## Palomar TSpec Observations

NIGHT1 May09 2017 /home/rdata/TSPEC/20170509 Conditions Dome dripping from Snow Observers PNA/Bhavin Joshi Itsgoply

File#	Object	UT	Air Mass	PA slit	Focus	Exp Time (s)	Pattern E.g. ABBA	Comments
1:10	Dark	23				30		darks
11:20	lampsON	23:25				12.7		New brights
21-24	HIP64248	04:26	1.135	E-W	37.73	90	ABBA	Telluric standard for XL53
25-28	XL53	4:45	1.071	E-W	37.82	300	ABBA	Lost guiding. Clouds. Only images #25 and #28 are okay.
29-32	XL53	5:07	1.051	E-W	37.82	300	ABBA	Repeating on XL53 now that clouds moved away. This ABBA sequence should be good.
33-37	XL53	5:30	1.041	E-W	37.82	300	ABBA	Repeating again on XL53. This time with a different guide star because the last one was probably an elliptical galaxy. Should have better seeing than previous ABBA sequence.
38-40	XL53	5:53	1.039	E-W	37.82	300	ABBA	Repeating again on XL53. We need more counts on the galaxy. Clouds again. Only image #38 is okay. Didn't write out the last A image, #41.
41-44	HIP68713	6:35	1.444	E-W	37.45	40	ABBA	Telluric standard for next target XL229.
45-48	XL229	6:49	1.212	E-W	37.46	300	ABBA	Source drifted off the slit in A, image #45. Can't see a continuum in image #45 but A-B seems to show a spectrum for A and relatively higher SNR spectrum for B.
49-52	XL229	7:23	1.23	E-W	37.46	300	ABBA	
53-56	XL229	8:03	1.291	E-W	37.46	300	ABBA	Seeing around 1.8" now. Some clouds coming through during images 54 and 55 (both Bs). Image 56 is also likely no good.
57-60	HIP75230	8:30	1.078	E-W	37.48	10	ABBA	Telluric standard for XL55
61-64	XL55	8:46	1.075	E-W	37.28	300	ABBA	
65(66-68 skipped)	XL55	9:09	1.095	E-W	37.28	300	A	Only got first A image here. Menacing looking clouds. Had to close dome.
6972	XL55	9:49	1.15	E-W	37.29	300	ABBA	Opening again after a short while. Seeing ~1.3".
								Clouds came in. Stopped observing for the night. 3:37AM
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NIGHT2 May10 2017 /home/rdata/TSPEC/20170510 Conditions Extremely thick fog. Observers PNA/Bhavin Joshi

File#	Object	UT	Air Mass	PA slit	Focus		Pattern E.g. ABBA	Comments
1:10	Dark	23:10				30		darks
11:20	lampsON(oldhi)	23:19				30		Old lamps bright
21-30	lampson(newhi)	23:35				12.7 (default)		New lamps
31-40	dark					12.7		12s dark
41-50	dark					300		300s dark

Fog all night--did not open

NIGHT3
May11 2017 /home/rdata/TSPEC/20170511
Conditions
Fog approaching dome
Observers PNA/Bhavin Joshi

File#	Object	UT	Air Mass	PA slit	Focus	Exp Time (s)	Pattern E.g. ABBA	Comments
1:10	Dark	23:10				12.7		darks
11-20	lampson(newhi)	23:35				12.7 (default)		New lamps
21-24	HIP64248	04:47	1.1	e-w=90	35.65	90	ABBA	Telluric 1.0"seeing!
25-28	XL53	04:58	1.05		35.78	300	ABBA	Seeing 1.0 great con
29-32	XL53	05:20	1.04			300	ABBA	see=1.1" Drips on dome
			Closed dome	Due to	High humidity			
33-36	XL435	06:35	1.06	90	35.70	300	ABBA	Seeing 1.0" !!
37-40	XL435	07:01	1.08	90	35.98	300	ABBA	1.1
41-44	XL435	07:33	1.13	E-W	35.87	300	ABBA	Focussed 1.2"
45-48	XL435	07:55	1.18	E-W	35.87	300	ABBA	Focus changed to 36.04 for last A image
49-52	XL435	08:21	1.27	E-W	36.00	300	ABBA	
53-56	HIP71172	08:46	1.08	e-w	36.02	60	ABBA	Telluric seeing 1.3"
57-60	SDSSJ131459	09:00	1.3			250	ABBA	Lin's Object Bright
61-64	XL692	09:23	1.35			300	ABBA	
65-68	HIP65280	09:41	1.41		36.17	60	ABBA	Tell at higher AM
69-72	XL692	09:49	1.47		36.17	300	ABBA	
73-76	XL692	10:12	1.62		36.17	300	ABBA	
77-80	XL100	10:36	1.29			300	ABBA	Seeing 1.1"
81-84	XL100	10:58	1.38			300	ABBA	
85-88	XL100	11:19	1.5		36.38	300	ABBA	Seeing worse 1.3
89-92	UKIRTFS146	11:41	1.1			30	ABBA	UK IR JHK standard
93-96	HD173638		1.4			12.71	ABBA	Big Dounut
97-100	XL100	12:02	1.8		36.38	300	ABBA	1.3"in Twighlight**
101-102	twiflats	12.26	2.1			300	ABBA	Until counts >25000
103-112	Old lights on					30		Redo flat with 'ol lamps
113-122	darks					30		Darks 30s

Night was photometric!

UKIRT FS 146 (Leggett+08?) 18:54:04.0 37:07:19 J=10.708(0.008), H=10.209(0.006) K=10.120(0.012)

Spectrophotometric standard (V. bright) HD173638 K = 3.8! FOIV (Defocussed) From IRTF Standard star cat. 18:46:43.32 -10:07:30.17 \*files stored in data directory. (Phil 1-TB backup disk). This last one for bandpass rsrf shape only

<sup>\*\*</sup> Integration 98: source at position B had small amount of emission from another galaxy close to position A for 50% of integration. (A(B) BA) last AB OK...