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INT OBSERVING LOG (ISAAC NEWTON GROUP, LA PALMA)

TELESCOPE:              INT
DATE:                   1999 JUL 21/22
INT TAPE NR:            INTD 4122
OBSERVER:               M. Irwin, R. Sharp
PROGRAMME:              INT WFS
PATT/CAT:               WFS09
TELESCOPE OPERATOR:     M. Irwin
SUPPORT ASTRONOMER:     N. Walton

FOCUS:                  Prime
INSTRUMENT:             WFC
FILTER WHEEL (PF):      U,KPB,g,r,i,Z
CAMERA (IDS):           -
COLLIMATOR (IDS):       -
COLL. FOCUS (IDS):      -
GRATING (IDS):          -
DETECTOR:               EEV
PIXELS:                 4x4200x2148
PIXEL SIZE (microns):   13.5
WINDOW:                 Xstart= , Xsize= , Ystart= , Ysize=
BINNING:                in X=1, in Y=1

WEATHER:                Good - Photometric, apart from last 2 observations
OUTSIDE TEMP (deg C):     14.3            (FIRST HALF)
OUTSIDE TEMP (deg C):     13.2            (SECOND HALF)
HUMIDITY (%):             13              (FIRST HALF)
HUMIDITY (%):             18              (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):           0.8            (FIRST HALF)
SEEING (arcsec):           0.8            (SECOND HALF)
AV. SEEING (arcsec):       -
NO. SEEING MEASURES:       20

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

DARK HOURS:             07:14
DOME OPEN (UTC):        18:00
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):    00:00
DK HRS LOST (OTHER):  00:00

COMMENTS:  Seeing deteriorated to > 2.5 arcsec at UT 04:20 -->

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Run no.	Object name	RA	Dec.	Equinox	AM	PA	UT	Exp. T.	Filter	Psys	Channel	Binning	Comments
181369	Bias frame	14:30:00.00	+39:59:59.9	J2000.00	1.021	179.7	20:01:02.6	0.0	z	Gunn	1	1 x 1	
181370	Bias frame	14:30:00.00	+39:59:59.9	J2000.00	1.021	179.7	20:01:02.6	0.0	z	Gunn	5	1 x 1	
181371	Bias frame	14:30:00.00	+39:59:59.9	J2000.00	1.021	179.7	20:01:02.6	0.0	z	Gunn	3	1 x 1	
181372	Bias frame	14:30:00.00	+39:59:59.9	J2000.00	1.021	179.7	20:01:02.6	0.0	z	Gunn	4	1 x 1	

181373	Bias frame	14:29:59.99	+39:59:59.9	J2000.00	1.023	179.7	20:06:46.7	0.0	z	Gunn	1	1 x 1
181374	Bias frame	14:29:59.99	+39:59:59.9	J2000.00	1.023	179.7	20:06:46.7	0.0	z	Gunn	5	1 x 1
181375	Bias frame	14:29:59.99	+39:59:59.9	J2000.00	1.023	179.7	20:06:46.7	0.0	z	Gunn	3	1 x 1
181376	Bias frame	14:29:59.99	+39:59:59.9	J2000.00	1.023	179.7	20:06:46.7	0.0	z	Gunn	4	1 x 1
181377	Bias frame	14:30:00.00	+40:00:00.0	J2000.00	1.024	179.7	20:10:26.3	0.0	z	Gunn	1	1 x 1
181378	Bias frame	14:30:00.00	+40:00:00.0	J2000.00	1.024	179.7	20:10:26.3	0.0	z	Gunn	5	1 x 1
181379	Bias frame	14:30:00.00	+40:00:00.0	J2000.00	1.024	179.7	20:10:26.3	0.0	z	Gunn	3	1 x 1
181380	Bias frame	14:30:00.00	+40:00:00.0	J2000.00	1.024	179.7	20:10:26.3	0.0	z	Gunn	4	1 x 1
181381	Flat field	14:29:59.99	+40:00:00.0	J2000.00	1.033	179.7	20:30:23.4	2.5	z	Gunn	1	1 x 1
181382	Flat field	14:29:59.99	+40:00:00.0	J2000.00	1.033	179.7	20:30:23.4	2.5	z	Gunn	5	1 x 1
181383	Flat field	14:29:59.99	+40:00:00.0	J2000.00	1.033	179.7	20:30:23.4	2.5	z	Gunn	3	1 x 1
181384	Flat field	14:29:59.99	+40:00:00.0	J2000.00	1.033	179.7	20:30:23.4	2.5	z	Gunn	4	1 x 1
181385	Flat field	14:30:05.22	+40:00:00.0	J2000.00	1.035	179.7	20:33:30.4	7.6	z	Gunn	1	1 x 1
181386	Flat field	14:30:05.22	+40:00:00.0	J2000.00	1.035	179.7	20:33:30.4	7.6	z	Gunn	5	1 x 1
181387	Flat field	14:30:05.22	+40:00:00.0	J2000.00	1.035	179.7	20:33:30.4	7.6	z	Gunn	3	1 x 1
181388	Flat field	14:30:05.22	+40:00:00.0	J2000.00	1.035	179.7	20:33:30.4	7.6	z	Gunn	4	1 x 1
181389	Flat field	14:30:05.22	+40:00:59.9	J2000.00	1.038	179.7	20:36:49.3	3.4	i	Sloan	1	1 x 1
181390	Flat field	14:30:05.22	+40:00:59.9	J2000.00	1.038	179.7	20:36:49.3	3.4	i	Sloan	5	1 x 1
181391	Flat field	14:30:05.22	+40:00:59.9	J2000.00	1.038	179.7	20:36:49.3	3.4	i	Sloan	3	1 x 1
181392	Flat field	14:30:05.22	+40:00:59.9	J2000.00	1.038	179.7	20:36:49.3	3.4	i	Sloan	4	1 x 1
181393	Flat field	14:29:59.99	+40:01:00.0	J2000.00	1.041	179.7	20:40:29.4	7.9	i	Sloan	1	1 x 1
181394	Flat field	14:29:59.99	+40:01:00.0	J2000.00	1.041	179.7	20:40:29.4	7.9	i	Sloan	5	1 x 1
181395	Flat field	14:29:59.99	+40:01:00.0	J2000.00	1.041	179.7	20:40:29.4	7.9	i	Sloan	3	1 x 1
181396	Flat field	14:29:59.99	+40:01:00.0	J2000.00	1.041	179.7	20:40:29.4	7.9	i	Sloan	4	1 x 1
181397	Flat field	14:30:00.00	+39:59:59.9	J2000.00	1.043	179.7	20:43:48.5	21.5	r	Sloan	1	1 x 1
181398	Flat field	14:30:00.00	+39:59:59.9	J2000.00	1.043	179.7	20:43:48.5	21.5	r	Sloan	5	1 x 1
181399	Flat field	14:30:00.00	+39:59:59.9	J2000.00	1.043	179.7	20:43:48.5	21.5	r	Sloan	3	1 x 1
181400	Flat field	14:30:00.00	+39:59:59.9	J2000.00	1.043	179.7	20:43:48.5	21.5	r	Sloan	4	1 x 1
181401	Flat field	14:30:05.22	+39:59:59.9	J2000.00	1.047	179.7	20:48:14.6	49.6	r	Sloan	1	1 x 1
181402	Flat field	14:30:05.22	+39:59:59.9	J2000.00	1.047	179.7	20:48:14.6	49.6	r	Sloan	5	1 x 1
181403	Flat field	14:30:05.22	+39:59:59.9	J2000.00	1.047	179.7	20:48:14.6	49.6	r	Sloan	3	1 x 1
181404	Flat field	14:30:05.22	+39:59:59.9	J2000.00	1.047	179.7	20:48:14.6	49.6	r	Sloan	4	1 x 1
181405	Focus run	15:39:19.00	-00:14:14.0	J2000.00	1.143	179.7	21:01:10.0	9.6	r	Sloan	1	1 x 1
181406	Focus run	15:39:19.00	-00:14:14.0	J2000.00	1.143	179.7	21:01:10.0	9.6	r	Sloan	5	1 x 1
181407	Focus run	15:39:19.00	-00:14:14.0	J2000.00	1.143	179.7	21:01:10.0	9.6	r	Sloan	3	1 x 1
181408	Focus run	15:39:19.00	-00:14:14.0	J2000.00	1.143	179.7	21:01:10.0	9.6	r	Sloan	4	1 x 1
181409	sa107-602 U	15:39:19.00	-00:15:29.0	J2000.00	1.146	179.7	21:08:59.0	30.1	U	RGO	1	1 x 1
181410	sa107-602 U	15:39:19.00	-00:15:29.0	J2000.00	1.146	179.7	21:08:59.0	30.1	U	RGO	5	1 x 1
181411	sa107-602 U	15:39:19.00	-00:15:29.0	J2000.00	1.146	179.7	21:08:59.0	30.1	U	RGO	3	1 x 1
181412	sa107-602 U	15:39:19.00	-00:15:29.0	J2000.00	1.146	179.7	21:08:59.0	30.1	U	RGO	4	1 x 1
181413	sa107-602 g	15:39:18.99	-00:15:29.0	J2000.00	1.147	179.7	21:12:39.2	10.1	g	Sloan	1	1 x 1
181414	sa107-602 g	15:39:18.99	-00:15:29.0	J2000.00	1.147	179.7	21:12:39.2	10.1	g	Sloan	5	1 x 1
181415	sa107-602 g	15:39:18.99	-00:15:29.0	J2000.00	1.147	179.7	21:12:39.2	10.1	g	Sloan	3	1 x 1
181416	sa107-602 g	15:39:18.99	-00:15:29.0	J2000.00	1.147	179.7	21:12:39.2	10.1	g	Sloan	4	1 x 1
181417	sa107-602 i	15:39:18.99	-00:15:28.9	J2000.00	1.148	179.7	21:15:59.9	10.1	i	Sloan	1	1 x 1
181418	sa107-602 i	15:39:18.99	-00:15:28.9	J2000.00	1.148	179.7	21:15:59.9	10.1	i	Sloan	5	1 x 1
181419	sa107-602 i	15:39:18.99	-00:15:28.9	J2000.00	1.148	179.7	21:15:59.9	10.1	i	Sloan	3	1 x 1
181420	sa107-602 i	15:39:18.99	-00:15:28.9	J2000.00	1.148	179.7	21:15:59.9	10.1	i	Sloan	4	1 x 1
181421	sa107-602 r	15:39:18.99	-00:15:28.9	J2000.00	1.150	179.7	21:19:18.6	10.2	r	Sloan	1	1 x 1
181422	sa107-602 r	15:39:18.99	-00:15:28.9	J2000.00	1.150	179.7	21:19:18.6	10.2	r	Sloan	5	1 x 1
181423	sa107-602 r	15:39:18.99	-00:15:28.9	J2000.00	1.150	179.7	21:19:18.6	10.2	r	Sloan	3	1 x 1
181424	sa107-602 r	15:39:18.99	-00:15:28.9	J2000.00	1.150	179.7	21:19:18.6	10.2	r	Sloan	4	1 x 1
181425	sa107-602 Z	15:39:19.00	-00:15:29.1	J2000.00	1.152	179.7	21:22:38.8	10.1	z	Gunn	1	1 x 1
181426	sa107-602 Z	15:39:19.00	-00:15:29.1	J2000.00	1.152	179.7	21:22:38.8	10.1	z	Gunn	5	1 x 1
181427	sa107-602 Z	15:39:19.00	-00:15:29.1	J2000.00	1.152	179.7	21:22:38.8	10.1	z	Gunn	3	1 x 1
181428	sa107-602 Z	15:39:19.00	-00:15:29.1	J2000.00	1.152	179.7	21:22:38.8	10.1	z	Gunn	4	1 x 1
181429	F_28	16:21:20.00	+26:33:59.9	J2000.00	1.001	179.7	21:29:01.9	599.5	z	Gunn	1	1 x 1
181430	F_28	16:21:20.00	+26:33:59.9	J2000.00	1.001	179.7	21:29:01.9	599.5	z	Gunn	5	1 x 1
181431	F_28	16:21:20.00	+26:33:59.9	J2000.00	1.001	179.7	21:29:01.9	599.5	z	Gunn	3	1 x 1
181432	F_28	16:21:20.00	+26:33:59.9	J2000.00	1.001	179.7	21:29:01.9	599.5	z	Gunn	4	1 x 1
181433	F_27	16:23:36.00	+26:33:59.9	J2000.00	1.002	179.7	21:43:40.5	599.5	z	Gunn	1	1 x 1
181434	F_27	16:23:36.00	+26:33:59.9	J2000.00	1.002	179.7	21:43:40.5	599.5	z	Gunn	5	1 x 1

181435	F_27	16:23:36.00	+26:33:59.9	J2000.00	1.002	179.7	21:43:40.5	599.5	z	Gunn	3	1 x 1
181436	F_27	16:23:36.00	+26:33:59.9	J2000.00	1.002	179.7	21:43:40.5	599.5	z	Gunn	4	1 x 1
181437	F_29	16:25:45.00	+26:33:59.9	J2000.00	1.005	179.7	21:57:44.2	599.4	z	Gunn	1	1 x 1
181438	F_29	16:25:45.00	+26:33:59.9	J2000.00	1.005	179.7	21:57:44.2	599.4	z	Gunn	5	1 x 1
181439	F_29	16:25:45.00	+26:33:59.9	J2000.00	1.005	179.7	21:57:44.2	599.4	z	Gunn	3	1 x 1
181440	F_29	16:25:45.00	+26:33:59.9	J2000.00	1.005	179.7	21:57:44.2	599.4	z	Gunn	4	1 x 1
181441	F_30	16:28:00.00	+26:34:00.0	J2000.00	1.009	179.7	22:11:17.6	598.9	z	Gunn	1	1 x 1
181442	F_30	16:28:00.00	+26:34:00.0	J2000.00	1.009	179.7	22:11:17.6	598.9	z	Gunn	5	1 x 1
181443	F_30	16:28:00.00	+26:34:00.0	J2000.00	1.009	179.7	22:11:17.6	598.9	z	Gunn	3	1 x 1
181444	F_30	16:28:00.00	+26:34:00.0	J2000.00	1.009	179.7	22:11:17.6	598.9	z	Gunn	4	1 x 1
181445	F_31	17:20:08.99	+26:37:59.8	J2000.00	1.001	179.7	22:27:28.0	599.5	z	Gunn	1	1 x 1
181446	F_31	17:20:08.99	+26:37:59.8	J2000.00	1.001	179.7	22:27:28.0	599.5	z	Gunn	5	1 x 1
181447	F_31	17:20:08.99	+26:37:59.8	J2000.00	1.001	179.7	22:27:28.0	599.5	z	Gunn	3	1 x 1
181448	F_31	17:20:08.99	+26:37:59.8	J2000.00	1.001	179.7	22:27:28.0	599.5	z	Gunn	4	1 x 1
181449	F_32	17:19:50.00	+26:00:00.0	J2000.00	1.002	179.7	22:41:53.7	599.4	z	Gunn	1	1 x 1
181450	F_32	17:19:50.00	+26:00:00.0	J2000.00	1.002	179.7	22:41:53.7	599.4	z	Gunn	5	1 x 1
181451	F_32	17:19:50.00	+26:00:00.0	J2000.00	1.002	179.7	22:41:53.7	599.4	z	Gunn	3	1 x 1
181452	F_32	17:19:50.00	+26:00:00.0	J2000.00	1.002	179.7	22:41:53.7	599.4	z	Gunn	4	1 x 1
181453	wfsj1610+5430_054	16:19:29.79	+55:49:59.9	J2000.00	1.170	179.7	22:56:49.3	599.6	z	Gunn	1	1 x 1
181454	wfsj1610+5430_054	16:19:29.79	+55:49:59.9	J2000.00	1.170	179.7	22:56:49.3	599.6	z	Gunn	5	1 x 1
181455	wfsj1610+5430_054	16:19:29.79	+55:49:59.9	J2000.00	1.170	179.7	22:56:49.3	599.6	z	Gunn	3	1 x 1
181456	wfsj1610+5430_054	16:19:29.79	+55:49:59.9	J2000.00	1.170	179.7	22:56:49.3	599.6	z	Gunn	4	1 x 1
181457	wfsj1610+5430_054	16:19:29.79	+55:50:00.0	J2000.00	1.185	179.7	23:09:54.9	599.5	i	Sloan	1	1 x 1
181458	wfsj1610+5430_054	16:19:29.79	+55:50:00.0	J2000.00	1.185	179.7	23:09:54.9	599.5	i	Sloan	5	1 x 1
181459	wfsj1610+5430_054	16:19:29.79	+55:50:00.0	J2000.00	1.185	179.7	23:09:54.9	599.5	i	Sloan	3	1 x 1
181460	wfsj1610+5430_054	16:19:29.79	+55:50:00.0	J2000.00	1.185	179.7	23:09:54.9	599.5	i	Sloan	4	1 x 1
181461	wfsj1610+5430_047	16:18:58.00	+53:30:00.0	J2000.00	1.185	179.7	23:23:48.5	599.5	i	Sloan	1	1 x 1
181462	wfsj1610+5430_047	16:18:58.00	+53:30:00.0	J2000.00	1.185	179.7	23:23:48.5	599.5	i	Sloan	5	1 x 1
181463	wfsj1610+5430_047	16:18:58.00	+53:30:00.0	J2000.00	1.185	179.7	23:23:48.5	599.5	i	Sloan	3	1 x 1
181464	wfsj1610+5430_047	16:18:58.00	+53:30:00.0	J2000.00	1.185	179.7	23:23:48.5	599.5	i	Sloan	4	1 x 1
181465	wfsj1610+5430_047	16:18:57.99	+53:30:00.0	J2000.00	1.207	179.7	23:36:50.4	599.5	z	Gunn	1	1 x 1
181466	wfsj1610+5430_047	16:18:57.99	+53:30:00.0	J2000.00	1.207	179.7	23:36:50.4	599.5	z	Gunn	5	1 x 1
181467	wfsj1610+5430_047	16:18:57.99	+53:30:00.0	J2000.00	1.207	179.7	23:36:50.4	599.5	z	Gunn	3	1 x 1
181468	wfsj1610+5430_047	16:18:57.99	+53:30:00.0	J2000.00	1.207	179.7	23:36:50.4	599.5	z	Gunn	4	1 x 1
181469	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.232	179.7	23:51:10.6	599.0	z	Gunn	1	1 x 1
181470	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.232	179.7	23:51:10.6	599.0	z	Gunn	5	1 x 1
181471	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.232	179.7	23:51:10.6	599.0	z	Gunn	3	1 x 1
181472	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.232	179.7	23:51:10.6	599.0	z	Gunn	4	1 x 1
181473	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.259	179.7	00:04:08.6	599.5	i	Sloan	1	1 x 1
181474	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.259	179.7	00:04:08.6	599.5	i	Sloan	5	1 x 1
181475	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.259	179.7	00:04:08.6	599.5	i	Sloan	3	1 x 1
181476	wfsj1610+5430_046	16:18:53.80	+53:10:00.0	J2000.00	1.259	179.7	00:04:08.6	599.5	i	Sloan	4	1 x 1
181477	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.303	179.7	00:17:30.7	599.4	i	Sloan	1	1 x 1
181478	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.303	179.7	00:17:30.7	599.4	i	Sloan	5	1 x 1
181479	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.303	179.7	00:17:30.7	599.4	i	Sloan	3	1 x 1
181480	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.303	179.7	00:17:30.7	599.4	i	Sloan	4	1 x 1
181481	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.340	179.7	00:30:30.9	599.4	z	Gunn	1	1 x 1
181482	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.340	179.7	00:30:30.9	599.4	z	Gunn	5	1 x 1
181483	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.340	179.7	00:30:30.9	599.4	z	Gunn	3	1 x 1
181484	wfsj1610+5430_038	16:15:22.80	+53:30:00.0	J2000.00	1.340	179.7	00:30:30.9	599.4	z	Gunn	4	1 x 1
181489	wfsj1610+5430_037	16:15:20.28	+53:10:00.2	J2000.00	1.386	179.7	00:45:39.0	599.4	z	Gunn	1	1 x 1
181490	wfsj1610+5430_037	16:15:20.28	+53:10:00.2	J2000.00	1.386	179.7	00:45:39.0	599.4	z	Gunn	5	1 x 1
181491	wfsj1610+5430_037	16:15:20.28	+53:10:00.2	J2000.00	1.386	179.7	00:45:39.0	599.4	z	Gunn	3	1 x 1
181492	wfsj1610+5430_037	16:15:20.28	+53:10:00.2	J2000.00	1.386	179.7	00:45:39.0	599.4	z	Gunn	4	1 x 1
181497	wfsj1610+5430_037	16:15:20.30	+53:10:00.0	J2000.00	1.441	179.7	01:00:58.1	599.4	i	Sloan	1	1 x 1
181498	wfsj1610+5430_037	16:15:20.30	+53:10:00.0	J2000.00	1.441	179.7	01:00:58.1	599.4	i	Sloan	5	1 x 1
181499	wfsj1610+5430_037	16:15:20.30	+53:10:00.0	J2000.00	1.441	179.7	01:00:58.1	599.4	i	Sloan	3	1 x 1
181500	wfsj1610+5430_037	16:15:20.30	+53:10:00.0	J2000.00	1.441	179.7	01:00:58.1	599.4	i	Sloan	4	1 x 1
181501	wfsj1610+5430_029	16:11:47.60	+53:30:00.2	J2000.00	1.516	179.7	01:15:05.9	599.4	i	Sloan	1	1 x 1
181502	wfsj1610+5430_029	16:11:47.60	+53:30:00.2	J2000.00	1.516	179.7	01:15:05.9	599.4	i	Sloan	5	1 x 1
181503	wfsj1610+5430_029	16:11:47.60	+53:30:00.2	J2000.00	1.516	179.7	01:15:05.9	599.4	i	Sloan	3	1 x 1
181504	wfsj1610+5430_029	16:11:47.60	+53:30:00.2	J2000.00	1.516	179.7	01:15:05.9	599.4	i	Sloan	4	1 x 1

181505	wfsj1610+5430_029	16:11:47.60	+53:30:00.0	J2000.00	1.577	179.7	01:28:03.7	599.4	z	Gunn	1	1 x 1
181506	wfsj1610+5430_029	16:11:47.60	+53:30:00.0	J2000.00	1.577	179.7	01:28:03.7	599.4	z	Gunn	5	1 x 1
181507	wfsj1610+5430_029	16:11:47.60	+53:30:00.0	J2000.00	1.577	179.7	01:28:03.7	599.4	z	Gunn	3	1 x 1
181508	wfsj1610+5430_029	16:11:47.60	+53:30:00.0	J2000.00	1.577	179.7	01:28:03.7	599.4	z	Gunn	4	1 x 1
181509	sa113-163 U	21:42:35.00	+00:16:45.9	J2000.00	1.197	179.7	01:43:13.8	30.0	U	RGO	1	1 x 1
181510	sa113-163 U	21:42:35.00	+00:16:45.9	J2000.00	1.197	179.7	01:43:13.8	30.0	U	RGO	5	1 x 1
181511	sa113-163 U	21:42:35.00	+00:16:45.9	J2000.00	1.197	179.7	01:43:13.8	30.0	U	RGO	3	1 x 1
181512	sa113-163 U	21:42:35.00	+00:16:45.9	J2000.00	1.197	179.7	01:43:13.8	30.0	U	RGO	4	1 x 1
181513	sa113-163 g	21:42:35.00	+00:16:46.0	J2000.00	1.192	179.7	01:46:53.8	10.1	g	Sloan	1	1 x 1
181514	sa113-163 g	21:42:35.00	+00:16:46.0	J2000.00	1.192	179.7	01:46:53.8	10.1	g	Sloan	5	1 x 1
181515	sa113-163 g	21:42:35.00	+00:16:46.0	J2000.00	1.192	179.7	01:46:53.8	10.1	g	Sloan	3	1 x 1
181516	sa113-163 g	21:42:35.00	+00:16:46.0	J2000.00	1.192	179.7	01:46:53.8	10.1	g	Sloan	4	1 x 1
181517	sa113-163 i	21:42:34.99	+00:16:46.0	J2000.00	1.186	179.7	01:50:15.5	10.1	i	Sloan	1	1 x 1
181518	sa113-163 i	21:42:34.99	+00:16:46.0	J2000.00	1.186	179.7	01:50:15.5	10.1	i	Sloan	5	1 x 1
181519	sa113-163 i	21:42:34.99	+00:16:46.0	J2000.00	1.186	179.7	01:50:15.5	10.1	i	Sloan	3	1 x 1
181520	sa113-163 i	21:42:34.99	+00:16:46.0	J2000.00	1.186	179.7	01:50:15.5	10.1	i	Sloan	4	1 x 1
181521	sa113-163 r	21:42:35.00	+00:16:45.9	J2000.00	1.181	179.7	01:53:32.9	10.1	r	Sloan	1	1 x 1
181522	sa113-163 r	21:42:35.00	+00:16:45.9	J2000.00	1.181	179.7	01:53:32.9	10.1	r	Sloan	5	1 x 1
181523	sa113-163 r	21:42:35.00	+00:16:45.9	J2000.00	1.181	179.7	01:53:32.9	10.1	r	Sloan	3	1 x 1
181524	sa113-163 r	21:42:35.00	+00:16:45.9	J2000.00	1.181	179.7	01:53:32.9	10.1	r	Sloan	4	1 x 1
181525	sa113-163 Z	21:42:35.00	+00:16:46.0	J2000.00	1.177	179.7	01:56:53.5	10.1	z	Gunn	1	1 x 1
181526	sa113-163 Z	21:42:35.00	+00:16:46.0	J2000.00	1.177	179.7	01:56:53.5	10.1	z	Gunn	5	1 x 1
181527	sa113-163 Z	21:42:35.00	+00:16:46.0	J2000.00	1.177	179.7	01:56:53.5	10.1	z	Gunn	3	1 x 1
181528	sa113-163 Z	21:42:35.00	+00:16:46.0	J2000.00	1.177	179.7	01:56:53.5	10.1	z	Gunn	4	1 x 1
181529	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.251	179.7	02:01:05.9	599.5	z	Gunn	1	1 x 1
181530	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.251	179.7	02:01:05.9	599.5	z	Gunn	5	1 x 1
181531	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.251	179.7	02:01:05.9	599.5	z	Gunn	3	1 x 1
181532	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.251	179.7	02:01:05.9	599.5	z	Gunn	4	1 x 1
181533	wfsj2240+0000_008	22:34:39.99	+00:59:59.8	J2000.00	1.220	179.7	02:14:13.8	599.5	r	Sloan	1	1 x 1
181534	wfsj2240+0000_008	22:34:39.99	+00:59:59.8	J2000.00	1.220	179.7	02:14:13.8	599.5	r	Sloan	5	1 x 1
181535	wfsj2240+0000_008	22:34:39.99	+00:59:59.8	J2000.00	1.220	179.7	02:14:13.8	599.5	r	Sloan	3	1 x 1
181536	wfsj2240+0000_008	22:34:39.99	+00:59:59.8	J2000.00	1.220	179.7	02:14:13.8	599.5	r	Sloan	4	1 x 1
181537	wfsj2240+0000_008	22:34:39.99	+00:59:59.9	J2000.00	1.194	179.7	02:27:24.2	599.5	i	Sloan	1	1 x 1
181538	wfsj2240+0000_008	22:34:39.99	+00:59:59.9	J2000.00	1.194	179.7	02:27:24.2	599.5	i	Sloan	5	1 x 1
181539	wfsj2240+0000_008	22:34:39.99	+00:59:59.9	J2000.00	1.194	179.7	02:27:24.2	599.5	i	Sloan	3	1 x 1
181540	wfsj2240+0000_008	22:34:39.99	+00:59:59.9	J2000.00	1.194	179.7	02:27:24.2	599.5	i	Sloan	4	1 x 1
181541	wfsj2240+0000_008	22:34:40.00	+00:59:59.9	J2000.00	1.173	179.7	02:40:37.7	599.3	g	Sloan	1	1 x 1
181542	wfsj2240+0000_008	22:34:40.00	+00:59:59.9	J2000.00	1.173	179.7	02:40:37.7	599.3	g	Sloan	5	1 x 1
181543	wfsj2240+0000_008	22:34:40.00	+00:59:59.9	J2000.00	1.173	179.7	02:40:37.7	599.3	g	Sloan	3	1 x 1
181544	wfsj2240+0000_008	22:34:40.00	+00:59:59.9	J2000.00	1.173	179.7	02:40:37.7	599.3	g	Sloan	4	1 x 1
181545	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.156	179.7	02:54:06.0	599.1	U	RGO	1	1 x 1
181546	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.156	179.7	02:54:06.0	599.1	U	RGO	5	1 x 1
181547	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.156	179.7	02:54:06.0	599.1	U	RGO	3	1 x 1
181548	wfsj2240+0000_008	22:34:40.00	+01:00:00.0	J2000.00	1.156	179.7	02:54:06.0	599.1	U	RGO	4	1 x 1
181549	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.140	179.7	03:07:54.6	599.3	z	Gunn	1	1 x 1
181550	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.140	179.7	03:07:54.6	599.3	z	Gunn	5	1 x 1
181551	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.140	179.7	03:07:54.6	599.3	z	Gunn	3	1 x 1
181552	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.140	179.7	03:07:54.6	599.3	z	Gunn	4	1 x 1
181553	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.132	179.7	03:21:03.2	599.4	r	Sloan	1	1 x 1
181554	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.132	179.7	03:21:03.2	599.4	r	Sloan	5	1 x 1
181555	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.132	179.7	03:21:03.2	599.4	r	Sloan	3	1 x 1
181556	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.132	179.7	03:21:03.2	599.4	r	Sloan	4	1 x 1
181557	wfsj2240+0000_009	22:34:39.90	+01:19:59.9	J2000.00	1.127	179.7	03:34:11.9	599.5	i	Sloan	1	1 x 1
181558	wfsj2240+0000_009	22:34:39.90	+01:19:59.9	J2000.00	1.127	179.7	03:34:11.9	599.5	i	Sloan	5	1 x 1
181559	wfsj2240+0000_009	22:34:39.90	+01:19:59.9	J2000.00	1.127	179.7	03:34:11.9	599.5	i	Sloan	3	1 x 1
181560	wfsj2240+0000_009	22:34:39.90	+01:19:59.9	J2000.00	1.127	179.7	03:34:11.9	599.5	i	Sloan	4	1 x 1
181561	wfsj2240+0000_009	22:34:39.89	+01:19:59.9	J2000.00	1.127	179.7	03:47:23.6	599.4	g	Sloan	1	1 x 1
181562	wfsj2240+0000_009	22:34:39.89	+01:19:59.9	J2000.00	1.127	179.7	03:47:23.6	599.4	g	Sloan	5	1 x 1
181563	wfsj2240+0000_009	22:34:39.89	+01:19:59.9	J2000.00	1.127	179.7	03:47:23.6	599.4	g	Sloan	3	1 x 1
181564	wfsj2240+0000_009	22:34:39.89	+01:19:59.9	J2000.00	1.127	179.7	03:47:23.6	599.4	g	Sloan	4	1 x 1
181565	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.130	179.7	04:00:52.8	599.4	U	RGO	1	1 x 1
181566	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.130	179.7	04:00:52.8	599.4	U	RGO	5	1 x 1

181567	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.130	179.7	04:00:52.8	599.4	U	RGO	3	1 x 1	
181568	wfsj2240+0000_009	22:34:39.90	+01:20:00.0	J2000.00	1.130	179.7	04:00:52.8	599.4	U	RGO	4	1 x 1	
181569	wfsj2240+0000_044	22:43:12.00	+00:59:59.8	J2000.00	1.135	179.7	04:14:34.7	599.6	U	RGO	1	1 x 1	No use due
181570	wfsj2240+0000_044	22:43:12.00	+00:59:59.8	J2000.00	1.135	179.7	04:14:34.7	599.6	U	RGO	5	1 x 1	to poor
181571	wfsj2240+0000_044	22:43:12.00	+00:59:59.8	J2000.00	1.135	179.7	04:14:34.7	599.6	U	RGO	3	1 x 1	seeing
181572	wfsj2240+0000_044	22:43:12.00	+00:59:59.8	J2000.00	1.135	179.7	04:14:34.7	599.6	U	RGO	4	1 x 1	......
181573	wfsj2240+0000_044	22:43:11.99	+00:59:59.9	J2000.00	1.144	179.7	04:27:36.7	598.9	g	Sloan	1	1 x 1	
181574	wfsj2240+0000_044	22:43:11.99	+00:59:59.9	J2000.00	1.144	179.7	04:27:36.7	598.9	g	Sloan	5	1 x 1	
181575	wfsj2240+0000_044	22:43:11.99	+00:59:59.9	J2000.00	1.144	179.7	04:27:36.7	598.9	g	Sloan	3	1 x 1	
181576	wfsj2240+0000_044	22:43:11.99	+00:59:59.9	J2000.00	1.144	179.7	04:27:36.7	598.9	g	Sloan	4	1 x 1	