

# V&V Reference Report

## L2 ASCDS Version : 8.1.1

Observation 965 - L2 Version 3

Chandra X-Ray Center

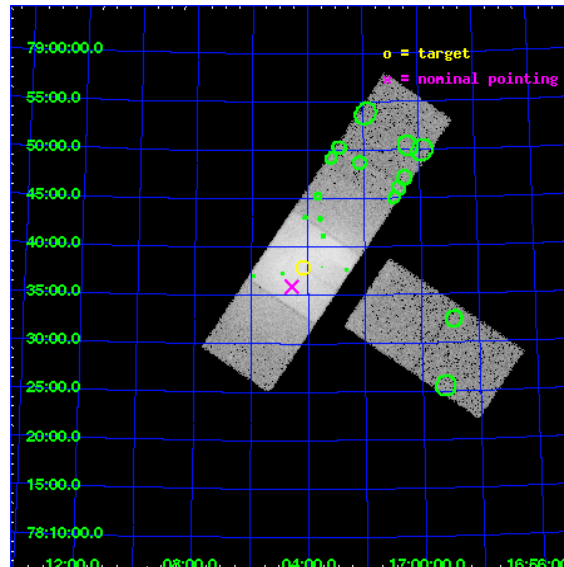
L2 Processing Date : Nov 19 2009

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# 1 Front

seq_num	800179	Sequence number
obs_id	965	Observation id
title	MASS DISTRIBUTIONS OF RELAXED CLUSTERS	Proposal title
observer	Dr Steve Murray	Principal investigator
object	A2256	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	256.04479	Observer's specified target RA
dec_targ	78.631	Observer's specified target Dec
ra_nom	256.14412077355	Nominal RA
dec_nom	78.598394943518	Nominal Dec
roll_nom	304.05461752161	Nominal Roll
revision	3	Processing version of data
ontime	11177.990969762	Sum of GTIs [s]
livetime	11036.448517525	Livetime [s]
ontime1	13594.429783642	Sum of GTIs [s]
ontime3	13513.405898094	Sum of GTIs [s]
ontime6	13937.971097074	Sum of GTIs [s]
ontime7	11177.990969762	Sum of GTIs [s]
ontime8	13957.416928105	Sum of GTIs [s]
ontime9	13847.224560313	Sum of GTIs [s]
l2events	223322	Number of level 2 events

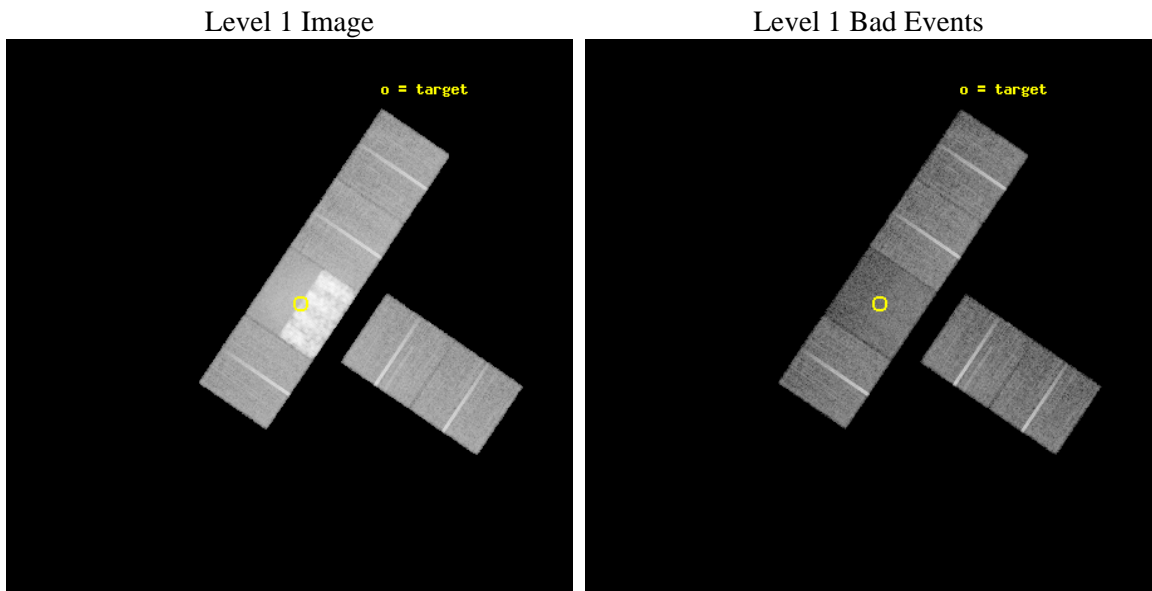




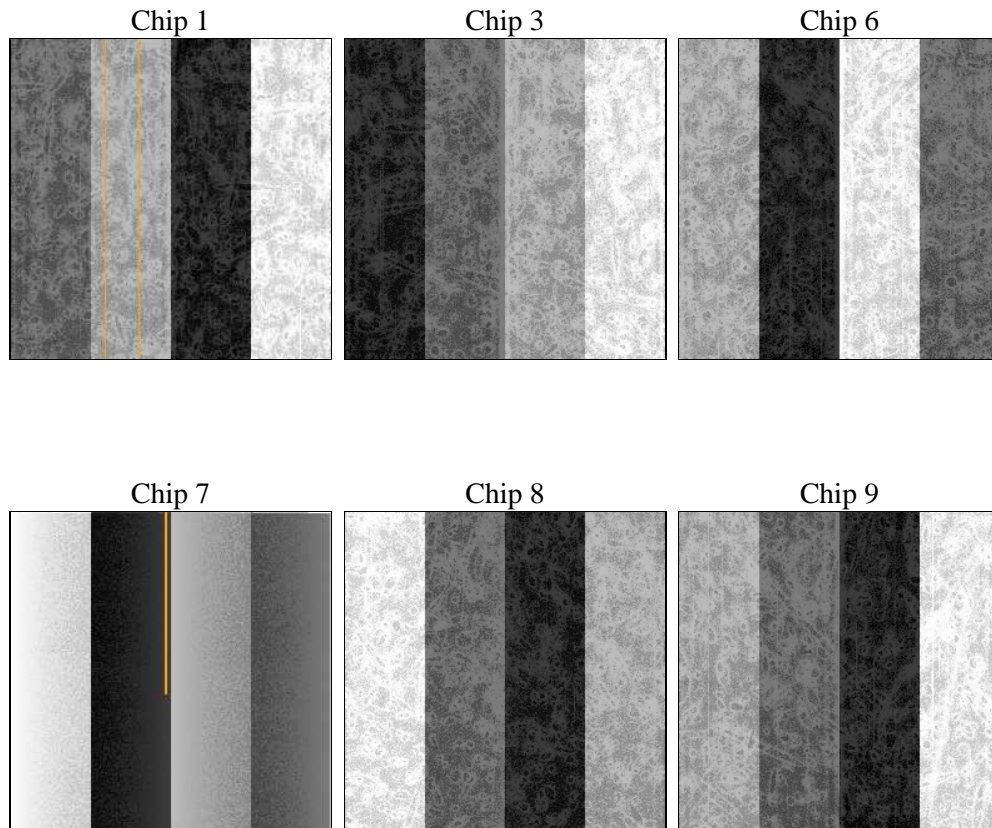
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	Scheduled observation exposure time
ascdsver	8.1.1	ASCDS version number	ontime	11177.990969762	Sum of GTIs [s]
caldsver	4.1.4	&#160	ontime1	13594.429783642	Sum of GTIs [s]
date	2009-11-19T21:00:52	Date and time of file creation	ontime3	13513.405898094	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	13937.971097074	Sum of GTIs [s]
			ontime7	11177.990969762	Sum of GTIs [s]
			ontime8	13957.416928105	Sum of GTIs [s]
			ontime9	13847.224560313	Sum of GTIs [s]
			l1events	1301565	Number of level 1 events

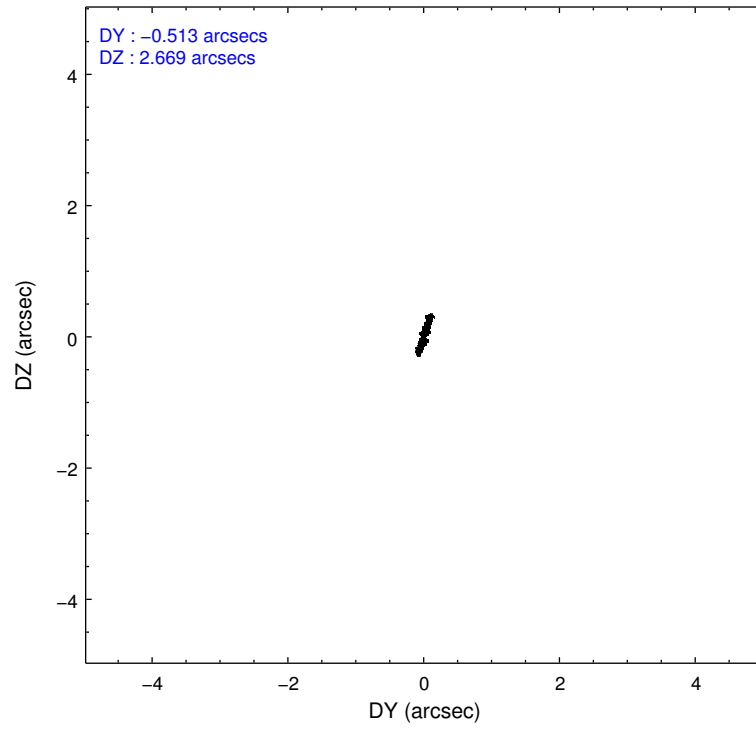
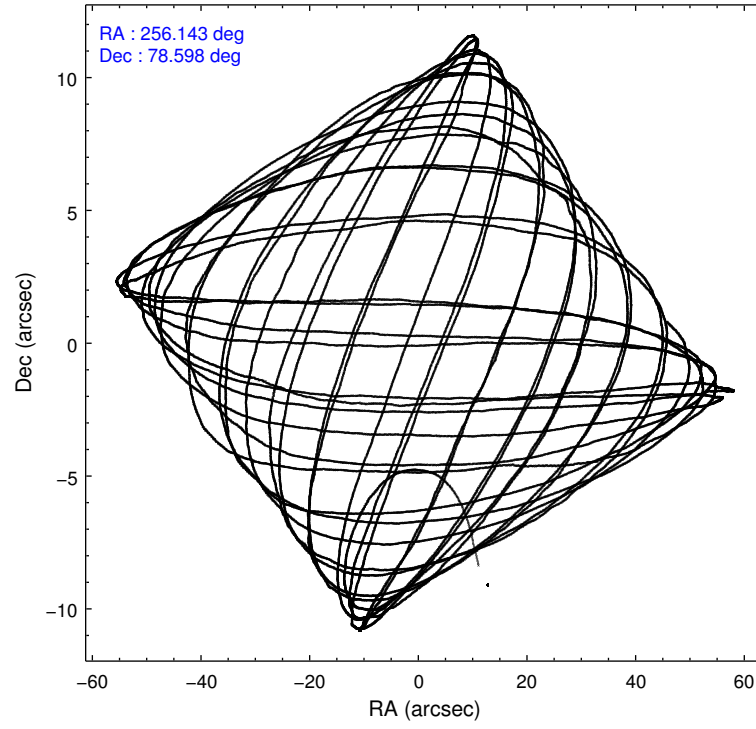
### 2.1.4 Events

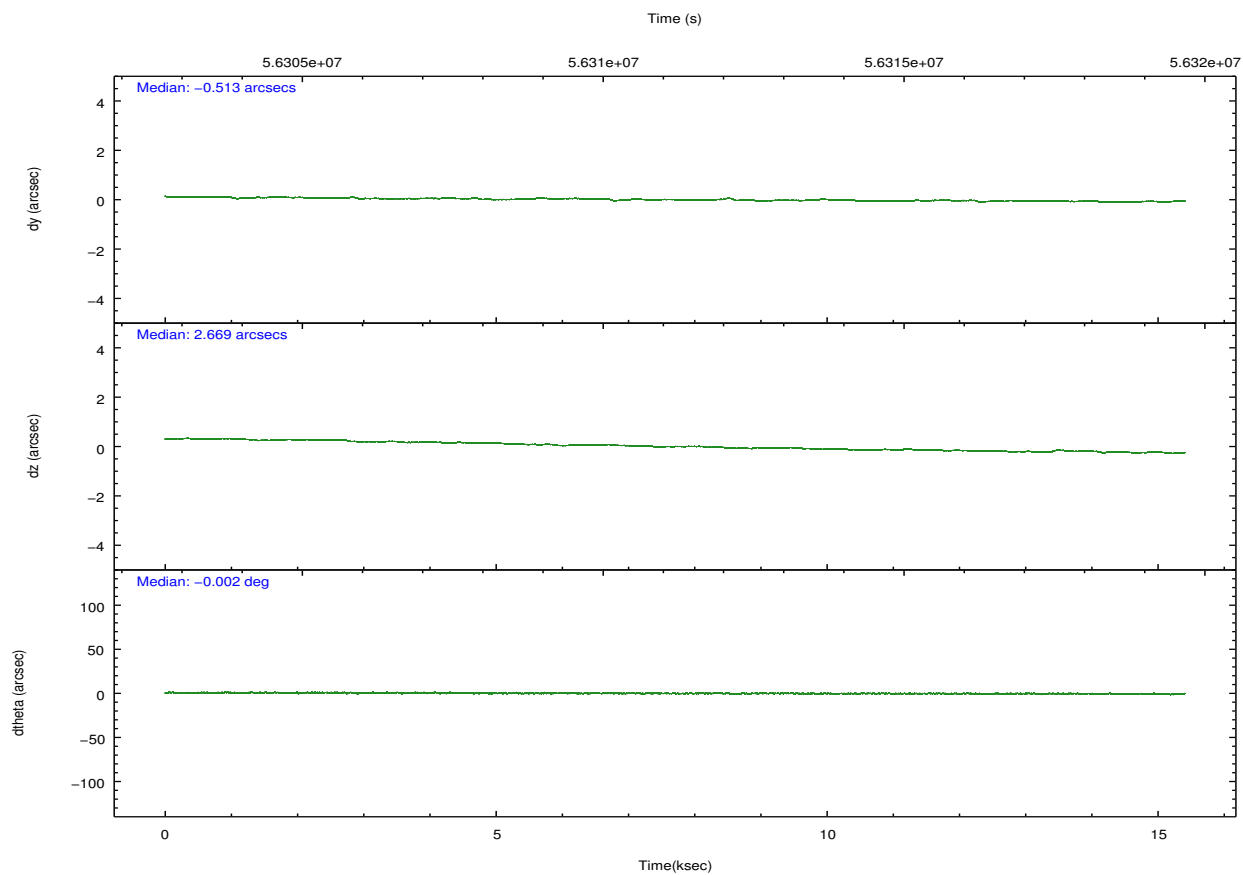
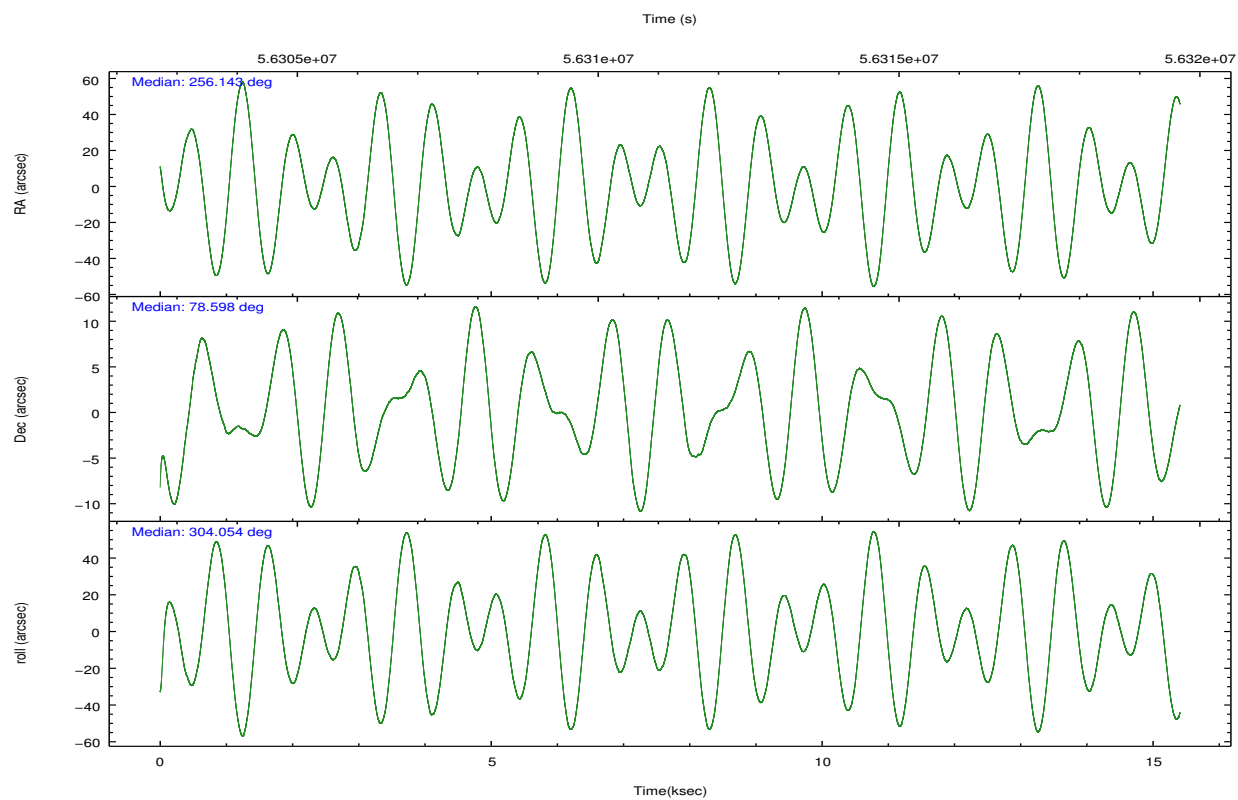
	ccd 1	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9		ccd 1	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	112984	127030	138928	632404	165804	124415	grade 0 events	2903	4504	11089	449083	15863	2909
rejected events	100451	112637	113636	73605	126946	111446		2%	3%	7%	71%	9%	2%
rejected %	88%	88%	81%	11%	76%	89%	grade 1 events	26	25	49	453	94	30
								0%	0%	0%	0%	0%	0%
							grade 2 events	4599	5378	8235	35083	10897	5065
								4%	4%	5%	5%	6%	4%
							grade 3 events	1016	808	1135	13078	2420	821
								0%	0%	0%	2%	1%	0%
							grade 4 events	973	769	1029	12517	2251	795
								0%	0%	0%	1%	1%	0%
							grade 5 events	2227	2275	2617	7507	3573	2608
								1%	1%	1%	1%	2%	2%
							grade 6 events	3048	2938	3821	52214	7434	3385
								2%	2%	2%	8%	4%	2%
							grade 7 events	98192	110333	110953	62469	123272	108802
								86%	86%	79%	9%	74%	87%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-136789	ACIS-136789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	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
Pointing RA	256.018693	256.1441207735521	Subarray requested	NONE	NONE
Pointing Dec	78.610625	78.59839494351844	Alternating exposures requested	N	N
Pointing Roll	304.020962	304.054617521611	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	56303898.184000	56302234.49072			
Observation start date	1999-10-14T15:57:14	1999-10-14T15:30:34			
Observation end time	56318898.184000	56320782.891388			
Observation end date	1999-10-14T20:07:14	1999-10-14T20:39:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



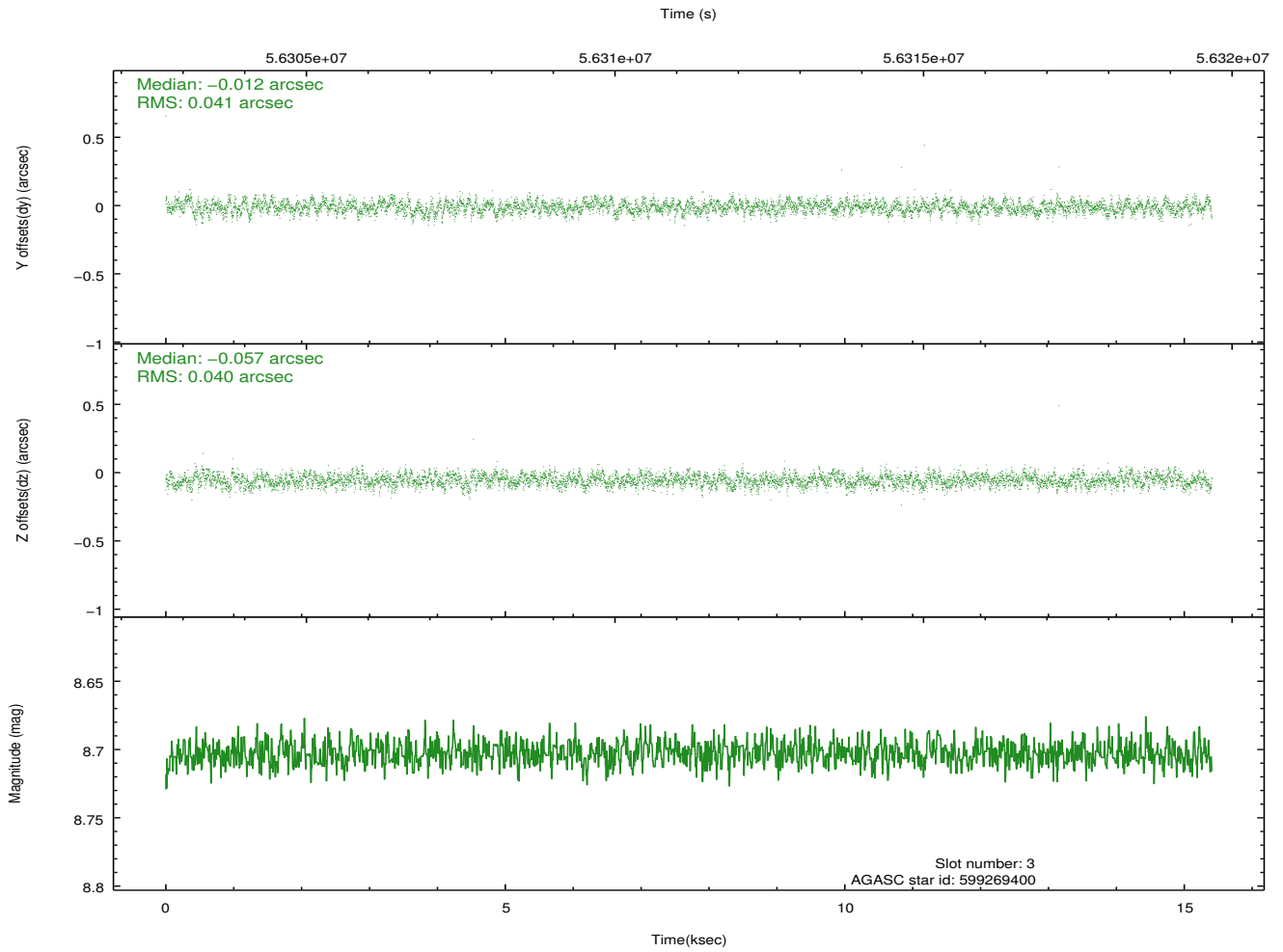
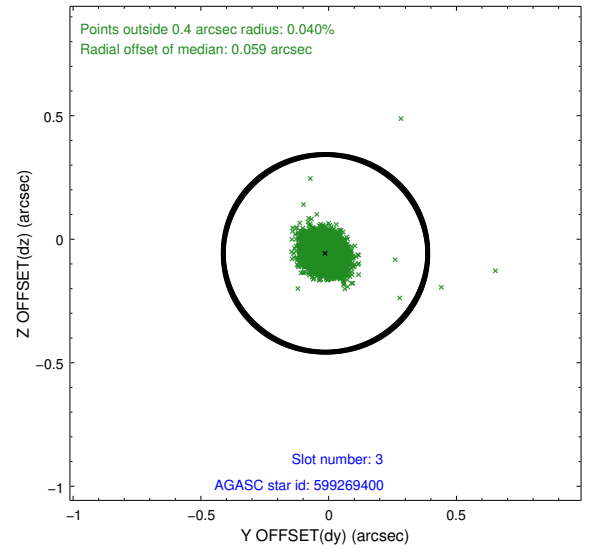
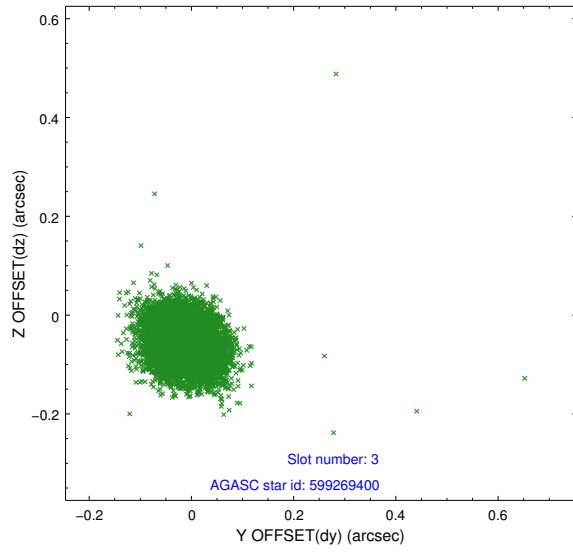


Slot Statistics

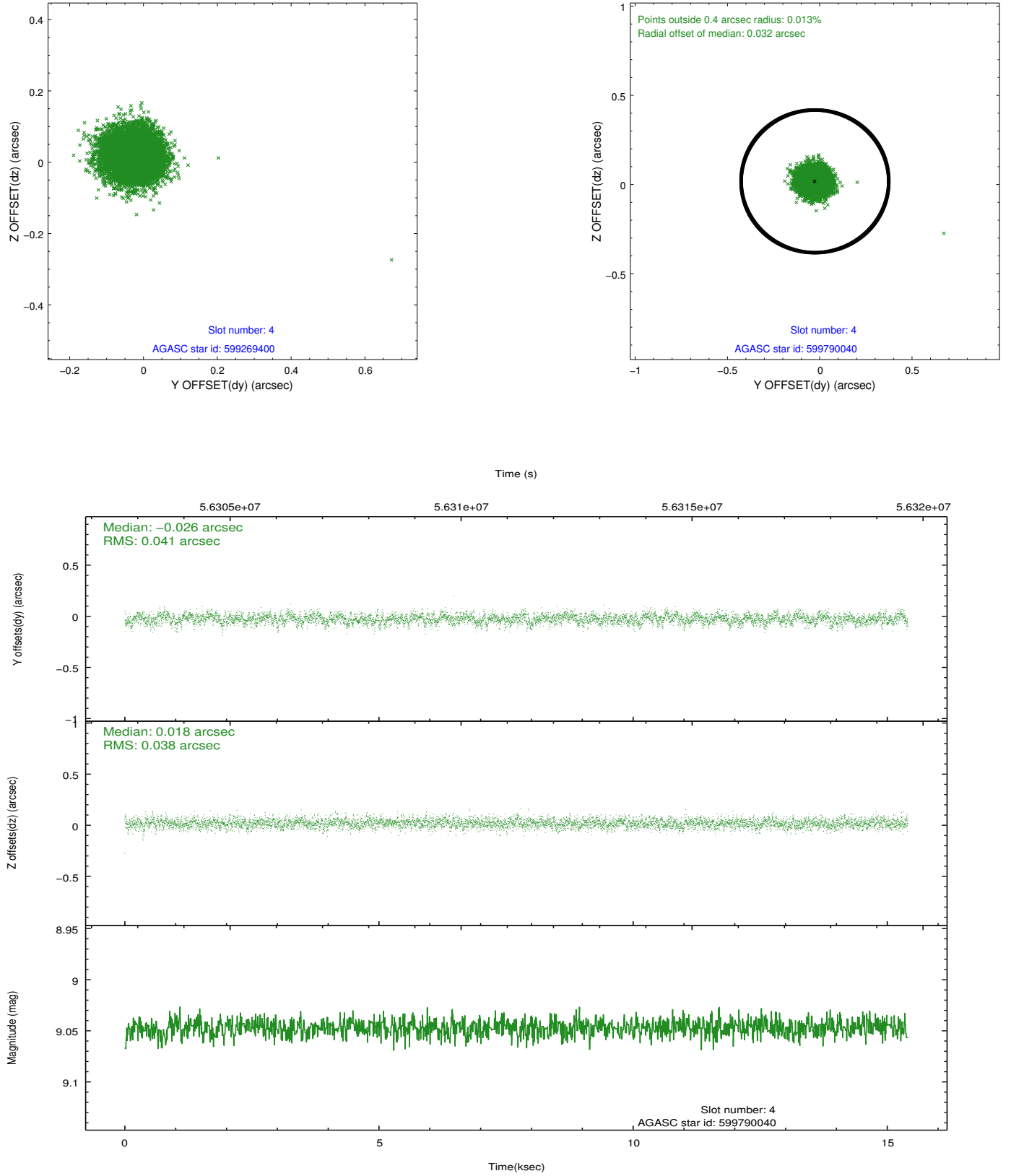
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	7516	0.019	0.003	0.008	0.013	0.000000	0.000000	-752.08	-1723.70
1	FID	ACIS-S-4	7.21	7516	0.041	-0.010	0.005	0.010	0.000000	0.000000	2161.25	184.59
2	FID	ACIS-S-5	7.24	7517	-0.091	0.016	0.007	0.012	0.000000	0.000000	-1804.88	178.51
3	GUIDE	599269400	8.70	7515	-0.012	-0.057	0.060	0.094	254.398050	78.499006	-330.24	-1179.34
4	GUIDE	599790040	9.05	7516	-0.026	0.018	0.059	0.096	252.479590	78.878159	-2233.40	-1454.95
5	GUIDE	599789480	8.83	7514	-0.001	-0.029	0.060	0.097	253.845424	78.947438	-1866.56	-548.61
6	GUIDE	599263768	9.69	7509	-0.042	-0.048	0.092	0.147	258.248120	78.312570	1773.58	764.75
7	GUIDE	599399032	9.84	7512	0.078	0.113	0.114	0.185	260.577377	78.393779	2386.95	2369.97

## 2.4 Star Slots

### 2.4.1 Slot 3

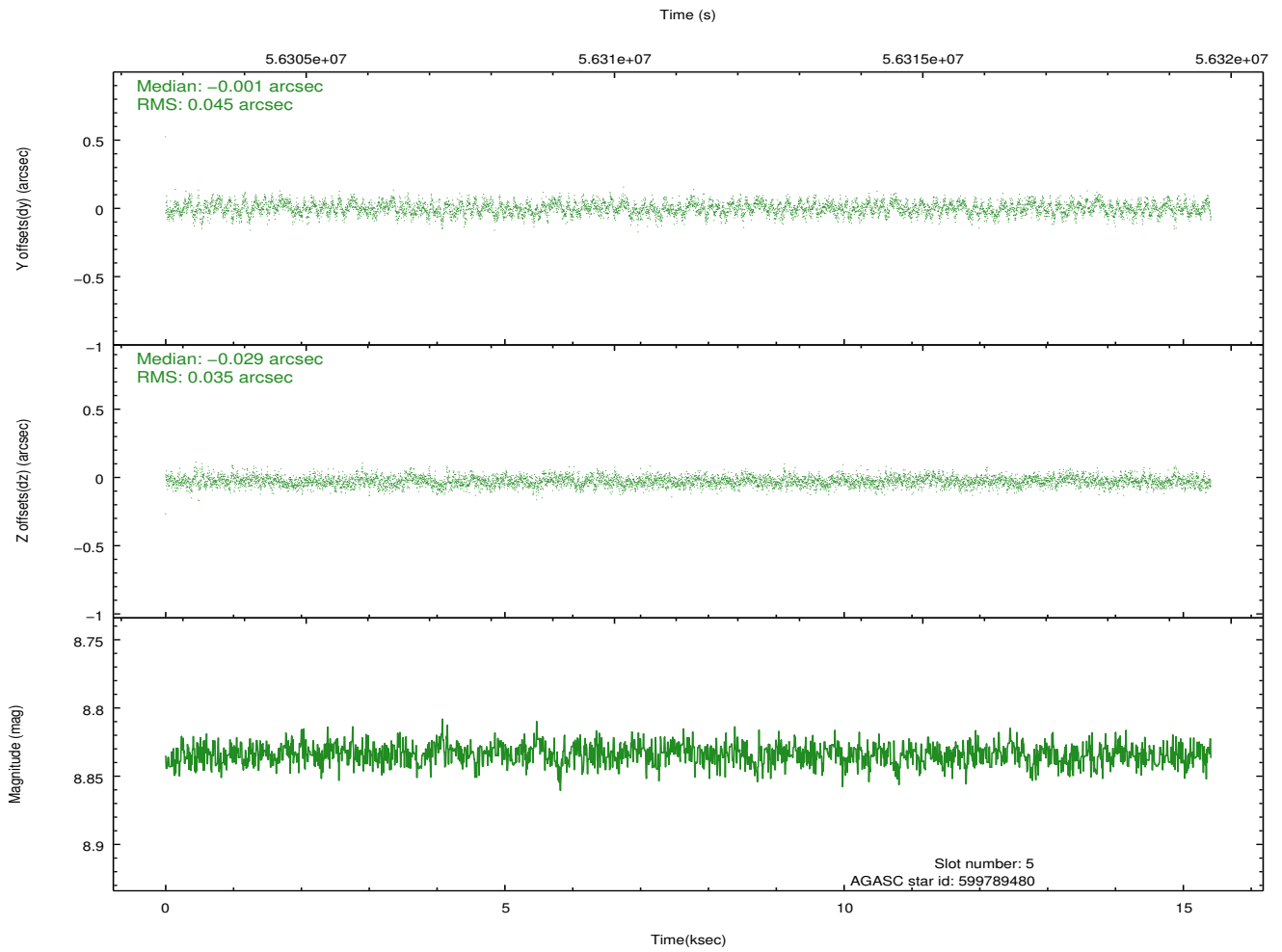
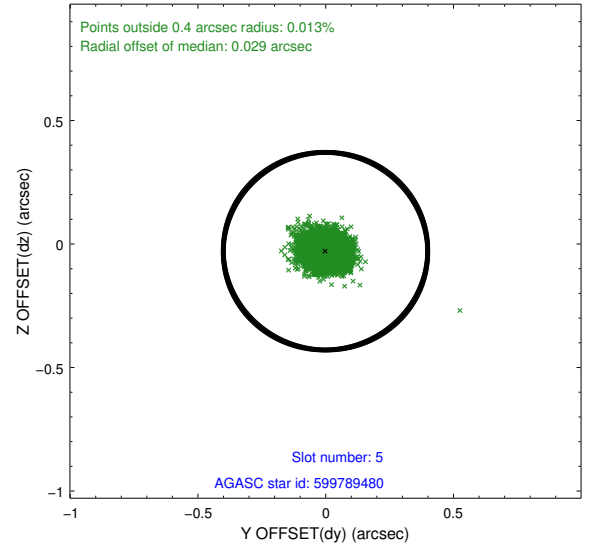
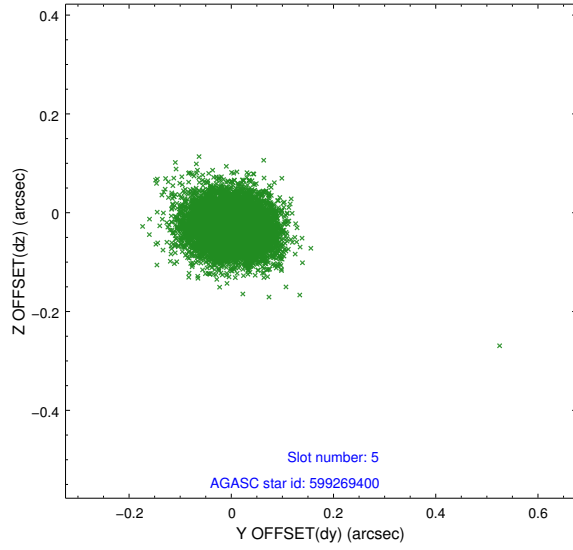


## 2.4.2 Slot 4

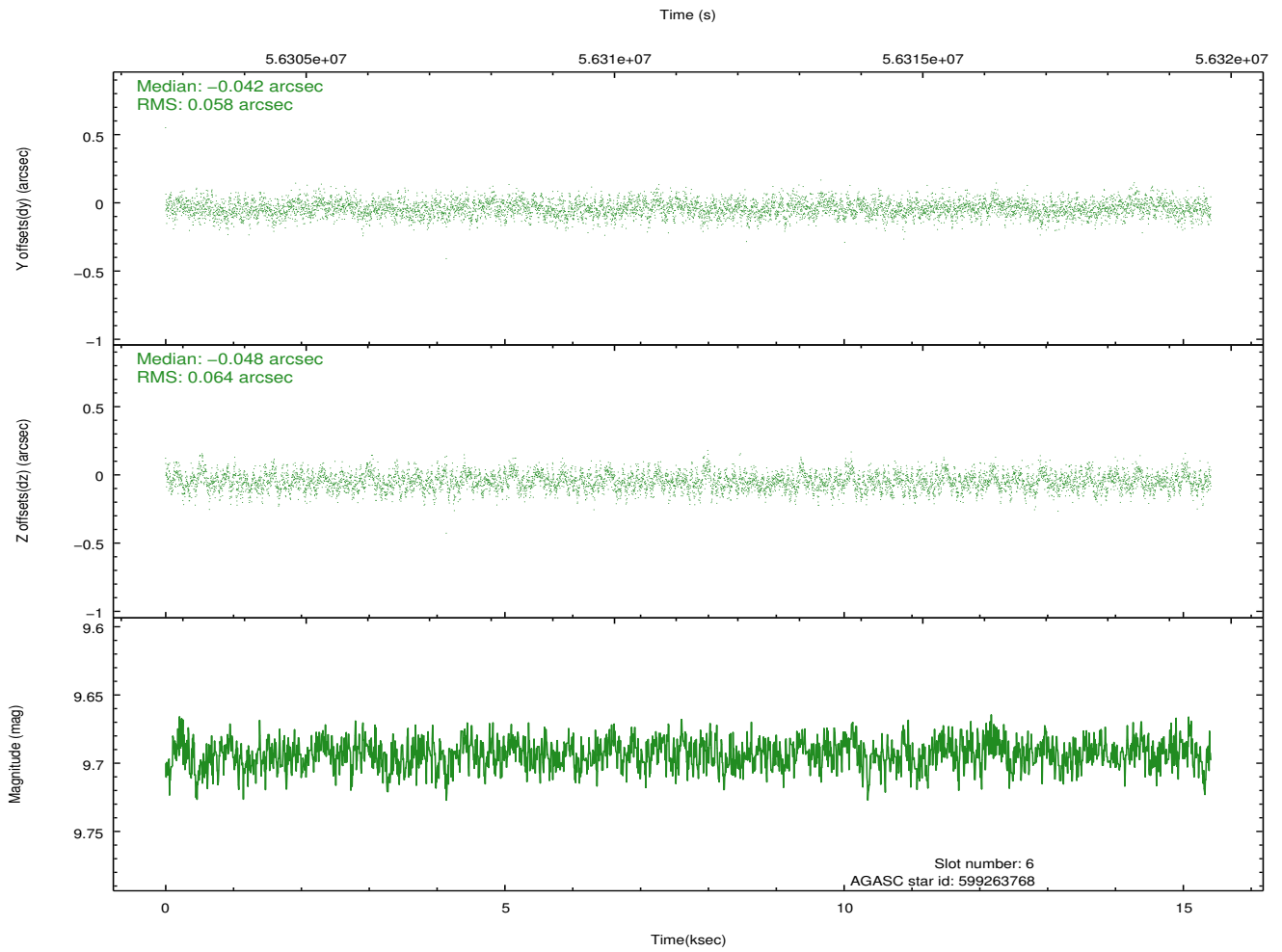
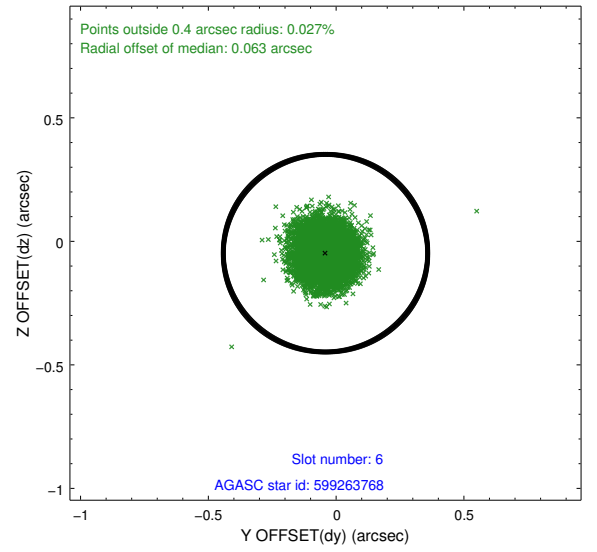
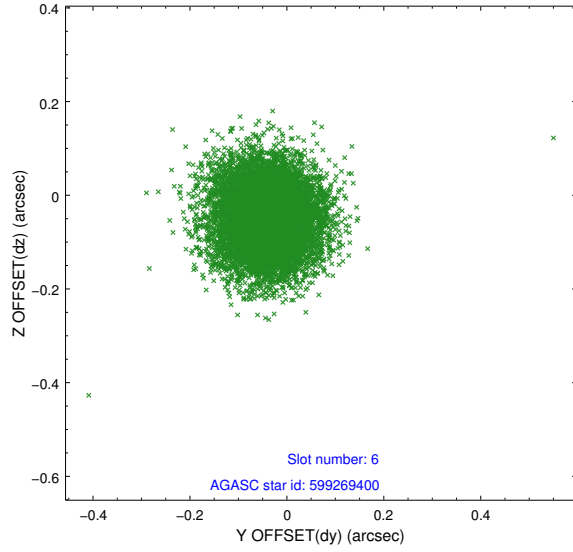




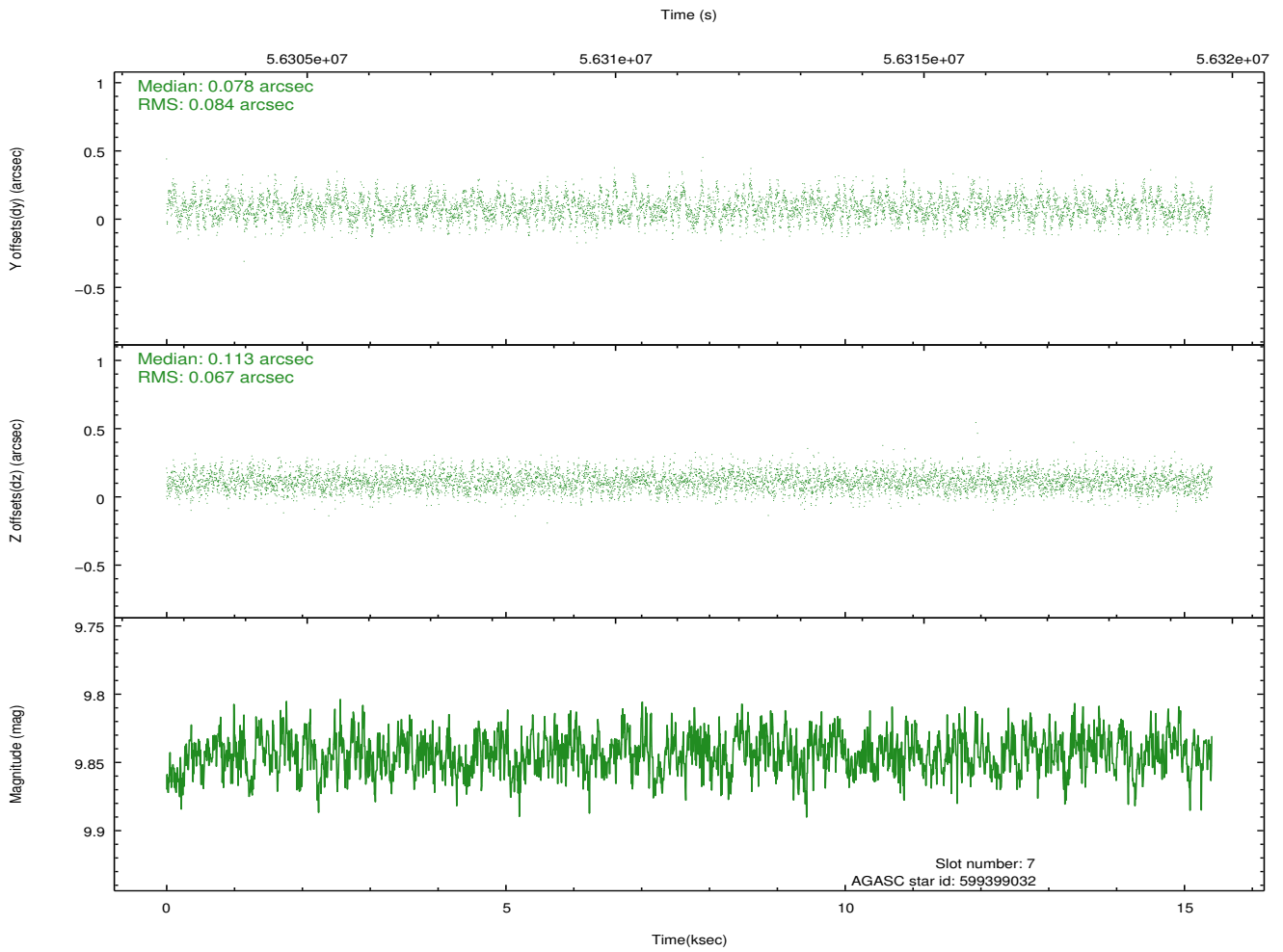
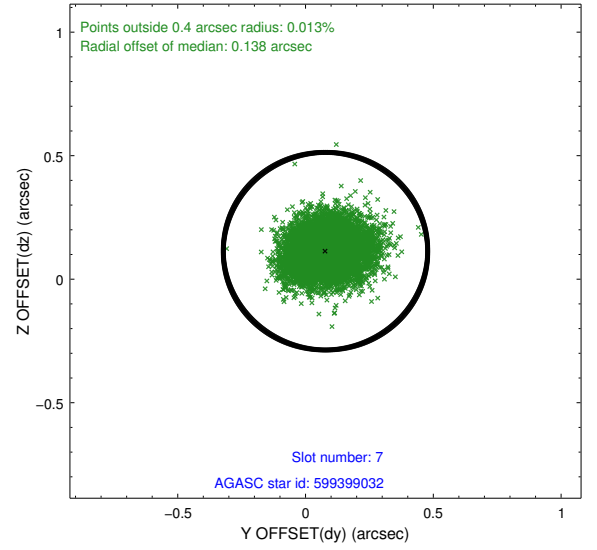
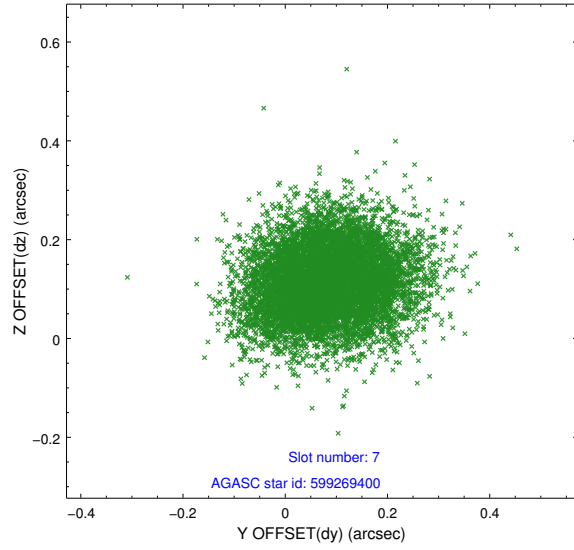
### 2.4.3 Slot 5



## 2.4.4 Slot 6

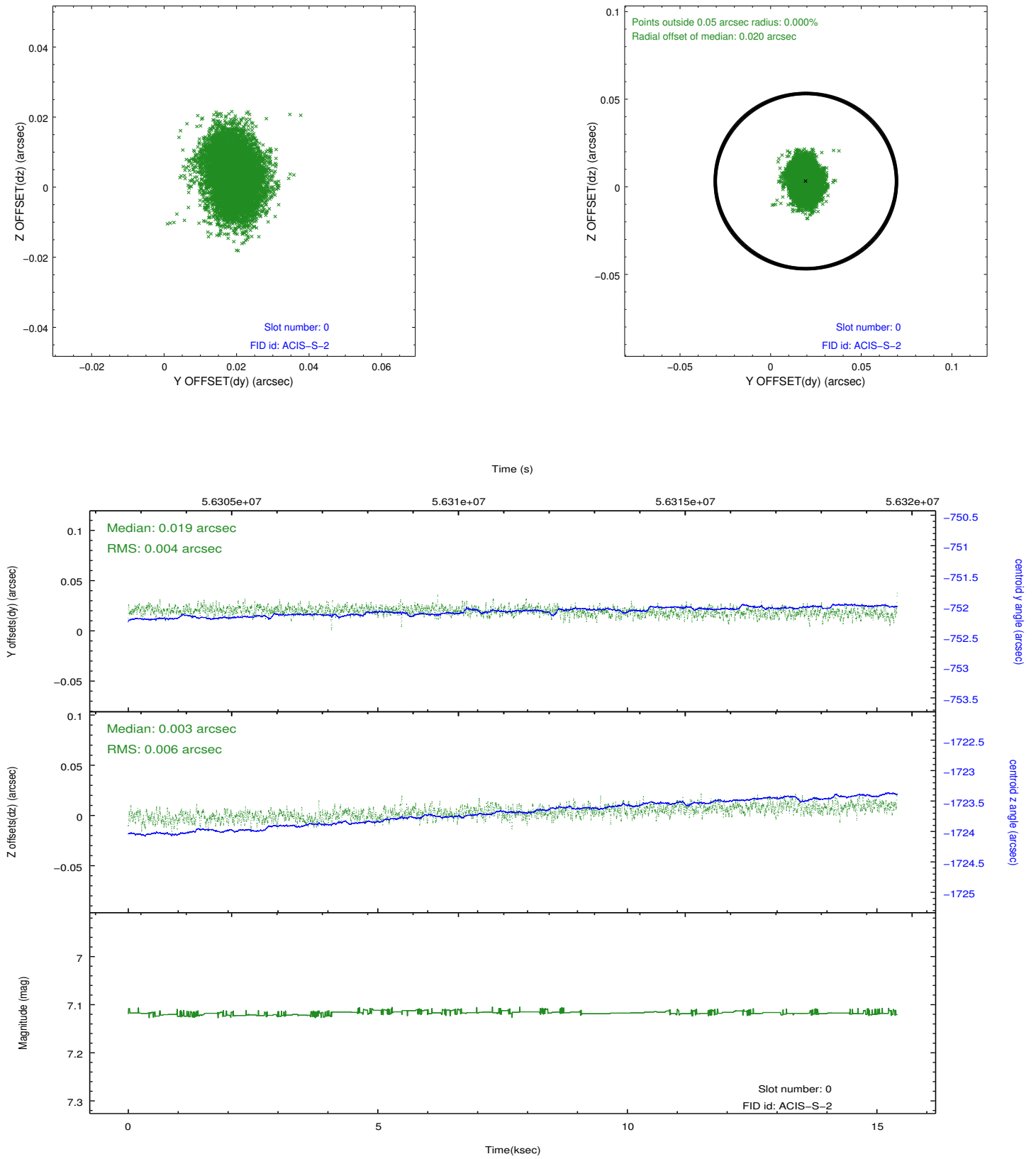


## 2.4.5 Slot 7

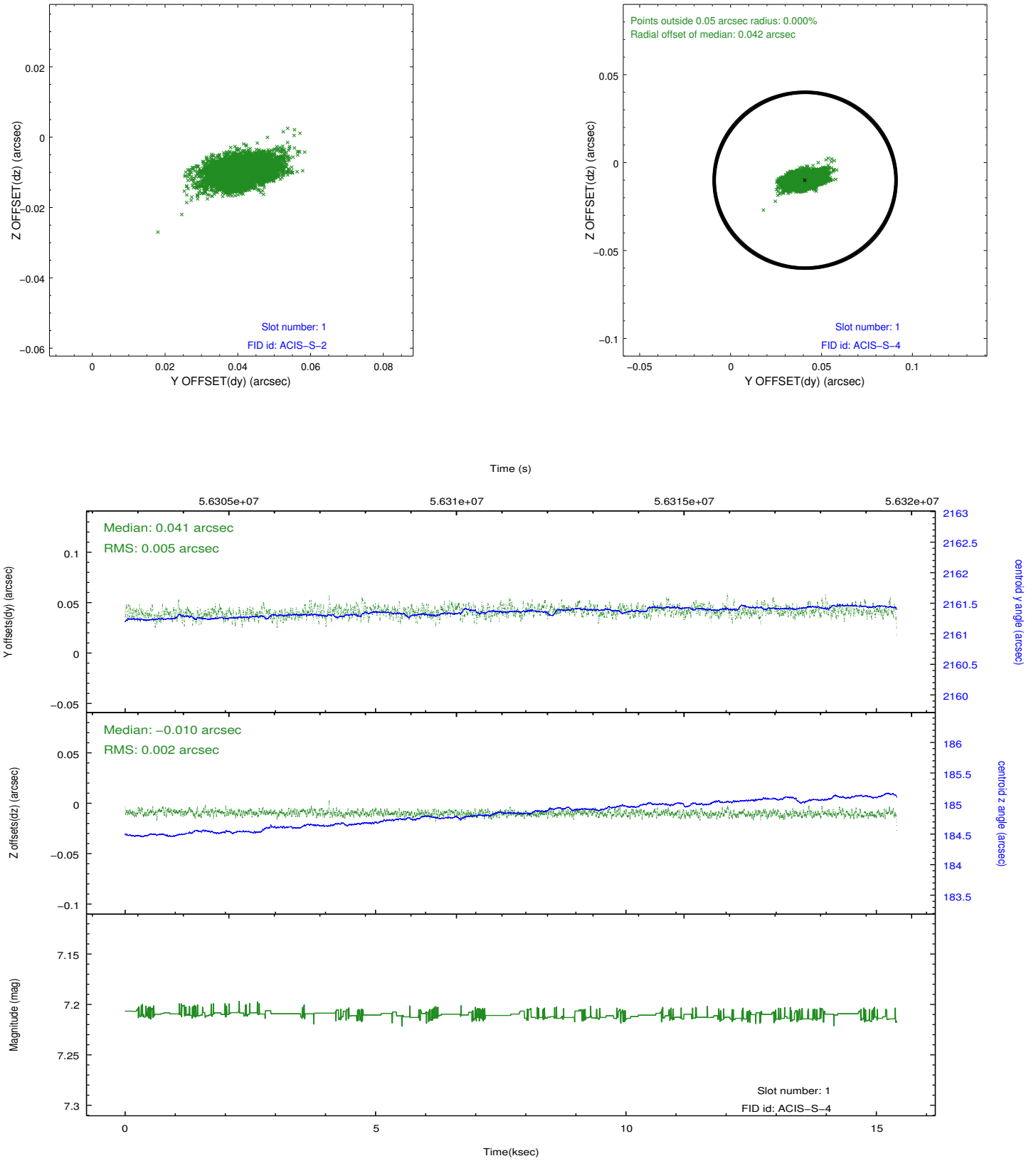


## 2.5 FID Slots

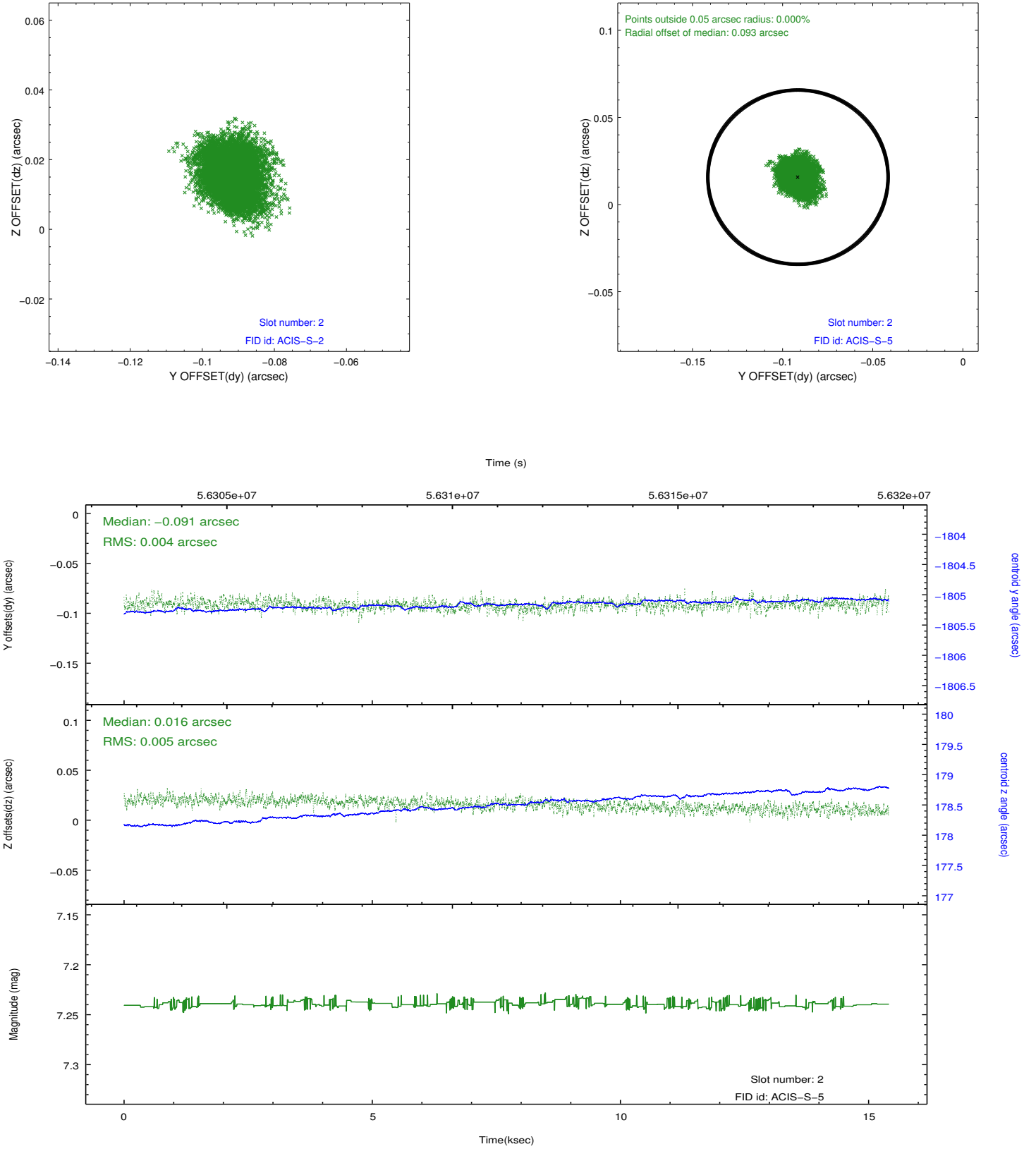
### 2.5.1 Slot 0



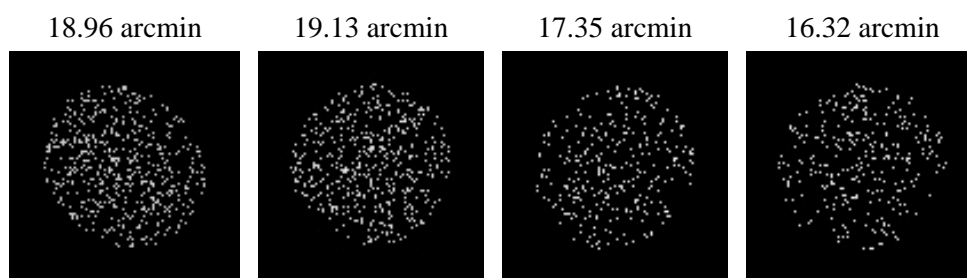
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.03.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.217

## A.2 Comments

The front-end processor designated FEP0 suffered from a rare problem. As a result, the top half of the bias-map for CCD\_ID 7 (the CCD associated with FEP0) was corrupted for part of the observation and

many invalid events were telemetered for this region. The standard pipeline processing tools identify the problem and remove the spurious

events from the Level 2 event file during the interval in question.

Therefore, the effective exposure for the top half of CCD 7 is much less than

the exposure for the bottom half of this CCD. The effect can be clearly

seen in Level 1 event data. The time interval of the problem started at 1999-10-14T19:13:22, so the first portion of the observation is usable

for the full CCD 7. The GTI does not include the portion of the observation affected by the FEP0 problem.

===

Charge time for this ObsId remains at previous value of 11.217 ksec, although with the current processing the charge time would have been 11.17 ksec.

==

The focal plane temperature is approximately -110 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T\_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

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.