

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22164 - L2 Version 2
Chandra X-Ray Center

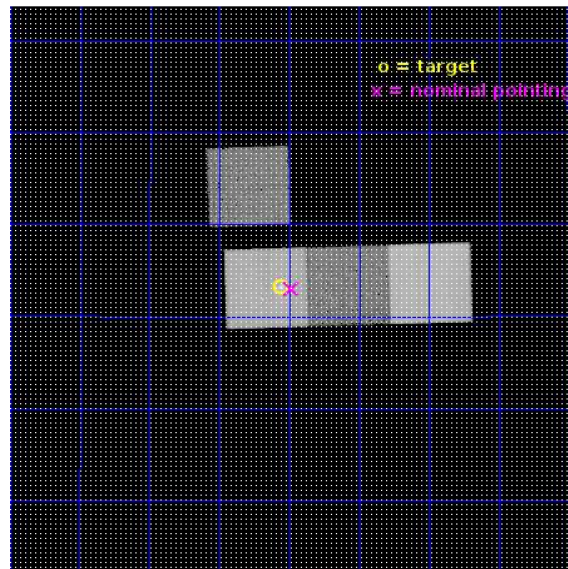
L2 Processing Date : Apr 2 2019

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1 Front

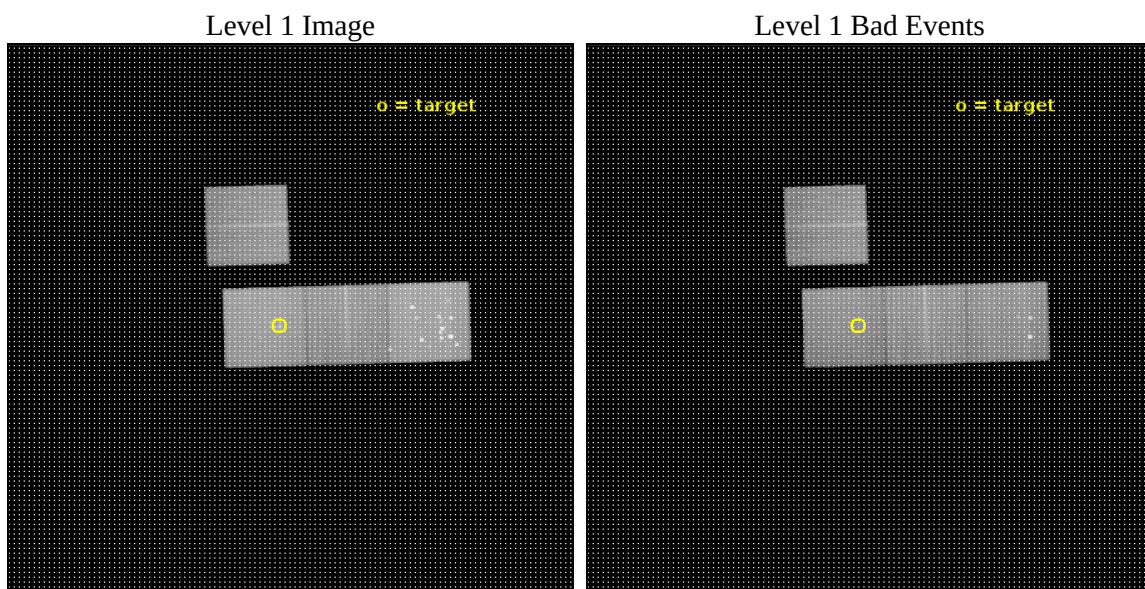
seq_num	801753	Sequence number
obs_id	22164	Observation id
title	Fuelling and self-regulation of AGN feedback at the Bondi radius of M84	Proposal title
observer	Helen Russell	Principal investigator
object	M84	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.265833	Observer's specified target RA [deg]
dec_targ	12.886944	Observer's specified target Dec [deg]
ra_nom	186.24631712006	Nominal RA [deg]
dec_nom	12.883892830683	Nominal Dec [deg]
roll_nom	178.1609526346	Nominal Roll [deg]
revision	2	Processing version of data
ontime	33066.624860406	Sum of GTIs [s]
livetime	32634.58506331	Livetime [s]
ontime3	33066.501740456	Sum of GTIs [s]
ontime5	33066.583820462	Sum of GTIs [s]
ontime6	33066.542780399	Sum of GTIs [s]
ontime7	33066.624860406	Sum of GTIs [s]
l2events	385131	Number of level 2 events



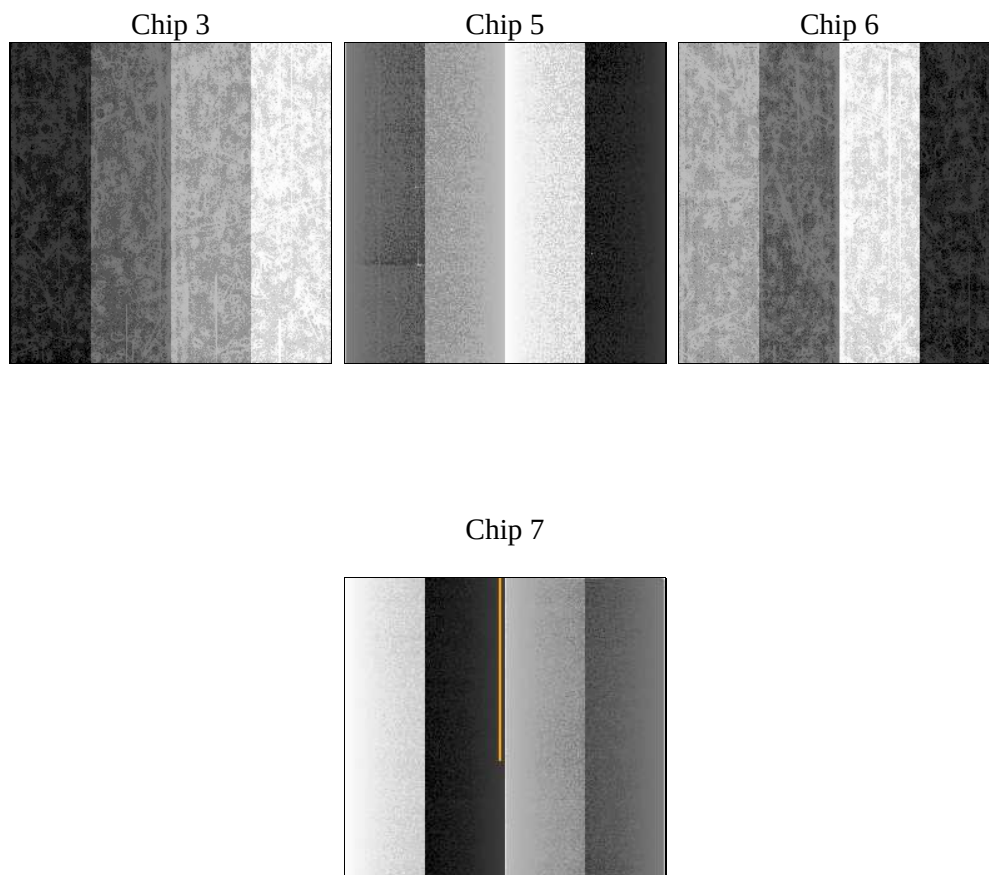
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	33000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	33066.624860406	Sum of GTIs [s]
caldsver	4.8.2	 	ontime3	33066.501740456	Sum of GTIs [s]
date	2019-04-02T20:21:40	Date and time of file creation	ontime5	33066.583820462	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	33066.542780399	Sum of GTIs [s]
			ontime7	33066.624860406	Sum of GTIs [s]
			l1events	1316809	Number of level 1 events

2.1.4 Events

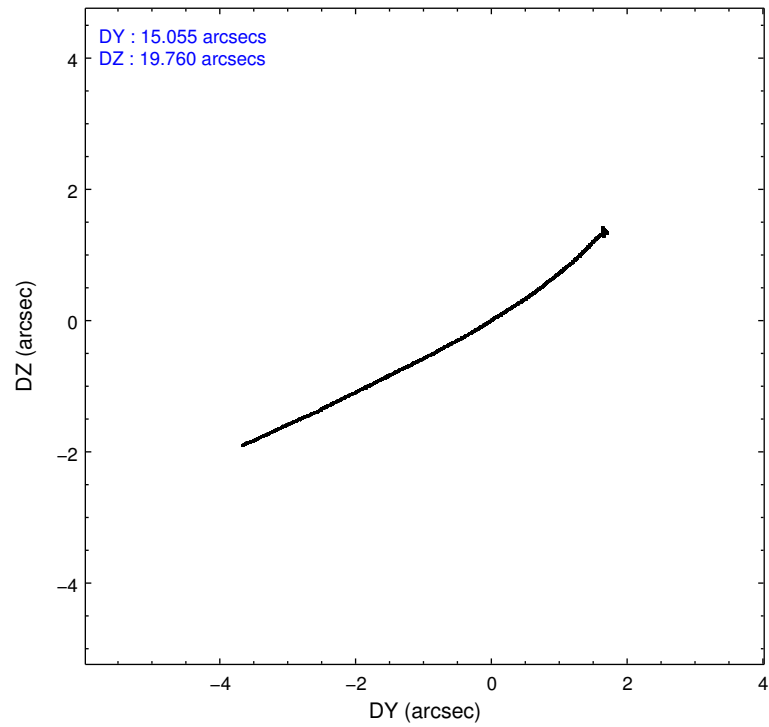
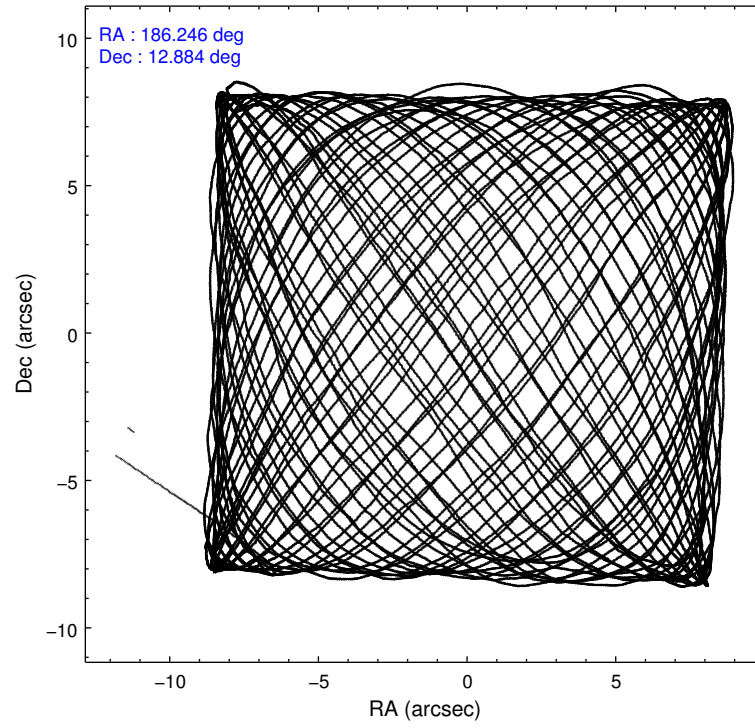
	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	242794	476399	262646	334970
rejected events	213223	224399	232423	185140
rejected %	87%	47%	88%	55%

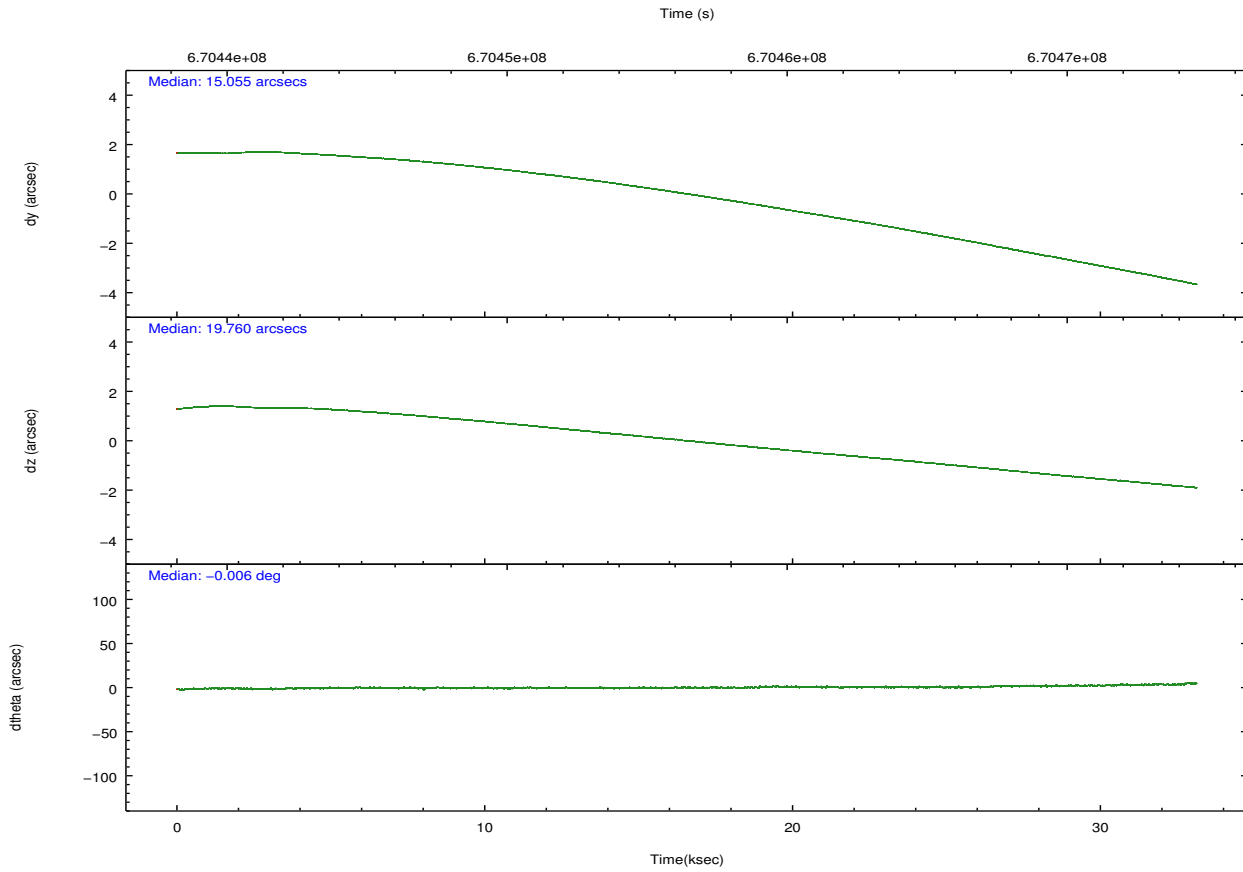
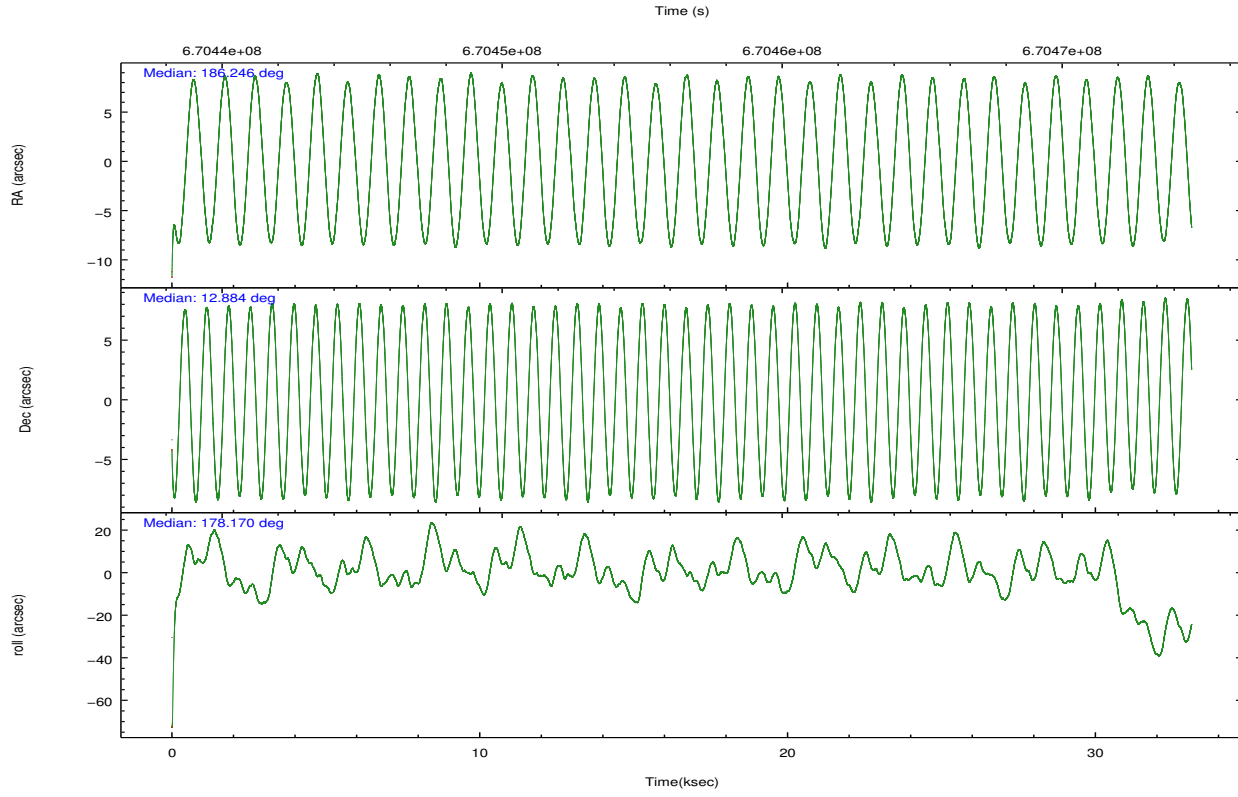
	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	12404	59153	10542	14680
	5%	12%	4%	4%
grade 1 events	155	1036	109	470
	0%	0%	0%	0%
grade 2 events	5878	70993	7336	32639
	2%	14%	2%	9%
grade 3 events	2883	7258	2751	12214
	1%	1%	1%	3%
grade 4 events	2829	7039	2669	11805
	1%	1%	1%	3%
grade 5 events	11415	28417	11327	31572
	4%	5%	4%	9%
grade 6 events	5581	107616	6931	78521
	2%	22%	2%	23%
grade 7 events	201649	194887	220981	153069
	83%	40%	84%	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-3567	ACIS-3567	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	186.270973	186.2463171200563	CCD I2 on	O1	N
[deg] Pointing Dec	12.897165	12.88389283068271	CCD I3 on	Y	Y
[deg] Pointing Roll	177.998848	178.1609526346018	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O2	N
[s] Observation start time (MET)	670439971.184000	670438647.08779	CCD S5 on	N	N
Observation start date	2019-03-31T17:18:22	2019-03-31T16:57:27	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	670472971.184000	670474056.22741	On-chip summing requested	N	N
Observation end date	2019-04-01T02:28:22	2019-04-01T02:47:36	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



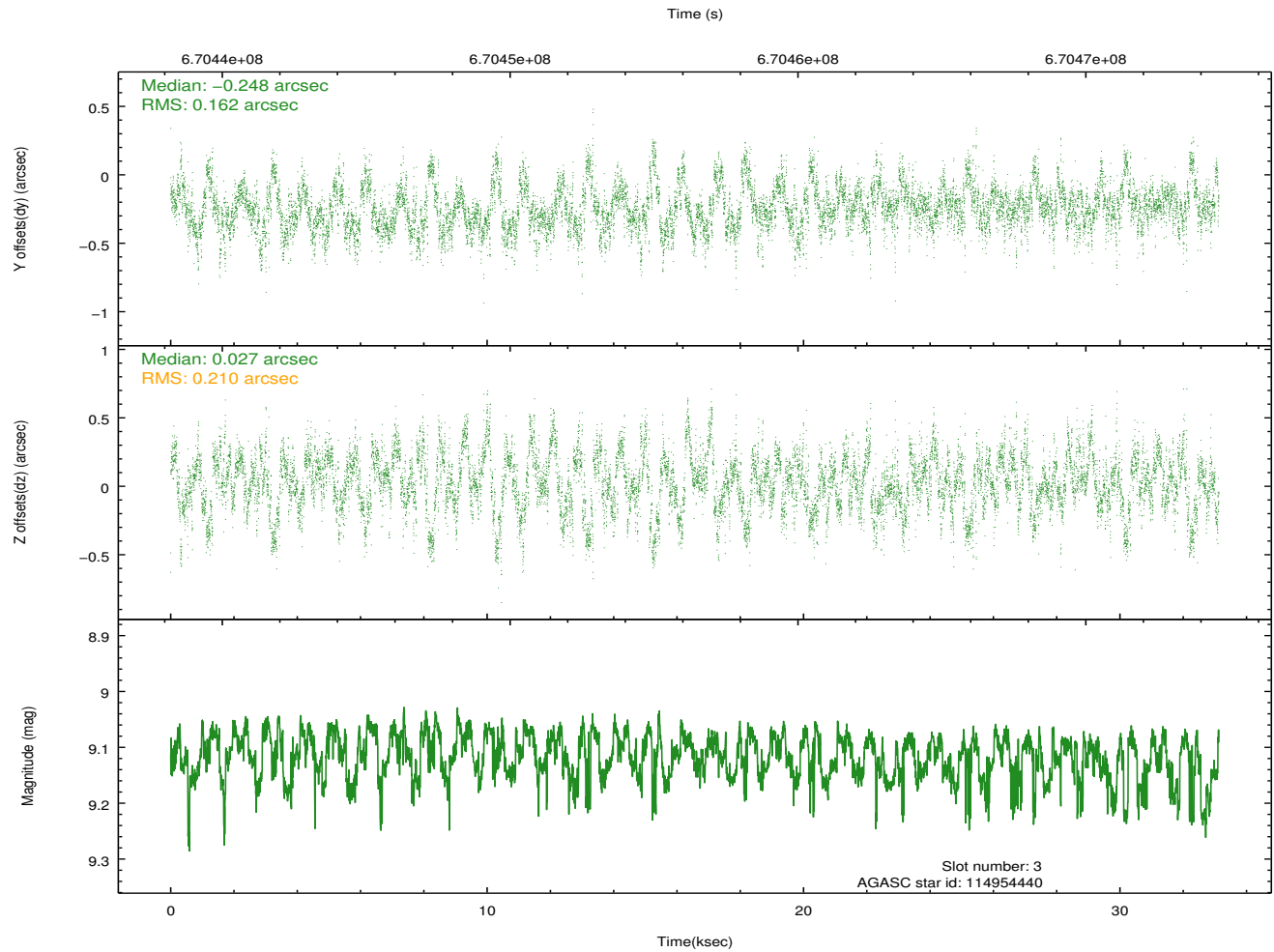
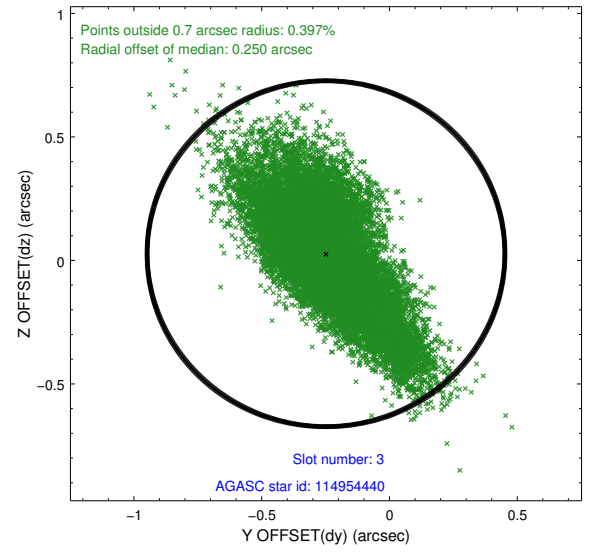
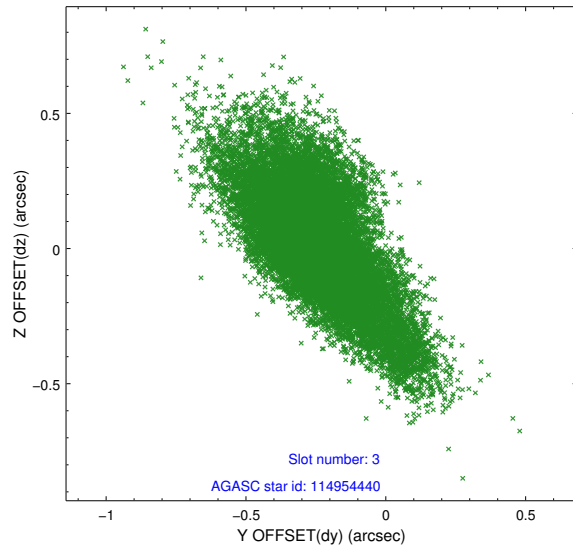


Slot Statistics

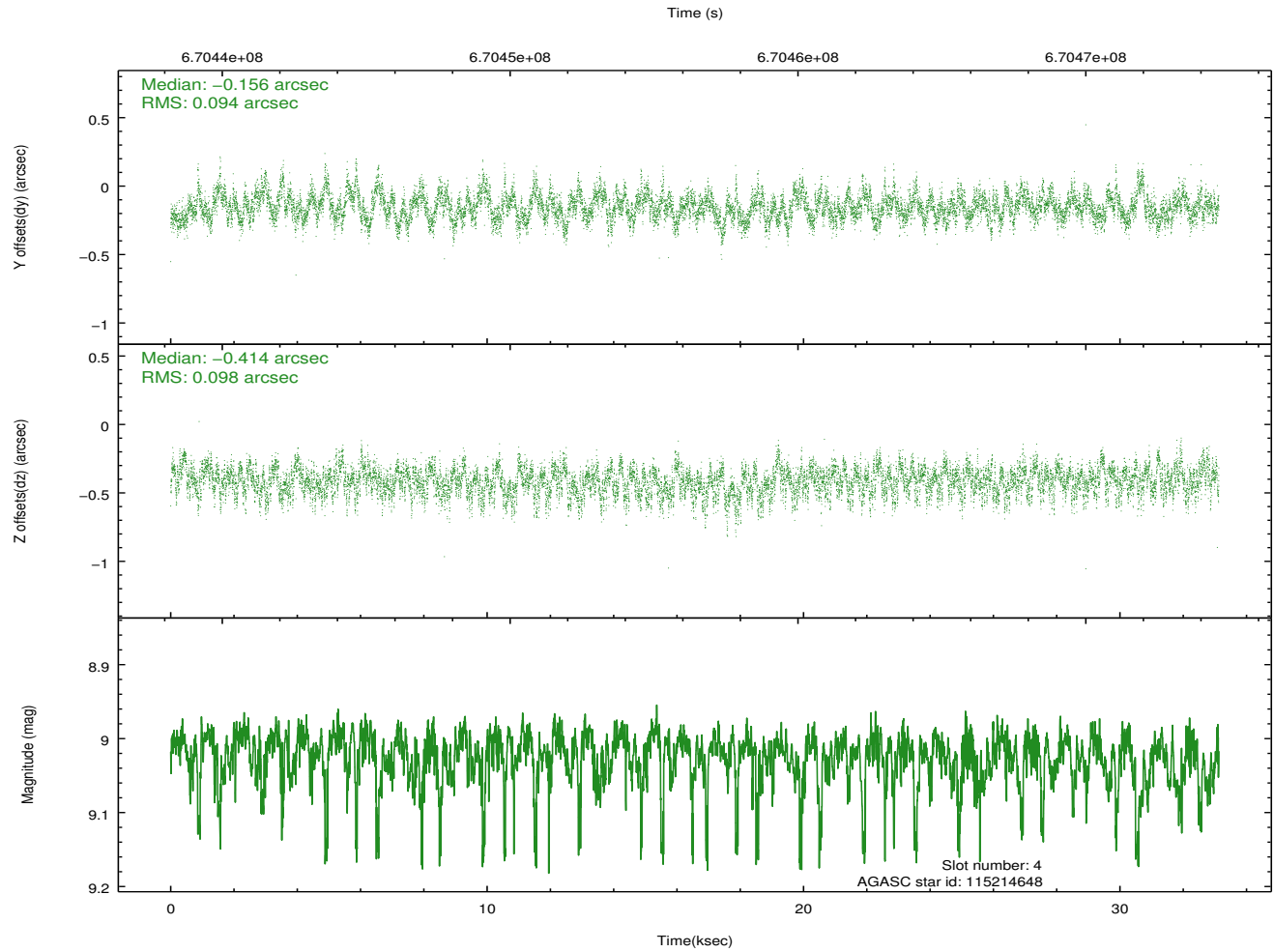
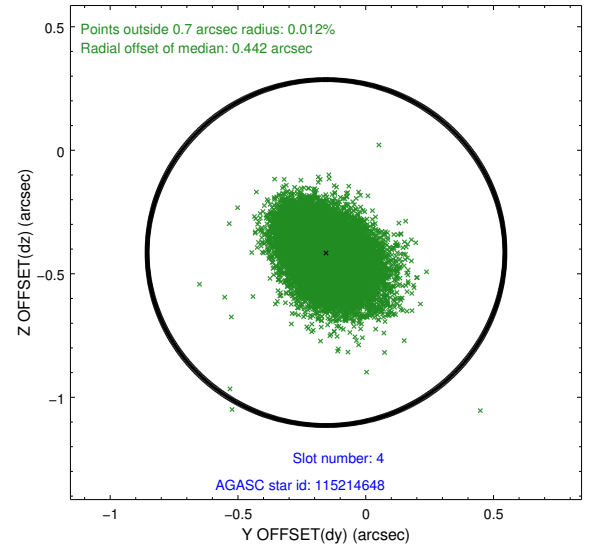
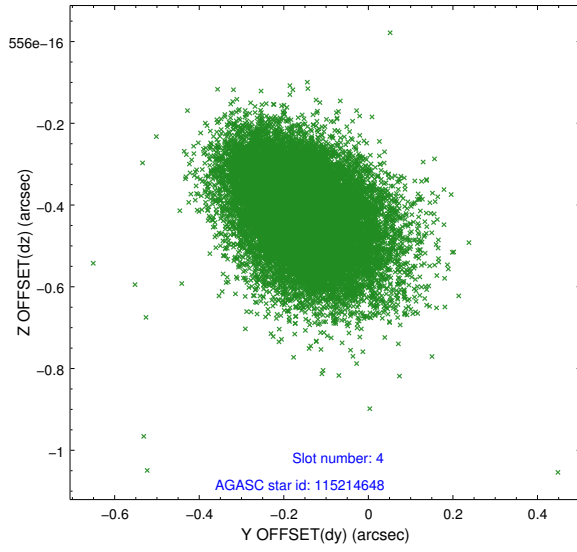
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.02	8081	1.000	-0.322	-0.198	0.038	0.077	0.000000	0.000000	-767.95	-1741
1	FID		ACIS-S-4	7.14	8078	1.000	0.772	0.209	0.051	0.085	0.000000	0.000000	2146.31	167
2	FID		ACIS-S-5	7.10	8081	1.000	-0.488	0.000	0.035	0.055	0.000000	0.000000	-1820.98	160
3	GUIDE	used	114954440	9.12	16123	1.000	-0.248	0.027	0.263	0.509	186.915066	12.219118	-2352.06	2358
4	GUIDE	used	115214648	9.02	16143	1.000	-0.156	-0.414	0.143	0.235	185.771147	12.685188	1728.66	821
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	115215984	9.95	16036	1.000	-0.164	-0.122	0.258	0.499	186.134733	12.875031	475.20	96
7	GUIDE	used	115347480	9.40	16130	1.000	0.561	0.537	0.179	0.282	186.668576	13.310410	-1339.53	-1535

2.4 Star Slots

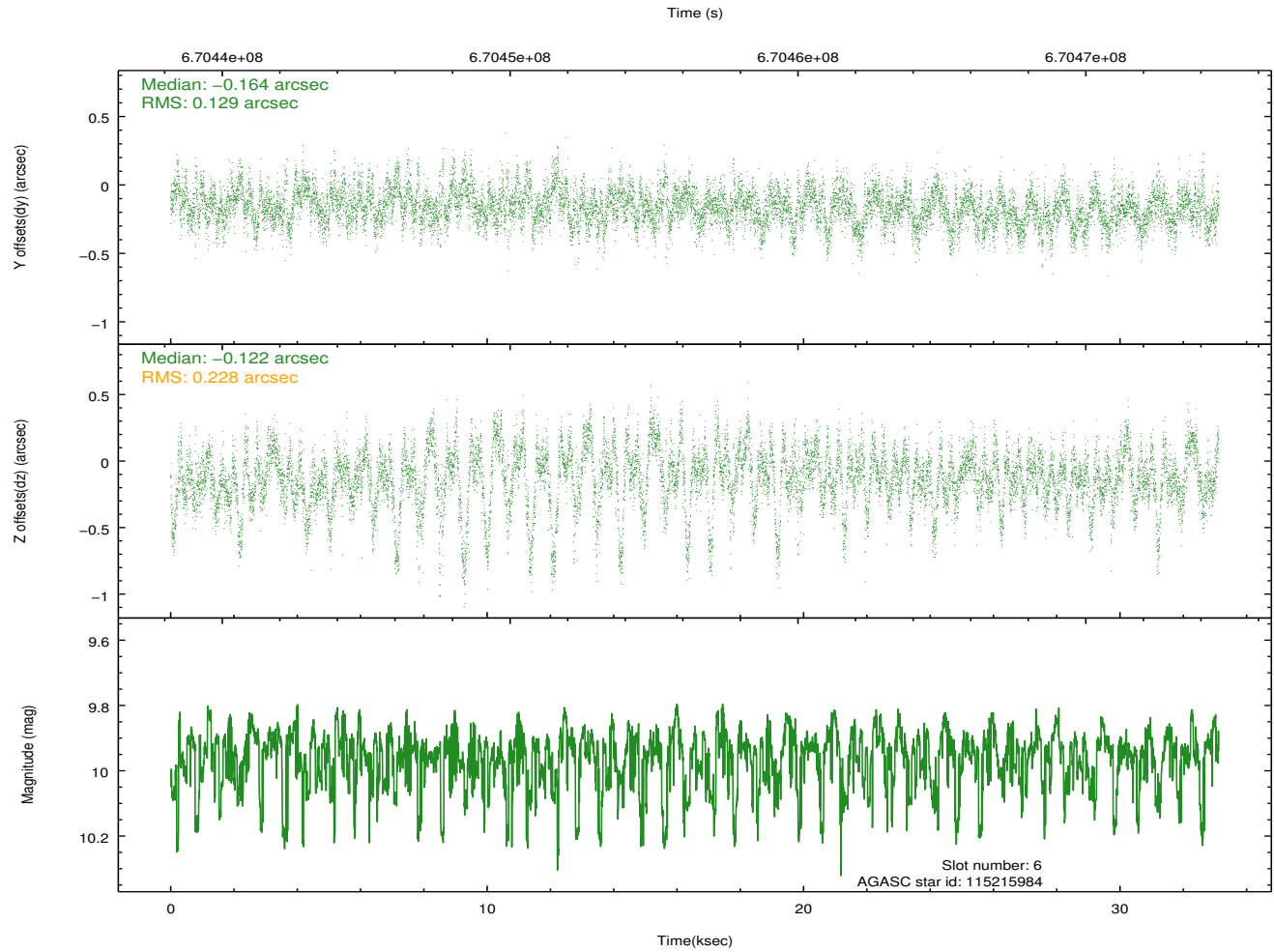
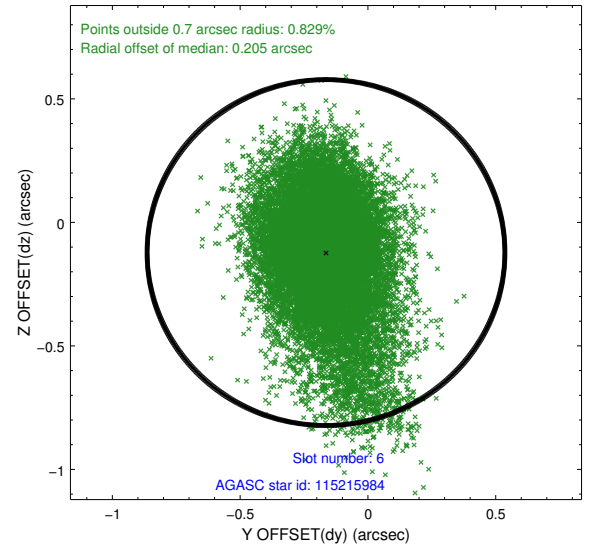
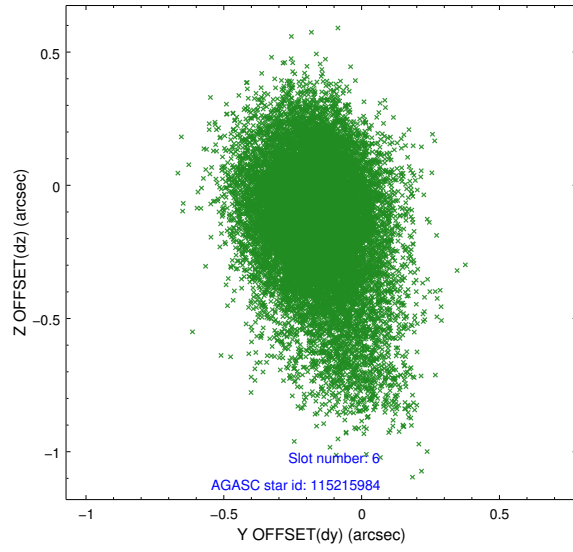
2.4.1 Slot 3



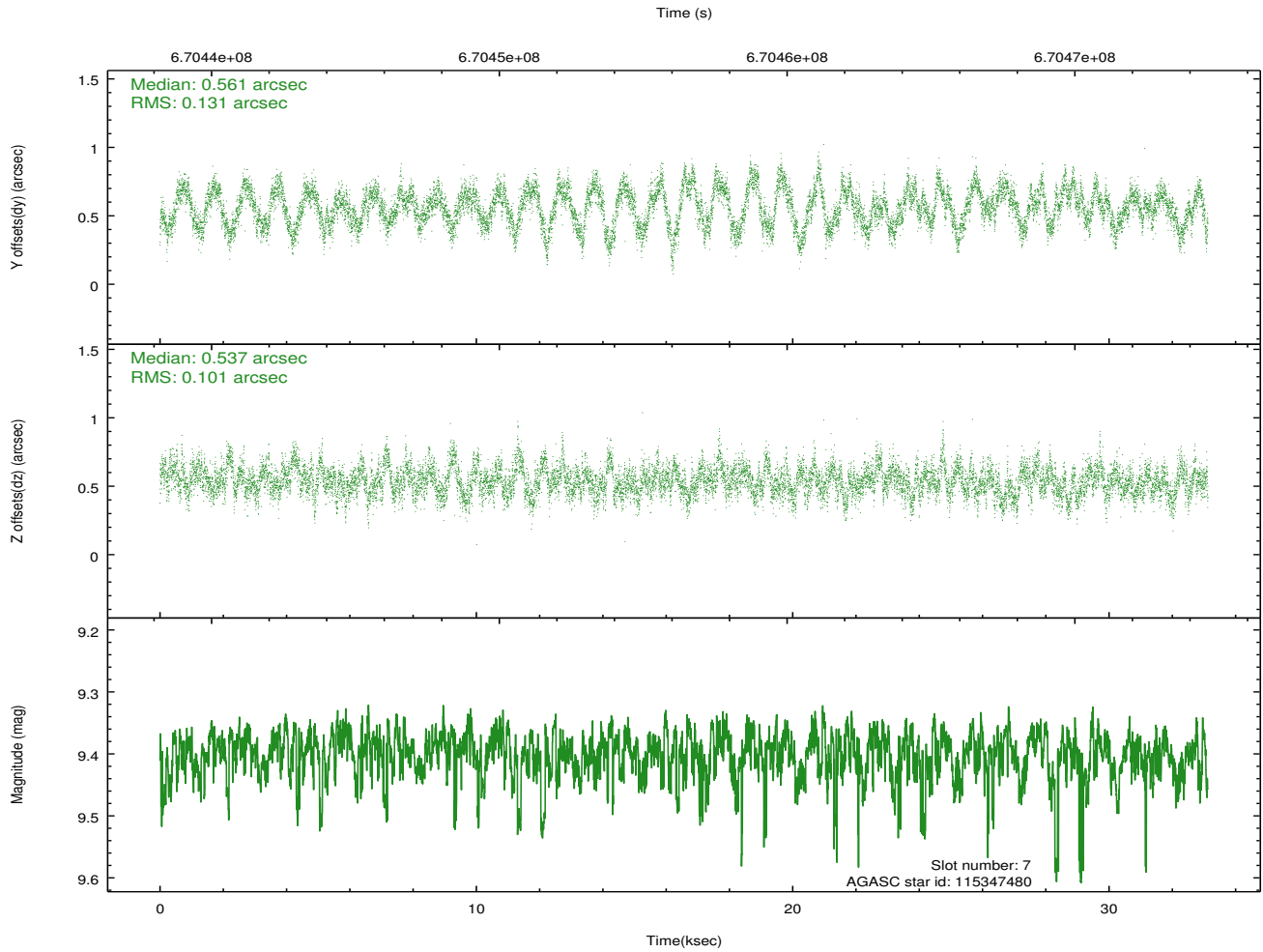
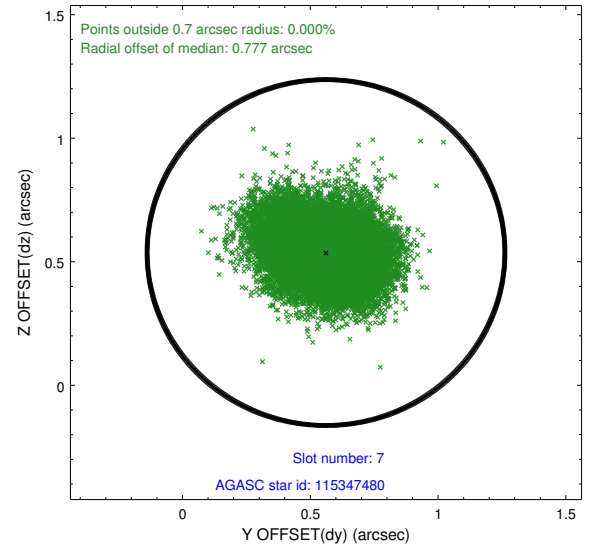
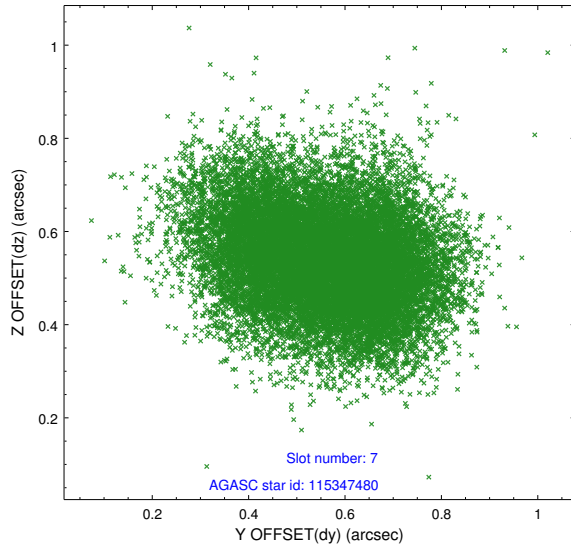
2.4.2 Slot 4



2.4.3 Slot 6

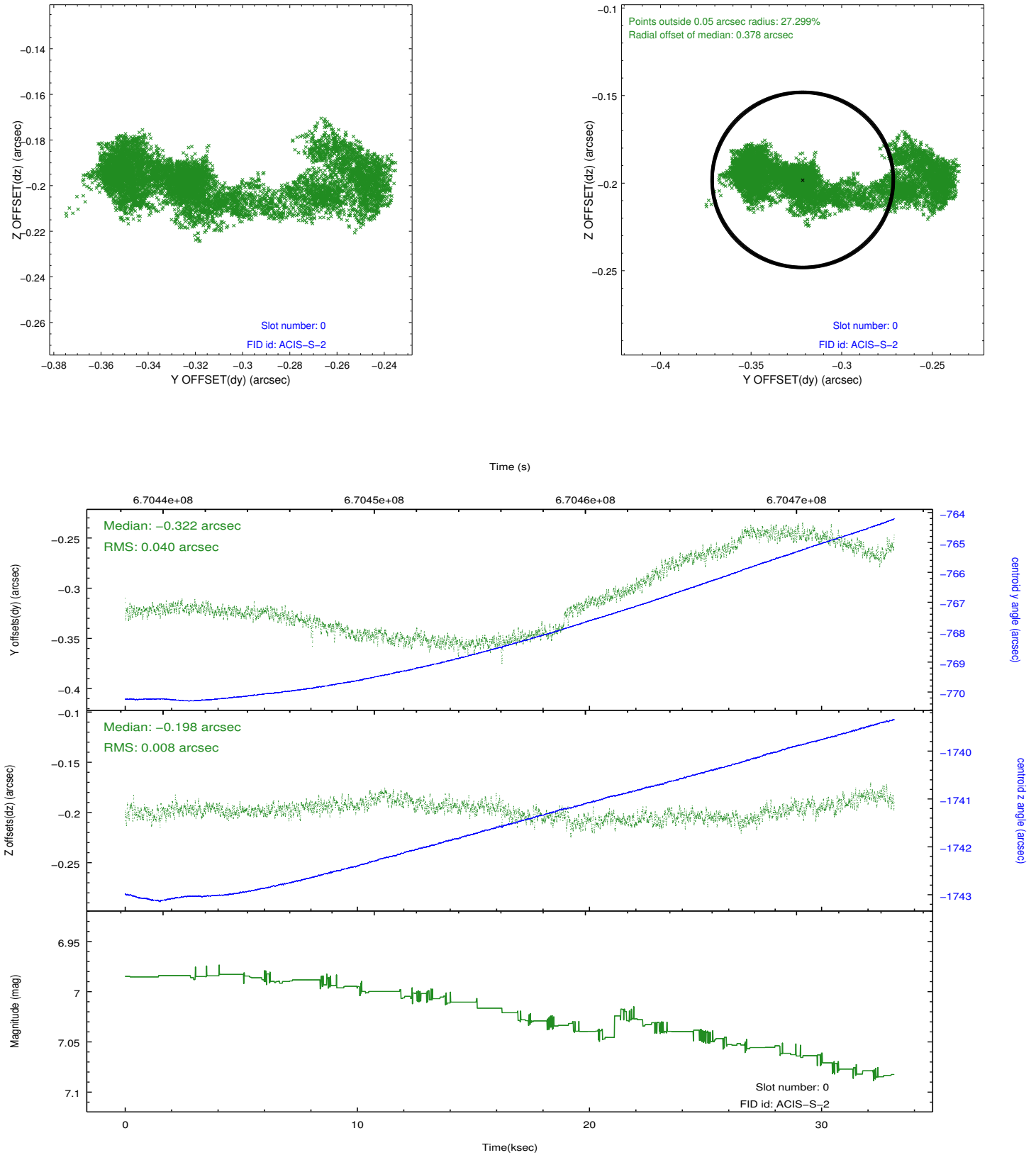


2.4.4 Slot 7

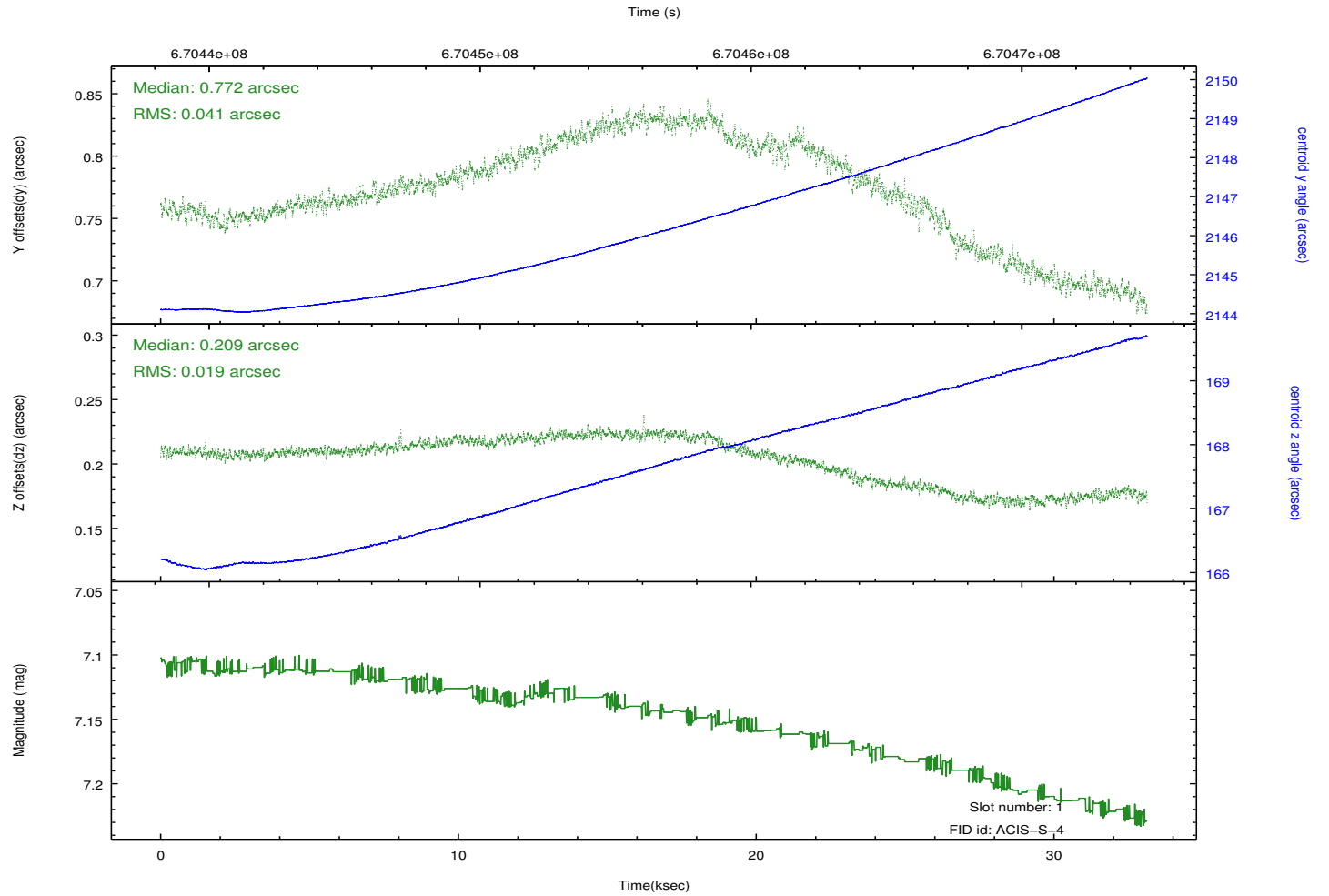
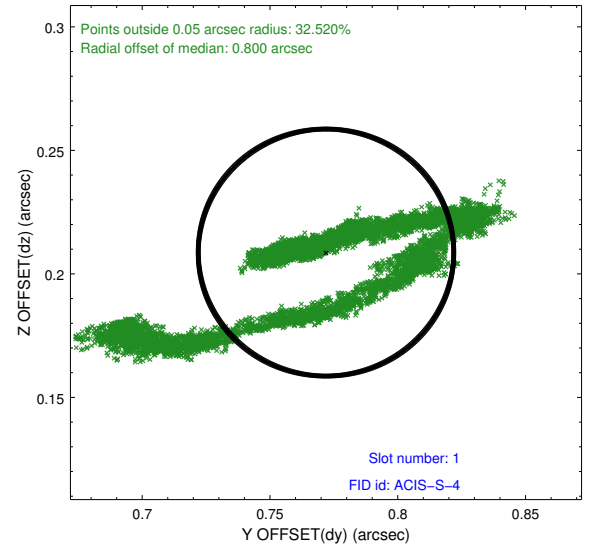
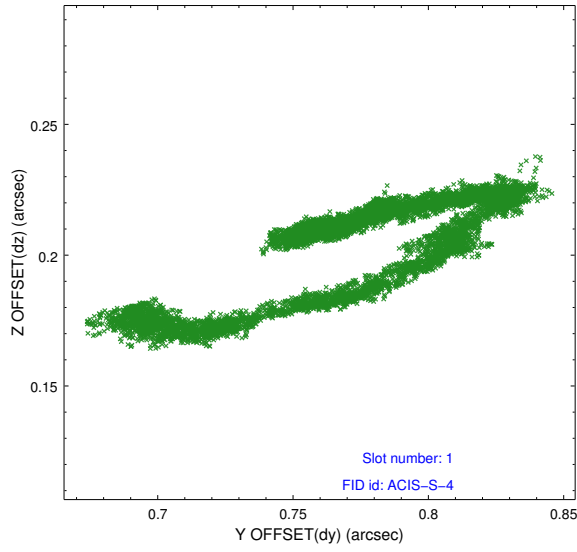


2.5 FID Slots

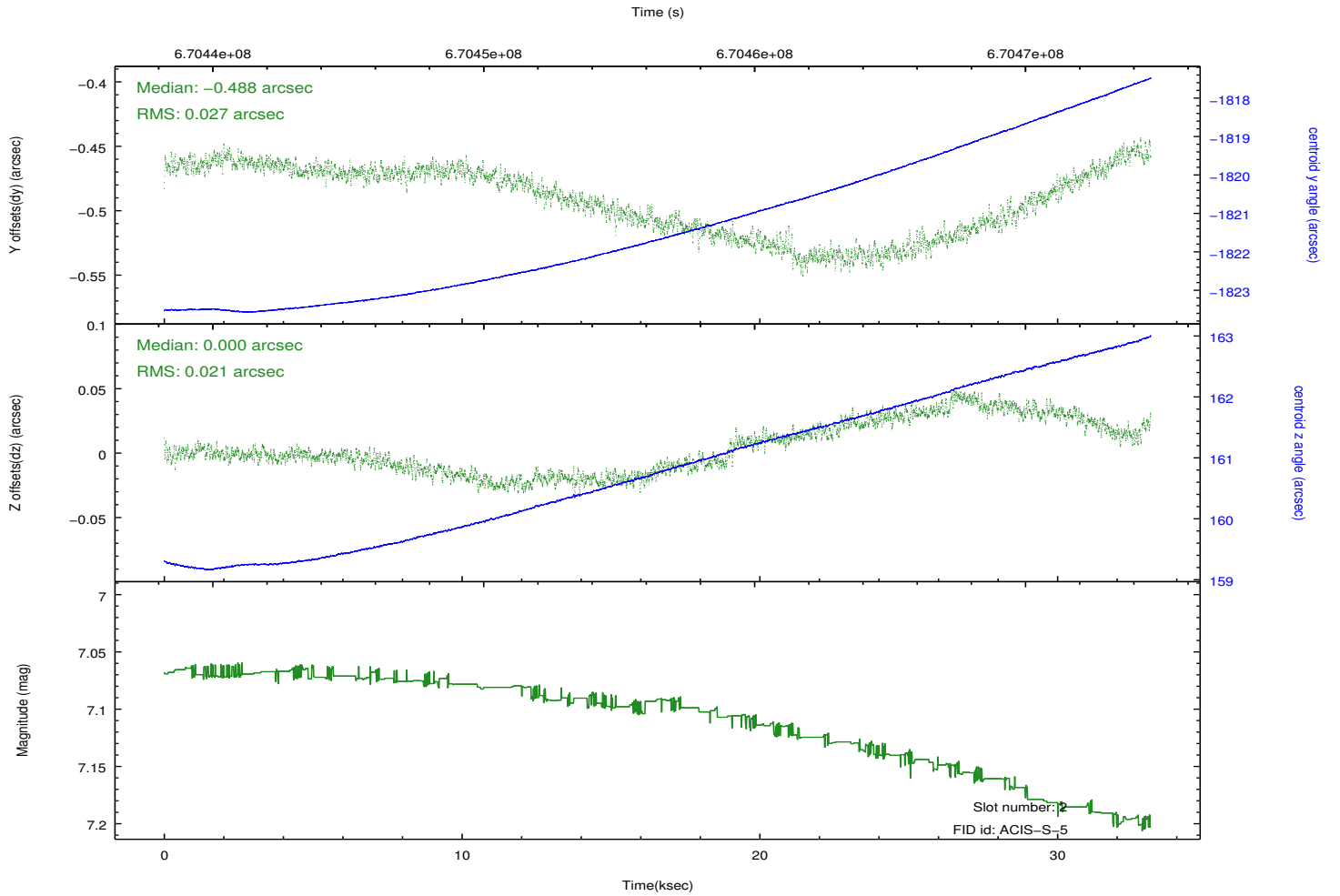
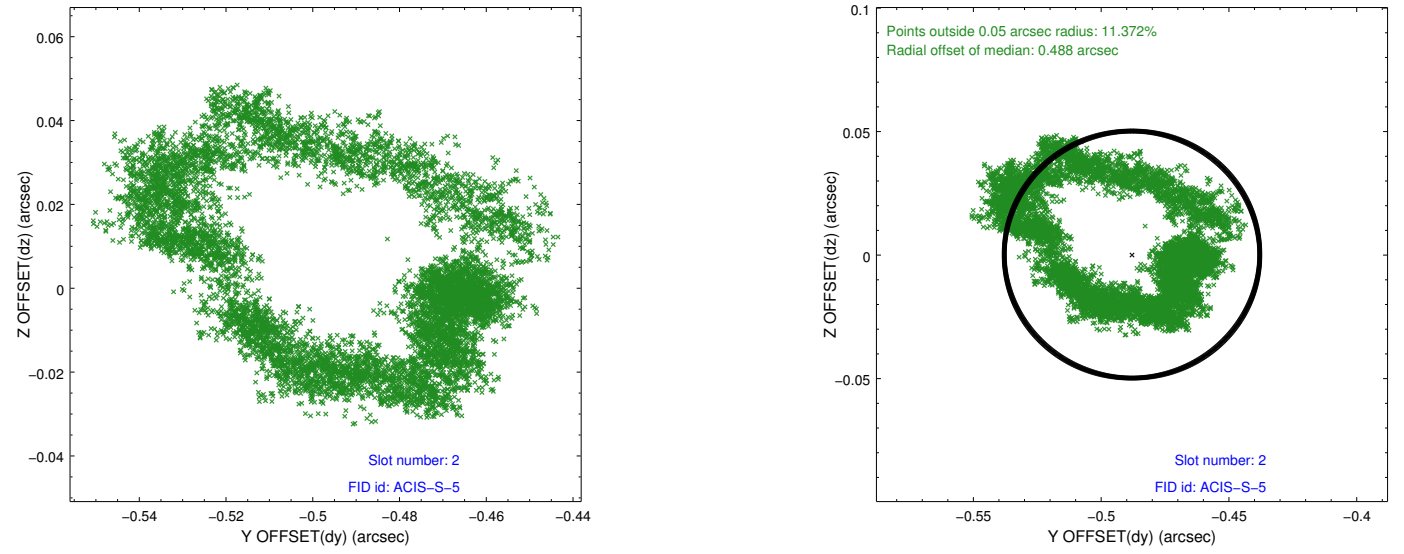
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.04.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	33.066624860406

A.2 Comments

Two optional chips were dropped.

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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 slot from the solution.

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To compensate for a few bad pixels not marked as bad that were not removed in the Level 2 processing, a custom bad pixel file with additional bad pixels at (chipx, chipy) = (232:234,322:339) in S1 was added in this processing. As a result, the user will NOT find a relatively bright square of pixels on the S1 chip for level 2 data caused by the application of the dither algorithm to the bad pixels in question, as opposed to previous processing(s).