

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 18281 - L2 Version 2
Chandra X-Ray Center

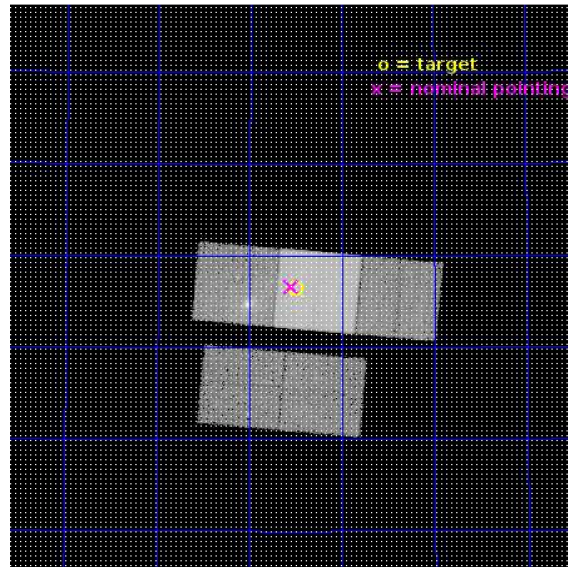
L2 Processing Date : Dec 30 2016

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1 Front

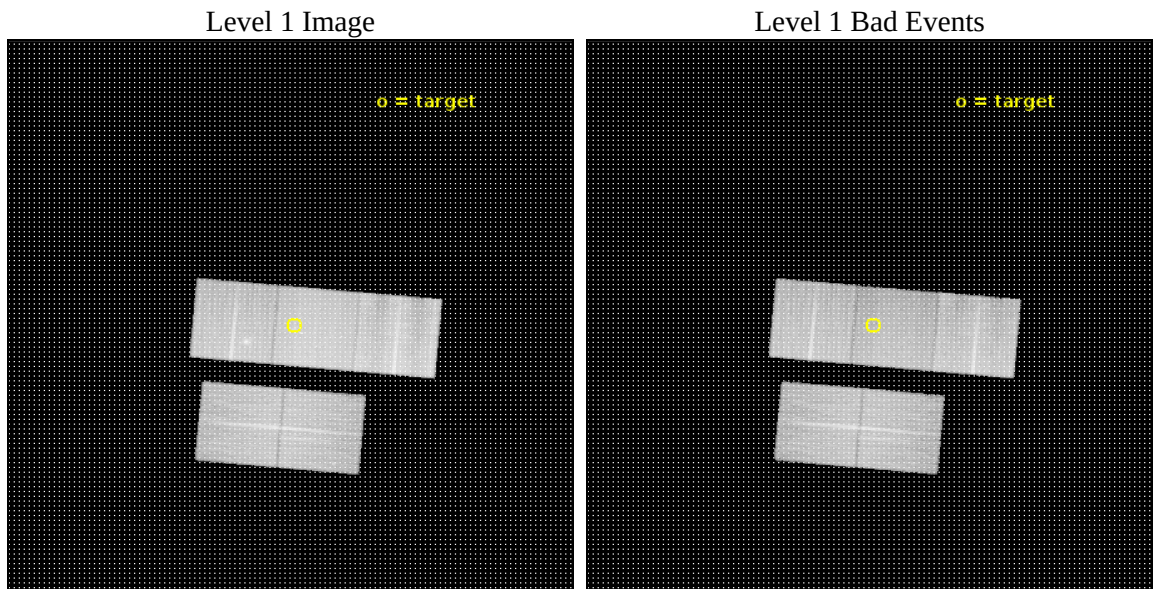
seq_num	801599	Sequence number
obs_id	18281	Observation id
title	A survivor found --- a detached X-ray cool core and tail	Proposal
observer	Ming Sun	Principal investigator
object	CGCG 254-021 tail	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	272.624583	Observer's specified target RA [deg]
dec_targ	49.94025	Observer's specified target Dec [deg]
ra_nom	272.6372857793	Nominal RA [deg]
dec_nom	49.94399812803	Nominal Dec [deg]
roll_nom	5.146900941394	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31604.34294939	Sum of GTIs [s]
livetime	31191.408941978	Livetime [s]
ontime2	31597.896788955	Sum of GTIs [s]
ontime3	31604.260869384	Sum of GTIs [s]
ontime6	31601.160919309	Sum of GTIs [s]
ontime7	31604.34294939	Sum of GTIs [s]
ontime8	31601.078859091	Sum of GTIs [s]
l2events	218952	Number of level 2 events



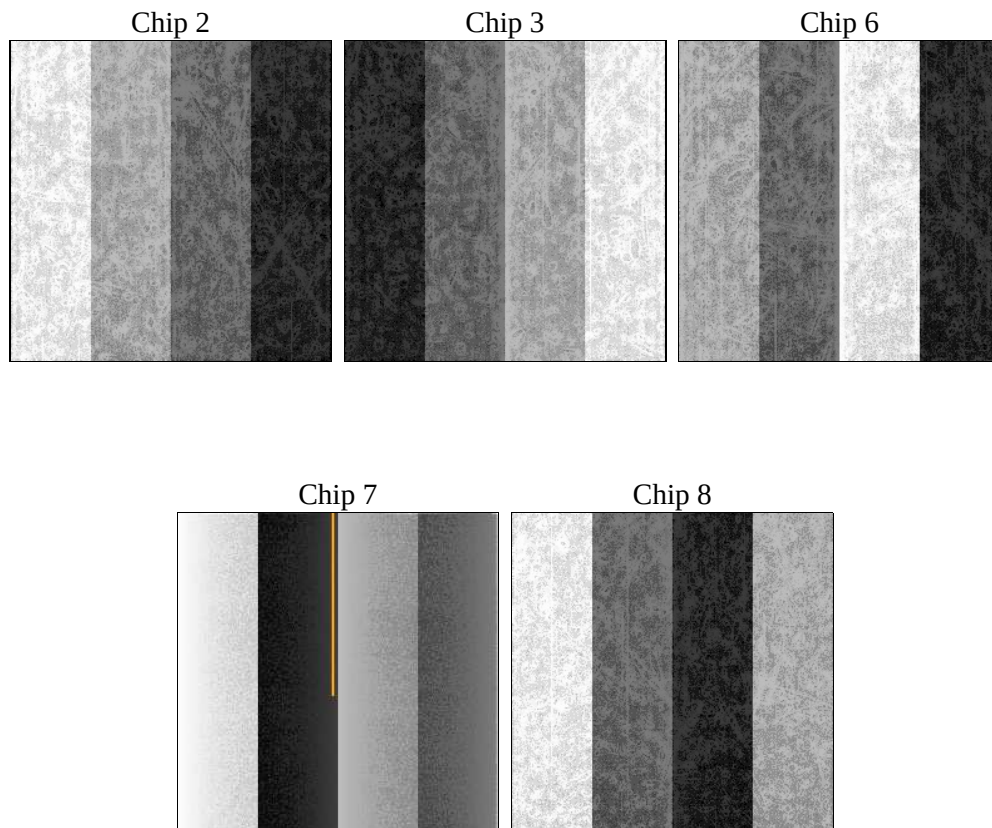
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31560.507000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	31604.34294939	Sum of GTIs [s]
caldsver	4.7.3	 	ontime2	31597.896788955	Sum of GTIs [s]
date	2016-12-30T18:41:46	Date and time of file creation	ontime3	31604.260869384	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	31601.160919309	Sum of GTIs [s]
			ontime7	31604.34294939	Sum of GTIs [s]
			ontime8	31601.078859091	Sum of GTIs [s]
			l1events	1225529	Number of level 1 events

2.1.4 Events

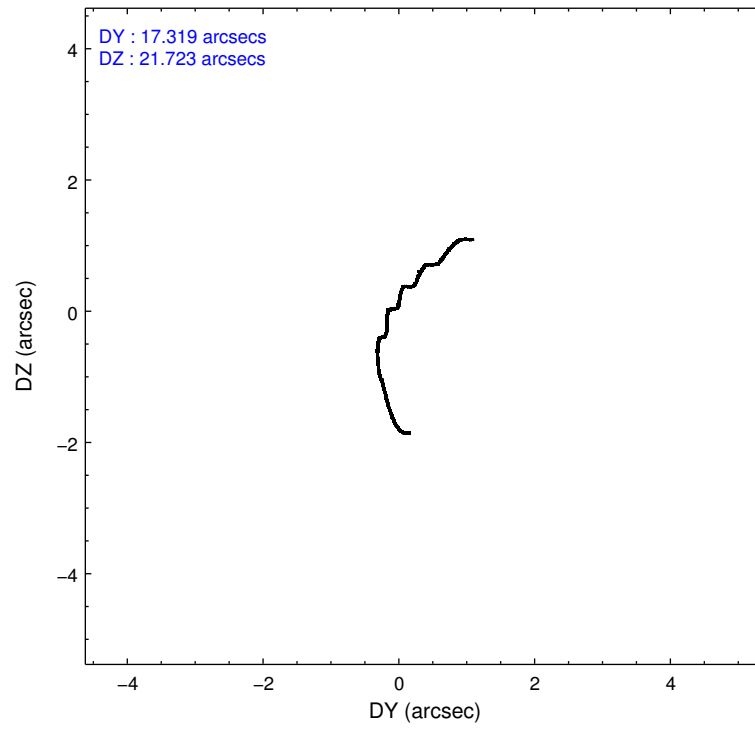
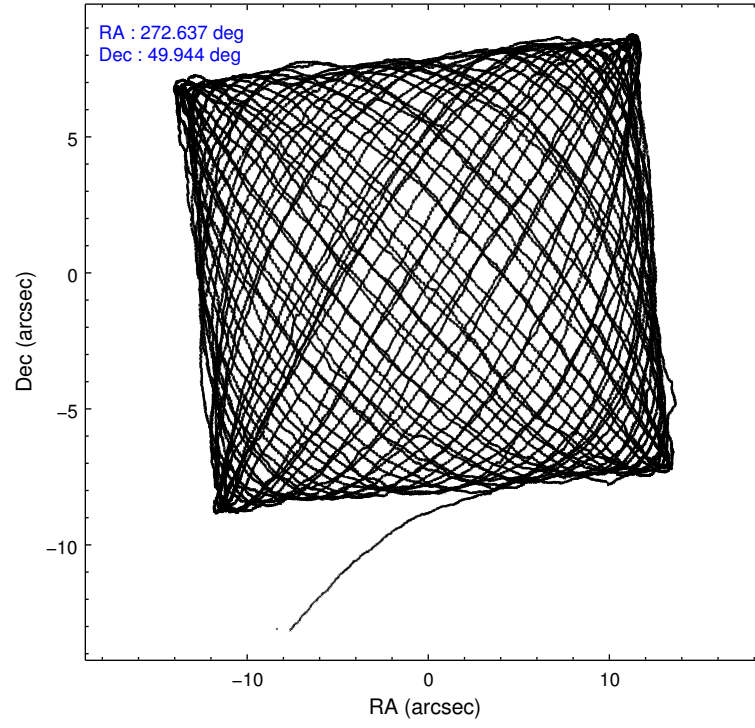
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	212841	212037	231961	282048	286642
rejected events	189401	189629	196260	155610	210455
rejected %	88%	89%	84%	55%	73%

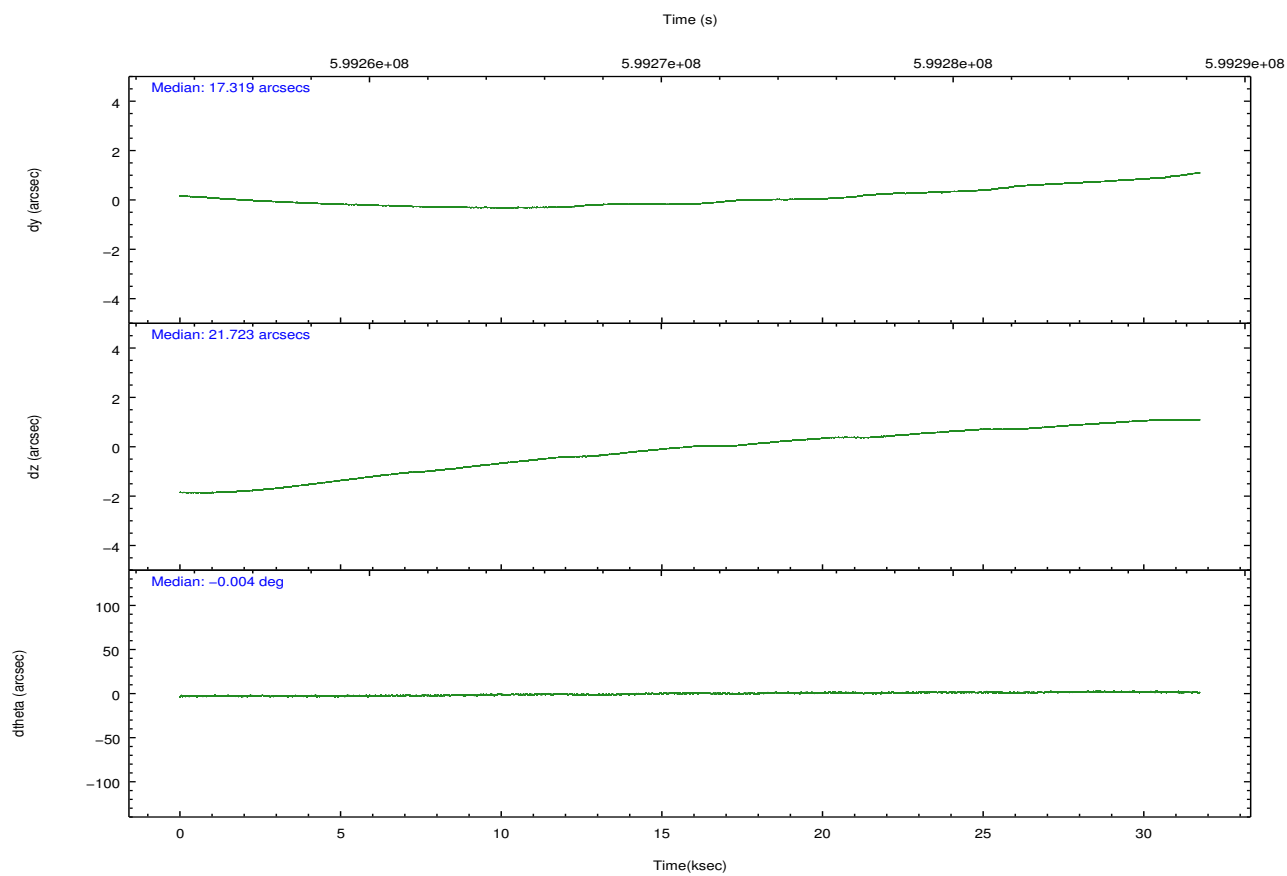
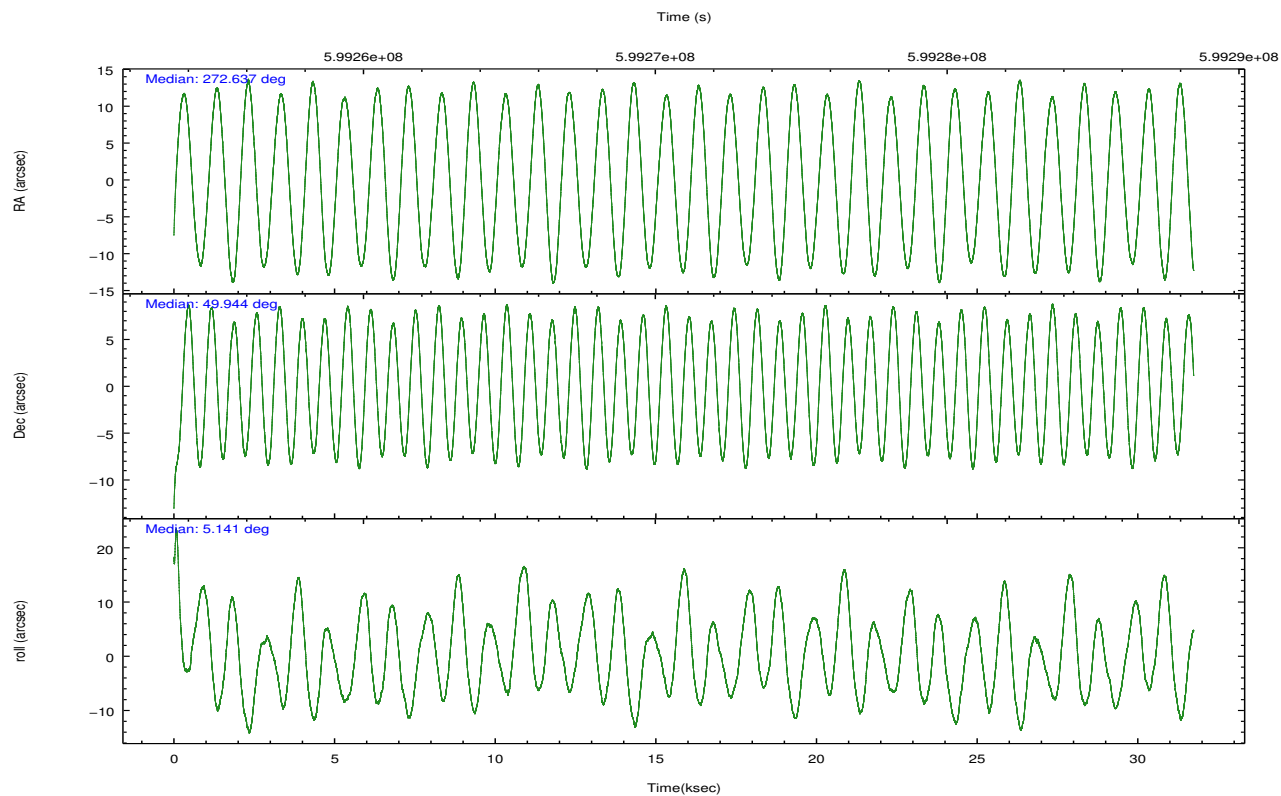
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	8902	8097	17094	12044	21665
	4%	3%	7%	4%	7%
grade 1 events	115	115	131	394	251
	0%	0%	0%	0%	0%
grade 2 events	5490	4897	7141	27409	18811
	2%	2%	3%	9%	6%
grade 3 events	2239	2372	2661	10273	7690
	1%	1%	1%	3%	2%
grade 4 events	2366	2363	2611	10234	7216
	1%	1%	1%	3%	2%
grade 5 events	8246	9835	10176	26893	15157
	3%	4%	4%	9%	5%
grade 6 events	4445	4680	6198	66487	20807
	2%	2%	2%	23%	7%
grade 7 events	181038	179678	185949	128314	195045
	85%	84%	80%	45%	68%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	272.602739	272.6372857793042	CCD I2 on	O1	Y
[deg] Pointing Dec	49.927903	49.94399812802958	CCD I3 on	Y	Y
[deg] Pointing Roll	5.016719	5.146900941393979	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	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	Y	Y
[s] Observation start time (MET)	599255297.184000	599254136.34246	CCD S5 on	N	N
Observation start date	2016-12-27T19:47:09	2016-12-27T19:28:56	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	599286857.184000	599287084.96936	On-chip summing requested	N	N
Observation end date	2016-12-28T04:33:09	2016-12-28T04:38:04	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



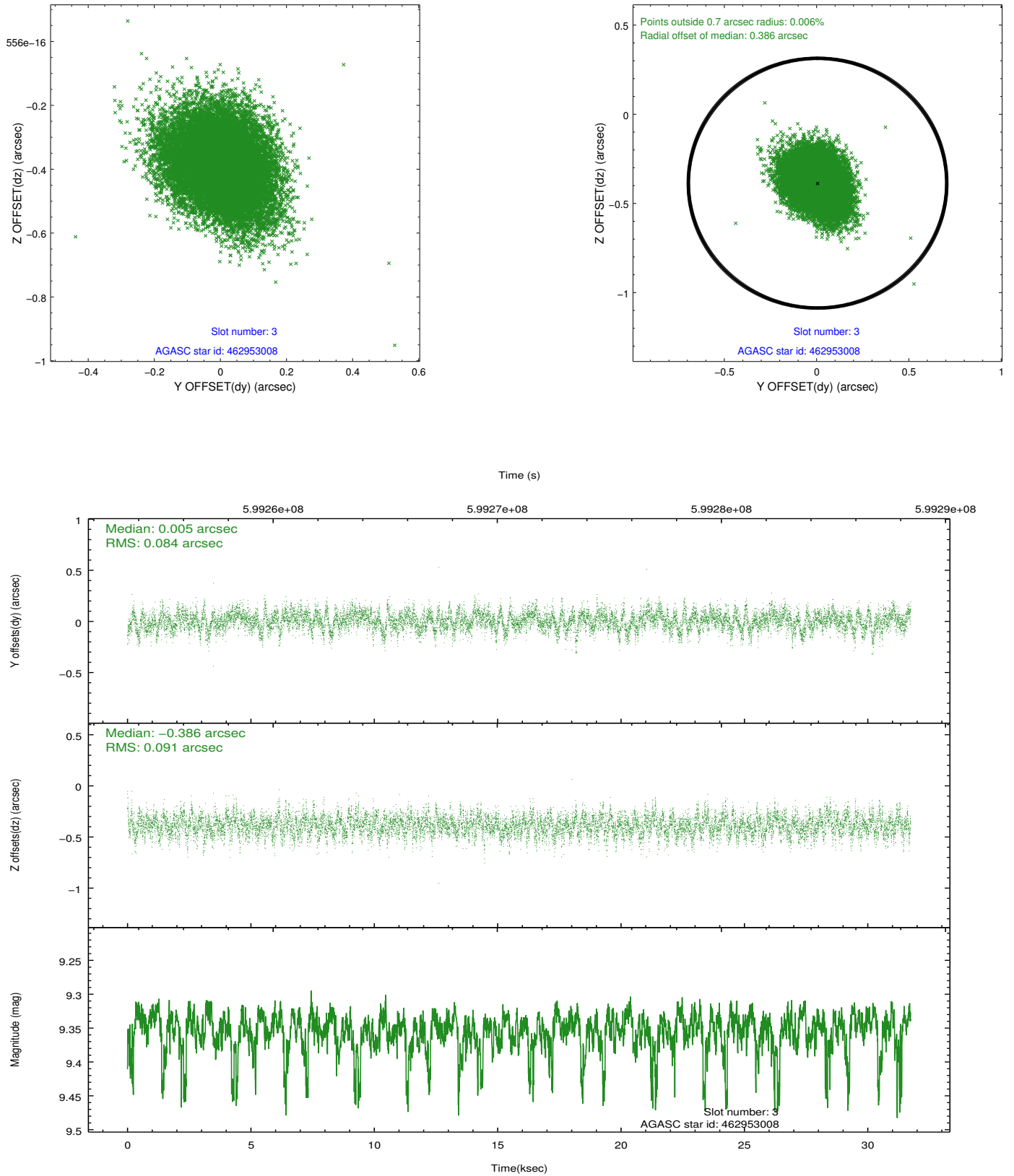


Slot Statistics

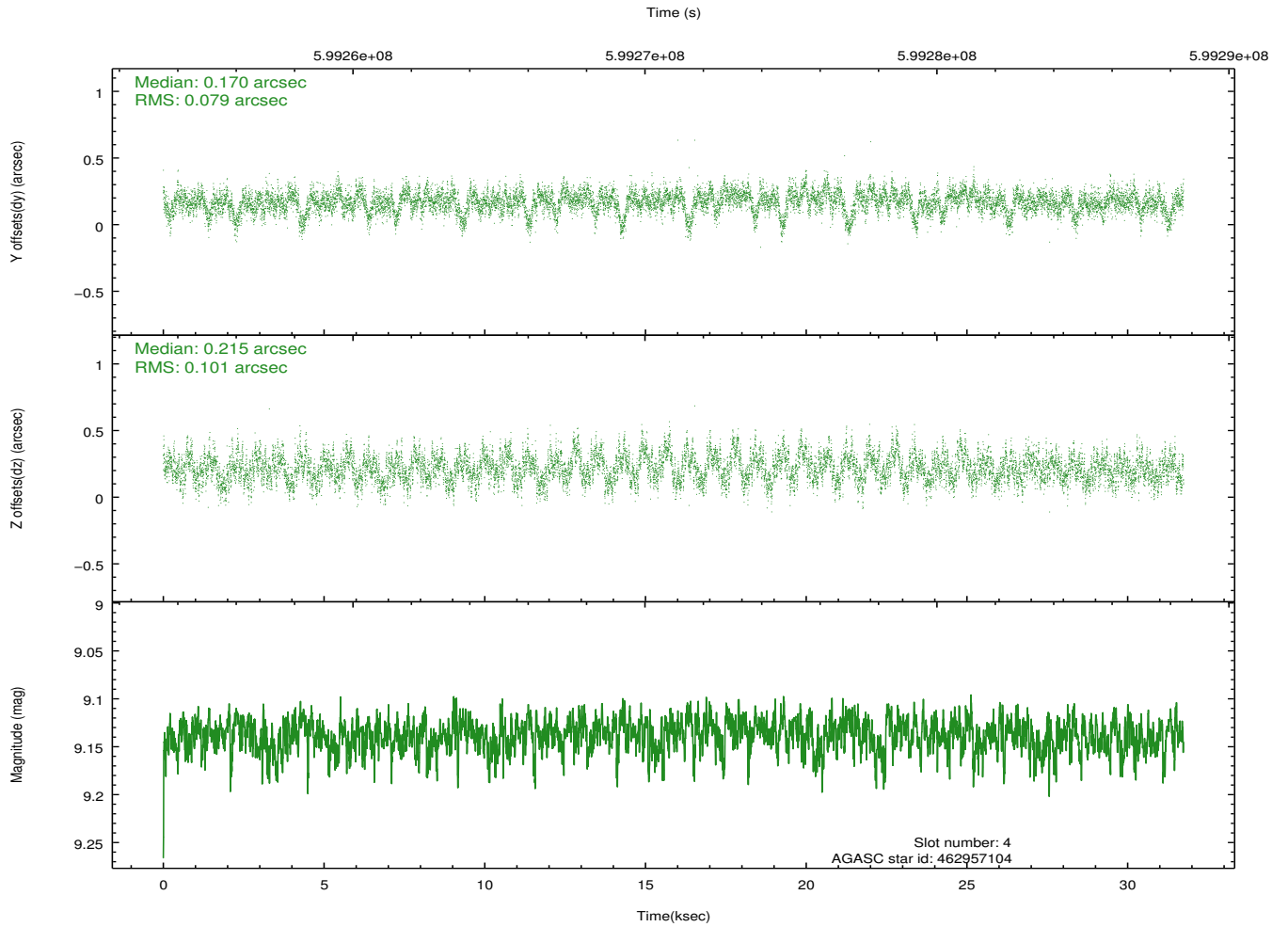
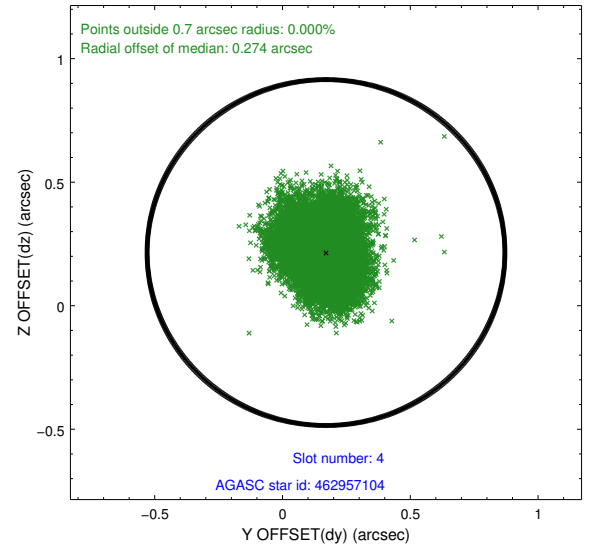
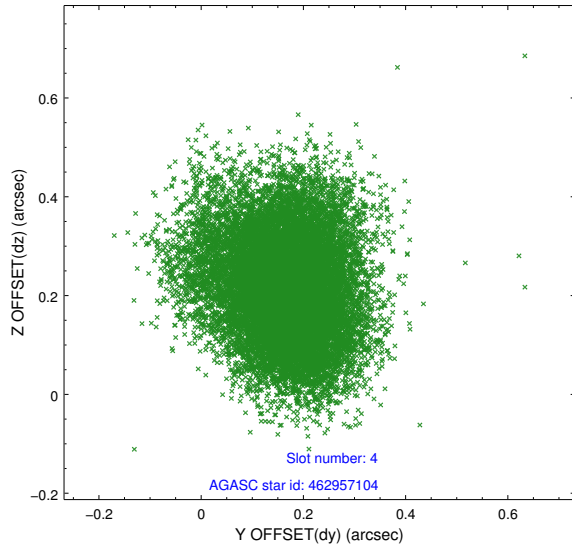
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.09	7742	-0.192	-0.135	0.022	0.028	0.000000	0.000000	-770.64	-1743.22
1	FID		ACIS-S-4	7.20	7742	0.442	0.129	0.018	0.046	0.000000	0.000000	2143.24	165.48
2	FID		ACIS-S-5	7.20	7741	-0.284	0.015	0.022	0.034	0.000000	0.000000	-1823.51	159.08
3	GUIDE	used	462953008	9.35	15465	0.005	-0.386	0.131	0.215	271.710398	50.466975	-1866.41	2124.20
4	GUIDE	used	462957104	9.14	15469	0.170	0.215	0.136	0.223	272.224010	49.834034	-905.18	-256.40
5	GUIDE	used	462957560	8.86	15470	0.089	0.315	0.128	0.222	271.724252	49.814479	-2066.90	-215.55
6	GUIDE	used	463091592	9.18	15473	-0.265	-0.433	0.122	0.195	273.392110	50.573139	2001.53	2165.74
7	GUIDE	used	463084696	8.98	15469	0.016	0.278	0.161	0.250	273.211558	49.626674	1320.52	-1197.86

2.4 Star Slots

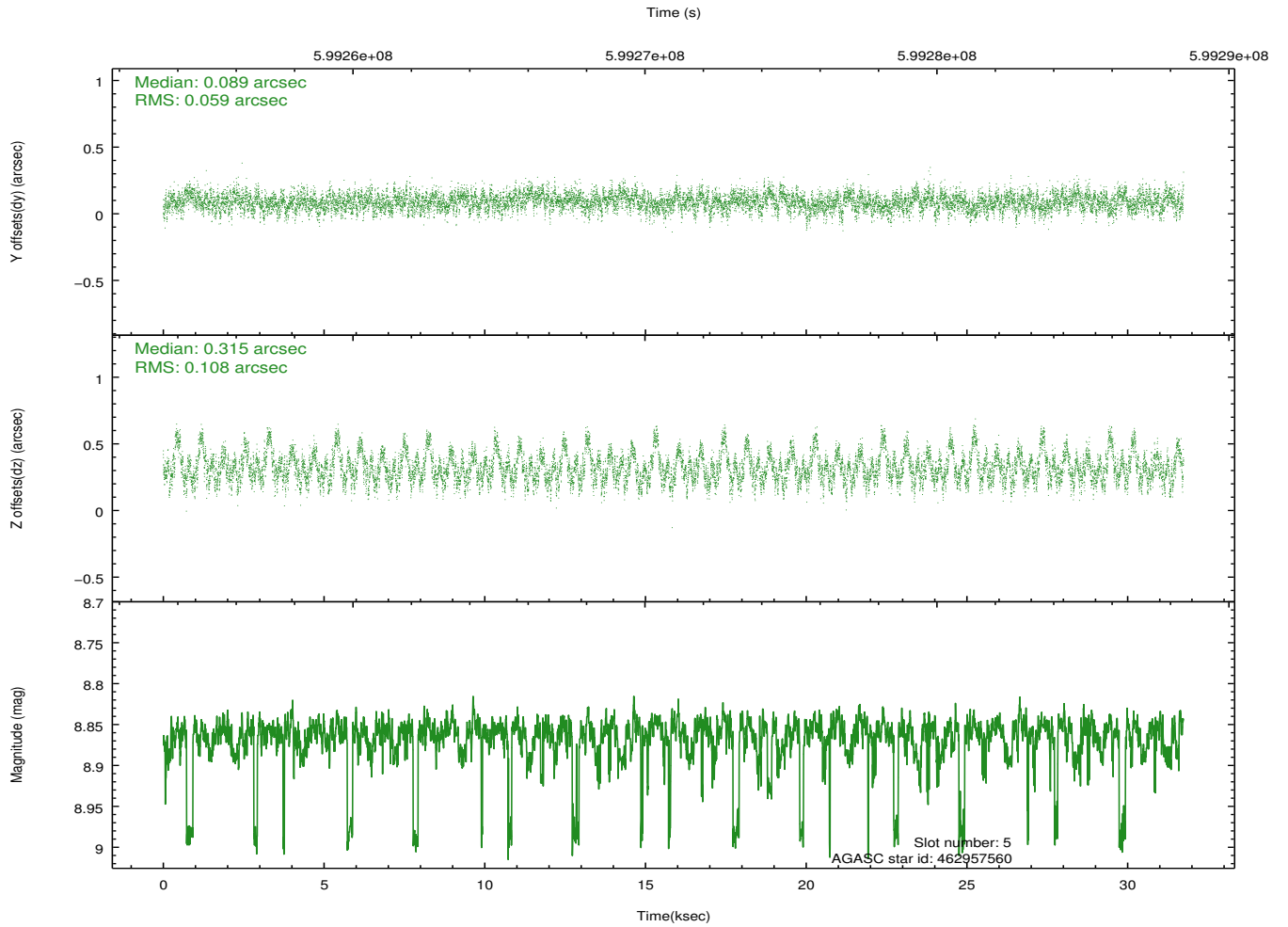
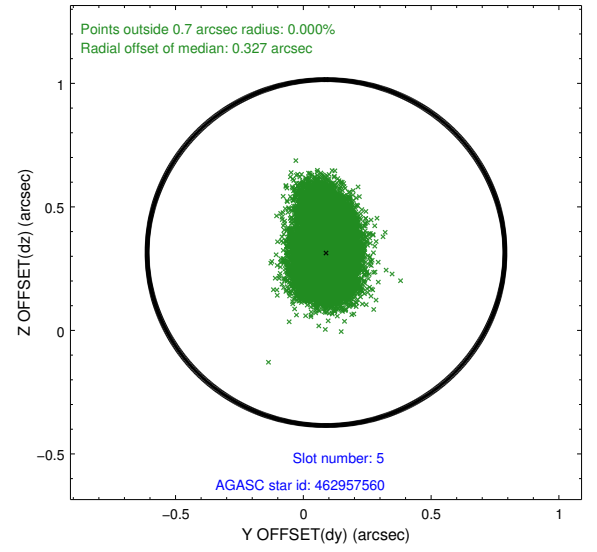
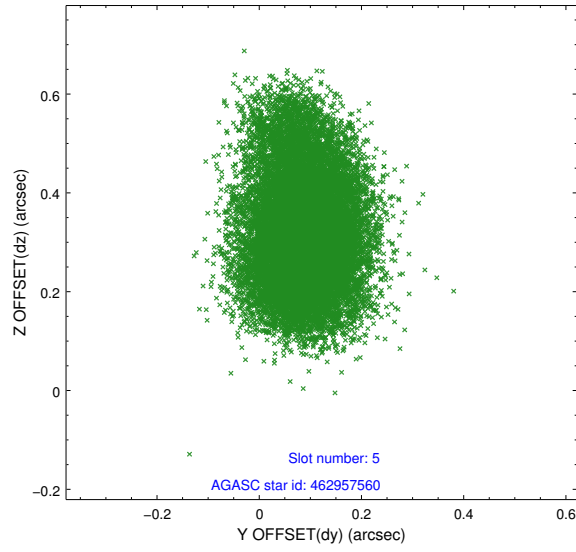
2.4.1 Slot 3



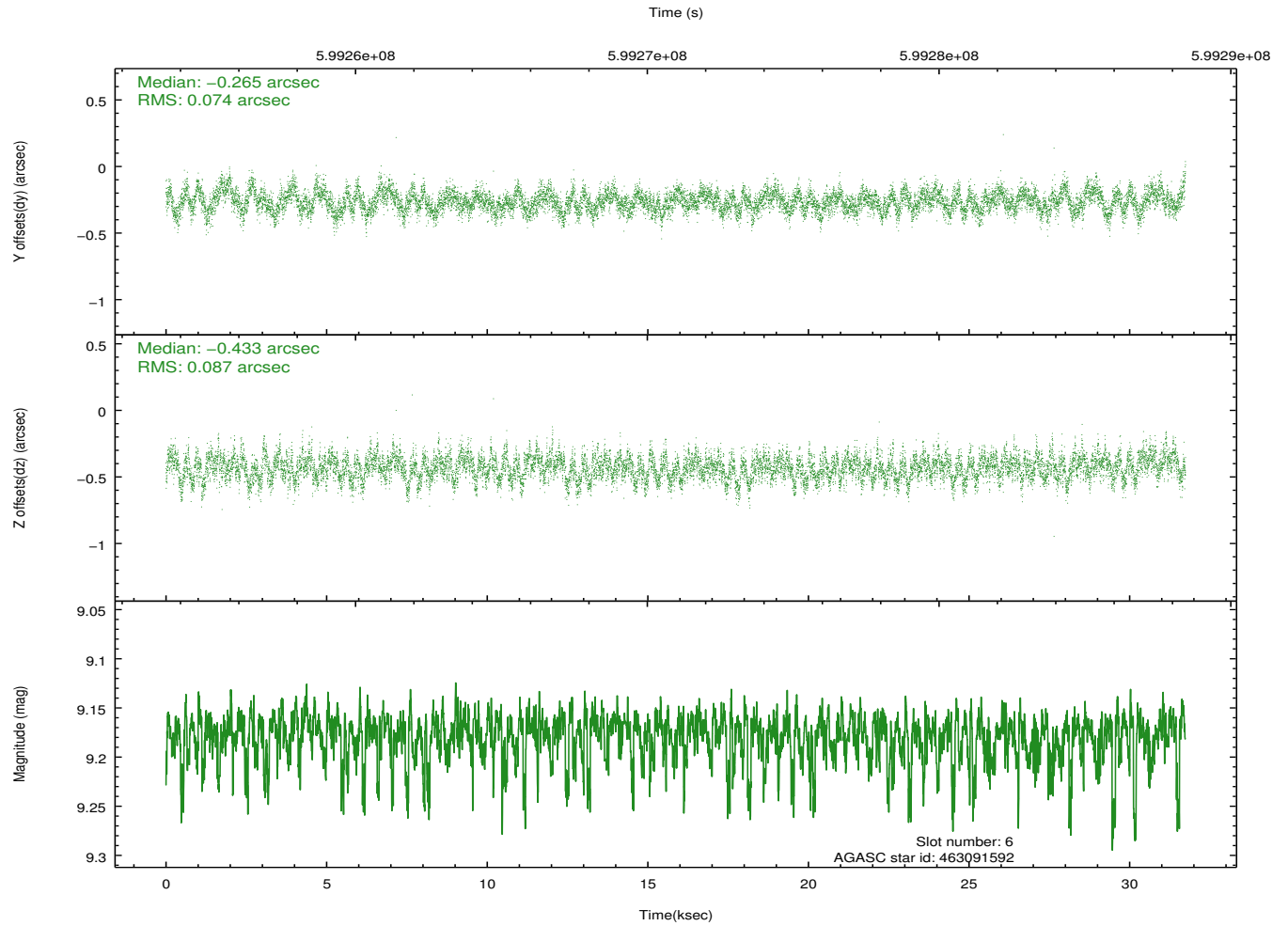
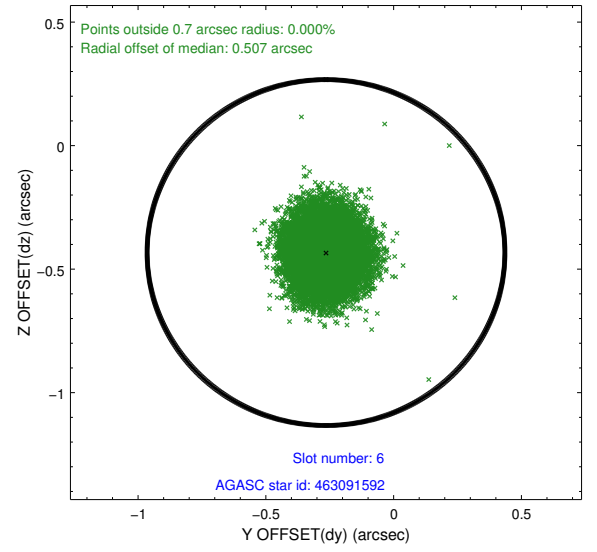
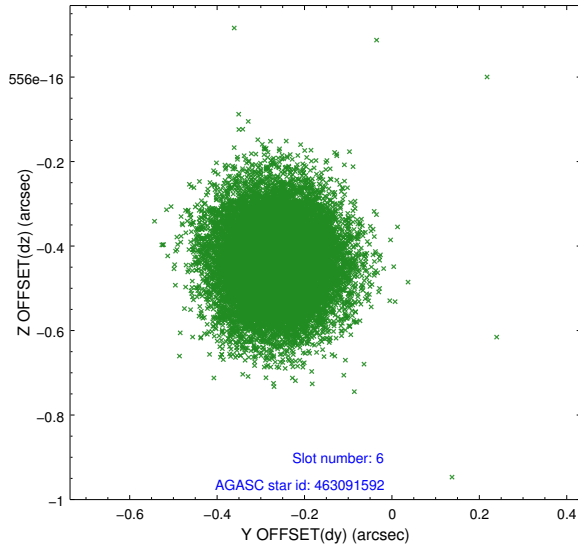
2.4.2 Slot 4



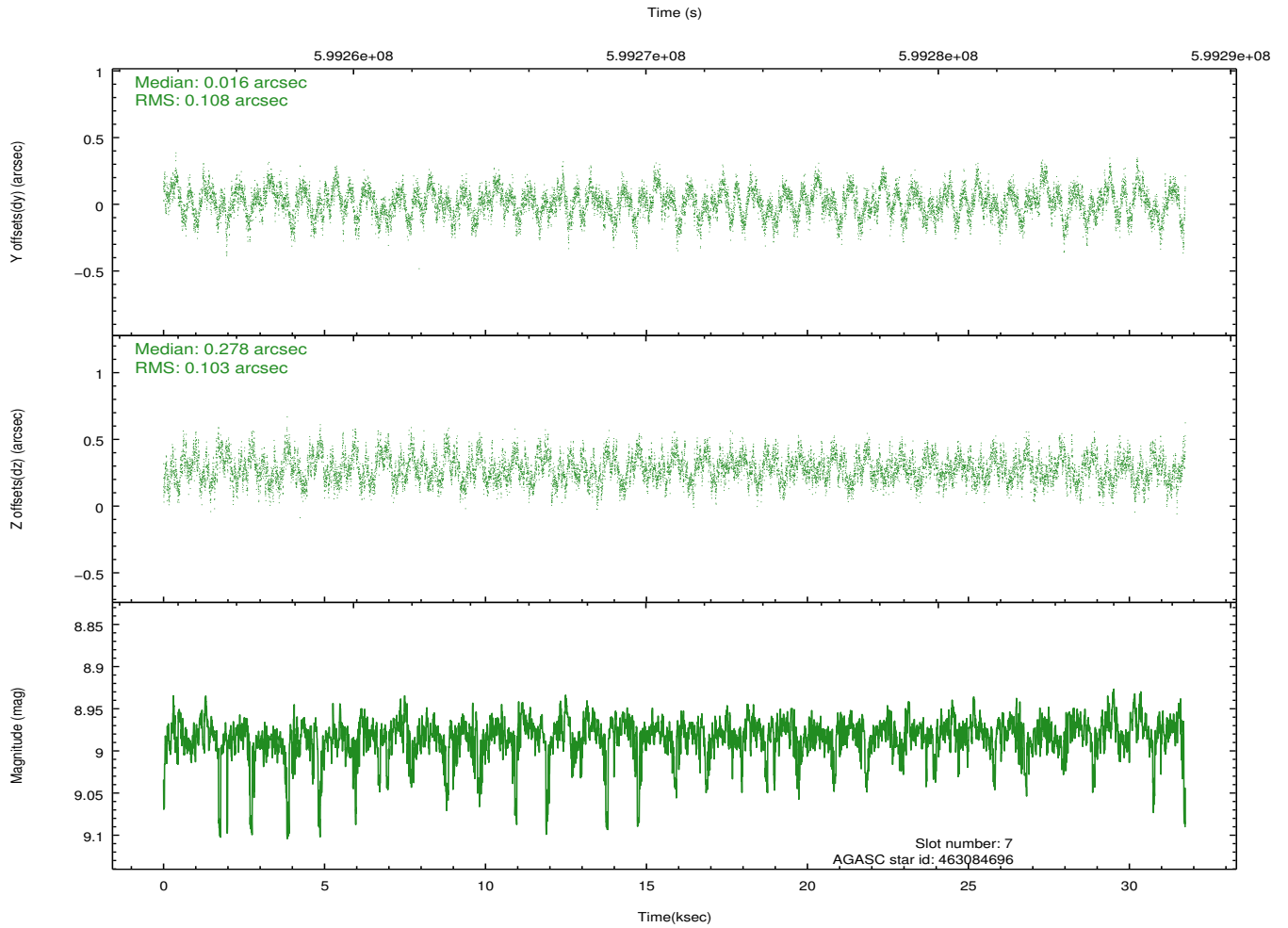
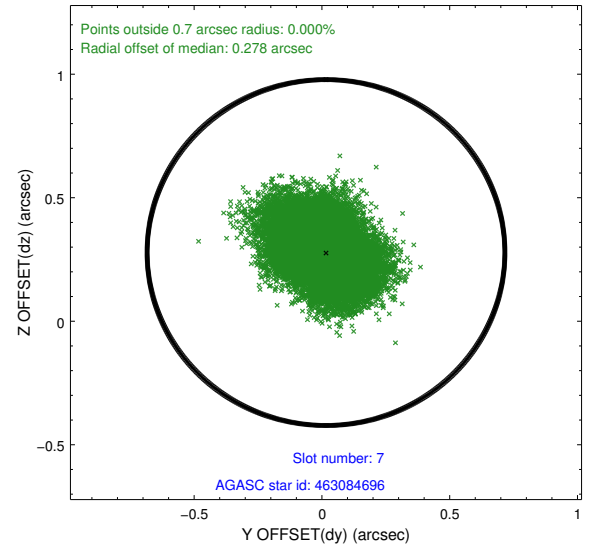
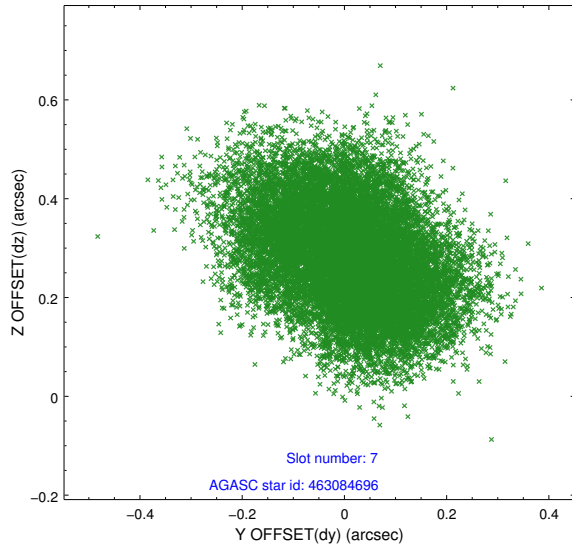
2.4.3 Slot 5



2.4.4 Slot 6

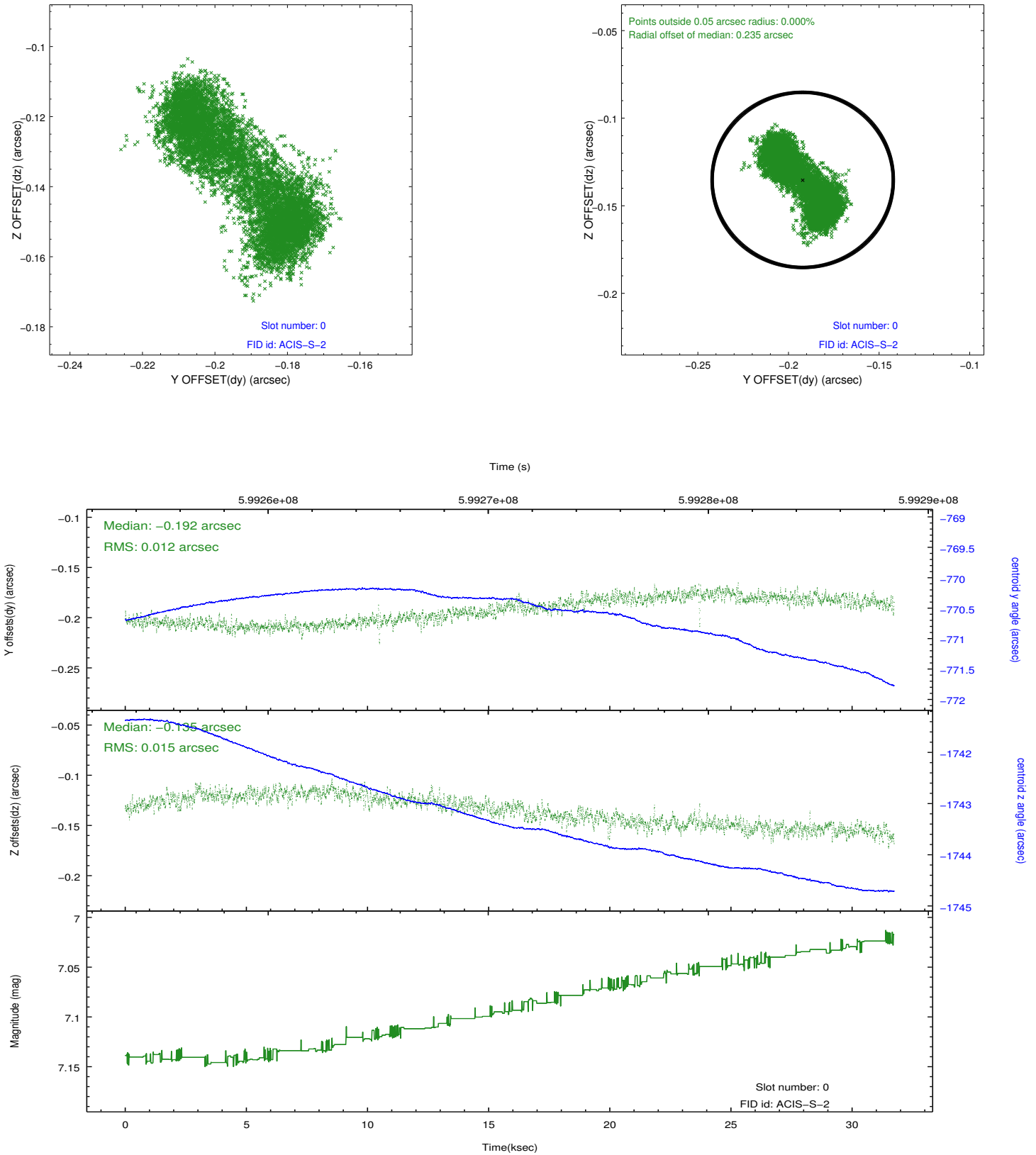


2.4.5 Slot 7

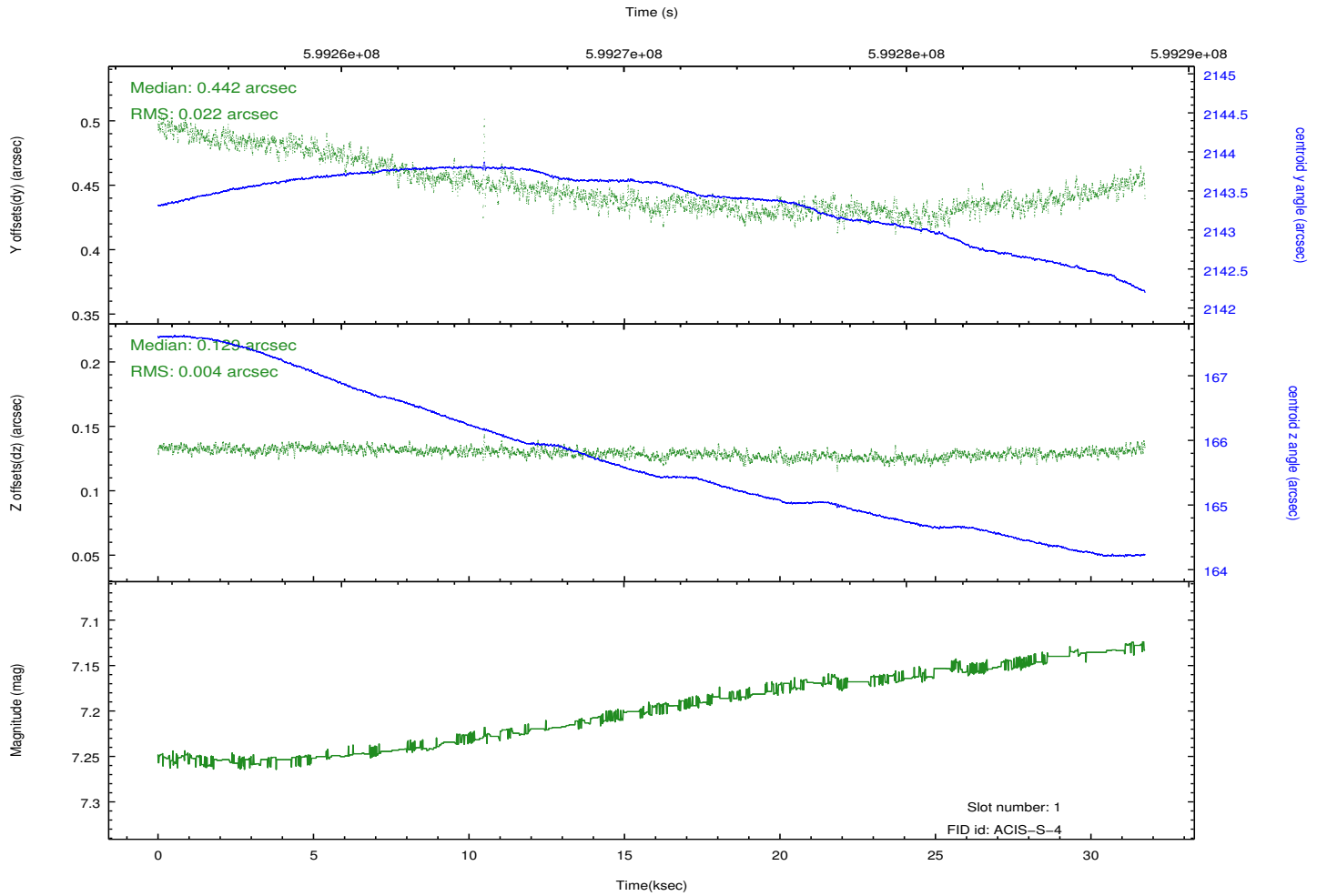
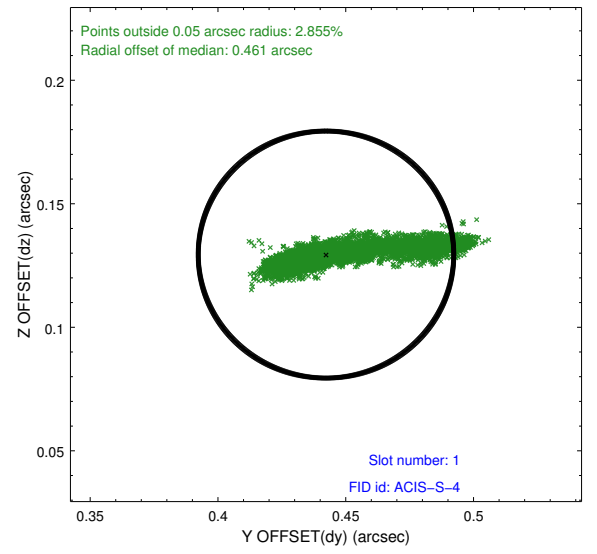
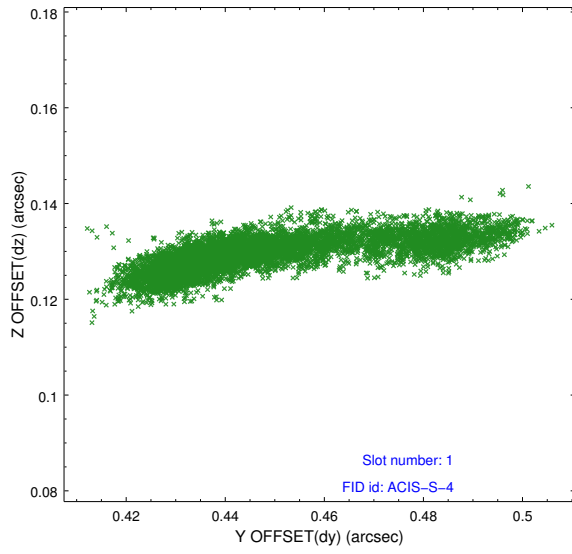


2.5 FID Slots

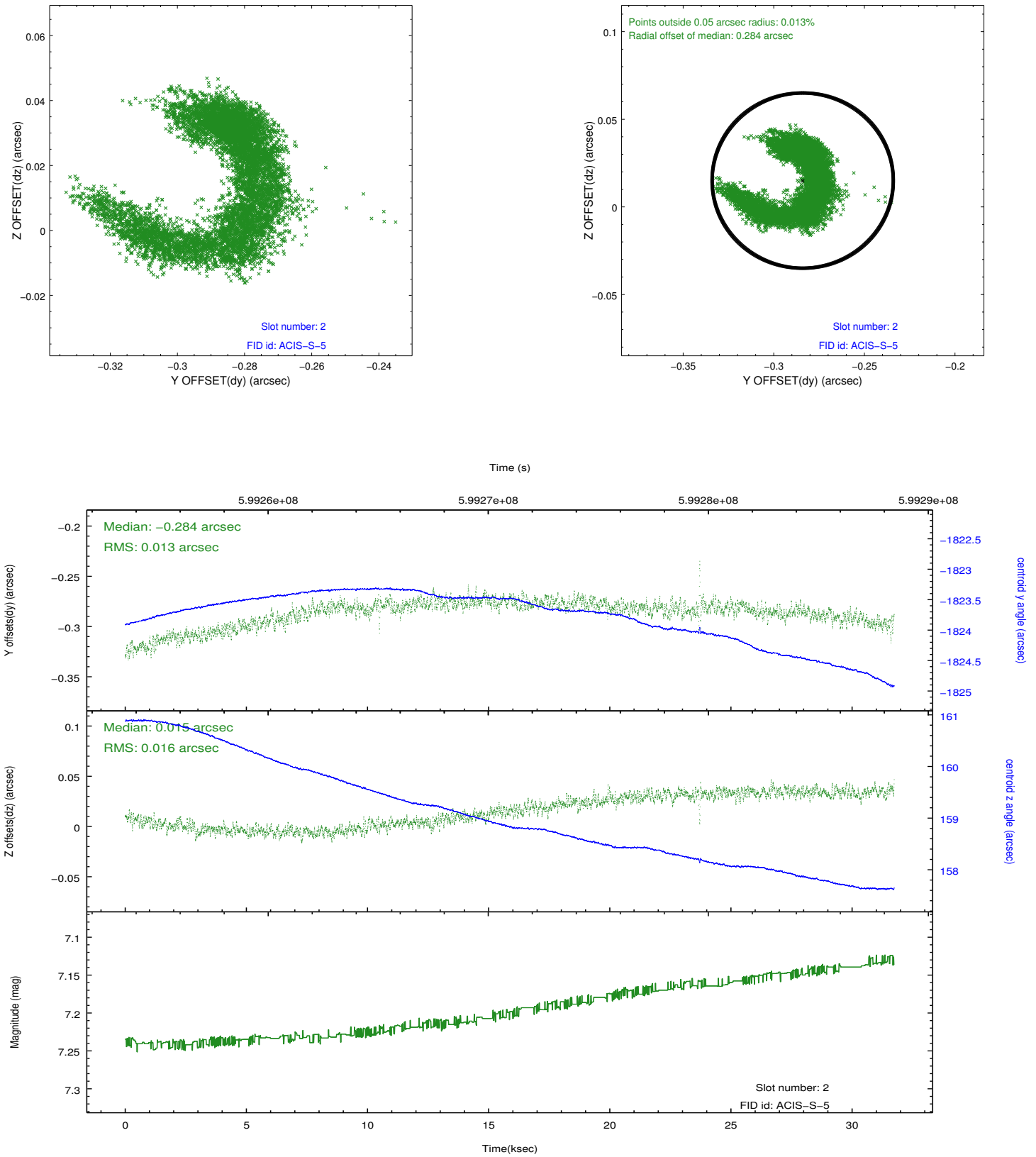
2.5.1 Slot 0



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)	2016.12.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.60434294939

A.2 Comments

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 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: (272.77365,50.01850), (272.76899,50.01823), (272.78825,49.87916), (272.79289,49.87943).