

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 21290 - L2 Version 2
Chandra X-Ray Center

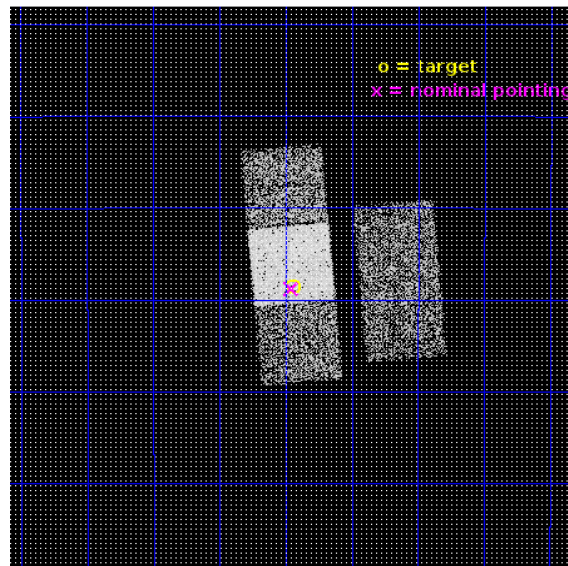
L2 Processing Date : Jul 9 2019

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1 Front

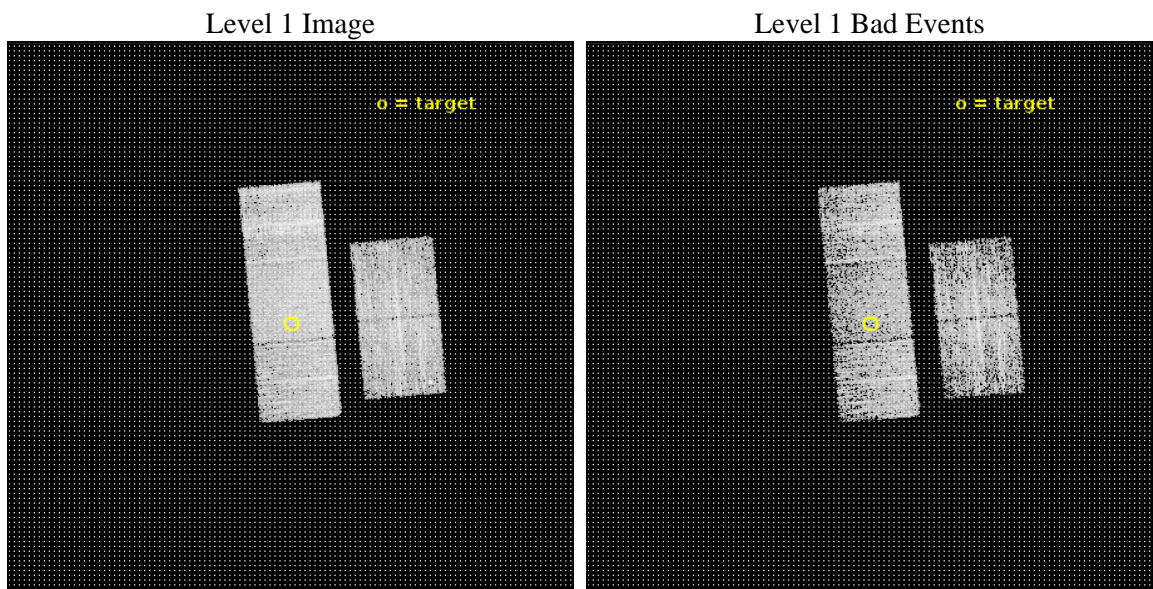
seq_num	503063	Sequence number
obs_id	21290	Observation id
title	Where Have All the Central Compact Objects Gone?	Proposal title
observer	Eric Gotthelf	Principal investigator
object	PSR J1733-2228	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	263.36	Observer's specified target RA [deg]
dec_targ	-22.476944	Observer's specified target Dec [deg]
ra_nom	263.36405267641	Nominal RA [deg]
dec_nom	-22.480174398093	Nominal Dec [deg]
roll_nom	264.93028012063	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3558.198959589	Sum of GTIs [s]
livetime	3511.708470674	Livetime [s]
ontime2	3558.0347995758	Sum of GTIs [s]
ontime3	3558.1168795824	Sum of GTIs [s]
ontime6	3558.1579196453	Sum of GTIs [s]
ontime7	3558.198959589	Sum of GTIs [s]
ontime8	3558.0758396387	Sum of GTIs [s]
l2events	26878	Number of level 2 events



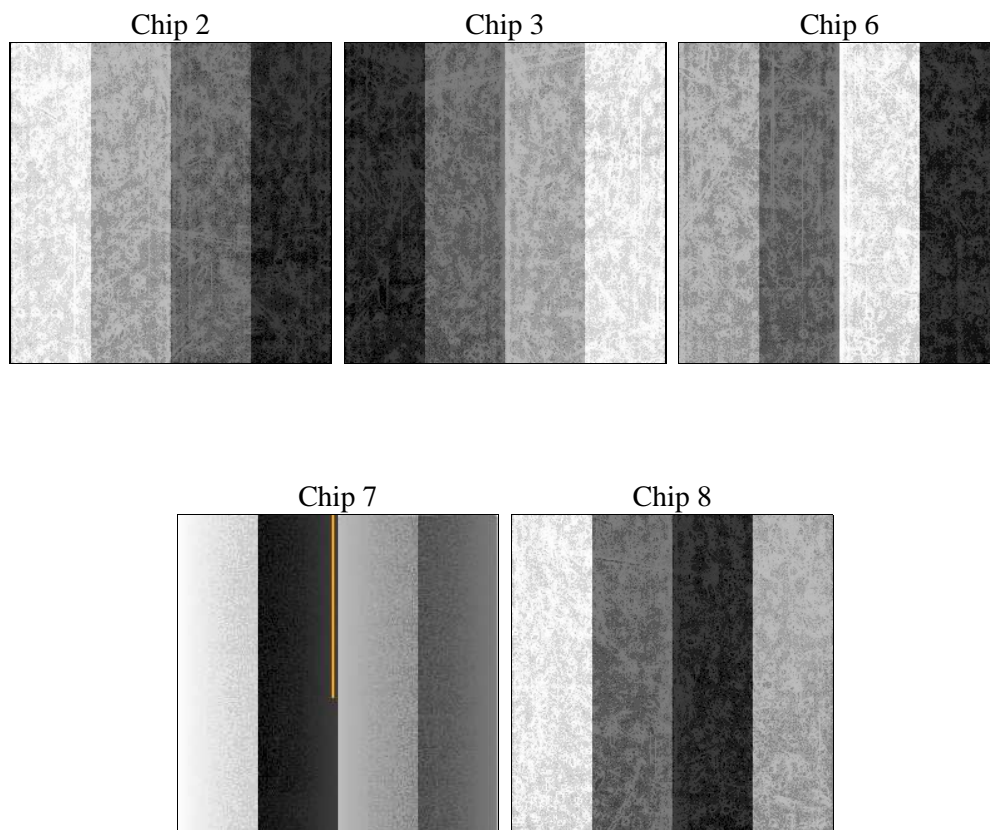
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3500.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	3558.198959589	Sum of GTIs [s]
caldsver	4.8.3.1	 	ontime2	3558.0347995758	Sum of GTIs [s]
date	2019-07-09T15:33:25	Date and time of file creation	ontime3	3558.1168795824	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	3558.1579196453	Sum of GTIs [s]
			ontime7	3558.198959589	Sum of GTIs [s]
			ontime8	3558.0758396387	Sum of GTIs [s]
			l1events	153441	Number of level 1 events

2.1.4 Events

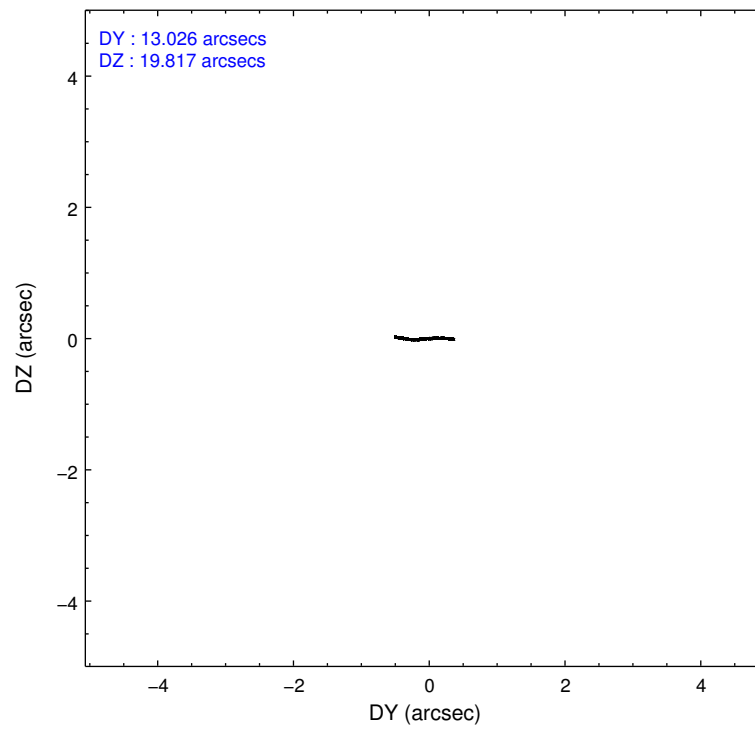
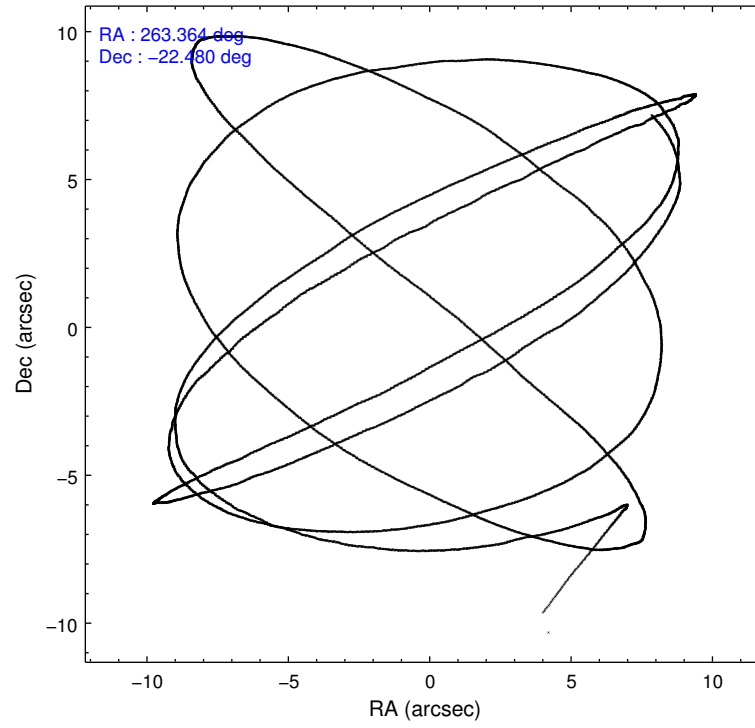
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	26529	25618	28022	36005	37267
rejected events	23162	22682	24642	20342	26806
rejected %	87%	88%	87%	56%	71%

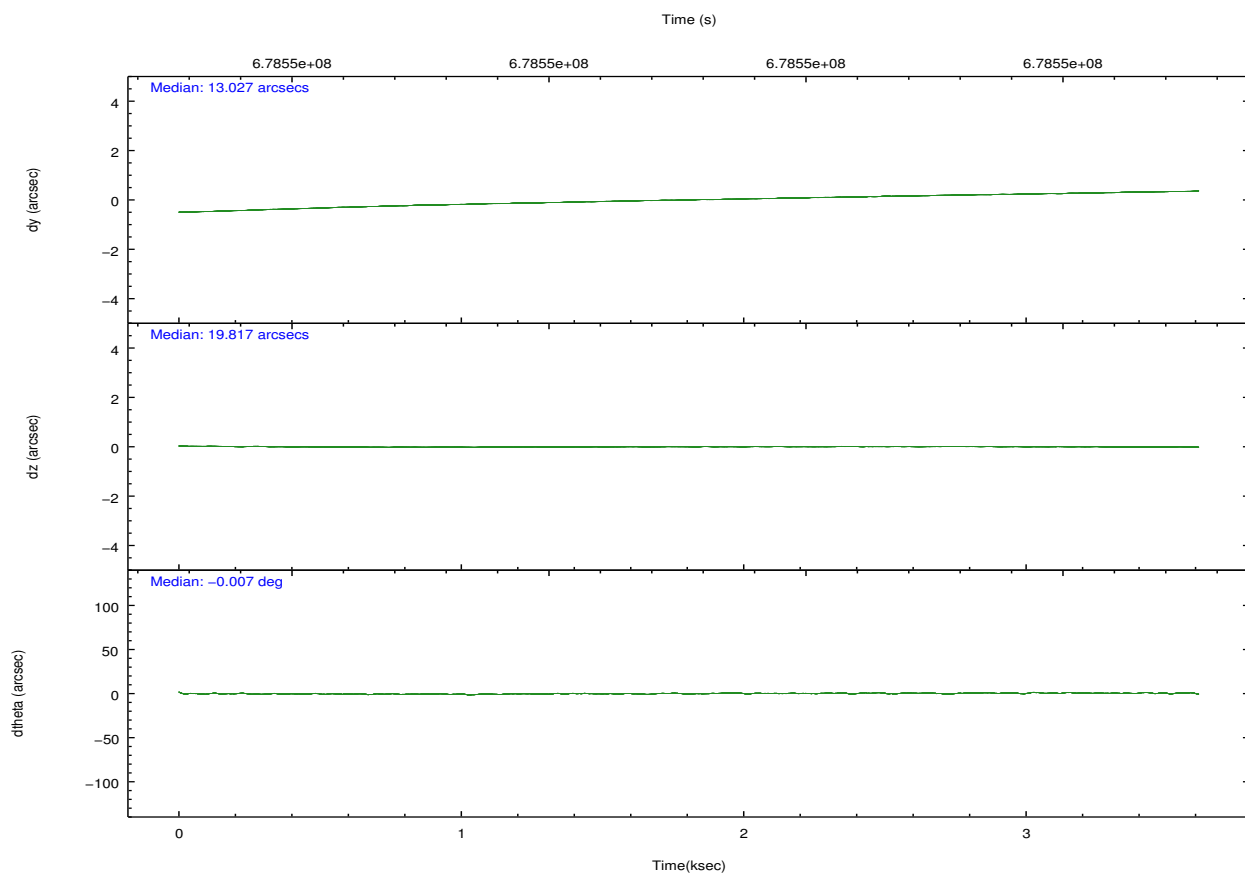
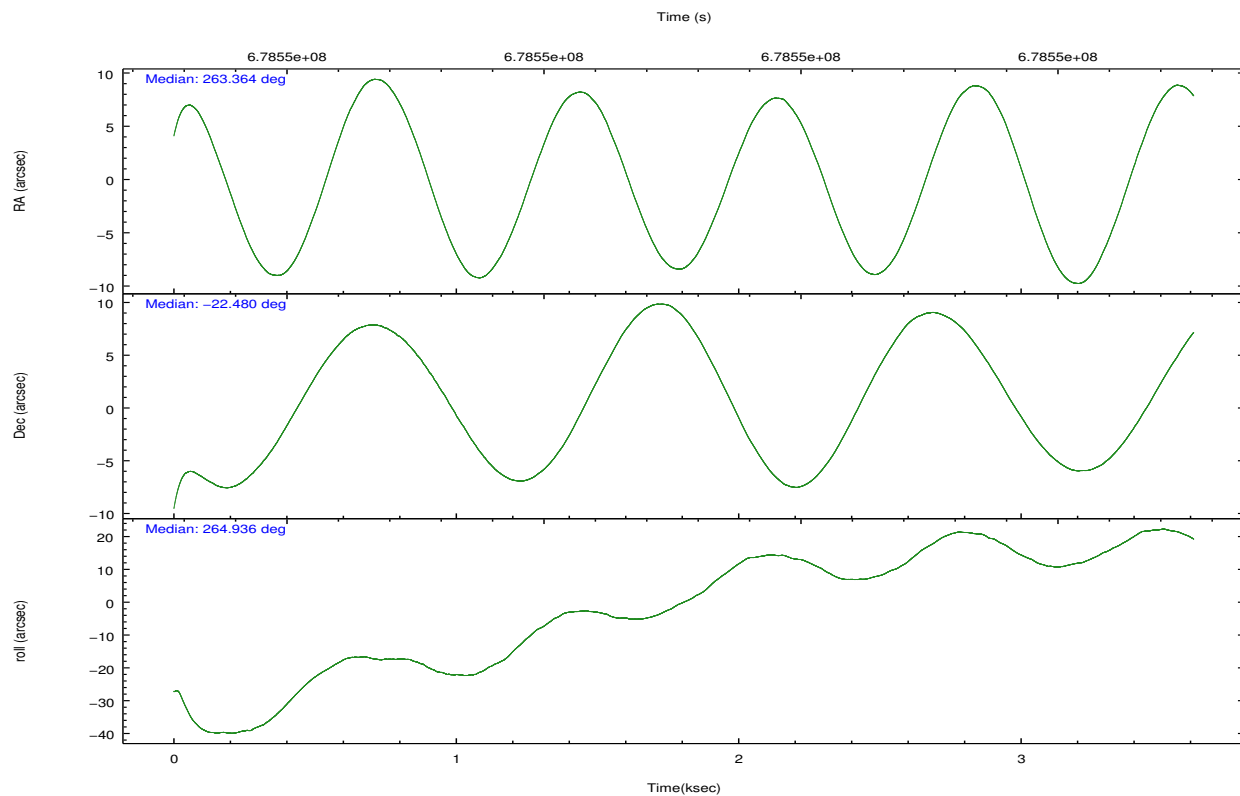
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1419	1083	1187	1315	3037
	5%	4%	4%	3%	8%
grade 1 events	18	11	18	57	37
	0%	0%	0%	0%	0%
grade 2 events	748	678	796	3322	2588
	2%	2%	2%	9%	6%
grade 3 events	286	297	303	1179	1048
	1%	1%	1%	3%	2%
grade 4 events	302	308	318	1250	966
	1%	1%	1%	3%	2%
grade 5 events	1194	1324	1389	3541	1921
	4%	5%	4%	9%	5%
grade 6 events	614	574	778	8605	2829
	2%	2%	2%	23%	7%
grade 7 events	21948	21343	23233	16736	24841
	82%	83%	82%	46%	66%

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	263.351125	263.3640526764056	CCD I2 on	O1	Y
[deg] Pointing Dec	-22.455265	-22.48017439809337	CCD I3 on	O2	Y
[deg] Pointing Roll	264.768650	264.9302801206326	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	678546870.184000	678545763.0987	CCD S5 on	N	N
Observation start date	2019-07-03T13:13:21	2019-07-03T12:56:03	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	678550370.184000	678551300.66154	On-chip summing requested	N	N
Observation end date	2019-07-03T14:11:41	2019-07-03T14:28:20	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



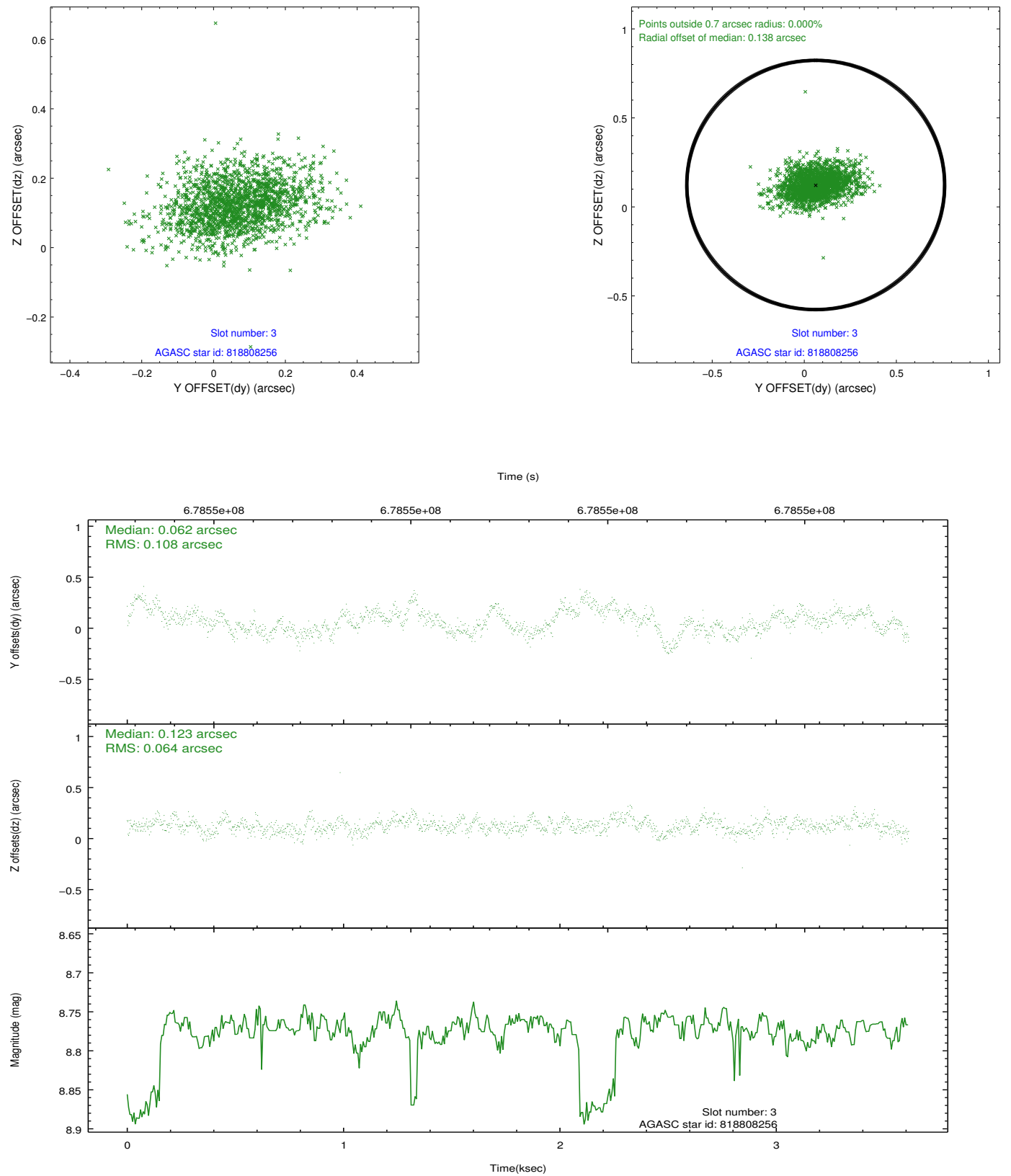


Slot Statistics

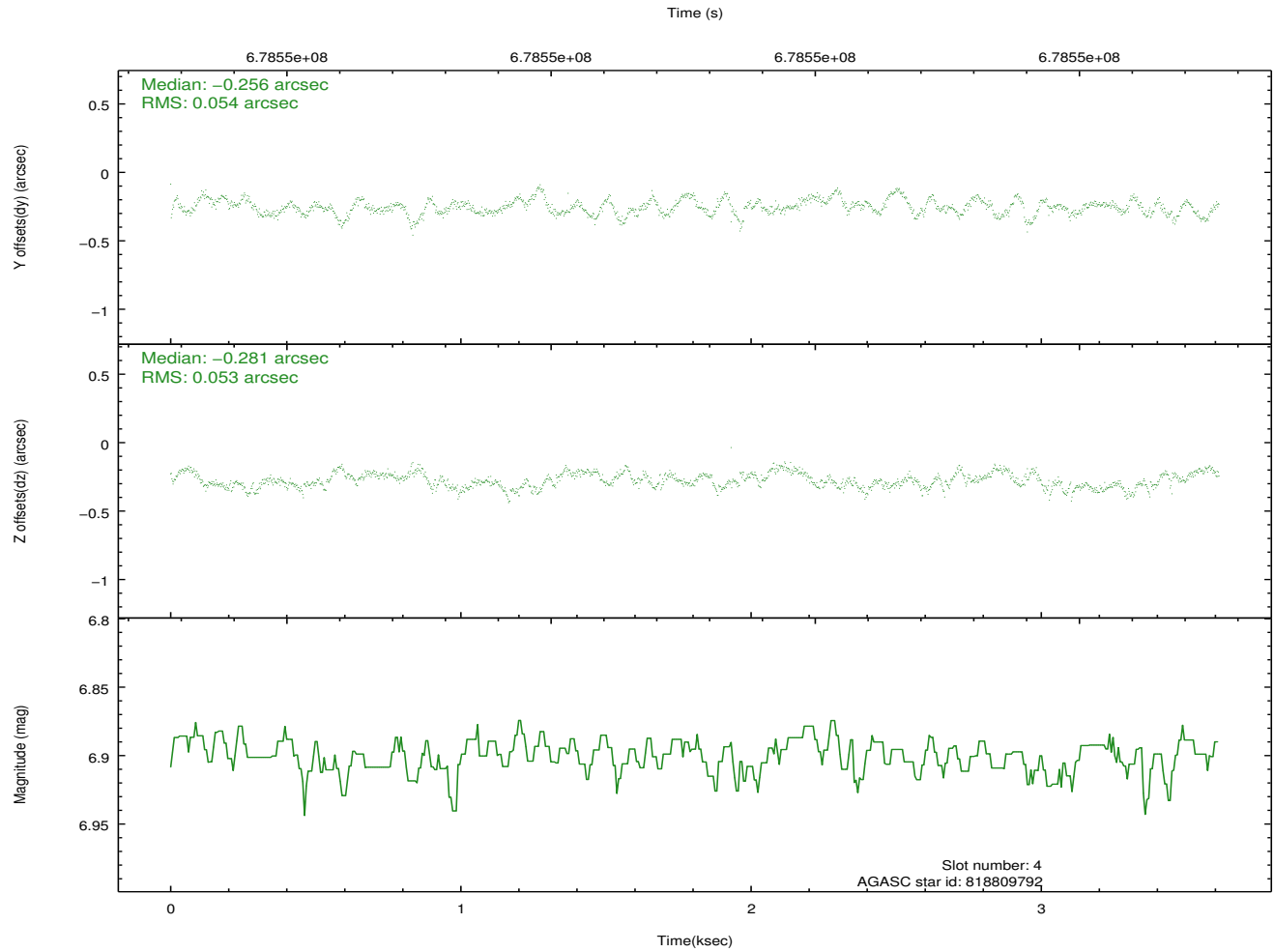
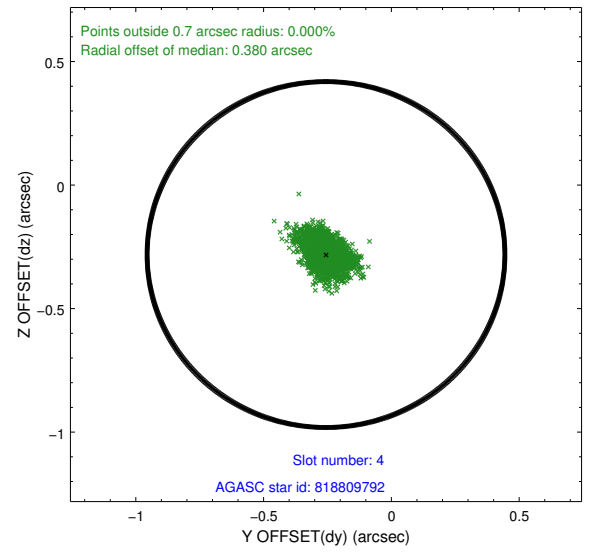
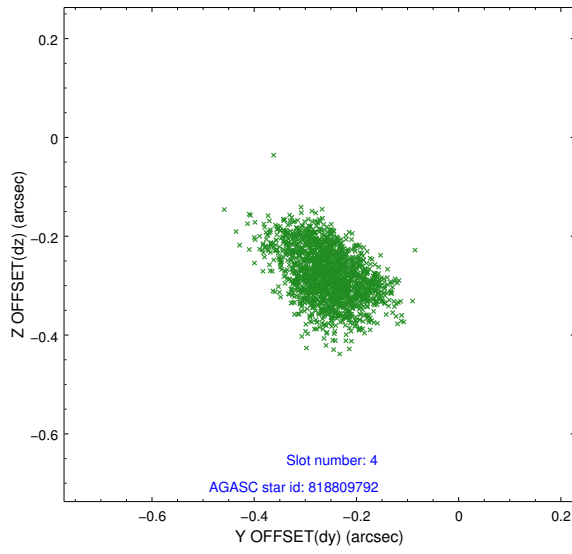
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.01	881	1.000	-0.254	-0.150	0.010	0.022	0.000000	0.000000	-766.09	-1741
1	FID		ACIS-S-4	7.14	881	1.000	0.704	0.163	0.016	0.034	0.000000	0.000000	2147.26	165
2	FID		ACIS-S-5	7.10	881	1.000	-0.480	-0.004	0.017	0.038	0.000000	0.000000	-1817.01	160
3	GUIDE	used	818808256	8.77	1759	1.000	0.062	0.123	0.128	0.229	263.255476	-21.831270	-2203.78	-521
4	GUIDE	used	818809792	6.90	1763	1.000	-0.256	-0.281	0.080	0.130	263.394050	-22.171676	-1030.78	49
5	GUIDE	used	818810336	8.23	1763	1.000	0.396	0.216	0.110	0.169	262.847928	-22.276362	-485.91	-1727
6	GUIDE	used	818810616	7.82	1763	1.000	0.139	0.203	0.075	0.123	263.165516	-21.873468	-2029.00	-808
7	GUIDE	used	894697752	8.51	1760	1.000	-0.340	-0.262	0.097	0.163	263.486462	-23.072364	2170.36	648

2.4 Star Slots

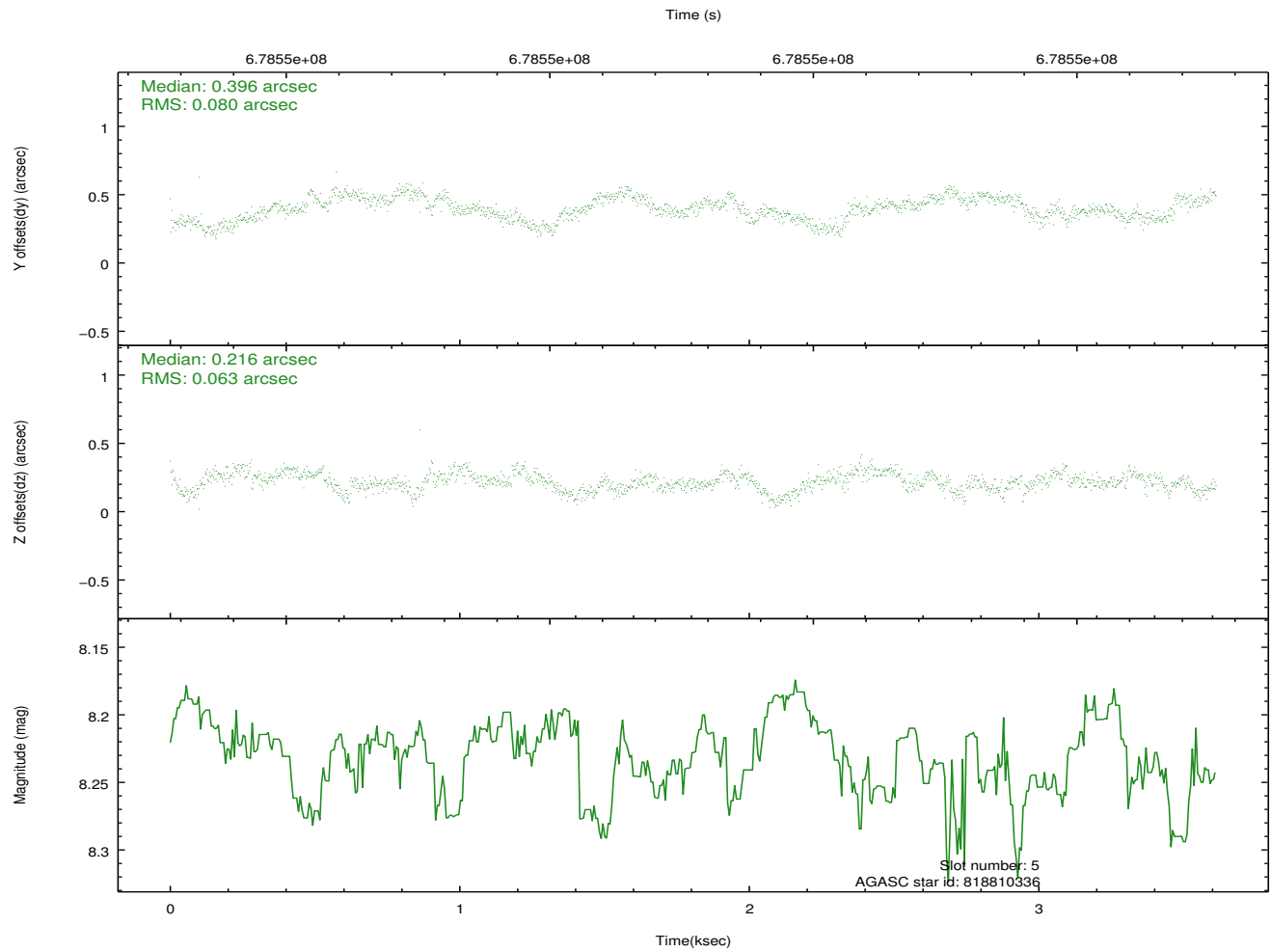
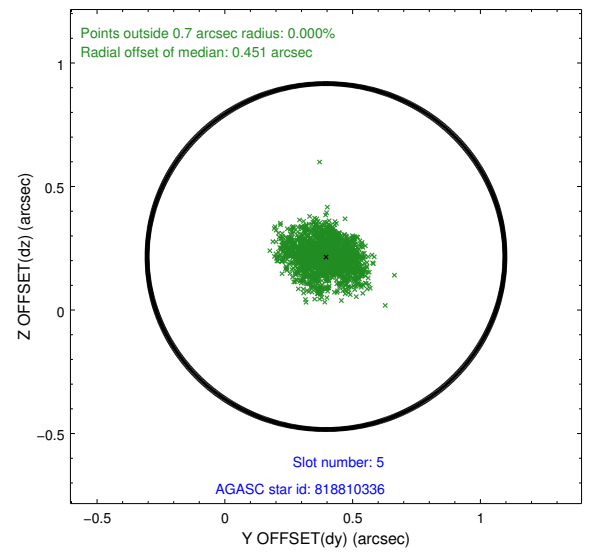
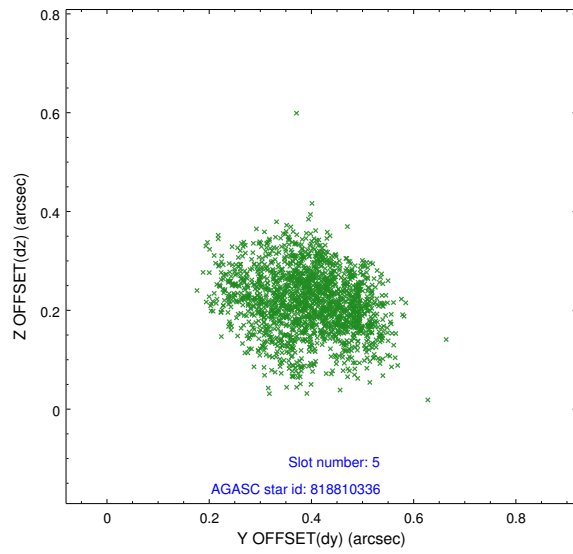
2.4.1 Slot 3



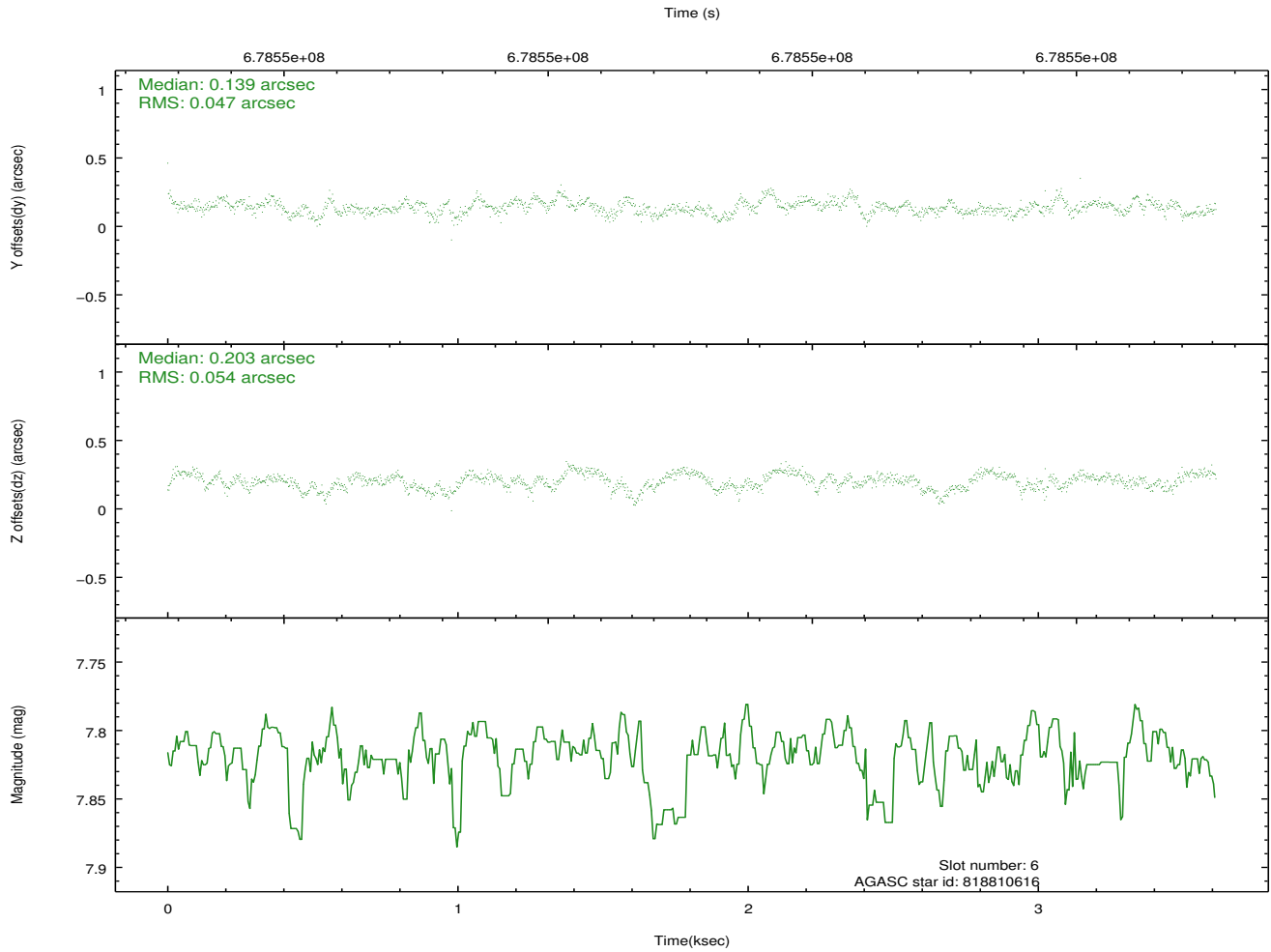
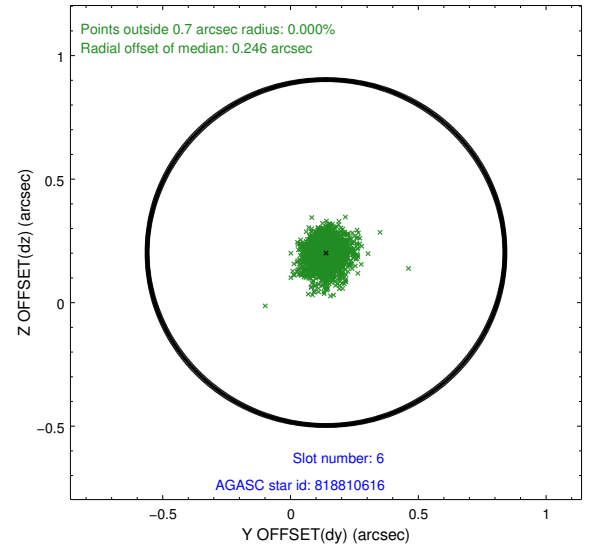
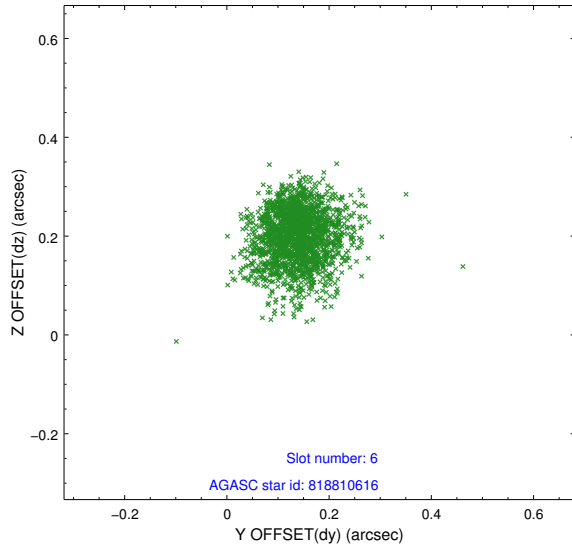
2.4.2 Slot 4



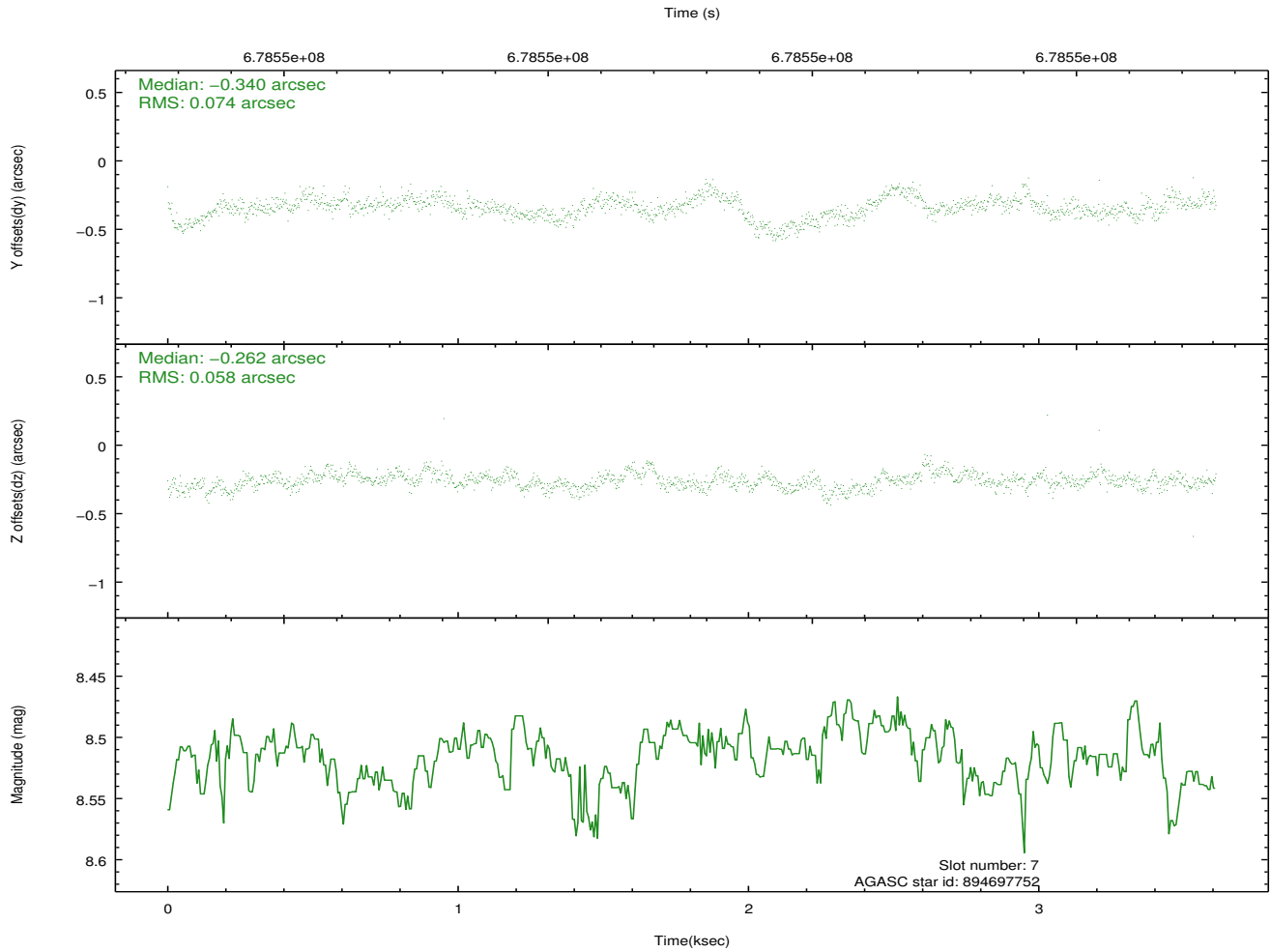
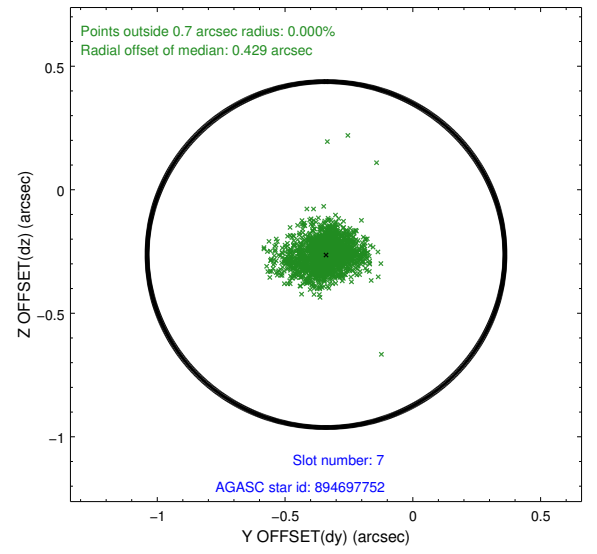
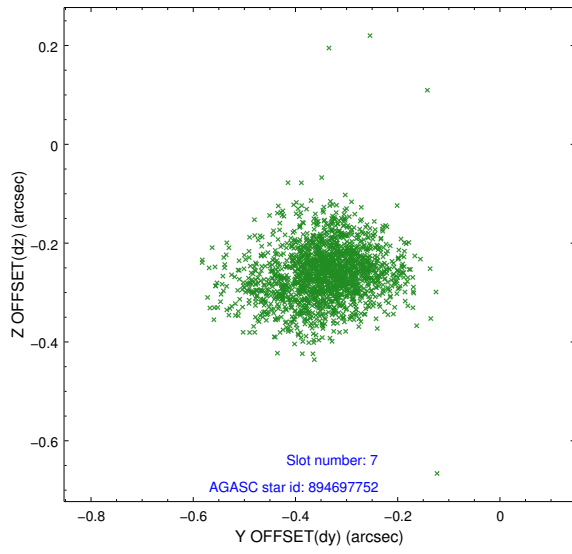
2.4.3 Slot 5



2.4.4 Slot 6

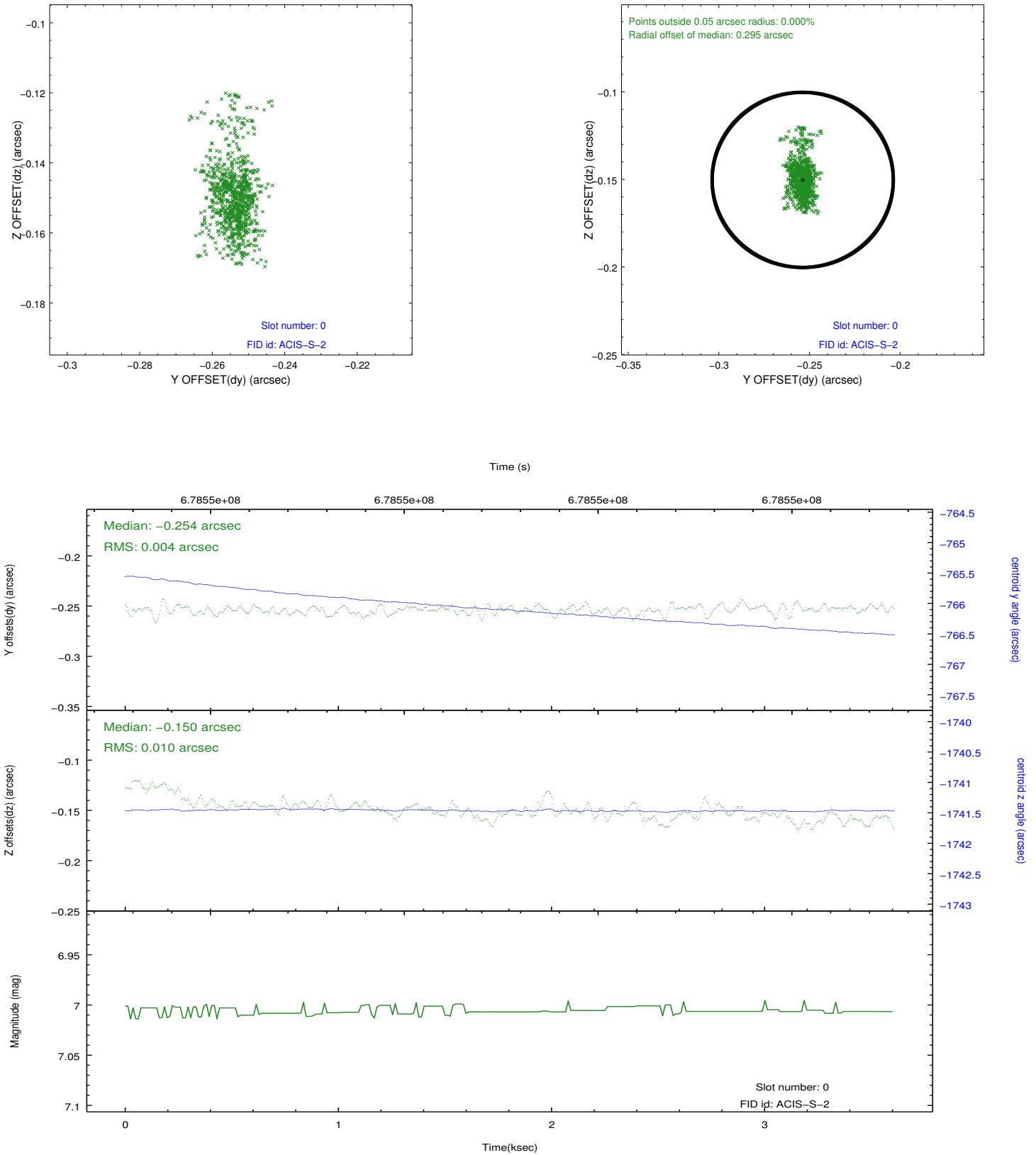


2.4.5 Slot 7

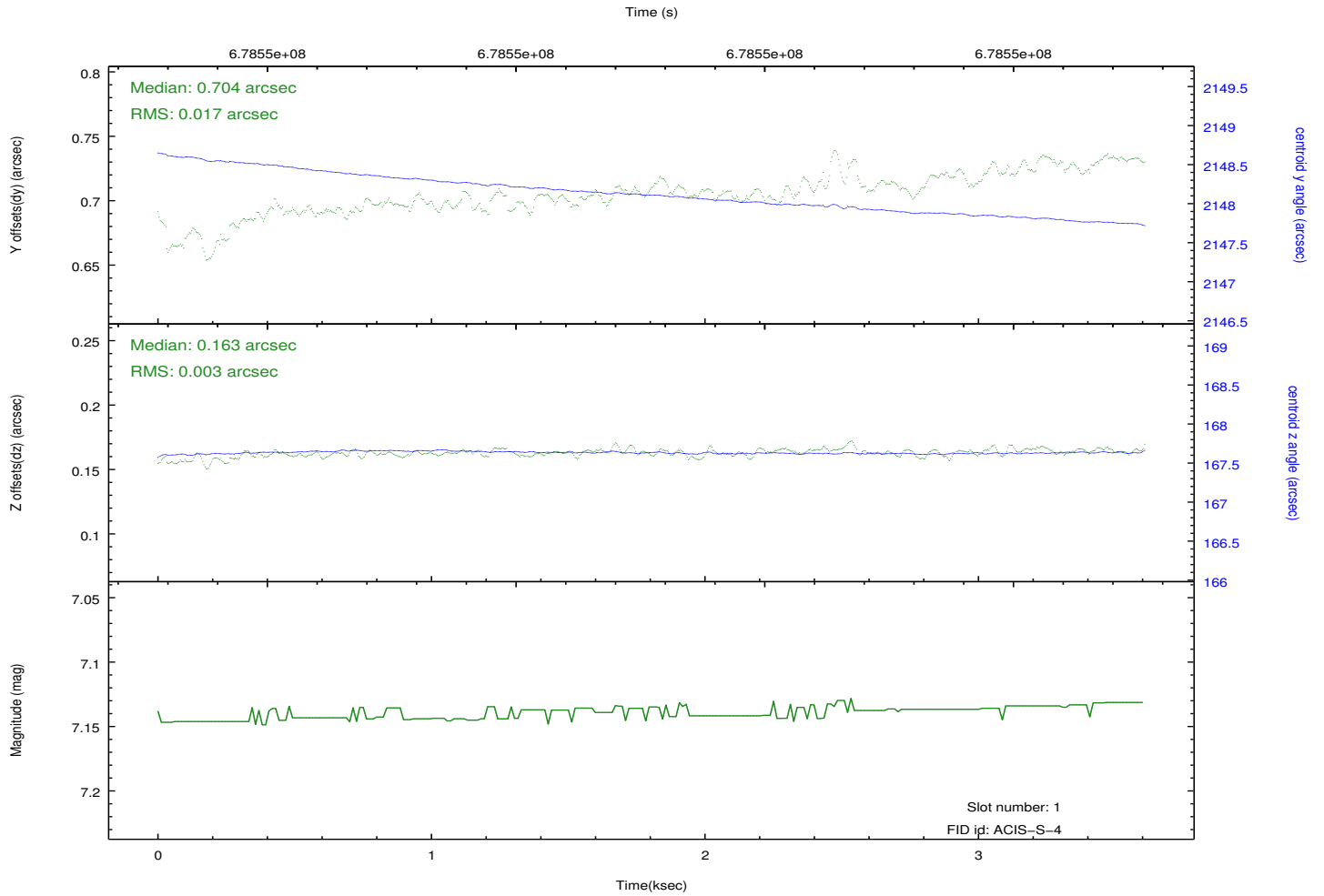
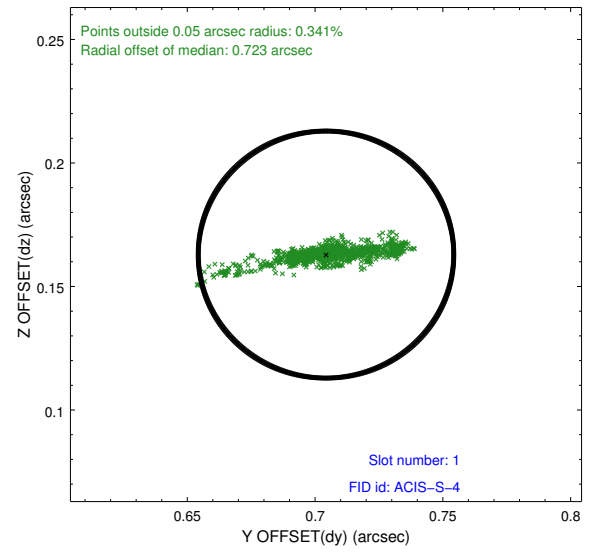
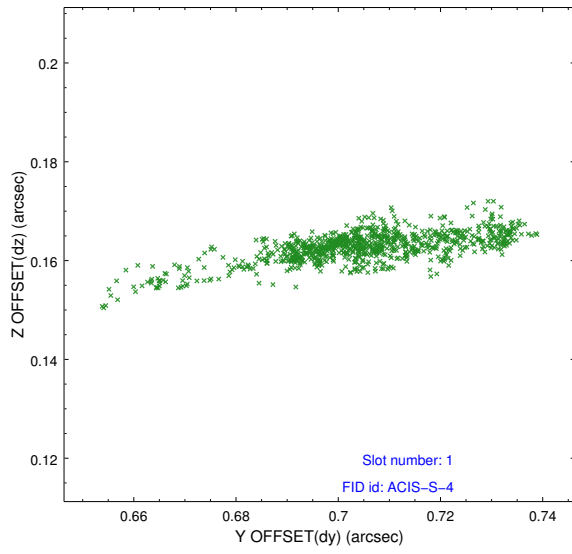


2.5 FID Slots

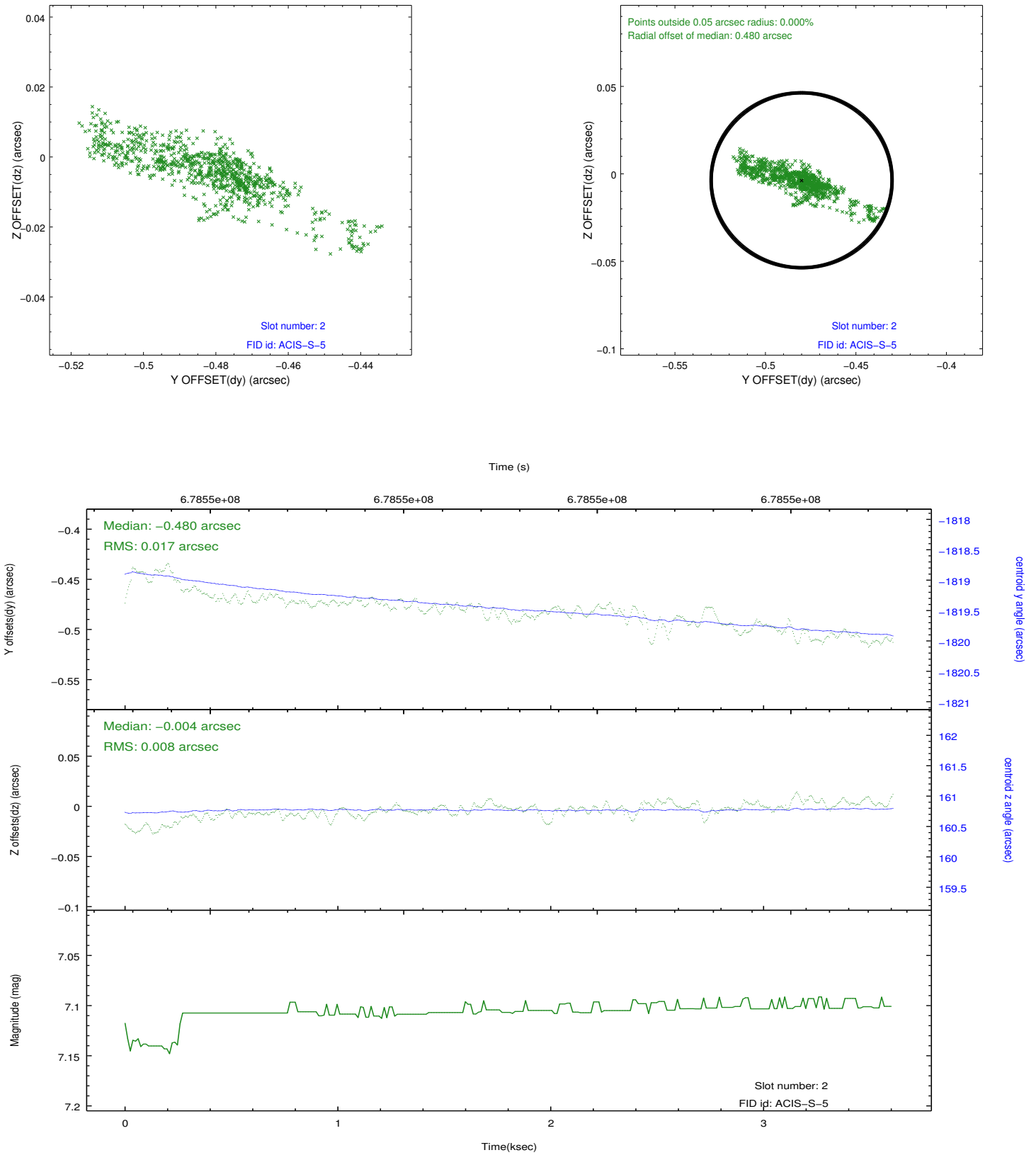
2.5.1 Slot 0



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)	2019.07.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.558198959589

A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 2 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:
(263.09343,-22.60136), (263.10608,-22.60239), (263.11969,-22.46350),
(263.10705,-22.46247).