

V&V Reference Report

L2 ASCDS Version : 10.7

Observation 21980 - L2 Version 1
Chandra X-Ray Center

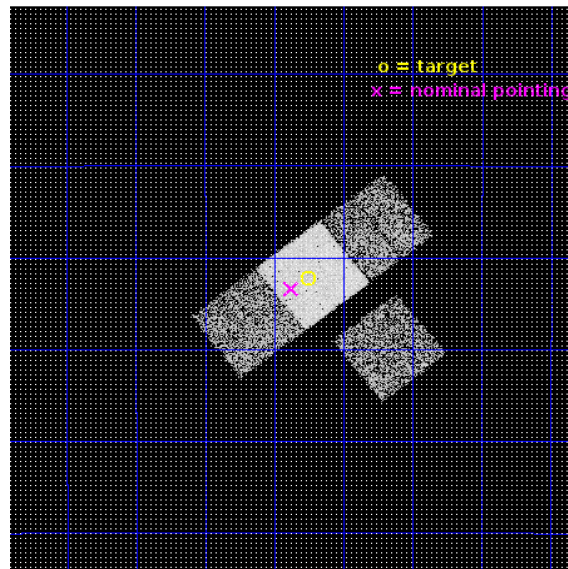
L2 Processing Date : Dec 6 2018

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1 Front

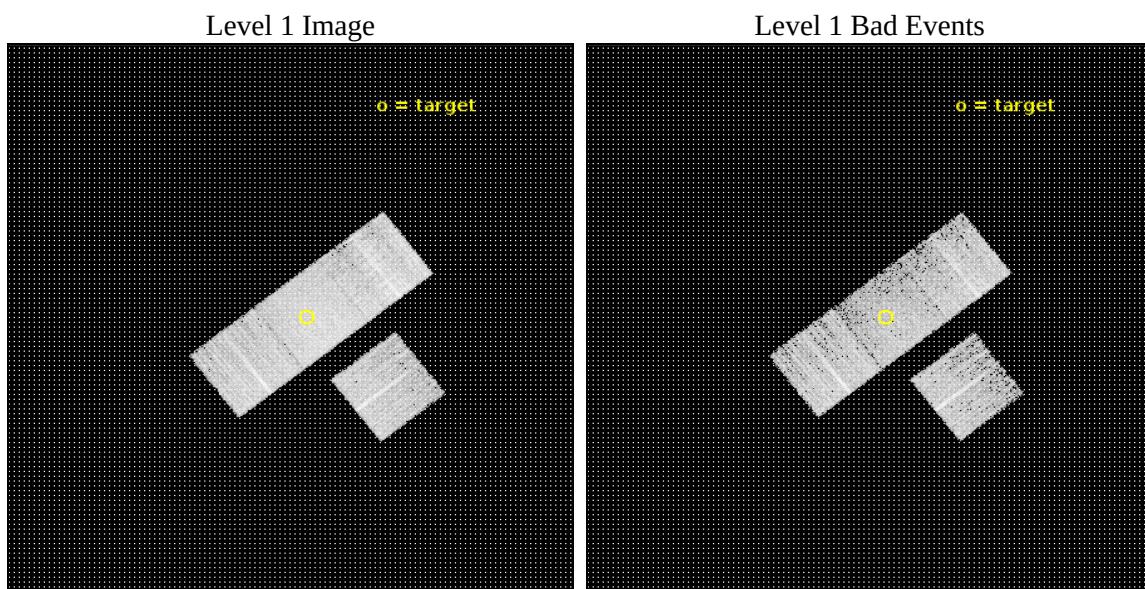
seq_num	100169	Sequence number
obs_id	21980	Observation id
title	Close encounter with comet 46P/Wirtanen: X-ray tomography of the coma	Proposal title
observer	Dennis Bodewits	Principal investigator
object	46P/Wirtanen	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	41.062285	Observer's specified target RA [deg]
dec_targ	-15.037532	Observer's specified target Dec [deg]
ra_nom	41.093905332695	Nominal RA [deg]
dec_nom	-15.05661901954	Nominal Dec [deg]
roll_nom	322.20903230013	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5186.3000400066	Sum of GTIs [s]
livetime	5118.5372118854	Livetime [s]
ontime3	5180.0179197788	Sum of GTIs [s]
ontime6	5186.3000400066	Sum of GTIs [s]
ontime7	5186.3000400066	Sum of GTIs [s]
ontime8	5186.3000400066	Sum of GTIs [s]
l2events	32766	Number of level 2 events



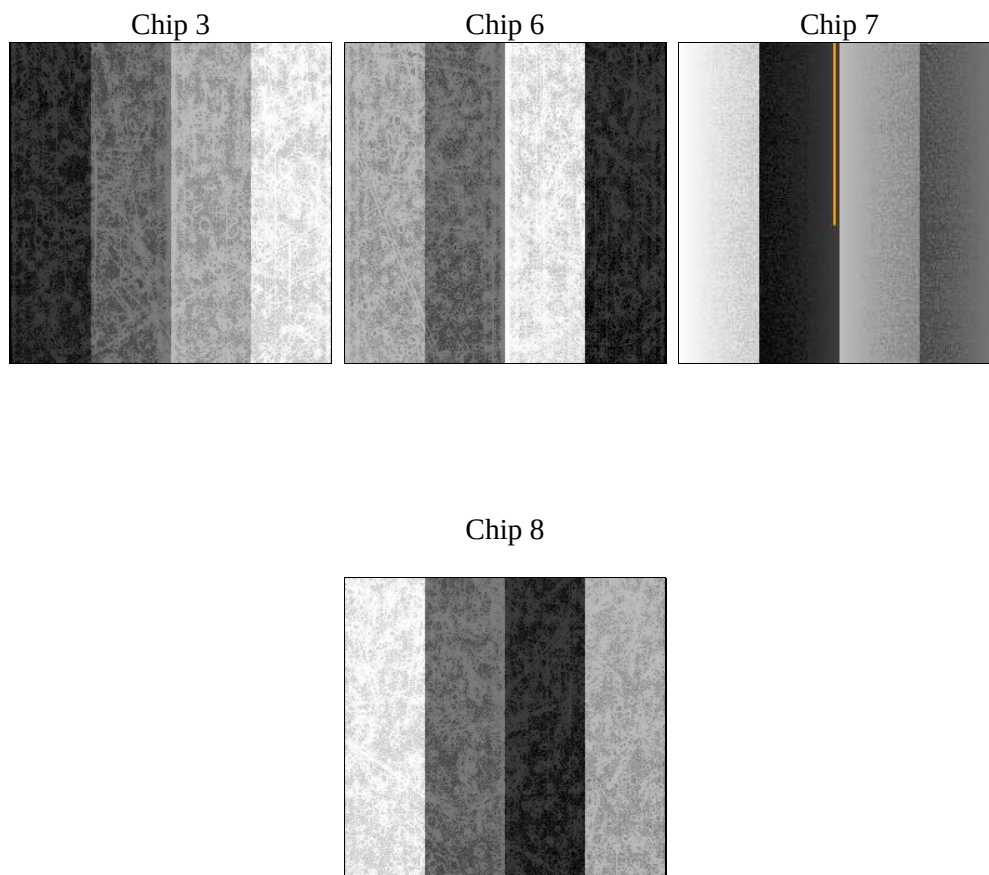
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.7	Processing system revision	ontime	5186.3000400066	Sum of GTIs [s]
caldbver	4.8.0.1	 	ontime3	5180.0179197788	Sum of GTIs [s]
date	2018-12-07T03:31:05	Date and time of file creation	ontime6	5186.3000400066	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	5186.3000400066	Sum of GTIs [s]
			ontime8	5186.3000400066	Sum of GTIs [s]
			l1events	194061	Number of level 1 events

2.1.4 Events

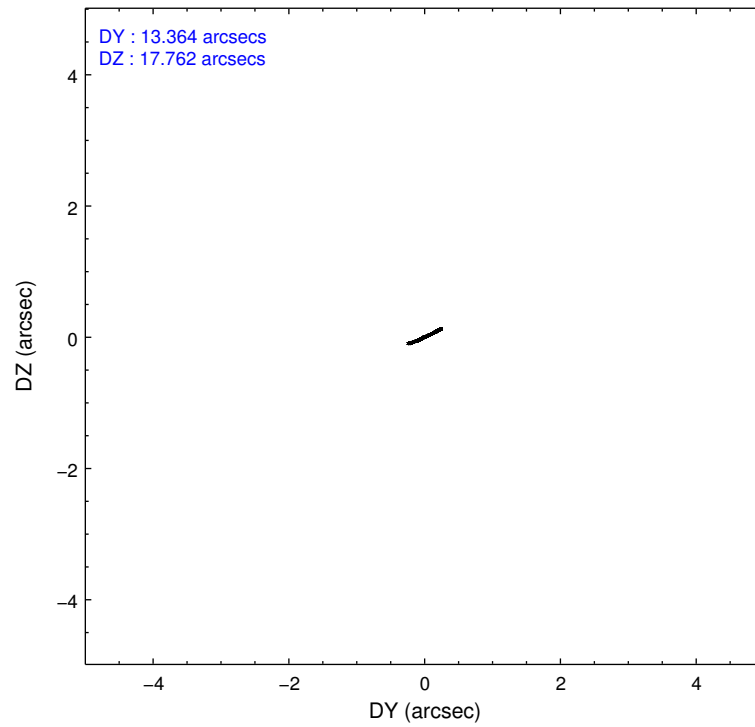
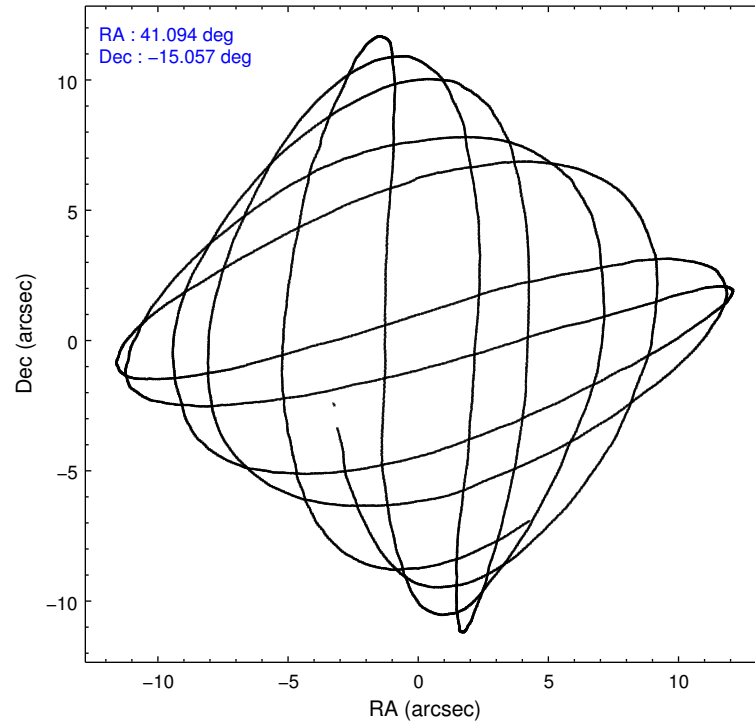
	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	40265	45708	54616	53472
rejected events	36362	41130	32835	41040
rejected %	90%	89%	60%	76%

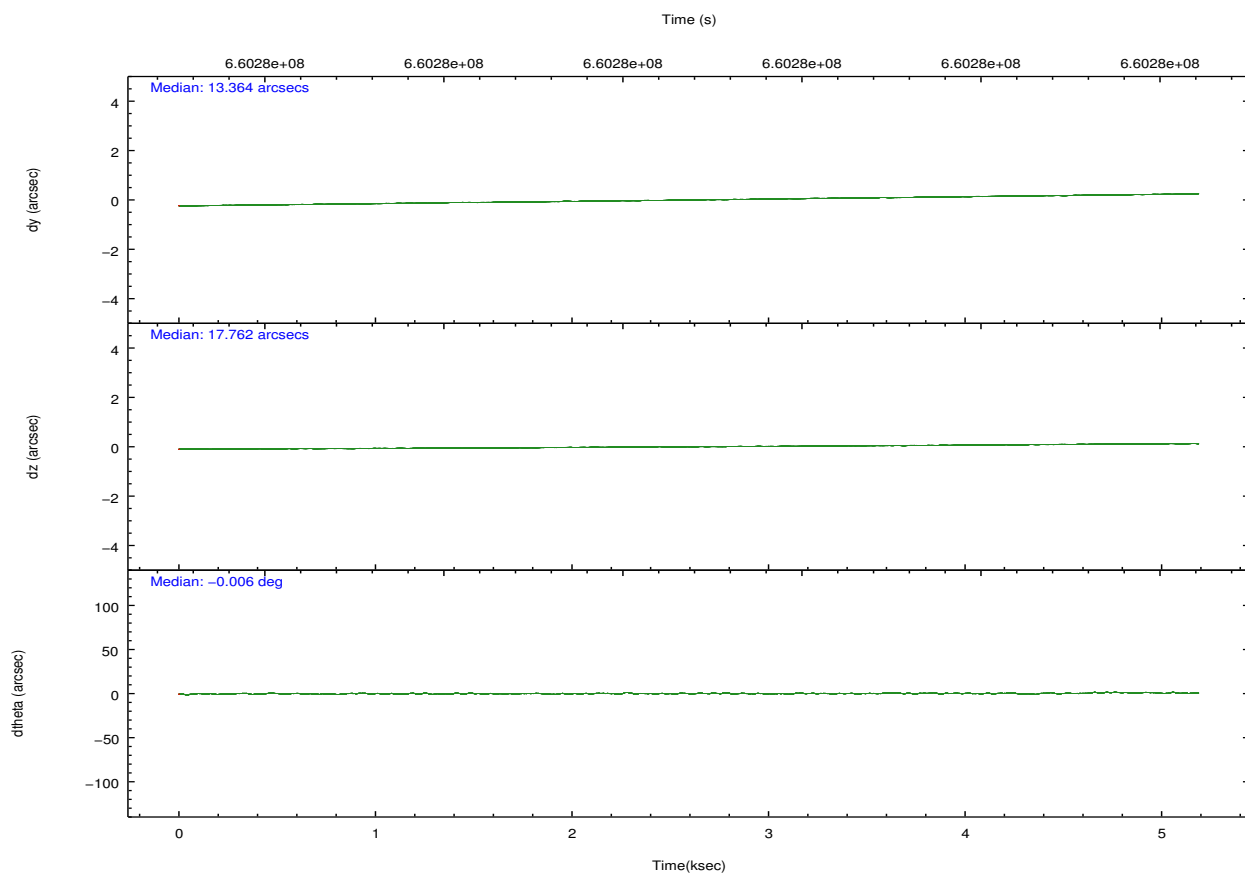
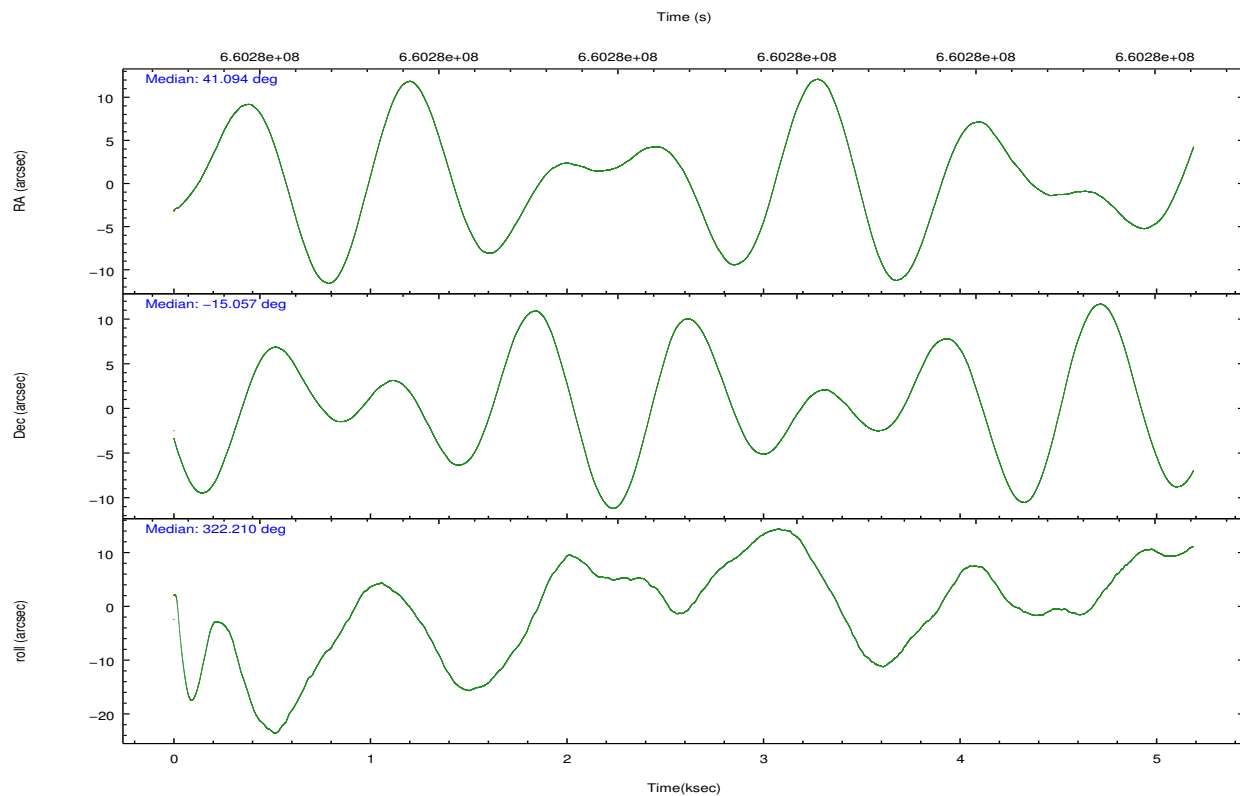
	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1368	1329	1911	3574
	3%	2%	3%	6%
grade 1 events	13	17	67	34
	0%	0%	0%	0%
grade 2 events	903	1432	4728	3271
	2%	3%	8%	6%
grade 3 events	440	376	1835	1293
	1%	0%	3%	2%
grade 4 events	435	356	1808	1246
	1%	0%	3%	2%
grade 5 events	1725	1760	5334	2742
	4%	3%	9%	5%
grade 6 events	955	1367	12853	3969
	2%	2%	23%	7%
grade 7 events	34426	39071	26080	37343
	85%	85%	47%	69%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-3678	ACIS-3678	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	41.065699	41.09390533269455	CCD I2 on	O2	N
[deg] Pointing Dec	-15.053195	-15.05661901954014	CCD I3 on	O3	Y
[deg] Pointing Roll	322.045032	322.2090323001339	CCD S0 on	N	N
[s] Window start time (MET)	660009669.184000	660009669.184000	CCD S1 on	O1	N
[s] Window stop time (MET)	660355269.184000	660355269.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	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	2	2
[s] Observation start time (MET)	660275940.184000	660275564.43081	On-chip summing requested	N	N
Observation start date	2018-12-04T01:57:51	2018-12-04T01:52:44	Subarray requested	NONE	NONE
[s] Observation end time (MET)	660280940.184000	660281073.8061399	Alternating exposures requested	N	N
Observation end date	2018-12-04T03:21:11	2018-12-04T03:24:33	[s] Primary exposure time	0.000000	3.1
Read mode	TIMED	TIMED			

2.3 Aspect



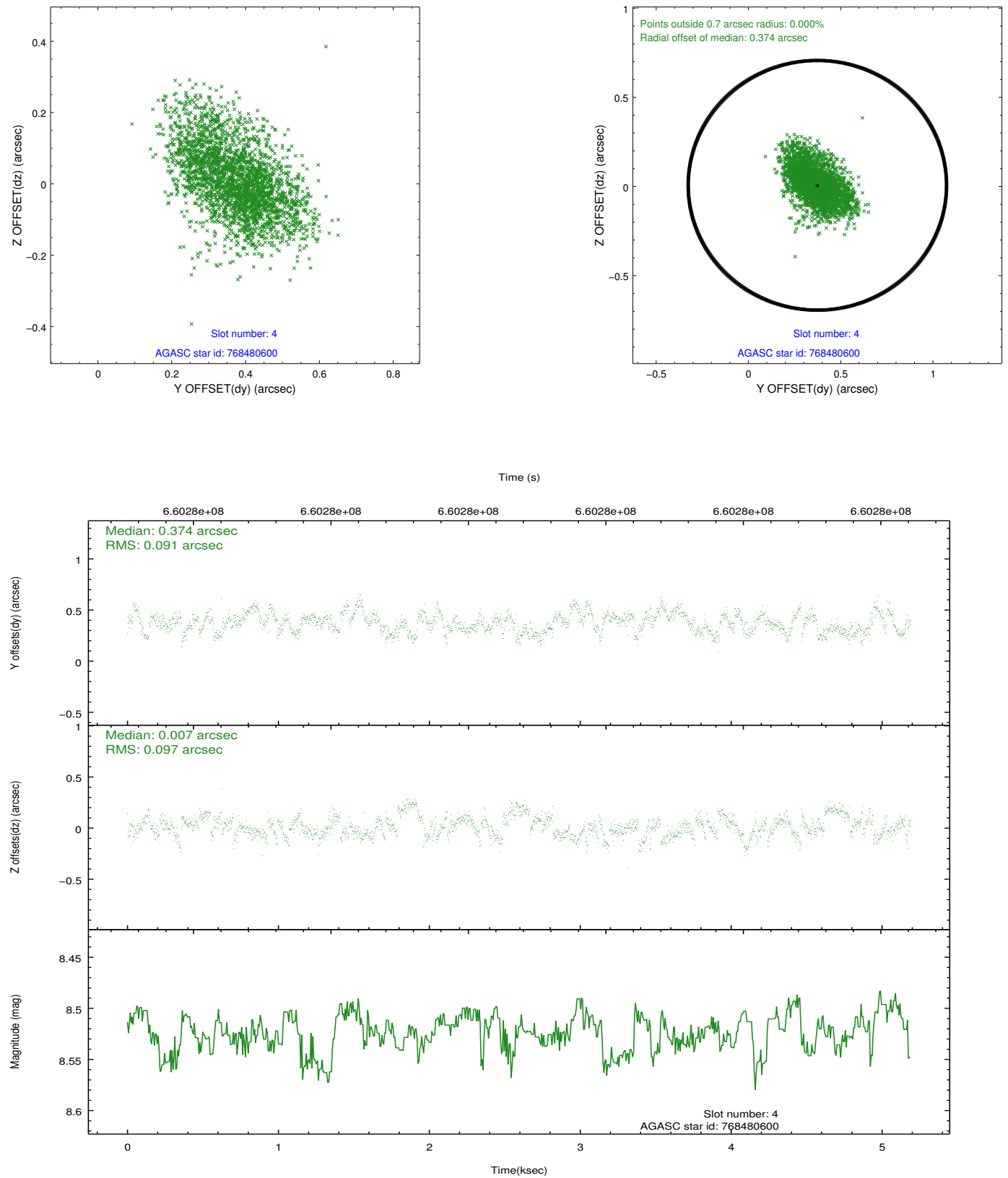


Slot Statistics

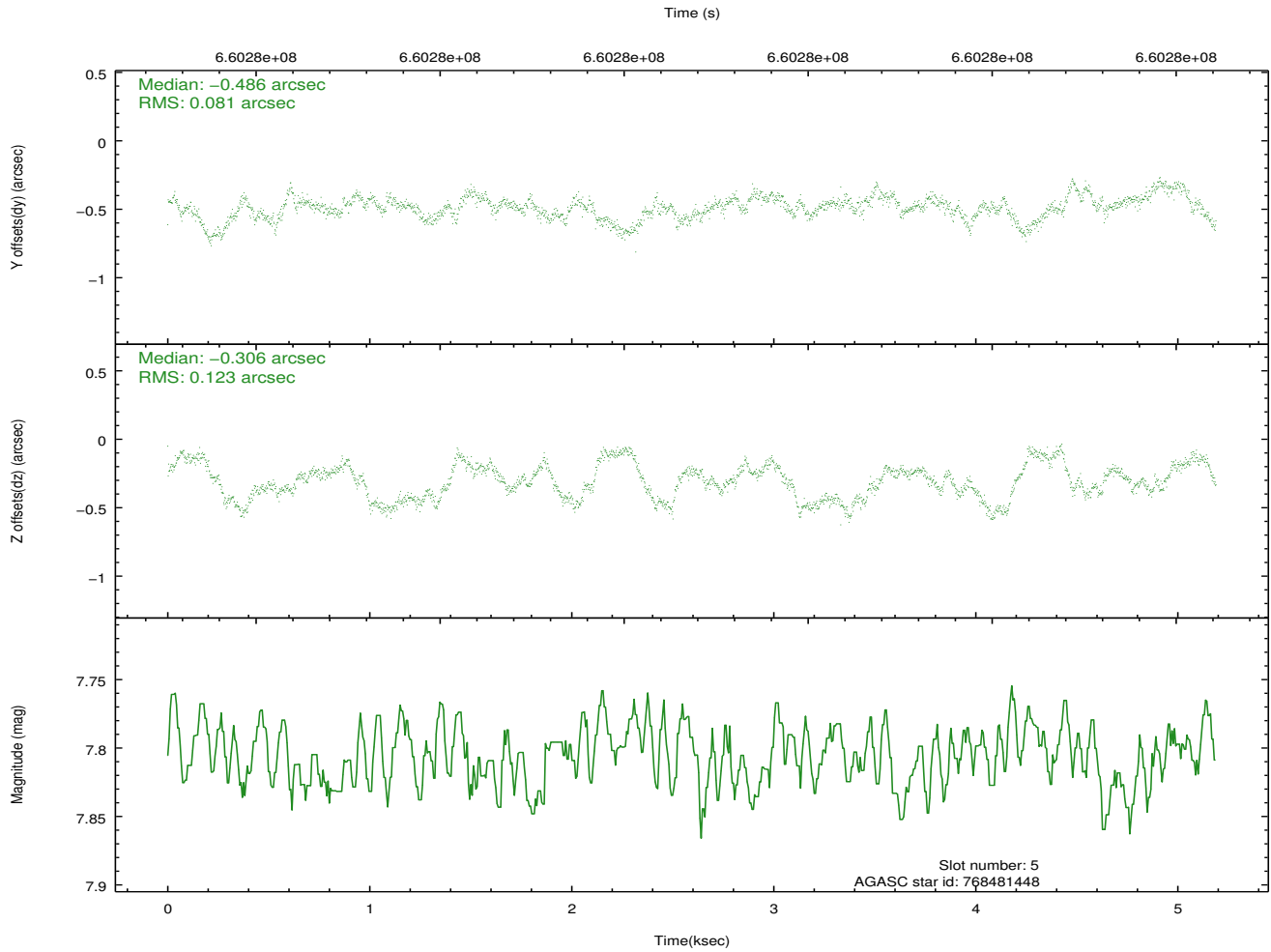
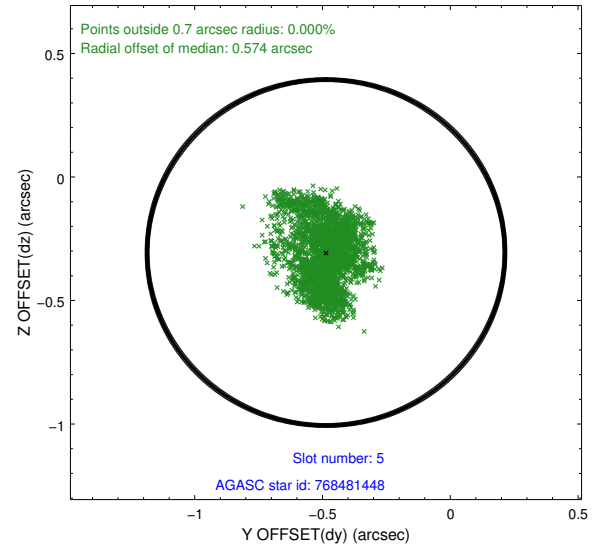
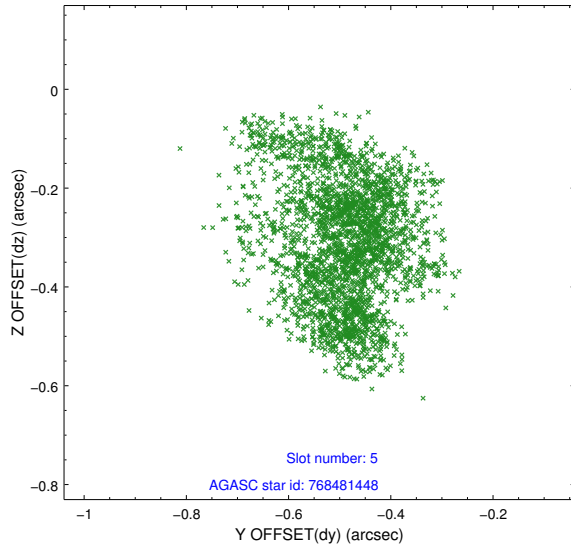
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.18	1266	1.000	-0.248	-0.242	0.010	0.016	0.000000	0.000000	-766.48	-1739
1	FID		ACIS-S-4	7.31	1266	1.000	0.750	0.184	0.010	0.017	0.000000	0.000000	2147.20	168
2	FID		ACIS-S-5	7.29	1266	1.000	-0.533	0.066	0.009	0.014	0.000000	0.000000	-1818.17	163
3	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
4	GUIDE	used	768480600	8.52	2528	1.000	0.374	0.007	0.143	0.233	40.992909	-15.785552	1423.04	-2233
5	GUIDE	used	768481448	7.81	2531	1.000	-0.486	-0.306	0.165	0.245	41.719335	-15.287038	2310.30	728
6	GUIDE	used	768481584	9.94	2524	1.000	0.131	0.368	0.309	0.470	40.616612	-15.044357	-1248.48	-935
7	GUIDE	used	768482072	7.57	2529	1.000	-0.003	-0.078	0.128	0.190	41.302106	-15.426646	1473.45	-554

2.4 Star Slots

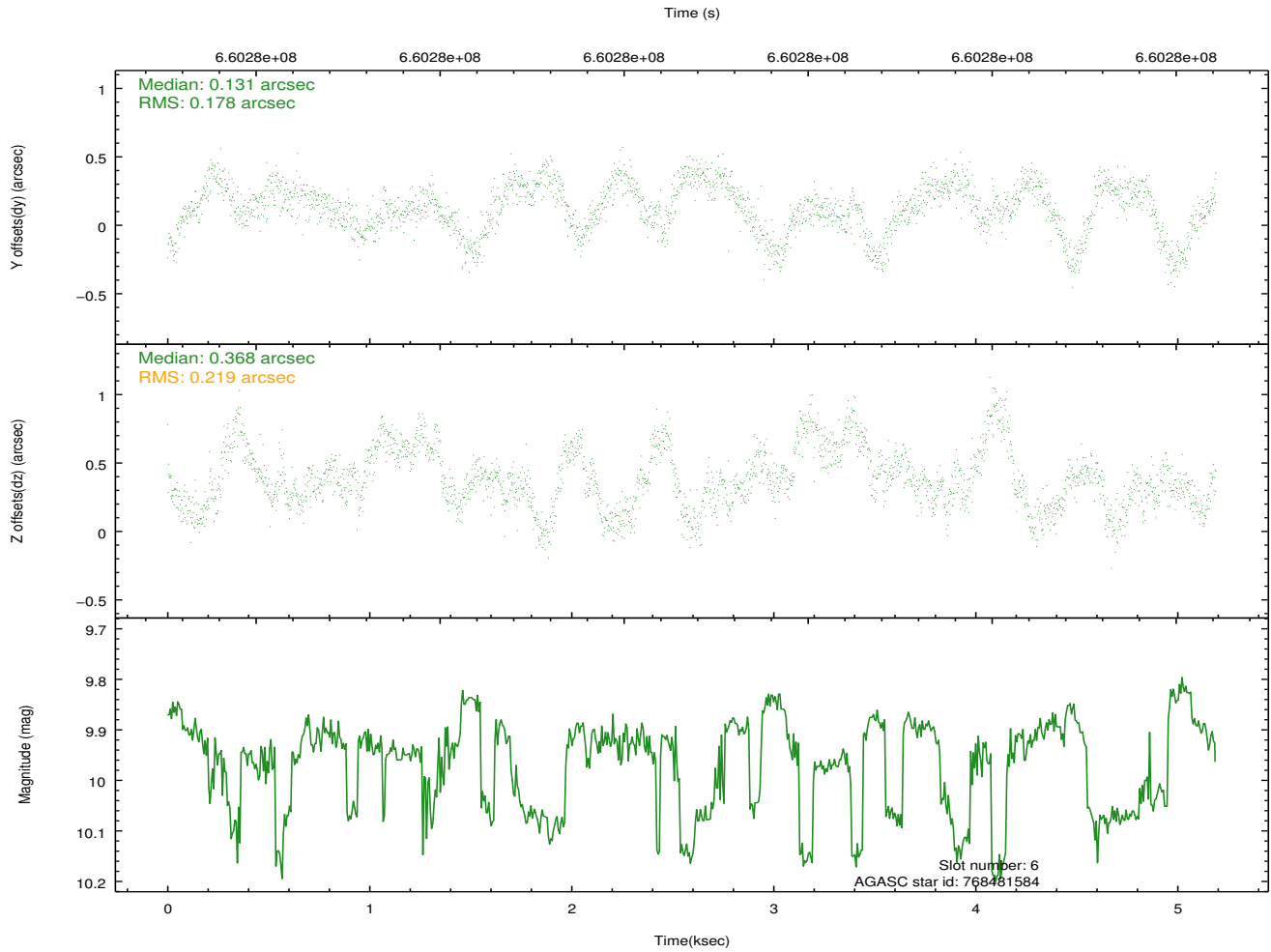
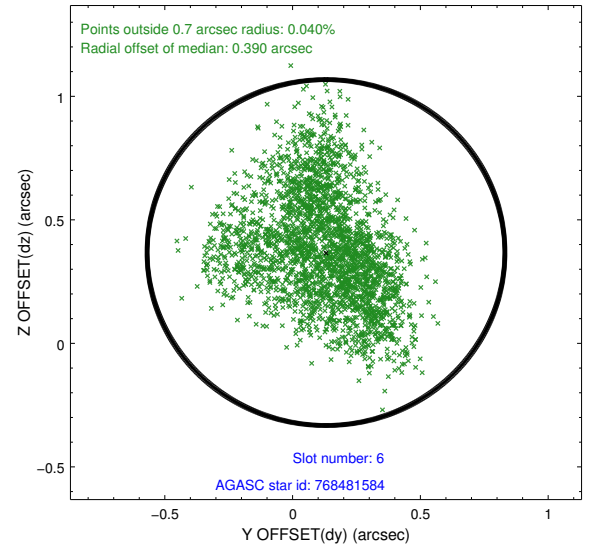
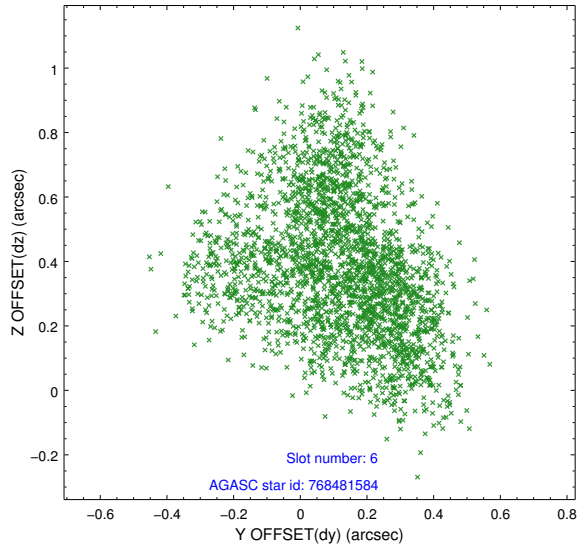
2.4.1 Slot 4



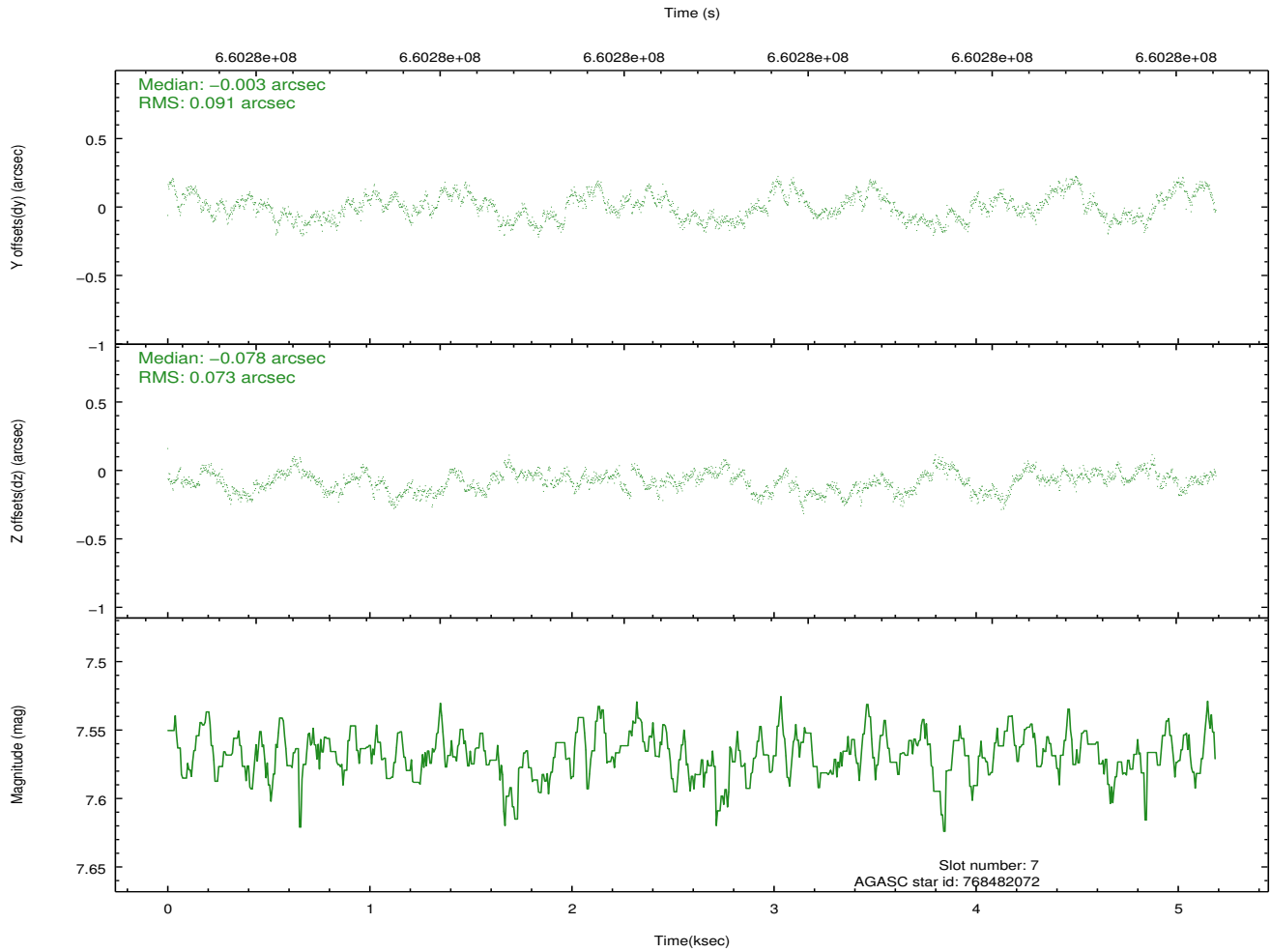
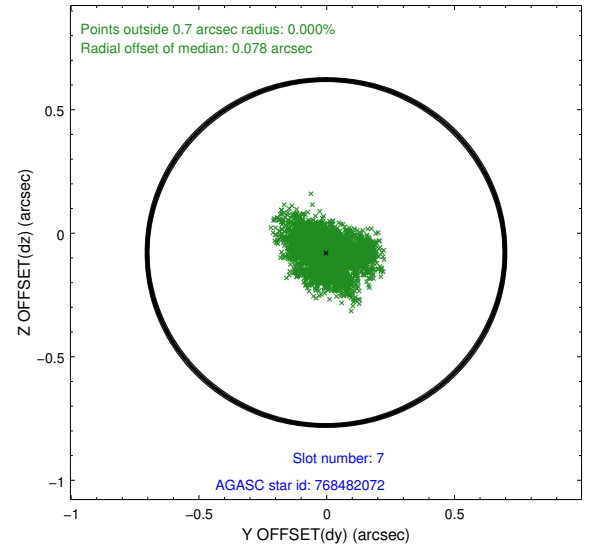
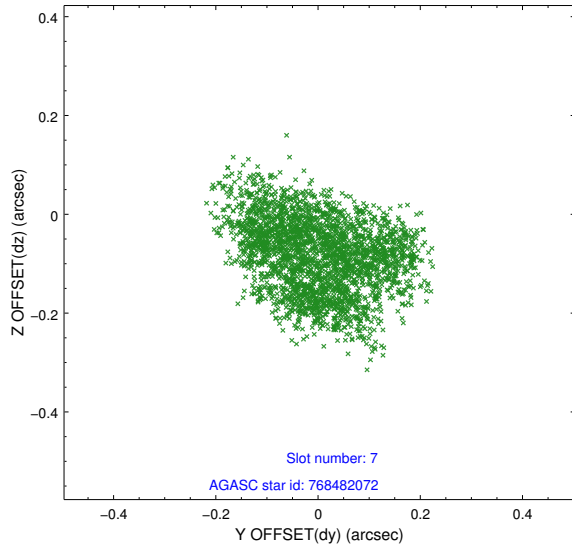
2.4.2 Slot 5



2.4.3 Slot 6

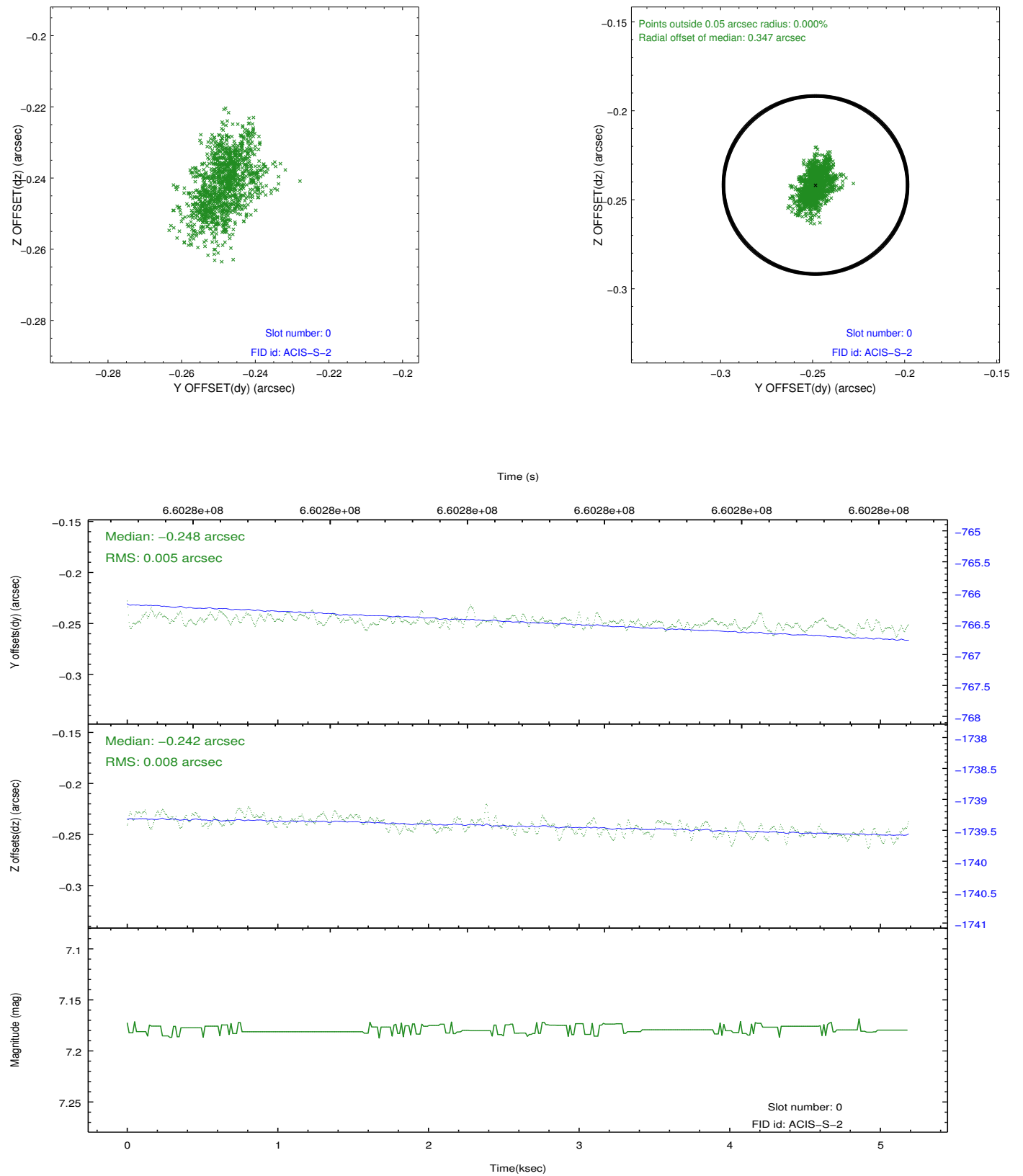


2.4.4 Slot 7

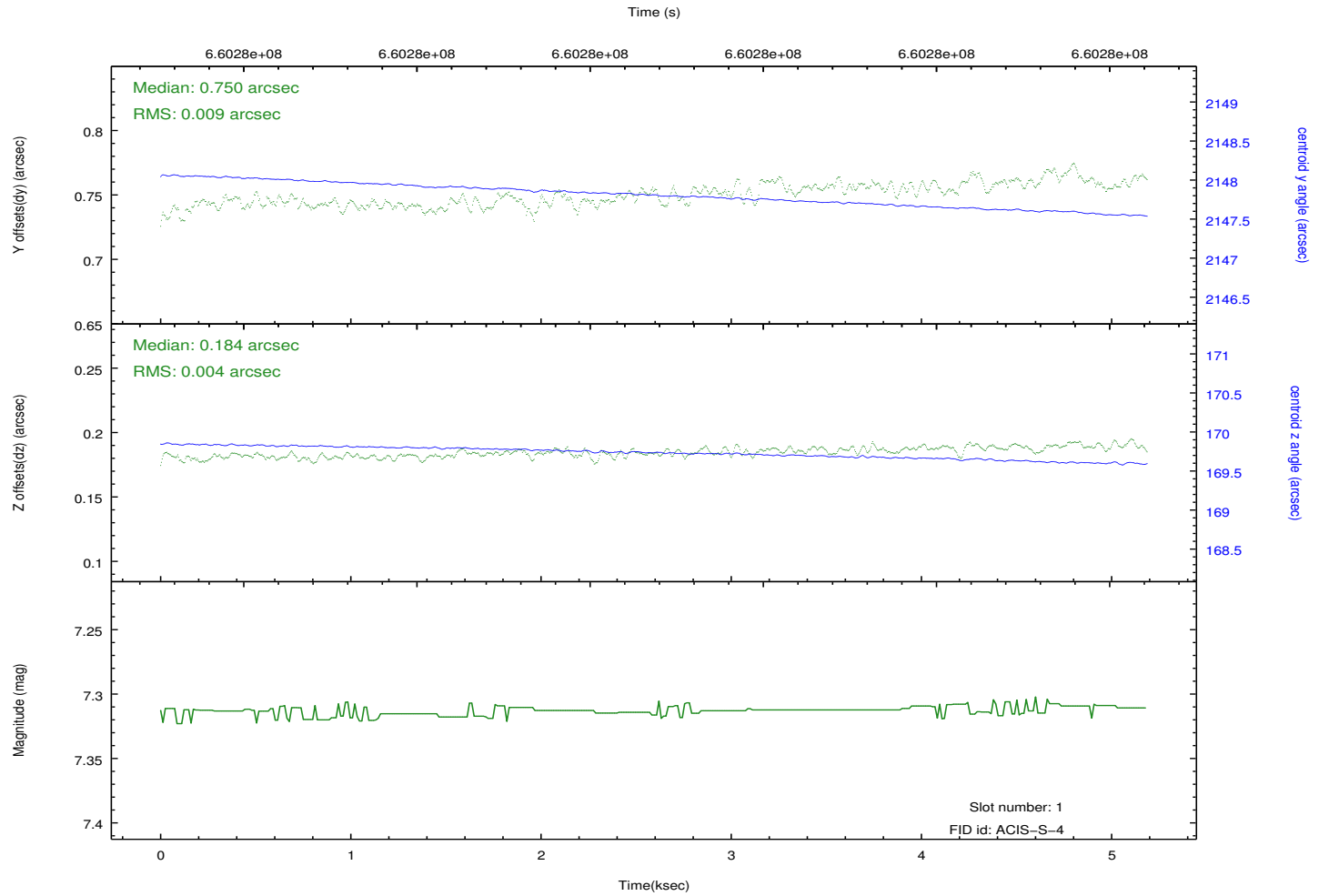
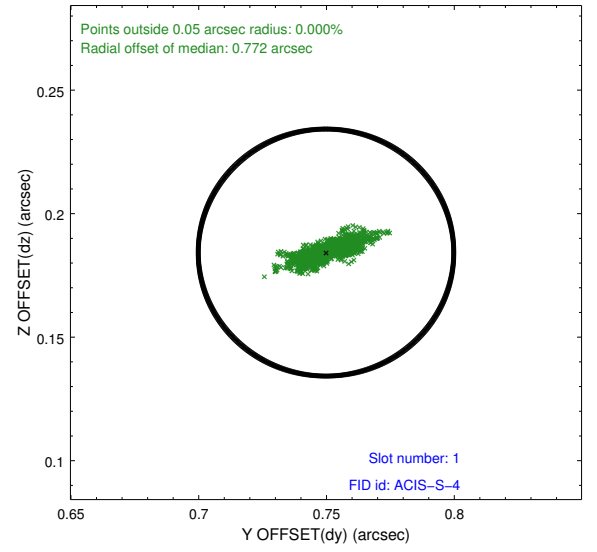
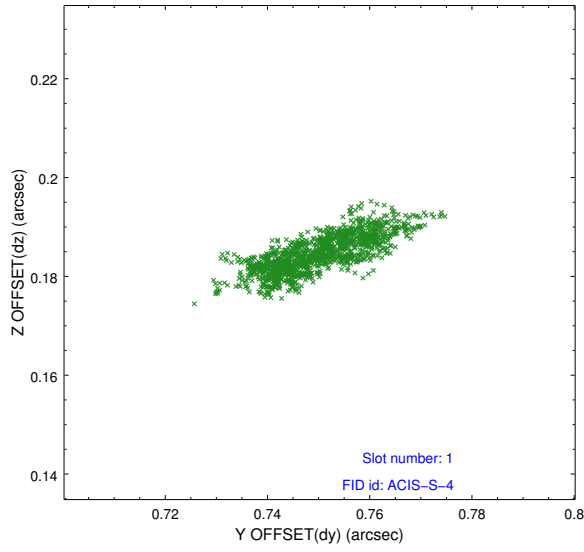


2.5 FID Slots

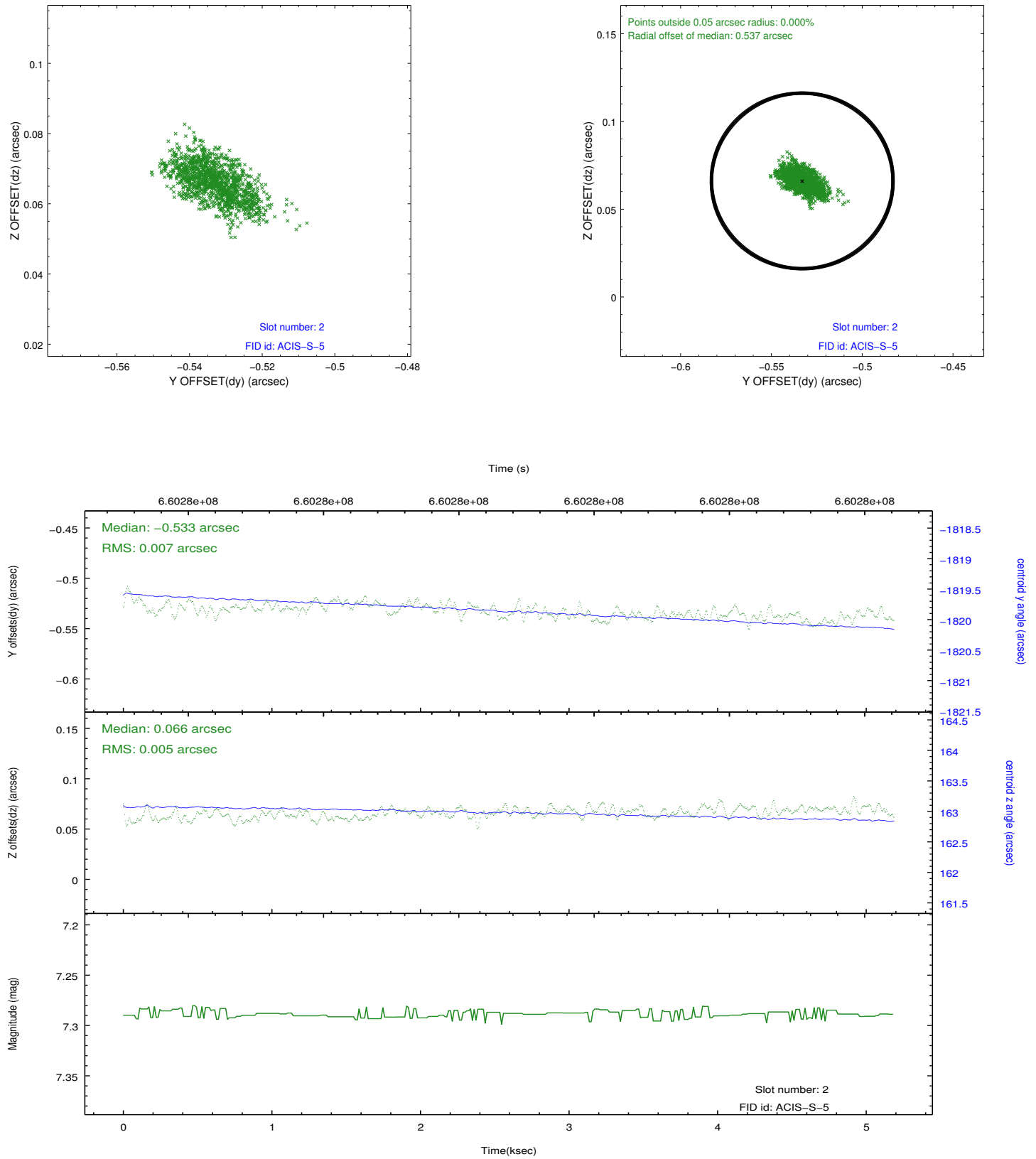
2.5.1 Slot 0



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)	2018.12.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.1863000400066

A.2 Comments

This is a moving target. Users will need to run `sso_freeze` or similar software to position the events in the reference frame of the target.

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The guide star in slot 3 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.