

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1791 - L2 Version 10
Chandra X-Ray Center

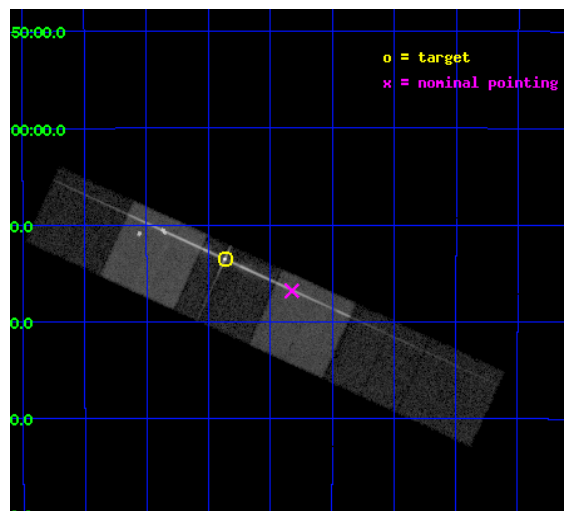
L2 Processing Date : Dec 3 2012

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1 Front

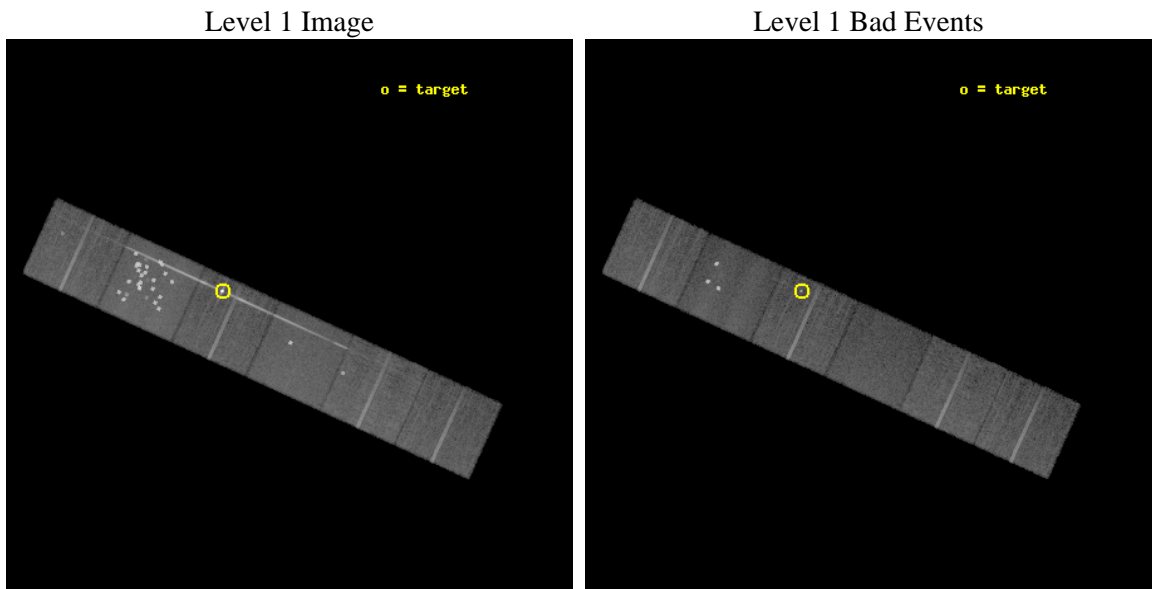
seq_num	390009	Sequence number
obs_id	1791	Observation id
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	PKS2155-304	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	329.716667	Observer's specified target RA [deg]
dec_targ	-30.225556	Observer's specified target Dec [deg]
ra_nom	329.58141388576	Nominal RA [deg]
dec_nom	-30.280415634543	Nominal Dec [deg]
roll_nom	24.478187466992	Nominal Roll [deg]
revision	10	Processing version of data
ontime	21158.40001969	Sum of GTIs [s]
livetime	20890.479618582	Livetime [s]
ontime4	21158.40001969	Sum of GTIs [s]
ontime5	21158.40001969	Sum of GTIs [s]
ontime6	21158.40001969	Sum of GTIs [s]
ontime7	21158.40001969	Sum of GTIs [s]
ontime8	21158.40001969	Sum of GTIs [s]
ontime9	21158.40001969	Sum of GTIs [s]
l2events	281225	Number of level 2 events



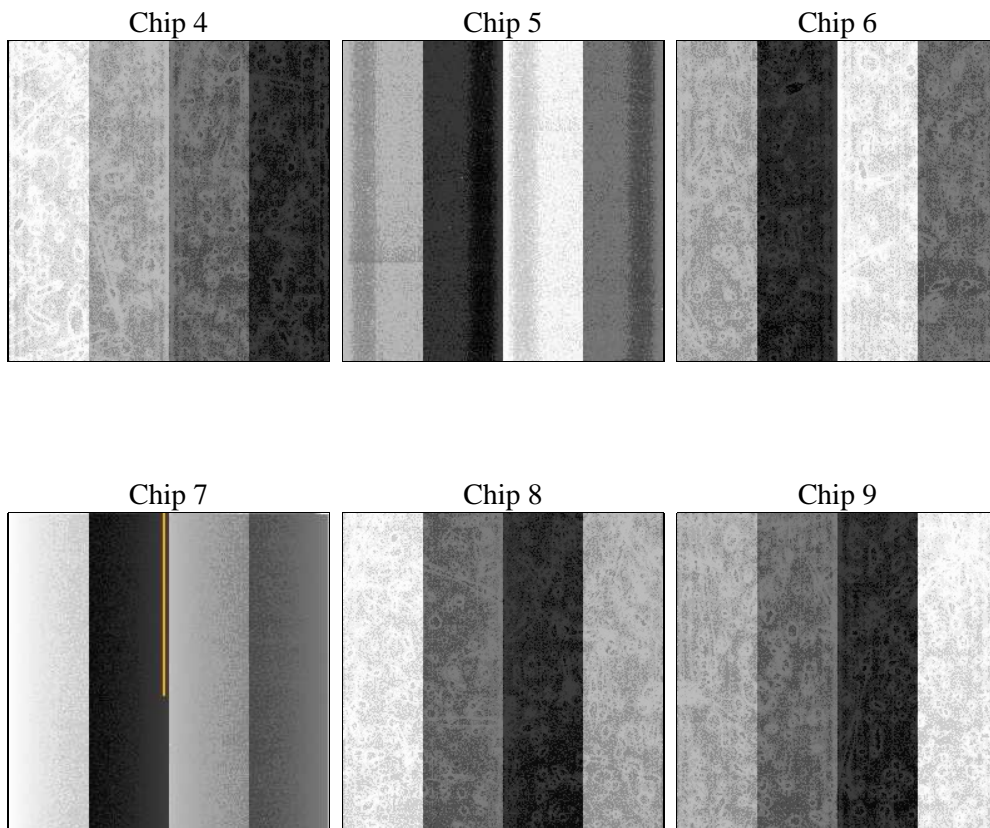
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	21400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	21158.40001969	Sum of GTIs [s]
caldbver	4.5.1.1	 	ontime4	21158.40001969	Sum of GTIs [s]
date	2012-08-31T14:29:45	Date and time of file creation	ontime5	21158.40001969	Sum of GTIs [s]
revision	5	Processing version of data	ontime6	21158.40001969	Sum of GTIs [s]
			ontime7	21158.40001969	Sum of GTIs [s]
			ontime8	21158.40001969	Sum of GTIs [s]
			ontime9	21158.40001969	Sum of GTIs [s]
			l1events	1108888	Number of level 1 events

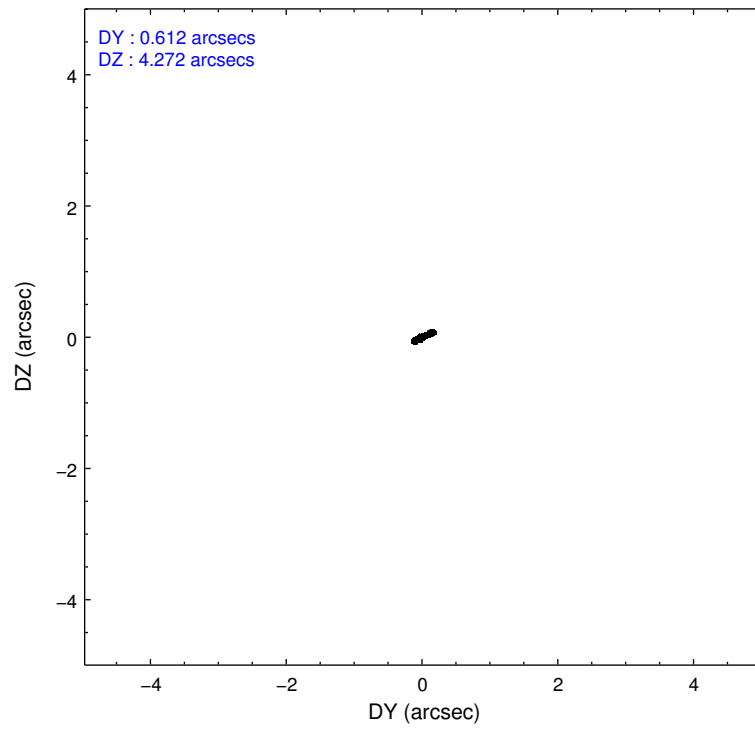
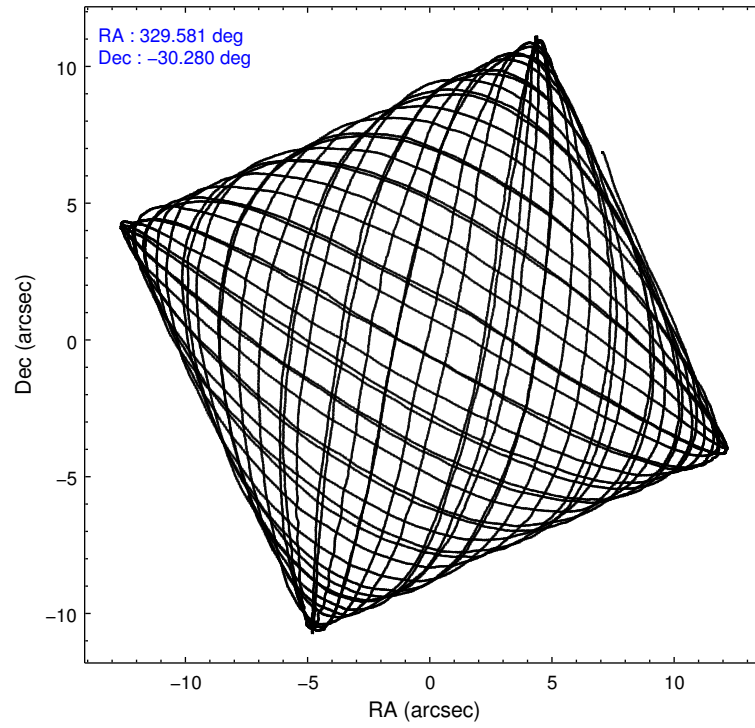
2.1.4 Events

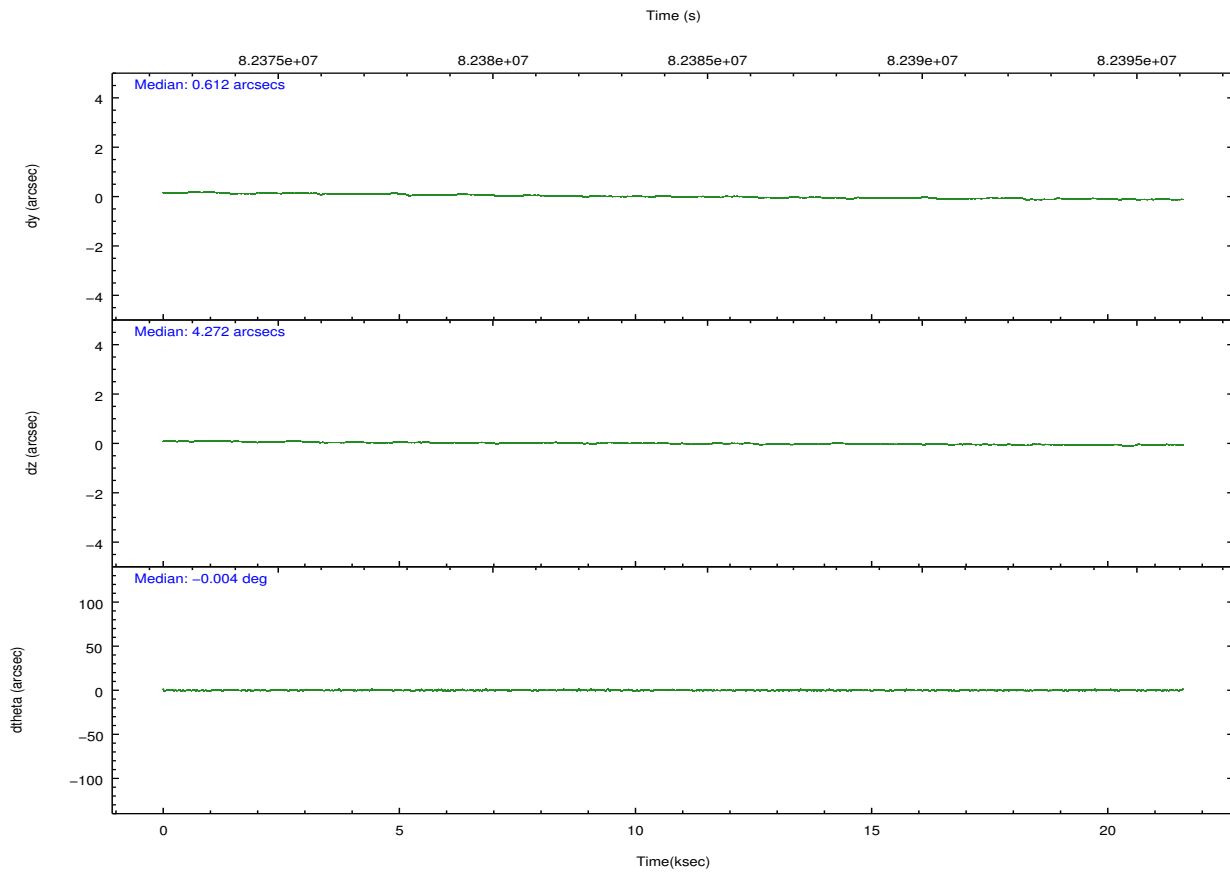
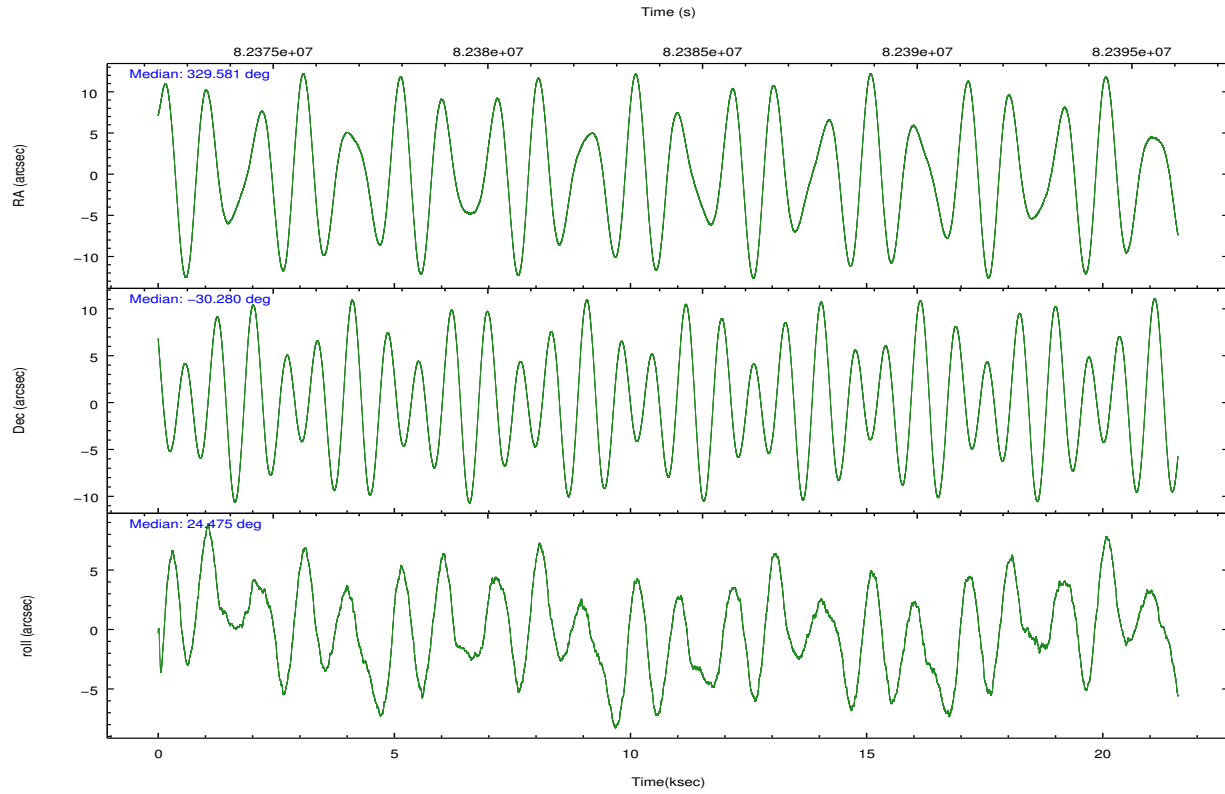
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	141407	341591	182330	161896	159131	122533	grade 0 events	4117	135725	49827	16981	11817	2999
rejected events	125239	114499	111470	87075	123777	107568		2%	39%	27%	10%	7%	2%
rejected %	88%	33%	61%	53%	77%	87%	grade 1 events	35	174	631	86	92	23
								0%	0%	0%	0%	0%	0%
							grade 2 events	6903	28442	11407	14827	9996	6385
								4%	8%	6%	9%	6%	5%
							grade 3 events	717	7829	2271	4900	2799	787
								0%	2%	1%	3%	1%	0%
							grade 4 events	709	4879	2249	4568	2733	790
								0%	1%	1%	2%	1%	0%
							grade 5 events	2484	16502	3170	8541	3951	2988
								1%	4%	1%	5%	2%	2%
							grade 6 events	3724	50247	5124	33557	8047	4008
								2%	14%	2%	20%	5%	3%
							grade 7 events	122718	97793	107651	78436	119696	104553
								86%	28%	59%	48%	75%	85%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	329.563121	329.5814138857568	Subarray requested	NONE	NONE
[deg] Pointing Dec	-30.302777	-30.28041563454317	Alternating exposures requested	N	N
[deg] Pointing Roll	24.312327	24.47818746699225	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.131972	-182.1344861297048			
[mm] SIM translation stage offset	-8.000551	-7.998036453302973			
[s] Observation start time (MET)	82373591.184000	82373109.47234701			
Observation start date	2000-08-11T09:32:07	2000-08-11T09:25:09			
[s] Observation end time (MET)	82394991.184000	82395186.948172			
Observation end date	2000-08-11T15:28:47	2000-08-11T15:33:06			
Read mode	TIMED	TIMED			

2.3 Aspect



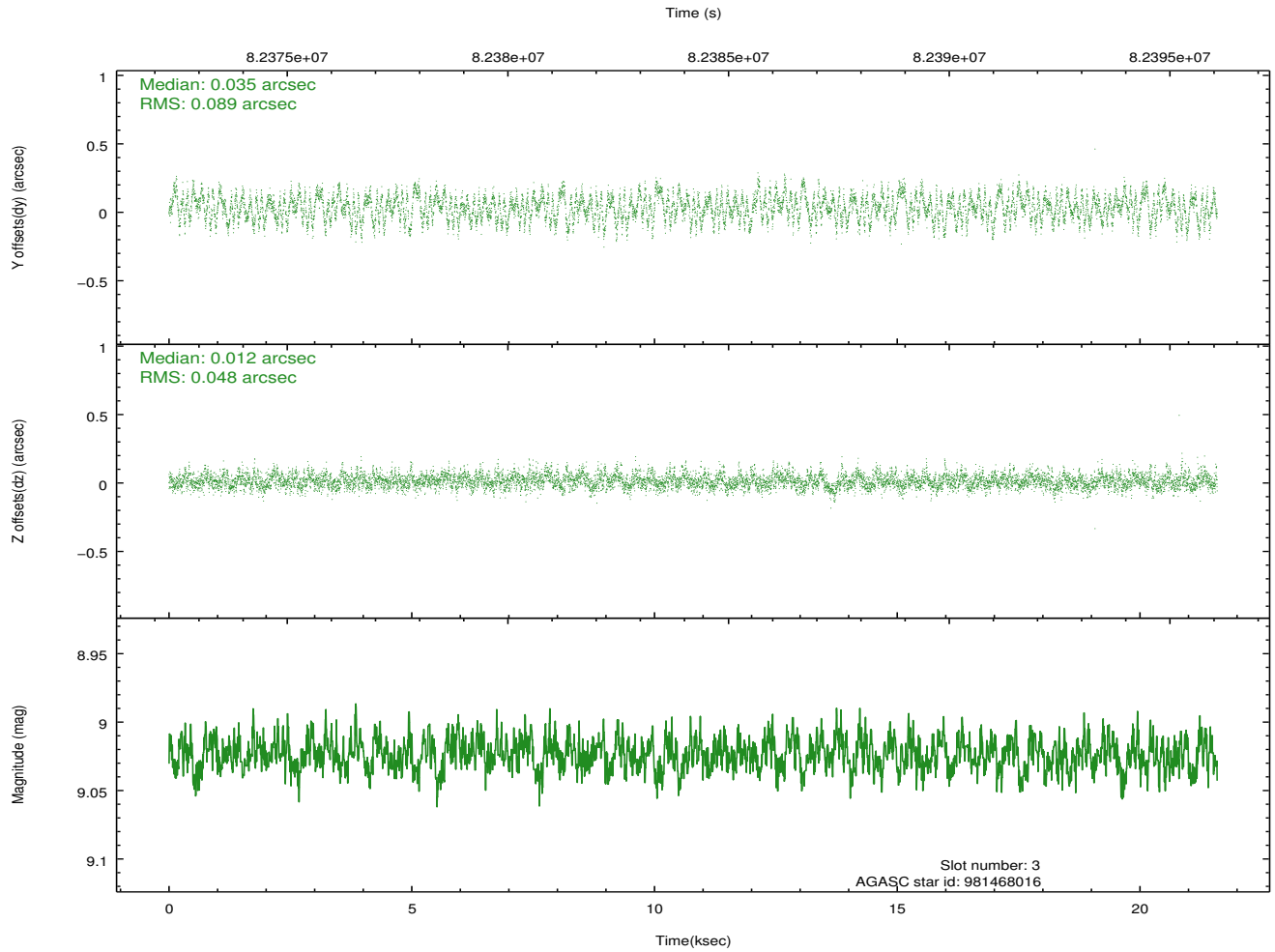
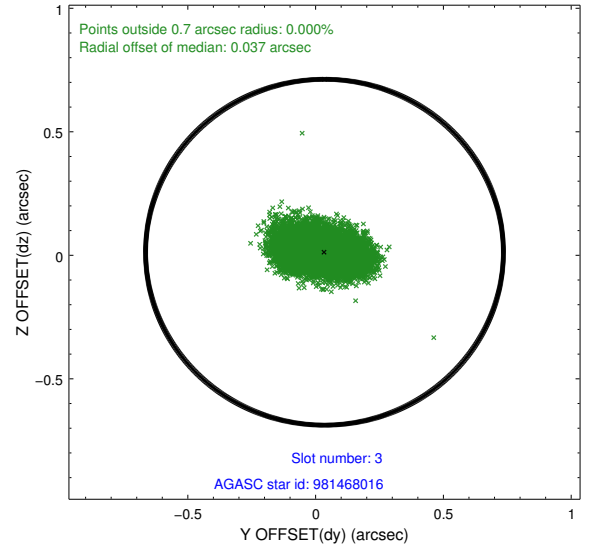
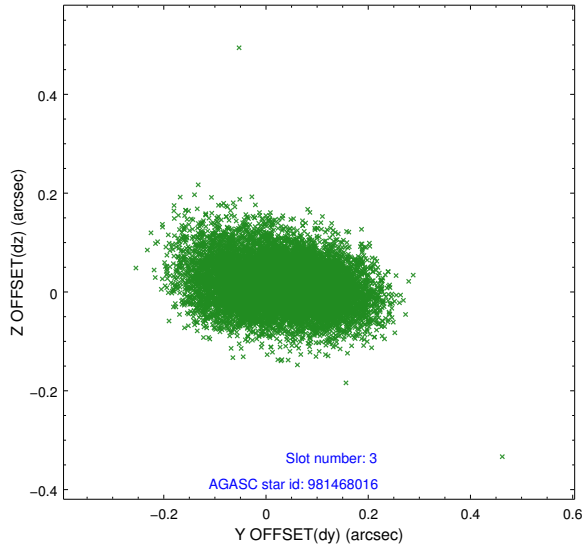


Slot Statistics

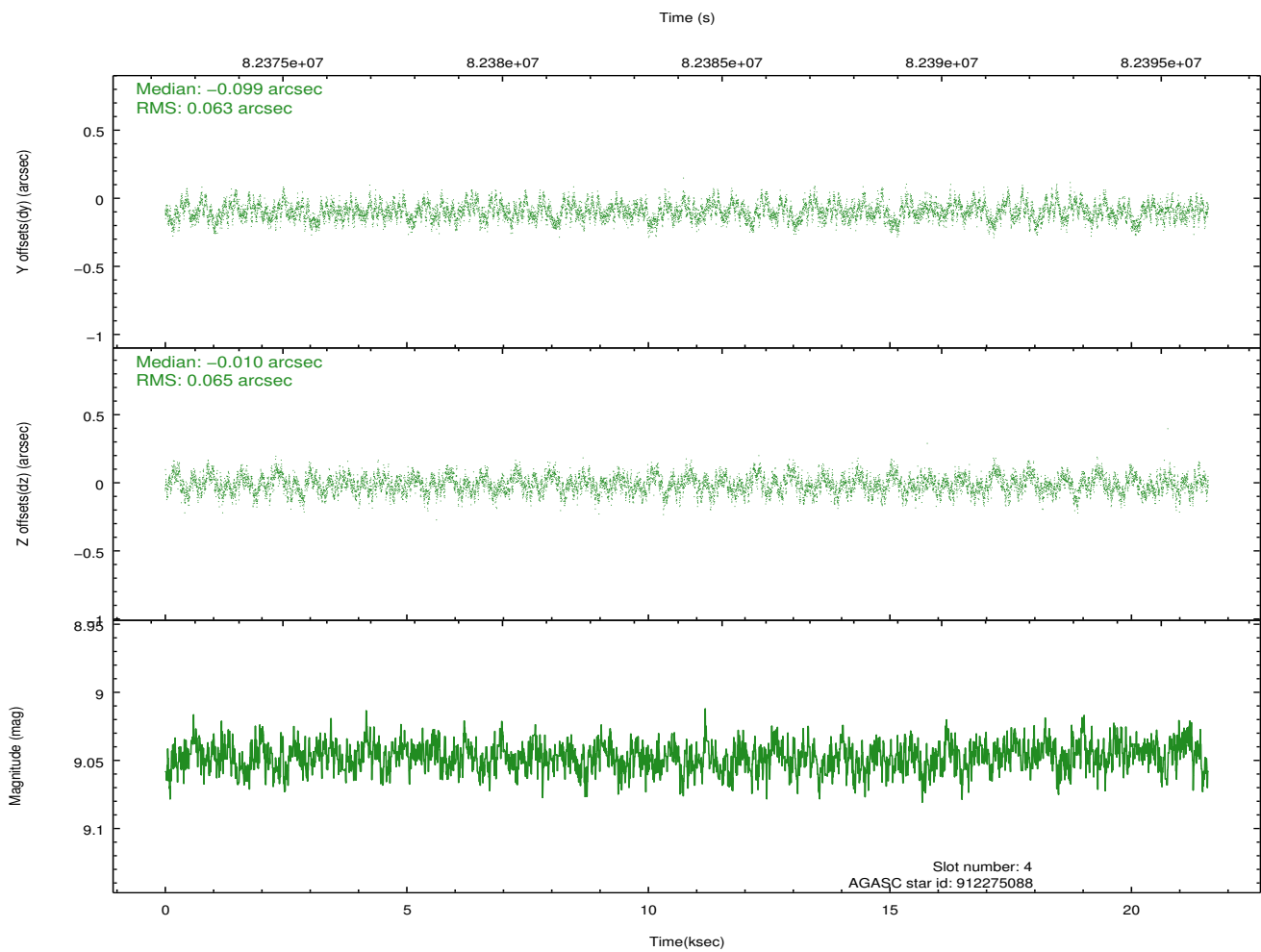
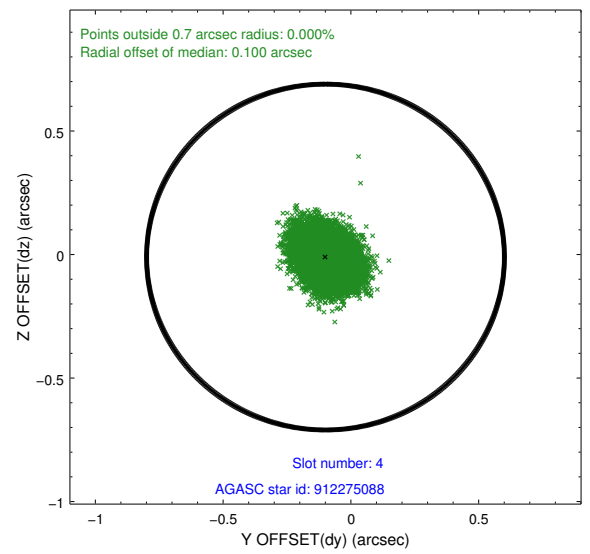
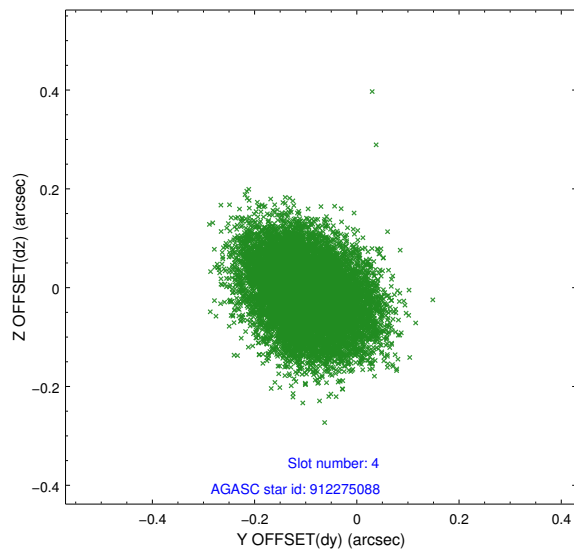
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	5267	-0.104	-0.082	0.005	0.010	0.000000	0.000000	-752.74	-1890.21
1	FID	ACIS-S-4	7.19	5266	0.080	0.056	0.006	0.010	0.000000	0.000000	2160.66	18.19
2	FID	ACIS-S-6	7.43	5267	-0.004	0.033	0.007	0.011	0.000000	0.000000	409.57	655.75
3	GUIDE	981468016	9.02	10529	0.035	0.012	0.107	0.176	328.842457	-30.034984	-1652.62	1796.76
4	GUIDE	912275088	9.05	10532	-0.099	-0.010	0.098	0.154	329.619228	-29.738698	995.87	1778.60
5	GUIDE	981478152	9.41	10530	0.043	0.017	0.081	0.134	329.415589	-30.057192	-54.64	994.90
6	GUIDE	981468128	9.35	10530	0.022	-0.028	0.092	0.161	329.756350	-30.158334	762.35	225.91
7	GUIDE	981469488	9.59	10532	0.004	0.011	0.092	0.147	329.261199	-30.045155	-475.77	1231.45

2.4 Star Slots

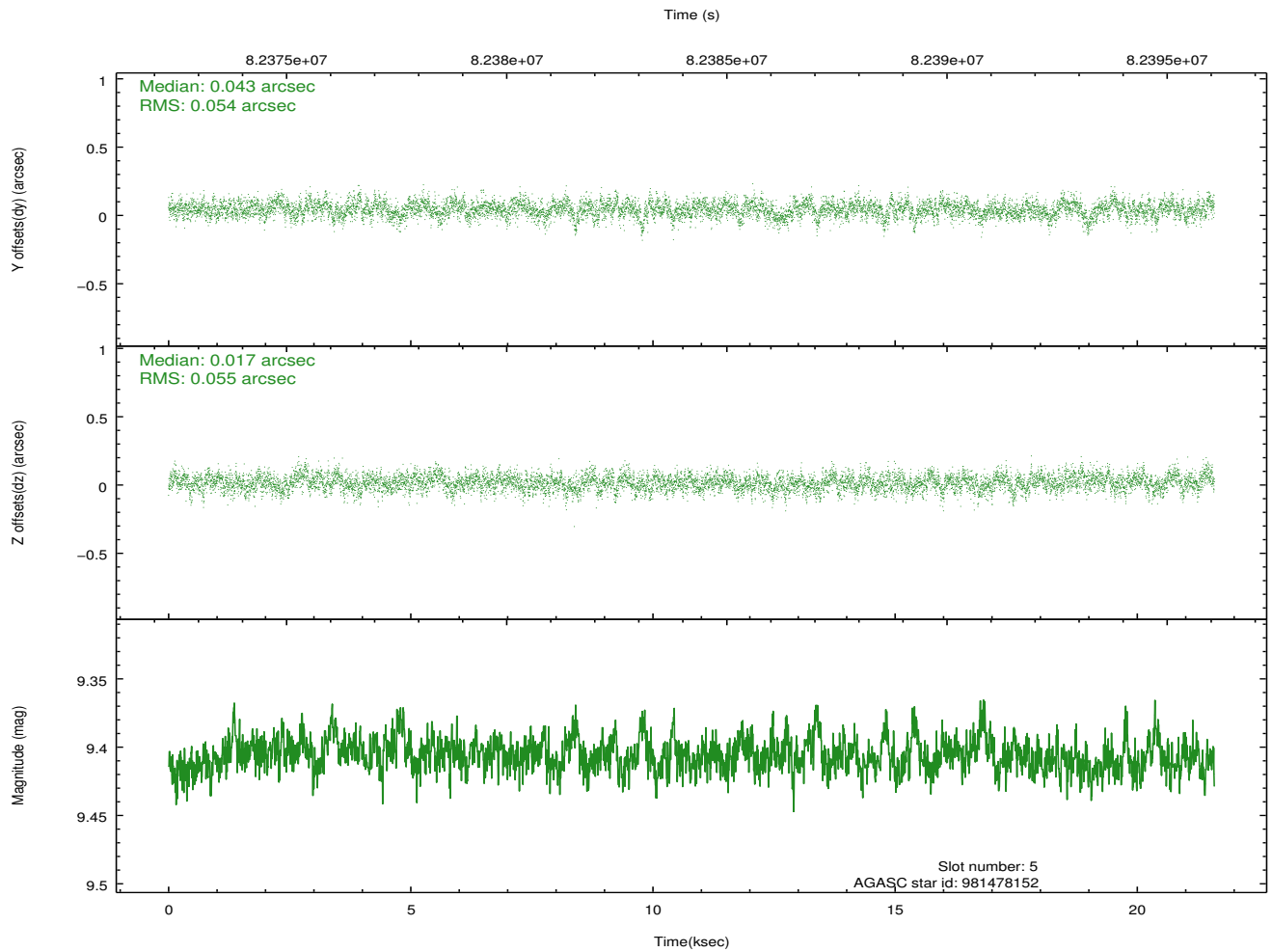
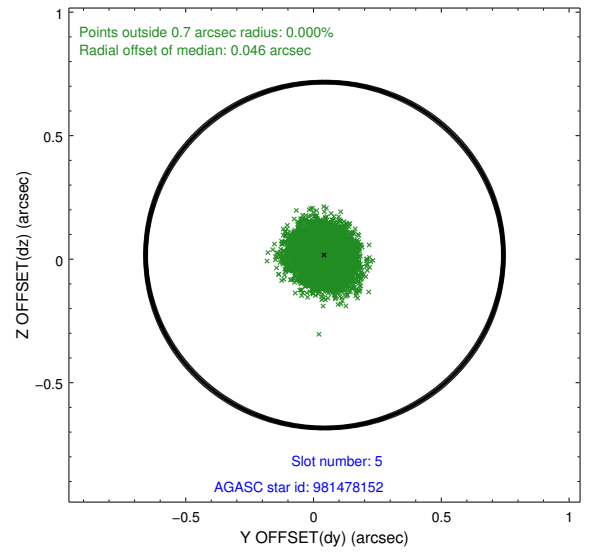
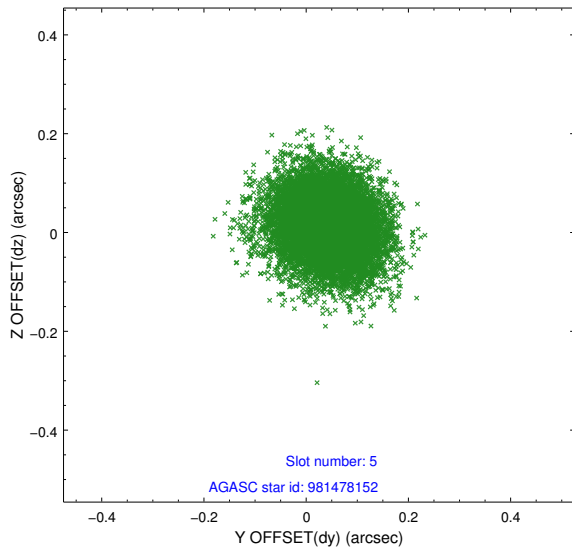
2.4.1 Slot 3



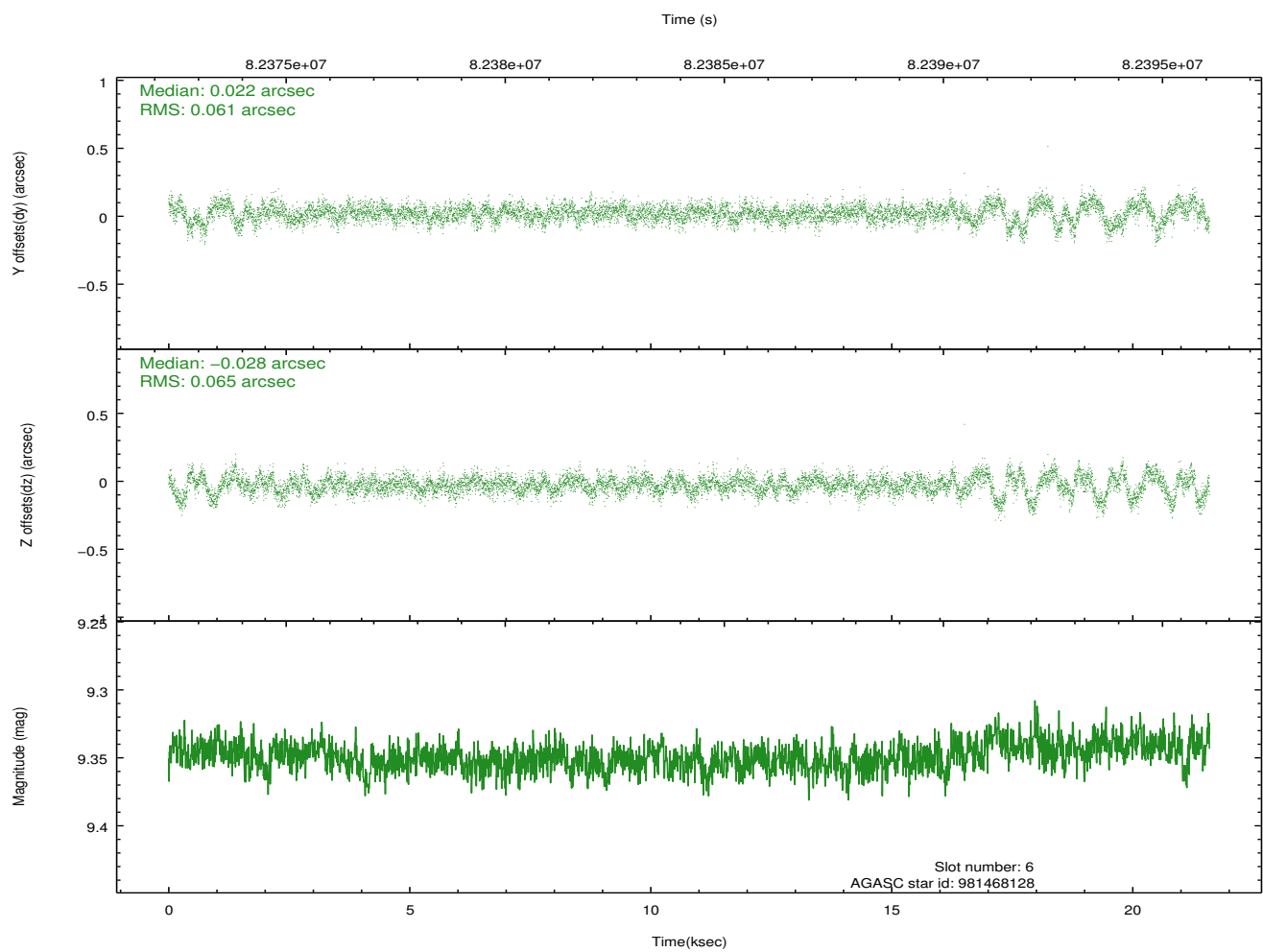
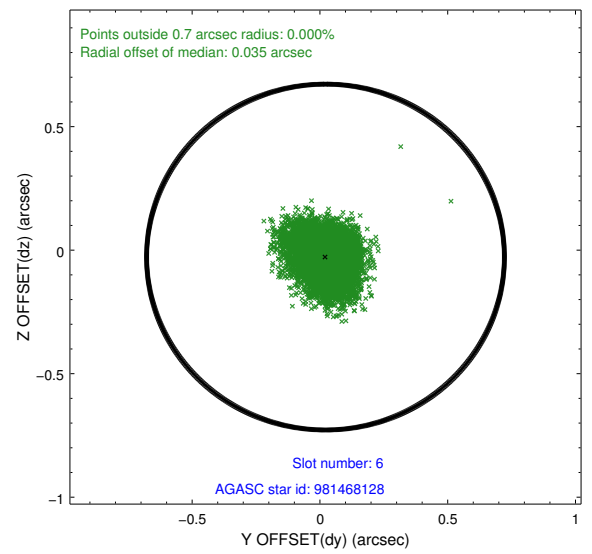
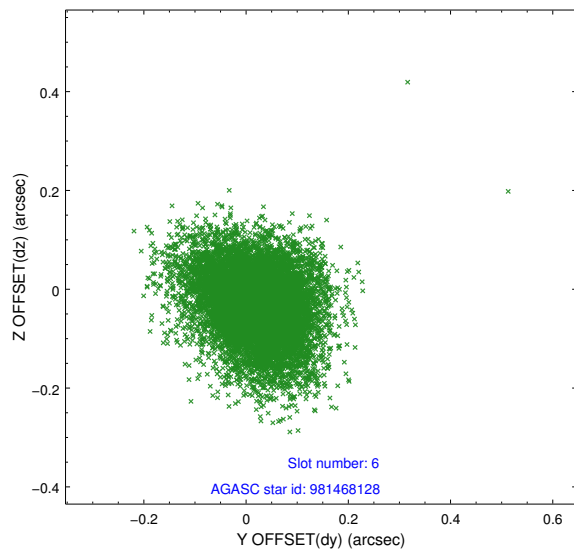
2.4.2 Slot 4



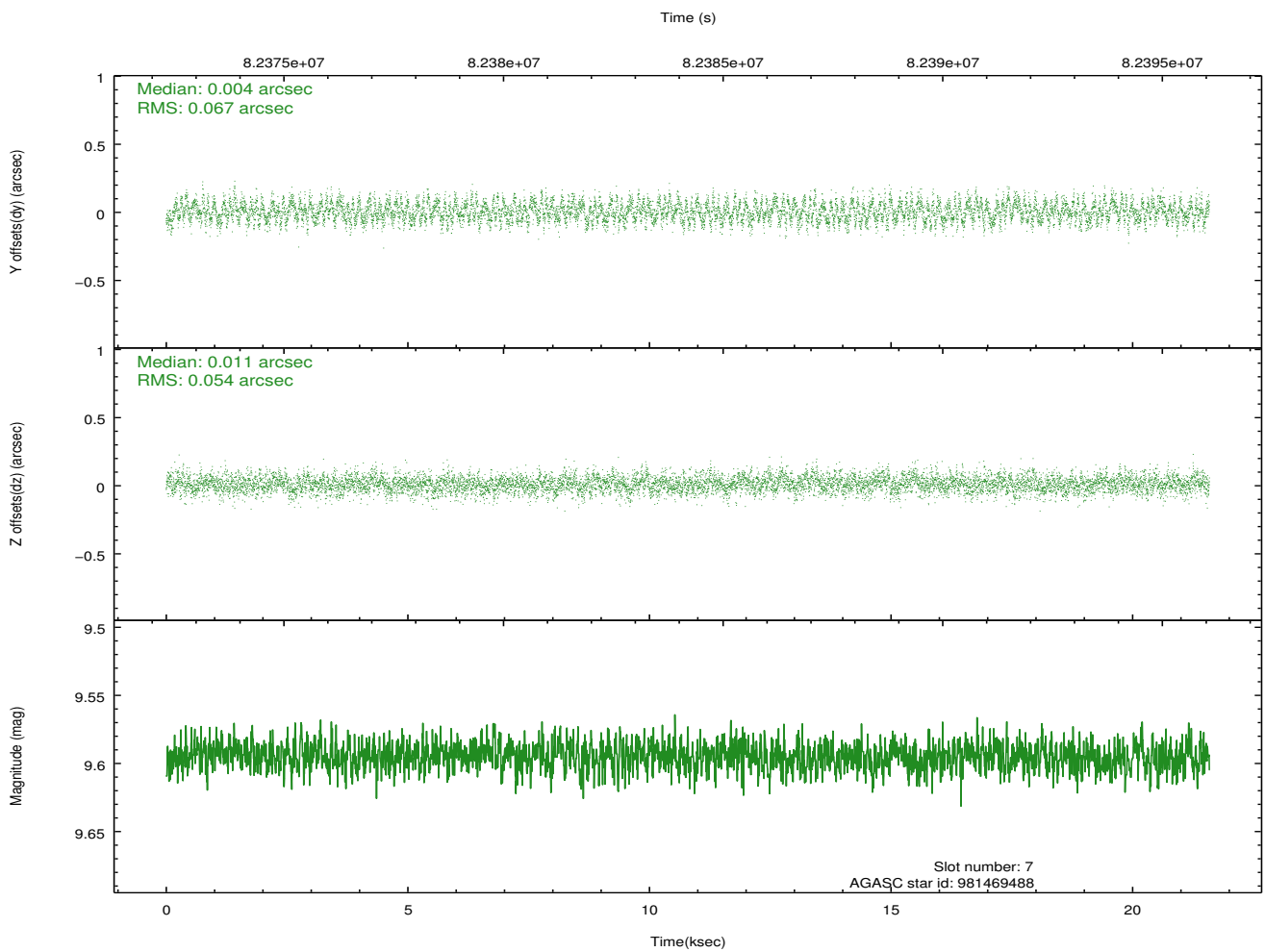
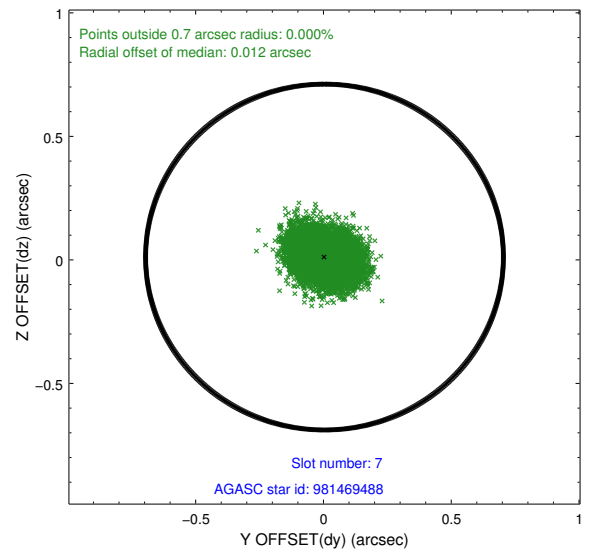
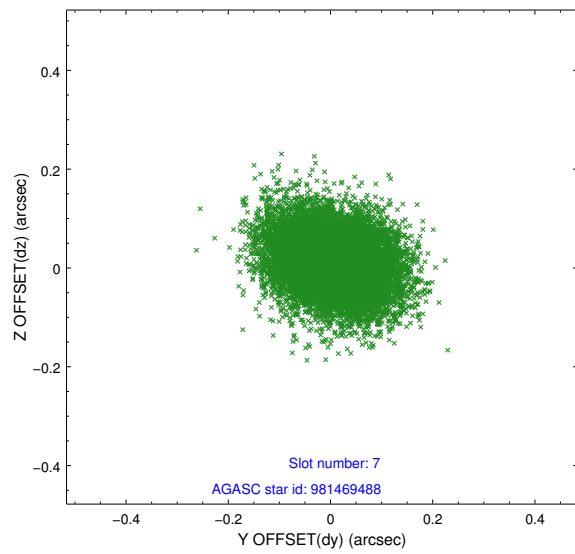
2.4.3 Slot 5



2.4.4 Slot 6

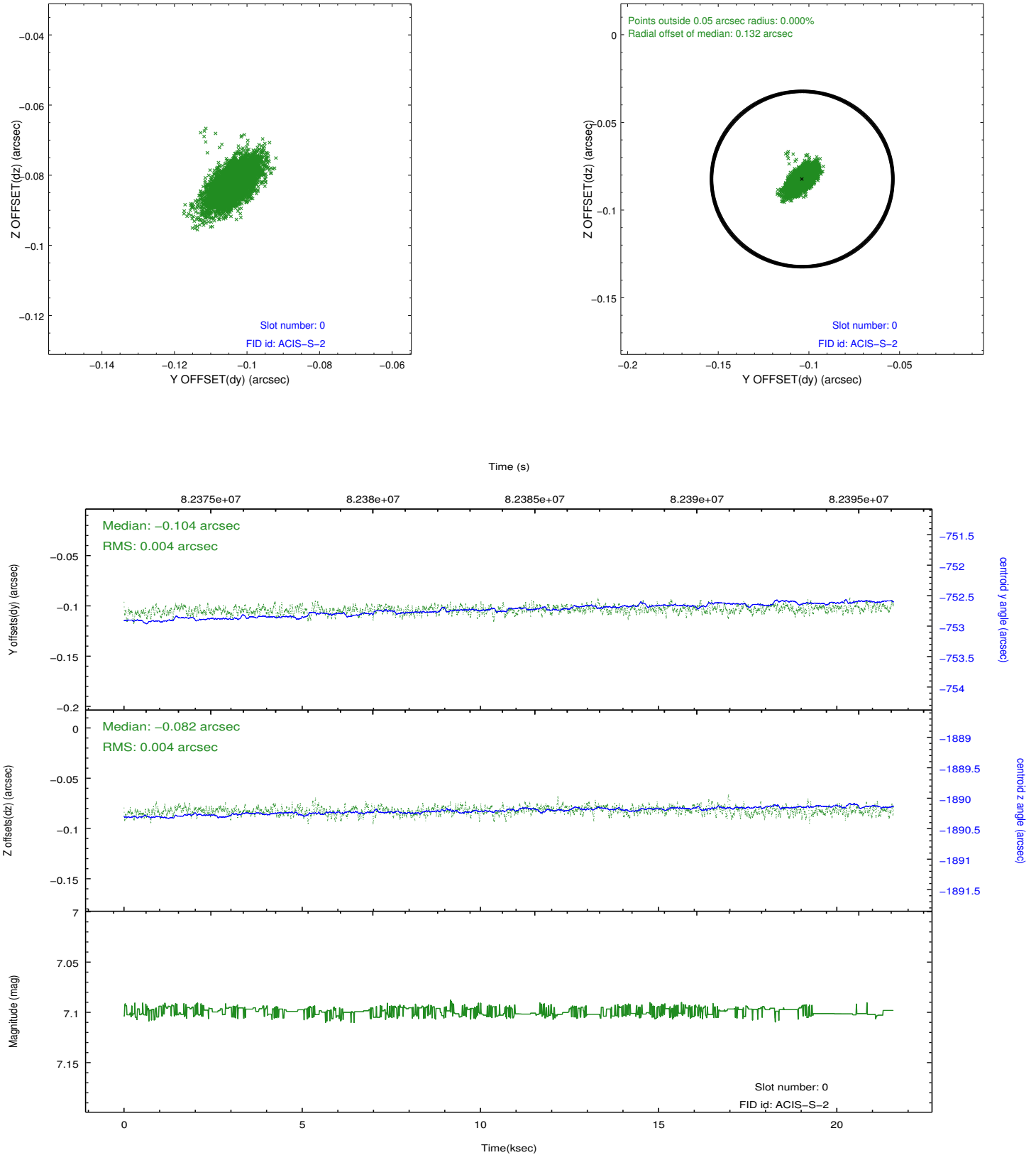


2.4.5 Slot 7

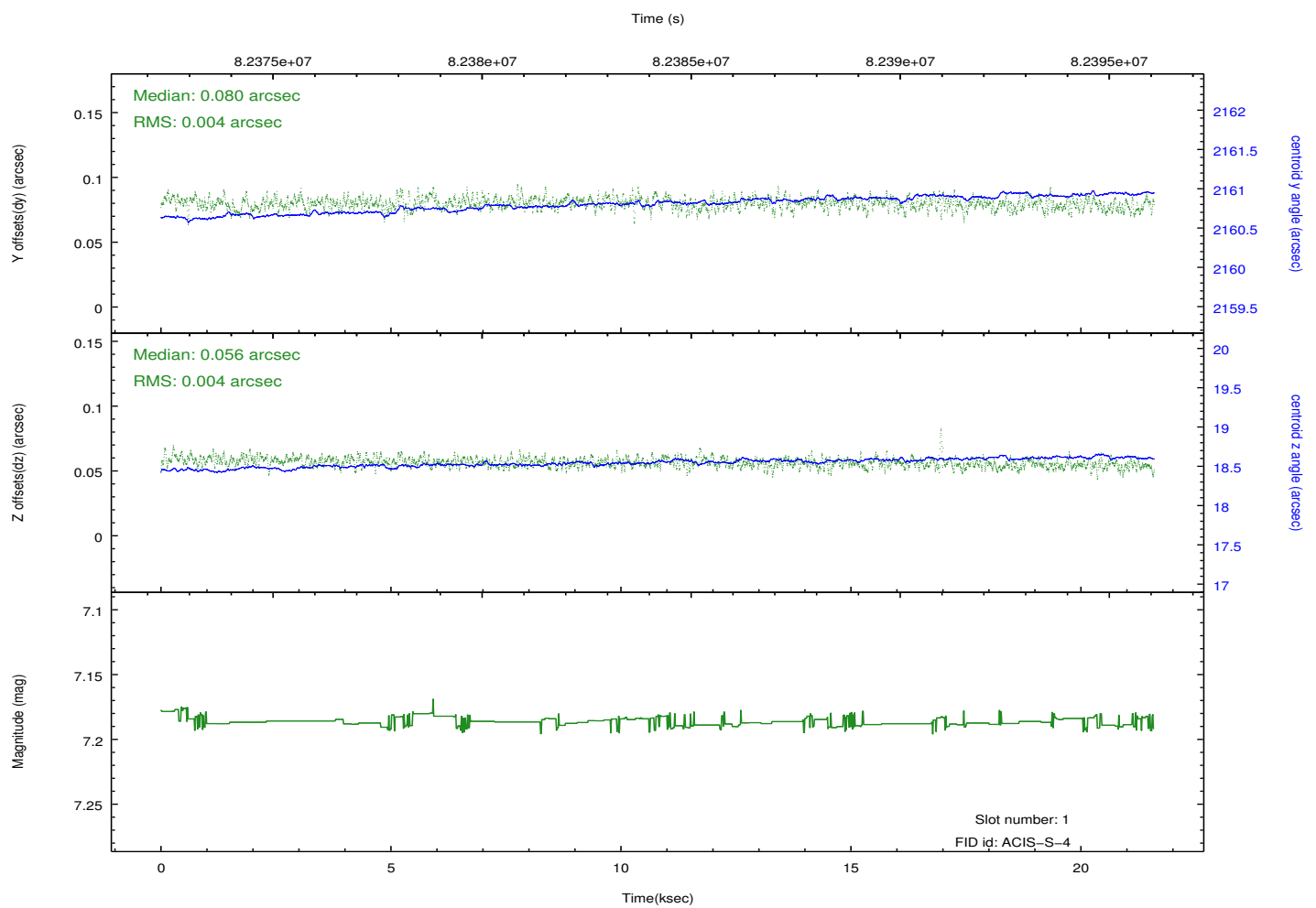
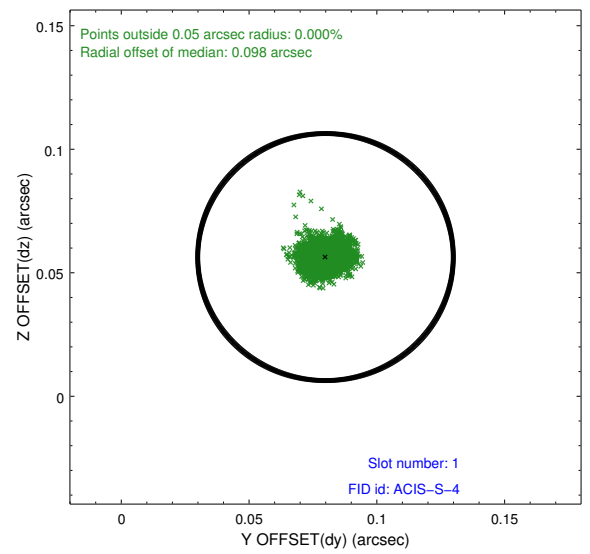
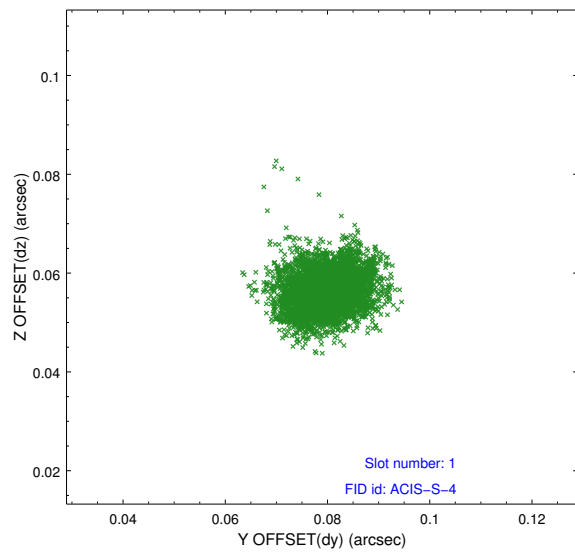


2.5 FID Slots

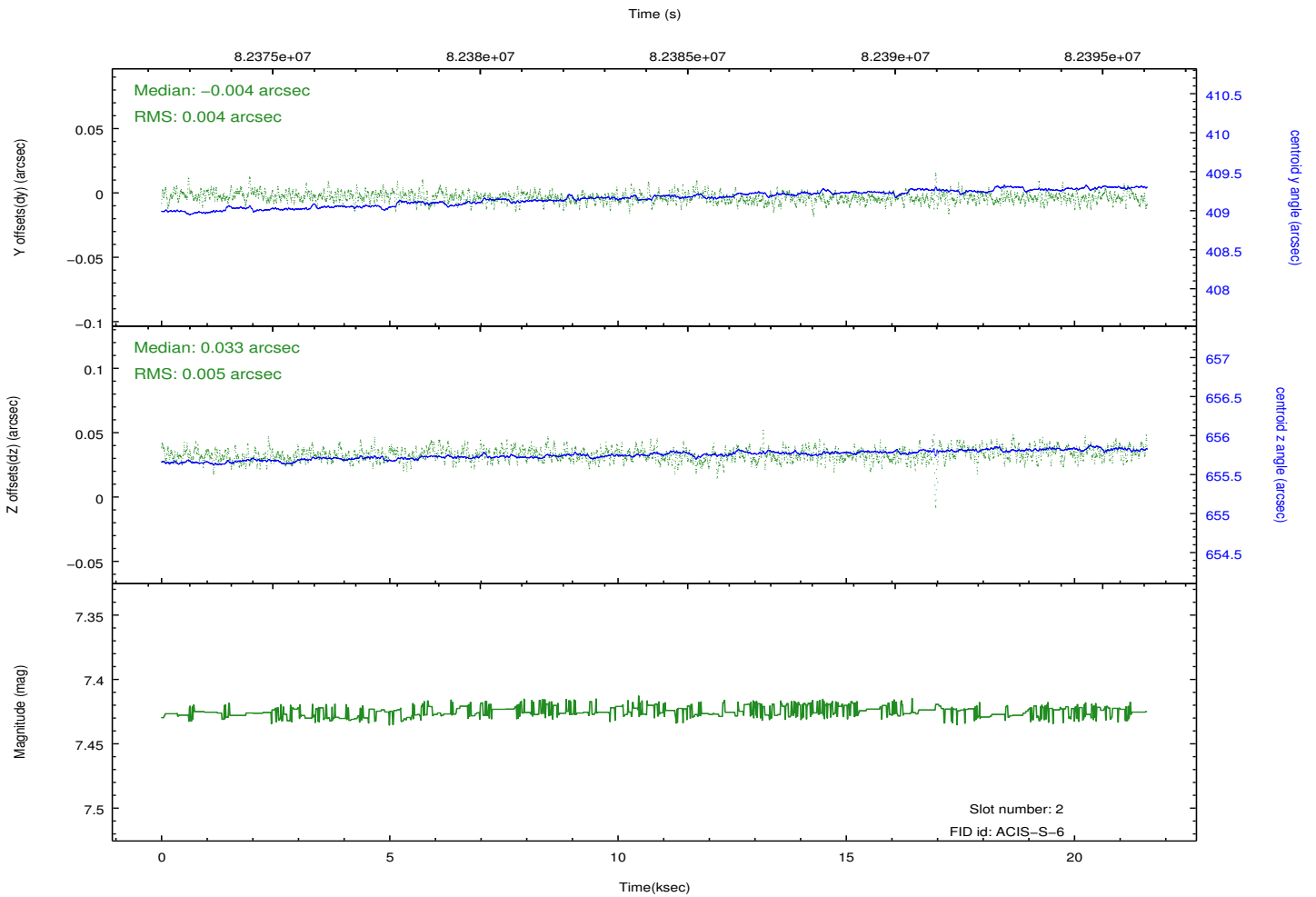
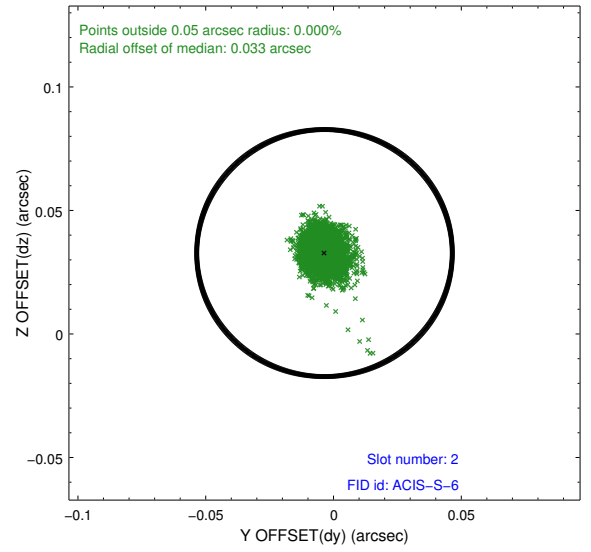
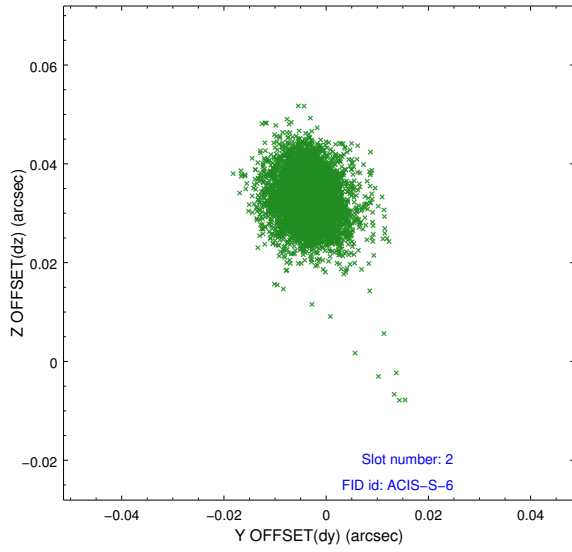
2.5.1 Slot 0



2.5.2 Slot 1

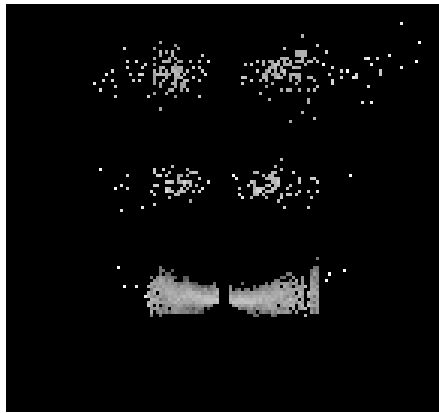


2.5.3 Slot 2

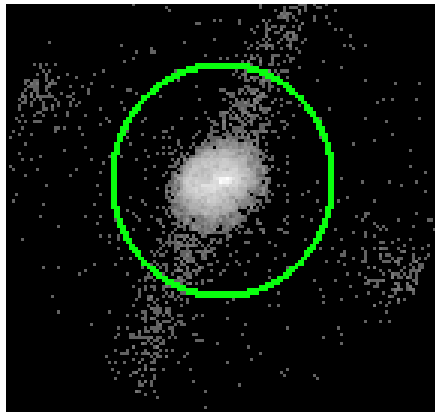


3 Gratings

3.1 LETG Arm



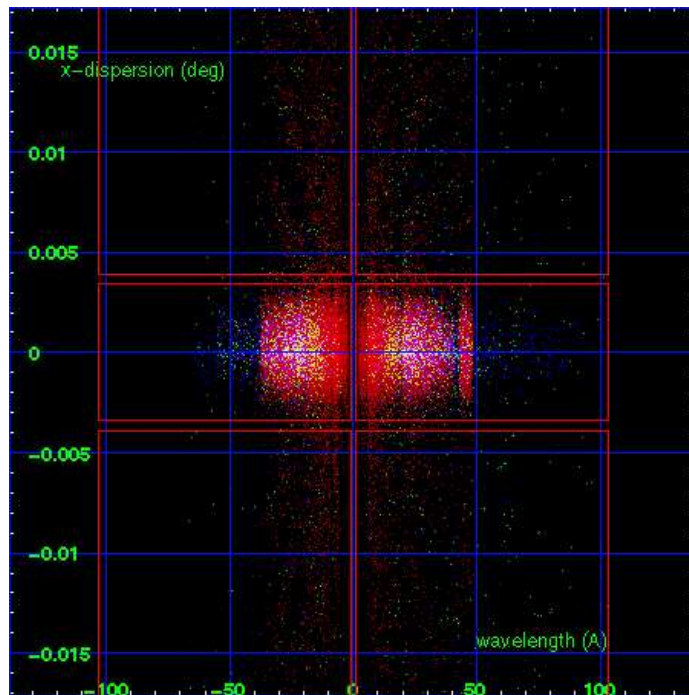
LETG Order Sort 123



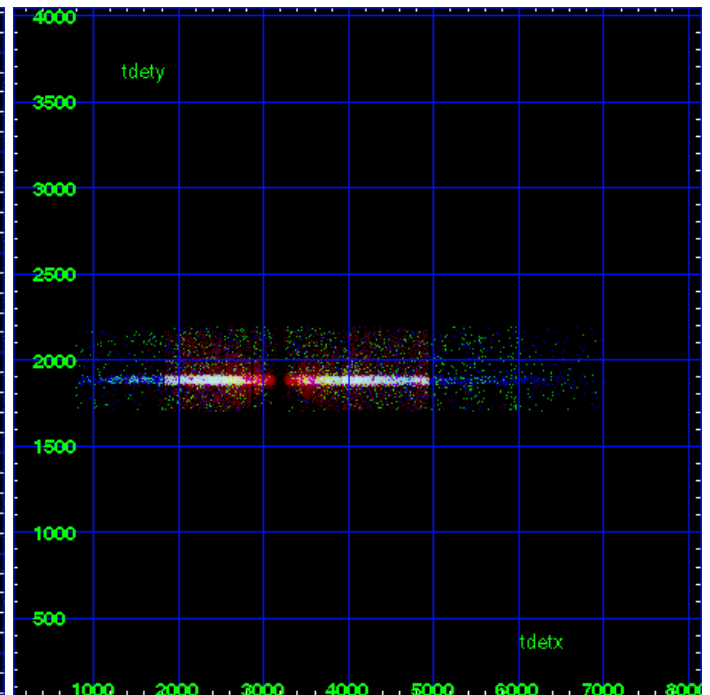
LETG Zero Order



LETG Order Sort ALL

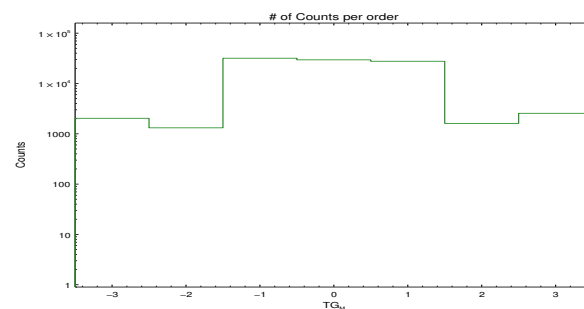


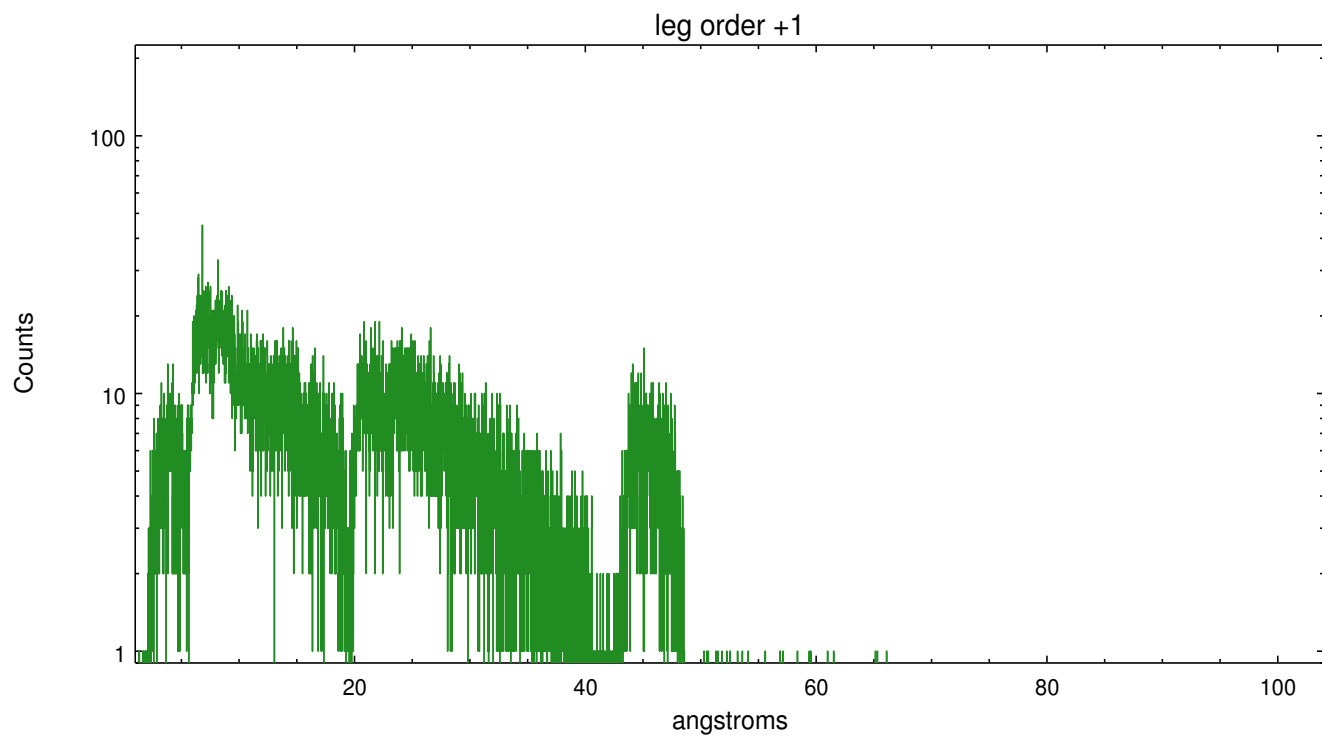
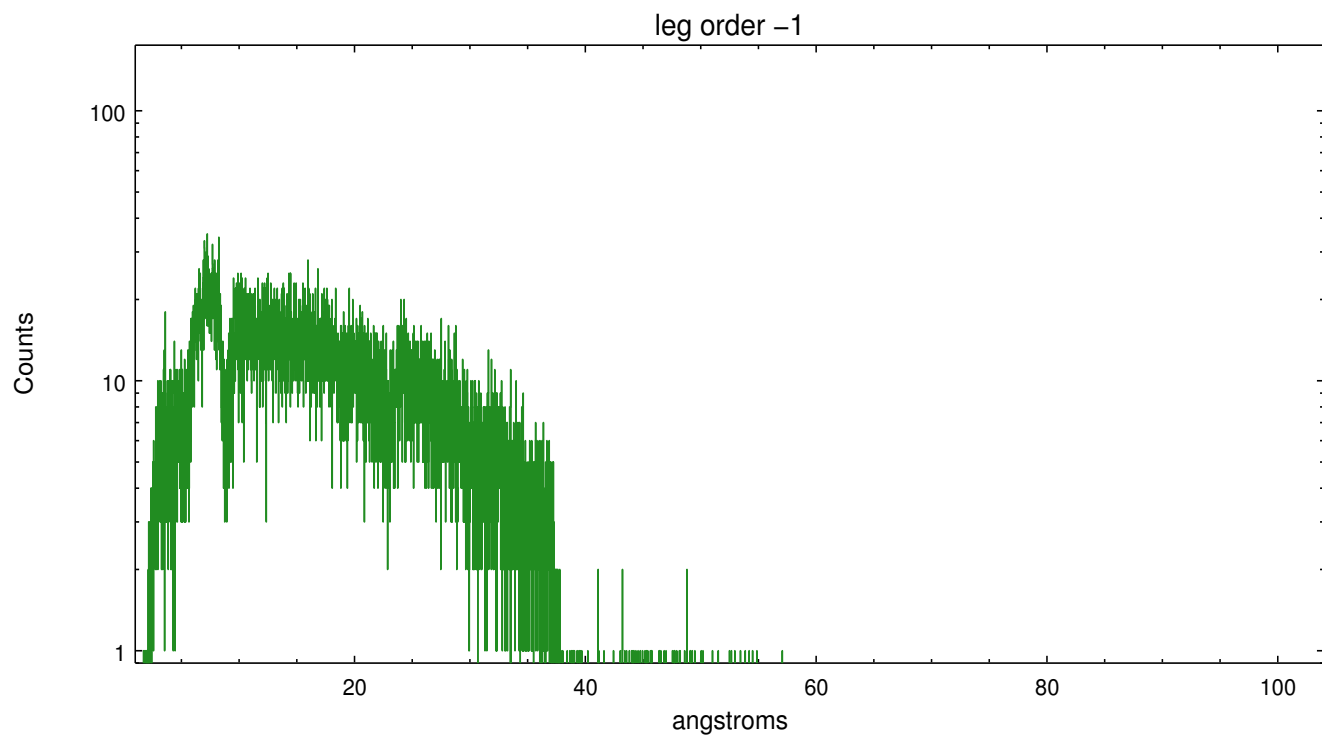
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2035	1315	31809	29520	27668	1611	2556





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2020.10.06
V&V Edition	3
V&V Disposition and Status	Repr+DD
V&V Charge Time	21.161

A.2 Comments

Observation will be reprocessed for issue #183.
reprocess using the following method:

Columns x, y, r, w give parameters for tg_create_mask

Columns s1, s2, d1, d2, u1, u2 give paramters for tgextract.

Customized parts of the usage are as follows:

```
tg_create_mask
use_user_pars = yes
sA_zero_x = $x
sA_zero_y = $y
sA_zero_rad = $r
sA_width_heg = $w
sA_width_meg = $w
sA_width_leg = $w
```

```
tgextract
min_tg_d = $s1
max_tg_d = $s2
min_downbkg_tg_d = $d1
max_downbkg_tg_d = $d2
min_upbkg_tg_d = $u1
max_upbkg_tg_d = $u2
```

PKS 2155 series (LETG/ACIS):

```
# obsid x y r w s1 s2 d1
d2 u1 u2
1791 3242.07 4497.14 47.96 598.78 -3.401e-03 3.401e-03 -2.592e-02
-3.887e-03 3.887e-03 2.592e-02
```