

Celestial Navigation

Estimation of Sun GHA & Dec.

Name: _____

1 ZT of 07 26 DR L $28^{\circ} 05.8' S$
 Observation 29-Jul $\lambda 162^{\circ} 57.9' E$

CT	08 23 19	ZT	07 26	29-Jul
CE	2 20 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

2 ZT of 17 07 DR L $20^{\circ} 37.3' S$
 Observation 13-Apr $\lambda 048^{\circ} 00.5' E$

CT	01 58 07	ZT	17 07	13-Apr
CE	8 33 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

3 ZT of 09 17 DR L $23^{\circ} 24.2' N$
 Observation 8-May $\lambda 124^{\circ} 56.0' E$

CT	01 24 19	ZT	09 17	8-May
CE	7 22 f	ZD		
GMT		GMT		

GHA _____ Dec. _____

4 ZT of 11 40 DR L $22^{\circ} 01.5' N$
 Observation 28-Feb $\lambda 115^{\circ} 08.3' W$

CT	07 44 51	ZT	11 40	28-Feb
CE	5 04 f	ZD		
GMT		GMT		

GHA _____ Dec. _____

5 ZT of 17 47 DR L $28^{\circ} 49.6' N$
 Observation 28-Oct $\lambda 020^{\circ} 06.0' W$

CT	06 37 48	ZT	17 47	28-Oct
CE	9 26 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

6 ZT of 16 06 DR L $23^{\circ} 42.8' S$
 Observation 29-Apr $\lambda 070^{\circ} 18.5' W$

CT	09 13 39	ZT	16 06	29-Apr
CE	7 53 f	ZD		
GMT		GMT		

GHA _____ Dec. _____

7 ZT of 08 59 DR L $28^{\circ} 07.4' N$
 Observation 17-Feb $\lambda 091^{\circ} 29.9' W$

CT	02 53 00	ZT	08 59	17-Feb
CE	6 01 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

8 ZT of 17 09 DR L $23^{\circ} 31.8' S$
 Observation 18-Sep $\lambda 073^{\circ} 28.4' E$

CT	00 11 26	ZT	17 09	18-Sep
CE	2 33 f	ZD		
GMT		GMT		

GHA _____ Dec. _____

9 ZT of 14 28 DR L $21^{\circ} 34.1' N$
 Observation 26-Apr $\lambda 087^{\circ} 40.0' W$

CT	08 24 39	ZT	14 28	26-Apr
CE	3 03 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

10 ZT of 11 34 DR L $23^{\circ} 16.9' N$
 Observation 4-Nov $\lambda 101^{\circ} 51.2' W$

CT	06 24 44	ZT	11 34	4-Nov
CE	9 12 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

11 ZT of 11 43 DR L $24^{\circ} 53.2' S$
 Observation 4-Feb $\lambda 101^{\circ} 30.7' W$

CT	06 47 57	ZT	11 43	4-Feb
CE	5 11 f	ZD		
GMT		GMT		

GHA _____ Dec. _____

12 ZT of 18 55 DR L $21^{\circ} 59.7' S$
 Observation 18-Apr $\lambda 148^{\circ} 03.1' W$

CT	04 53 08	ZT	18 55	18-Apr
CE	1 41 s	ZD		
GMT		GMT		

GHA _____ Dec. _____

1	ZT of Observation	07 26 29-Jul	DR L λ	28° 05.8' S 162° 57.9' E	7	ZT of Observation	08 59 17-Feb	DR L λ	28° 07.4' N 091° 29.9' W
	CT 08 23 19 CE 2 20 s GMT 20 25 39	ZT 07 26 ZD - 11 GMT 20 26	29-Jul		CT 02 53 00 CE 6 01 s GMT 14 59 00	ZT 08 59 ZD + 6 GMT 14 59	17-Feb		
	GHA ~ 120°	Dec. ~N 20°			GHA ~ 30°	Dec. ~S 10°			
2	ZT of Observation	17 07 13-Apr	DR L λ	20° 37.3' S 048° 00.5' E	8	ZT of Observation	17 09 18-Sep	DR L λ	23° 31.8' S 073° 28.4' E
	CT 01 58 07 CE 8 33 s GMT 14 06 40	ZT 17 07 ZD - 3 GMT 14 07	13-Apr		CT 00 11 26 CE 2 33 f GMT 12 08 53	ZT 17 09 ZD - 5 GMT 12 09	18-Sep		
	GHA ~ 30°	Dec. ~N 12°			GHA ~ 0°	Dec. ~0°			
3	ZT of Observation	09 17 8-May	DR L λ	23° 24.2' N 124° 56.0' E	9	ZT of Observation	14 28 26-Apr	DR L λ	21° 34.1' N 087° 40.0' W
	CT 01 24 19 CE 7 22 f GMT 01 16 57	ZT 09 17 ZD - 8 GMT 01 17	8-May		CT 08 24 39 CE 3 03 s GMT 20 27 42	ZT 14 28 ZD + 6 GMT 20 28	26-Apr		
	GHA ~ 195°	Dec. ~N 20°			GHA ~ 120°	Dec. ~N 12°			
4	ZT of Observation	11 40 28-Feb	DR L λ	22° 01.5' N 115° 08.3' W	10	ZT of Observation	11 34 4-Nov	DR L λ	23° 16.9' N 101° 51.2' W
	CT 07 44 51 CE 5 04 f GMT 19 39 47	ZT 11 40 ZD + 8 GMT 19 40	28-Feb		CT 06 24 44 CE 9 12 s GMT 18 33 56	ZT 11 34 ZD + 7 GMT 18 34	4-Nov		
	GHA ~ 105°	Dec. ~S 10°			GHA ~ 90°	Dec. ~S 11°			
5	ZT of Observation	17 47 28-Oct	DR L λ	28° 49.6' N 020° 06.0' W	11	ZT of Observation	11 43 4-Feb	DR L λ	24° 53.2' S 101° 30.7' W
	CT 06 37 48 CE 9 26 s GMT 18 47 14	ZT 17 47 ZD + 1 GMT 18 47	28-Oct		CT 06 47 57 CE 5 11 f GMT 18 42 46	ZT 11 43 ZD + 7 GMT 18 43	4-Feb		
	GHA ~ 90°	Dec. ~S 11°			GHA ~ 90°	Dec. ~S 20°			
6	ZT of Observation	16 06 29-Apr	DR L λ	23° 42.8' S 070° 18.5' W	12	ZT of Observation	18 55 18-Apr	DR L λ	21° 59.7' S 148° 03.1' W
	CT 09 13 39 CE 7 53 f GMT 21 05 46	ZT 16 06 ZD + 5 GMT 21 06	29-Apr		CT 04 53 08 CE 1 41 s GMT 04 54 49	ZT 18 55 ZD + 10 GMT 04 55	18-Apr		
	GHA ~ 135°	Dec. ~N 12°			GHA ~ 240°	Dec. ~N 12°			