

# OBSERVING LOG

**TELESCOPE** : DuPont  
**INSTRUMENT** : WFCCD  
**CONFIGURATION** : TYPHOON  
**OBSERVER** : Jeff Rich  
**NIGHT ASSISTANT**: Herman

**DATE** : December 20/21 2019  
**NIGHT**: 3 of 5  
**PAGE** : 1 of 3  
**WEATHER**: clear

File	Object	UTstart	Expsec	Filter	Airmass	Aper	Seeing	Comments
3001	bias	19:07	0	grism	-	150um	-	bias Test, OK, ~1370
3002-3004	dflat	19:09	3x3	R	Flat field	open	-	Lamp @ 350V, ~26k peak
3005-3007	"	19:14	3x4	V	"	open	-	Lamp @ 390V, <18k peak
3008-3010	"	19:19	3x4	B	"	open	-	Lamp @ 480V, <22k peak
3011-3013	"	19:23	3x80	grism	"	150um	-	Lamp @ 480V, ~40k peak
3014-3016	"	19:32	3x20	grism	"	750um	-	Lamp @ 480V, <38k peak
3017-3019	"	19:38	3x50	grism	"	hart	-	Lamp @ 480V, ~41k peak
3020	"	19:45	4	V	"	hart	-	Lamp @ 390V
3021-3023	HeNeAr arcs	19:47	30/60/90	grism	"	150um	-	Arcs for calibs
3024	Slit image	20:06	4	V	zenith	150um	-	1424.6, 2640.4 @ y=2100, 1424.3, 1424.8
3025	"	20:10	2	"	"	750um	-	1436.2, 2628.8 @ y=2100
3026	a133_g image	20:18	5	"	"	mask	-	LED, full readout
3027-3034	bias	20:27	8x0	"	"	mask	-	Back to subraster
3035-3042	Full frame bias	20:48	8x0	"	"	"	-	Full frame bias
3043-3047	dark	21:22	600	"	"	"	-	Back to Subraster
3048	a133_g mask	00:32	10	V		mask	-	Sky image, full frame
3049	a133_g sky	00:35	"	"	1.025	open	~1"	4.60"E, -12.00"S, cass=148.8
3050	a133_g sky	00:47	"	"	1.035	"		87.7"W, 37.2"N, cass=150.7
3052	a133_g sky	01:16	"	"	1.071	"	1.3"	Reset field, 105"E, 51.3"N
3053	"	01:24	"	"	1.084	"		OK
3054	a133_g mask	01:30	"	"	1.093	mask		Ring OK, offset 0.2"W. 1.2"S
3055	a133_g	01:35	1800	grism	1.106	"	~1"	Seeing on guider good, objects in the slits
3056	a133_g	02:07	1800	"	1.178	"	~1.2"	

# OBSERVING LOG

**TELESCOPE** : DuPont  
**INSTRUMENT** : WFCCD  
**CONFIGURATION** : TYPHOON  
**OBSERVER** : Jeff Rich  
**NIGHT ASSISTANT**: Herman

**DATE** : December 20/21 2019  
**NIGHT**: 3 of 5  
**PAGE** : 2 of 3  
**WEATHER**: clear

File	Object	UTstart	Expsec	Filter	Airmass	Aper	Seeing	Comments
3057	a133_g	02:40	1800	grism	1.289	mask	~1.2"	
3058	HeNeAr arc	03:13	45	grism	1.442	mask		Arc @ Obs
3059	LED	03:16	60	grism	1.467	mask		LED @ Obs
3060	NGC 1566	03:24	20	V	1.113	open	1.6"	Back to subraster, cass=180, 238"W, 2.5"S
3061	"	03:28	"	"	1.114	"	1.3"	Align 6075, 11_04_05_18, 5.2"N, 2.4" W
3062	"	03:31	"	"	1.115	"	1.3"	2.9"E, 1.9"N
3063	"	03:35	"	"	1.116	"		+10.3, R2L, 1"E offset for slit Dif and GO
3064	NGC 1566	03:38	600	grism	1.117	150um	~1.3"	496.5, 399.7
3065	"	03:50	"	"	1.123	"		410.0 variable seeing
3066	"	04:01	"	"	1.130	"		420.3
3067	"	04:13	"	"	1.138	"		430.6
3068	"	04:24	"	"		"		440.9
3069	"	04:36	"	"	1.161	"		451.2 Seeing going bad (1.5-2")
3070	"	04:48	"	"	1.175	"		461.5
3071	"	04:59	"	"	1.191	"		471.8 seeing ~1.6" on guider, variable
3072	"	05:11	"	"	1.209	"		482.1
3073	"	05:22	"	"	1.230	"		492.4
3074	"	05:34	"	"	1.253	"		502.7 seeing still bad (1.5-2")
3075	"	05:45	"	"		"		513.0
3076	"	05:57	"	"	1.306	"		523.3
3077	"	06:08	"	"		"		533.6 seeing improving, but variable
3078	"	06:20	"	"	1.370	"		543.9
3079	"	06:31	"	"	1.407	"		554.2 seeing improved, <1.3-1.6"
3080	NGC 1566	06:42	20	V	1.454	open	1.7"	564.5

