

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12708 - L2 Version 2
Chandra X-Ray Center

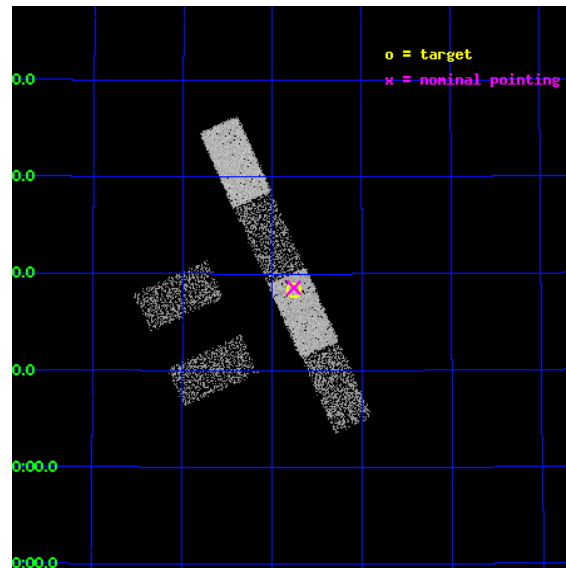
L2 Processing Date : Feb 3 2012

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

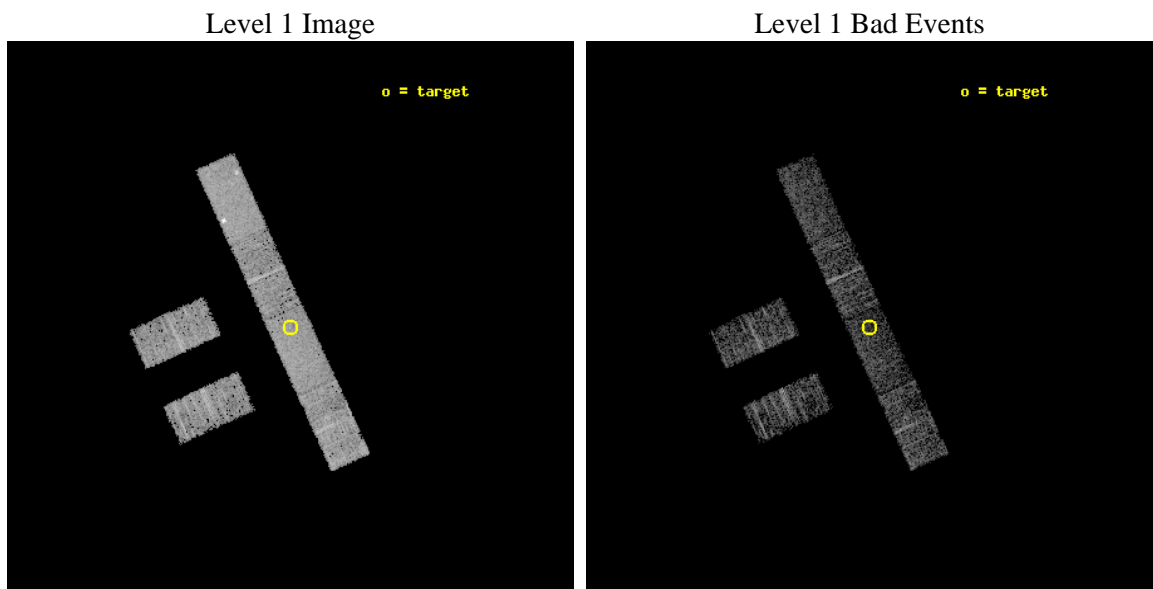
seq_num	702344	Sequence number
obs_id	12708	Observation id
title	The Nature of Weak-Line Quasars at Low Redshift	Proposal title
observer	Prof. William Brandt	Principal investigator
object	SDSS J1612+5118	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	243.190417	Observer's specified target RA [deg]
dec_targ	51.304667	Observer's specified target Dec [deg]
ra_nom	243.1894811394	Nominal RA [deg]
dec_nom	51.309297185215	Nominal Dec [deg]
roll_nom	65.438800836272	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3297.6000217795	Sum of GTIs [s]
livetime	3224.0907526198	Livetime [s]
ontime2	3297.6000217795	Sum of GTIs [s]
ontime3	3297.6000217795	Sum of GTIs [s]
ontime5	3297.6000217795	Sum of GTIs [s]
ontime6	3297.6000217795	Sum of GTIs [s]
ontime7	3297.6000217795	Sum of GTIs [s]
ontime8	3297.6000217795	Sum of GTIs [s]
l2events	20377	Number of level 2 events



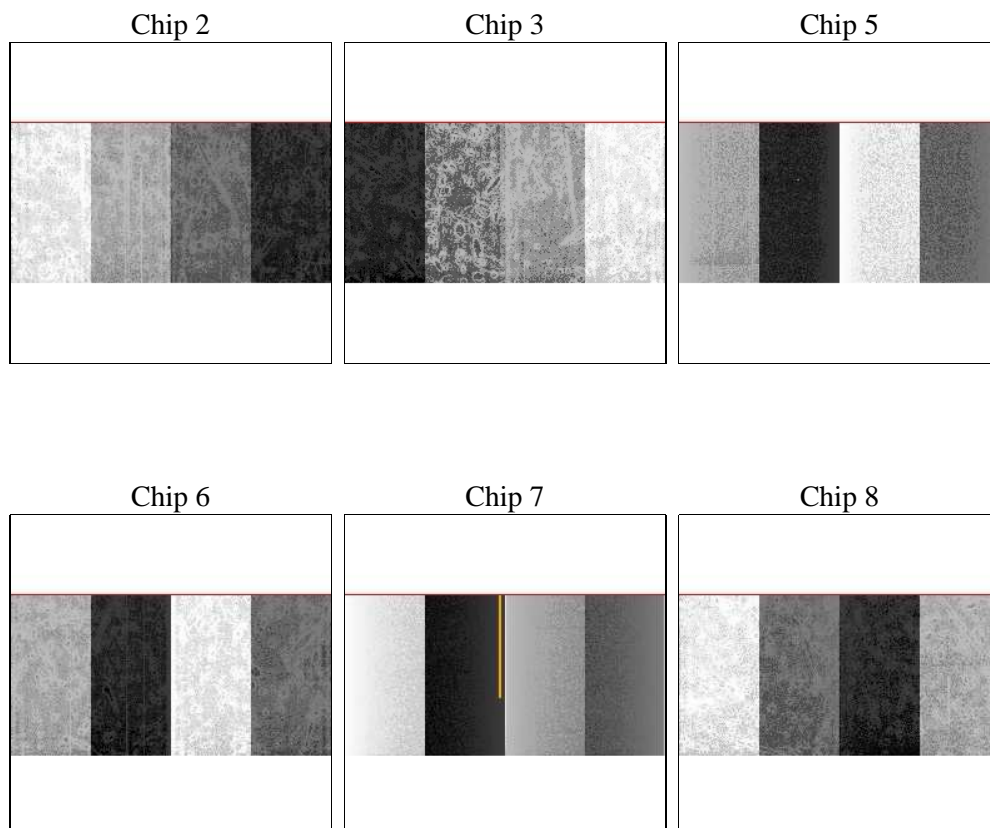
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	3297.6000217795	Sum of GTIs [s]
caldsver	4.4.7	 	ontime2	3297.6000217795	Sum of GTIs [s]
date	2012-02-03T14:09:55	Date and time of file creation	ontime3	3297.6000217795	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	3297.6000217795	Sum of GTIs [s]
			ontime6	3297.6000217795	Sum of GTIs [s]
			ontime7	3297.6000217795	Sum of GTIs [s]
			ontime8	3297.6000217795	Sum of GTIs [s]
			l1events	88683	Number of level 1 events

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	12884	12265	19558	12494	15385	16097
rejected events	11424	10992	9237	11090	8239	11891
rejected %	88%	89%	47%	88%	53%	73%

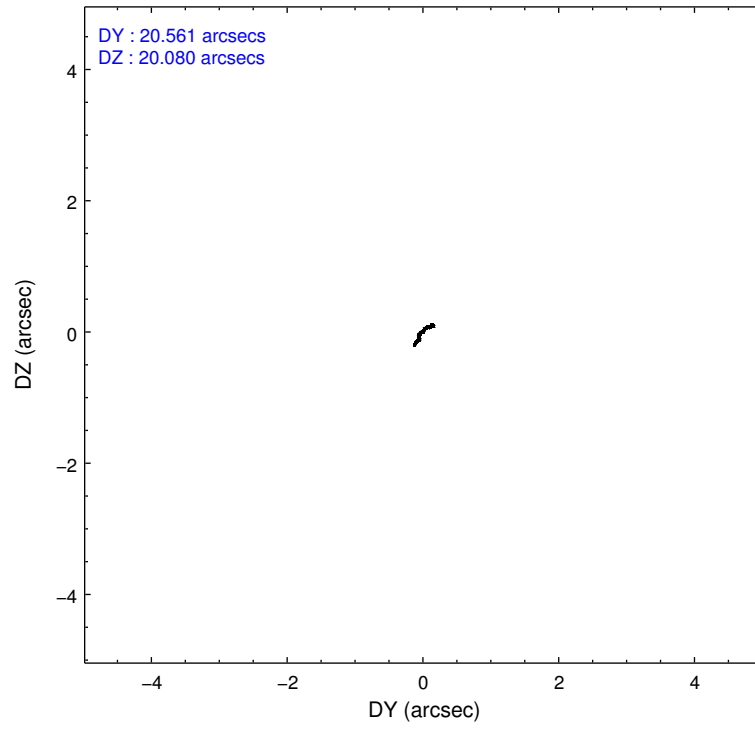
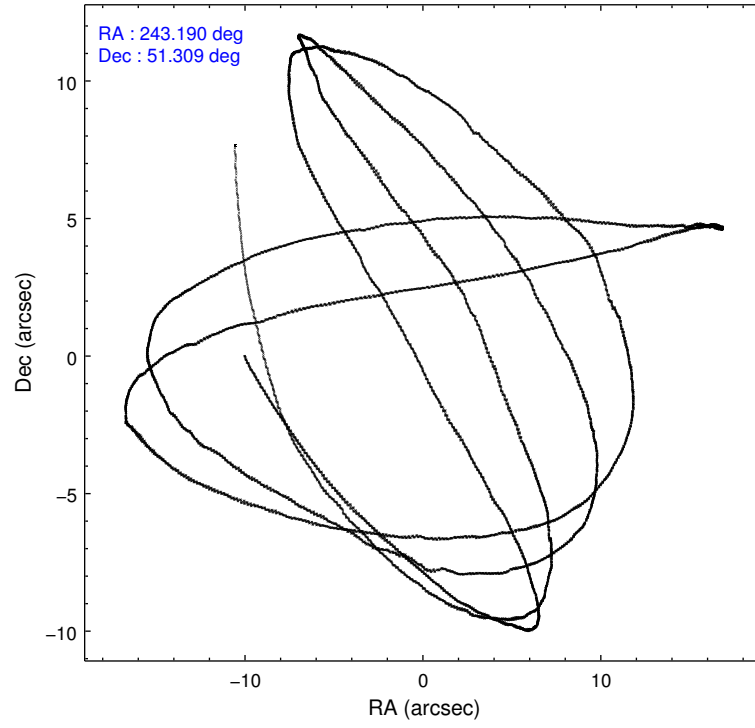
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	477	420	2217	490	714	1327
	3%	3%	11%	3%	4%	8%
grade 1 events	6	8	53	6	19	9
	0%	0%	0%	0%	0%	0%
grade 2 events	347	282	2710	282	1469	998
	2%	2%	13%	2%	9%	6%
grade 3 events	169	167	414	175	751	428
	1%	1%	2%	1%	4%	2%
grade 4 events	184	167	428	165	706	436
	1%	1%	2%	1%	4%	2%
grade 5 events	498	500	1537	529	1611	782
	3%	4%	7%	4%	10%	4%
grade 6 events	284	239	4564	293	3512	1054
	2%	1%	23%	2%	22%	6%
grade 7 events	10919	10482	7635	10554	6603	11063
	84%	85%	39%	84%	42%	68%

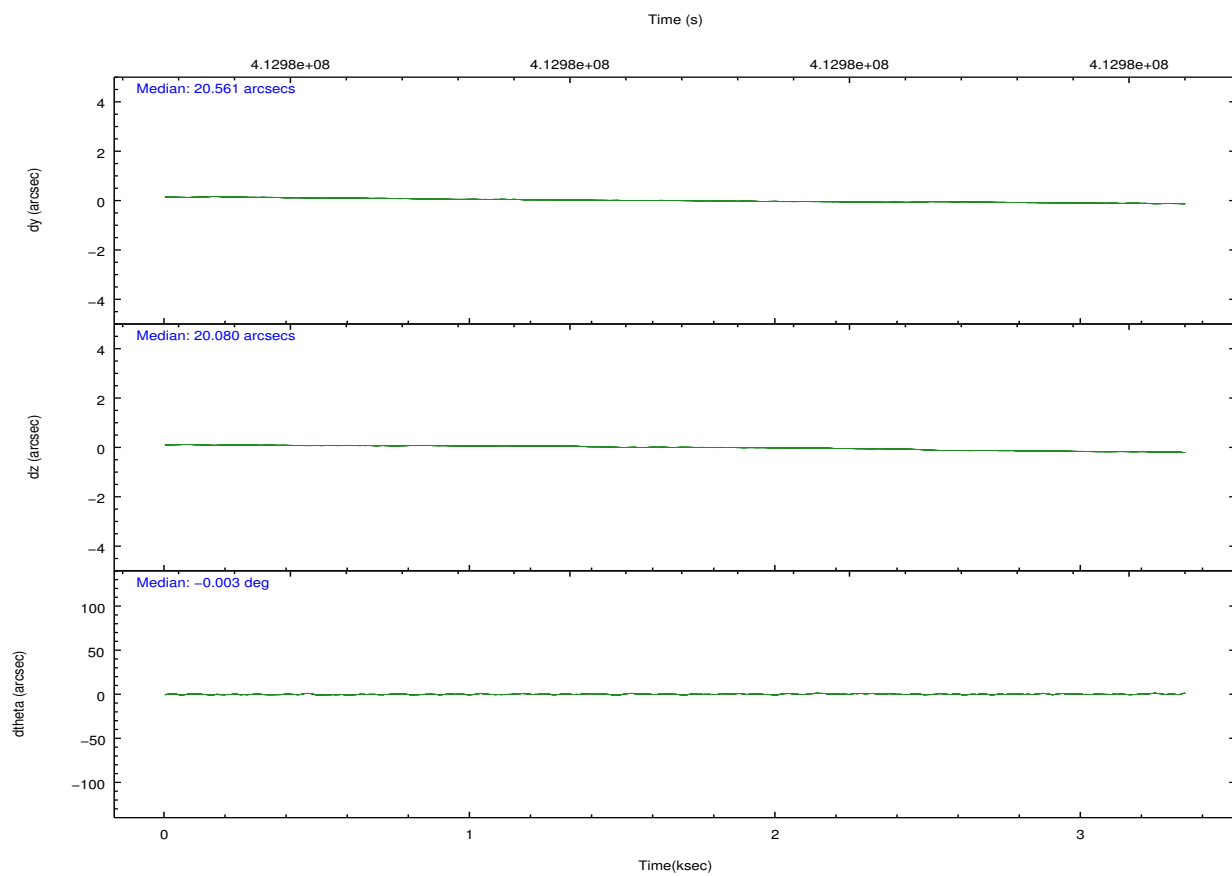
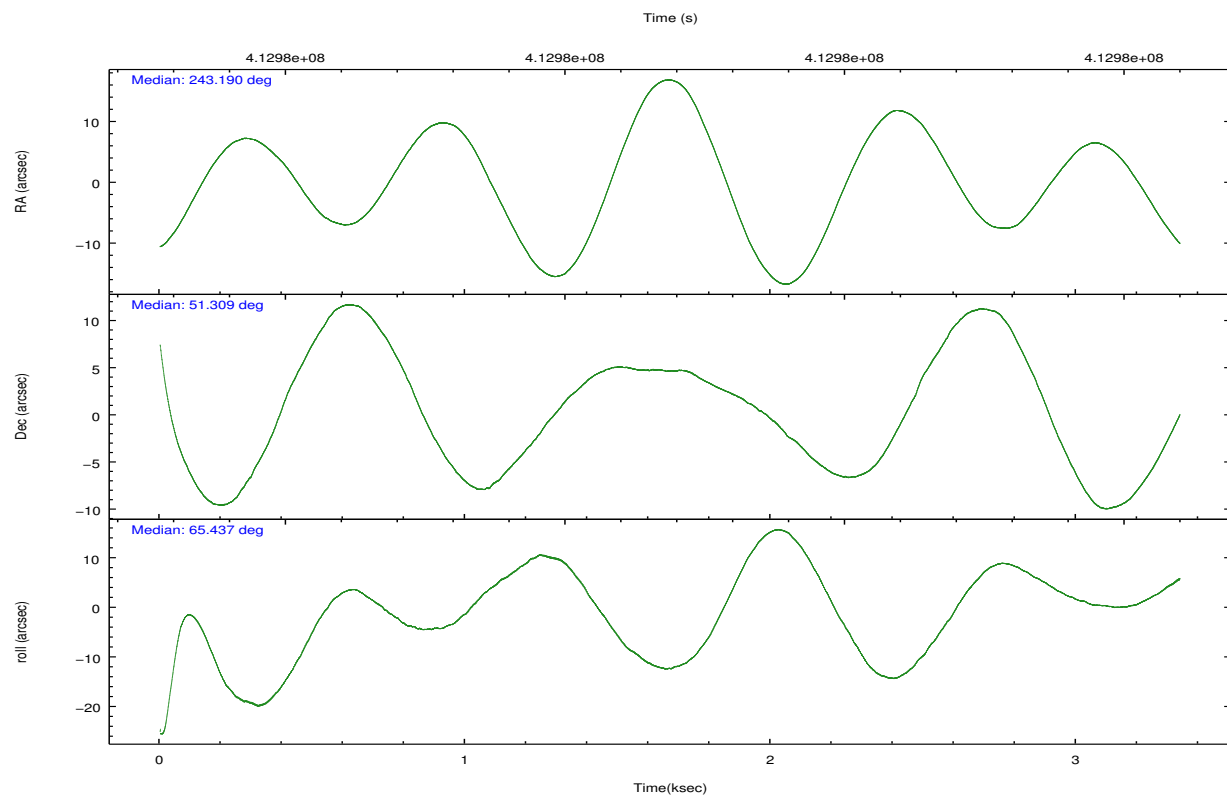
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	243.194201	243.1894811393957
[deg] Pointing Dec	51.282289	51.30929718521475
[deg] Pointing Roll	65.278598	65.4388008362717
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	412979854.184000	412978603.05231
Observation start date	2011-02-01T20:36:28	2011-02-01T20:16:43
[s] Observation end time (MET)	412983054.184000	412983829.01508
Observation end date	2011-02-01T21:29:48	2011-02-01T21:43:49
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	O2	Y
CCD I3 on	O1	Y
CCD S0 on	N	N
CCD S1 on	O3	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	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	1.8

2.3 Aspect



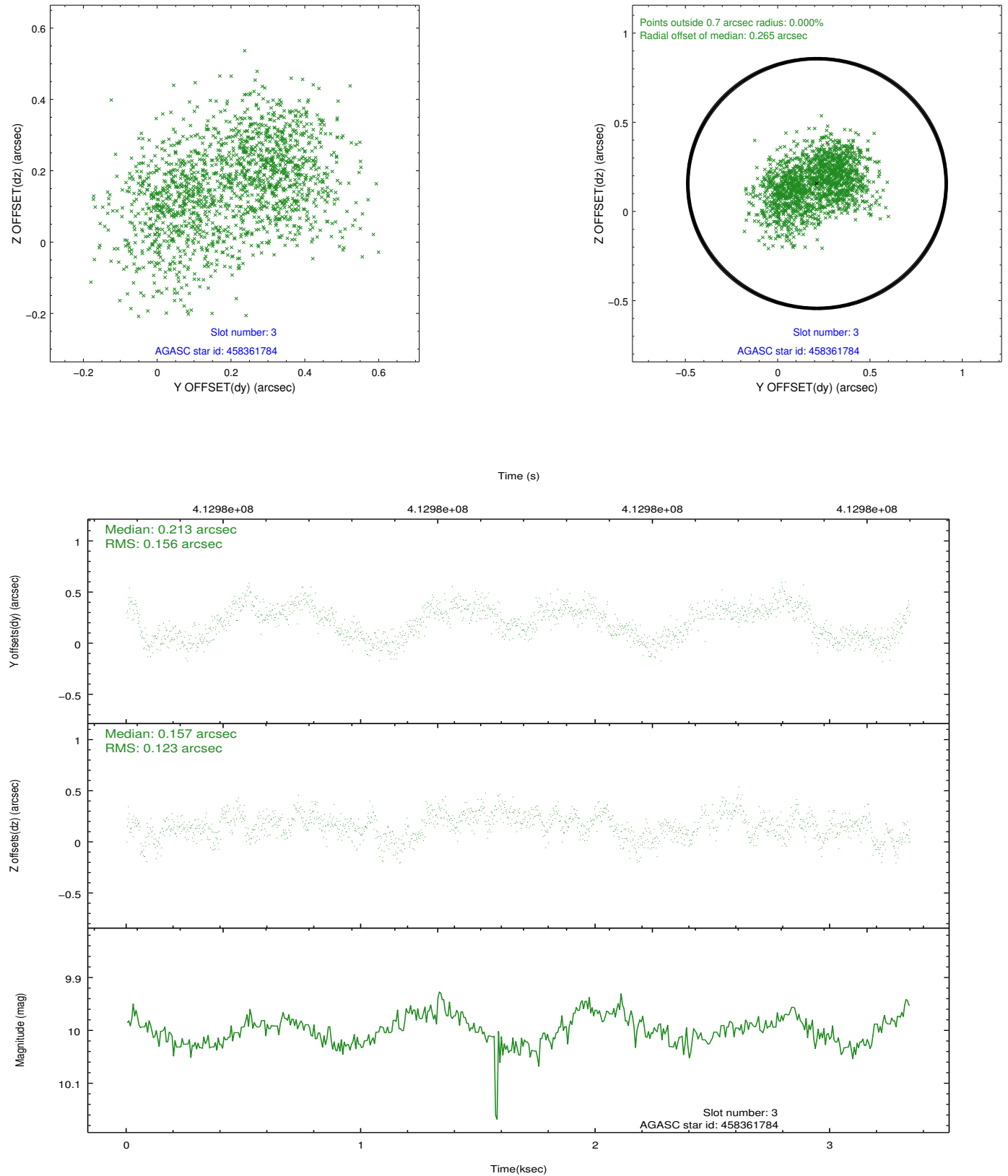


Slot Statistics

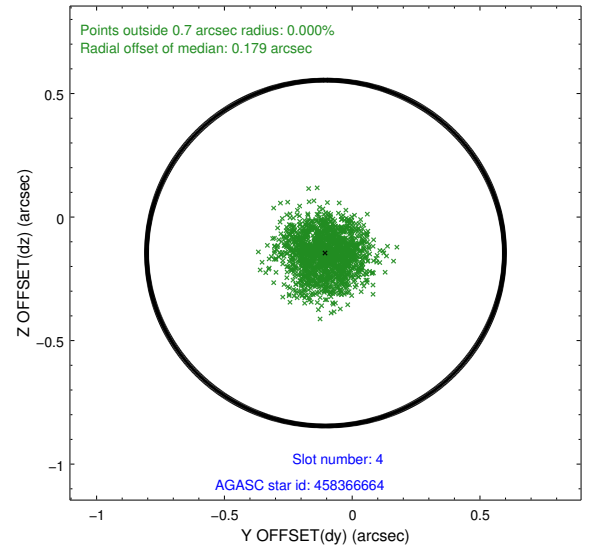
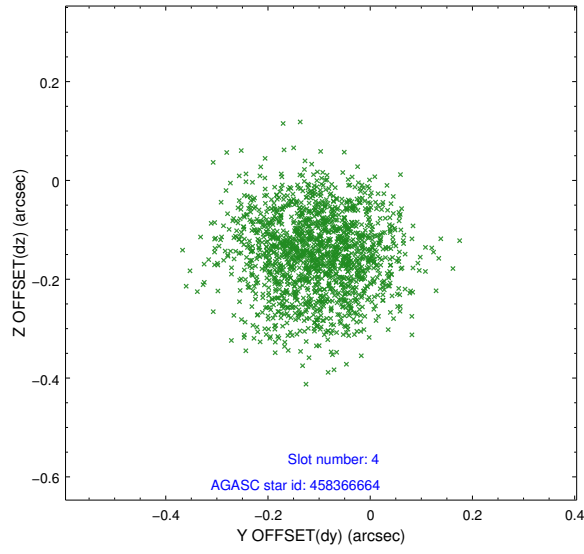
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.89	815	-0.112	-0.061	0.005	0.009	0.000000	0.000000	-773.84	-1741.57
1	FID	ACIS-S-4	6.97	815	0.130	0.063	0.006	0.009	0.000000	0.000000	2138.85	164.99
2	FID	ACIS-S-6	7.10	815	-0.046	0.005	0.007	0.011	0.000000	0.000000	390.69	804.53
3	GUIDE	458361784	10.00	1606	0.213	0.157	0.214	0.336	243.323527	50.781021	-1515.35	-1021.41
4	GUIDE	458366664	9.31	1628	-0.104	-0.146	0.126	0.198	243.148630	51.763569	1530.83	817.12
5	GUIDE	458368312	9.01	1630	-0.052	-0.132	0.095	0.154	242.130676	51.150583	-1417.81	1991.20
6	GUIDE	458372368	9.73	1629	0.011	0.126	0.147	0.232	242.799202	50.827762	-1859.65	135.30
7	GUIDE	458368632	8.90	1629	-0.055	0.006	0.161	0.236	242.689212	52.137071	2331.49	2302.42

2.4 Star Slots

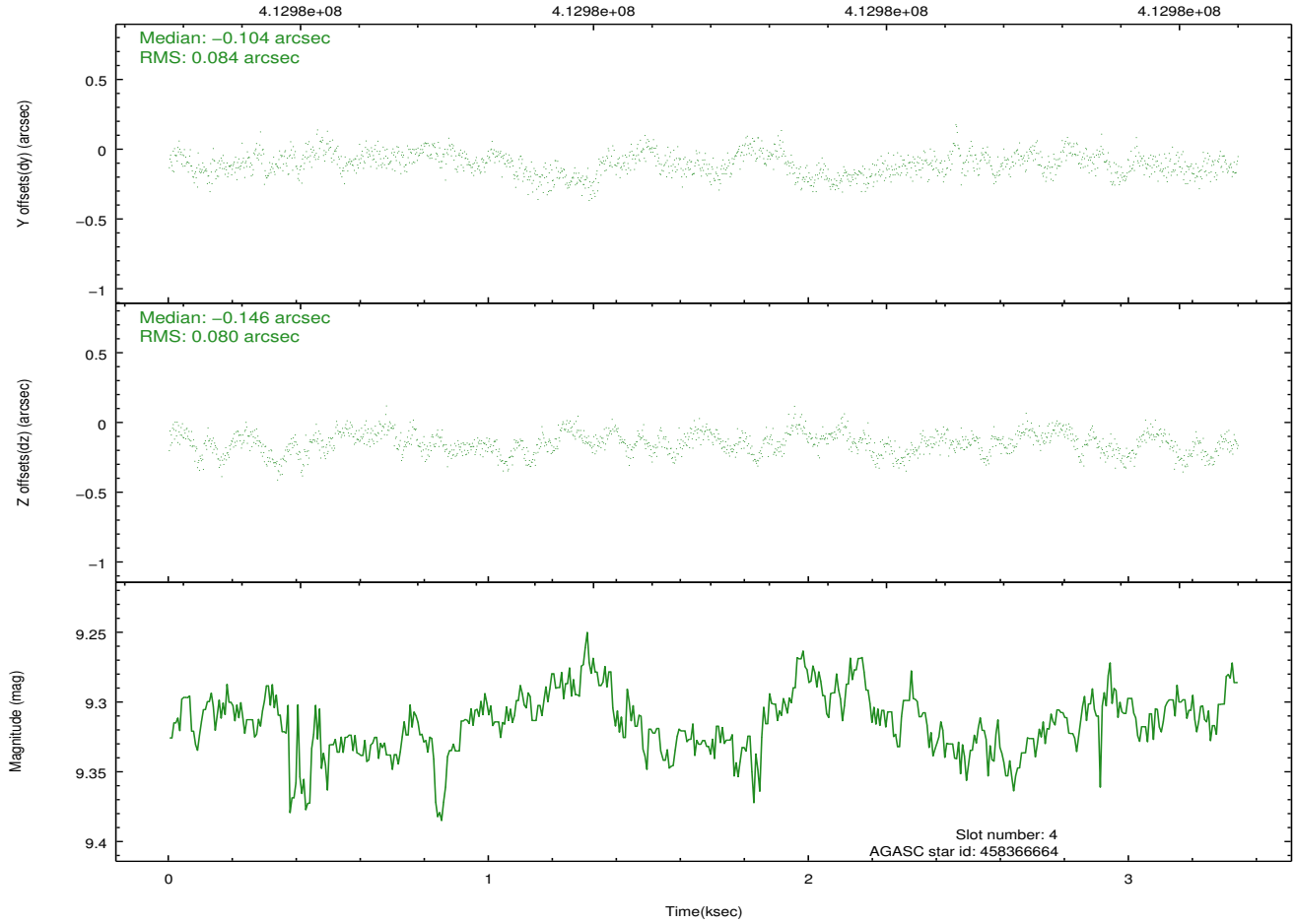
2.4.1 Slot 3



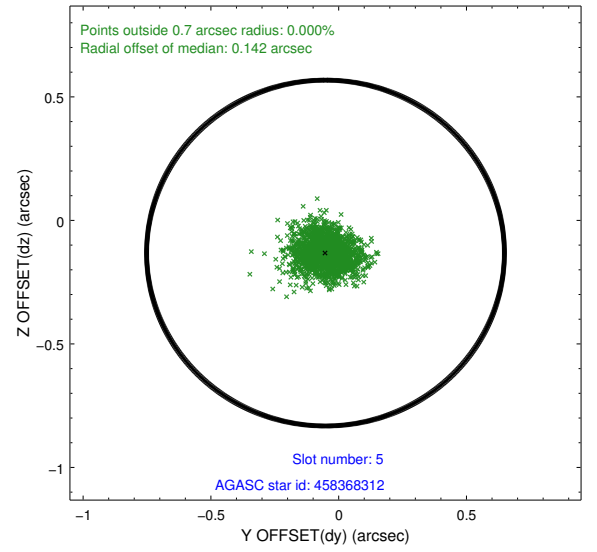
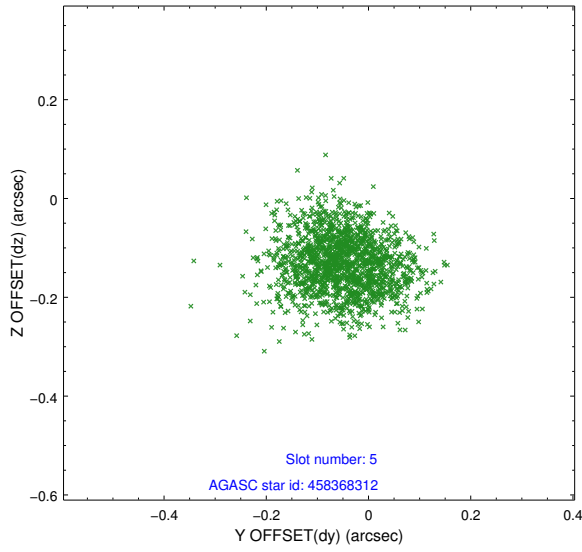
2.4.2 Slot 4



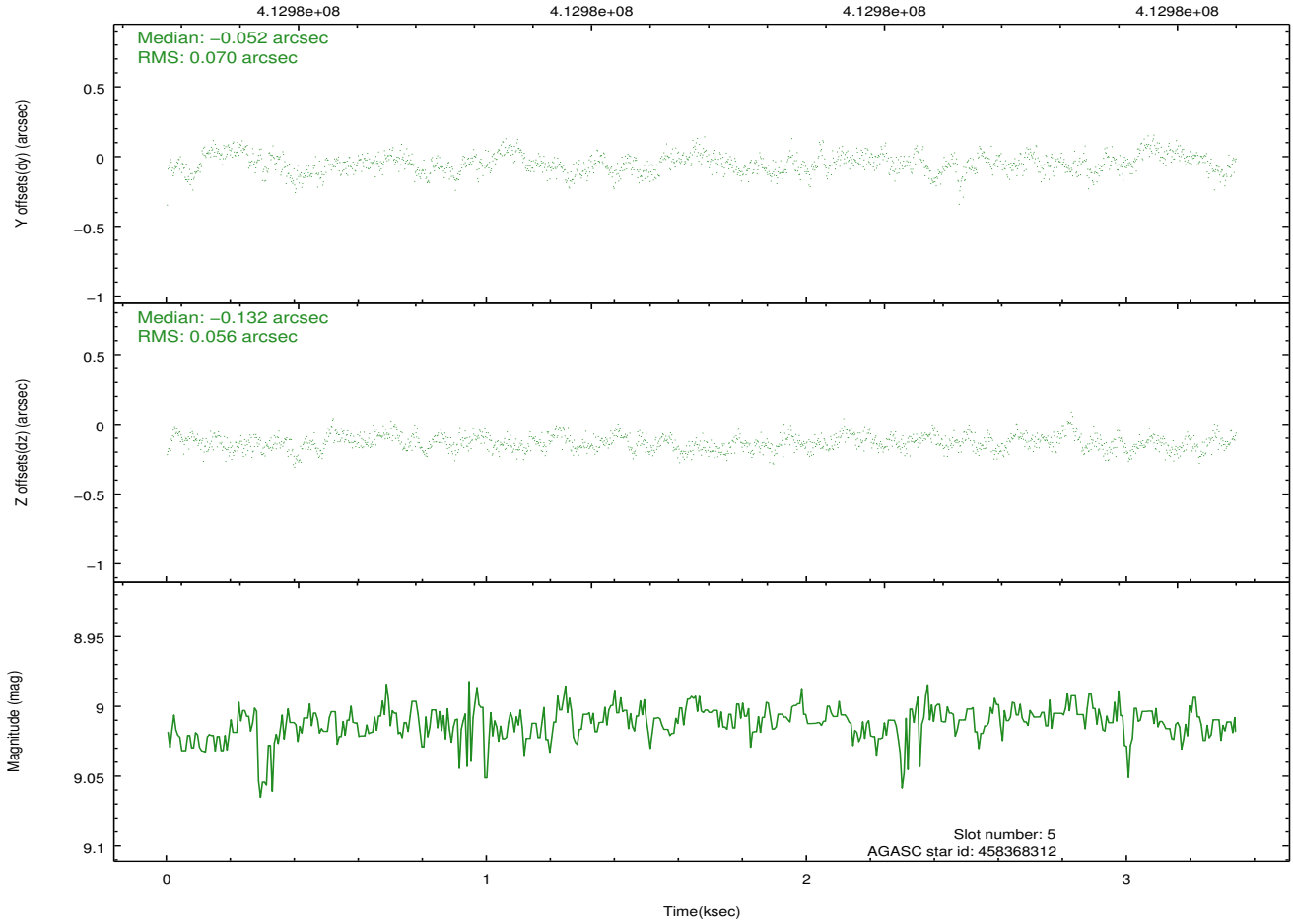
Time (s)



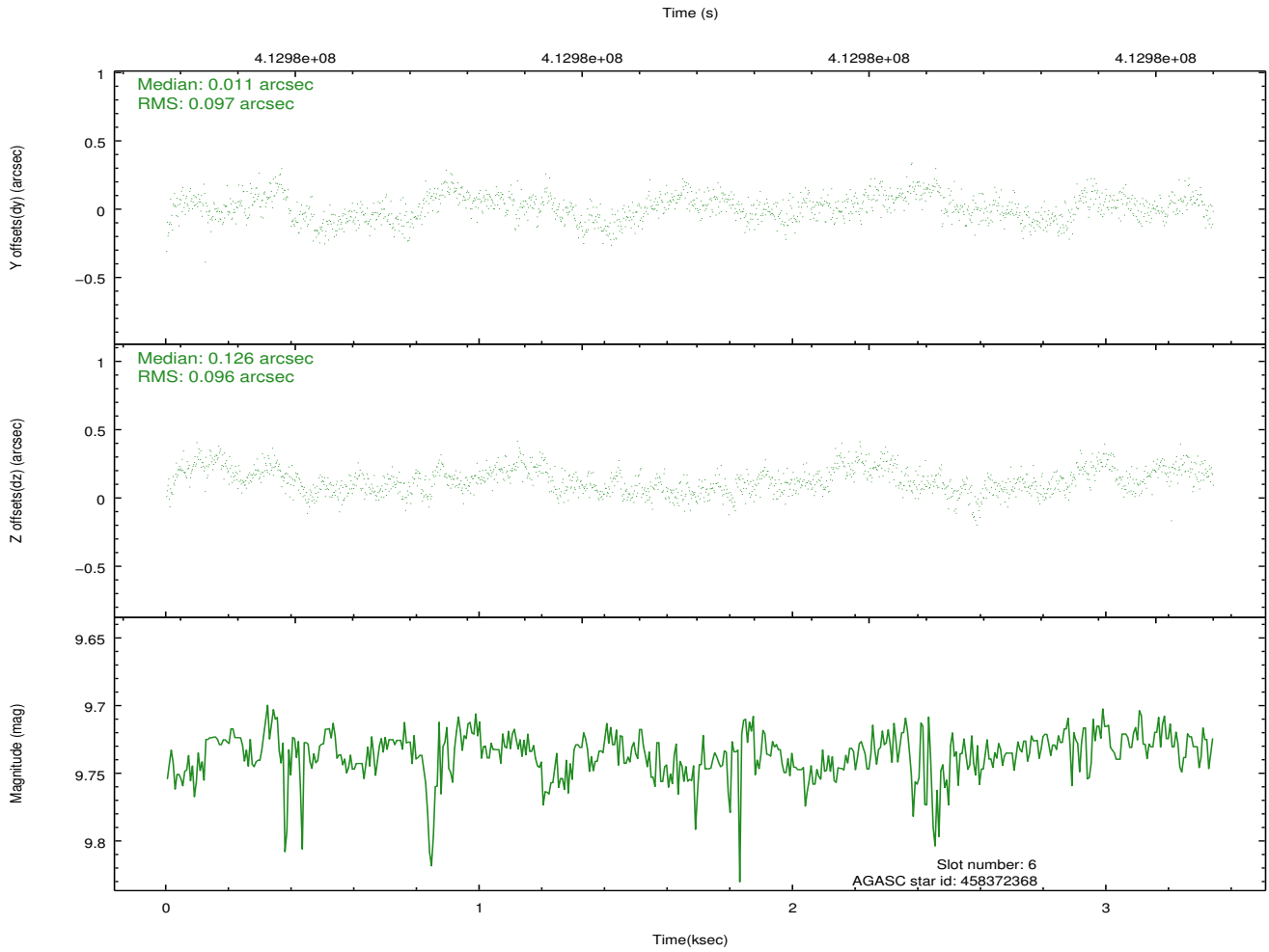
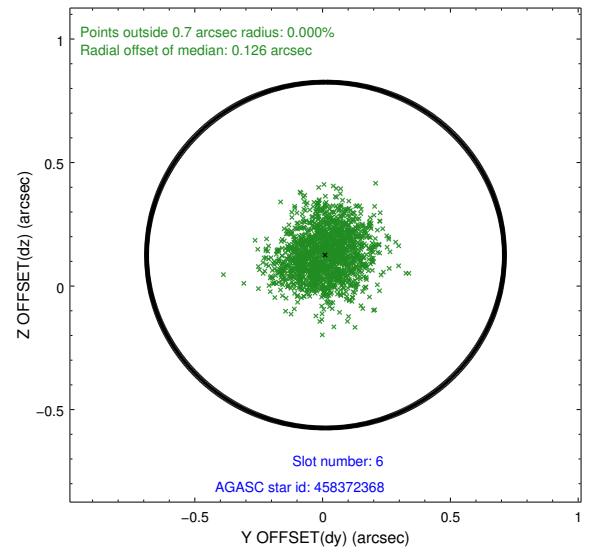
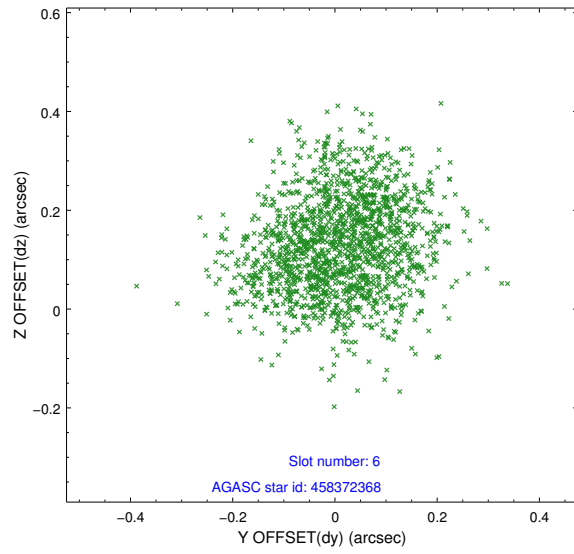
2.4.3 Slot 5



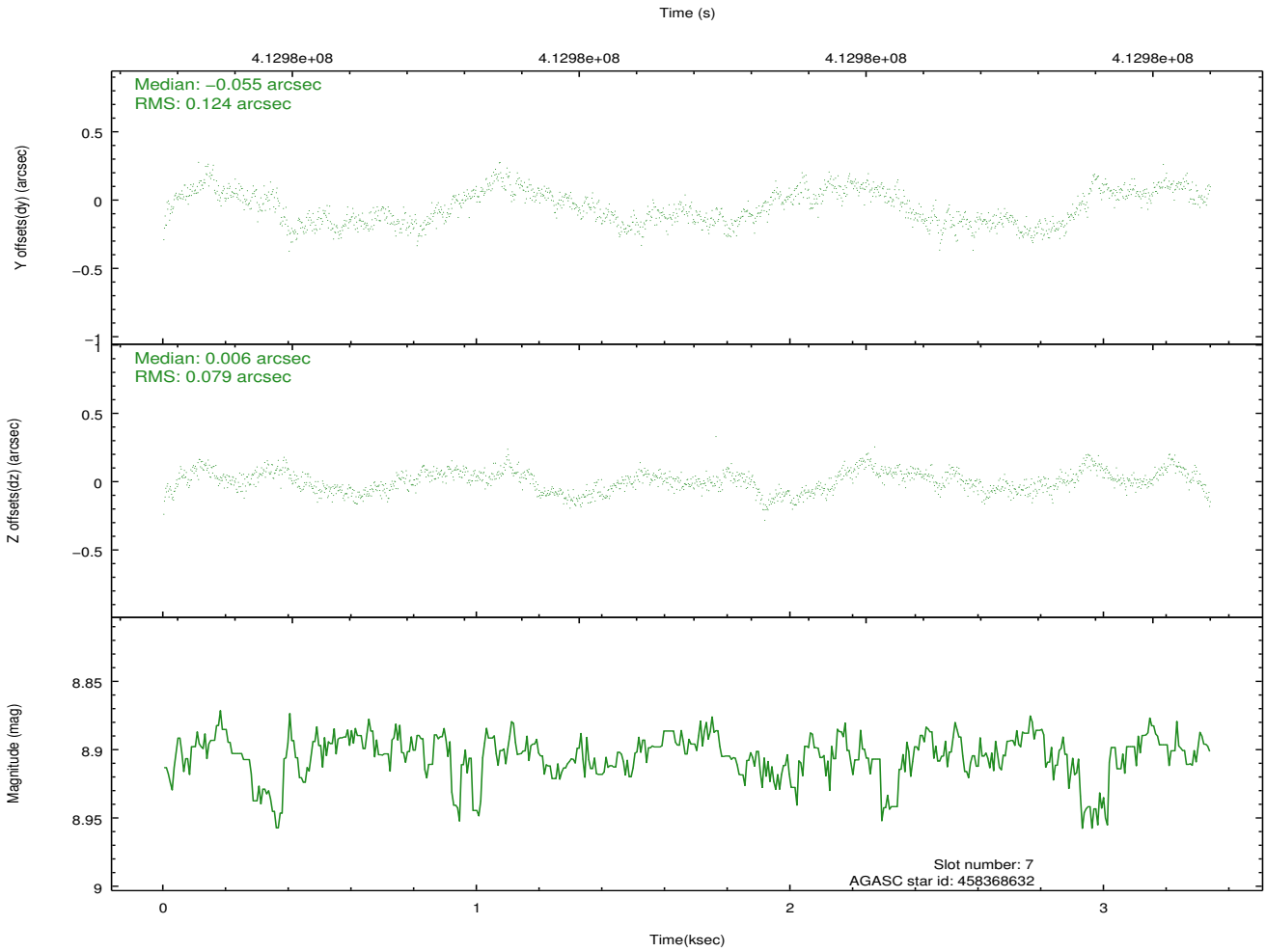
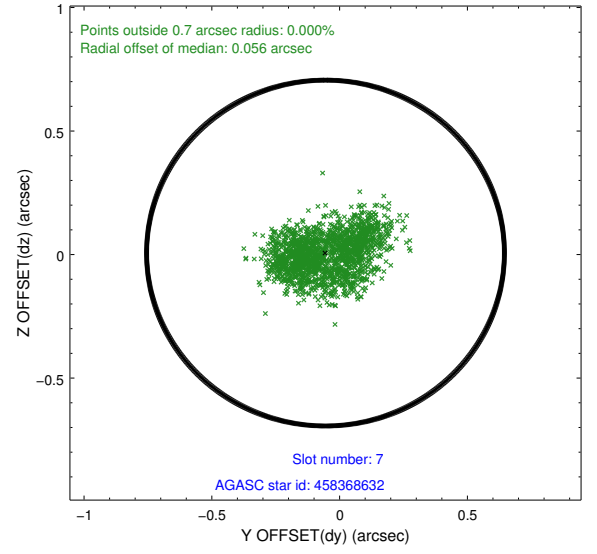
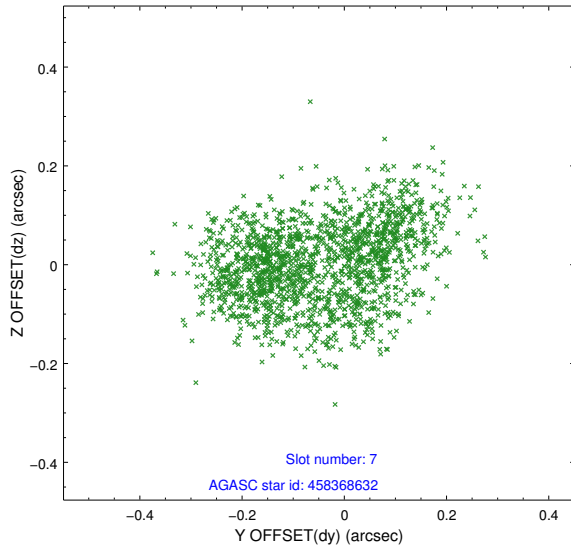
Time (s)



2.4.4 Slot 6

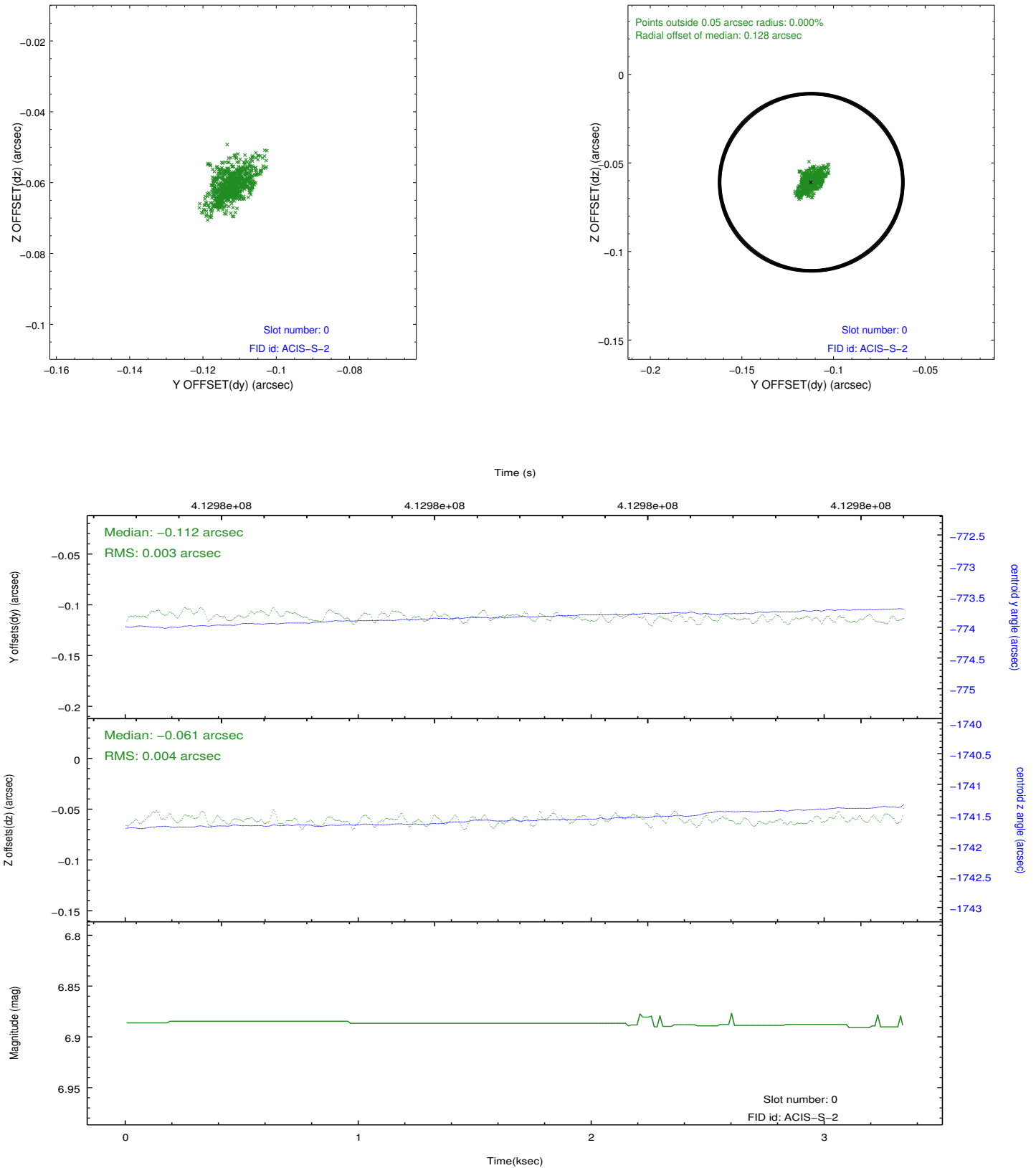


2.4.5 Slot 7

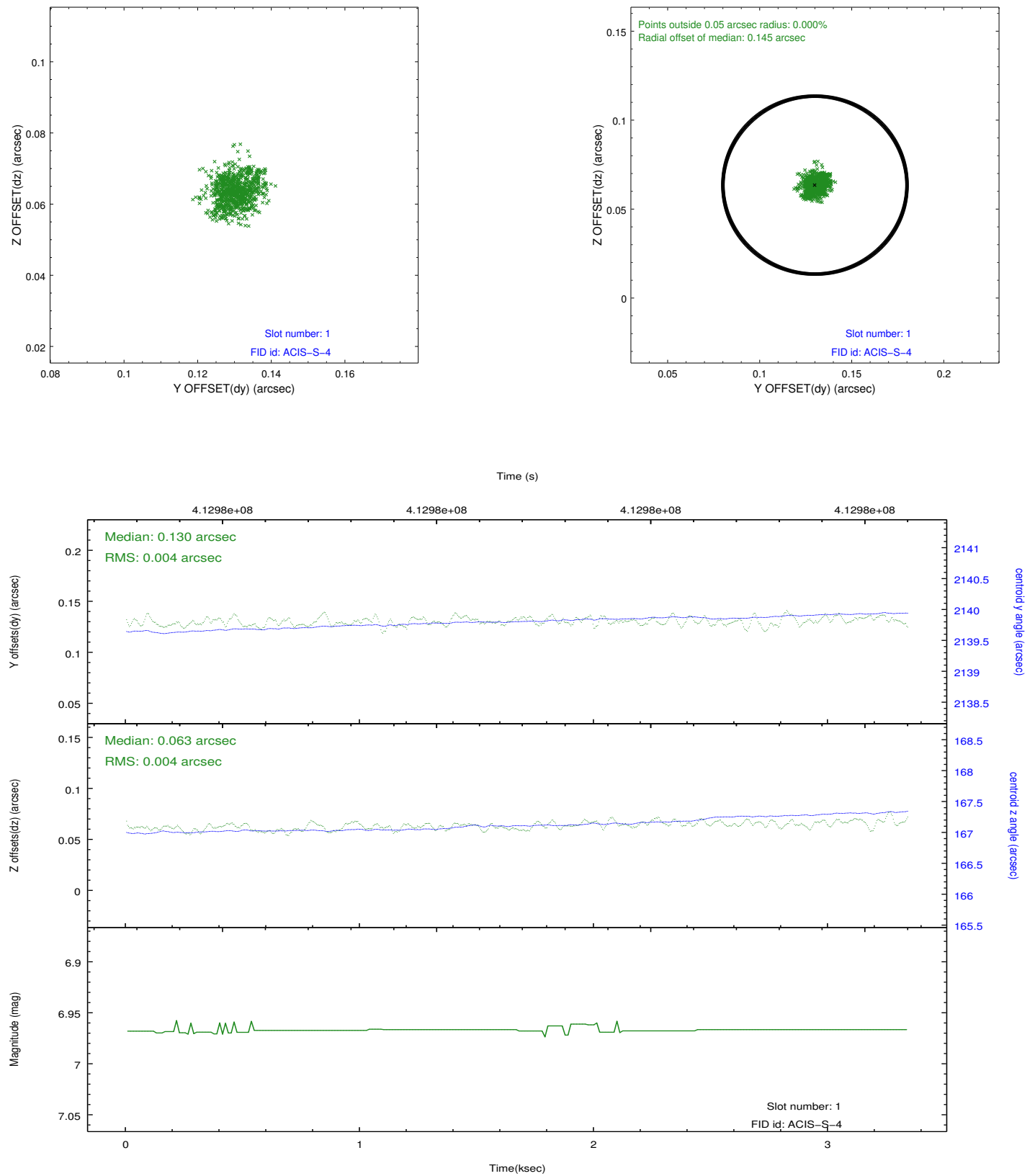


2.5 FID Slots

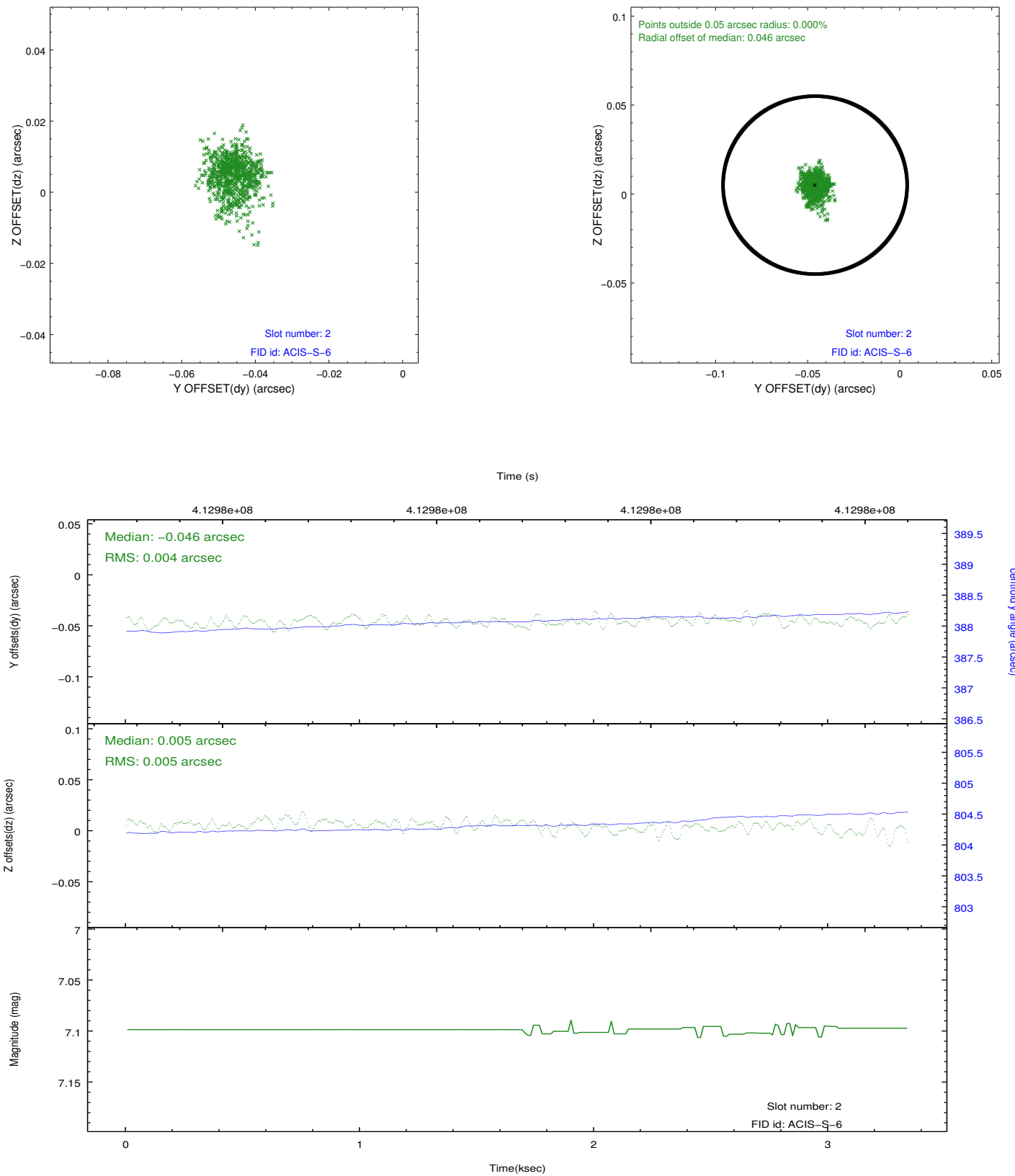
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.2976000217795

A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.