

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 21990 - L2 Version 1
Chandra X-Ray Center

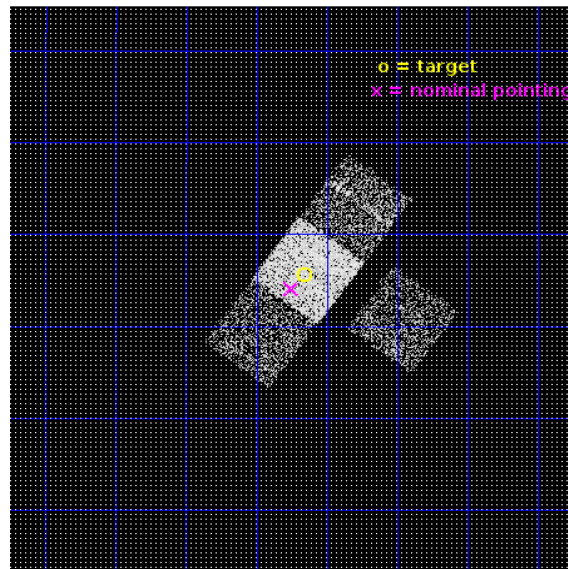
L2 Processing Date : Dec 14 2018

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1 Front

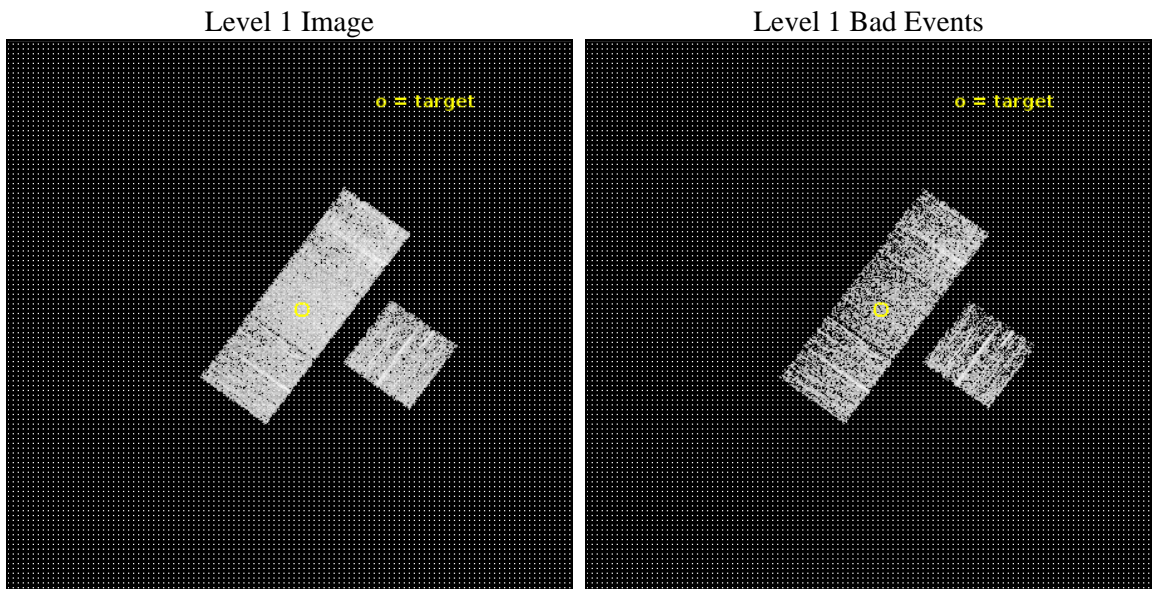
seq_num	100169	Sequence number
obs_id	21990	Observation id
title	Close encounter with comet 46P/Wirtanen: X-ray tomography of the coma	Proposal title
observer	Dennis Bodewits	Principal investigator
object	46P/Wirtanen	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	54.539107	Observer's specified target RA [deg]
dec_targ	10.927785	Observer's specified target Dec [deg]
ra_nom	54.562777822664	Nominal RA [deg]
dec_nom	10.901533516894	Nominal Dec [deg]
roll_nom	306.15162671399	Nominal Roll [deg]
revision	1	Processing version of data
ontime	2194.8000169992	Sum of GTIs [s]
livetime	2166.1233389889	Livetime [s]
ontime3	2191.6589368582	Sum of GTIs [s]
ontime6	2194.8000169992	Sum of GTIs [s]
ontime7	2194.8000169992	Sum of GTIs [s]
ontime8	2194.8000169992	Sum of GTIs [s]
l2events	13872	Number of level 2 events



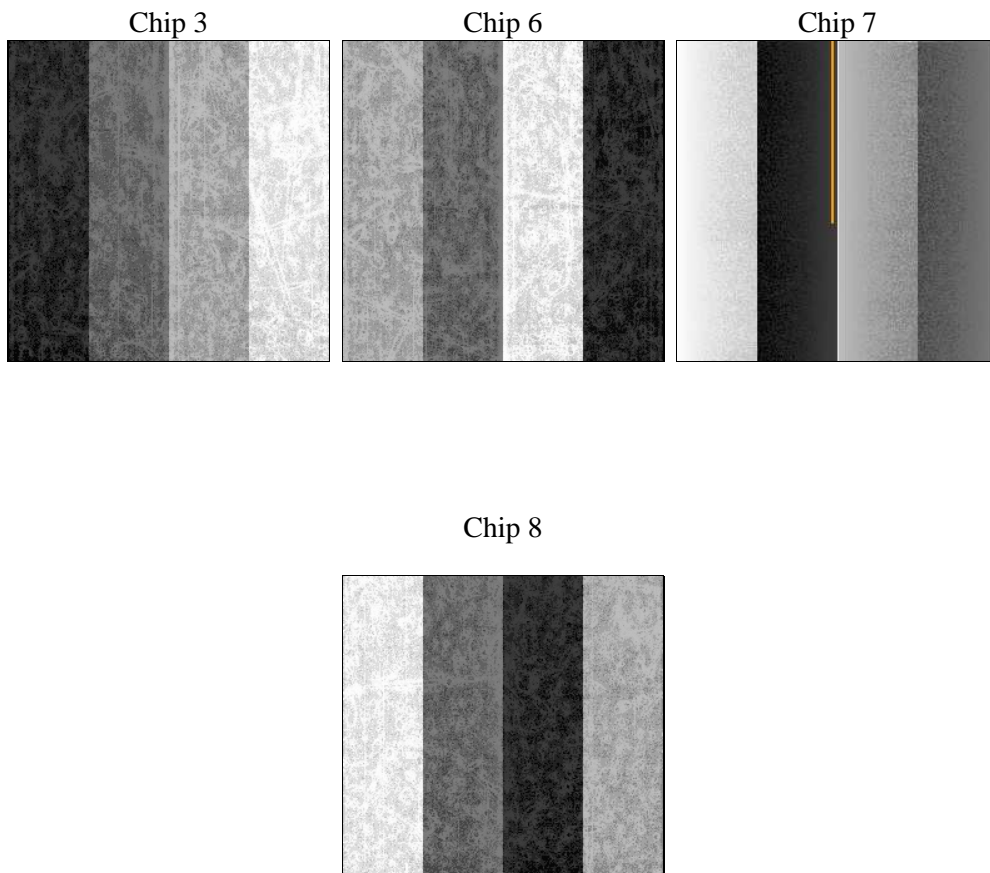
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	2194.8000169992	Sum of GTIs [s]
caldbver	4.8.2	 	ontime3	2191.6589368582	Sum of GTIs [s]
date	2018-12-14T11:56:42	Date and time of file creation	ontime6	2194.8000169992	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	2194.8000169992	Sum of GTIs [s]
			ontime8	2194.8000169992	Sum of GTIs [s]
			l1events	87923	Number of level 1 events

2.1.4 Events

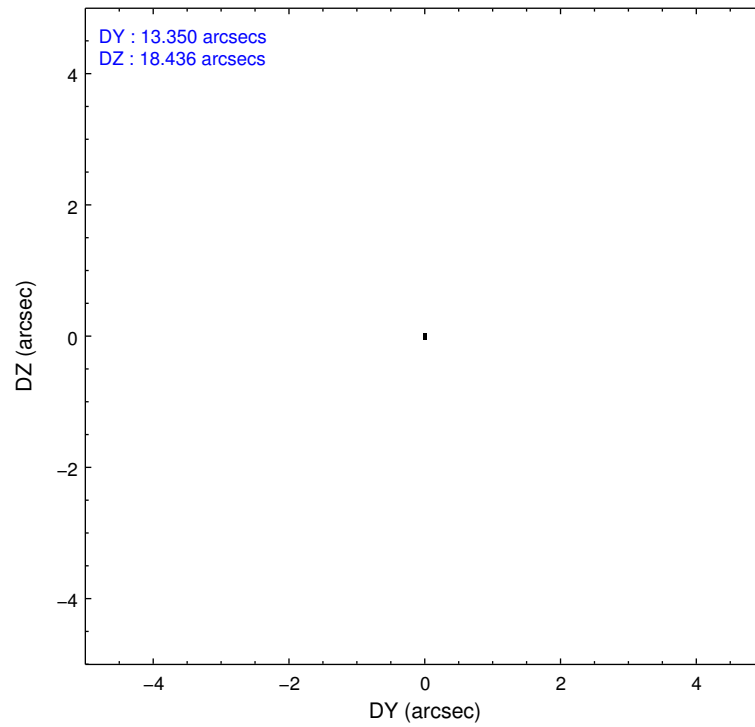
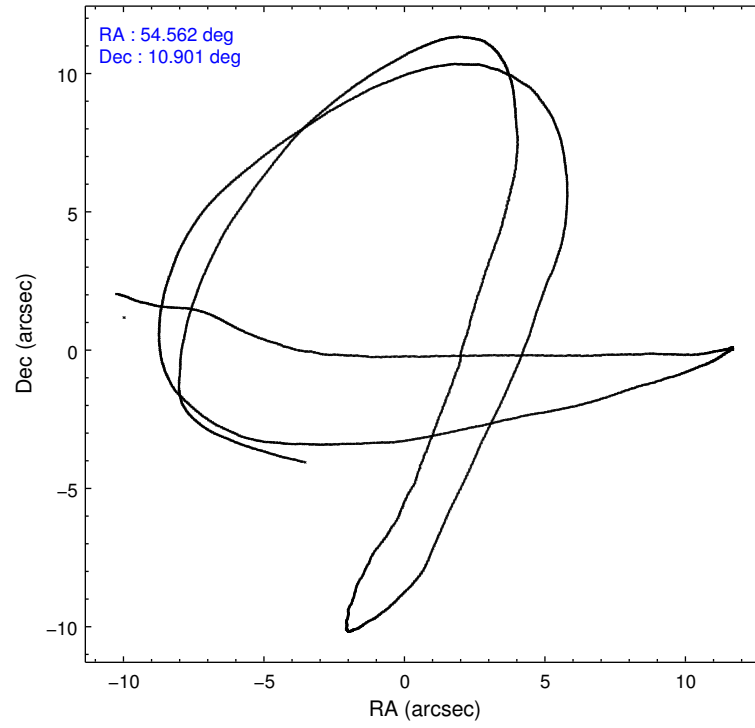
	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	18696	19241	24640	25346
rejected events	17058	17419	15646	19566
rejected %	91%	90%	63%	77%

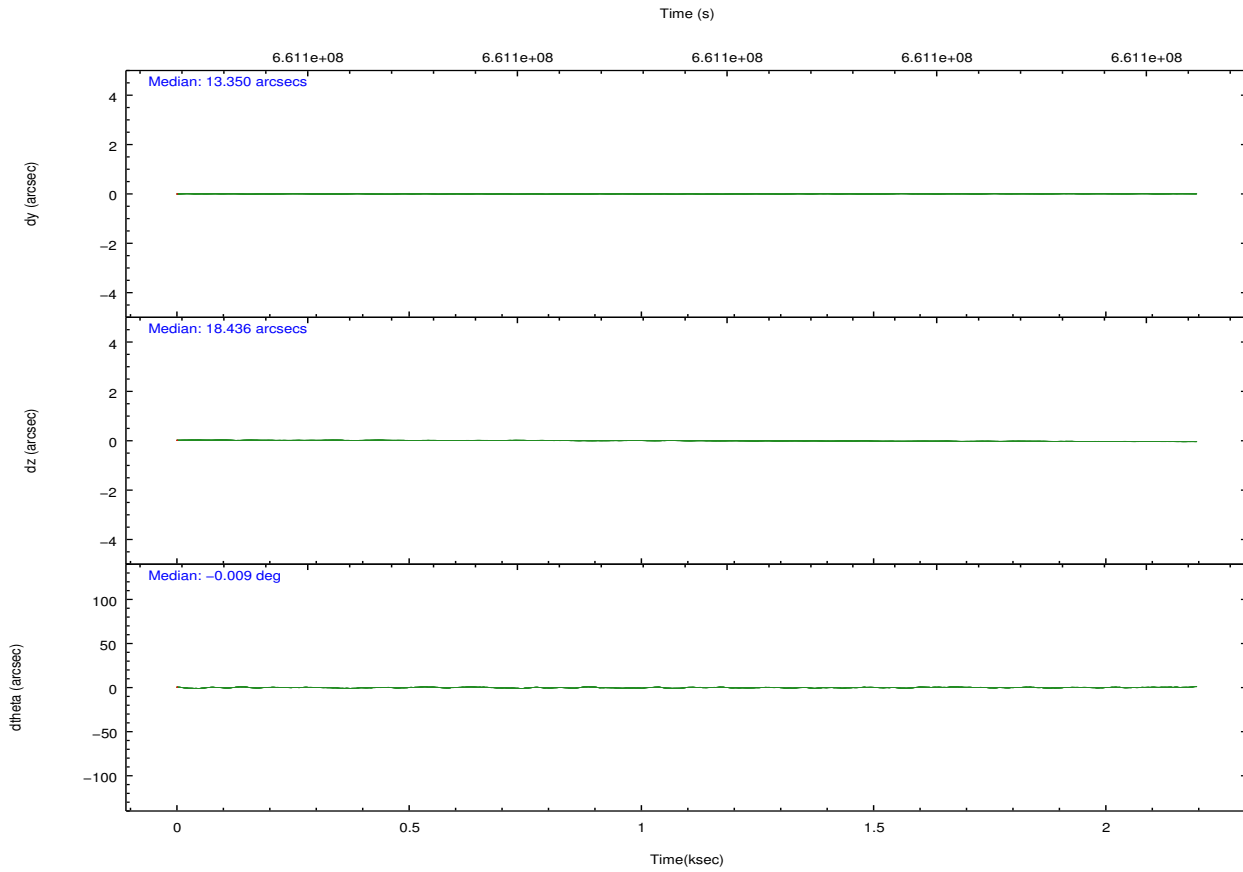
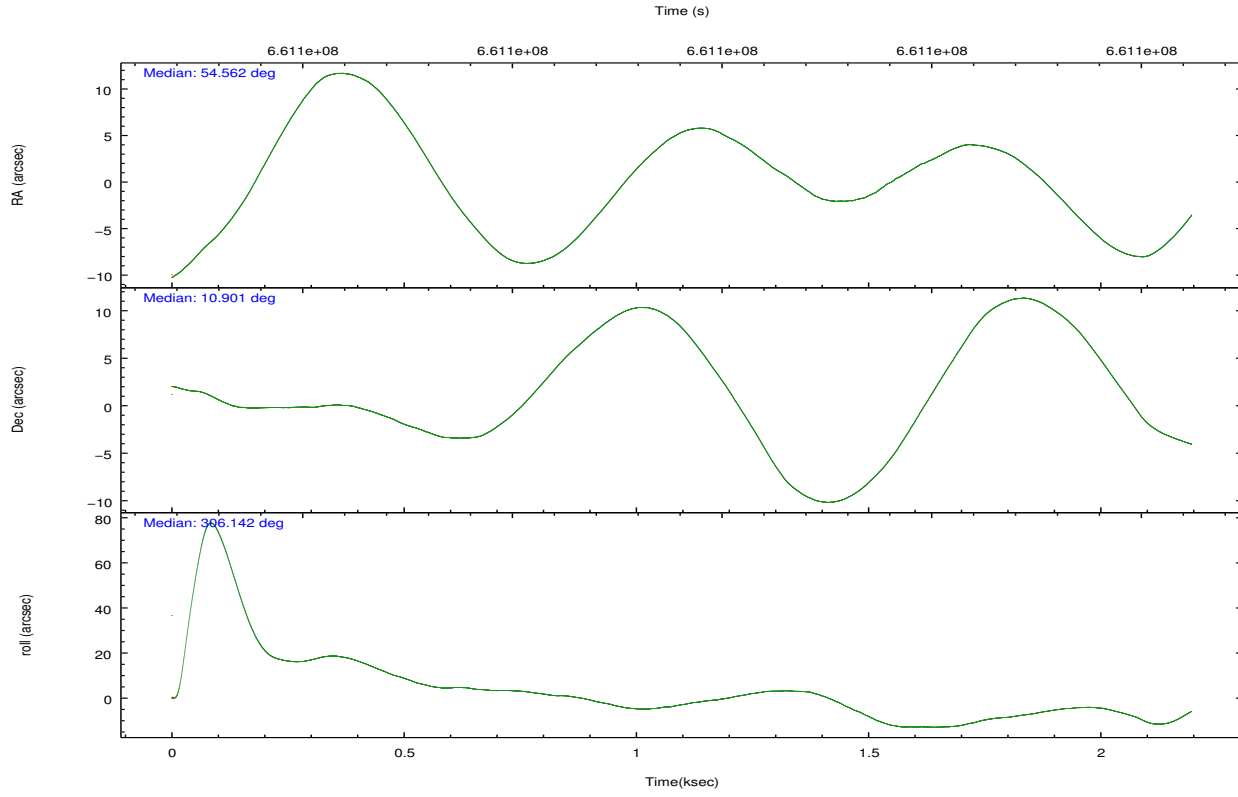
	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	720	656	860	2014
	3%	3%	3%	7%
grade 1 events	10	14	39	20
	0%	0%	0%	0%
grade 2 events	409	562	2178	1483
	2%	2%	8%	5%
grade 3 events	206	201	812	700
	1%	1%	3%	2%
grade 4 events	222	195	757	661
	1%	1%	3%	2%
grade 5 events	841	809	2423	1351
	4%	4%	9%	5%
grade 6 events	390	523	5833	1806
	2%	2%	23%	7%
grade 7 events	15898	16281	11738	17311
	85%	84%	47%	68%

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	54.537139	54.56277782266412	CCD I2 on	O2	N
[deg] Pointing Dec	10.912253	10.90153351689384	CCD I3 on	Y	Y
[deg] Pointing Roll	306.000372	306.1516267139928	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	-190.1400660498719	CCD S5 on	N	N
[mm] SIM translation stage offset	0	0.00754346686406393	Number of optional ACIS chips dropped	2	2
[s] Observation start time (MET)	661099013.184000	661098597.45486	On-chip summing requested	N	N
Observation start date	2018-12-13T14:35:44	2018-12-13T14:29:57	Subarray requested	NONE	NONE
[s] Observation end time (MET)	661101013.184000	661101147.65501	Alternating exposures requested	N	N
Observation end date	2018-12-13T15:09:04	2018-12-13T15:12:27	[s] Primary exposure time	0.000000	3.1
Read mode	TIMED	TIMED			

2.3 Aspect



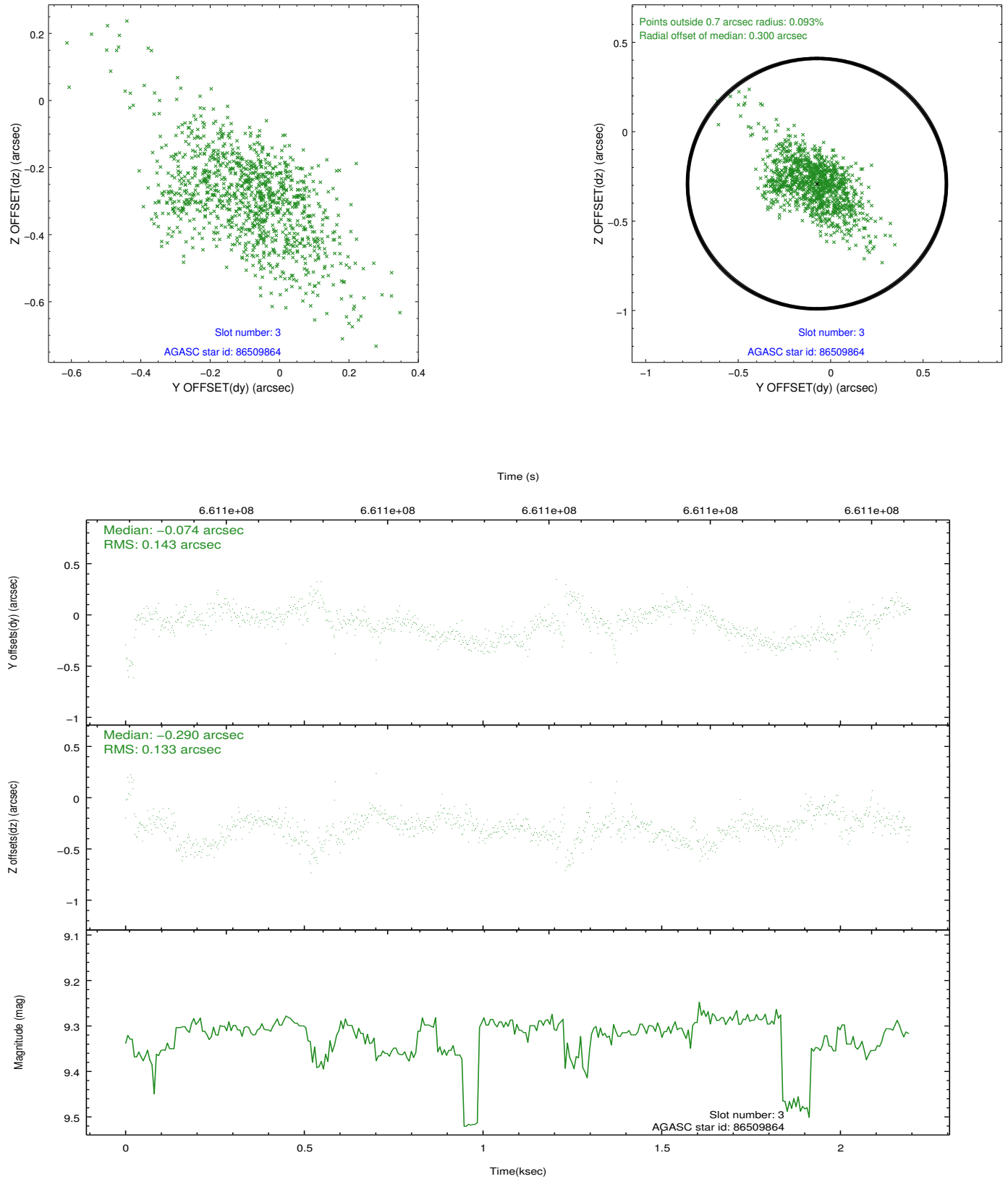


Slot Statistics

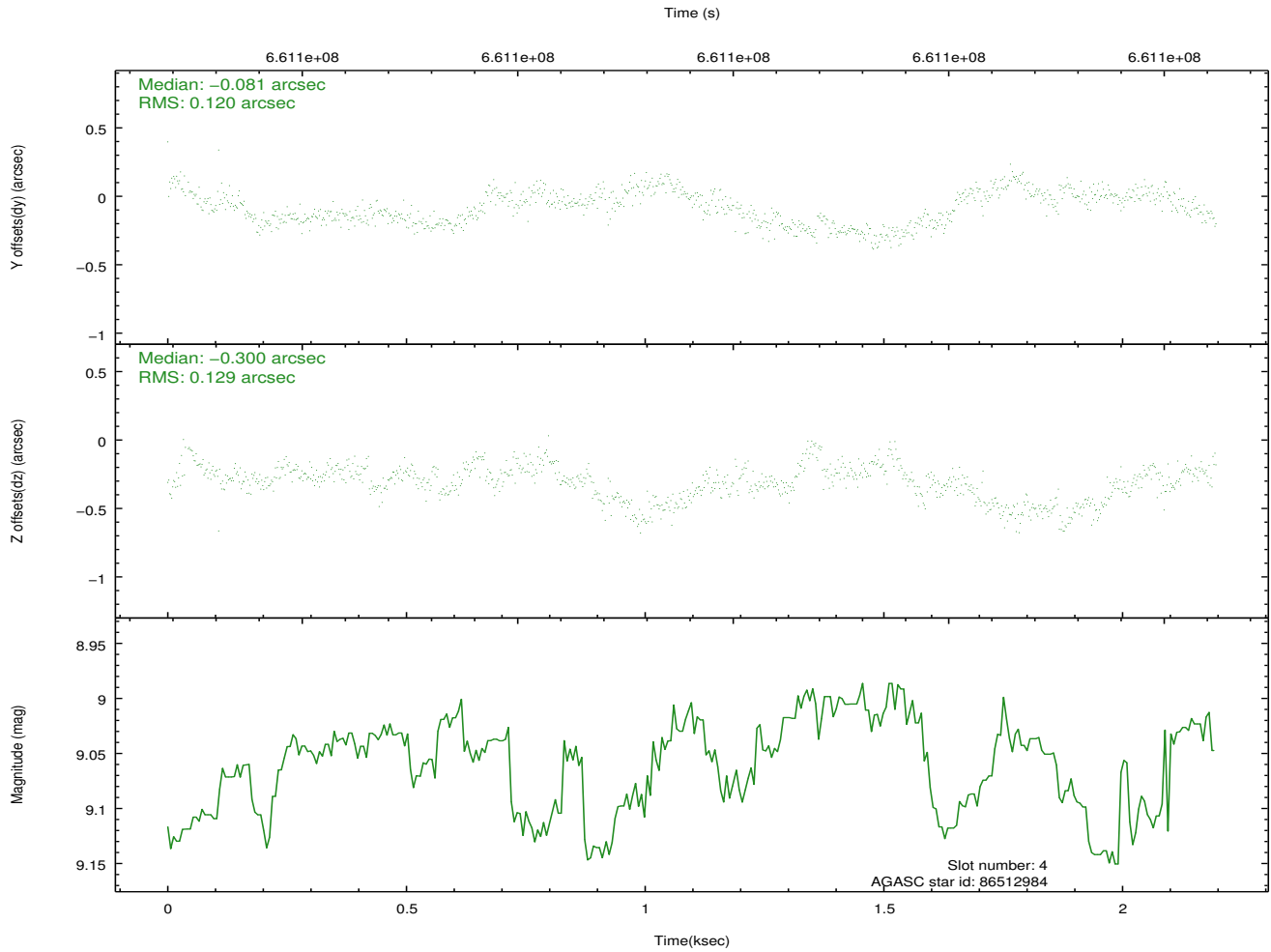
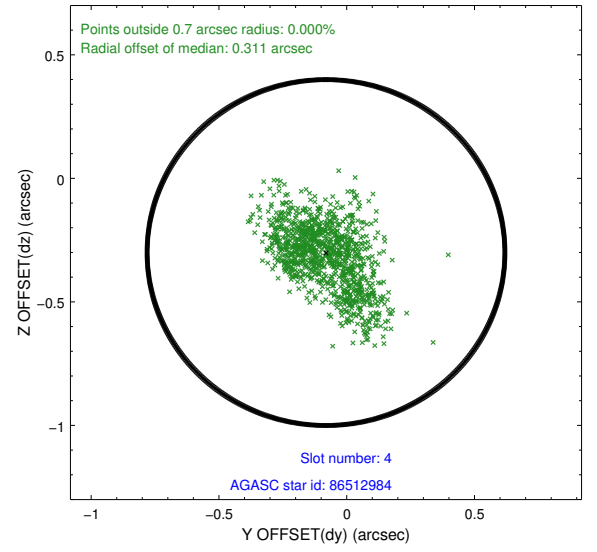
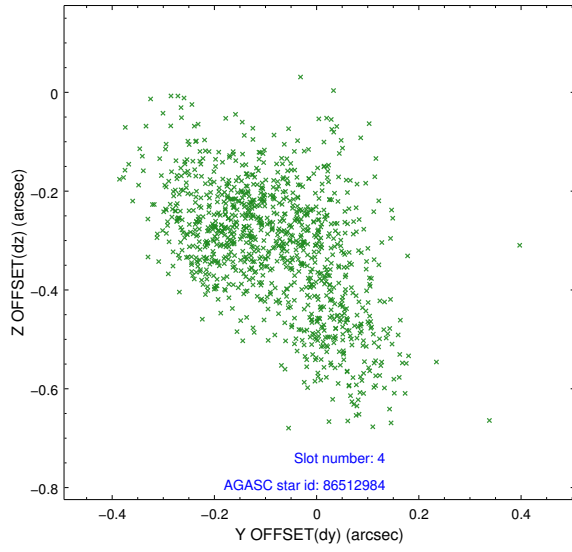
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.20	536	1.000	0.081	-0.093	0.008	0.012	0.000000	0.000000	929.94	-1735
1	FID		ACIS-S-4	7.22	536	1.000	0.603	0.031	0.006	0.011	0.000000	0.000000	2149.40	165
2	FID		ACIS-S-5	7.19	536	1.000	-0.710	0.075	0.008	0.014	0.000000	0.000000	-1816.03	162
3	GUIDE	used	86509864	9.31	1072	1.000	-0.074	-0.290	0.195	0.341	54.565929	11.706993	-2254.38	1764
4	GUIDE	used	86512984	9.05	1067	1.000	-0.081	-0.300	0.185	0.322	54.433894	10.707148	382.40	-726
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
6	GUIDE	used	86515104	8.09	1072	1.000	-0.049	0.379	0.113	0.181	53.764409	11.045848	-1995.33	-1923
7	GUIDE	used	86511872	9.77	1068	1.000	0.234	0.221	0.240	0.380	54.009934	10.794884	-755.57	-1756

2.4 Star Slots

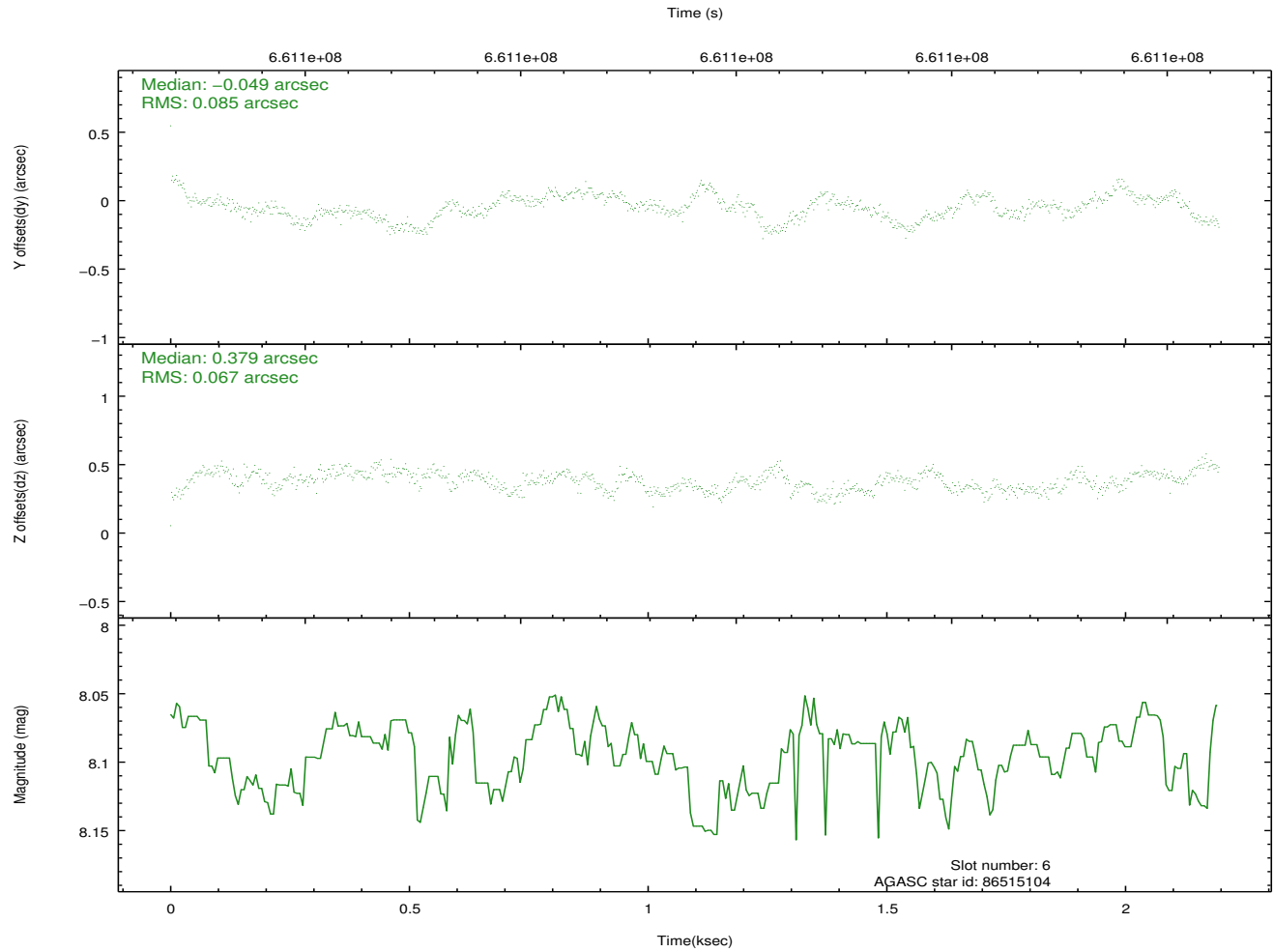
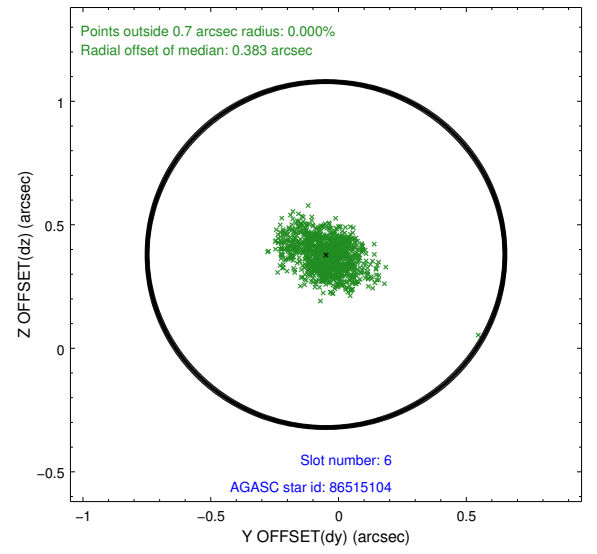
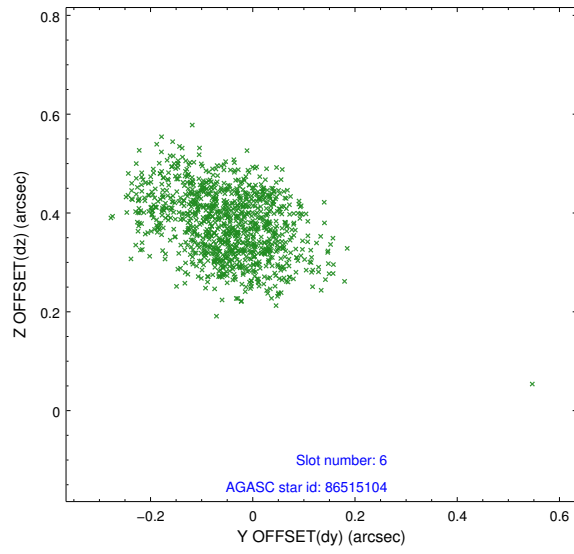
2.4.1 Slot 3



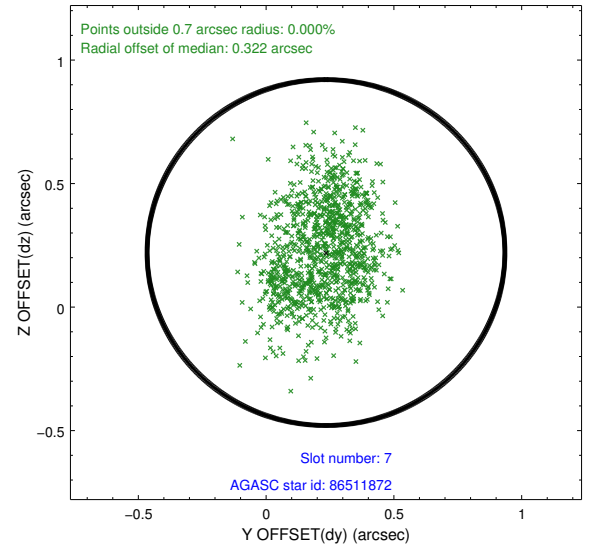
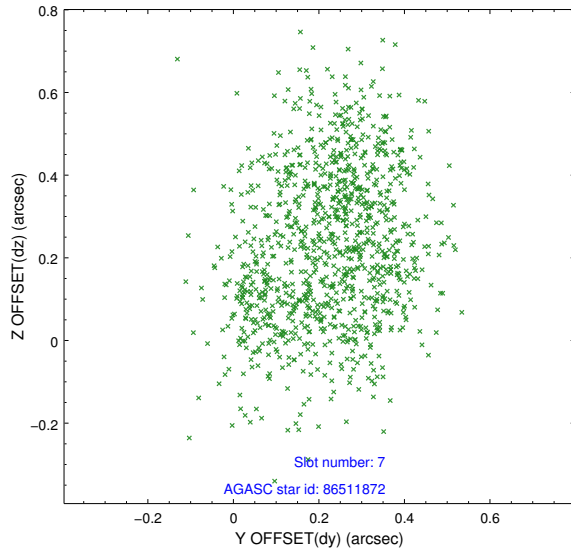
2.4.2 Slot 4



2.4.3 Slot 6

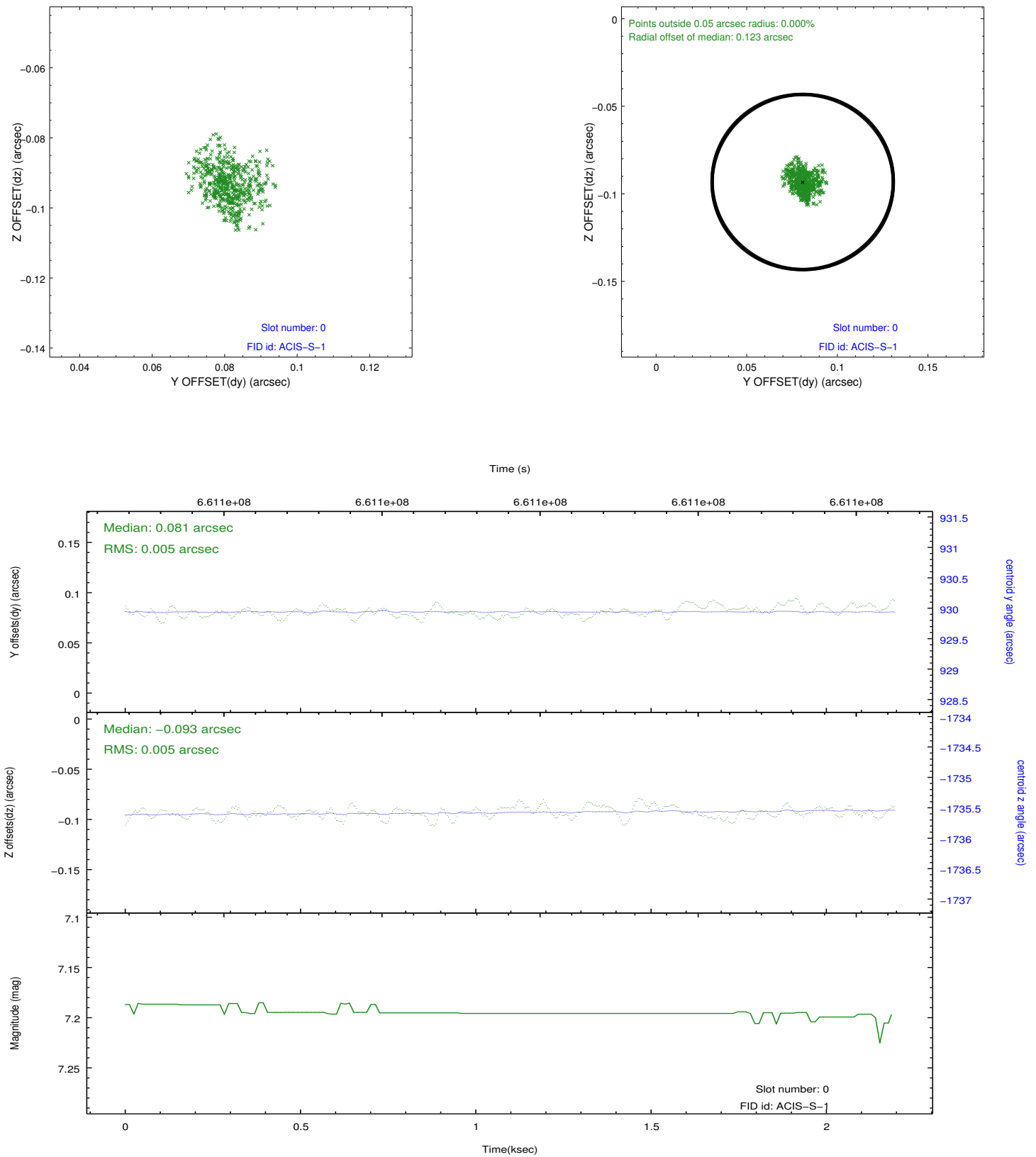


2.4.4 Slot 7

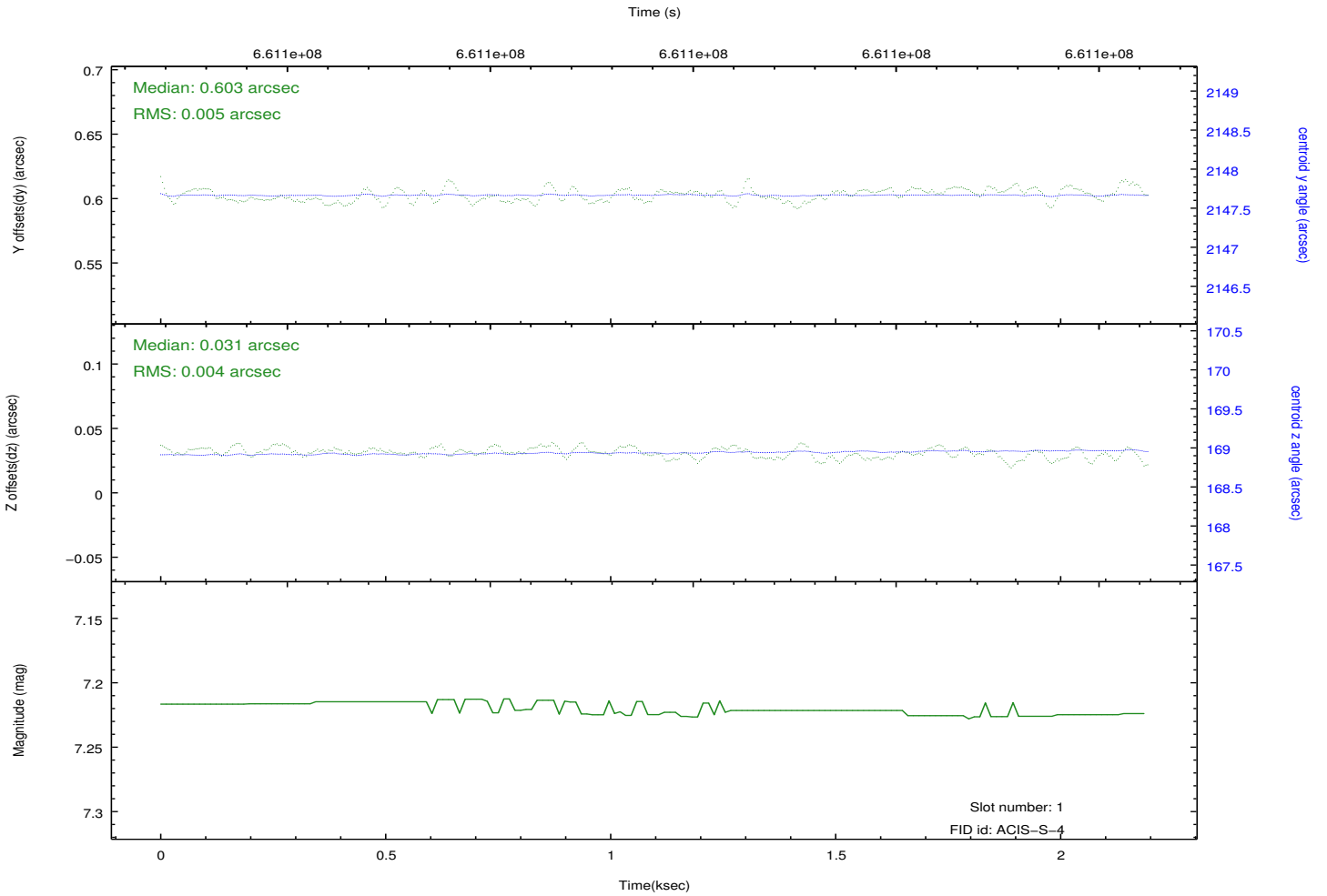
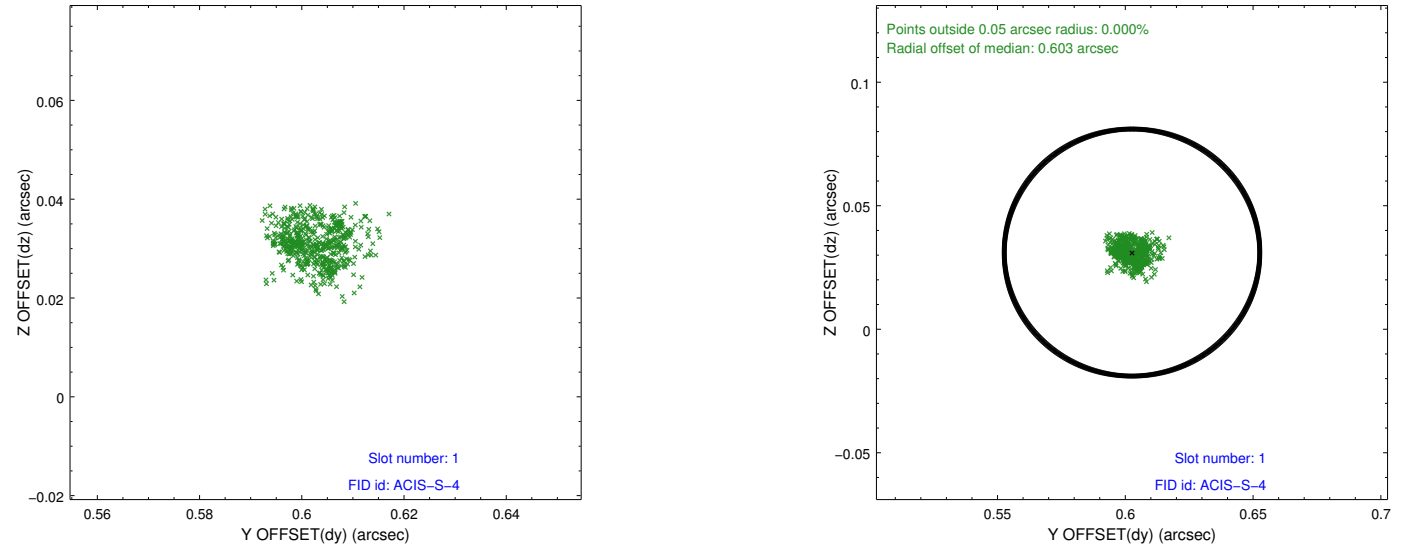


2.5 FID Slots

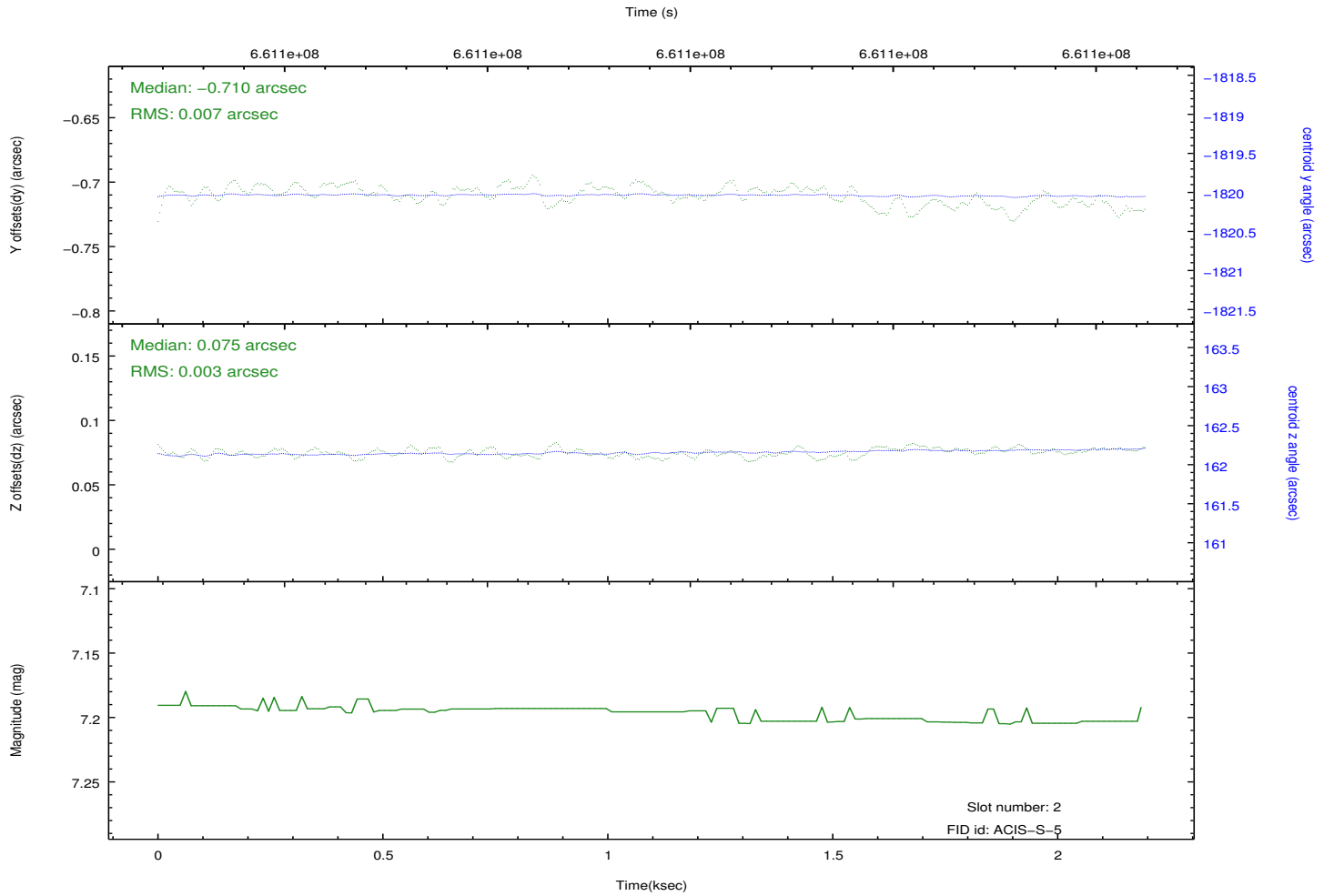
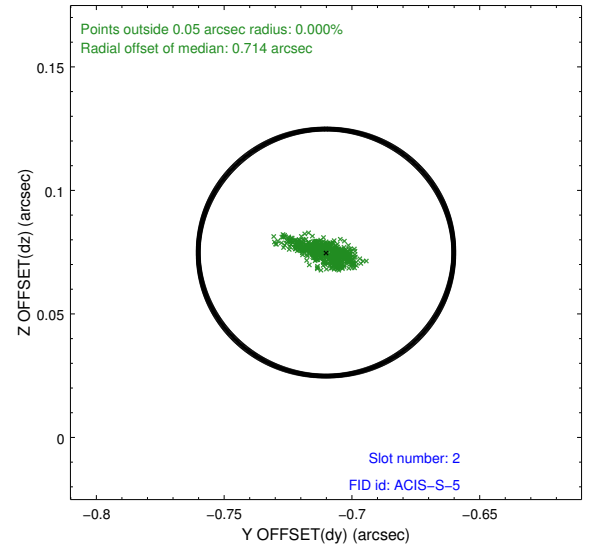
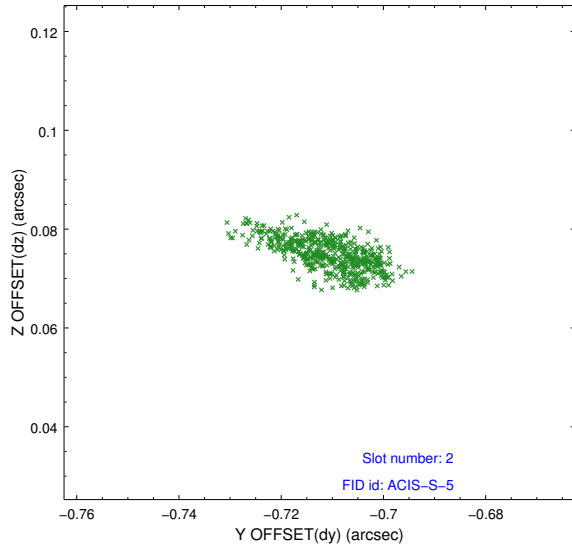
2.5.1 Slot 0



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)	2018.12.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.1948000169992

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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Joint Proposal: HST. Window constraint met. Optional chips S1 and I2 not included.

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The guide star in slot 5 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.