

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 15128 - L2 Version 3  
Chandra X-Ray Center

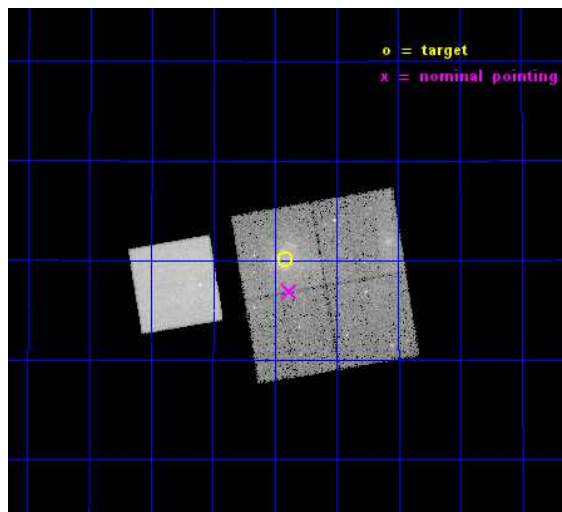
L2 Processing Date : Dec 3 2014

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# 1 Front

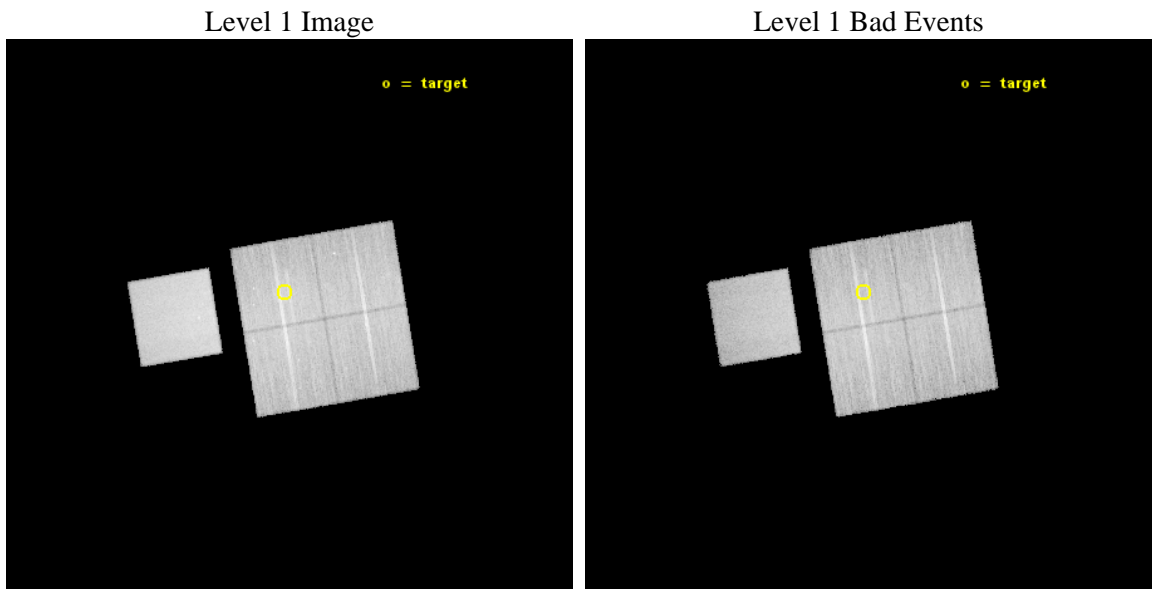
seq_num	801257	Sequence number
obs_id	15128	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G195.62+44.05	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	140.103333	Observer's specified target RA [deg]
dec_targ	30.502556	Observer's specified target Dec [deg]
ra_nom	140.09541277786	Nominal RA [deg]
dec_nom	30.448569853881	Nominal Dec [deg]
roll_nom	260.43539467841	Nominal Roll [deg]
revision	3	Processing version of data
ontime	35566.259303212	Sum of GTIs [s]
livetime	35101.559941917	Livetime [s]
ontime0	35569.400273561	Sum of GTIs [s]
ontime1	35569.400273561	Sum of GTIs [s]
ontime2	35569.400273561	Sum of GTIs [s]
ontime3	35566.259303212	Sum of GTIs [s]
ontime7	35569.400273561	Sum of GTIs [s]
l2events	179374	Number of level 2 events



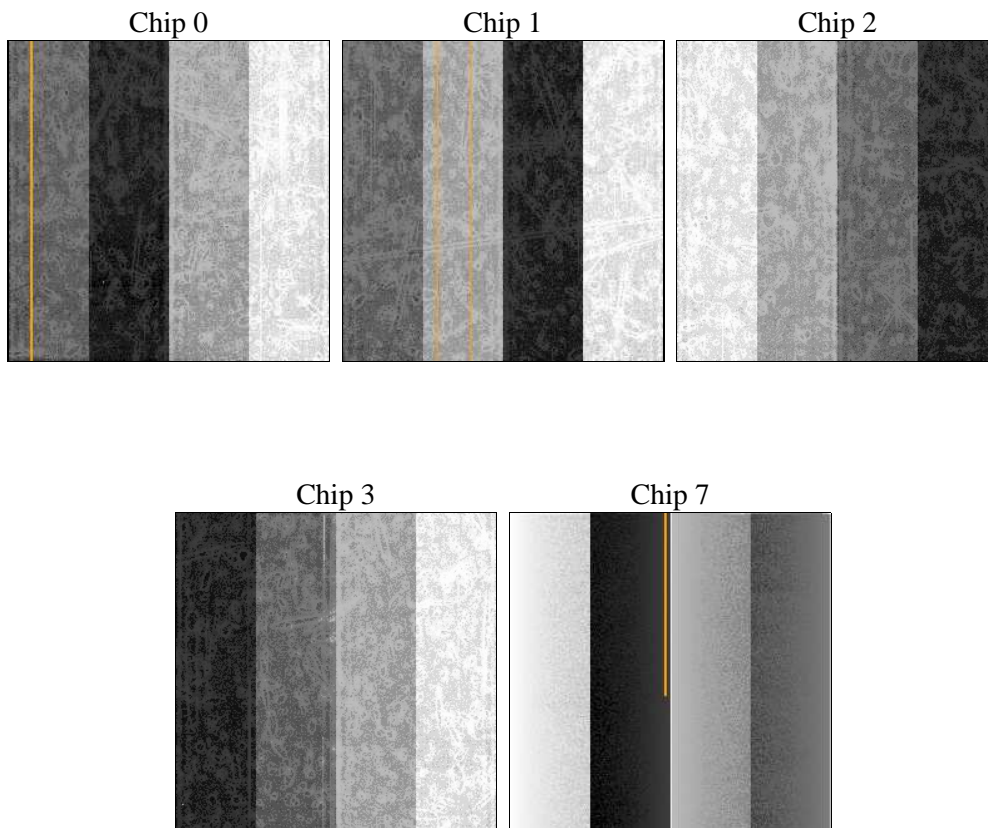
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35500.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	35566.259303212	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	35569.400273561	Sum of GTIs [s]
date	2014-12-03T23:53:18	Date and time of file creation	ontime1	35569.400273561	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	35569.400273561	Sum of GTIs [s]
			ontime3	35566.259303212	Sum of GTIs [s]
			ontime7	35569.400273561	Sum of GTIs [s]
			l1events	886849	Number of level 1 events

### 2.1.4 Events

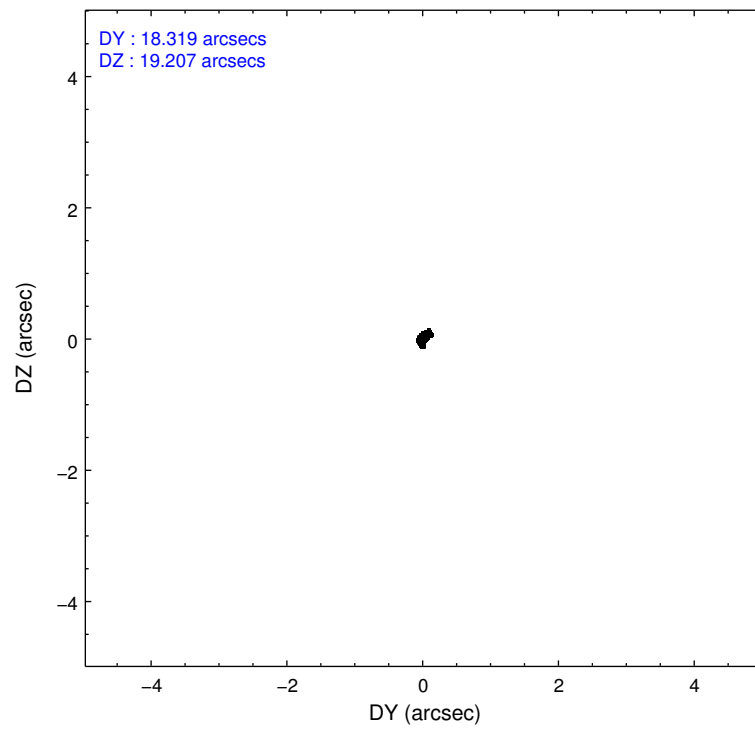
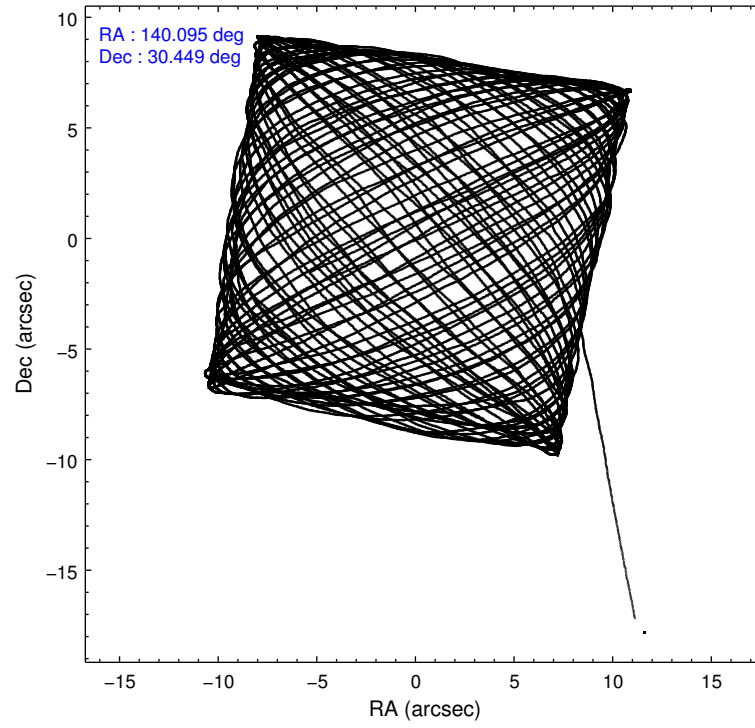
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	150587	161694	167934	173839	232795
rejected events	130565	137282	147688	144861	130756
rejected %	86%	84%	87%	83%	56%

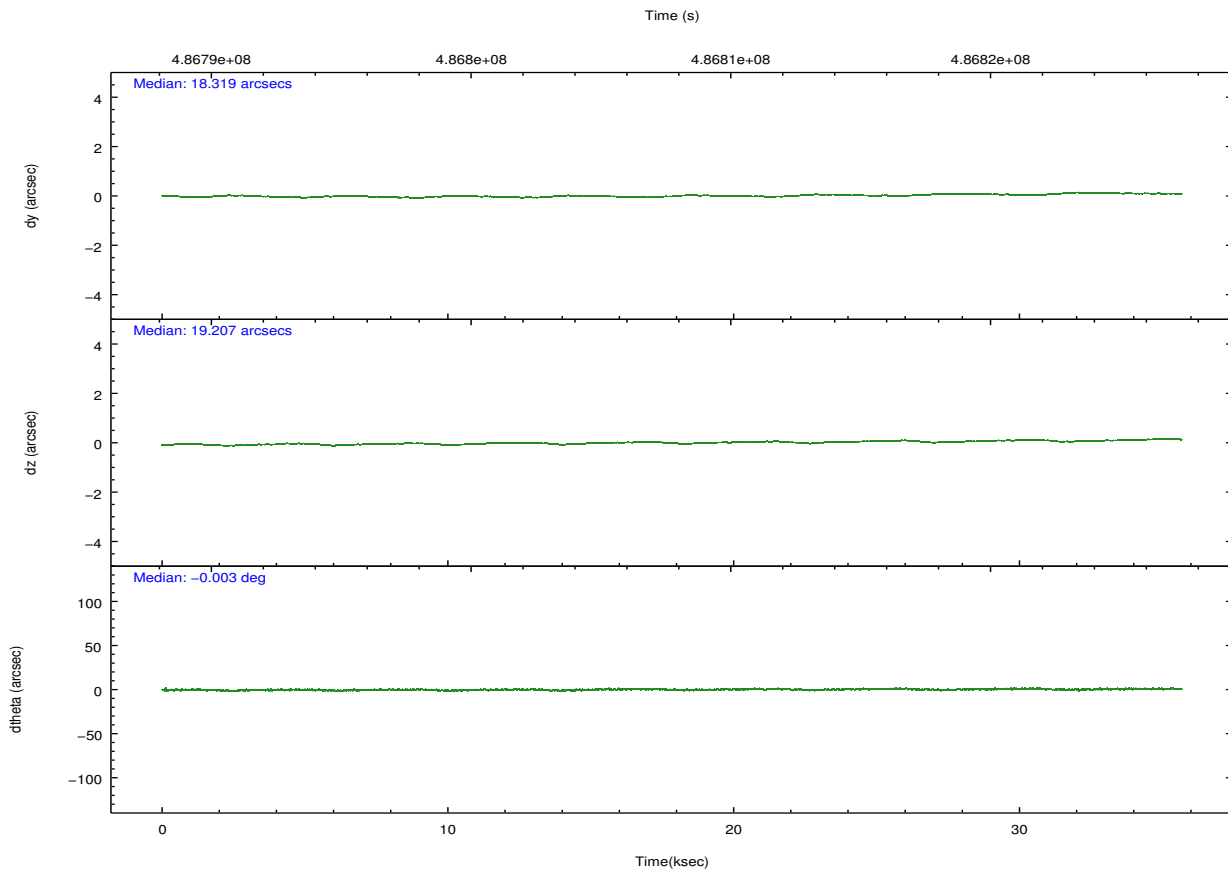
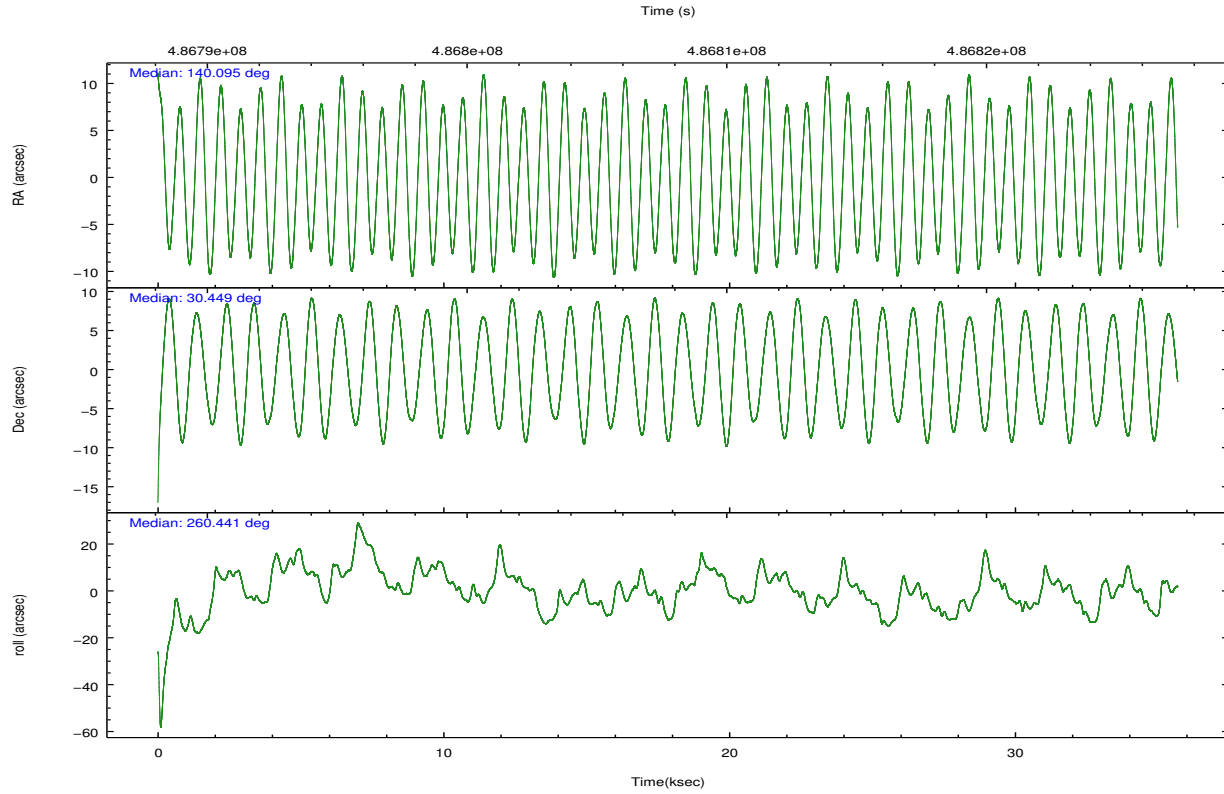
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	6894	9314	7431	14672	9485
	4%	5%	4%	8%	4%
grade 1 events	96	77	111	111	301
	0%	0%	0%	0%	0%
grade 2 events	5024	5782	4881	5326	20764
	3%	3%	2%	3%	8%
grade 3 events	2063	2189	1926	2276	8729
	1%	1%	1%	1%	3%
grade 4 events	1960	2210	2027	2339	8607
	1%	1%	1%	1%	3%
grade 5 events	7911	8410	7422	8909	23564
	5%	5%	4%	5%	10%
grade 6 events	4087	4922	3986	4370	54469
	2%	3%	2%	2%	23%
grade 7 events	122552	128790	140150	135836	106876
	81%	79%	83%	78%	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	140.084147	140.0954127778615	CCD I2 on	Y	Y
[deg] Pointing Dec	30.474287	30.4485698538809	CCD I3 on	Y	Y
[deg] Pointing Roll	260.232404	260.4353946784103	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	N	N
[mm] SIM translation stage pos	-224.842463	-224.8401315267014	CCD S3 on	O1	Y
[mm] SIM translation stage offset	-8.75	-8.752321476228246	CCD S4 on	N	N
[s] Observation start time (MET)	486790064.184000	486788786.67872	CCD S5 on	N	N
Observation start date	2013-06-05T03:26:37	2013-06-05T03:06:26	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	486825564.184000	486826637.36827	On-chip summing requested	N	N
Observation end date	2013-06-05T13:18:17	2013-06-05T13:37:17	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





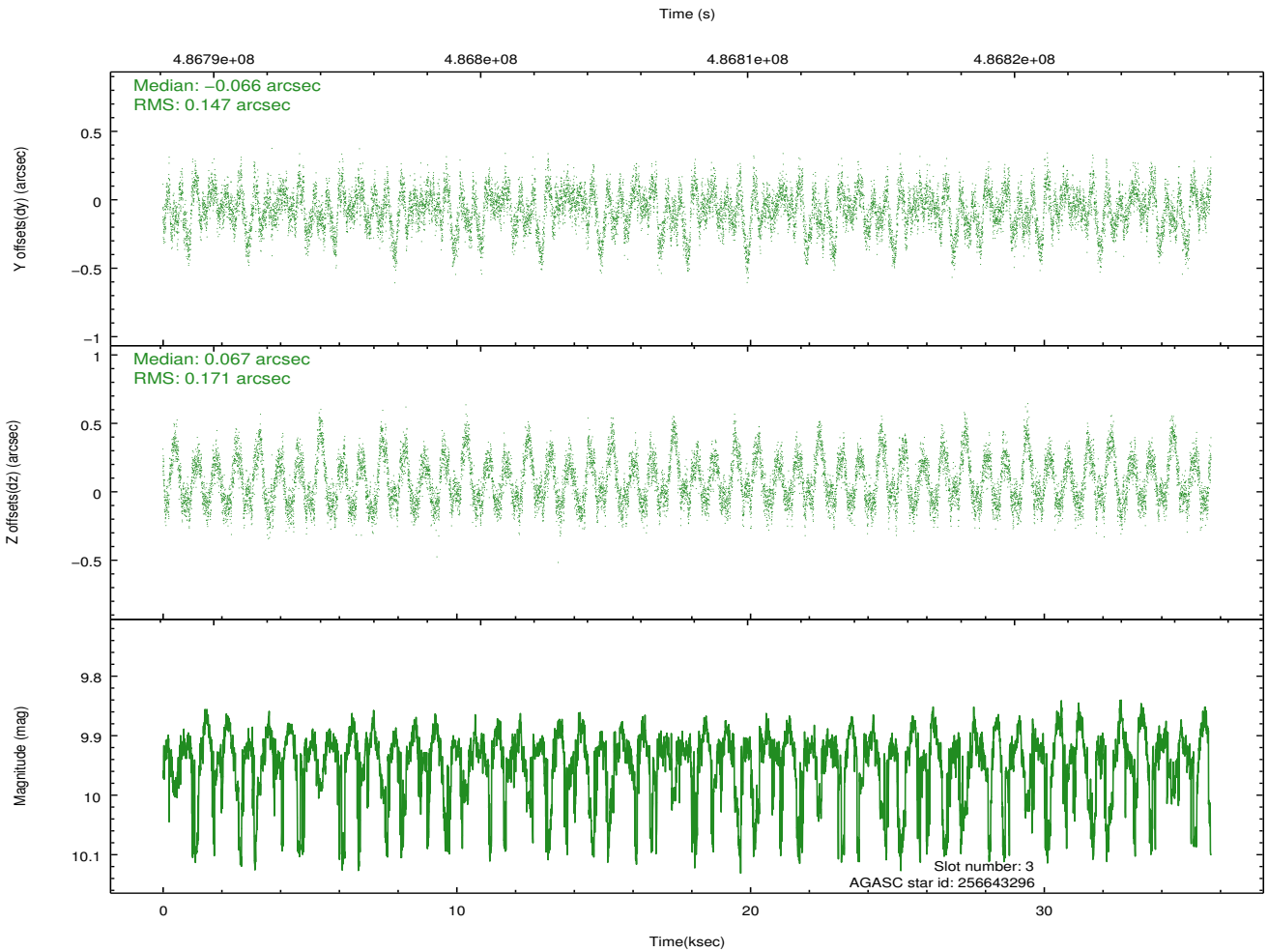
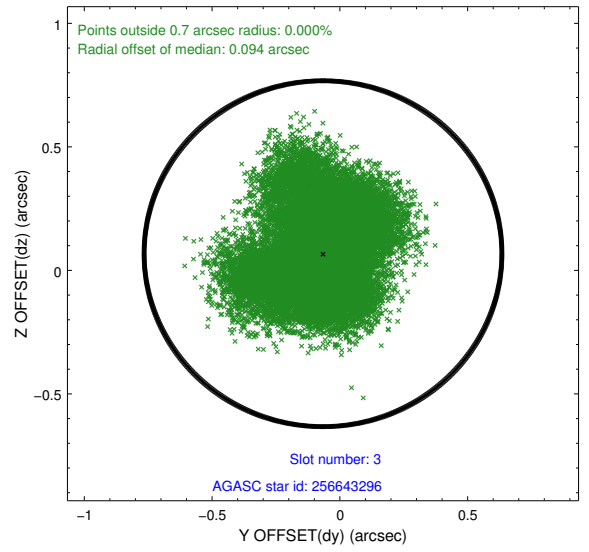
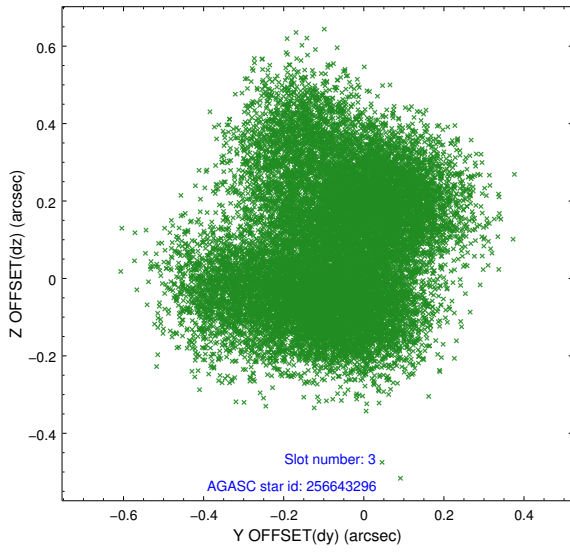
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.04	8703	0.107	-0.099	0.008	0.014	0.000000	0.000000	921.01	-1022.68
1	FID		ACIS-I-5	7.04	8702	-0.284	0.079	0.006	0.012	0.000000	0.000000	-1827.52	874.87
2	FID		ACIS-I-6	7.04	8703	0.085	0.091	0.007	0.011	0.000000	0.000000	386.42	1519.49
3	GUIDE	used	256643296	9.93	17247	-0.066	0.067	0.246	0.373	140.366940	29.899544	1888.58	1220.38
4	GUIDE	used	326769456	9.79	17392	-0.262	0.020	0.149	0.244	139.990989	30.956642	-1662.08	-577.77
5	GUIDE	used	326769528	9.91	17390	0.088	0.054	0.203	0.315	139.865265	30.652456	-517.00	-776.59
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	used	256644352	10.31	17294	0.260	-0.170	0.203	0.343	139.574742	29.883541	2362.79	-1207.18

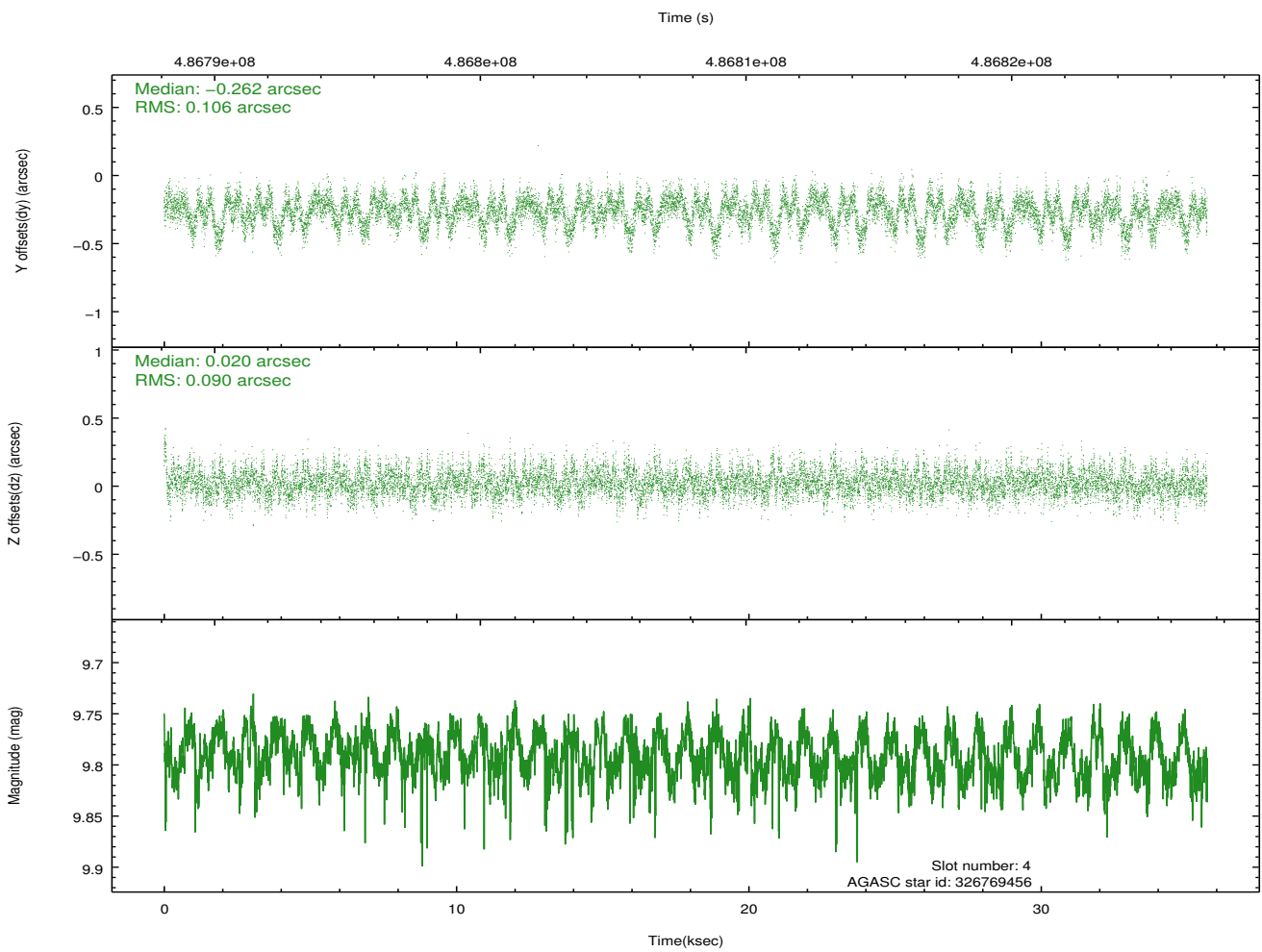
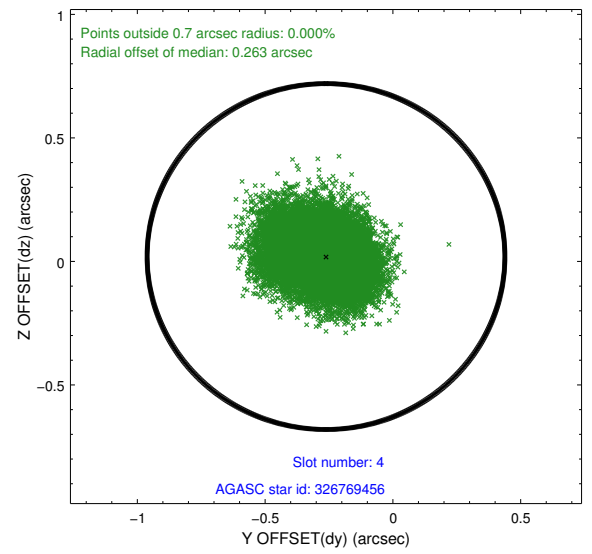
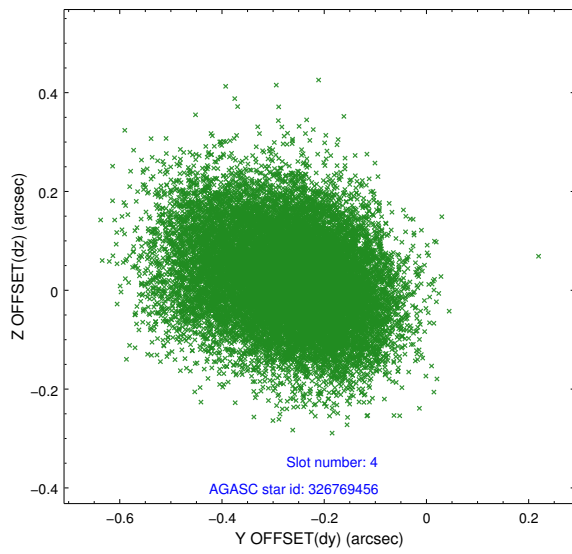
∞

## 2.4 Star Slots

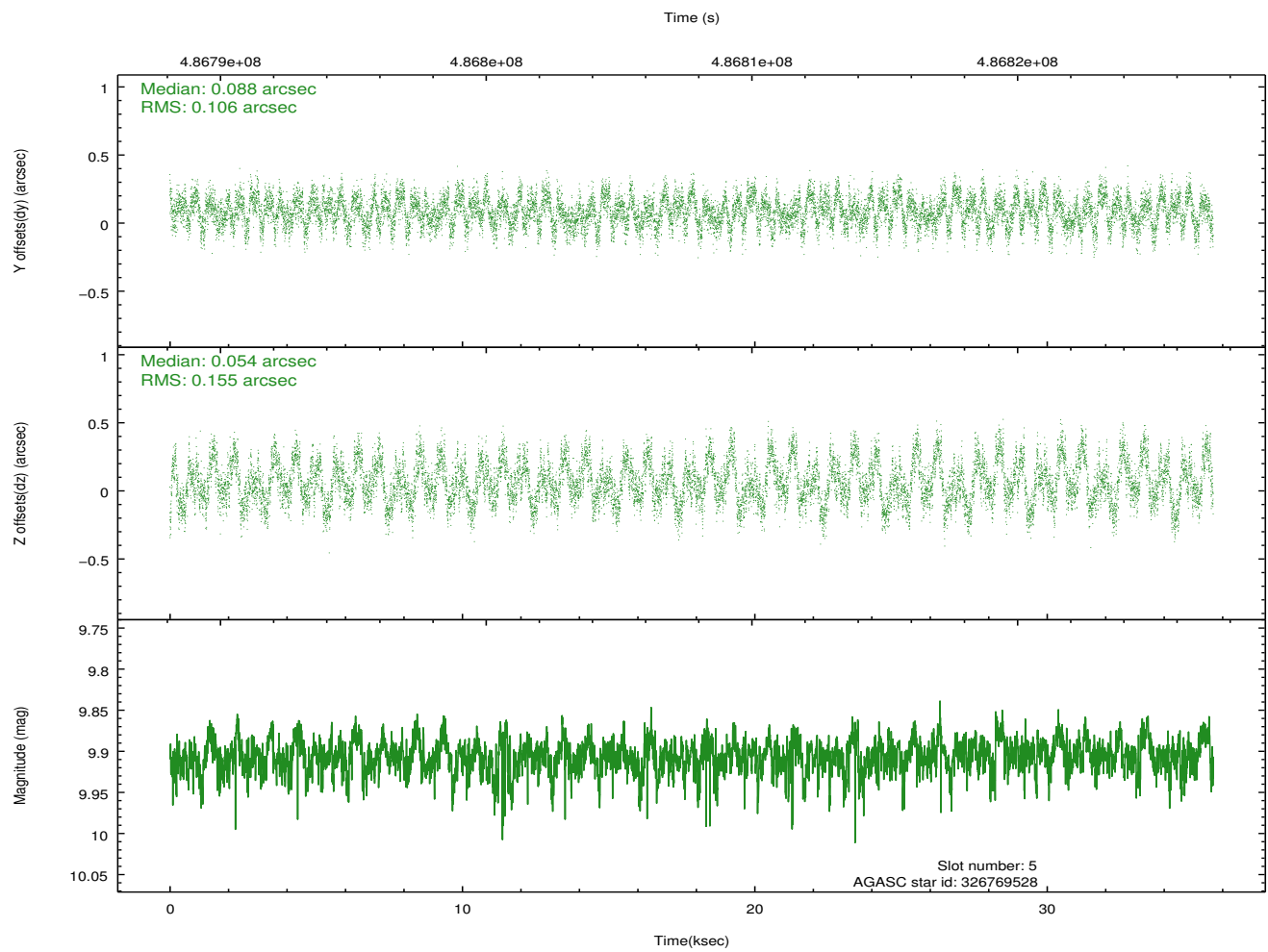
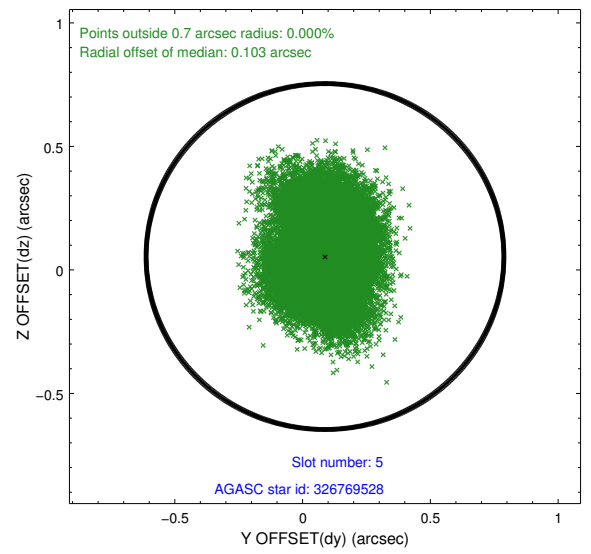
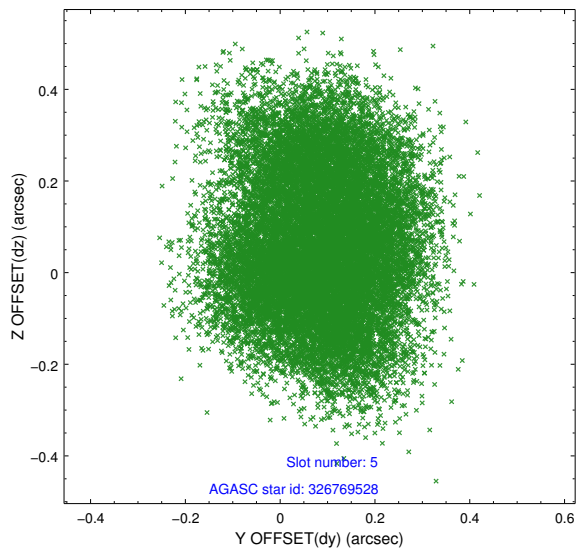
### 2.4.1 Slot 3



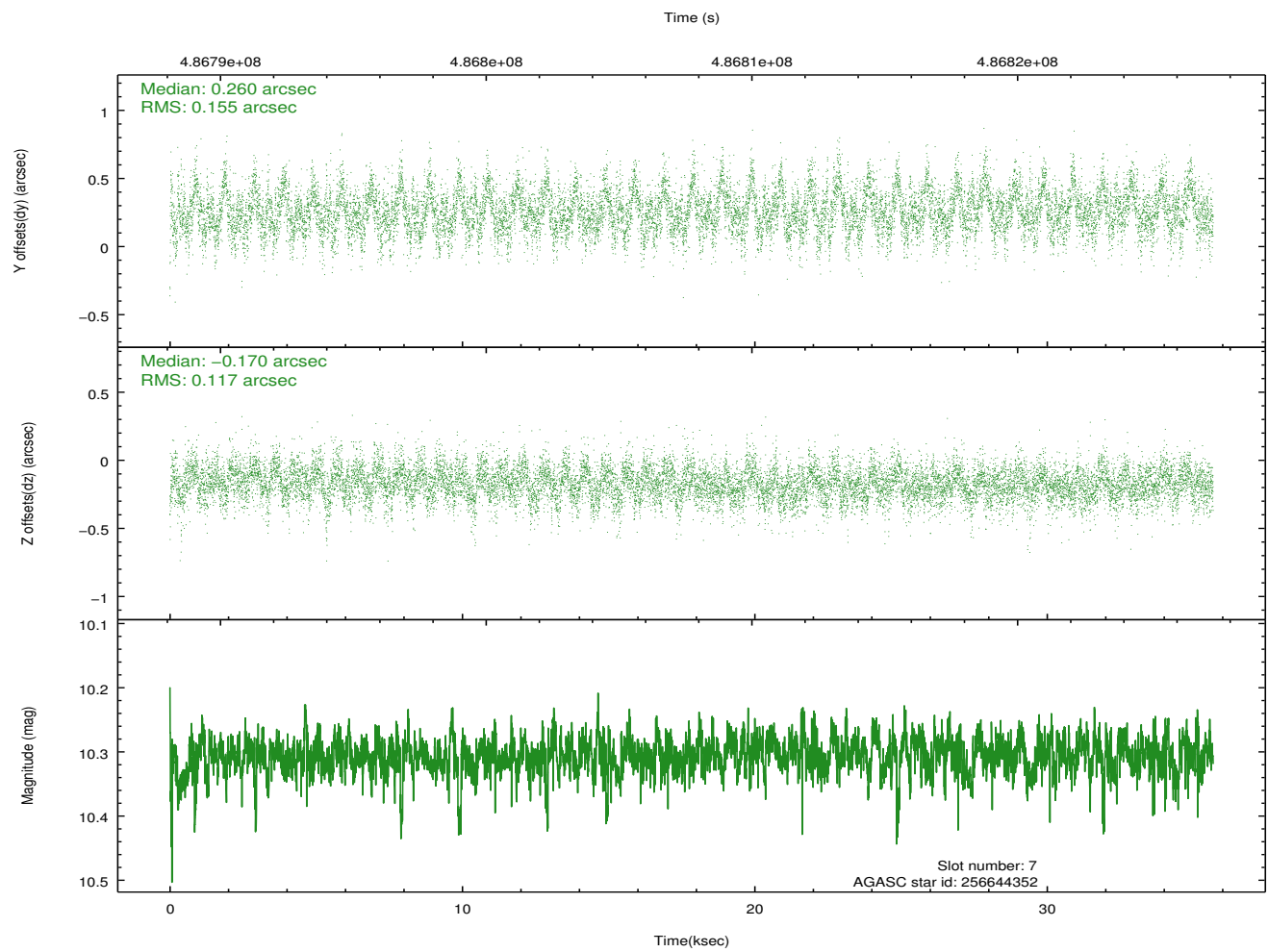
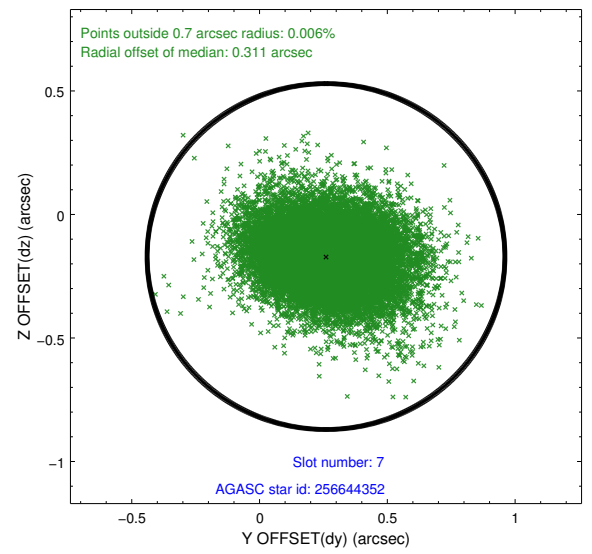
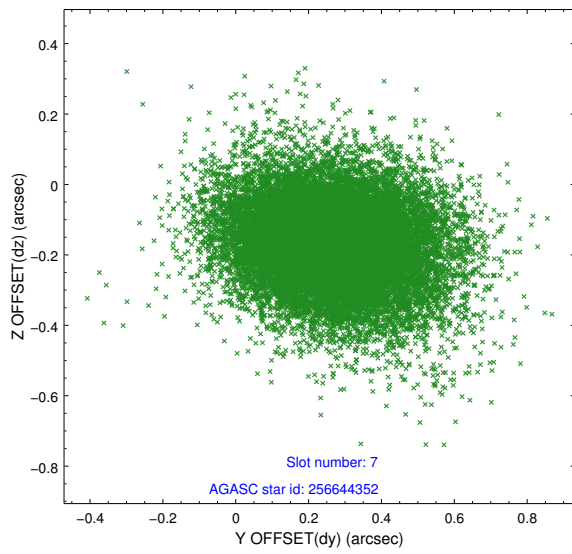
## 2.4.2 Slot 4



### 2.4.3 Slot 5

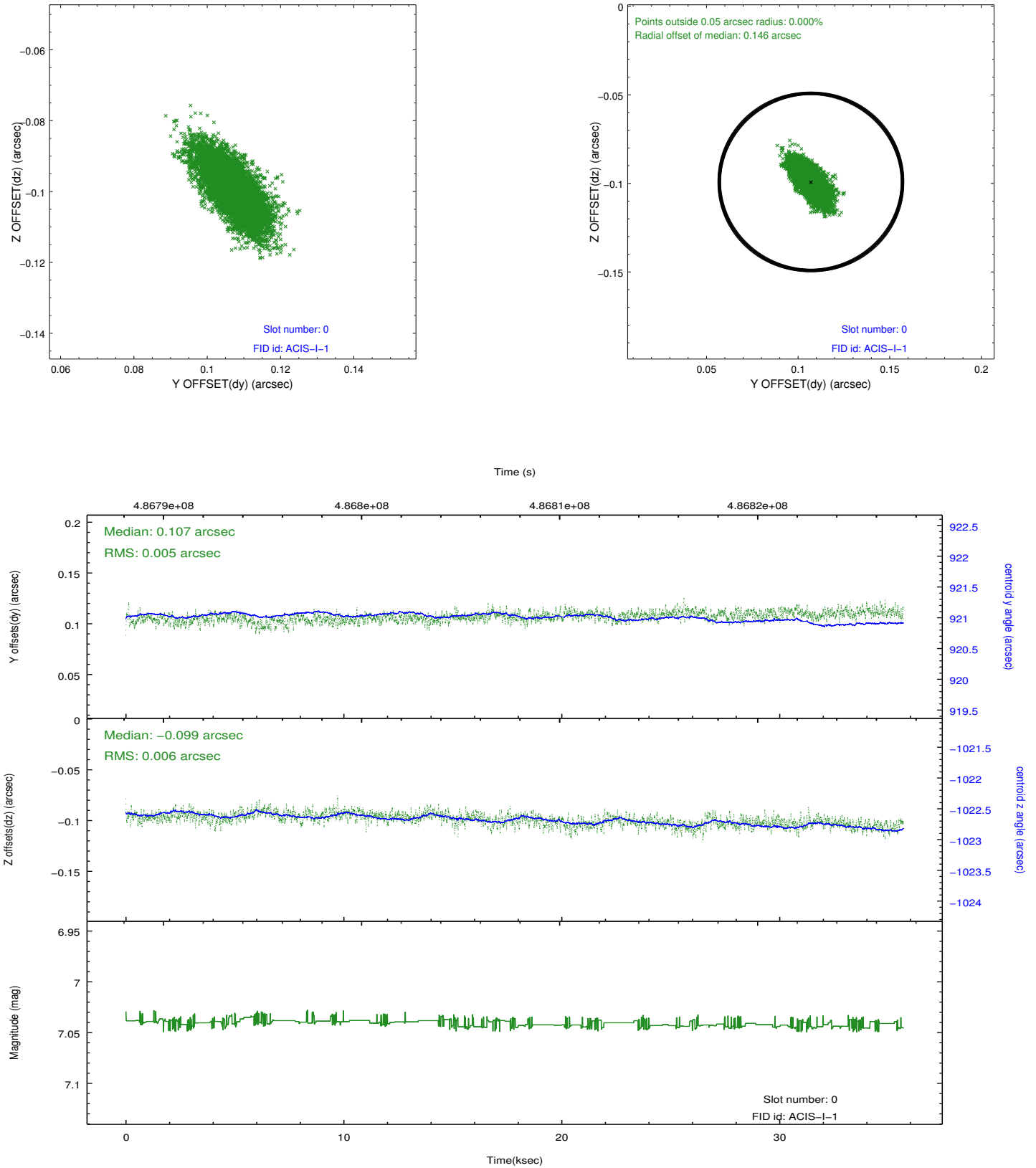


## 2.4.4 Slot 7

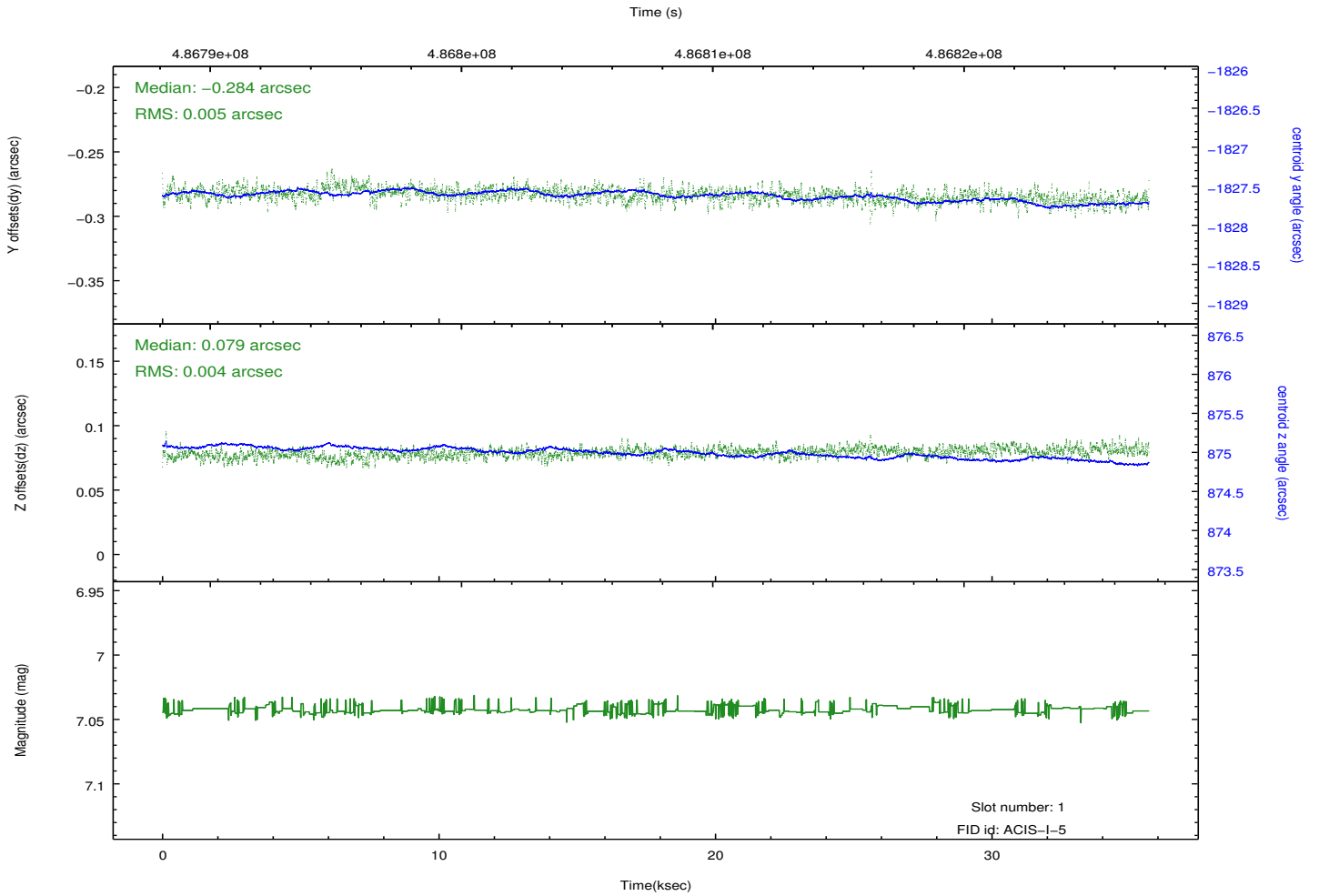
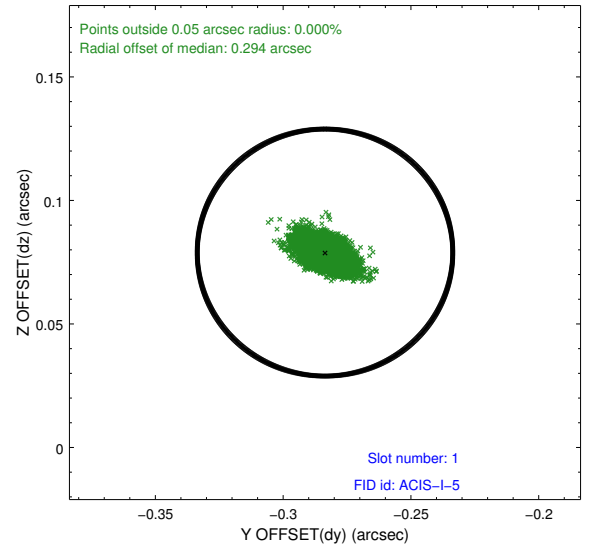
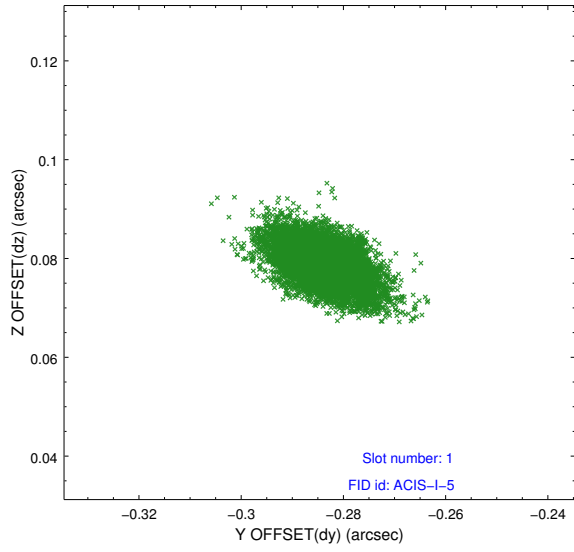


## 2.5 FID Slots

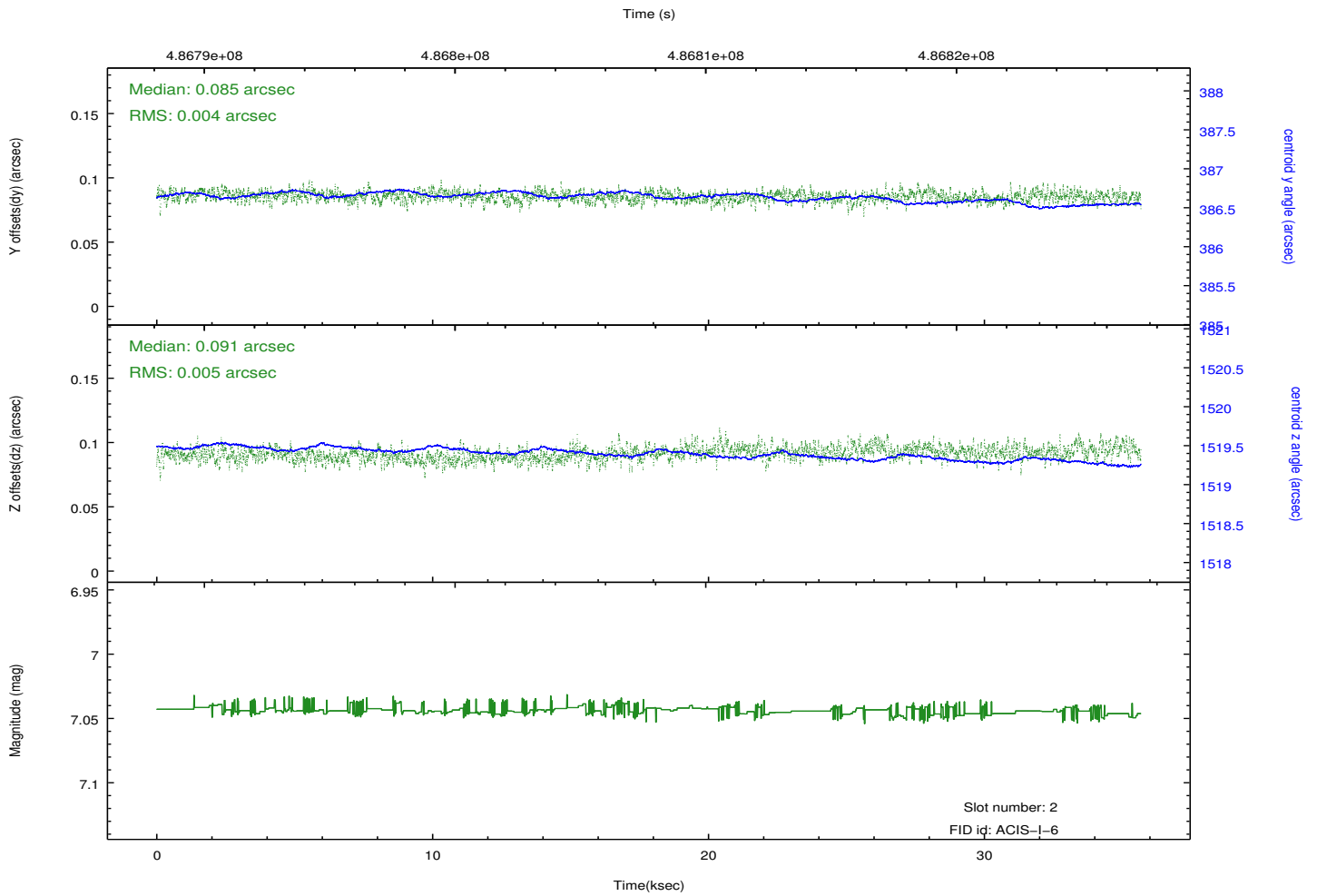
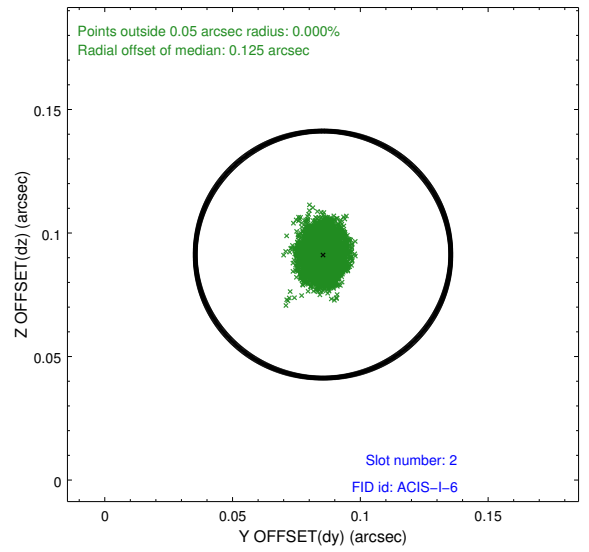
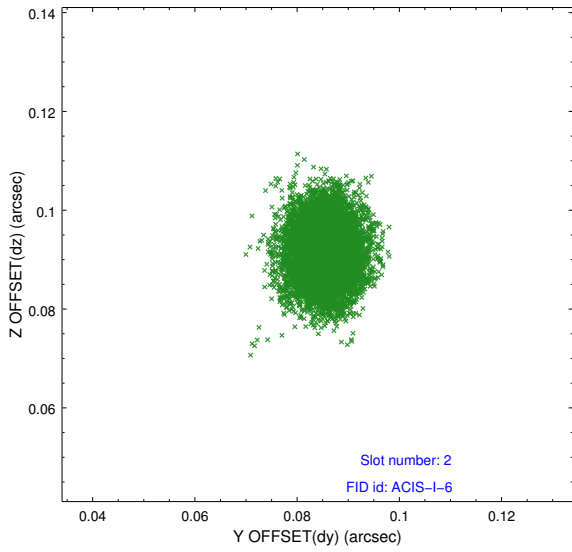
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.566259303212

## A.2 Comments

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.