

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 15048 - L2 Version 2  
Chandra X-Ray Center

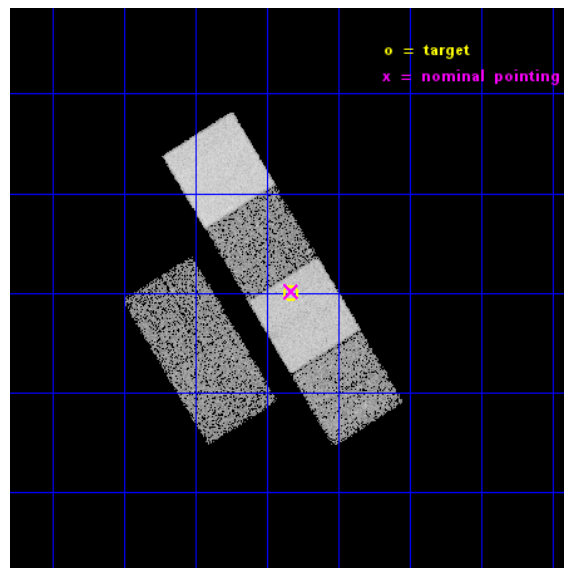
L2 Processing Date : Nov 29 2014

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# 1 Front

seq_num	702855	Sequence number
obs_id	15048	Observation id
title	C-GOALS: The Chandra-RBGS Survey of a Complete Sample of Major-Merger LIRGs	Proposal title
observer	Professor David Sanders	Principal investigator
object	CGCG 043-099	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	195.457917	Observer's specified target RA [deg]
dec_targ	4.333611	Observer's specified target Dec [deg]
ra_nom	195.45660020058	Nominal RA [deg]
dec_nom	4.3363142701657	Nominal Dec [deg]
roll_nom	58.409290099049	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14966.399944305	Sum of GTIs [s]
livetime	14776.886376526	Livetime [s]
ontime2	14966.399944305	Sum of GTIs [s]
ontime3	14963.158973932	Sum of GTIs [s]
ontime5	14966.399944305	Sum of GTIs [s]
ontime6	14966.399944305	Sum of GTIs [s]
ontime7	14966.399944305	Sum of GTIs [s]
ontime8	14966.399944305	Sum of GTIs [s]
l2events	136762	Number of level 2 events

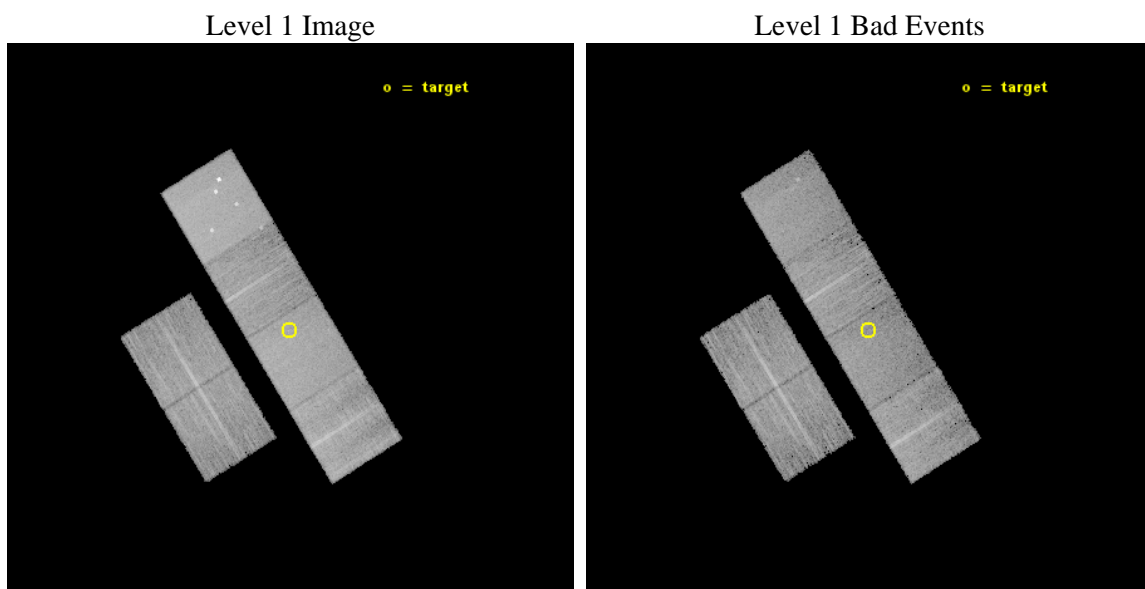




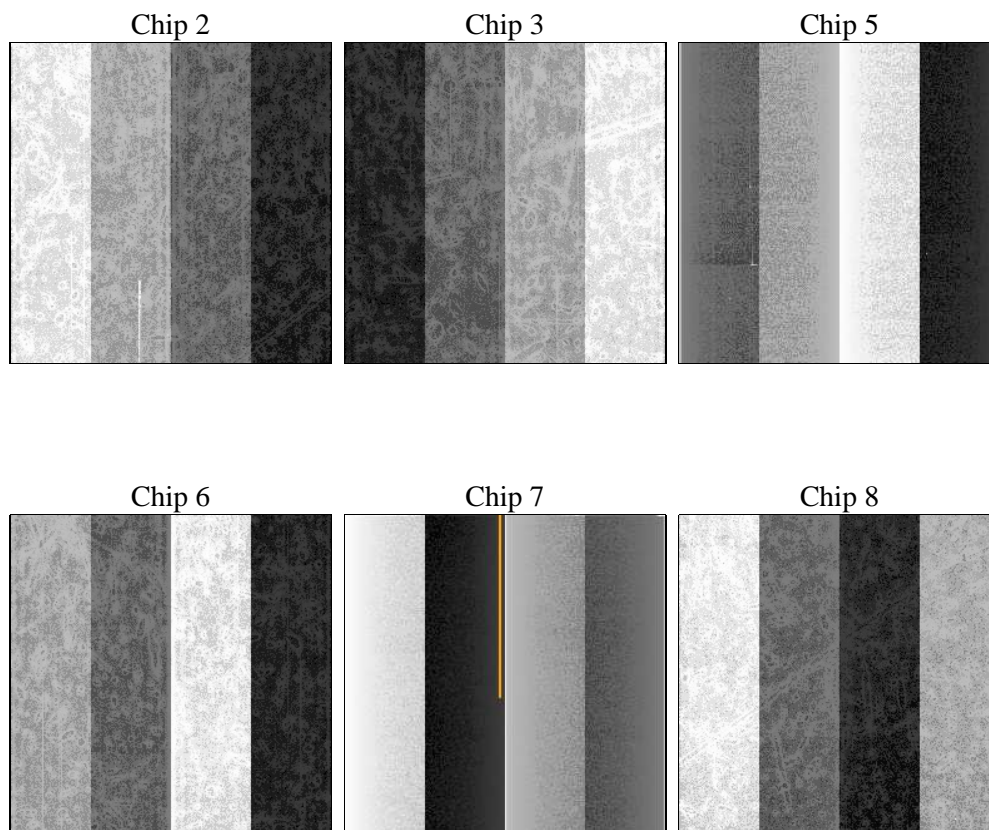
## 2 OBI

### 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	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	14966.399944305	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	14966.399944305	Sum of GTIs [s]
date	2014-11-29T20:58:47	Date and time of file creation	ontime3	14963.158973932	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	14966.399944305	Sum of GTIs [s]
			ontime6	14966.399944305	Sum of GTIs [s]
			ontime7	14966.399944305	Sum of GTIs [s]
			ontime8	14966.399944305	Sum of GTIs [s]
			l1events	569297	Number of level 1 events

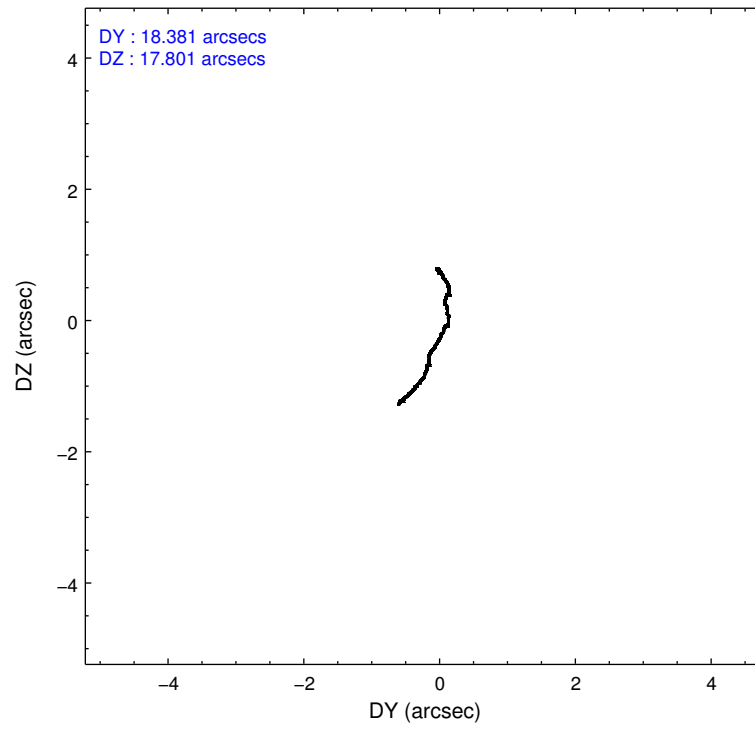
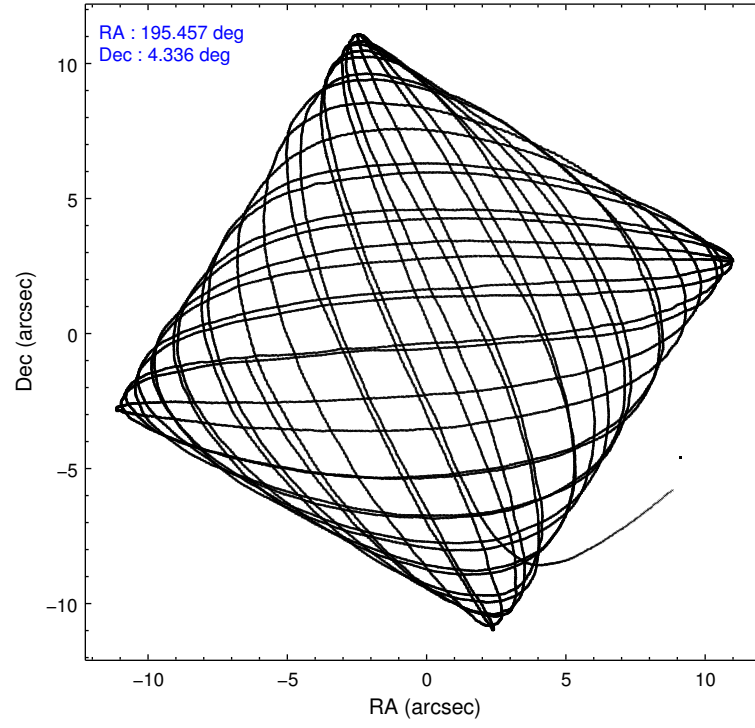
### 2.1.4 Events

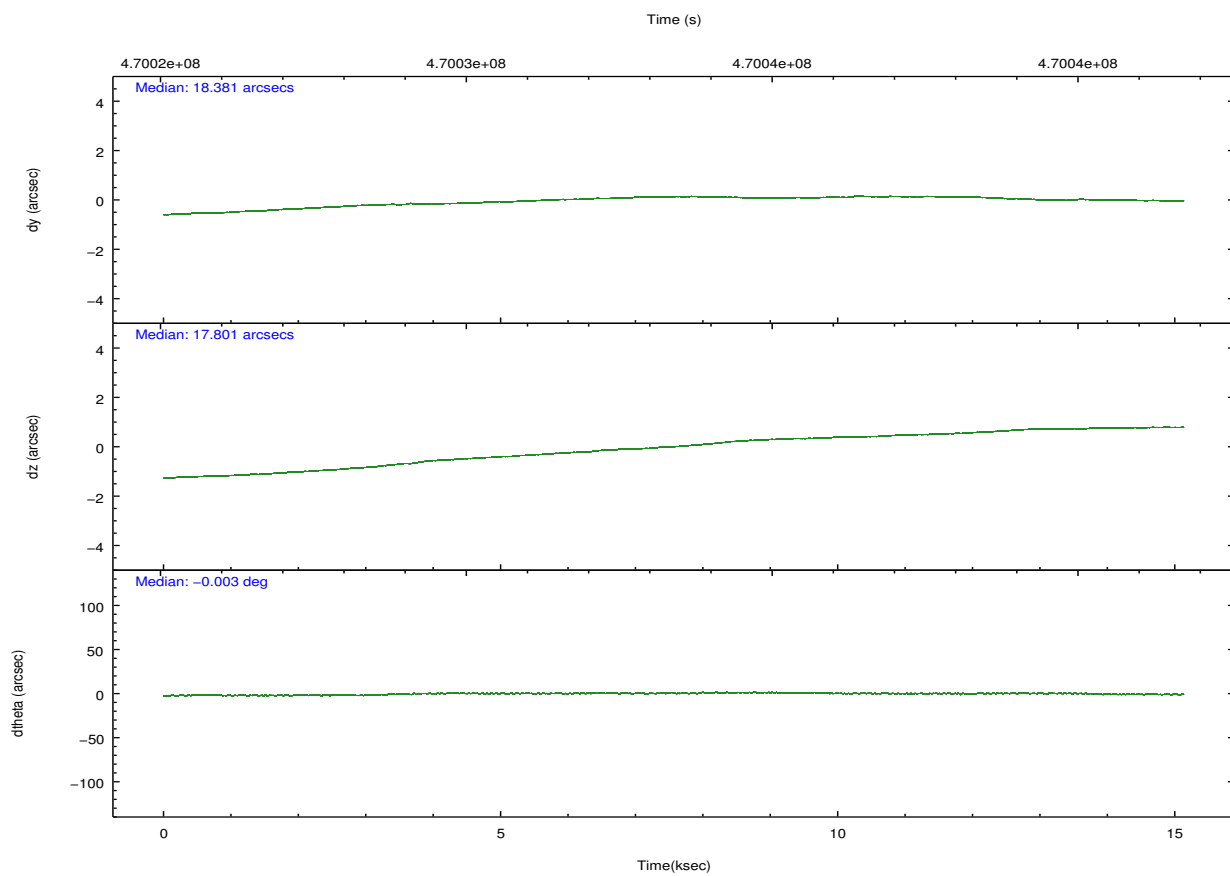
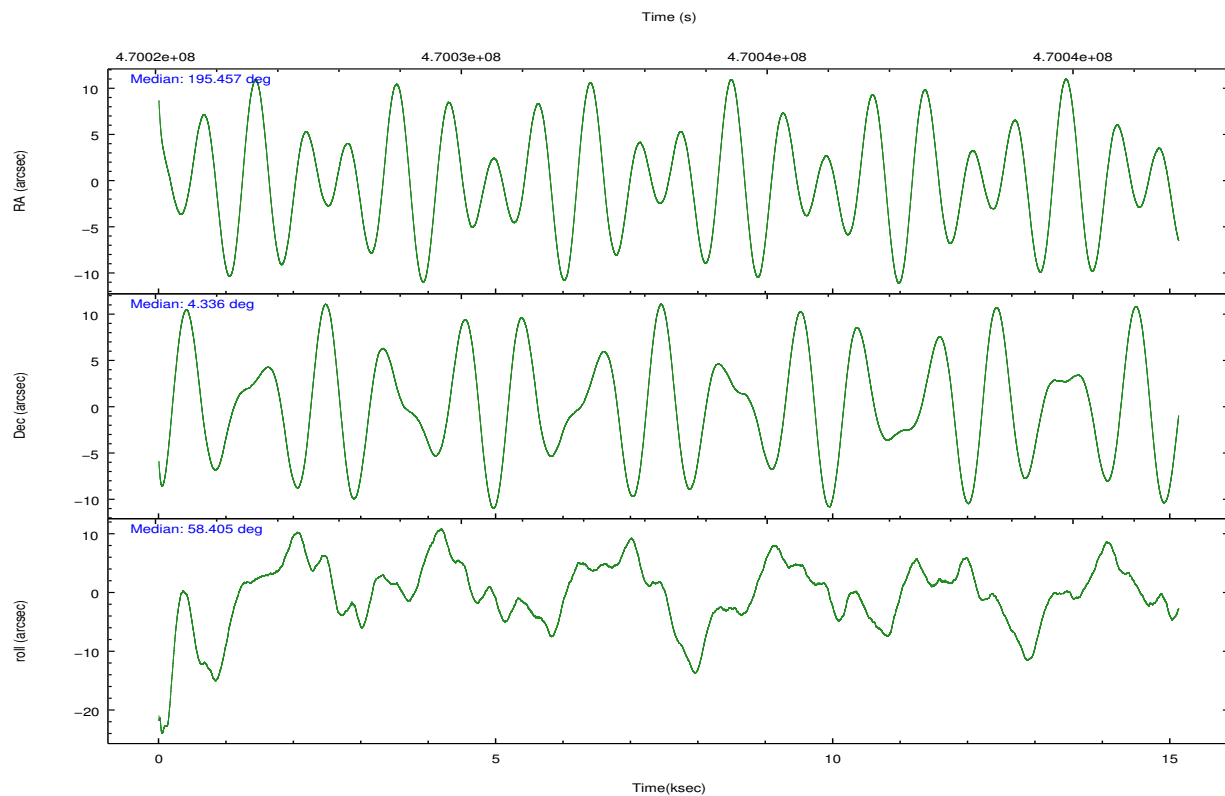
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	76060	73247	133142	80131	104426	102291	grade 0 events	3194	3057	9820	3241	4283	8569
rejected events	67179	64697	66253	70696	58553	74365		4%	4%	7%	4%	4%	8%
rejected %	88%	88%	49%	88%	56%	72%	grade 1 events	61	47	346	49	152	83
								0%	0%	0%	0%	0%	0%
							grade 2 events	2223	1839	19653	2268	9471	6454
								2%	2%	14%	2%	9%	6%
							grade 3 events	870	891	2170	964	3891	2885
								1%	1%	1%	1%	3%	2%
							grade 4 events	890	931	2087	901	3897	2799
								1%	1%	1%	1%	3%	2%
							grade 5 events	3405	4040	9616	3978	10728	5715
								4%	5%	7%	4%	10%	5%
							grade 6 events	1709	1834	33184	2065	24350	7225
								2%	2%	24%	2%	23%	7%
							grade 7 events	63708	60608	56266	66665	47654	68561
								83%	82%	42%	83%	45%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	195.456210	195.4566002005776	CCD I2 on	O2	Y
[deg] Pointing Dec	4.308993	4.336314270165706	CCD I3 on	Y	Y
[deg] Pointing Roll	58.252692	58.40929009904913	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	470025956.184000	470024663.74784	CCD S5 on	N	N
Observation start date	2012-11-23T02:44:49	2012-11-23T02:24:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	470040956.184000	470041605.46125	On-chip summing requested	N	N
Observation end date	2012-11-23T06:54:49	2012-11-23T07:06:45	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



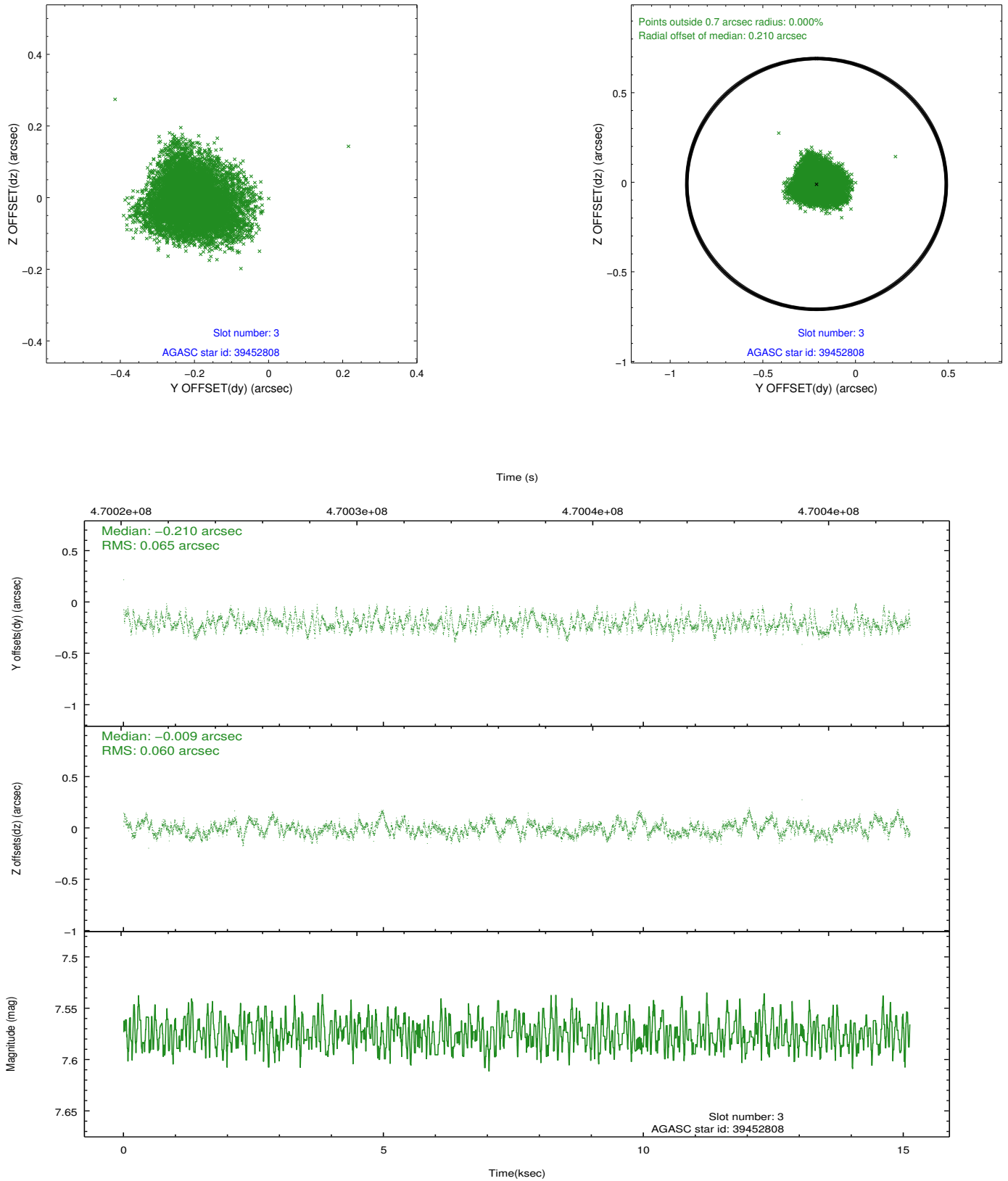


### Slot Statistics

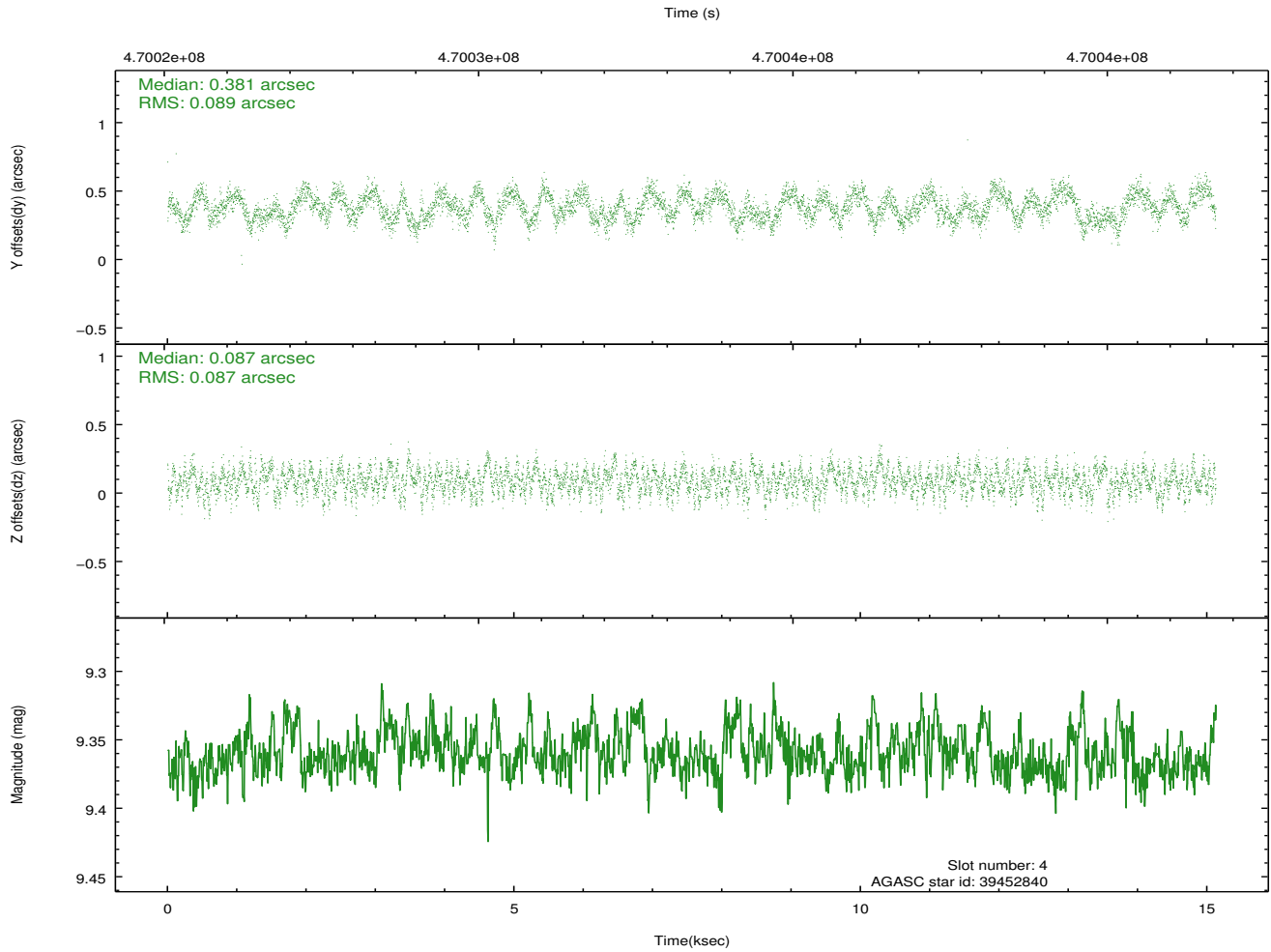
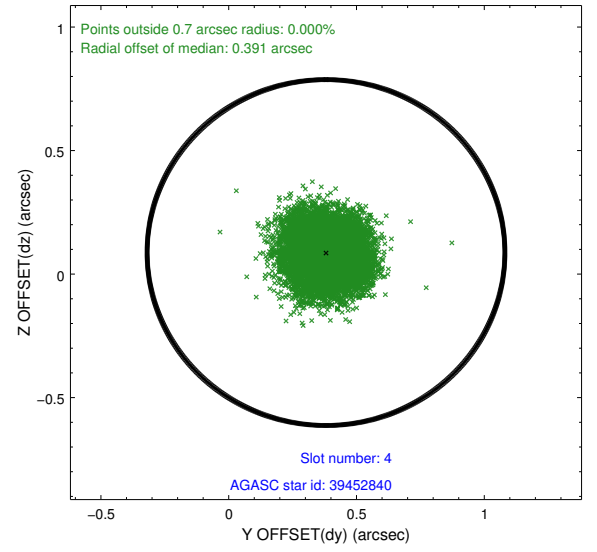
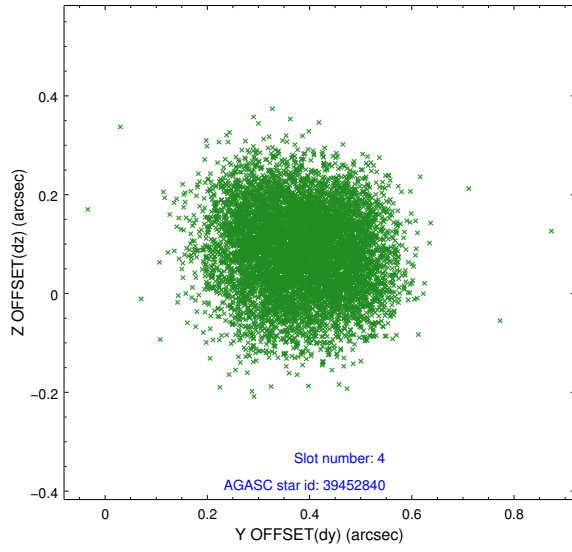
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.97	3690	-0.091	-0.052	0.015	0.034	0.000000	0.000000	-771.49	-1739.16
1	FID		ACIS-S-4	7.03	3690	0.257	0.057	0.010	0.017	0.000000	0.000000	2142.02	169.08
2	FID		ACIS-S-5	7.07	3689	-0.198	0.002	0.011	0.029	0.000000	0.000000	-1824.04	163.08
3	GUIDE	used	39452808	7.58	7379	-0.210	-0.009	0.094	0.148	195.283813	4.358637	-173.44	620.63
4	GUIDE	used	39452840	9.36	7378	0.381	0.087	0.136	0.204	195.531599	3.848537	-1266.30	-1102.08
5	GUIDE	used	39453392	9.62	7363	-0.325	-0.051	0.168	0.260	195.502669	4.868993	1801.89	919.33
6	GUIDE	used	39453904	9.36	7337	-0.124	-0.254	0.153	0.234	195.586846	4.612087	1174.87	176.70
7	GUIDE	used	39456448	9.80	7332	0.273	0.222	0.212	0.316	195.260373	3.694167	-2251.93	-565.43

## 2.4 Star Slots

### 2.4.1 Slot 3

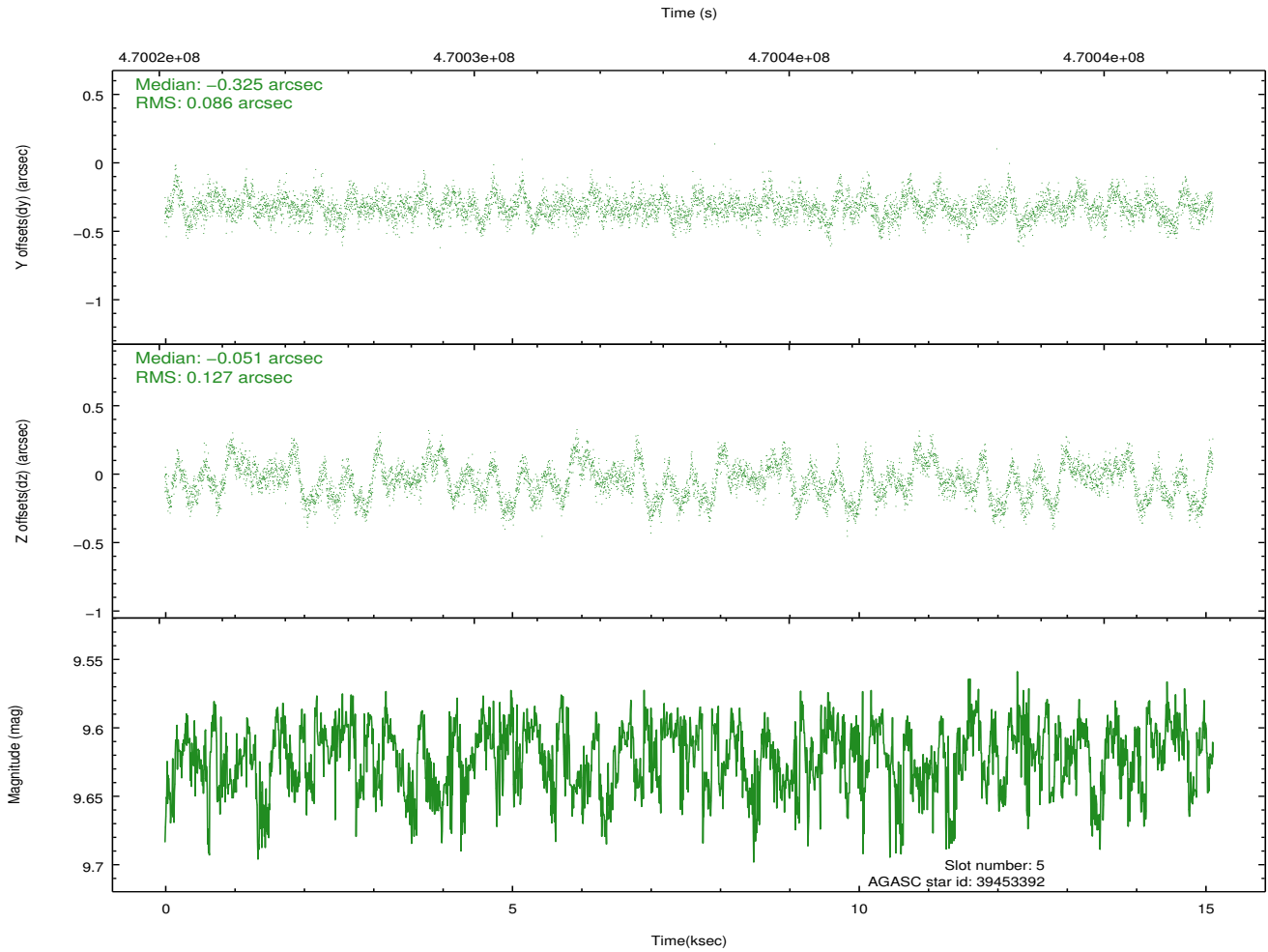
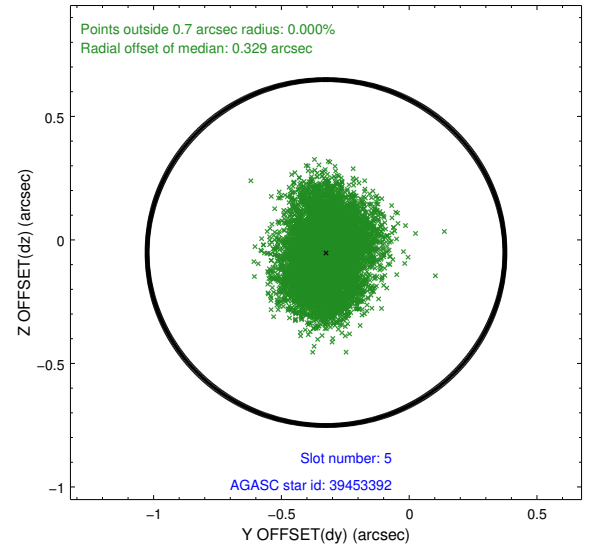
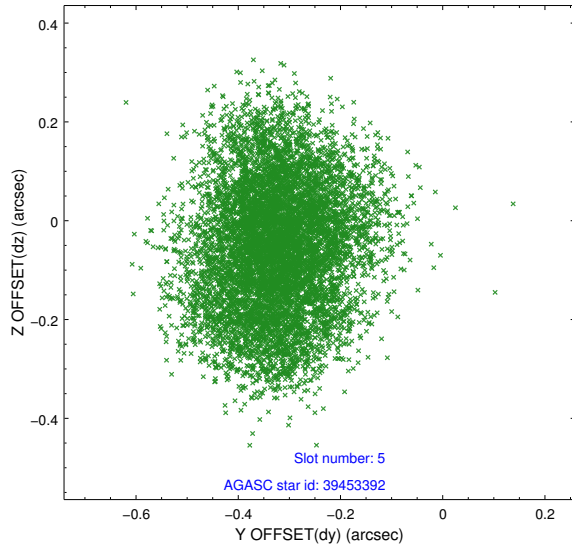


## 2.4.2 Slot 4

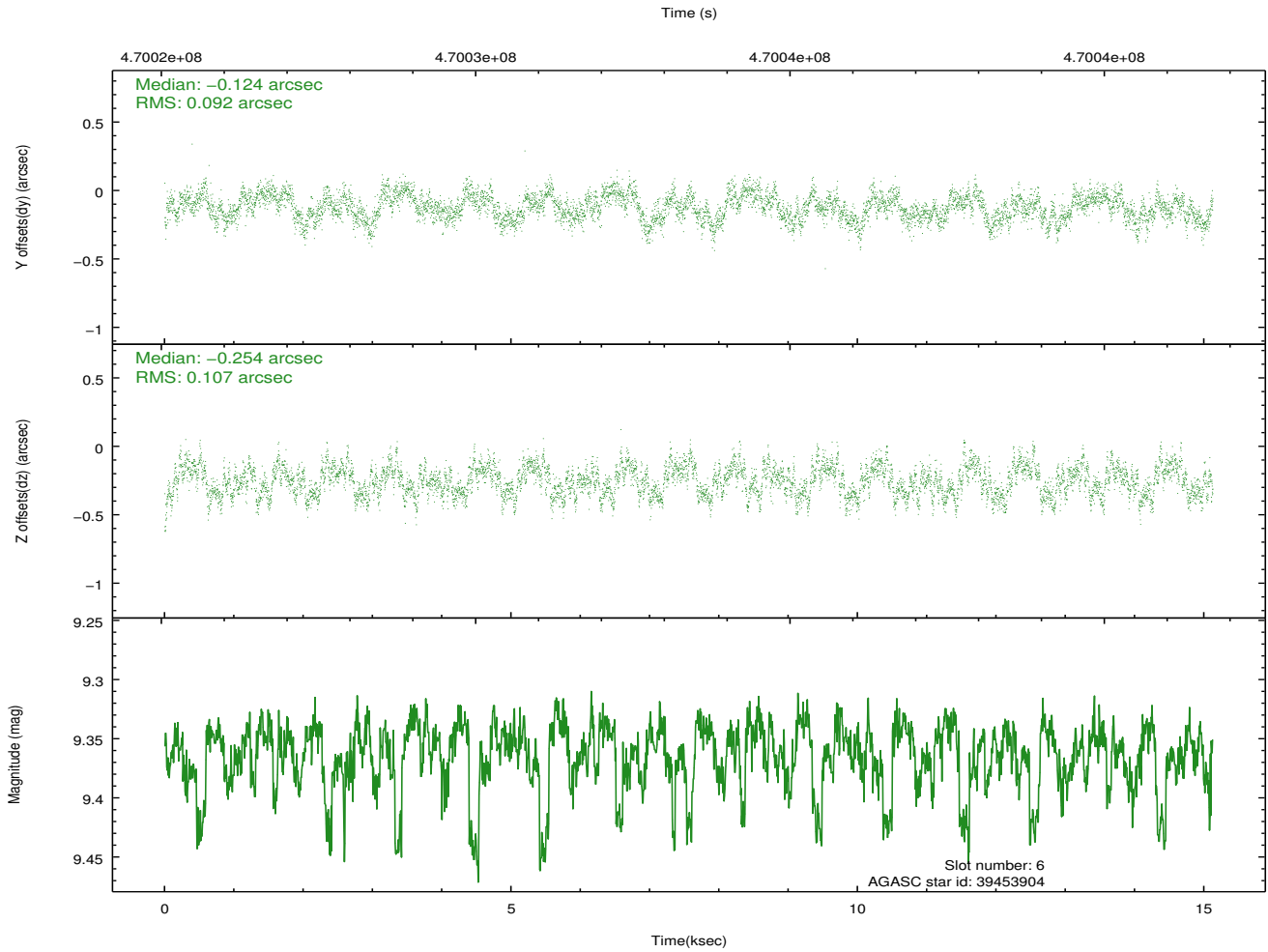
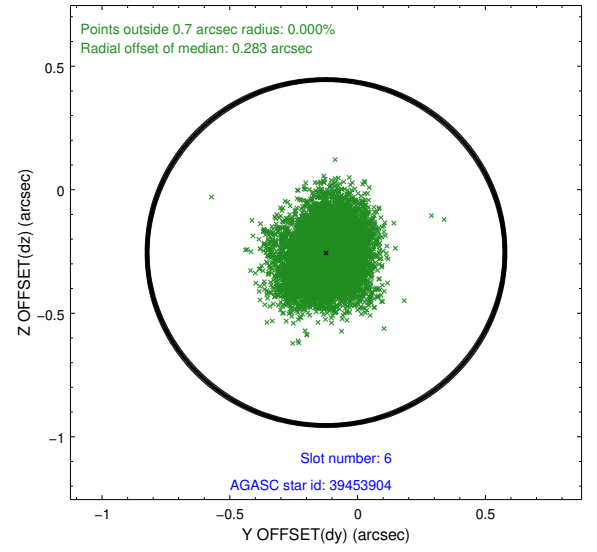
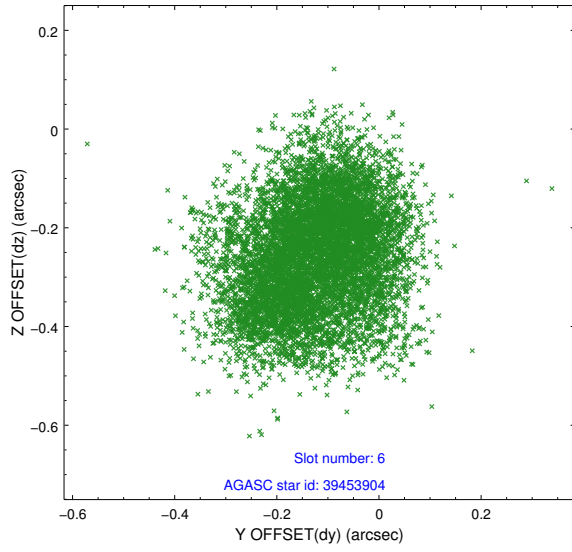




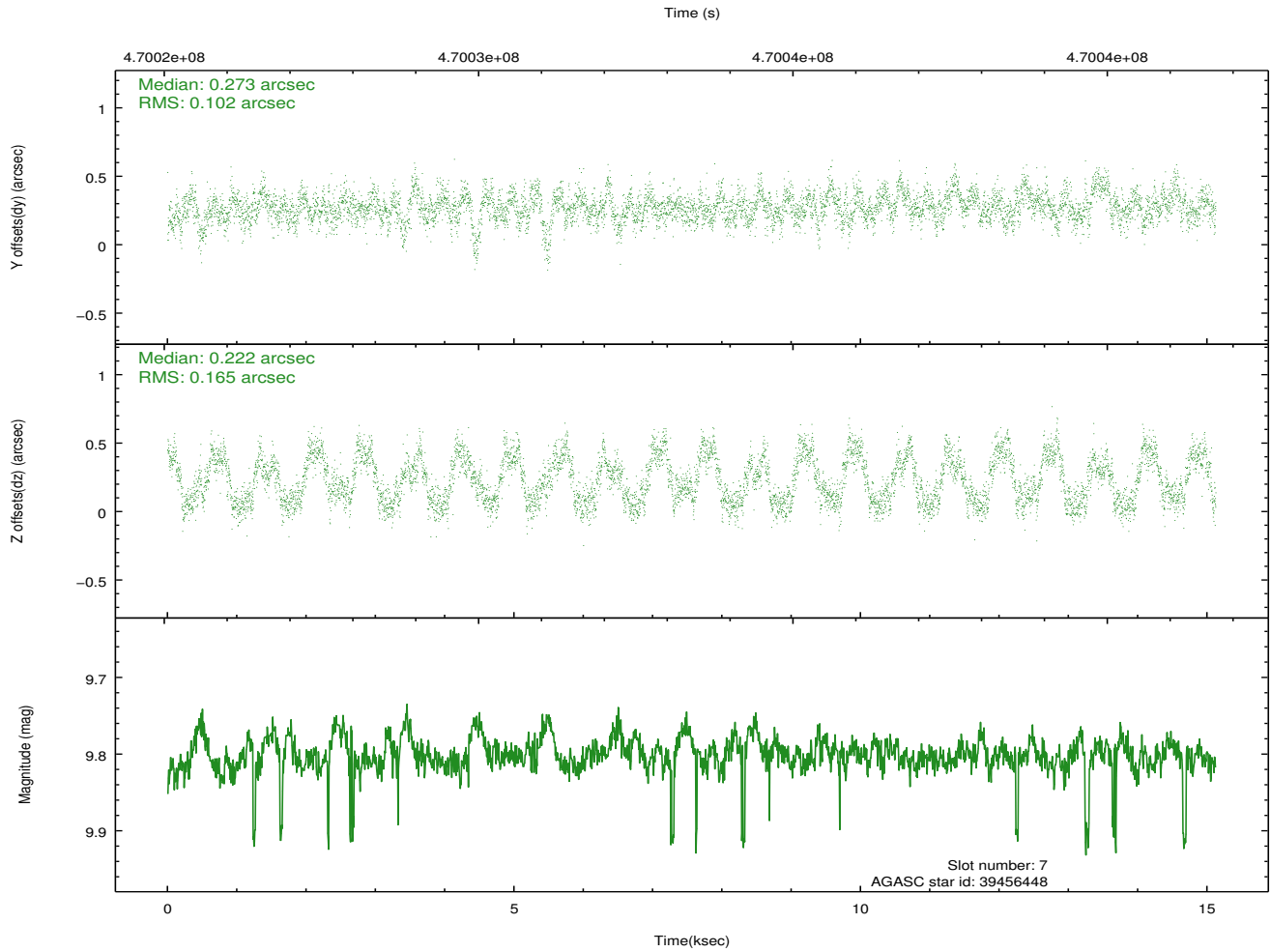
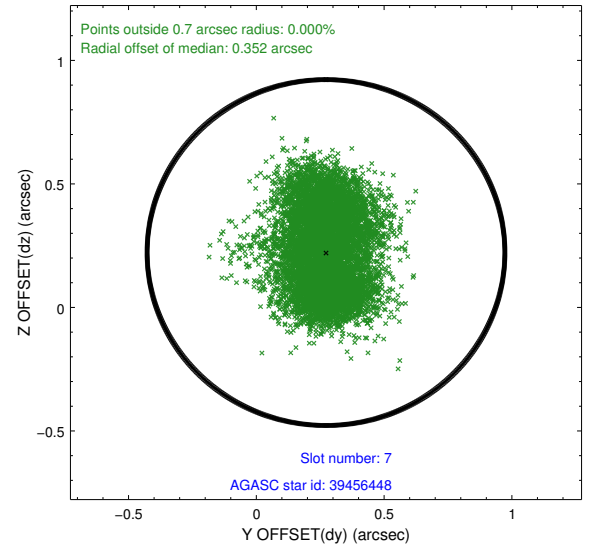
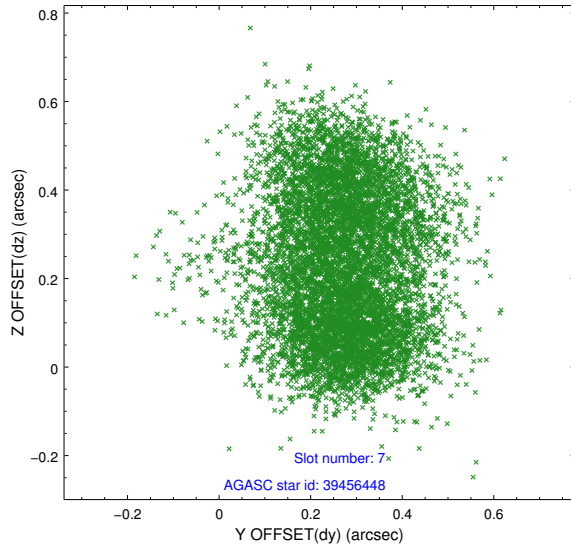
### 2.4.3 Slot 5



## 2.4.4 Slot 6

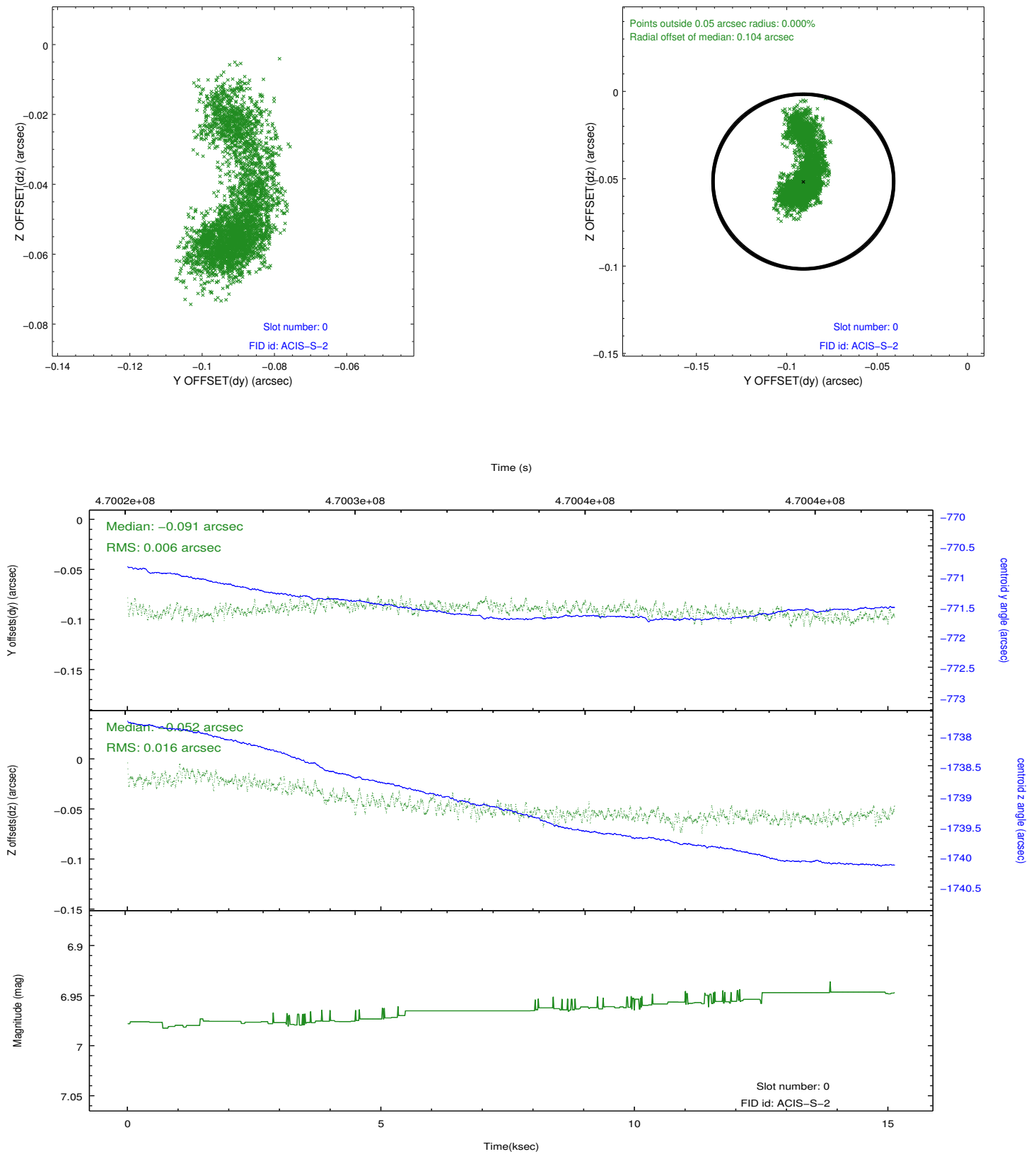


## 2.4.5 Slot 7

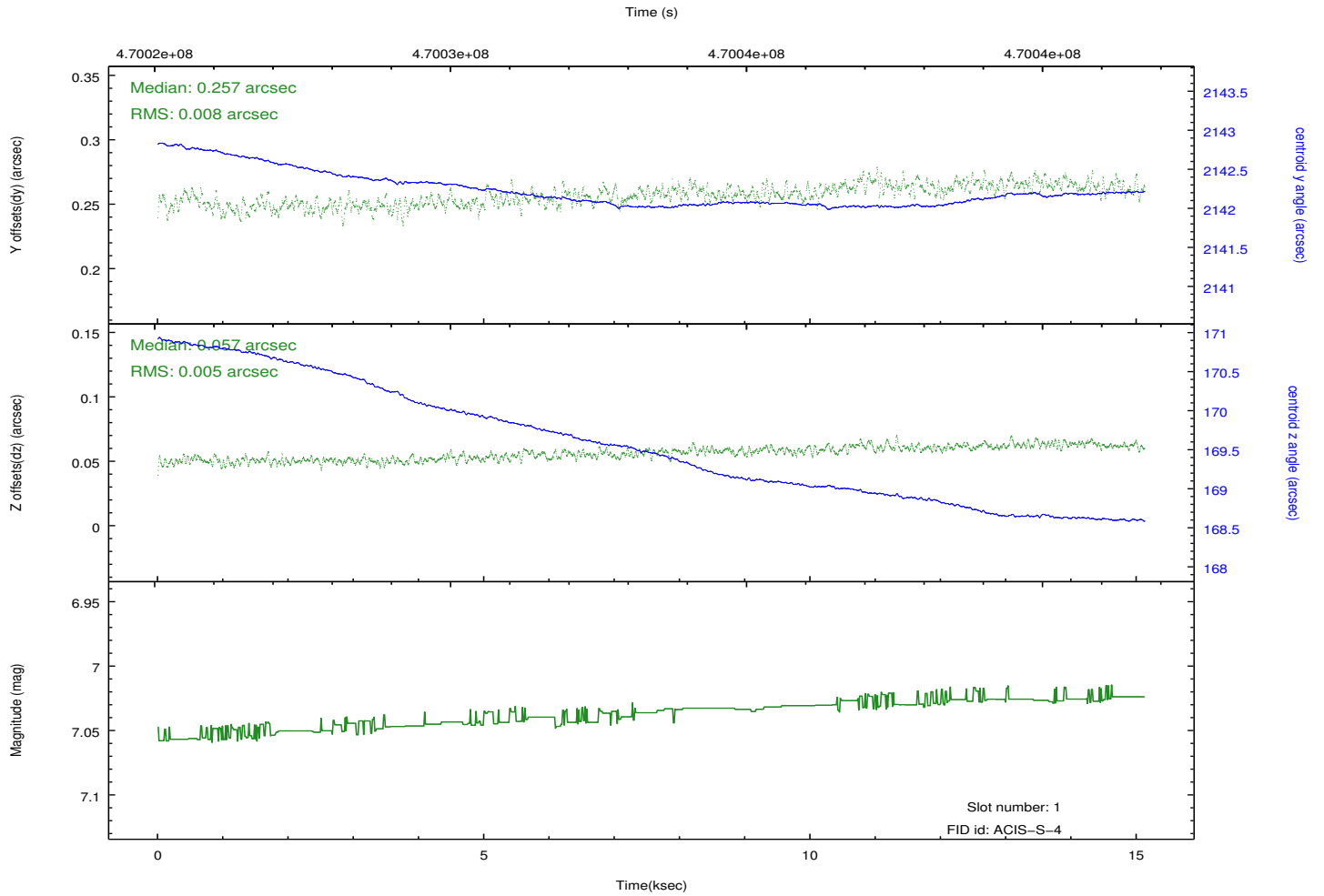
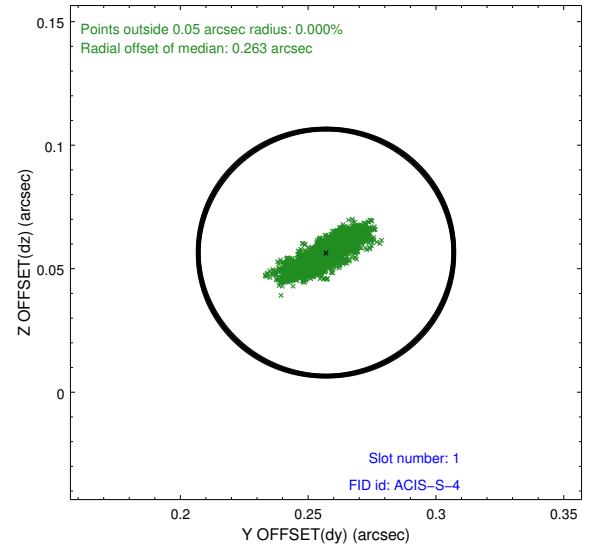
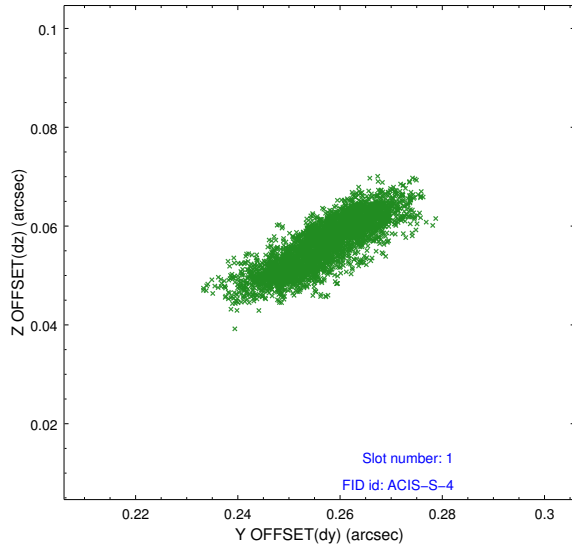


## 2.5 FID Slots

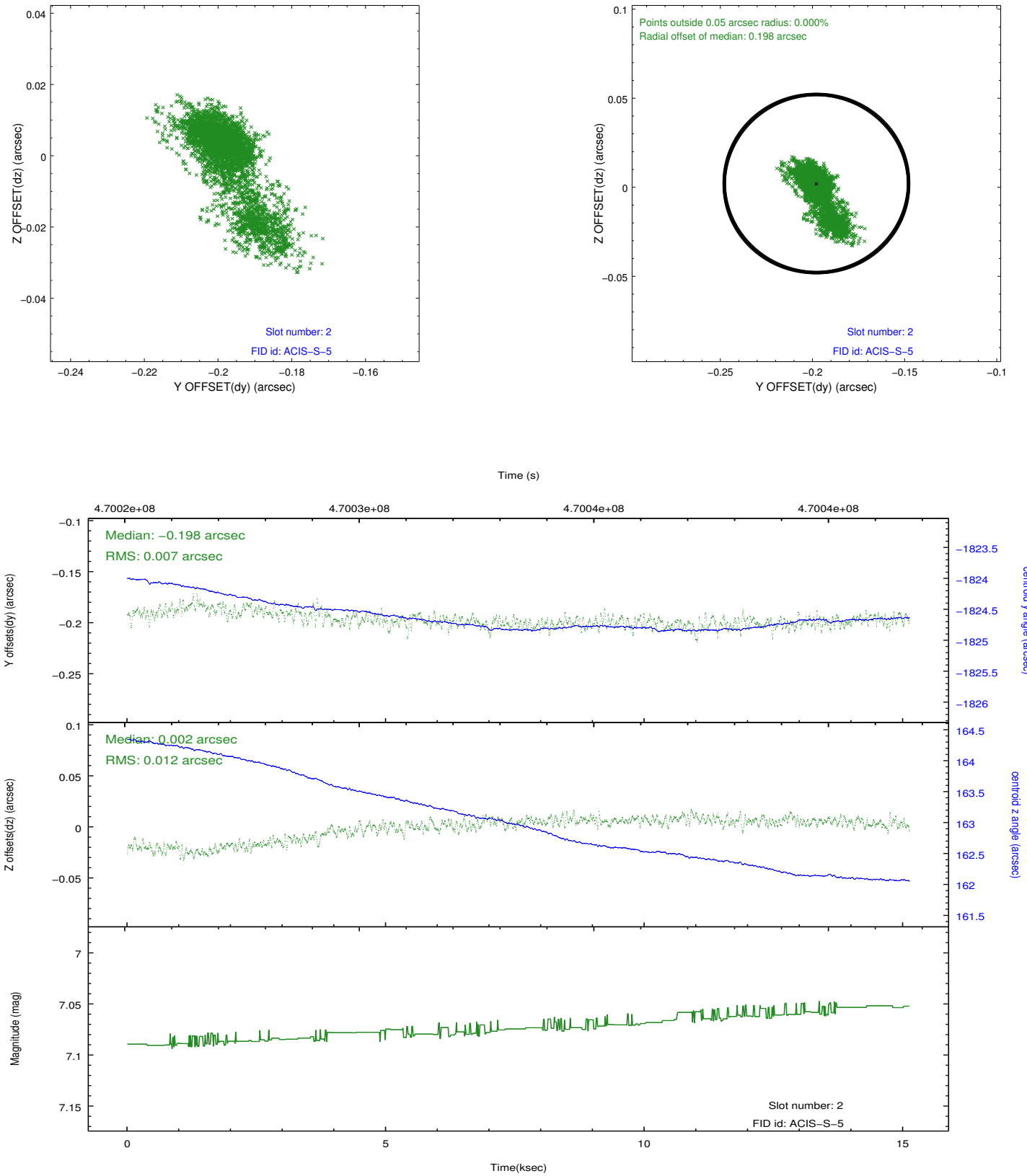
### 2.5.1 Slot 0



## 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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.966399944305

## 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.