

V&V Reference Report

L2 ASCDS Version : 10

Observation 15151 - L2 Version 2
Chandra X-Ray Center

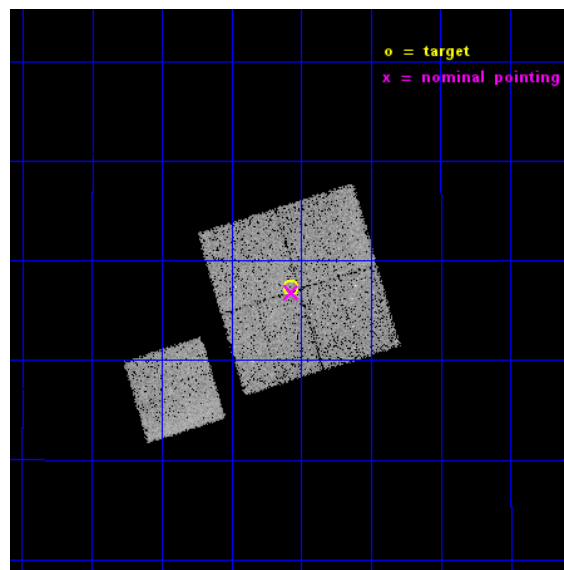
L2 Processing Date : Dec 4 2014

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1 Front

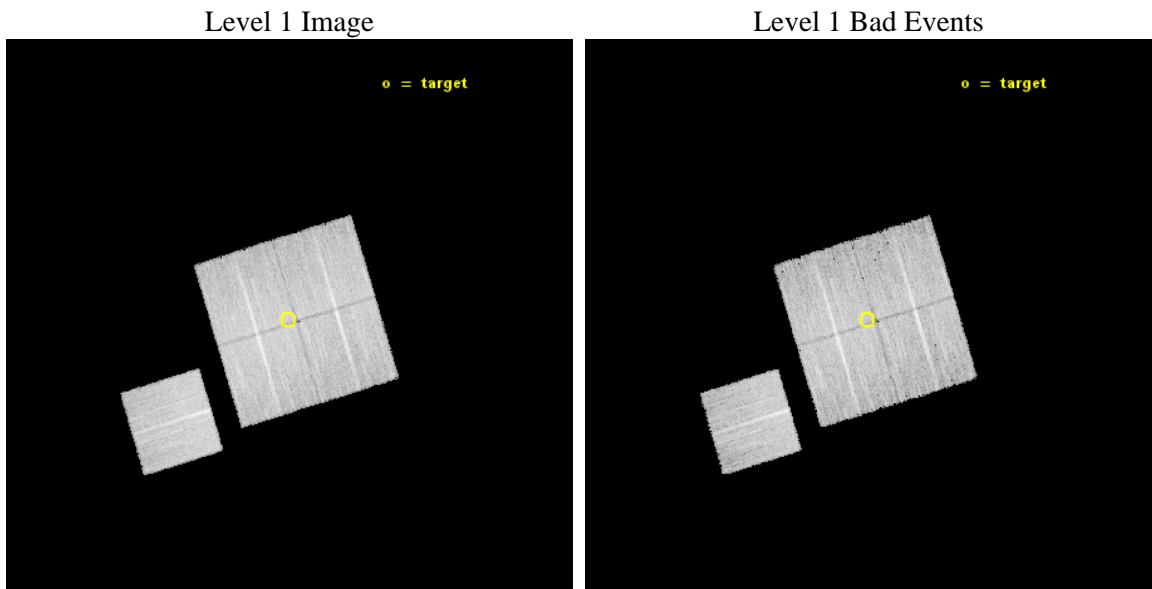
seq_num	801279	Sequence number
obs_id	15151	Observation id
title	A Detailed Study of the Longest Known Ram Pressure Stripped Tail with Deep Chandra Observations of M86	Proposal title
observer	Dr. Scott Randall	Principal investigator
object	M86 Outer Tail	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.26744	Observer's specified target RA [deg]
dec_targ	13.288401	Observer's specified target Dec [deg]
ra_nom	186.26749475008	Nominal RA [deg]
dec_nom	13.280299762508	Nominal Dec [deg]
roll_nom	253.00867026658	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20087.588561296	Sum of GTIs [s]
livetime	19825.129428476	Livetime [s]
ontime0	20087.465441287	Sum of GTIs [s]
ontime1	20084.365461111	Sum of GTIs [s]
ontime2	20087.547521293	Sum of GTIs [s]
ontime3	20087.588561296	Sum of GTIs [s]
ontime6	20084.283401012	Sum of GTIs [s]
l2events	59003	Number of level 2 events



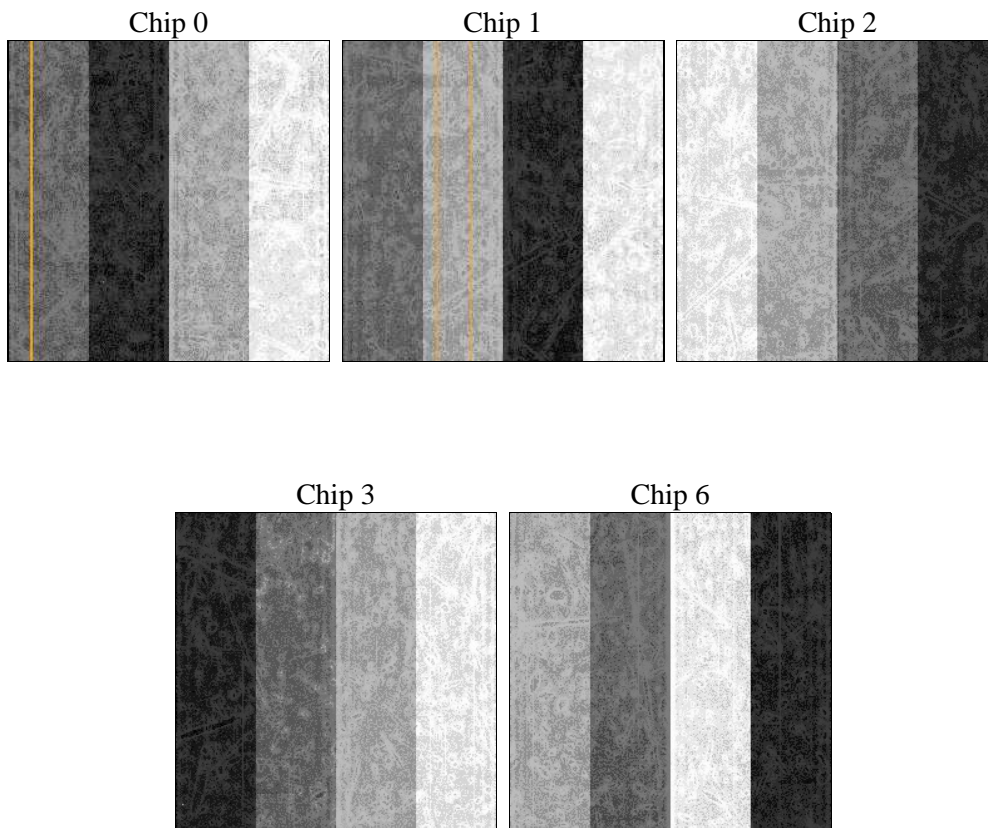
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20087.588561296	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	20087.465441287	Sum of GTIs [s]
date	2014-12-04T19:45:45	Date and time of file creation	ontime1	20084.365461111	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20087.547521293	Sum of GTIs [s]
			ontime3	20087.588561296	Sum of GTIs [s]
			ontime6	20084.283401012	Sum of GTIs [s]
			l1events	454327	Number of level 1 events

2.1.4 Events

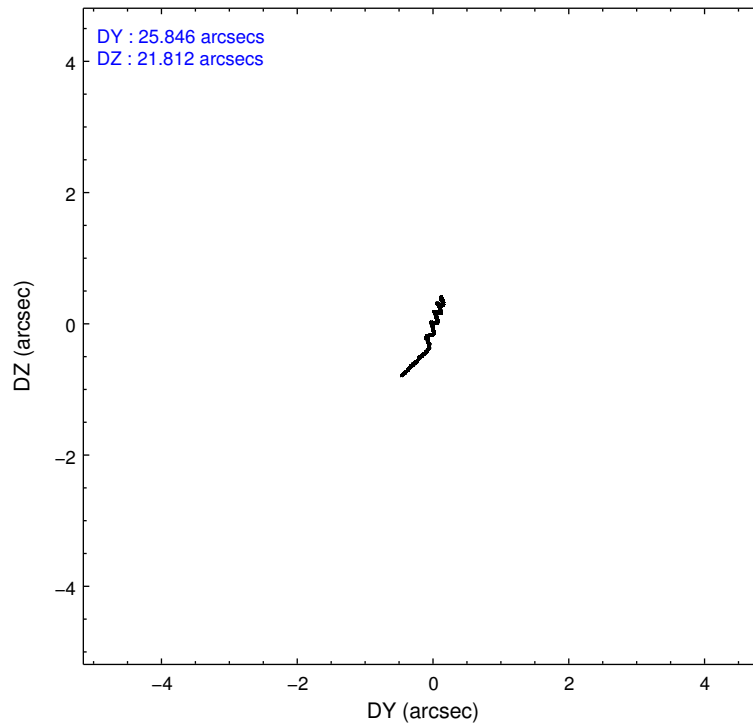
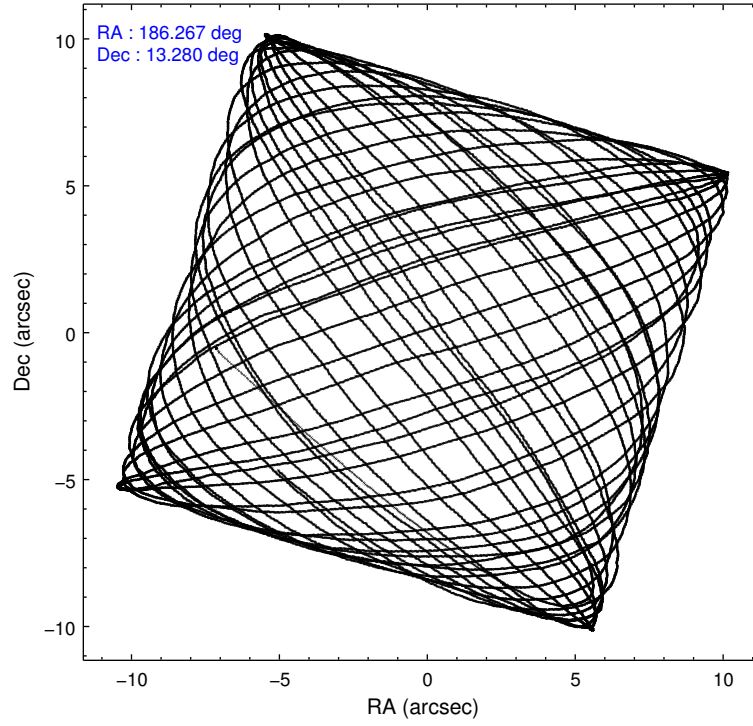
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	85921	85858	95590	89523	97435
rejected events	73385	72320	81586	77107	81804
rejected %	85%	84%	85%	86%	83%

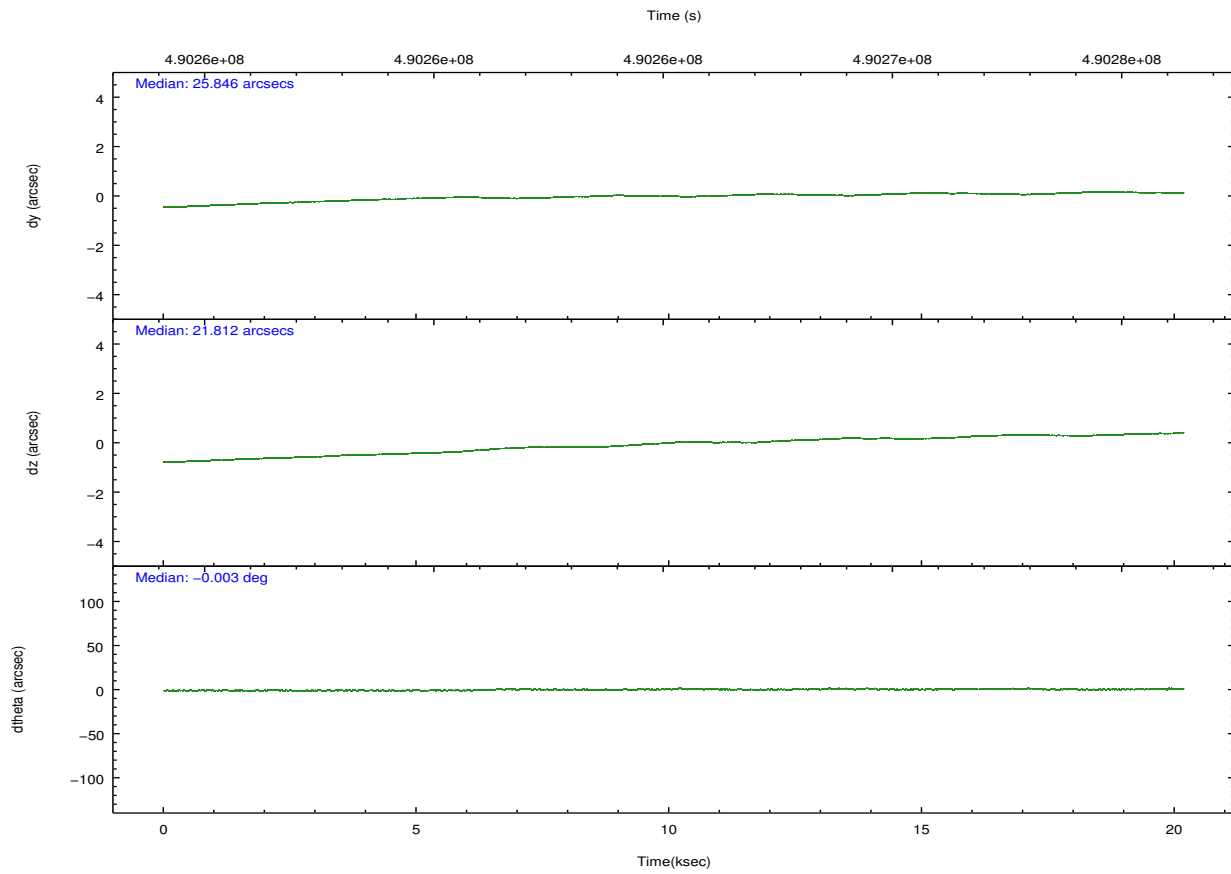
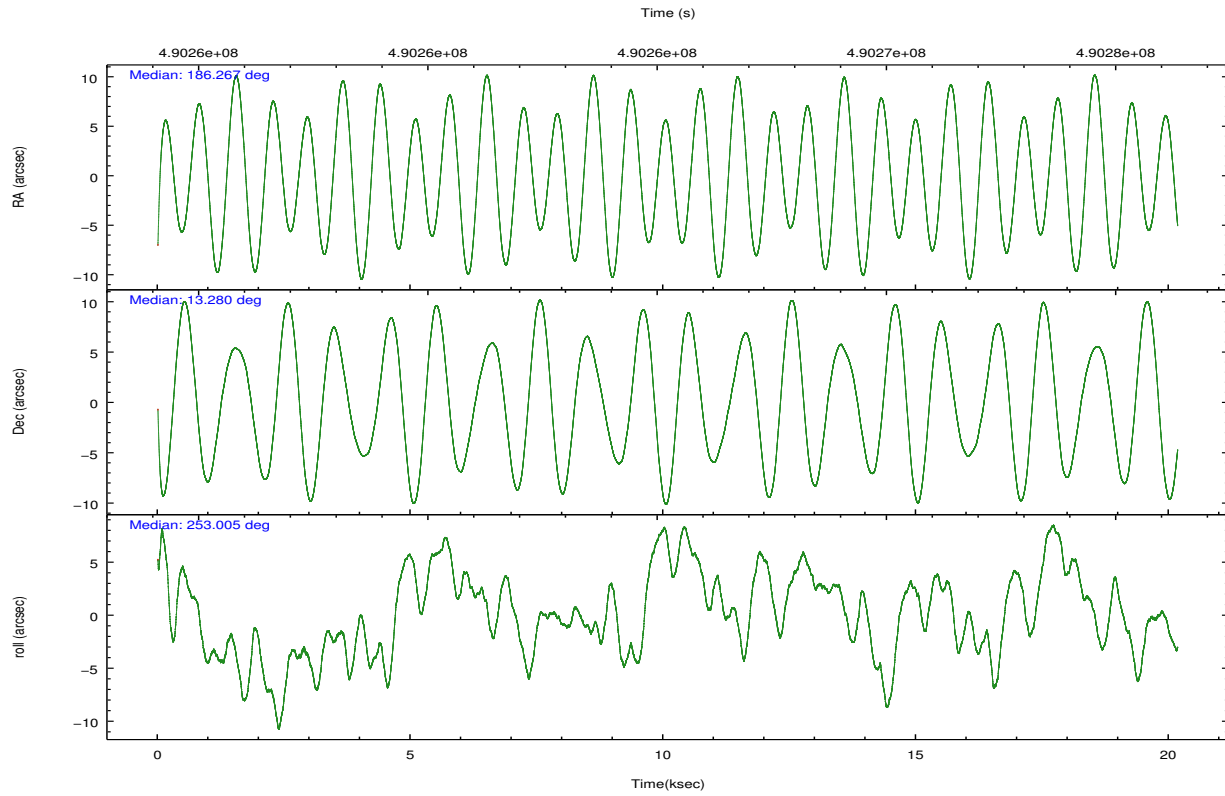
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5062	5348	6623	5357	7461
	5%	6%	6%	5%	7%
grade 1 events	57	44	67	49	55
	0%	0%	0%	0%	0%
grade 2 events	2856	3019	2927	2459	3051
	3%	3%	3%	2%	3%
grade 3 events	1182	1230	1176	1127	1274
	1%	1%	1%	1%	1%
grade 4 events	1129	1247	1137	1181	1249
	1%	1%	1%	1%	1%
grade 5 events	4261	4770	4147	4978	4914
	4%	5%	4%	5%	5%
grade 6 events	2313	2696	2150	2301	2601
	2%	3%	2%	2%	2%
grade 7 events	69061	67504	77363	72071	76830
	80%	78%	80%	80%	78%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	186.261015	186.2674947500818	CCD I2 on	Y	Y
[deg] Pointing Dec	13.307086	13.28029976250846	CCD I3 on	Y	Y
[deg] Pointing Roll	252.801484	253.0086702665779	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	490255324.184000	490253912.11694	CCD S5 on	N	N
Observation start date	2013-07-15T06:00:57	2013-07-15T05:38:32	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	490275324.184000	490275976.78064	On-chip summing requested	N	N
Observation end date	2013-07-15T11:34:17	2013-07-15T11:46:16	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





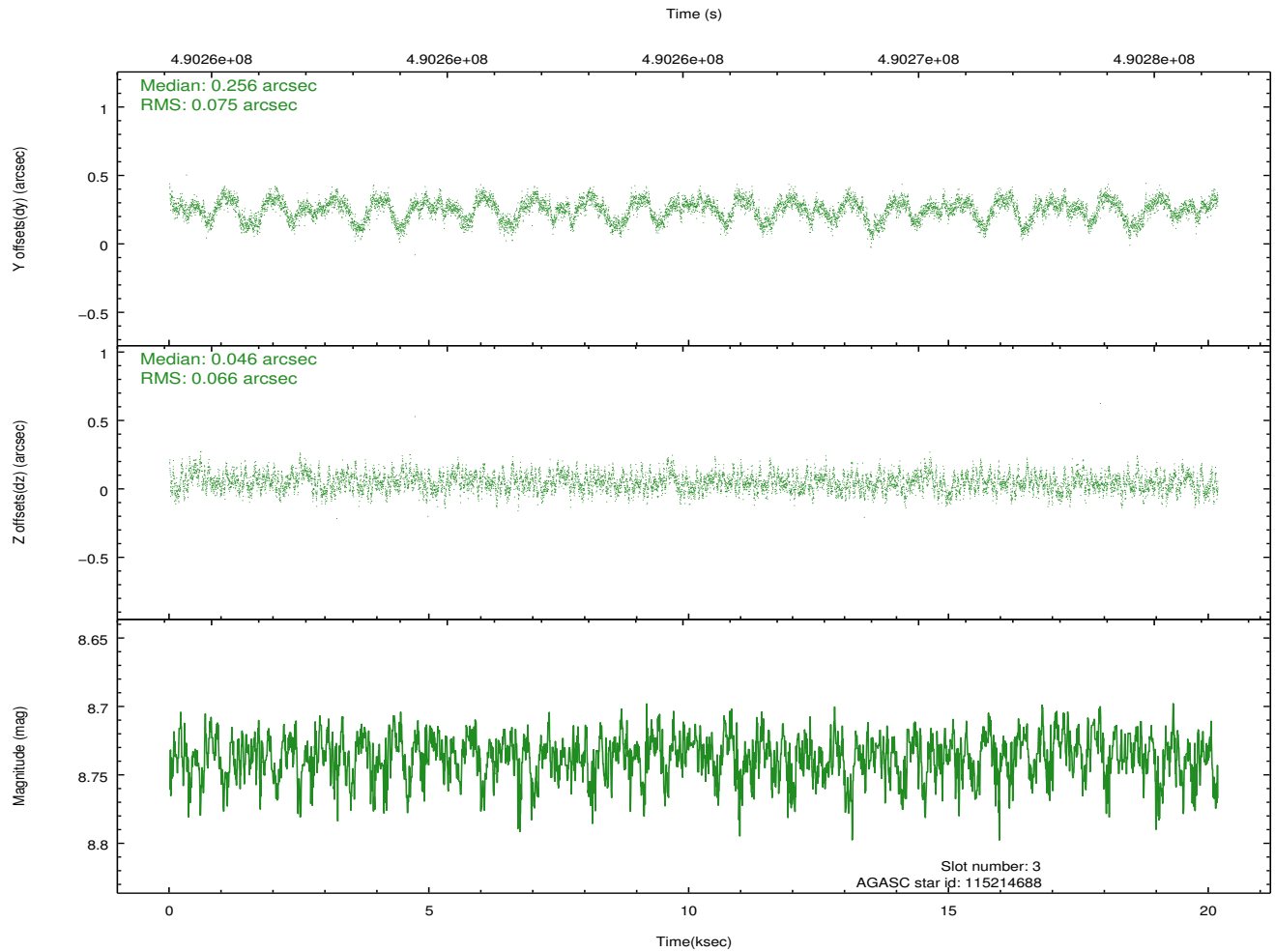
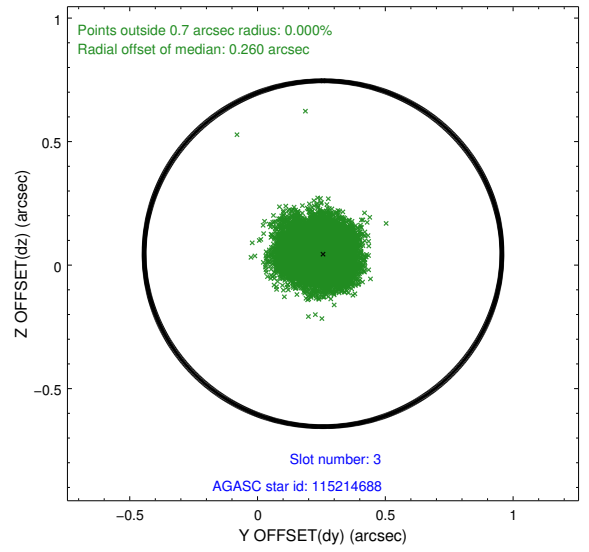
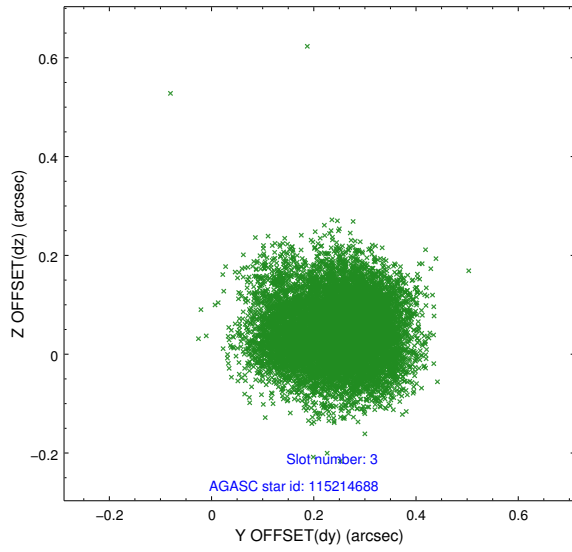
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	6.98	4920	0.054	-0.003	0.012	0.021	0.000000	0.000000	913.43	-845.46
1	FID		ACIS-I-5	6.98	4921	-0.267	0.048	0.009	0.015	0.000000	0.000000	-1834.94	1051.92
2	FID		ACIS-I-6	6.98	4921	0.121	0.025	0.018	0.026	0.000000	0.000000	378.78	1696.66
3	GUIDE	used	115214688	8.74	9835	0.256	0.046	0.107	0.168	185.816167	13.622157	-624.06	-1822.25
4	GUIDE	used	115215984	9.95	9674	-0.087	-0.218	0.170	0.281	186.134733	12.875031	1617.27	36.36
5	GUIDE	used	115347480	9.36	9799	-0.177	-0.119	0.125	0.198	186.668576	13.310410	-434.55	1360.11
6	GUIDE	used	115349448	9.71	9748	-0.166	0.048	0.190	0.327	186.471080	13.770115	-1809.79	208.27
7	GUIDE	used	115212384	9.46	9836	0.146	0.236	0.137	0.230	185.981825	14.058276	-2295.83	-1731.62

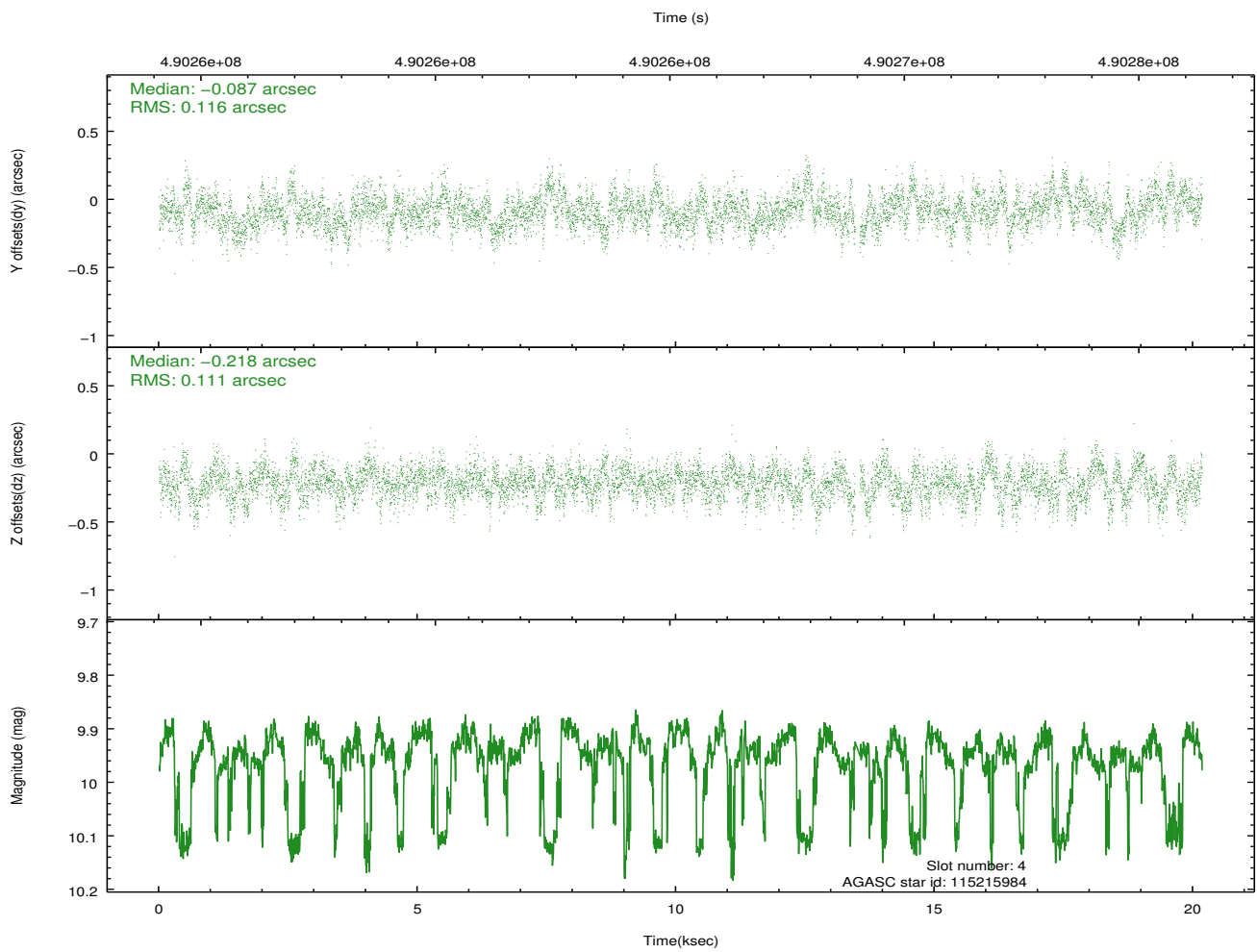
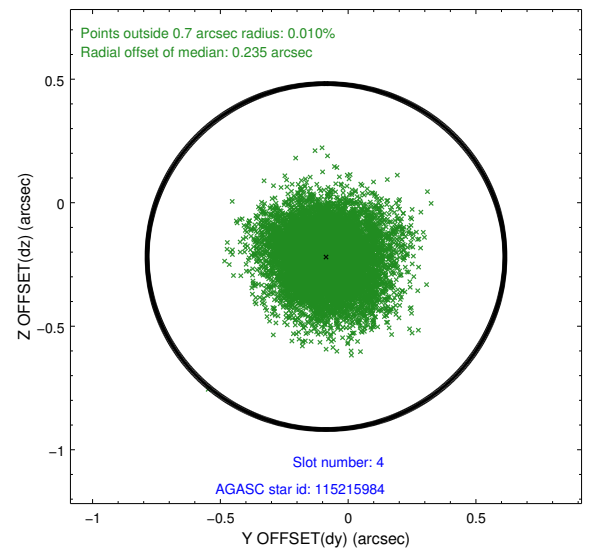
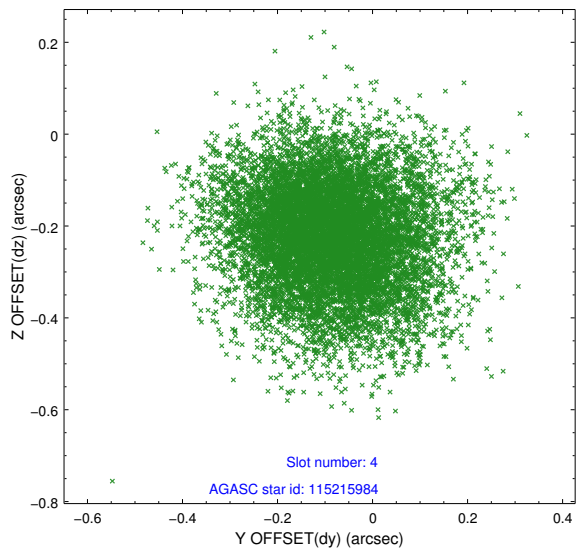
∞

2.4 Star Slots

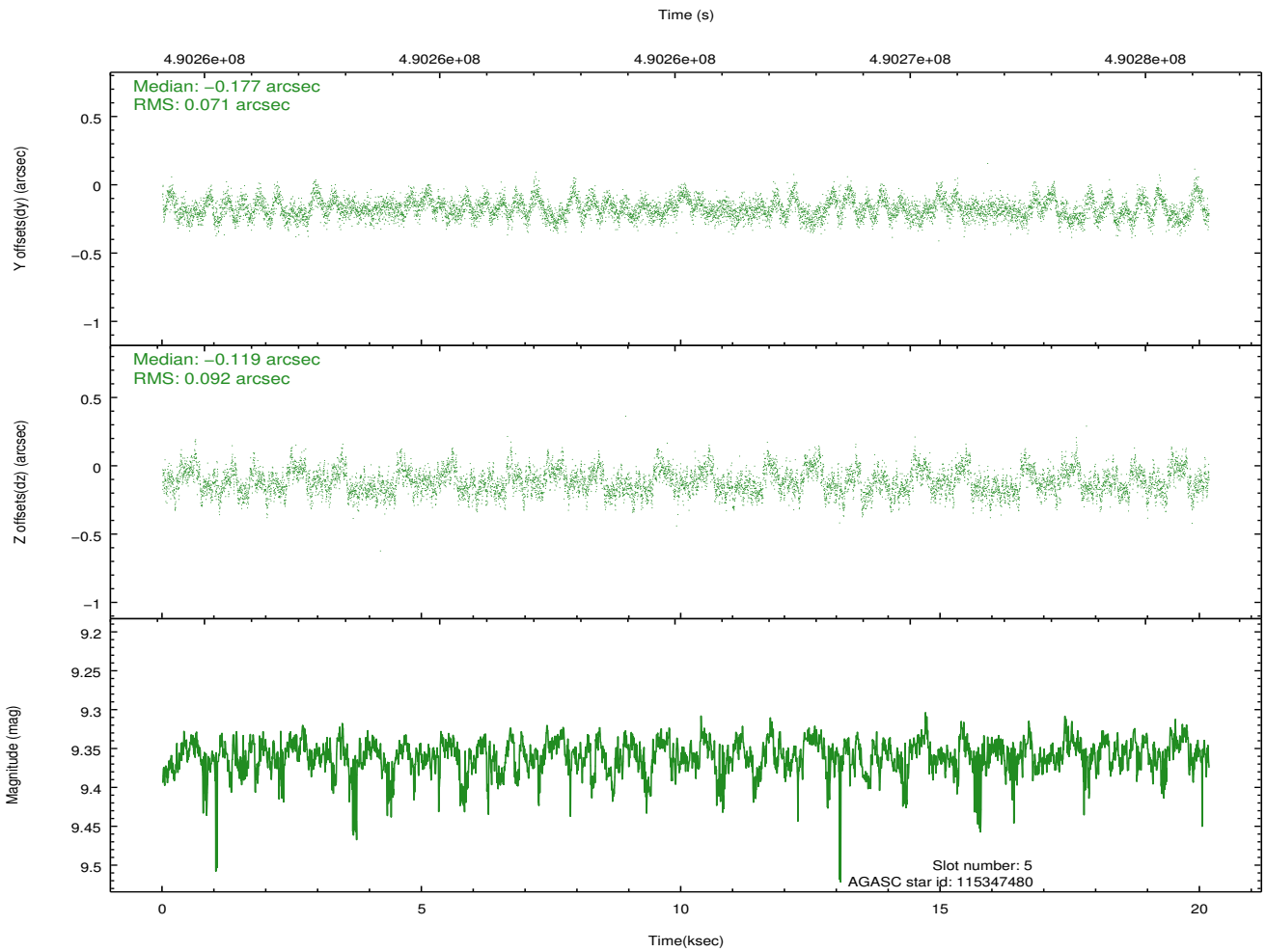
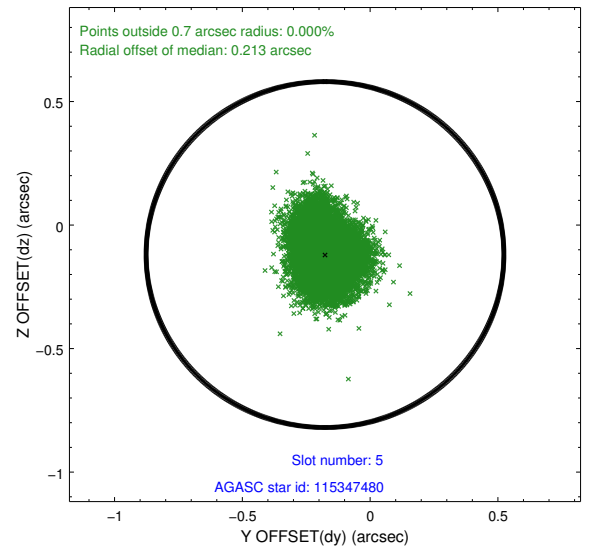
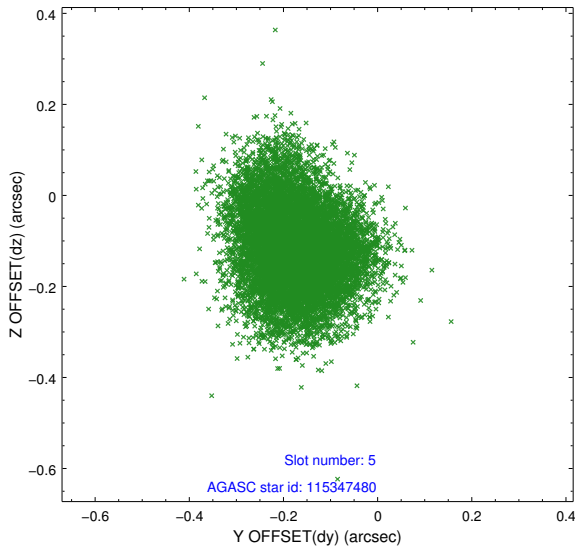
2.4.1 Slot 3



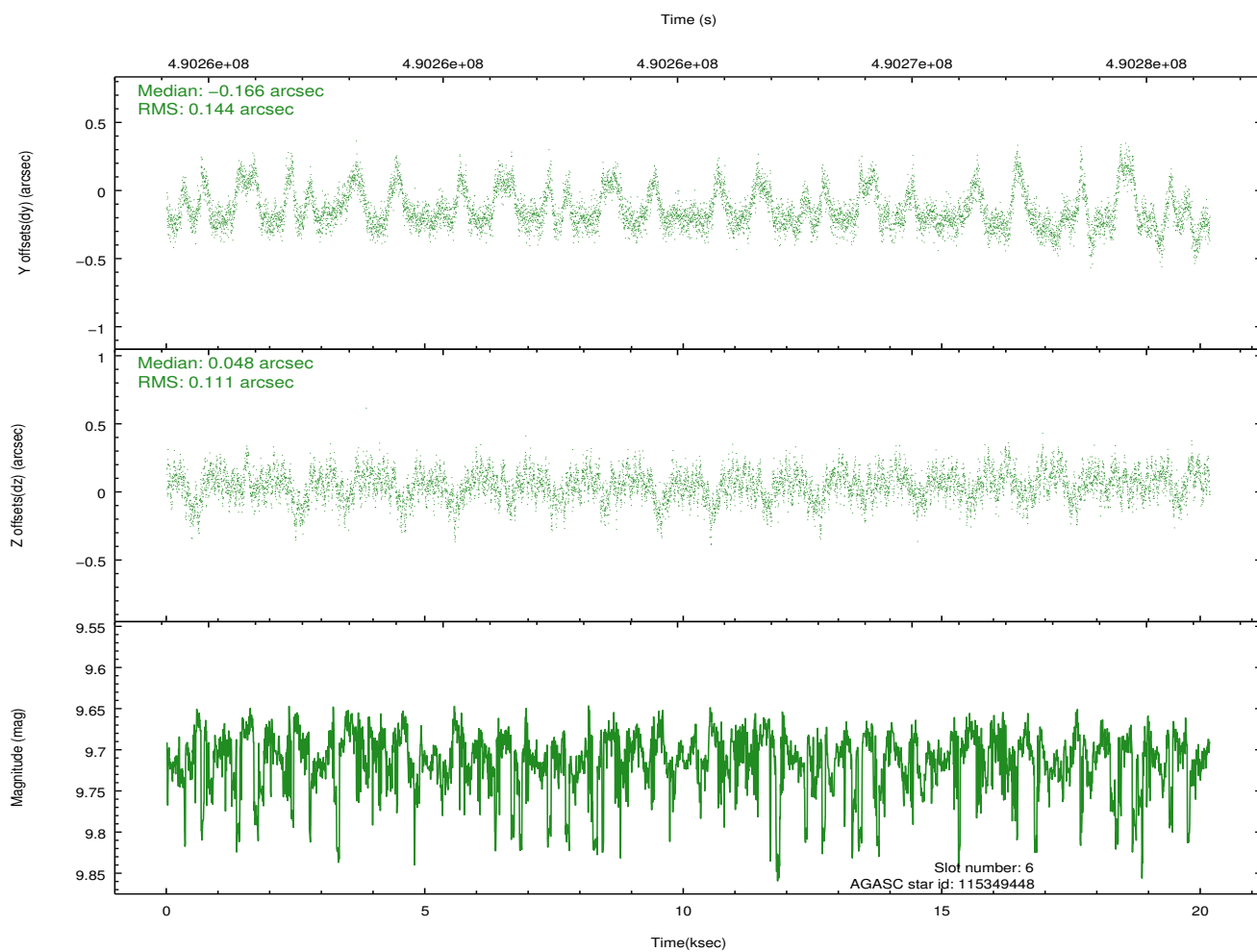
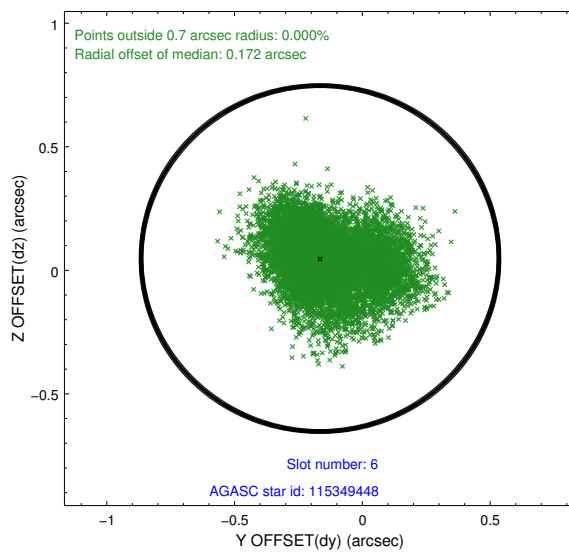
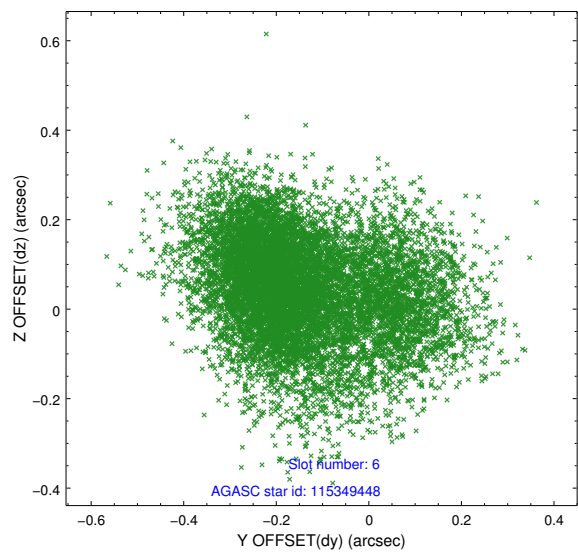
2.4.2 Slot 4



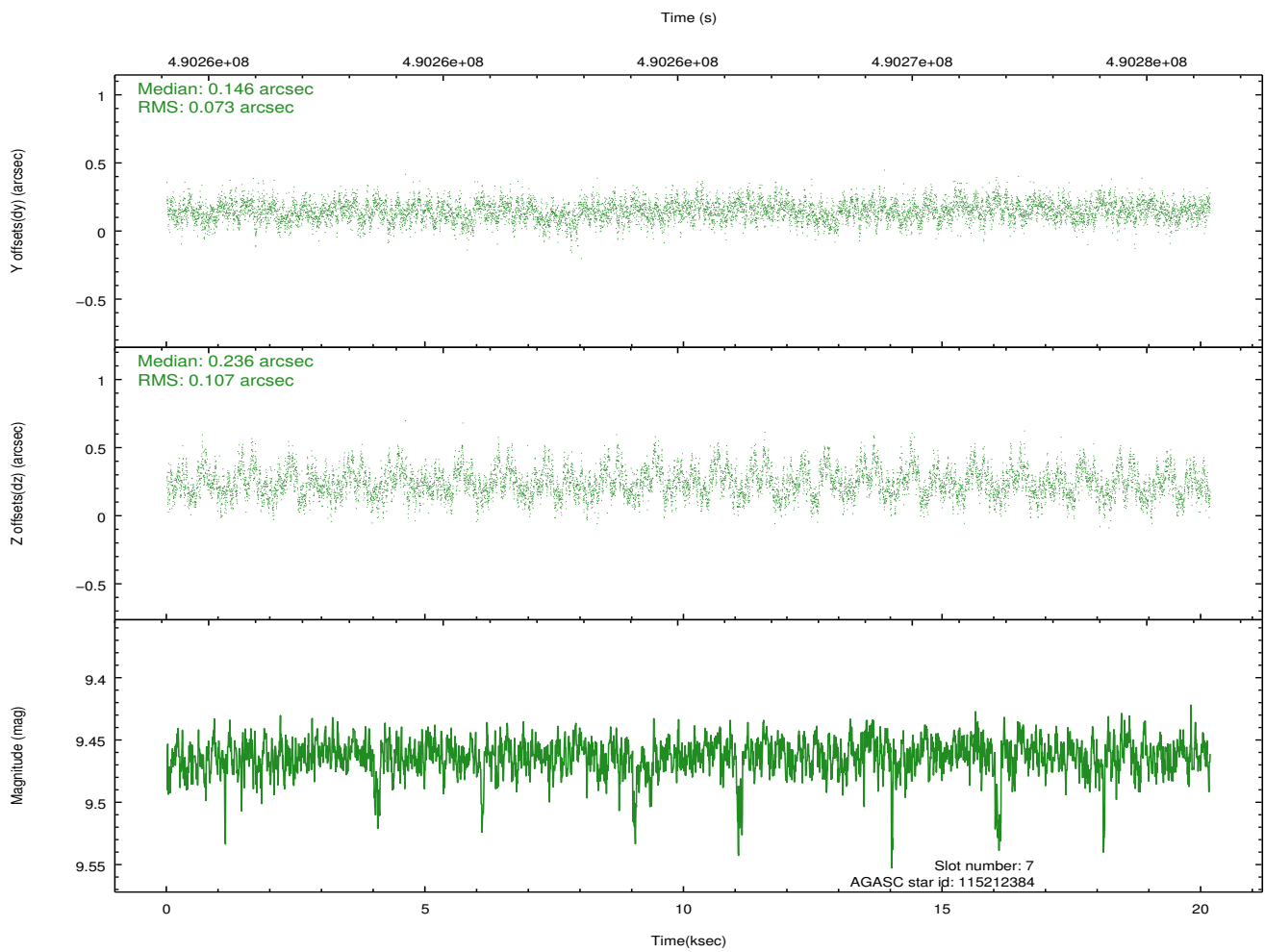
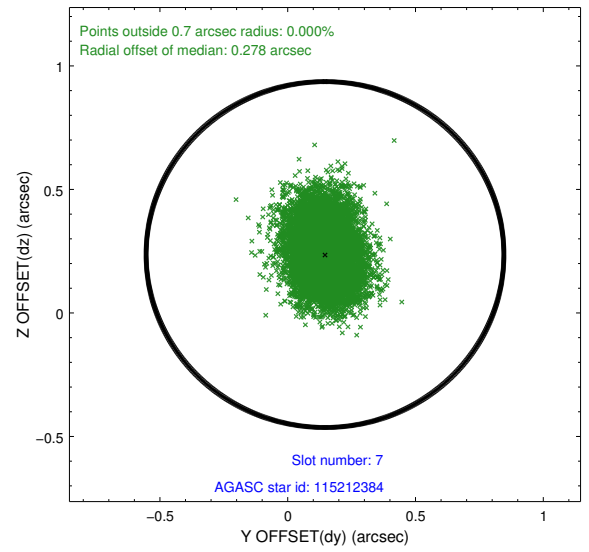
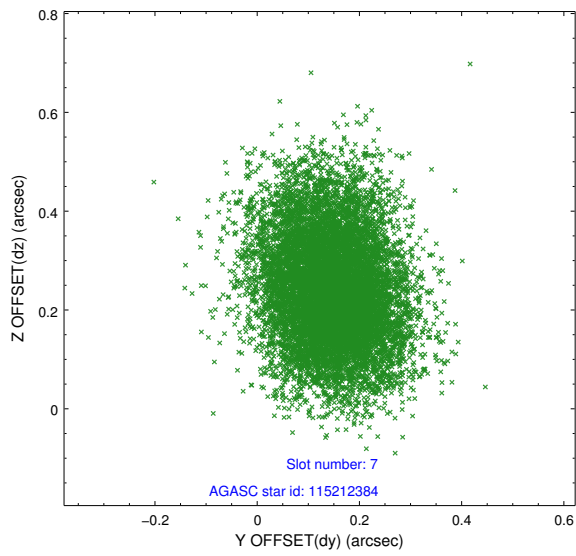
2.4.3 Slot 5



2.4.4 Slot 6

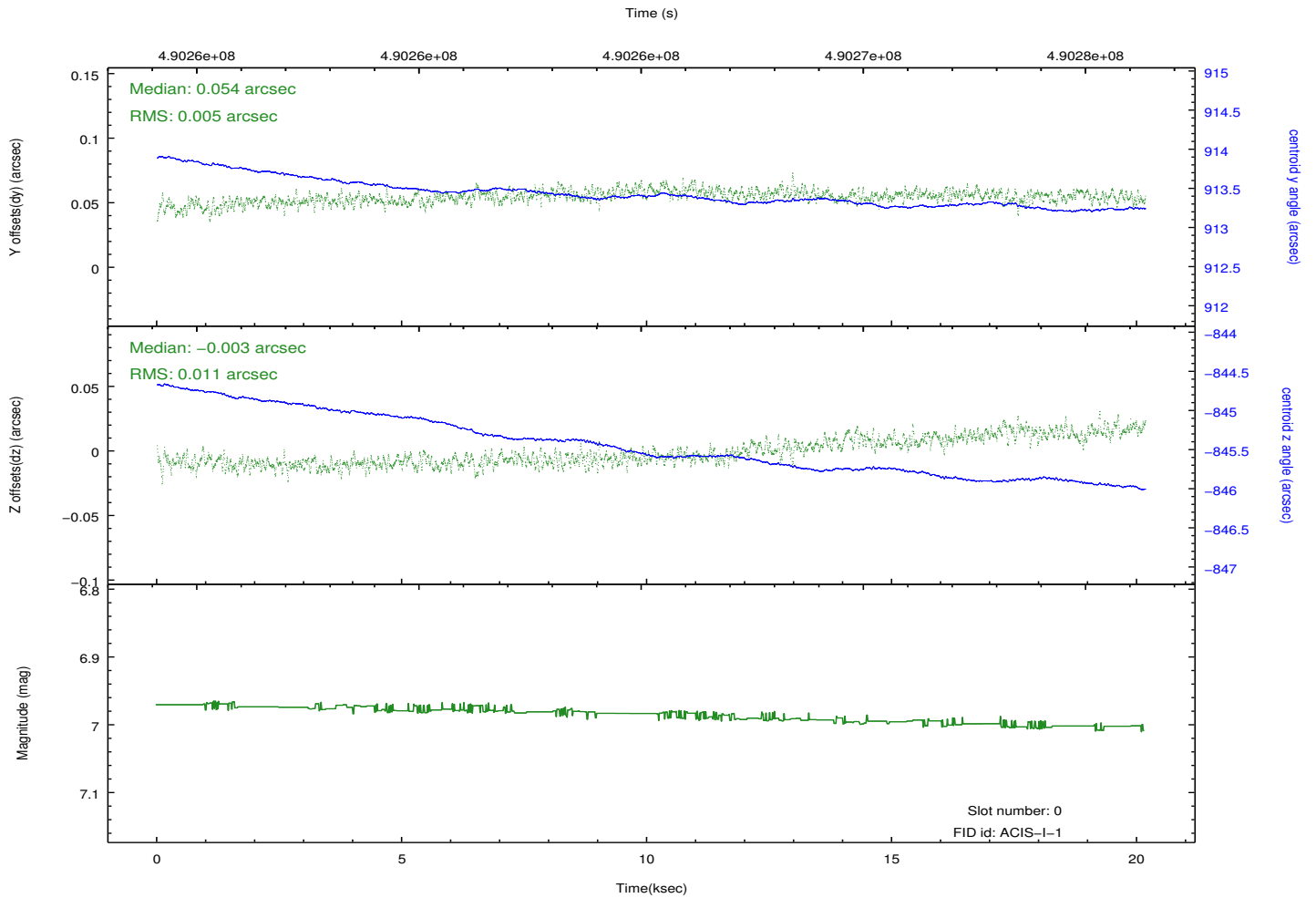
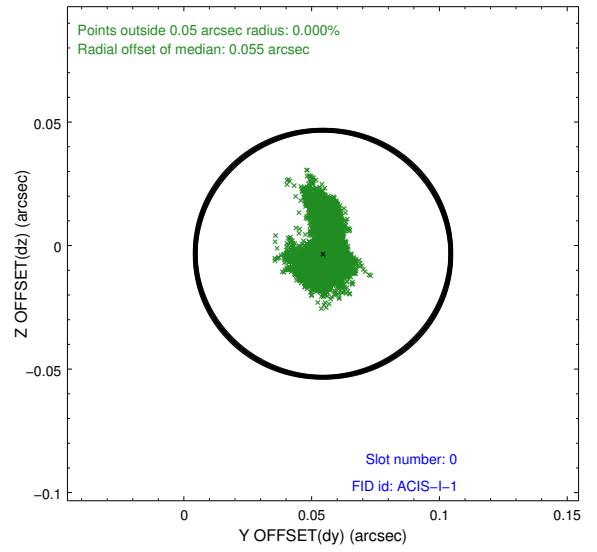
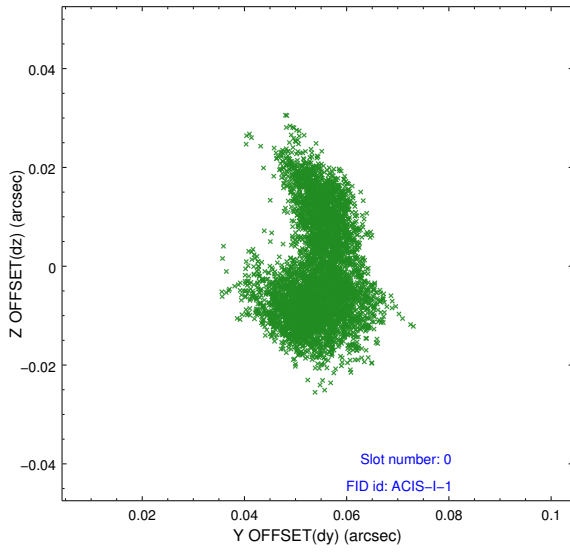


2.4.5 Slot 7

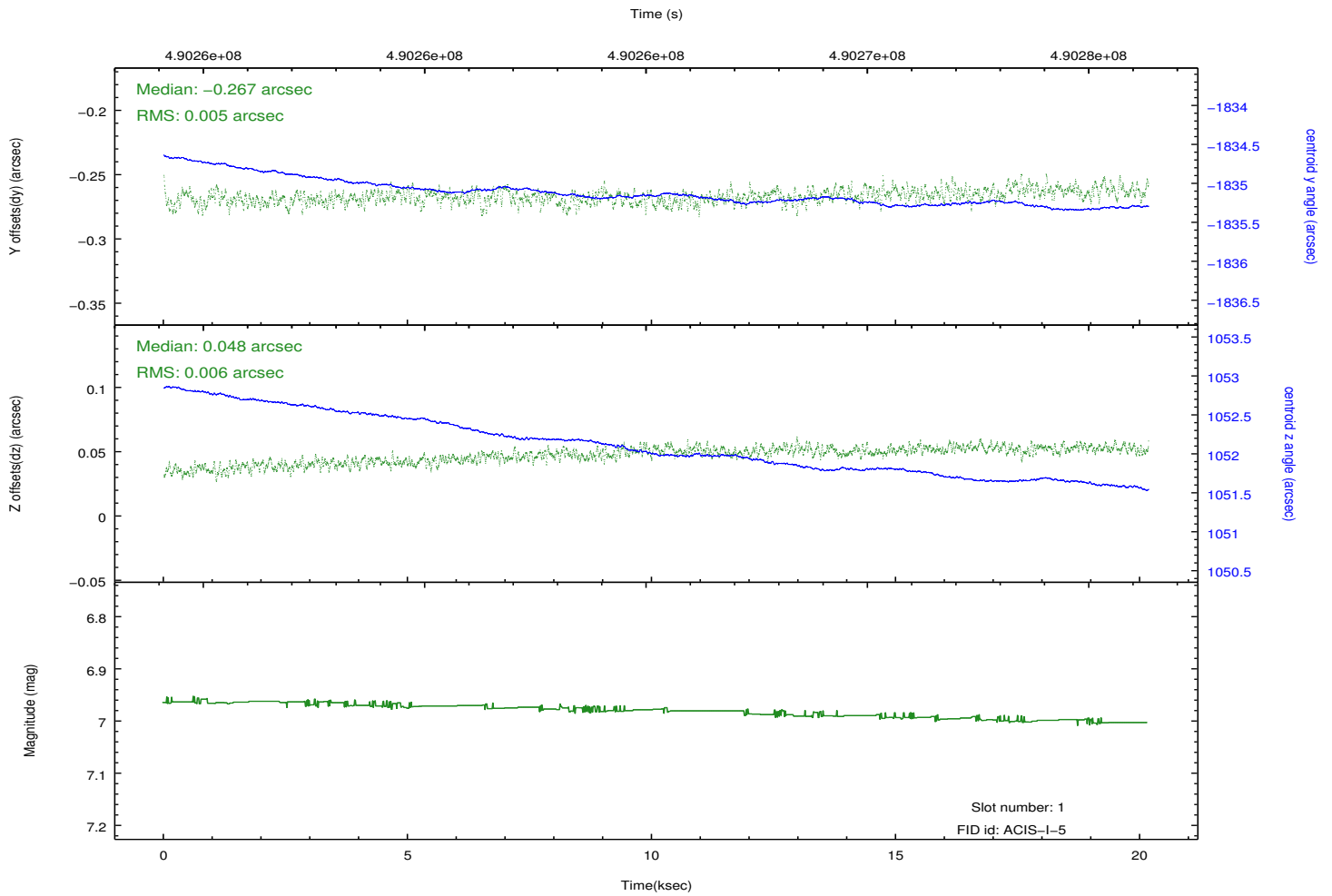
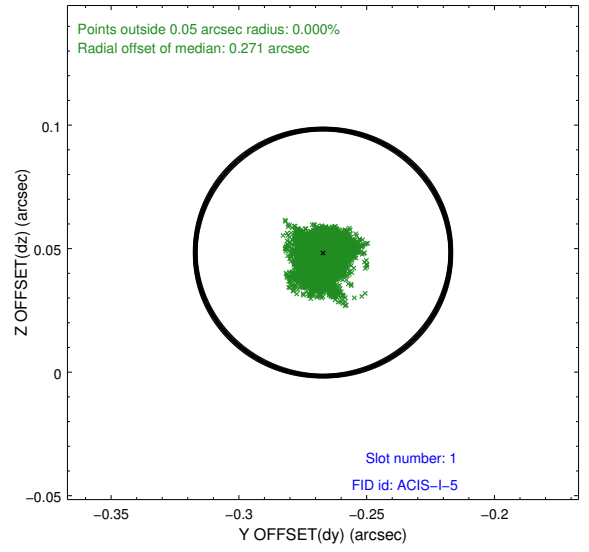
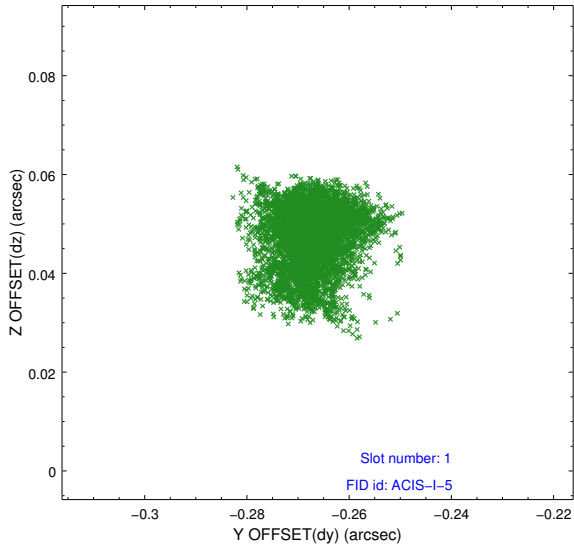


2.5 FID Slots

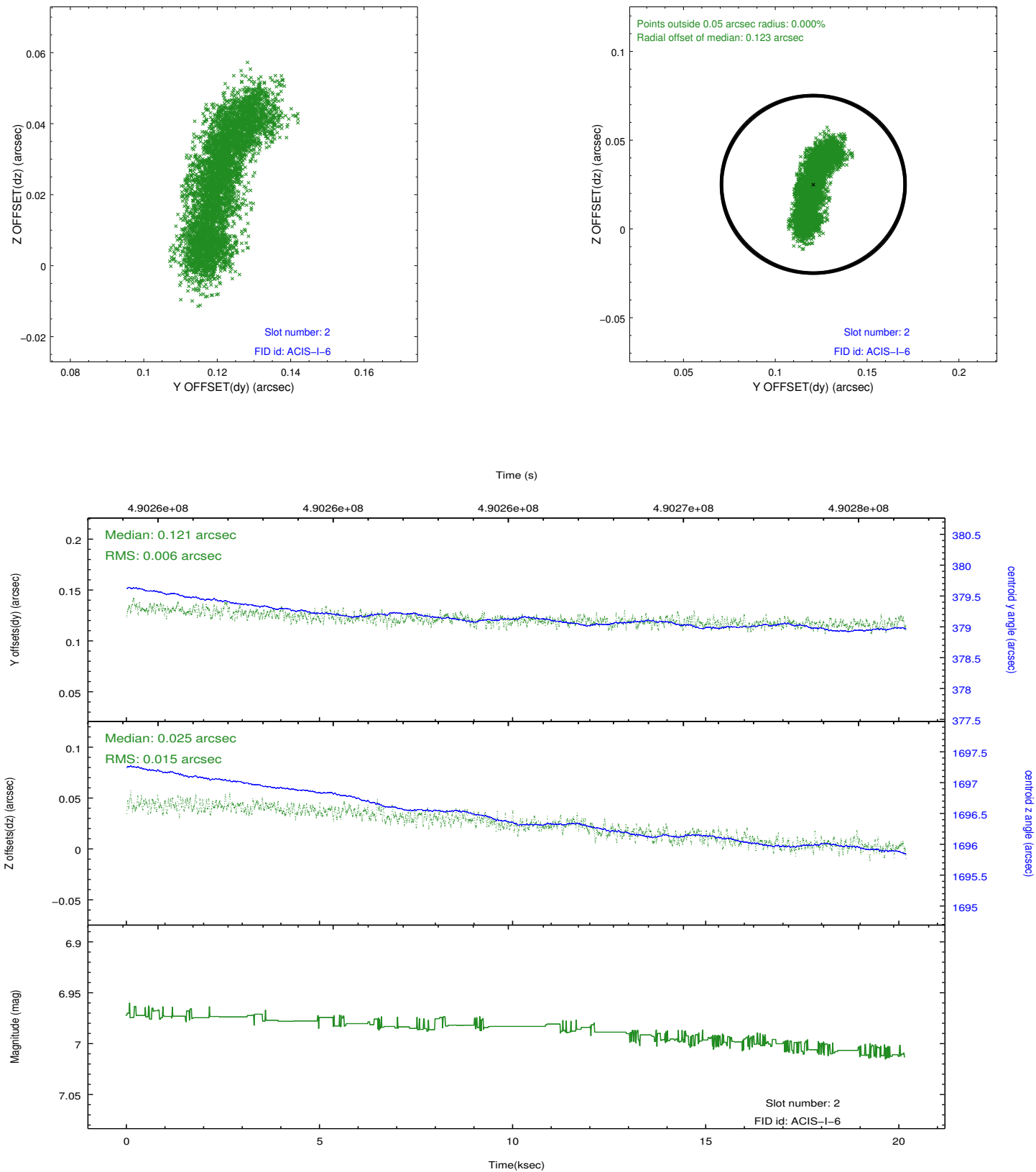
2.5.1 Slot 0



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)	2014.12.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.087588561296

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.