

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14408 - L2 Version 2
Chandra X-Ray Center

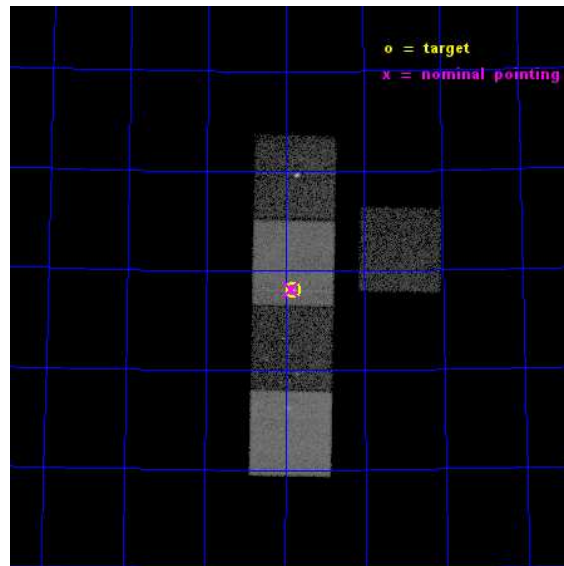
L2 Processing Date : Nov 28 2014

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1 Front

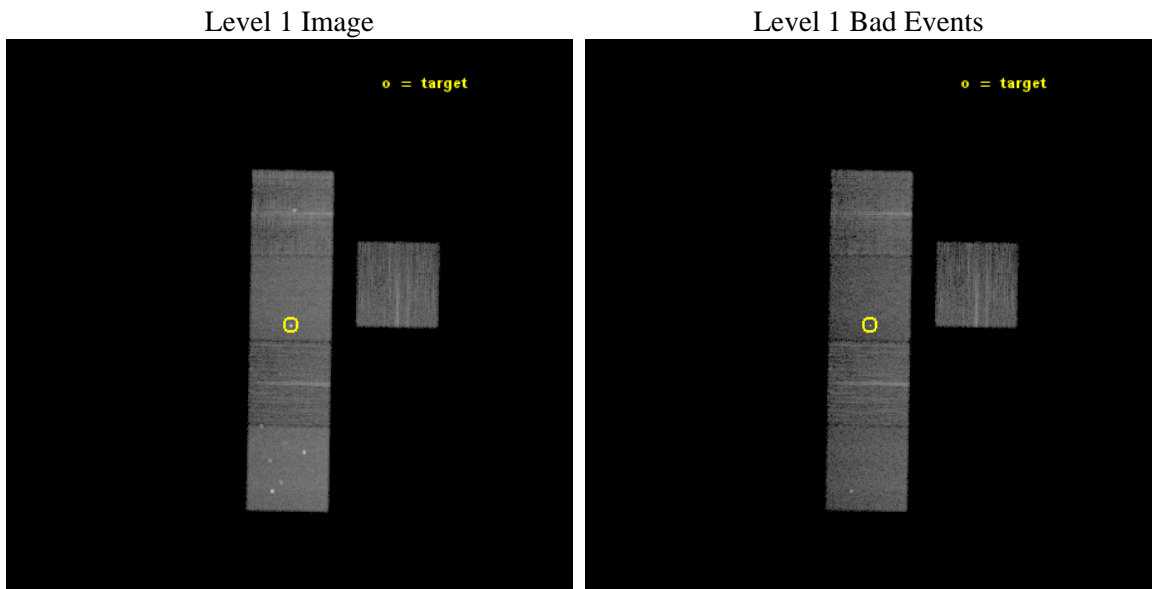
seq_num	801080	Sequence number
obs_id	14408	Observation id
title	4C73.18: Catching a black hole as it transitions from very bright to very dim	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	4C73.18	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	291.952083	Observer's specified target RA [deg]
dec_targ	73.967111	Observer's specified target Dec [deg]
ra_nom	291.96129368633	Nominal RA [deg]
dec_nom	73.968863005215	Nominal Dec [deg]
roll_nom	271.00824312046	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15561.219655991	Sum of GTIs [s]
livetime	15357.900865182	Livetime [s]
ontime3	15554.814495385	Sum of GTIs [s]
ontime5	15561.178615987	Sum of GTIs [s]
ontime6	15561.137575984	Sum of GTIs [s]
ontime7	15561.219655991	Sum of GTIs [s]
ontime8	15557.914475739	Sum of GTIs [s]
l2events	135227	Number of level 2 events



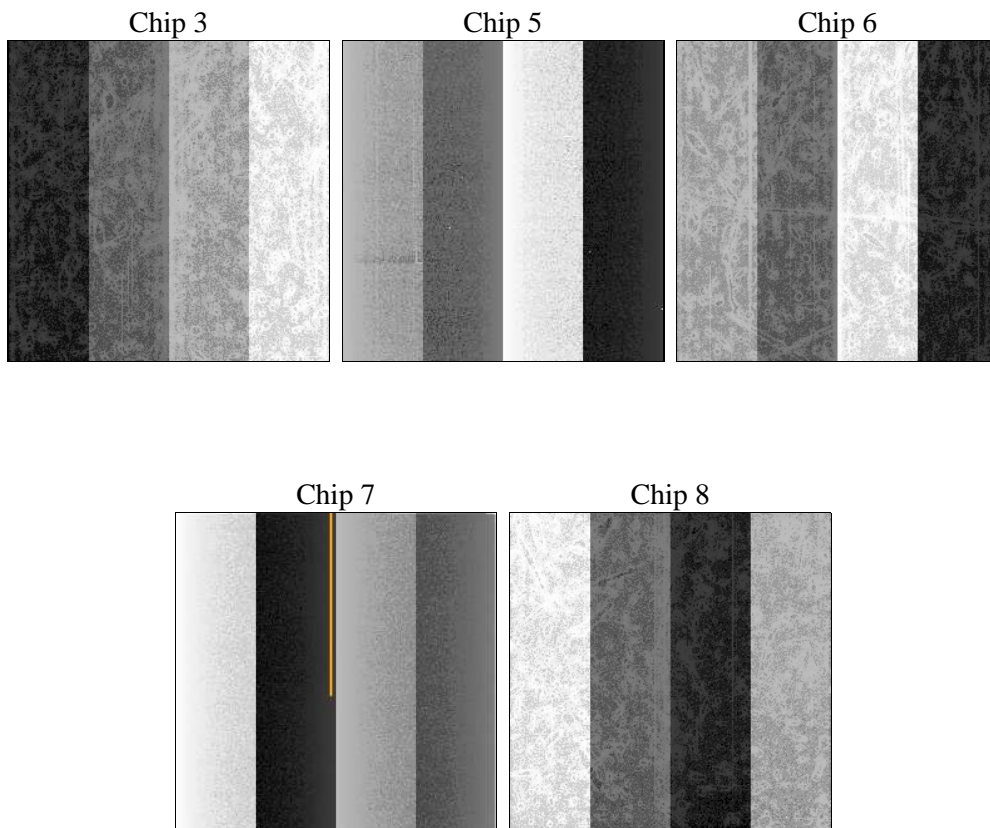
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15500.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	15561.219655991	Sum of GTIs [s]
caldbver	4.6.4	 	ontime3	15554.814495385	Sum of GTIs [s]
date	2014-11-28T10:29:00	Date and time of file creation	ontime5	15561.178615987	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15561.137575984	Sum of GTIs [s]
			ontime7	15561.219655991	Sum of GTIs [s]
			ontime8	15557.914475739	Sum of GTIs [s]
			l1events	512243	Number of level 1 events

2.1.4 Events

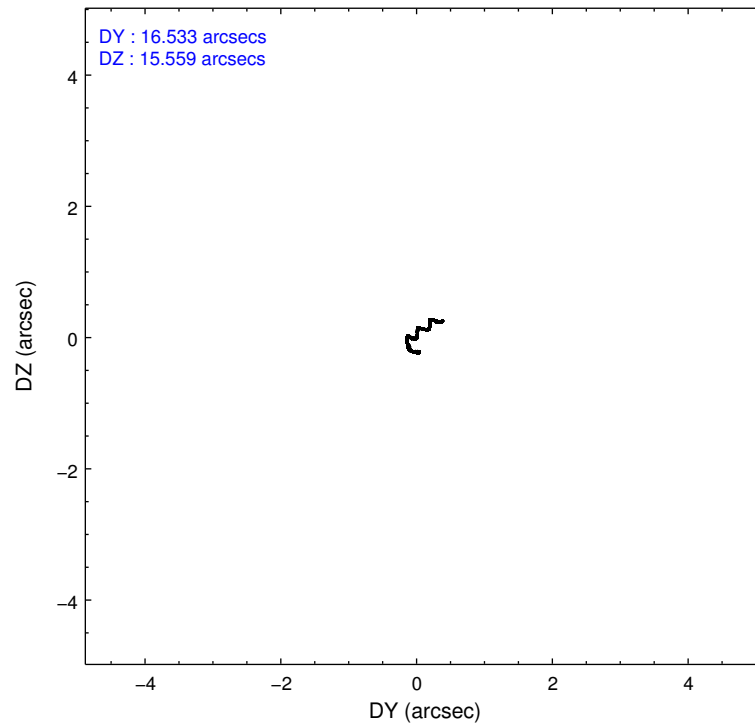
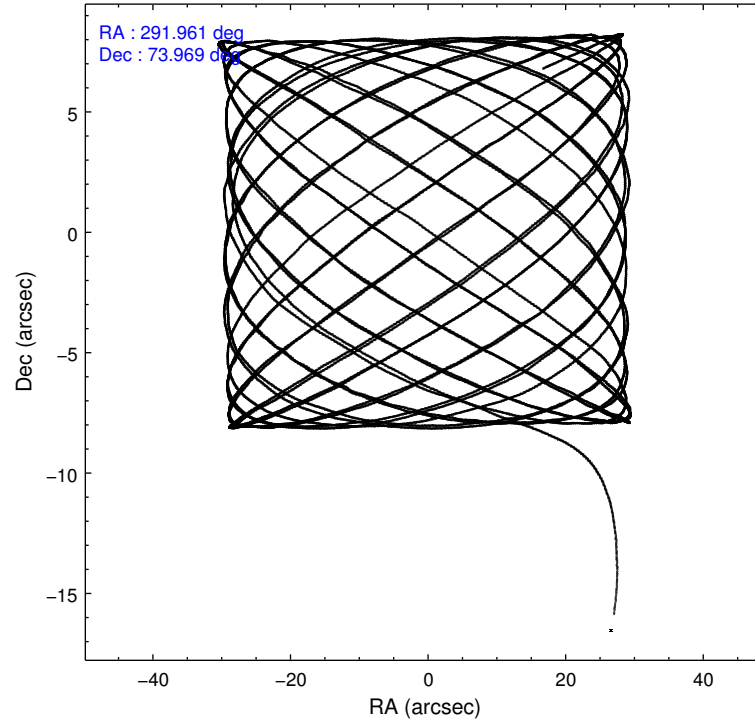
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	76972	133192	81199	115148	105732
rejected events	68576	67591	71214	64242	76991
rejected %	89%	50%	87%	55%	72%

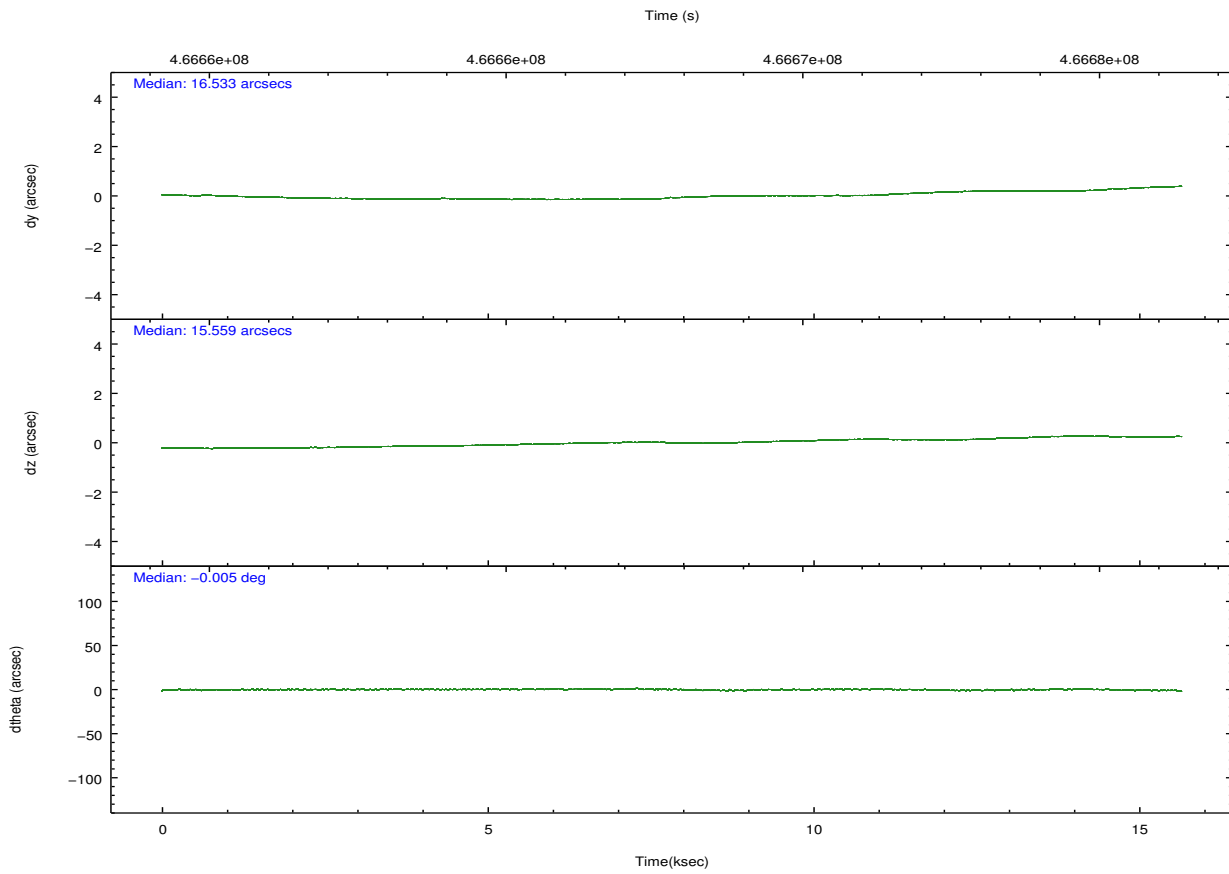
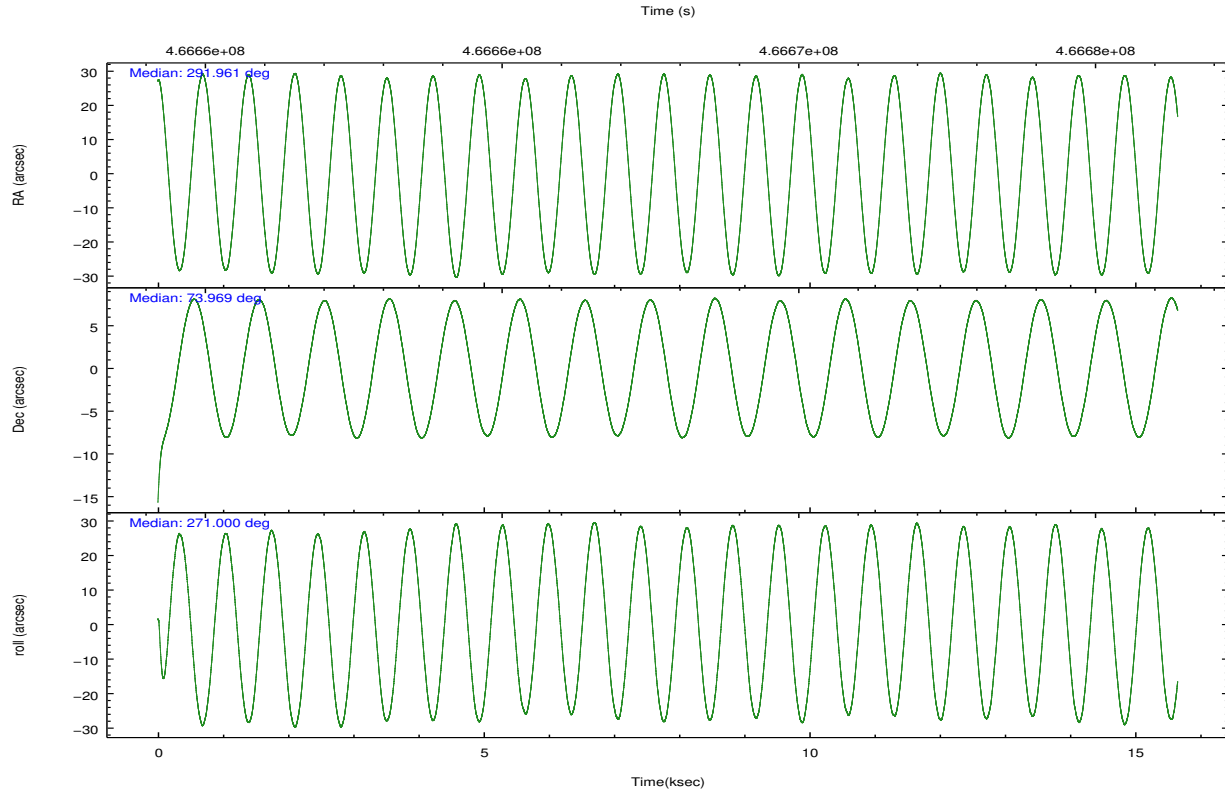
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	2764	8315	3542	4742	8744
	3%	6%	4%	4%	8%
grade 1 events	34	714	38	246	75
	0%	0%	0%	0%	0%
grade 2 events	1885	19449	2237	10313	6696
	2%	14%	2%	8%	6%
grade 3 events	945	2150	960	4427	2880
	1%	1%	1%	3%	2%
grade 4 events	916	2190	1015	4184	2771
	1%	1%	1%	3%	2%
grade 5 events	3982	9652	4030	11476	5856
	5%	7%	4%	9%	5%
grade 6 events	1889	33518	2233	27256	7654
	2%	25%	2%	23%	7%
grade 7 events	64557	57204	67144	52504	71056
	83%	42%	82%	45%	67%

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	291.909009	291.9612936863289	CCD I2 on	N	N
[deg] Pointing Dec	73.992109	73.9688630052146	CCD I3 on	O1	Y
[deg] Pointing Roll	270.901847	271.0082431204571	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	466660110.184000	466658974.07948	CCD S5 on	N	N
Observation start date	2012-10-15T03:47:23	2012-10-15T03:29:34	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	466675610.184000	466676537.45543	On-chip summing requested	N	N
Observation end date	2012-10-15T08:05:43	2012-10-15T08:22:17	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



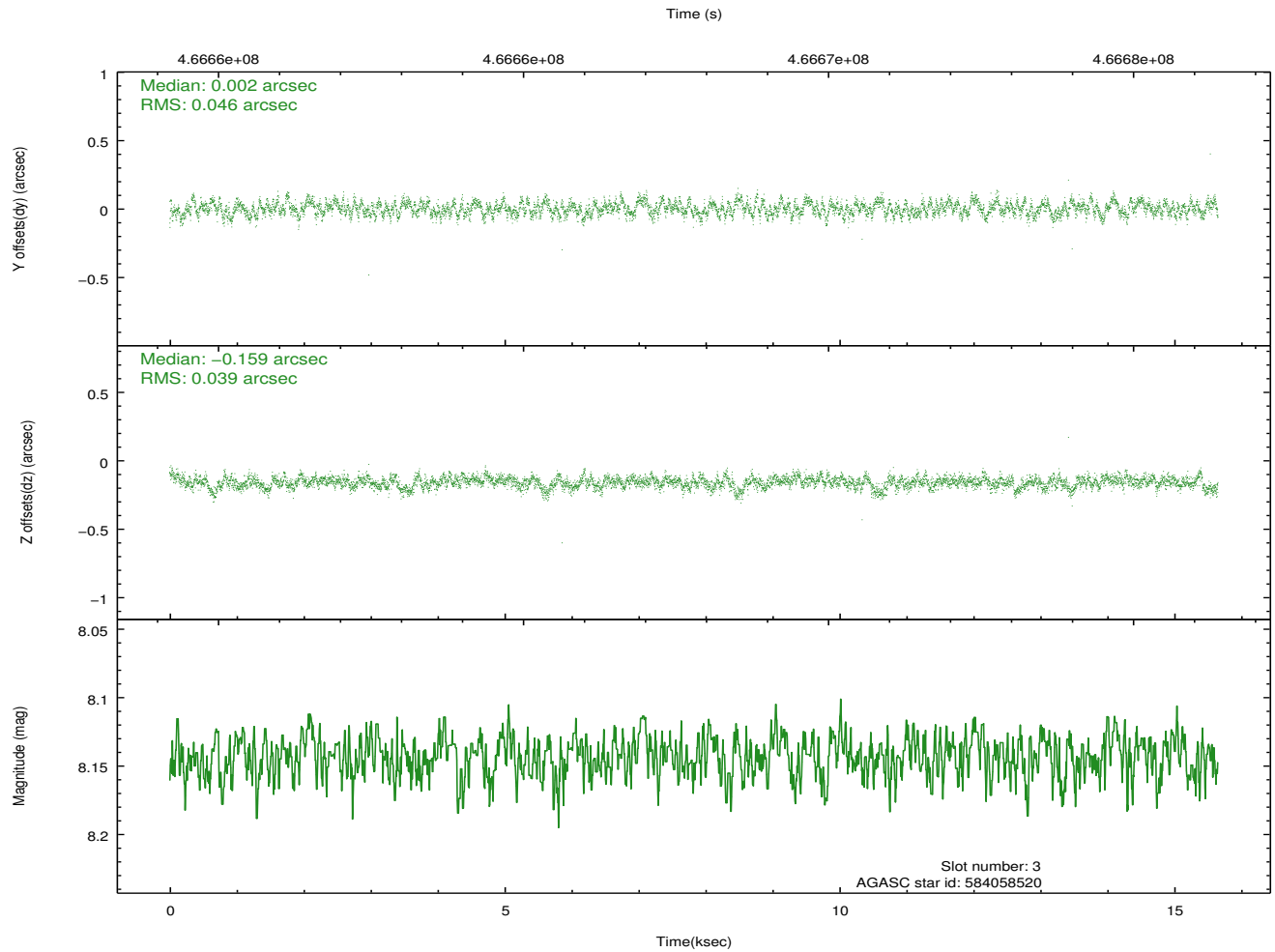
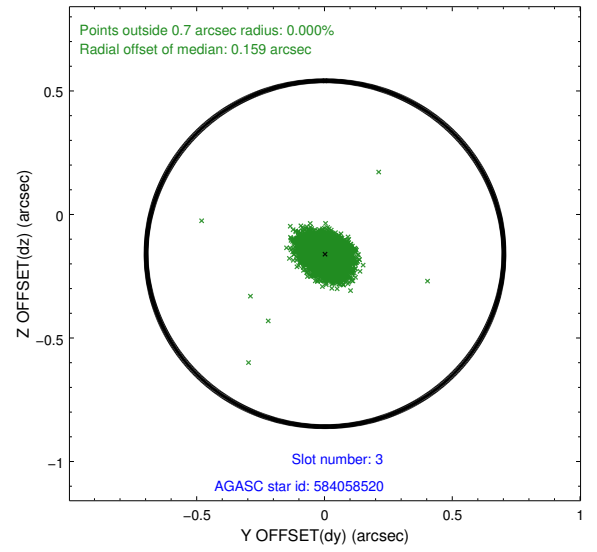
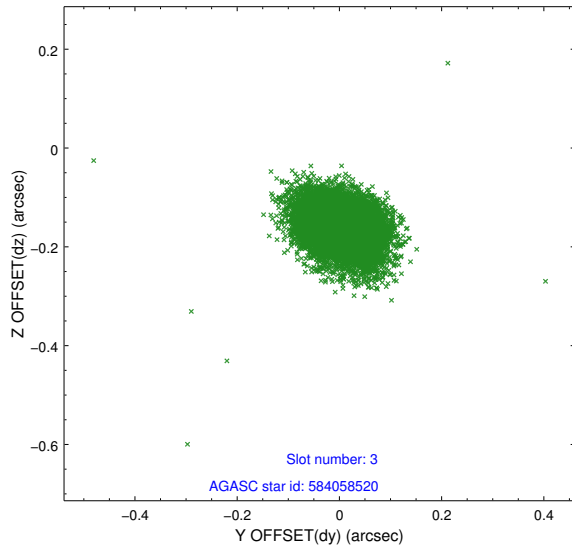


Slot Statistics

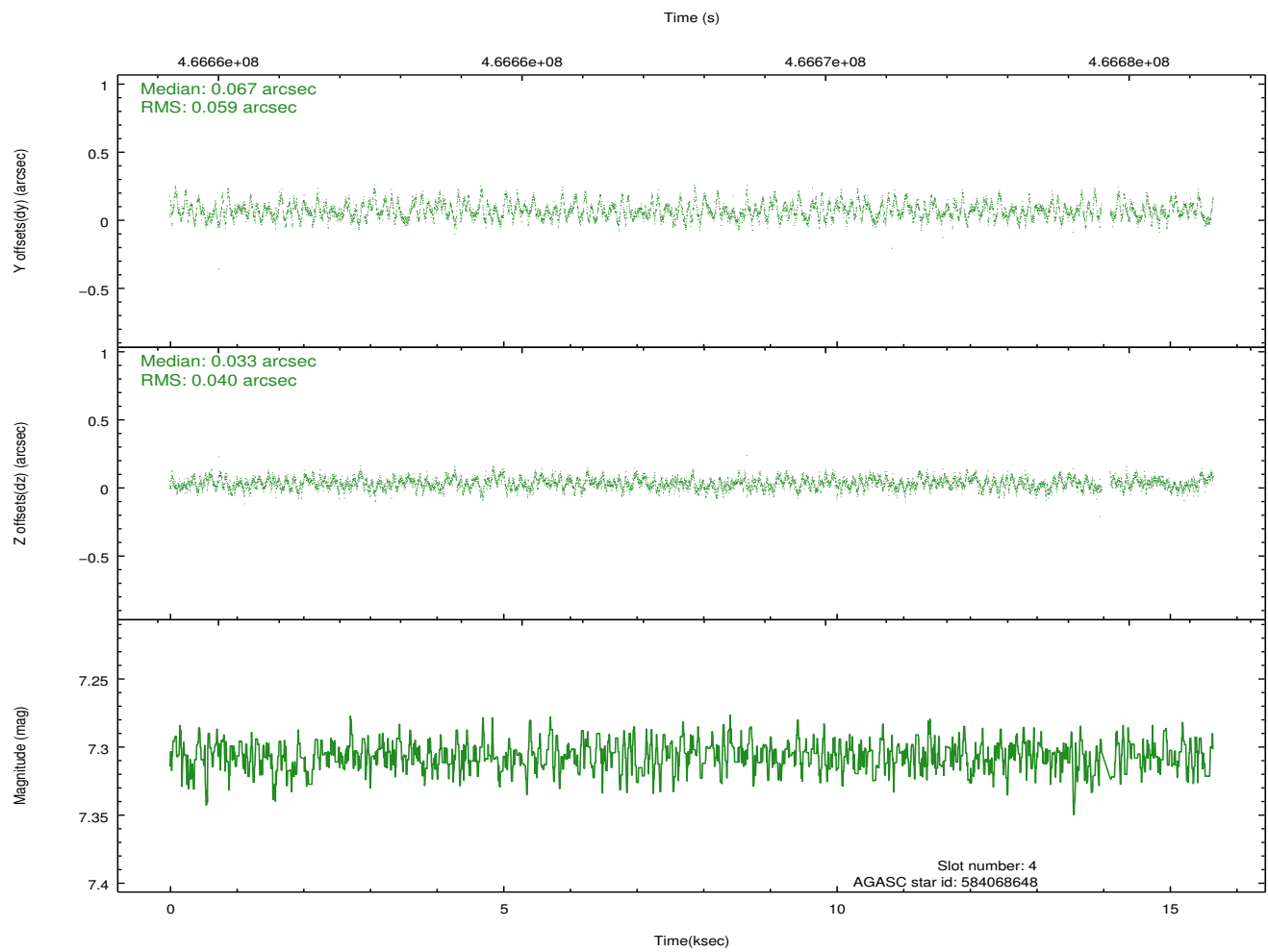
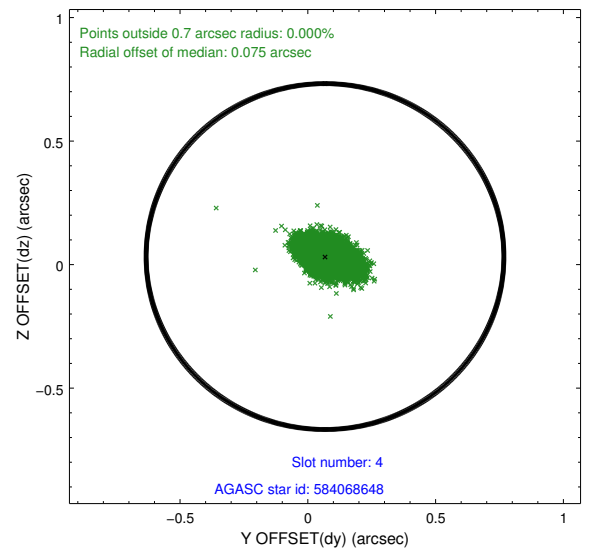
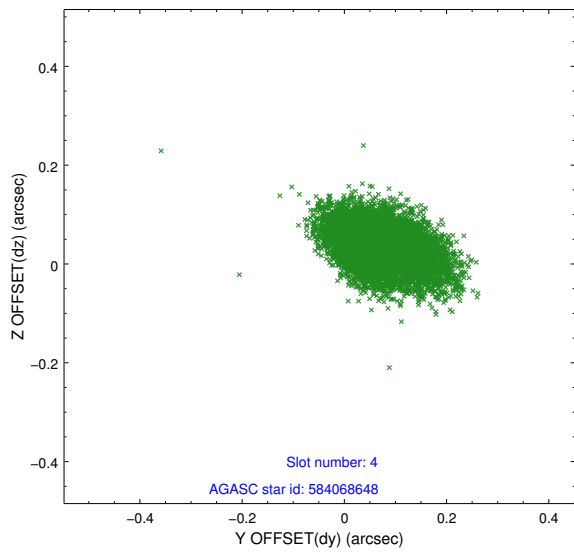
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	3818	-0.126	-0.014	0.007	0.011	0.000000	0.000000	-769.67	-1736.93
1	FID		ACIS-S-4	7.12	3818	0.256	0.065	0.006	0.011	0.000000	0.000000	2143.84	171.36
2	FID		ACIS-S-5	7.14	3818	-0.162	-0.042	0.007	0.012	0.000000	0.000000	-1822.20	165.21
3	GUIDE	used	584058520	8.14	7633	0.002	-0.159	0.063	0.102	292.919697	74.241817	-891.41	1002.25
4	GUIDE	used	584068648	7.31	7570	0.067	0.033	0.074	0.126	289.733367	73.550892	1512.74	-2240.41
5	GUIDE	used	584070048	8.77	7628	-0.157	0.129	0.087	0.139	289.511723	74.303845	-1205.25	-2315.46
6	GUIDE	used	584073696	6.84	7635	-0.037	-0.275	0.065	0.112	293.792631	74.377476	-1387.75	1847.66
7	GUIDE	used	584060056	8.60	7633	0.118	0.273	0.088	0.141	289.622660	74.497909	-1896.87	-2169.34

2.4 Star Slots

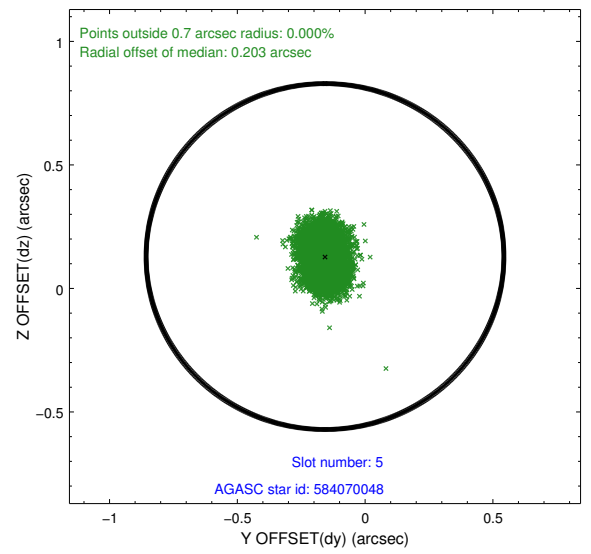
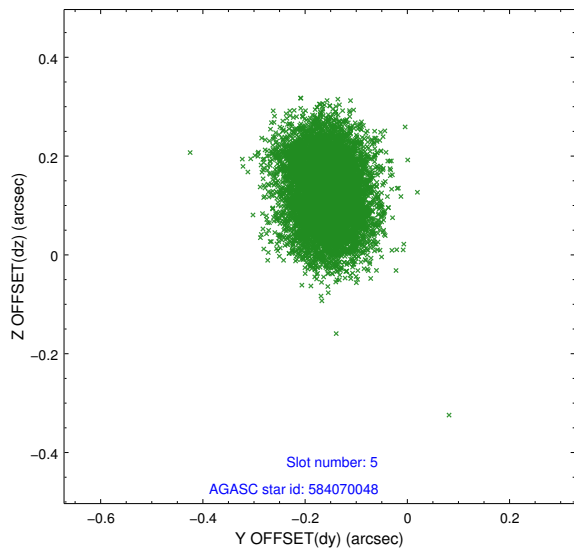
2.4.1 Slot 3



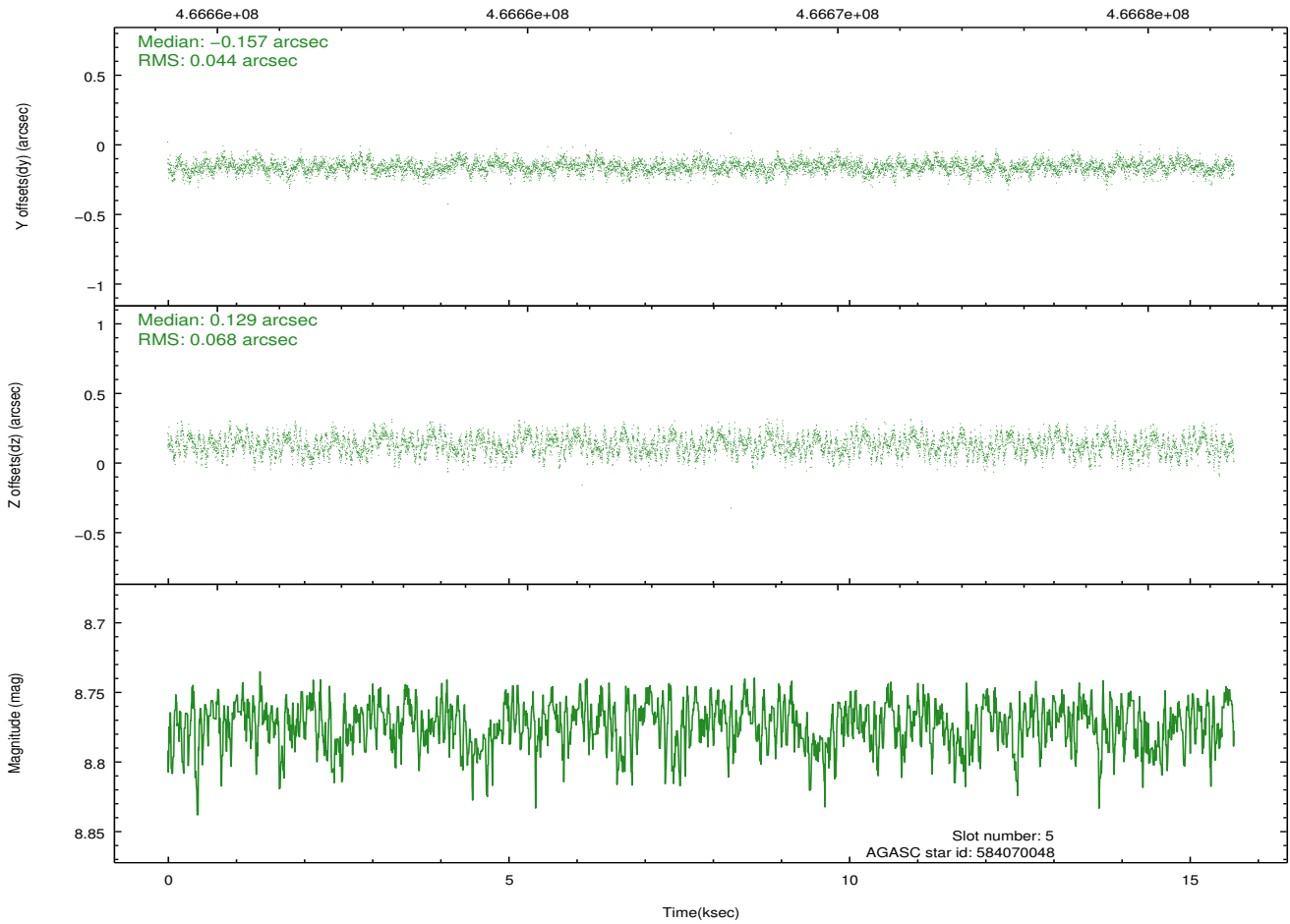
2.4.2 Slot 4



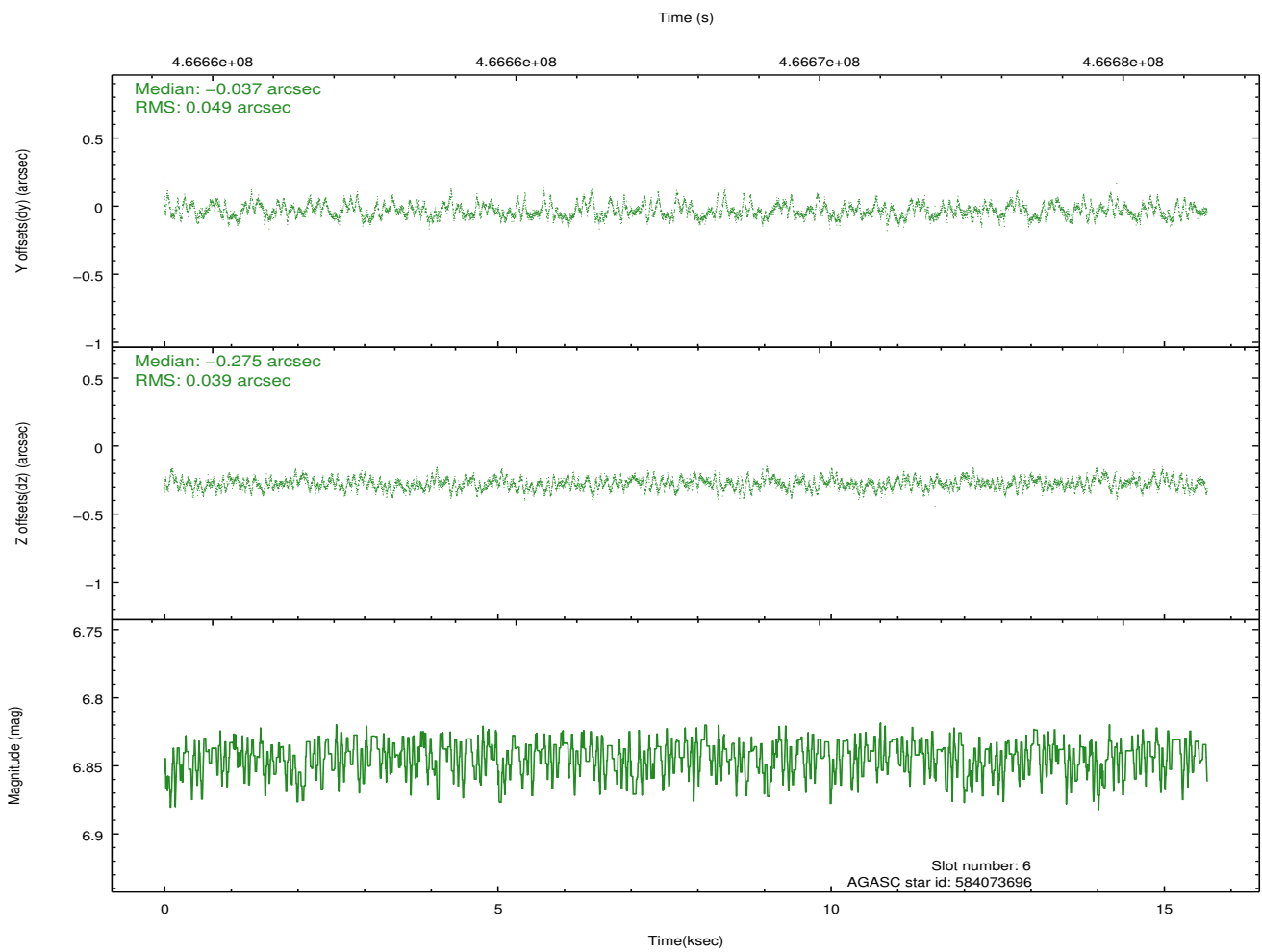
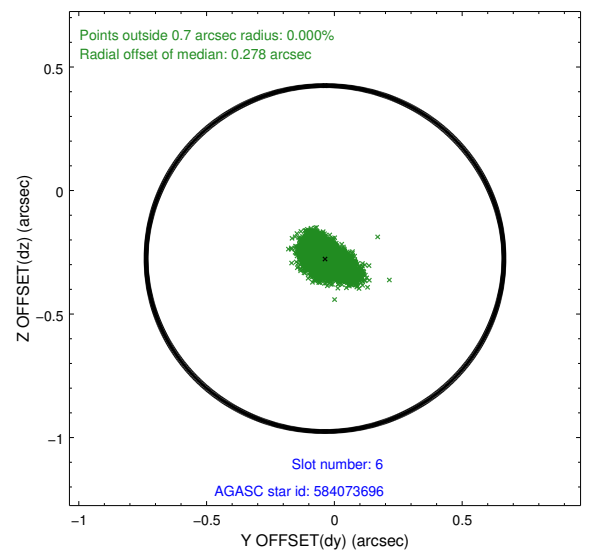
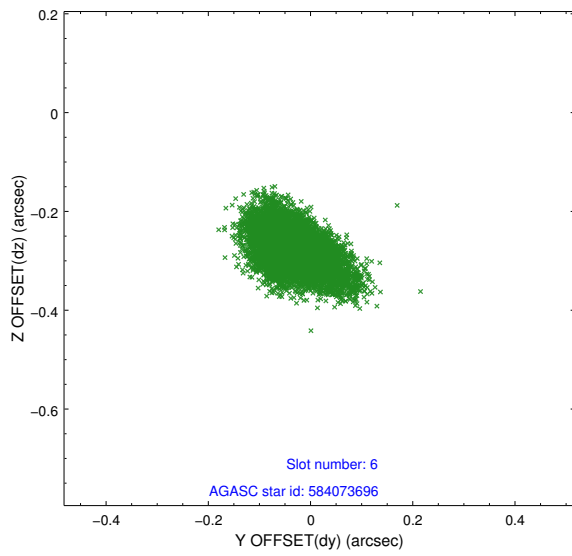
2.4.3 Slot 5



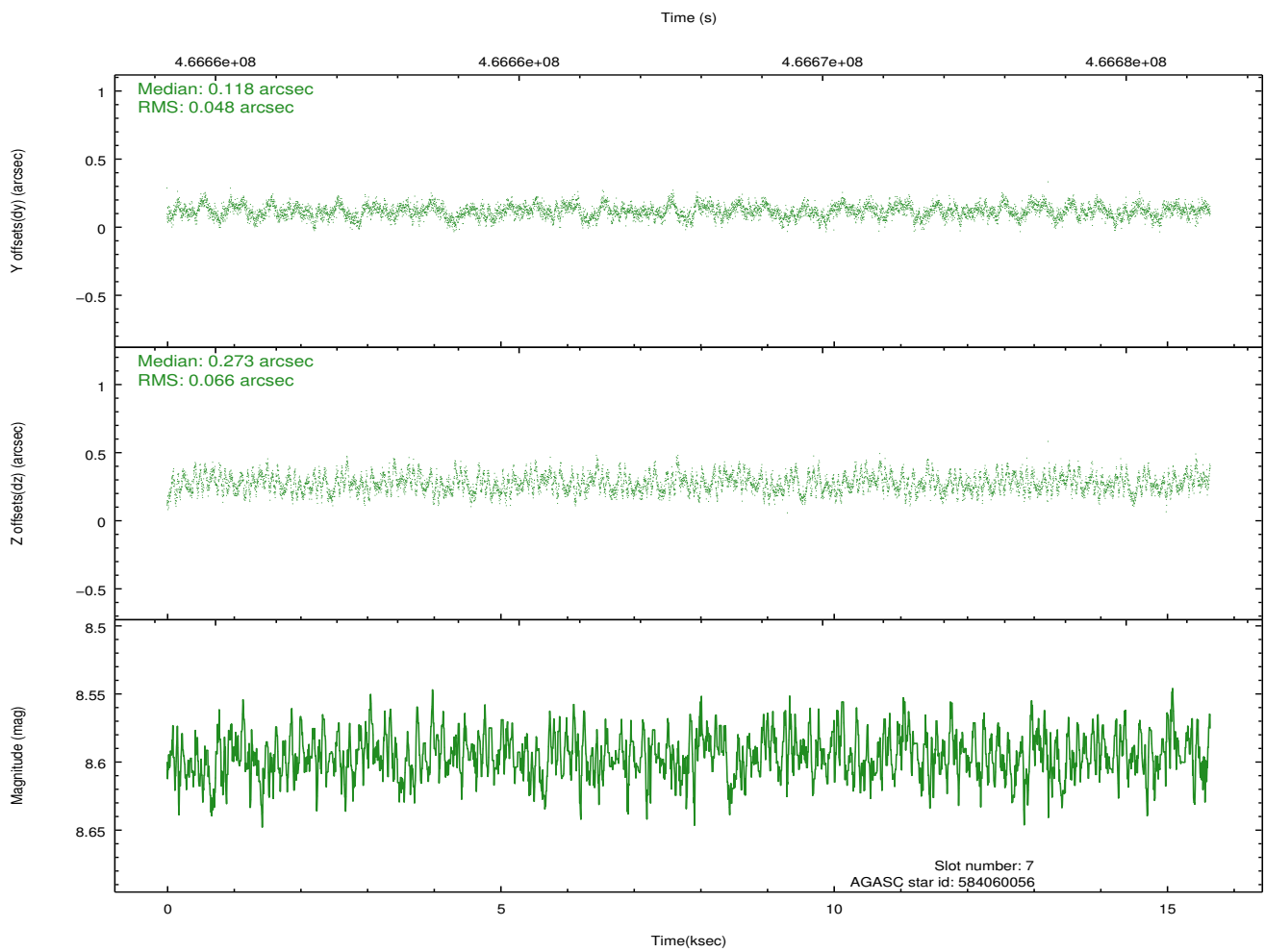
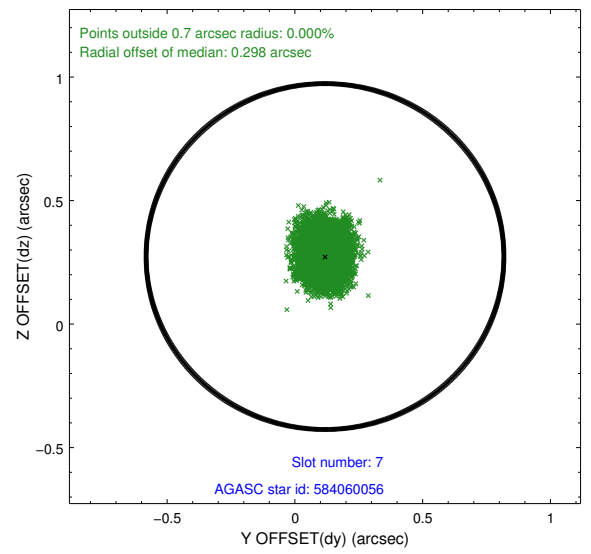
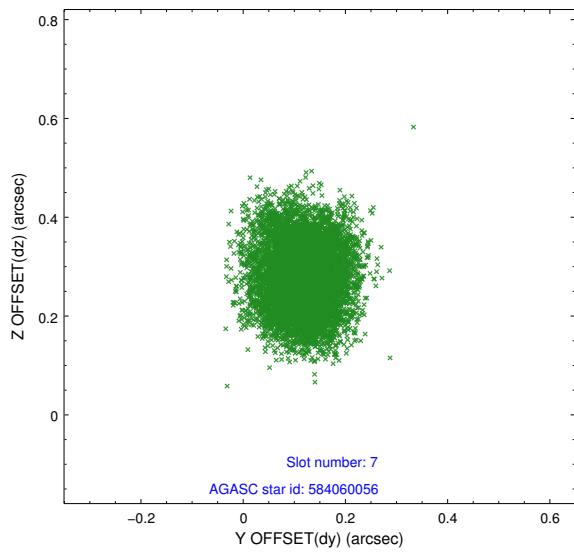
Time (s)



2.4.4 Slot 6

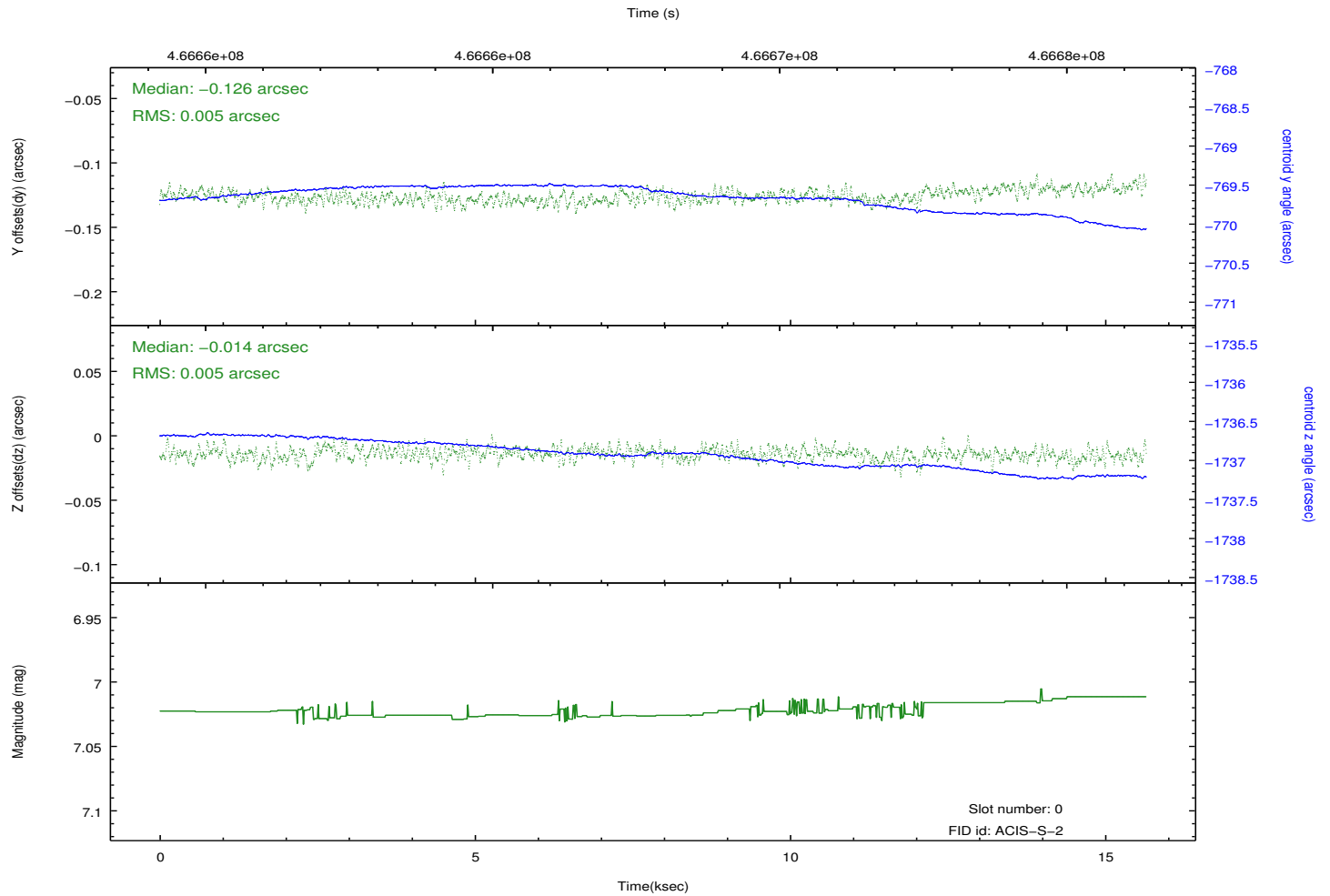
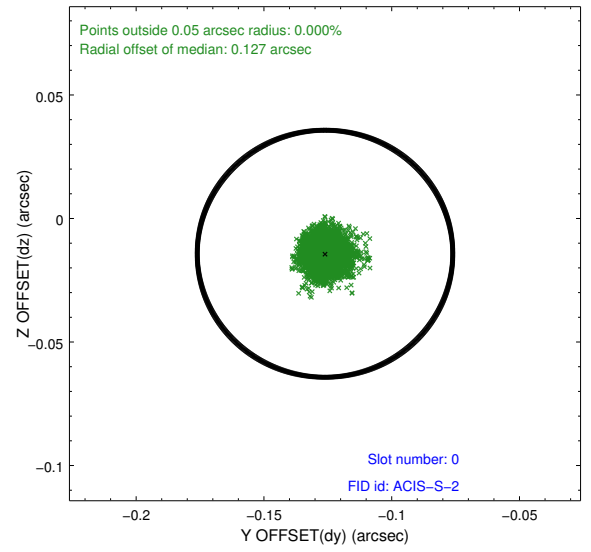
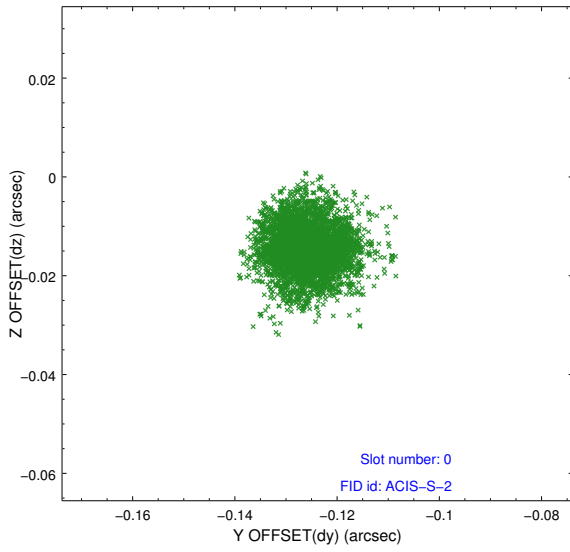


2.4.5 Slot 7

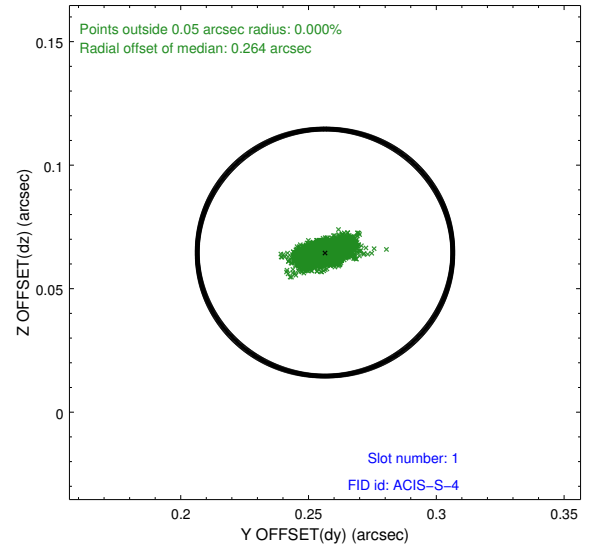
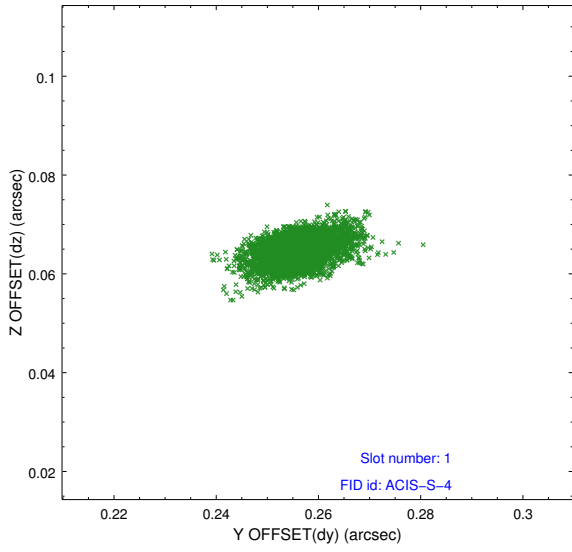


2.5 FID Slots

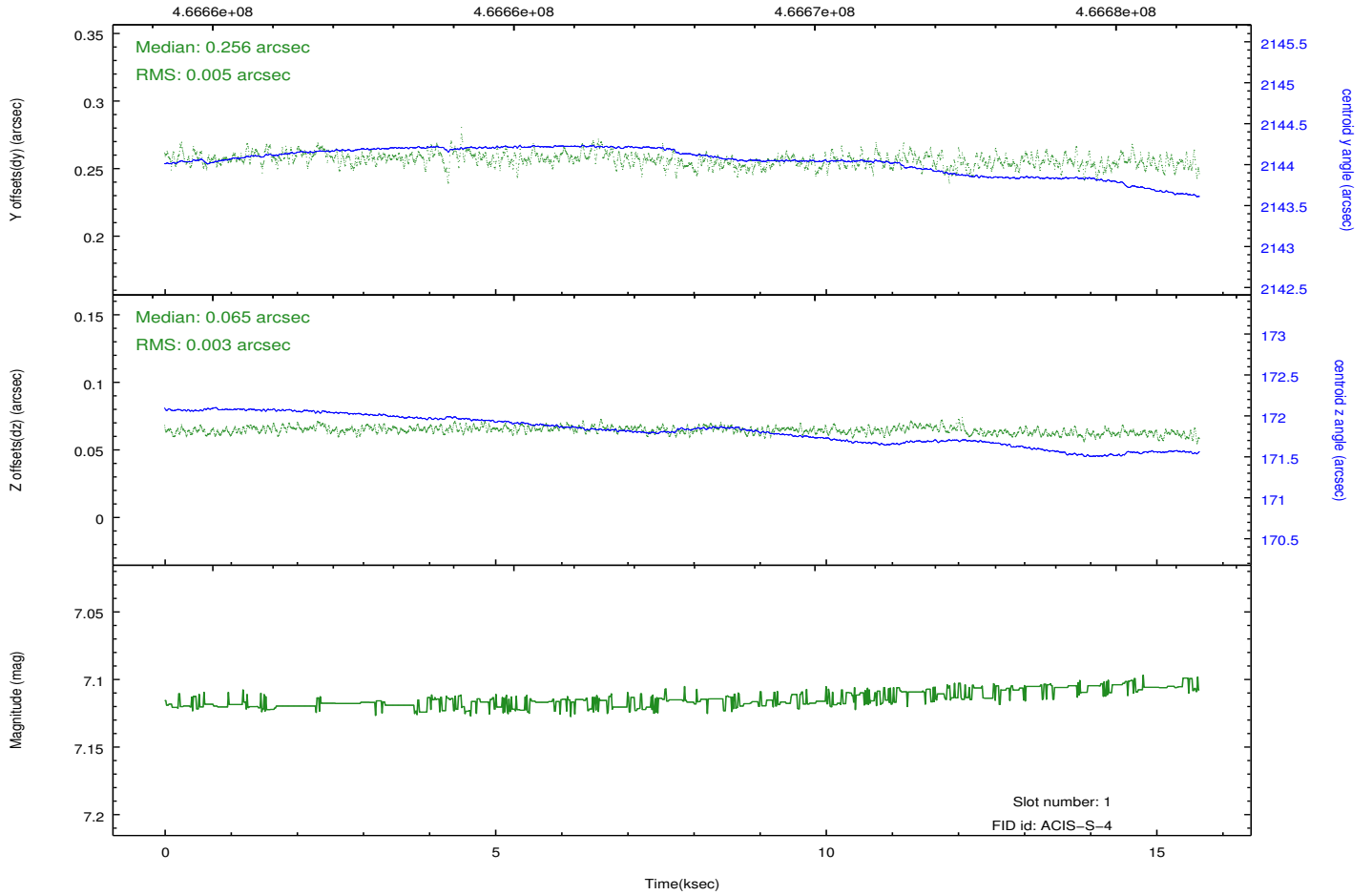
2.5.1 Slot 0



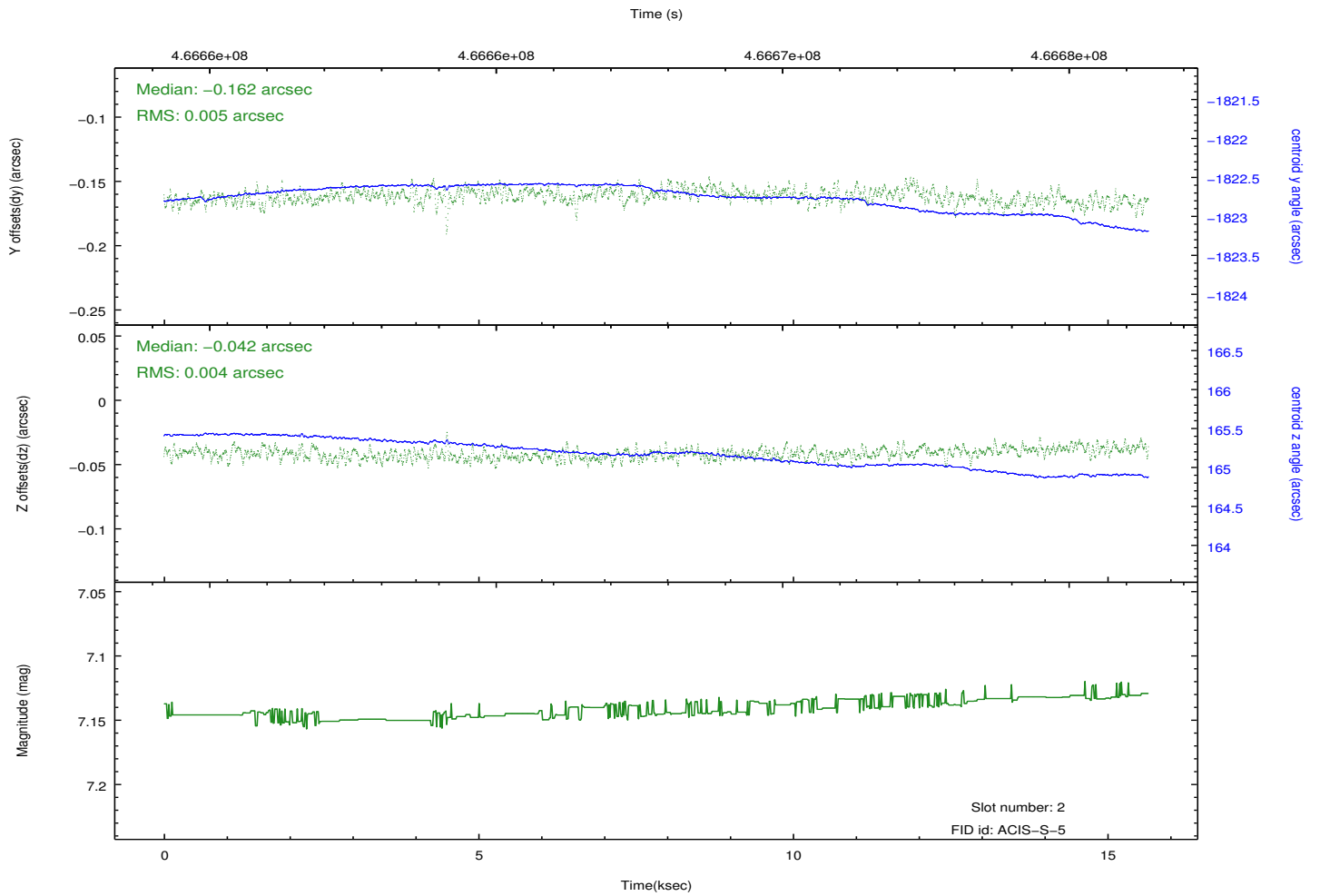
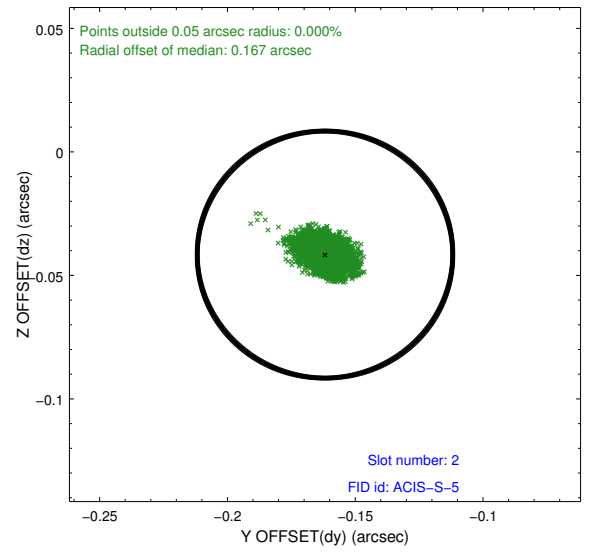
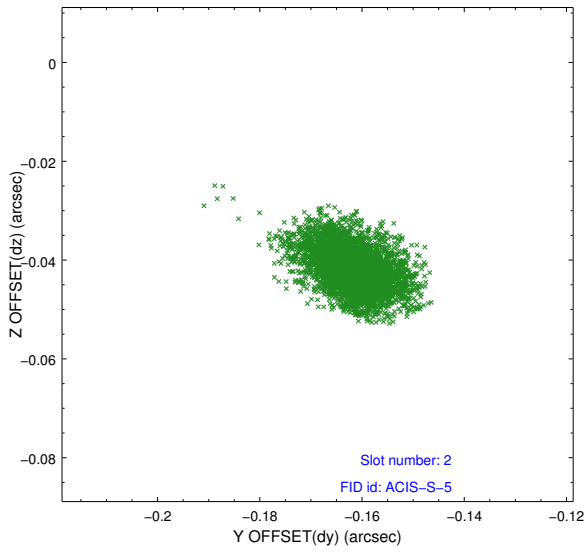
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.561219655991

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.