

1 ZT 10 09 DR L 15° 49.4' S
 λ 124° 13.4' W Ho 56° 48.3'

CT	02 06 15	ZT	Date
CE	2 34 s	ZD	
GMT		GMT	

GHA h	211° - 23.0'
m & s	
GHA ⊙	
aλ	
LHA	

Dec.	S	8° 39.1'
d.	-(0.9)	
Dec.		

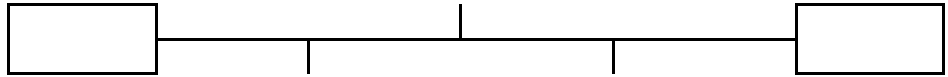
aL	
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Ht	
d ()	
Hc	
Ho	
a	

Rising/Setting	
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Dec.		Lat.	
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Z	
Δz ()	
Z	
Zn	



2 ZT 11 10 DR L 20° 30.7' S
 λ 169° 43.7' W Ho 76° 44.6'

CT	00 16 48	ZT	Date
CE	6 51 f	ZD	
GMT		GMT	

GHA h	
m & s	
GHA ⊙	
aλ	
LHA	

Dec.		
d.	()	
Dec.		

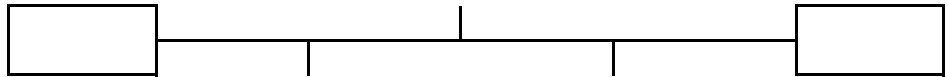
aL	
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Ht	
d ()	
Hc	
Ho	
a	

Rising/Setting	
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Dec.		Lat.	
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Z	
Δz ()	
Z	
Zn	



1 ZT 10 09 DR L 15° 49.4' N
λ 124° 13.4' E Ho 56° 48.3'

CT	02 06 15	ZT	1009	Date
CE	2 34 s	ZD	- 8	
GMT	02 08 49	GMT	0209	Same Date

GHA h	211° - 23.0'
m & s	2° - 12.3'
GHA ⊙	213° - 35.3'
aλ	124° - 24.7' E
LHA	338° - 00.0'

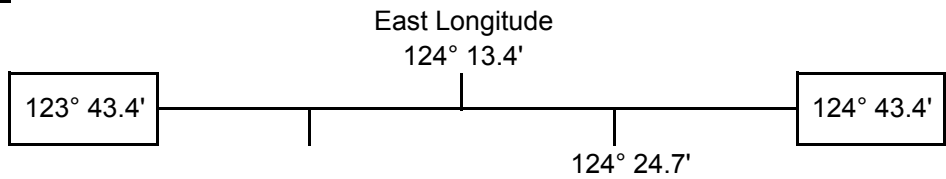
Dec.	S	8° 39.1'
d.	-(0.9)	-0.1'
Dec.	S	8° 39.0'

aL	16° N
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Ht	57° 35.4'
d (-44.8)	-29.1'
Hc	57° 06.3'
Ho	56° 48.3'
a	18.0' A

Rising/Setting Rising
Dec. south of Lat.

Z	136.2°
Δz (1.2)	0.8°
Z	137.0°
Zn	137.0°



2 ZT 11 10 DR L 20° 30.7' S
λ 169° 43.7' E Ho 76° 44.6'

CT	00 16 48	ZT	1110	Date
CE	6 51 f	ZD	- 11	
GMT	00 09 57	GMT	0010	Same Date

GHA h	182° - 39.1'
m & s	2° - 29.3'
GHA ⊙	185° - 08.4'
aλ	169° - 51.6' E
LHA	355° - 00.0'

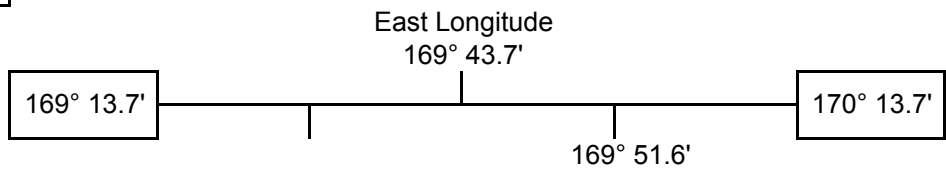
Dec.	S	9° 07.1'
d.	-(0.9)	-0.1'
Dec.	S	9° 07.0'

aL	21° S
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Ht	77° 04.1'
d (55.6)	6.5'
Hc	77° 10.6'
Ho	76° 44.6'
a	26.0' A

Rising/Setting Rising
Dec. north of Lat.

Z	157.4°
Δz (-1.8)	-0.2°
Z	157.2°
Zn	022.8°



3

ZT 07 06

DR L

29° 36.7' S

λ

81° 09.5' W

Ho

19° 22.0'

CT	02 13 58	ZT	Date
CE	7 52 f	ZD	
GMT		GMT	

GHA h
m & s
GHA ⊙
aλ
LHA

Dec.
d. ()
Dec.

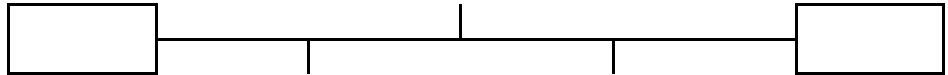
aL

Ht
d ()
Hc
Ho
a

Rising/Setting

Dec.
Lat.

Z
Δz ()
Z
Zn



4

ZT 06 53

DR L

28° 49.3' S

λ

178° 10.2' W

Ho

02° 19.9'

CT	06 57 15	ZT	Date
CE	4 30 f	ZD	
GMT		GMT	

GHA h
m & s
GHA ⊙
aλ
LHA

Dec.
d. ()
Dec.

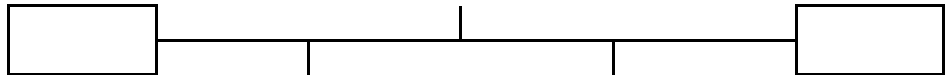
aL

Ht
d ()
Hc
Ho
a

Rising/Setting

Dec.
Lat.

Z
Δz ()
Z
Zn



3 ZT 07 06 DR L 29° 36.7' N
 λ 081° 09.5' E Ho 19° 22.0'

CT	02 13 58	ZT	0706	Date
CE	7 52 f	ZD	- 5	
GMT	02 06 07	GMT	0206	Same Date

GHA h	206° - 51.6'
m & s	1° - 31.8'
GHA ⊙	208° - 23.4'
aλ	081° - 36.6' E
LHA	290° - 00.0'

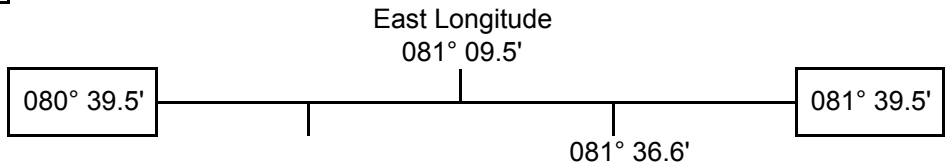
Dec.	N	4° 08.0'
d.	(1.0)	0.1'
Dec.	N	4° 08.1'

aL	30° N
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Ht	19° 17.4'
d (30.3)	4.1'
Hc	19° 21.5'
Ho	19° 22.0'
a	0.4' T

Rising/Setting Rising
 Dec. south of Lat.

Z	096.7°
Δz (-0.9)	-0.1°
Z	096.6°
Zn	096.6°



4 ZT 06 53 DR L 28° 49.3' N
 λ 178° 10.2' E Ho 02° 19.9'

CT	06 57 15	ZT	0653	Date
CE	4 30 f	ZD	- 12	
GMT	18 52 45	GMT	1853	Previous Date

GHA h	90° - 58.2'
m & s	13° - 11.3'
GHA ⊙	104° - 09.5'
aλ	177° - 50.5' E
LHA	282° - 00.0'

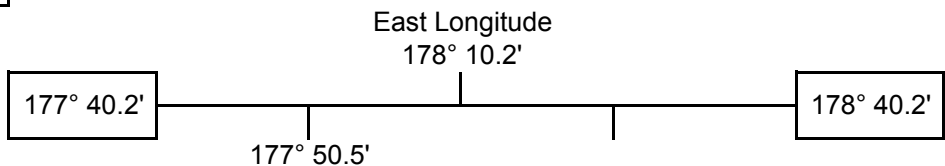
Dec.	S	15° 53.3'
d.	-(0.8)	-0.7'
Dec.	S	15° 52.6'

aL	29° N
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Ht	02° 52.5'
d (-31.0)	-27.2'
Hc	02° 25.3'
Ho	02° 19.9'
a	5.4' A

Rising/Setting Rising
 Dec. south of Lat.

Z	108.9°
Δz (0.9)	0.8°
Z	109.7°
Zn	109.7°



5

ZT 07 42

DR L 20° 03.9' S
λ 171° 23.1' W

Ho 14° 31.5'

CT	06 53 21	ZT	Date
CE	11 34 f	ZD	
GMT		GMT	

GHA h
m & s
GHA ⊙
aλ
LHA

Dec.
d. ()
Dec.

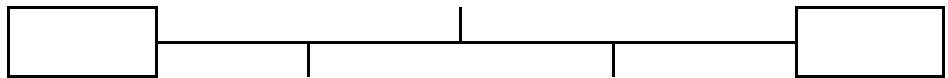
aL

Ht
d ()
Hc
Ho
a

Rising/Setting

Dec.
Lat.

Z
Δz ()
Z
Zn



6

ZT 12 36

DR L 16° 25.8' S
λ 115° 43.1' W

Ho 50° 32.4'

CT	04 25 32	ZT	Date
CE	10 21 s	ZD	
GMT		GMT	

GHA h
m & s
GHA ⊙
aλ
LHA

Dec.
d. ()
Dec.

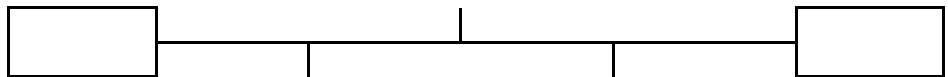
aL

Ht
d ()
Hc
Ho
a

Rising/Setting

Dec.
Lat.

Z
Δz ()
Z
Zn



5 ZT 07 42 DR L 20° 03.9' S
 λ 171° 23.1' W Ho 14° 31.5'

CT	06 53 21	ZT	0742	Date
CE	11 34 f	ZD	+ 11	
GMT	18 41 47	GMT	1842	Same Date

GHA h	93° - 38.1'
m & s	10° - 26.8'
GHA ⊙	104° - 04.9'
aλ	171° - 04.9' W
LHA	293° - 00.0'

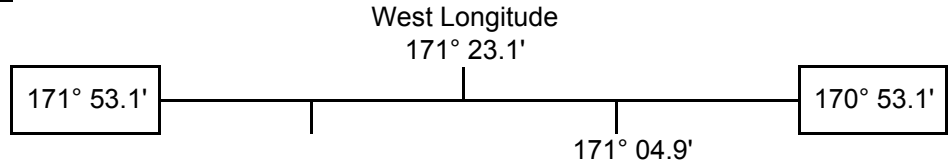
Dec.	N	16° 10.6'
d.	(0.7)	0.5'
Dec.	N	16° 11.1'

aL 20° S

Ht	14° 59.5'
d (-26.8)	-5.0'
Hc	14° 54.5'
Ho	14° 31.5'
a	23.0' A

Rising/Setting Rising
 Dec. north of Lat.

Z	113.6°
Δz (1)	0.2°
Z	113.8°
Zn	066.2°



6 ZT 12 36 DR L 16° 25.8' N
 λ 115° 43.1' E Ho 50° 32.4'

CT	04 25 32	ZT	1236	Date
CE	10 21 s	ZD	- 8	
GMT	04 35 54	GMT	0436	Same Date

GHA h	237° - 41.0'
m & s	8° - 58.5'
GHA ⊙	246° - 39.5'
aλ	115° - 20.5' E
LHA	002° - 00.0'

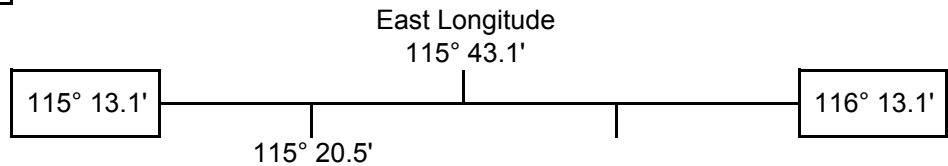
Dec.	S	23° 23.0'
d.	(0.0)	0.0'
Dec.	S	23° 23.0'

aL 16° N

Ht	50° 57.1'
d (-59.9)	-23.0'
Hc	50° 34.1'
Ho	50° 32.4'
a	1.6' A

Rising/Setting Setting
 Dec. south of Lat.

Z	177.1°
Δz (0.1)	0.0°
Z	177.1°
Zn	182.9°



7

ZT 16 17

DR L 23° 15.2' S
λ 115° 06.7' W

Ho 22° 24.8'

CT	00 27 08	ZT	Date
CE	9 51 f	ZD	
GMT		GMT	

GHA h	
m & s	
GHA ⊙	
aλ	
LHA	

Dec.	
d. ()	
Dec.	

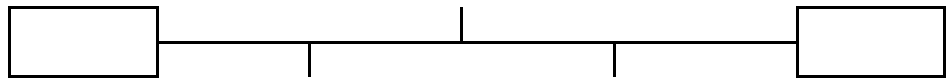
aL	
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Ht	
d ()	
Hc	
Ho	
a	

Rising/Setting	
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Dec.		Lat.	
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Z	
Δz ()	
Z	
Zn	



8

ZT 16 55

DR L 24° 31.3' S
λ 119° 38.4' W

Ho 23° 36.2'

CT	09 03 09	ZT	Date
CE	8 08 f	ZD	
GMT		GMT	

GHA h	
m & s	
GHA ⊙	
aλ	
LHA	

Dec.	
d. ()	
Dec.	

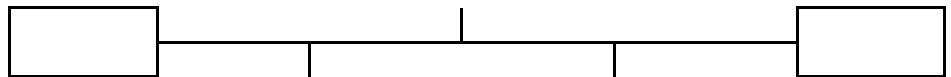
aL	
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Ht	
d ()	
Hc	
Ho	
a	

Rising/Setting	
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Dec.		Lat.	
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Z	
Δz ()	
Z	
Zn	



7 ZT 16 17 DR L 23° 15.2' N
 λ 115° 06.7' W Ho 22° 24.8'

CT	00 27 08	ZT	1617	Date
CE	9 51 f	ZD	+ 8	
GMT	00 17 17	GMT	0017	Next Date

GHA h	179° - 05.1'
m & s	4° - 19.3'
GHA \odot	183° - 24.4'
a λ	115° - 24.4' W
LHA	068° - 00.0'

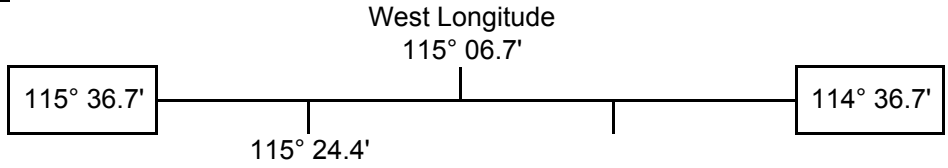
Dec.	N	6° 06.5'
d.	(1.0)	0.3'
Dec.	N	6° 06.8'

aL 23° N

Ht	22° 34.1'
d (22.7)	2.6'
Hc	22° 36.7'
Ho	22° 24.8'
a	11.9' A

Rising/Setting Setting
 Dec. south of Lat.

Z	093.1°
Δz (-1)	-0.1°
Z	093.0°
Zn	267.0°



8 ZT 16 55 DR L 24° 31.3' N
 λ 119° 38.4' E Ho 23° 36.2'

CT	09 03 09	ZT	1655	Date
CE	8 08 f	ZD	- 8	
GMT	08 55 01	GMT	0855	Same Date

GHA h	298° - 07.5'
m & s	13° - 45.3'
GHA \odot	311° - 52.8'
a λ	120° - 07.2' E
LHA	072° - 00.0'

Dec.	N	19° 44.3'
d.	(0.6)	0.6'
Dec.	N	19° 44.9'

aL 25° N

Ht	23° 43.7'
d (20.0)	15.0'
Hc	23° 58.7'
Ho	23° 36.2'
a	22.5' A

Rising/Setting Setting
 Dec. south of Lat.

Z	079.2°
Δz (-1)	-0.7°
Z	078.5°
Zn	281.5°

