

V&V Reference Report

L2 ASCDS Version : 10.0.1

Observation 14793 - L2 Version 3
Chandra X-Ray Center

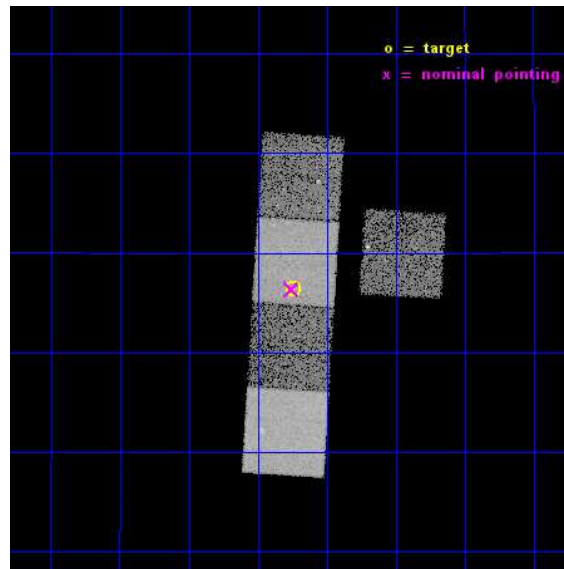
L2 Processing Date : Dec 6 2014

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1 Front

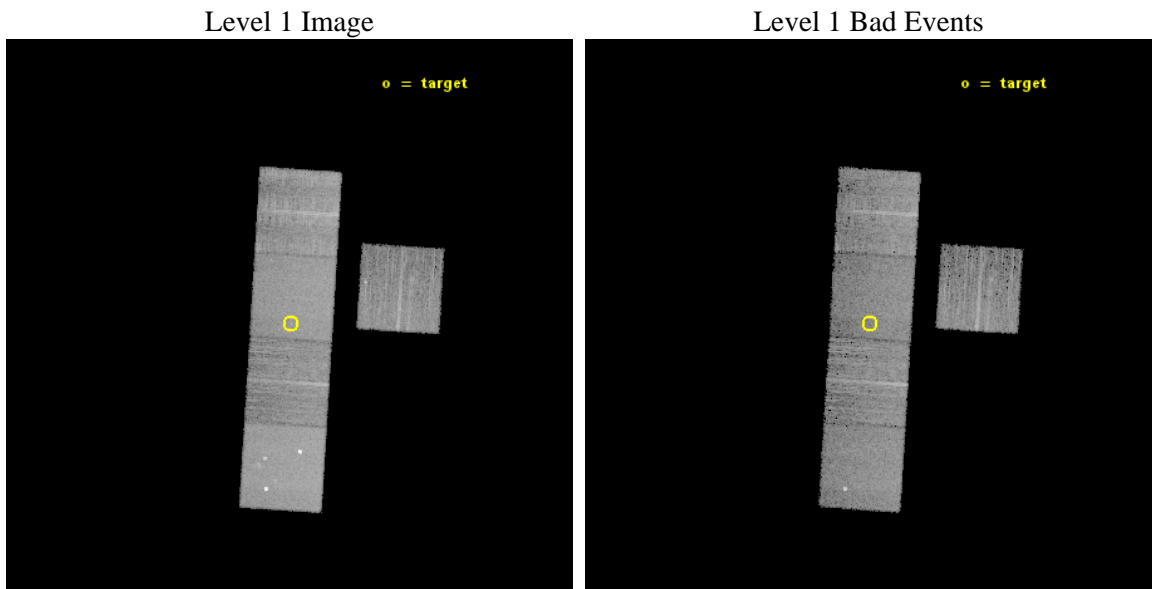
seq_num	501921	Sequence number
obs_id	14793	Observation id
title	Late-time X-rays to extract the true energy of nearby GRBs	Proposa
observer	Dr Raffaella Margutti	Principal investigator
object	GRB130702A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	217.311583	Observer's specified target RA [deg]
dec_targ	15.774	Observer's specified target Dec [deg]
ra_nom	217.31430252373	Nominal RA [deg]
dec_nom	15.772517592978	Nominal Dec [deg]
roll_nom	273.60911317211	Nominal Roll [deg]
revision	3	Processing version of data
ontime	15066.000115871	Sum of GTIs [s]
livetime	14869.15173293	Livetime [s]
ontime3	15066.000115871	Sum of GTIs [s]
ontime5	15066.000115871	Sum of GTIs [s]
ontime6	15066.000115871	Sum of GTIs [s]
ontime7	15066.000115871	Sum of GTIs [s]
ontime8	15066.000115871	Sum of GTIs [s]
l2events	117560	Number of level 2 events



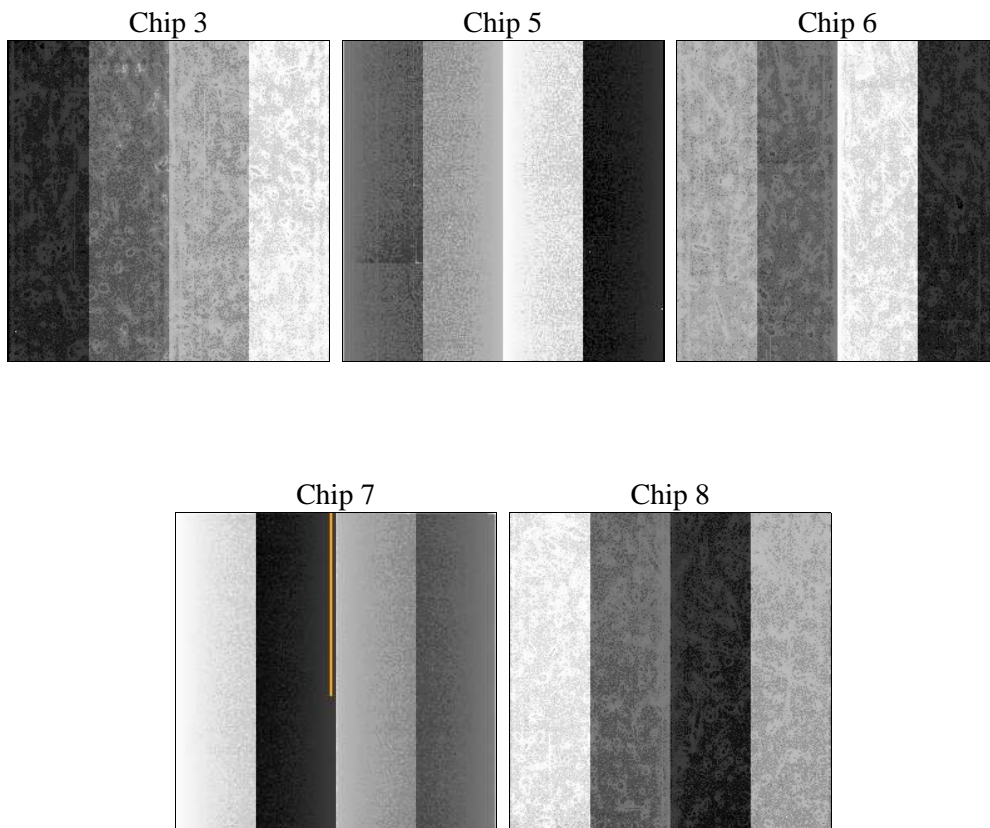
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	15066.000115871	Sum of GTIs [s]
caldbver	4.6.4	 	ontime3	15066.000115871	Sum of GTIs [s]
date	2014-12-06T09:57:13	Date and time of file creation	ontime5	15066.000115871	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	15066.000115871	Sum of GTIs [s]
			ontime7	15066.000115871	Sum of GTIs [s]
			ontime8	15066.000115871	Sum of GTIs [s]
			l1events	441623	Number of level 1 events

2.1.4 Events

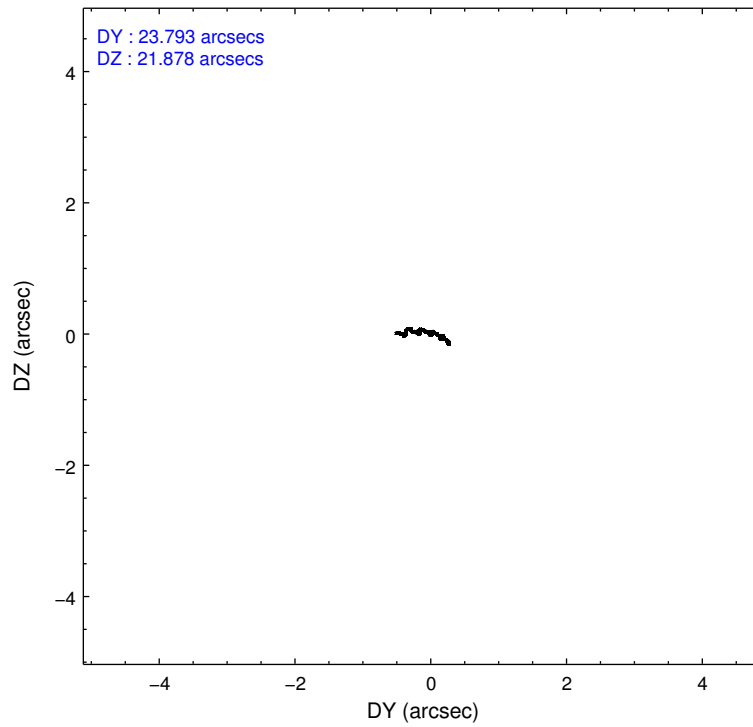
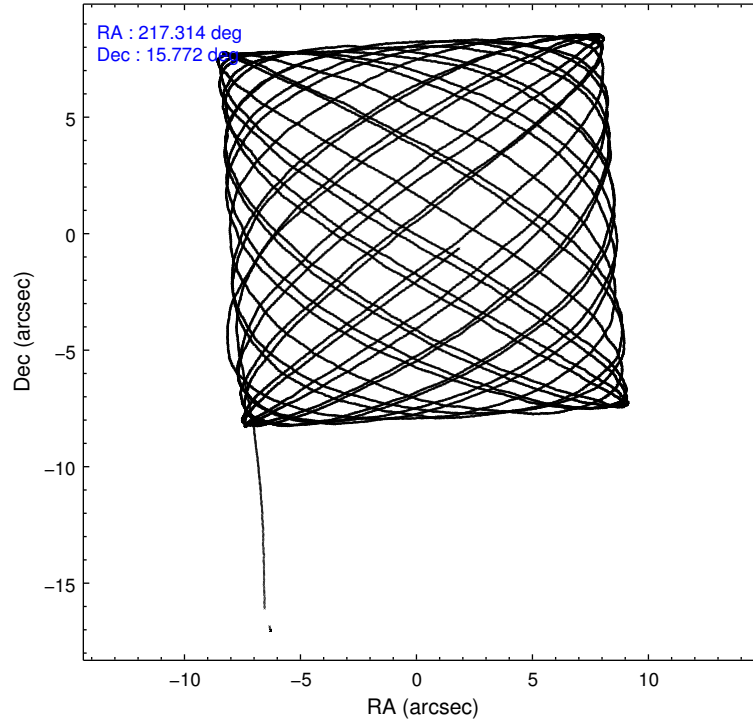
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	65352	121575	69282	94008	91406
rejected events	57166	60202	60587	52729	65444
rejected %	87%	49%	87%	56%	71%

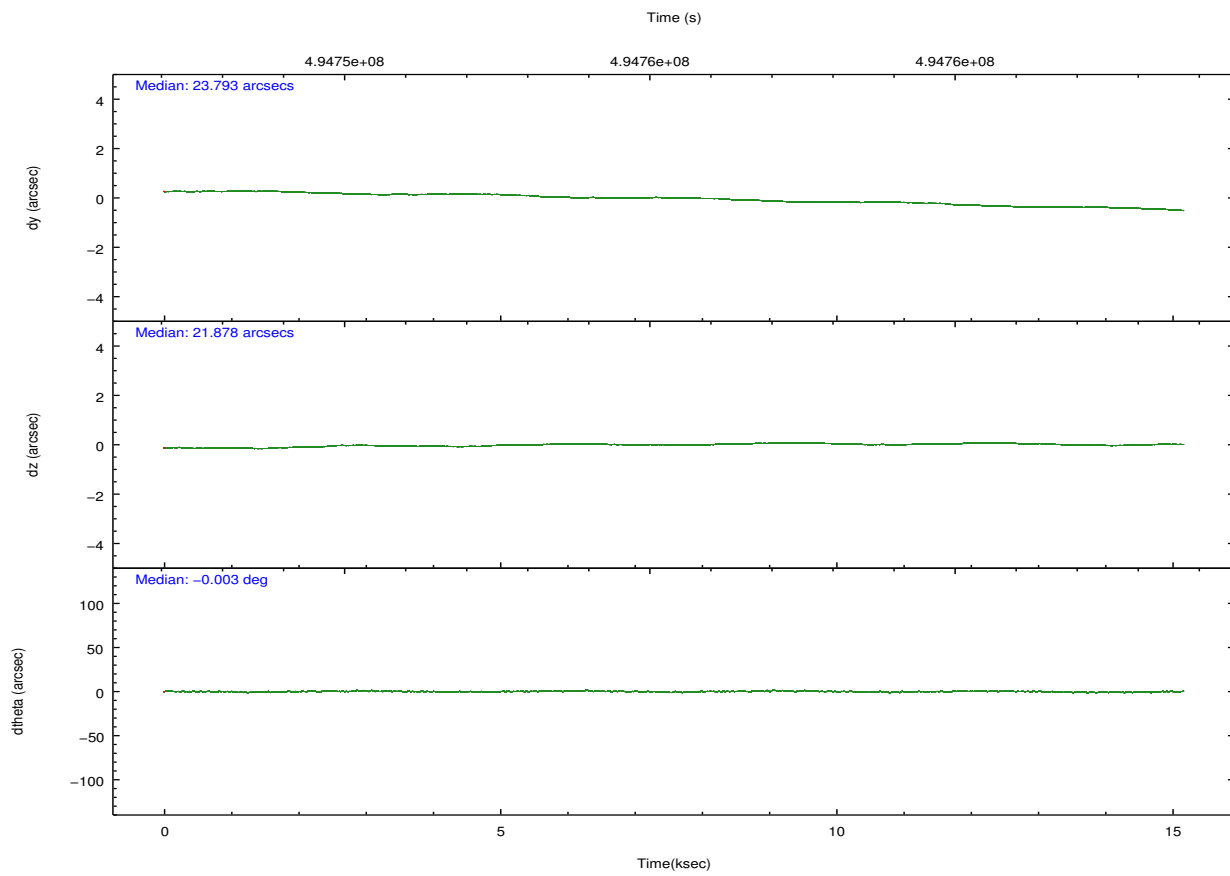
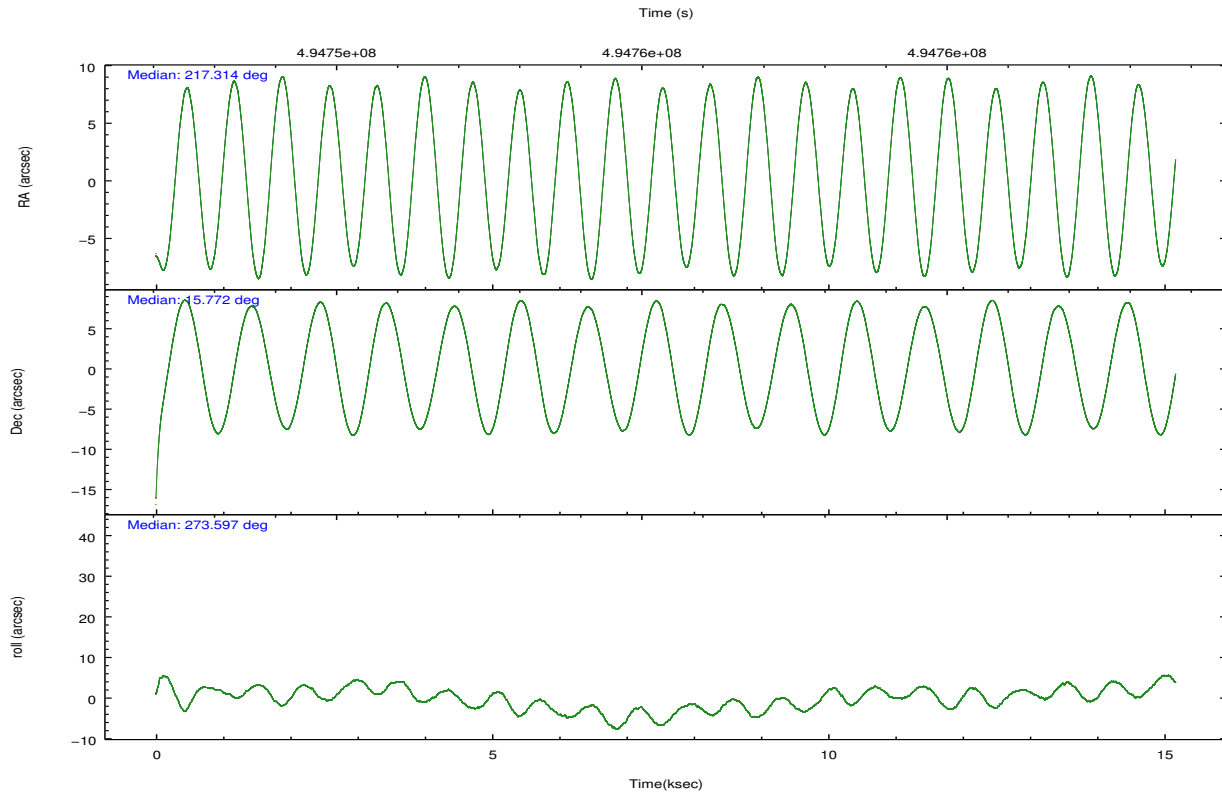
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	3169	8771	3001	3792	8095
	4%	7%	4%	4%	8%
grade 1 events	37	191	28	110	82
	0%	0%	0%	0%	0%
grade 2 events	1710	18668	1884	8391	5932
	2%	15%	2%	8%	6%
grade 3 events	841	1982	879	3597	2588
	1%	1%	1%	3%	2%
grade 4 events	818	1882	867	3625	2599
	1%	1%	1%	3%	2%
grade 5 events	3639	9099	3413	9889	5356
	5%	7%	4%	10%	5%
grade 6 events	1649	30078	2064	21890	6781
	2%	24%	2%	23%	7%
grade 7 events	53489	50904	57146	42714	59973
	81%	41%	82%	45%	65%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	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	217.298286	217.3143025237264	CCD I2 on	N	N
[deg] Pointing Dec	15.795103	15.77251759297774	CCD I3 on	O1	Y
[deg] Pointing Roll	273.456851	273.6091131721097	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[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)	494747967.184000	494746448.92434	CCD S5 on	N	N
Observation start date	2013-09-05T05:58:20	2013-09-05T05:34:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	494762967.184000	494763899.03779	On-chip summing requested	N	N
Observation end date	2013-09-05T10:08:20	2013-09-05T10:24:59	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





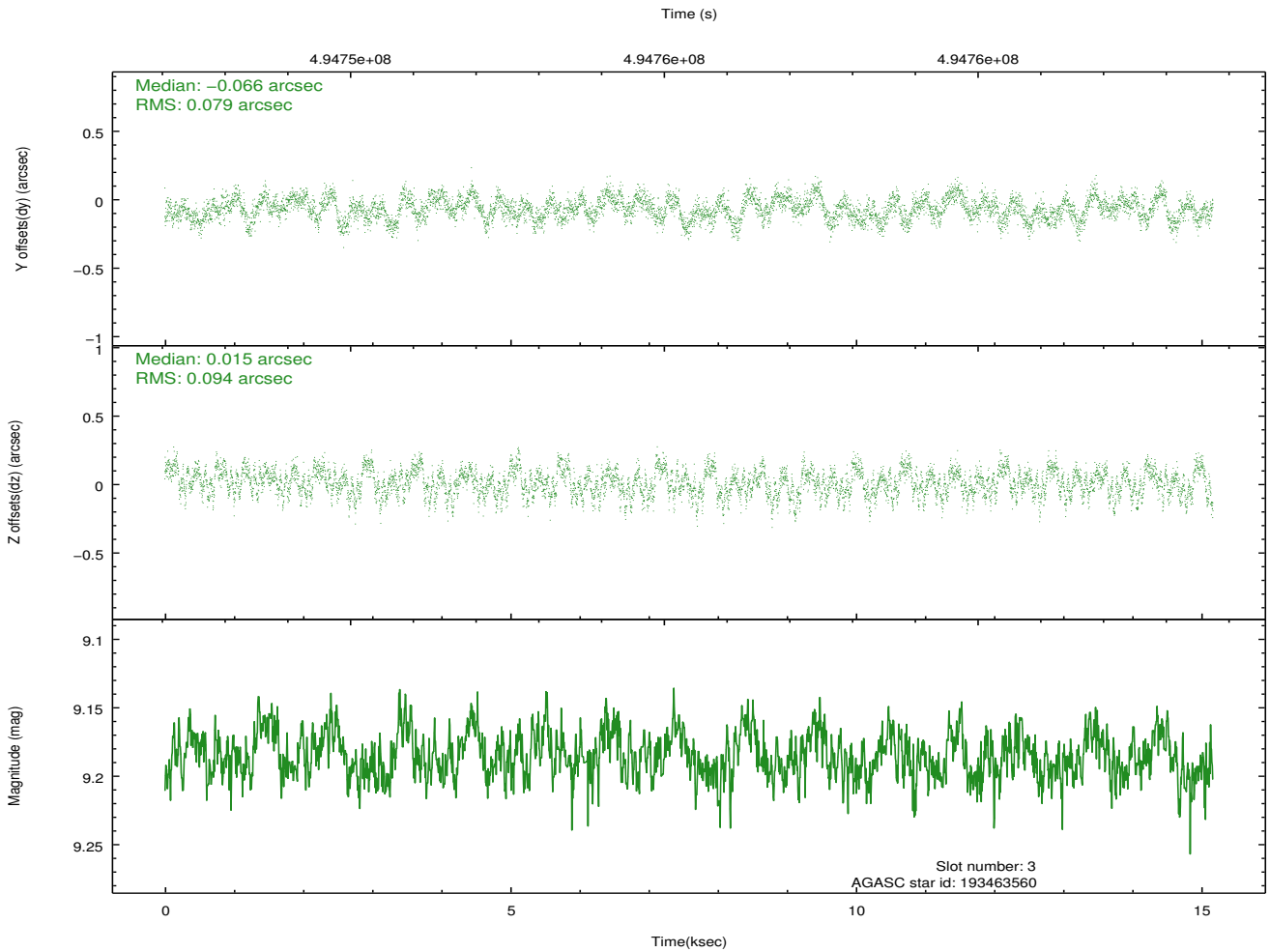
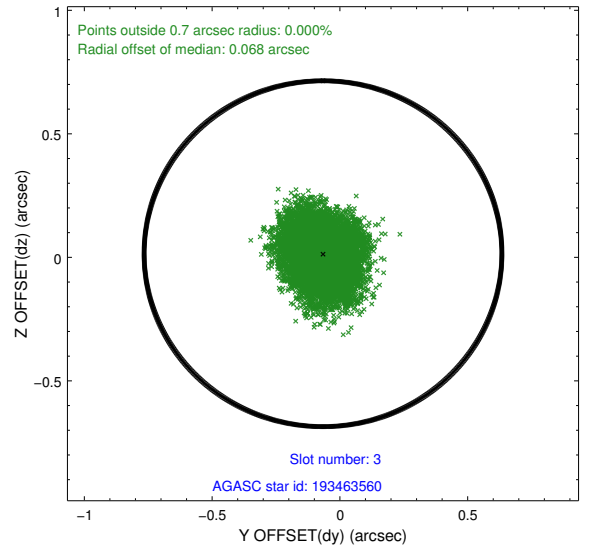
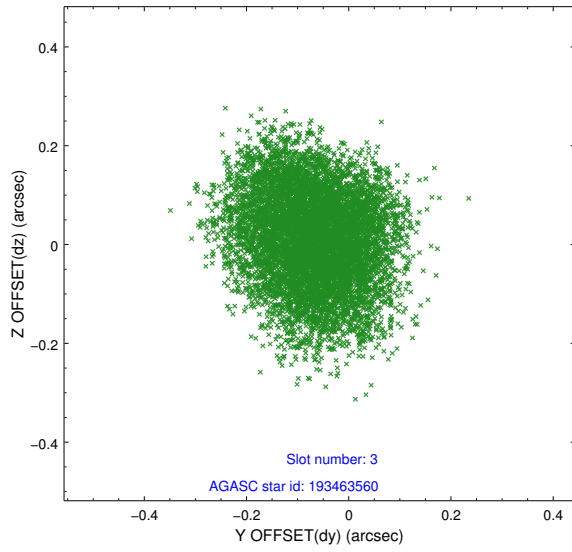
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.92	3700	-0.113	-0.023	0.011	0.017	0.000000	0.000000	-777.09	-1743.44
1	FID		ACIS-S-4	7.00	3700	0.291	0.061	0.013	0.023	0.000000	0.000000	2136.48	164.77
2	FID		ACIS-S-5	7.03	3700	-0.208	-0.030	0.007	0.012	0.000000	0.000000	-1829.62	158.75
3	GUIDE	used	193463560	9.19	7390	-0.066	0.015	0.133	0.204	217.129546	15.752946	117.57	-593.28
4	GUIDE	used	193465408	7.53	7400	0.081	0.108	0.085	0.131	217.063048	16.118636	-1209.11	-740.55
5	GUIDE	used	193470264	9.05	7373	0.010	-0.036	0.148	0.232	216.768786	15.498636	952.52	-1897.04
6	GUIDE	used	193471584	7.01	7399	-0.076	-0.037	0.069	0.121	217.473702	16.208762	-1449.71	694.47
7	GUIDE	used	193472112	8.95	7393	0.062	-0.051	0.088	0.141	217.074657	15.670966	398.84	-800.87

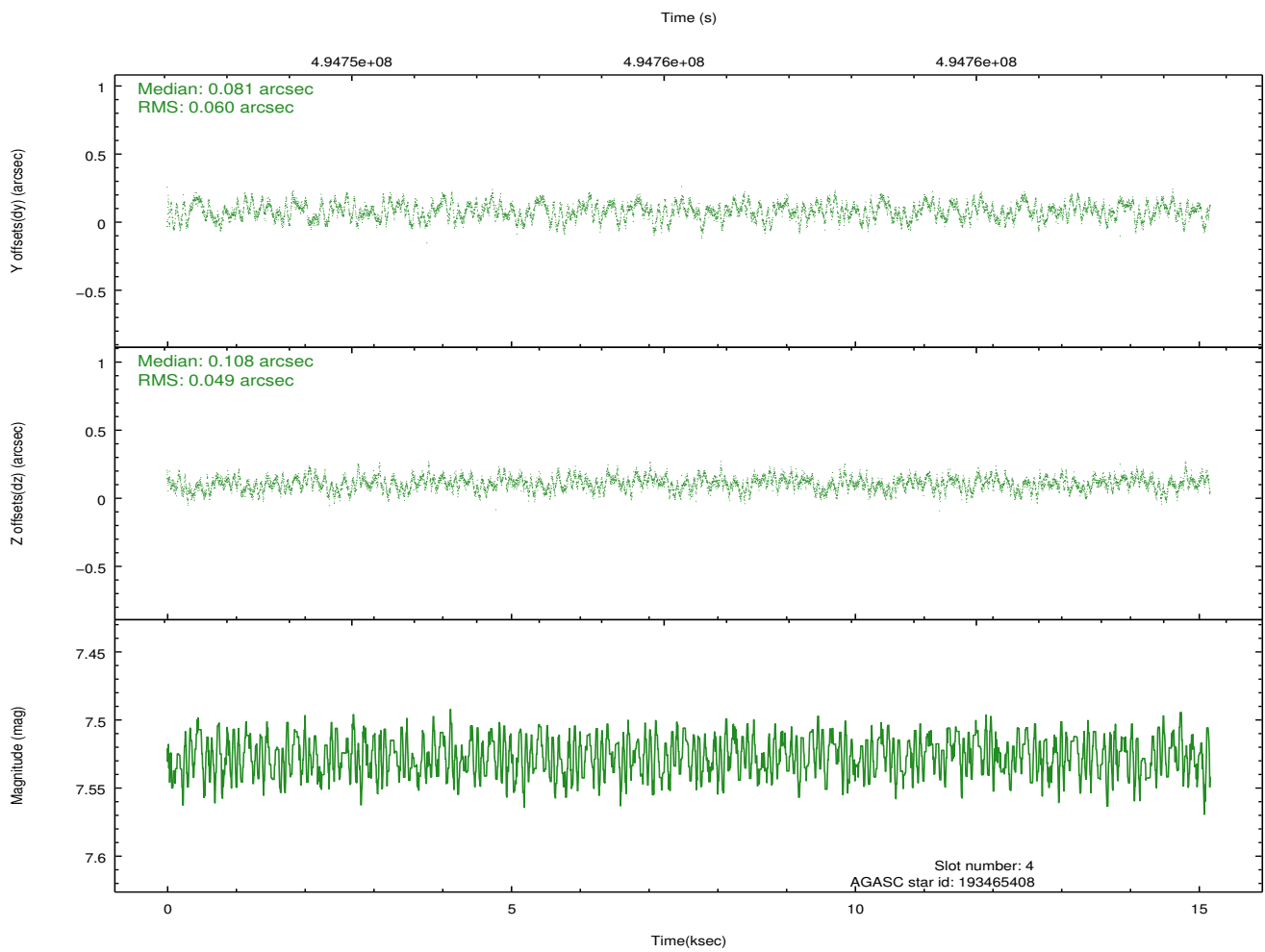
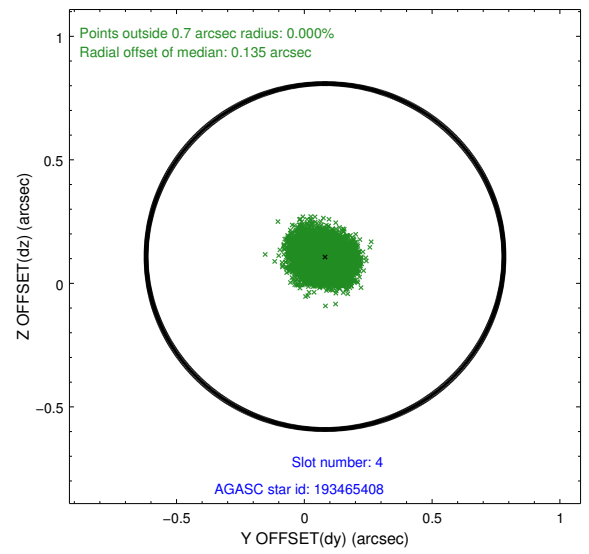
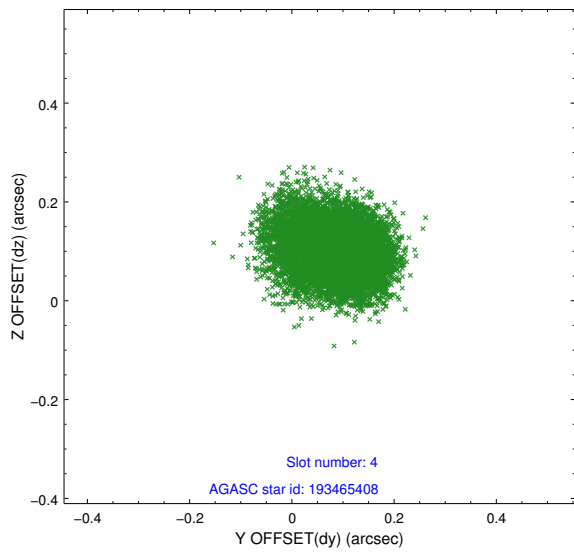
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2.4 Star Slots

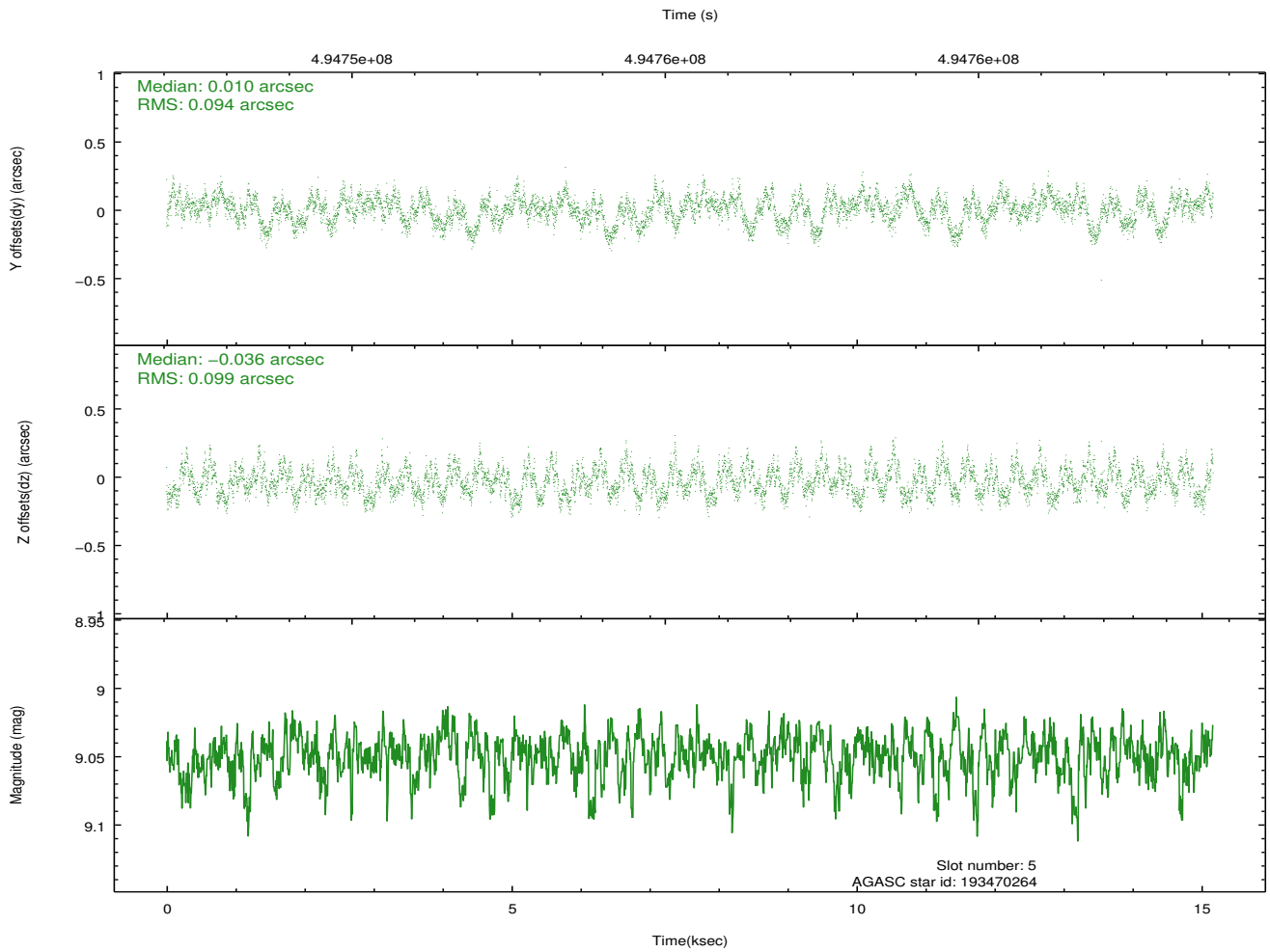
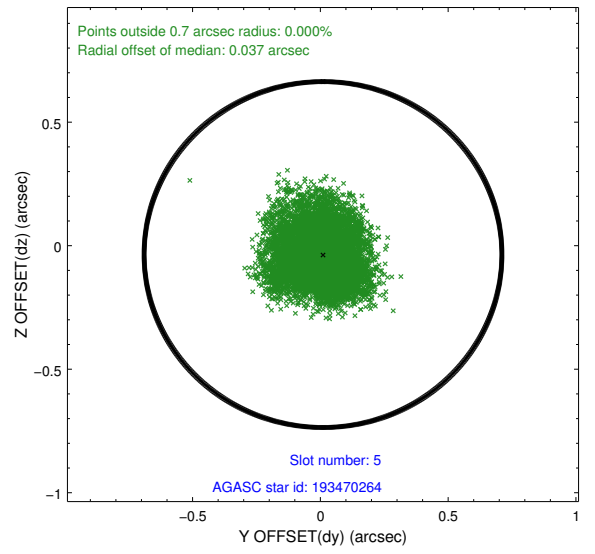
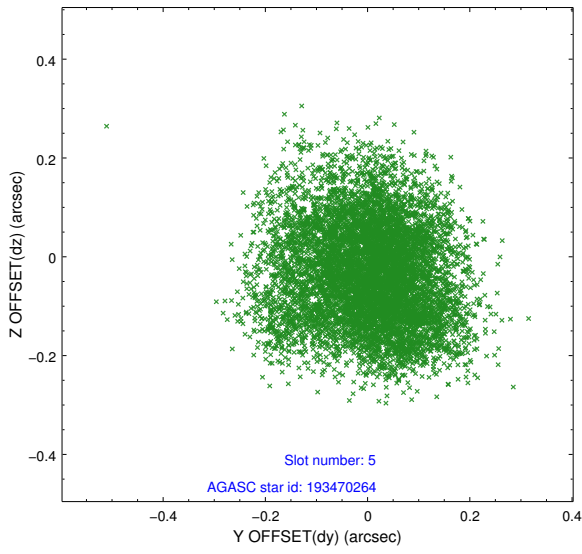
2.4.1 Slot 3



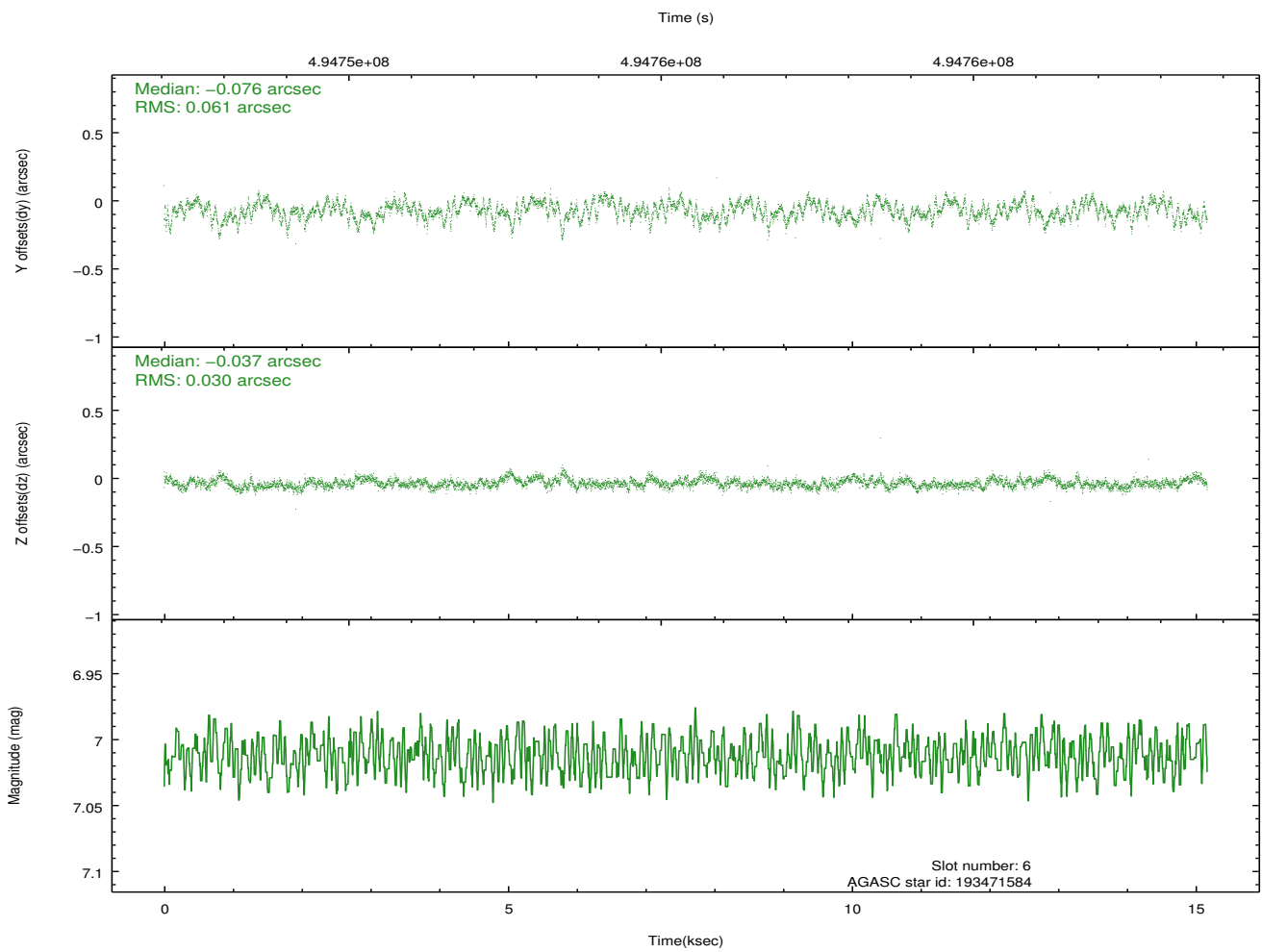
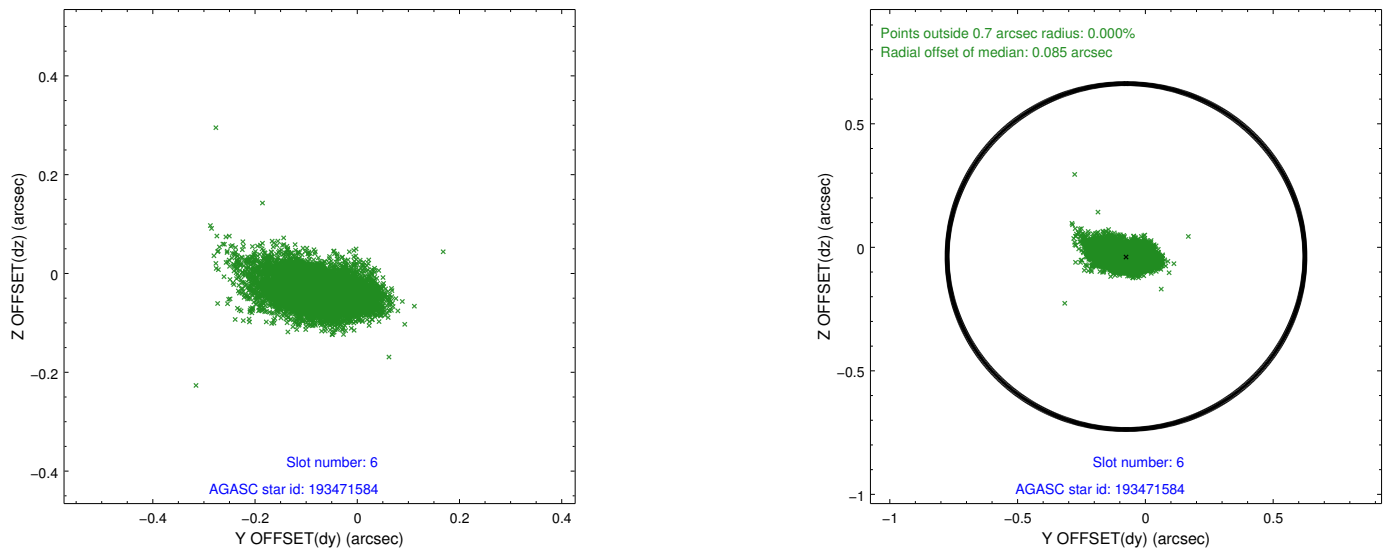
2.4.2 Slot 4



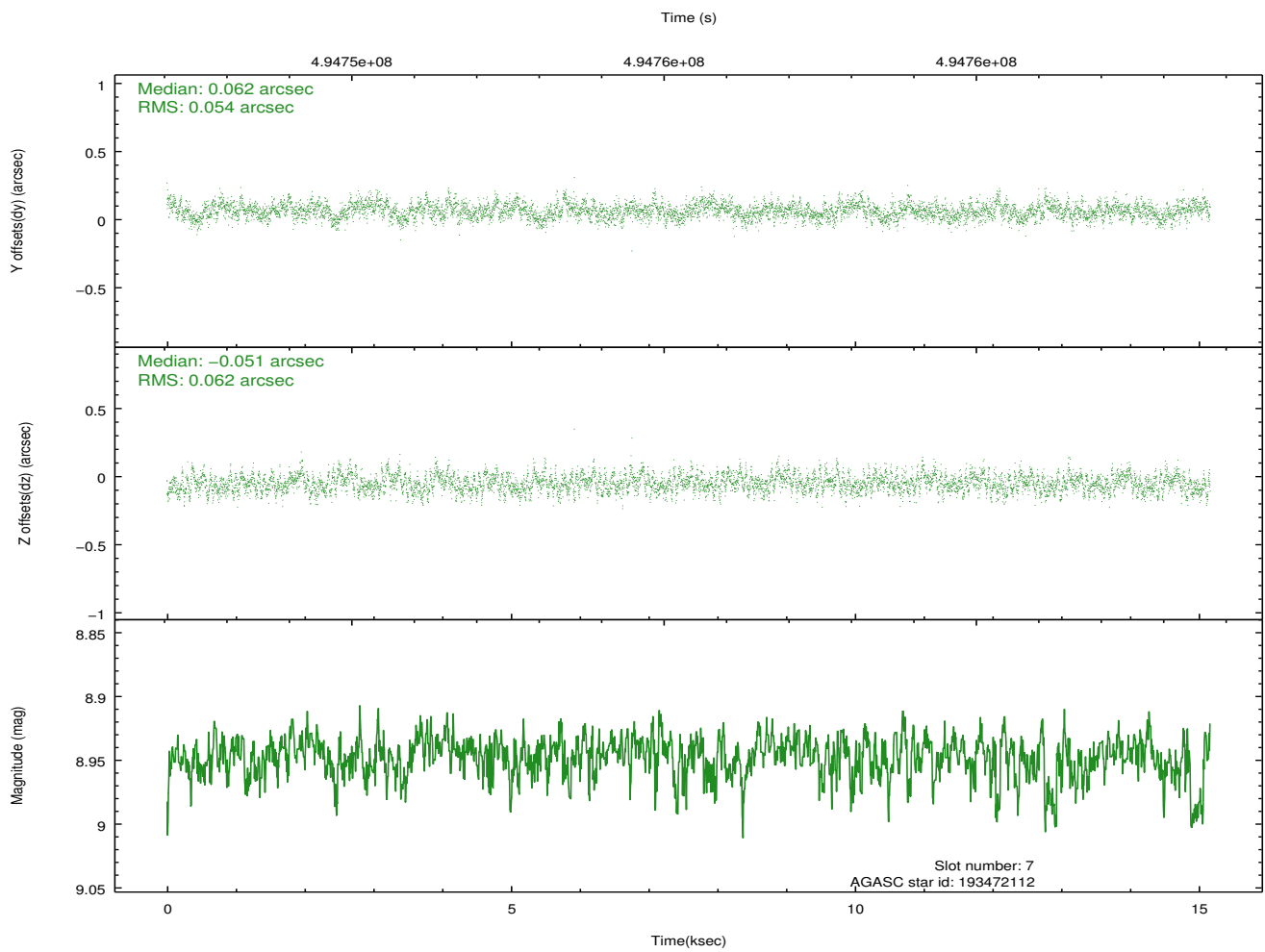
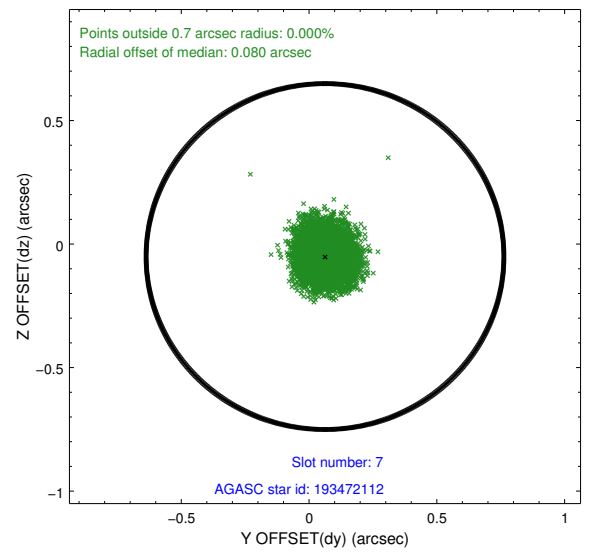
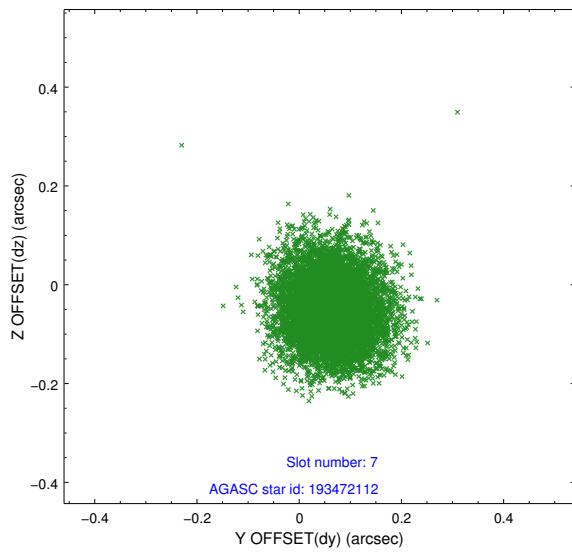
2.4.3 Slot 5



2.4.4 Slot 6

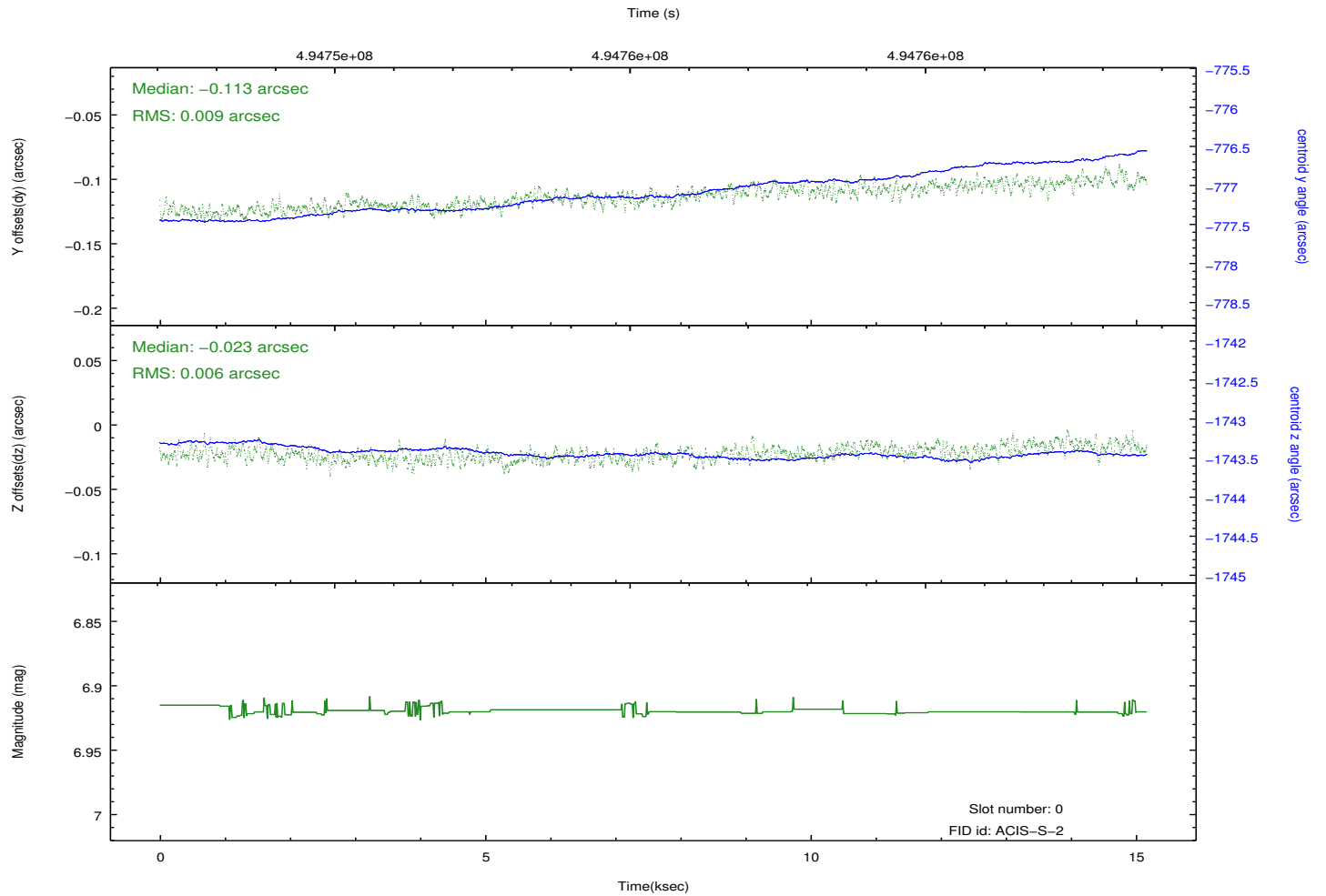
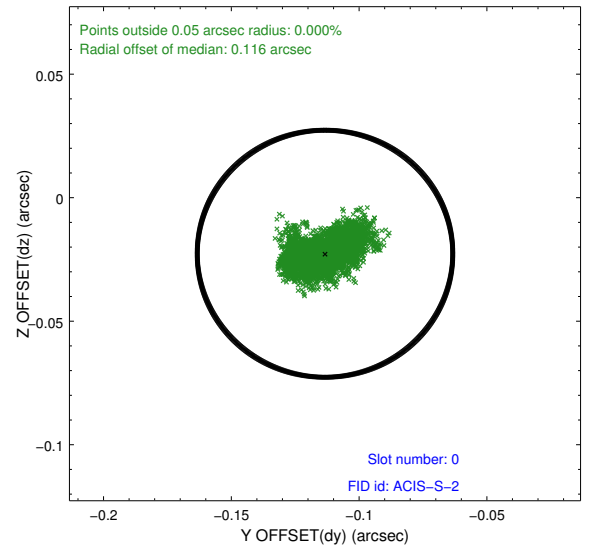
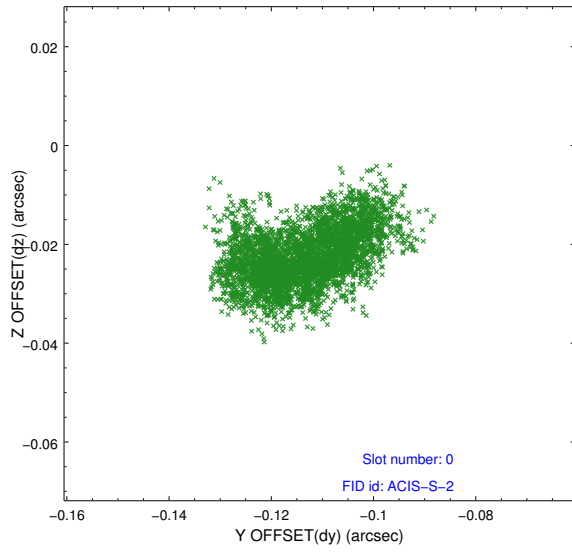


2.4.5 Slot 7

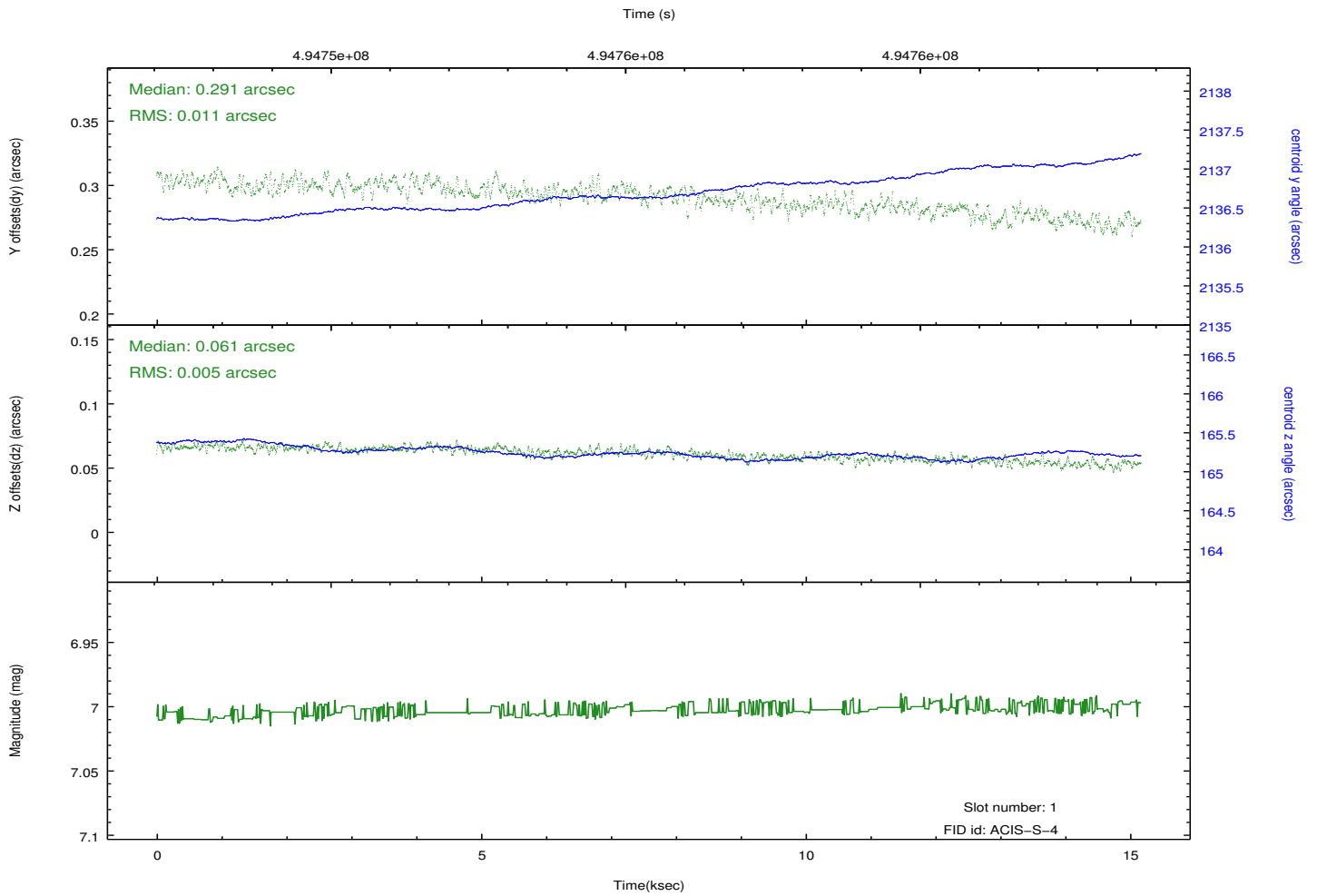
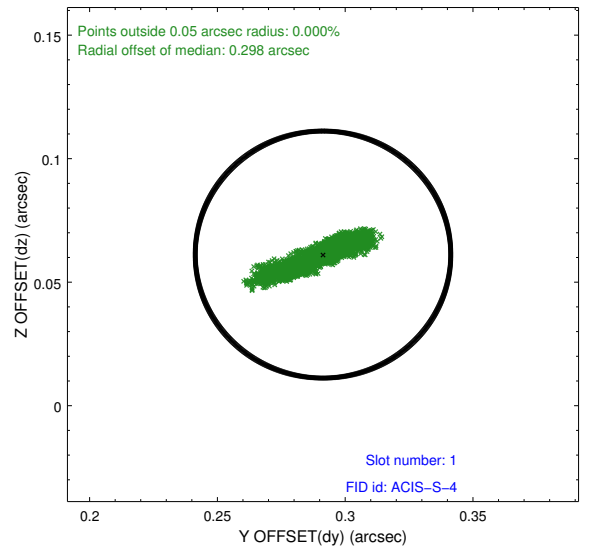
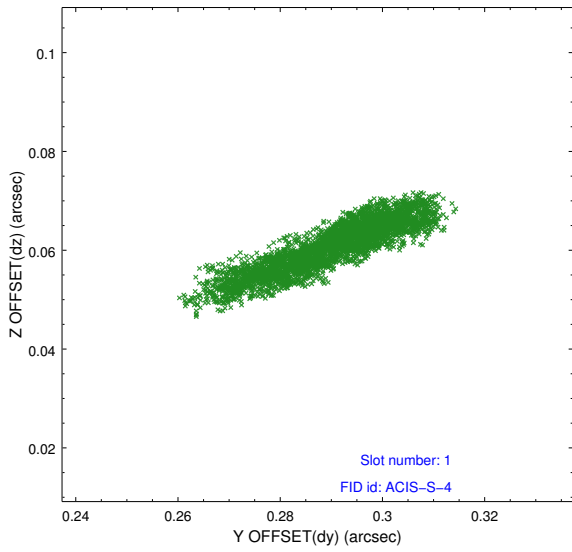


2.5 FID Slots

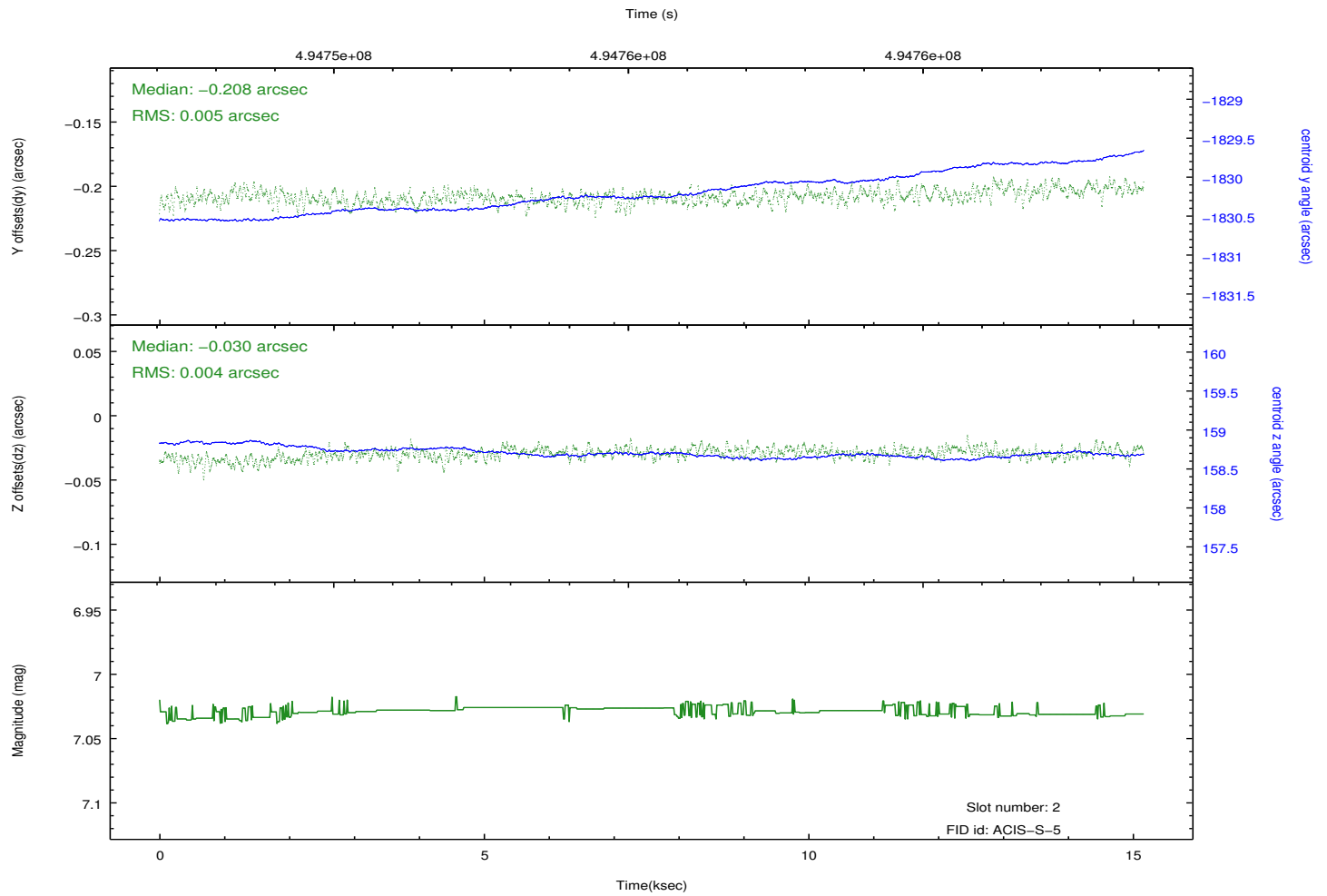
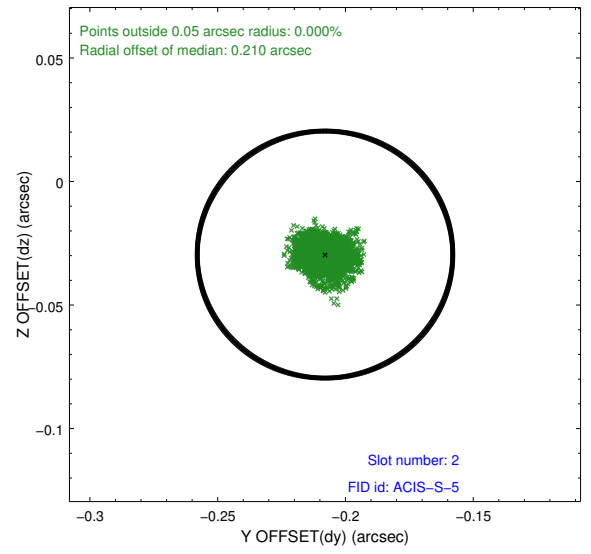
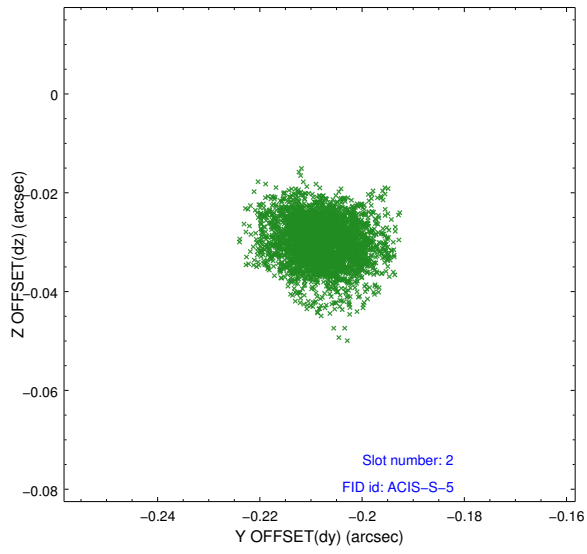
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.066000115871

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 bias 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:
(217.39213,15.63853), (217.39192,15.64166), (217.33888,15.63841), (217.34305,15.63552)

=====

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.