

V&V Reference Report

L2 ASCDS Version : 10.1.1

Observation 16542 - L2 Version 2
Chandra X-Ray Center

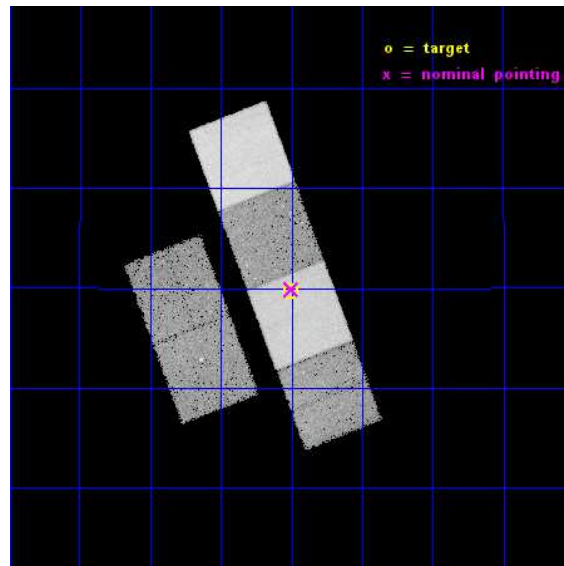
L2 Processing Date : Dec 8 2014

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

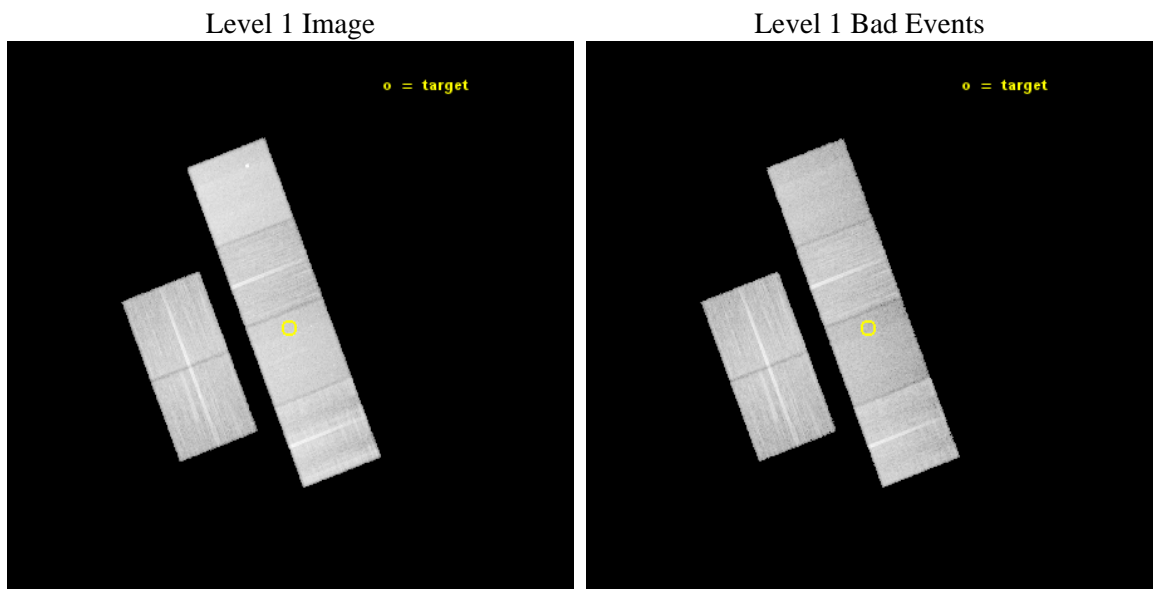
seq_num	501945	Sequence number
obs_id	16542	Observation id
title	Constraining the Energetics of Fermi-LAT GRBs with Chandra	Proposa
observer	Dr Judith Racusin	Principal investigator
object	GRB 131108A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	156.50187	Observer's specified target RA [deg]
dec_targ	9.66225	Observer's specified target Dec [deg]
ra_nom	156.50004535282	Nominal RA [deg]
dec_nom	9.6646725481559	Nominal Dec [deg]
roll_nom	69.156930454203	Nominal Roll [deg]
revision	2	Processing version of data
ontime	38370.027071714	Sum of GTIs [s]
livetime	37884.162685276	Livetime [s]
ontime2	38366.827071369	Sum of GTIs [s]
ontime3	38369.903951705	Sum of GTIs [s]
ontime5	38369.986031711	Sum of GTIs [s]
ontime6	38369.944991708	Sum of GTIs [s]
ontime7	38370.027071714	Sum of GTIs [s]
ontime8	38366.621930897	Sum of GTIs [s]
l2events	286378	Number of level 2 events



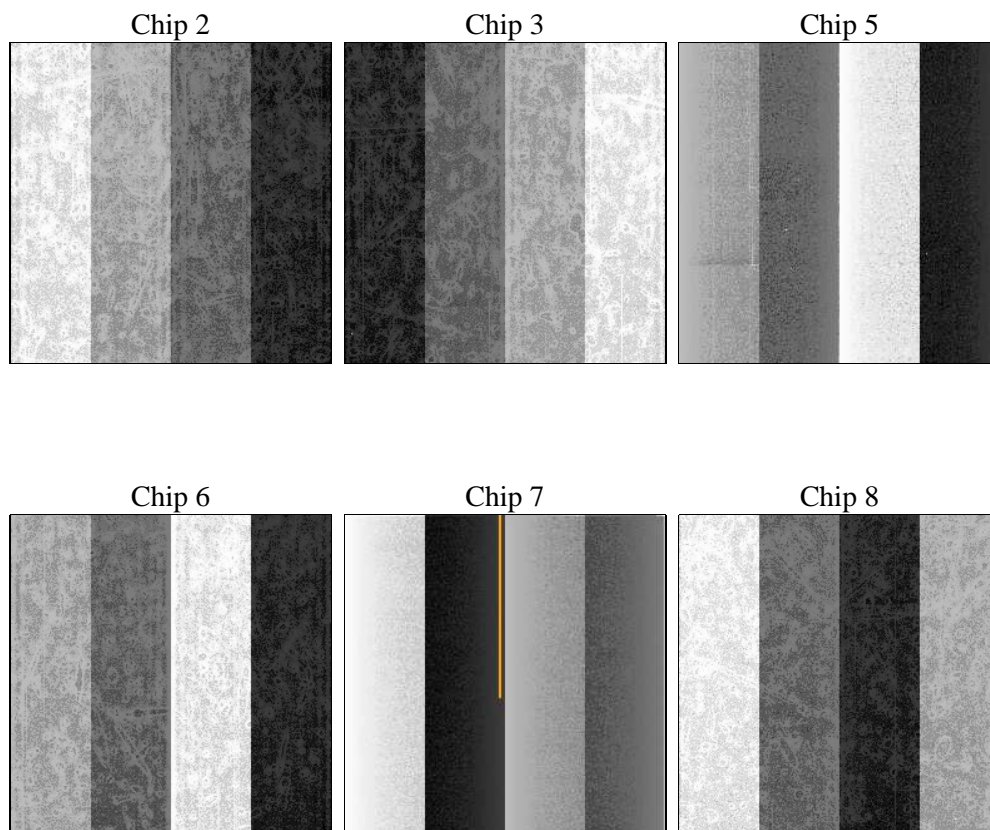
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38405.741000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	38370.027071714	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	38366.827071369	Sum of GTIs [s]
date	2014-12-08T05:39:31	Date and time of file creation	ontime3	38369.903951705	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	38369.986031711	Sum of GTIs [s]
			ontime6	38369.944991708	Sum of GTIs [s]
			ontime7	38370.027071714	Sum of GTIs [s]
			ontime8	38366.621930897	Sum of GTIs [s]
			l1events	1178396	Number of level 1 events

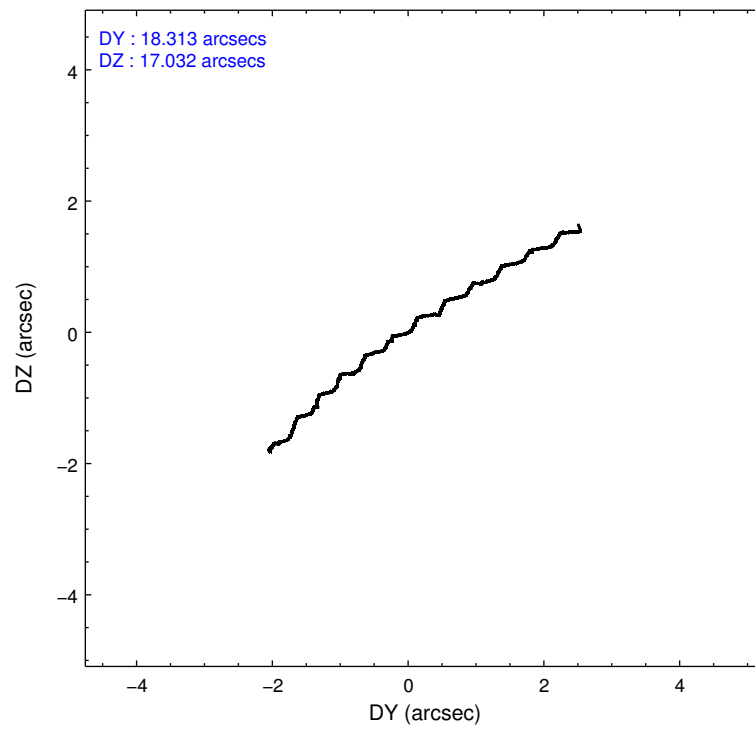
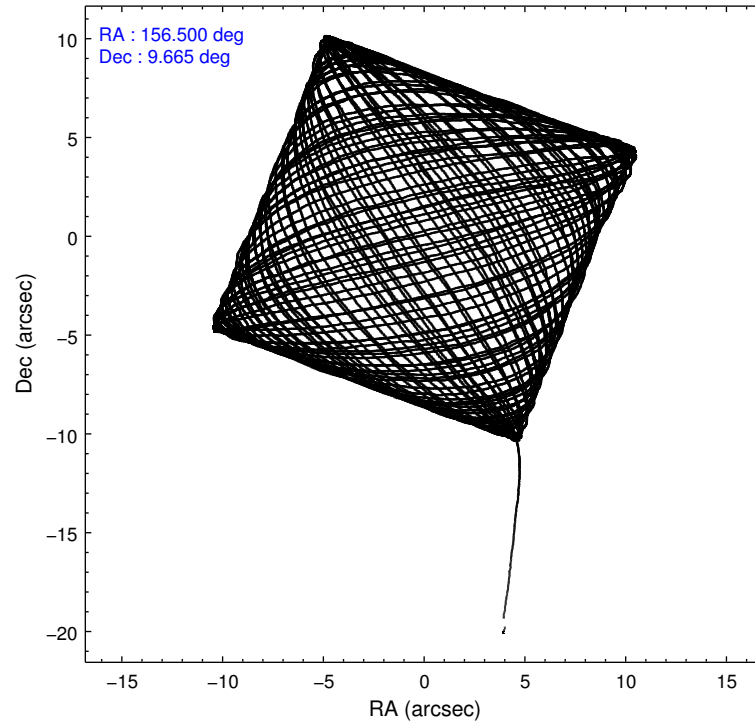
2.1.4 Events

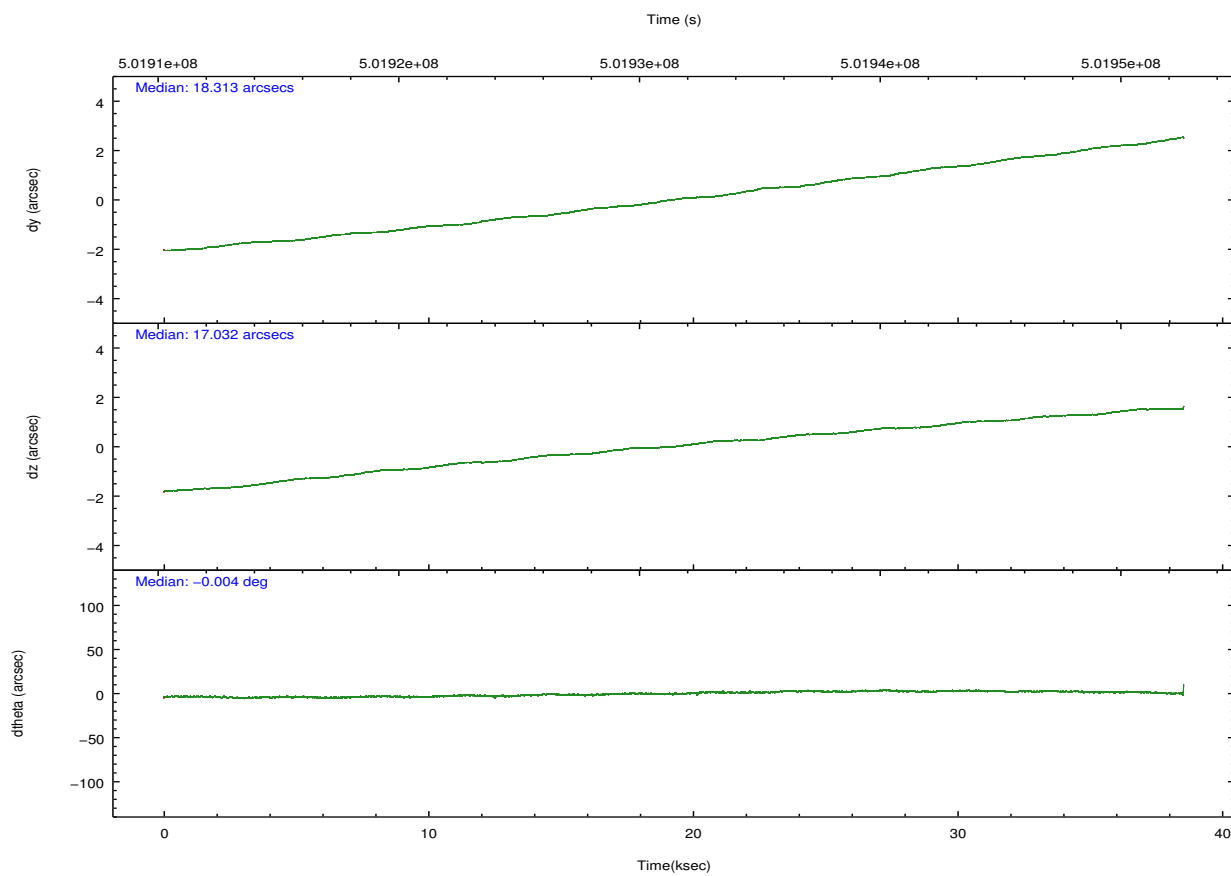
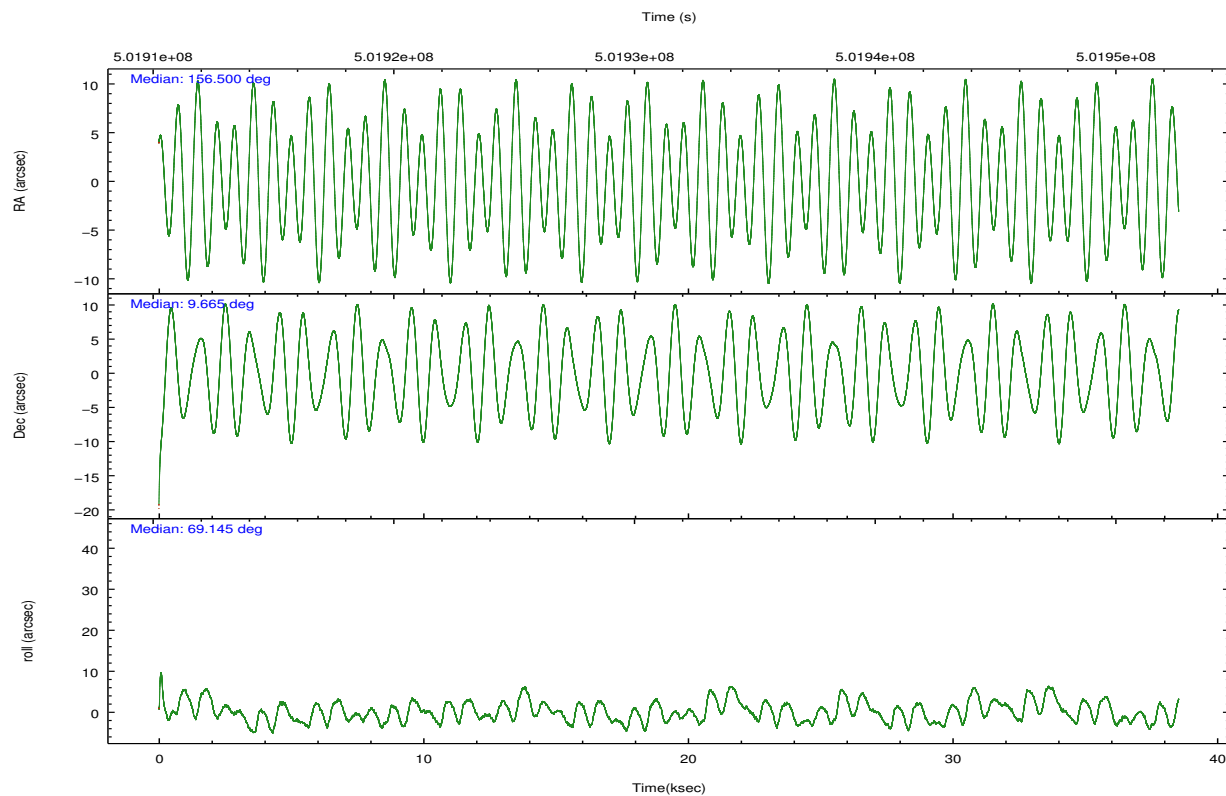
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	173207	159845	255817	171016	200076	218435	grade 0 events	6858	6922	9217	7229	9215	16546
rejected events	154201	141206	126406	150491	105016	157857		3%	4%	3%	4%	4%	7%
rejected %	89%	88%	49%	87%	52%	72%	grade 1 events	100	111	496	80	292	149
								0%	0%	0%	0%	0%	0%
							grade 2 events	4762	4086	41091	4560	20432	14607
								2%	2%	16%	2%	10%	6%
							grade 3 events	1877	2017	4816	2149	8213	6462
								1%	1%	1%	1%	4%	2%
							grade 4 events	1931	1947	4771	2116	8110	6254
								1%	1%	1%	1%	4%	2%
							grade 5 events	6349	7808	19800	7720	21461	11859
								3%	4%	7%	4%	10%	5%
							grade 6 events	3580	3668	69525	4472	49098	16713
								2%	2%	27%	2%	24%	7%
							grade 7 events	147750	133286	106101	142690	83255	145845
								85%	83%	41%	83%	41%	66%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	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	156.504821	156.5000453528231	CCD I2 on	O4	Y
[deg] Pointing Dec	9.637750	9.664672548155863	CCD I3 on	O5	Y
[deg] Pointing Roll	68.999510	69.15693045420278	CCD S0 on	N	N
[s] Window start time (MET)	501724867.184000	501724867.184000	CCD S1 on	O1	Y
[s] Window stop time (MET)	502156807.184000	502156807.184000	CCD S2 on	O2	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	O3	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S5 on	N	N
[mm] SIM translation stage offset	0	0.01005778216563158	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	501912281.184000	501910687.32878	On-chip summing requested	N	N
Observation start date	2013-11-27T04:03:34	2013-11-27T03:38:07	Subarray requested	NONE	NONE
[s] Observation end time (MET)	501950687.184000	501950912.43098	Alternating exposures requested	N	N
Observation end date	2013-11-27T14:43:40	2013-11-27T14:48:32	[s] Primary exposure time	0.000000	3.2
Read mode	TIMED	TIMED			

2.3 Aspect



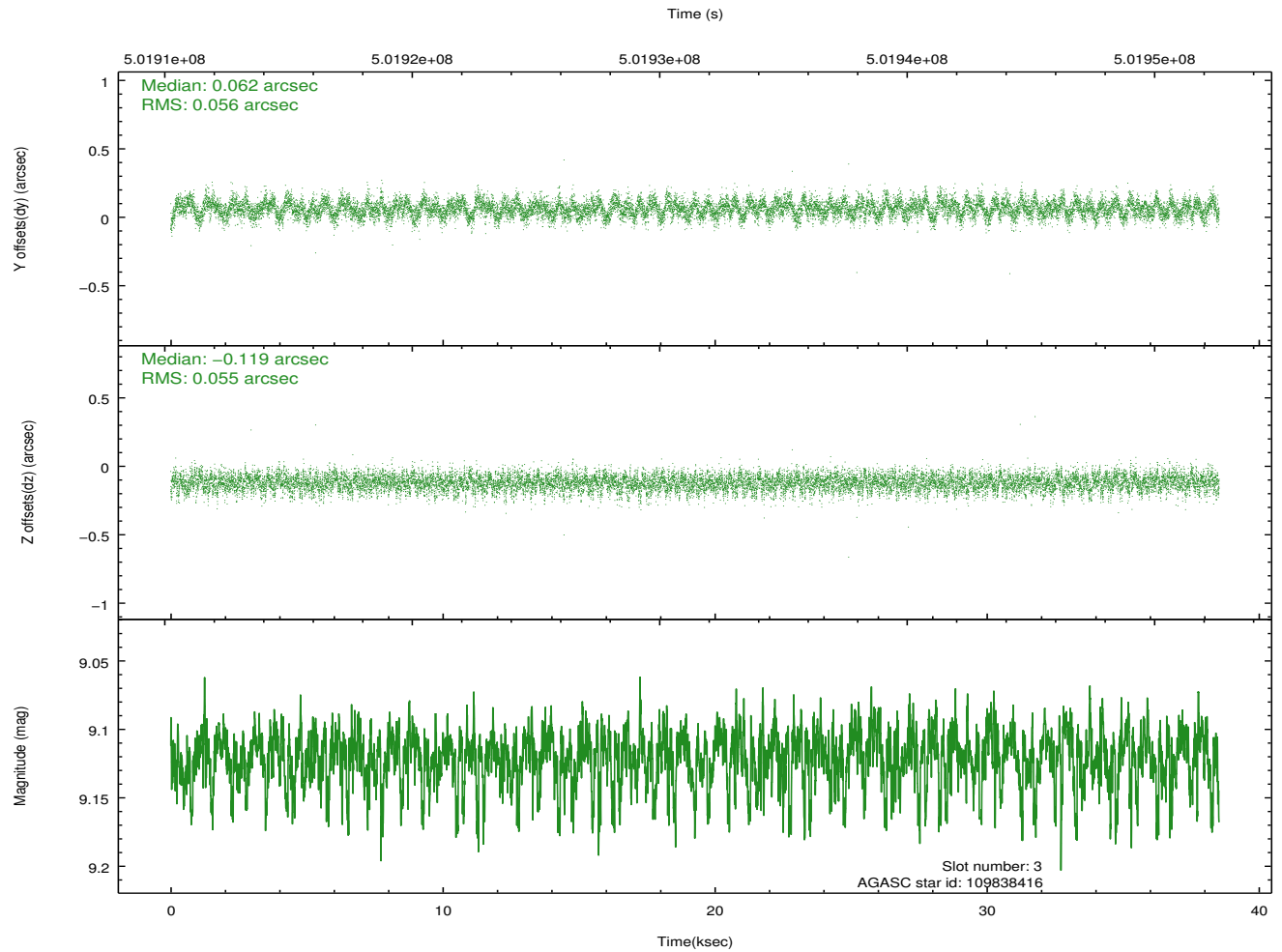
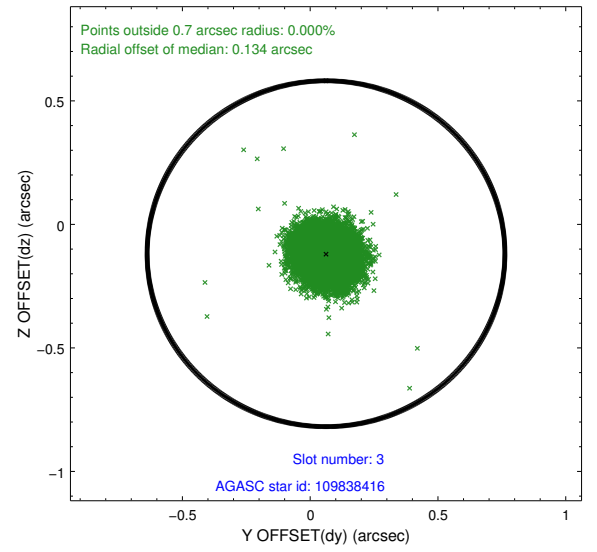
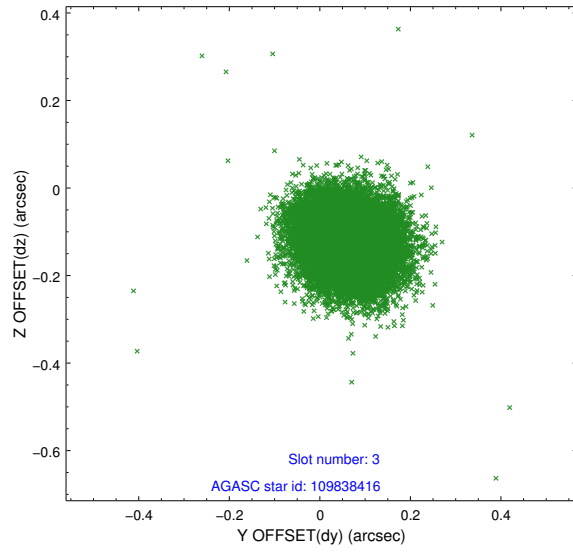


Slot Statistics

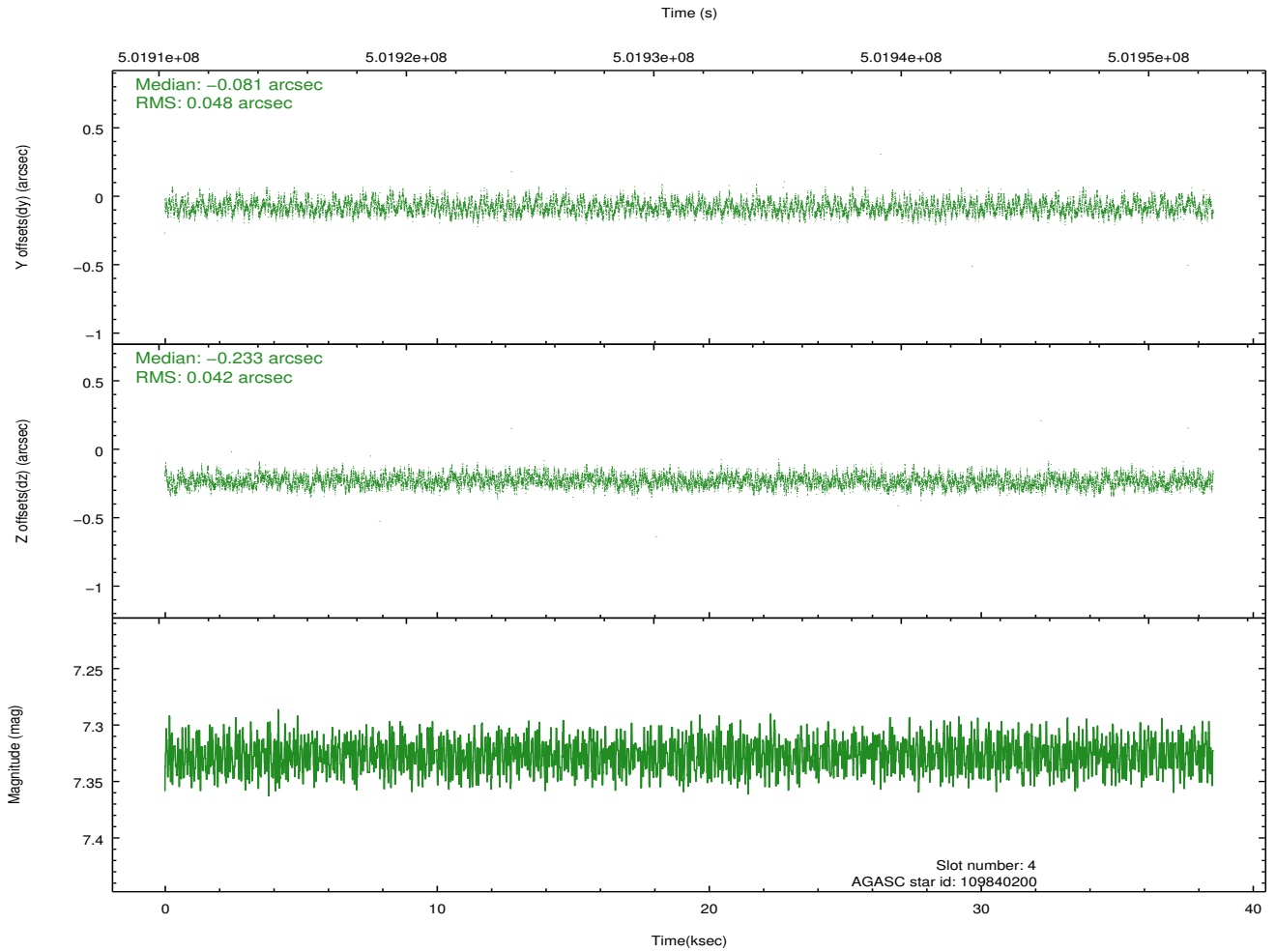
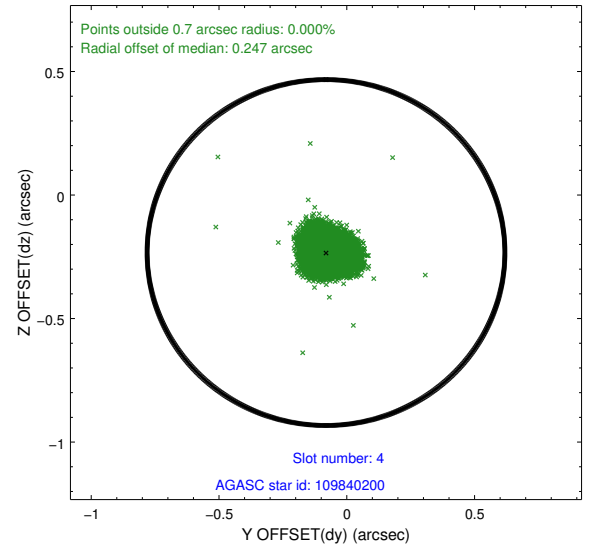
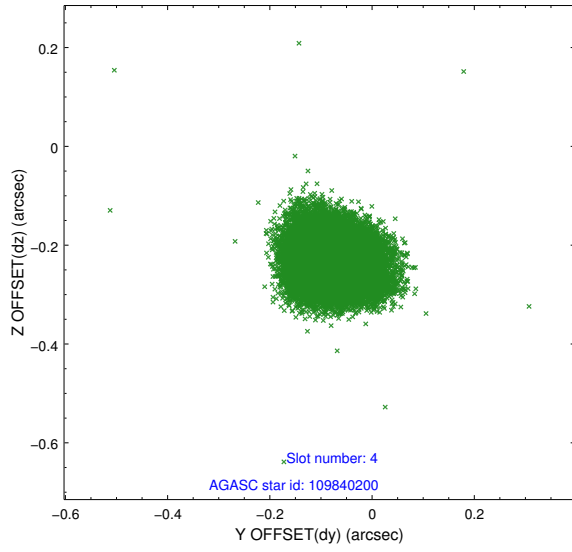
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	9401	-0.109	-0.038	0.030	0.041	0.000000	0.000000	-771.56	-1738.42
1	FID		ACIS-S-4	7.10	9400	0.260	0.059	0.023	0.033	0.000000	0.000000	2142.09	170.12
2	FID		ACIS-S-5	7.13	9401	-0.186	-0.010	0.030	0.059	0.000000	0.000000	-1824.43	163.76
3	GUIDE	used	109838416	9.12	18796	0.062	-0.119	0.083	0.134	156.441357	9.917351	859.47	571.08
4	GUIDE	used	109840200	7.33	18801	-0.081	-0.233	0.068	0.105	156.258344	9.982308	844.89	1260.52
5	GUIDE	used	109840520	6.51	18800	0.067	0.345	0.077	0.138	156.912459	9.762394	938.74	-1188.68
6	GUIDE	used	109842832	9.14	18793	-0.002	0.324	0.101	0.163	156.927091	9.878529	1347.33	-1086.65
7	GUIDE	used	110238496	9.09	18791	-0.047	-0.316	0.095	0.155	156.324509	10.346564	2153.95	1510.70

2.4 Star Slots

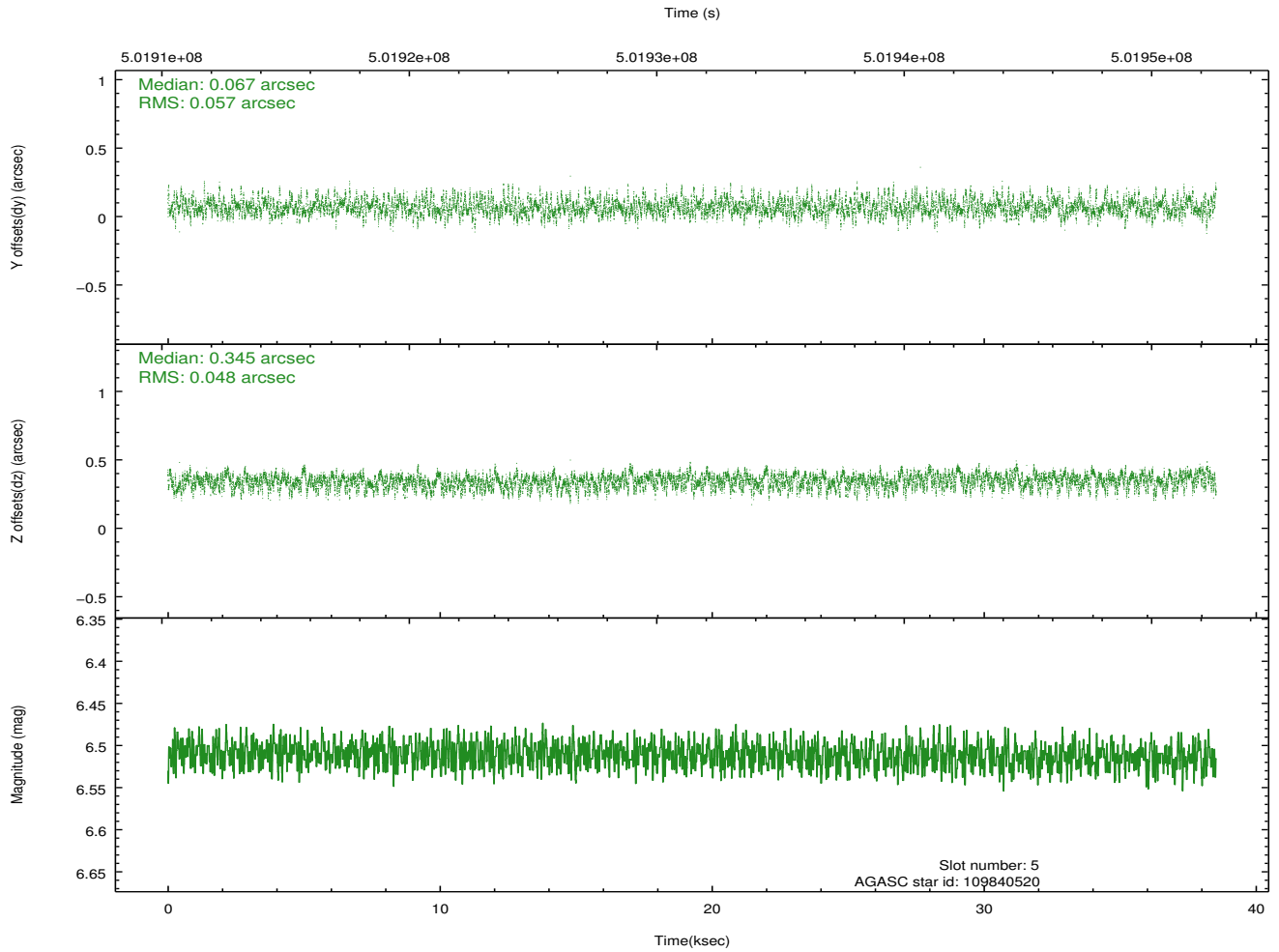
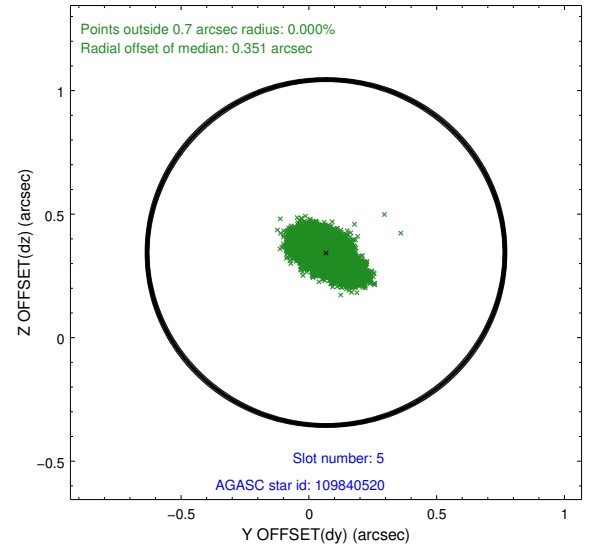
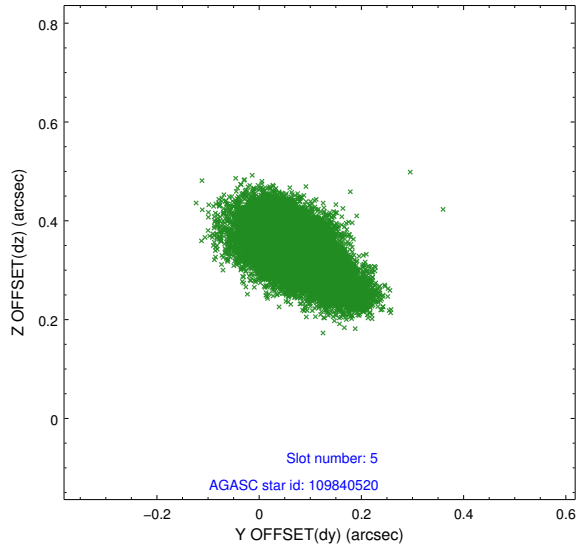
2.4.1 Slot 3



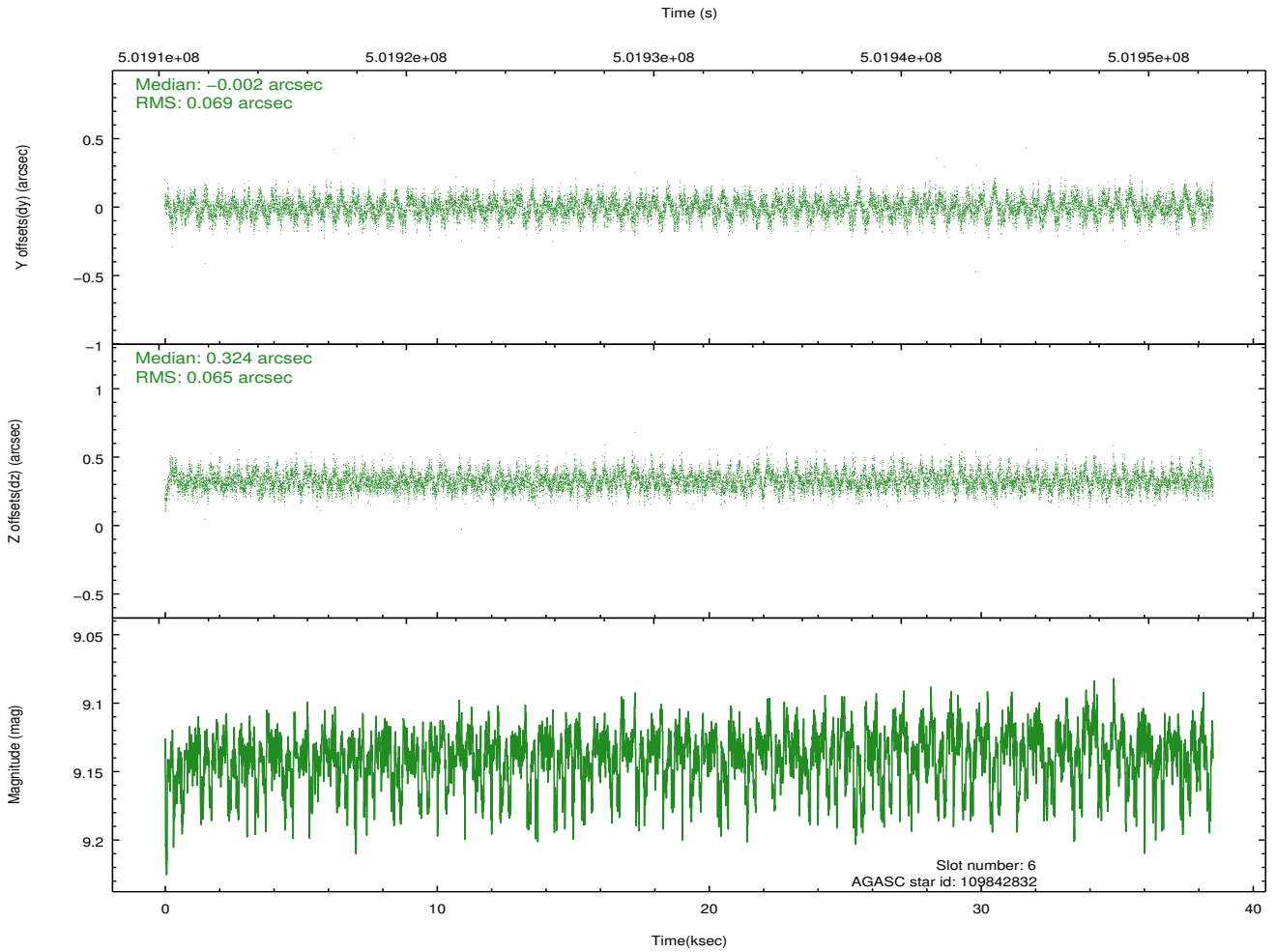
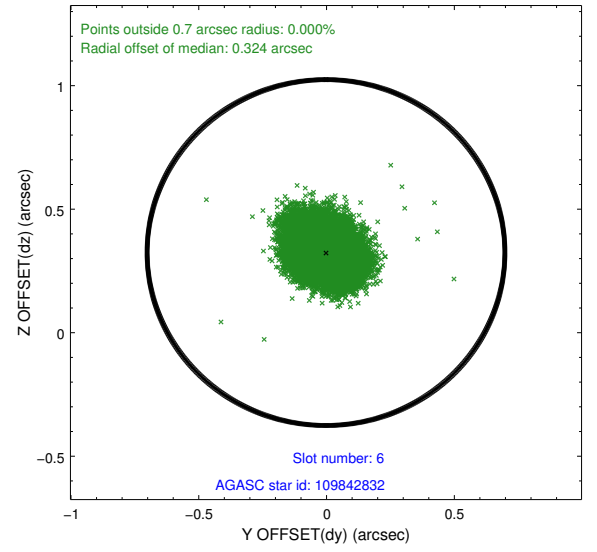
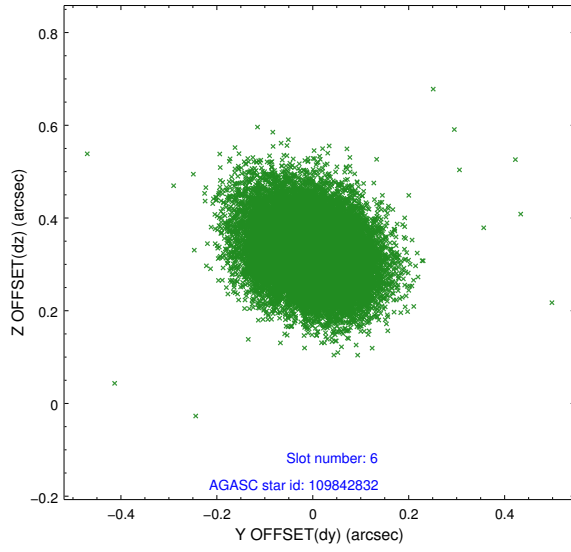
2.4.2 Slot 4



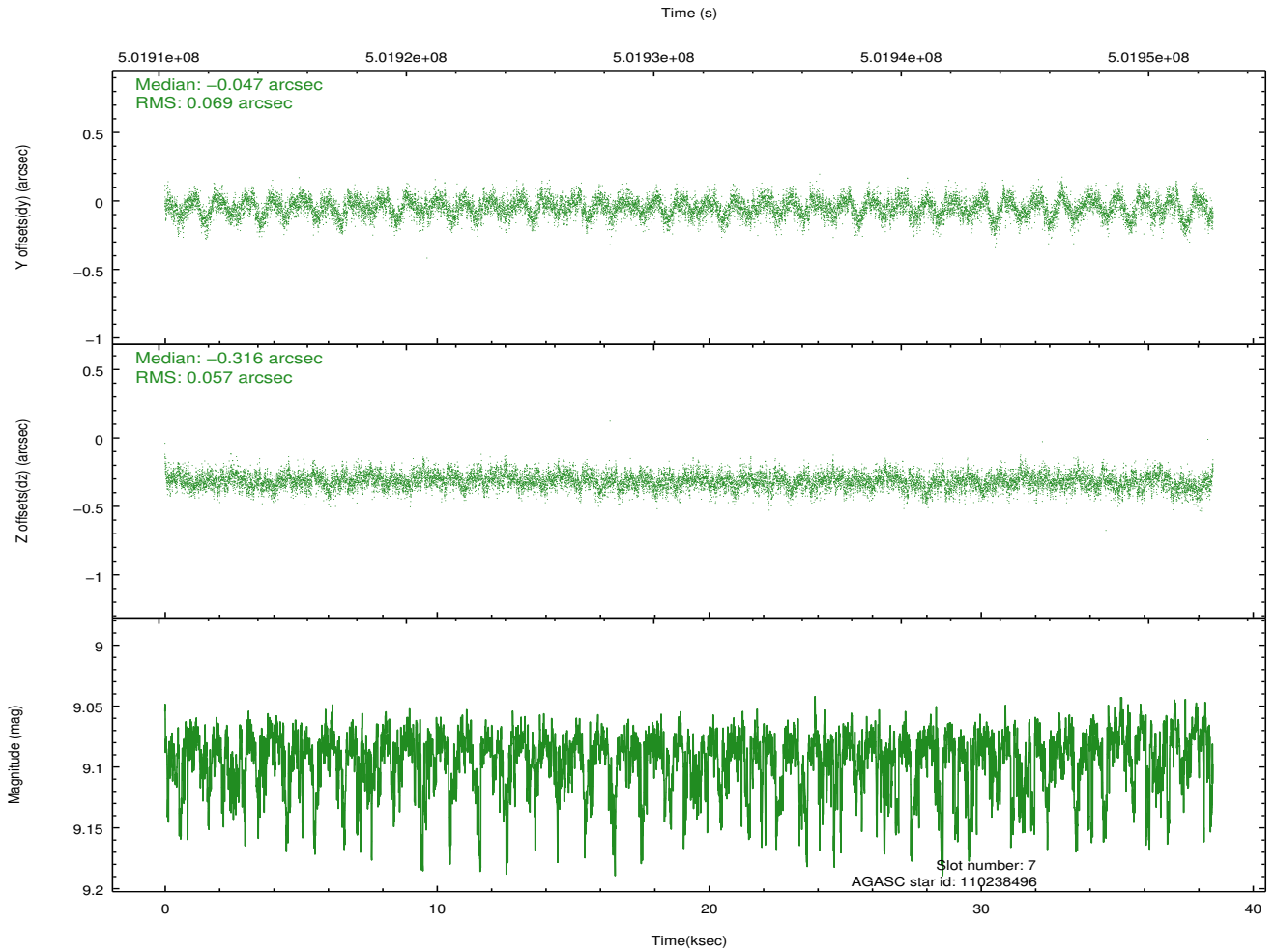
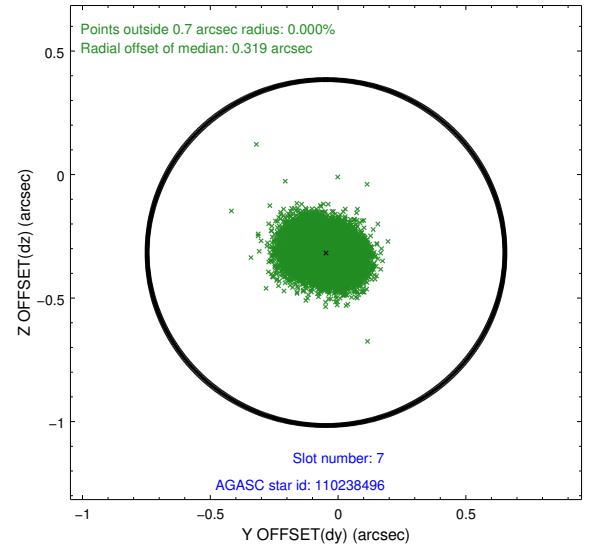
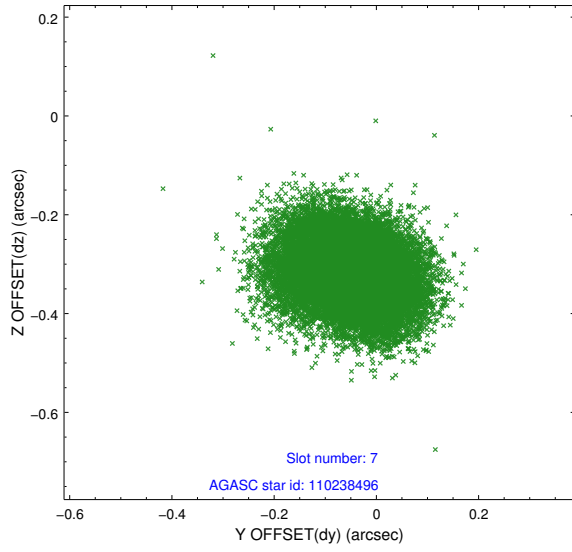
2.4.3 Slot 5



2.4.4 Slot 6

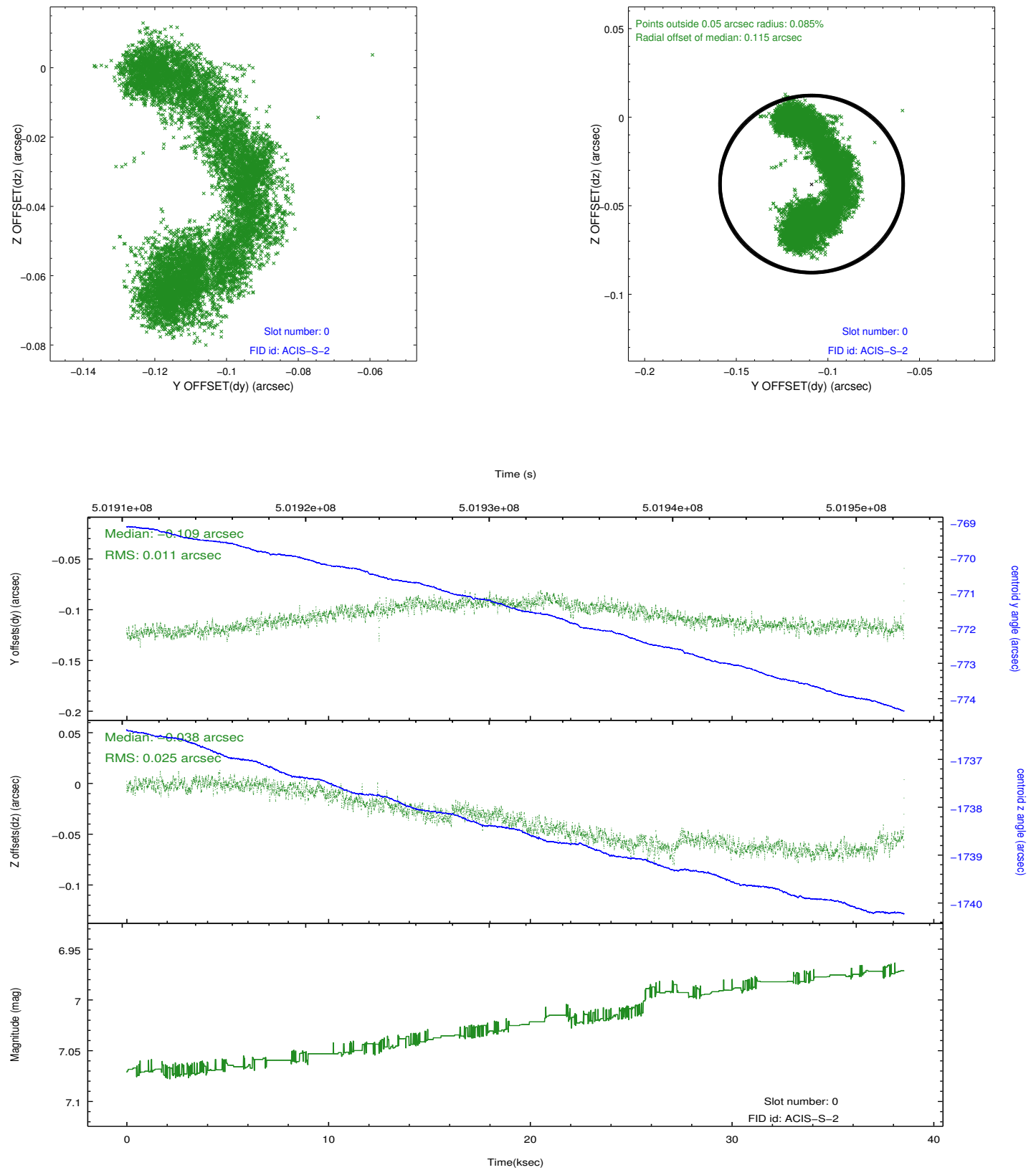


2.4.5 Slot 7

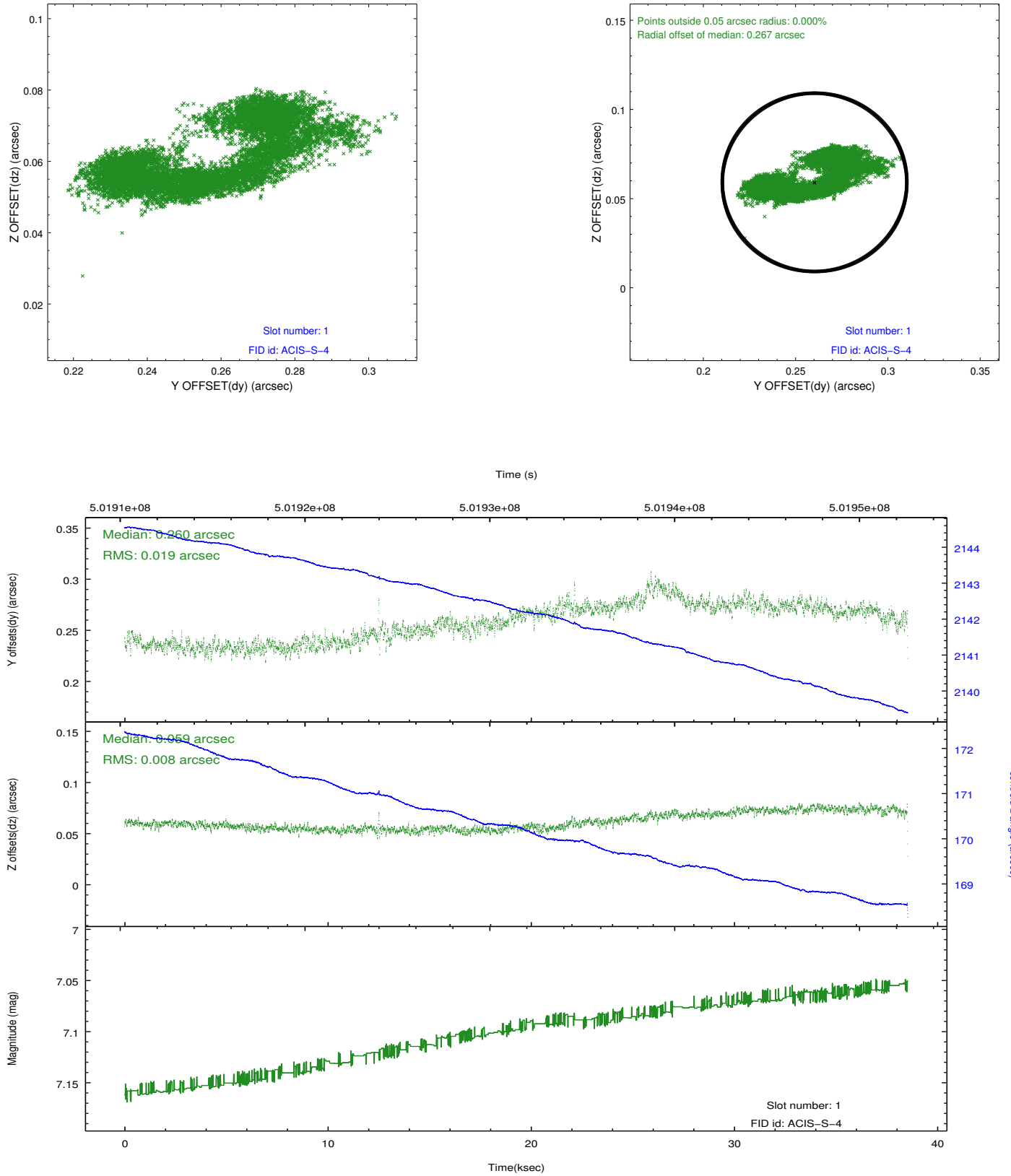


2.5 FID Slots

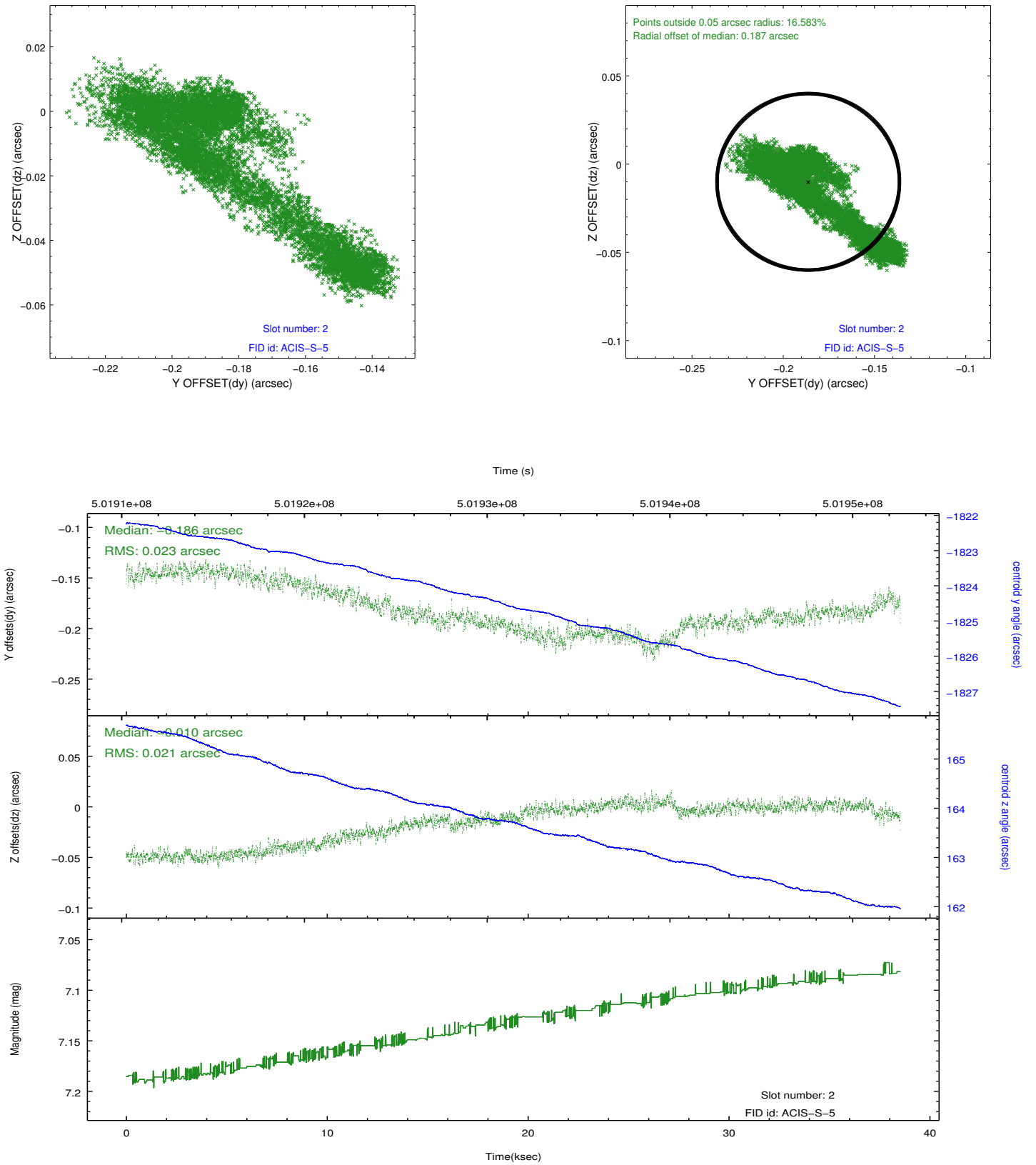
2.5.1 Slot 0



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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.370027071714

A.2 Comments

Window preference met.

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.