```
INT OBSERVING LOG (ISAAC NEWTON GROUP, LA PALMA)

TELESCOPE:             INT
DATE:                  1999 Sep 08/09
INT TAPE NR:           INTD 4174
OBSERVER:              M. Irwin + SNe
PROGRAMME:             WFS + M31
PATT/CAT:              WFS09
TELESCOPE OPERATOR:    M. Irwin
SUPPORT ASTRONOMER:

FOCUS:                 Prime
INSTRUMENT:            WFC
FILTER WHEEL (PF):     KP,g,r,i,z,U
CAMERA (IDS):          -
COLLIMATOR (IDS):      -
COLL. FOCUS (IDS):     -
GRATING (IDS):         -
DETECTOR:              EEV
PIXELS:                2048x4200
PIXEL SIZE (microns):  13.5
WINDOW:                Xstart=0, Xsize=2048, Ystart=0, Ysize=4200
BINNING:               in X=1, in Y=1

WEATHER:               Photometric and good seeing

OUTSIDE TEMP (deg C):    13              (FIRST HALF)
OUTSIDE TEMP (deg C):    14              (SECOND HALF)
HUMIDITY (%):            33              (FIRST HALF)
HUMIDITY (%):            20              (SECOND HALF)
CLOUD COVER (%):          0              (FIRST HALF)
CLOUD COVER (%):          0              (SECOND HALF)
DUST (0 - 2):             0              (FIRST HALF)
DUST (0 - 2):             0              (SECOND HALF)
SEEING (arcsec):         1.0             (FIRST HALF)
SEEING (arcsec):         1.1             (SECOND HALF)
AV. SEEING (arcsec):     1.1
NO. SEEING MEASURES:     10

UTC    TELESCOPE                CASELLA OUT   CASELLA IN    SEEING
       AZ    ZD  Focus  TubeTemp  Temp   Humid  Temp   Humid  Det./TV  Comments

DARK HOURS:            08:47
DOME OPEN (UTC):       20:00
MOON PHASE (D/G/B):        D
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):    00:00
DK HRS LOST (OTHER):  00:00

COMMENTS:

Good seeing and photometric all night

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Run no. Object name              RA          Dec.      Equinox    AM     PA     UT       Exp. T.   Filter      Psys Channel  Binning Comments
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194755	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:40:32.3	0.0	z	Gunn
194756	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:42:08.9	0.0	z	Gunn
194757	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:42:57.4	0.0	z	Gunn
194758	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:43:47.8	0.0	z	Gunn
194759	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:44:35.3	0.0	z	Gunn
194760	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:45:22.9	0.0	z	Gunn
194761	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:46:11.6	0.0	z	Gunn
194762	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:46:59.0	0.0	z	Gunn
194763	Bias frame	0:00:00.00	+00:00:00.0	A	1.000	179.7	16:47:48.0	0.0	z	Gunn
194765	Flat field	15:55:00.00	+34:59:59.9	J2000.00	1.092	179.7	19:44:55.2	3.5	U	RGO
194766	Flat field	15:55:02.03	+35:00:25.0	J2000.00	1.095	179.7	19:46:44.7	5.2	U	RGO
194767	Flat field	15:55:04.47	+35:00:54.9	J2000.00	1.098	179.7	19:48:10.4	7.6	U	RGO
194768	Flat field	15:55:04.47	+35:00:54.9	J2000.00	1.100	179.7	19:49:46.7	11.0	z	Gunn
194769	Flat field	15:55:02.03	+35:00:25.0	J2000.00	1.104	179.7	19:51:26.3	18.4	z	Gunn
194770	Flat field	15:55:02.03	+35:00:25.0	J2000.00	1.107	179.7	19:53:22.6	7.0	i	Sloan
194771	Flat field	15:54:59.99	+34:59:59.9	J2000.00	1.110	179.7	19:55:01.7	10.6	i	Sloan
194772	Flat field	15:55:00.00	+35:00:00.0	J2000.00	1.114	179.7	19:56:52.0	19.3	r	Sloan
194773	Flat field	15:55:02.03	+35:00:24.9	J2000.00	1.118	179.7	19:58:51.0	32.4	r	Sloan
194774	Flat field	15:55:04.07	+35:00:49.9	J2000.00	1.122	179.7	20:00:29.5	50.0	r	Sloan
194775	Focus run	18:42:45.00	+00:10:03.9	J2000.00	1.151	179.7	20:11:29.0	10.1	g	Sloan
194776	sa110-361 U	18:42:45.00	+00:08:03.9	J2000.00	1.148	179.7	20:15:59.4	30.1	U	RGO
194777	sa110-361 g	18:42:45.00	+00:08:04.0	J2000.00	1.147	179.7	20:17:34.9	10.1	g	Sloan
194778	sa110-361 i	18:42:45.00	+00:08:03.9	J2000.00	1.146	179.7	20:18:48.1	10.1	i	Sloan
194779	sa110-361 r	18:42:45.00	+00:08:04.0	J2000.00	1.145	179.7	20:20:03.4	10.1	r	Sloan
194780	sa110-361 Z	18:42:45.00	+00:08:03.9	J2000.00	1.145	179.7	20:21:18.0	10.1	z	Gunn
194781	wfsj1610+5430_017	16:04:21.00	+55:29:59.9	J2000.00	1.268	179.7	20:32:29.7	599.3	U	RGO
194782	wfsj1610+5430_018	16:04:18.10	+55:49:59.8	J2000.00	1.297	179.7	20:44:25.8	599.0	U	RGO
194783	wfsj1610+5430_020	16:08:12.40	+53:29:59.9	J2000.00	1.300	179.7	20:56:23.5	599.5	U	RGO
194784	wfsj1610+5430_026	16:08:07.00	+55:29:59.9	J2000.00	1.365	179.7	21:14:45.5	599.1	U	RGO
194785	wfsj1610+5430_027	16:08:05.99	+55:49:59.8	J2000.00	1.405	179.7	21:26:46.9	599.4	U	RGO
194786	wfsj1610+5430_035	16:11:53.00	+55:30:00.0	J2000.00	1.431	179.7	21:38:47.6	599.5	U	RGO
194787	wfsj1610+5430_037	16:15:20.29	+53:09:59.8	J2000.00	1.454	179.7	21:51:31.7	599.0	U	RGO
194788	wfsj1610+5430_038	16:15:22.79	+53:29:59.9	J2000.00	1.505	179.7	22:03:26.6	599.6	U	RGO
194789	wfsj1610+5430_039	16:15:25.29	+53:49:59.9	J2000.00	1.560	179.7	22:15:24.7	599.5	U	RGO
194790	sa113-163 U	21:42:34.99	+00:16:46.0	J2000.00	1.200	179.7	22:29:04.5	30.1	U	RGO
194791	sa113-163 g	21:42:35.00	+00:16:45.9	J2000.00	1.198	179.7	22:30:40.4	10.1	g	Sloan
194792	sa113-163 i	21:42:35.00	+00:16:45.9	J2000.00	1.195	179.7	22:31:56.3	10.1	i	Sloan
194793	sa113-163 r	21:42:35.00	+00:16:45.9	J2000.00	1.193	179.7	22:33:13.2	10.0	r	Sloan
194794	sa113-163 Z	21:42:35.00	+00:16:46.0	J2000.00	1.191	179.7	22:34:27.1	10.1	z	Gunn
194795	wfssgc043	23:24:00.00	+00:00:00.0	J2000.00	1.505	179.7	22:37:11.2	599.5	g	Sloan
194796	wfssgc045 verf	23:28:00.00	+00:00:00.0	J2000.00	1.461	179.7	22:49:18.9	599.3	g	Sloan
194797	M31-microfld1	0:43:59.99	+41:34:00.0	J2000.00	1.428	179.7	23:04:00.6	359.6	r	Sloan
194798	M31-microfld1	0:43:59.99	+41:33:59.9	J2000.00	1.395	179.7	23:11:05.4	359.7	r	Sloan
194799	M31-microfld1	0:43:59.99	+41:33:59.9	J2000.00	1.362	179.7	23:18:51.0	359.7	g	Sloan
194800	M31-microfld1	0:43:59.99	+41:34:00.0	J2000.00	1.334	179.7	23:26:01.4	358.1	g	Sloan
194801	M31-microfld2	0:43:10.00	+40:58:15.0	J2000.00	1.294	179.7	23:35:56.2	359.6	r	Sloan
194802	M31-microfld2	0:43:10.00	+40:58:15.0	J2000.00	1.270	179.7	23:42:59.2	359.7	r	Sloan
194803	M31-microfld2	0:43:09.99	+40:58:14.9	J2000.00	1.247	179.7	23:50:22.3	359.6	g	Sloan
194804	M31-microfld2	0:43:10.00	+40:58:15.0	J2000.00	1.226	179.7	23:57:28.7	359.6	g	Sloan
194805	wfssgc058 verf	23:53:59.99	+00:00:00.0	J2000.00	1.263	179.7	00:08:07.1	599.4	g	Sloan
194806	wfssgc076 verf	0:30:00.00	-00:00:00.0	J2000.00	1.337	179.7	00:20:01.0	599.4	g	Sloan
194807	wfssgc078 verf	0:34:00.00	-00:00:00.0	J2000.00	1.309	179.7	00:32:18.4	599.4	g	Sloan
194808	wfssgc066 g	0:09:59.99	-00:00:00.0	J2000.00	1.221	179.7	00:44:59.0	239.9	g	Sloan
194809	wfssgc067 g	0:11:59.99	+00:00:00.0	J2000.00	1.213	179.7	00:50:55.5	239.9	g	Sloan
194810	wfssgc068 g	0:13:59.99	-00:00:00.1	J2000.00	1.206	179.7	00:56:50.9	239.8	g	Sloan
194811	wfssgc069 g	0:16:00.00	+00:00:00.1	J2000.00	1.199	179.7	01:02:47.6	239.9	g	Sloan
194812	wfssgc070 g	0:18:00.00	+00:00:00.0	J2000.00	1.193	179.7	01:08:44.0	239.8	g	Sloan
194813	wfssgc066 g	0:09:59.99	-00:00:00.0	J2000.00	1.173	179.7	01:14:45.7	239.9	g	Sloan
194814	wfssgc067 g	0:12:00.00	+00:00:00.0	J2000.00	1.168	179.7	01:20:51.7	239.8	g	Sloan
194815	wfssgc068 g	0:14:00.00	+00:00:00.0	J2000.00	1.164	179.7	01:27:03.0	239.9	g	Sloan
194816	wfssgc069 g	0:16:00.00	-00:00:00.0	J2000.00	1.159	179.7	01:33:19.7	239.8	g	Sloan
194817	wfssgc070 g	0:18:00.00	-00:00:00.0	J2000.00	1.156	179.7	01:39:23.4	239.9	g	Sloan

194818	wfssgc096 g	1:10:00.00	-00:00:00.0	J2000.00	1.219	179.7	01:45:59.4	239.3	g	Sloan
194819	wfssgc097 g	1:12:00.00	+00:00:00.0	J2000.00	1.211	179.7	01:51:55.6	239.8	g	Sloan
194820	wfssgc098 g	1:14:00.00	-00:00:00.0	J2000.00	1.204	179.7	01:57:50.6	239.8	g	Sloan
194821	wfssgc099 g	1:16:00.00	-00:00:00.2	J2000.00	1.197	179.7	02:03:49.9	239.8	g	Sloan
194822	wfssgc100	1:17:59.99	+00:00:00.2	J2000.00	1.171	179.7	02:23:55.5	239.4	g	Sloan
194823	wfssgc096 g	1:10:00.00	-00:00:00.1	J2000.00	1.155	179.7	02:32:27.3	239.8	g	Sloan
194824	wfssgc097 g	1:11:59.99	-00:00:00.0	J2000.00	1.152	179.7	02:38:35.5	239.4	g	Sloan
194825	wfssgc098 g	1:14:00.00	-00:00:00.1	J2000.00	1.149	179.7	02:44:39.2	239.8	g	Sloan
194826	wfssgc099 g	1:15:59.99	+00:00:00.0	J2000.00	1.147	179.7	02:50:43.3	239.8	g	Sloan
194827	wfssgc100 g	1:18:00.00	-00:00:00.1	J2000.00	1.145	179.7	02:56:45.6	239.3	g	Sloan
194828	wfssgc103 g	1:23:59.99	-00:00:00.0	J2000.00	1.143	179.7	03:03:06.6	599.4	g	Sloan
194829	wfssgc104 g	1:26:00.00	-00:00:00.1	J2000.00	1.141	179.7	03:15:12.7	599.5	g	Sloan
194830	wfssgc118 g	1:53:59.99	+00:00:00.3	J2000.00	1.146	179.7	03:27:17.0	599.5	g	Sloan
194831	wfssgc132 g	2:22:00.00	+00:00:00.2	J2000.00	1.156	179.7	03:39:18.3	599.4	g	Sloan
194832	wfssgc133 g	2:23:59.99	+00:00:00.0	J2000.00	1.149	179.7	03:51:15.4	599.4	g	Sloan
194833	wfssgc131	2:19:59.99	+00:00:00.0	J2000.00	1.143	179.7	04:04:18.5	239.8	g	Sloan
194834	wfssgc111 g	1:40:00.00	+00:00:00.0	J2000.00	1.152	179.7	04:11:08.5	239.4	g	Sloan
194835	wfssgc113 g	1:43:59.99	+00:00:00.0	J2000.00	1.154	179.7	04:17:14.9	239.9	g	Sloan
194836	wfssgc114 g	1:45:59.99	+00:00:00.0	J2000.00	1.157	179.7	04:23:12.7	239.9	g	Sloan
194837	wfssgc115 g	1:48:00.00	-00:00:00.0	J2000.00	1.161	179.7	04:29:08.5	239.8	g	Sloan
194838	wfssgc111 g	1:40:00.00	+00:00:00.0	J2000.00	1.176	179.7	04:35:11.9	239.8	g	Sloan
194839	wfssgc113 g	1:44:00.00	+00:00:00.0	J2000.00	1.179	179.7	04:41:15.9	239.8	g	Sloan
194840	wfssgc114 g	1:45:59.99	+00:00:00.1	J2000.00	1.185	179.7	04:47:21.5	239.9	g	Sloan
194841	wfssgc115 g	1:48:00.00	+00:00:00.0	J2000.00	1.191	179.7	04:53:26.7	239.8	g	Sloan
194842	wfsj0354+0010_017	3:51:00.00	+01:10:00.1	J2000.00	1.149	179.7	05:02:42.2	599.5	U	RGO
194843	wfsj0354+0010_016	3:50:59.99	+00:50:00.0	J2000.00	1.142	179.7	05:15:23.5	598.4	U	RGO
194844	wfsj0354+0010_018	3:50:59.90	+01:30:00.0	J2000.00	1.128	179.7	05:28:09.0	599.4	U	RGO
194845	sa92-335 U	0:54:59.99	+00:44:12.9	J2000.00	1.500	179.7	05:39:42.3	30.1	U	RGO
194846	sa92-335 g	0:55:00.00	+00:44:13.0	J2000.00	1.509	179.7	05:41:20.7	8.5	g	Sloan
194847	sa92-335 i	0:55:00.00	+00:44:12.9	J2000.00	1.516	179.7	05:42:35.2	9.6	i	Sloan
194848	sa92-335 r	0:55:00.00	+00:44:13.0	J2000.00	1.523	179.7	05:43:51.2	10.1	r	Sloan
194849	sa92-335 Z	0:55:00.00	+00:44:12.9	J2000.00	1.531	179.7	05:45:05.6	10.1	z	Gunn