

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 14504 - L2 Version 2
Chandra X-Ray Center

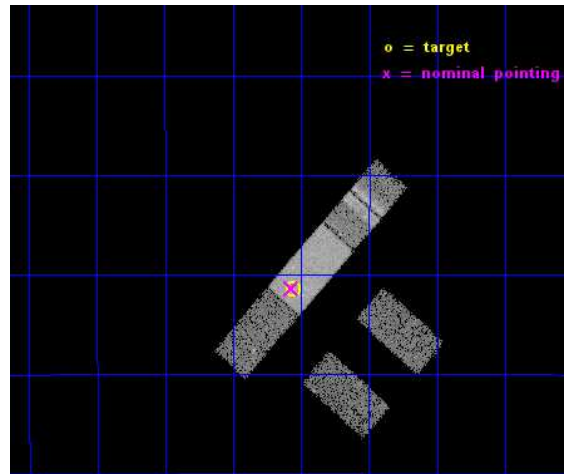
L2 Processing Date : Dec 10 2014

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1 Front

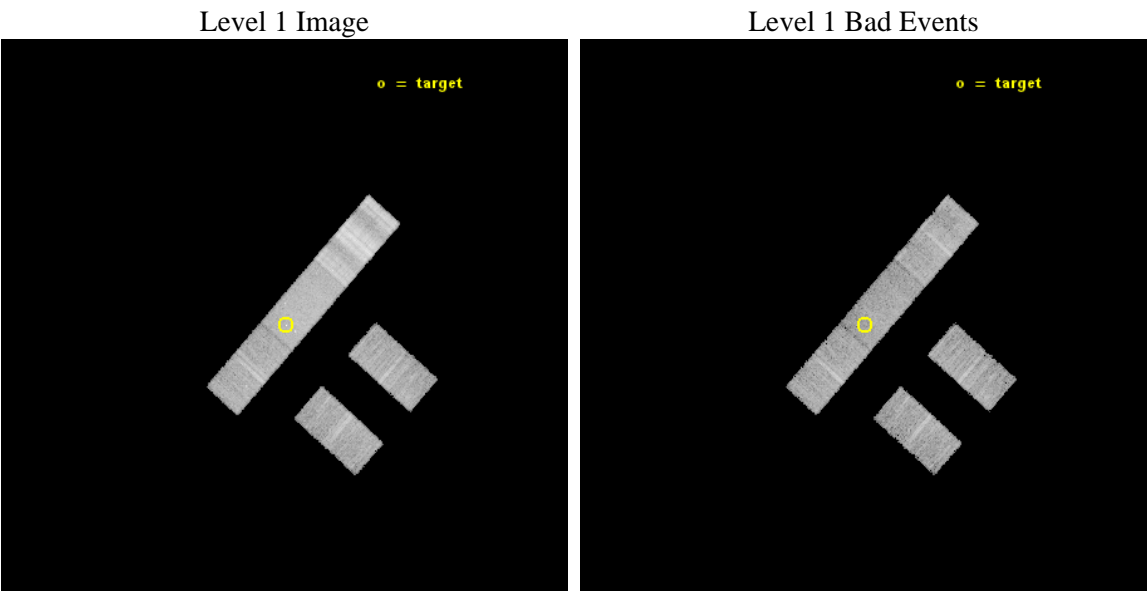
seq_num	702741	Sequence number
obs_id	14504	Observation id
title	ENERGY DEPENDENT X-RAY MICROLENSING AND THE STRUCTURE OF QUASARS	P
observer	Prof. Christopher Kochanek	Principal investigator
object	HE1104-1805	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.639583	Observer's specified target RA [deg]
dec_targ	-18.356722	Observer's specified target Dec [deg]
ra_nom	166.64275163255	Nominal RA [deg]
dec_nom	-18.356261789444	Nominal Dec [deg]
roll_nom	311.45198133182	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14065.448880494	Sum of GTIs [s]
livetime	13733.896462367	Livetime [s]
ontime2	14065.28472048	Sum of GTIs [s]
ontime3	14065.366800487	Sum of GTIs [s]
ontime6	14065.40784049	Sum of GTIs [s]
ontime7	14065.448880494	Sum of GTIs [s]
ontime8	14065.325760484	Sum of GTIs [s]
l2events	47790	Number of level 2 events



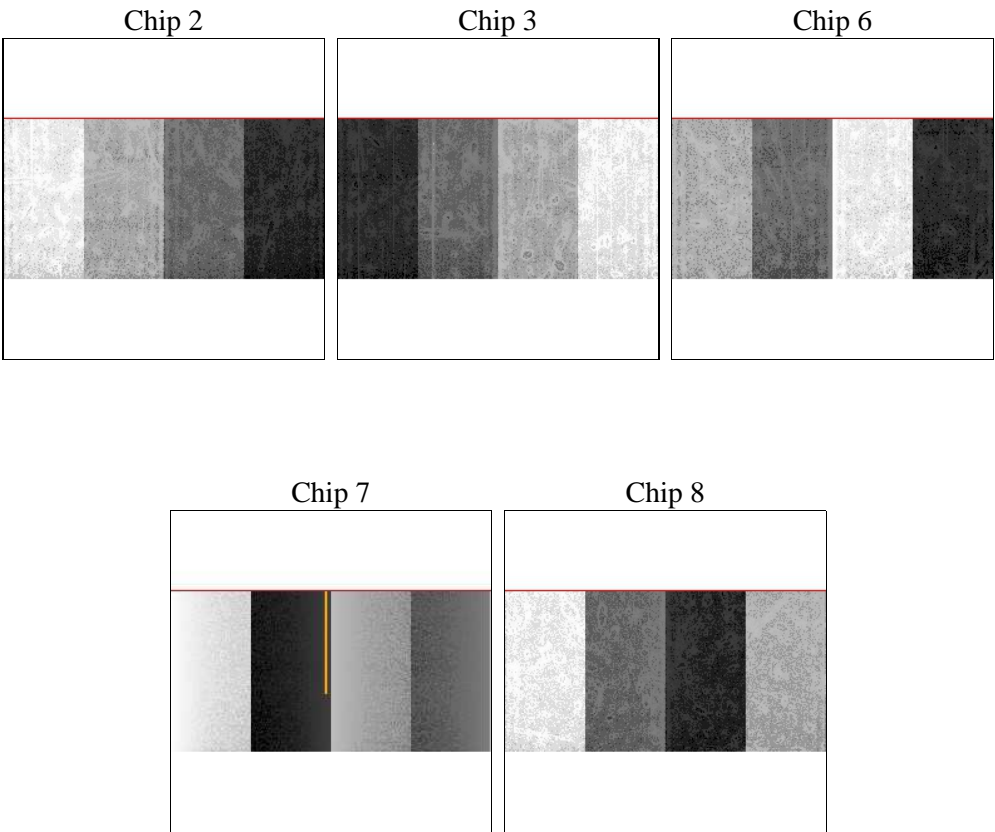
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	14065.448880494	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	14065.28472048	Sum of GTIs [s]
date	2014-12-10T21:29:02	Date and time of file creation	ontime3	14065.366800487	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14065.40784049	Sum of GTIs [s]
			ontime7	14065.448880494	Sum of GTIs [s]
			ontime8	14065.325760484	Sum of GTIs [s]
			l1events	259852	Number of level 1 events

2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	36902	37719	41753	54008	89470
rejected events	31339	33182	35641	28480	39971
rejected %	84%	87%	85%	52%	44%

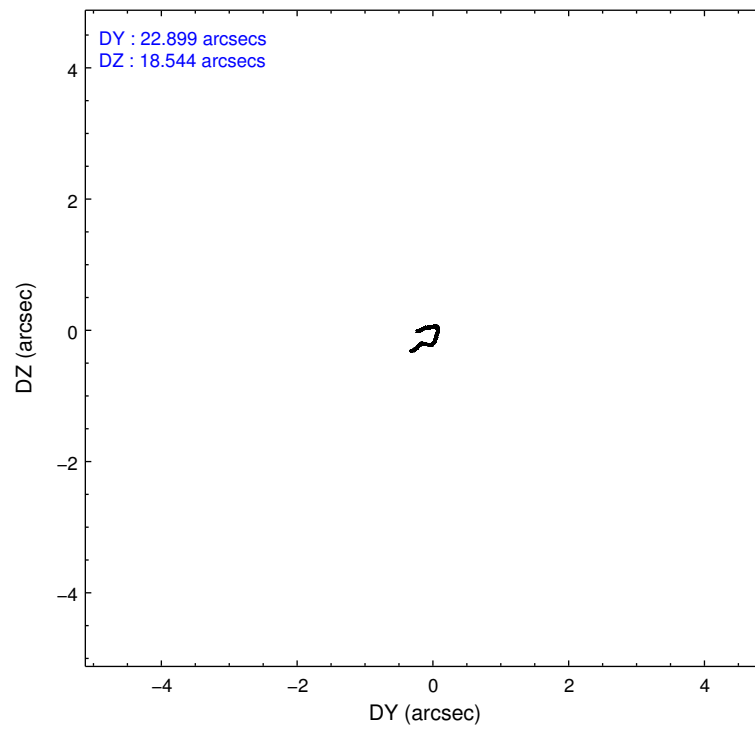
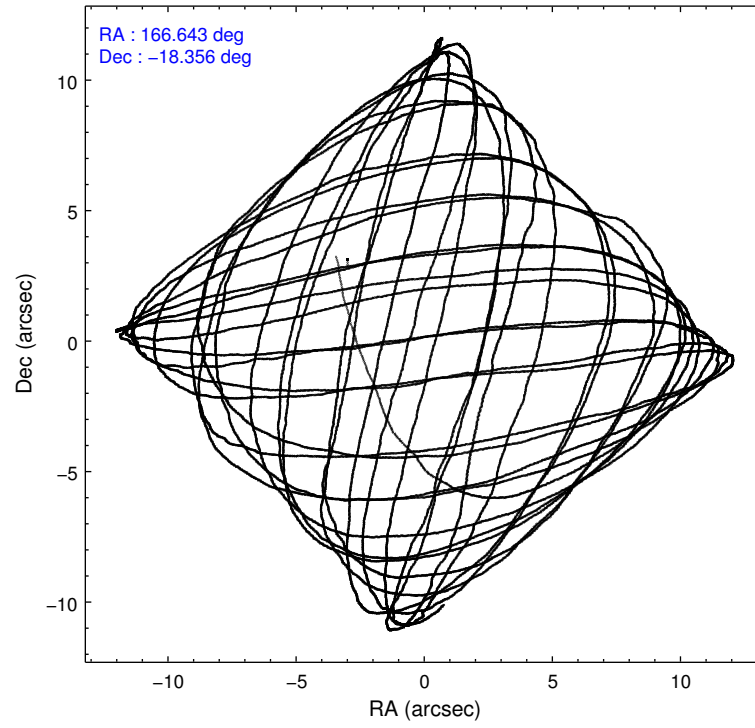
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	2375	1693	2686	2616	19673
	6%	4%	6%	4%	21%
grade 1 events	24	18	23	94	174
	0%	0%	0%	0%	0%
grade 2 events	1206	962	1265	5860	5460
	3%	2%	3%	10%	6%
grade 3 events	518	531	580	2486	9124
	1%	1%	1%	4%	10%
grade 4 events	644	527	599	2295	8401
	1%	1%	1%	4%	9%
grade 5 events	1453	1867	1850	5496	2843
	3%	4%	4%	10%	3%
grade 6 events	821	825	983	12272	6841
	2%	2%	2%	22%	7%
grade 7 events	29861	31296	33767	22889	36954
	80%	82%	80%	42%	41%

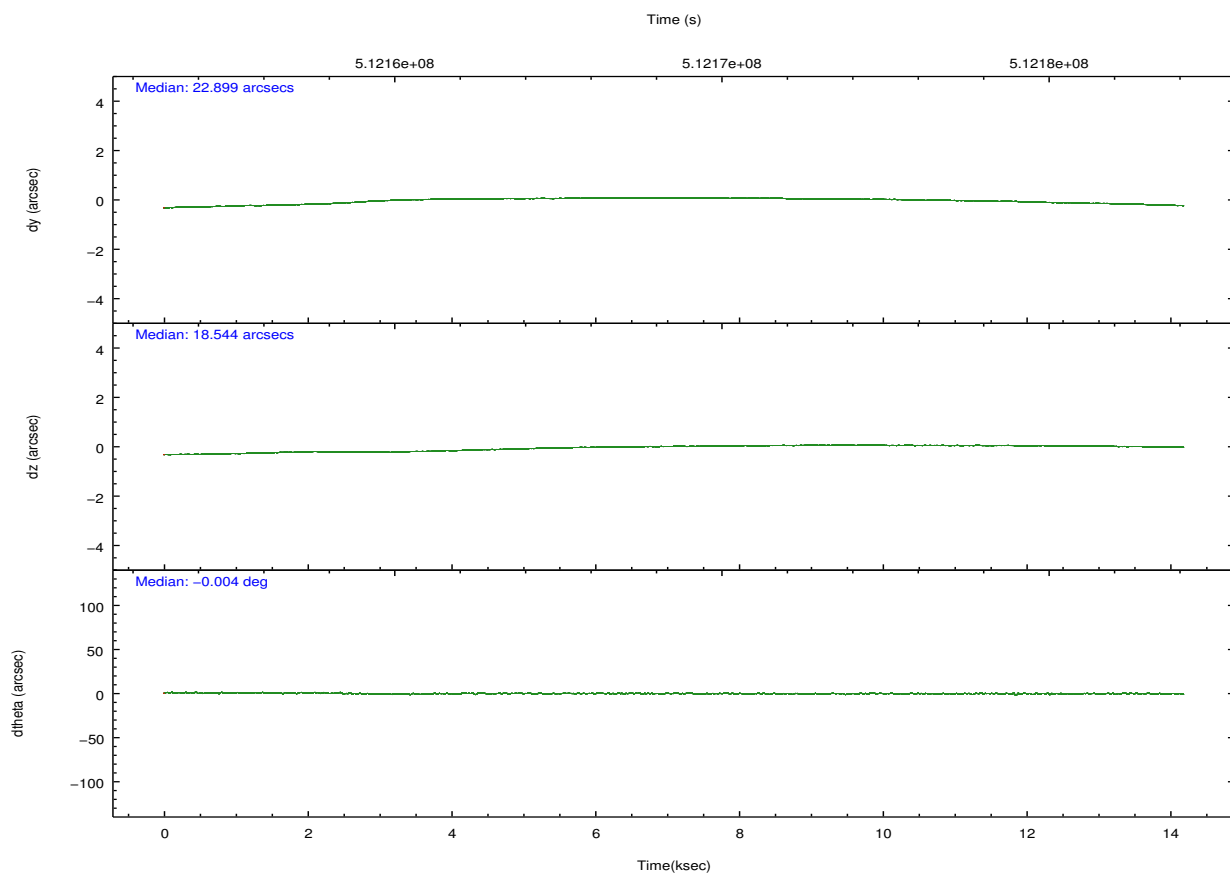
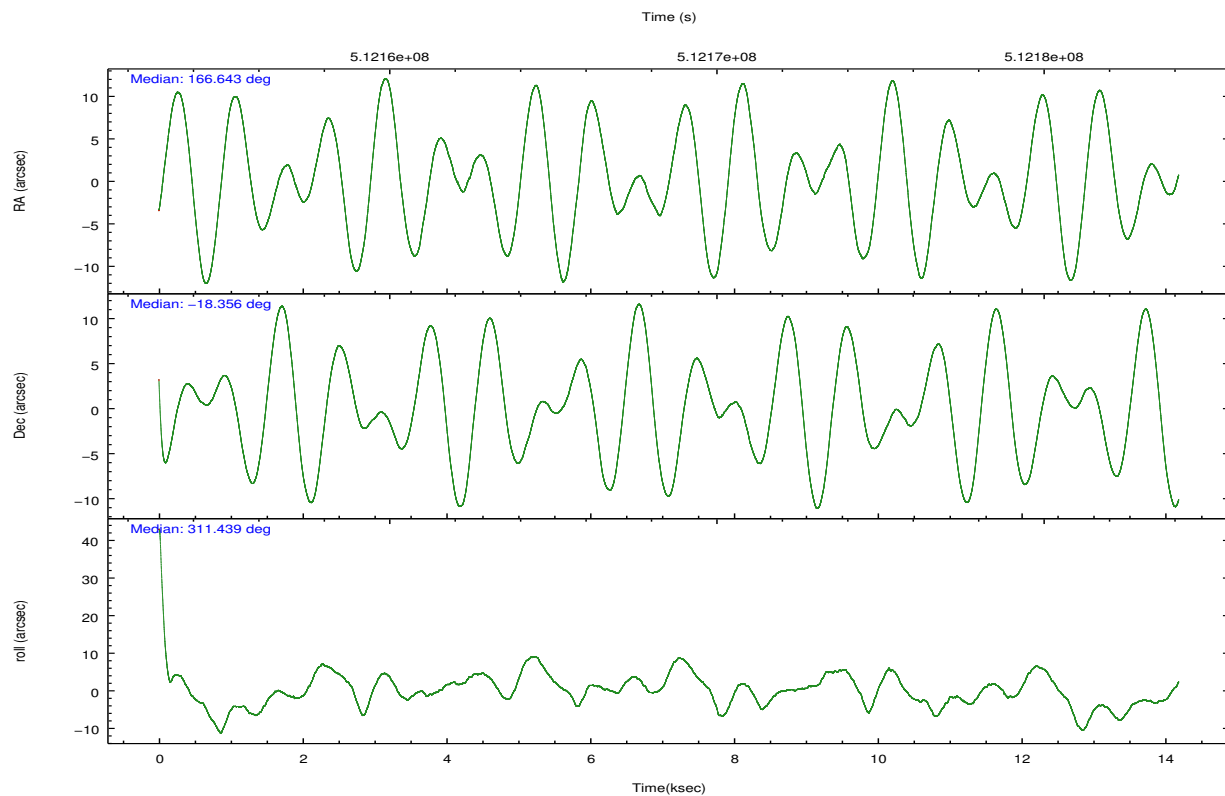
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23678	ACIS-23678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	166.615298	166.6427516325475
[deg] Pointing Dec	-18.347908	-18.35626178944387
[deg] Pointing Roll	311.286673	311.4519813318243
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.145094680475
[mm] SIM translation stage offset	0	0.01257209746719923
[s] Observation start time (MET)	512162354.184000	512161500.2049
Observation start date	2014-03-25T19:18:07	2014-03-25T19:05:00
[s] Observation end time (MET)	512176354.184000	512176965.91825
Observation end date	2014-03-25T23:11:27	2014-03-25T23:22:45
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	O4	Y
CCD I3 on	O3	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	Y	Y
CCD S4 on	O2	Y
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/2
Subarray start row	257	257
Subarray row count	512	512
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	1.7

2.3 Aspect



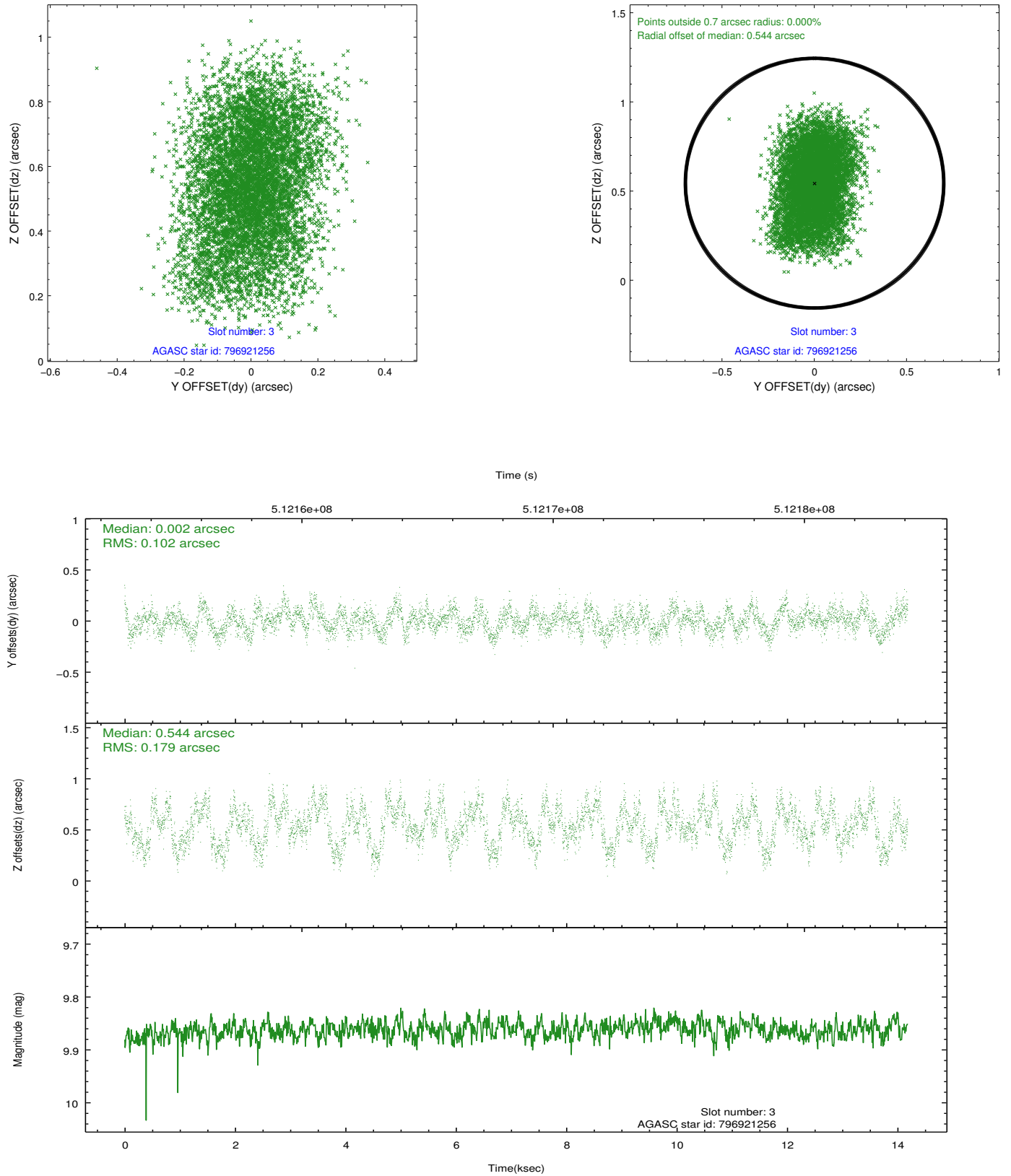


Slot Statistics

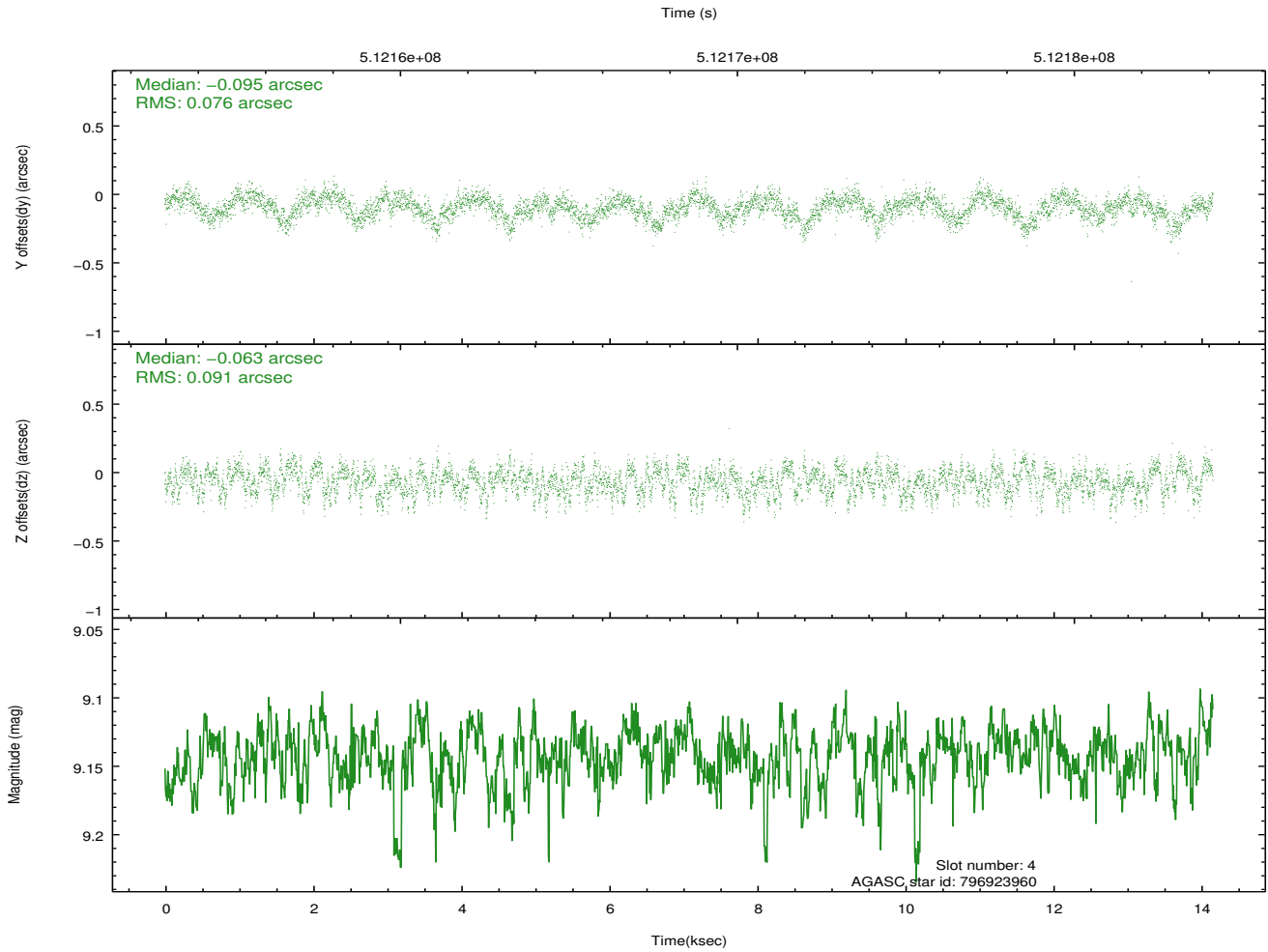
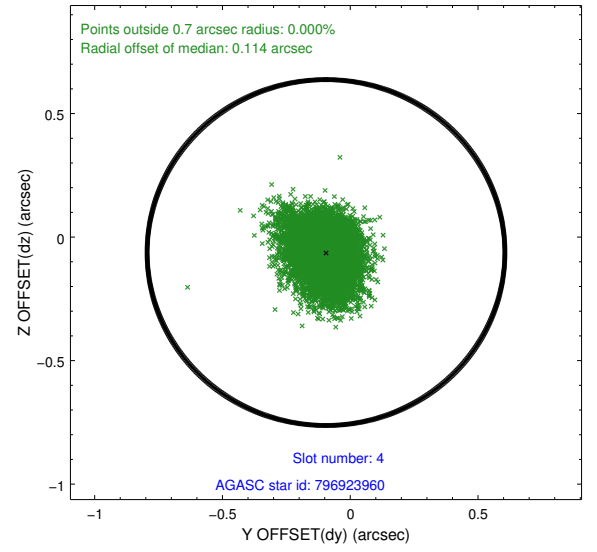
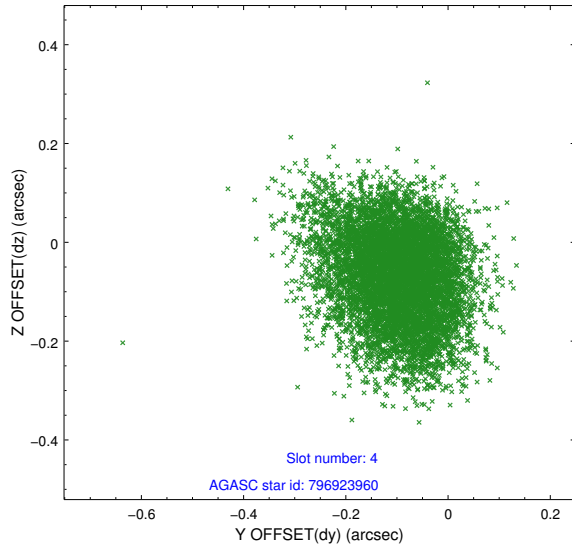
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.99	3461	-0.115	-0.066	0.010	0.020	0.000000	0.000000	-776.17	-1739.91
1	FID		ACIS-S-4	7.08	3461	0.306	0.073	0.009	0.021	0.000000	0.000000	2137.39	168.34
2	FID		ACIS-S-5	7.10	3461	-0.222	0.002	0.008	0.014	0.000000	0.000000	-1828.68	162.35
3	GUIDE	used	796921256	9.86	6911	0.002	0.544	0.223	0.354	165.757289	-18.316611	-2013.40	-2133.64
4	GUIDE	used	796923960	9.14	6842	-0.095	-0.063	0.126	0.203	167.114946	-18.113690	495.52	1838.95
5	GUIDE	used	796928784	8.41	6916	-0.257	-0.218	0.117	0.199	166.853792	-17.800971	-939.87	1912.91
6	GUIDE	used	796928880	9.86	6910	-0.052	0.220	0.253	0.393	166.621408	-18.801010	1241.95	-1062.00
7	GUIDE	used	796930872	10.11	6830	0.415	-0.457	0.253	0.386	166.504684	-19.082395	1740.20	-2027.94

2.4 Star Slots

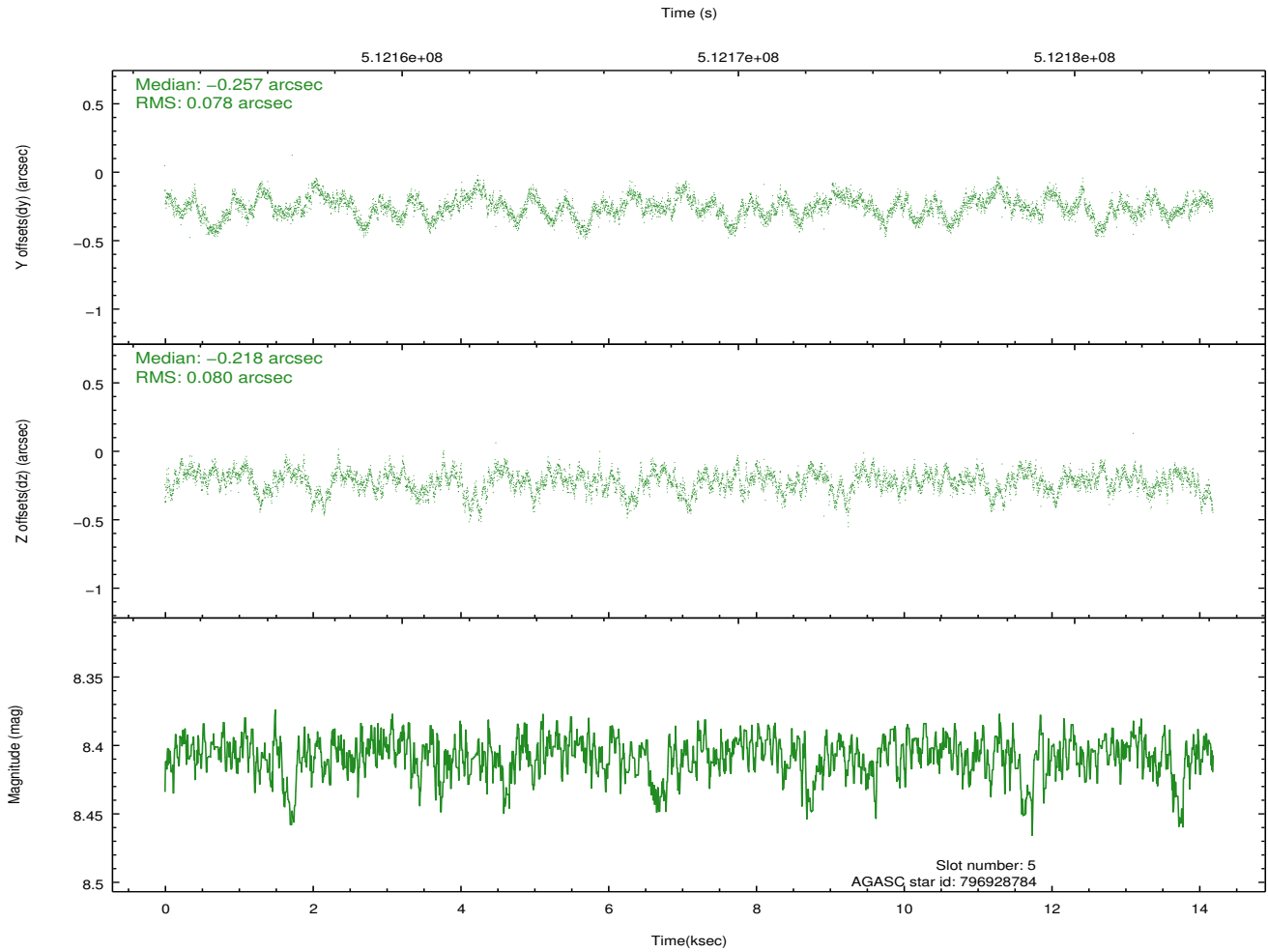
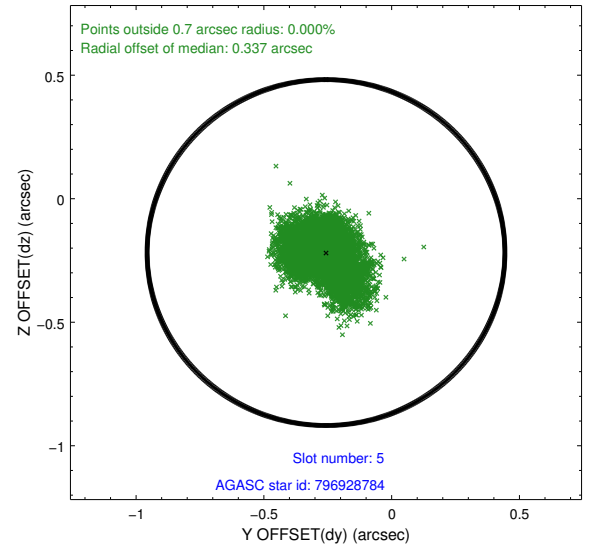
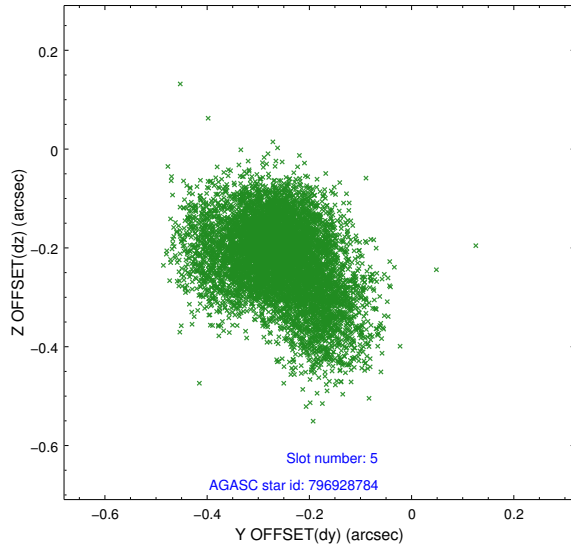
2.4.1 Slot 3



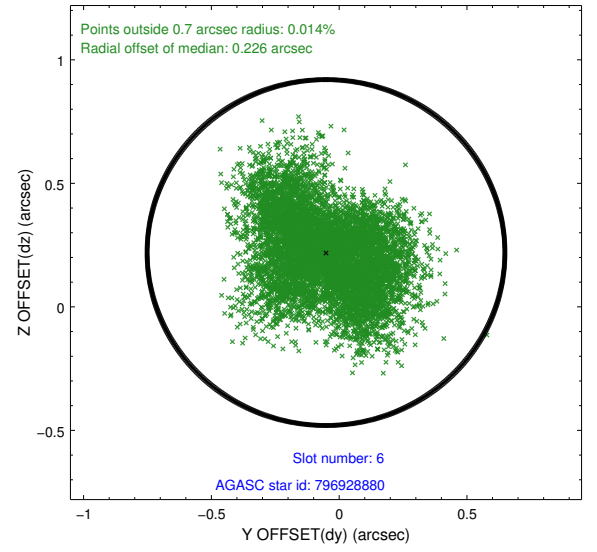
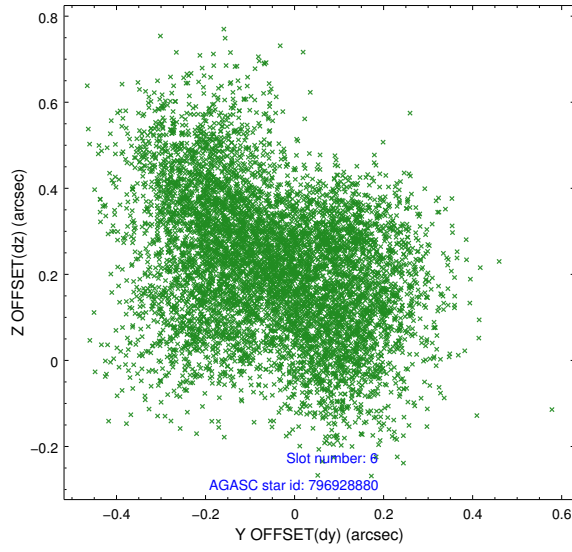
2.4.2 Slot 4



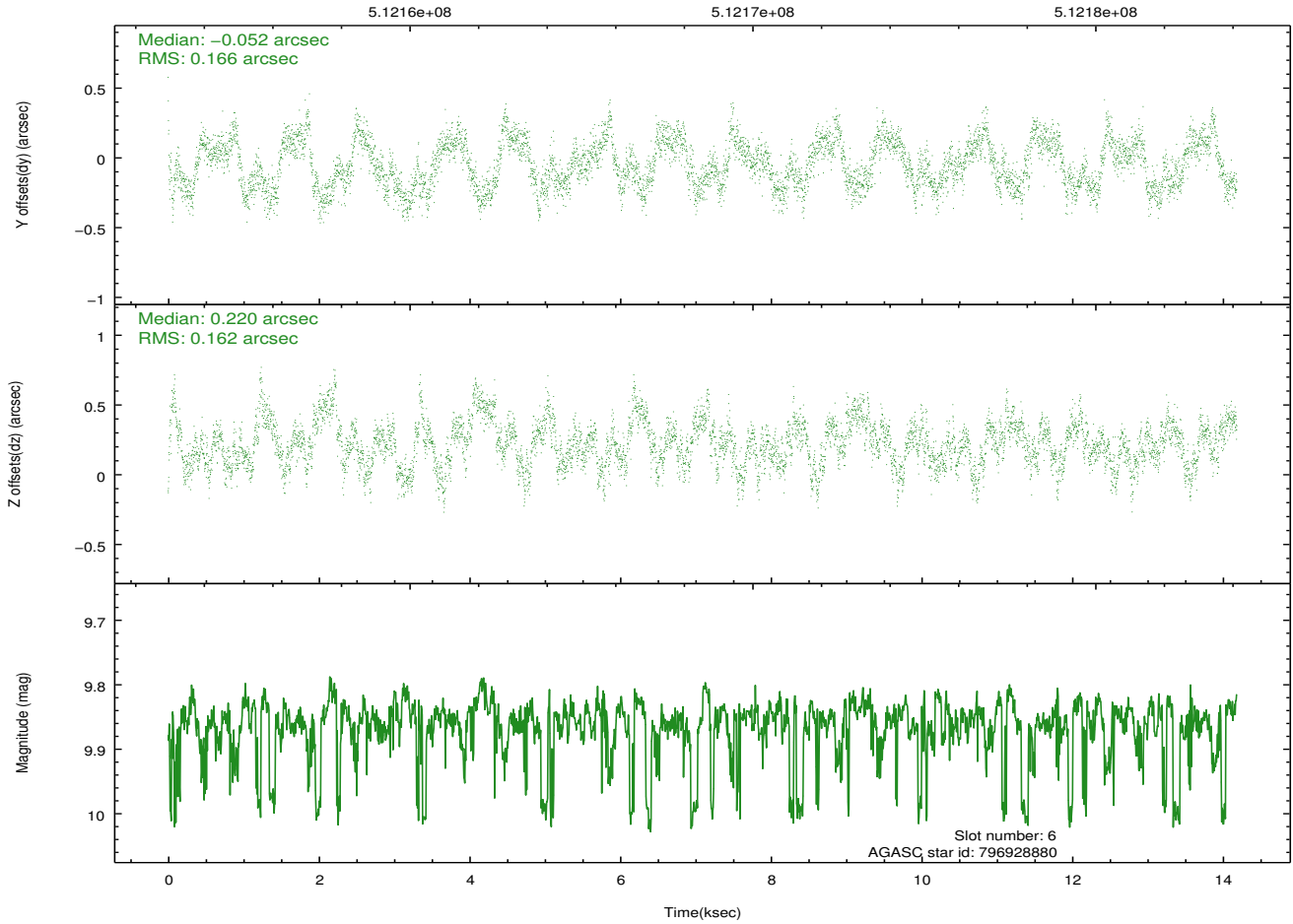
2.4.3 Slot 5



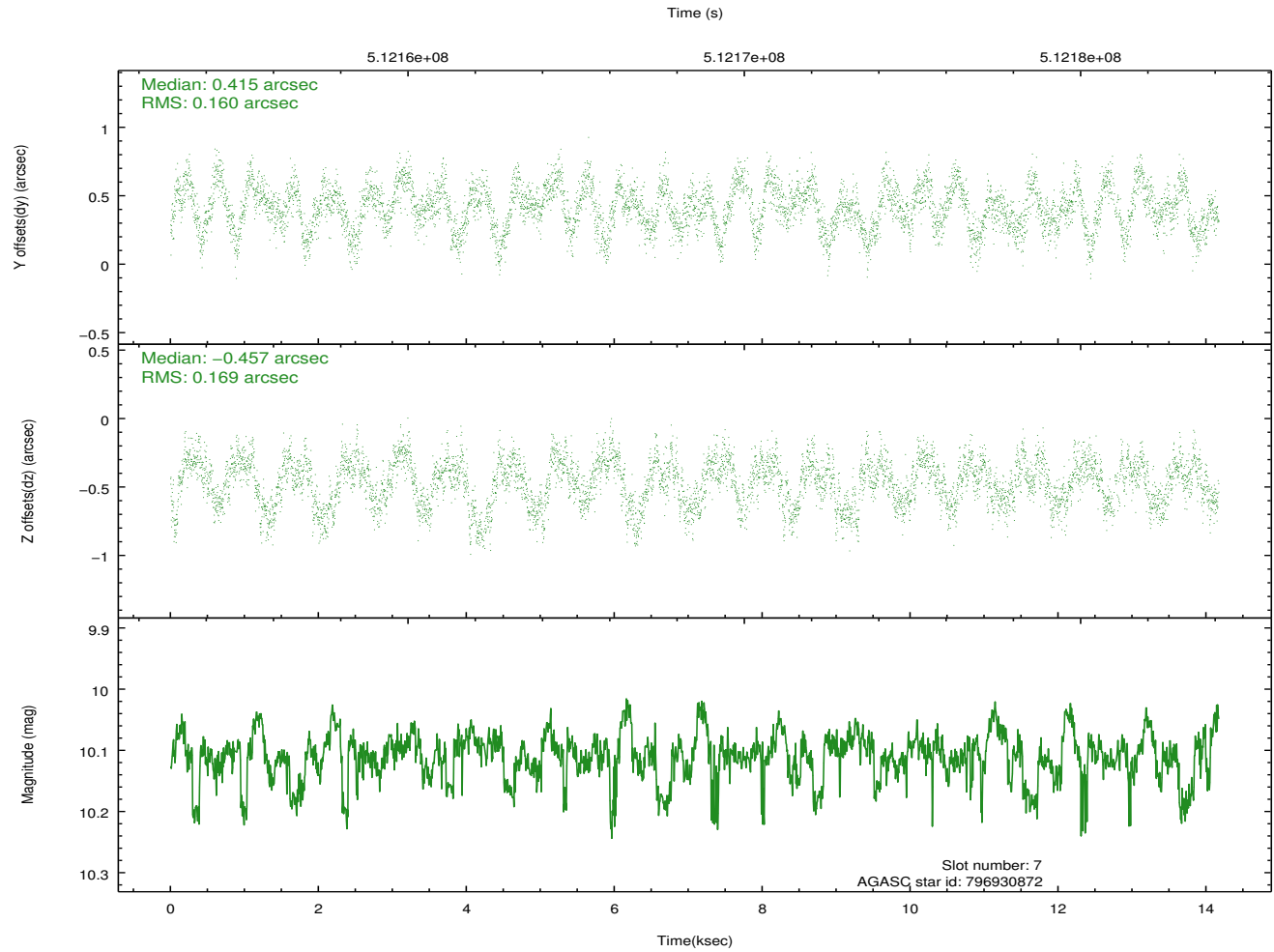
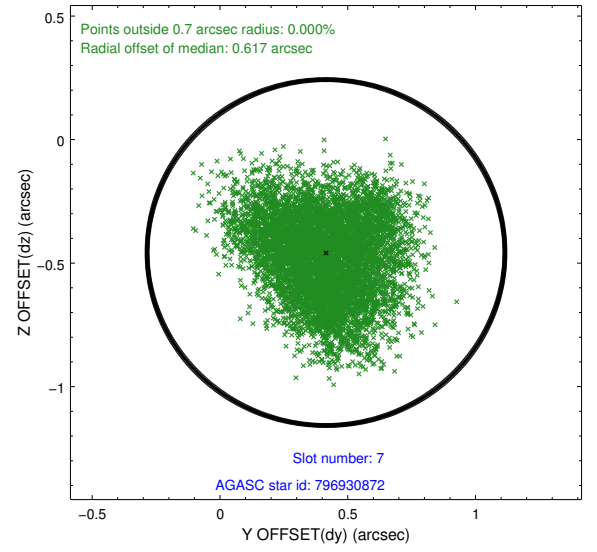
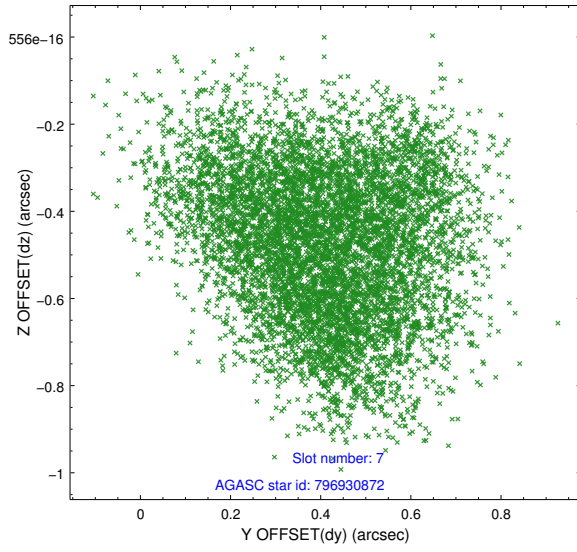
2.4.4 Slot 6



Time (s)

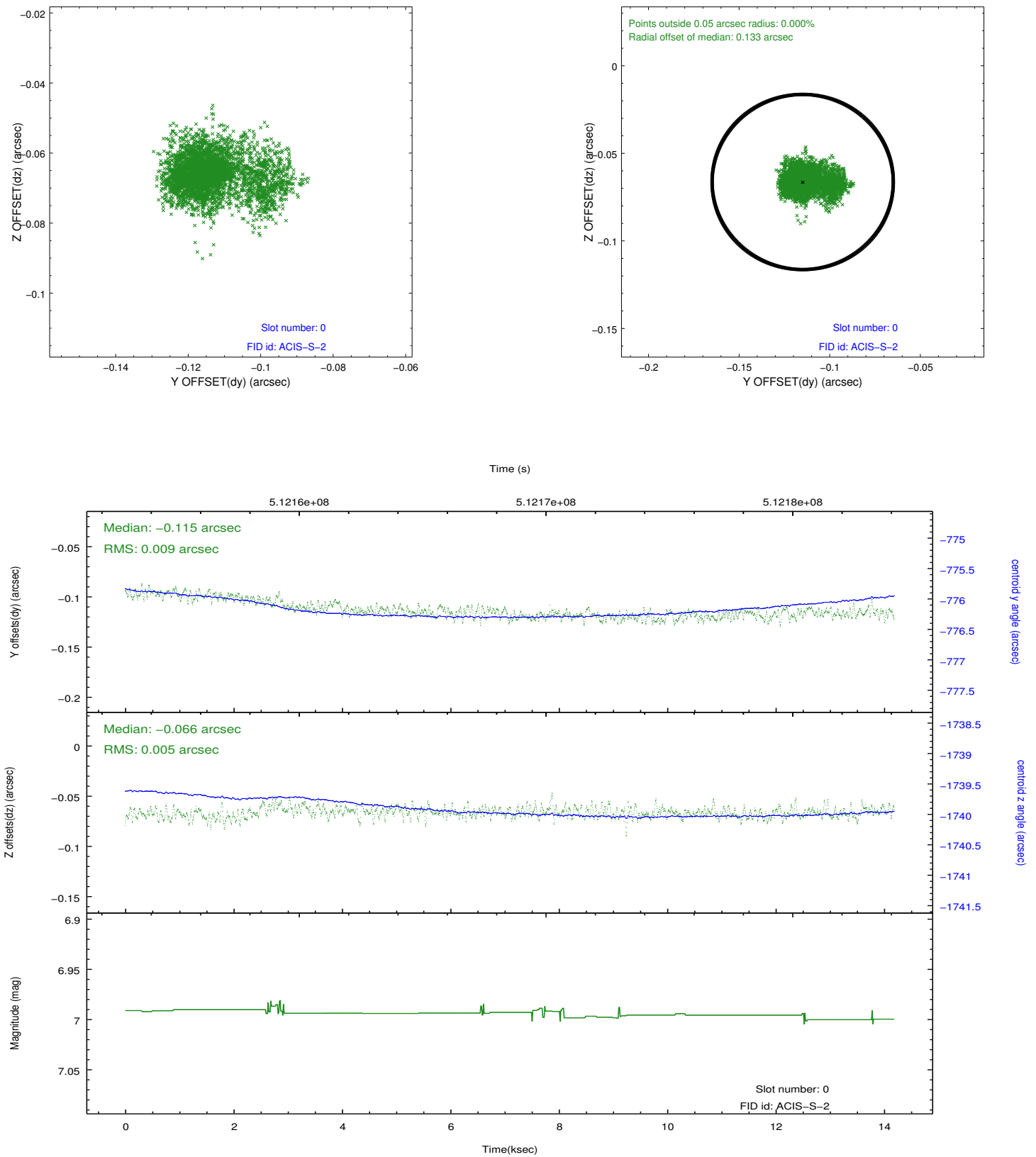


2.4.5 Slot 7

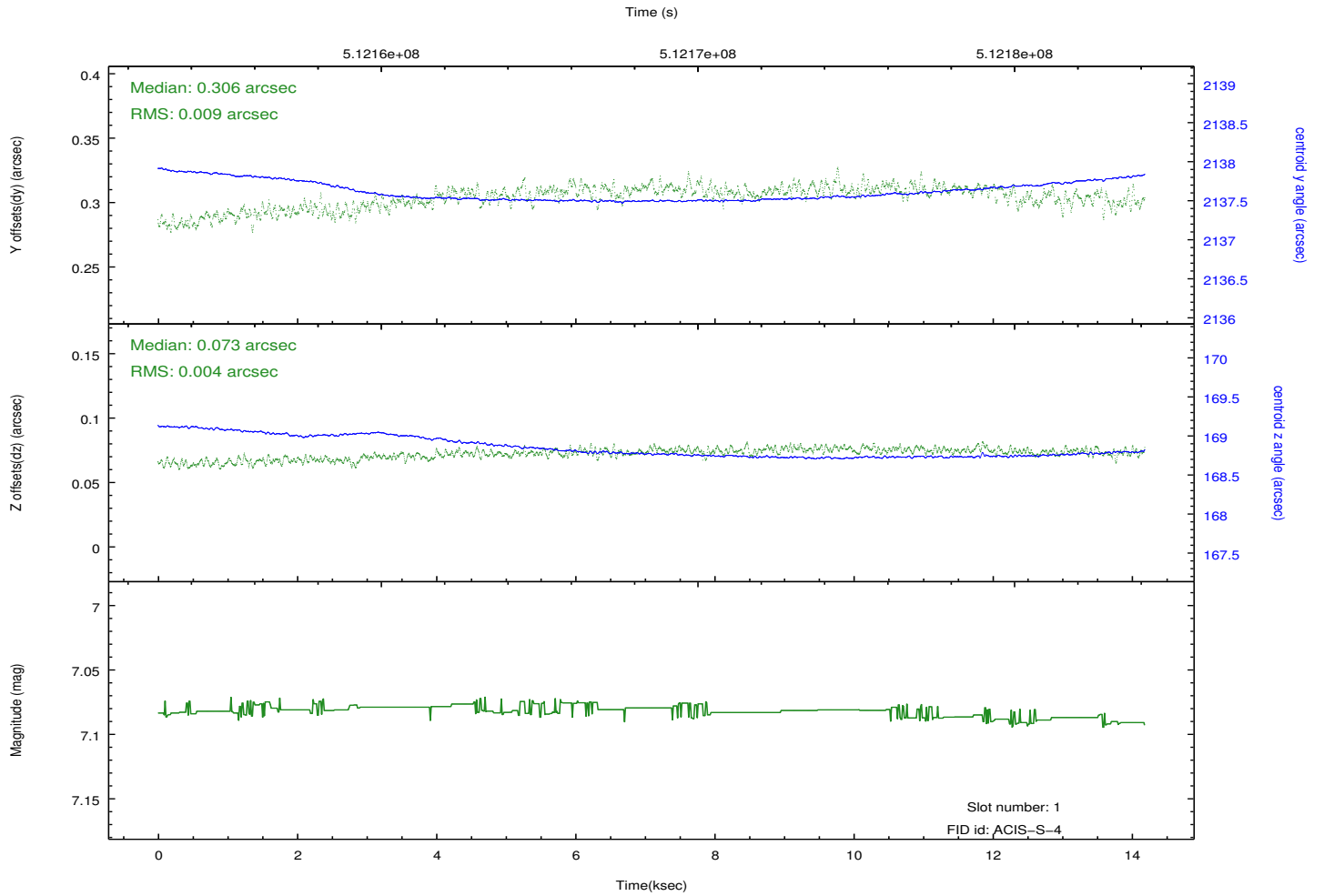
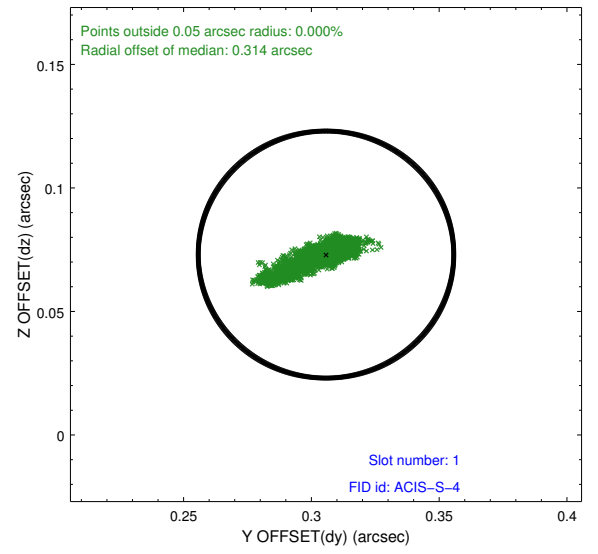
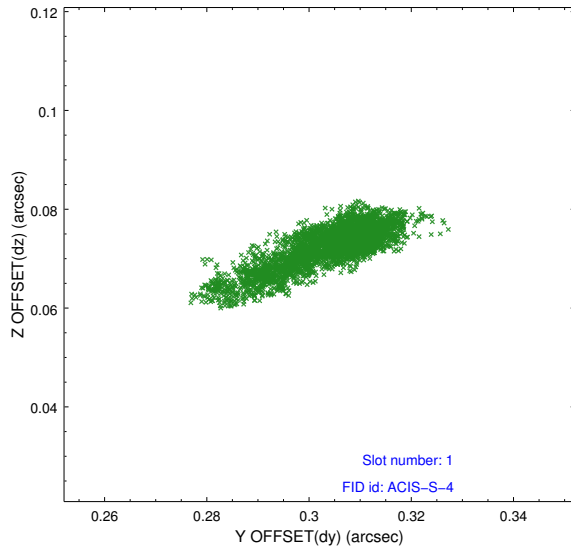


2.5 FID Slots

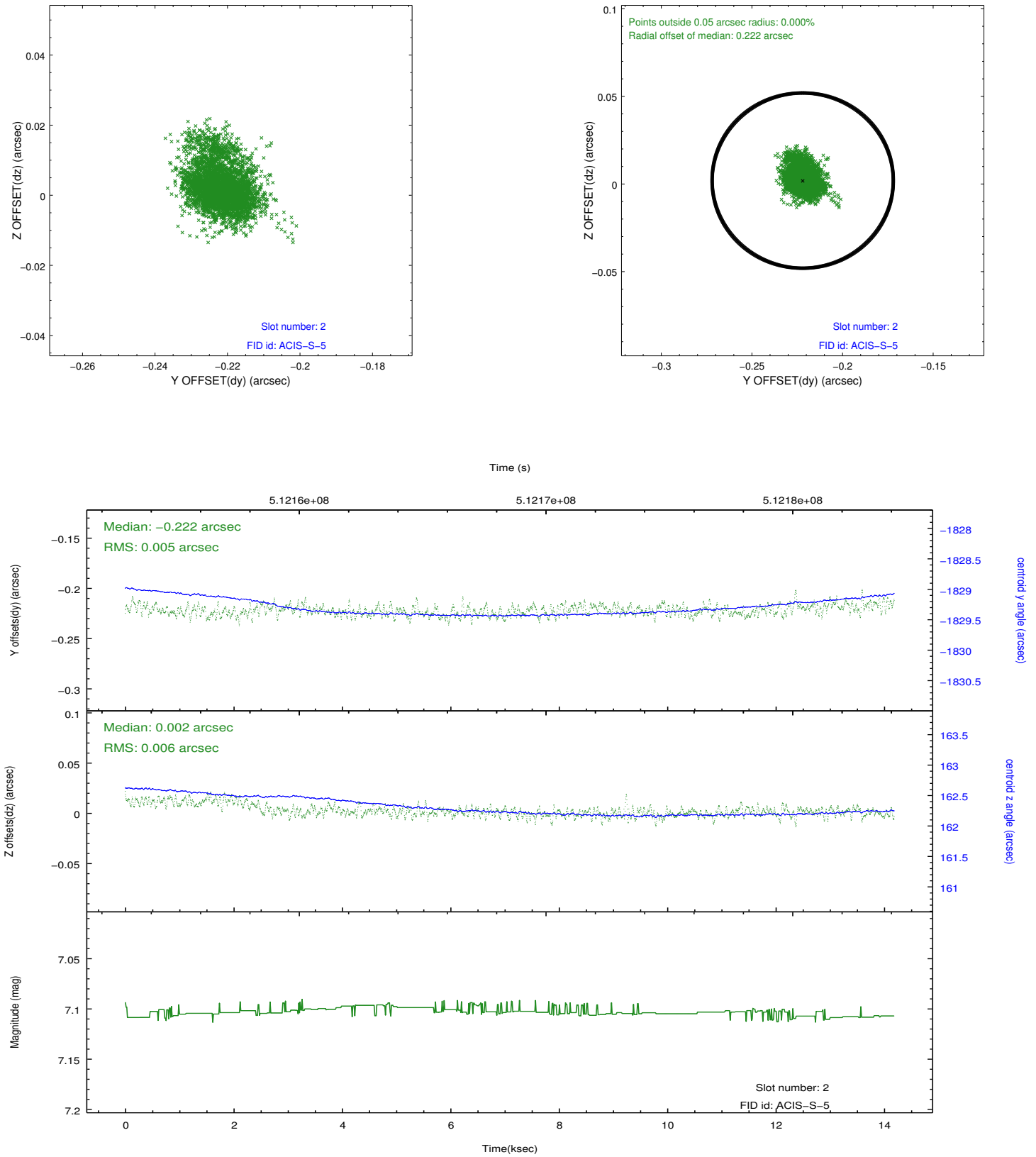
2.5.1 Slot 0



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)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.065448880494

A.2 Comments

Joint proposal with HST.

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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.