m s
Dec. 22 SH	e	13 35 01
Dec. 22 TUC	e	13 40 15
Dec. 22 BC	iP	14 01 36
	i	02 10
OV	i	14 01 14
PF	i	14 02 00
Dec. 22 SH	eP	23 24 51
Dec. 23 BC	iP	01 27 29
OV	iP	01 27 28
PF	iP	01 27 32
TUC	eP	01 27 58
Dec. 23 BC	i(P)	02 55 44
OV	i(P)	02 55 44
PF	i(P)	02 55 47
Dec. 23 HUAN	eP	16 40 09
TUC	eP	16 47 17
Dec. 23 BC	eP	17 21 34
PF	eP	17 21 37
SJ	e	17 30 46
	i	30 59
	iL	31 26
Dec. 23 BC	e	18 01 45
PF	e	18 01 49
Dec. 24 BC	e	01 40 44
PF	e	01 41 00
Dec. 24 BER	eL	05 07 10
BC	eP	04 13 39
BOZ	eL	04 42 09
CHI	eL	05 01 47
COL	e(S)	04 22 40
	e	26 47
	eL	35 40
GC	eP	04 13 22
HUAN	e(PP)	04 23 05
	e	25 58
	eSS	40 11
	e(SSS)	47 00
	eL	05 04 14
PHIL	eL	04 58 40
PF	eP	04 13 40
RC	eL	04 52 32
SLC	eL	04 42 15
SJ	eL	05 07 23
SH	eP	04 13 12
TUC	e	04 18 03
	eL	46 36
Dec. 24 BC	e(P)	09 47 52
HUAN	e(P')	09 54 56
OV	e(P)	09 47 53
PF	e(P)	09 48 57
TUC	e(P)	09 48 21
Dec. 24 TUC	e	11 06 13
Dec. 24 BC	eP	15 12 56
COL	eL	15 11 53
PF	eP	15 12 59
TUC	eP	15 13 38
	e	13 48
Dec. 24 BER	eL	17 31 43
BOZ	eS	16 57 02
	eL	17 09 17
BC	eP	16 48 35
COL	e	16 45 40
	eS	51 03
	e	54 20
	eL	56 24
GC	iP	16 47 51
HUAN	e	16 54 05
	e	17 23 31
	eL	42 16
OV	eP	16 48 39
PHIL	eL	17 26 03
PF	eP	16 48 40
	i	48 59
SLC	eL	17 09 47
SJ	eL	17 35 42
SH	eP	16 47 49
SIT	e	16 53 05
	eL	17 04 14
TUC	eP	16 49 08
	i	49 26
	eL	17 17 32
Dec. 24 BC	e	19 49 02
PF	eP	19 48 35
SH	eP	19 48 24

Date and Station	Phase (GCT)	h m s
Dec. 24		--
BC	e	20 45 54
COL	eL	20 44 09
PF	e(P)	20 45 51
	i	46 03
Dec. 25		
BOZ	eL	01 18 07
Dec. 25		
BOZ	eL	06 34 47
BC	iP	06 21 30
COL	eP	06 17 28
	e	21 01
	eL	21 44
GC	e(P)	06 20 04
OV	eP	06 21 27
	i	21 41
PHIL	eL	06 46 10
PF	iP	06 21 32
	i	22 10
SIT	eL	06 22 38
TUC	iP	06 22 10
	i	24 10
Dec. 25		
BC	eP	06 59 34
OV	eP	06 59 34
PF	eP	06 59 37
TUC	e(P)	07 00 04
Dec. 25		
HUAN	eP	10 19 21
PF	e	10 27 05
TUC	eP	10 26 39
Dec. 25		
BER	eL	11 53 25

Date and Station	Phase (GCT)	h m s
BC	iP	11 21 56
	e(S)	28 42
BOZ	eL	11 31 36
COL	e(P)	11 18 00
	eL	21 52
GC	iP	11 20 30
OV	iP	11 21 45
	eS	28 41
PHIL	eL	11 50 15
PF	iP	11 21 49
	i	22 11
	eS	28 48
SLC	eP	11 21 37
	eS	28 25
	eL	31 55
SJ	eL	12 00 40
SH	iP	11 20 46
	e	26 31
	eS	26 52
SIT	eL	11 24 04
TUC	iP	11 22 23
	e	29 45
	eL	34 35
Dec. 25		
TUC	e	12 10 23
Dec. 25		
OV	e(P)	19 39 13
PF	eP	19 38 59
	eS	39 53
Dec. 26		
BC	iP	00 08 51
OV	iP	00 08 52
PF	iP	00 08 54
SH	eP	00 08 15

Date and Station	Phase (GCT)	h m s
TUC	eP	00 09 13
Dec. 26		
BC	e(P)	04 00 50
PF	e(P)	04 00 48
SH	eP	04 59 48
	e	05 00 07
	e	00 54
TUC	e(P)	03 59 41
Dec. 26		
BC	eP	12 12 24
OV	iP	12 12 25
PF	iP	12 12 27
SH	eP	12 11 50
Dec. 26		
HUAN	eP	15 02 25
Dec. 26		
BC	iP	17 09 31
HUAN	e(P')	17 10 28
	e	11 43
	eSSS	39 57
	eL	57 24
PF	eP	17 09 27
	i	09 33
SIT	eL	17 24 20
TUC	eP	17 09 38
Dec. 26		
BH	e(P)	19 39 02
BC	iP	19 45 31
	i	46 24
GC	eP	19 46 42
	iP	46 43
HUAN	iP	19 39 09
	iS	41 07
	iL	41 44
OV	eP	19 45 32

Date and Station		Phase (GCT) h m s
PF	iP	19 45 27
SLC	eL	20 06 52
SJ	iP	19 41 32
	i	41 45
	e	42 13
	e	45 41
	eL	46 33
SH	eP	19 46 23
TUC	iP	19 44 52.5
	i	45 02
	e	45 51
	e	53 52
	eL	20 01 08
Dec. 27		
GC	e	02 51 48
Dec. 27		
BC	iP	07 07 29
OV	eP	07 07 28
PF	eP	07 07 28
SH	eP	07 07 38
Dec. 27		
GC	iP	16 40 16
	i	41 13
Dec. 27		
SH	eP	17 09 15
Dec. 28		
BH	e(P)	01 01 30
	e	03 56
BER	e	01 03 45
	eL	04 25
BC	iP	01 06 11
GC	eP	01 06 55
	iP	06 56
HUAN	eP	01 04 33
	i	04 42
	e	06 01
	eS	09 39

Date and Station		Phase (GCT) h m s
HUAN	iS	01 09 44
	i	11 26
	e	12 09
	eL	13 56
OV	iP	01 06 10
PHIL	e	01 03 04
	iS	06 36
	eL	06 51
PF	iP	01 06 05
	i	06 12
RC	iP	01 05 23
	eL	17 09
SLC	e(P)	01 06 01
	e	12 20
	eL	16 44
SJ	iP	00 59 02
	i	59 10
	i	59 22
	i(S)	59 40
	i	59 50
	iL	01 01 00
SH	eP	01 07 00
SIT	eL	01 30 00
TUC	iP	01 05 38
	i	05 47
	i	07 16
	eL	19 11
Dec. 28		
HUAN	e	05 42 36
	eL	50 56
TUC	e	05 53 03
Dec. 28		
BER	eL	10 56 21
BC	iP	10 20 36
	i	20 52
BOZ	eL	10 46 44
COL	e	10 17 02
	eS	23 06
	eL	26 15

Date and Station		Phase (GCT) h m s
GC	eP	10 19 33
	i	19 47
HUAN	e	10 33 42
	eL	11 08 26
OV	eP	10 20 34
	i	20 54
	i	21 03
PF	eP	10 20 37
	i	20 39
	i	20 56
	i	21 22
SLC	eL	10 44 36
SJ	eL	11 07 39
SH	eP	10 19 45
SIT	i	10 24 56
	eL	28 28
TUC	iP	10 21 05
	eL	47 44
Dec. 29		
BC	eP	04 26 42
OV	eP	04 26 40
PF	eP	04 26 46
SH	eP	04 26 00
TUC	eP	04 27 09
Dec. 30		
BER	eL	04 24 27
BC	eP	04 21 53
HUAN	e(P)	04 17 41
	eS	24 31
	eL	30 03
OV	eP	04 21 54
PF	eP	04 21 51
TUC	iP	04 21 35
	i	21 43

Date and Station		Phase (GCT) h m s
Dec. 30		
PF	i	10 04 40
Dec. 30		
BC	iP	11 20 55
OV	eP	11 20 58
PF	eP	11 20 51
	iP	20 52
SJ	eL	11 28 24
TUC	iP	11 20 11
	i	21 08
	eL	29 32
Dec. 30		
TUC	e	13 03 56
Dec. 30		
BC	eP	16 19 15
PF	iP	16 19 14
	i	19 47
TUC	eP	16 19 22
	e	19 54
Dec. 30		
TUC	e	22 38 23
Dec. 31		
HUAN	e(P)	02 10 16
Dec. 31		
HUAN	eP	05 32 18
Dec. 31		
BER	eL	06 38 12
SJ	eP	06 33 01
	i	33 10
	i(S)	33 15
	i	33 22
	iL	33 27
Dec. 31		
SH	e	11 21 58
	e	24 08
Dec. 31		
BC	eP	23 08 40

Date and Station		Phase (GCT) h m s
GC	eP	23 09 38
HUAN	e	23 00 18
	eS	02 36
	eL	04 08
OV	iP	23 08 41
PF	iP	23 08 38
SH	iP	23 09 22
TUC	iP	23 08 09

Date and Station	Phase (GCT) h m s

Local and Minor Earthquakes

day	hour
COL	
Oct.	
9	01.1
17	15.2
29	09.8
Dec.	
25	07.6
30	19.1
HONO	
Oct.	
10	16.5
Dec.	
2	20.1
4	18.1
5	22.8
6	23.4
13	18.2
18	23.2
22	17.6
HUAN	
Oct.	
1	23.3
5	06.8
	07.1
7	15.3
8	03.2
9	20.0
10	04.2
	08.9
	14.7
	16.8
11	23.4
12	05.4
	09.3
16	18.8
17	21.2
18	12.6
	16.2
19	03.0
	04.1
21	01.3
	13.2
22	06.1
	14.4
	15.6
23	02.1
	20.6
24	01.3
	08.8
	23.1

day	hour
HUAN	
Oct.	
24	23.3
27	04.8
	18.4
29	03.4
	04.3
30	13.1
31	12.7
Nov.	
4	23.7
5	00.5
7	05.9
8	00.8
10	19.0
	20.6
	20.8
	23.8
11	00.3
	01.1
	01.5
	01.7
	06.6
	09.0
	10.9
	14.5
	19.1
	19.8
12	01.2
	04.3
	05.4
	06.0
	06.3
	08.2
	14.8
	16.1
	16.3
	16.3
	23.9
13	01.2
	01.6
	02.7
	10.5
	14.6
	14.8
	18.1
	21.0
14	01.1
	03.1
	12.7
15	18.7
	19.3
	20.8

day	hour
HUAN	
Nov.	
16	04.6
	14.1
17	09.6
	11.7
	16.9
18	05.4
	08.3
	11.0
19	02.7
	20.2
20	19.1
21	14.0
	21.3
22	11.9
	12.0
23	10.8
24	00.8
	09.0
25	14.7
26	04.9
	06.7
	09.5
	18.6
	21.5
Dec.	
11	15.5
12	01.8
	03.3
	07.9
	18.7
	22.0
13	21.1
	21.7
15	23.7
16	06.2
17	14.8
	17.6
	19.6
18	06.8
	16.4
21	01.6
	06.4
	11.2
25	13.4
	23.1
28	10.4
	12.1
30	06.9
	15.8
	17.5
	17.5

day	hour
HUAN	
Dec.	
31	04.5
	15.9
SJ	
Nov.	
1	23.4
2	00.8
3	06.2
6	14.9
	18.2
7	15.4
9	17.9
	21.2
12	08.5
	09.5
	16.7
15	16.1
	23.1
17	14.0
22	19.1
	20.1
25	10.3
29	04.9
Dec.	
4	02.3
5	08.7
13	16.8
14	06.6
	08.1
	14.6
15	02.7
	08.4
21	07.3
23	23.0
26	08.0
28	20.6
TUC	
Oct.	
1	17.5
	21.1
2	14.2
4	04.6
	12.5
5	18.2
	18.2
	18.3
	18.6
7	21.6
	23.8
8	05.7

day	hour
TUC	
Oct.	
10	06.6
	10.0
15	14.2
16	03.6
	05.9
18	07.2
20	14.0
24	01.2
	06.9
27	17.8
28	21.9
	22.1
29	06.0
	11.6
31	03.1
Nov.	
1	13.1
5	00.2
	03.9
7	05.9
12	10.6
	12.2
15	01.6
16	02.2
17	19.6
20	08.3
30	03.1
	03.2
	03.5
Dec.	
2	13.7
	14.0
	20.0
3	06.0
6	02.0
9	01.9
10	03.1
	03.4
	10.1
	15.9
	16.2
	17.7
11	00.7
	08.2
	10.3
13	03.0
15	20.1
16	06.2
18	12.2
20	04.9

day	hour
TUC	
Dec.	
22	00.0
	12.2
25	02.9
	03.5
27	13.9
29	07.2
	10.1