INT OBSERVING LOG (ISAAC NEWTON GROUP, LA PALMA)

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TELESCOPE:              INT
DATE:                   1999 Feb 10/11
INT TAPE NR:            INTD3951-52
OBSERVER:               Gavin Dalton/Jane Booth
PROGRAMME:              Oxford UBVRIZ deep survey
PATT/CAT:               WFS 16
TELESCOPE OPERATOR:     Jose Norberto
SUPPORT ASTRONOMER:     Nic Walton

FOCUS:                  PRIME
INSTRUMENT:             WFC
FILTER WHEEL (PF):      KP, U, SI, R, V, Z
CAMERA (IDS):           ---
COLLIMATOR (IDS):       ---
COLL. FOCUS (IDS):      ---
GRATING (IDS):          ---
DETECTOR:               4xEEV
PIXELS:                 2K x 4K
PIXEL SIZE (microns):   13.5
WINDOW:                 none
BINNING:                none

WEATHER:                  Ggood
OUTSIDE TEMP (deg C):     03.9            (FIRST HALF)
OUTSIDE TEMP (deg C):     04.3            (SECOND HALF)
HUMIDITY (%):             18              (FIRST HALF)
HUMIDITY (%):             30              (SECOND HALF)
CLOUD COVER (%):          00              (FIRST HALF)
CLOUD COVER (%):          00              (SECOND HALF)
DUST (0 - 2):              0              (FIRST HALF)
DUST (0 - 2):              0              (SECOND HALF)
SEEING (arcsec):           -              (FIRST HALF)
SEEING (arcsec):           -              (SECOND HALF)
AV. SEEING (arcsec):
NO. SEEING MEASURES:
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UTC	TELESCOPE AZ	EL	Focus	TComp	CASELLA OUT Temp	Humid	CASELLA IN Temp	Humid	SEEING Det./TV	Comments
22:30	057	54	46.02	0.14	03.6	16	04.0	16	1.2	filter KP
01:30	333	71	46.04	0.18	04.8	17	04.3	18	1.1	filter R
03:30	305	55	46.04	0.18	05.8	20	04.7	20	1.2	filter V TC 0.18
05:30	046	72	46.04	0.18	04.2	43	04.9	51	1.2	filter R

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DARK HOURS:             10:16
DOME OPEN (UTC):        18:30
MOON PHASE (D/G/B):         B
DK HRS LOST (WEATHER):00:00
DK HRS LOST (TELESC): 00:00
DK HRS LOST (DOME):   00:00
DK HRS LOST (INSTR.): 00:00
DK HRS LOST (DET.):   00:00
DK HRS LOST (COMPS.): 00:00
DK HRS LOST (A&G):    03:00
DK HRS LOST (OTHER):  00:00

COMMENTS:
Big troubles using the autoguider due to bright spots confusing the autoguider
Evening twilight lost due to pointing problems
Morning twilight lost dur to fog
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Run no.	Object name	RA	Dec.	Equinox	AM	PA	UT	Exp. T.	Filter	Psys	Channel	Binning	Comments
147880	Bias frame	0:00:00.00	+00:00:00.0	J2000.00	1.000	180.0	14:08:22.9	0.0	z	Gunn	1	1 x 1	

147881	Bias frame	0:00:00.00	+00:00:00.0	J2000.00	1.000	180.0	14:08:22.9	0.0	z	Gunn	5	1 x 1
147882	Bias frame	0:00:00.00	+00:00:00.0	J2000.00	1.000	180.0	14:08:22.9	0.0	z	Gunn	3	1 x 1
147883	Bias frame	0:00:00.00	+00:00:00.0	J2000.00	1.000	180.0	14:08:22.9	0.0	z	Gunn	4	1 x 1
147884	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:45:20.8	0.0	I Sloan	Gunn	1	1 x 1
147885	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:45:20.8	0.0	I Sloan	Gunn	5	1 x 1
147886	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:45:20.8	0.0	I Sloan	Gunn	3	1 x 1
147887	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:45:20.8	0.0	I Sloan	Gunn	4	1 x 1
147888	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:49:45.7	0.0	I Sloan	Gunn	1	1 x 1
147889	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:49:45.7	0.0	I Sloan	Gunn	5	1 x 1
147890	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:49:45.7	0.0	I Sloan	Gunn	3	1 x 1
147891	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:49:45.7	0.0	I Sloan	Gunn	4	1 x 1
147892	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:56:32.6	0.0	I Sloan	Gunn	1	1 x 1
147893	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:56:32.6	0.0	I Sloan	Gunn	5	1 x 1
147894	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:56:32.6	0.0	I Sloan	Gunn	3	1 x 1
147895	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:56:32.6	0.0	I Sloan	Gunn	4	1 x 1
147896	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:59:22.8	0.0	I Sloan	Gunn	1	1 x 1
147897	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:59:22.8	0.0	I Sloan	Gunn	5	1 x 1
147898	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:59:22.8	0.0	I Sloan	Gunn	3	1 x 1
147899	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	16:59:22.8	0.0	I Sloan	Gunn	4	1 x 1
147900	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:02:12.5	0.0	I Sloan	Gunn	1	1 x 1
147901	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:02:12.5	0.0	I Sloan	Gunn	5	1 x 1
147902	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:02:12.5	0.0	I Sloan	Gunn	3	1 x 1
147903	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:02:12.5	0.0	I Sloan	Gunn	4	1 x 1
147904	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:05:03.4	0.0	I Sloan	Gunn	1	1 x 1
147905	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:05:03.4	0.0	I Sloan	Gunn	5	1 x 1
147906	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:05:03.4	0.0	I Sloan	Gunn	3	1 x 1
147907	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:05:03.4	0.0	I Sloan	Gunn	4	1 x 1
147908	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:07:54.6	0.0	I Sloan	Gunn	1	1 x 1
147909	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:07:54.6	0.0	I Sloan	Gunn	5	1 x 1
147910	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:07:54.6	0.0	I Sloan	Gunn	3	1 x 1
147911	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:07:54.6	0.0	I Sloan	Gunn	4	1 x 1
147912	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:10:45.0	0.0	I Sloan	Gunn	1	1 x 1
147913	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:10:45.0	0.0	I Sloan	Gunn	5	1 x 1
147914	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:10:45.0	0.0	I Sloan	Gunn	3	1 x 1
147915	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:10:45.0	0.0	I Sloan	Gunn	4	1 x 1
147916	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:13:34.8	0.0	I Sloan	Gunn	1	1 x 1
147917	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:13:34.8	0.0	I Sloan	Gunn	5	1 x 1
147918	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:13:34.8	0.0	I Sloan	Gunn	3	1 x 1
147919	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:13:34.8	0.0	I Sloan	Gunn	4	1 x 1
147920	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:16:25.7	0.0	I Sloan	Gunn	1	1 x 1
147921	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:16:25.7	0.0	I Sloan	Gunn	5	1 x 1
147922	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:16:25.7	0.0	I Sloan	Gunn	3	1 x 1
147923	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:16:25.7	0.0	I Sloan	Gunn	4	1 x 1
147924	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:19:15.6	0.0	I Sloan	Gunn	1	1 x 1
147925	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:19:15.6	0.0	I Sloan	Gunn	5	1 x 1
147926	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:19:15.6	0.0	I Sloan	Gunn	3	1 x 1
147927	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:19:15.6	0.0	I Sloan	Gunn	4	1 x 1
147928	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:22:05.6	0.0	I Sloan	Gunn	1	1 x 1
147929	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:22:05.6	0.0	I Sloan	Gunn	5	1 x 1
147930	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:22:05.6	0.0	I Sloan	Gunn	3	1 x 1
147931	Bias frame	0:00:00.00	+00:00:00.0	A	1.521	179.9	17:22:05.6	0.0	I Sloan	Gunn	4	1 x 1
147932	u 1s	4:25:46.00	+54:09:03.0	B1950.00	1.132	179.9	19:16:13.6	1.5	U	RGO	1	1 x 1
147933	u 1s	4:25:46.00	+54:09:03.0	B1950.00	1.132	179.9	19:16:13.6	1.5	U	RGO	5	1 x 1
147934	u 1s	4:25:46.00	+54:09:03.0	B1950.00	1.132	179.9	19:16:13.6	1.5	U	RGO	3	1 x 1
147935	u 1s	4:25:46.00	+54:09:03.0	B1950.00	1.132	179.9	19:16:13.6	1.5	U	RGO	4	1 x 1
147936	Flat field	4:25:46.00	+54:09:02.9	B1950.00	1.129	179.9	19:19:34.4	6.3	U	RGO	1	1 x 1
147937	Flat field	4:25:46.00	+54:09:02.9	B1950.00	1.129	179.9	19:19:34.4	6.3	U	RGO	5	1 x 1
147938	Flat field	4:25:46.00	+54:09:02.9	B1950.00	1.129	179.9	19:19:34.4	6.3	U	RGO	3	1 x 1
147939	Flat field	4:25:46.00	+54:09:02.9	B1950.00	1.129	179.9	19:19:34.4	6.3	U	RGO	4	1 x 1
147940	Flat field	4:25:47.13	+54:09:13.0	B1950.00	1.127	179.9	19:22:55.5	14.5	U	RGO	1	1 x 1
147941	Flat field	4:25:47.13	+54:09:13.0	B1950.00	1.127	179.9	19:22:55.5	14.5	U	RGO	5	1 x 1
147942	Flat field	4:25:47.13	+54:09:13.0	B1950.00	1.127	179.9	19:22:55.5	14.5	U	RGO	3	1 x 1

147943	Flat field	4:25:47.13	+54:09:13.0	B1950.00	1.127	179.9	19:22:55.5	14.5	U	RGO	4	1 x 1	
147944	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.124	179.9	19:26:57.6	43.1	U	RGO	1	1 x 1	Shutter Opened
147945	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.124	179.9	19:26:57.6	43.1	U	RGO	5	1 x 1	
147946	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.124	179.9	19:26:57.6	43.1	U	RGO	3	1 x 1	
147947	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.124	179.9	19:26:57.6	43.1	U	RGO	4	1 x 1	
147948	Flat field	4:25:44.86	+54:09:13.0	B1950.00	1.121	179.9	19:31:25.2	27.7	I	Sloan Gunn	1	1 x 1	
147949	Flat field	4:25:44.86	+54:09:13.0	B1950.00	1.121	179.9	19:31:25.2	27.7	I	Sloan Gunn	5	1 x 1	
147950	Flat field	4:25:44.86	+54:09:13.0	B1950.00	1.121	179.9	19:31:25.2	27.7	I	Sloan Gunn	3	1 x 1	
147951	Flat field	4:25:44.86	+54:09:13.0	B1950.00	1.121	179.9	19:31:25.2	27.7	I	Sloan Gunn	4	1 x 1	
147952	Flat field	4:25:47.13	+54:09:12.9	B1950.00	1.119	179.9	19:35:10.0	57.4	I	Sloan Gunn	1	1 x 1	
147953	Flat field	4:25:47.13	+54:09:12.9	B1950.00	1.119	179.9	19:35:10.0	57.4	I	Sloan Gunn	5	1 x 1	
147954	Flat field	4:25:47.13	+54:09:12.9	B1950.00	1.119	179.9	19:35:10.0	57.4	I	Sloan Gunn	3	1 x 1	
147955	Flat field	4:25:47.13	+54:09:12.9	B1950.00	1.119	179.9	19:35:10.0	57.4	I	Sloan Gunn	4	1 x 1	
147956	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.117	179.9	19:39:33.3	127.9	I	Sloan Gunn	1	1 x 1	
147957	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.117	179.9	19:39:33.3	127.9	I	Sloan Gunn	5	1 x 1	
147958	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.117	179.9	19:39:33.3	127.9	I	Sloan Gunn	3	1 x 1	
147959	Flat field	4:25:44.86	+54:09:12.9	B1950.00	1.117	179.9	19:39:33.3	127.9	I	Sloan Gunn	4	1 x 1	
147960	Focus run	3:53:24.99	+00:04:02.9	J2000.00	1.143	179.9	20:00:46.9	5.1	R	Harris	1	1 x 1	
147961	Focus run	3:53:24.99	+00:04:02.9	J2000.00	1.143	179.9	20:00:46.9	5.1	R	Harris	5	1 x 1	
147962	Focus run	3:53:24.99	+00:04:02.9	J2000.00	1.143	179.9	20:00:46.9	5.1	R	Harris	3	1 x 1	
147963	Focus run	3:53:24.99	+00:04:02.9	J2000.00	1.143	179.9	20:00:46.9	5.1	R	Harris	4	1 x 1	
147964	SA95-107 I	3:53:25.00	+00:05:48.0	J2000.00	1.147	179.9	20:08:36.3	5.1	I	Sloan Gunn	1	1 x 1	
147965	SA95-107 I	3:53:25.00	+00:05:48.0	J2000.00	1.147	179.9	20:08:36.3	5.1	I	Sloan Gunn	5	1 x 1	
147966	SA95-107 I	3:53:25.00	+00:05:48.0	J2000.00	1.147	179.9	20:08:36.3	5.1	I	Sloan Gunn	3	1 x 1	
147967	SA95-107 I	3:53:25.00	+00:05:48.0	J2000.00	1.147	179.9	20:08:36.3	5.1	I	Sloan Gunn	4	1 x 1	
147968	SA95-107 R	3:53:25.00	+00:05:48.0	J2000.00	1.149	179.9	20:12:35.1	5.1	R	Harris	1	1 x 1	
147969	SA95-107 R	3:53:25.00	+00:05:48.0	J2000.00	1.149	179.9	20:12:35.1	5.1	R	Harris	5	1 x 1	
147970	SA95-107 R	3:53:25.00	+00:05:48.0	J2000.00	1.149	179.9	20:12:35.1	5.1	R	Harris	3	1 x 1	
147971	SA95-107 R	3:53:25.00	+00:05:48.0	J2000.00	1.149	179.9	20:12:35.1	5.1	R	Harris	4	1 x 1	
147972	SA95-107 V	3:53:25.00	+00:05:48.0	J2000.00	1.152	179.9	20:16:44.0	9.6	V	Harris	1	1 x 1	
147973	SA95-107 V	3:53:25.00	+00:05:48.0	J2000.00	1.152	179.9	20:16:44.0	9.6	V	Harris	5	1 x 1	
147974	SA95-107 V	3:53:25.00	+00:05:48.0	J2000.00	1.152	179.9	20:16:44.0	9.6	V	Harris	3	1 x 1	
147975	SA95-107 V	3:53:25.00	+00:05:48.0	J2000.00	1.152	179.9	20:16:44.0	9.6	V	Harris	4	1 x 1	
147976	SA95-107 B	3:53:25.00	+00:05:48.0	J2000.00	1.156	179.9	20:21:21.5	10.1	B	Kitt Peak	1	1 x 1	
147977	SA95-107 B	3:53:25.00	+00:05:48.0	J2000.00	1.156	179.9	20:21:21.5	10.1	B	Kitt Peak	5	1 x 1	
147978	SA95-107 B	3:53:25.00	+00:05:48.0	J2000.00	1.156	179.9	20:21:21.5	10.1	B	Kitt Peak	3	1 x 1	
147979	SA95-107 B	3:53:25.00	+00:05:48.0	J2000.00	1.156	179.9	20:21:21.5	10.1	B	Kitt Peak	4	1 x 1	
147980	SA95-107 U	3:53:25.00	+00:05:48.0	J2000.00	1.162	179.9	20:28:23.4	20.1	U	RGO	1	1 x 1	
147981	SA95-107 U	3:53:25.00	+00:05:48.0	J2000.00	1.162	179.9	20:28:23.4	20.1	U	RGO	5	1 x 1	
147982	SA95-107 U	3:53:25.00	+00:05:48.0	J2000.00	1.162	179.9	20:28:23.4	20.1	U	RGO	3	1 x 1	
147983	SA95-107 U	3:53:25.00	+00:05:48.0	J2000.00	1.162	179.9	20:28:23.4	20.1	U	RGO	4	1 x 1	
147984	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.170	179.9	20:35:17.4	5.1	z	Gunn	1	1 x 1	
147985	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.170	179.9	20:35:17.4	5.1	z	Gunn	5	1 x 1	
147986	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.170	179.9	20:35:17.4	5.1	z	Gunn	3	1 x 1	
147987	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.170	179.9	20:35:17.4	5.1	z	Gunn	4	1 x 1	
147988	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.178	179.9	20:42:08.1	5.1	z	Gunn	1	1 x 1	
147989	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.178	179.9	20:42:08.1	5.1	z	Gunn	5	1 x 1	
147990	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.178	179.9	20:42:08.1	5.1	z	Gunn	3	1 x 1	
147991	SA95-107 Z	3:53:25.00	+00:05:48.0	J2000.00	1.178	179.9	20:42:08.1	5.1	z	Gunn	4	1 x 1	
147992	test	4:20:53.17	+45:27:50.9	J2000.00	1.054	179.9	20:49:50.4	2.1	z	Gunn	1	1 x 1	
147993	test	4:20:53.17	+45:27:50.9	J2000.00	1.054	179.9	20:49:50.4	2.1	z	Gunn	5	1 x 1	
147994	test	4:20:53.17	+45:27:50.9	J2000.00	1.054	179.9	20:49:50.4	2.1	z	Gunn	3	1 x 1	
147995	test	4:20:53.17	+45:27:50.9	J2000.00	1.054	179.9	20:49:50.4	2.1	z	Gunn	4	1 x 1	
147996	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.096	180.0	21:47:53.7	1.1	V	Harris	1	1 x 1	
147997	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.096	180.0	21:47:53.7	1.1	V	Harris	5	1 x 1	
147998	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.096	180.0	21:47:53.7	1.1	V	Harris	3	1 x 1	
147999	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.096	180.0	21:47:53.7	1.1	V	Harris	4	1 x 1	
148000	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.101	180.0	21:52:14.6	1.1	V	Harris	1	1 x 1	
148001	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.101	180.0	21:52:14.6	1.1	V	Harris	5	1 x 1	
148002	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.101	180.0	21:52:14.6	1.1	V	Harris	3	1 x 1	
148003	O5+07 v 1s	5:04:21.36	+08:12:18.4	J2000.00	1.101	180.0	21:52:14.6	1.1	V	Harris	4	1 x 1	
148008	H054 B	9:11:33.73	+40:36:22.9	J2000.00	1.239	180.0	22:04:55.1	899.3	B	Kitt Peak	1	1 x 1	

148009	H054	B	9:11:33.73	+40:36:22.9	J2000.00	1.239	180.0	22:04:55.1	899.3	B	Kitt Peak	5	1 x 1
148010	H054	B	9:11:33.73	+40:36:22.9	J2000.00	1.239	180.0	22:04:55.1	899.3	B	Kitt Peak	3	1 x 1
148011	H054	B	9:11:33.73	+40:36:22.9	J2000.00	1.239	180.0	22:04:55.1	899.3	B	Kitt Peak	4	1 x 1
148012	H054	B	9:11:33.73	+40:36:22.8	J2000.00	1.190	180.0	22:22:49.4	898.6	B	Kitt Peak	1	1 x 1
148013	H054	B	9:11:33.73	+40:36:22.8	J2000.00	1.190	180.0	22:22:49.4	898.6	B	Kitt Peak	5	1 x 1
148014	H054	B	9:11:33.73	+40:36:22.8	J2000.00	1.190	180.0	22:22:49.4	898.6	B	Kitt Peak	3	1 x 1
148015	H054	B	9:11:33.73	+40:36:22.8	J2000.00	1.190	180.0	22:22:49.4	898.6	B	Kitt Peak	4	1 x 1
148016	H054	B	4:35:46.87	+20:18:11.4	J2000.00	1.148	180.0	22:40:52.5	899.1	B	Kitt Peak	1	1 x 1
148017	H054	B	4:35:46.87	+20:18:11.4	J2000.00	1.148	180.0	22:40:52.5	899.1	B	Kitt Peak	5	1 x 1
148018	H054	B	4:35:46.87	+20:18:11.4	J2000.00	1.148	180.0	22:40:52.5	899.1	B	Kitt Peak	3	1 x 1
148019	H054	B	4:35:46.87	+20:18:11.4	J2000.00	1.148	180.0	22:40:52.5	899.1	B	Kitt Peak	4	1 x 1
148020	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.108	180.0	22:59:44.2	1198.8	R	Harris	1	1 x 1
148021	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.108	180.0	22:59:44.2	1198.8	R	Harris	5	1 x 1
148022	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.108	180.0	22:59:44.2	1198.8	R	Harris	3	1 x 1
148023	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.108	180.0	22:59:44.2	1198.8	R	Harris	4	1 x 1 Trailed -Guide
148040	H054	R	9:11:33.73	+40:36:22.8	J2000.00	1.023	180.0	00:38:55.8	1198.8	R	Harris	1	1 x 1
148041	H054	R	9:11:33.73	+40:36:22.8	J2000.00	1.023	180.0	00:38:55.8	1198.8	R	Harris	5	1 x 1
148042	H054	R	9:11:33.73	+40:36:22.8	J2000.00	1.023	180.0	00:38:55.8	1198.8	R	Harris	3	1 x 1
148043	H054	R	9:11:33.73	+40:36:22.8	J2000.00	1.023	180.0	00:38:55.8	1198.8	R	Harris	4	1 x 1
148044	H054	R	9:11:33.74	+40:36:22.7	J2000.00	1.023	180.0	01:04:19.3	1198.9	R	Harris	1	1 x 1
148045	H054	R	9:11:33.74	+40:36:22.7	J2000.00	1.023	180.0	01:04:19.3	1198.9	R	Harris	5	1 x 1
148046	H054	R	9:11:33.74	+40:36:22.7	J2000.00	1.023	180.0	01:04:19.3	1198.9	R	Harris	3	1 x 1
148047	H054	R	9:11:33.74	+40:36:22.7	J2000.00	1.023	180.0	01:04:19.3	1198.9	R	Harris	4	1 x 1 2 arcsec glitch
148048	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.039	180.0	01:41:13.3	1198.9	R	Harris	1	1 x 1
148049	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.039	180.0	01:41:13.3	1198.9	R	Harris	5	1 x 1
148050	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.039	180.0	01:41:13.3	1198.9	R	Harris	3	1 x 1
148051	H054	R	9:11:33.74	+40:36:22.8	J2000.00	1.039	180.0	01:41:13.3	1198.9	R	Harris	4	1 x 1
148052	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.072	180.0	02:16:07.3	1099.0	I	Sloan Gunn	1	1 x 1
148053	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.072	180.0	02:16:07.3	1099.0	I	Sloan Gunn	5	1 x 1
148054	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.072	180.0	02:16:07.3	1099.0	I	Sloan Gunn	3	1 x 1
148055	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.072	180.0	02:16:07.3	1099.0	I	Sloan Gunn	4	1 x 1
148056	H054	I	9:11:33.74	+40:36:22.8	J2000.00	1.103	180.0	02:38:24.0	1099.0	I	Sloan Gunn	1	1 x 1
148057	H054	I	9:11:33.74	+40:36:22.8	J2000.00	1.103	180.0	02:38:24.0	1099.0	I	Sloan Gunn	5	1 x 1
148058	H054	I	9:11:33.74	+40:36:22.8	J2000.00	1.103	180.0	02:38:24.0	1099.0	I	Sloan Gunn	3	1 x 1
148059	H054	I	9:11:33.74	+40:36:22.8	J2000.00	1.103	180.0	02:38:24.0	1099.0	I	Sloan Gunn	4	1 x 1
148060	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.151	180.0	03:04:21.0	1099.0	I	Sloan Gunn	1	1 x 1
148061	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.151	180.0	03:04:21.0	1099.0	I	Sloan Gunn	5	1 x 1
148062	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.151	180.0	03:04:21.0	1099.0	I	Sloan Gunn	3	1 x 1
148063	H054	I	9:11:33.74	+40:36:22.9	J2000.00	1.151	180.0	03:04:21.0	1099.0	I	Sloan Gunn	4	1 x 1
148064	H054	V	9:11:33.74	+40:36:22.8	J2000.00	1.205	180.0	03:28:05.5	999.0	V	Harris	1	1 x 1
148065	H054	V	9:11:33.74	+40:36:22.8	J2000.00	1.205	180.0	03:28:05.5	999.0	V	Harris	5	1 x 1
148066	H054	V	9:11:33.74	+40:36:22.8	J2000.00	1.205	180.0	03:28:05.5	999.0	V	Harris	3	1 x 1
148067	H054	V	9:11:33.74	+40:36:22.8	J2000.00	1.205	180.0	03:28:05.5	999.0	V	Harris	4	1 x 1
148068	H054	V	4:35:46.86	+20:18:11.4	J2000.00	1.265	180.0	03:48:14.5	999.1	V	Harris	1	1 x 1
148069	H054	V	4:35:46.86	+20:18:11.4	J2000.00	1.265	180.0	03:48:14.5	999.1	V	Harris	5	1 x 1
148070	H054	V	4:35:46.86	+20:18:11.4	J2000.00	1.265	180.0	03:48:14.5	999.1	V	Harris	3	1 x 1
148071	H054	V	4:35:46.86	+20:18:11.4	J2000.00	1.265	180.0	03:48:14.5	999.1	V	Harris	4	1 x 1
148072	H054	V	9:11:33.74	+40:36:23.0	J2000.00	1.336	180.0	04:08:21.6	998.9	V	Harris	1	1 x 1
148073	H054	V	9:11:33.74	+40:36:23.0	J2000.00	1.336	180.0	04:08:21.6	998.9	V	Harris	5	1 x 1
148074	H054	V	9:11:33.74	+40:36:23.0	J2000.00	1.336	180.0	04:08:21.6	998.9	V	Harris	3	1 x 1
148075	H054	V	9:11:33.74	+40:36:23.0	J2000.00	1.336	180.0	04:08:21.6	998.9	V	Harris	4	1 x 1
148076	H054	Z	9:11:33.73	+40:36:22.9	J2000.00	1.413	180.0	04:29:33.3	599.4	z	Gunn	1	1 x 1
148077	H054	Z	9:11:33.73	+40:36:22.9	J2000.00	1.413	180.0	04:29:33.3	599.4	z	Gunn	5	1 x 1
148078	H054	Z	9:11:33.73	+40:36:22.9	J2000.00	1.413	180.0	04:29:33.3	599.4	z	Gunn	3	1 x 1
148079	H054	Z	9:11:33.73	+40:36:22.9	J2000.00	1.413	180.0	04:29:33.3	599.4	z	Gunn	4	1 x 1
148080	J028	R	16:37:41.30	+46:22:22.2	J2000.00	1.378	180.0	04:50:01.9	1198.9	R	Harris	1	1 x 1
148081	J028	R	16:37:41.30	+46:22:22.2	J2000.00	1.378	180.0	04:50:01.9	1198.9	R	Harris	5	1 x 1
148082	J028	R	16:37:41.30	+46:22:22.2	J2000.00	1.378	180.0	04:50:01.9	1198.9	R	Harris	3	1 x 1
148083	J028	R	16:37:41.30	+46:22:22.2	J2000.00	1.378	180.0	04:50:01.9	1198.9	R	Harris	4	1 x 1 Wrong rotator
148088	J013	Z	16:34:23.57	+46:35:33.4	J2000.00	1.263	180.0	05:26:06.9	599.5	z	Gunn	1	1 x 1
148089	J013	Z	16:34:23.57	+46:35:33.4	J2000.00	1.263	180.0	05:26:06.9	599.5	z	Gunn	5	1 x 1
148090	J013	Z	16:34:23.57	+46:35:33.4	J2000.00	1.263	180.0	05:26:06.9	599.5	z	Gunn	3	1 x 1

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148091 J013 Z              16:34:23.57 +46:35:33.4 J2000.00 1.263 180.0 05:26:06.9    599.5        z       Gunn    4      1 x 1
148092 J013 I              16:34:23.57 +46:35:33.3 J2000.00 1.214 180.0 05:40:47.6   1099.0        I Sloan Gunn    1      1 x 1
148093 J013 I              16:34:23.57 +46:35:33.3 J2000.00 1.214 180.0 05:40:47.6   1099.0        I Sloan Gunn    5      1 x 1
148094 J013 I              16:34:23.57 +46:35:33.3 J2000.00 1.214 180.0 05:40:47.6   1099.0        I Sloan Gunn    3      1 x 1
148095 J013 I              16:34:23.57 +46:35:33.3 J2000.00 1.214 180.0 05:40:47.6   1099.0        I Sloan Gunn    4      1 x 1 Autoguider
148096 J013 I               8:17:11.78 +23:17:46.6 J2000.00 1.165 180.0 06:03:23.5   1098.8        I Sloan Gunn    1      1 x 1
148097 J013 I               8:17:11.78 +23:17:46.6 J2000.00 1.165 180.0 06:03:23.5   1098.8        I Sloan Gunn    5      1 x 1
148098 J013 I               8:17:11.78 +23:17:46.6 J2000.00 1.165 180.0 06:03:23.5   1098.8        I Sloan Gunn    3      1 x 1
148099 J013 I               8:17:11.78 +23:17:46.6 J2000.00 1.165 180.0 06:03:23.5   1098.8        I Sloan Gunn    4      1 x 1
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