

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 529 - L2 Version 4  
Chandra X-Ray Center

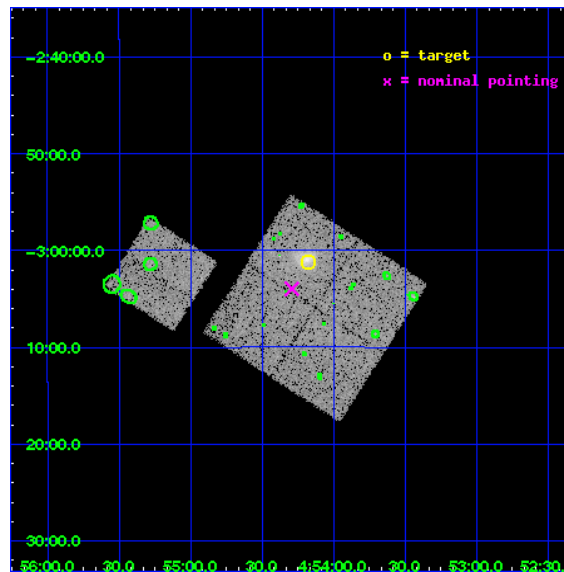
L2 Processing Date : Dec 2 2009

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# 1 Front

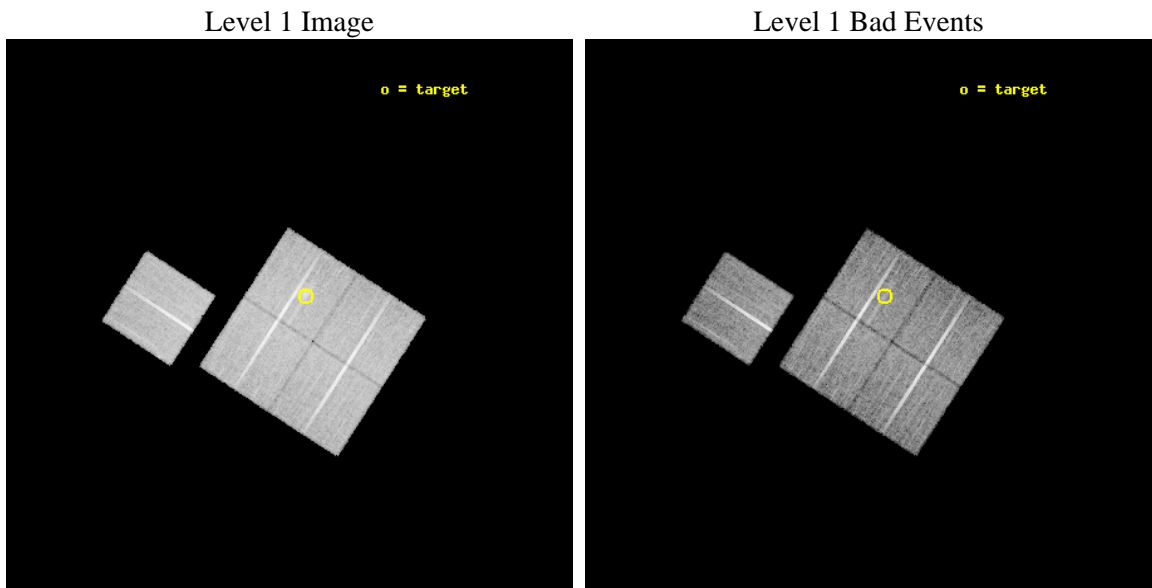
seq_num	800037	Sequence number
obs_id	529	Observation id
title	DETERMINATION OF H0/Q0	Proposal title
observer	DR. LEON VANSPEYBROECK	Principal investigator
object	MS 0451.6-0305	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	73.545	Observer's specified target RA
dec_targ	-3.019	Observer's specified target Dec
ra_nom	73.572985235664	Nominal RA
dec_nom	-3.0661518834262	Nominal Dec
roll_nom	302.94921578222	Nominal Roll
revision	4	Processing version of data
ontime	14175.959052987	Sum of GTIs [s]
livetime	13996.454523721	Livetime [s]
ontime0	14179.200013205	Sum of GTIs [s]
ontime1	14175.959023066	Sum of GTIs [s]
ontime2	14179.200013205	Sum of GTIs [s]
ontime3	14175.959052987	Sum of GTIs [s]
ontime6	14175.959052987	Sum of GTIs [s]
l2events	57134	Number of level 2 events



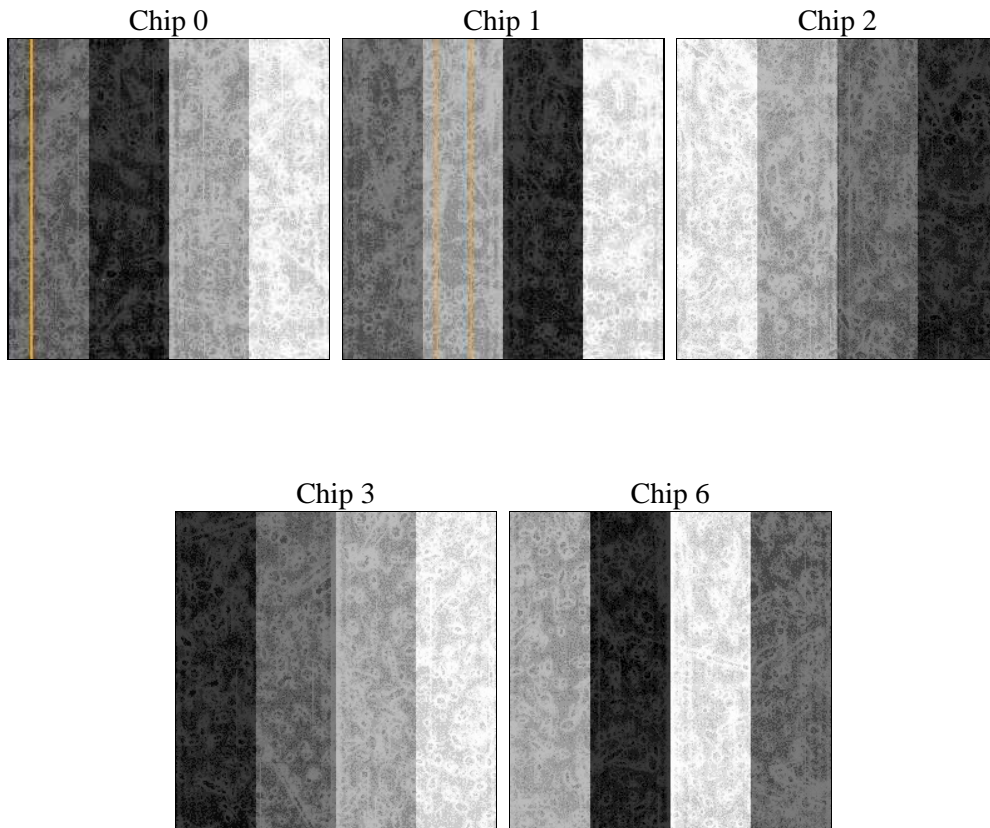
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	14175.959052987	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime0	14179.200013205	Sum of GTIs [s]
date	2009-12-02T13:48:05	Date and time of file creation	ontime1	14175.959023066	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	14179.200013205	Sum of GTIs [s]
			ontime3	14175.959052987	Sum of GTIs [s]
			ontime6	14175.959052987	Sum of GTIs [s]
			l1events	597709	Number of level 1 events

### 2.1.4 Events

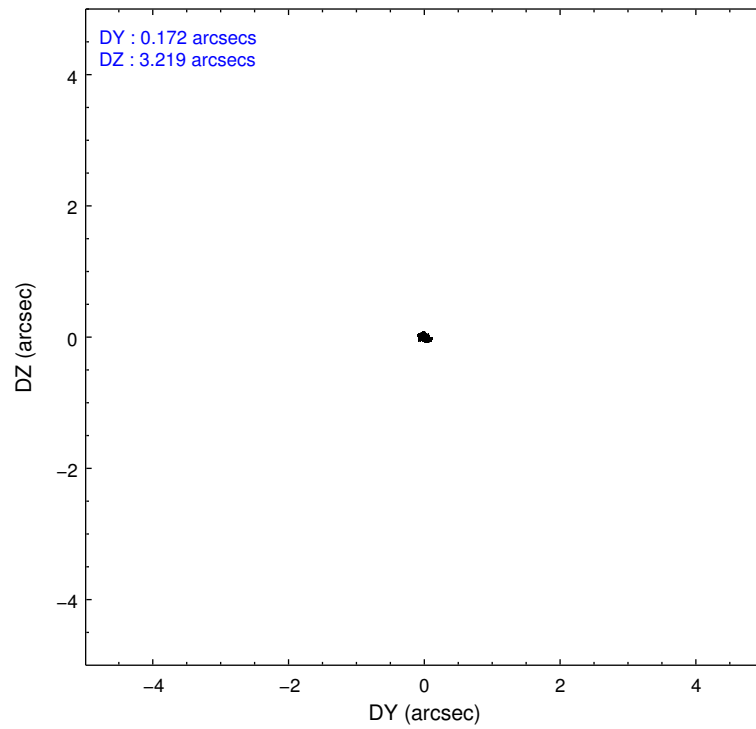
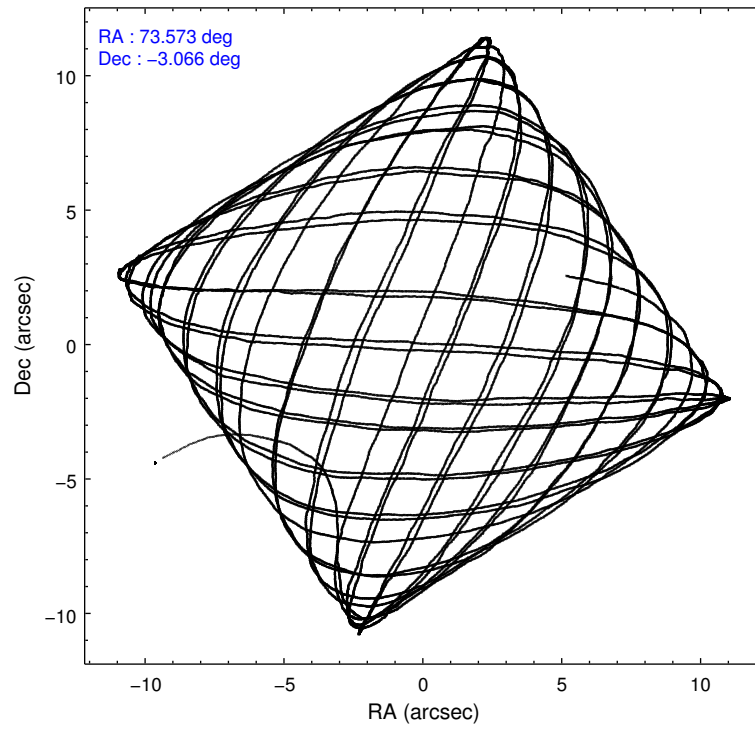
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	114868	114560	124748	121290	122243
rejected events	102885	102028	113549	105917	110368
rejected %	89%	89%	91%	87%	90%

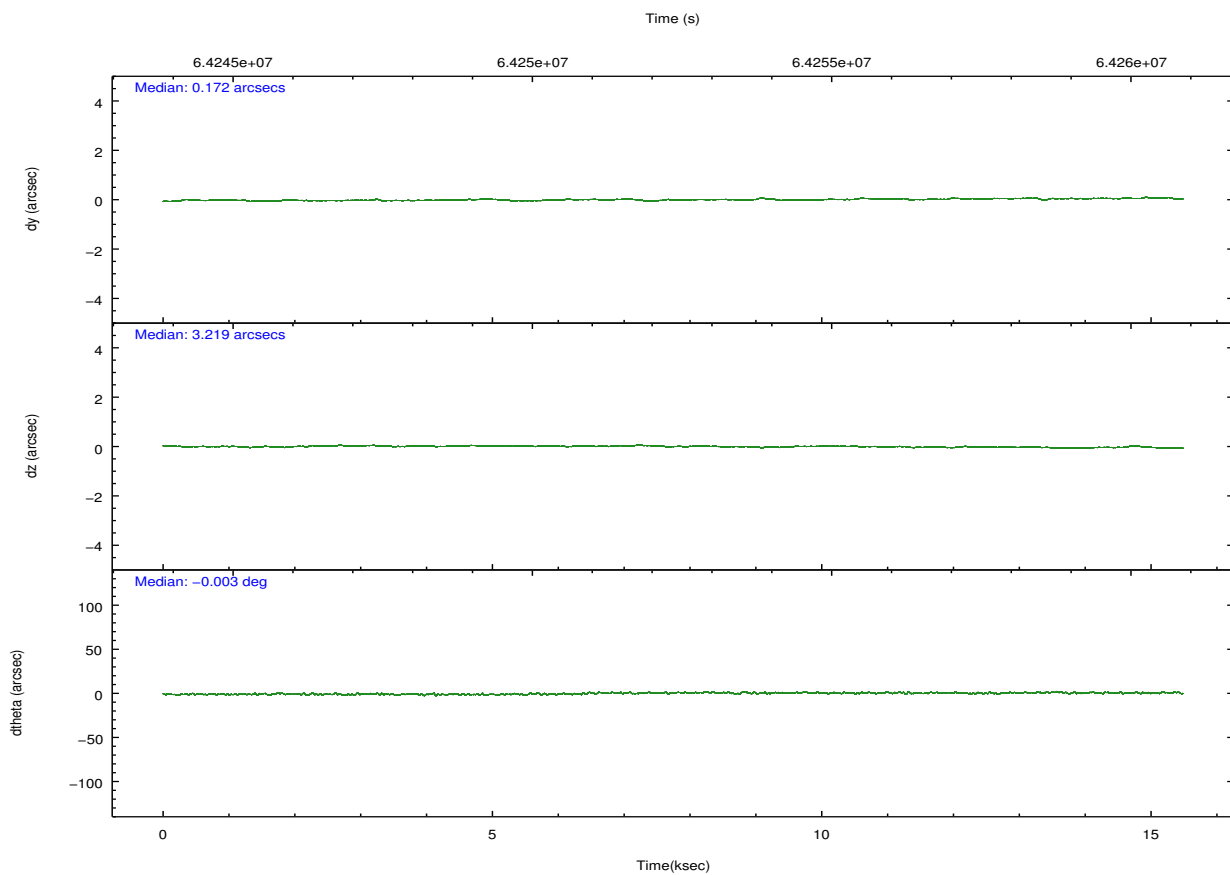
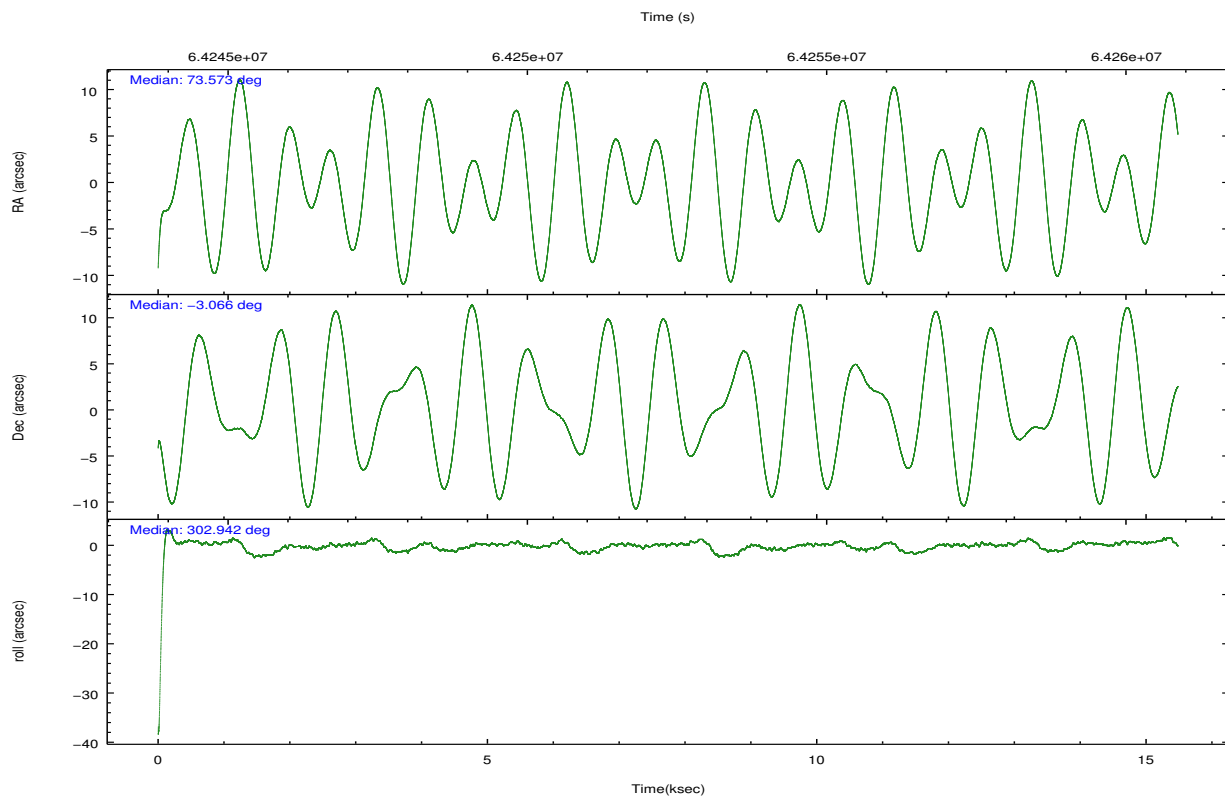
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3060	2946	2586	5108	2513
	2%	2%	2%	4%	2%
grade 1 events	20	28	18	28	30
	0%	0%	0%	0%	0%
grade 2 events	4415	4607	4268	5728	4553
	3%	4%	3%	4%	3%
grade 3 events	882	1020	718	829	818
	0%	0%	0%	0%	0%
grade 4 events	834	931	742	766	743
	0%	0%	0%	0%	0%
grade 5 events	2391	2497	2207	2257	2535
	2%	2%	1%	1%	2%
grade 6 events	2803	3040	2889	2948	3261
	2%	2%	2%	2%	2%
grade 7 events	100463	99491	111320	103626	107790
	87%	86%	89%	85%	88%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	73.548417	73.57298523566445	Subarray requested	NONE	NONE
Pointing Dec	-3.053271	-3.066151883426238	Alternating exposures requested	N	N
Pointing Roll	302.739251	302.9492157822189	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-225.842463	-225.8433433320239			
SIM translation stage offset (mm)	-7.75	-7.749109670905796			
Observation start time	64245092.184000	64244152.590425			
Observation start date	2000-01-14T13:50:28	2000-01-14T13:35:52			
Observation end time	64260092.184000	64261043.053539			
Observation end date	2000-01-14T18:00:28	2000-01-14T18:17:23			
Read mode	TIMED	TIMED			

## 2.3 Aspect



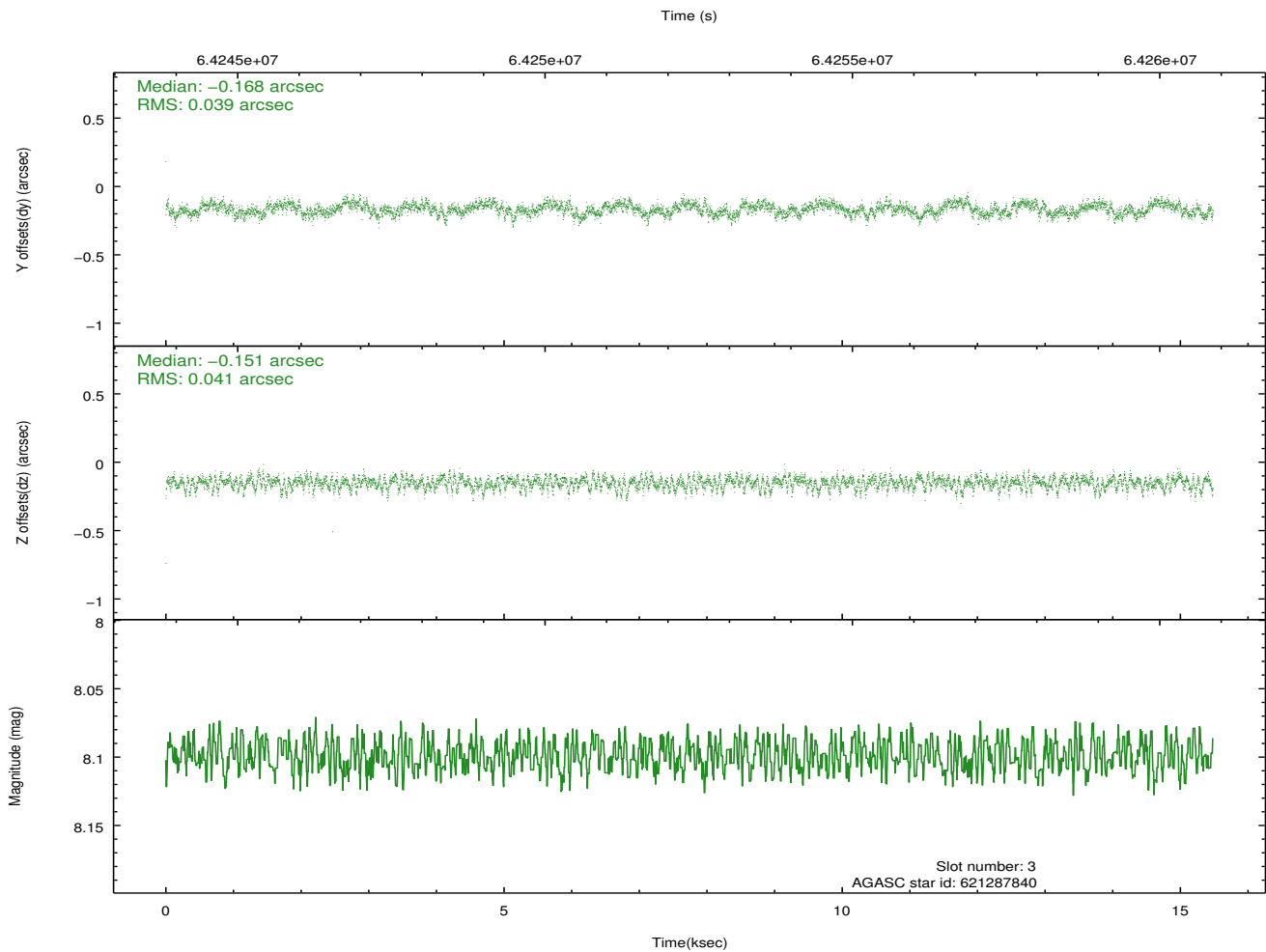
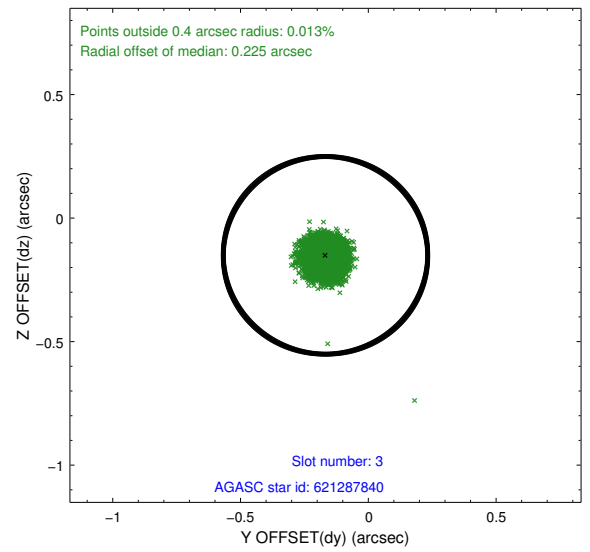
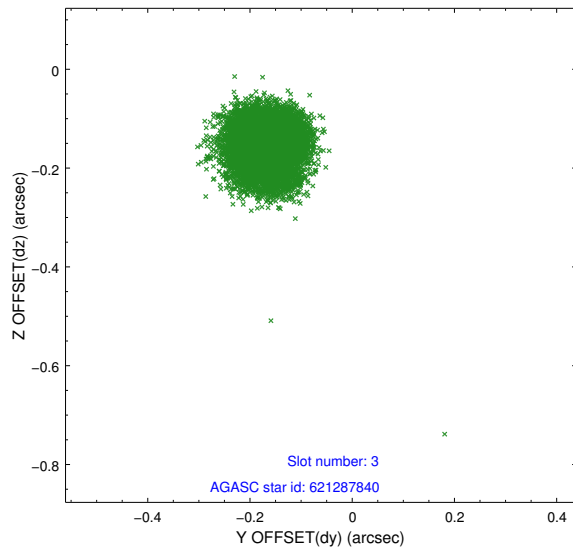


### Slot Statistics

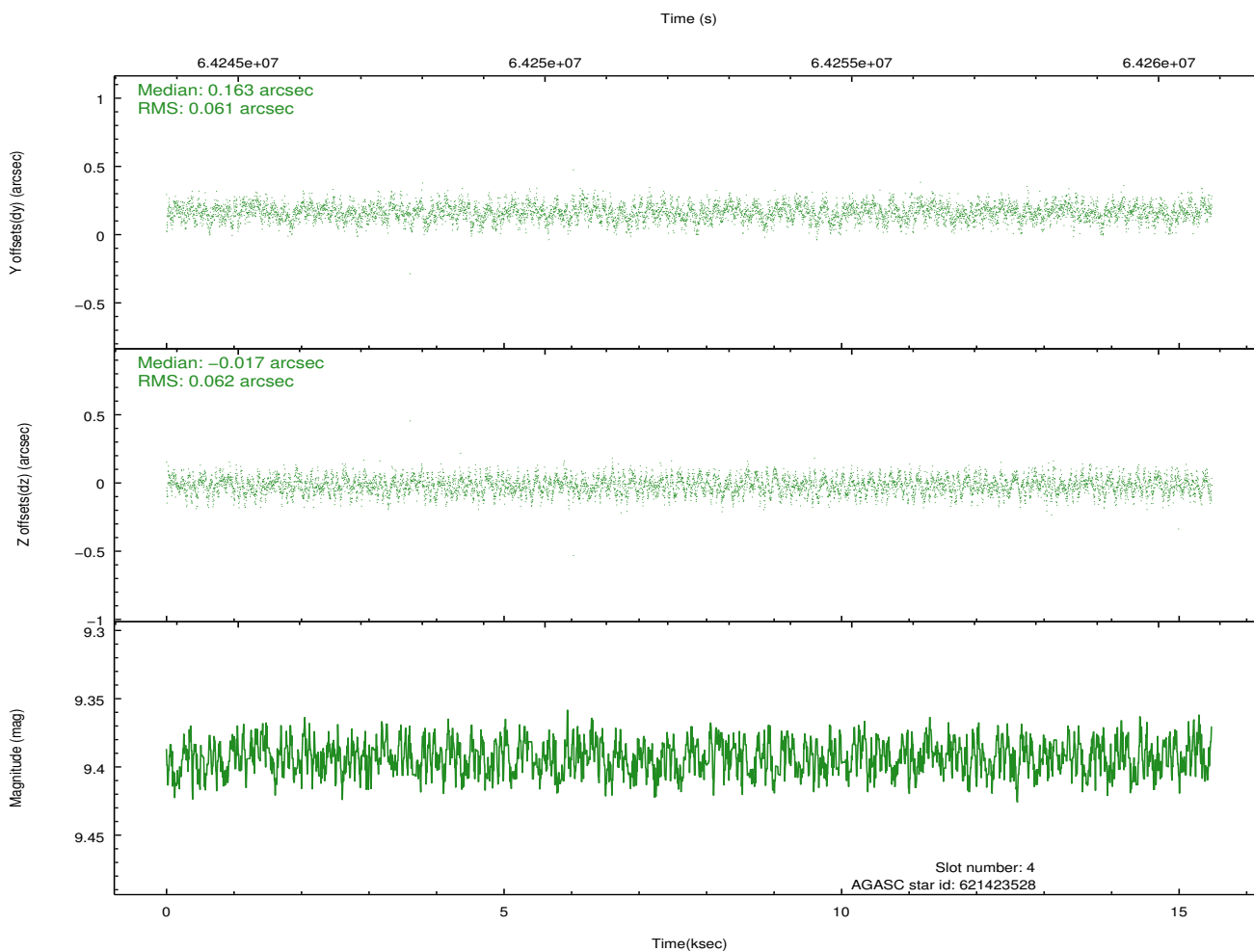
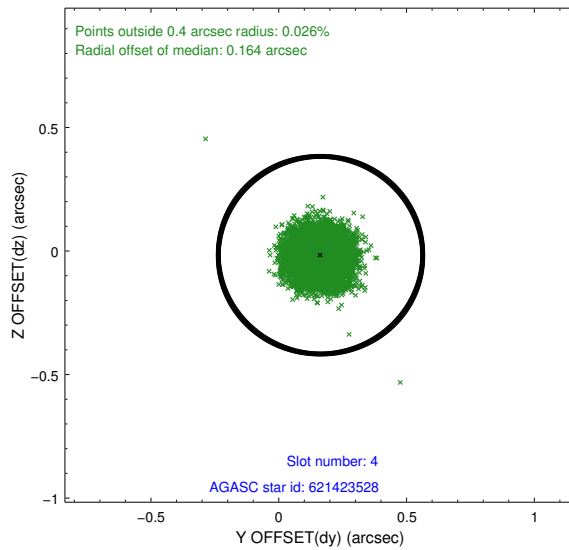
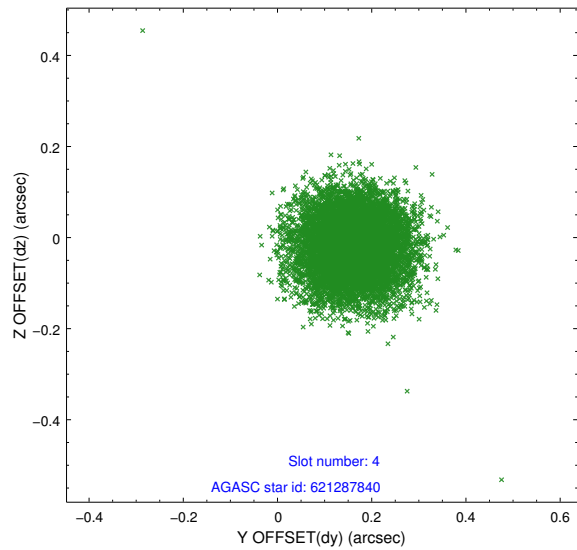
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-3	7.42	3777	0.029	0.135	0.009	0.014	0.000000	0.000000	57.03	-1118.68
1	FID	ACIS-I-4	7.16	3776	-0.043	-0.062	0.007	0.012	0.000000	0.000000	2159.02	914.96
2	FID	ACIS-I-5	7.22	3776	-0.085	-0.004	0.009	0.014	0.000000	0.000000	-1808.18	912.17
3	GUIDE	621287840	8.10	7551	-0.168	-0.151	0.060	0.095	72.904853	-2.949814	-1564.78	-1745.57
4	GUIDE	621423528	9.39	7548	0.163	-0.017	0.093	0.148	73.592013	-3.702796	2050.89	-1132.93
5	GUIDE	621417600	9.67	7548	-0.107	0.108	0.093	0.154	73.769107	-2.601844	-938.47	1546.26
6	GUIDE	621416480	9.72	7547	0.112	0.047	0.095	0.154	74.169838	-3.123852	1421.39	1741.57
7	GUIDE	621416776	9.31	7542	-0.004	0.016	0.080	0.127	73.251683	-2.926024	-962.67	-649.63

## 2.4 Star Slots

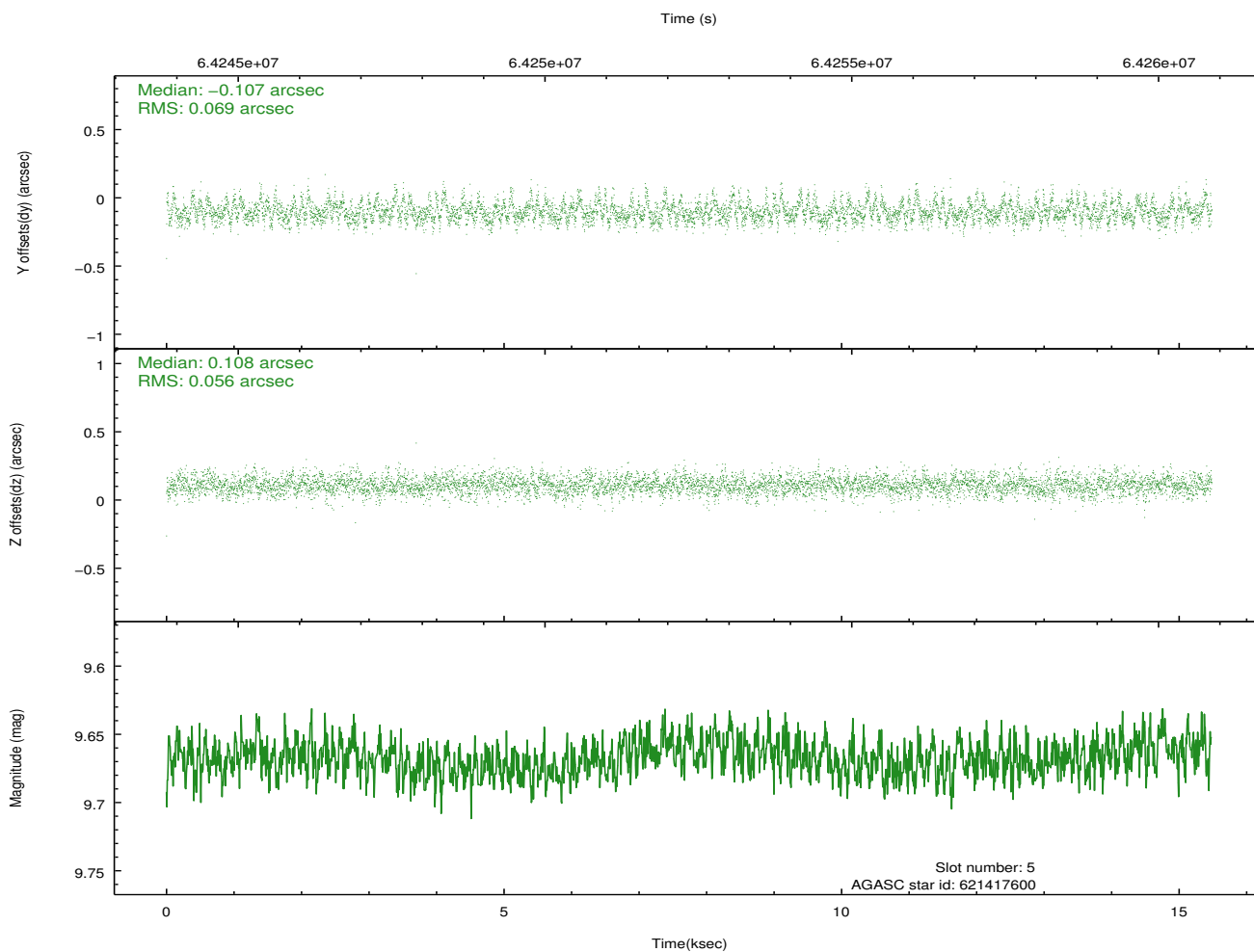
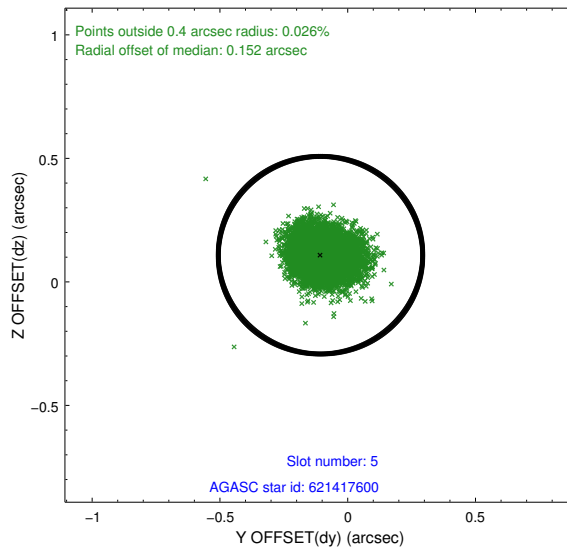
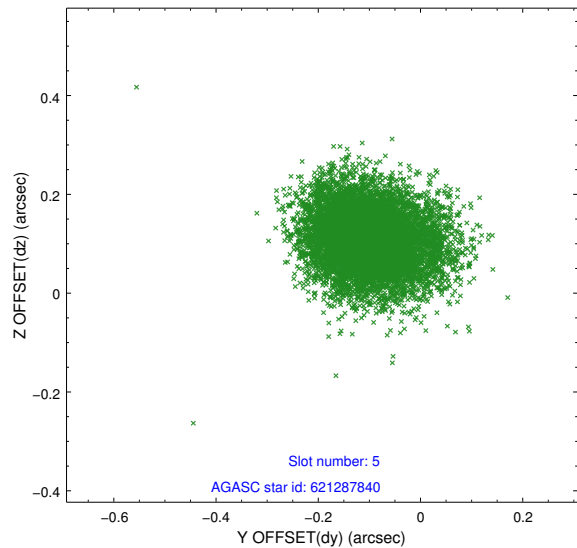
### 2.4.1 Slot 3



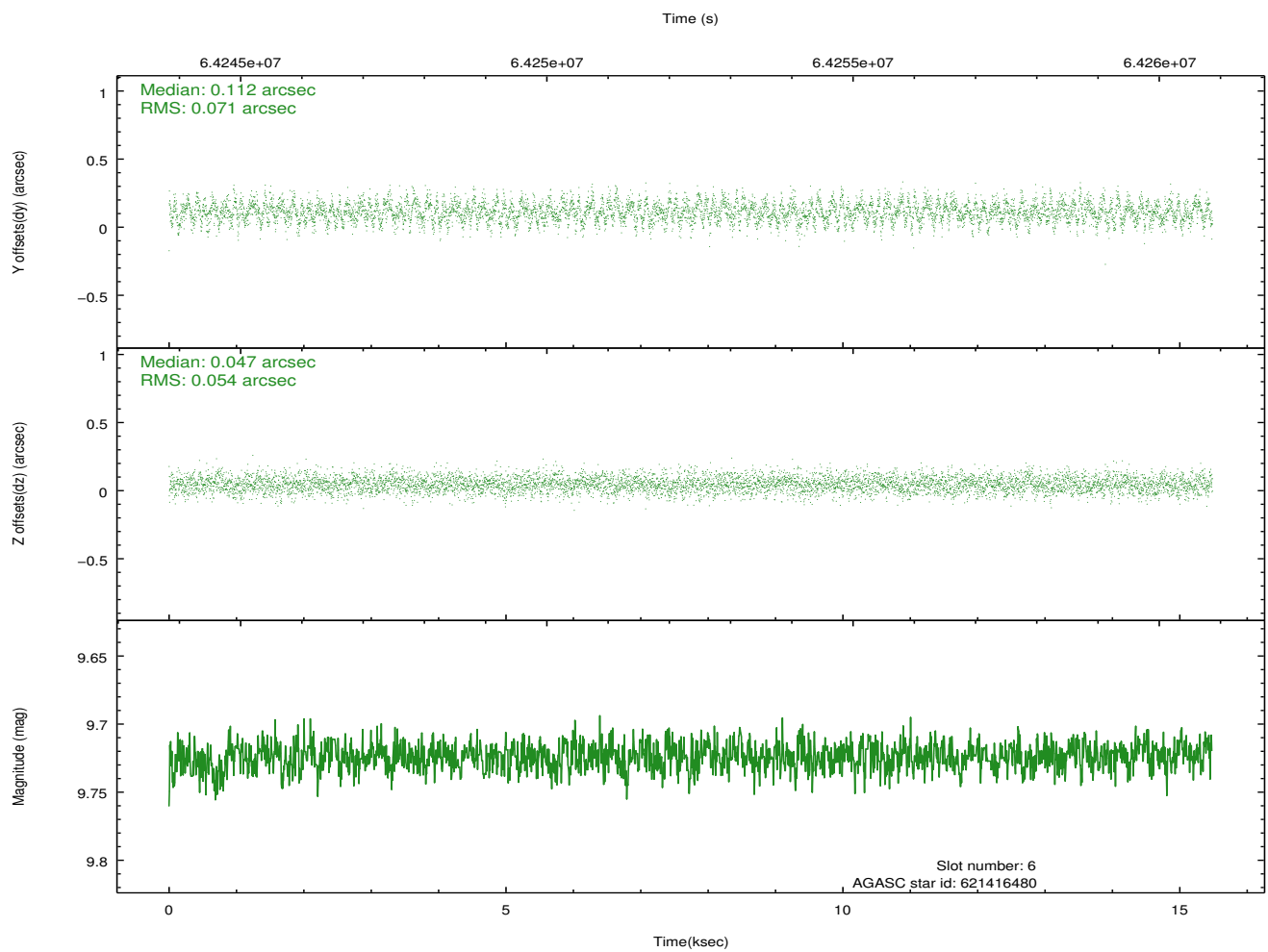
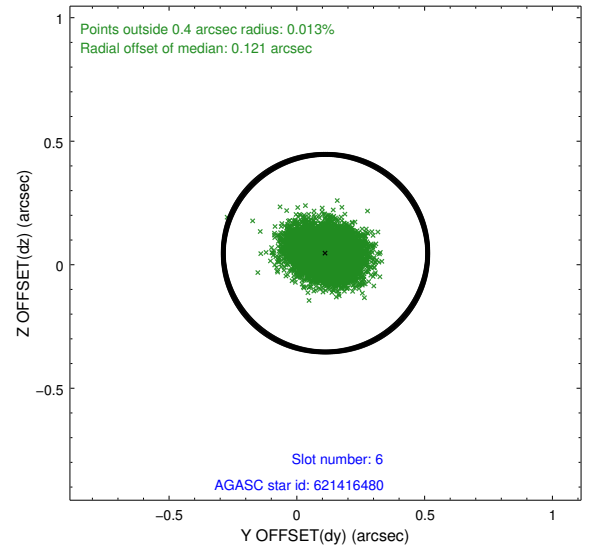
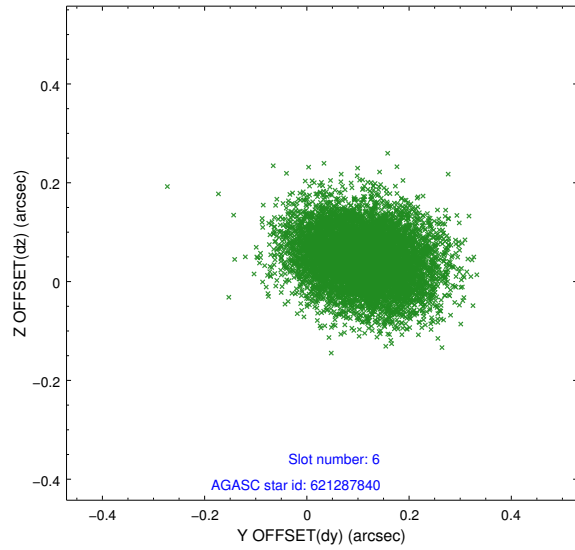
## 2.4.2 Slot 4



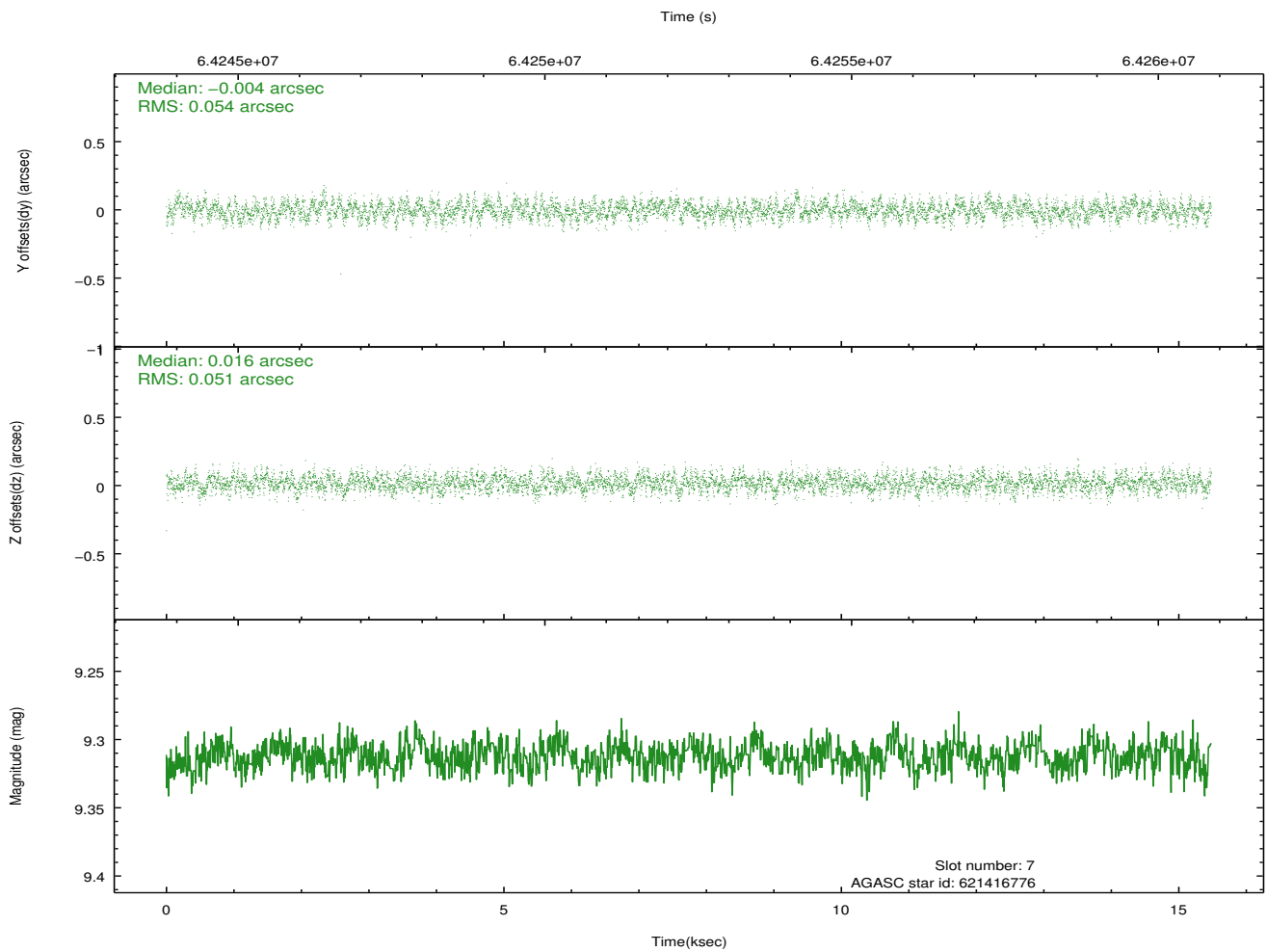
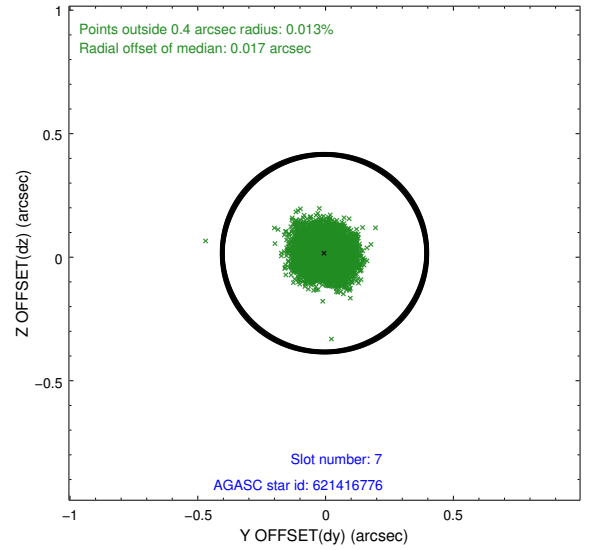
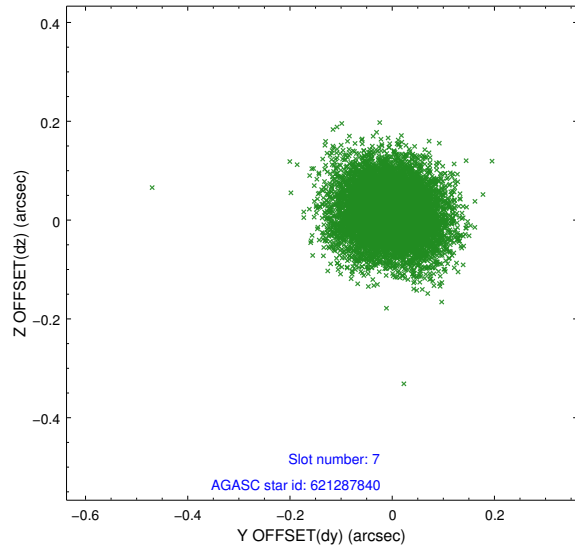
### 2.4.3 Slot 5



## 2.4.4 Slot 6

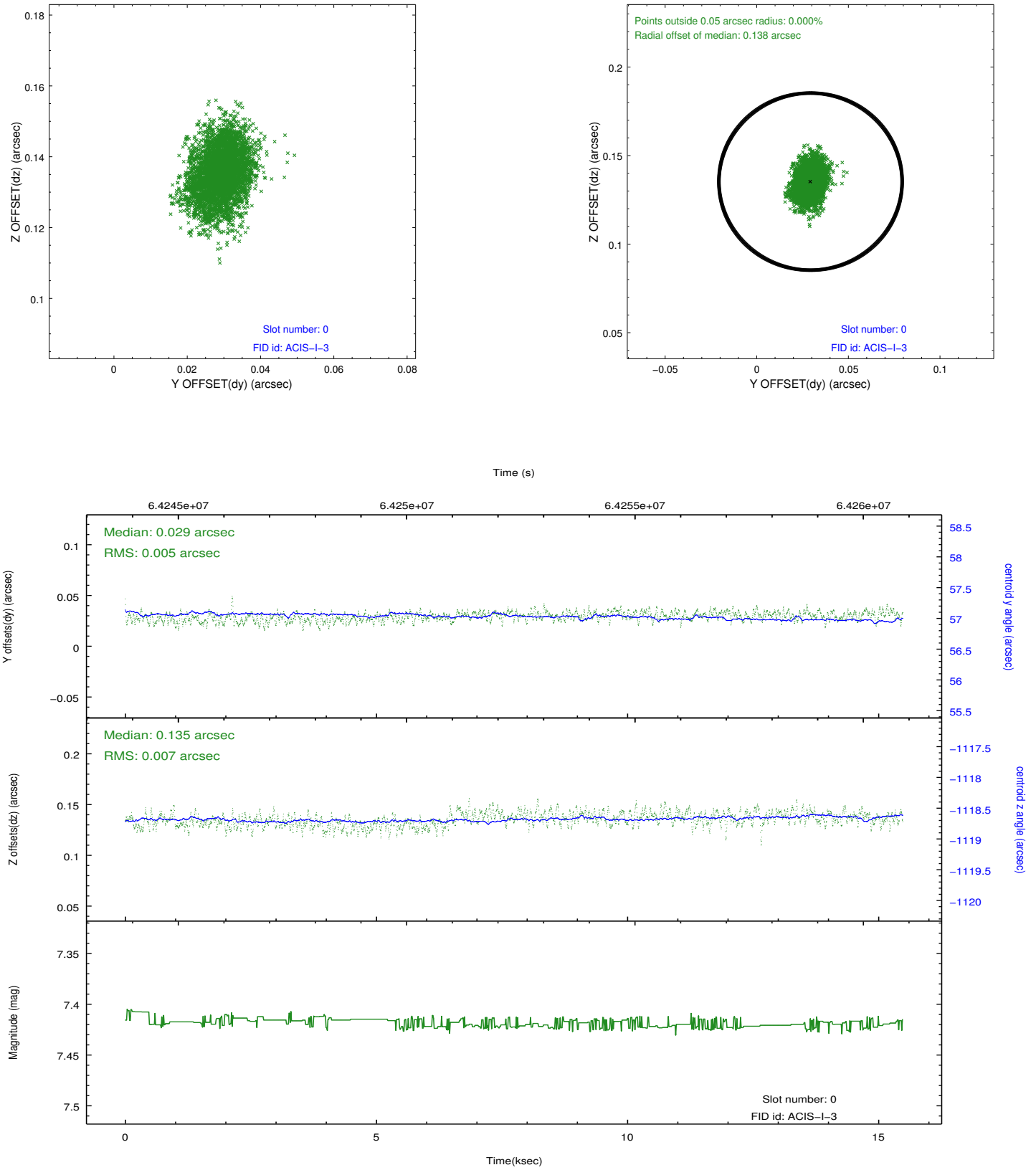


## 2.4.5 Slot 7

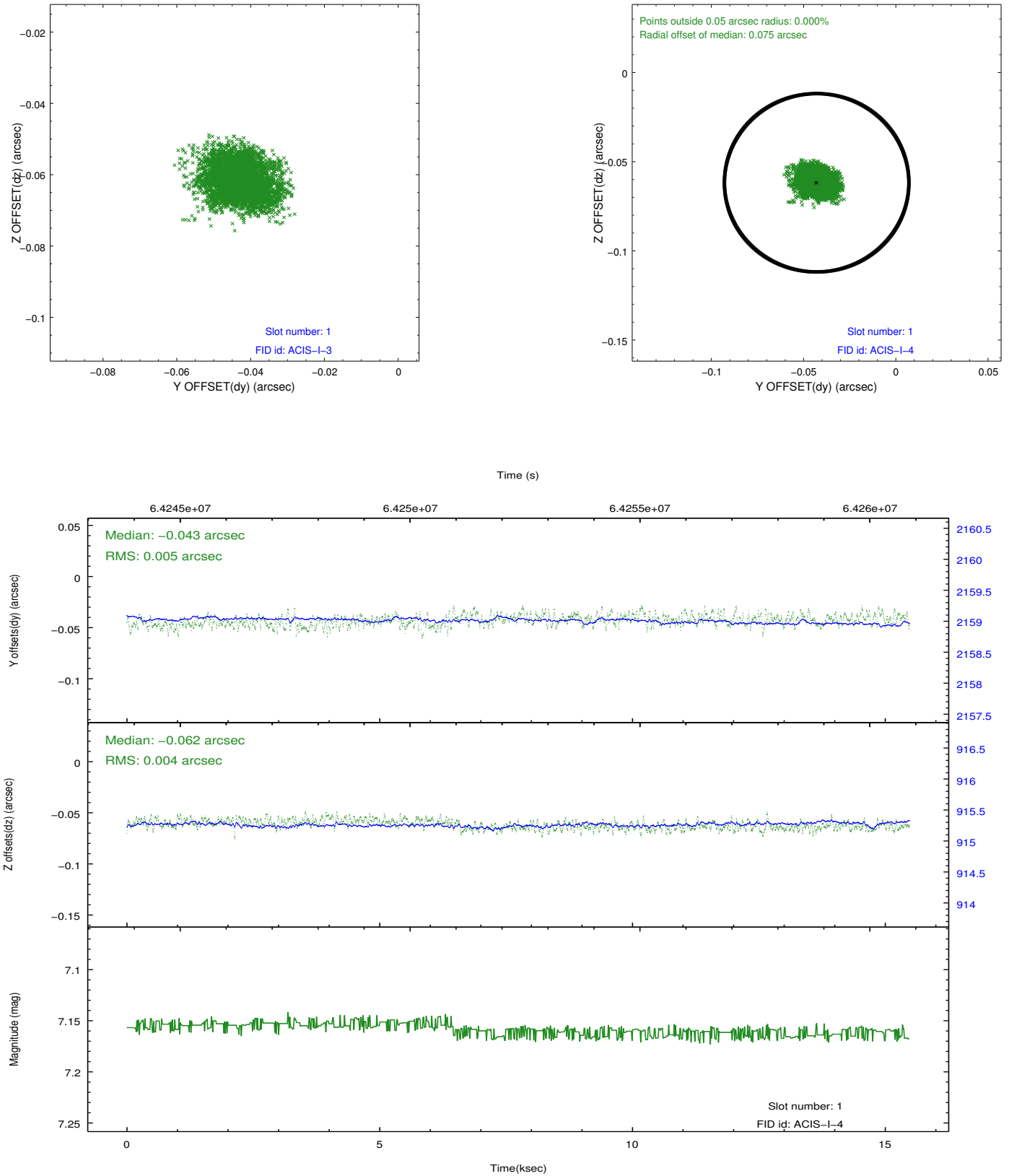


## 2.5 FID Slots

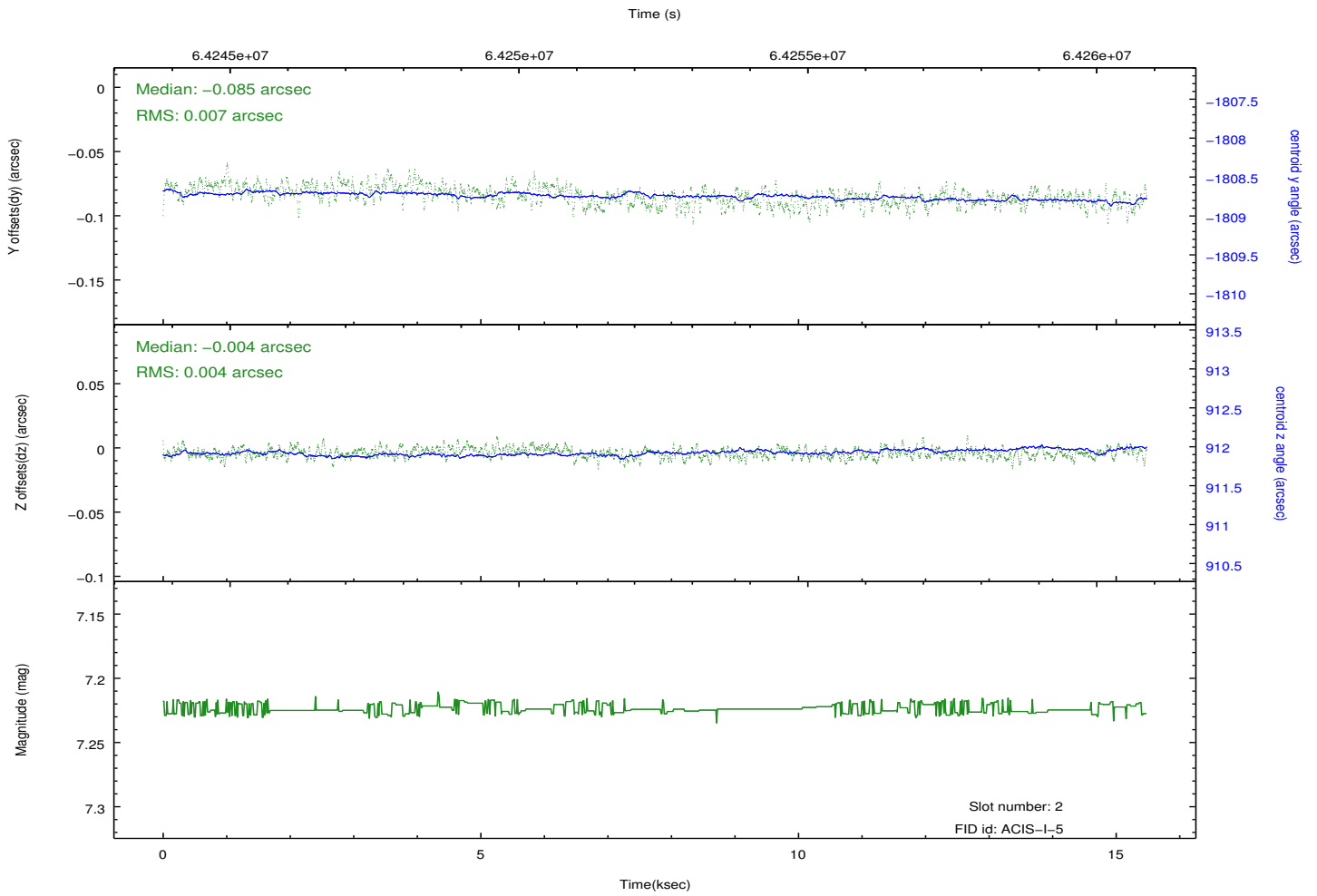
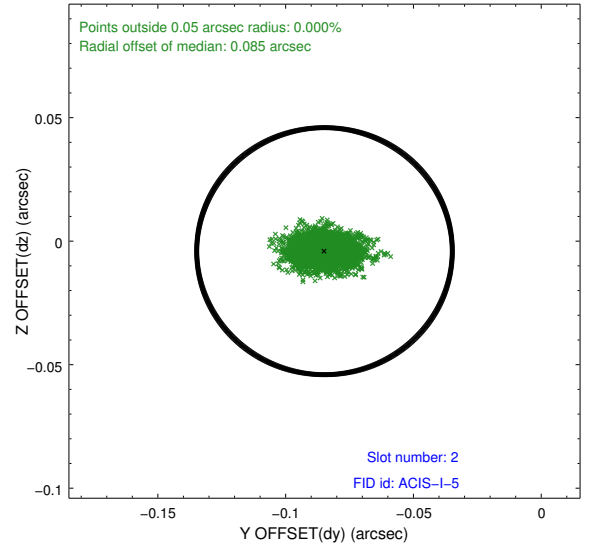
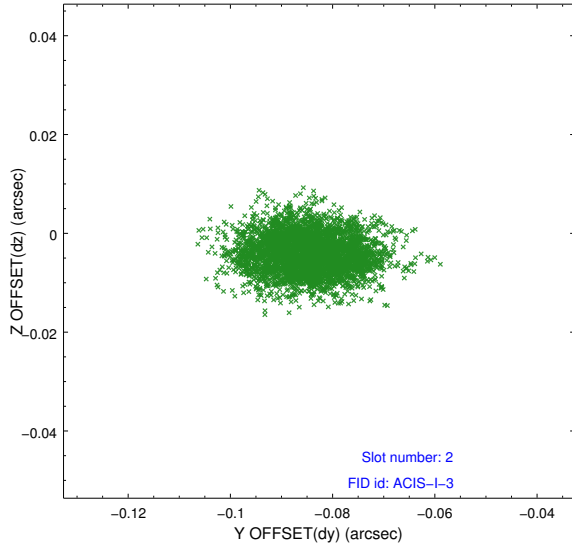
### 2.5.1 Slot 0



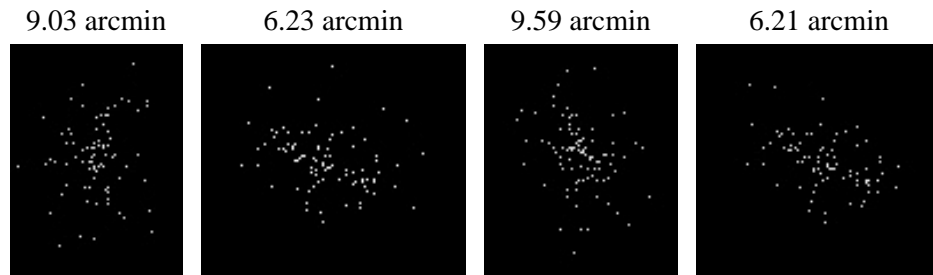
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2009.12.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.083

## A.2 Comments

Charge time for this ObsId remains at previous value of 14.083 ksec, although with the current processing the charge time would have been 14.175 ksec.

==

Focal plane temperature is warmer than -118.7 C degrees during the entire observation. This temperature is the upper limit of the verified ACIS calibration for the front-illuminated chips. The focal plane temperature is also warmer than -116.7 degrees C for the entire observation. This temperature is the upper limit of the verified ACIS calibration for the back-illuminated chips. The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.