

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 21393 - L2 Version 1
Chandra X-Ray Center

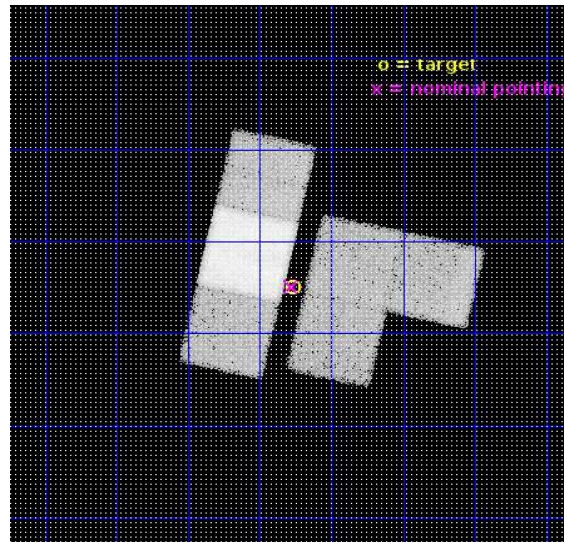
L2 Processing Date : Oct 27 2019

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1 Front

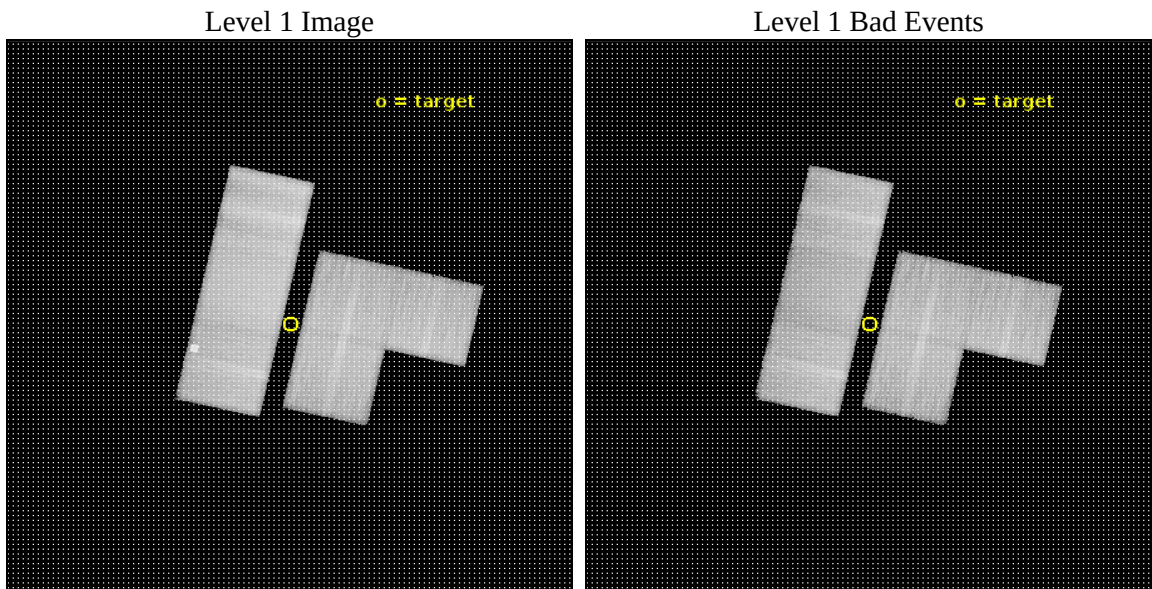
seq_num	901414	Sequence number
obs_id	21393	Observation id
title	Putting a Ring on it: Light Echoes from X-ray Transients as Probes of Interstellar Dust and Galactic Structure	Proposal title
observer	Sebastian Heinz	Principal investigator
object	Aquila X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	287.816875	Observer's specified target RA [deg]
dec_targ	0.584939	Observer's specified target Dec [deg]
ra_nom	287.81970182108	Nominal RA [deg]
dec_nom	0.58523035583447	Nominal Dec [deg]
roll_nom	282.79860842688	Nominal Roll [deg]
revision	1	Processing version of data
ontime	24943.959391475	Sum of GTIs [s]
livetime	24628.103958211	Livetime [s]
ontime1	24943.959391475	Sum of GTIs [s]
ontime2	24937.47747016	Sum of GTIs [s]
ontime3	24943.95935154	Sum of GTIs [s]
ontime6	24943.959371328	Sum of GTIs [s]
ontime7	24947.200371742	Sum of GTIs [s]
ontime8	24940.718380332	Sum of GTIs [s]
l2events	200385	Number of level 2 events



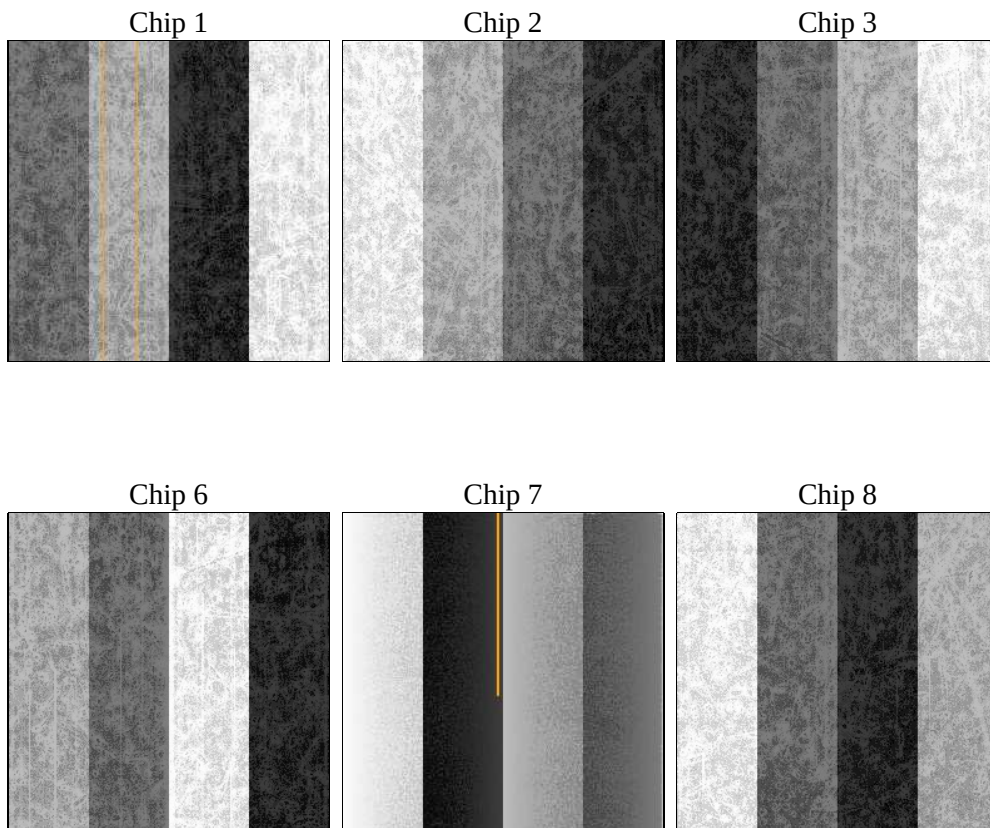
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.8.1	Processing system revision	ontime	24943.959391475	Sum of GTIs [s]
caldsver	4.8.4.2	 	ontime1	24943.959391475	Sum of GTIs [s]
date	2019-10-27T15:32:58	Date and time of file creation	ontime2	24937.47747016	Sum of GTIs [s]
revision	1	Processing version of data	ontime3	24943.95935154	Sum of GTIs [s]
			ontime6	24943.959371328	Sum of GTIs [s]
			ontime7	24947.200371742	Sum of GTIs [s]
			ontime8	24940.718380332	Sum of GTIs [s]
			l1events	1275525	Number of level 1 events

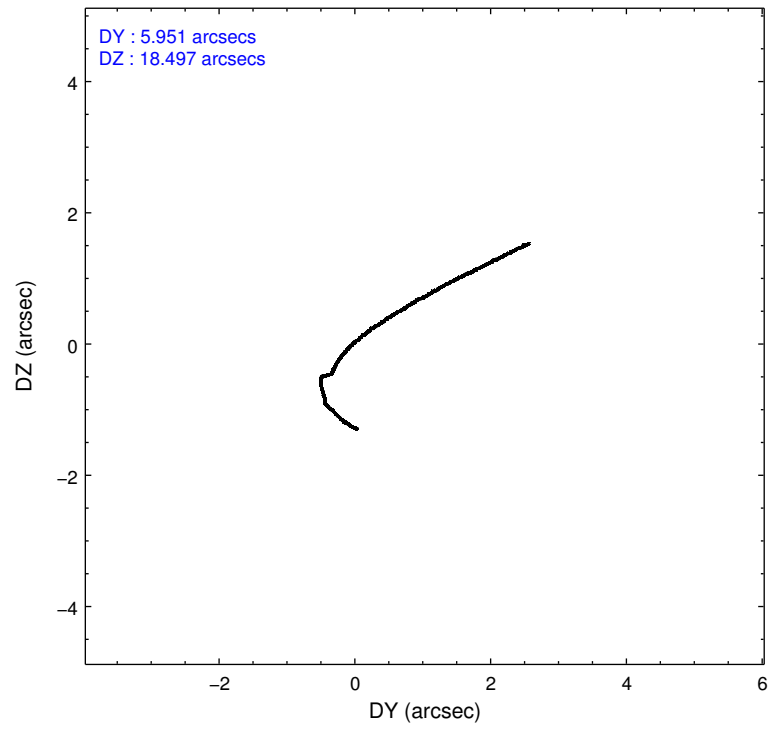
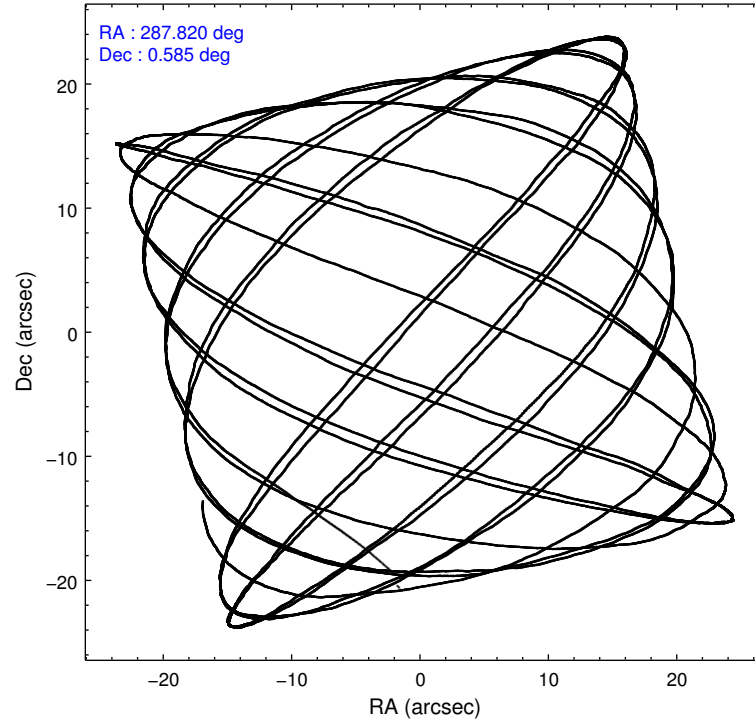
2.1.4 Events

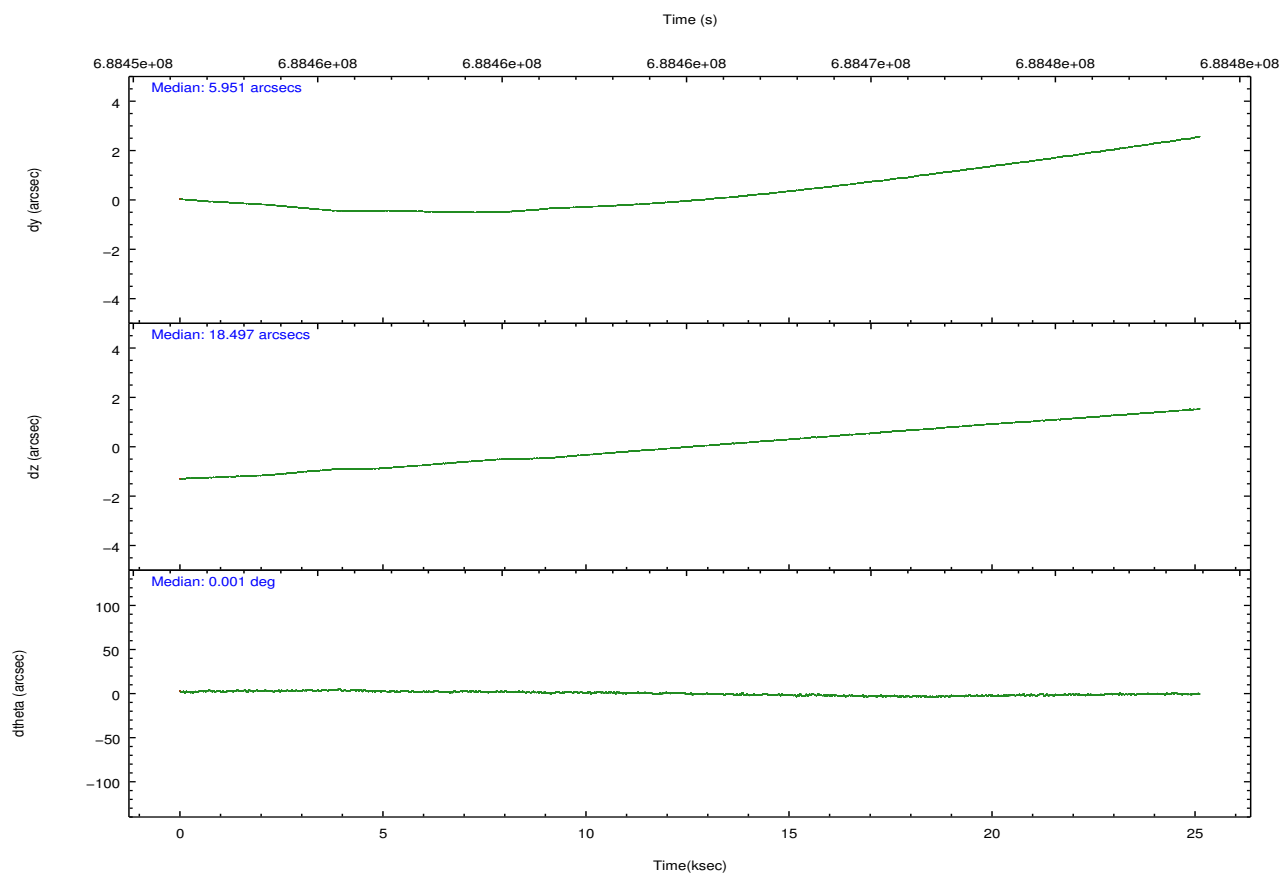
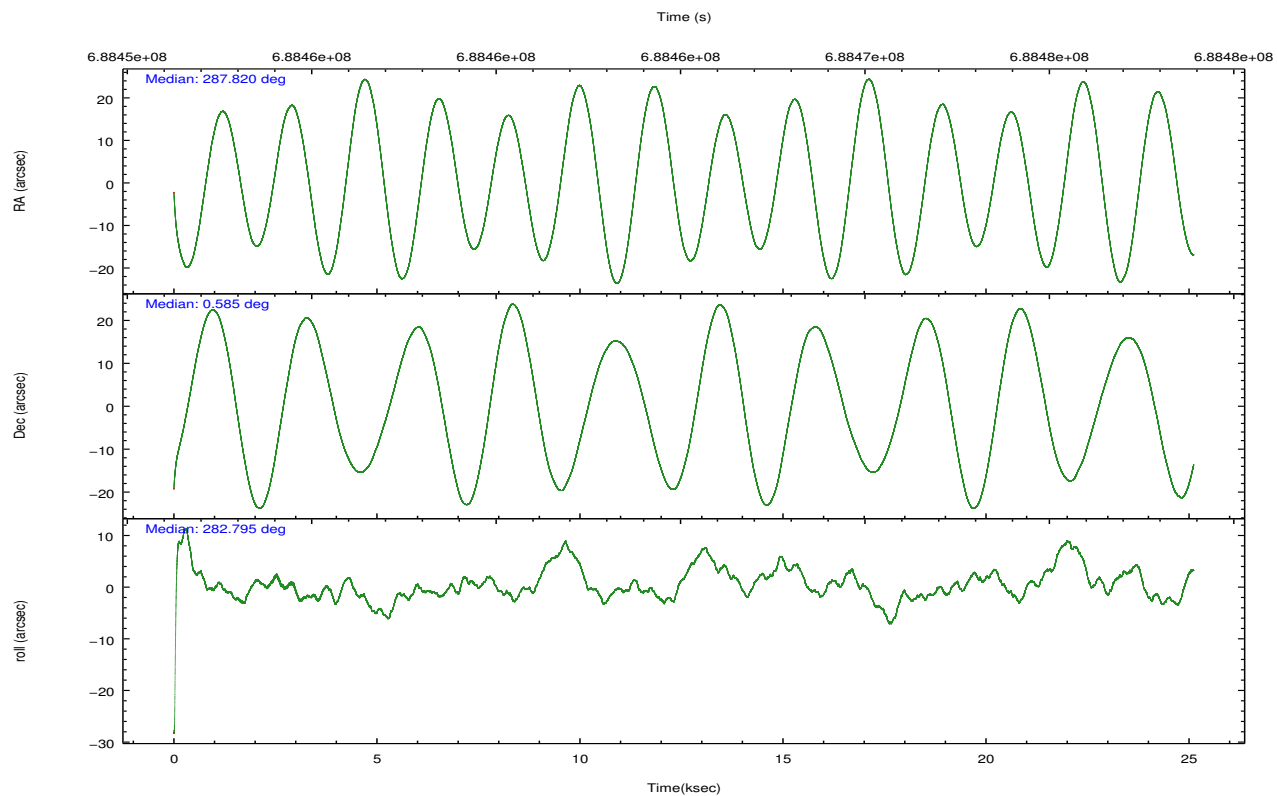
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8		ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	189427	193589	186198	212356	244699	249256	grade 0 events	7596	7525	7364	14394	9048	20072
rejected events	165327	173063	165942	182924	138359	182361		4%	3%	3%	6%	3%	8%
rejected %	87%	89%	89%	86%	56%	73%	grade 1 events	99	111	100	123	331	213
								0%	0%	0%	0%	0%	0%
							grade 2 events	6693	5040	4462	5679	22698	15746
								3%	2%	2%	2%	9%	6%
							grade 3 events	2058	2005	2088	1936	8381	6840
								1%	1%	1%	0%	3%	2%
							grade 4 events	1989	1932	2053	1870	8218	6469
								1%	0%	1%	0%	3%	2%
							grade 5 events	8035	7300	8585	8407	23975	13268
								4%	3%	4%	3%	9%	5%
							grade 6 events	5767	4029	4290	5558	58006	17782
								3%	2%	2%	2%	23%	7%
							grade 7 events	157190	165647	157256	174389	114042	168866
								82%	85%	84%	82%	46%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-123678	ACIS-123678	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	O1	Y
[deg] Pointing RA	287.800847	287.8197018210784	CCD I2 on	Y	Y
[deg] Pointing Dec	0.605137	0.5852303558344664	CCD I3 on	Y	Y
[deg] Pointing Roll	282.642201	282.7986084268818	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-206.232523	-206.2316839798559	CCD S3 on	Y	Y
[mm] SIM translation stage offset	16.1	16.09916139684807	CCD S4 on	O2	Y
[s] Observation start time (MET)	688452645.184000	688451425.7071	CCD S5 on	N	N
Observation start date	2019-10-26T04:49:36	2019-10-26T04:30:25	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	688477645.184000	688478666.10874	On-chip summing requested	N	N
Observation end date	2019-10-26T11:46:16	2019-10-26T12:04:26	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



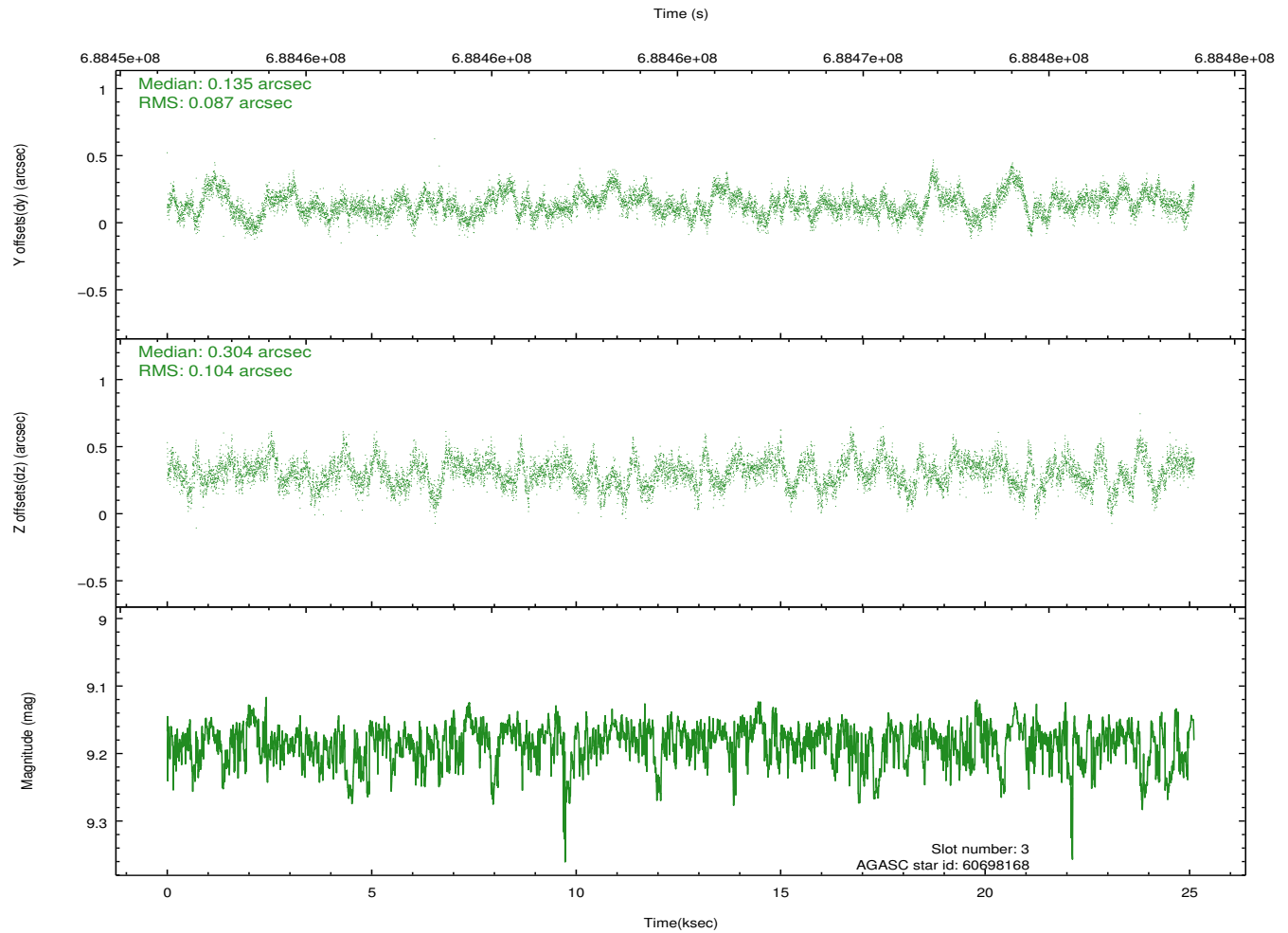
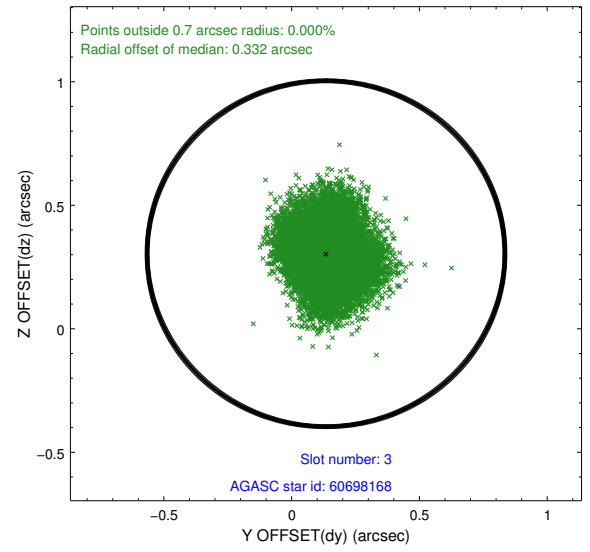
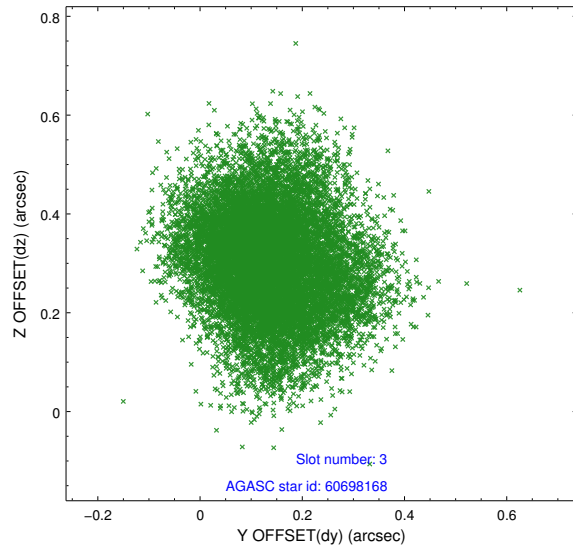


Slot Statistics

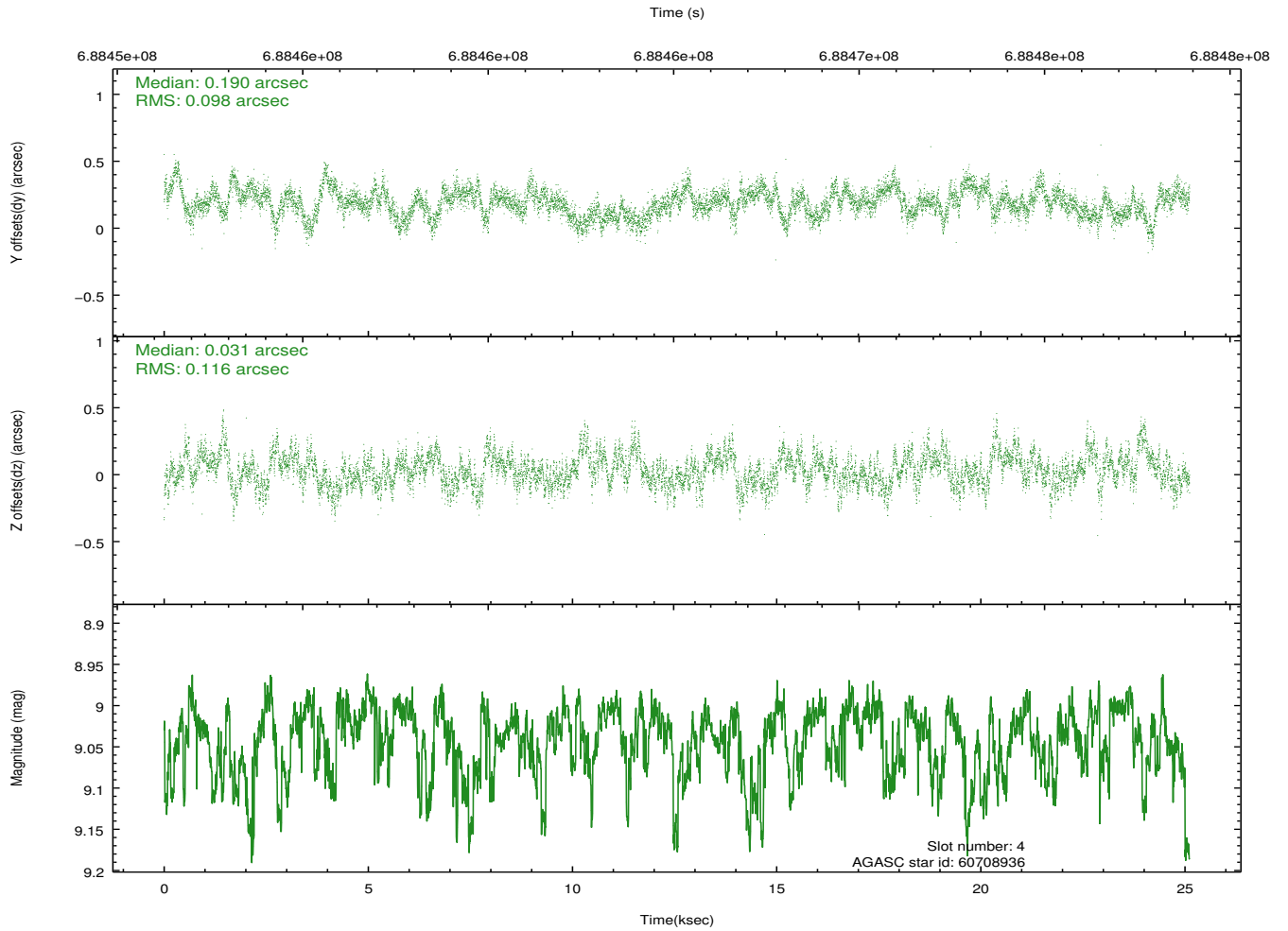
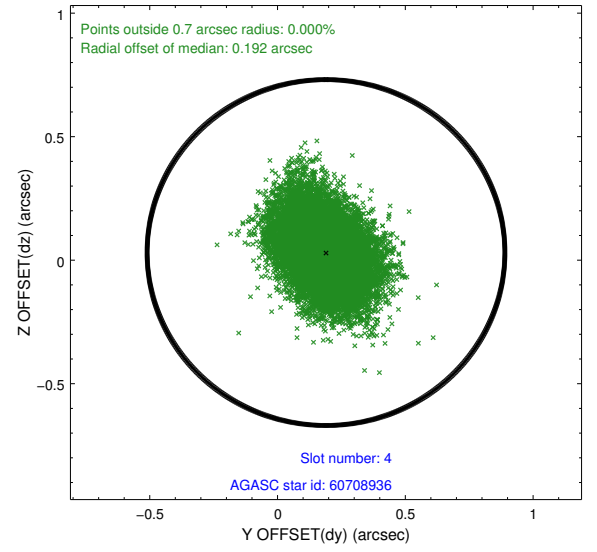
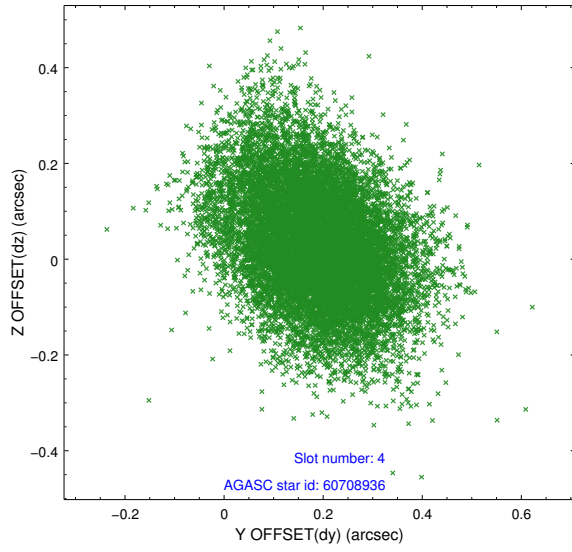
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.14	6125	1.000	-0.099	0.186	0.015	0.029	0.000000	0.000000	-760.23	-1407
1	FID		ACIS-S-4	7.22	6123	1.000	0.496	-0.001	0.018	0.050	0.000000	0.000000	2153.76	500
2	FID		ACIS-S-5	7.22	6125	1.000	-0.433	-0.174	0.017	0.026	0.000000	0.000000	-1813.10	494
3	GUIDE	used	60698168	9.18	12236	1.000	0.135	0.304	0.145	0.234	287.027982	1.024720	-2082.20	-2383
4	GUIDE	used	60708936	9.04	12241	1.000	0.190	0.031	0.161	0.266	287.407925	0.924863	-1432.32	-1128
5	GUIDE	used	60717264	7.16	12250	1.000	-0.381	-0.256	0.090	0.143	288.494203	0.125541	2230.65	2057
6	GUIDE	used	60718872	9.32	12234	1.000	0.062	-0.070	0.160	0.280	287.679270	0.108754	1648.48	-817
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

2.4 Star Slots

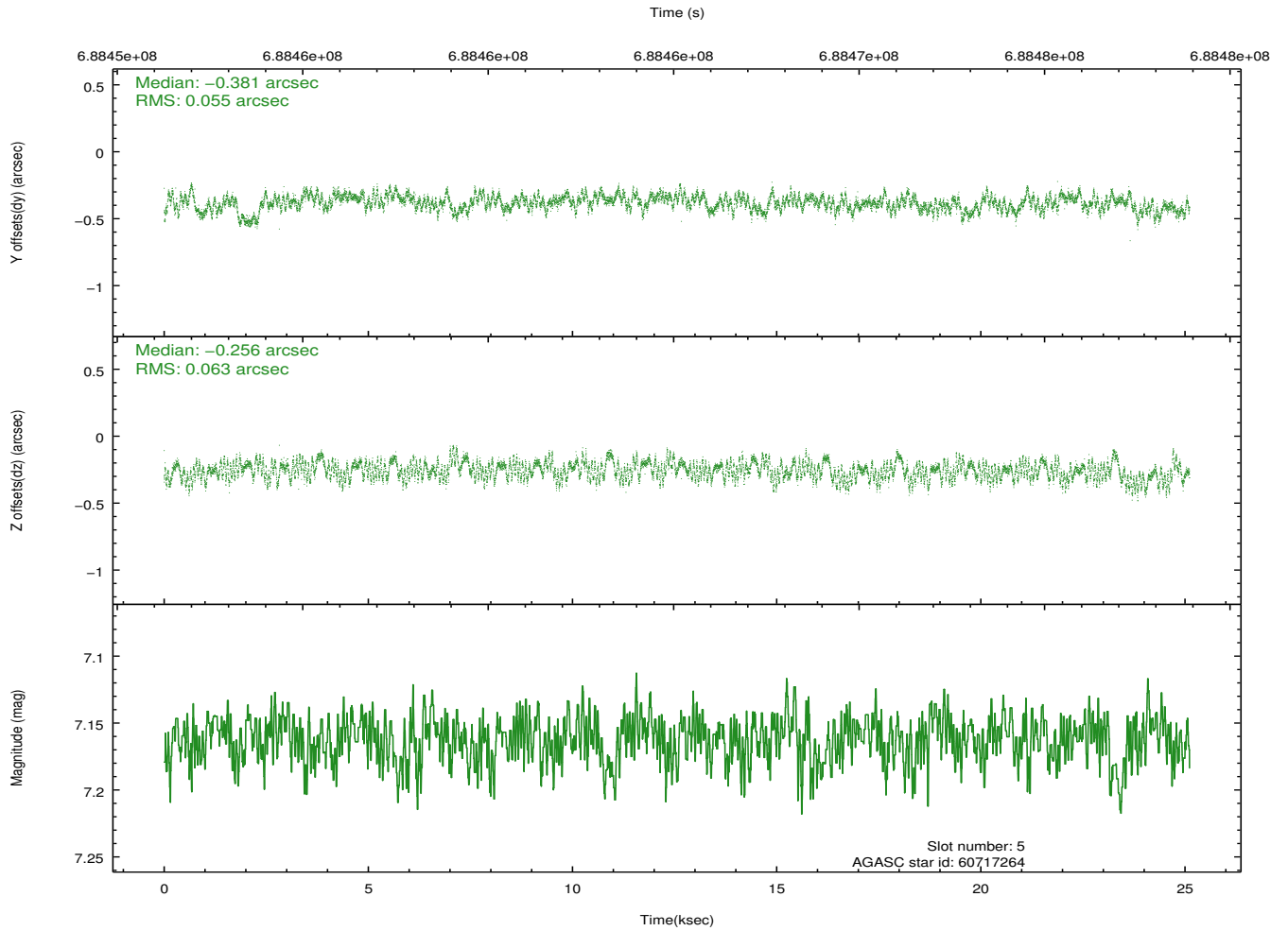
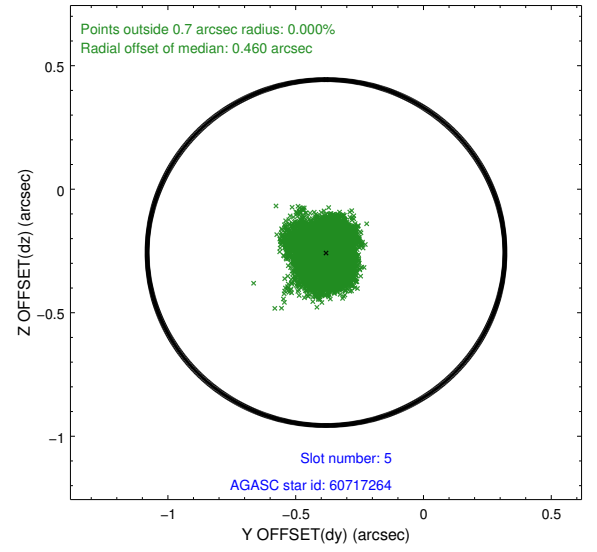
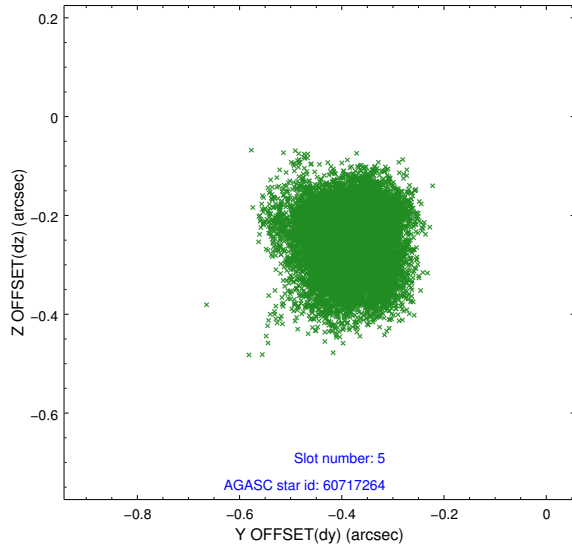
2.4.1 Slot 3



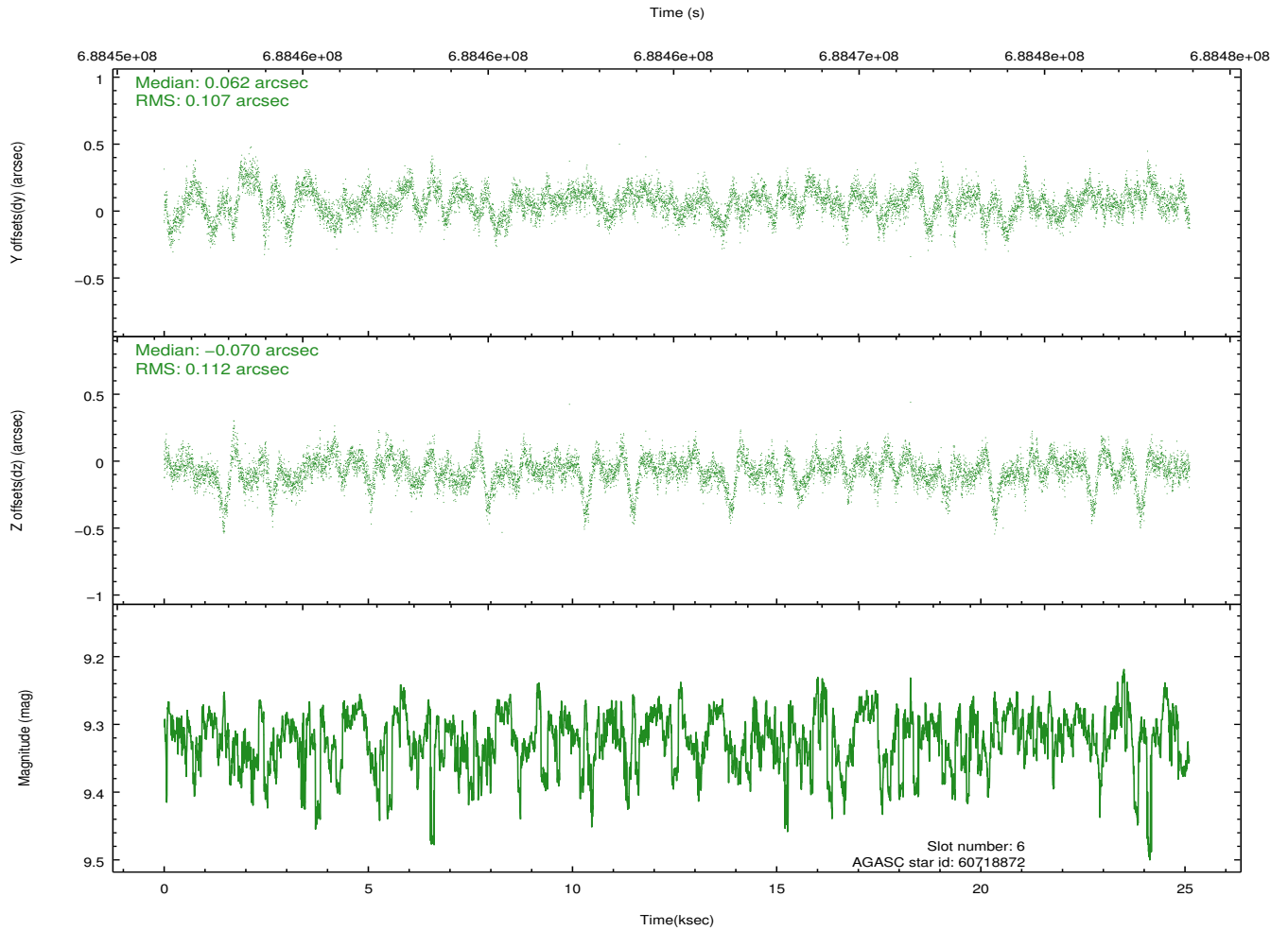
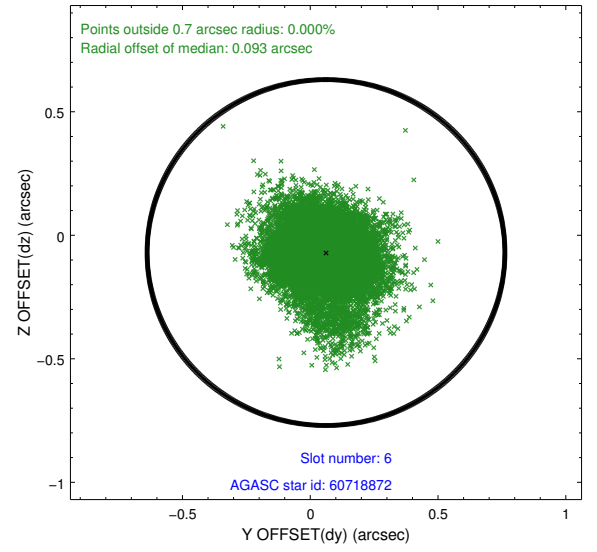
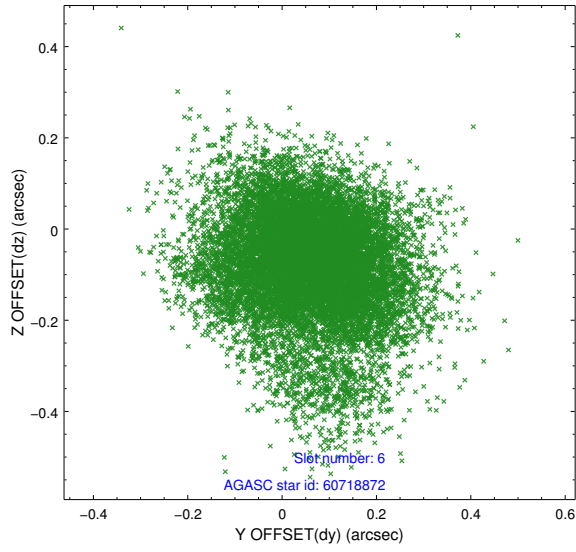
2.4.2 Slot 4



2.4.3 Slot 5

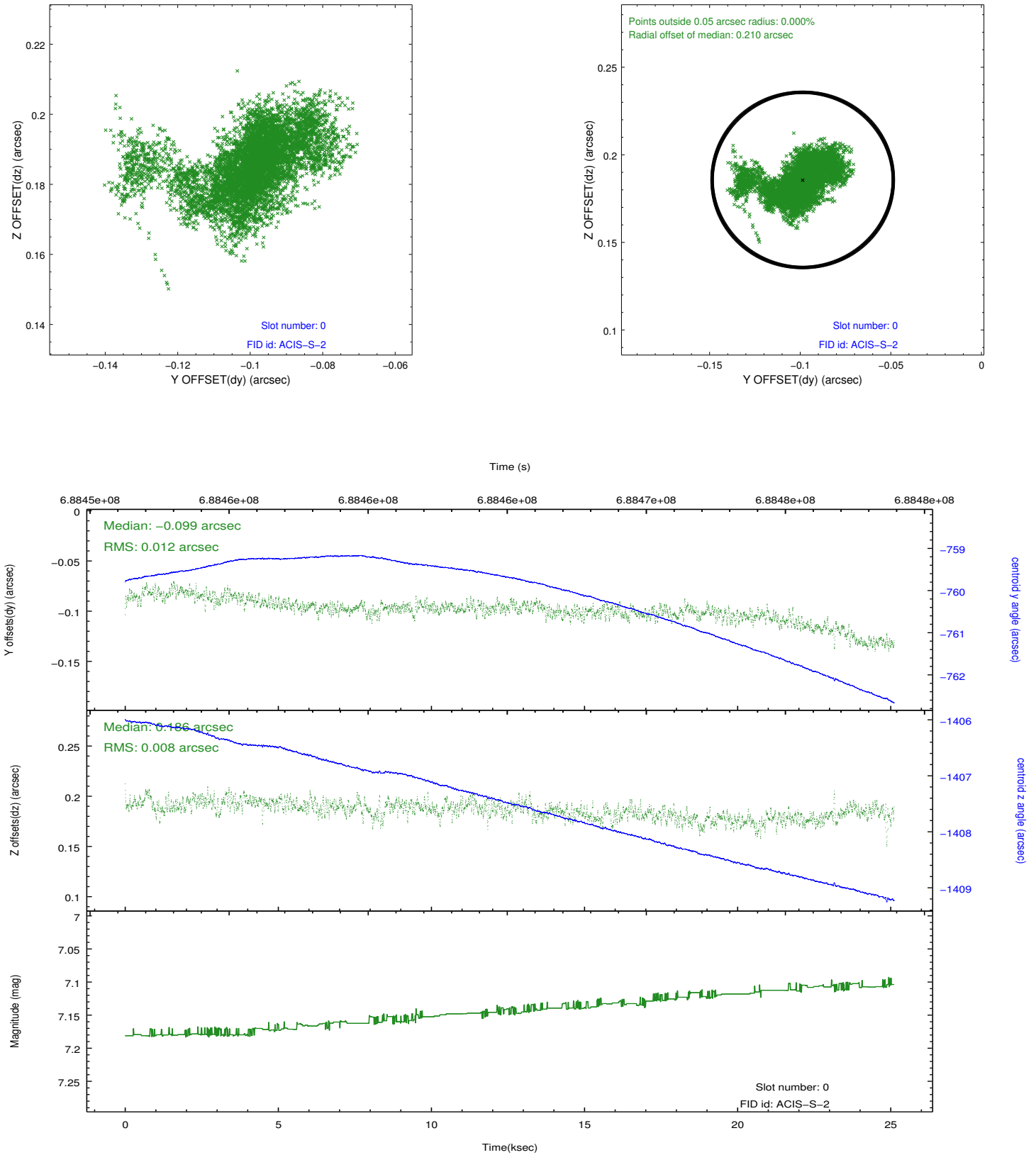


2.4.4 Slot 6

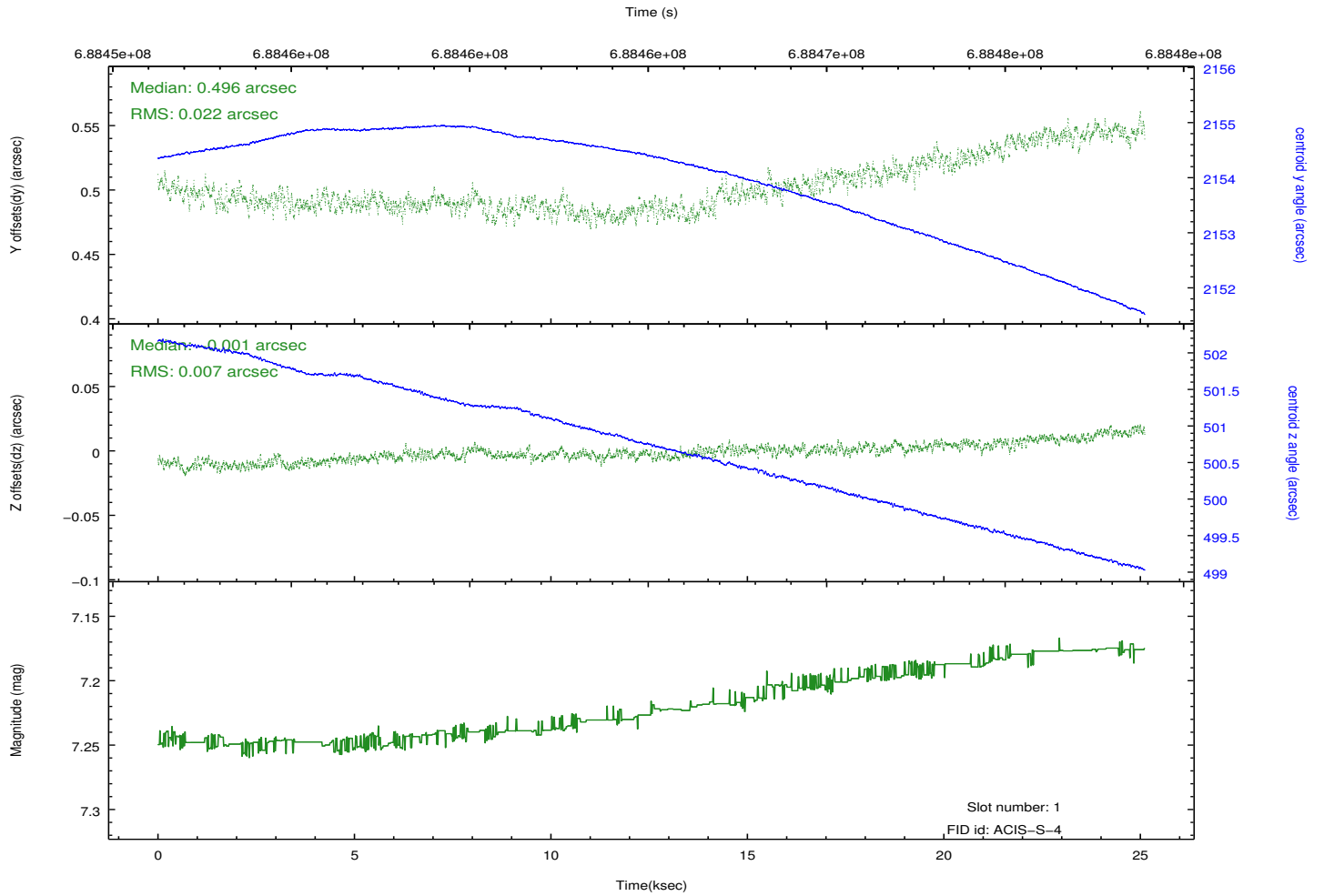
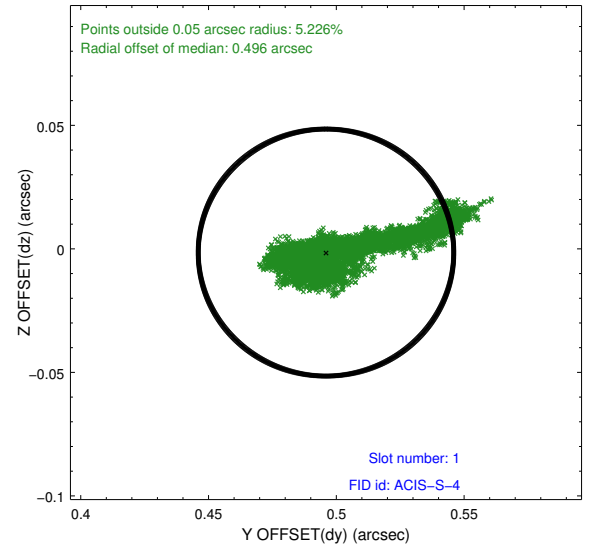
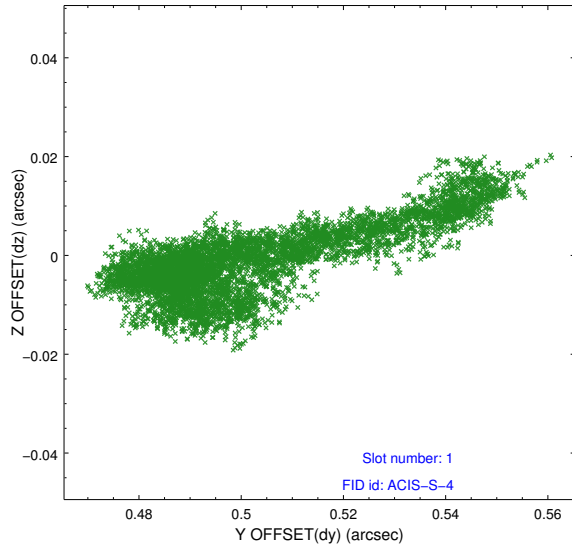


2.5 FID Slots

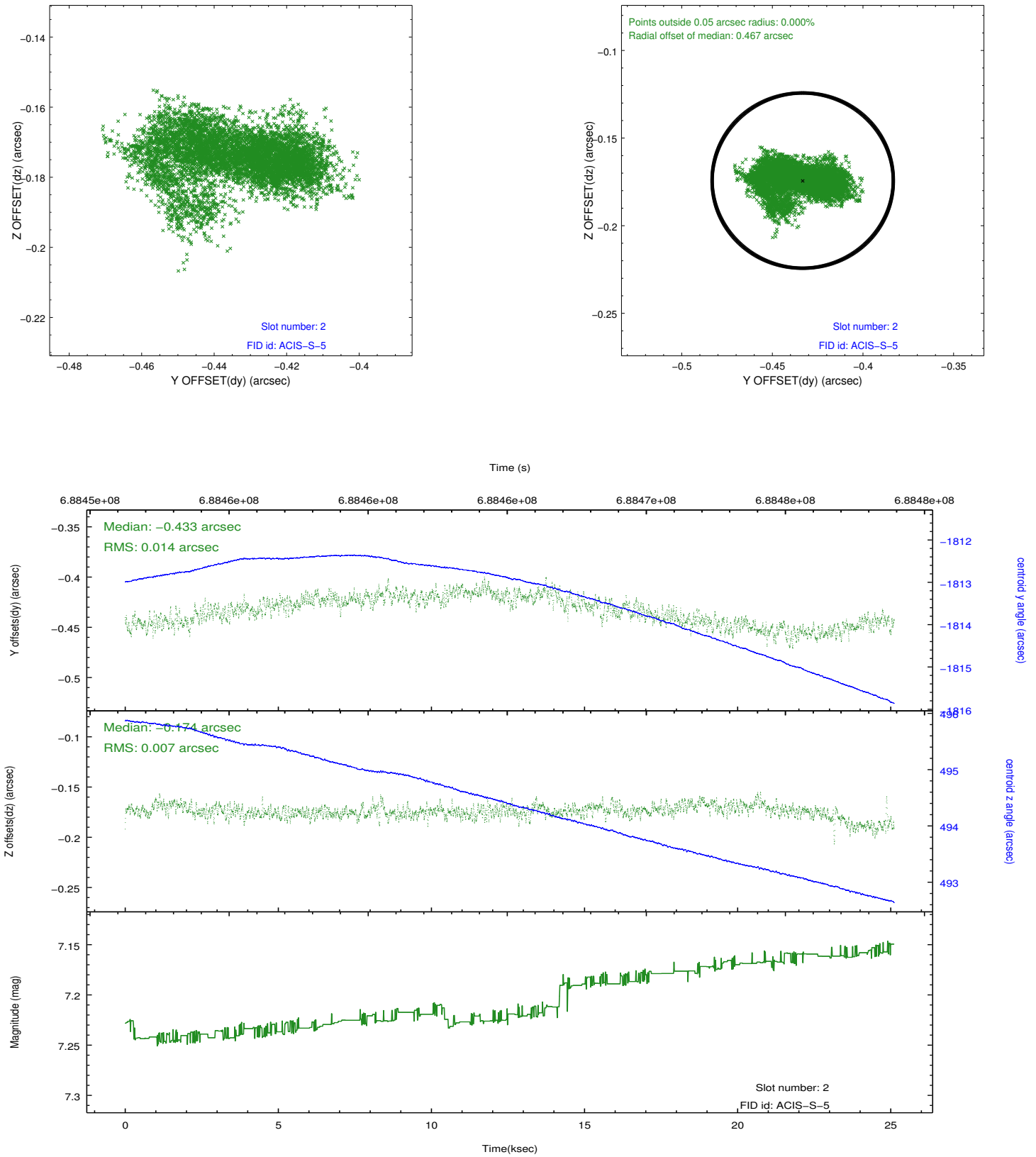
2.5.1 Slot 0



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)	2019.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.943959391475

A.2 Comments

Joint proposal with Swift.

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.