INT OBSERVING LOG (ISAAC NEWTON GROUP, LA PALMA)

TELESCOPE:	INT
DATE:	20000918
TAPE NR:	INTD4506
OBSERVER:	David James, David Mitchell, Kevin Pearson
PROGRAMME:	Planet Transits in NGC7789
PATT/CAT REF.:	P30+M31
TELESCOPE OPERATOR:	-
SUPPORT ASTRONOMER:	-
TELESCOPE FOCUS:	not specified
CALIBRATE RESULTS:	not specified
INSTRUMENT:	WFC
WFC FILTER WHEEL:	g,V,r,i,z,Ha
WEATHER:	(1st half)
	(2nd half)
CLOUD COVER (%):	(1st half)
	(2nd half)
DUST (0-2):	(1st half)
	(2nd half)
SEEING (arcsec):	(1st half)
	(2nd half)
DOME OPENED (UT):	19:06

METEOROLOGICAL PARAMETERS

UT	AirT	Hum%	Wspd	Gust	Wdir	Press	LocT	IntT	Mirr	LocRH	IntRH
20:00	13.0	12	45.4	49.8	269	772.3	13.5	16.2	18.3	10	12
21:00	12.3	13	42.1	48.8	277	772.2	12.9	14.7	17.9	12	12
22:00	11.5	16	42.3	50.5	286	772.6	12.1	14.1	17.7	15	15
23:00	11.3	16	37.1	41.3	302	772.9	11.6	13.7	17.6	16	15
00:00	9.9	31	36.4	38.4	276	772.6	10.3	12.9	17.3	29	24
01:00	10.9	18	41.5	46.7	285	772.2	11.7	12.7	17.0	15	17
02:00	11.0	16	37.9	41.2	281	771.9	11.7	13.4	16.8	14	15
03:00	10.3	25	38.8	41.5	290	771.3	11.1	13.0	16.7	16	18
04:00	9.6	26	32.1	34.7	280	771.1	10.1	12.2	16.3	25	20
05:00	9.5	24	26.1	29.4	270	770.8	10.2	12.2	16.0	24	21
06:00	9.4	26	27.7	32.8	271	770.5	9.9	11.7	15.9	25	22

SUNSET(UT)	19:21
EVENING TWILIGHT(UT)	20:33
MORNING TWILIGHT(UT)	05:39
SUNRISE(UT)	06:51
MOON'S QUARTER (1-4)	3
DISK % OF ILLUM.	69
DARK TIME	09:06
TWILIGHT TIME	02:24
MOONRISE(UT)	22:27
MOONSET(UT)	No moonset within sunset-sunrise
TIME LOST(WEATHER):	00:00
TIME LOST(TECHNICAL):	01:00
TIME LOST(OTHER):	00:00

Run no.	Object name	RA	Dec.	Equinox	AM	PA	UT	Exp. T.	Filter	Psys Channel	Binning	Comments
230086	Bias	0:00:00.00	+00:00:00.0	J2000.00	1.142	180.0	13:57:51.0	0.0	Halpha Narrow-ban		1 x 1	

230087	test flat	0:00:00.00	+00:00:00.0	J2000.00	2.899	180.0	13:59:08.3	5.1	Halpha	Narrow-ban	1 x 1
230088	test bias	0:00:00.00	+00:00:00.0	J2000.00	2.899	180.0	14:00:45.2	0.0	Halpha	Narrow-ban	1 x 1
230089	test flat 2	0:00:00.00	+00:00:00.0	J2000.00	2.899	180.0	14:01:58.5	20.1	Halpha	Narrow-ban	1 x 1
230090	Bias	0:00:00.00	+00:00:00.0	J2000.00	4.329	180.0	14:06:39.4	0.0	Halpha	Narrow-ban	1 x 1
230093	Bias	0:00:00.00	+00:00:00.0	J2000.00	4.324	180.0	14:23:00.7	0.0	i	Sloan	1 x 1
230094	Bias	0:00:00.00	+00:00:00.0	J2000.00	4.324	180.0	14:25:06.7	0.0	i	Sloan	1 x 1
230095	FLAT	19:19:09.00	+12:22:05.0	B1950.00	1.080	180.0	19:35:43.6	1.1	r	Sloan	1 x 1
230096	FLAT	19:19:09.68	+12:22:15.0	B1950.00	1.078	180.0	19:37:32.5	3.1	r	Sloan	1 x 1
230097	FLAT	19:19:10.36	+12:22:24.9	B1950.00	1.076	180.0	19:39:11.2	6.1	r	Sloan	1 x 1
230098	FLAT	19:19:11.04	+12:22:34.9	B1950.00	1.074	180.0	19:40:56.9	12.1	r	Sloan	1 x 1
230099	FLAT	19:19:11.73	+12:22:45.0	B1950.00	1.072	180.0	19:42:37.6	19.6	r	Sloan	1 x 1
230100	FLAT	19:19:12.41	+12:22:54.9	B1950.00	1.070	180.0	19:44:46.5	35.1	r	Sloan	1 x 1
230101	FLAT	19:19:13.09	+12:23:04.9	B1950.00	1.067	180.0	19:47:03.6	49.6	r	Sloan	1 x 1
230102	FLAT	19:19:13.77	+12:23:14.9	B1950.00	1.065	180.0	19:49:39.9	90.0	r	Sloan	1 x 1
230103	Focus run	18:42:45.00	+00:10:49.1	J2000.00	1.139	180.0	20:00:33.1	10.1	r	Sloan	1 x 1
230104	POS TEST	23:57:30.81	+56:43:41.8	J2000.00	1.952	180.0	20:08:57.3	10.1	r	Sloan	1 x 1
230105	BIAS	23:57:30.80	+56:43:41.7	J2000.00	1.930	180.0	20:11:57.7	0.0	r	Sloan	1 x 1
230106	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.922	180.0	20:12:57.5	0.0	r	Sloan	1 x 1
230107	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.915	180.0	20:13:55.8	0.0	r	Sloan	1 x 1
230108	BIAS	23:57:30.80	+56:43:41.8	J2000.00	1.908	180.0	20:14:54.4	0.0	r	Sloan	1 x 1
230109	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.901	180.0	20:15:52.0	0.0	r	Sloan	1 x 1
230110	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.894	180.0	20:16:49.7	0.0	r	Sloan	1 x 1
230111	BIAS	23:57:30.81	+56:43:41.7	J2000.00	1.887	180.0	20:17:47.3	0.0	r	Sloan	1 x 1
230112	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.842	180.0	20:21:36.5	299.9	r	Sloan	1 x 1
230113	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.798	180.0	20:28:19.6	299.8	r	Sloan	1 x 1
230114	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.756	180.0	20:35:08.6	299.8	r	Sloan	1 x 1
230115	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.716	180.0	20:41:57.1	299.8	r	Sloan	1 x 1
230116	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.678	180.0	20:48:46.0	299.7	r	Sloan	1 x 1
230117	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.642	180.0	20:55:34.7	299.9	r	Sloan	1 x 1
230118	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.608	180.0	21:02:23.7	299.3	r	Sloan	1 x 1
230119	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.576	180.0	21:09:13.2	299.8	r	Sloan	1 x 1
230120	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.546	180.0	21:16:03.6	299.8	r	Sloan	1 x 1
230121	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.517	180.0	21:22:53.0	299.7	r	Sloan	1 x 1
230122	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.500	180.0	21:29:31.6	0.0	r	Sloan	1 x 1
230123	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.484	180.0	21:31:19.4	299.8	r	Sloan	1 x 1
230124	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.458	180.0	21:38:08.6	299.2	r	Sloan	1 x 1
230125	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.434	180.0	21:44:58.7	299.8	r	Sloan	1 x 1
230126	NGC 7789	23:57:30.80	+56:43:41.7	J2000.00	1.412	180.0	21:51:48.2	299.7	r	Sloan	1 x 1
230127	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.390	180.0	21:58:36.5	299.8	r	Sloan	1 x 1
230128	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.370	180.0	22:05:26.7	299.8	r	Sloan	1 x 1
230129	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.351	180.0	22:12:16.3	299.9	r	Sloan	1 x 1
230130	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.333	180.0	22:19:05.1	299.9	r	Sloan	1 x 1
230131	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.316	180.0	22:25:54.6	299.7	r	Sloan	1 x 1
230132	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.300	180.0	22:32:43.3	299.8	r	Sloan	1 x 1
230133	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.282	180.0	22:43:19.3	0.0	r	Sloan	1 x 1
230134	NGC 7789	23:57:30.80	+56:43:41.7	J2000.00	1.273	180.0	22:45:05.2	299.8	r	Sloan	1 x 1
230135	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.259	180.0	22:51:55.9	299.9	r	Sloan	1 x 1
230136	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.246	180.0	22:58:44.3	299.7	r	Sloan	1 x 1
230137	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.234	180.0	23:05:34.4	299.8	r	Sloan	1 x 1
230138	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.223	180.0	23:12:23.8	299.8	r	Sloan	1 x 1
230139	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.213	180.0	23:19:13.4	299.8	r	Sloan	1 x 1
230140	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.203	180.0	23:26:02.7	299.8	r	Sloan	1 x 1
230141	NGC 7789	23:57:30.81	+56:43:41.9	J2000.00	1.194	180.0	23:32:52.8	299.8	r	Sloan	1 x 1
230142	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.185	180.0	23:39:42.3	299.8	r	Sloan	1 x 1
230143	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.178	180.0	23:46:32.6	299.7	r	Sloan	1 x 1
230144	NGC 7789	23:57:30.81	+56:43:41.9	J2000.00	1.171	180.0	23:53:22.3	299.8	r	Sloan	1 x 1
230145	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.167	180.0	23:59:58.2	0.0	r	Sloan	1 x 1
230146	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.163	180.0	00:01:49.6	299.8	r	Sloan	1 x 1
230147	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.157	180.0	00:08:39.2	299.9	r	Sloan	1 x 1
230148	NGC 7789	23:57:30.80	+56:43:41.9	J2000.00	1.152	180.0	00:15:28.0	299.8	r	Sloan	1 x 1
230149	NGC 7789	23:57:30.81	+56:43:42.1	J2000.00	1.148	180.0	00:22:16.8	299.8	r	Sloan	1 x 1
230150	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.144	180.0	00:29:06.5	299.8	r	Sloan	1 x 1

230151	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.140	180.0	00:35:57.4	299.9	r	Sloan	1 x 1
230152	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.138	180.0	00:42:44.6	299.9	r	Sloan	1 x 1
230153	NGC 7789	23:57:30.81	+56:43:41.9	J2000.00	1.135	180.0	00:49:34.7	299.9	r	Sloan	1 x 1
230154	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.134	180.0	00:56:24.5	299.7	r	Sloan	1 x 1
230155	NGC 7789	23:57:30.80	+56:43:41.9	J2000.00	1.133	180.0	01:03:14.4	299.8	r	Sloan	1 x 1
230156	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.132	180.0	01:11:01.7	0.0	r	Sloan	1 x 1
230157	BIAS	23:57:30.80	+56:43:41.8	J2000.00	1.132	180.0	01:12:31.8	0.0	r	Sloan	1 x 1
230158	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.132	180.0	01:15:08.6	299.8	r	Sloan	1 x 1
230159	NGC 7789	23:57:30.81	+56:43:41.9	J2000.00	1.132	180.0	01:21:57.1	299.8	r	Sloan	1 x 1
230160	NGC 7789	23:57:30.80	+56:43:41.7	J2000.00	1.133	180.0	01:28:47.0	299.8	r	Sloan	1 x 1
230161	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.135	180.0	01:35:35.7	299.8	r	Sloan	1 x 1
230162	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.137	180.0	01:42:24.6	299.3	r	Sloan	1 x 1
230163	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.139	180.0	01:49:14.5	299.7	r	Sloan	1 x 1
230164	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.143	180.0	01:56:04.5	299.8	r	Sloan	1 x 1
230165	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.146	180.0	02:02:52.8	299.8	r	Sloan	1 x 1
230166	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.151	180.0	02:09:41.0	299.8	r	Sloan	1 x 1
230167	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.156	180.0	02:16:30.5	299.8	r	Sloan	1 x 1
230168	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.159	180.0	02:23:25.6	0.0	r	Sloan	1 x 1
230169	NGC 7789	23:57:30.80	+56:43:41.9	J2000.00	1.163	180.0	02:25:33.5	299.7	r	Sloan	1 x 1
230170	NGC 7789	23:57:30.80	+56:43:41.6	J2000.00	1.170	180.0	02:33:15.0	299.9	r	Sloan	1 x 1
230171	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.177	180.0	02:40:03.6	299.8	r	Sloan	1 x 1
230172	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.185	180.0	02:46:53.8	299.8	r	Sloan	1 x 1
230173	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.193	180.0	02:53:43.4	299.8	r	Sloan	1 x 1
230174	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.202	180.0	03:00:32.0	299.9	r	Sloan	1 x 1
230175	NGC 7789	23:57:30.81	+56:43:41.9	J2000.00	1.212	180.0	03:07:22.7	299.3	r	Sloan	1 x 1
230176	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.222	180.0	03:14:10.6	299.3	r	Sloan	1 x 1
230177	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.233	180.0	03:21:01.2	299.8	r	Sloan	1 x 1
230178	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.245	180.0	03:27:50.1	299.8	r	Sloan	1 x 1
230179	BIAS	23:57:30.81	+56:43:41.7	J2000.00	1.253	180.0	03:34:23.6	0.0	r	Sloan	1 x 1
230180	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.266	180.0	03:38:52.2	299.8	r	Sloan	1 x 1
230181	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.280	180.0	03:45:40.2	299.7	r	Sloan	1 x 1
230182	NGC 7789	23:57:30.81	+56:43:42.1	J2000.00	1.295	180.0	03:52:28.7	299.3	r	Sloan	1 x 1
230183	NGC 7789	23:57:30.81	+56:43:41.3	J2000.00	1.311	180.0	03:59:18.8	299.8	r	Sloan	1 x 1
230184	NGC 7789	23:57:30.81	+56:43:41.7	J2000.00	1.328	180.0	04:06:06.6	299.8	r	Sloan	1 x 1
230185	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.346	180.0	04:12:56.5	299.7	r	Sloan	1 x 1
230186	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.364	180.0	04:19:45.2	299.8	r	Sloan	1 x 1
230187	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.384	180.0	04:26:35.3	299.8	r	Sloan	1 x 1
230188	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.405	180.0	04:33:23.7	299.3	r	Sloan	1 x 1
230189	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.428	180.0	04:40:12.6	299.3	r	Sloan	1 x 1
230190	NGC 7789	23:57:30.80	+56:43:41.8	J2000.00	1.451	180.0	04:47:01.1	299.9	r	Sloan	1 x 1
230191	NGC 7789	23:57:30.81	+56:43:41.8	J2000.00	1.476	180.0	04:53:51.1	299.8	r	Sloan	1 x 1
230192	BIAS	23:57:30.81	+56:43:41.8	J2000.00	1.492	180.0	05:00:24.7	0.0	r	Sloan	1 x 1
230193	M31-microfld1	0:44:00.00	+41:33:59.9	J2000.00	1.293	180.0	05:04:13.1	319.7	r	Sloan	1 x 1
230194	M31-microfld1	0:44:00.00	+41:33:59.9	J2000.00	1.319	180.0	05:11:20.9	319.7	r	Sloan	1 x 1
230195	M31-microfld1	0:43:59.99	+41:34:00.0	J2000.00	1.345	180.0	05:18:22.0	319.7	i	Sloan	1 x 1
230196	M31-microfld1	0:44:00.00	+41:33:59.9	J2000.00	1.374	180.0	05:25:21.6	319.3	i	Sloan	1 x 1
230197	M31-microfld2	0:43:09.97	+40:58:15.1	J2000.00	1.414	180.0	05:33:28.1	319.8	r	Sloan	1 x 1
230198	M31-microfld2	0:43:10.00	+40:58:14.9	J2000.00	1.448	180.0	05:40:28.1	319.9	r	Sloan	1 x 1
230199	M31-microfld2	0:43:09.99	+40:58:15.0	J2000.00	1.484	180.0	05:47:29.5	319.8	i	Sloan	1 x 1
230200	M31-microfld2	0:43:10.00	+40:58:15.0	J2000.00	1.523	180.0	05:54:29.5	319.7	i	Sloan	1 x 1
230201	BIAS	0:43:10.00	+40:58:15.0	J2000.00	1.564	180.0	06:04:07.7	0.0	V	Harris	1 x 1
230202	BIAS	0:43:09.99	+40:58:15.0	J2000.00	1.577	180.0	06:06:18.3	0.0	V	Harris	1 x 1
230203	BIAS	0:43:10.00	+40:58:14.9	J2000.00	1.585	180.0	06:07:29.7	0.0	V	Harris	1 x 1
230204	BIAS	0:43:10.00	+40:58:14.9	J2000.00	1.591	180.0	06:08:27.5	0.0	V	Harris	1 x 1
230205	BIAS	0:43:10.00	+40:58:14.9	J2000.00	1.598	180.0	06:09:25.6	0.0	V	Harris	1 x 1
230206	BIAS	0:43:10.00	+40:58:15.0	J2000.00	1.604	180.0	06:10:23.2	0.0	V	Harris	1 x 1
230207	BIAS	0:43:10.00	+40:58:15.0	J2000.00	1.610	180.0	06:11:21.3	0.0	V	Harris	1 x 1
230208	BIAS	0:43:10.00	+40:58:15.0	J2000.00	1.617	180.0	06:12:19.4	0.0	V	Harris	1 x 1
230209	FLAT - V	4:25:46.00	+54:09:03.0	B1950.00	1.115	180.0	06:22:20.4	60.1	V	Harris	1 x 1
230210	FLAT - V	4:25:47.13	+54:09:13.0	B1950.00	1.116	180.0	06:25:13.7	29.6	V	Harris	1 x 1
230211	FLAT - V	4:25:48.27	+54:09:22.9	B1950.00	1.117	180.0	06:27:33.3	15.1	V	Harris	1 x 1
230212	FLAT - V	4:25:49.41	+54:09:33.0	B1950.00	1.118	180.0	06:29:28.3	9.1	V	Harris	1 x 1

230213	FLAT - V	4:25:50.55	+54:09:43.0	B1950.00	1.119	180.0	06:31:08.1	6.1	V Harris	1 x 1
230214	FLAT - R	4:25:51.69	+54:09:52.8	B1950.00	1.120	180.0	06:32:56.4	3.1	r Sloan	1 x 1
230215	FLAT - R	4:25:52.83	+54:10:02.9	B1950.00	1.121	180.0	06:34:38.4	2.1	r Sloan	1 x 1
230216	FLAT - R	4:25:53.97	+54:10:12.8	B1950.00	1.122	180.0	06:36:13.3	1.1	r Sloan	1 x 1
230217	FLAT - R	4:25:55.11	+54:10:23.0	B1950.00	1.123	180.0	06:37:45.8	1.1	r Sloan	1 x 1