

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13501 - L2 Version 1
Chandra X-Ray Center

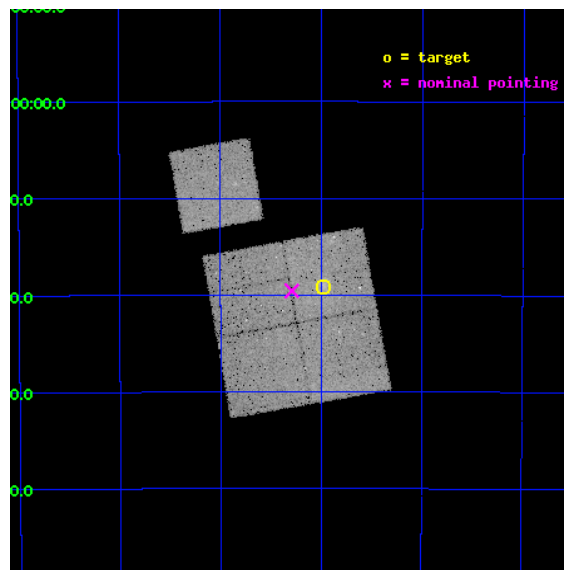
L2 Processing Date : Sep 2 2012

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1 Front

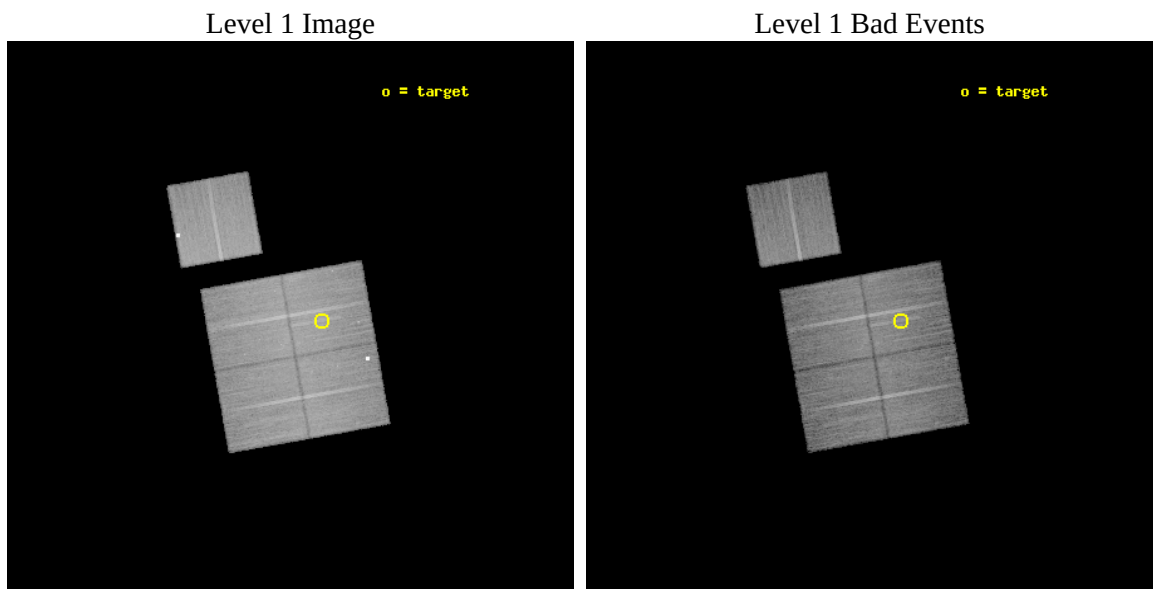
seq_num	801142	Sequence number
obs_id	13501	Observation id
title	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg^2 from the South Pole Telescope Survey	Proposal title
observer	Dr Bradford Benson	Principal investigator
object	SPT-CLJ2218-4519	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	334.746	Observer's specified target RA [deg]
dec_targ	-45.3187	Observer's specified target Dec [deg]
ra_nom	334.8227025386	Nominal RA [deg]
dec_nom	-45.326051235804	Nominal Dec [deg]
roll_nom	349.91256694475	Nominal Roll [deg]
revision	1	Processing version of data
ontime	35276.594689071	Sum of GTIs [s]
livetime	34815.680009207	Livetime [s]
ontime0	35276.471579552	Sum of GTIs [s]
ontime1	35276.512629569	Sum of GTIs [s]
ontime2	35276.553668797	Sum of GTIs [s]
ontime3	35276.594689071	Sum of GTIs [s]
ontime6	35279.571579754	Sum of GTIs [s]
l2events	98255	Number of level 2 events



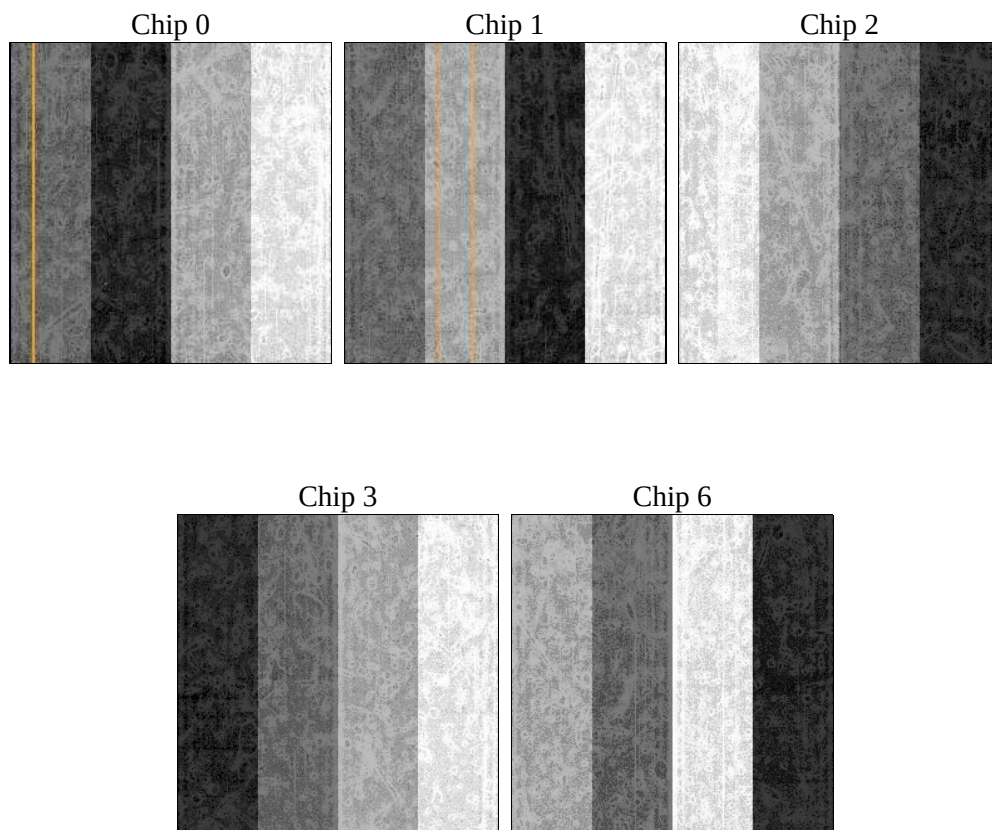
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	35276.594689071	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime0	35276.471579552	Sum of GTIs [s]
date	2012-09-02T17:12:42	Date and time of file creation	ontime1	35276.512629569	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	35276.553668797	Sum of GTIs [s]
			ontime3	35276.594689071	Sum of GTIs [s]
			ontime6	35279.571579754	Sum of GTIs [s]
			l1events	1013192	Number of level 1 events

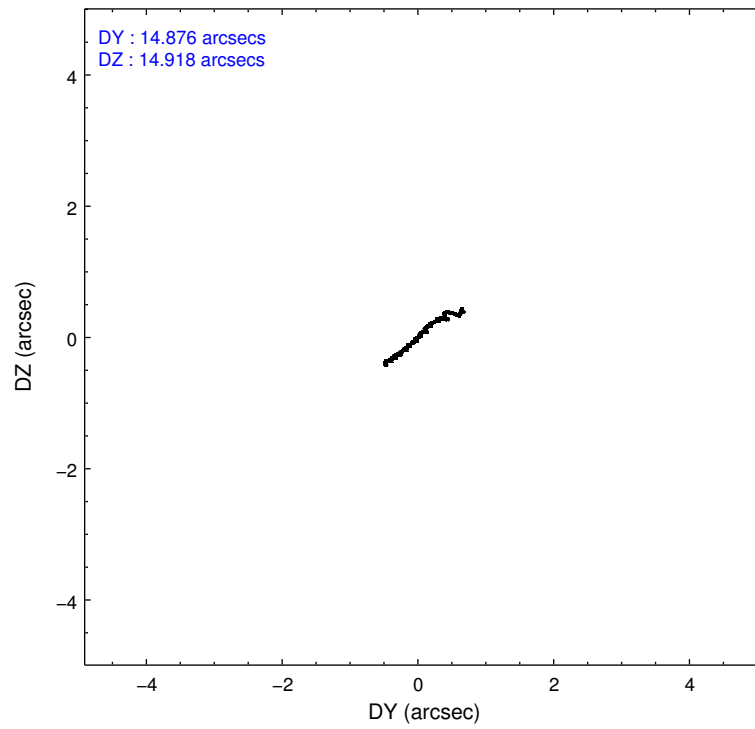
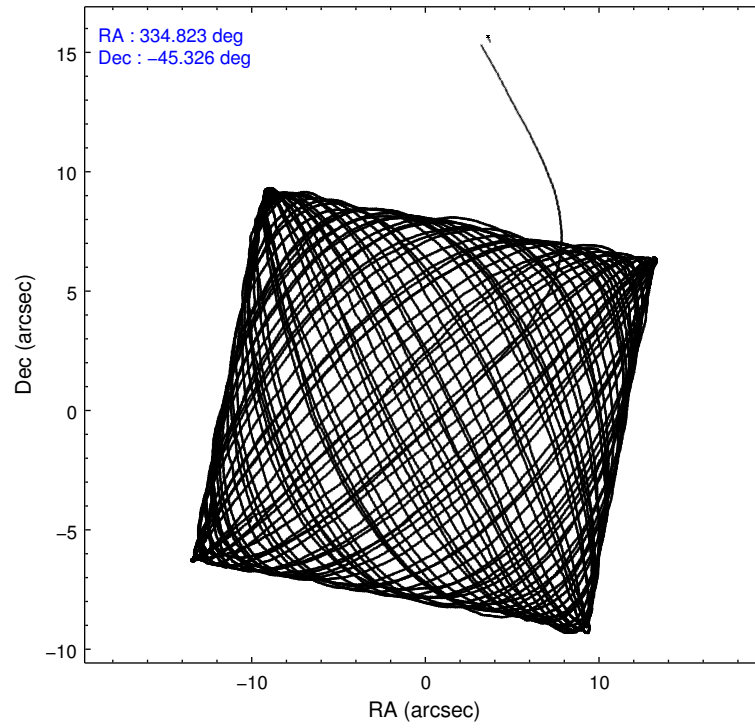
2.1.4 Events

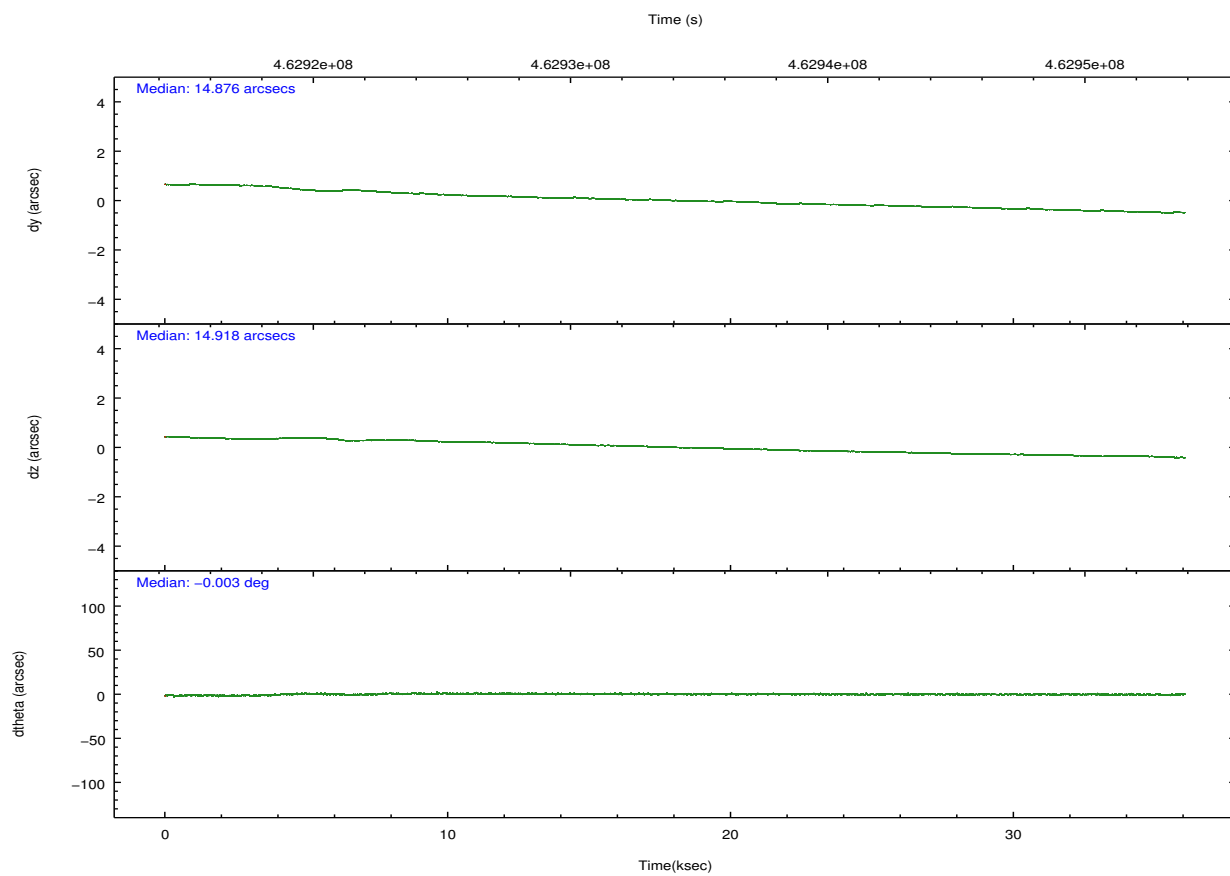
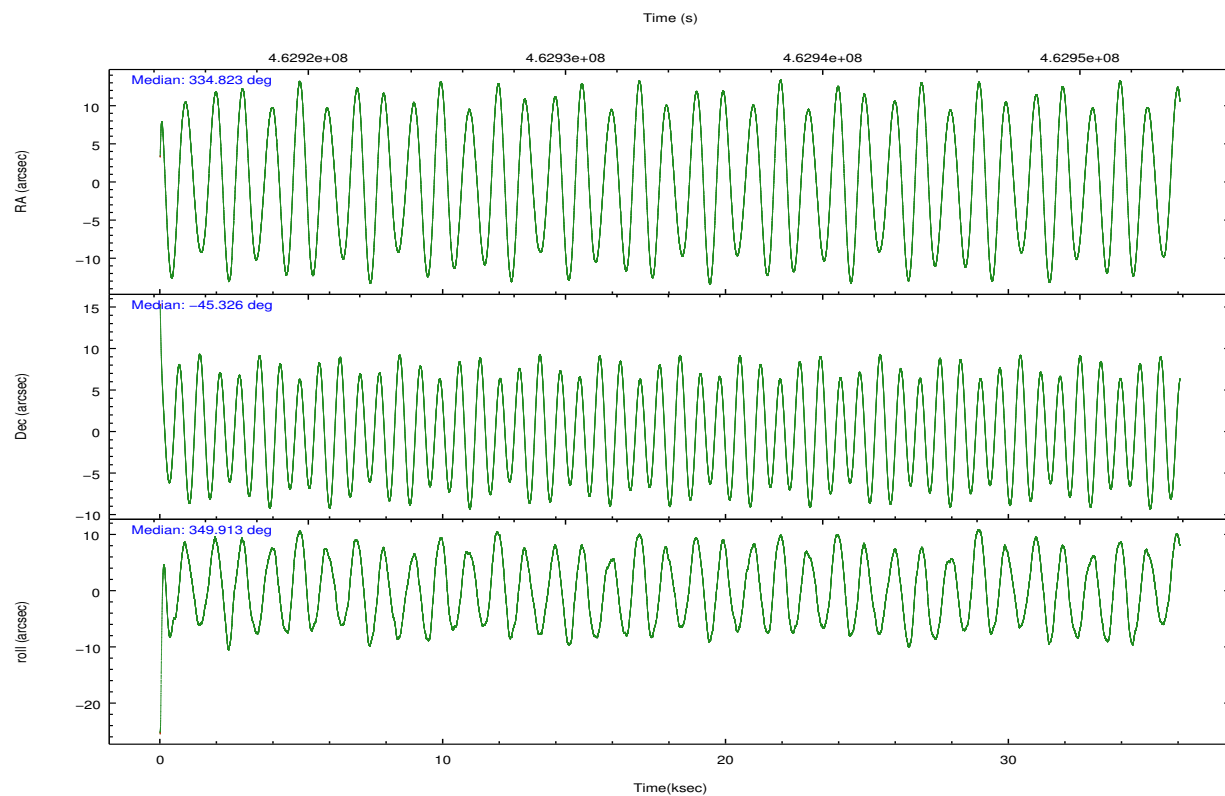
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	185756	199939	206059	204172	217266	grade 0 events	8680	19718	9183	9745	8608
rejected events	161613	164246	181259	180073	181858		4%	9%	4%	4%	3%
rejected %	87%	82%	87%	88%	83%	grade 1 events	119	139	129	115	93
							0%	0%	0%	0%	0%
						grade 2 events	6332	5933	6653	5110	16925
							3%	2%	3%	2%	7%
						grade 3 events	2396	2399	2230	2260	2339
							1%	1%	1%	1%	1%
						grade 4 events	2161	2372	2436	2343	2307
							1%	1%	1%	1%	1%
						grade 5 events	8589	9078	8173	9637	9408
							4%	4%	3%	4%	4%
						grade 6 events	4576	5272	4302	4644	5234
							2%	2%	2%	2%	2%
						grade 7 events	152903	155028	172953	170318	172352
							82%	77%	83%	83%	79%

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	334.785973	334.8227025386046	CCD I2 on	Y	Y
[deg] Pointing Dec	-45.335511	-45.32605123580436	CCD I3 on	Y	Y
[deg] Pointing Roll	349.677773	349.9125669447494	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	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	462916898.184000	462915153.17878	CCD S5 on	N	N
Observation start date	2012-09-01T20:00:31	2012-09-01T19:32:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	462952098.184000	462952859.3433	On-chip summing requested	N	N
Observation end date	2012-09-02T05:47:11	2012-09-02T06:00:59	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



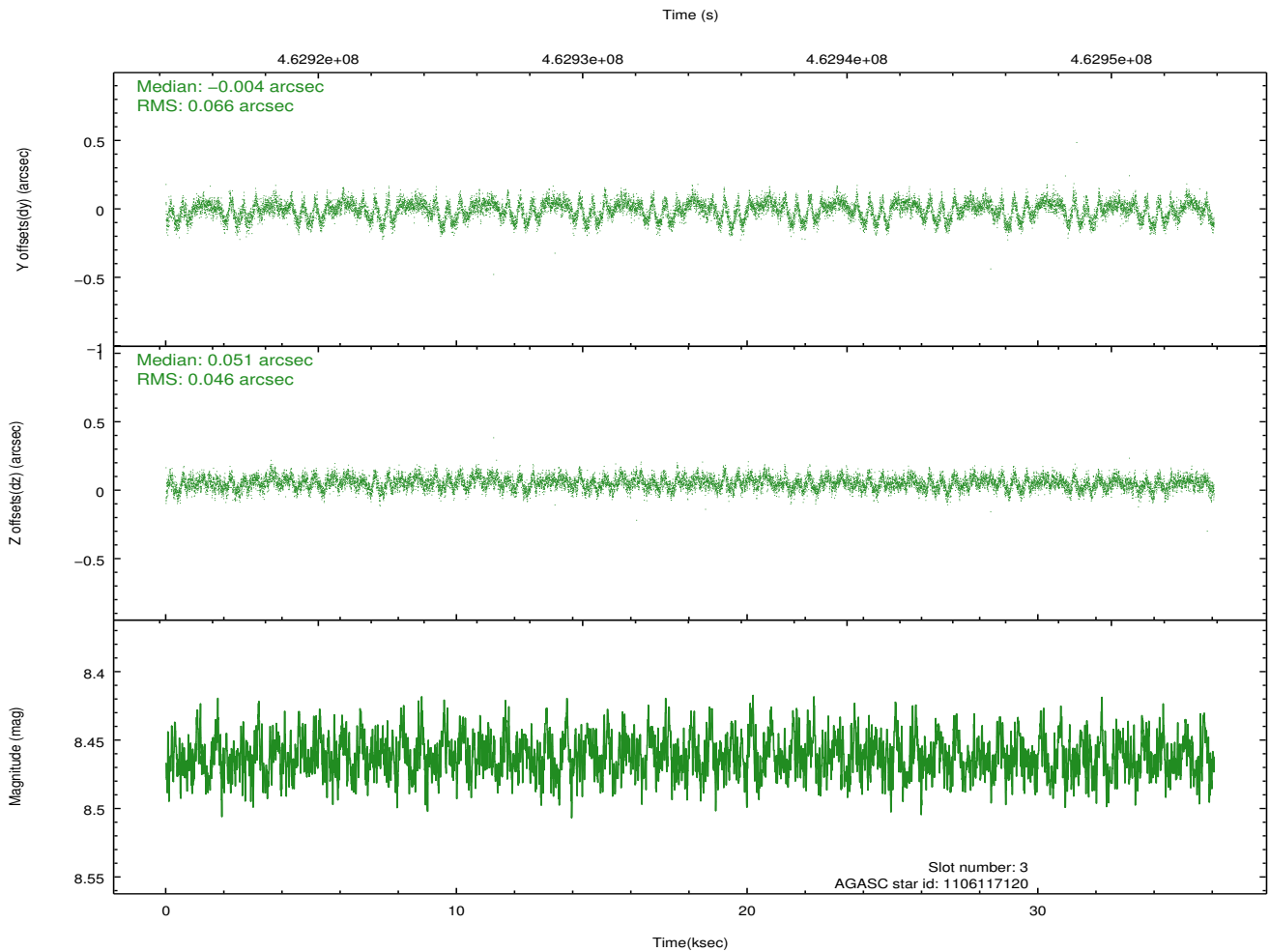
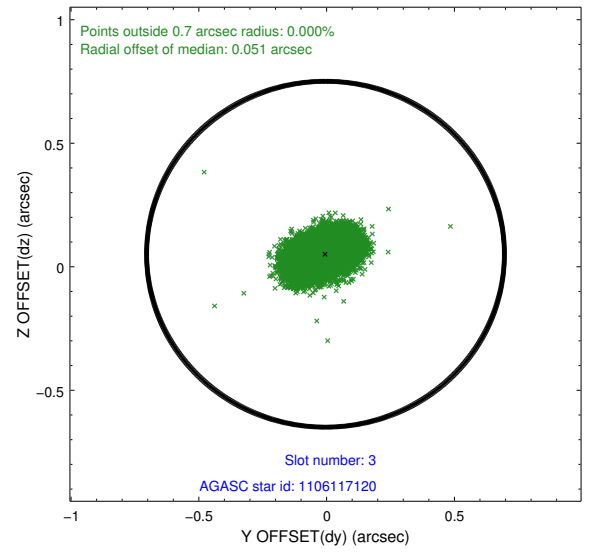
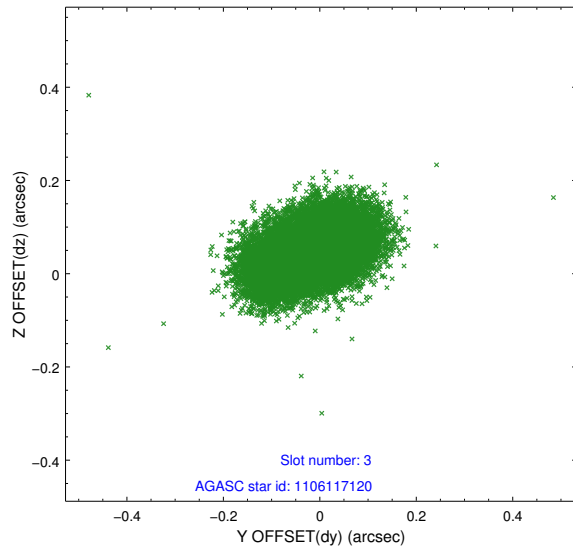


Slot Statistics

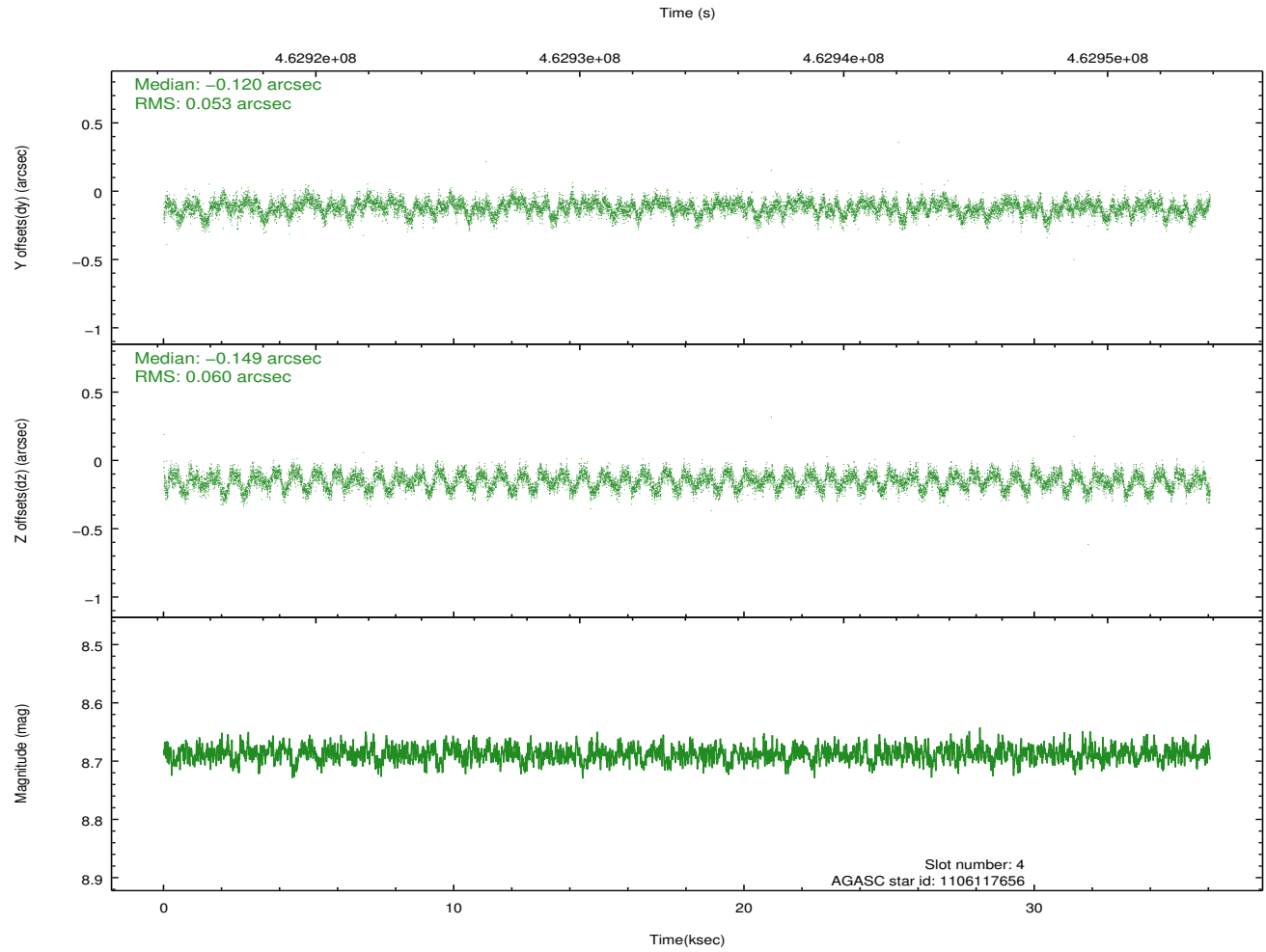
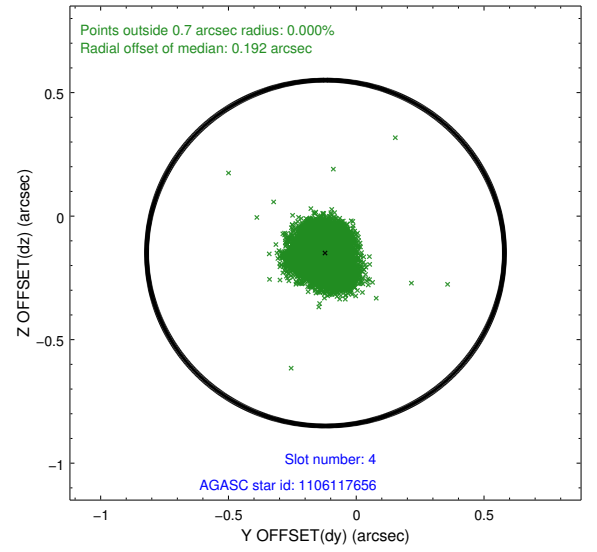
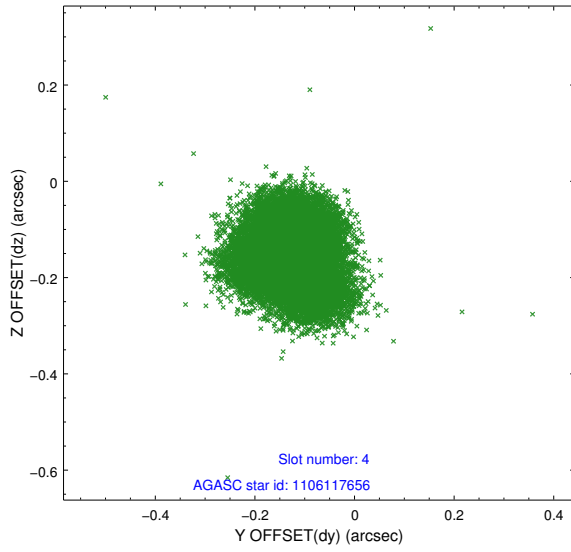
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.09	8792	0.131	-0.098	0.018	0.028	0.000000	0.000000	924.57	-997.68
1	FID	ACIS-I-5	7.08	8794	-0.334	0.092	0.010	0.017	0.000000	0.000000	-1824.03	899.89
2	FID	ACIS-I-6	7.09	8794	0.113	0.076	0.015	0.023	0.000000	0.000000	389.99	1544.48
3	GUIDE	1106117120	8.46	17582	-0.004	0.051	0.085	0.142	335.739376	-45.125128	2249.23	1164.87
4	GUIDE	1106117656	8.69	17576	-0.120	-0.149	0.086	0.133	335.613734	-45.023348	1873.16	1472.41
5	GUIDE	1106122208	8.20	17568	0.050	0.071	0.067	0.106	333.957839	-45.815688	-1731.99	-2083.45
6	GUIDE	1106122648	9.53	17391	0.179	0.035	0.152	0.231	333.865199	-45.629144	-2088.45	-1468.48
7	GUIDE	1106118672	8.28	17580	-0.088	0.003	0.070	0.118	333.990576	-45.842982	-1633.39	-2164.58

2.4 Star Slots

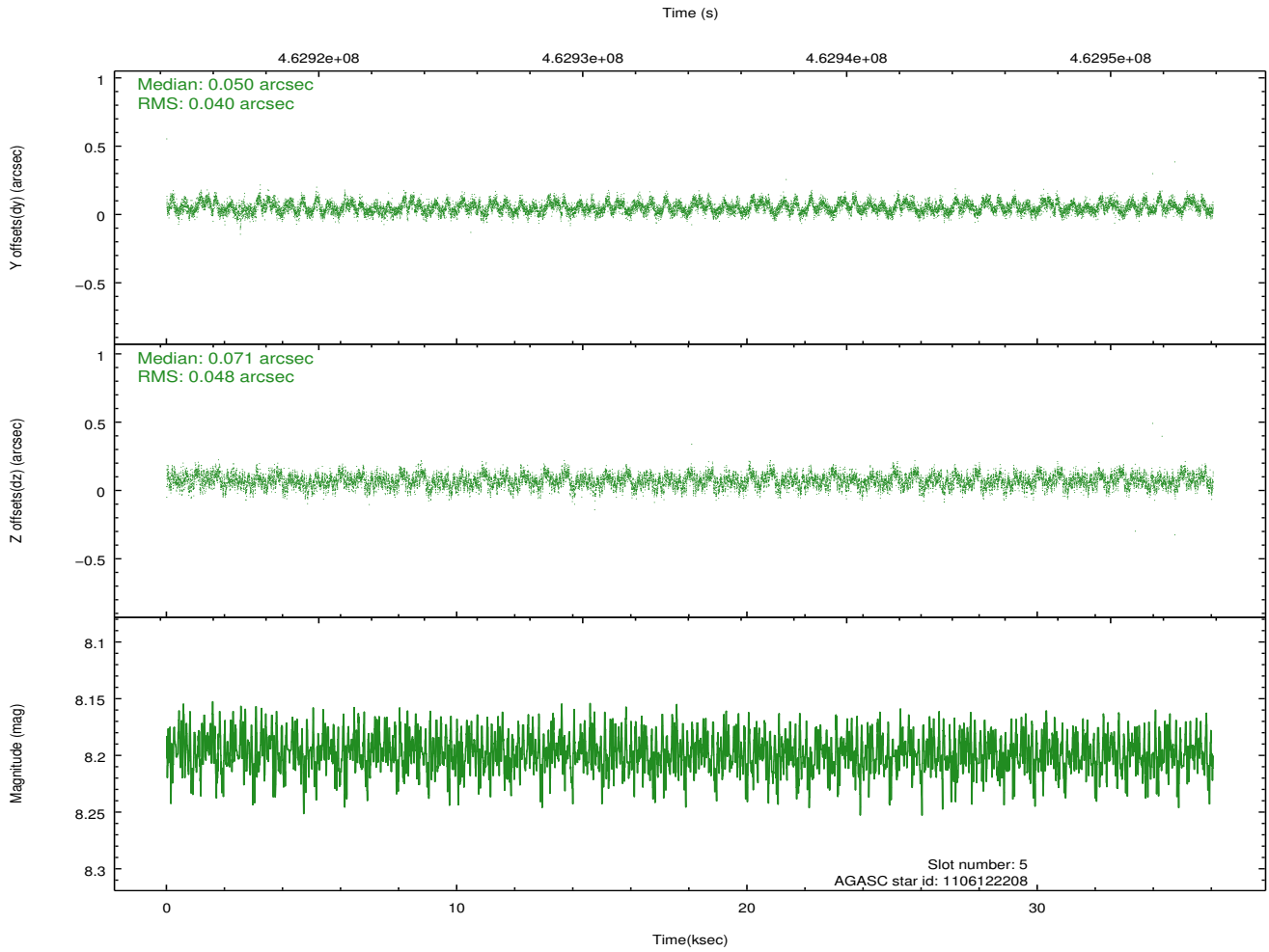
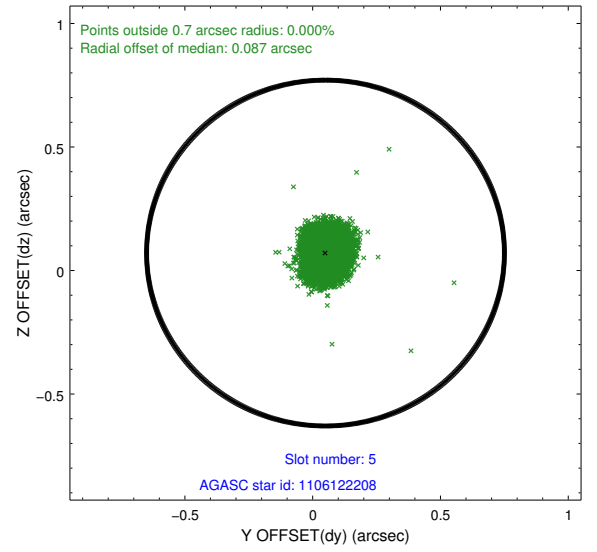
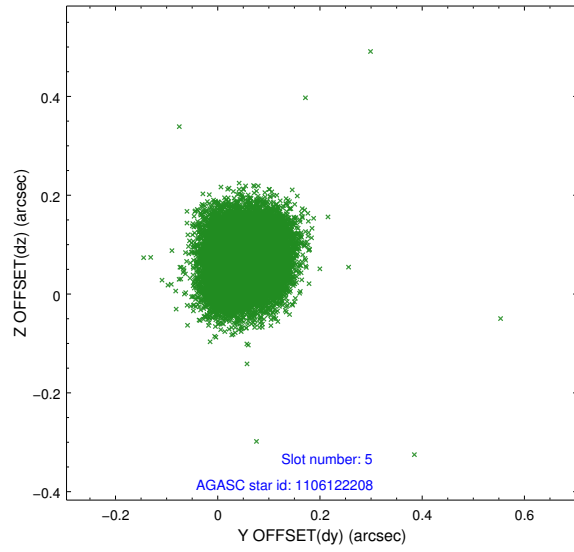
2.4.1 Slot 3



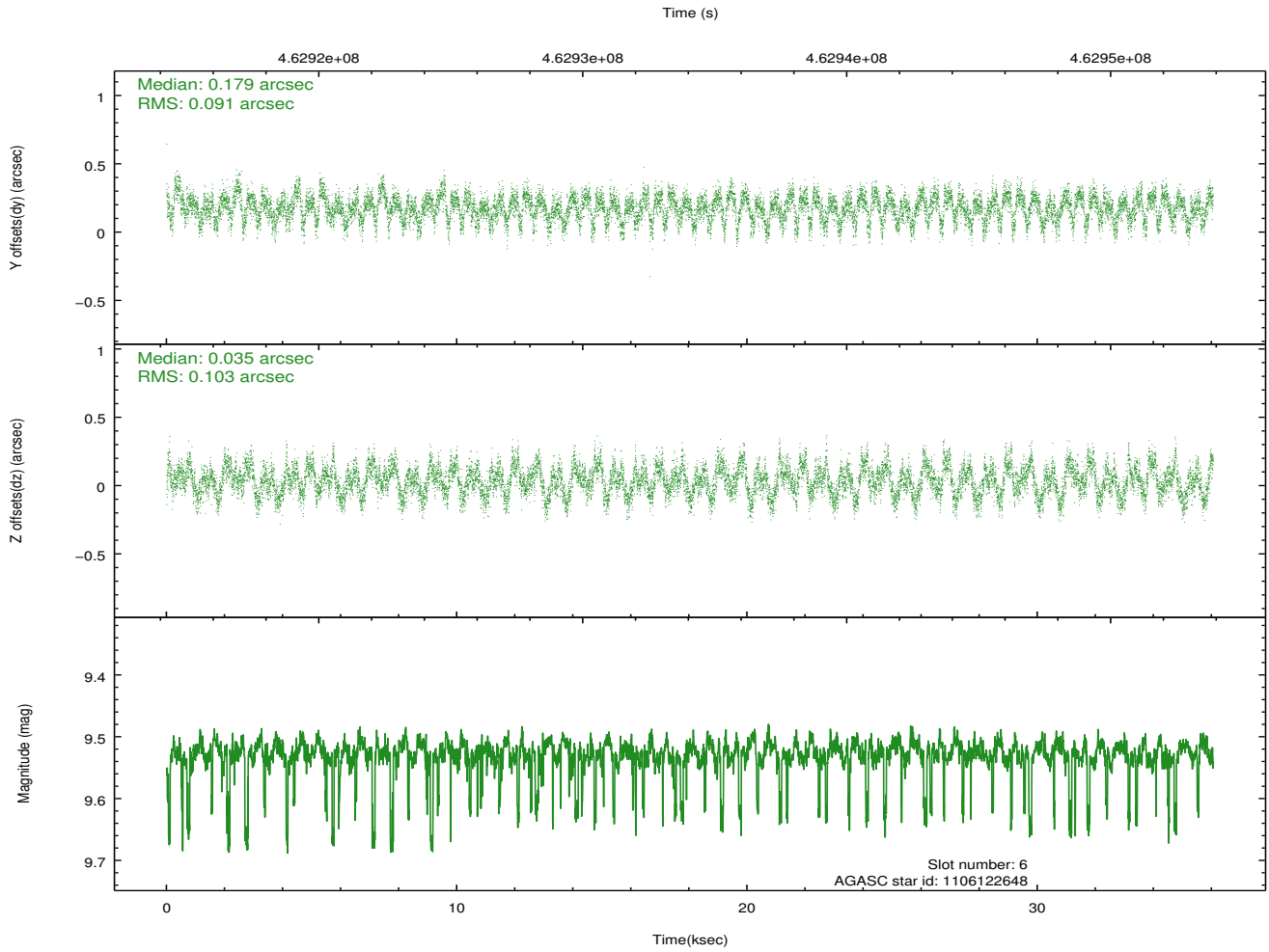
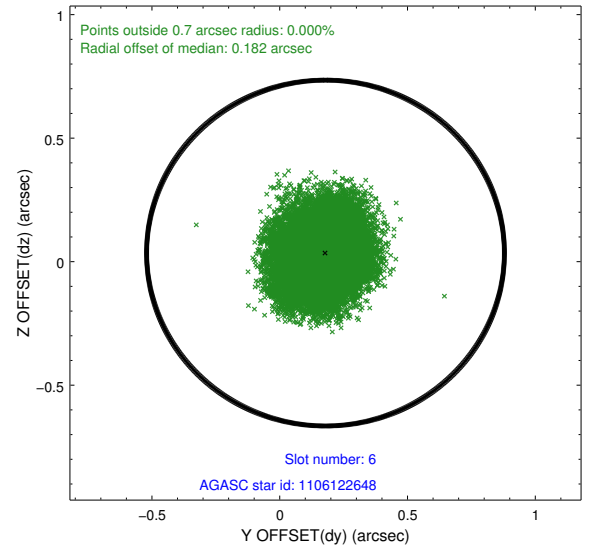
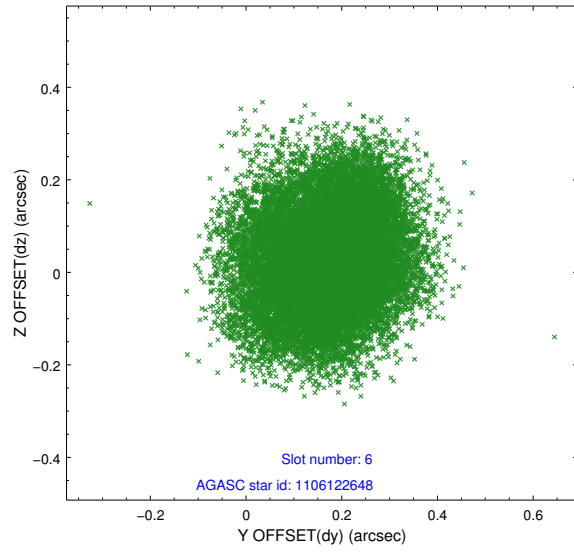
2.4.2 Slot 4



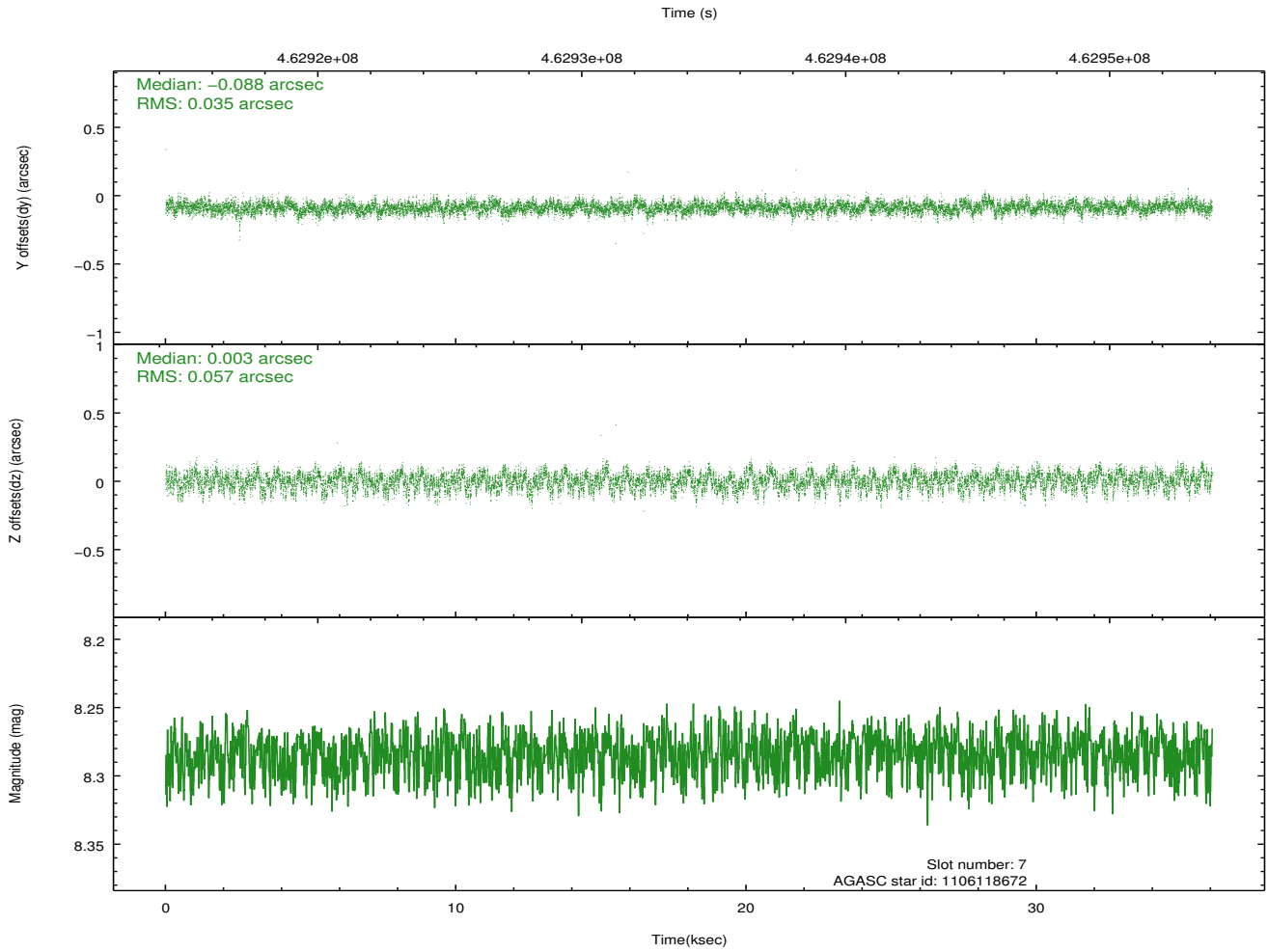
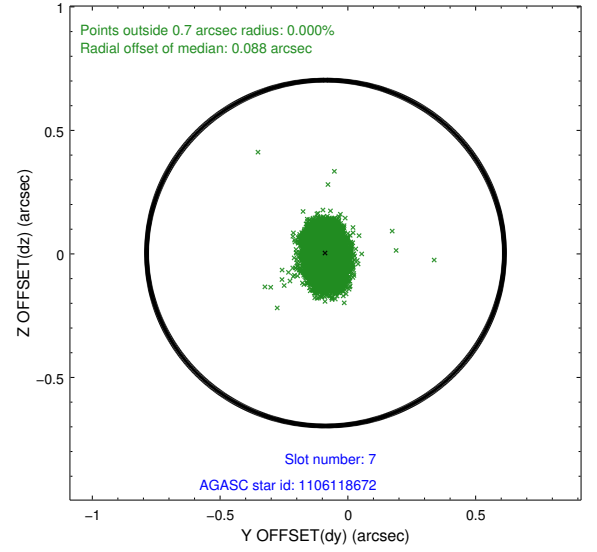
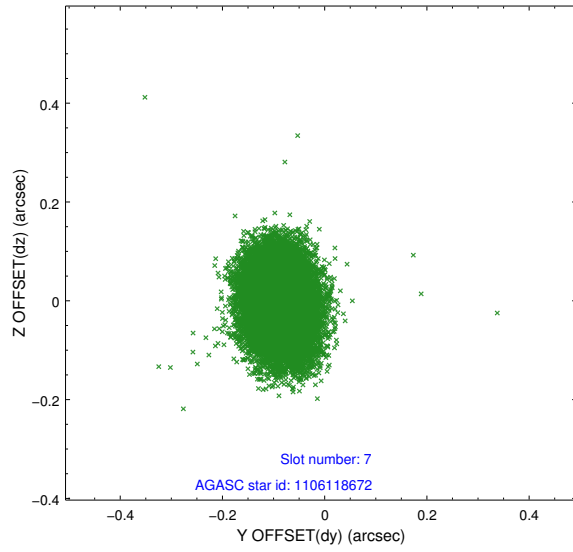
2.4.3 Slot 5



2.4.4 Slot 6

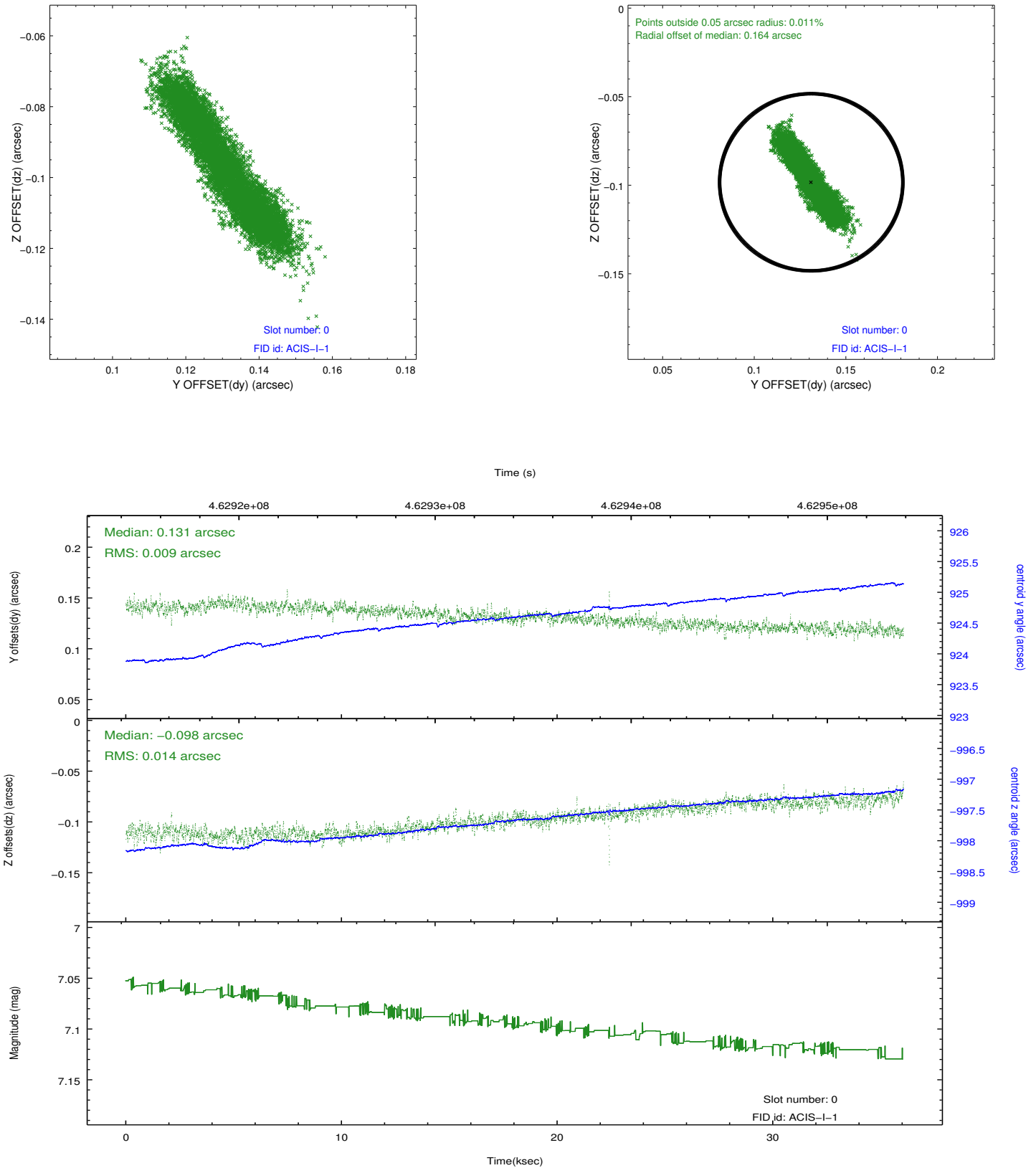


2.4.5 Slot 7

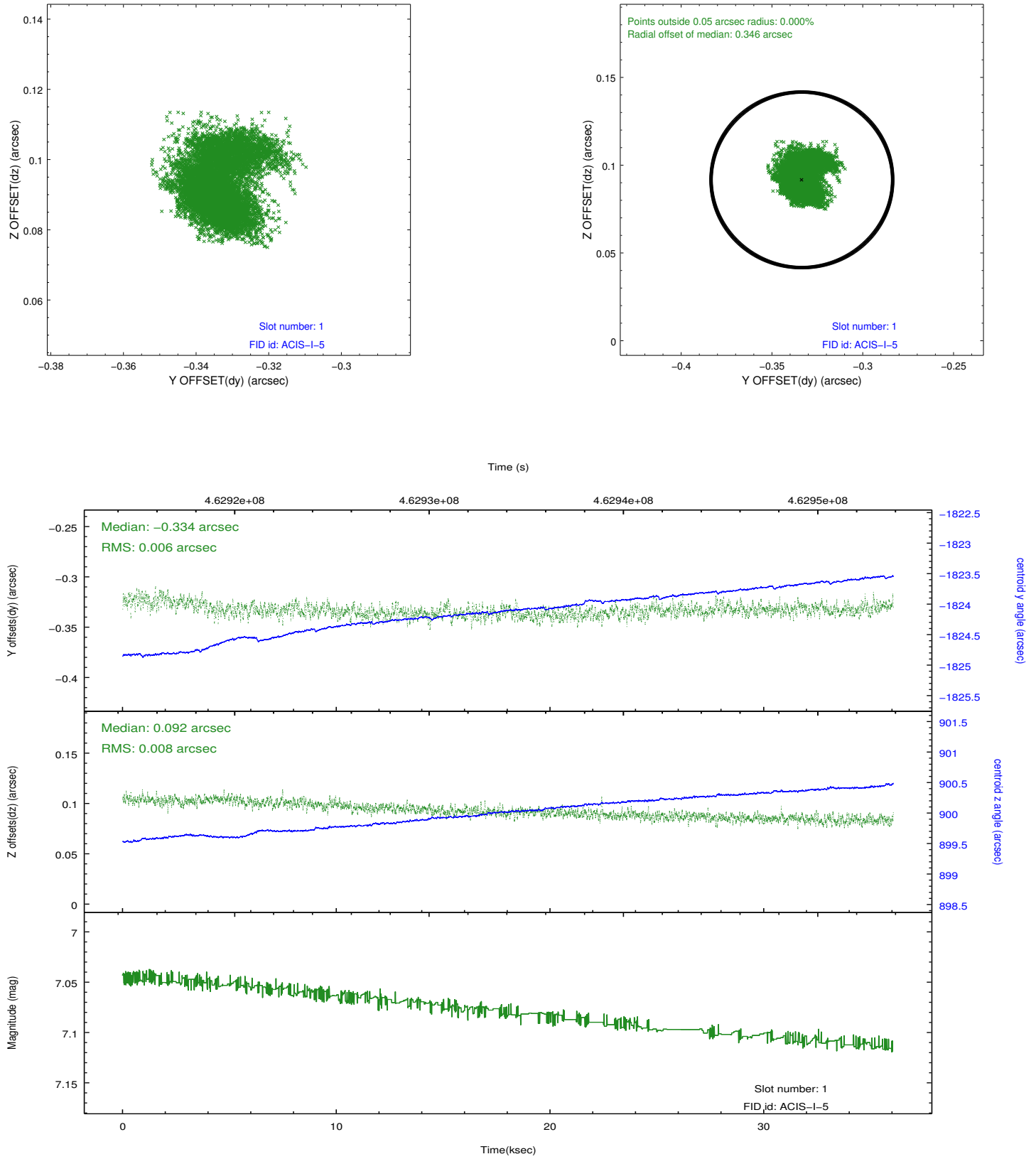


2.5 FID Slots

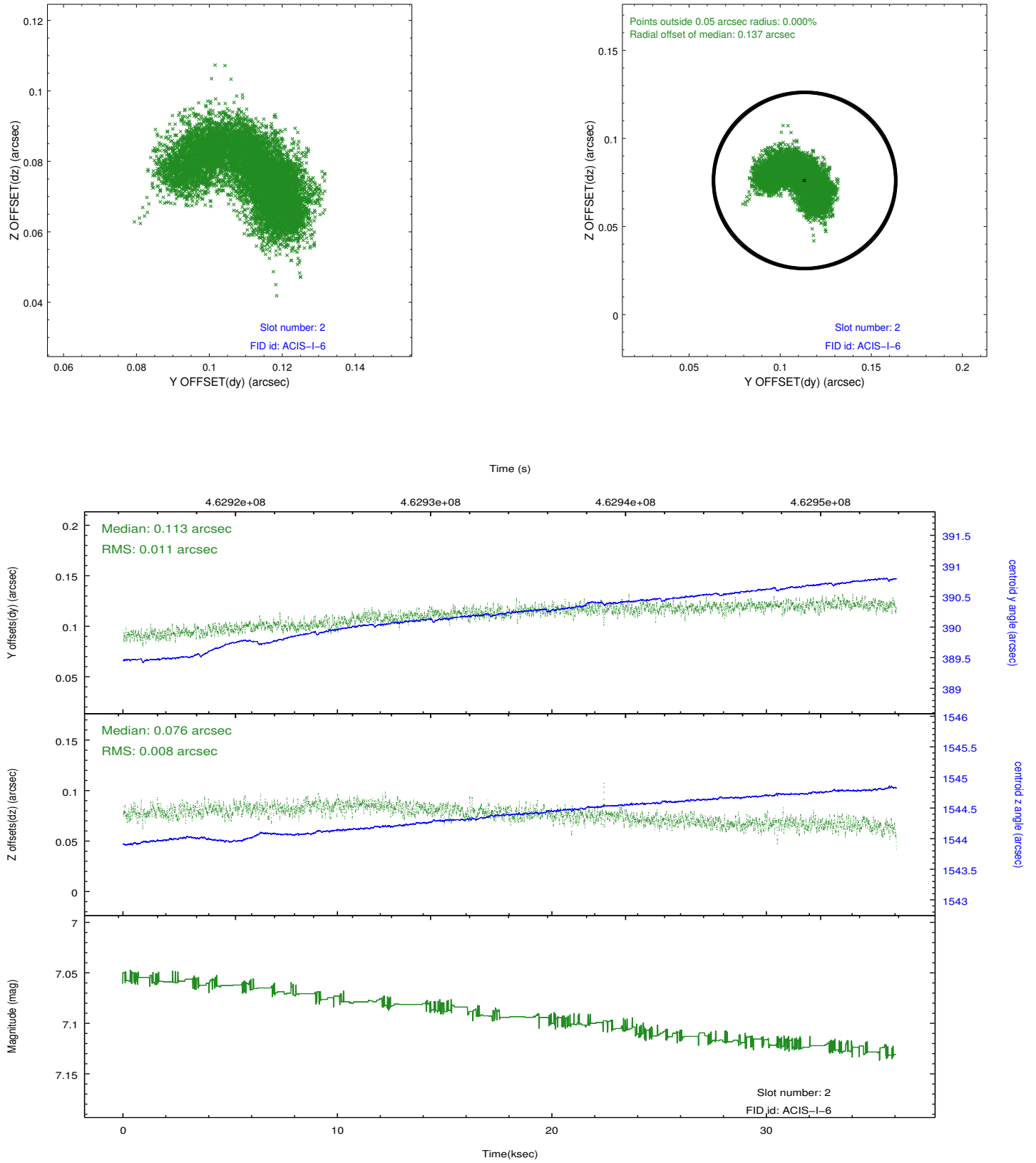
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.04
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	35.276594689071

A.2 Comments

The bias map for CCD_ID = 2 suffers from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the 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_ID = 2 will be recreated to remove this anomaly and the data will be reprocessed.