

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 14801 - L2 Version 2  
Chandra X-Ray Center

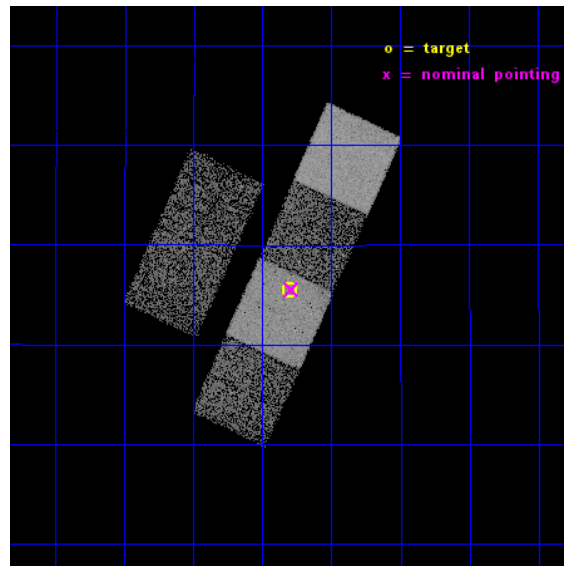
L2 Processing Date : Dec 6 2014

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# 1 Front

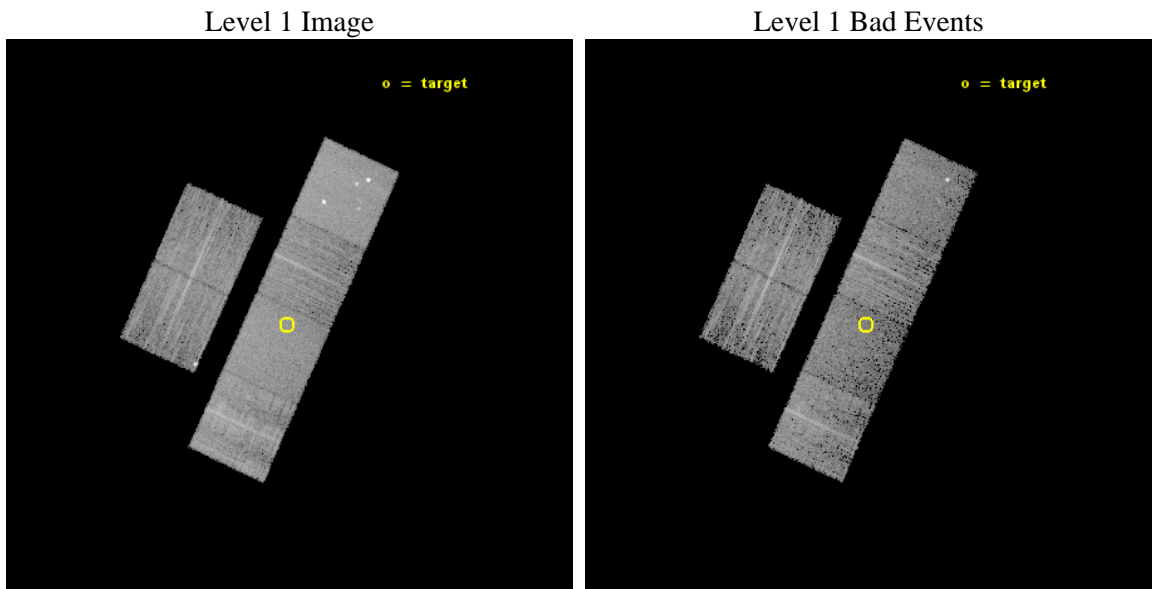
seq_num	501929	Sequence number
obs_id	14801	Observation id
title	Chandra Observations of New X-ray Supernovae	Proposal title
observer	Dr. David Pooley	Principal investigator
object	SN 2013ej	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	24.200667	Observer's specified target RA [deg]
dec_targ	15.758611	Observer's specified target Dec [deg]
ra_nom	24.19754496576	Nominal RA [deg]
dec_nom	15.759053059007	Nominal Dec [deg]
roll_nom	114.58550238511	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9963.8724490404	Sum of GTIs [s]
livetime	9837.703896567	Livetime [s]
ontime2	9963.9134890437	Sum of GTIs [s]
ontime3	9963.7493290305	Sum of GTIs [s]
ontime5	9963.8314090371	Sum of GTIs [s]
ontime6	9963.7903690338	Sum of GTIs [s]
ontime7	9963.8724490404	Sum of GTIs [s]
ontime8	9963.7082890272	Sum of GTIs [s]
l2events	77308	Number of level 2 events



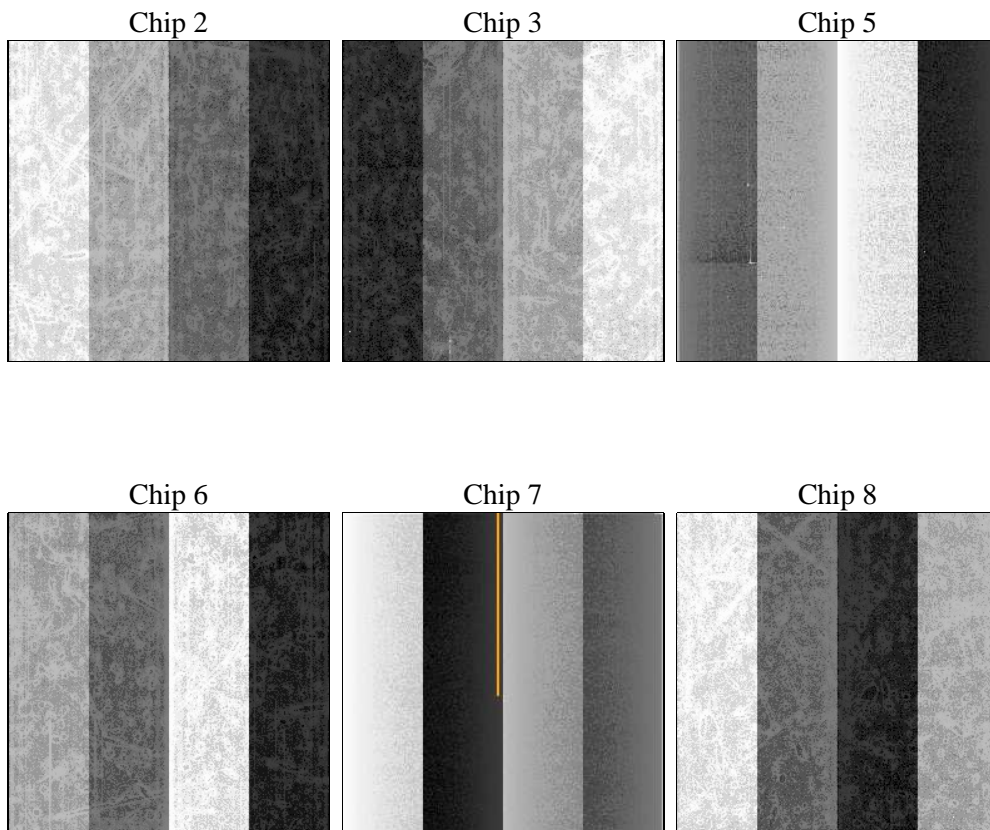
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.022000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	9963.8724490404	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	9963.9134890437	Sum of GTIs [s]
date	2014-12-06T05:12:31	Date and time of file creation	ontime3	9963.7493290305	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	9963.8314090371	Sum of GTIs [s]
			ontime6	9963.7903690338	Sum of GTIs [s]
			ontime7	9963.8724490404	Sum of GTIs [s]
			ontime8	9963.7082890272	Sum of GTIs [s]
			l1events	324383	Number of level 1 events

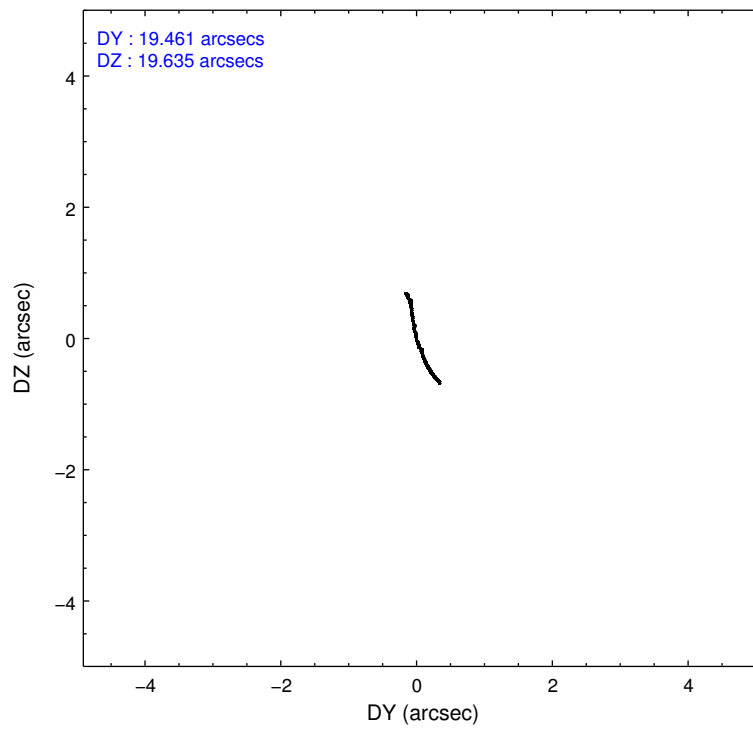
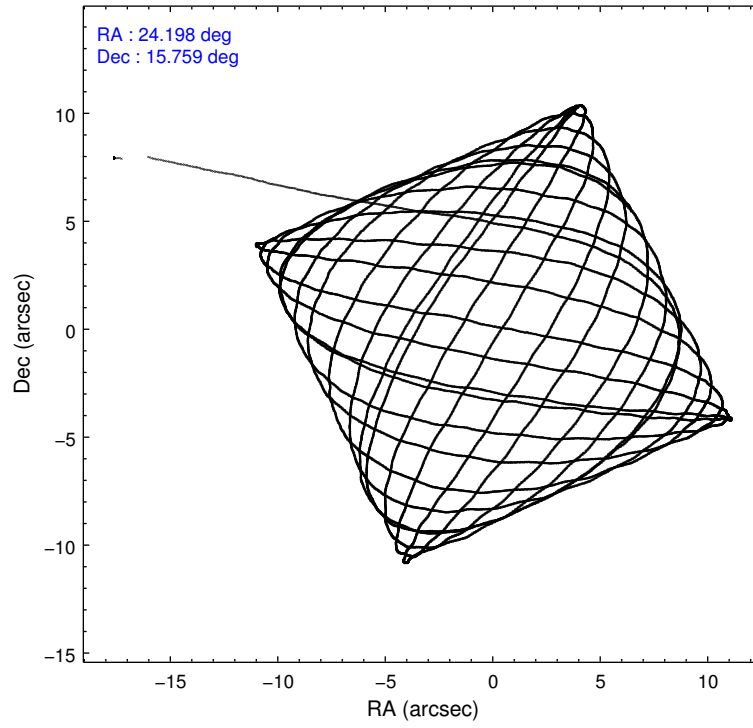
### 2.1.4 Events

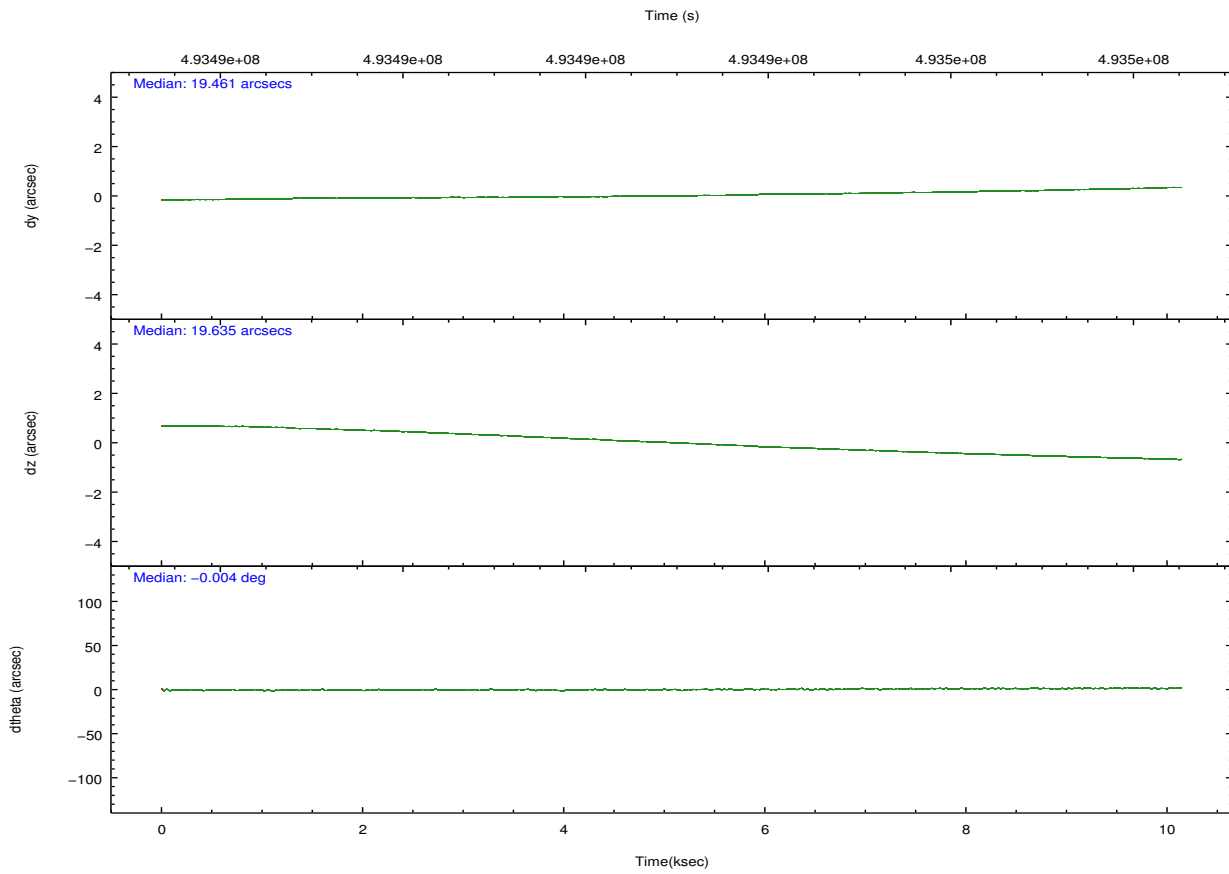
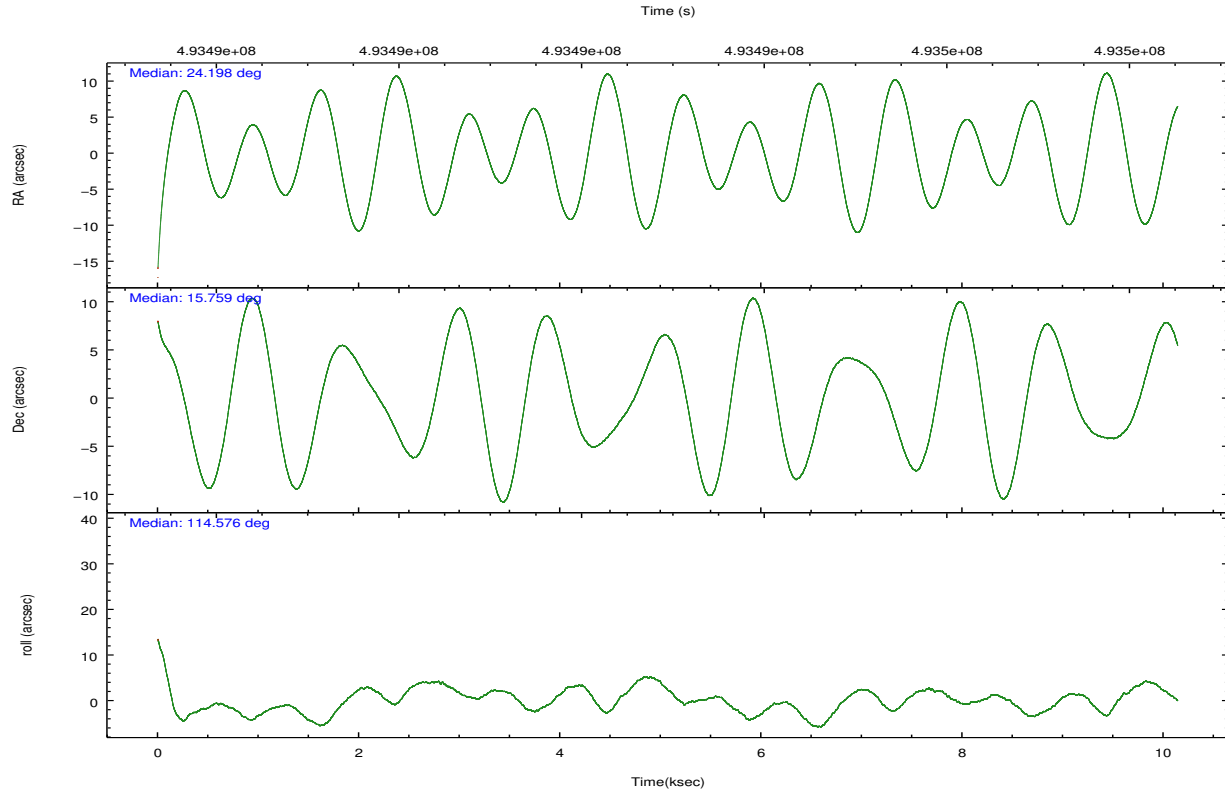
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	44395	43158	74331	45264	54842	62393	grade 0 events	1884	2980	6511	2137	2741	5618
rejected events	39270	37153	34591	39650	28257	42641		4%	6%	8%	4%	4%	9%
rejected %	88%	86%	46%	87%	51%	68%	grade 1 events	29	34	240	19	70	50
								0%	0%	0%	0%	0%	0%
							grade 2 events	1253	1062	12339	1189	5924	4338
								2%	2%	16%	2%	10%	6%
							grade 3 events	523	501	1329	596	2441	2490
								1%	1%	1%	1%	4%	3%
							grade 4 events	496	475	1288	549	2318	2386
								1%	1%	1%	1%	4%	3%
							grade 5 events	1789	1948	5645	2011	5958	3153
								4%	4%	7%	4%	10%	5%
							grade 6 events	972	996	18309	1146	13175	4925
								2%	2%	24%	2%	24%	7%
							grade 7 events	37449	35162	28670	37617	22215	39433
								84%	81%	38%	83%	40%	63%

## 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	24.220928	24.19754496575974	CCD I2 on	O1	Y
[deg] Pointing Dec	15.743487	15.75905305900679	CCD I3 on	O2	Y
[deg] Pointing Roll	114.422526	114.5855023851137	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O5	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O4	Y
[s] Observation start time (MET)	493488018.184000	493486851.98063	CCD S5 on	N	N
Observation start date	2013-08-21T15:59:11	2013-08-21T15:40:51	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	493498018.184000	493498243.31876	On-chip summing requested	N	N
Observation end date	2013-08-21T18:45:51	2013-08-21T18:50:43	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





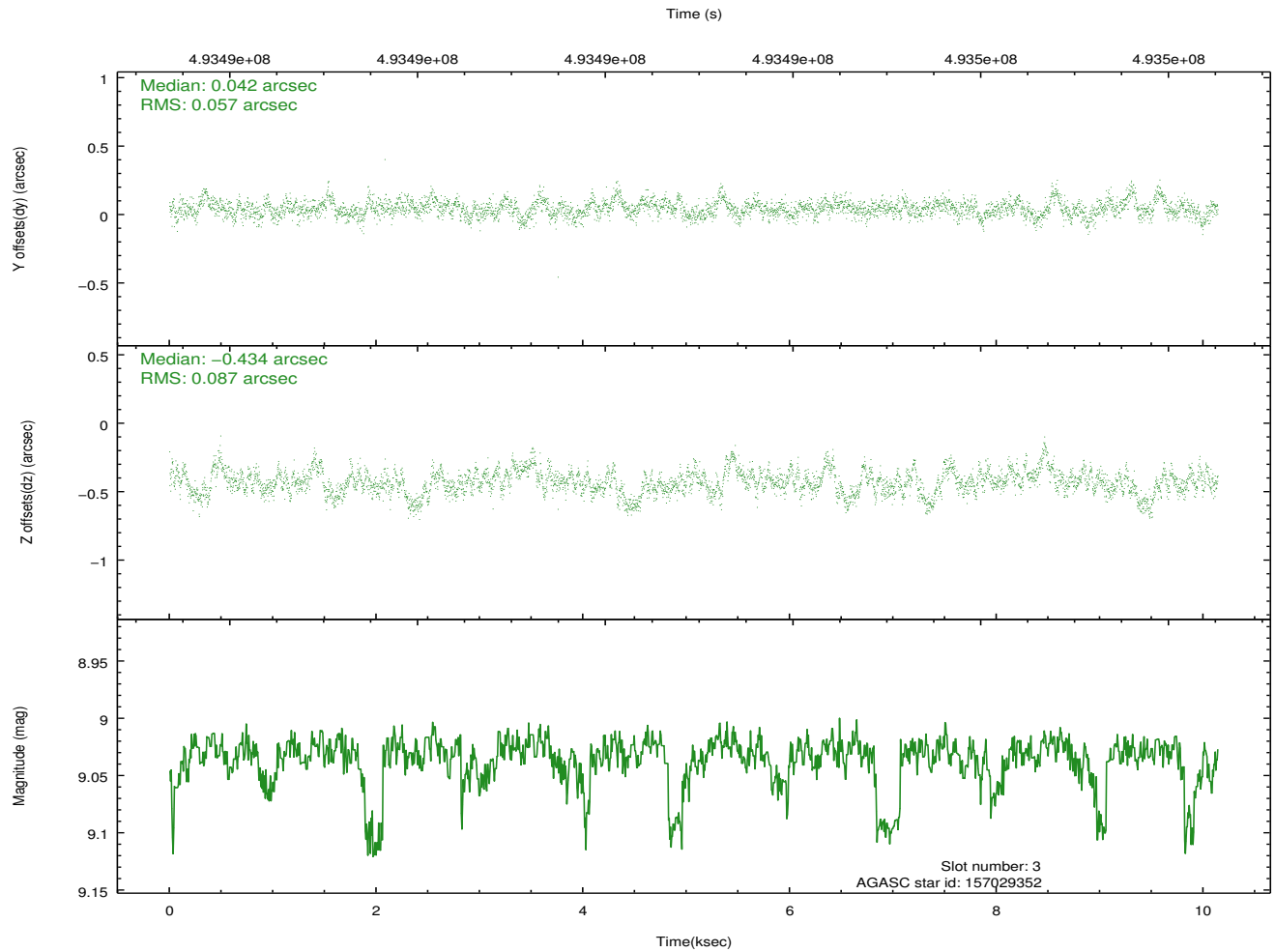
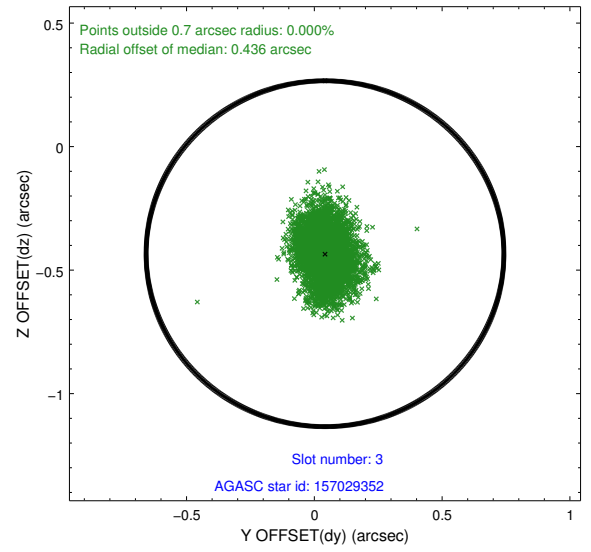
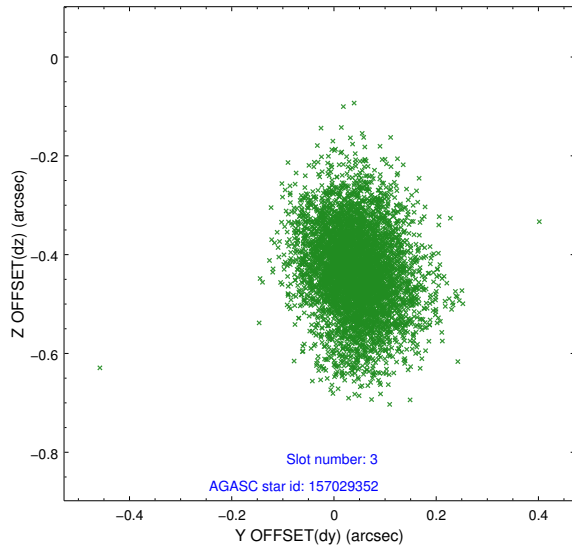
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.95	2473	-0.120	-0.015	0.015	0.023	0.000000	0.000000	-772.73	-1741.16
1	FID		ACIS-S-4	7.03	2474	0.240	0.063	0.007	0.011	0.000000	0.000000	2140.68	166.83
2	FID		ACIS-S-5	7.06	2472	-0.151	-0.039	0.013	0.019	0.000000	0.000000	-1824.92	161.03
3	GUIDE	used	157029352	9.03	4938	0.042	-0.434	0.108	0.186	23.764744	15.271289	-891.77	2144.14
4	GUIDE	used	157943240	8.97	4940	-0.313	0.286	0.103	0.171	24.500363	16.361777	1628.21	-1798.12
5	GUIDE	used	157953216	9.36	4943	0.063	-0.036	0.098	0.155	24.189817	15.248642	-1576.97	834.75
6	GUIDE	used	157954272	8.70	4948	0.158	0.502	0.086	0.134	24.932144	15.423798	-2064.71	-1772.15
7	GUIDE	used	82183064	9.13	4938	0.049	-0.317	0.112	0.183	23.866444	14.948729	-2095.40	2305.03

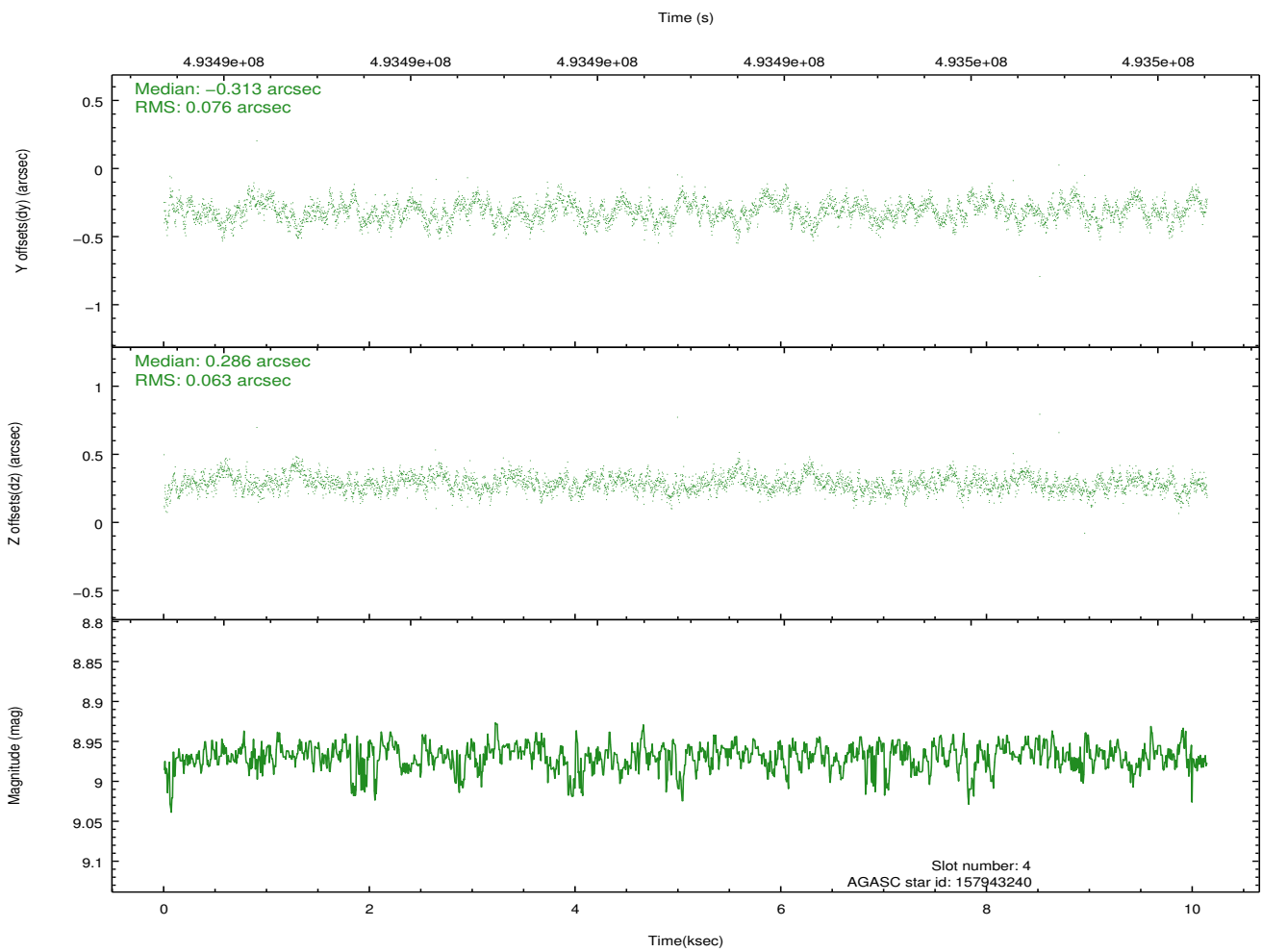
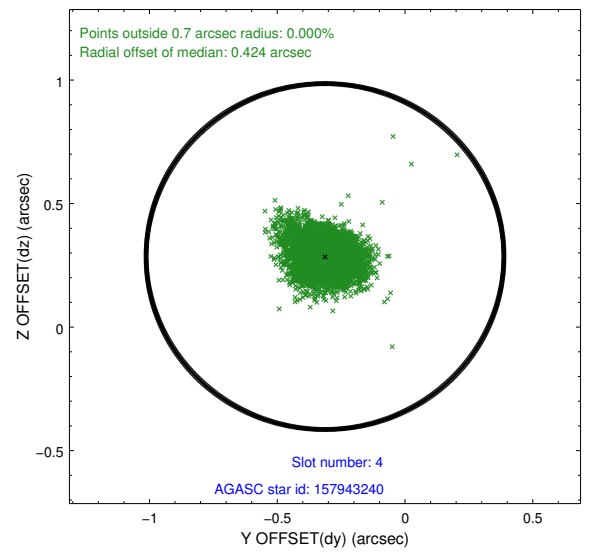
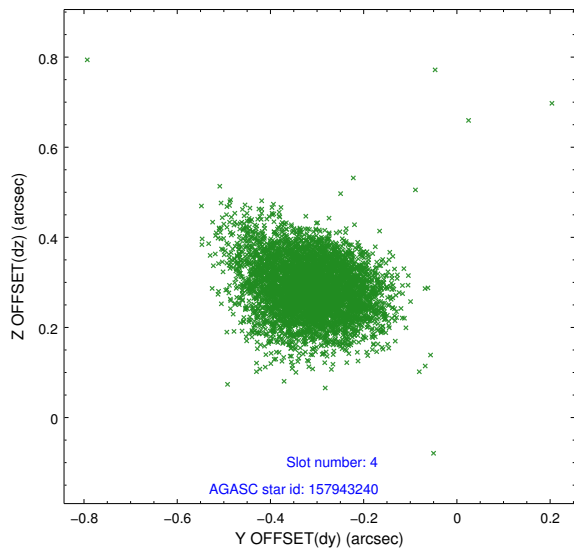
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## 2.4 Star Slots

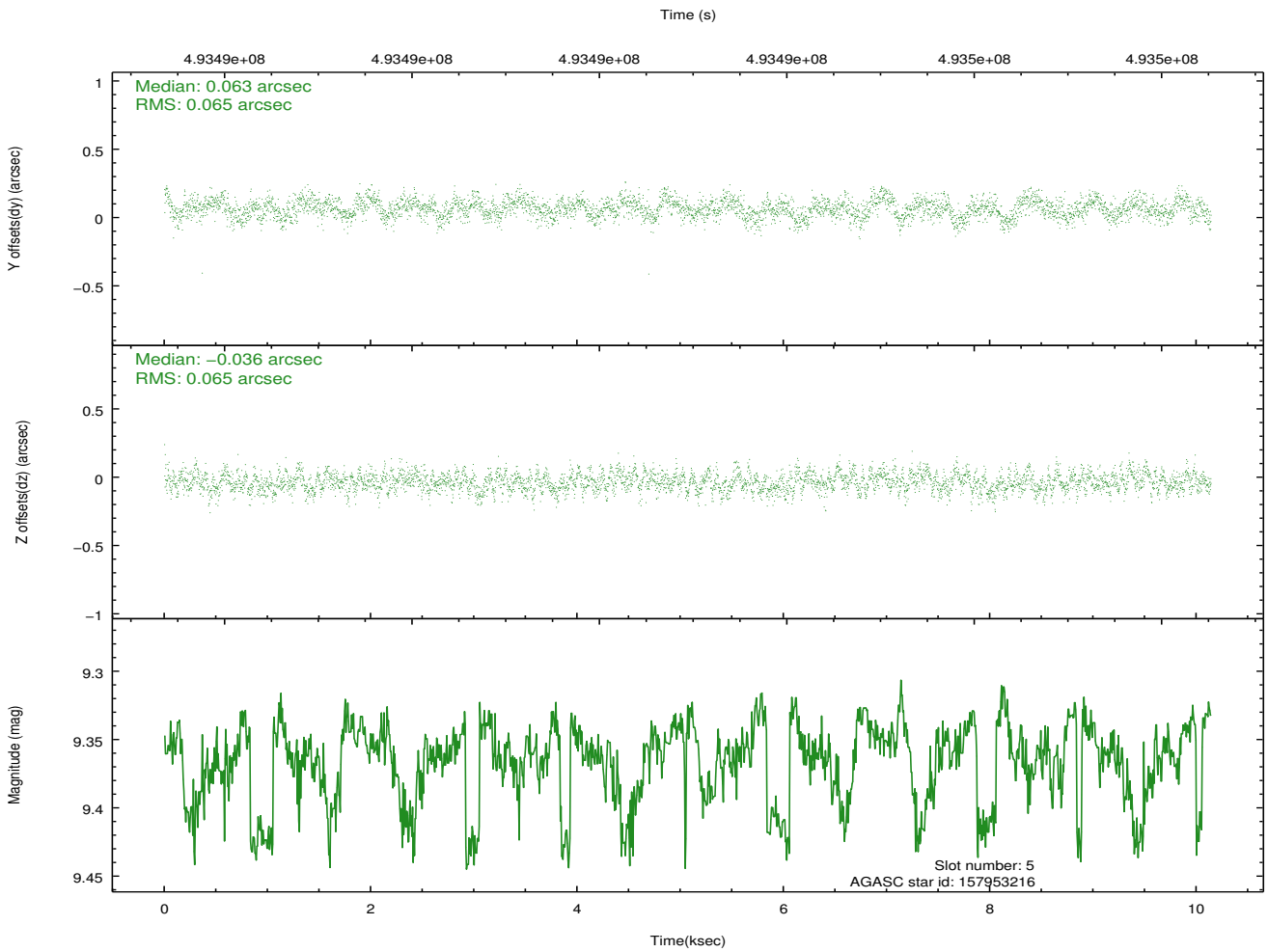
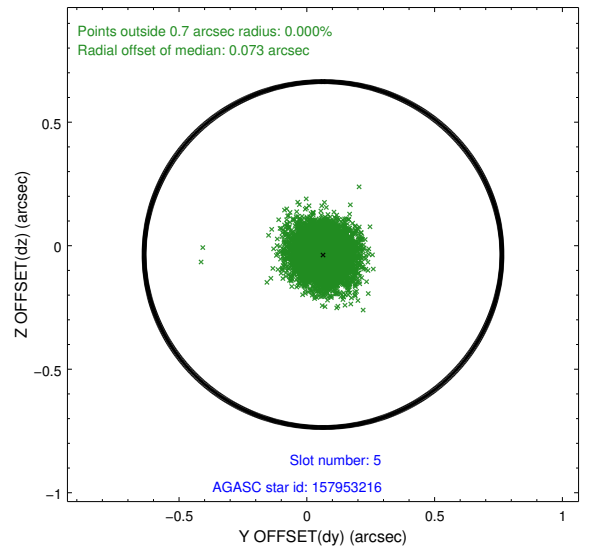
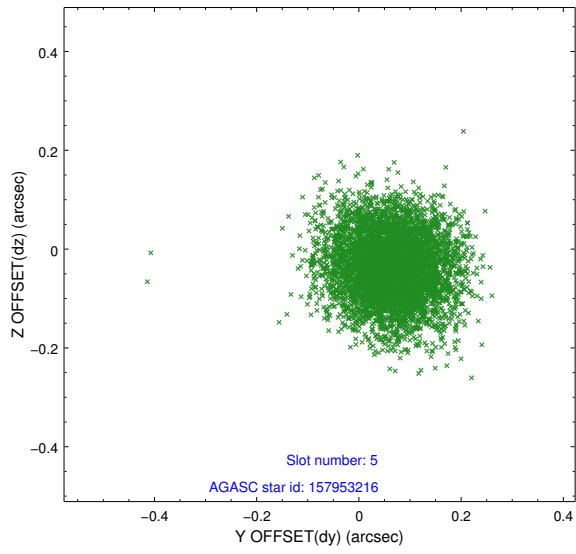
### 2.4.1 Slot 3



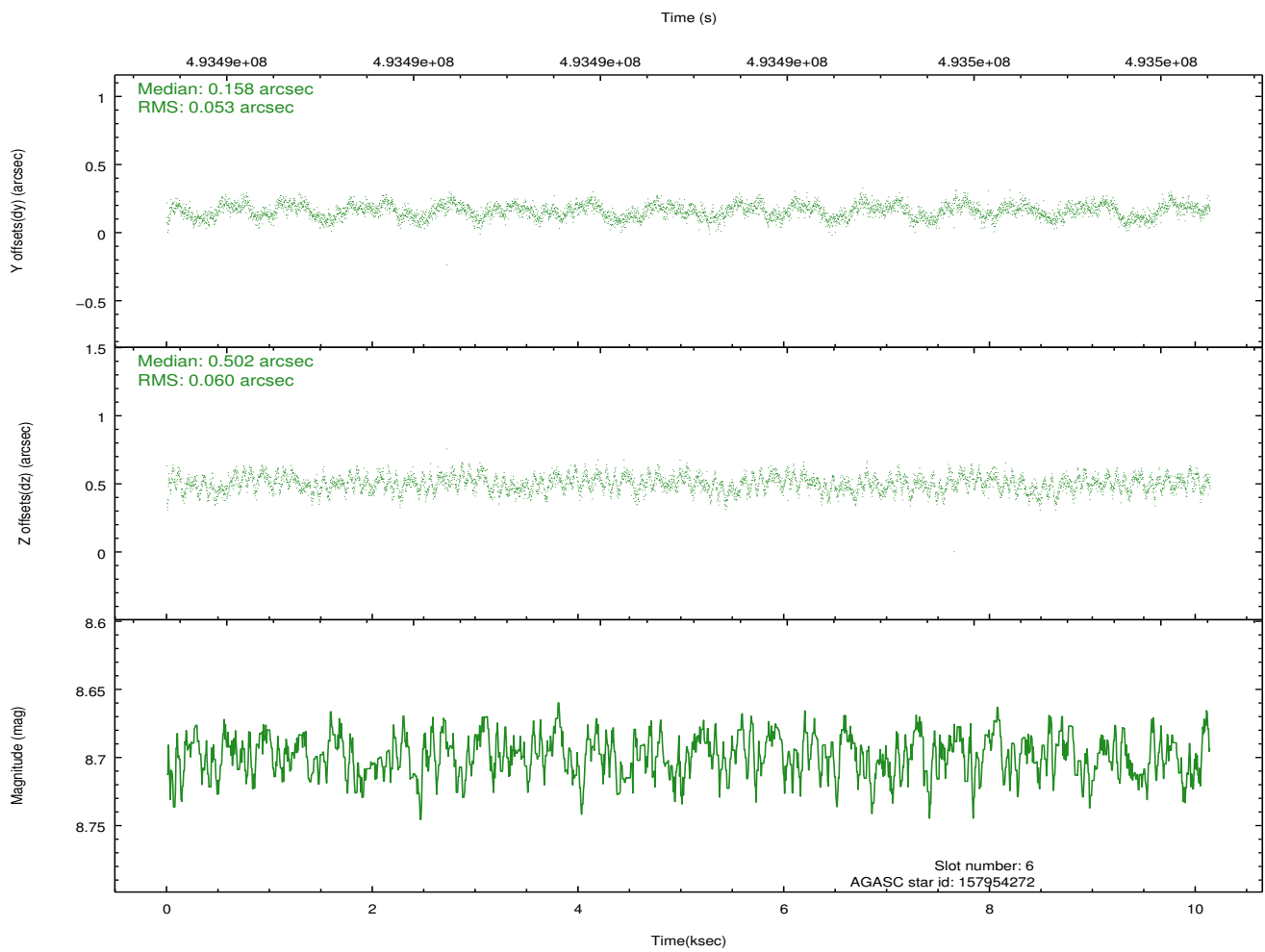
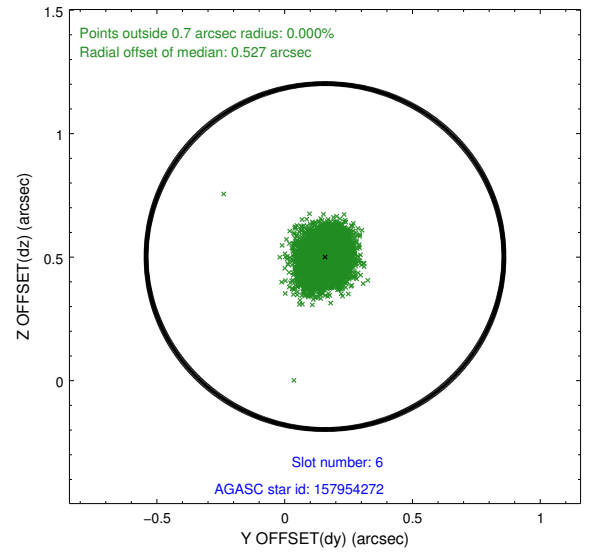
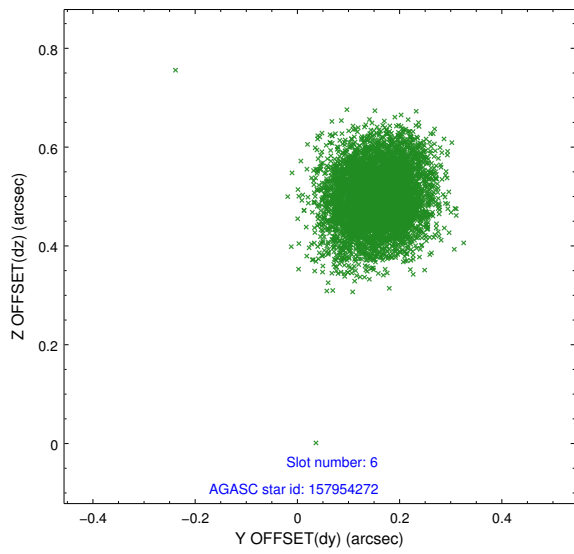
## 2.4.2 Slot 4



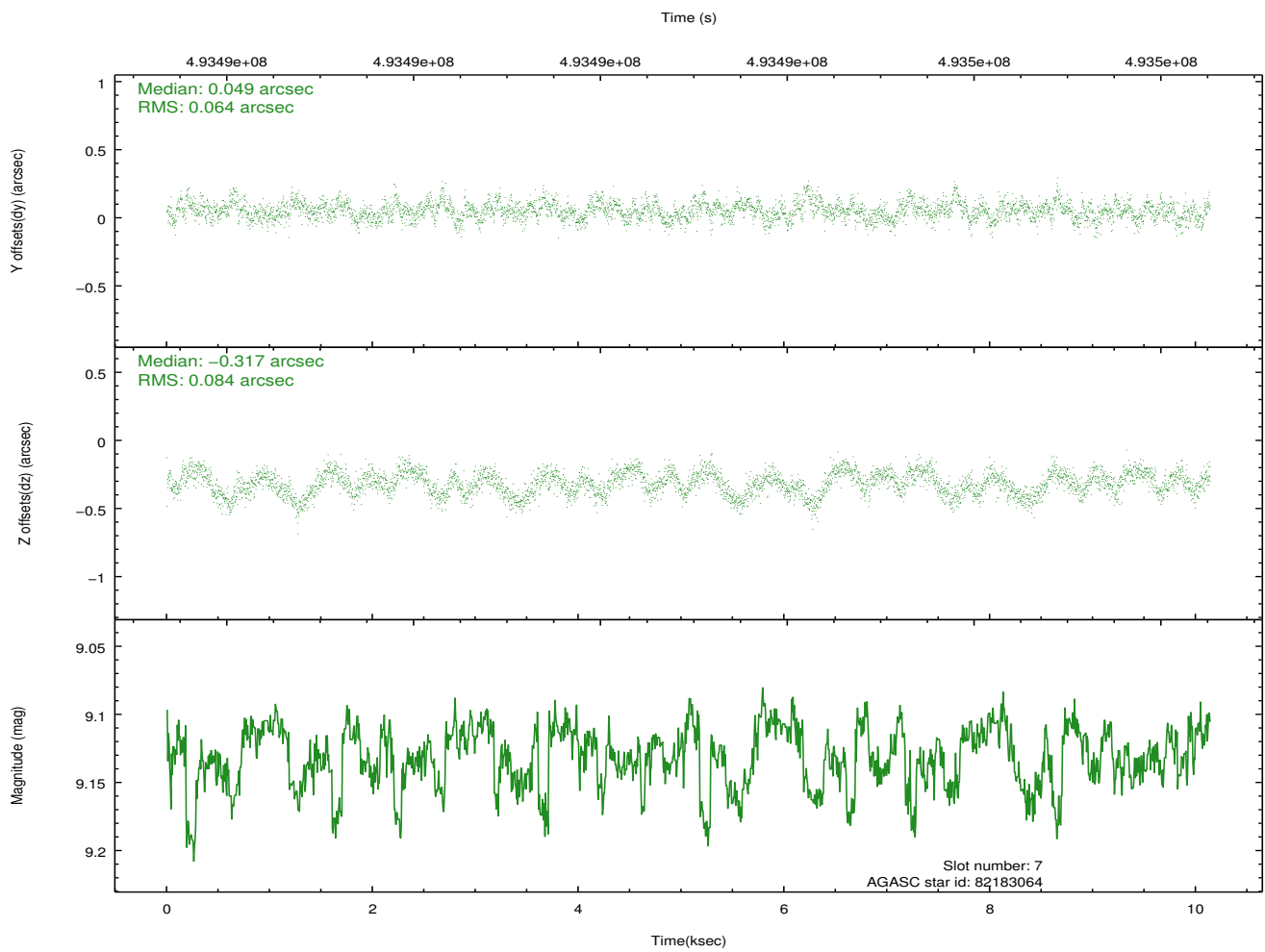
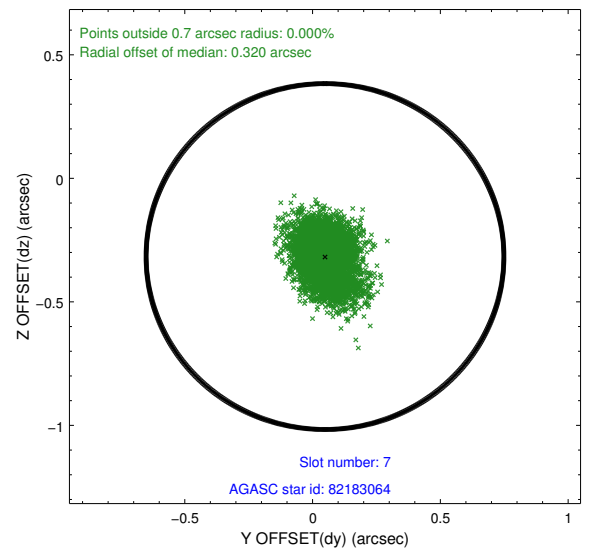
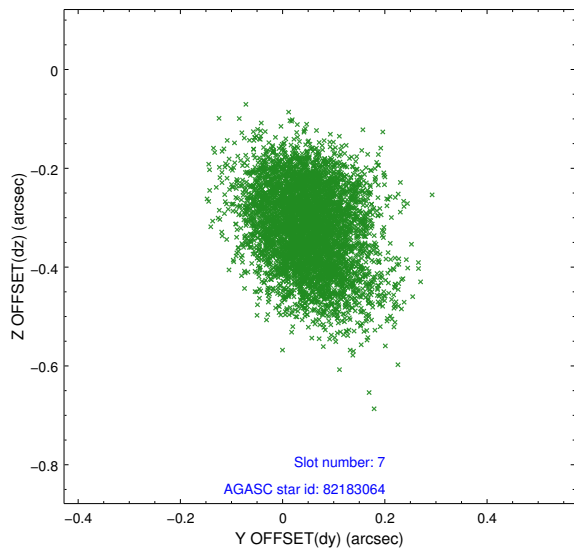
### 2.4.3 Slot 5



## 2.4.4 Slot 6

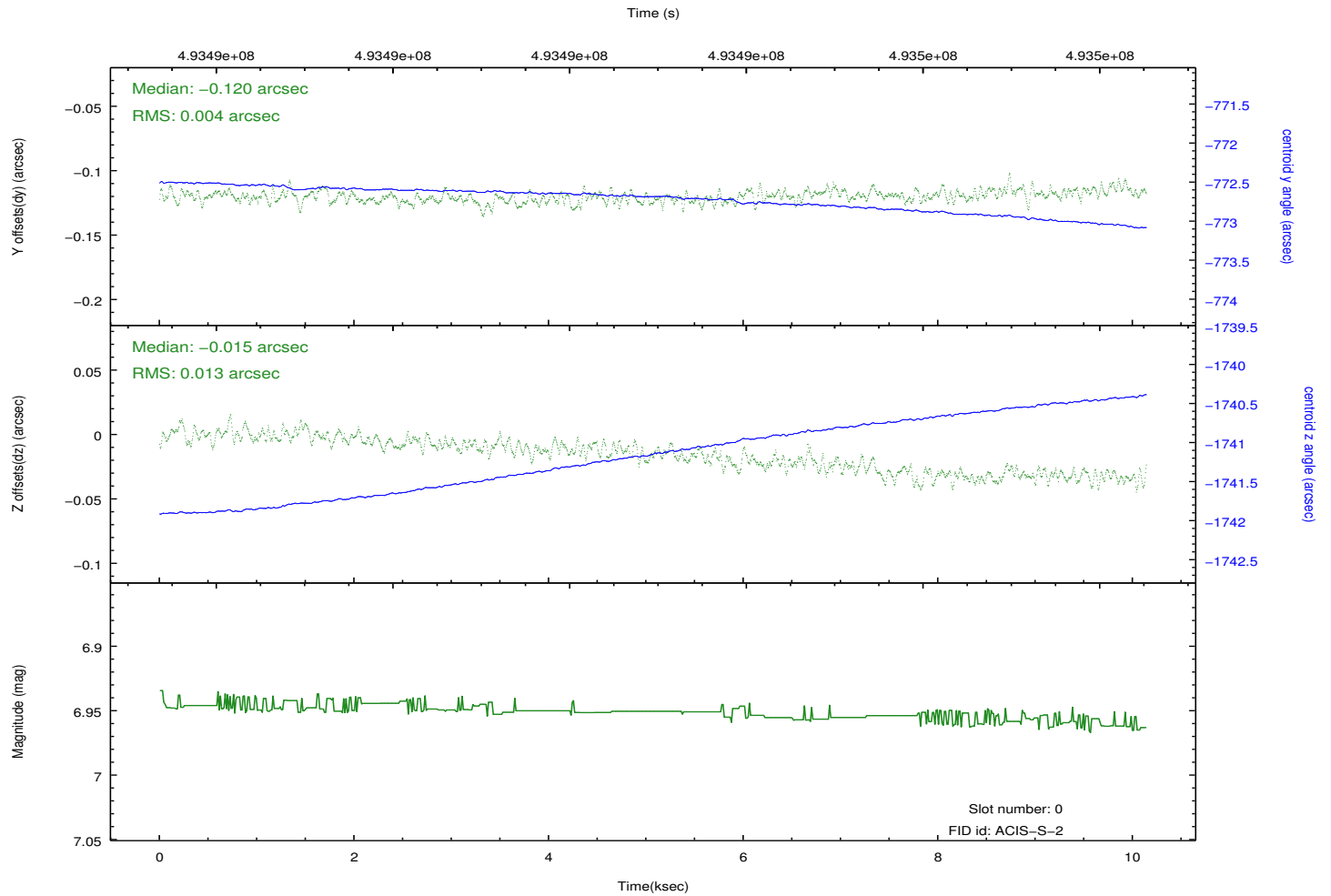
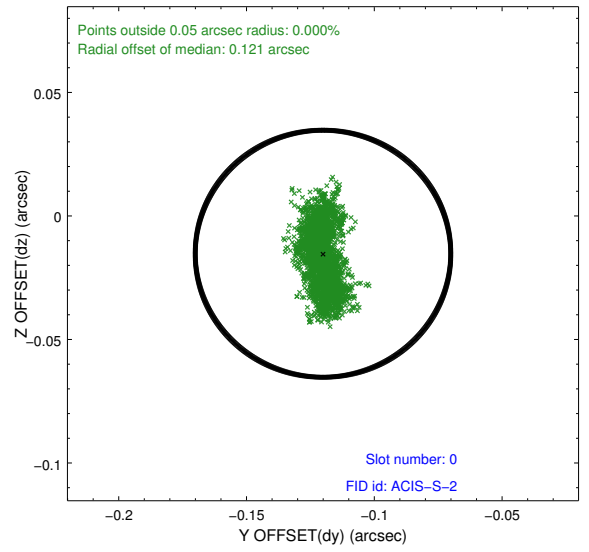
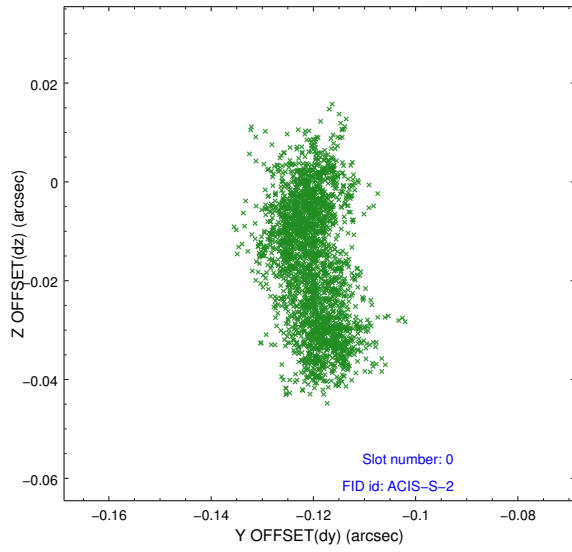


## 2.4.5 Slot 7

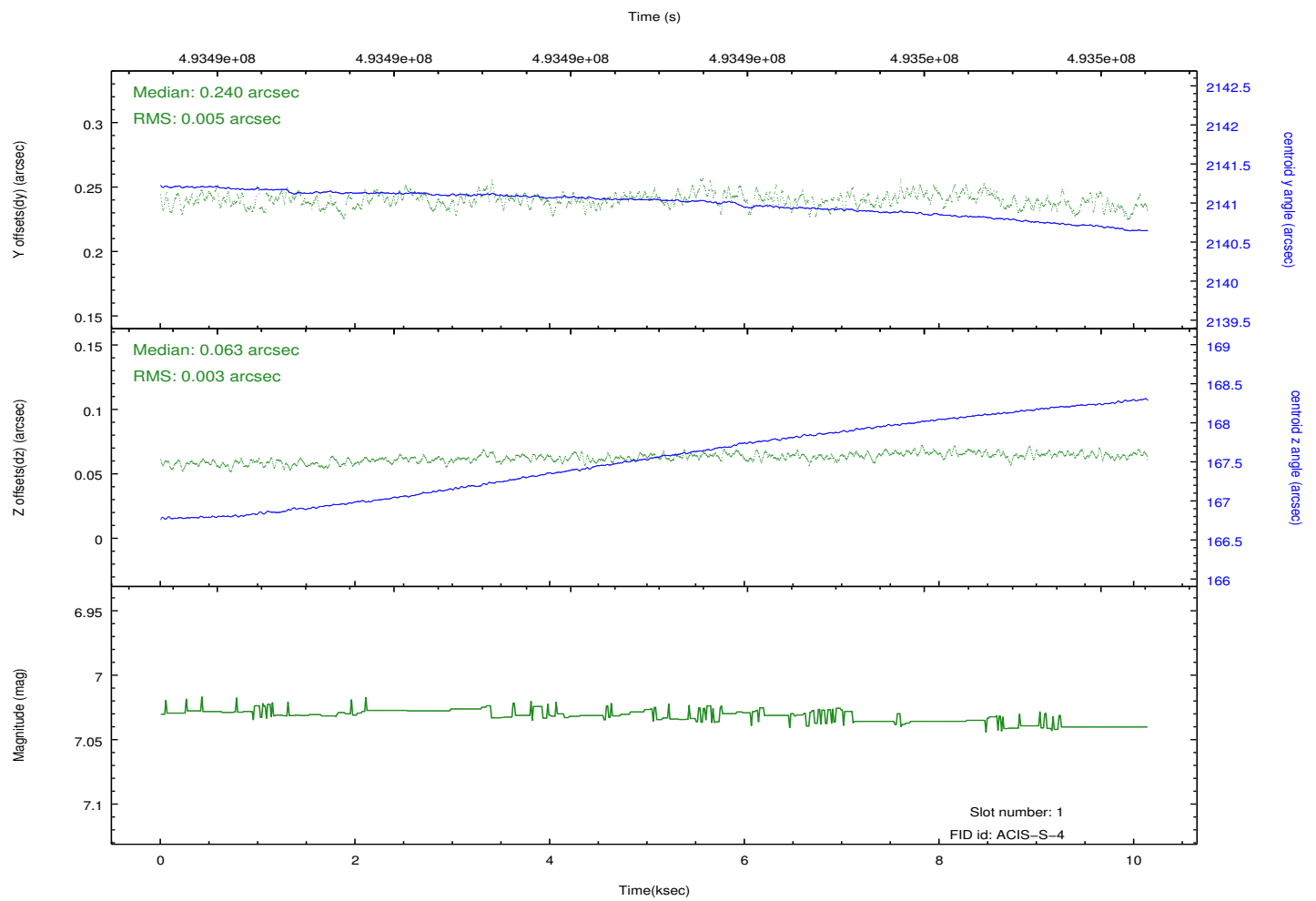
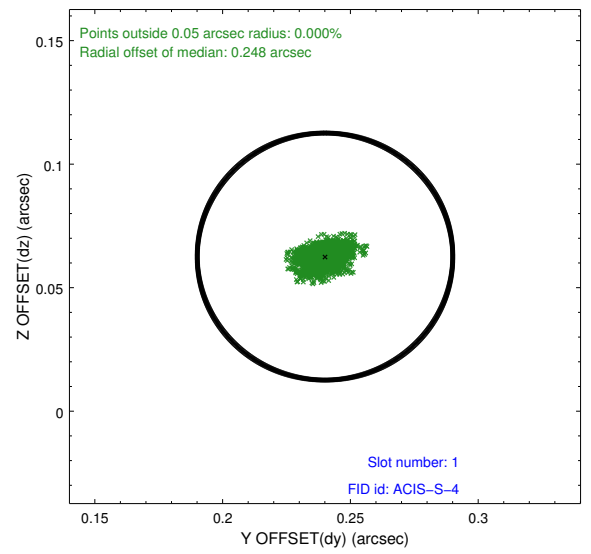
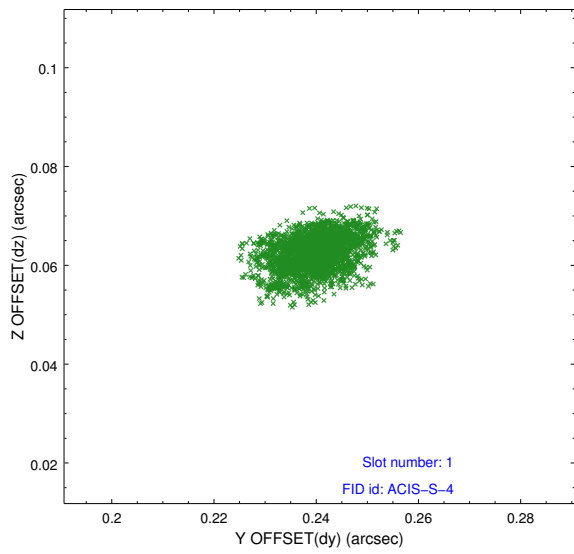


## 2.5 FID Slots

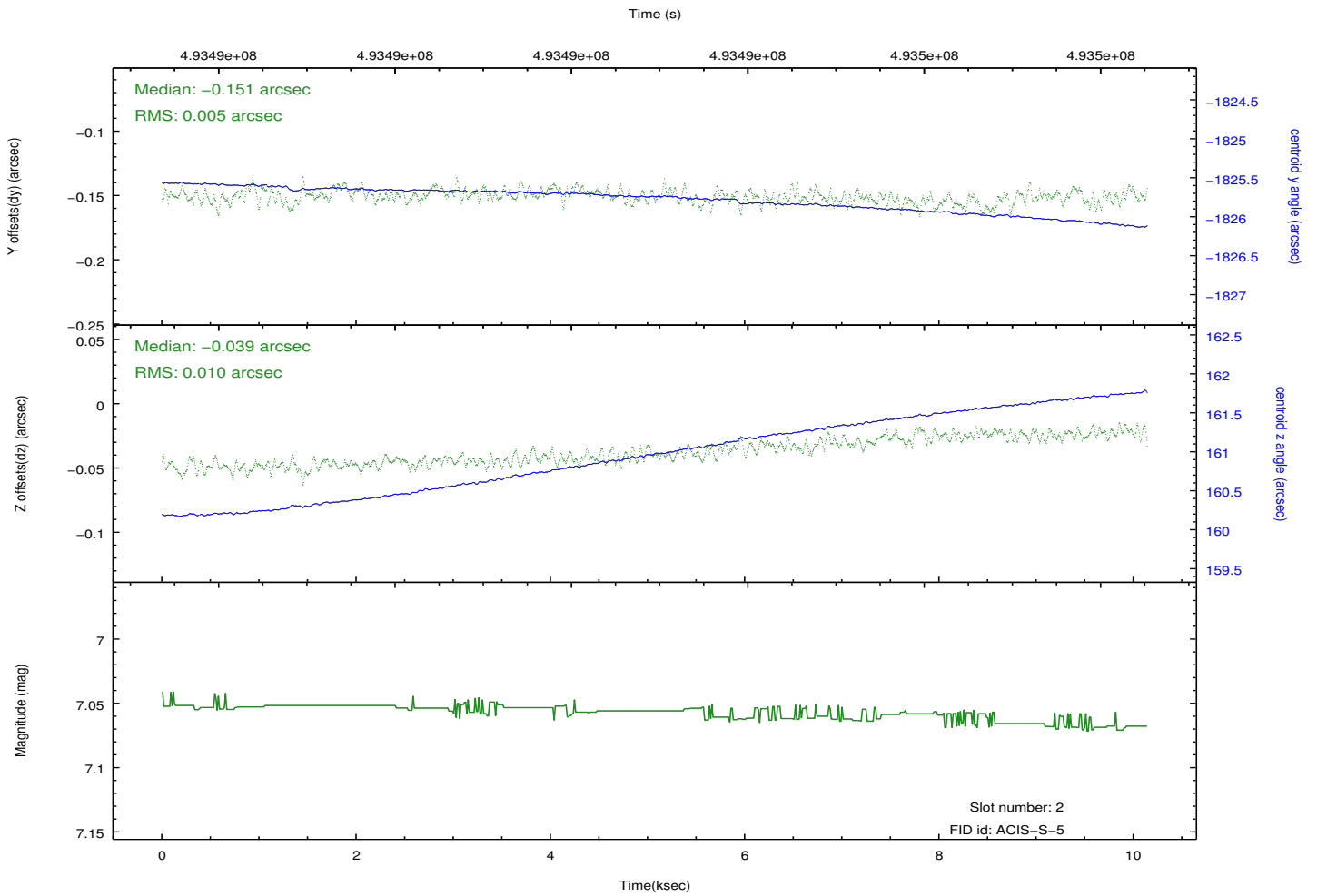
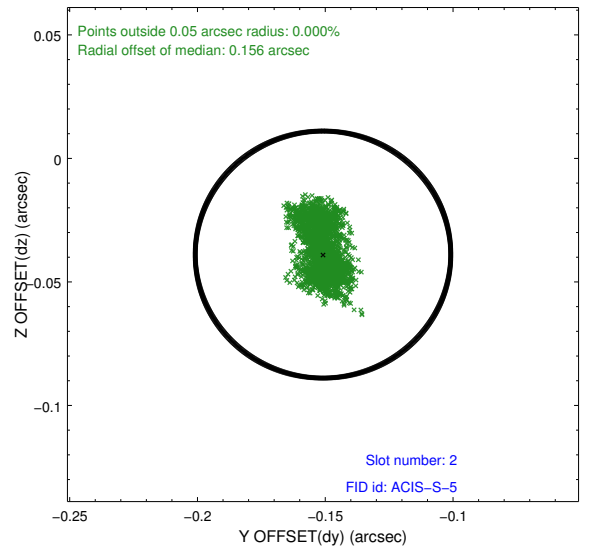
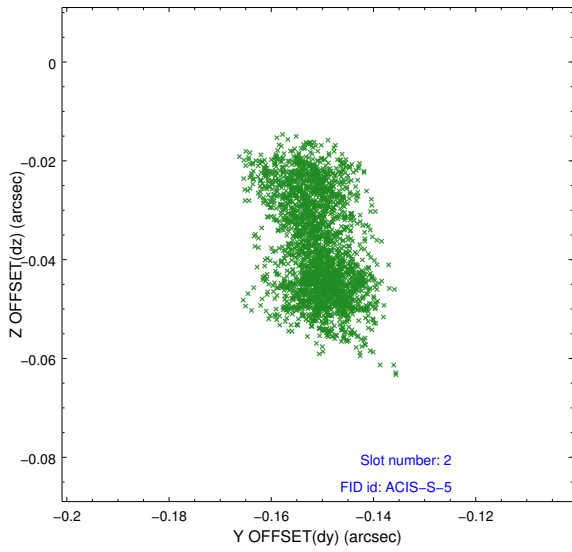
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.9638724490404

## 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.