

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 15317 - L2 Version 2  
Chandra X-Ray Center

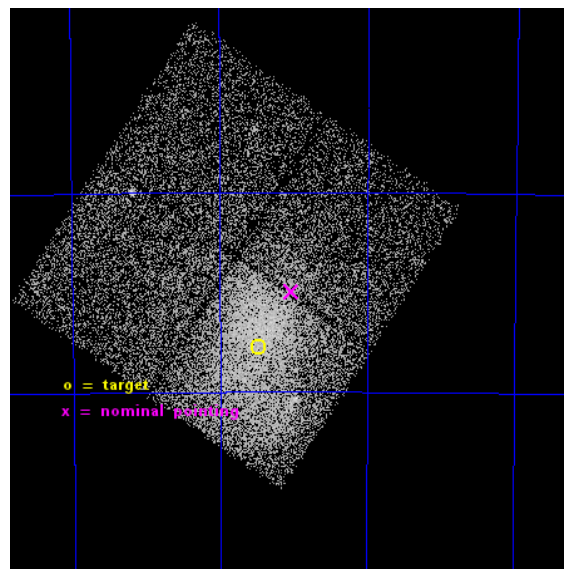
L2 Processing Date : Dec 9 2014

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# 1 Front

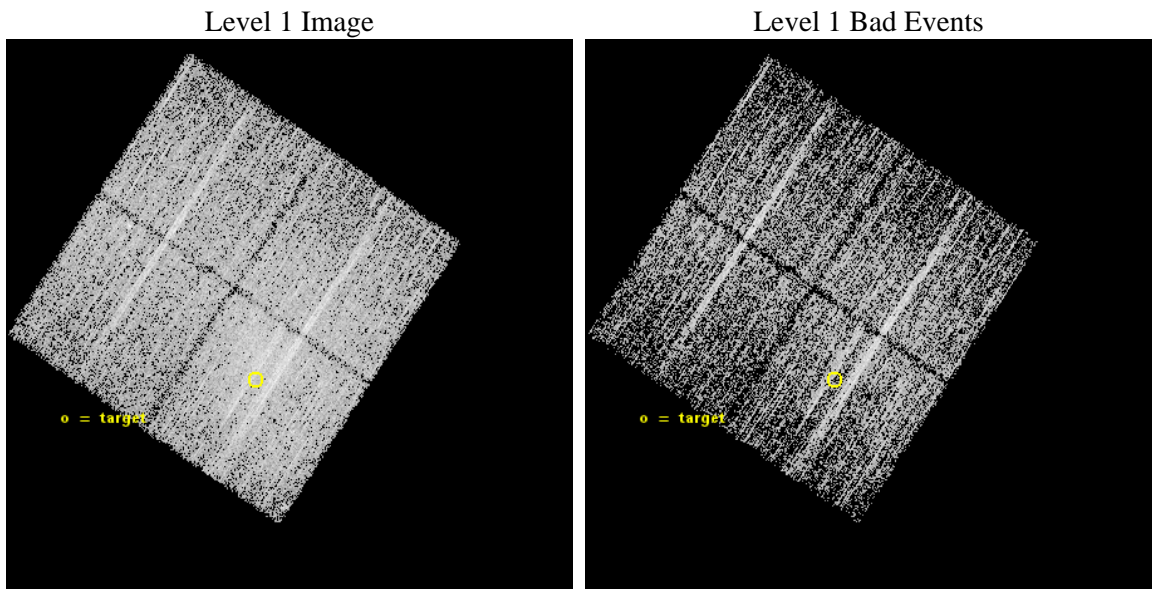
seq_num	801350	Sequence number
obs_id	15317	Observation id
title	Characterizing the Most Massive Clusters in the z	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	G315.70-18.04	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	247.87	Observer's specified target RA [deg]
dec_targ	-75.128694	Observer's specified target Dec [deg]
ra_nom	247.75787378223	Nominal RA [deg]
dec_nom	-75.082488657474	Nominal Dec [deg]
roll_nom	123.94693376184	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10295.100079179	Sum of GTIs [s]
livetime	10160.587017502	Livetime [s]
ontime0	10295.100079179	Sum of GTIs [s]
ontime1	10295.100079179	Sum of GTIs [s]
ontime2	10295.100079179	Sum of GTIs [s]
ontime3	10295.100079179	Sum of GTIs [s]
l2events	37069	Number of level 2 events



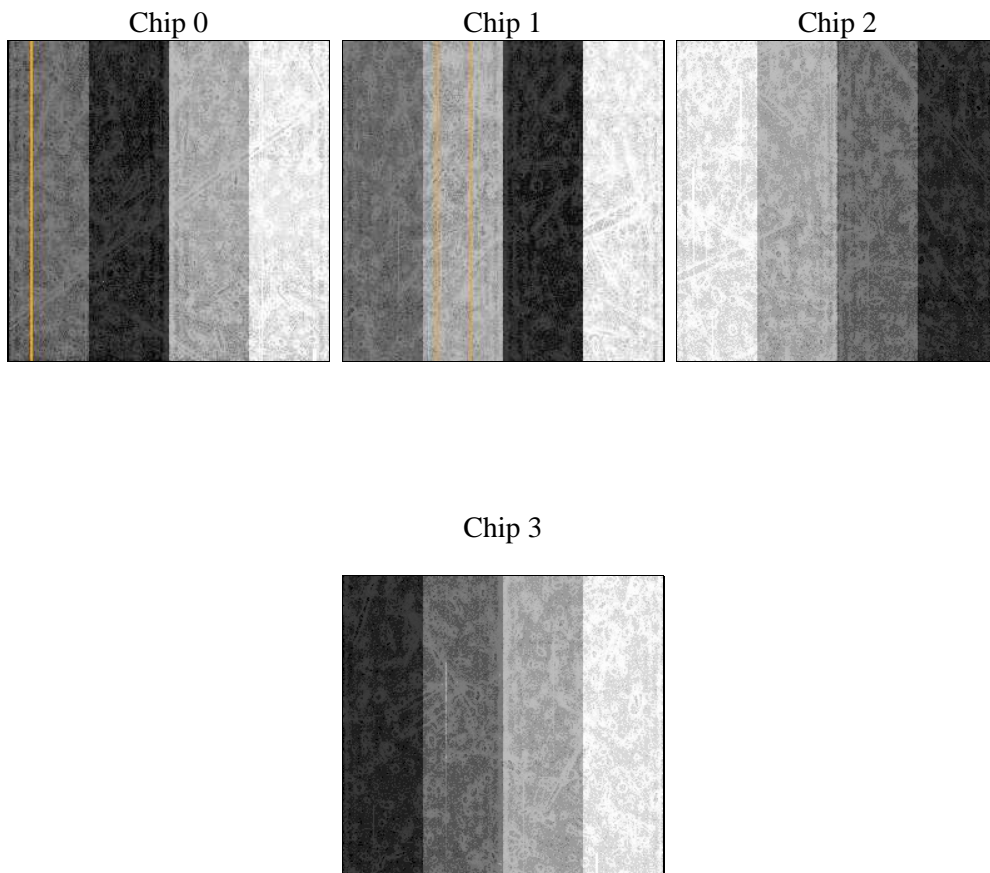
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10508.464000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	10295.100079179	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10295.100079179	Sum of GTIs [s]
date	2014-12-10T00:21:31	Date and time of file creation	ontime1	10295.100079179	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10295.100079179	Sum of GTIs [s]
			ontime3	10295.100079179	Sum of GTIs [s]
			l1events	203751	Number of level 1 events

### 2.1.4 Events

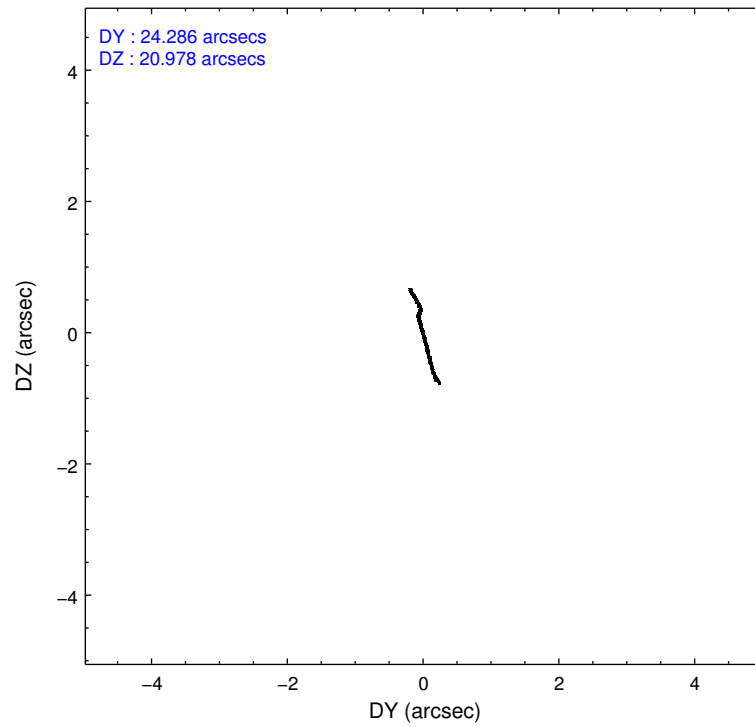
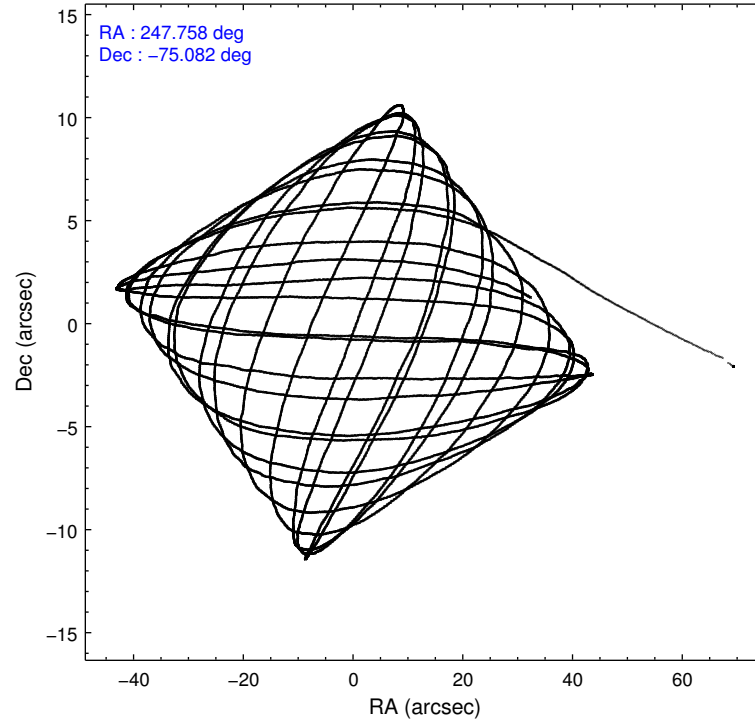
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	46081	44683	50055	62932
rejected events	39754	36601	42745	43269
rejected %	86%	81%	85%	68%

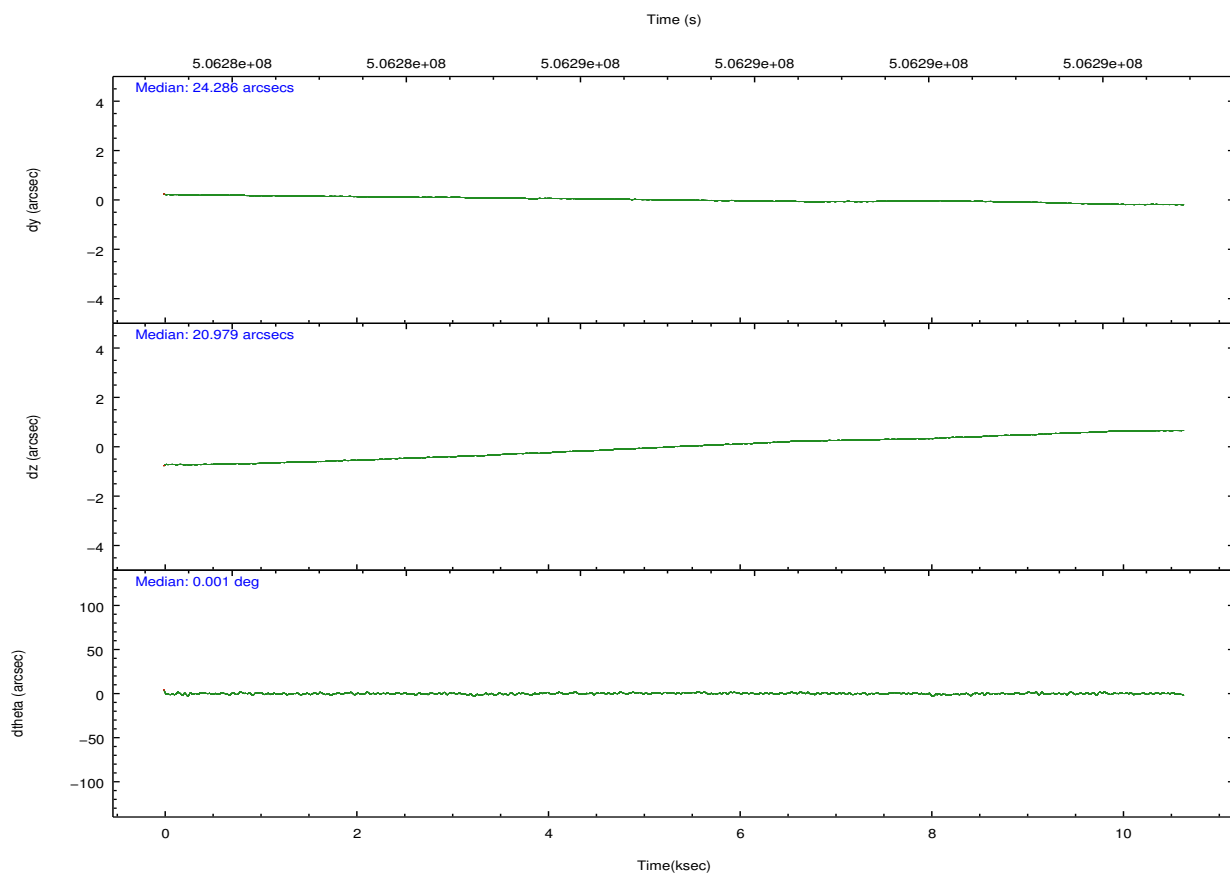
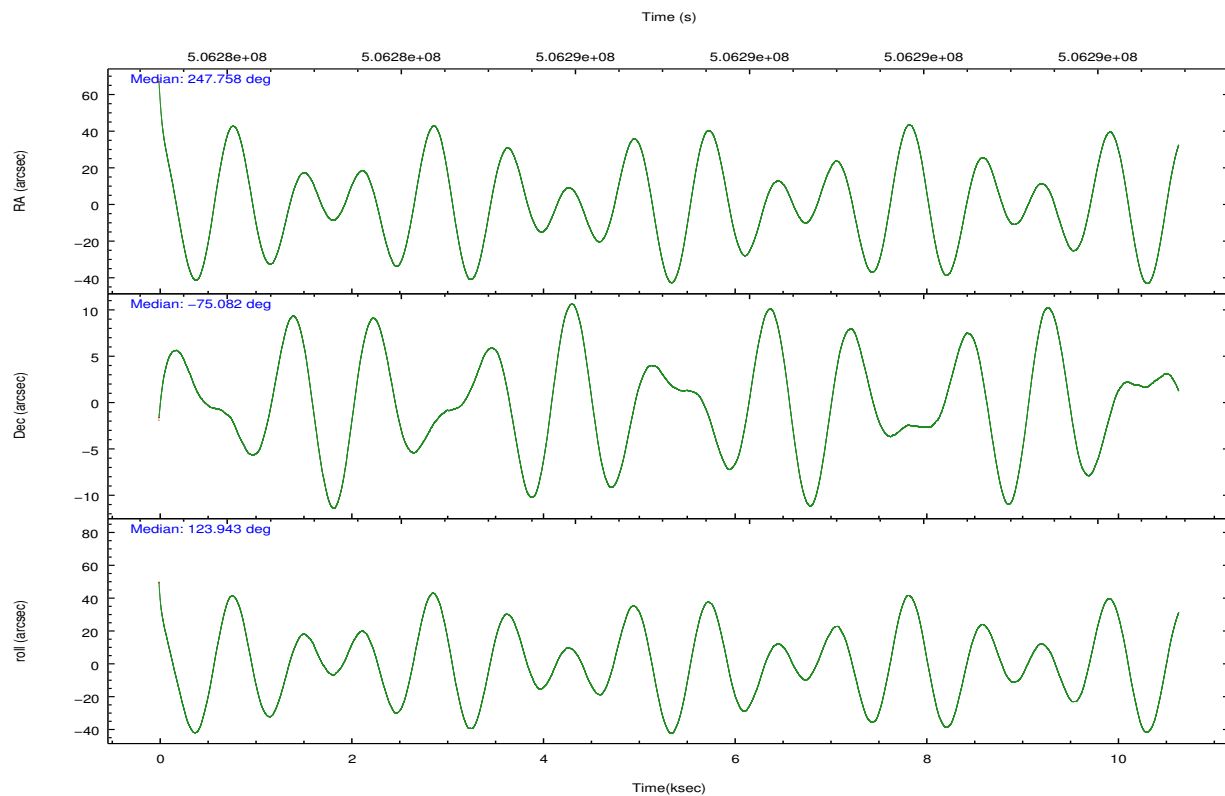
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	2457	3631	3405	13149
	5%	8%	6%	20%
grade 1 events	33	27	42	90
	0%	0%	0%	0%
grade 2 events	1443	1731	1508	2724
	3%	3%	3%	4%
grade 3 events	635	669	663	1092
	1%	1%	1%	1%
grade 4 events	591	655	624	1097
	1%	1%	1%	1%
grade 5 events	2197	2479	2242	2659
	4%	5%	4%	4%
grade 6 events	1206	1406	1113	1619
	2%	3%	2%	2%
grade 7 events	37519	34085	40458	40502
	81%	76%	80%	64%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	247.854181	247.7578737822315	CCD I2 on	Y	Y
[deg] Pointing Dec	-75.094490	-75.08248865747409	CCD I3 on	Y	Y
[deg] Pointing Roll	123.831327	123.9469337618436	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	O1	N
[mm] SIM translation stage pos	-225.840463	-225.8458576473255	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.752	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	506281879.184000	506280657.70617	CCD S5 on	N	N
Observation start date	2014-01-16T17:50:12	2014-01-16T17:30:57	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	506292388.184000	506292623.04433	On-chip summing requested	N	N
Observation end date	2014-01-16T20:45:21	2014-01-16T20:50:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



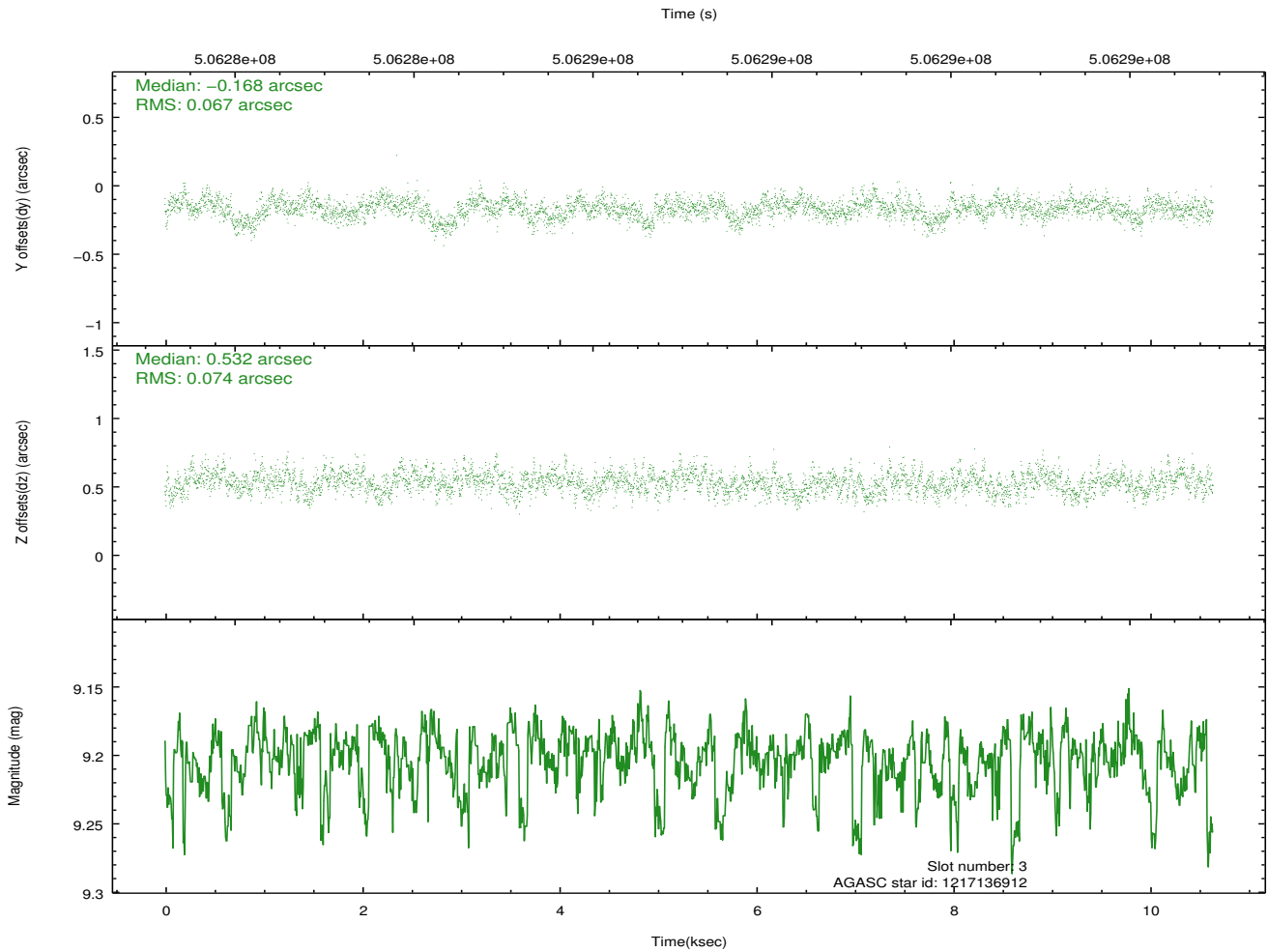
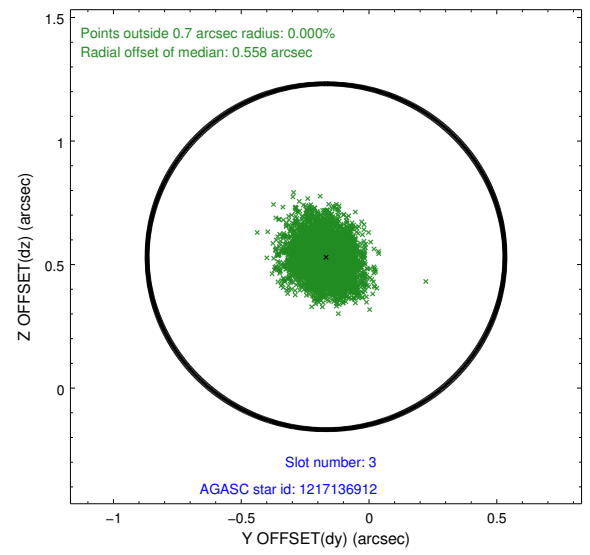
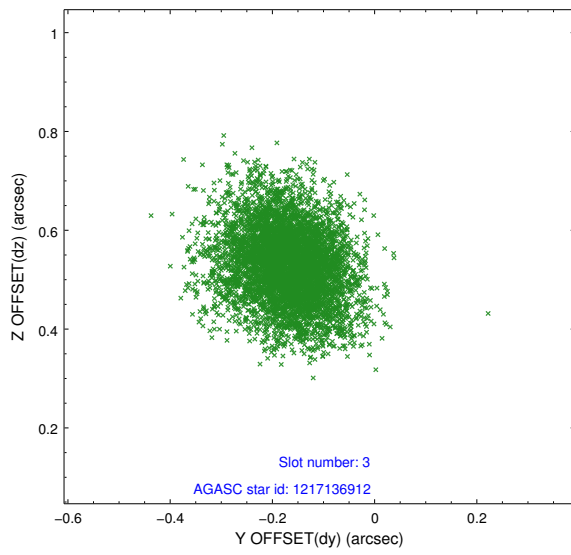


### Slot Statistics

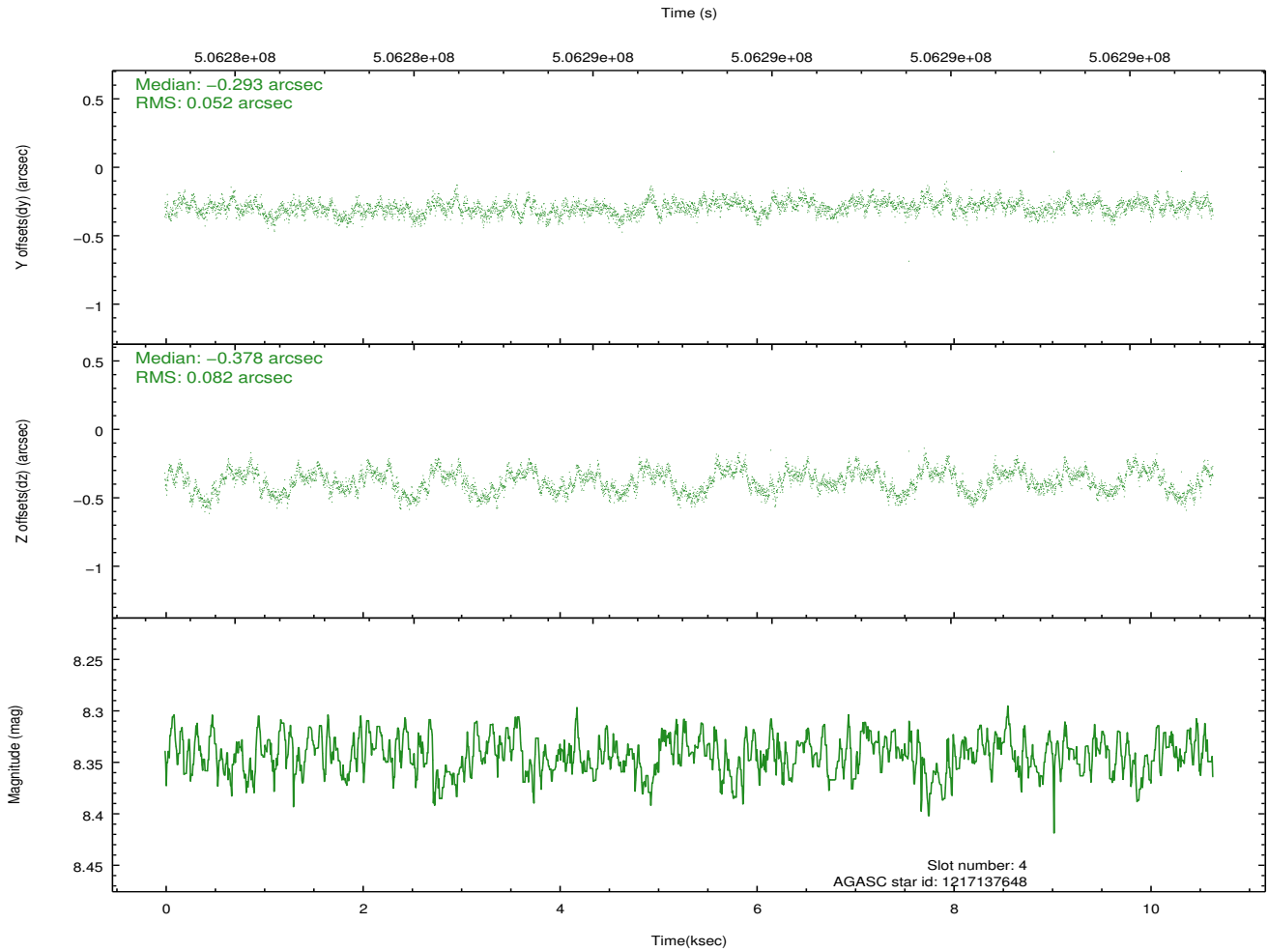
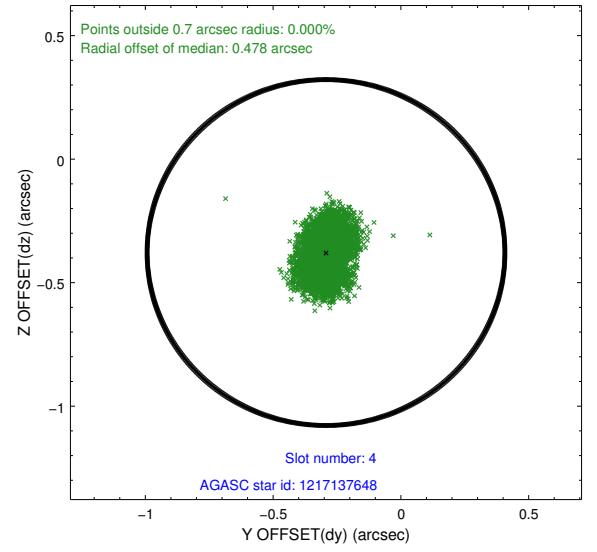
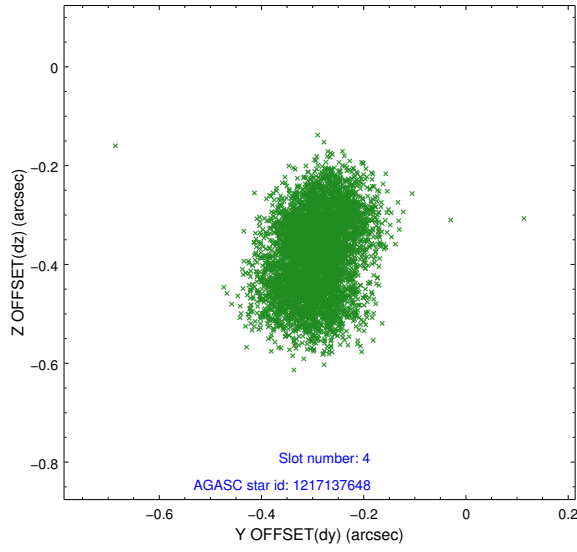
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.13	2596	-0.287	-0.158	0.012	0.018	0.000000	0.000000	-780.16	-1009.17
1	FID		ACIS-I-4	7.08	2596	0.176	0.195	0.011	0.017	0.000000	0.000000	2134.20	896.83
2	FID		ACIS-I-6	7.19	2596	0.012	0.026	0.020	0.030	0.000000	0.000000	381.38	1538.53
3	GUIDE	used	1217136912	9.20	5191	-0.168	0.532	0.105	0.175	249.259653	-74.527180	931.77	-2248.44
4	GUIDE	used	1217137648	8.34	5190	-0.293	-0.378	0.106	0.161	246.131171	-74.867949	1558.98	903.95
5	GUIDE	used	1237594072	8.54	5189	0.339	-0.185	0.065	0.104	248.210029	-75.718211	-2041.44	988.32
6	GUIDE	used	1237600112	8.64	5190	0.218	0.496	0.093	0.152	249.788726	-75.488665	-2173.99	-642.29
7	GUIDE	used	1237598336	7.65	5190	-0.092	-0.459	0.081	0.141	246.785551	-75.907427	-1917.43	2412.08

## 2.4 Star Slots

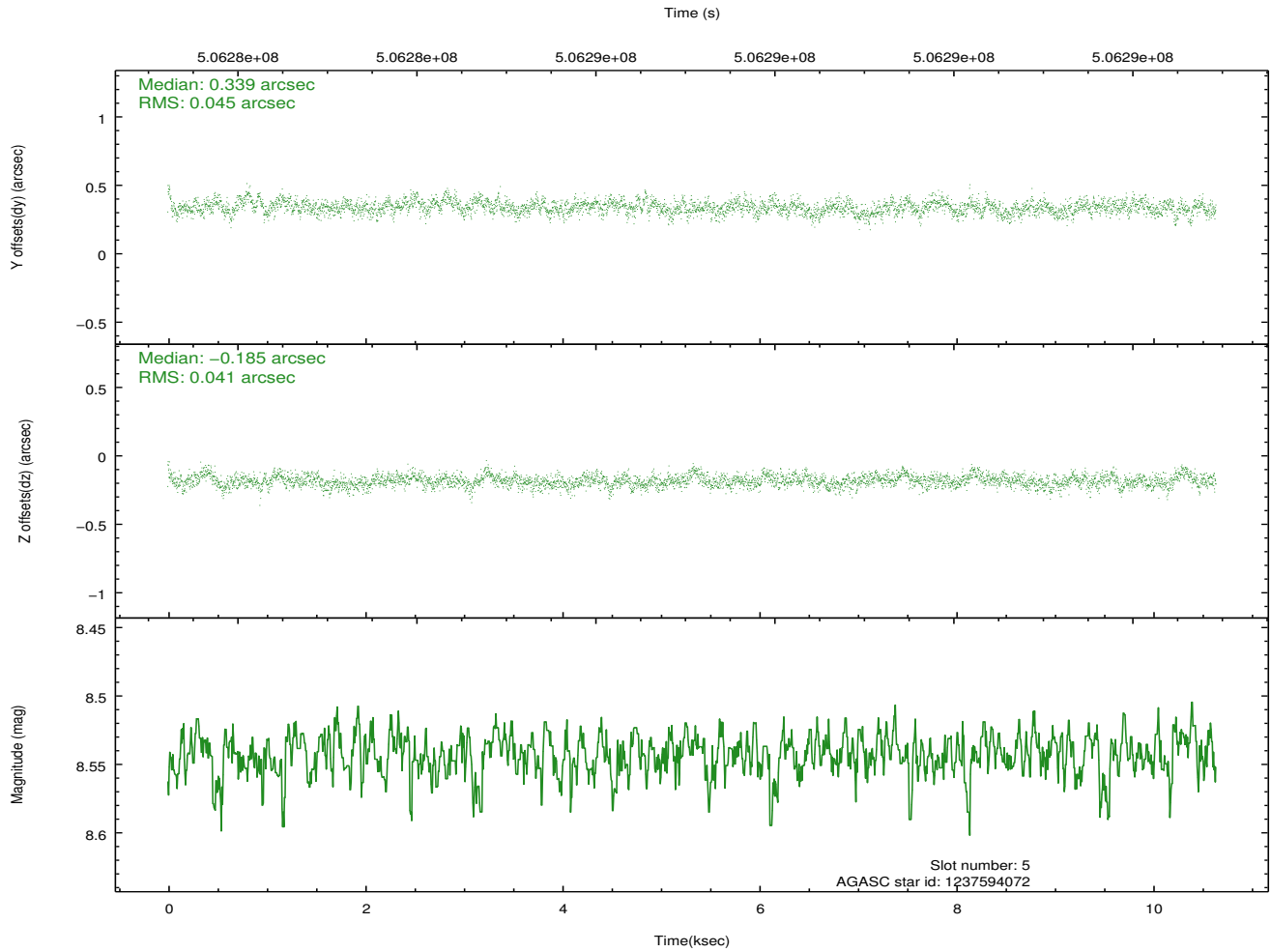
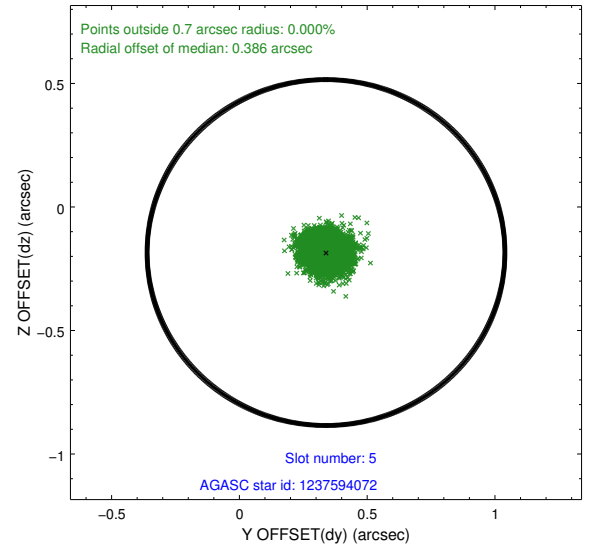
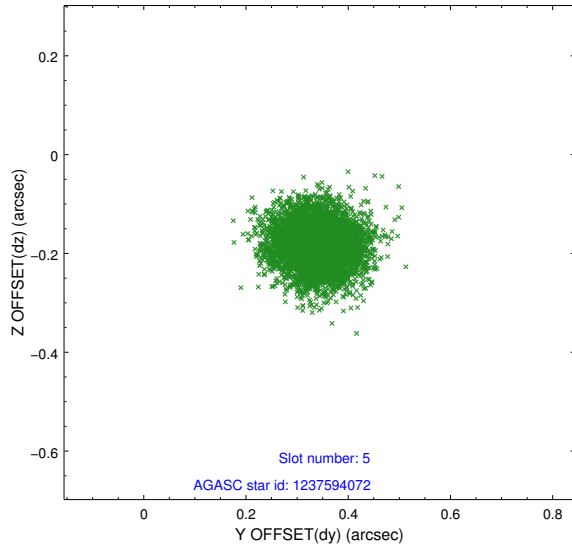
### 2.4.1 Slot 3



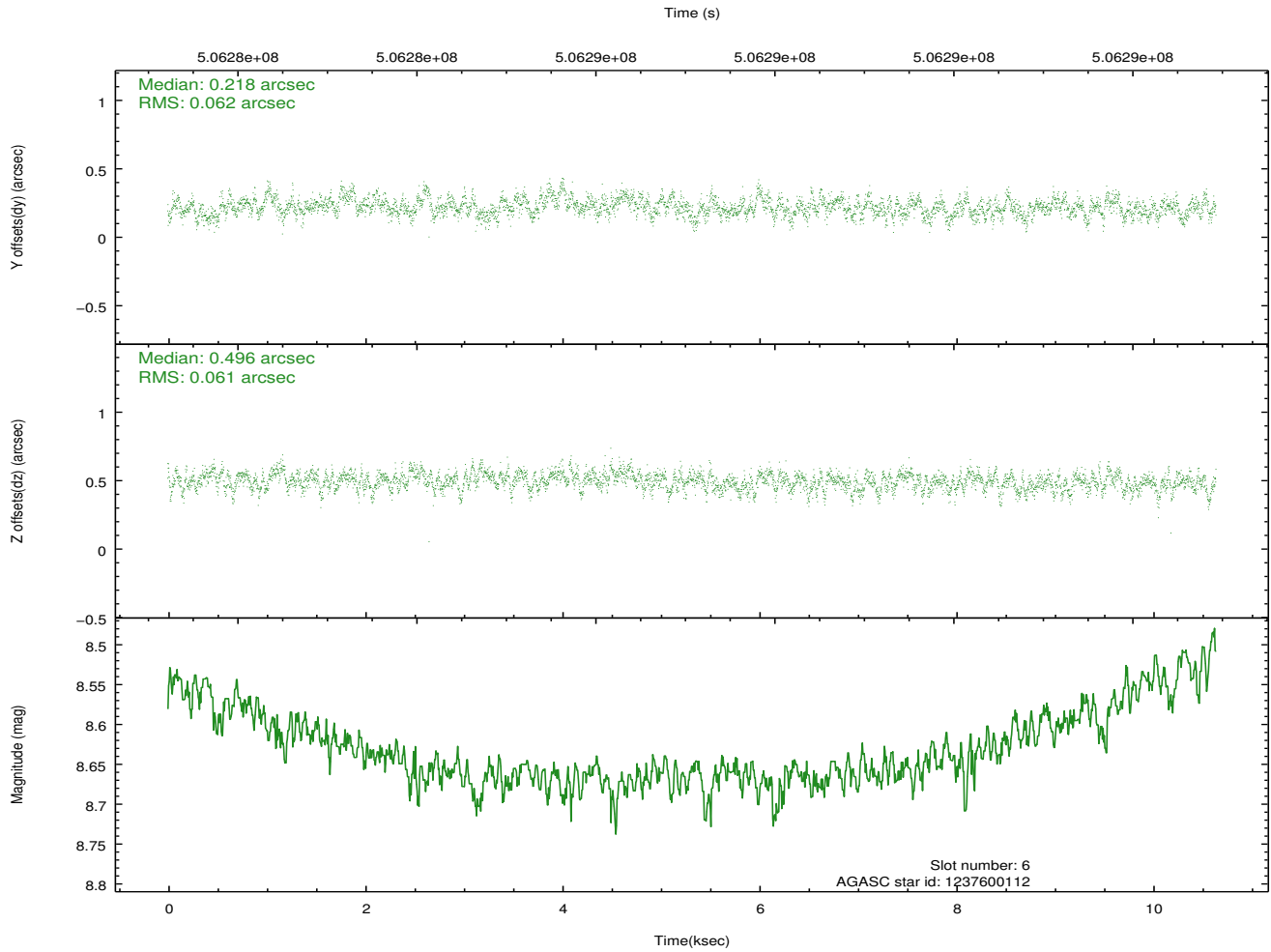
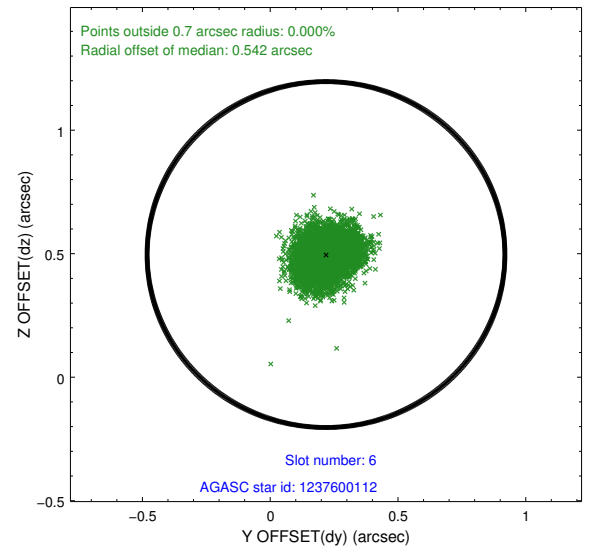
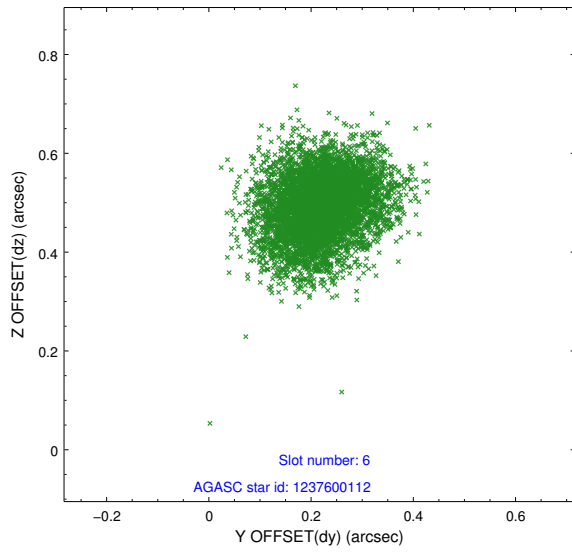
## 2.4.2 Slot 4



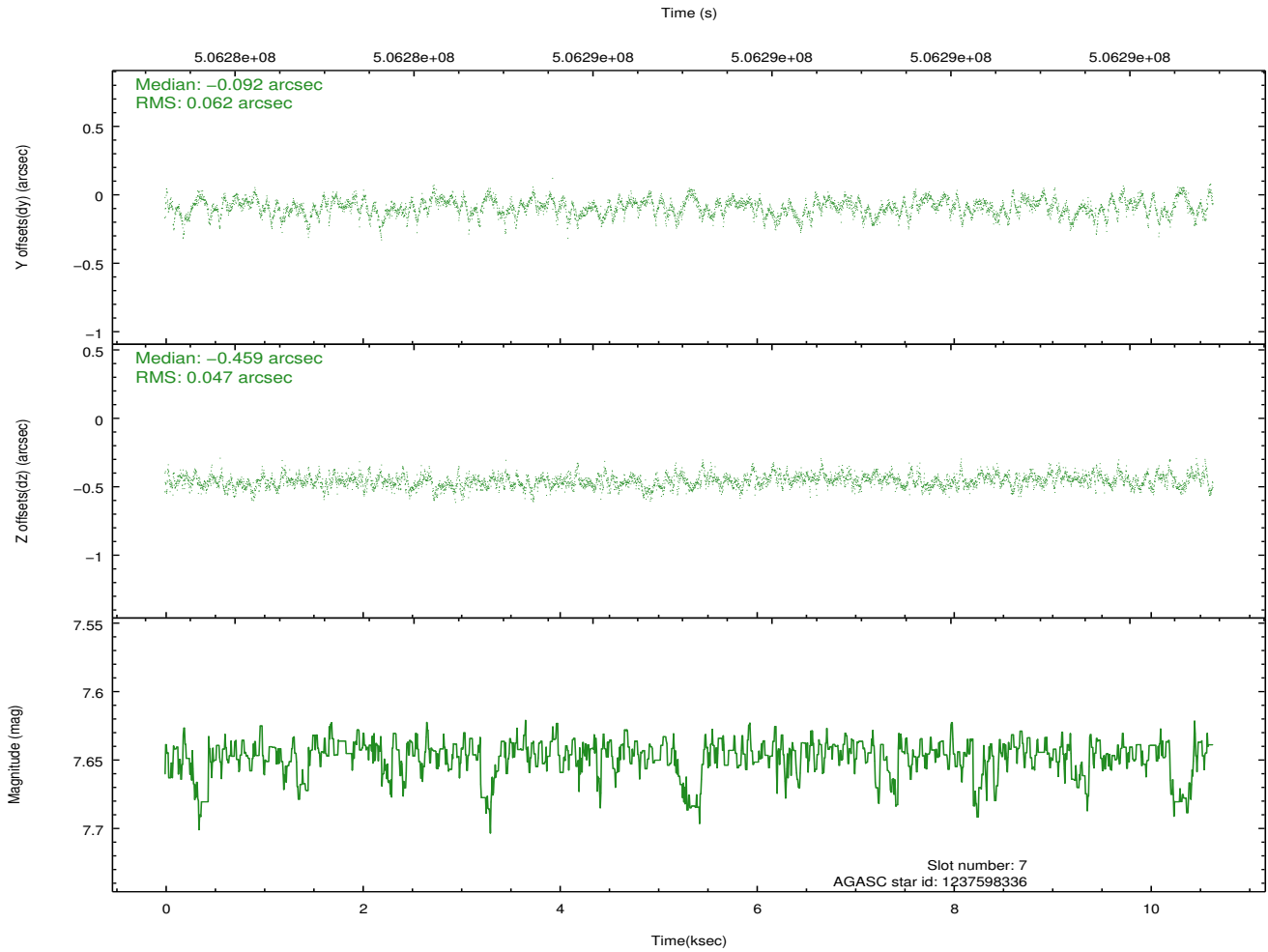
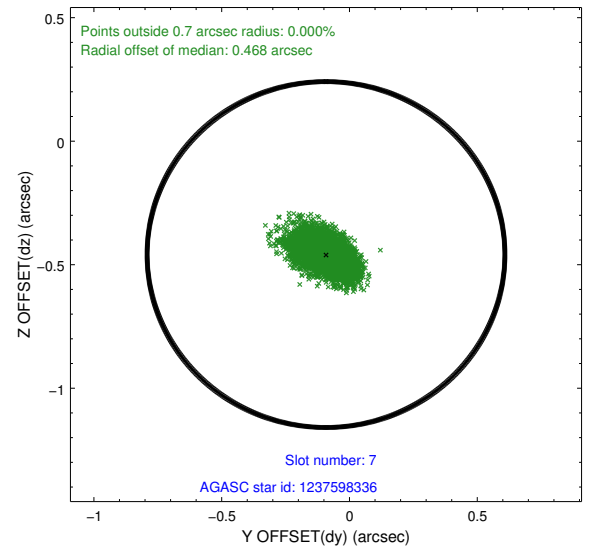
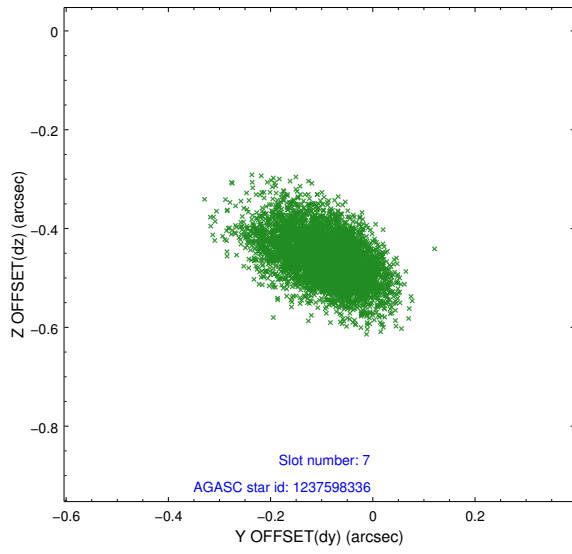
### 2.4.3 Slot 5



## 2.4.4 Slot 6

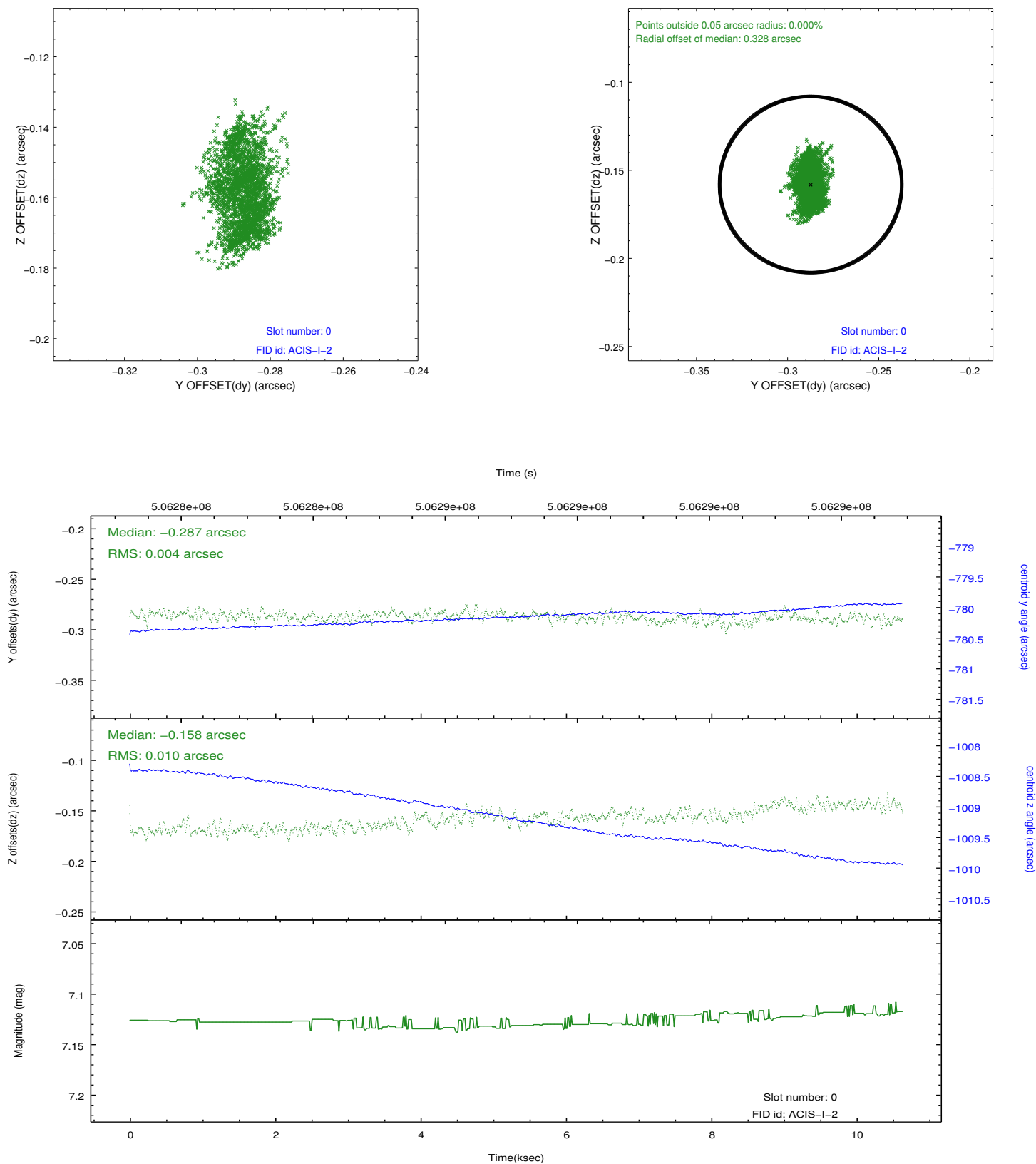


## 2.4.5 Slot 7

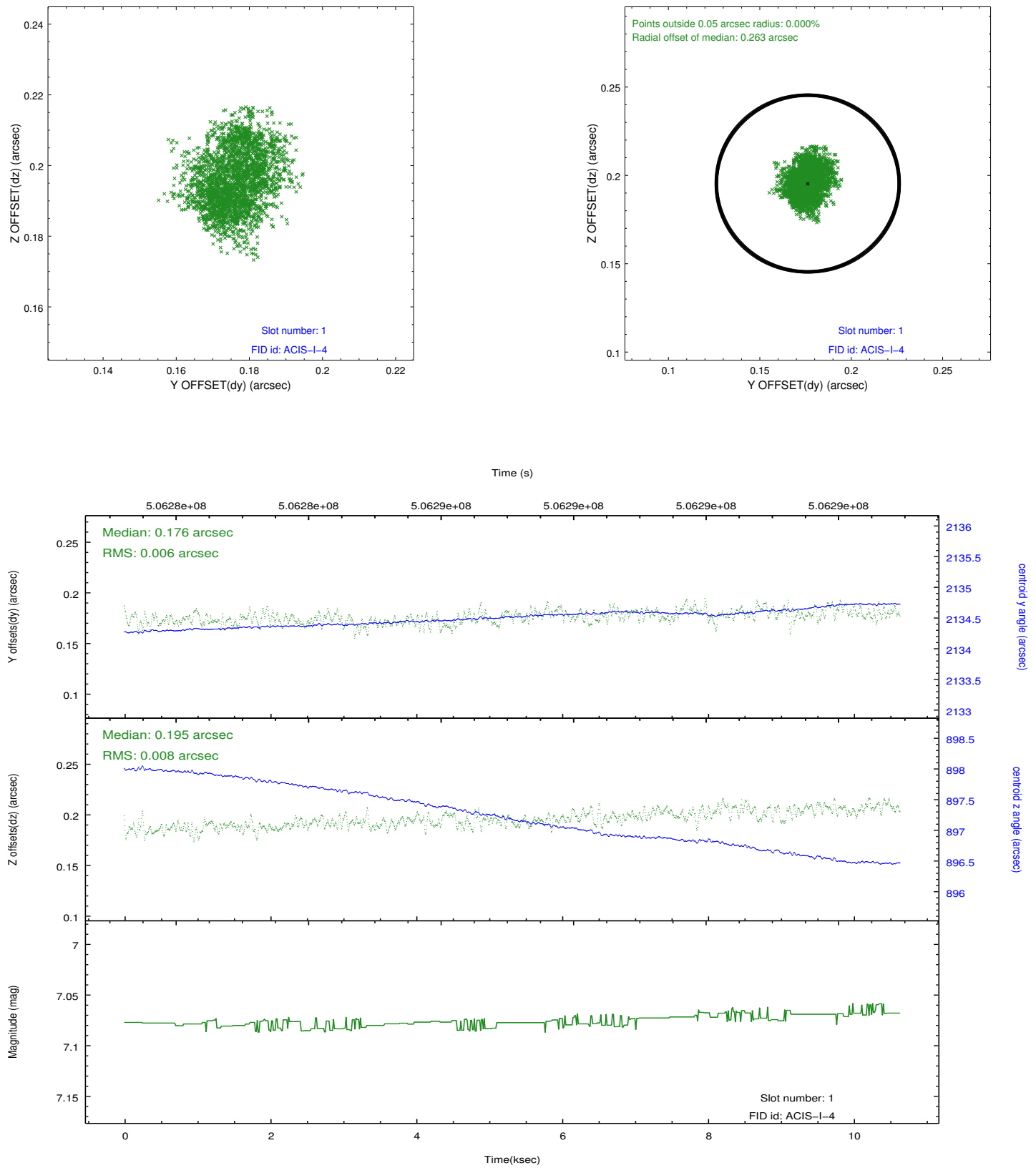


## 2.5 FID Slots

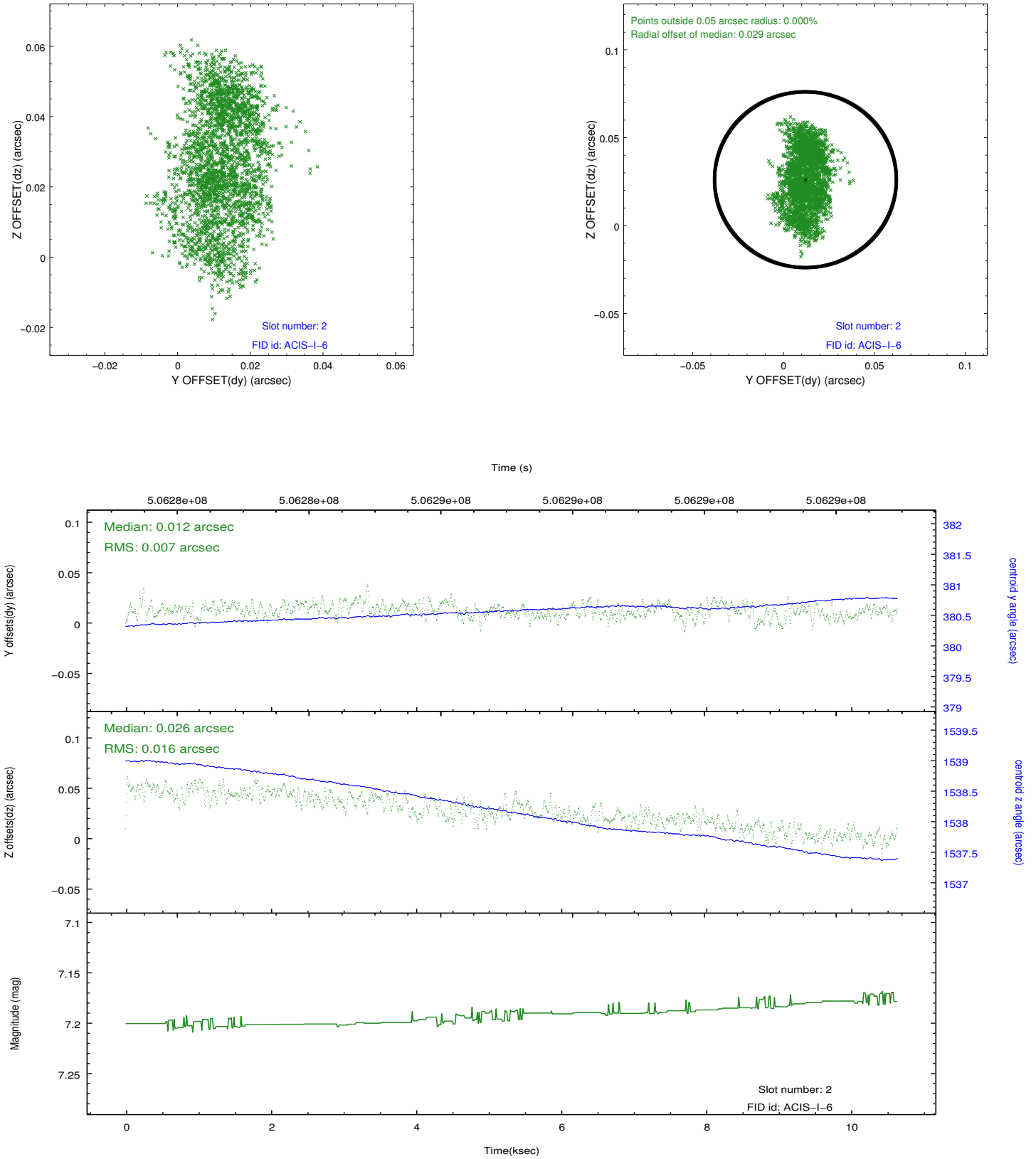
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.295100079179

## A.2 Comments

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.