

V&V Reference Report

L2 ASCDS Version : 10.7

Observation 21981 - L2 Version 1
Chandra X-Ray Center

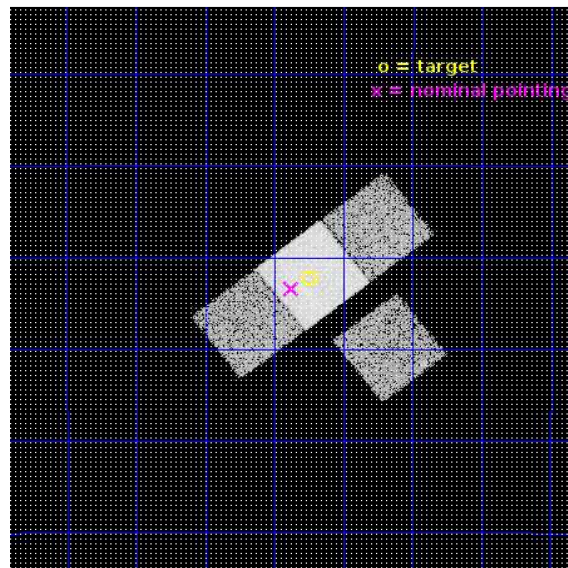
L2 Processing Date : Dec 6 2018

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1 Front

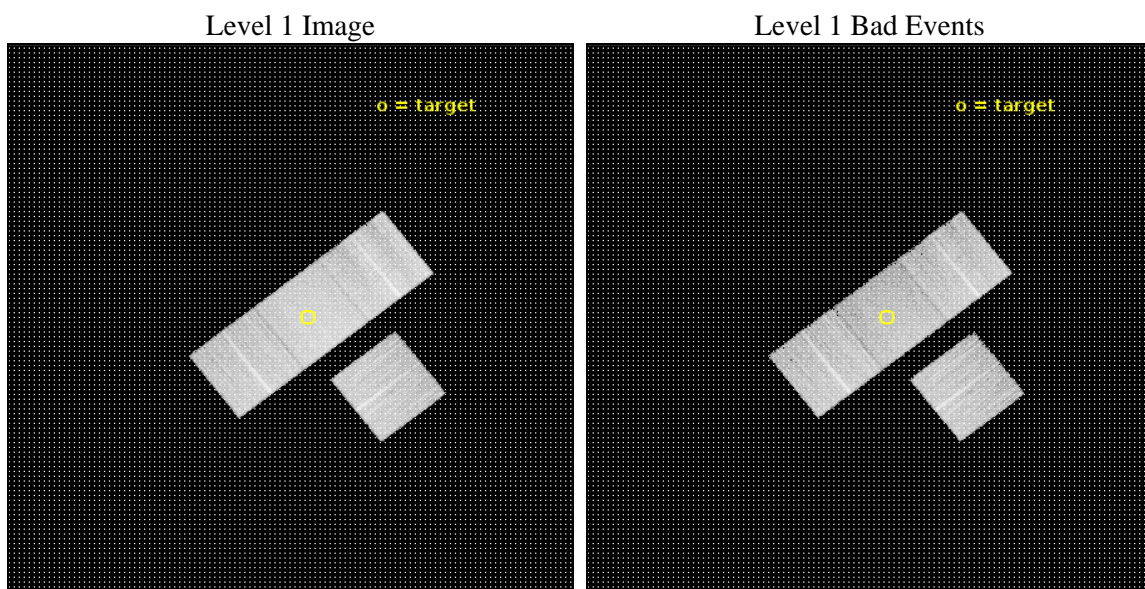
seq_num	100169	Sequence number
obs_id	21981	Observation id
title	Close encounter with comet 46P/Wirtanen: X-ray tomography of the coma	Proposal title
observer	Dennis Bodewits	Principal investigator
object	46P/Wirtanen	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	41.062278	Observer's specified target RA [deg]
dec_targ	-15.037523	Observer's specified target Dec [deg]
ra_nom	41.094145457769	Nominal RA [deg]
dec_nom	-15.056603845045	Nominal Dec [deg]
roll_nom	322.14385595882	Nominal Roll [deg]
revision	1	Processing version of data
ontime	11364.600087523	Sum of GTIs [s]
livetime	11216.113220883	Livetime [s]
ontime3	11361.458997369	Sum of GTIs [s]
ontime6	11364.600087523	Sum of GTIs [s]
ontime7	11364.600087523	Sum of GTIs [s]
ontime8	11364.600087523	Sum of GTIs [s]
l2events	72257	Number of level 2 events



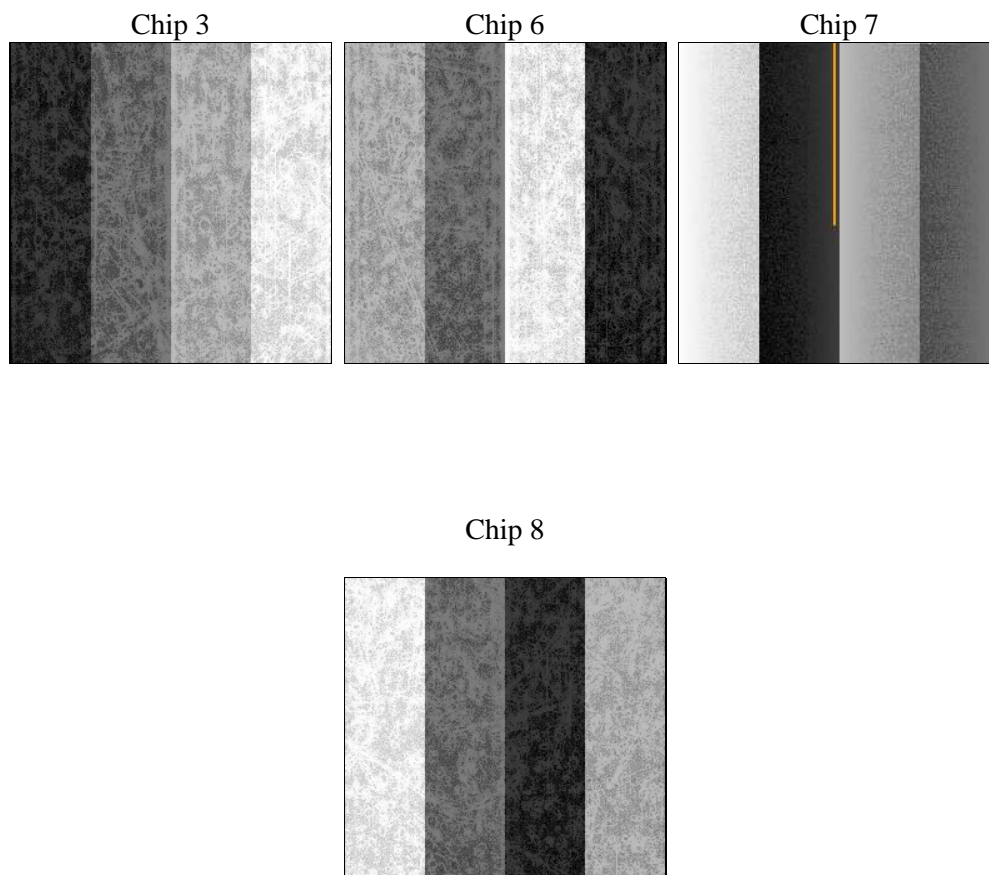
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	11188.367000	[s] Scheduled observation exposure time
ascdsver	10.7	Processing system revision	ontime	11364.600087523	Sum of GTIs [s]
caldsver	4.8.0.1	 	ontime3	11361.458997369	Sum of GTIs [s]
date	2018-12-07T03:31:30	Date and time of file creation	ontime6	11364.600087523	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	11364.600087523	Sum of GTIs [s]
			ontime8	11364.600087523	Sum of GTIs [s]
			l1events	409267	Number of level 1 events

2.1.4 Events

	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	91565	93962	112891	110849
rejected events	83128	84198	64861	83513
rejected %	90%	89%	57%	75%

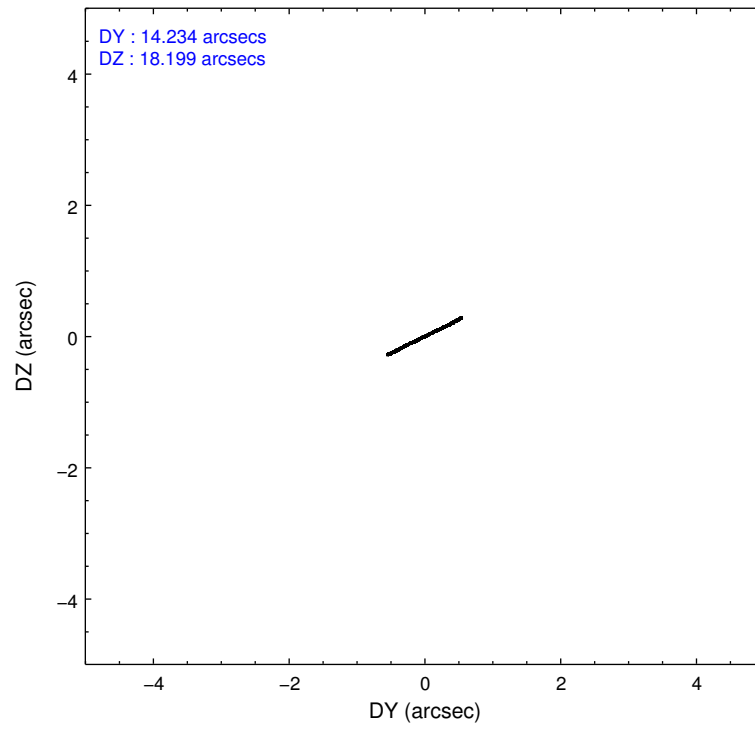
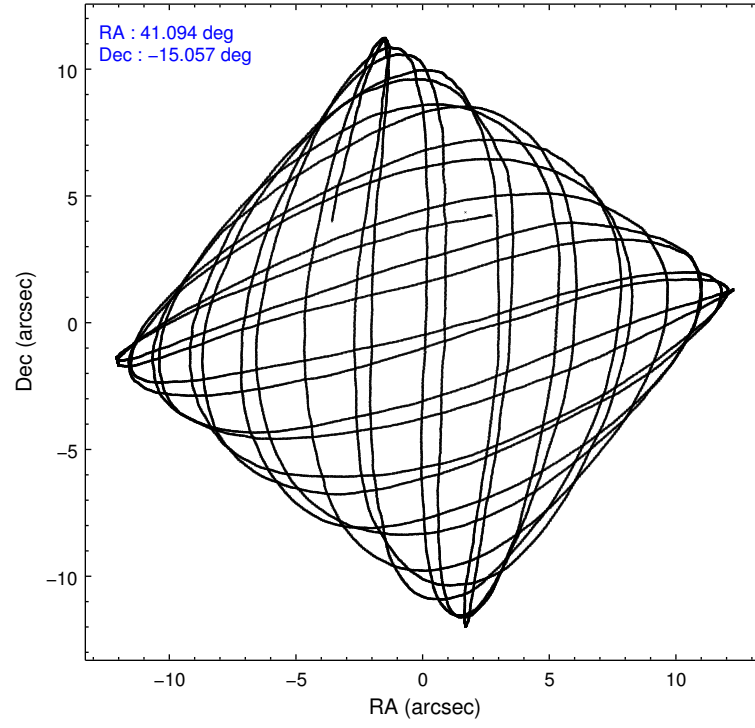
	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	2973	2784	4003	7698
	3%	2%	3%	6%
grade 1 events	37	41	152	77
	0%	0%	0%	0%
grade 2 events	1859	2821	10048	6862
	2%	3%	8%	6%
grade 3 events	923	857	3870	2757
	1%	0%	3%	2%
grade 4 events	865	763	3823	2599
	0%	0%	3%	2%
grade 5 events	3771	3610	10933	5808
	4%	3%	9%	5%
grade 6 events	1952	2698	27120	7953
	2%	2%	24%	7%
grade 7 events	79185	80388	52942	77095
	86%	85%	46%	69%

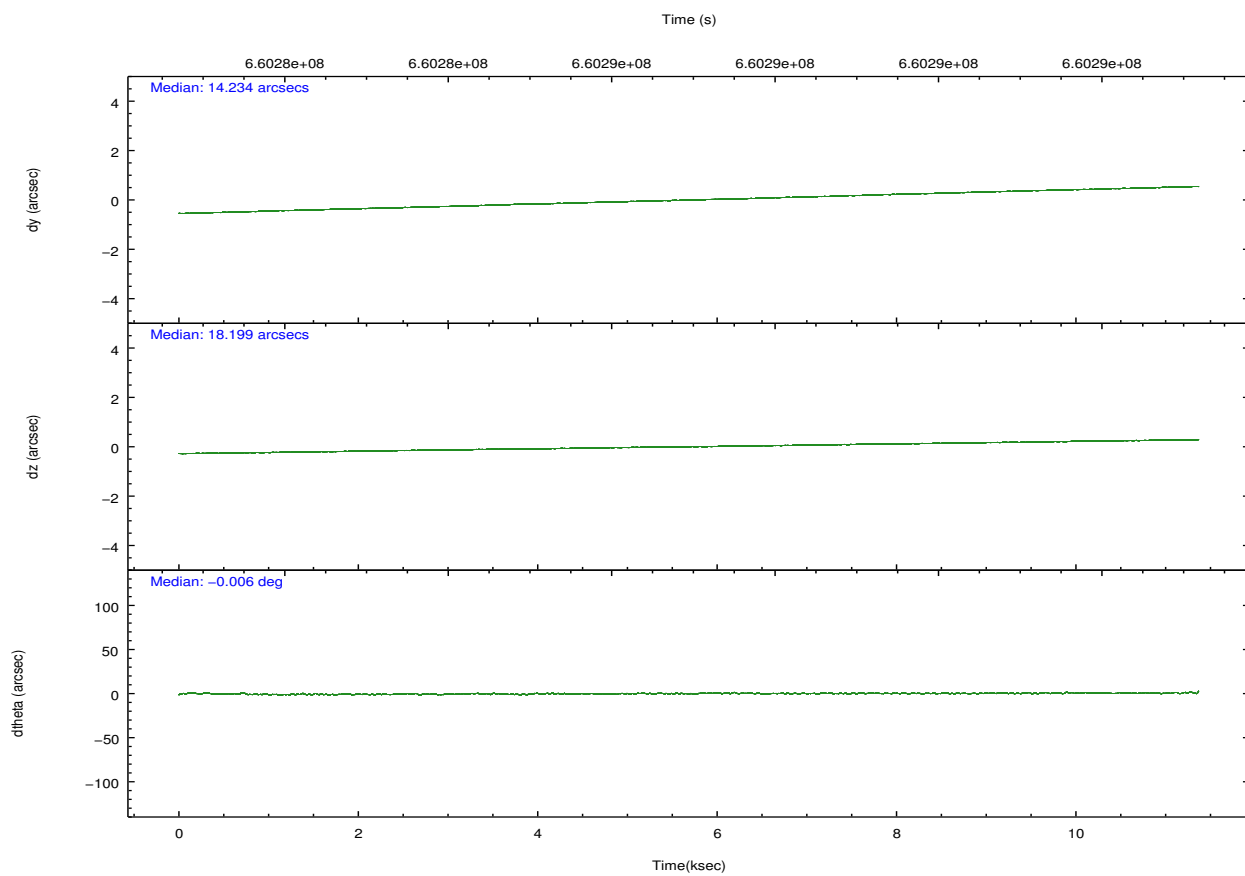
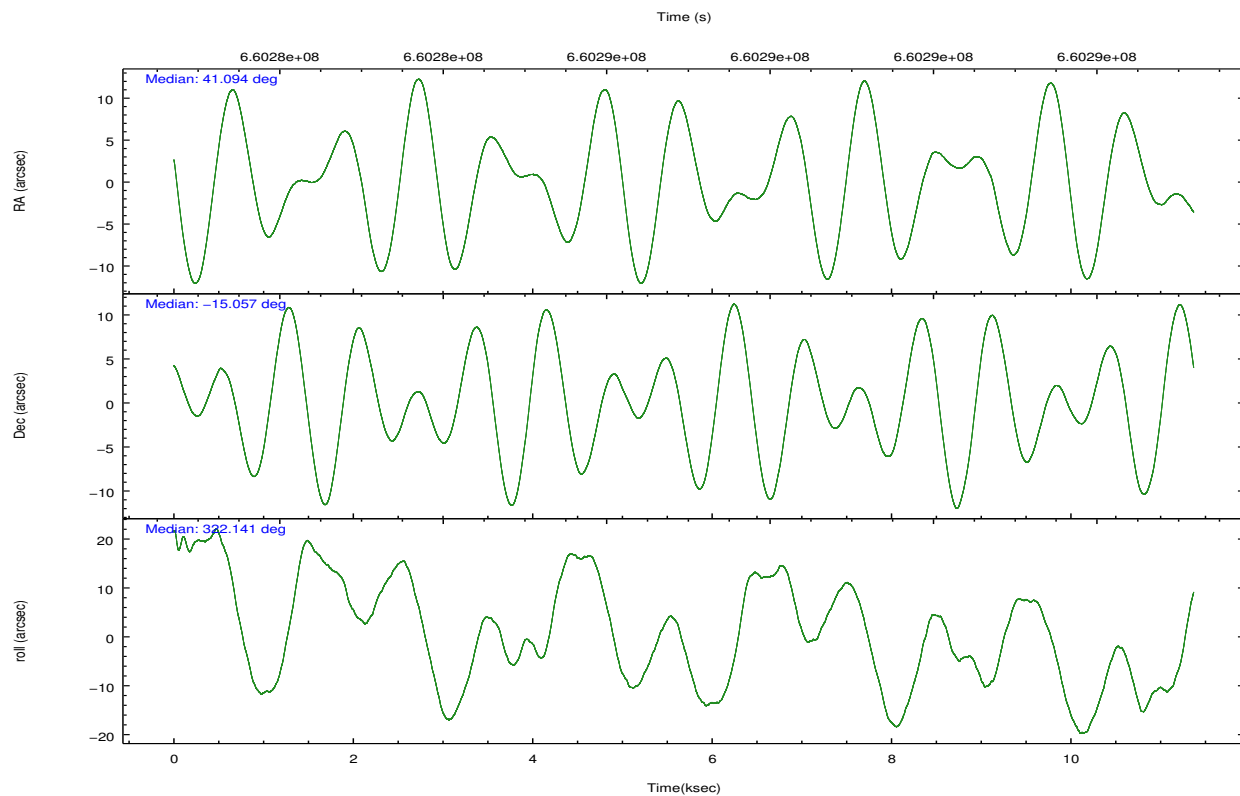
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-3678	ACIS-3678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	41.065976	41.09414545776873
[deg] Pointing Dec	-15.053255	-15.05660384504479
[deg] Pointing Roll	321.979939	322.1438559588191
[s] Window start time (MET)	660009669.184000	660009669.184000
[s] Window stop time (MET)	660355269.184000	660355269.184000
[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)	660281450.184000	660281073.8061399
Observation start date	2018-12-04T03:29:41	2018-12-04T03:24:33
[s] Observation end time (MET)	660292638.184000	660293224.15686
Observation end date	2018-12-04T06:36:09	2018-12-04T06:47:04
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	N
CCD I3 on	O3	Y
CCD S0 on	N	N
CCD S1 on	O1	N
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	2	2
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



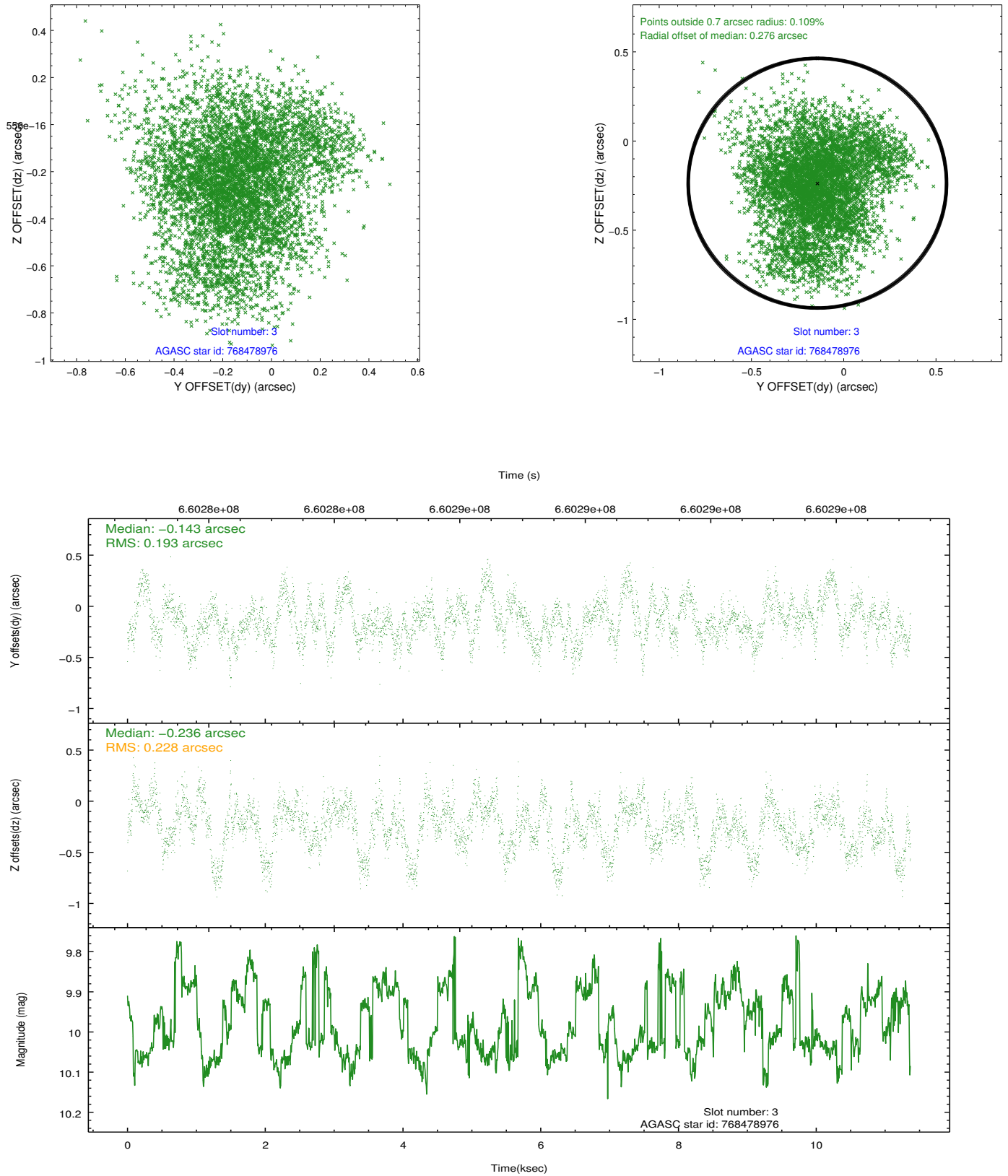


Slot Statistics

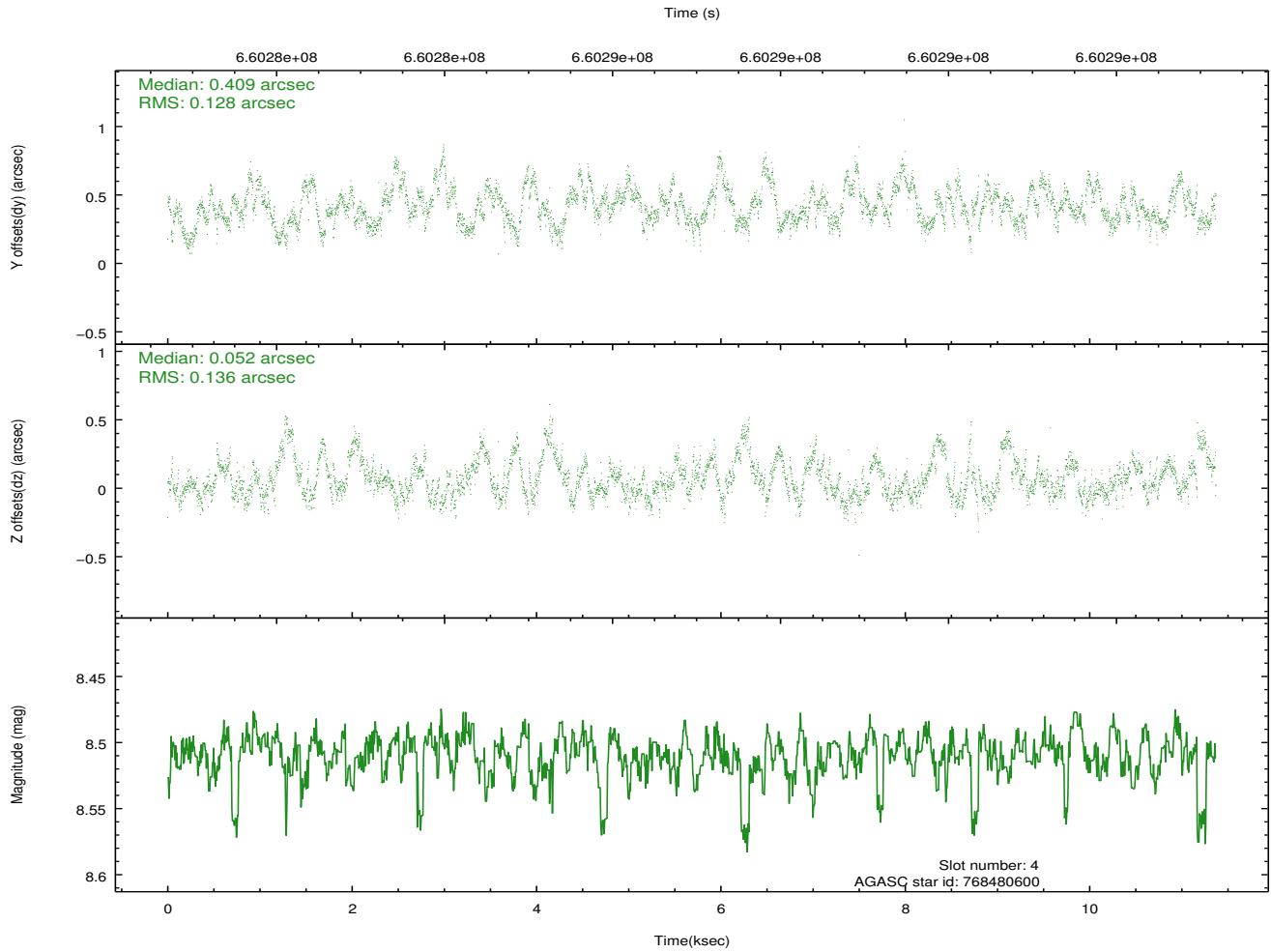
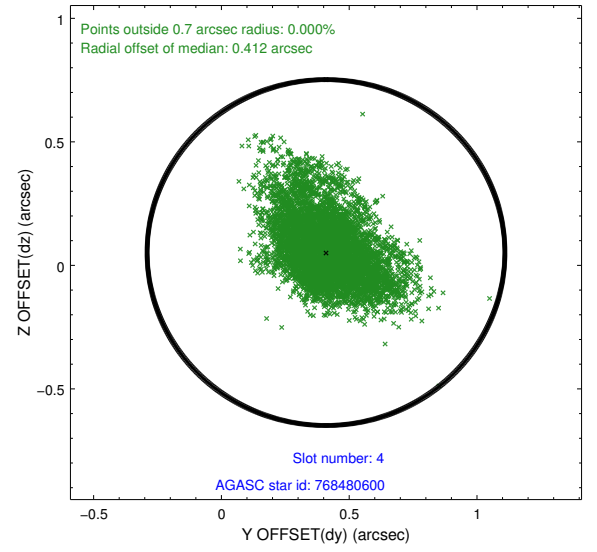
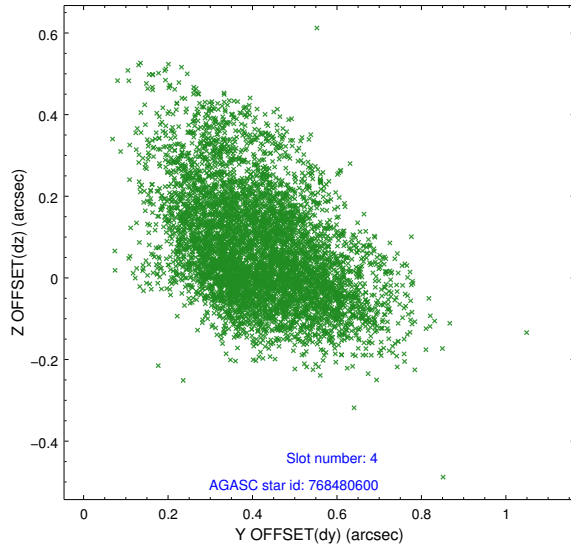
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.19	2773	1.000	-0.294	-0.251	0.017	0.033	0.000000	0.000000	-767.42	-1739
1	FID		ACIS-S-4	7.31	2773	1.000	0.793	0.209	0.014	0.027	0.000000	0.000000	2146.68	168
2	FID		ACIS-S-5	7.29	2773	1.000	-0.531	0.051	0.011	0.021	0.000000	0.000000	-1819.98	162
3	GUIDE	used	768478976	10.00	5526	1.000	-0.143	-0.236	0.330	0.510	41.505799	-15.190621	1508.50	550
4	GUIDE	used	768480600	8.51	5542	1.000	0.409	0.052	0.192	0.336	40.992909	-15.785552	1425.30	-2232
5	GUIDE	used	768481448	7.80	5546	1.000	-0.457	-0.263	0.154	0.223	41.719335	-15.287038	2308.47	731
6	GUIDE	used	768481584	9.94	5531	1.000	0.109	0.446	0.349	0.537	40.616612	-15.044357	-1248.57	-937
7	GUIDE	used	768482072	7.56	5541	1.000	0.021	-0.049	0.211	0.337	41.302106	-15.426646	1473.71	-553

2.4 Star Slots

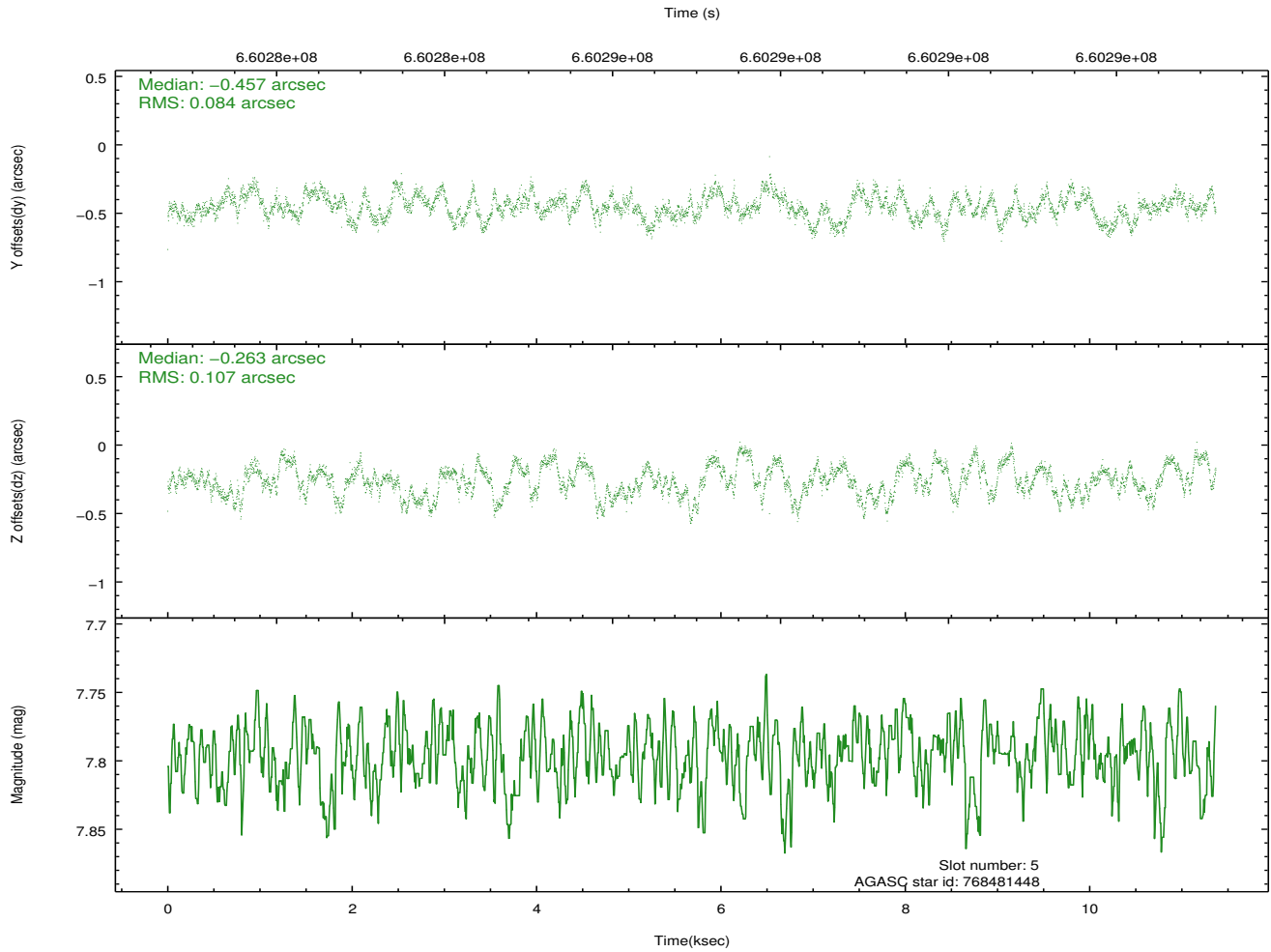
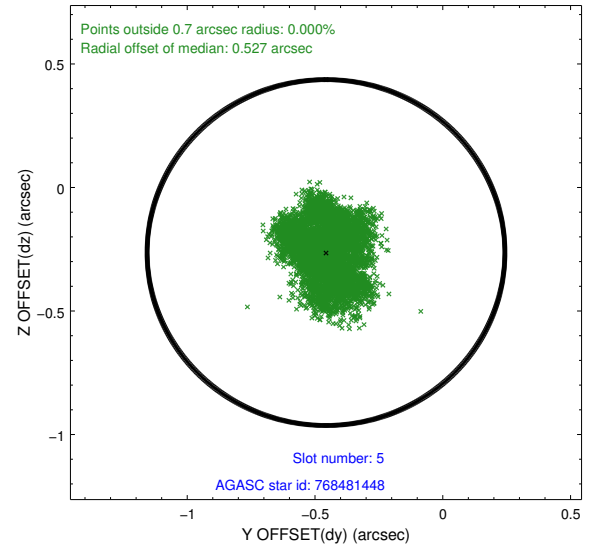
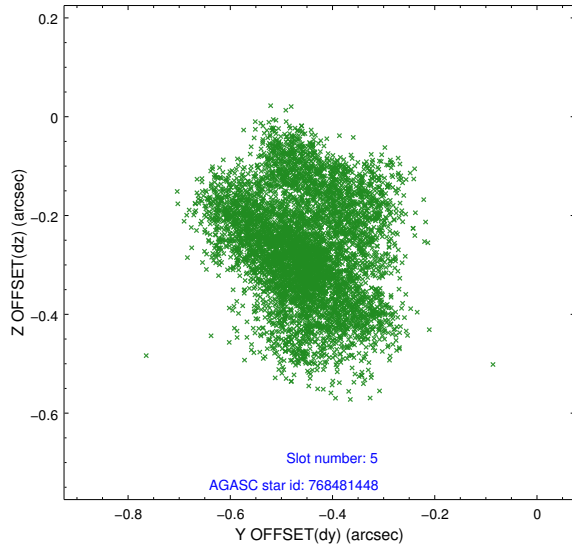
2.4.1 Slot 3



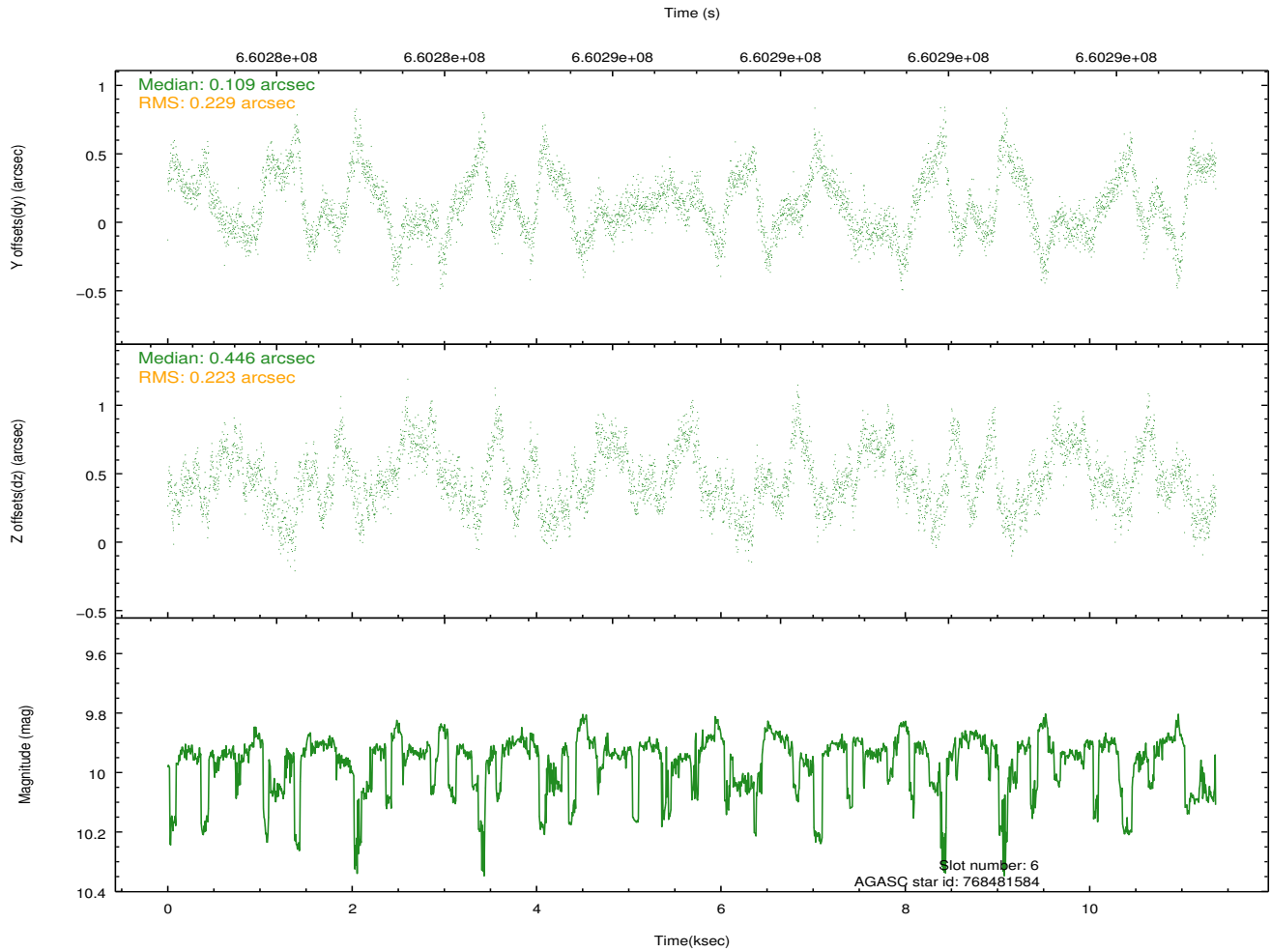
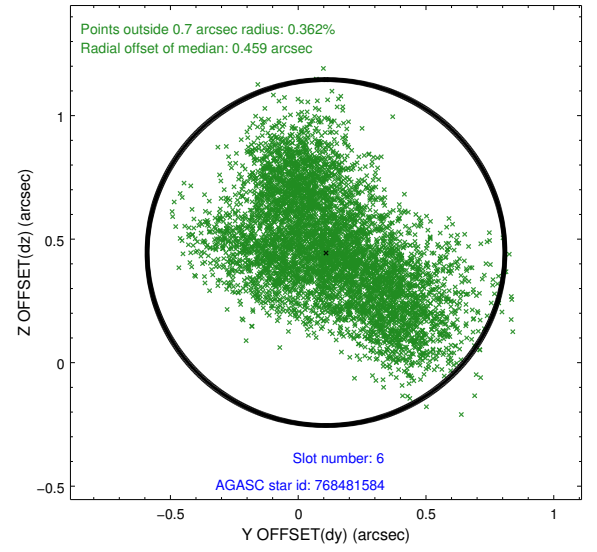
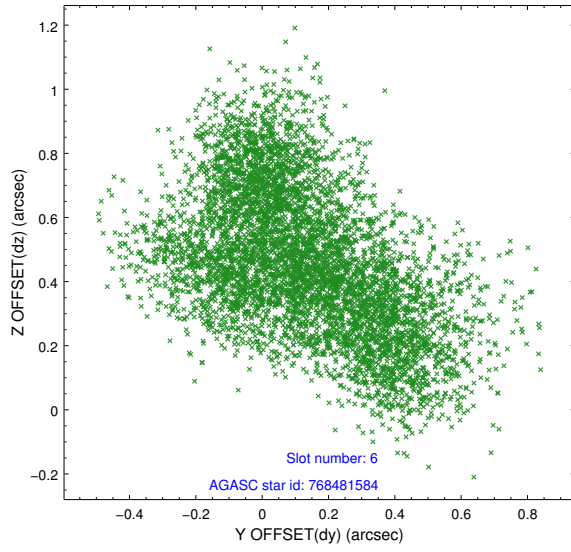
2.4.2 Slot 4



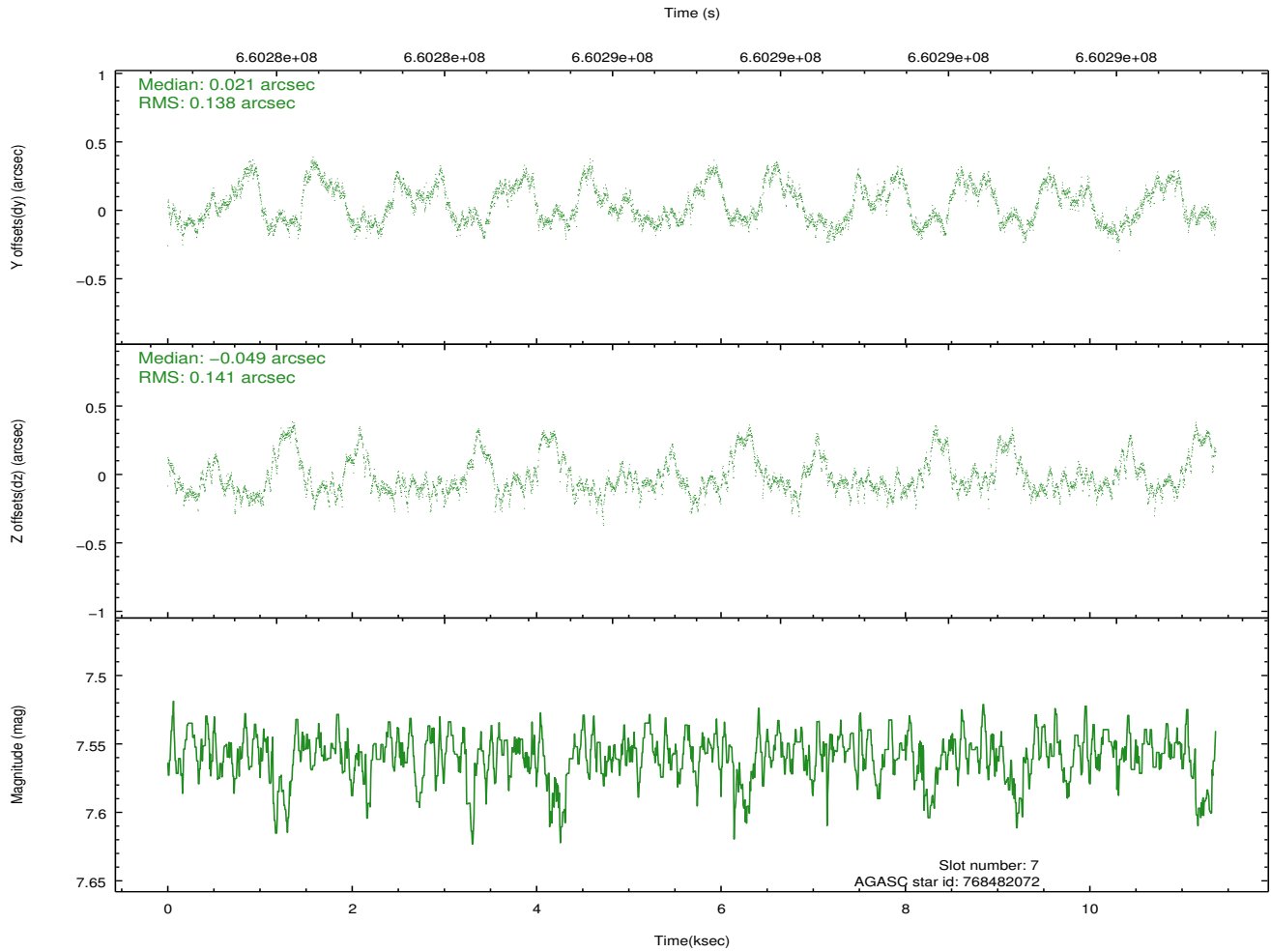
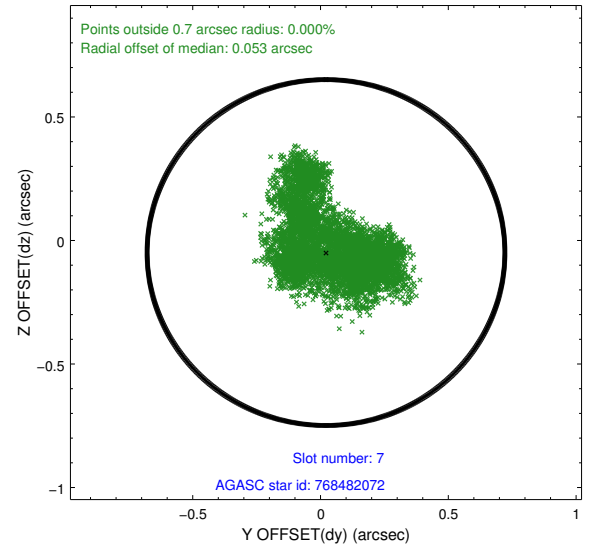
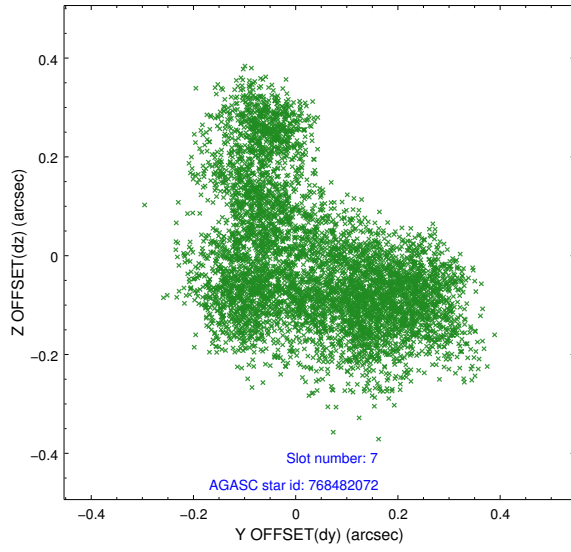
2.4.3 Slot 5



2.4.4 Slot 6

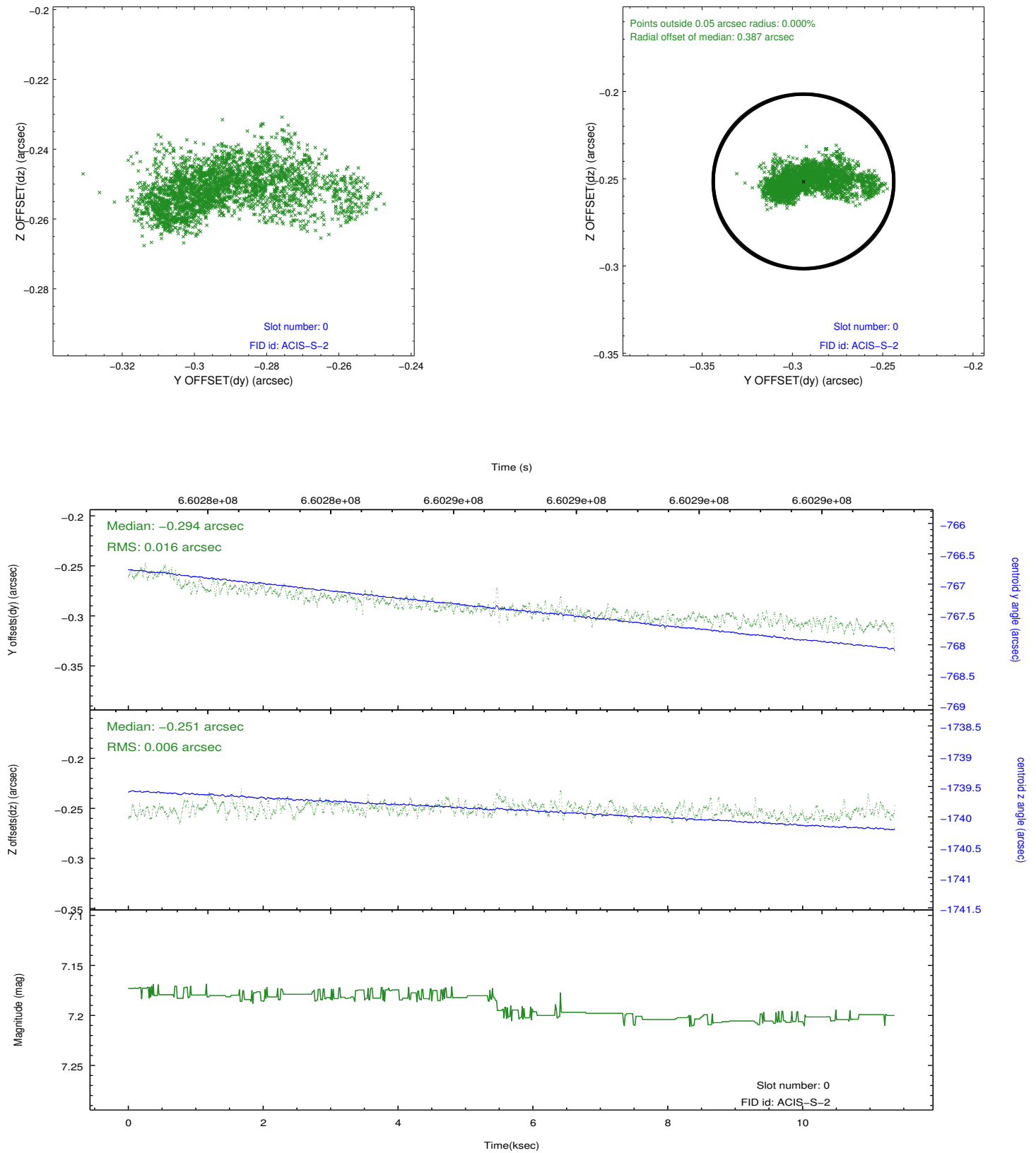


2.4.5 Slot 7

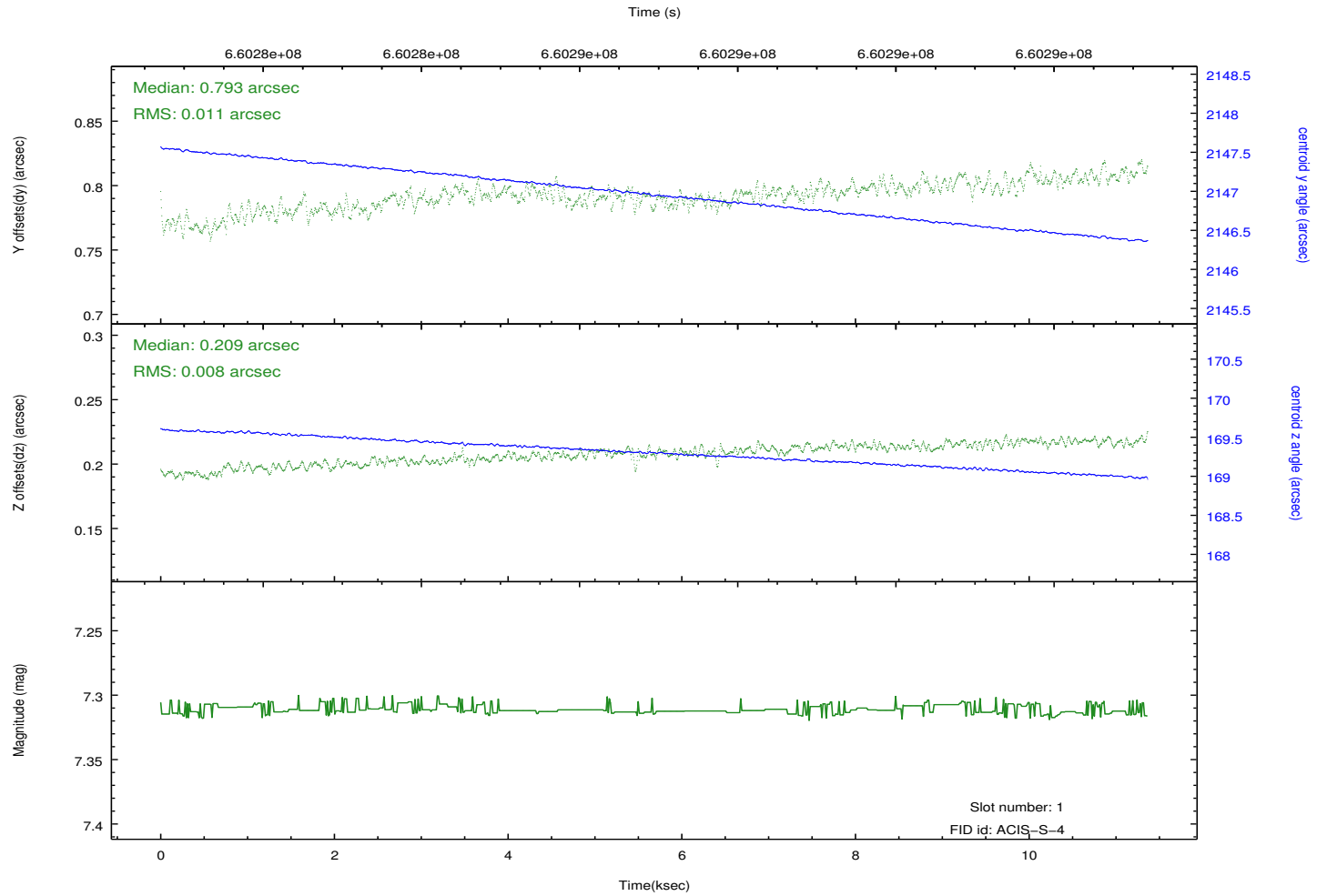
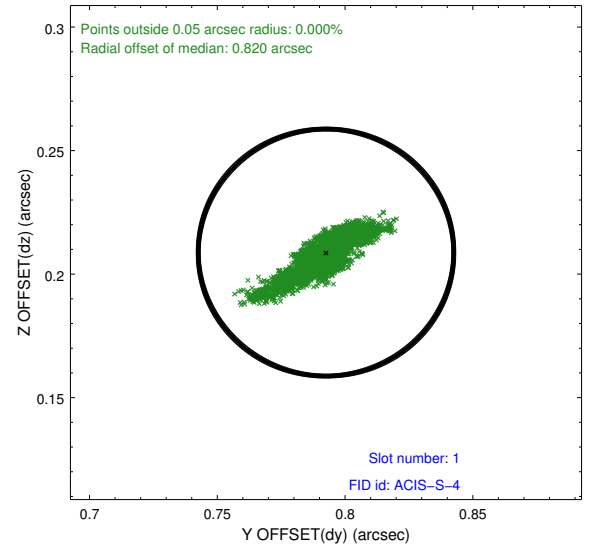
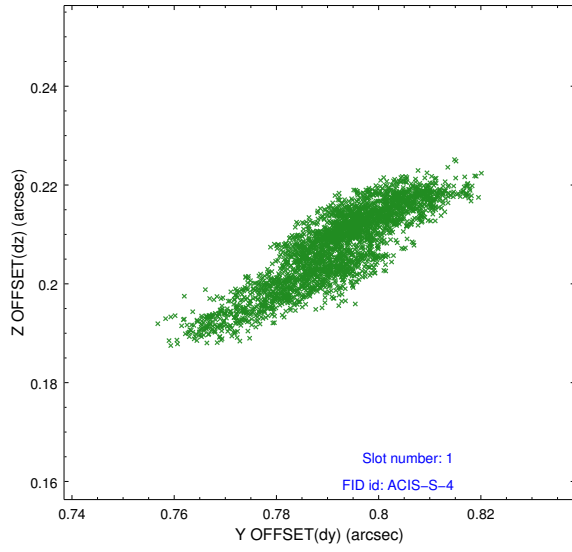


2.5 FID Slots

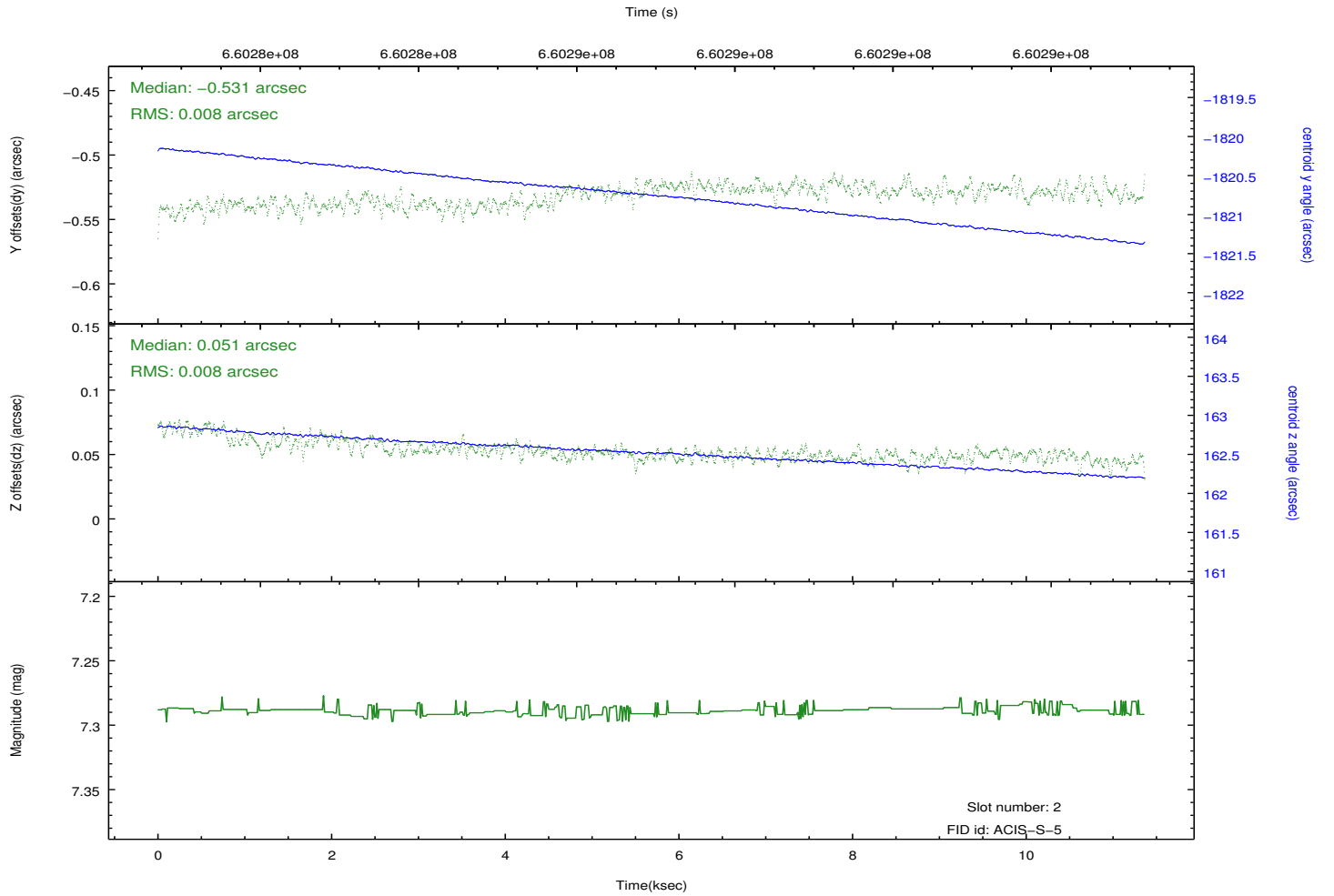
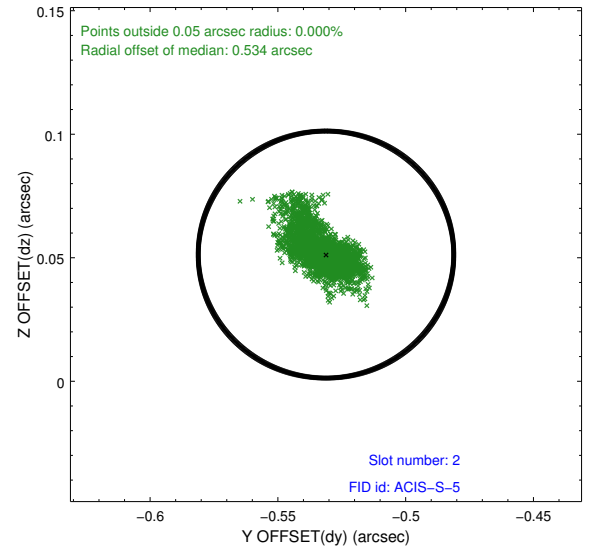
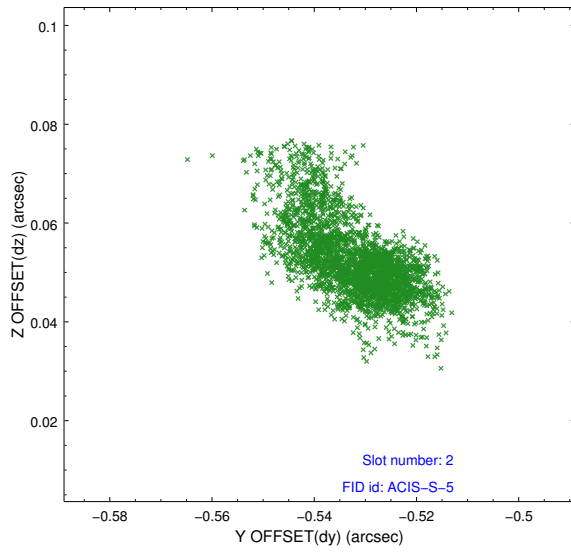
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2018.12.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.364600087523

A.2 Comments

Two optional chips were dropped.

Window preference met.

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