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July, 1954

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CONTENTS

List of stations 1
Provisional epicenters 2
Seismogram interpretations 5
Local and minor earthquakes 22

U. S. DEPARTMENT OF COMMERCE

Sinclair Weeks, Secretary

U. S. COAST AND GEODETIC SURVEY—WASHINGTON

R. F. A. Studds, Director

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National Oceanic and Atmospheric Administration

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March 4, 2011

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

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

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

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

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

All seismograms are on file in the U. S. Coast and Geodetic Survey, except those from Balboa Heights, Burlington, Logan, and New Kensington which may be obtained on loan by addressing the Seismograph Station Director: - Meteorological and Hydrographic Office, Panama Canal Company, Balboa Heights, Canal Zone; University of Vermont, Burlington, Vermont; Utah State Agricultural College, Logan, Utah; 508 Pershing Drive, New Kensington, Pennsylvania.

Date 1954	Origin Time G. C. T.	Lat.		Long.		Region, Focal Depth, and Remarks
July	h m s	° ′		° ′		
1	03 15 16*	52	N.	159½	E.	Off east coast of Kamchatka.
1	05 23 57*	23½	N.	122	E.	Off east coast of Formosa.
2	02 45 08*	13	N.	124½	E.	Southeastern Luzon, Philippine Islands. 13 killed, many injured, and extensive property damage at Sorsogon, Bacon, and Legaspi City. Mag. 6-3/4.
2	09 06 19*	5	S.	77	W.	Northern Peru.
2	10 43 13	38.2	N.	116.4	W.	South central Nevada. Mag. 5-1/4.
3	00 32 53*	3½	S.	29	E.	Near Lake Tanganyika, Belgian Congo. Damage at Uvira.
3	21 15 00*	19½	N.	121½	E.	Off north coast of Luzon, Philippine Islands. Felt at Calayan and Aparri.
3	21 52 33*	20½	N.	155½	W.	Near northeast coast of Hawaii, T. H. Felt in Hilo.
3	22 31 25*	6½	S.	105½	E.	Near southwest coast of Java. Felt at Djakarta. h about 100 km. Mag. 7
4	16 32 50	44.9	N.	110.8	W.	Yellowstone National Park. Felt.
5	13 52 18*	50½	N.	156½	E.	Near south coast of Kamchatka. h about 60 km.
6	04 00 13*	3	S.	148	E.	Bismarck Sea.
6	08 04 42*	46½	N.	153½	E.	Kurile Islands. h about 100 km. Mag. 6-3/4 - 7.
6	08 21 23*	46	N.	153	E.	Kurile Islands.
6	08 54 32**					Do.
6	10 14 00*	46	N.	153	E.	Do.
6	10 46 46*	46	N.	153	E.	Do.
6	11 13 19	39½	N.	118½	W.	Near Fallon, Nevada. Several injured and moderate property damage. Mag. 7
6	11 49 00*	39	N.	118½	W.	Fallon aftershock. Mag. 5-3/4 (Berk).
6	13 15 11*	39½	N.	119	W.	Fallon aftershock. Mag. 5-1/4 (Berk).
6	15 47 02**					Arctic Ocean, 200 miles west of Spitzbergen.
6	15 56 25**					Near coast of Guatemala. h about 150 km.
6	22 07 41	39½	N.	118½	W.	Fallon aftershock. Mag. 6-3/4.
7	01 21 24**					Northern Kurile Islands.
8	02 13 56*	39½	N.	118½	W.	Fallon aftershock. Mag. 5
8	12 55 10**					Fallon aftershock. Mag. 4-1/4 - 4-1/2.
8	19 31 57*	39	N.	118½	W.	Fallon aftershock. Mag. 5-1/2.
9	08 50 03**					Fallon aftershock. Mag. 4-3/4.
9	12 20 38*	16	S.	174½	W.	Tonga Islands region. h about 100 km.
9	15 38 18*	43½	N.	147	E.	Off east coast of Hokkaido, Japan.
9	18 28 22*	41	N.	133½	E.	Off northwest coast of Honshu, Japan.
10	16 00 40*	38	S.	73½	W.	Near coast of central Chile.

Date 1954	Origin Time G. C. T.	Lat.		Long.		Region, Focal Depth, and Remarks
July	h m s	° ′		° ′		
10	22 56 53*	37	N.	70½	E.	Hindu Kush. h about 200 km.
12	17 32 10*	46	N.	153	E.	Kurile Islands.
12	17 44 56*	46	N.	153	E.	Do.
12	18 51 43**					Kurile Islands region.
12	21 55 02*	46	N.	153	E.	Kurile Islands.
13	08 04 44*	3	S.	151	E.	New Britain region.
13	22 07 40**					Northern Kurile Islands.
14	23 43 48**					Kurile Islands region.
15	00 03 44*	13	S.	177	W.	Wallis Islands region.
15	00 34 32**					Samoa Islands region.
15	13 24 35*	54	N.	138	W.	Queen Charlotte Islands region.
16	12 41 38*	40	N.	144½	E.	Off east coast of Honshu, Japan.
18	00 56 50**					Revilla Gigedo Islands region.
18	06 34 35*	55	N.	161½	E.	Near east coast of Kamchatka.
18	09 07 44*	35½	N.	140½	E.	Near east coast of Honshu, Japan. Felt. Mag. 6-1/2.
18	13 18 55*	37½	N.	23	E.	Near south coast of Greece.
18	14 42 38*	38½	N.	20½	E.	Near west coast of Greece.
18	19 53 22*	30	S.	180		Kermadec Islands. Felt in Raoul. h about 400 km.
19	02 15 16**					Near coast of northern Chile. Felt in Antofagasta. h about 60 km.
21	04 38 51*	27½	N.	101	E.	Szechwan province, China.
21	13 50 11**					Off southeast coast of Honshu, Japan.
23	04 33 30*	30½	S.	71½	W.	Central Chile. 3 injured and minor property damage in Coquimbo. h about 60 km. Mag. 6-3/4.
23	14 45 16*	34½	N.	69½	E.	Eastern Afghanistan.
23	15 03 48*	14	S.	178	W.	Wallis Islands.
23	20 52 20**					New Hebrides Islands.
24	09 41 16**					Do.
24	21 43 49**					Do.
25	11 00 15*	10	N.	72½	W.	Northwestern Venezuela.
26	19 09 00*	1½	S.	79	W.	Central Ecuador.
26	20 15 45*	41	S.	73	W.	Central Chile. 1 killed and moderate property damage in Osorno. Mag. 6-1/4 - 6-1/2.
26	22 09 57*	12½	N.	44	W.	Mid Atlantic Ocean. Mag. 6-1/4.
27	06 46 44*	12½	N.	44	W.	Mid Atlantic Ocean aftershock.
27	20 57 45**					Do.

Date 1954	Origin Time G. C. T.	Lat.	Long.	Region, Focal Depth, and Remarks
July	h m s	° ′	° ′	
29	03 23 46*	16½ S.	70½ W.	Southern Peru. h about 100 km.
29	03 34 20*	49½ N.	158 E.	Off south coast of Kamchatka. Mag. 6
29	04 06 20**			Kurile Islands region.
29	04 42 27**			Western Switzerland. Felt.
29	06 27 59*	28 S.	179 W.	Kermadec Islands region.
29	13 53 42**			Kurile Islands region.
29	22 23 54*	17½ N.	92½ W.	Tabasco, Mexico.
30	02 00 10*	39½ N.	118½ W.	Near Fallon, Nevada. Felt. Mag. 5-1/4.
30	08 46 11*	35½ S.	97½ W.	Pacific Ocean, southeast of Easter Island. h about 100 km. Mag. 6-1/2.
31	00 59 57*	39 N.	104 E.	Ningsia province, China. Mag. 6-1/2.
31	01 15 04**			Ningsia aftershock.
31	01 22 22**			Do.
31	23 22 27**			Bolivia-Chile border. h about 100 km.

Date and Station		Phase	(GCT) h m s
July 1			
BC	i(P)		01 10 22.5
	i		10 42.0
	e		11 23
July 1			
COL	iP		01 25 29
July 1			
BC	eP		03 25 26
	e		25 39
COL	iP		03 21 22
	i		24 26
HH	eP		03 24 29
NEL	eP		03 25 26
	e		25 36
	e		25 46
	iPcP		26 08.6
SLC	eP		03 25 22
July 1			
NEL	eP		04 22 10
	e		22 22
July 1			
COL	iP		05 35 05
	i		35 30
HH	eP		05 37 04
	i		37 13
NEL	eP		05 37 58
	e		38 28
	ePP		41 48
July 1			
HH	eP		08 06 26
	e		07 16
July 1			
COL	iP		08 23 56
July 1			
COL	iP		09 02 06
July 1			
NEL	e(P)		11 14 15
TUC	e(P)		11 13 31
July 1			
COLU	eP		16 15 02
July 1			
BC	eP		16 29 33
	i		29 55
HH	e(P)		16 32 18
NEL	eP		16 29 33
	e		30 38
	e		30 57
	i		31 10
TUC	eP		16 30 11
July 1			
SJ	e(P)		20 07 24
July 1			
SLC	eP		22 58 34
	e		58 56
July 1			
MONT	eP		23 43 11
SJ	e(P)		23 44 19
July 2			
HH	e(P)		01 48 04
	e		48 43
July 2			
NEL	eP		02 05 00
July 2			
BC	eP		02 59 25
	ePP		03 03 50
	e		11 52
	e(PKKP)		14 05
BOZ	eP		02 59 12
	eSKS		03 09 42
	e(SS)		17 08
	eL		25 14
BUT	eP		02 59 08
	e(P')		03 02 20
	iPP		03 20
	e		08 33
	eSKS		09 42
	iSKS		09 47
	iSKKS		10 30
	iS		11 04
	iPPS		13 08
	iSS		17 42
	e(P'P')		25 04
	eL		26 44
COL	eP		02 57 05D
	iP		57 06C
	iPP		03 00 02
	eS		06 57
	iS		07 00
	e		09 12
	eL		16 38
COLU	eP'		03 04 16
	ePP		06 17
	ePKS		07 31
	eSKS		11 11
	eSKKS		12 48
	eSKKKS		13 14
	e(PS)		17 26
	eSS		23 26
	eSSS		27 56
	eL		36 06
HONO	iP		02 56 50D
	e(PP)		03 00 10
	eS		06 26
	eSS		11 06
	eL		15 32
HH	eP		02 58 57C
	e(P')		03 02 14
	ePP		03 04
	eSKS		09 39
	ePKKP		15 15
	eP'P'		23 30
MONT	eP'		03 05 17C
	ePP		10 04
NEL	iP		02 59 24.7C
	eP'		03 02 33
	iPP		03 38
	i		03 50
	ePPP		06 05
	e(S)		11 32
	ePPS		14 18
PHIL	ePP		03 05 50
	eSKKS		12 34
	ePS		15 55
	ePPS		17 33
	e		21 13
	eSS		22 15
	eL		38 21
SLC	eP		02 59 22
	e		03 02 37
	eP'		03 20
	ePP		03 48
	eSKS		10 05
	e(S)		11 46
	eL		27 55
SJ	iP'		03 04 52C
SIT	iP		02 57 44
	iS		03 08 05
	e		09 04
	e(PPS)		10 08
	i		11 26
	eSS		14 02
	eL		22 58
TUC	e(P')		03 03 13
	ePP		04 17
	eSKS		10 20
	ePS		13 50
	ePPS		14 54
	ePKKP		14 54
	eSS		19 42
	eSSS		24 26
	eL		30 24
WASH	eP'		03 04 08
	iP'		04 10
	iPP		05 57
	eL		58 01
July 2			
HH	eP		04 13 53
NEL	eP		04 10 30
July 2			
BC	eP		09 15 54
BOZ	eP		09 16 26
BUT	e(P)		09 16 33
COL	iP		09 19 07
COLU	eP		09 13 57
HH	eP		09 16 48
MONT	e(P)		09 10 41
	iP		10 43
	e(S)		14 24
NEL	iP		09 15 50.7
	iPcP		16 40.5
SLC	e(P)		09 15 54
SJ	iP		09 11 52
TUC	eP		09 15 16
July 2			
COL	eP		09 33 37
July 2			
NEL	eP		09 47 37
July 2			
COL	iP		10 00 58
HH	e(P)		10 01 06
NEL	eP'		10 07 21
	e		08 43
SJ	e(P')		10 08 40
July 2			
BC	iP		10 43 54.5
	iL		50 21.5
BOZ	eP		10 45 21
	eL		47 27
BUT	iP		10 45 19
	iL		47 44
COL	eP		10 49 45
COLU	eP		10 49 13
	eL		58 14
HH	eP		10 45 44
	e(S)		47 45
	eL		48 35
NEL	iP		10 43 57.5
RC	eP		10 46 01
	e		46 35
	eL		49 02
SLC	eP		10 44 26
	i		44 37
	iS		44 57
	iL		45 33

Date and Station		Phase (GCT)
		h m s
TUC	iP	10 45 04.5
	i	45 32
	i	45 47
	iL	47 04
July 2		
BC	i(P)	11 00 45.9
	i	01 32.6
	i	02 02.7
July 2		
BC	i(P)	11 35 08.6
	i	35 40.2
	e	36 35
	i	37 56.8
July 2		
BC	iP	11 41 29.6
	i	42 00.4
NEL	iP	11 41 32.6
	i	42 07.8
	e	43 56
July 2		
BC	eP	11 58 33
	i	59 05.4
July 2		
COL	eP	13 25 04
July 2		
COL	iP	13 51 04
July 2		
BC	iP	14 14 55.4
	i	15 27.8
	i	15 34.0
July 2		
COL	eP	15 26 09
July 2		
BC	iP	16 18 54.3
COL	iP	16 14 34
	i	14 57
HH	e(P)	16 17 47
NEL	eP	16 18 50
July 2		
HH	eP	18 11 14
	e(S)	11 47
July 2		
NEL	e(P)	19 59 59
July 2		
NEL	e(P)	20 51 35
July 2		
HH	e(P)	21 04 31
NEL	e(P)	21 04 19
July 2		
BC	e(P)	21 44 14

Date and Station		Phase (GCT)
		h m s
BC	e	21 44 30
	e	44 38
July 2		
HH	eP	22 34 22
July 2		
HH	eP	23 33 26
July 3		
BC	eP'	00 52 08
	e	52 48
BOZ	eP'	00 52 03
HH	eP'	00 52 01
	ePP	54 02
COL	iP'	00 53 01
NEL	eP'	00 52 18
	ePP	54 57
TUC	eP'	00 52 18
July 3		
COL	iP	03 03 36
HH	eP	03 06 32
July 3		
COL	iP	05 45 57
July 3		
HH	e(P)	08 25 20
July 3		
BC	iP	09 29 21.7
	e	31 46
July 3		
BOZ	iP	10 02 55
	i	03 13
BUT	iP	10 03 18
	i(S)	03 32
HH	eP	10 03 45
	i	03 56
	e(S)	04 27
	iL	04 45
SLC	eP	10 03 49
July 3		
HH	iP	13 21 02
	i	21 39
NEL	eP	13 21 41
July 3		
HH	e(P)	13 28 08
	e	28 21
July 3		
BC	eP	16 03 56
	e	09 40

Date and Station		Phase (GCT)
		h m s
BOZ	eP	16 04 21
COL	iP	16 03 36
HH	iP	16 04 14
NEL	iP	16 03 55.0
	e	04 12
SLC	eP	16 04 12
TUC	eP	16 04 07
July 3		
COL	iP	16 09 20
HH	eP	16 09 58
July 3		
MONT	iP	16 22 52
July 3		
COL	eP	21 26 33
HH	iP	21 28 33
	e(PP)	32 03
	eSKS	39 17
MONT	eP'	21 35 12
July 3		
BC	eP	22 00 01
BOZ	eP	22 00 48
BUT	eL	22 12 18
COL	iP	22 00 54
HONO	iP	21 53 20
	i	53 38
	iS	53 52
	iL	53 59
HH	eP	22 00 40
	e	01 04
	eL	10 38
NEL	eP	22 00 00
SLC	eP	22 00 31
TUC	eP	22 00 23
July 3		
BH	eP'	22 51 27
BC	e(P')	22 50 20
	iP'	50 36.8
	ePP	53 00
	ePKS	54 01
	i	54 25
BOZ	iP'	22 50 30D
	iPP	52 40
	ePKS	53 46
	eSKSP	23 02 22
	ePPS	04 37

Date and Station		Phase (GCT)
		h m s
BOZ	eSS	23 10 20
	eSSS	15 10
	eL	27 10
BUT	iP'	22 50 27C
	ipP'	50 59
	iPP	52 32
	iPKS	53 47
	iPPP	55 34
	i(SKS)	57 43
	i	23 00 39
	i	01 28
	iPPS	04 22
	eSS	10 12
	eSSS	14 44
	eL	27 12
COL	eP	22 45 18
	i(P')	48 50
	iPP	49 29
	eSKKS	56 12
	iPS	58 53
	eSPP	59 18
	iPKKP	23 01 15
	i	01 33
	eSS	04 20
	eL	14 08
COLU	iP'	22 51 09C
	ipP'	51 25
	e(PP)	54 34
	eSKSP	23 04 45
	e(PPS)	08 29
	e(SS)	15 32
	e(SSS)	21 07
	eL	33 44
HONO	e(P)	22 46 32
	e(PP)	50 02
	eSKS	55 38
	eS	56 25
	ePS	58 09
	eSS	23 02 10
	e	07 44
	eL	12 31
HH	e(P)	22 47 38
	iP'	50 23C
	ipP'	50 48
	i	51 40
	iPP	52 18
	e	59 07
	ePS	23 02 22
	eSKPP'	14 29
MONT	iP'	22 51 08C
NEL	e(P')	22 50 20
	iP'	50 36.2
	iPP	53 00.2
	iPKS	54 00.2
	ePPP	56 26
PHIL	iP'	22 50 58S
	iPP	54 21
	ePPP	57 41
	e(SKKS)	23 01 16
	eSKSP	04 42

Date and Station		Phase (GCT)
		h m s
PHIL	eSS	23 13 17
	eSSS	19 40
	eL	32 24
RC	eP'	22 50 43
	ePP	53 18
	iPKS	54 11
	eSKKS	59 26
	eSKSP	23 03 21
	eL	30 20
SLC	e(P')	22 50 01
	iP'	50 36D
	epP	50 57
	iPP	52 56
	iPKS	53 57
	ipPKS	54 25
	eSP	23 03 07
	eL	28 00
SJ	iP'	22 51 24C
	i	52 23
	iPP	56 10
	i	56 52
	i	57 55
	e	23 00 51
	e(SKKS)	03 03
	eSKSP	06 36
	e(SPP)	09 39
	eSS	16 36
	eL	42 32
TUC	eP'	22 50 34
	iP'	50 45
	e	51 19
	iPP	53 27
	iPKS	54 14
	eSKS	57 53
	eSPP	23 05 46
	ePPS	06 26
	eSS	11 04
	eSSS	16 42
	eL	27 41
WASH	iP'	22 50 59
	i(pP')	51 17
	i	51 48
	iPP	54 26
	eL	23 45 00
July 4		
NEL	eP	00 25 40
July 4		
TUC	e(P)	00 58 16
July 4		
TUC	iP	01 24 55
July 4		
NEL	eP	04 05 30
July 4		
BC	eP	07 17 21
	i	18 01.7
COL	eP	07 14 58

Date and Station		Phase (GCT)
		h m s
HH	eP	07 18 01
July 4		
BOZ	iP	07 28 02.2
	iS	28 13
HH	iP	07 28 51
	i	29 00
	i(S)	29 38
	iL	30 00
SLC	eP	07 28 56
July 4		
HH	e(P)	08 00 40
July 4		
BOZ	iP	10 58 46
	iS	58 57
HH	eP	10 59 34
	i	59 44
	i(S)	11 00 24
	iL	00 44
SLC	eP	10 59 40
July 4		
BC	eP	16 35 07
	eL	38 50
BOZ	iP	16 33 06
BUT	iP	16 33 19
	iL	34 45
COL	iP	16 38 48
HH	iP	16 33 54
NEL	iP	16 35 11.0
	eL	37 58
RC	eP	16 34 31
SLC	iP	16 33 54
	i	33 59
	i	34 13
	iS	34 25
	iL	34 49
TUC	eP	16 35 51
July 4		
BOZ	iP	16 48 48
	iS	48 58
HH	eP	16 49 35
	i(S)	50 25
	iL	50 43
July 4		
BOZ	iP	17 23 14
	iS	23 26
HH	eP	17 24 03
	i(S)	24 51
	iL	25 07

Date and Station		Phase (GCT)
		h m s
July 4		
HH	e(P)	19 03 59
July 4		
HH	iP	19 32 41
	i	32 52
MONT	eP	19 21 12
	iP	21 13
	i	21 16
	i	21 22
	i(S)	22 01
	iL	22 14
NEL	eP	19 31 50
	e	32 01
SJ	e(P)	19 28 19
WASH	e(P)	19 30 40
	e	31 20
July 4		
SJ	e(P)	19 37 15
July 4		
HH	e(P)	19 58 50
July 4		
HH	e(P)	21 14 41
July 4		
TUC	eP	21 53 31
July 5		
NEL	e(P)	07 27 14
July 5		
COL	iP	09 36 44
	i	37 05
July 5		
COL	iP	10 06 52
July 5		
NEL	eP	10 39 37
July 5		
NEL	eP	11 49 09
July 5		
NEL	eP	12 39 54
	e	40 55
July 5		
BC	eP	14 02 48
	i	02 54.0
BOZ	iP	14 02 08
	ipP	02 24
BUT	eP	14 02 01
COL	iP	13 58 39
	ipP	58 51
COLU	iP	14 04 34
	ipP	04 47

Date and Station		Phase (GCT)
		h m s
HH	iP	14 01 44
	ipP	02 00
	isP	02 14
	eS	09 21
	e(ScS)	11 57
MONT	eP'	14 11 34
NEL	iP	14 02 39.4
	ipP	02 55.3
	i(PcP)	03 04
	e	03 27
RC	eP	14 02 44
	eS	12 12
SLC	iP	14 02 28
	ipP	02 43
	isP	02 55
TUC	iP	14 03 10
	ipP	03 26
July 5		
BC	iP	16 38 07
NEL	iP	16 38 07.1
	e	38 15
July 5		
SLC	eP	16 58 39
TUC	eP	16 59 11
July 6		
BC	e(P)	04 14 51
BOZ	eP	04 14 01
BUT	eSKS	04 24 38
	ePPS	27 32
	eSS	32 08
	eSSS	36 00
	eL	40 26
COL	iP	04 12 35
	eS	22 55
	ePPS	23 57
	e(SS)	27 33
	eL	33 32
HONO	eS	04 18 16
	eL	26 15
MONT	eP'	04 19 42
NEL	eP	04 13 51
	e	14 09
	ePP	17 46
SJ	eP'	04 19 47
	ePP	23 15
	eSKS	27 07
	eL	05 07 24
SIT	eP	04 12 52
	iS	23 22
	ePS	24 19

Date and Station		Phase (GCT)
		h m s
SIT	ePPS	04 24 43
	eL	33 50
TUC	e(P')	04 18 06
	ePPS	28 04
	eL	46 18
July 6		
COL	iP	05 13 21
July 6		
NEL	iP	05 37 38.5
	iPcP	37 42.6
	ipP	37 50.0
SLC	eP	05 37 23
July 6		
BC	eP	08 15 22C
	iP	15 23D
	i	15 27.5
	i	16 39.6
	i	17 00.2
	iS	24 13.8
	eP'P'	44 00
BOZ	eP	08 14 55D
	iP	14 56C
	ipP	15 20C
	ePP	17 15
	iS	23 20
	eSS	27 17
	eL	30 28
	eP'P'	43 59C
BUT	eP	08 14 48C
	iP	14 49
	e(PP)	17 27
	iPPP	18 48
	iS	23 08
	isS	23 45
	i(ScS)	24 36
	eSS	27 06
	eL	29 52
CHI	eP	08 16 22
	e(PP)	20 32
	eS	26 09
	eSS	31 02
	eSSS	35 04
	eL	38 50
COL	iP	08 11 37C
	e(pP)	12 15
	iS	17 18
	eL	19 30
COLU	iP	08 17 16C
	i	17 25
	e(PP)	20 24
	eS	27 38
	iS	27 47
	eSS	33 30
	eSSS	37 04
	eL	39 50
HONO	eP	08 13 03
	ePcP	14 36
HONO	e(PP)	08 14 52
	esPP	15 34
	eS	19 47
	eSS	23 20
	eL	24 03
HH	eP	08 14 34
MONT	eP'	08 24 02D
	ePP	27 10
NEL	eP	08 15 22C
	iP	15 23.0D
	ipP	15 45.4
	isP	16 01.9
	iS	23 58.2
	eP'P'	43 54
PHIL	e(P)	08 16 53
	ePP	20 23
	eS	27 18
	e(SS)	33 05
	eSSS	36 35
	eL	44 30
RC	eP	08 15 31
	eS	24 25
	e(ScS)	25 26
	eSS	28 43
	eL	32 41
SLC	eP	08 15 13D
	iP	15 15
	ipP	15 33
	iPcP	15 58
	eS	23 56
	e(ScS)	25 06
	eSS	28 06
	esSS	29 00
	eL	33 00
SJ	ePP	08 23 08
	eS	30 39
	ePPS	33 39
	eSS	38 12
	eL	48 00
		W
SIT	eP	08 12 39S
	iP	12 40E
	iS	19 09
	e(SS)	21 49
	eL	23 03
TUC	eP	08 15 52C
	iP	15 53
	ipP	16 13
	ePP	18 45
	eS	25 10
	iPS	25 45
	e	26 58
	eL	33 54
	eP'P'	43 44
WASH	eP	08 17 04
	epP	17 26
July 6		
BC	i(P)	08 23 26.6
COL	iP	08 19 43
NEL	i(P)	08 23 27.6
TUC	eP	08 23 57
July 6		
BC	iP	08 32 17.0
BOZ	e(P)	08 31 50
COL	iP	08 28 32
NEL	iP	08 32 17.4
TUC	eP	08 32 47
July 6		
BC	eP	09 05 28
COL	eP	09 01 42
NEL	eP	09 05 28
	i	05 40.4
July 6		
NEL	eP	10 06 57
July 6		
BH	eP	10 10 53
	iS	11 35
NEL	iP	10 17 33.8
July 6		
BC	eP	10 24 55
BOZ	eP	10 24 29
COL	iP	10 21 11
	i(pP)	21 27
NEL	eP	10 24 56
	i	25 09.5
SLC	eP	10 24 48
TUC	eP	10 25 25
July 6		
BC	eP	10 57 41
	i	57 52
BOZ	e(P)	10 57 15
COL	iP	10 53 56
NEL	eP	10 57 42
	e	57 53
SLC	eP	10 57 32
July 6		
COL	iP	11 18 42
July 6		
BC	iP	11 14 28.1C
BOZ	eP	11 15 24C
	iP	15 25
	i	15 56
	i	16 15
	i(S)	16 45
	iL	17 29
BUT	eP	11 15 16C
	iP	15 17
	iS	17 04
	iL	17 15
CHI	eP	11 18 26
	iP	18 34
	eS	22 22
	iS	22 43
	i	22 58
	iL	23 38
COL	eP	11 19 35
	iP	19 36C
	iPcP	22 32
	iS	24 45
	eL	26 24
	iScS	30 14
COLU	iP	11 19 32C
	iPP	20 20
	iS	24 36
	iL	26 48
HONO	e(P)	11 20 36
	e(S)	26 43
	eL	29 08
HH	eP	11 15 39
MONT	iP	11 25 15C
NEL	iP	11 14 30.6C
PHIL	iP	11 19 57
	eS	25 06
	eL	26 15
RC	eP	11 16 16
	iP	16 18
	i	16 27
	i	16 38
	i	16 45
	i(S)	18 46
	i	19 05
	iL	19 36
SLC	iP	11 14 39
SJ	iP	11 22 10
	ePP	24 12
	e(PPP)	25 29
	eS	29 19
	e(SS)	32 18
	eL	33 28
SIT	iP	11 18 06S
	i	18 17
	i	19 43
	iS	22 02
	i	22 15

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Date and Station		Phase	(GCT) h m s
SIT		iL	11 22 52
TUC		iP	11 15 38C
		i	15 44
		i	16 20
		iS	17 32
		iL	18 03
UK		eP	11 14 18
		i	14 36
		iS	15 14
WASH		iP	11 19 56
		i	20 38
		iPP	21 06
		e(S)	25 08
		eL	26 40
July 6			
COL		eP	11 55 22
HH		eP	11 54 05
SLC		eP	11 50 24
		i	50 44
TUC		eP	11 51 19
		i	51 29
July 6			
BOZ		e(P)	12 56 08
		e	56 29
BUT		eP	12 58 17
July 6			
BC		iP	13 16 38D
BOZ		eP	13 17 20
		i	17 30
BUT		eP	13 17 29
NEL		iP	13 16 25
SLC		eP	13 16 35
		i	16 58
		i(S)	17 08
		i	17 26
		eL	17 54
TUC		eP	13 17 31
July 6			
COL		e(P)	13 21 30
July 6			
BOZ		e(P)	13 38 08
BUT		eP	13 38 37
July 6			
BUT		e(P)	14 59 26
July 6			
COL		eP	15 53 55
July 6			
BC		iP	16 02 27.0
BOZ		eP	16 03 13
COL		iP	16 06 42
		ipP	07 20
COLU		e(P)	16 01 22
MONT		eP	16 04 13
NEL		iP	16 02 25.1
SLC		iP	16 02 43
July 6			
BC		iP	22 08 49.9C
		i	09 01.4
BOZ		eP	22 09 47C
		iP	09 50C
		i	10 11
		i	10 24
		i(S)	10 46
		iL	11 00
BUT		iP	22 09 42C
		i	10 07
		i	10 47
		iS	11 19
CHI		iP	22 12 53W
		eS	17 09
		eL	18 57
COL		eP	22 14 00C
		iP	14 01C
		ePP	15 16
		iPcP	16 55
		iS	19 03
		i	19 44
		iL	21 02
COLU		iP	22 13 55D
		e(PP)	15 14
		iS	18 55
		e	19 22
		iL	20 43
HONO		eP	22 15 04
		eS	21 06
		eL	23 53
HH		eP	22 10 06
MONT		iP	22 19 39D
NEL		eP	22 08 52C
		iP	08 52.4D
PHIL		eP	22 14 17
		ePP	15 33
		e	19 25
		eL	21 13
RC		eP	22 10 41
		eS	12 48
		e	13 14
		iL	13 42
SLC		eP	22 09 03
		iP	09 04
		e(S)	10 09
SJ		eP	22 16 33
		ePP	18 31
		eS	23 34
		eScS	26 39
		eL	28 00
SIT		iP	22 12 26S
		iS	16 24
		iL	17 20
TUC		iP	22 10 01C
		i	10 17
		i	10 43
		i(S)	11 01
		iL	12 22
UK		eP	22 08 46
		i(S)	09 34
		iL	09 52
WASH		iP	22 14 09C
		e	15 01
		ePP	15 26
		ePcP	17 03
		eS	19 17
		eL	21 00
July 7			
BC		iP	01 31 11.0
		iPcP	32 07.7
BOZ		eP	01 31 29
		epP	31 43
COL		iP	01 28 04
TUC		eP	01 32 32
July 7			
BOZ		eP	07 10 46
July 7			
NEL		e(P)	16 11 00
July 7			
BUT		eP	18 02 28
July 7			
NEL		eP	19 47 45
July 8			
BC		iP	02 15 07.1
		i	15 19.8
		i(S)	16 19.3
BOZ		eP	02 16 03
		e	16 28
		eL	18 19
BUT		eP	02 16 08
		i	16 21
COLU		eL	02 29 39
HH		eP	02 16 40
		iL	18 54
NEL		iP	02 15 09
		i	15 22
RC		eP	02 16 53
		eS	20 28
		eL	21 02
SLC		eP	02 15 15
		eS	16 12
		eL	16 28
July 8			
HH		eP	04 13 21
July 8			
BC		iP	12 56 20.9
		i	56 37.1
		i(S)	57 32.6
BUT		eP	12 57 31
		e	58 15
COL		eP	13 01 29
HH		eP	13 00 14
NEL		iP	12 56 23
		i	56 39
		iL	57 36
SLC		eP	12 57 33
		i	58 53
		e(S)	59 13
July 8			
NEL		eP	13 38 26
July 8			
NEL		eP	19 05 42
		epP	05 58
July 8			
MONT		eP	19 13 22
NEL		eP	19 16 37
July 8			
BC		iP	19 33 06.3
		i(S)	34 14.6
BOZ		eP	19 34 06
		e	34 21
		i	34 38
		iL	36 24
BUT		eP	19 33 59
		i	34 32
		i	34 46
COL		eP	19 38 16
COLU		eL	19 48 04
HH		iP	19 34 22
		iL	36 50

Date and Station		Phase (GCT)
		h m s
NEL	iP	19 33 09.4
	i	33 20.6
RC	eP	19 35 12
SLC	eP	19 33 11
	i	33 43
	e(S)	34 11
	eL	34 23
TUC	eP	19 34 18
	i	34 23
	i	34 34
	i	34 55
	i	36 18
	iS	36 28
	iL	36 53
WASH	eL	19 48 57
July 8		
BC	i(P)	21 02 00.5
NEL	iP	21 01 51.7
July 9		
BC	eP	08 51 09
	i(S)	52 22
BUT	eP	08 52 18
	e	53 08
	e	53 25
COL	eP	08 59 12
COLU	eL	09 05 47
HH	e(P)	08 53 27
	eL	54 57
NEL	iP	08 51 12.7
	i	51 22.5
	i	51 26.5
SLC	eP	08 51 24
	i	51 41
	eL	52 00
July 9		
BC	iP	12 32 24.1
	ipP	32 48.9
BOZ	eP	12 33 03
	epP	33 28
BUT	eP	12 32 59
	ipP	33 24
	eS	43 04
	eL	55 06
COL	iP	12 33 00
	ipP	33 25
	i	33 34
	eS	43 11
	ePS	44 04
	eL	58 20
HH	iP	12 33 00

Date and Station		Phase (GCT)
		h m s
MONT	eP	12 34 07
NEL	iP	12 32 22.7
	ipP	32 46.7
SLC	eP	12 32 47
	epP	33 10
TUC	iP	12 32 29
	ipP	32 53
July 9		
BC	iP	15 49 42.9
	i	49 51.2
BOZ	eP	15 49 17
COL	iP	15 46 07
	i(pP)	46 20
	iPP	47 39
	eS	52 18
	eL	16 01 05
HH	eP	15 48 57
	i	49 08
MONT	eP'	15 57 55
NEL	iP	15 49 43.7
	i	50 09
	e	50 30
July 9		
BOZ	e(P)	18 19 54
July 9		
BC	iP	18 40 25.8
	i	40 31.7
	i	40 40.3
BOZ	iP	18 39 59
BUT	iP	18 39 54
	i	40 11
COL	iP	18 37 00
HH	iP	18 39 42
MONT	eP'	18 48 11
	i	48 17
NEL	iP	18 40 26.4
	i	40 32.6
	i	40 44.2
	i	42 23.6
SLC	iP	18 40 17
TUC	iP	18 40 51
July 9		
NEL	iP	19 42 19.1
July 9		
HH	eP	23 29 35

Date and Station		Phase (GCT)
		h m s
July 10		
BUT	eP	00 35 13
	e	37 17
HH	e(P)	00 35 31
	eL	37 52
July 10		
BOZ	e(P)	01 24 46
	eL	26 39
BUT	eP	01 24 43
HH	e(P)	01 24 38
	eL	27 11
July 10		
NEL	eP	02 49 02
July 10		
NEL	eP	03 08 03
July 10		
COL	iP	03 49 40
	i	49 45
July 10		
COL	iP	04 20 36
NEL	eP	04 16 43
July 10		
HH	eP	05 16 07
July 10		
COL	iP	05 37 46
July 10		
NEL	eP	07 23 09
July 10		
COL	eP	08 19 08
July 10		
COL	eP	09 14 14
July 10		
NEL	eP	12 31 49
July 10		
BUT	eP	14 14 05
HH	eP	14 14 57
July 10		
COL	iP	14 23 46
July 10		
BC	eP	16 13 18
BOZ	eP	16 13 43
HH	eP	16 14 06
MONT	eP	16 04 28
	iP	04 35

Date and Station		Phase (GCT)
		h m s
NEL	iP	16 13 09.5
	iPcP	13 16.7
SLC	eP	16 13 32
TUC	e(P)	16 12 44
	iP	12 51
July 10		
NEL	eP	18 41 43
July 10		
HH	eP	19 06 19
July 10		
HH	e(P)	20 44 43
July 10		
TUC	iP	22 09 17
July 10		
BC	eP	22 40 05
NEL	iP	22 40 03.7
July 10		
BUT	eL	22 53 10
HH	e(P)	22 53 13
SLC	eP	22 53 58
	eS	54 24
July 10		
BOZ	eP	23 10 07
BUT	i(P)	23 10 07
	ePP	14 05
COL	iP	23 08 10
HH	iP	23 09 55
	i	10 15
	epP	10 44
	esP	11 12
	ePP	13 33
	e(P'P')	37 19
MONT	iP'	23 15 59
NEL	eP	23 10 55
	i	14 10.8
TUC	eP'	23 15 05
July 11		
HH	e(P)	00 22 56
July 11		
BOZ	eP	03 28 10
BUT	eP	03 28 01
HH	eP	03 28 08
NEL	iP	03 27 45.7

Date and Station		Phase (GCT) h m s
July 11		
BC	eP	04 59 10
BOZ	eP	04 58 35
BUT	eP	04 58 22
COL	eP	04 59 24
	i	59 28
HH	eP	04 57 58
	e	59 22
	e	05 00 54
NEL	iP	04 59 42.1
	i	59 53.1
	i	05 00 10.0
SLC	eP	04 59 10
TUC	eP	05 00 32
WASH	eL	05 19 05
July 11		
BOZ	eP	07 07 08
BUT	eP	07 06 47
HH	eP	07 07 06
	i	09 39
July 11		
BOZ	eP	10 00 18
	e	00 49
BUT	eP	10 00 30
HH	eP	10 00 37
	eL	03 17
July 11		
BC	iP	10 37 52.2
	ipP	38 01.7
BOZ	eP	10 37 49
BUT	iP	10 37 45
COL	iP	10 35 51
HH	iP	10 37 37
MONT	eP'	10 44 34
NEL	iP	10 37 52.6
	ipP	38 01
	i	38 16
SLC	eP	10 37 56
July 11		
COL	iP	13 39 59
July 11		
BC	eP	15 09 45
BOZ	eP	15 09 41
COL	eP	15 12 56
HH	eP	15 09 28
MONT	eP'	15 16 49
NEL	iP	15 09 47.8
SLC	eP	15 09 49
July 11		
COL	eP	15 41 54
July 11		
HH	e(P)	17 13 54
July 11		
COL	eP	20 01 16
HH	eP	20 03 40
July 11		
HH	e(P)	22 37 09
	iL	39 47
July 12		
HH	e(P)	01 07 53
July 12		
HH	eP	02 35 02
July 12		
NEL	iP	04 58 34.3
July 12		
HH	eP	06 45 23
NEL	e(P)	06 49 59
July 12		
COL	iP	07 37 09
NEL	eP	07 38 09
July 12		
COL	eP	08 28 38
July 12		
COL	eP	08 43 19
July 12		
COL	iP	09 21 21
July 12		
COL	iP	09 32 17
	epP	32 26
July 12		
COL	eP	09 37 31
July 12		
BUT	eP	10 19 28
	eS	20 29
	eL	20 49
HH	eP	10 19 31
	eL	22 09
July 12		
HH	eP	13 22 19
NEL	eP	13 23 40
	e	23 53
July 12		
BC	iP	16 06 29.0
	i	07 40.0
BOZ	eP	16 07 29
BUT	eP	16 07 38
	eS	08 30
	eL	08 46
HH	eP	16 07 39
	iL	10 19
NEL	iP	16 06 33
	iS	06 47
	iL	07 04
SLC	eP	16 06 43
	eS	07 16
	eL	07 28
TUC	eP	16 07 45
	i	08 18
July 12		
BC	eP	17 43 03
	i	43 13.9
BOZ	eP	17 42 36
COL	iP	17 39 20
	iS	45 01
	eL	47 20
HH	iP	17 42 15
NEL	iP	17 43 04.3
SLC	eP	17 43 10
TUC	eP	17 43 32
July 12		
BC	eP	17 55 49
	i	56 01.4
BOZ	eP	17 55 24
COL	iP	17 52 06
HH	eP	17 55 01
NEL	eP	17 55 51
	e	58 03
SLC	eP	17 55 58
July 12		
BC	eP	17 58 01
	i	58 09
BOZ	eP	17 57 37
COL	iP	17 54 18
HH	eP	17 57 14
NEL	eP	17 58 03
July 12		
BC	eP	19 02 40
BOZ	eP	19 02 10
COL	iP	18 58 53
	i	59 17
HH	eP	19 01 45
	e	03 54
	e	04 09
NEL	eP	19 02 41
	e(S)	02 55
July 12		
MONT	iP	19 02 18
July 12		
BC	eP	22 05 55
	ipP	06 07.5
	i	06 16.0
BOZ	eP	22 05 29
COL	iP	22 02 12
	ipP	02 24
	i	02 40
	i	02 49
HH	eP	22 05 08
	ipP	05 20
NEL	iP	22 05 56.6
	iPoP	06 08.6
	ipP	06 20.4
	isP	06 26.6
	ePP	07 32
July 12		
HH	e(P)	23 21 28
July 13		
COL	iP	00 19 37
HH	eP	00 22 44
NEL	iP	00 23 32.6
July 13		
SLC	eP	01 26 22
July 13		
BC	iP	02 09 00.2
COL	iP	02 05 05
	i	05 16
HH	eP	02 08 00
NEL	iP	02 09 21.4

Date and Station		Phase (GCT) h m s
July 13		
BC	eP	02 58 43
	e	58 52
HH	eP	02 57 18
NEL	iP	02 58 46.2
July 13		
HH	e(P)	03 29 09
July 13		
BC	eP	04 05 24
COL	iP	04 01 37
HH	eP	04 04 32
July 13		
COL	eP	05 42 54
July 13		
HH	e(P)	06 48 58
July 13		
BC	eP	08 18 07
	e	18 17
	e	18 31
BOZ	eP	08 18 29
BUT	eP	08 18 19
	ePP	22 38
	eSKS	28 37
	iS	29 08
	ePS	31 09
	eSS	36 03
	eSSS	39 37
	eL	42 25
CHI	ePP	08 24 09
	ePS	34 14
	eSS	40 31
	eL	51 17
COL	eP	08 17 02
	iP	17 04
	i	17 14
	i	17 30
	eS	27 10
	ePPS	28 19
	eL	37 10
COLU	eP'	08 23 45
	eL	55 39
HONO	e(S)	08 22 34
	eL	27 36
HH	eP	08 18 15
	ePP	22 09
NEL	iP	08 18 14.2
	i	18 23.0
SLC	e(P)	08 18 43
	ePP	22 44
	eSKS	29 28

Date and Station		Phase (GCT) h m s
SLC	eSS	08 32 21
	eL	51 30
SJ	ePP	08 24 21
SIT	eP	08 17 21
	e	18 11
	eS	27 46
	eL	38 42
TUC	e(P)	08 18 44
	eL	44 22
July 13		
NEL	e(P)	14 56 52
July 13		
NEL	eP	16 33 55
July 13		
NEL	eP	20 10 50
July 13		
NEL	eP	21 32 01
July 13		
BOZ	eP	22 17 45
BUT	eP	22 17 24
	eL	42 04
COL	iP	22 14 15
HH	eP	22 17 19
July 14		
HH	e(P)	02 02 14
July 14		
NEL	eP	03 56 57
July 14		
HH	e(P)	04 08 15
WASH	e(P')	04 18 31
	e	18 47
July 14		
NEL	eP	04 30 46
July 14		
HH	e(P)	04 40 59
July 14		
COL	eP	06 16 27
HH	eP	06 19 20
NEL	e(P)	06 20 45
July 14		
HH	eP	07 30 34
July 14		
COL	eP	07 42 45
July 14		
SLC	iP	07 59 49
	i	08 00 05

Date and Station		Phase (GCT) h m s
SLC	i	08 00 19
	e	00 46
July 14		
COL	eP	10 10 07
July 14		
COL	eP	10 13 47
NEL	eP	10 14 03
July 14		
NEL	iP	10 17 48
July 14		
COLU	eP	11 46 35
HH	eP	11 49 20
NEL	eP	11 48 11
	e	48 18
July 14		
BC	eP	13 29 28
July 14		
NEL	eP	15 08 41
July 14		
NEL	e(P)	15 11 58
July 14		
HH	e(P)	17 08 55
NEL	e(P)	17 09 05
July 14		
BC	iP	17 53 24
July 14		
HH	eP	18 14 35
TUC	eP	18 14 45
July 14		
BC	iP	23 54 36.6
BOZ	eP	23 54 09
COL	iP	23 50 53
HH	eP	23 53 45
NEL	iP	23 54 37.7
SLC	iP	23 54 49
TUC	e(P)	23 55 08
July 15		
BC	eP	00 15 36
	i	15 45
BOZ	eP	00 16 13
BUT	eP	00 16 14
	eS	26 30
	eSoS	27 12
	eL	37 20

Date and Station		Phase (GCT) h m s
COL	iP	00 16 04
	eS	26 22
	e(SoS)	27 05
	eL	34 52
HONO	e(S)	00 17 32
	eL	19 54
HH	eP	00 16 09
NEL	eP	00 15 33
	iP	15 38.2
SLC	eP	00 16 15
	eS	26 45
	eL	37 36
SIT	e(P)	00 15 18
	eP	15 28
	eS	25 54
	ePPS	26 49
	eSS	31 14
	eL	35 38
TUC	eP	00 15 43
	e	16 08
	ePP	18 49
	eS	25 36
	eSS	30 36
	eL	38 30
July 15		
COL	eP	00 29 26
July 15		
BC	iP	00 46 28.2
BOZ	eP	00 47 05
BUT	eP	00 47 02
	e	47 27
COL	eP	00 46 57
	iP	47 00
HH	eP	00 47 04
MONT	eP'	00 55 54
NEL	eP	00 46 24
	e	49 20
SLC	eP	00 47 10
TUC	eP	00 46 31
	iP	46 37
July 15		
BUT	e(P)	01 34 07
NEL	eP	01 30 00
	i	30 15.4
July 15		
NEL	eP	06 09 18
July 15		
BC	eP	06 32 00

Date and Station		Phase	(GCT) h m s
COL		iP	06 32 42
NEL		eP	06 31 57
TUC		eP	06 32 03
July 15 BC		iP	08 51 11.3
COL		iP	08 55 44
HH		eP	08 52 35
NEL		eP	08 51 08
TUC		eP	08 50 21
July 15 NEL		eP	09 02 33
July 15 COL		iP	09 48 19
		i	50 17
		i	50 20
		e	50 38
July 15 BC		eP	13 29 28
BOZ		eP	13 28 26
BUT		eP	13 28 14
		eS	32 10
		eL	32 36
COL		eP	13 27 49
		ePP	31 57
HH		iP	13 27 45
		e(S)	30 09
		eL	31 22
NEL		iP	13 29 29
SLC		eP	13 29 20
SIT		eP	13 25 30
		eS	26 02
		eL	26 09
TUC		eP	13 30 15
July 15 HH		e(P)	15 37 40
July 15 COL		eP	16 57 35
NEL		eP	16 57 04
		e	57 07
July 15 COL		eP	19 29 05
July 16 HH		eP	02 42 19
NEL		iP	02 41 11.3
TUC		eP	02 40 46
July 16 BC		eP	03 11 27
TUC		eP	03 11 40
July 16 COL		iP	07 48 17
July 16 BC		eP	09 10 46
		eS	12 44
		eL	13 12
BUT		e(P)	09 12 54
		eS	16 07
		eL	16 41
HH		e(P)	09 13 20
SLC		e	09 14 54
		eL	15 53
July 16 HH		e(P)	12 00 14
July 16 BC		iP	12 53 22.5
		i	53 35.8
BOZ		eP	12 53 00
BUT		iP	12 52 53
		e	53 14
COL		iP	12 49 59
HH		iP	12 52 41
SLC		iP	12 53 34
TUC		eP	12 53 49
July 16 HH		e(P)	15 37 36
July 16 HH		e(P)	16 20 21
July 16 HH		e(P)	16 32 15
July 16 HH		e(P)	18 17 48
July 16 COL		iP	23 01 31
HH		eP	23 04 38
NEL		eP	23 02 21
SLC		eP	23 03 33
TUC		eP	23 01 20
July 16 BOZ		e(P)	23 40 13
July 17 BUT		eP	00 04 52
		e(S)	06 28
HH		eP	00 04 36
		eL	07 23
July 17 NEL		eP	00 38 51
		i	39 40.4
July 17 BOZ		eP	01 55 17
BUT		eP	01 55 33
		eS	57 26
HH		eP	01 55 31
SLC		eP	01 54 52
		eS	55 09
		eL	55 27
July 17 HH		e(P)	05 46 18
SLC		eP	05 43 56
		eS	44 18
		iL	44 20
July 17 NEL		eP	06 00 53
July 17 HH		eP	06 19 21
July 17 NEL		e(P)	10 39 06
July 17 HH		e(P)	11 24 57
July 17 BOZ		eP	11 30 18
COL		iP	11 31 13
HH		iP	11 30 18
NEL		eP	11 30 07
SLC		eP	11 30 13
July 17 HH		e(P)	18 17 06
July 17 HH		e(P)	18 57 52
NEL		eP	18 57 49
		e	57 56
		ePP	59 58
July 17 HH		iP	19 22 34
NEL		iP	19 22 53.5
July 17 HH		i(P)	20 43 16
July 17 HH		e(P)	22 08 09
SLC		eP	22 04 09
		i	05 33
July 17 NEL		iP	22 35 50
July 18 SLC		eP	00 03 27
July 18 BC		iP	01 00 48.0
BOZ		eP	01 02 22
BUT		eP	01 02 26
		e(S)	07 05
		eL	08 54
HH		eP	01 02 47
NEL		iP	01 00 44.1
		i	01 01.1
		iPP	01 18.1
		i	01 47.1
PHIL		e	01 12 04
		eL	15 55
SLC		eP	01 01 35
TUC		iP	00 59 50D
		eS	01 02 58
July 18 COL		eP	05 17 10
July 18 BC		eP	06 44 29
		iP	44 31.8
		eS	52 31
		eP'P'	07 14 16
BOZ		eP	06 43 55
BUT		iP	06 43 48
		eS	51 06
		eL	56 54
COL		iP	06 40 15
		eS	44 43
		eL	45 59
COLU		iP	06 46 27
		eL	07 13 26
HH		iP	06 43 30
		i	43 42
		iPcP	44 52
		e	48 44

Date and Station		Phase (GCT)
		h m s
HH	eP'P'	07 13 53
MONT	eP'	06 53 51
	ePKS	57 10
NEL	iP	06 44 32.5
	i	44 45.9
	iPcP	45 14.2
	iP'P'	07 14 24.2
SLC	iP	06 44 18
SJ	eP	06 48 07
TUC	iP	06 45 05
	eP'P'	07 14 04
July 18		
BC	iP	09 19 48.8
	iPP	19 53.8
	eS	29 48.5
BOZ	eP	09 19 28
	i	19 34
BUT	eP	09 19 22
	i	19 28
	e	23 12
	e	25 20
	iS	28 55
	iScS	29 26
	eSS	33 06
	e	35 50
	eL	38 12
CHI	eSKS	09 31 07
	iS	31 32
	eSS	37 13
	eL	44 13
COL	iP	08 16 37
	i	16 50
	iS	23 50
	e	24 28
	eScS	26 17
	eL	27 24
COLU	ePP	09 25 41
	e	26 12
	eSKS	31 59
	ePS	34 25
	eSS	39 53
	eL	53 04
HONO	eS	09 24 48
	eL	32 18
HH	eP	09 19 09C
	iP	19 11
	iPcP	19 36
	ePP	21 47
	eS	28 32
	e(ScS)	29 04
	e	46 41
MONT	iP'	09 27 34D
NEL	iP	09 19 49.3
	i	19 54.5

Date and Station		Phase (GCT)
		h m s
NEL	i	09 20 15.3
	i	20 29.3
	iPP	23 10.1
PHIL	eSKS	09 31 53
	eS	32 43
	eL	44 24
SLC	eP	09 19 43
	iP	19 47
	i	20 29
	eS	29 30
	e(SS)	34 03
	eL	40 09
TUC	iP	09 20 13.5
	ipP	20 26
	ePP	23 30
	eS	30 33
	ePS	31 37
	e	39 36
July 18		
NEL	e(P)	10 25 46
July 18		
COL	eP	10 47 09
	iP	47 10
HH	eP	10 49 43
NEL	eP	10 50 23
July 18		
COL	eP	11 09 04
HH	eP	11 11 03
July 18		
HH	eP	12 58 08
NEL	eP	12 58 37
	e	59 02
July 18		
COL	e(P)	13 31 01
HH	iP	13 31 43
July 18		
COL	iP	14 29 12
HH	eP	14 31 44
NEL	eP	14 32 23
	e	32 40
July 18		
BOZ	eP	14 55 17
COL	eP	14 54 28
HH	iP	14 55 12
NEL	eP	14 56 02
SJ	eP	14 54 26

Date and Station		Phase (GCT)
		h m s
July 18		
BC	iP	15 20 27.9
COL	iP	15 20 55
HH	eP	15 21 00
NEL	iP	15 20 26.8
July 18		
COL	iP	16 02 05
HH	eP	16 04 37
July 18		
BC	iP	20 05 42.7
	ipP	07 10.7
	i(S)	16 11.9
BUT	e(SKS)	20 16 37
COL	iP	20 06 17
NEL	iP	20 05 42.5
	epP	07 09.0
TUC	eP	20 05 45
July 18		
BOZ	eP	22 35 10
July 19		
BOZ	eP	00 08 50
NEL	eP	00 08 10.7
July 19		
HH	eP	00 22 08
July 19		
BC	eP	02 26 35
BOZ	eP	02 27 07
HH	iP	02 27 24
MONT	iP	02 15 49
NEL	iP	02 26 33.5
	ipP	26 41.7
	e	26 57.8
TUC	eP	02 26 04
	e	26 11
July 19		
HH	e(P)	02 47 08
MONT	iP	02 35 14
NEL	iP	02 45 49.6
	ipP	46 17.9
July 19		
NEL	eP	03 57 31
	ipP	57 48.8

Date and Station		Phase (GCT)
		h m s
July 19		
BC	eP	05 39 17
NEL	eP	05 39 13
TUC	eP	05 38 20
July 19		
BOZ	eP	07 09 18
COL	eP	07 14 37
HH	eP	07 09 24
SLC	eP	07 09 10
July 19		
BOZ	eP	09 31 07
HH	eP	09 31 14
July 19		
NEL	eP	11 12 17
	e	12 20
July 19		
BOZ	eP	17 33 55
COL	eP	17 31 52
HH	iP	17 33 41
MONT	iP	17 40 48
July 19		
NEL	eP	18 44 25
July 19		
BC	eP	19 20 10
BUT	e	19 28 37
	eL	31 06
NEL	eP	19 20 07
	i	20 28.0
SLC	eP	19 21 08
TUC	eP	19 19 18
July 19		
NEL	iP	19 55 15.2
July 19		
NEL	iP	20 47 31.4
July 19		
NEL	iP	23 47 19.5
July 20		
BC	iP	00 12 19.8
	i	12 26.2
BOZ	eP	00 13 50
BUT	eP	00 14 18
	eS	16 00

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Date and Station		Phase	(GCT)
			h m s
HH		e(P)	00 14 16
		eL	17 05
NEL		iP	00 12 23.4
		i	12 30.1
SLC		eP	00 13 20
		iS	14 20
		eL	14 32
July 20			
NEL		e(P)	00 45 20
July 20			
BOZ		eP	01 44 29
BUT		eP	01 44 22
		eL	46 07
HH		e(P)	01 44 17
		eL	46 55
NEL		eP	01 43 06
		i	43 23
		i	43 35
		iS	43 47
		eL	43 54
SLC		e(P)	01 43 19
		e	43 40
		eL	44 38
July 20			
HH		e(P)	02 16 43
MONT		eP	02 01 05
NEL		eP	02 13 50
		i	14 09
		i	14 18
July 20			
HH		e(P)	03 01 51
July 20			
COLU		eP	07 17 26
July 20			
BC		e(P)	12 14 33
		e	15 42
		i	15 46
		iS	16 43
BOZ		eP	12 15 55
BUT		eP	12 15 53
		eS	17 27
HH		e(P)	12 16 14
		eL	18 21
NEL		eP	12 14 37
		i	14 42
		i	15 42
SLC		eP	12 14 48
		e	15 05
		eS	15 46
		eL	16 00

Date and Station		Phase	(GCT)
			h m s
July 20			
BUT		eP	15 32 22
July 20			
HH		e(P)	15 52 20
NEL		iP	15 53 44.6
July 20			
NEL		eP	17 27 13
July 20			
BUT		eP	18 00 18
HH		eP	18 01 11
July 20			
SLC		iP	20 29 27
July 20			
BC		eP	22 29 16
BOZ		eP	22 29 54
COL		iP	22 33 18
COLU		iP	22 27 34
HH		iP	22 30 22
NEL		iP	22 29 14.4
		e	29 57
July 20			
BC		eP	22 58 05
COL		iP	22 58 46
NEL		iP	22 58 04.2
		e	58 39
TUC		eP	22 58 09
July 20			
COL		iP	23 50 54
July 20			
COL		iP	23 59 56
July 21			
COL		iP	03 25 50
July 21			
COL		iP	04 50 27
		iPcP	50 33
HH		iP	04 52 31
		ePP	56 27
NEL		e(P')	04 57 22
		iPP	57 47
SLC		ePP	04 57 24
TUC		eP'	04 57 32
July 21			
BC		eP	08 54 19
		i	54 25.6

Date and Station		Phase	(GCT)
			h m s
BOZ		e(P)	08 53 59
COL		eP	08 51 15
		i	51 19
		e	51 33
HH		eP	08 53 42
NEL		iP	08 54 19.3
SLC		eP	08 54 21
July 21			
COL		eP	12 59 47
July 21			
COL		eP	13 28 38
July 21			
BC		iP	14 02 40.1
BOZ		eP	14 02 22
BUT		eP	14 02 15
COL		eP	13 59 37
HH		eP	14 02 04
MONT		eP'	14 10 22
NEL		iP	14 02 41.4
		i	03 03.3
SLC		eP	14 02 37
July 21			
COL		eP	14 07 50
July 21			
COL		iP	16 44 24
HH		e(P)	16 47 34
NEL		eP	16 48 10
July 21			
COL		eP	23 46 15
July 22			
NEL		e(P)	00 51 13
July 22			
NEL		eP	02 39 53
July 22			
COL		iP	07 39 09
		ipP	39 30
July 22			
BC		eP	10 56 08
July 22			
HH		eP	12 20 16
		e	22 32
NEL		eP	12 21 20

Date and Station		Phase	(GCT)
			h m s
July 22			
HH		e(P)	12 42 07
July 22			
COL		eP	13 47 30
July 22			
COL		eP	18 24 01
HH		e(P)	18 24 50
NEL		eP	18 25 57
July 22			
BC		eP	22 37 06
COL		iP	22 39 57
COLU		eP	22 36 05
HH		iP	22 37 21
NEL		iP	22 36 57.1
		i	37 02.4
SLC		eP	22 36 48
SJ		eP	22 30 10
		i	30 19
		e	31 00
		e(S)	31 08
		i(S)	31 17
		iL	31 30
July 23			
COL		iP	03 25 28
July 23			
BC		iP	04 45 25.9C
		ipP	45 35.9
		eS	55 18
BOZ		eP	04 45 58
BUT		eP	04 46 04C
		ipP	46 17
		e	48 22
		e	50 47
		iS	56 27
		eScS	56 48
		ePS	57 29
		eSS	05 02 11
		eSSS	06 45
		eL	08 18
CHI		eP	04 45 00N
		eS	54 24
		e	57 56
		eSS	05 02 52
COL		eP	04 52 03
		epP	52 16
COLU		iP	04 44 07
		ipP	44 17
		ePP	46 28
		eS	52 40
		iS	52 42

B 4297-4

Date and Station		Phase (GCT)
		h m s
COLU	isS	04 53 04
	eScS	54 10
	eSS	57 03
	e(L)	58 28
HH	iP	04 46 14.5C
	i	46 26
	eSKS	56 35
	e	59 05
	ePKKP	05 04 16
	eP'P'	12 35
NEL	iP	04 45 24.8C
	i	45 30.8
	ipP	45 35.8
	i	45 55.8
PHIL	iP	04 44 40N,W
	e(PP)	47 02
	eS	53 37
	iS	53 51
	eSS	58 19
	eL	05 03 28
SLC	eP	04 45 30
	i	46 50
SJ	iP	04 42 12C
	ipP	42 27
	iPP	44 09
	eS	49 08
	eScS	51 43
	eSS	52 44
	eL	54 12
TUC	iP	04 44 57C
	ipP	45 08
	e(PP)	48 11
	eS	54 26
	e(SS)	58 39
	eL	05 02 47
WASH	iP	04 44 39
	ipP	44 51
	eScS	45 05
July 23		
COL	iP	05 54 08
July 23		
BUT	eP	06 37 43
HH	e(P)	06 36 29
	eL	38 39
SLC	eP	06 35 00
July 23		
COL	iP	06 56 37
July 23		
COL	iP	08 46 51
July 23		
BUT	iP	12 20 28
July 23		
COL	iP	14 57 09

Date and Station		Phase (GCT)
		h m s
NEL	eP	15 03 53
	e	04 20
July 23		
BC	iP	15 15 44
BUT	eP	15 16 16
COL	iP	15 16 08
HH	iP	15 16 17
NEL	iP	15 15 43.6
SLC	eP	15 16 25
July 23		
NEL	e(P)	19 29 03
July 23		
BC	iP	20 41 15.1
MONT	iP	20 36 56
	i(S)	37 17
	iL	38 10
NEL	iP	20 41 14.0
TUC	eP	20 41 19
July 23		
HH	iP	20 48 10
	ipP	48 40
NEL	iP	20 47 20.9
	ipP	47 48.8
	isP	48 02.1
	i	48 14.2
SJ	iP	20 43 23
July 23		
BC	eP	21 05 26
COL	iP	21 05 23
NEL	iP	21 05 25.3
	i	05 37.1
	e	07 49
TUC	eP	21 05 35
July 23		
COL	eP	23 30 33
July 24		
COL	eP	01 05 09
HH	iP	01 06 00
July 24		
HH	e(P)	05 21 55
July 24		
COL	eP	06 56 23
HH	eP	06 58 13
NEL	iP	06 58 27.5

Date and Station		Phase (GCT)
		h m s
July 24		
HH	e(P)	07 29 49
July 24		
BOZ	eP	07 33 16
HH	iP	07 33 03
NEL	iP	07 33 18.0
SLC	eP	07 33 40
July 24		
COL	eP	07 46 10
July 24		
HH	iP	09 06 48.5
	i	07 16
MONT	iP	08 54 57
NEL	eP	09 06 00
TUC	eP	09 05 30
July 24		
COL	eP	09 32 47
July 24		
BC	iP	09 54 19.0
COL	iP	09 54 14
HH	e(P)	09 54 42
NEL	iP	09 54 18.4
TUC	iP	09 54 26.5
July 24		
COL	iP	17 26 44
NEL	eP	17 26 01
July 24		
HH	e(P)	20 56 46
July 24		
BC	iP	21 56 58.1
COL	iP	21 56 52
	ipP	57 04
NEL	iP	21 56 56
	ipP	57 09.7
TUC	eP	21 57 06
	epP	57 18
July 25		
BOZ	e(P)	04 29 43
	e	31 25
HH	e(P)	04 31 12
NEL	eP	04 31 29

Date and Station		Phase (GCT)
		h m s
July 25		
BC	eP	06 26 05
HH	e(P)	06 26 38
NEL	eP	06 26 04
	e	27 47
	e	29 13
July 25		
COL	eP	07 11 57
July 25		
NEL	eP	10 49 13
	iP	49 17.5
July 25		
HH	eP	11 01 58
	eS	03 14
BC	iP	11 08 44.1
BOZ	eP	11 09 00
COLU	eP	11 05 44
	eS	10 08
	eL	13 26
HH	eP	11 09 24
NEL	eP	11 08 41
	i	08 48.9
SLC	eP	11 08 44
SJ	iP	11 02 48
	i	03 10
	i	04 43
TUC	eP	11 08 07
July 25		
BC	eP	13 43 52
BOZ	eP	13 45 50
NEL	eP	13 43 47
	iP	43 49
TUC	eP	13 42 55
July 25		
TUC	e(P)	14 47 26
July 25		
BOZ	eP	15 03 21
COL	eP	15 00 44
	iP	00 47
	i	00 55
	eS	02 55
	eL	03 02
HH	e(P)	15 02 49
NEL	iP	15 04 29.2
SLC	eP	15 04 00

Date and Station	Phase	Phase (GCT) h m s
SIT	eP	14 59 10
	iS	59 24
	iL	59 28
TUC	e(P)	15 05 09
July 25		
BOZ	eP	15 09 28
BUT	eP	15 09 04
	i	09 11
	i	10 27
July 25		
COL	iP	16 19 17
HH	iP	16 20 03
	i	20 25
July 25		
HH	e(P)	17 35 28
July 25		
HH	iP	18 31 34
NEL	eP	18 30 50
	ePP	32 04
July 25		
COL	iP	18 57 22
	i	57 36
	i	57 46
HH	eP	18 56 35
MONT	eP	18 45 47
July 25		
COL	eP	19 40 31
	e(P')	43 49
	i(PP)	44 25
July 26		
COL	iP	00 17 12
HH	iP	00 19 22
July 26		
COL	iP	00 45 26
July 26		
SJ	eP	00 57 02
July 26		
HH	e(P)	03 06 09
July 26		
BOZ	e(P)	05 29 47
July 26		
MONT	iP	06 17 43
	eL	19 10
NEL	e(P)	06 26 13
July 26		
MONT	iP	08 50 00
NEL	e(P)	08 57 37
SLC	e(P)	08 57 27
TUC	eP	08 57 21
July 26		
COL	eP	11 45 24
July 26		
COL	eP	13 26 43
July 26		
COL	eP	15 27 09
	e	27 17
	e	27 23
July 26		
COL	eP	15 39 24
July 26		
COL	iP	15 59 24
NEL	e(P)	15 57 47
July 26		
COL	iP	16 49 35
July 26		
COL	iP	17 16 43
July 26		
NEL	iP	17 22 35.9
SJ	iP	17 24 25
July 26		
NEL	eP	17 33 33
July 26		
COL	eP	18 13 02
July 26		
BC	e(P)	18 19 31
July 26		
COL	iP	18 20 33
HH	iP	18 18 58
NEL	iP	18 18 57.9
SJ	e(P)	18 12 48
	e	13 06
	e(S)	17 09
	eL	19 15
July 26		
BC	e(P)	19 18 03
BOZ	eP	19 18 34
HH	eP	19 18 56
MONT	eP	19 14 11
NEL	iP	19 17 59.1
SLC	eP	19 18 10
SJ	iP	19 14 06
TUC	eP	19 17 22
July 26		
BC	iP	20 28 28.7
	eS	38 49
BOZ	eP	20 28 59
	e	29 15
BUT	eP	20 29 04
	i	29 22
	e(PP)	32 40
	iSKS	39 35
	iS	40 07
	eSSS	50 42
CHI	eP	20 28 13
	iS	38 25
	e(SS)	43 13
	eSSS	47 23
	eL	50 43
COL	iP'	20 34 35
	iPKKP	44 44
COLU	iP	20 27 29
	ePP	30 20
	iS	37 00
	i	37 30
	eSSS	44 36
	eSS	41 46
HH	iP	20 29 14C
	e	29 33
	e(PP)	32 45
	eSKS	39 44
	iPKKP	46 01
	i	46 32
	i	52 49
	eP'P'	54 18
MONT	iP	20 20 09
	iS	23 38
	iL	24 25
NEL	iP	20 28 26.3
	i	28 43.0
	e	30 52
	iPKKP	46 29.6
RC	eP	20 28 44
	eS	39 06
	e	39 28
	e(ScS)	39 55
	eL	52 30
SLC	eP	20 28 41
	iP	28 42
	i	28 58
	e(S)	39 03
	e	39 25
	eSSS	49 00
SJ	iP	20 25 48
	e(PP)	28 33
	iS	33 50
	e	34 14
	eSS	38 24
	eL	40 28
TUC	iP	20 28 03C
	i	28 24
	ePP	31 23
	eS	38 06
	ePPS	39 03
	eSS	43 33
	eL	50 14
WASH	iP	20 27 54
	e	28 19
	e	28 38
July 26		
NEL	iP	20 52 03.0
	i	52 07.0
July 26		
HH	iP	21 57 13
July 26		
BOZ	eP	22 20 43
BUT	eP	22 20 51
	e(S)	29 52
	eSS	34 04
	eL	36 43
CHI	eP	22 18 39
	ePP	20 21
	e(S)	25 47
	eL	29 27
COL	eP	22 22 33
	iP	22 34
COLU	eP	22 17 38
	ePP	19 13
	e(S)	23 50
	eL	26 41
HH	e(P)	22 20 57
MONT	eP	22 17 46
NEL	iP	22 20 57.2
	e(PKKP)	40 53
	eP'P'	49 19
RC	eP	22 20 08
	e(S)	28 26
	eL	37 45
SLC	eP	22 20 45
	eS	29 35
	e	30 04
	eL	38 17
	e(P'P')	48 03
SJ	eP	22 14 59
	iP	15 00
	iPP	15 37

B 4297-4

Date and Station		Phase (GCT) h m s
SJ	eS	22 19 10
	eL	20 35
TUC	eP	22 20 35
	e(S)	29 40
	eL	39 32
WASH	eP	22 17 36
June 26		
COL	eP	22 36 48
	iP	36 50
	i	36 59
July 26		
NEL	e(P)	23 56 23
July 27		
BOZ	eP	01 39 39
SLC	eP	01 39 31
	i	39 53
July 27		
HH	iP	03 40 06
	i	40 34
MONT	iP	03 28 36
	i(S)	29 01
	iL	29 24
NEL	iP	03 39 17.1
	iPP	39 57.4
July 27		
COL	iP	05 07 13
July 27		
BC	iP	06 57 45.0
	i	58 54.5
BOZ	eP	06 57 31
BUT	e(P)	06 57 35
	eL	07 23 42
COL	iP	06 59 21
COLU	iP	06 54 26
	e(PP)	55 58
	eS	07 00 43
	eL	03 48
HH	iP	06 57 45
	i	58 08
NEL	iP	06 57 44.9
SLC	iP	06 57 31
SJ	iP	06 51 45
	eS	55 57
	eL	57 36
TUC	eP	06 57 22
	eL	07 20 20
July 27		
NEL	eP	10 20 56
July 27		
COL	eP	13 21 13
July 27		
COL	eP	13 43 19
	i	44 37
July 27		
COL	iP	14 07 33
	i	07 43
July 27		
NEL	eP	20 11 40
July 27		
BC	eP	21 08 54
BOZ	eP	21 08 37
BUT	eP	21 08 47
COL	i(P)	21 10 30
COLU	eP	21 05 36
	ePP	07 11
	eS	11 45
	eL	14 46
HH	eP	21 08 54
NEL	iP	21 08 53.9
SLC	eP	21 08 30
SJ	eP	21 02 57
TUC	eP	21 08 35
July 27		
COL	iP	22 54 04
SLC	eP	22 59 06
July 27		
SJ	e(P)	23 49 36
July 28		
HH	e(P)	01 15 16
July 28		
NEL	e(P)	02 07 27
July 28		
HH	eP	03 14 04
July 28		
NEL	eP	03 45 15
July 28		
COL	iP	04 10 19
July 28		
COL	eP	04 16 52
	i	17 04
NEL	eP	04 20 48
	e	21 02
July 28		
HH	iP	06 56 56
July 28		
HH	e(P)	08 18 29
July 28		
BC	eP	08 32 04
COL	iP	08 27 44
HH	eP	08 31 07
NEL	iP	08 32 03.7
July 28		
HH	e(P)	12 04 50
July 28		
COL	iP	14 54 12
	iS	55 24
July 28		
BC	e(P)	16 49 39
July 28		
NEL	e(P)	20 15 46
July 28		
NEL	e(P)	21 36 23
July 28		
NEL	iP	22 45 25.0
July 28		
SLC	eP	22 54 42
July 28		
SLC	eP	23 00 26
July 28		
HH	eP	23 22 14
July 29		
HH	iP	00 25 55
MONT	iP	00 15 04
	i(S)	15 53
	iL	16 35
NEL	iP	00 25 04.9
	ipP	25 32.0
SJ	iP	00 21 05
July 29		
BOZ	eP	00 36 31
July 29		
BC	e(P)	02 34 49
COL	eP	02 30 42
HH	eP	02 33 54
	e	35 31
NEL	iP	02 34 55.5
	epP	35 14
SLC	eP	02 34 42
July 29		
HH	e(P)	03 00 43
July 29		
HH	e(P)	03 25 07
	e	25 28
July 29		
BC	iP	03 34 33.3
	i	35 59.7
BOZ	eP	03 35 03
	e(pP)	35 41
	ePP	37 49
BUT	iP	03 35 09
COL	eP	03 37 16
COLU	eP	03 32 46
	epP	33 14
	e(S)	40 08
HH	iP	03 35 22
	ipP	35 50
NEL	iP	03 34 31.6
	ipP	34 57.7
	isP	35 09.9
SLC	iP	03 34 44
SJ	iP	03 30 32
	i	31 20
TUC	iP	03 34 01
July 29		
BC	P	03 44 44.1
	i	44 58.7
	iPcP	45 20.5
BOZ	iP	03 44 15
	e	44 28
	ePPP	47 41
	eP'P'	04 14 05
BUT	iP	03 44 08
	i(PcP)	44 46
	ePPP	47 28
	eS	52 03
	e(SS)	56 28
	eL	58 38
CHI	eP	03 45 47
	ePPP	50 13
	eS	55 13
	eScS	56 04
	eL	04 04 36
COL	iP	03 40 49
	eS	56 01
	e	56 58
	eL	57 47

B 4287-4

Date and Station		Phase	(GCT)
			h m s
COLU	i(P)		03 46 42
	e(S)		57 03
	eSS		04 01 41
	eSSS		06 04
	eL		08 34
HH	iP		03 43 52D
	i		44 07
	iPcP		44 56
	e(PP)		46 06
	eS		51 32
	eP'P'		04 13 58
MONT	eP'		03 53 42
	ePKS		57 44
NEL	iP		03 44 45.1
	i		44 59.7
	eP'P'		04 13 55
PHIL	eP		03 46 25W
	e(PP)		49 18
	eS		56 24
	eSS		04 01 41
	e(SSS)		05 57
	eL		07 34
RC	eP		03 44 53
	ePP		47 36
	eS		53 24
	i(S)		53 32
SLC	iP		03 44 34
	i		44 48
	eS		52 54
SIT	iP		03 41 48
	ePP		43 18
	eS		47 54
	eL		50 40
TUC	iP		03 45 16
	i(pP)		45 31
	i		45 52
	e(S)		54 27
	eSS		58 09
	eL		04 04 48
WASH	iP		03 46 26
July 29			
BOZ	eP		04 16 19
COL	eP		04 12 20
	e		12 34
	i		12 54
	iPP		13 06
HH	iP		04 15 57
NEL	eP		04 16 50
July 29			
HH	eP		04 53 58
July 29			
TUC	eP		05 18 54

Date and Station		Phase	(GCT)
			h m s
July 29			
COL	eP		05 27 34
July 29			
BC	iP		06 40 53.3
	i(S)		51 06.0
BOZ	ePP		06 45 23
BUT	e(P)		06 41 22
	eSKS		51 44
	eS		52 33
	eSS		58 47
COL	iP		06 41 29
HH	eP		06 41 28
	ePP		45 19
	iSKS		51 46
NEL	iP		06 40 51.9
	iPP		44 20.0
	i		44 26.7
SLC	iP		06 41 15
TUC	iP		06 40 55
	i		41 13
July 29			
BC	i(P)		06 48 43.7
BOZ	e(P)		06 48 15
COL	iP		06 44 48
HH	e(P)		06 47 51
NEL	eP		06 48 44
	e		48 59
	e		49 14
July 29			
BC	e(P)		08 32 51
COL	iP		08 29 00
July 29			
COL	iP		08 45 31
HH	eP		08 48 34
NEL	e(P)		08 49 28
July 29			
HH	e(P)		08 54 37
July 29			
COL	eP		09 30 11
	i		32 20
	i		33 57
July 29			
BC	e(P)		09 33 22
	e		35 08
COL	eP		09 34 43
	i		34 57

Date and Station		Phase	(GCT)
			h m s
HH	iP		09 33 07.5
	i		33 14
	e		35 34
NEL	eP		09 33 21
	i		33 26.4
	e		34 11
	e		35 10
	i		35 31.6
SLC	eP		09 33 27
	e		34 11
TUC	eL		10 03 38
July 29			
HH	eP		10 29 01
NEL	iP		10 29 15.6
July 29			
BC	e(P)		13 49 34
COL	iP		13 45 20
July 29			
COL	eP		13 59 07
July 29			
BC	eP		14 04 11
COL	iP		14 00 15
HH	eP		14 03 19
NEL	iP		14 04 11.9
SLC	eP		14 04 01
July 29			
COL	eP		14 11 58
July 29			
BC	e(P)		14 50 16
COL	iP		14 46 21
July 29			
BC	e(P)		16 17 55
July 29			
SLC	eP		20 56 53
	eL		58 32
July 29			
BC	e(P)		21 49 01
MONT	iP		21 38 01
	i(S)		38 18
	iL		38 35
July 29			
BC	e(P)		22 18 57
July 29			
BC	iP		22 29 42.4
BOZ	eP		22 30 26

Date and Station		Phase	(GCT)
			h m s
BUT	eP		22 30 32
	eL		43 03
CHI	e(P)		22 29 18
	e(S)		33 40
	eL		36 30
COL	iP		22 34 03
COLU	iP		22 28 24
	e(S)		32 17
	eL		33 28
HH	eP		22 30 54
NEL	iP		22 29 40.6
	i		29 55.5
PHIL	eP		22 29 41
	e(S)		34 11
	eL		36 30
SLC	iP		22 29 56
	i		30 16
SJ	eP		22 29 20
TUC	eP		22 28 55
	iP		28 56
	eL		37 07
WASH	eP		22 29 23
	eL		36 05
July 29			
BC	iP		22 32 29.5
July 29			
BC	e(P)		22 35 17
July 29			
SLC	eP		23 59 35
July 30			
SLC	eP		00 04 00
	e		05 00
July 30			
BOZ	eP		02 02 15
	e		02 42
	iL		04 31
BUT	eP		02 02 20
	eS		03 55
	eL		04 04
COL	iP		02 06 23
COLU	eL		02 16 01
HH	eP		02 02 28
	e(S)		04 41
	iL		05 03
NEL	iP		02 01 20.4
SLC	eP		02 01 28
	i		01 34

Date and Station		Phase (GCT) h m s
SLC	i	02 01 45
	i	01 54
	e(S)	02 52
	i(S)	02 56
	eL	03 01
July 30		
BC	e(P)	02 24 29
NEL	iP	02 24 30.0
	i	24 43.5
July 30		
NEL	e(P)	03 02 26
SLC	e(P)	03 01 40
July 30		
NEL	eP	03 16 57
July 30		
COL	iP	04 33 51
July 30		
HH	e(P)	05 37 26
July 30		
BC	iP	08 57 41.7
	i	58 50.2
BOZ	eP	08 58 28
	iP	58 30
	i	58 49
	e(PP)	09 02 05
	eS	08 46
	e	12 07
	eSS	14 17
	eL	20 13
BUT	iP	08 58 34
	ePP	09 01 38
	iS	08 53
	e	12 50
	e(SS)	15 05
	eL	20 32
CHI	eP	08 58 06
	ePP	09 01 02
	eS	07 58
	eSS	13 13
	eSSS	16 42
	eL	19 32
COL	eP'	09 04 37
	ePP	04 49
	ePPP	07 14
	eSKS	11 01
	ePS	14 21
	eSS	20 19
	eSSS	24 49
	eL	29 47
COLU	eP	08 57 25C
	iP	57 26D
	ePP	09 00 00
	e(PPP)	02 18
	iS	06 46
	eSS	11 26

Date and Station		Phase (GCT) h m s
COLU	eSSS	09 14 34
	eL	14 46
HH	eP	08 58 45
	eS	09 09 16
	eP'P'	25 01
NEL	iP	08 57 37.0
PHIL	eP	08 58 04
	ePP	09 01 08
	ePPP	03 04
	iS	07 58
	e	10 36
	eSS	13 15
	eSSS	16 56
	eL	18 02
RC	eP	08 58 20
	eS	09 08 22
	e	11 24
	eL	19 18
SLC	eP	08 58 05
	eS	09 07 58
	eSS	12 51
	eL	18 57
SJ	iP	08 56 22
	e(PP)	59 22
	eS	09 04 42
	iS	04 46
	e(SS)	08 24
	eL	12 10
TUC	eP	08 57 13
	iP	57 15
	e	57 57
	eS	09 06 24
	e	06 45
	eScS	07 26
	eSS	11 08
	eL	15 40
	eP'P'	25 29
WASH	eP	08 57 53
	e	58 21
	ePP	09 00 40
	ePPP	02 40
July 30		
BC	i(P)	12 36 58.0
HH	iP	12 37 46
July 30		
BC	e(P)	14 15 14
July 30		
BC	e(P)	15 43 52
	i	46 05.4
July 30		
NEL	iP	15 43 51.2
	i	46 04.2
	i	46 16.0
July 30		
NEL	eP	16 02 47

Date and Station		Phase (GCT) h m s
July 30		
COL	i(P)	21 37 42
NEL	iP	21 32 19.4
July 30		
HH	e(P)	22 08 18
July 30		
BC	e(P)	23 11 40
COL	iP	23 08 10
July 31		
BC	e(P)	01 13 33
	i	14 10.0
BOZ	iP	01 12 58
	i	13 06
	i	13 24
	eSKS	23 27
	eS	23 42
	eScS	24 15
	ePPS	25 13
	eSS	30 13
	eL	39 49
BUT	iP	01 12 55
	i	13 38
	e(PP)	16 50
	eSKS	23 20
	i(S)	24 01
	iScS	24 10
	ePPS	25 22
	e	27 19
	eSS	29 53
	eSSS	33 44
	eL	37 21
CHI	e(PP)	01 18 20
	eSKS	24 15
	e(PPS)	28 08
	eSS	31 49
	eL	39 23
COL	iP	01 10 22
	iS	18 49
	e	19 31
	i	23 12
	eL	26 30
COLU	eP'	01 18 28
	ePP	18 35
	ePPP	20 44
	eSKS	24 56
	eS	26 10
	ePS	27 50
	ePPS	29 11
	eSS	33 19
	eSSS	38 06
	eL	43 20
HH	iP	01 12 44
	e	15 29
	eS	23 07
	e	23 16
	iScS	23 31

Date and Station		Phase (GCT) h m s
MONT	e(P)	01 20 03
	eP'	20 11
	ePP	24 37
	e	25 58
	e	35 57
NEL	iP	01 13 33.2
	i	14 09.8
PHIL	ePP	01 18 05
	eSKS	24 25
	ePS	26 55
	eSS	32 56
	e(SSS)	37 34
	eL	41 08
SLC	eP	01 13 19
	ePP	17 04
	eSKS	23 51
	ePS	25 47
	eL	37 53
SJ	eP'	01 19 18
SIT	eP	01 11 23
	e	11 47
	ePP	14 14
	ePPP	16 04
	eS	20 46
	e	21 02
	eScS	21 45
	eSS	25 38
	eL	29 06
TUC	eP	01 13 56
	ePP	18 14
	eSKS	24 24
	ePS	27 32
	e(PPS)	28 29
	eSS	32 50
	eSSS	37 16
WASH	e(PPP)	01 21 04
	eL	51 20
July 31		
COL	iP	01 25 29C
HH	iP	01 27 51
NEL	eP	01 28 41
	e	29 45
July 31		
BOZ	eP	01 35 25
BUT	eP	01 35 22
COL	iP	01 32 48
	i	34 46
HH	iP	01 35 09
NEL	eP	01 35 59
July 31		
NEL	eP	01 41 45

Date and Station		Phase (GCT) h m s
July 31		
COL	eP	02 09 24
	i	09 30
	i	10 26
HH	iP	02 11 47
	i	12 21
July 31		
SLC	eP	02 35 29
July 31		
NEL	e(P)	06 10 31
July 31		
COL	iP	10 07 04
HH	eP	10 11 12
July 31		
BC	e(P)	12 32 53
COL	iP	12 28 52
NEL	e(P)	12 32 49
July 31		
BC	e(P)	13 33 08
July 31		
BOZ	eP	13 57 06
BUT	eP	13 57 02
	eS	58 46
	eL	58 52
HH	eP	13 56 58
	e	57 32
	eL	59 39
July 31		
HH	e(P)	16 38 10
July 31		
NEL	iP	16 50 36.0
	e	50 53
	e	51 12
July 31		
BC	e(P)	17 16 39
July 31		
BOZ	eP	17 26 44
BUT	e(P)	17 26 28
	eP	26 33
	eS	28 11
	iL	28 21
HH	eP	17 26 33
	i	27 59
	iL	29 08
July 31		
BUT	eP	17 33 37
	i(S)	35 19
HH	e(P)	17 33 52
	iL	36 16

Date and Station		Phase (GCT) h m s
July 31		
NEL	eP	19 01 59
July 31		
HH	e(P)	19 31 05
July 31		
NEL	eP	20 45 14
July 31		
SLC	eP	21 16 05
	e	16 30
July 31		
BOZ	e(P)	21 46 03
July 31		
COL	iP	22 26 35
July 31		
BC	eP	23 33 52
BOZ	eP	23 34 21
HH	iP	23 34 39
MONT	iP	23 22 49
	i(L)	23 55
NEL	iP	23 33 51.0
	i	33 54.5
	ipP	34 18.5
	isP	34 31.3
SLC	eP	23 34 02
	epP	34 30
SJ	eP	23 30 00
TUC	eP	23 33 21
ADDENDUM		
July 30		
MONT	iP	08 51 59
	eS	56 49
	eL	59 27

Date and Station		Phase (GCT) h m s

Date and Station		Phase (GCT) h m s

Local and Minor Earthquakes

day	hour
BOZ	
July	
2	18.2
3	03.3
	04.6
4	20.3
	21.8
	23.6
5	01.7
	10.0
6	17.7
7	00.4
	00.0
	02.4
	06.2
	18.0
	21.8
8	04.1
	12.9
9	08.9
10	00.6
12	10.3
BUT	
July	
2	09.5
	16.4
3	03.4
	04.7
	10.7
4	07.5
	11.0
	16.8
	17.4
	23.7
5	01.7
	10.0
6	17.2
7	01.6
	04.6
	06.3
	15.7
9	02.9
	07.5
10	09.2
15	21.7
16	11.9
28	19.3
29	00.9
COL	
July	
3	08.4
	09.5
	09.7
	13.4
5	00.7
	01.3
	05.0
	09.6
	11.5
	14.0
7	01.5
10	02.7
12	13.3
	15.4
13	02.9

Local and Minor Earthquakes

day	hour
COL	
July	
13	15.5
	17.2
15	17.0
18	20.8
19	07.9
22	07.2
	09.8
27	21.2
28	08.5
31	03.5
	08.7
	10.6
HONO	
July	
2	21.2
13	02.1
23	03.5
	21.0
MONT	
July	
1	16.9
	20.5
4	10.1
5	19.4
8	12.8
9	23.2
11	17.1
13	18.2
	21.9
	23.4
14	14.4
15	06.0
16	03.9
17	15.3
18	03.4
22	20.3
23	03.6
	11.2
27	06.2
	12.9
	16.7
28	18.9
31	14.9
SLC	
July	
17	01.2
31	13.9
	17.4
	17.5
	22.8
	22.9
	23.0
SJ	
July	
2	17.5
4	11.8
6	17.8
9	11.9
15	2[illegible].4
16	08.3
22	17.2

Local and Minor Earthquakes

day	hour
SJ	
July	
29	12.6
30	05.2
TUC	
July	
1	03.4
2	11.6
4	04.0
	04.5
5	21.0
	22.4
6	12.9
	13.6
	17.7
	18.8
	23.2
7	00.0
	02.4
	04.7
	06.2
	10.9
	12.7
	18.0
	21.8
8	02.3
	04.2
	07.0
	13.0
9	08.8
10	00.6
	01.4
11	07.1
	10.0
	22.6
12	10.3
13	16.5
14	01.0
	02.0
	07.0
15	01.5
	04.2
	09.0
16	03.8
	09.2
	18.2
	18.5
	18.3
17	00.7
	01.9
	03.9
	03.6
	03.7
	06.0
	06.4
	08.5
	15.8
	22.1
	22.8
	23.1
18	22.4
	22.5
19	00.1
	20.0
20	00.2
	02.2

Local and Minor Earthquakes

day	hour
TUC	
July	
20	12.3
25	10.2
28	02.1
30	02.1
31	14.0
	21.7