Project Name: U077
Observers: Fassnacht; (UCD); Rusu; (UCD)
Instrument: LRIS
SA: Luca Rizzi
OA: John
Data Directories: /s/sdata243/lris8/2017mar22_B

Filename	Object	Target	t (s)	UTC	Airmass	HA	Slitmask	Dichroic	Grism	Grating	Wavelength	MSWave	Angle	Focus	Comment
b170322_0001.fits			1	00:53:08.75	1.41	+00:00:00.00	c17_14L.	680	clear					-3448.97973633	
b170322_0002.fits			1	00:54:23.15	1.41	+00:00:00.00	c17_14L.	680	clear					-3448.97973633	
b170322_0003.fits			0	00:58:35.25	1.41	+00:00:00.00	c17_14L.	680	clear					-3448.97973633	
b170322_0004.fits	Direct image mask 1206m1.f		1	01:04:49.71	1.41	+00:00:00.00	1206m1.f	560	clear					-3448.97973633	
b170322_0005.fits	Direct image mask 1405m1.f		1	01:06:02.31	1.41	+00:00:00.00	1405m1.f	560	clear					-3448.97973633	
b170322_0006.fits	Direct image mask 1405m2.f		1	01:07:12.81	1.41	+00:00:00.00	1405m2.f	560	clear					-3448.97973633	
r170322_0001.fits	Test arclamp Ar for 1206m1	unknown	1	01:39:09.57	13.37	+00:00:00.00	1206m1.f	560		400/8500	7030.7	7503.7	22.9	-0.68063295	
r170322_0002.fits	Test arclamp Ar for 1206m1	unknown	1	01:45:20.23	13.37	+00:00:00.00	1206m1.f	560		400/8500	7030.7	7503.7	22.9	-0.68063295	
b170322_0007.fits	Test arclamp Hg for 1206m1	unknown	1	01:56:49.22	1.41	+00:00:00.00	1206m1.f	560	clear					-3448.97973633	
r170322_0003.fits	Test arclamp Hg for 1206m1	unknown	1	01:57:06.02	1.41	+00:00:00.00	1206m1.f	560		400/8500	7030.7	7503.7	22.9	-0.68129569	
r170322_0004.fits	Test arclamp Hg for 1206m1	unknown	1	02:04:33.66	1.41	+00:00:00.00	1206m1.f	560		400/8500	7030.7	7503.7	22.9	-0.68129569	
b170322_0008.fits	Test arclamp Hg for 1206m1	unknown	1	02:06:11.16	1.41	+00:00:00.00	1206m1.f	560	300/5000					-3482.37475586	
b170322_0009.fits	Test arclamp Hg for 1206m1	unknown	1	02:13:32.40	1.41	+00:00:00.00	1405m1.f	560	300/5000					-3482.37475586	
b170322_0010.fits	Test arclamp Hg for 1206m1	unknown	1	02:18:28.26	1.41	+00:00:00.00	1405m1.f	560	300/5000					-3482.37475586	
r170322_0005.fits	Test	unknown	1	02:18:41.01	1.41	+00:00:00.00	1405m1.f	560		400/8500	7030.7	7503.7	22.9	-0.68129569	

	arclamp Hg for 1206m1														
r170322_0006.fits	Test arclamp Hg for 1206m1	unknown	1	02:22:24.46	1.41	+00:00:00.00	1405m1.f	560		400/8500	6731.3	7204.8	22.5	-0.68129569	
r170322_0007.fits	Test arclamp Hg for 1206m1	unknown	1	02:24:10.95	1.41	+00:00:00.00	1405m1.f	560		400/8500	7330.6	7803.1	23.3	-0.68129569	
b170322_0011.fits	Test arclamp Hg for 1206m1	unknown	1	02:26:19.45	1.41	+00:00:00.00	1405m2.f	560	300/5000					-3482.37475586	
r170322_0008.fits	Test arclamp Hg for 1405m2	unknown	1	02:26:32.40	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.68129569	
r170322_0009.fits	domeflat	unknown	7	04:03:36.93	1.41	+00:00:00.00	sp15l.fi	560		400/8500	6429.0	6903.0	22.1	-0.6799702	
r170322_0010.fits	domeflat	unknown	7	04:09:52.38	1.41	+00:00:00.00	1206m1.f	560		400/8500	7028.9	7501.9	22.9	-0.6799702	
r170322_0011.fits	domeflat	unknown	7	04:10:55.68	1.41	+00:00:00.00	1206m1.f	560		400/8500	7028.9	7501.9	22.9	-0.6799702	
r170322_0012.fits	domeflat	unknown	7	04:11:59.43	1.41	+00:00:00.00	1206m1.f	560		400/8500	7028.9	7501.9	22.9	-0.6799702	
r170322_0013.fits	domeflat	unknown	7	04:14:52.17	1.41	+00:00:00.00	1405m1.f	560		400/8500	7330.6	7803.1	23.3	-0.6799702	
r170322_0014.fits	domeflat	unknown	7	04:15:55.93	1.41	+00:00:00.00	1405m1.f	560		400/8500	7330.6	7803.1	23.3	-0.6799702	
r170322_0015.fits	domeflat	unknown	7	04:16:59.58	1.41	+00:00:00.00	1405m1.f	560		400/8500	7330.6	7803.1	23.3	-0.6799702	
r170322_0016.fits	domeflat	unknown	7	04:20:11.98	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.6799702	
r170322_0017.fits	domeflat	unknown	7	04:21:15.88	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.6799702	
r170322_0018.fits	domeflat	unknown	7	04:22:20.88	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.6799702	
r170322_0019.fits	domeflat	unknown	1	04:26:47.67	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.6799702	
b170322_0012.fits	domeflat	unknown	1	04:27:31.92	1.41	+00:00:00.00	1405m2.f	560	300/5000					-3463.20361328	
r170322_0020.fits	domeflat	unknown	1	04:27:48.57	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.6799702	
b170322_0013.fits	domeflat	unknown	1	04:28:10.27	1.41	+00:00:00.00	1405m2.f	560	300/5000					-3463.20361328	
b170322_0014.fits	arcs	unknown	1	04:28:48.42	1.41	+00:00:00.00	1405m2.f	560	300/5000					-3463.20361328	
r170322_0021.fits	arcs	unknown	1	04:28:48.92	1.41	+00:00:00.00	1405m2.f	560		400/8500	7528.9	8001.0	23.5	-0.6799702	
b170322_0015.fits	arcs	unknown	1	04:31:34.57	1.41	+00:00:00.00	1405m1.f	560	300/5000					-3463.20361328	
r170322_0022.fits	arcs	unknown	1	04:31:31.27	1.41	+00:00:00.00	1405m1.f	560		400/8500	7329.7	7802.2	23.3	-0.6799702	
b170322_0016.fits	arcs	unknown	1	04:32:12.72	1.41	+00:00:00.00	1405m1.f	560	300/5000					-3463.20361328	
r170322_0023.fits	arcs	unknown	1	04:32:30.62	1.41	+00:00:00.00	1405m1.f	560		400/8500	7329.7	7802.2	23.3	-0.6799702	
b170322_0017.fits	arcs	unknown	1	04:32:50.97	1.41	+00:00:00.00	1405m1.f	560	300/5000					-3463.20361328	
r170322_0024.fits	arcs	unknown	1	04:33:29.92	1.41	+00:00:00.00	1405m1.f	560		400/8500	7329.7	7802.2	23.3	-0.6799702	
b170322_0018.fits	arcs	unknown	1	04:36:57.66	1.41	+00:00:00.00	1206m1.f	560	300/5000					-3463.20361328	
r170322_0025.fits	arcs	unknown	1	04:37:00.96	1.41	+00:00:00.00	1206m1.f	560		400/8500	7028.9	7501.9	22.9	-0.6799702	

b170322_0019.fits	arcs	unknown	1	04:37:35.41	1.41	+00:00:00.00	1206m1.f	560	300/5000					-3463.20361328
r170322_0026.fits	arcs	unknown	1	04:38:00.51	1.41	+00:00:00.00	1206m1.f	560		400/8500	7028.9	7501.9	22.9	-0.6799702
b170322_0020.fits	arcs	unknown	1	04:38:13.71	1.41	+00:00:00.00	1206m1.f	560	300/5000					-3463.20361328
r170322_0027.fits	arcs	unknown	1	04:39:01.21	1.41	+00:00:00.00	1206m1.f	560		400/8500	7028.9	7501.9	22.9	-0.6799702
b170322_0021.fits	MIRA PMFM +350	s12069+4341	10	10:37:54.18	1.09	+00:08:45.71	direct	560	clear					-3455.16381836
b170322_0022.fits	MIRA PMFM -350	s12069+4341	10	10:39:08.37	1.09	+00:10:00.11	direct	560	clear					-3455.16381836
b170322_0023.fits	MIRA PMFM -350	1206m1.f	20	10:50:44.66	1.09	+00:21:59.37	1206m1.f	560	clear					-3455.16381836
b170322_0024.fits	MIRA PMFM -350	1206m1.f	20	10:55:37.81	1.1	+00:26:53.38	1206m1.f	560	clear					-3455.16381836
b170322_0025.fits	MIRA PMFM -350	1206m1.f	20	10:57:19.41	1.1	+00:28:34.64	1206m1.f	560	clear					-3455.16381836
b170322_0026.fits	MIRA PMFM -350	1206m1.f	20	10:59:17.91	1.1	+00:30:33.94	1206m1.f	560	clear					-3455.16381836
b170322_0027.fits	1206m1	1206m1.f	900	11:02:44.65	1.1	+00:34:01.30	1206m1.f	560	300/5000					-3464.44042969
r170322_0028.fits	1206m1	1206m1.f	900	11:02:47.95	1.1	+00:34:04.05	1206m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
b170322_0028.fits	1206m1	1206m1.f	900	11:18:36.74	1.11	+00:49:55.99	1206m1.f	560	300/5000					-3464.44042969
r170322_0029.fits	1206m1	1206m1.f	900	11:18:49.29	1.11	+00:50:08.02	1206m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
r170322_0030.fits	1206m1	1206m1.f	2	11:36:04.29	1.13	+01:07:25.86	1206m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
b170322_0029.fits	1206m1	1206m1.f	30	11:35:55.54	1.13	+01:07:17.08	1206m1.f	560	300/5000					-3464.44042969
b170322_0030.fits	1206m1	1206m1.f	20	11:37:40.39	1.13	+01:09:02.22	1206m1.f	560	300/5000					-3464.44042969
r170322_0031.fits	1206m1	1206m1.f	1	11:37:58.09	1.13	+01:09:19.97	1206m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
b170322_0031.fits	1206m1	1206m1.f	10	11:39:50.39	1.13	+01:11:12.57	1206m1.f	560	300/5000					-3464.44042969
b170322_0032.fits	1206m1	1206m1.f	2	11:41:02.18	1.13	+01:12:25.12	1206m1.f	560	300/5000					-3464.44042969
b170322_0033.fits	1206m1	1206m1.f	1	11:42:22.18	1.13	+01:13:44.79	1206m1.f	560	300/5000					-3464.44042969
r170322_0032.fits	1206m1 arcs	1206m1.f	1	11:43:36.73	1.14	+01:14:59.54	1206m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
b170322_0034.fits	1206m1 arcs	1206m1.f	1	11:45:47.03	1.14	+01:17:10.19	1206m1.f	560	300/5000					-3464.44042969
b170322_0035.fits	1206m1	1206m1.f	900	11:47:50.08	1.14	+01:19:14.31	1206m1.f	560	300/5000					-3464.44042969
r170322_0033.fits	1206m1	1206m1.f	900	11:47:53.93	1.14	+01:19:17.62	1206m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
b170322_0036.fits	MIRA PMFM +350	s13051+1017	10	12:09:31.11	1.03	+00:42:21.93	direct	560	clear					-3464.44042969
b170322_0037.fits	MIRA PMFM -350	s13051+1017	10	12:10:46.06	1.03	+00:43:37.09	direct	560	clear					-3464.44042969

b170322_0038.fits	MIRA PMFM -350	1405m1.f	20	12:23:51.05	1.02	+23:56:36.53	1405m1.f	560	clear					-3464.44042969
b170322_0039.fits	MIRA PMFM -350	1405m1.f	20	12:25:29.45	1.02	+23:58:15.19	1405m1.f	560	clear					-3464.44042969
r170322_0034.fits	1405m1	1405m1.f	240	12:28:19.24	1.02	+00:01:05.44	1405m1.f	560		400/8500	7027.1	7500.1	22.9	-0.6799702
b170322_0040.fits	1405m1	1405m1.f	1800	12:28:24.19	1.02	+00:01:10.35	1405m1.f	560	300/5000					-3464.44042969
r170322_0035.fits	1405m1	1405m1.f	1800	12:33:28.49	1.02	+00:06:15.48	1405m1.f	560		400/8500	7331.5	7804.0	23.3	-0.6799702
b170322_0041.fits	1405m1	1405m1.f	1800	12:59:30.37	1.03	+00:32:21.68	1405m1.f	560	300/5000					-3464.44042969
r170322_0036.fits	1405m1	1405m1.f	1800	13:04:48.36	1.03	+00:37:40.00	1405m1.f	560		400/8500	7331.5	7804.0	23.3	-0.6799702
b170322_0042.fits	1405m1 flat	1405m1.f	1	13:36:16.24	1.06	+01:09:13.59	1405m1.f	560	300/5000					-3464.44042969
r170322_0037.fits	1405m1 flat	1405m1.f	1	13:36:29.39	1.06	+01:09:26.22	1405m1.f	560		400/8500	7331.5	7804.0	23.3	-0.6799702
r170322_0038.fits	1405m1 arcs	1405m1.f	1	13:38:01.83	1.06	+01:10:58.93	1405m1.f	560		400/8500	7331.5	7804.0	23.3	-0.6799702
b170322_0043.fits	1405m1 arcs	1405m1.f	1	13:40:24.18	1.07	+01:13:21.66	1405m1.f	560	300/5000					-3464.44042969
b170322_0044.fits	1405m1	1405m1.f	1800	13:42:16.43	1.07	+01:15:13.80	1405m1.f	560	300/5000					-3464.44042969
r170322_0039.fits	1405m1	1405m1.f	1800	13:42:24.58	1.07	+01:15:22.48	1405m1.f	560		400/8500	7331.5	7804.0	23.3	-0.6799702
b170322_0045.fits	1405m1	1405m2.f	20	14:26:34.40	1.16	+01:59:40.90	1405m2.f	560	clear					-3464.44042969
b170322_0046.fits	1405m1	1405m2.f	20	14:28:28.75	1.17	+02:01:36.03	1405m2.f	560	clear					-3464.44042969
b170322_0047.fits	1405m1	1405m2.f	20	14:30:07.35	1.17	+02:03:14.33	1405m2.f	560	clear					-3464.44042969
b170322_0048.fits	1405m1	1405m2.f	1800	14:33:18.40	1.18	+02:06:25.90	1405m2.f	560	300/5000					-3464.44042969
r170322_0040.fits	1405m1	1405m2.f	1800	14:33:30.90	1.18	+02:06:38.43	1405m2.f	560		400/8500	7530.7	8002.8	23.5	-0.6799702
b170322_0049.fits	1405m1	1405m2.f	900	15:04:13.57	1.29	+02:37:26.70	1405m2.f	560	300/5000					-3464.44042969
r170322_0041.fits	1405m1	1405m2.f	900	15:04:29.77	1.29	+02:37:42.40	1405m2.f	560		400/8500	7530.7	8002.8	23.5	-0.6799702
b170322_0050.fits	1405m2_arc	1405m2.f	1	15:20:49.26	1.37	+02:54:05.12	1405m2.f	560	300/5000					-3464.44042969
r170322_0042.fits	1405m2_arc	1405m2.f	1	15:20:53.01	1.37	+02:54:08.83	1405m2.f	560		400/8500	7530.7	8002.8	23.5	-0.6799702
r170322_0043.fits	1405m2_arc	1405m2.f	1	15:21:56.46	1.37	+02:55:12.50	1405m2.f	560		400/8500	7530.7	8002.8	23.5	-0.6799702
b170322_0051.fits	1405m2_arc	1405m2.f	1	15:24:53.06	1.39	+02:58:09.58	1405m2.f	560	300/5000					-3464.44042969
b170322_0052.fits	BD33	BD332642	10	15:29:07.00	1.07	+01:15:50.85	long_1.0	560	300/5000					-3543.59936523
r170322_0044.fits	BD33	BD332642	10	15:29:19.80	1.07	+01:16:03.64	long_1.0	560		400/8500	7802.6	8274.2	23.9	-0.64020586
b170322_0053.fits	BD33	BD332642	5	15:31:26.10	1.08	+01:18:09.78	long_1.0	560	300/5000					-3543.59936523
r170322_0045.fits	BD33	BD332642	5	15:31:37.85	1.08	+01:18:22.11	long_1.0	560		400/8500	7802.6	8274.2	23.9	-0.64020586
b170322_0054.fits	BD33_flat	BD332642	1	15:34:25.80	1.08	+01:21:10.47	long_1.0	560	300/5000					-3543.59936523
r170322_0046.fits	BD33_flat	BD332642	1	15:34:39.65	1.08	+01:21:23.86	long_1.0	560		400/8500	7802.6	8274.2	23.9	-0.64020586
r170322_0047.fits	BD33_arc	BD332642	1	15:37:00.90	1.08	+01:23:46.04	long_1.0	560		400/8500	7802.6	8274.2	23.9	-0.64020586
b170322_0055.fits	BD33_arc	BD332642	1	15:38:03.44	1.09	+01:24:48.76	long_1.0	560	300/5000					-3543.59936523

Log entries:

Sunset	Dusk 12 deg	Dusk 18 deg	Dawn 18 deg	Dawn 12 deg	Sunrise	Dark Frac.
04:43:00 UTC	05:21:00 UTC	05:47:00 UTC	15:11:00 UTC	15:37:00 UTC	16:14:00 UTC	74 %

(UTC) 00:54:40: **Data found in /s/sdata243/lris8/2017mar22_B. Now tracking.**

(UTC) 03:43:02: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
7.2000 C	C	-25.7000 C	7.4000 %	621.2700 mBar

(UTC) 04:43:20: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.0000 C	C	-31.9000 C	4.8000 %	621.5800 mBar

(UTC) 05:43:32: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.2000 C	C	-29.3000 C	6.1000 %	621.9100 mBar

(UTC) 06:43:39: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.3000 C	C	-28.1000 C	6.7000 %	622.2700 mBar

(UTC) 07:43:42: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.1000 C	C	-29.5000 C	6.0000 %	622.6300 mBar

(UTC) 08:43:46: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.1000 C	C	-33.4000 C	4.1000 %	622.6100 mBar

(UTC) 09:43:51: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.2000 C	C	-33.4000 C	4.1000 %	622.2000 mBar

(UTC) 10:40:53: **Observer comment**

```
0.8 arcsec seeing after MIRA
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(UTC) 10:44:12: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.3000 C	C	-33.8000 C	3.9000 %	621.8700 mBar

(UTC) 11:44:23: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.0000 C	C	-34.5000 C	3.7000 %	621.3900 mBar

(UTC) 12:14:40: **Observer comment**

```
MIRA failed.  Trying an autofoc instead
```

(UTC) 12:18:23: **Observer comment**

```
Seeing 0.925 after autofoc
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(UTC) 12:44:31: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
4.8000 C	C	-37.4000 C	2.8000 %	620.9200 mBar

(UTC) 13:44:42: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
4.8000 C	C	-35.5000 C	3.4000 %	620.7700 mBar

(UTC) 14:44:57: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
4.3000 C	C	-35.0000 C	3.7000 %	620.7100 mBar

(UTC) 15:45:01: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
4.3000 C	C	-30.7000 C	5.6000 %	620.9900 mBar

(UTC) 16:45:07: **Weather update**

Temperature	Dome temp.	Dew point	Rel. humidity	Pressure
5.1000 C	C	-31.0000 C	5.2000 %	621.3600 mBar