

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 6867 - L2 Version 2  
Chandra X-Ray Center

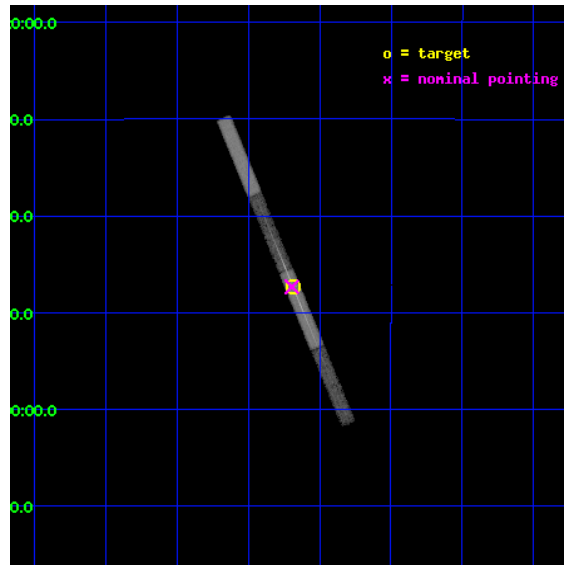
L2 Processing Date : Mar 23 2012

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# 1 Front

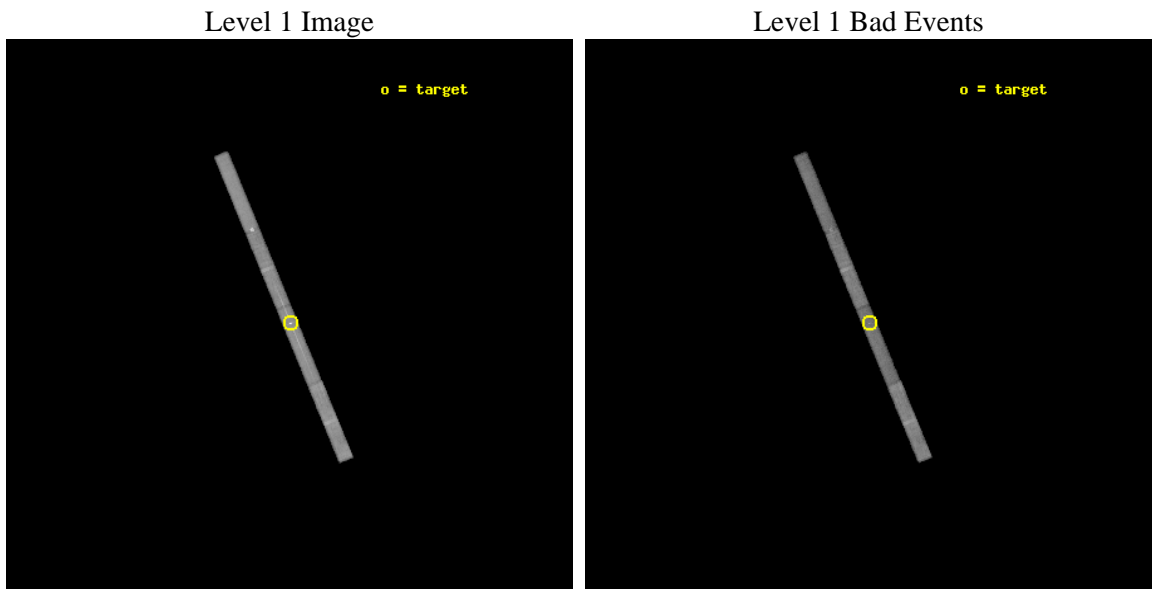
seq_num	701285	Sequence number
obs_id	6867	Observation id
title	Chandra ToO Observation of the Blazar 3C 279 in High State as Part of a Multifrequency Campaign	Proposal title
observer	Dr. Werner Collmar	Principal investigator
object	3C 279	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	194.046667	Observer's specified target RA [deg]
dec_targ	-5.789306	Observer's specified target Dec [deg]
ra_nom	194.04871032827	Nominal RA [deg]
dec_nom	-5.7887699947615	Nominal Dec [deg]
roll_nom	67.487991244226	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30051.599701494	Sum of GTIs [s]
livetime	28127.667260852	Livetime [s]
ontime5	30051.599701494	Sum of GTIs [s]
ontime6	30051.599701494	Sum of GTIs [s]
ontime7	30051.599701494	Sum of GTIs [s]
ontime8	30051.599701494	Sum of GTIs [s]
l2events	76003	Number of level 2 events



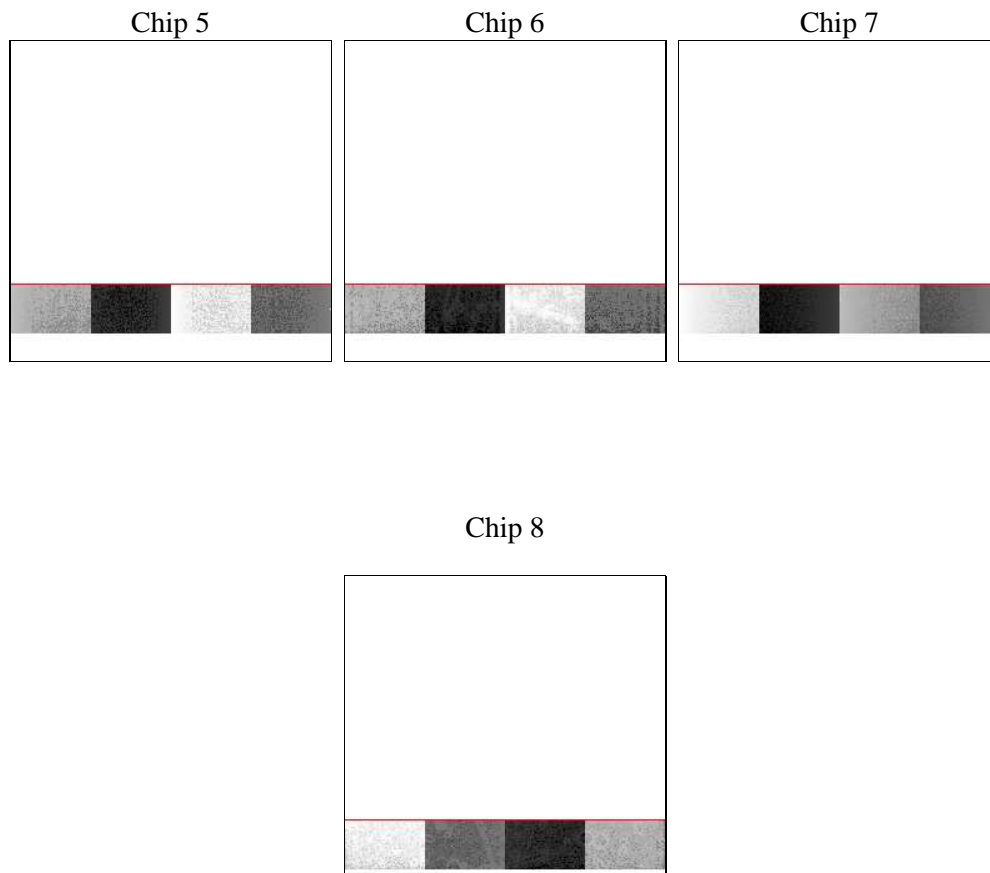
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	30051.599701494	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime5	30051.599701494	Sum of GTIs [s]
date	2012-03-23T14:36:20	Date and time of file creation	ontime6	30051.599701494	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	30051.599701494	Sum of GTIs [s]
			ontime8	30051.599701494	Sum of GTIs [s]
			l1events	257865	Number of level 1 events

### 2.1.4 Events

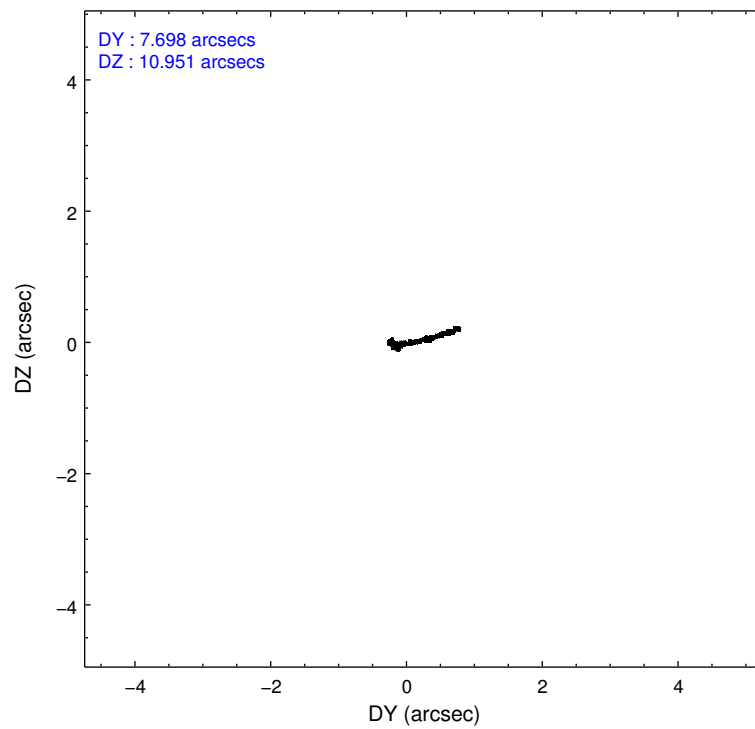
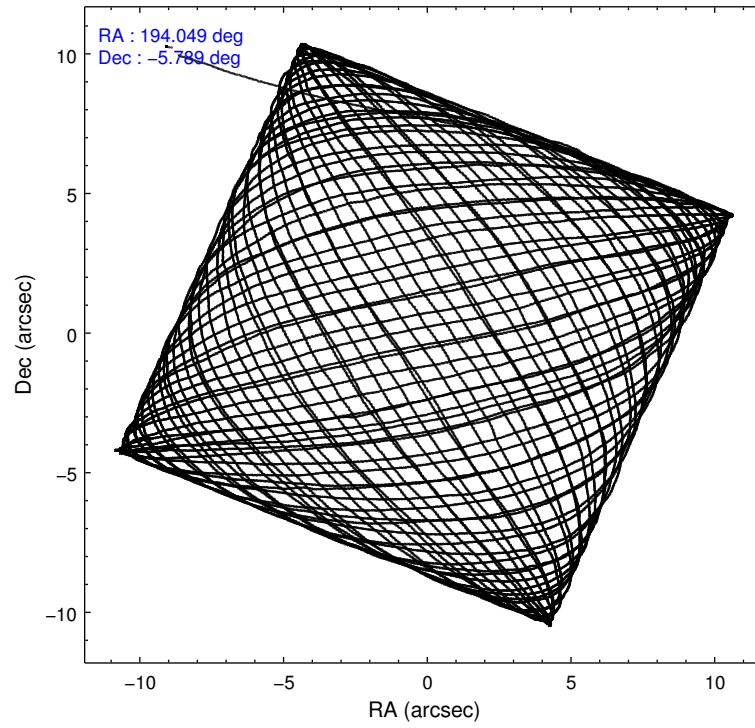
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	66102	53920	67924	69919
rejected events	32717	45470	31884	56225
rejected %	49%	84%	46%	80%

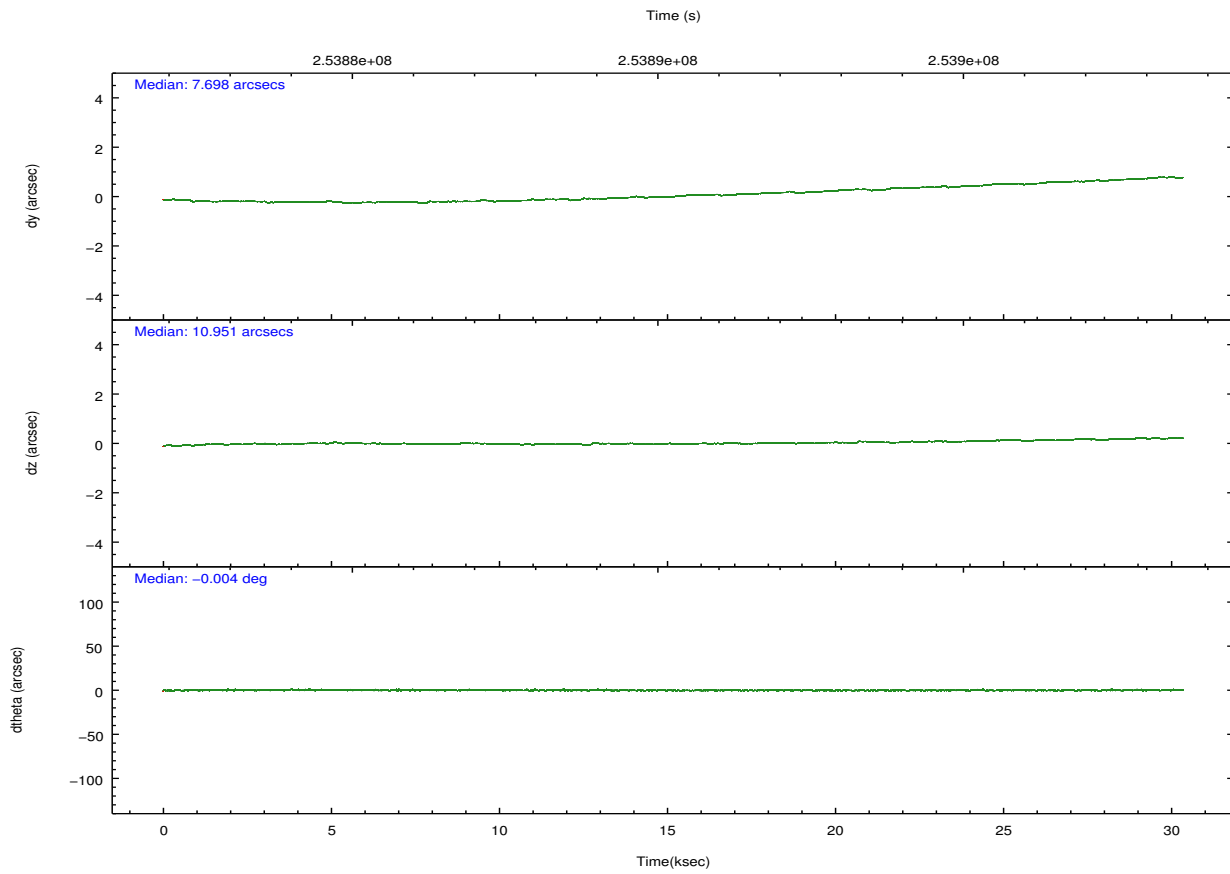
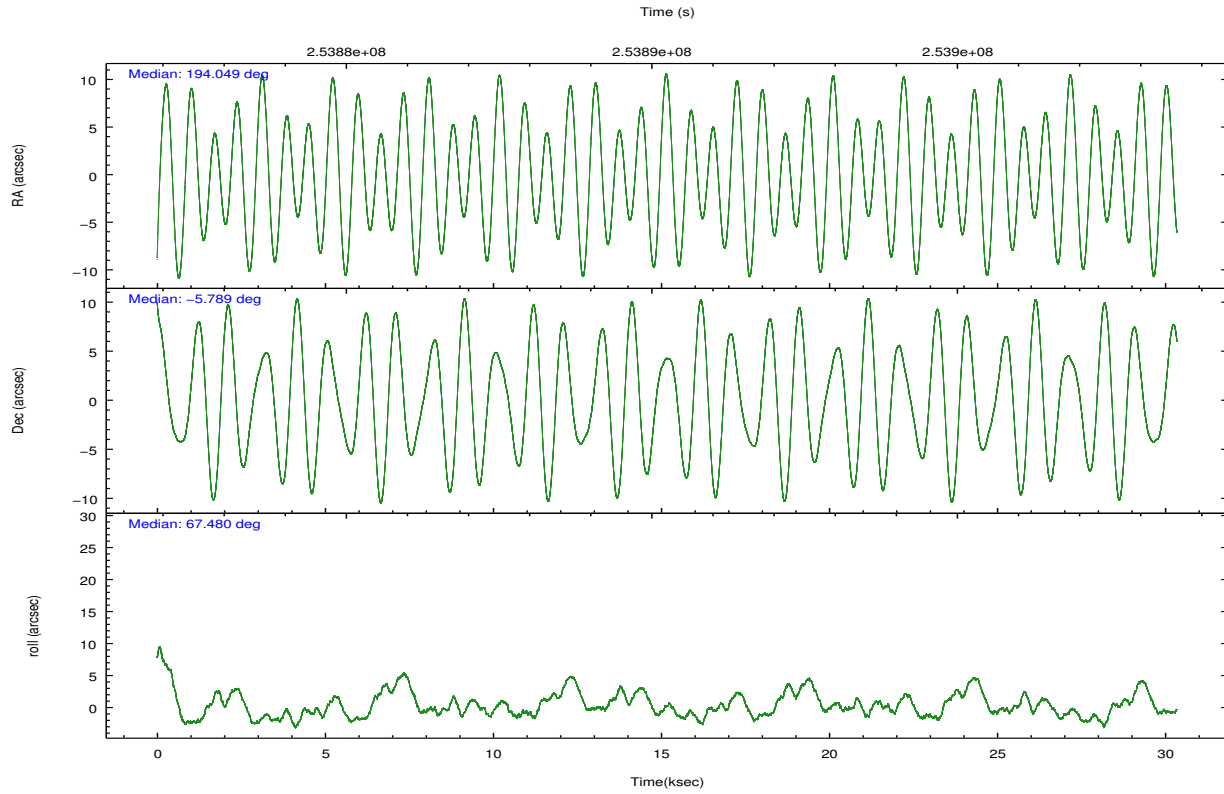
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	6178	3936	5193	3730
	9%	7%	7%	5%
grade 1 events	469	8	58	21
	0%	0%	0%	0%
grade 2 events	7712	1241	7792	2635
	11%	2%	11%	3%
grade 3 events	2717	1078	4061	1747
	4%	1%	5%	2%
grade 4 events	2708	1057	4024	1656
	4%	1%	5%	2%
grade 5 events	5351	1714	5152	2089
	8%	3%	7%	2%
grade 6 events	14071	1138	14971	3926
	21%	2%	22%	5%
grade 7 events	26896	43748	26673	54115
	40%	81%	39%	77%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	194.052639	194.0487103282715	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-5.815745	-5.788769994761473	Subarray start row	89	89
[deg] Pointing Roll	67.331759	67.48799124422573	Subarray row count	158	158
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.6
[mm] SIM translation stage pos	-182.132523	-182.1344861297048			
[mm] SIM translation stage offset	-8	-7.998036453302973			
[s] Observation start time (MET)	253875664.184000	253874900.04398			
Observation start date	2006-01-17T08:59:59	2006-01-17T08:48:20			
[s] Observation end time (MET)	253905664.184000	253906223.53293			
Observation end date	2006-01-17T17:19:59	2006-01-17T17:30:23			
Read mode	TIMED	TIMED			

## 2.3 Aspect



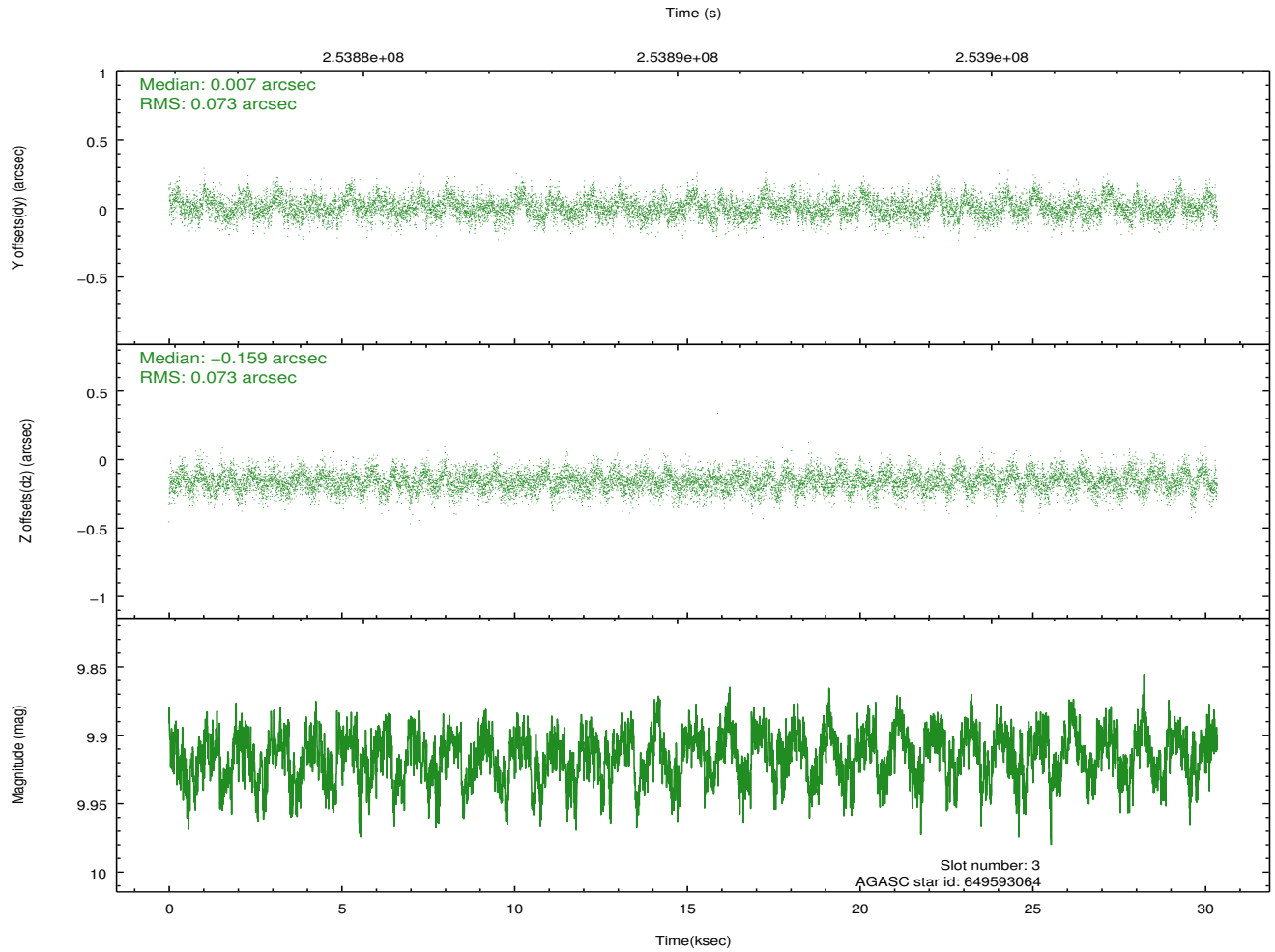
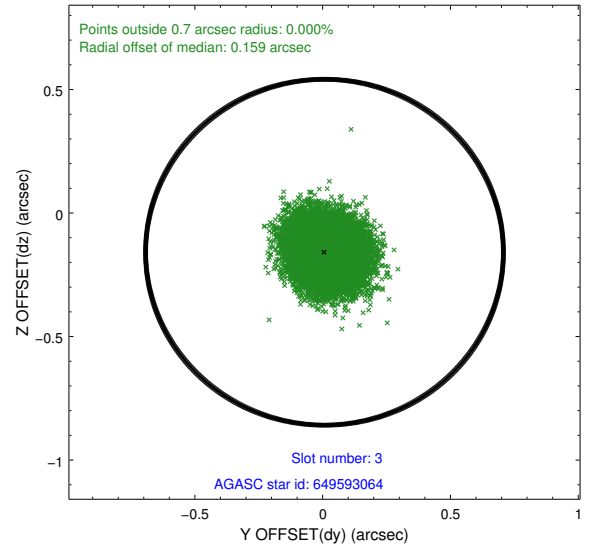
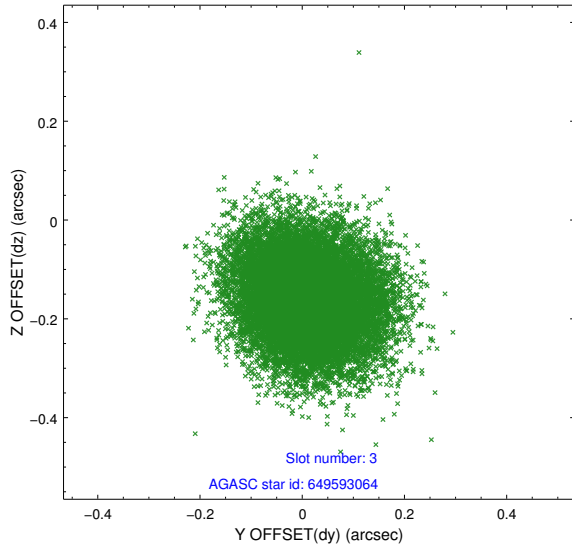


### Slot Statistics

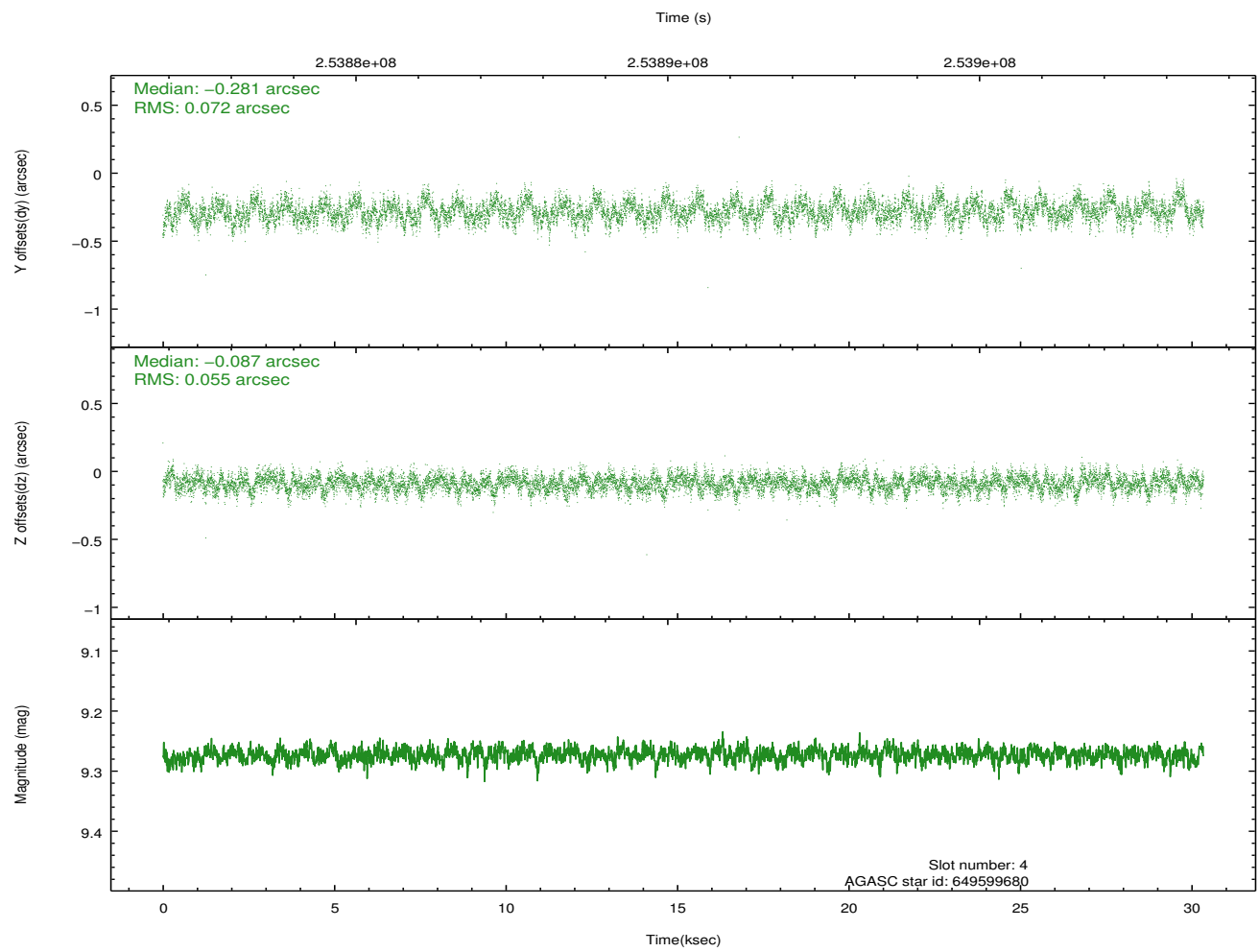
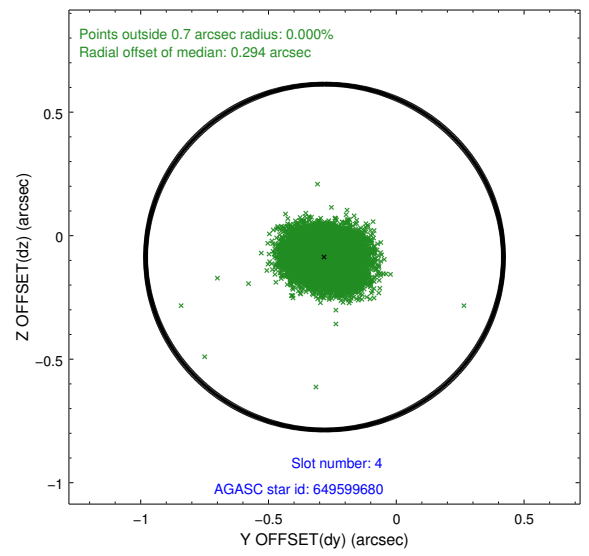
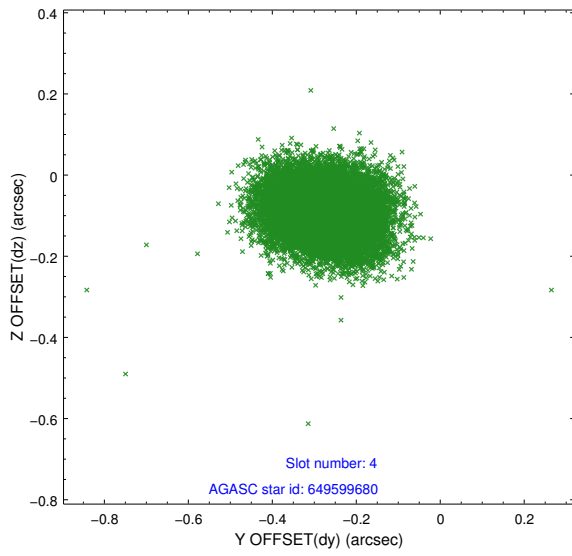
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	7402	-0.062	-0.129	0.011	0.021	0.000000	0.000000	-760.06	-1897.15
1	FID	ACIS-S-4	7.18	7402	0.117	0.065	0.007	0.017	0.000000	0.000000	2153.36	11.43
2	FID	ACIS-S-5	7.23	7399	-0.085	0.072	0.012	0.030	0.000000	0.000000	-1812.84	5.18
3	GUIDE	649593064	9.91	14794	0.007	-0.159	0.109	0.177	193.584328	-5.919936	-993.16	1402.57
4	GUIDE	649599680	9.27	14794	-0.281	-0.087	0.096	0.157	194.094993	-5.408421	1411.27	425.57
5	GUIDE	649599704	8.66	14799	0.099	0.251	0.077	0.122	194.128261	-6.327014	-1593.89	-958.41
6	GUIDE	649601232	8.45	14800	0.101	0.347	0.079	0.126	194.416640	-6.392285	-1413.49	-2001.38
7	GUIDE	649594216	9.47	14789	0.065	-0.350	0.116	0.183	193.273989	-6.022654	-1764.20	2284.24

## 2.4 Star Slots

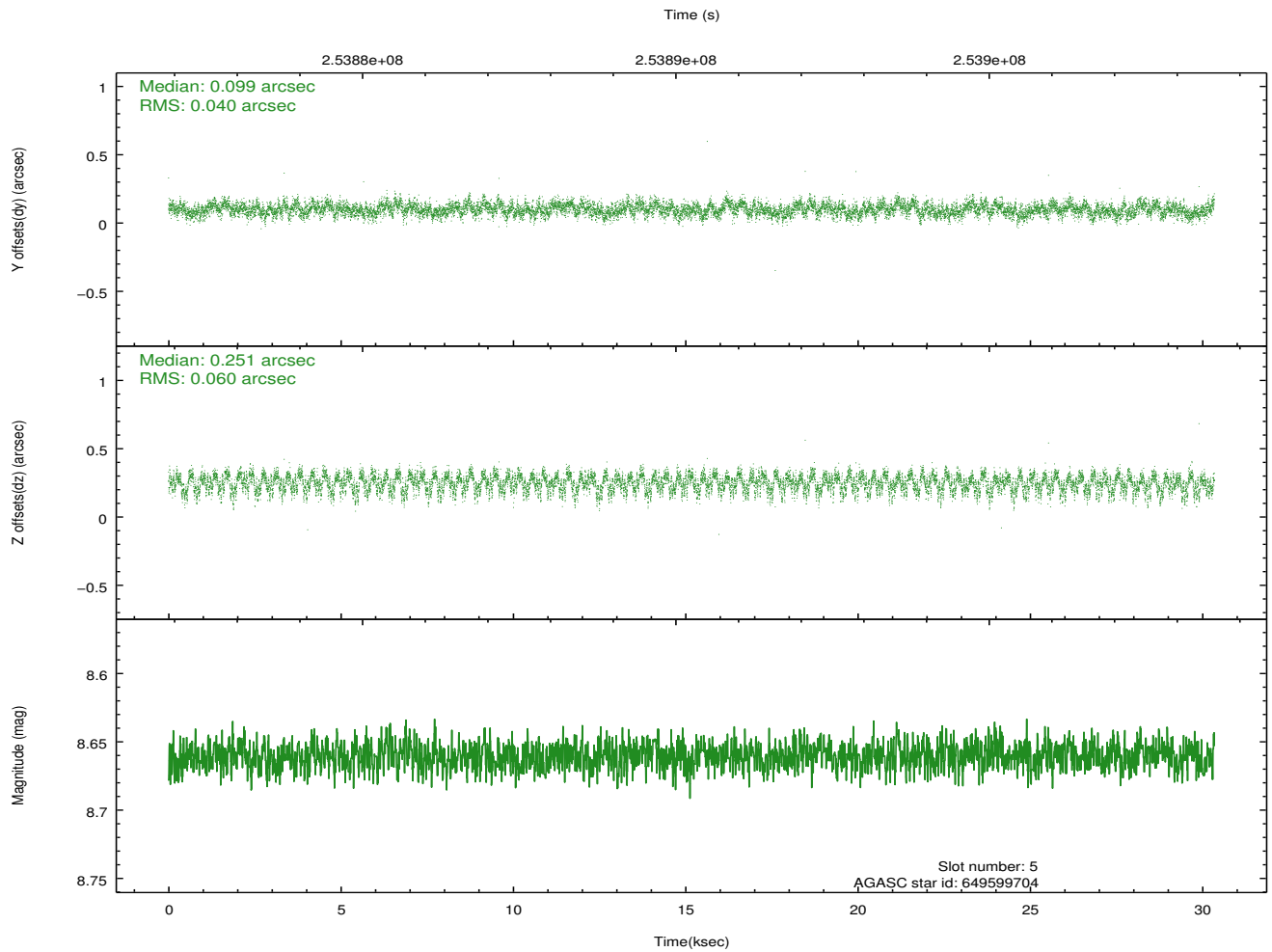
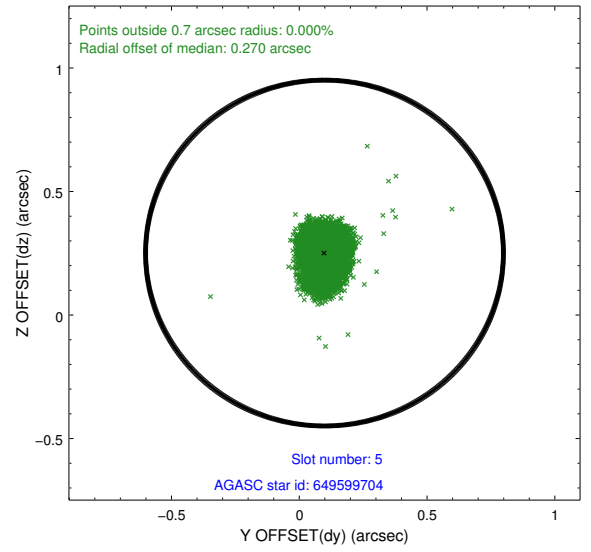
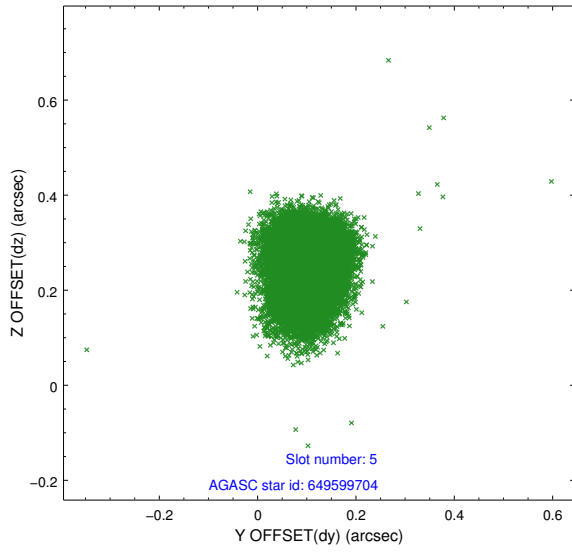
### 2.4.1 Slot 3



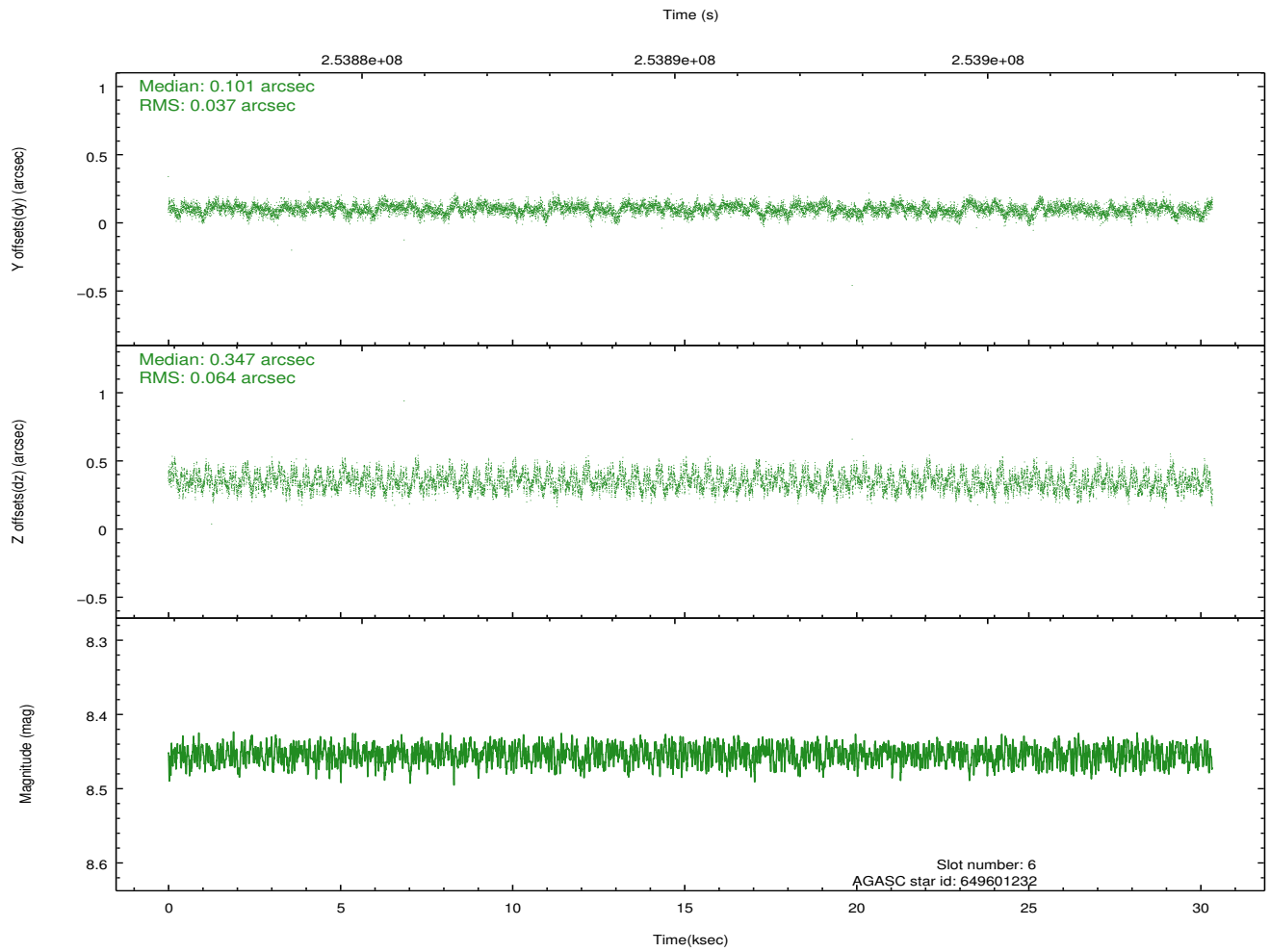
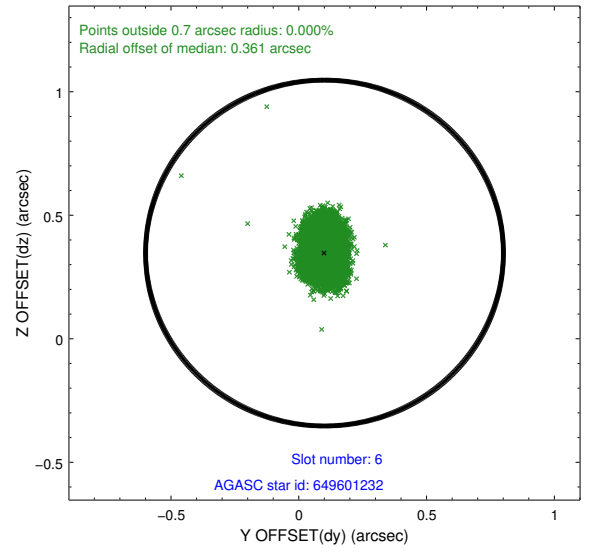
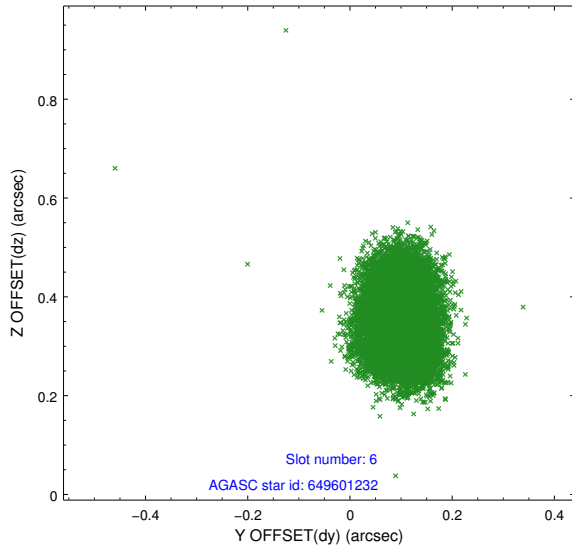
## 2.4.2 Slot 4



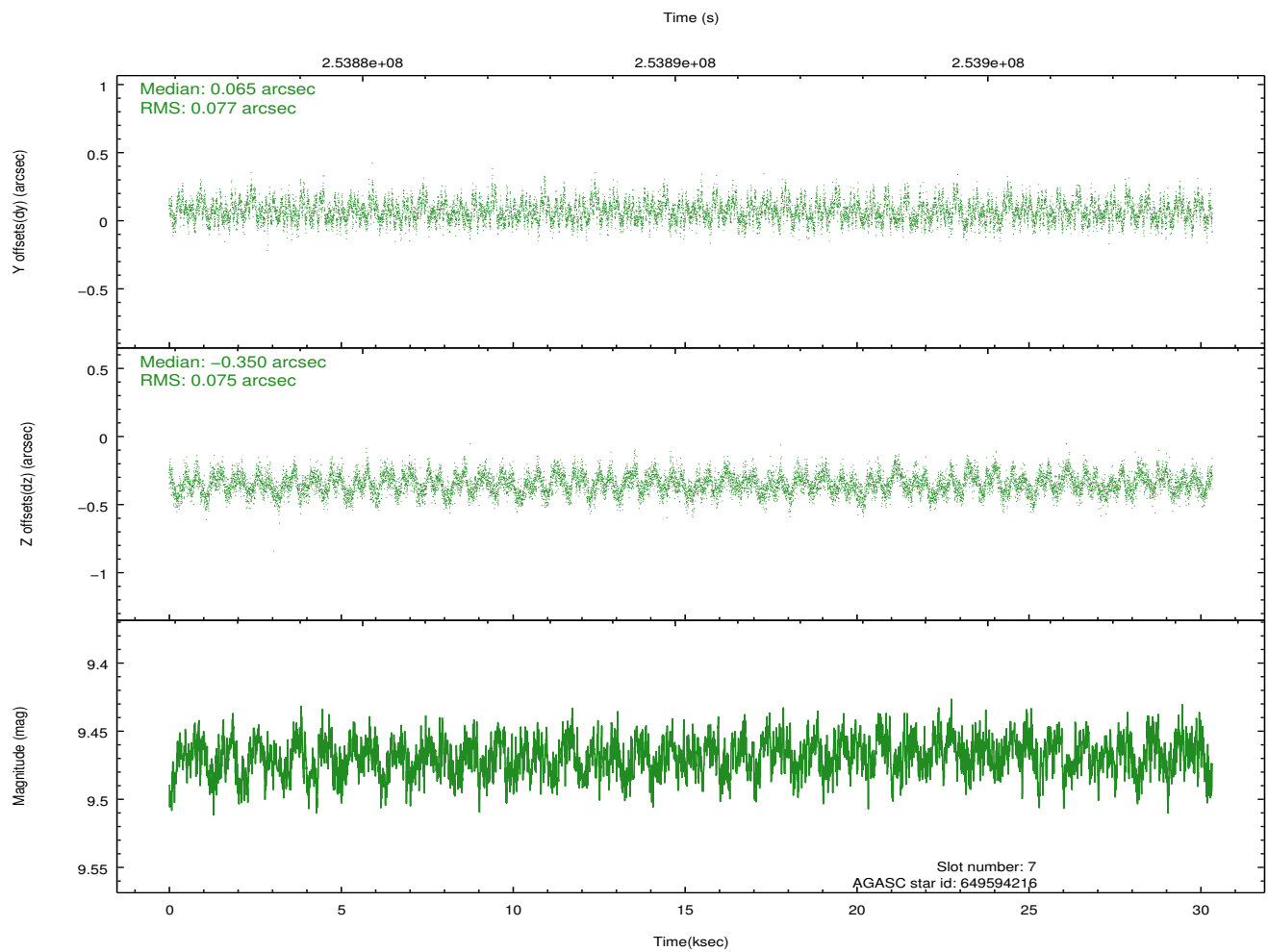
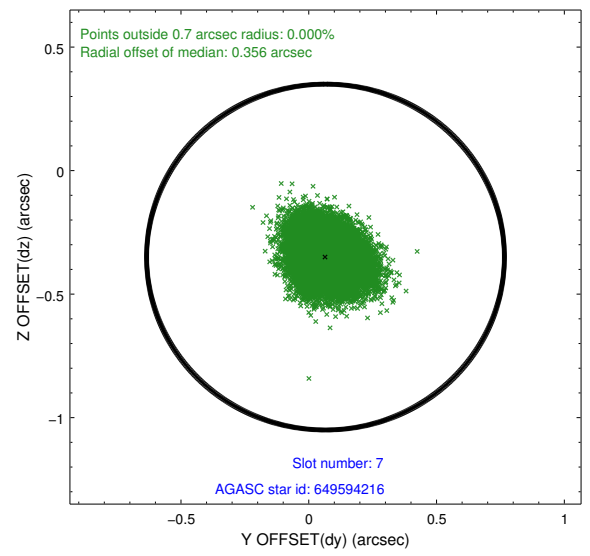
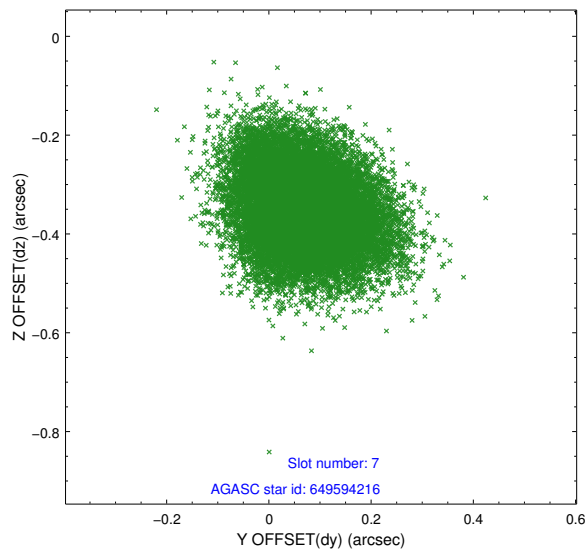
### 2.4.3 Slot 5



### 2.4.4 Slot 6

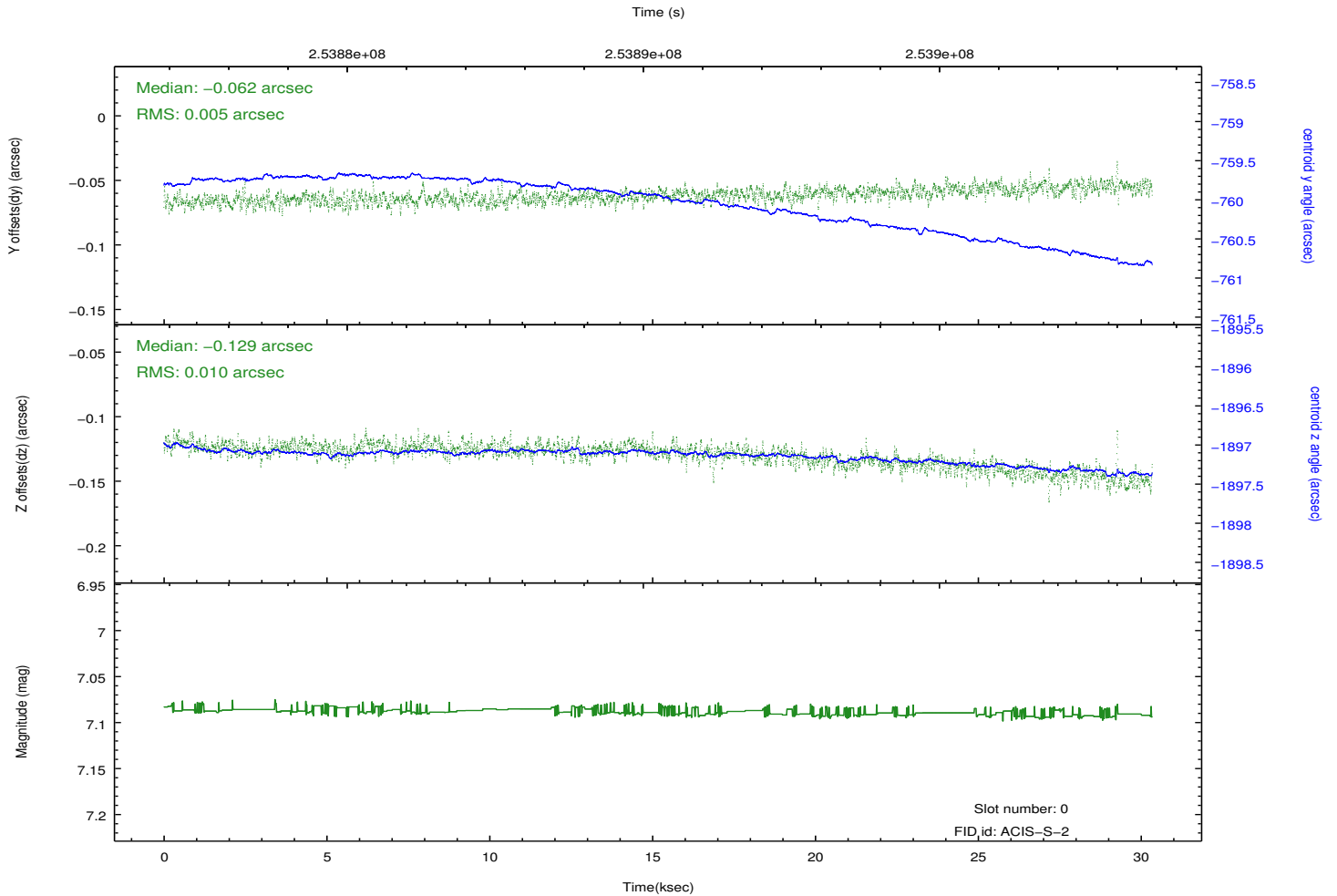
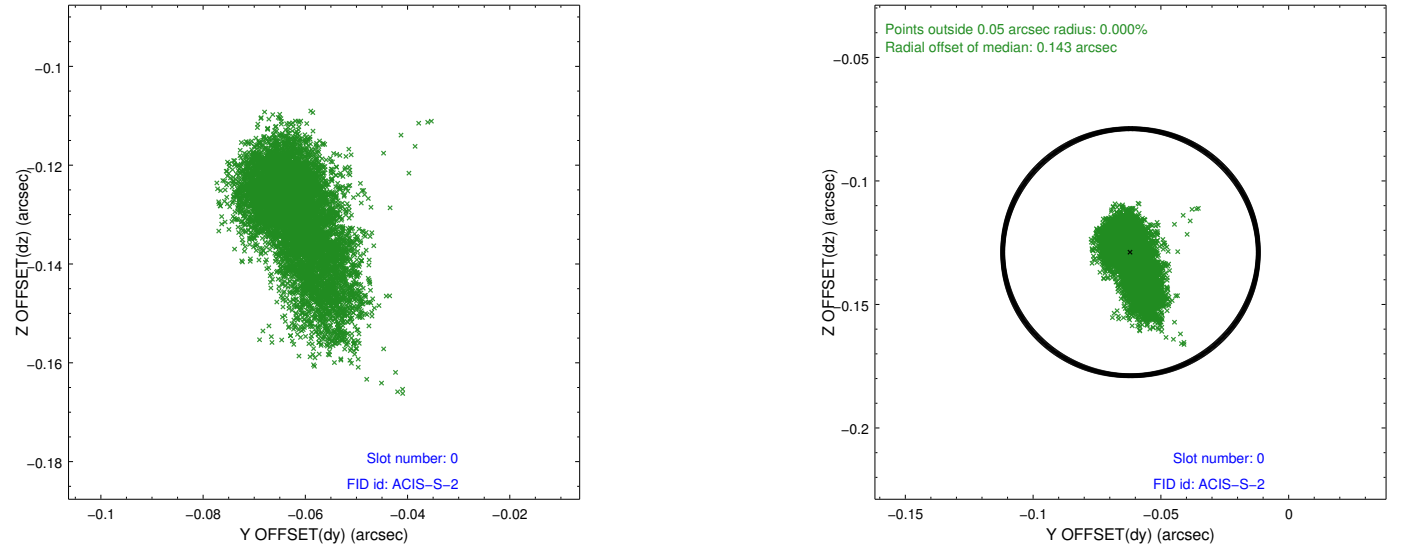


## 2.4.5 Slot 7

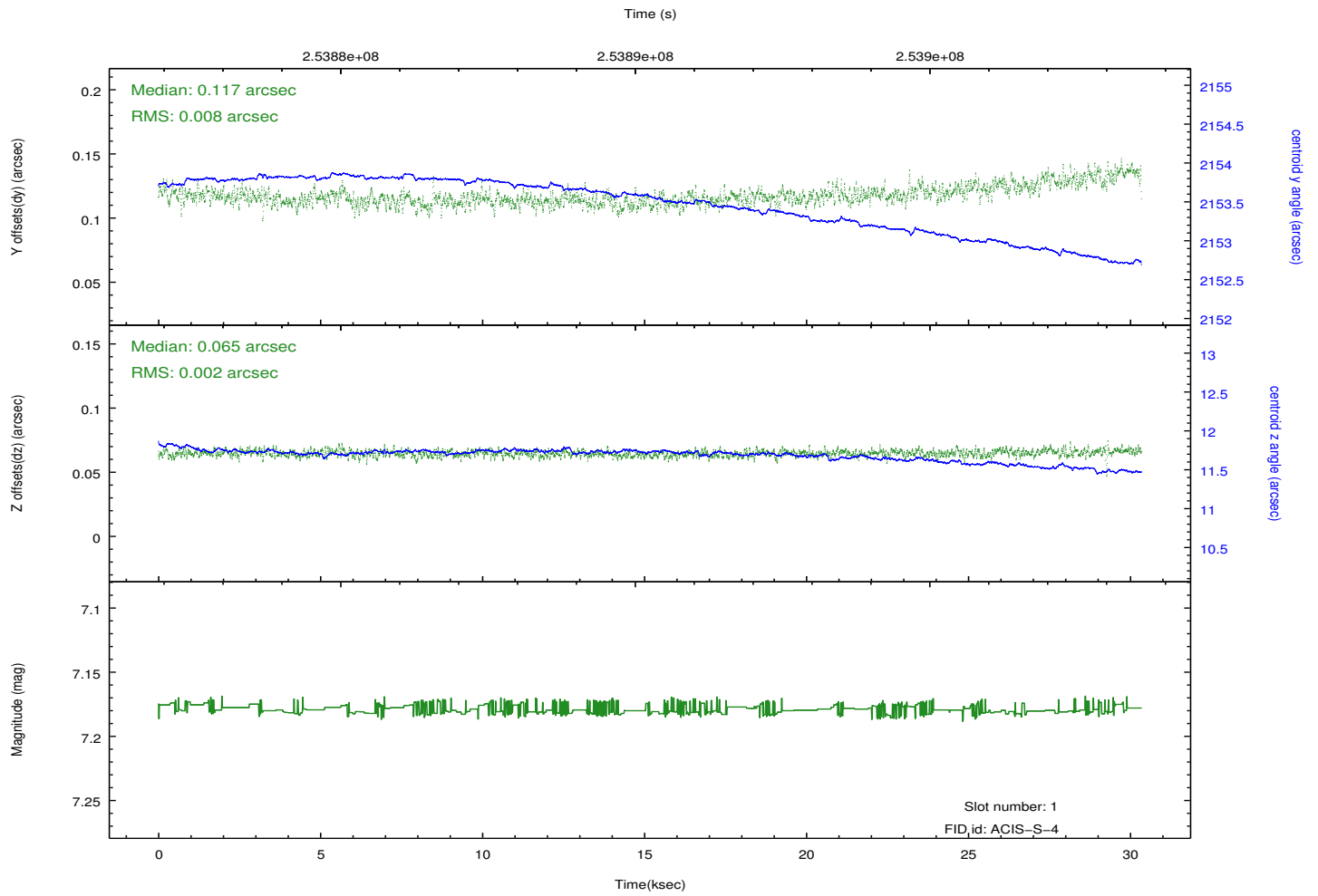
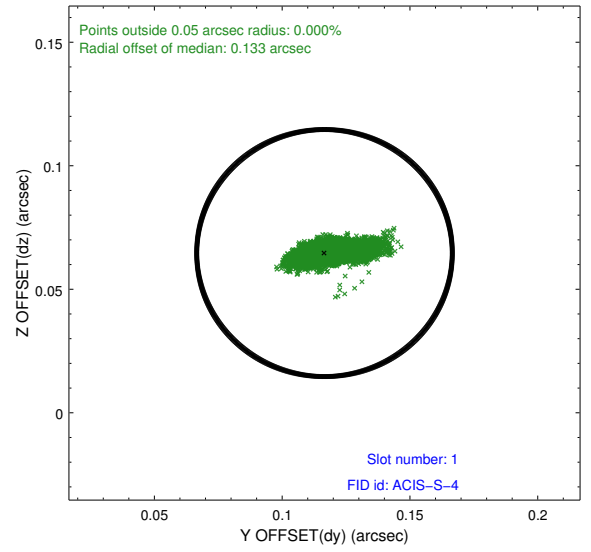
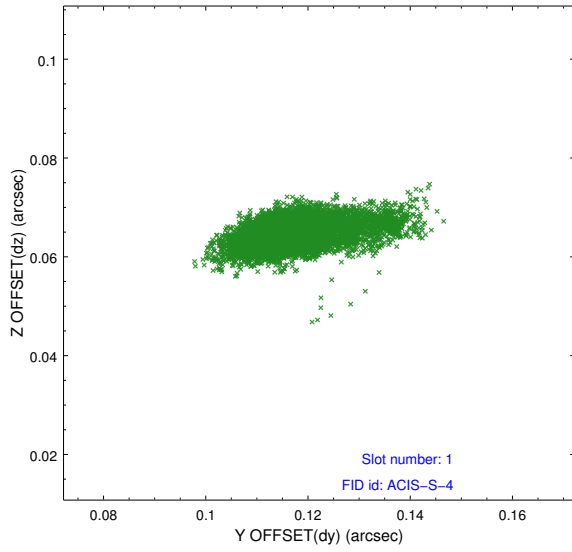


## 2.5 FID Slots

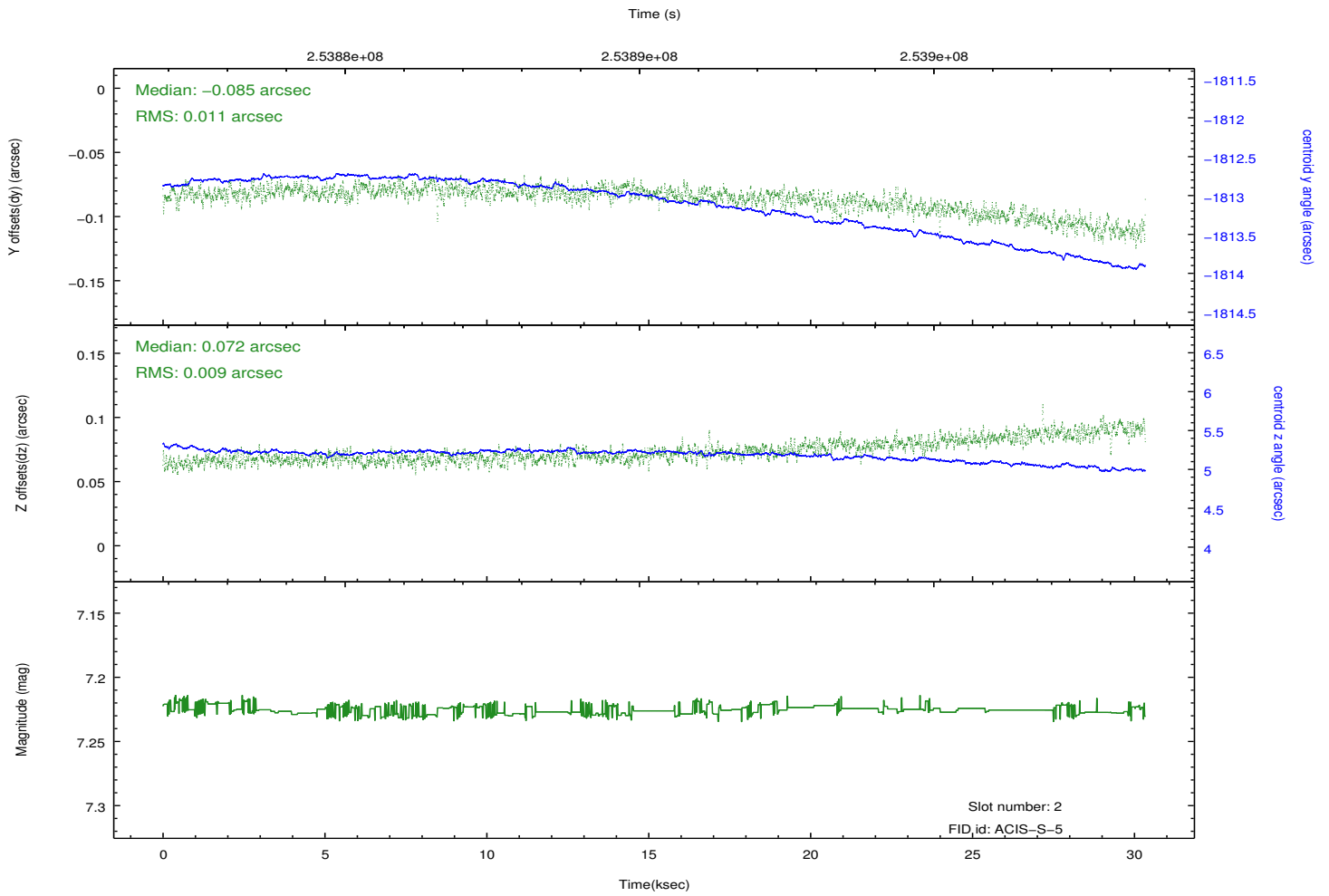
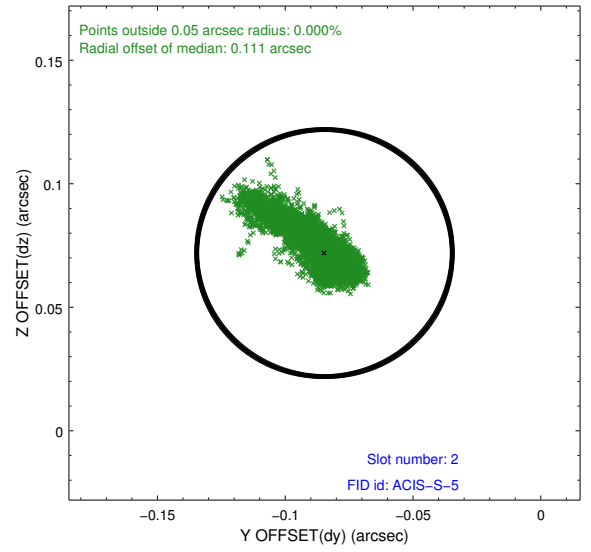
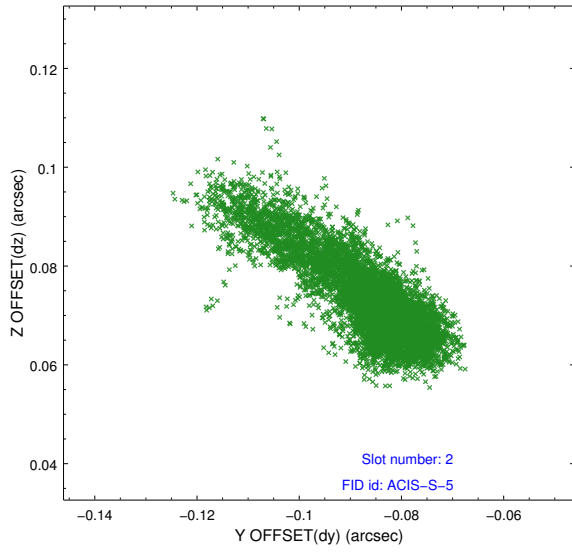
### 2.5.1 Slot 0



## 2.5.2 Slot 1

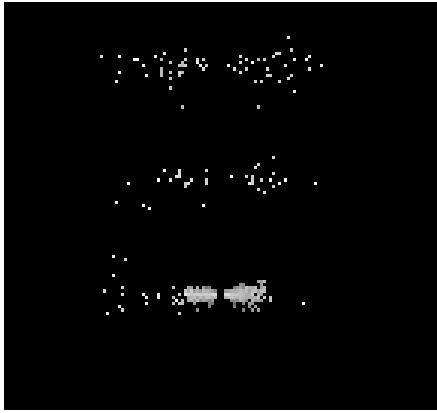


### 2.5.3 Slot 2

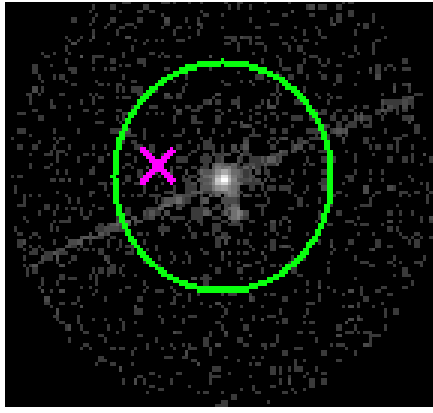


### 3 Gratings

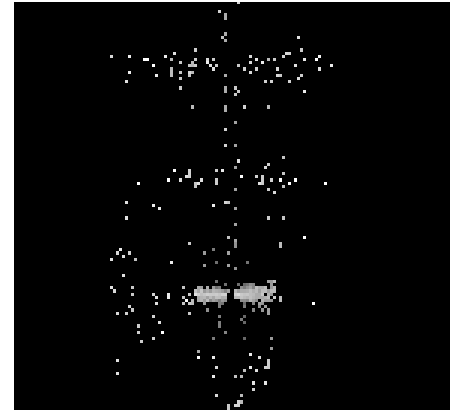
#### 3.1 LETG Arm



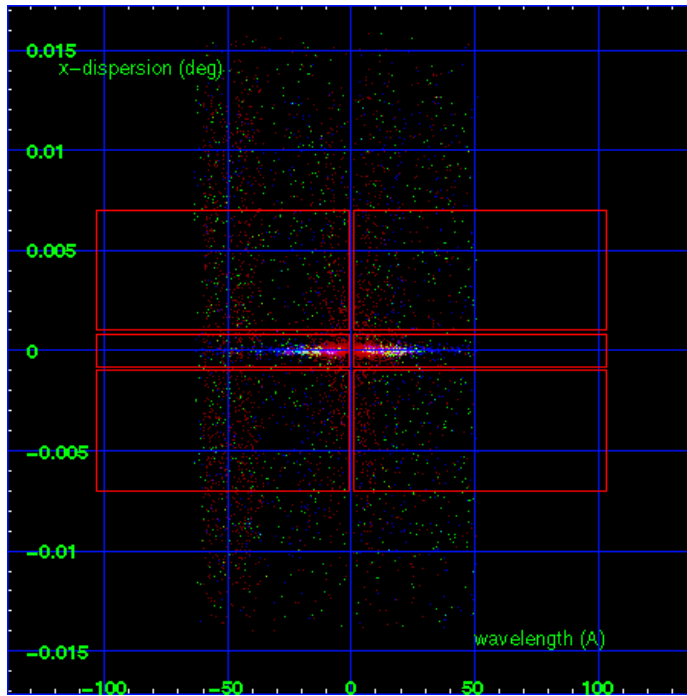
LETG Order Sort 123



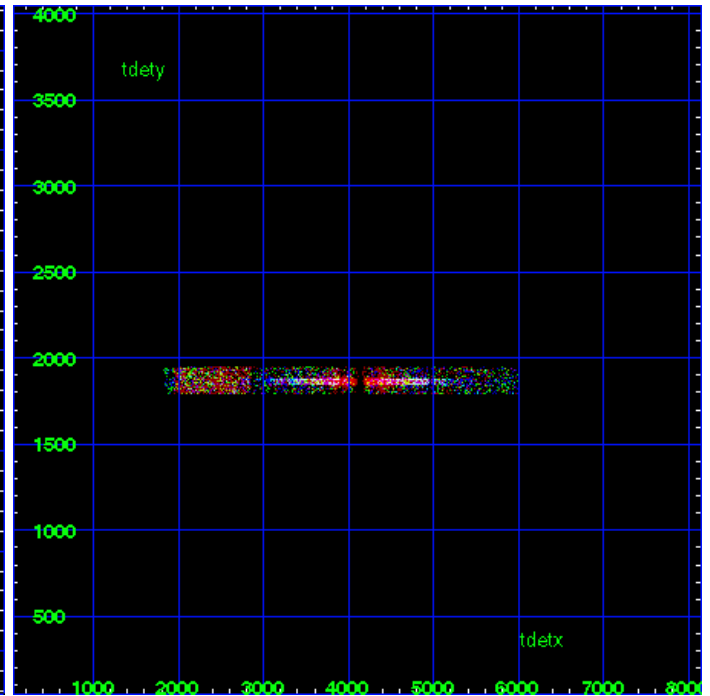
LETG Zero Order



LETG Order Sort ALL

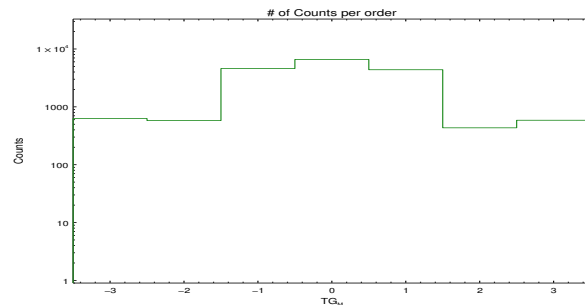


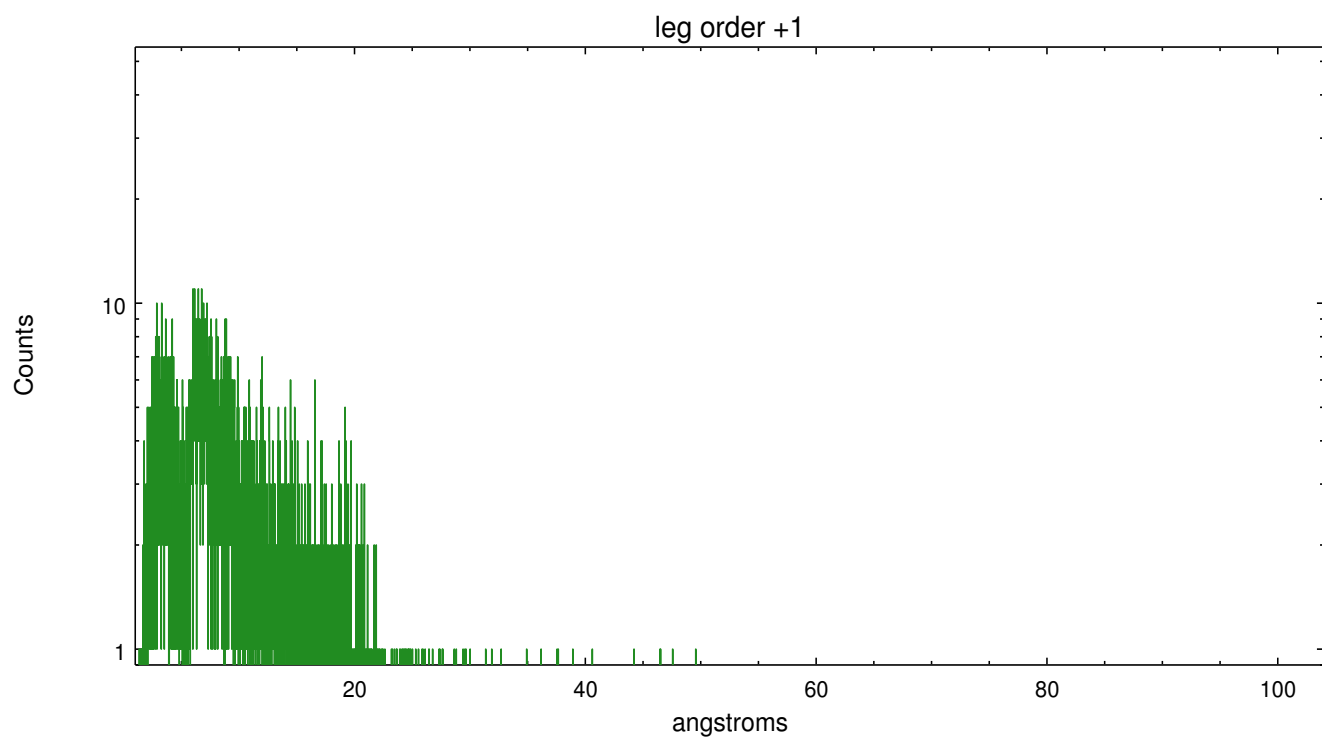
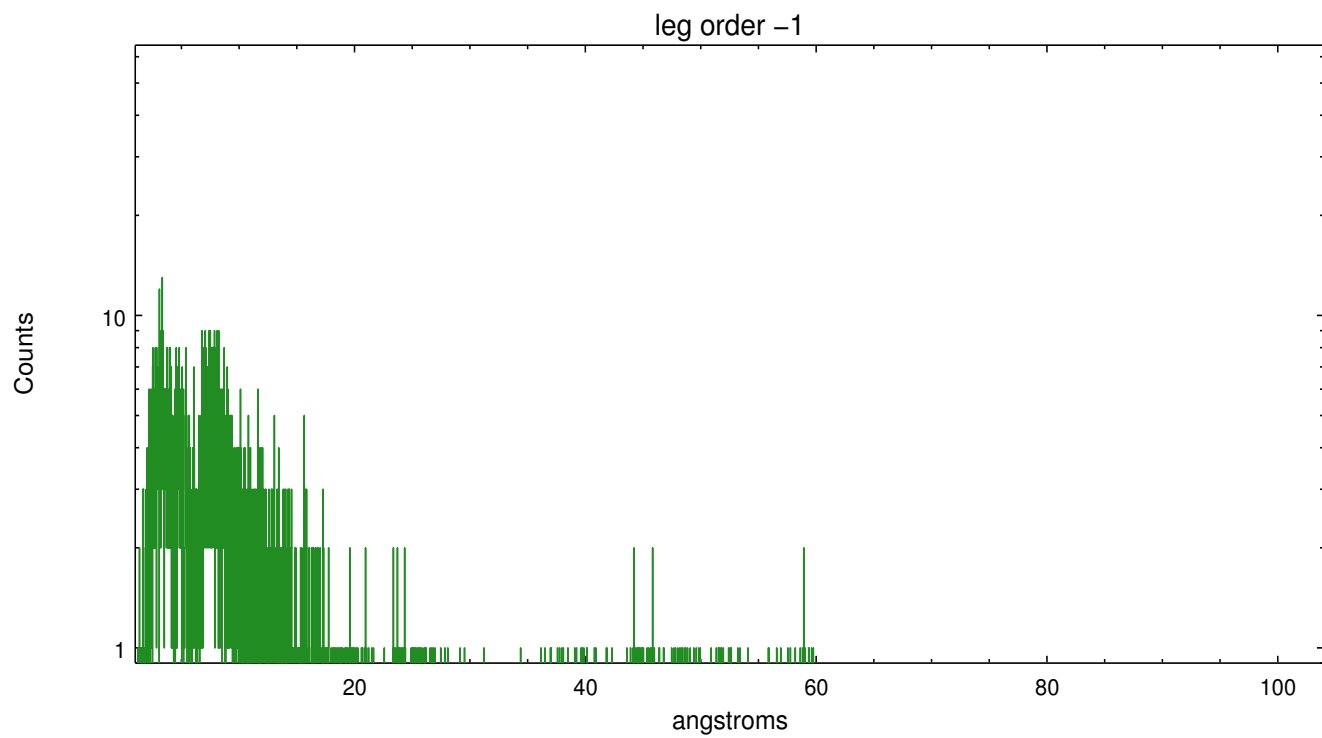
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	627	579	4586	6583	4381	434	586





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.0515997

## A.2 Comments

Source is extended and standard software processing technique using the tool tgdetect did not give an accurate position for the zeroth order. Zeroth order position for this observation has been determined using the known angle between the readout streak and the meg spectral arm. The newly determined zeroth order coordinates have been placed in the \*src1a.fits file, replacing the coordinates determined by tgdetect. Coordinates used as zeroth order position for extracting dispersed spectra in this processing x=4112.39; y=4092.52.

=====

Gain and CTI correction are not well calibrated on CCD\_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in tg\_resolve\_events (osipfile=None, osort\_lo, osort\_hi ~0.5) though this can allow more zeroth order background at short wavelengths.

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Bright extended structure lies along the dispersion direction.