

RGO/La Palma Technical Note No 28

Hour Angle Limits of the JKT

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Note: The limiting hour-angles in the original (1985) version of Technical Note No 28 were based on the design drawings of the telescope. The tables in this document show the limiting hour-angles as based on actual measurements by Derek Jones in 1988.

Hour angle limits of the JKT

The telescope has a zenith distance limit of 85° and is further limited by the dome-rail with the fully-lowered wind shield above it. There are further limits in Hour Angle because of the cable winder in the polar axis. There are no limits in declination as such. Because of the asymmetry of the telescope the limits are different for telescope East and West. The tables show the limiting hour-angles East (negative) and West (positive) as a function of declination. The contingency which first limits the telescope is given as Z (zenith distance), D (Dome Rail) or H (hour angle). These limits are known to the telescope drive program, and Z and H are also duplicated in the hardware. The table is intended for planning observations in advance.

Limit	= 0	Star does not Rise or Set
	= D	Rises or Sets above Dome Rail
	= Z	Zenith Distance Limit 85 deg
	= H	Hour Angle Limit

Note

The limiting hour-angles in the original (1985) version of Technical Note No 28 were based on the design drawings of the telescope. The tables in this document show the limiting hour-angles as based on actual measurements by the author. In October 1988 out-of-focus star images were observed as they rose above the dome rail in order to obtain refined values.

Table 1 Limiting Hour Angles for JKT, Telescope East

Declination	HA East hh mm	Limit	HA West hh mm	Limit
-54	00 00	0	00 00	0
-52	00 30	D	02 01	Z
-50	-00 08	D	02 24	Z
-48	-00 36	D	02 42	Z
-46	-00 58	D	02 58	Z
-44	-01 17	D	03 12	Z
-42	-01 33	D	03 24	Z
-40	-01 48	D	03 35	Z
-38	-02 01	D	03 45	Z
-36	-02 13	D	03 54	Z
-34	-02 24	D	04 02	Z
-32	-02 34	D	04 10	Z
-30	-02 43	D	04 17	Z
-28	-02 52	D	04 24	Z
-26	-03 00	D	04 31	Z
-24	-03 07	D	04 37	Z
-22	-03 14	D	04 43	Z
-20	-03 21	D	04 48	Z
-18	-03 28	D	04 54	Z
-16	-03 34	D	04 59	Z
-14	-03 40	D	05 04	Z
-12	-03 45	D	05 09	Z
-10	-03 50	D	05 14	Z
-8	-03 56	D	05 19	Z
-6	-04 00	D	05 23	Z
-4	-04 05	D	05 28	Z
-2	-04 10	D	05 32	Z
0	-04 14	D	05 37	Z
2	-04 18	D	05 41	Z
4	-04 23	D	05 45	Z
6	-04 27	D	05 50	Z
8	-04 31	D	05 54	Z
10	-04 34	D	05 59	Z
12	-04 38	D	06 03	Z
14	-04 42	D	06 07	Z
16	-04 45	D	06 12	Z
18	-04 49	D	06 16	Z
20	-04 52	D	06 21	Z
22	-04 56	D	06 26	Z
24	-04 59	D	06 31	Z
26	-05 02	D	06 36	Z
28	-05 06	D	06 41	Z
30	-05 09	D	06 46	Z

Table 1 (continued) Limiting Hour Angles for JKT, Telescope East

Declination	HA East hh mm	Limit	HA West hh mm	Limit
32	- 05 12	D	06 52	Z
34	- 05 15	D	06 57	Z
36	- 05 19	D	07 04	Z
38	- 05 22	D	07 10	Z
40	- 05 25	D	07 17	Z
42	- 05 28	D	07 24	Z
44	- 05 32	D	07 32	Z
46	- 05 35	D	07 40	Z
48	- 05 38	D	07 49	Z
50	- 05 42	D	07 59	Z
52	- 05 46	D	08 10	Z
54	- 05 49	D	08 23	Z
56	- 05 53	D	08 37	Z
58	- 05 57	D	08 54	Z
60	- 06 00	H	09 14	Z
62	- 06 00	H	09 40	Z
64	- 06 00	H	10 15	Z
66	- 06 00	H	10 37	D
68	- 06 00	H	11 01	D
70	- 06 00	H	11 28	D
72	- 06 00	H	12 00	D
74	- 06 00	H	12 38	D
76	- 06 00	H	13 26	D
78	- 06 00	H	14 37	D
80	- 06 00	H	18 00	H
82	- 06 00	H	18 00	H
84	- 06 00	H	18 00	H
86	- 06 00	H	18 00	H
88	- 06 00	H	18 00	H
90	00 00	0	00 00	0

Table 2 Limiting Hour Angles for JKT, Telescope West

Declination	HA East	Limit	HA West	Limit
-54	00 00	0	00 00	0
-52	- 02 01	Z	- 00 30	D
-50	- 02 24	Z	00 08	D
-48	- 02 42	Z	00 36	D
-46	- 02 58	Z	00 58	D
-44	- 03 12	Z	01 17	D
-42	- 03 24	Z	01 33	D
-40	- 03 35	Z	01 48	D
-38	- 03 45	Z	02 01	D
-36	- 03 54	Z	02 13	D
-34	- 04 02	Z	02 24	D
-32	- 04 10	Z	02 34	D
-30	- 04 17	Z	02 43	D
-28	- 04 24	Z	02 52	D
-26	- 04 31	Z	03 00	D
-24	- 04 37	Z	03 07	D
-22	- 04 43	Z	03 14	D
-20	- 04 48	Z	03 21	D
-18	- 04 54	Z	03 28	D
-16	- 04 59	Z	03 34	D
-14	- 05 04	Z	03 40	D
-12	- 05 09	Z	03 45	D
-10	- 05 14	Z	03 50	D
-8	- 05 19	Z	03 56	D
-6	- 05 23	Z	04 00	D
-4	- 05 28	Z	04 05	D
-2	- 05 32	Z	04 10	D
0	- 05 37	Z	04 14	D
2	- 05 41	Z	04 18	D
4	- 05 45	Z	04 23	D
6	- 05 50	Z	04 27	D
8	- 05 54	Z	04 31	D
10	- 05 59	Z	04 34	D
12	- 06 03	Z	04 38	D
14	- 06 07	Z	04 42	D
16	- 06 12	Z	04 45	D
18	- 06 16	Z	04 49	D
20	- 06 21	Z	04 52	D
22	- 06 26	Z	04 56	D
24	- 06 31	Z	04 59	D
26	- 06 36	Z	05 02	D
28	- 06 41	Z	05 06	D
30	- 06 46	Z	05 09	D
32	- 06 52	Z	05 12	D
34	- 06 57	Z	05 15	D
36	- 07 04	Z	05 19	D
38	- 07 10	Z	05 22	D
40	- 07 17	Z	05 25	D
42	- 07 24	Z	05 28	D
44	- 07 32	Z	05 32	D

Table 2 (continued) Limiting Hour Angles for JKT, Telescope West

Declination	HA East	Limit	HA West	Limit
46	- 07 40	Z	05 35	D
48	- 07 49	Z	05 38	D
50	- 07 59	Z	05 42	D
52	- 08 10	Z	05 46	D
54	- 08 23	Z	05 49	D
56	- 08 37	Z	05 53	D
58	- 08 54	Z	05 57	D
60	- 09 14	Z	06 00	H
62	- 09 40	Z	06 00	H
64	- 10 15	Z	06 00	H
66	- 10 37	D	06 00	H
68	- 11 01	D	06 00	H
70	- 11 28	D	06 00	H
72	- 12 00	D	06 00	H
74	- 12 38	D	06 00	H
76	- 13 26	D	06 00	H
78	- 14 37	D	06 00	H
80	- 18 00	H	06 00	H
82	- 18 00	H	06 00	H
84	- 18 00	H	06 00	H
86	- 18 00	H	06 00	H
88	- 18 00	H	06 00	H
90	00 00	0	00 00	0