

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 16002 - L2 Version 3
Chandra X-Ray Center

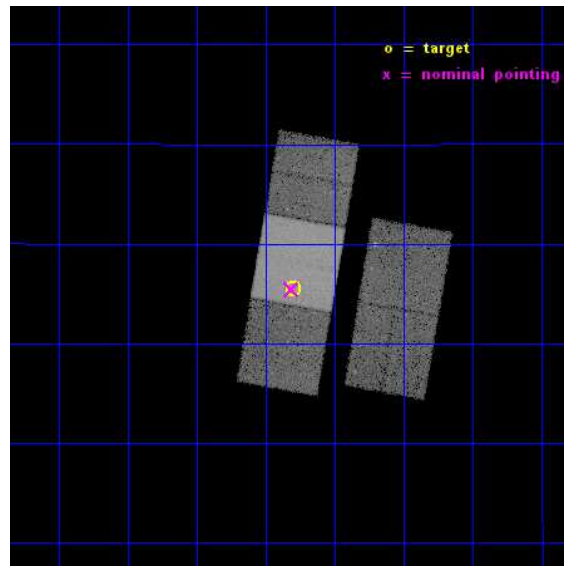
L2 Processing Date : Dec 7 2014

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1 Front

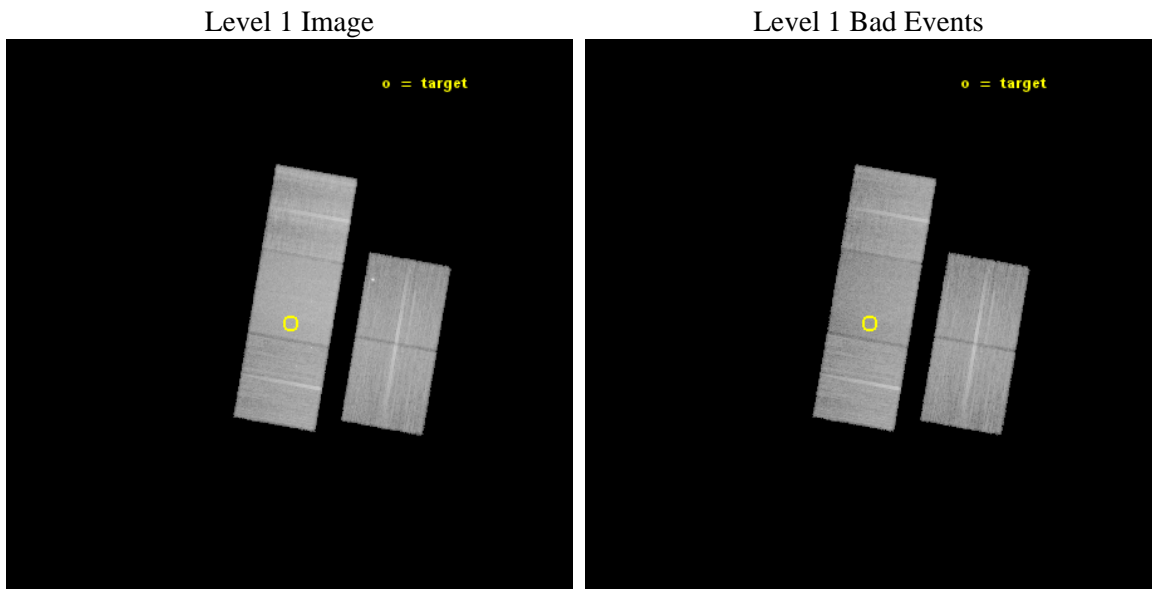
seq_num	502235	Sequence number
obs_id	16002	Observation id
title	State of the shocked plasma: X-ray and radio signatures from type IIP supernovae	Proposal title
observer	Prof. Alak Ray	Principal investigator
object	SN 2013ej	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	24.200667	Observer's specified target RA [deg]
dec_targ	15.758611	Observer's specified target Dec [deg]
ra_nom	24.203569175691	Nominal RA [deg]
dec_nom	15.757450041027	Nominal Dec [deg]
roll_nom	279.94838610889	Nominal Roll [deg]
revision	3	Processing version of data
ontime	38068.000292778	Sum of GTIs [s]
livetime	37570.613843699	Livetime [s]
ontime2	38067.983705282	Sum of GTIs [s]
ontime3	38068.000292778	Sum of GTIs [s]
ontime6	38068.000292778	Sum of GTIs [s]
ontime7	38068.000292778	Sum of GTIs [s]
ontime8	38068.000292778	Sum of GTIs [s]
l2events	183462	Number of level 2 events



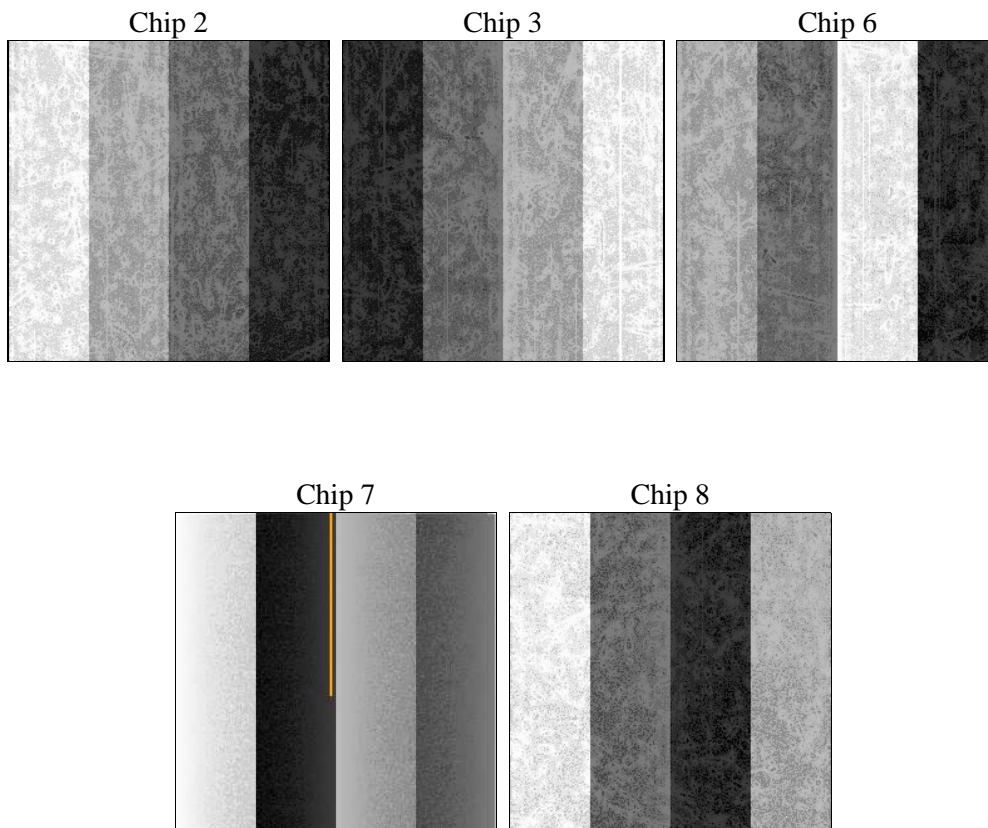
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	38068.000292778	Sum of GTIs [s]
caldbver	4.6.4	 	ontime2	38067.983705282	Sum of GTIs [s]
date	2014-12-08T03:15:06	Date and time of file creation	ontime3	38068.000292778	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	38068.000292778	Sum of GTIs [s]
			ontime7	38068.000292778	Sum of GTIs [s]
			ontime8	38068.000292778	Sum of GTIs [s]
			l1events	1026233	Number of level 1 events

2.1.4 Events

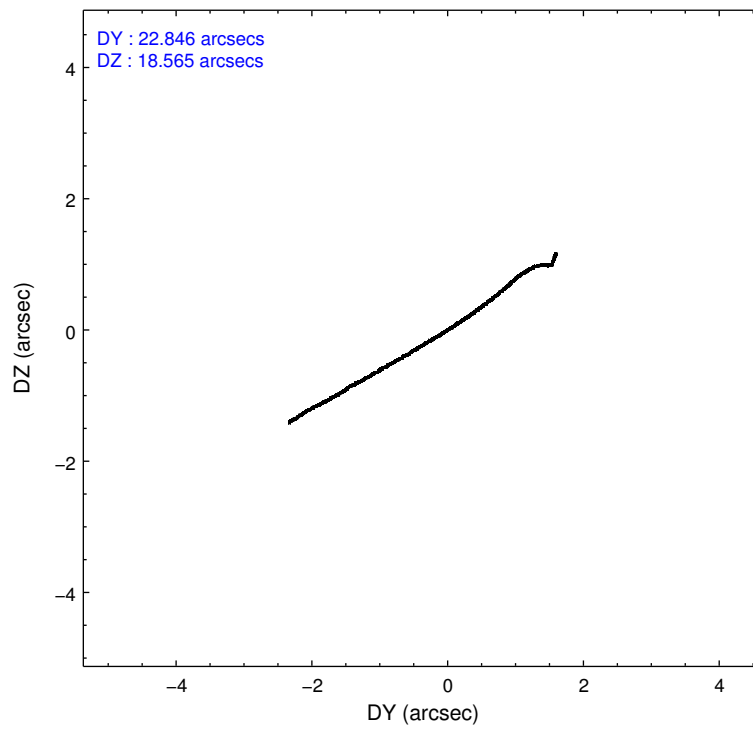
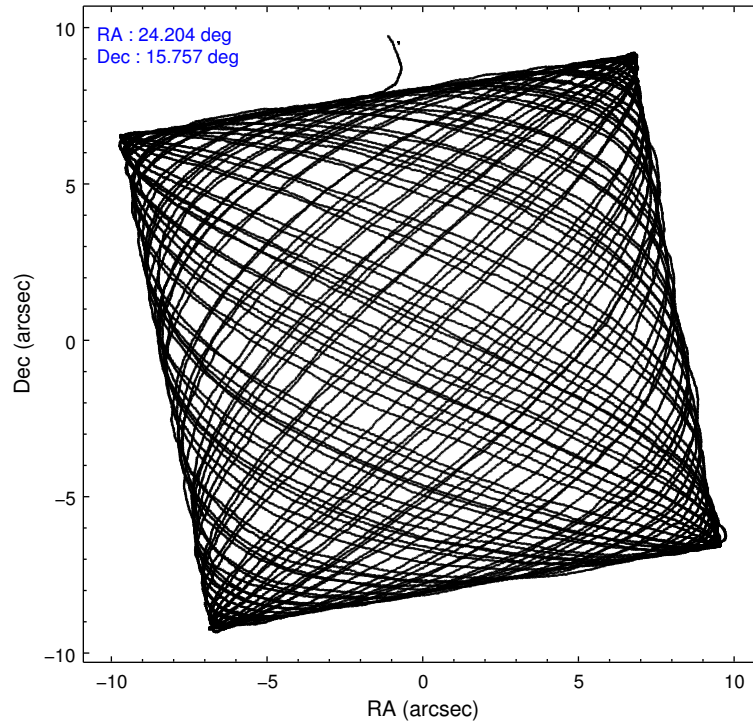
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	174384	173471	187282	251674	239422
rejected events	154297	152286	165206	142339	174683
rejected %	88%	87%	88%	56%	72%

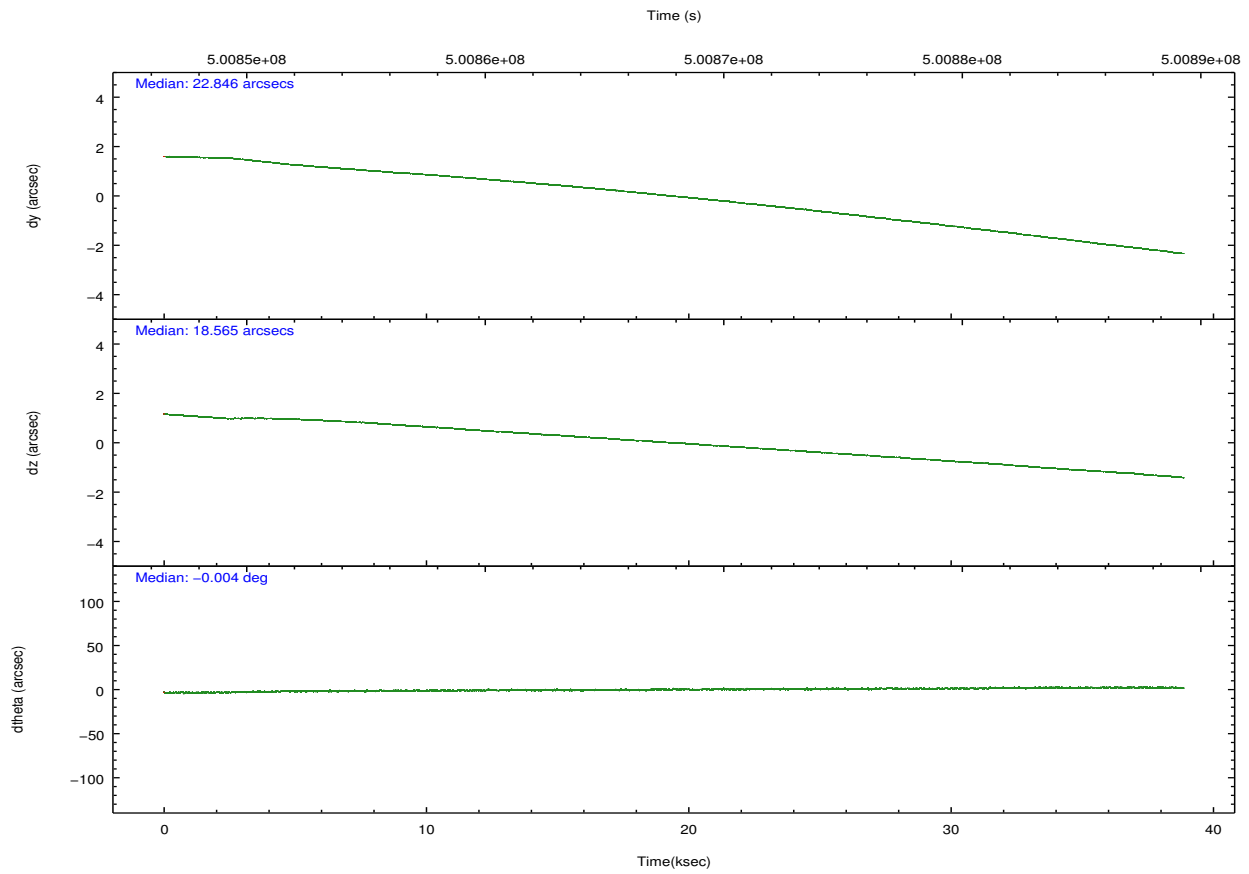
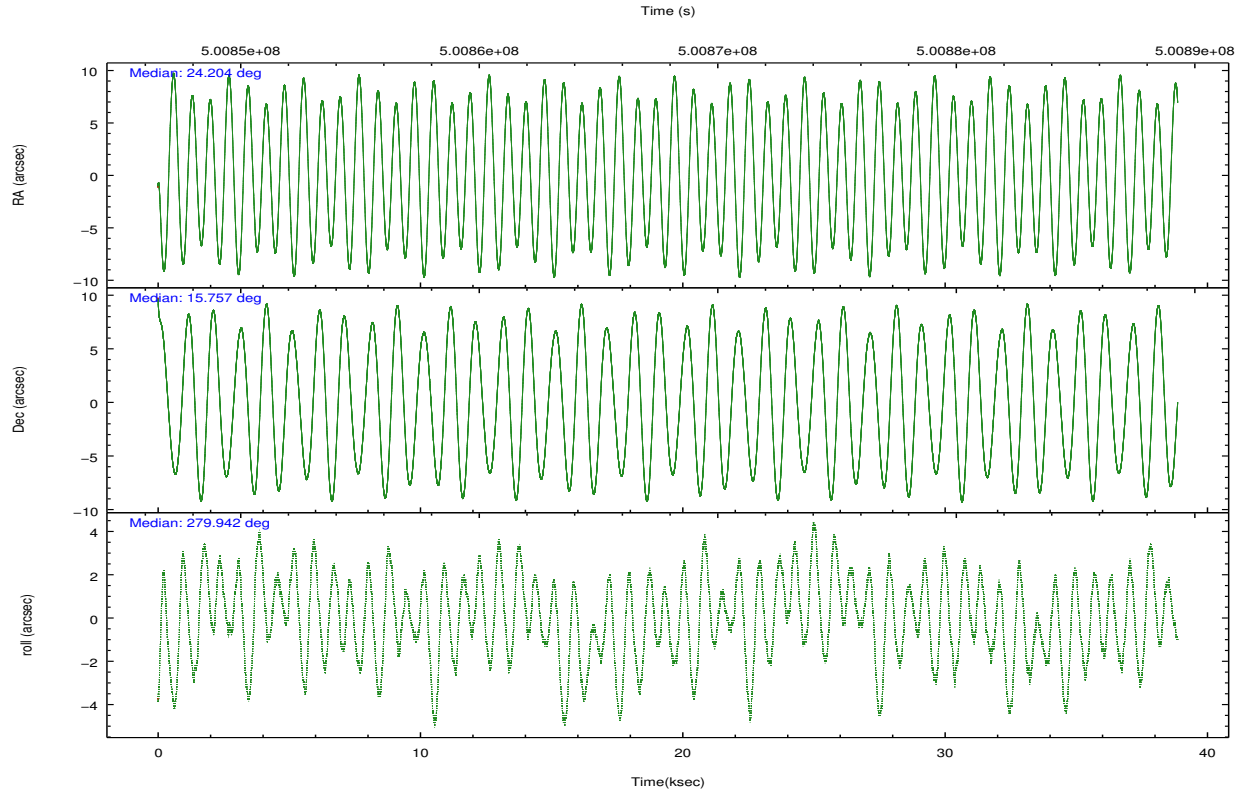
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	7025	7865	7410	9802	18195
	4%	4%	3%	3%	7%
grade 1 events	89	113	95	276	189
	0%	0%	0%	0%	0%
grade 2 events	4910	4642	5058	22316	15201
	2%	2%	2%	8%	6%
grade 3 events	2128	2183	2289	9141	7266
	1%	1%	1%	3%	3%
grade 4 events	2087	2205	2189	9193	6828
	1%	1%	1%	3%	2%
grade 5 events	7848	9825	9543	25623	14000
	4%	5%	5%	10%	5%
grade 6 events	3937	4293	5130	58898	17257
	2%	2%	2%	23%	7%
grade 7 events	146360	142345	155568	116425	160486
	83%	82%	83%	46%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	24.185029	24.20356917569125	Subarray requested	NONE	NONE
[deg] Pointing Dec	15.778173	15.75745004102662	Alternating exposures requested	N	N
[deg] Pointing Roll	279.796793	279.94838610889	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	500849343.184000	500847048.87051			
Observation start date	2013-11-14T20:47:56	2013-11-14T20:10:48			
[s] Observation end time (MET)	500887343.184000	500887965.84776			
Observation end date	2013-11-15T07:21:16	2013-11-15T07:32:45			
Read mode	TIMED	TIMED			

2.3 Aspect



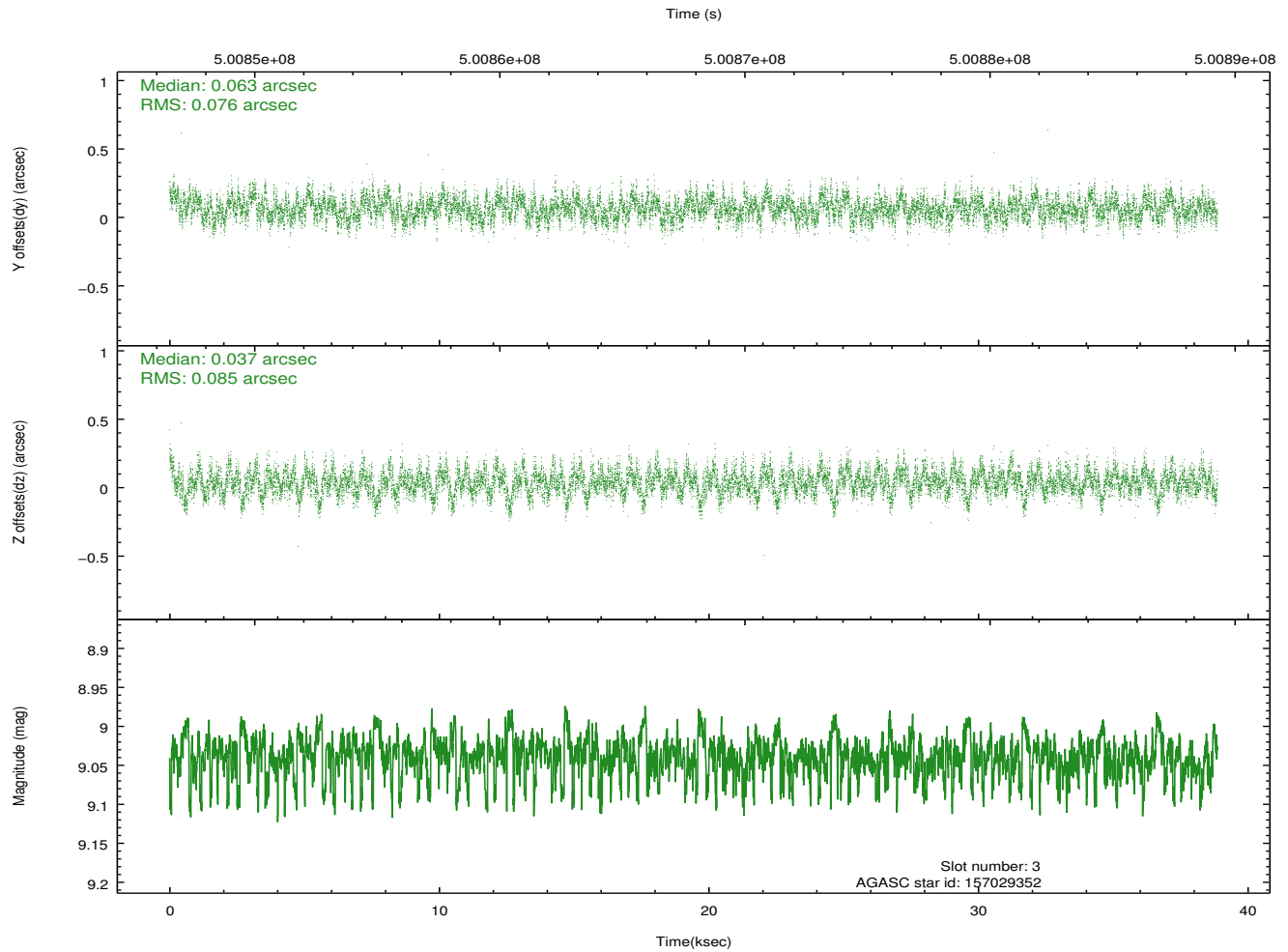
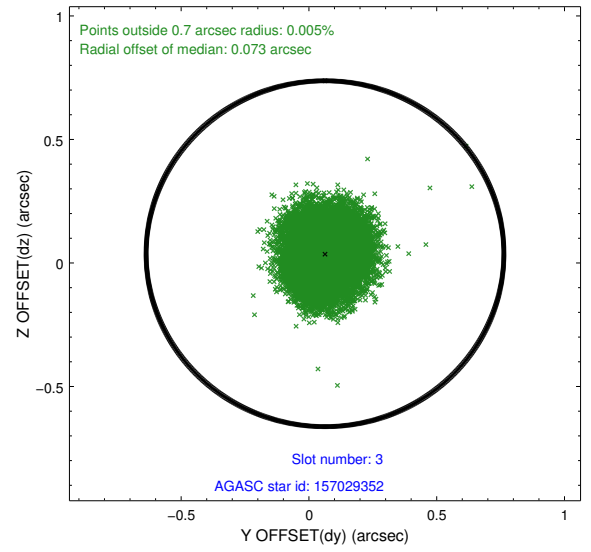
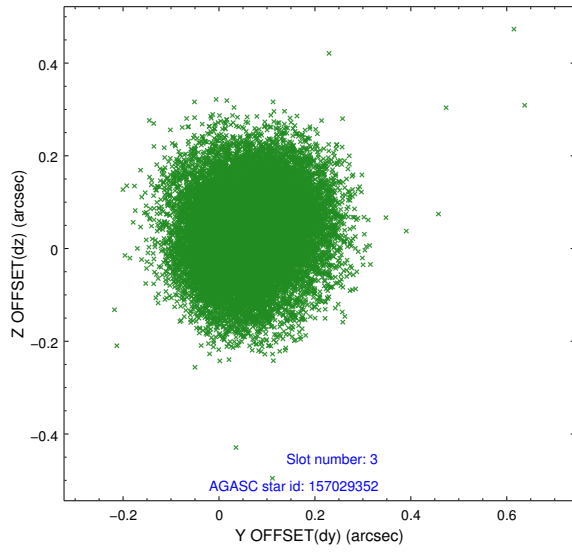


Slot Statistics

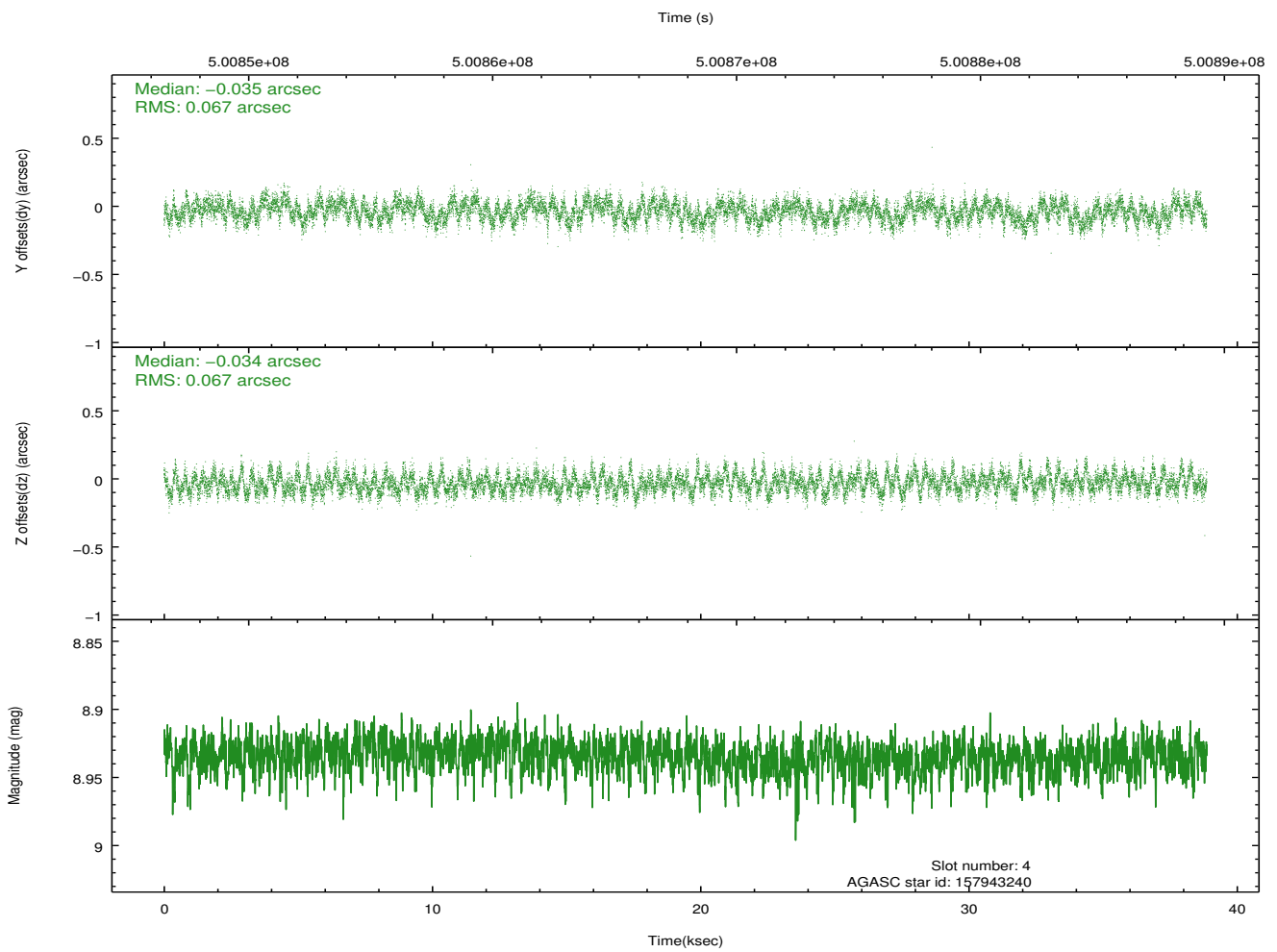
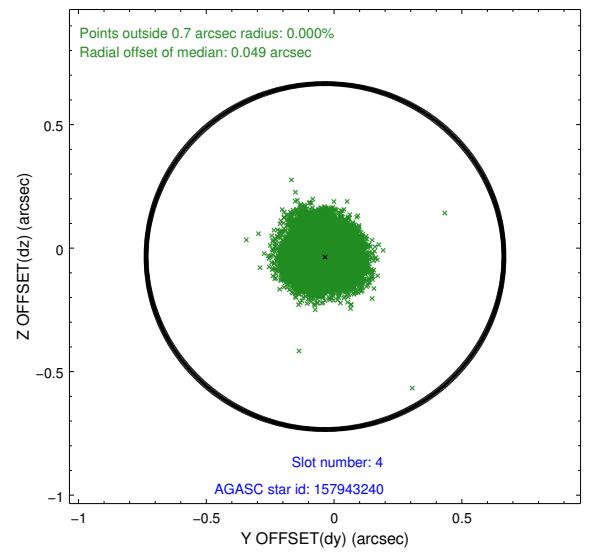
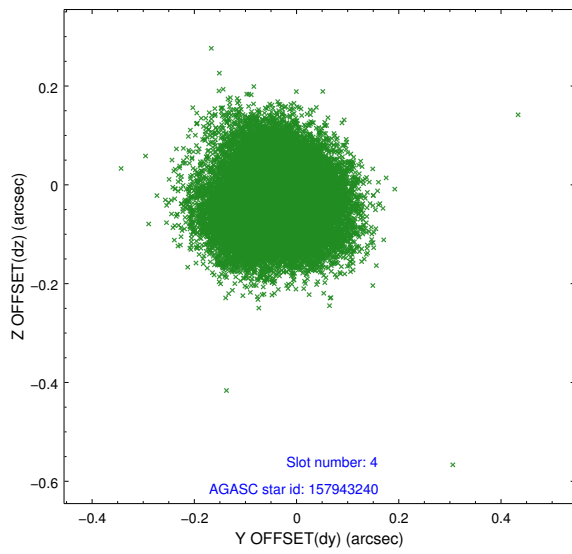
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.01	9482	-0.127	-0.057	0.028	0.061	0.000000	0.000000	-776.04	-1740.05
1	FID		ACIS-S-4	7.10	9481	0.309	0.077	0.053	0.068	0.000000	0.000000	2137.69	168.52
2	FID		ACIS-S-5	7.13	9481	-0.218	-0.011	0.040	0.051	0.000000	0.000000	-1828.91	162.15
3	GUIDE	used	157029352	9.04	18951	0.063	0.037	0.123	0.195	23.764744	15.271289	1549.18	-1747.69
4	GUIDE	used	157943240	8.93	18951	-0.035	-0.034	0.102	0.158	24.500363	16.361777	-1885.74	1430.99
5	GUIDE	used	157953216	9.35	18945	0.071	-0.043	0.163	0.253	24.189817	15.248642	1881.62	-307.52
6	GUIDE	used	157954272	8.70	18956	-0.177	-0.233	0.086	0.142	24.932144	15.423798	1694.21	2338.61
7	GUIDE	used	157036752	9.05	18955	0.072	0.260	0.123	0.193	23.400830	16.130370	-1714.89	-2455.79

2.4 Star Slots

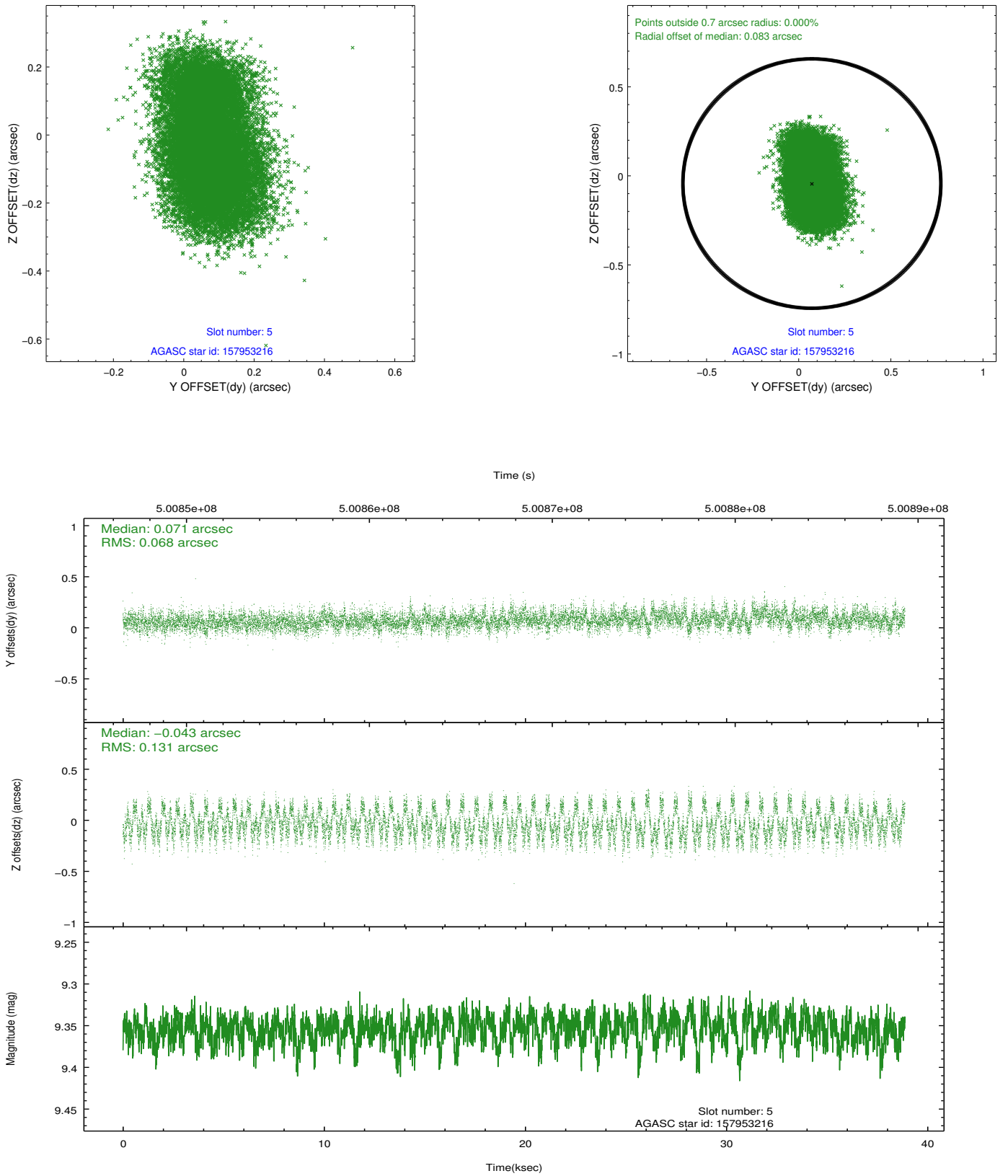
2.4.1 Slot 3



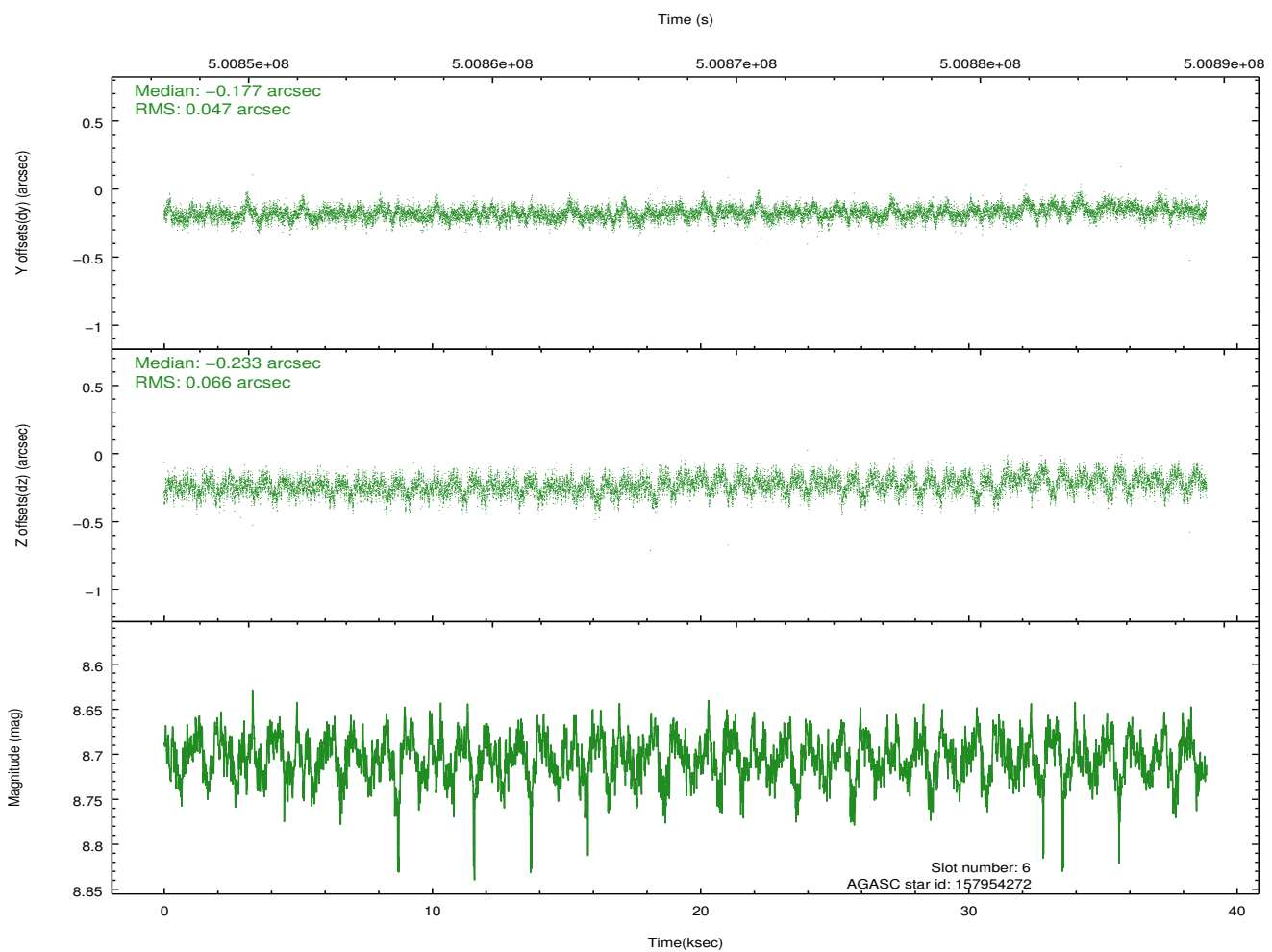
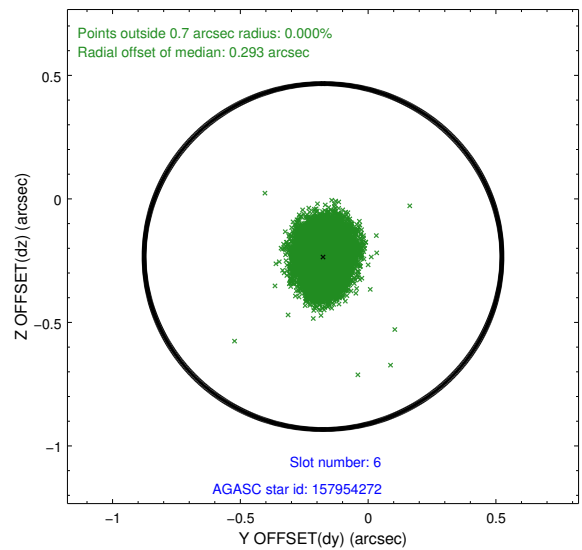
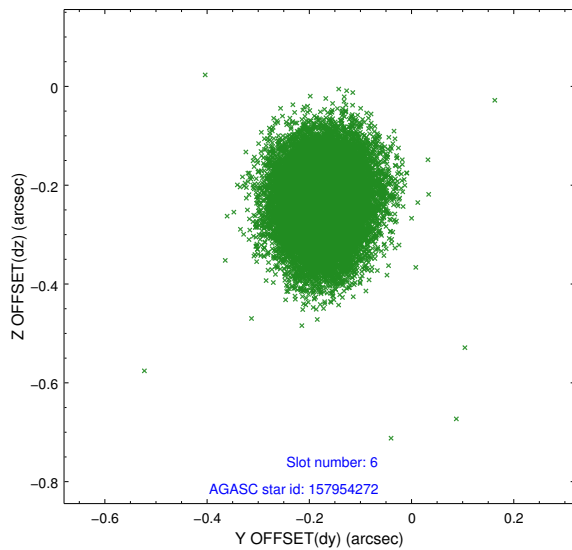
2.4.2 Slot 4



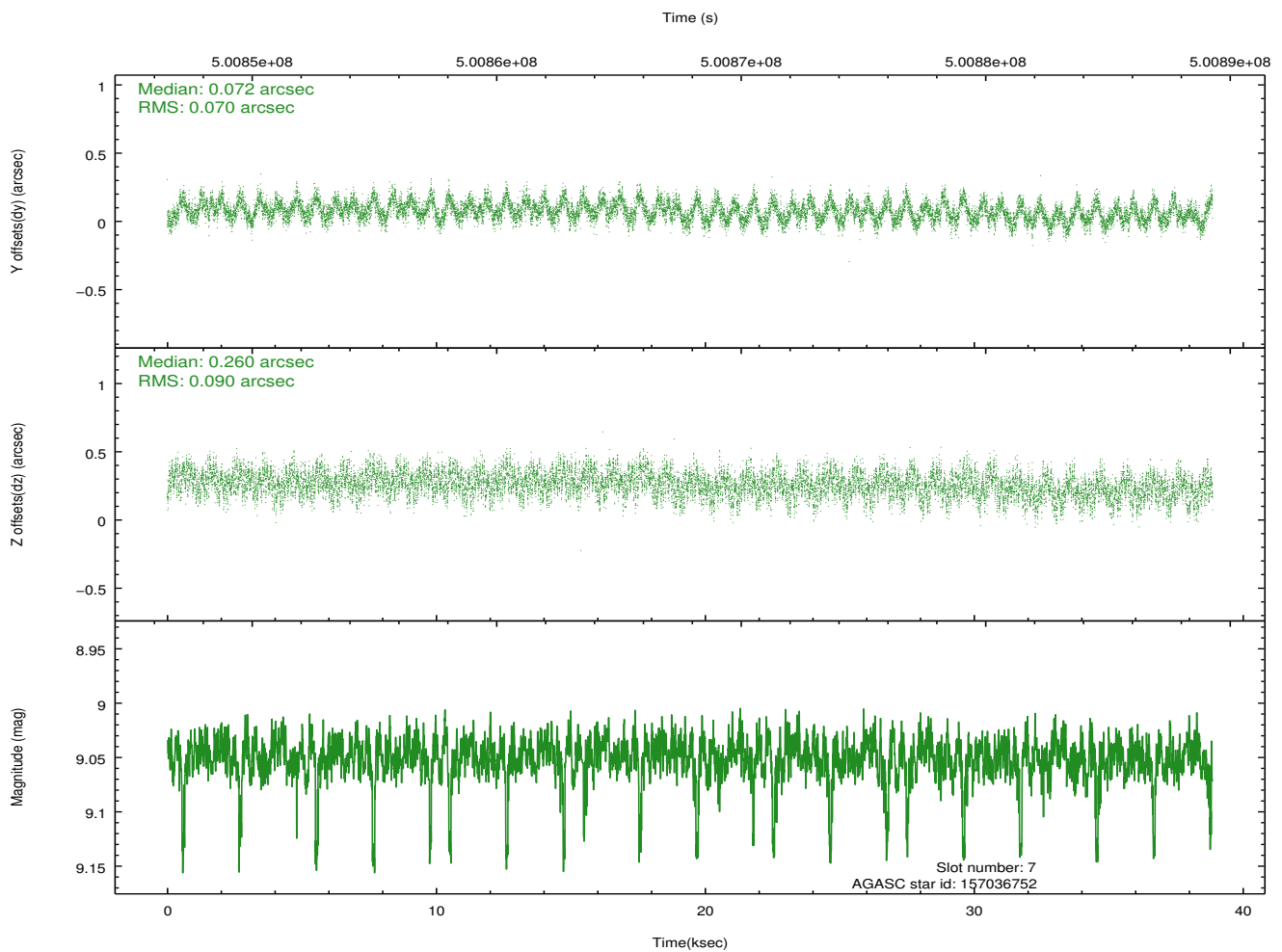
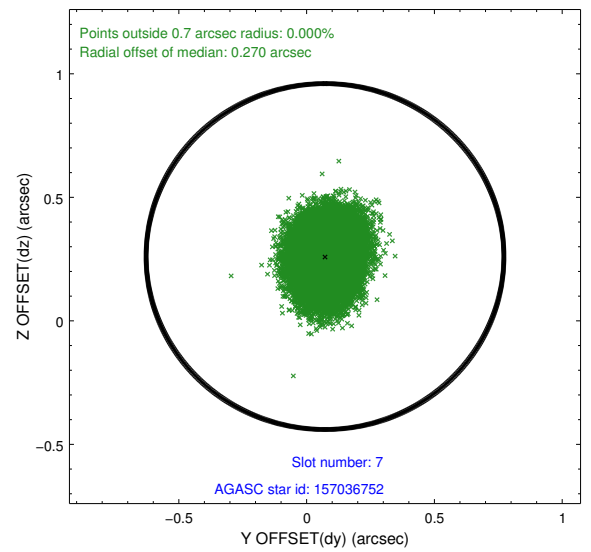
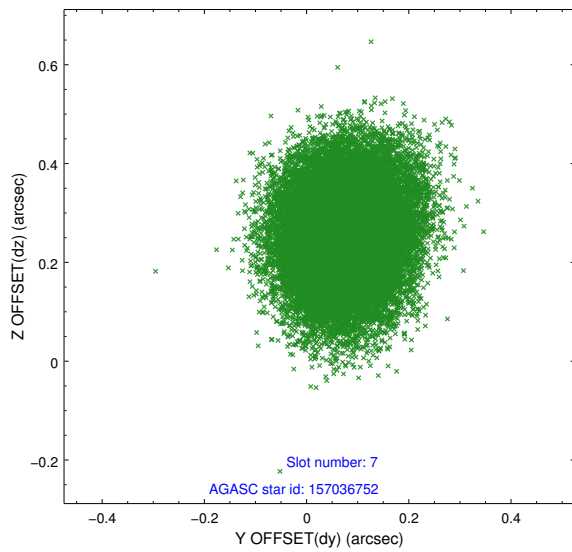
2.4.3 Slot 5



2.4.4 Slot 6

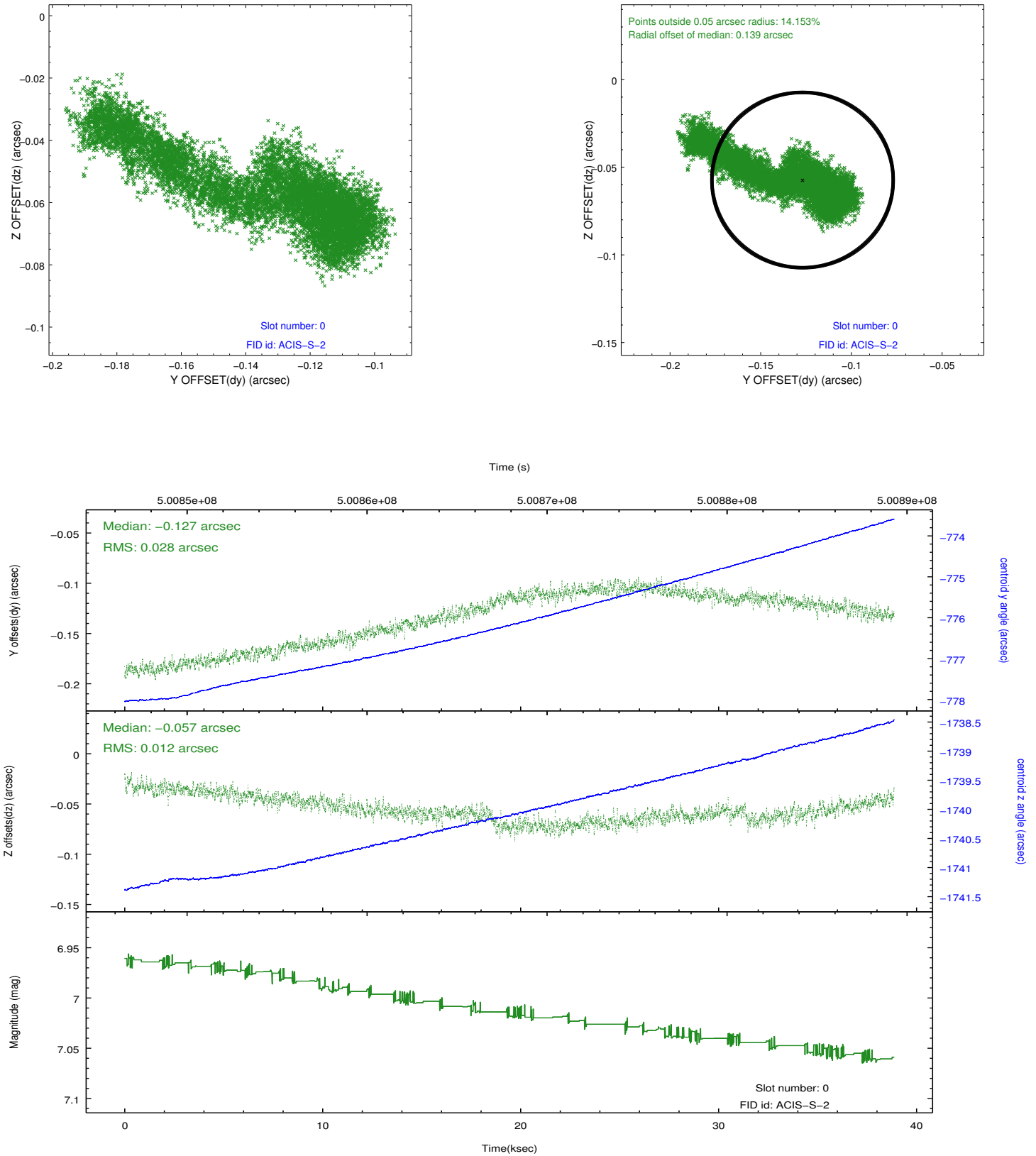


2.4.5 Slot 7

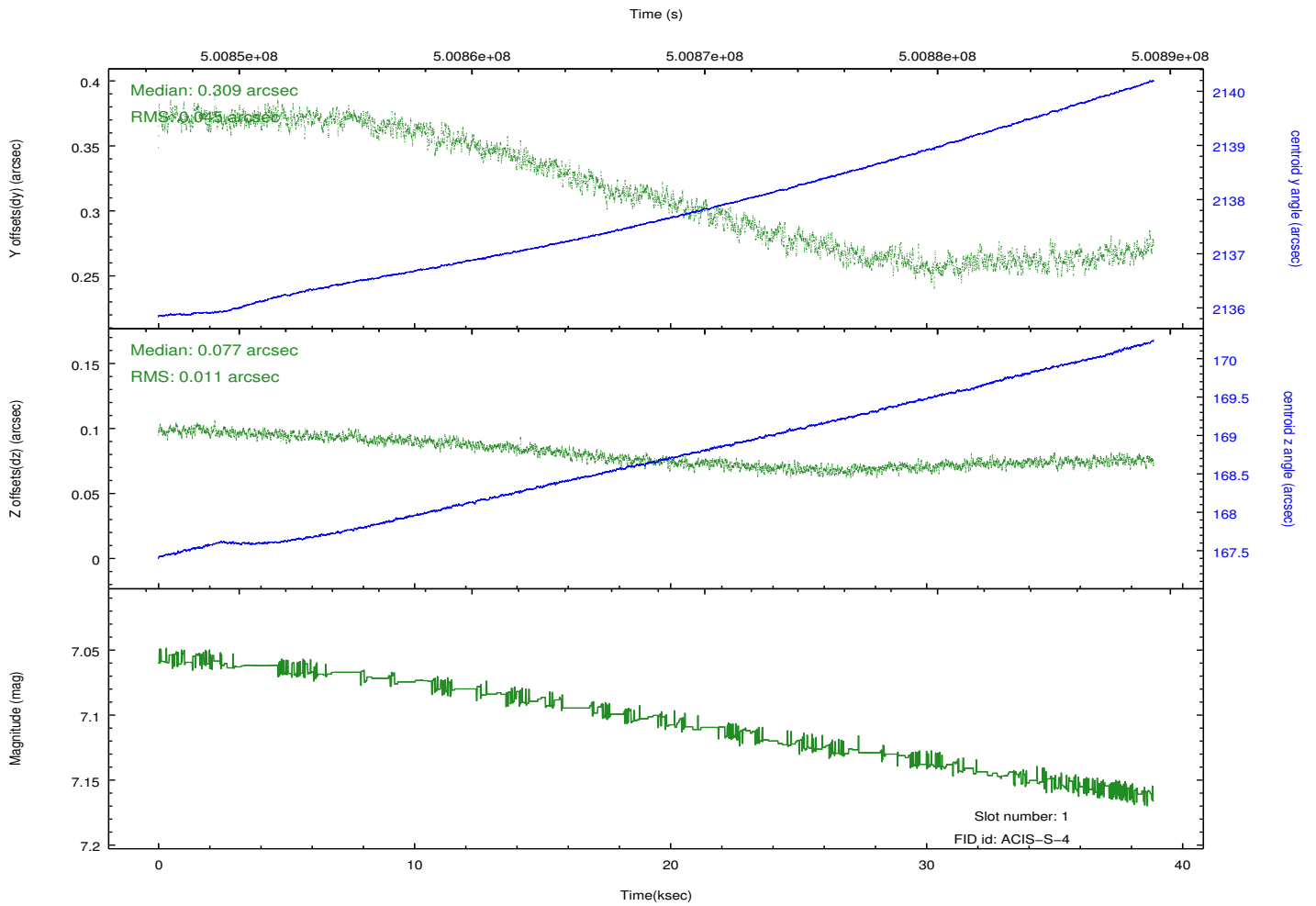
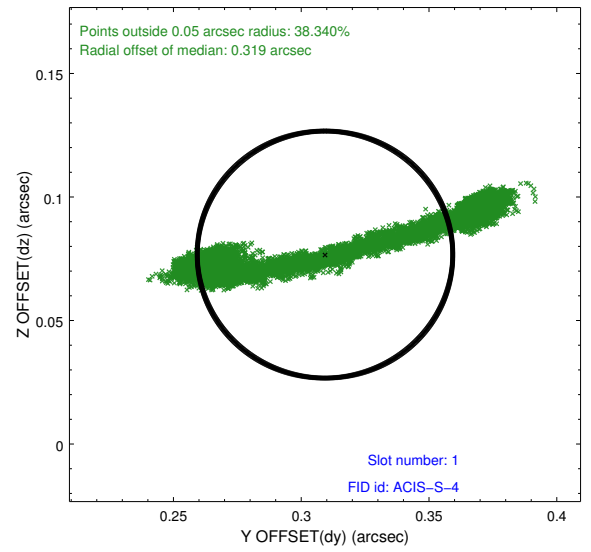
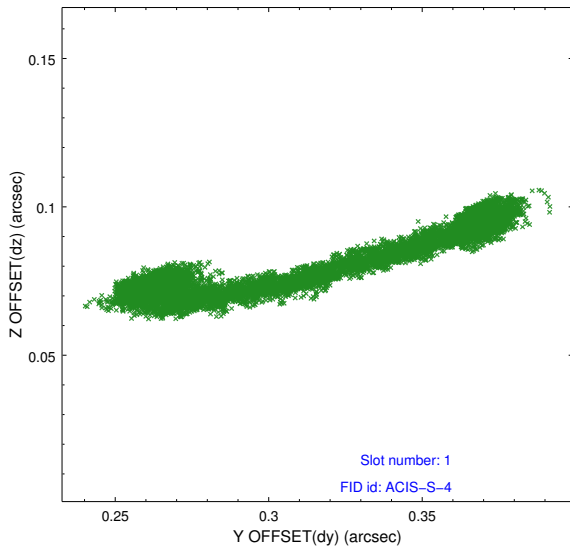


2.5 FID Slots

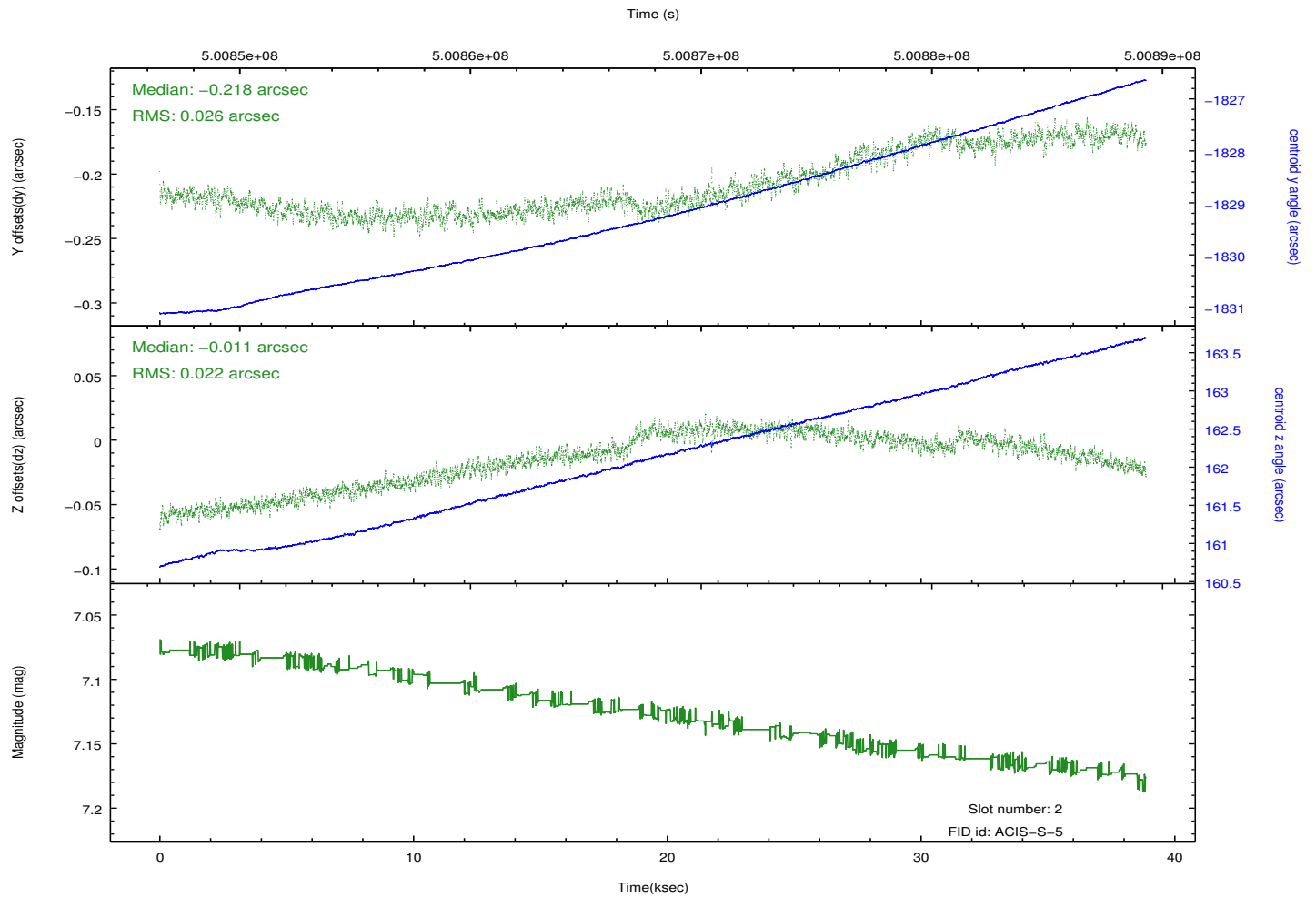
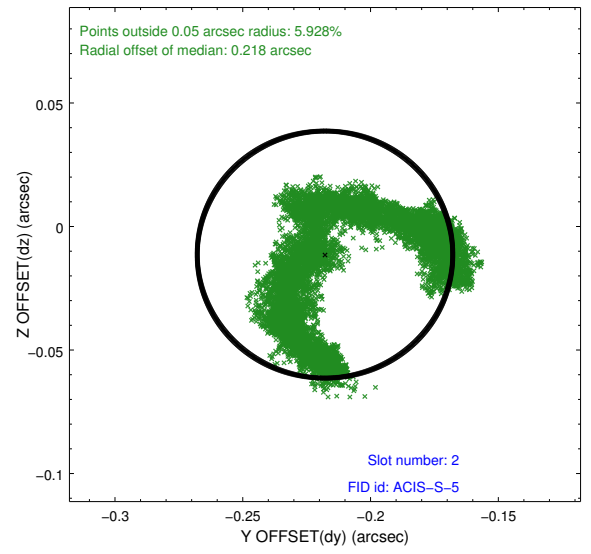
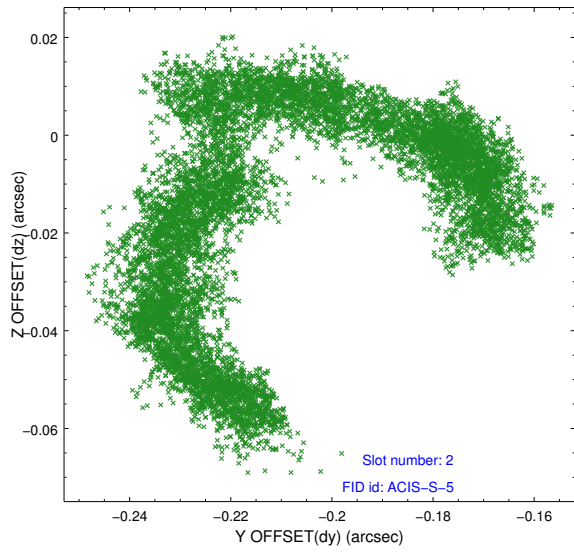
2.5.1 Slot 0



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)	2014.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.068000292778

A.2 Comments

Joint Proposal with NRAO. Monitor constraint met.

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A spatial region of the original bias map for CCD = 6 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 6 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(24.24427,15.60764), (24.24277,15.61584), (24.16044,15.60186), (24.16194,15.59366)

=====

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.