

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19516 - L2 Version 2
Chandra X-Ray Center

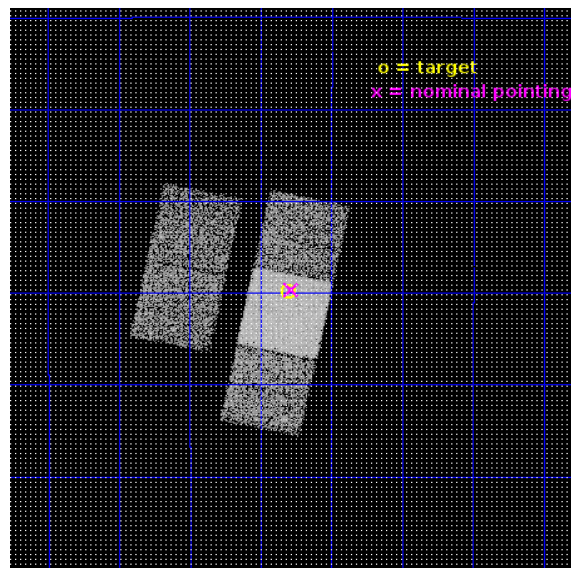
L2 Processing Date : Aug 15 2017

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

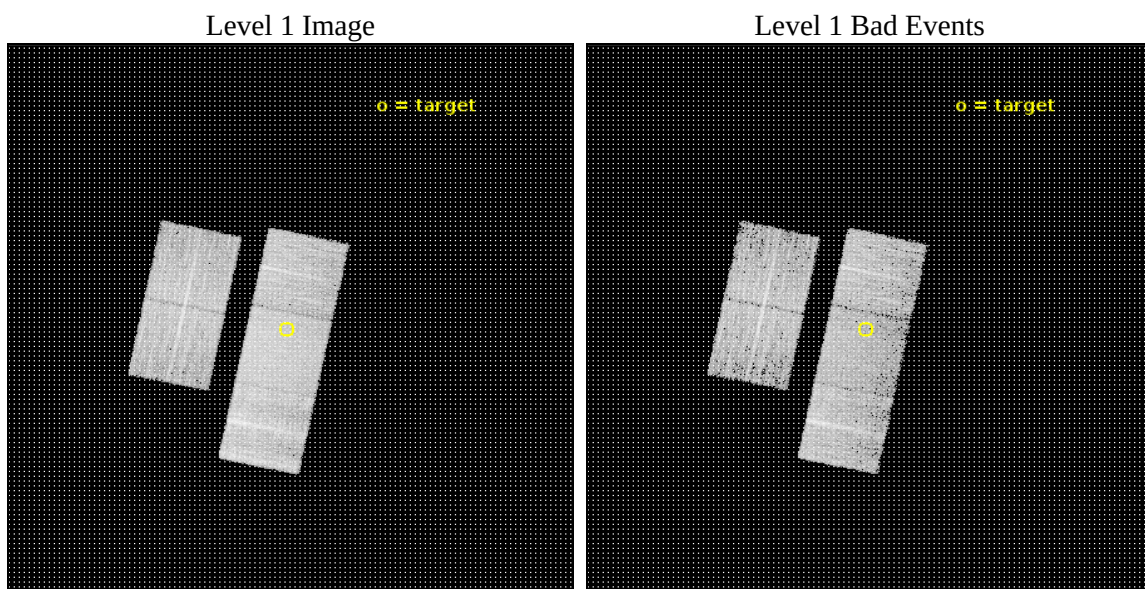
seq_num	703364	Sequence number
obs_id	19516	Observation id
title	Understanding AGN Accretion State Transitions via a Sample of Confirmed Changing-Look Quasars	Proposal title
observer	John Ruan	Principal investigator
object	SDSS J012648.08-083948.0	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	21.700417	Observer's specified target RA [deg]
dec_targ	-8.663361	Observer's specified target Dec [deg]
ra_nom	21.69569778366	Nominal RA [deg]
dec_nom	-8.6609452208236	Nominal Dec [deg]
roll_nom	101.88854573625	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7058.7000544071	Sum of GTIs [s]
livetime	6966.4729416569	Livetime [s]
ontime2	7058.7000544071	Sum of GTIs [s]
ontime3	7058.7000544071	Sum of GTIs [s]
ontime6	7058.7000544071	Sum of GTIs [s]
ontime7	7058.7000544071	Sum of GTIs [s]
ontime8	7058.7000544071	Sum of GTIs [s]
l2events	47079	Number of level 2 events



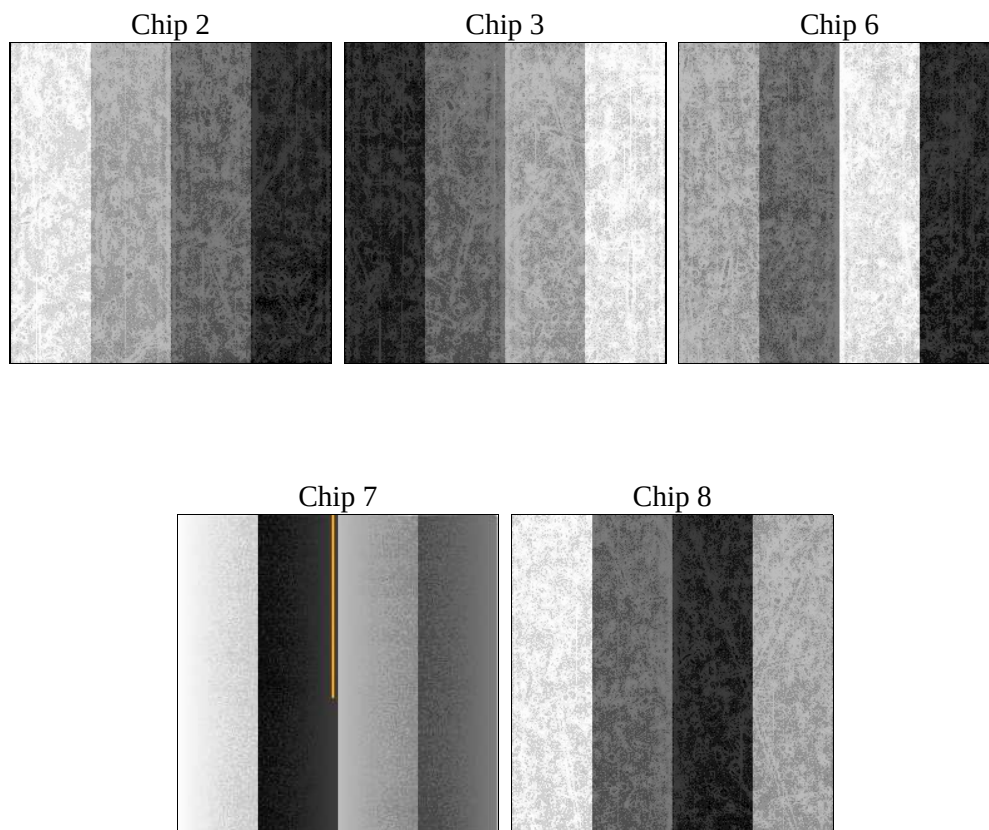
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	7058.7000544071	Sum of GTIs [s]
caldsver	4.7.5	 	ontime2	7058.7000544071	Sum of GTIs [s]
date	2017-08-15T21:07:00	Date and time of file creation	ontime3	7058.7000544071	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	7058.7000544071	Sum of GTIs [s]
			ontime7	7058.7000544071	Sum of GTIs [s]
			ontime8	7058.7000544071	Sum of GTIs [s]
			l1events	272738	Number of level 1 events

2.1.4 Events

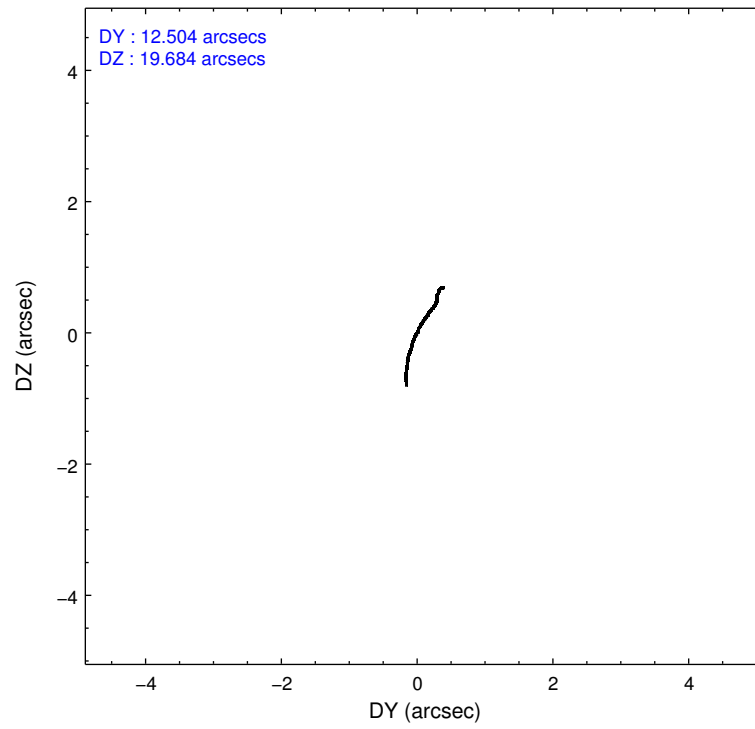
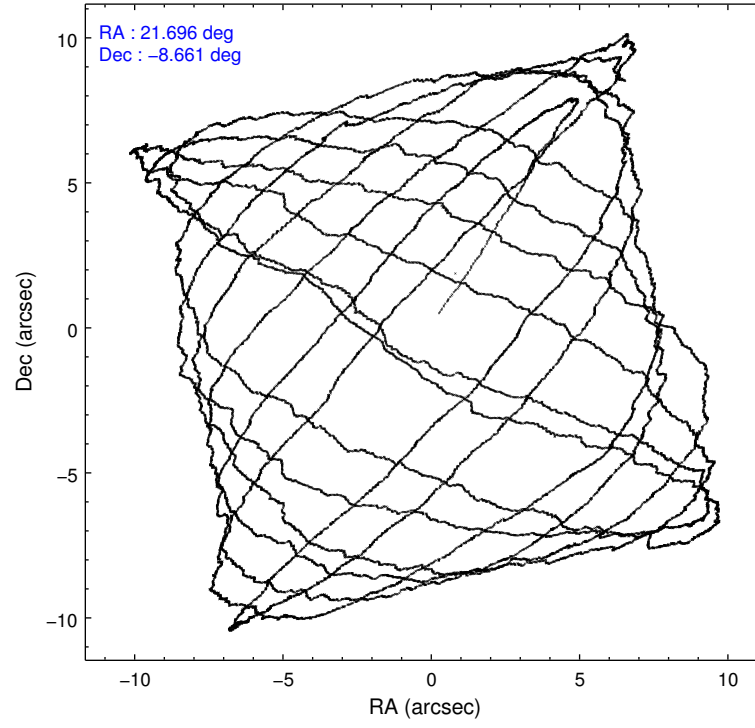
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	47184	47747	49308	63569	64930
rejected events	41806	42457	43622	35874	46664
rejected %	88%	88%	88%	56%	71%

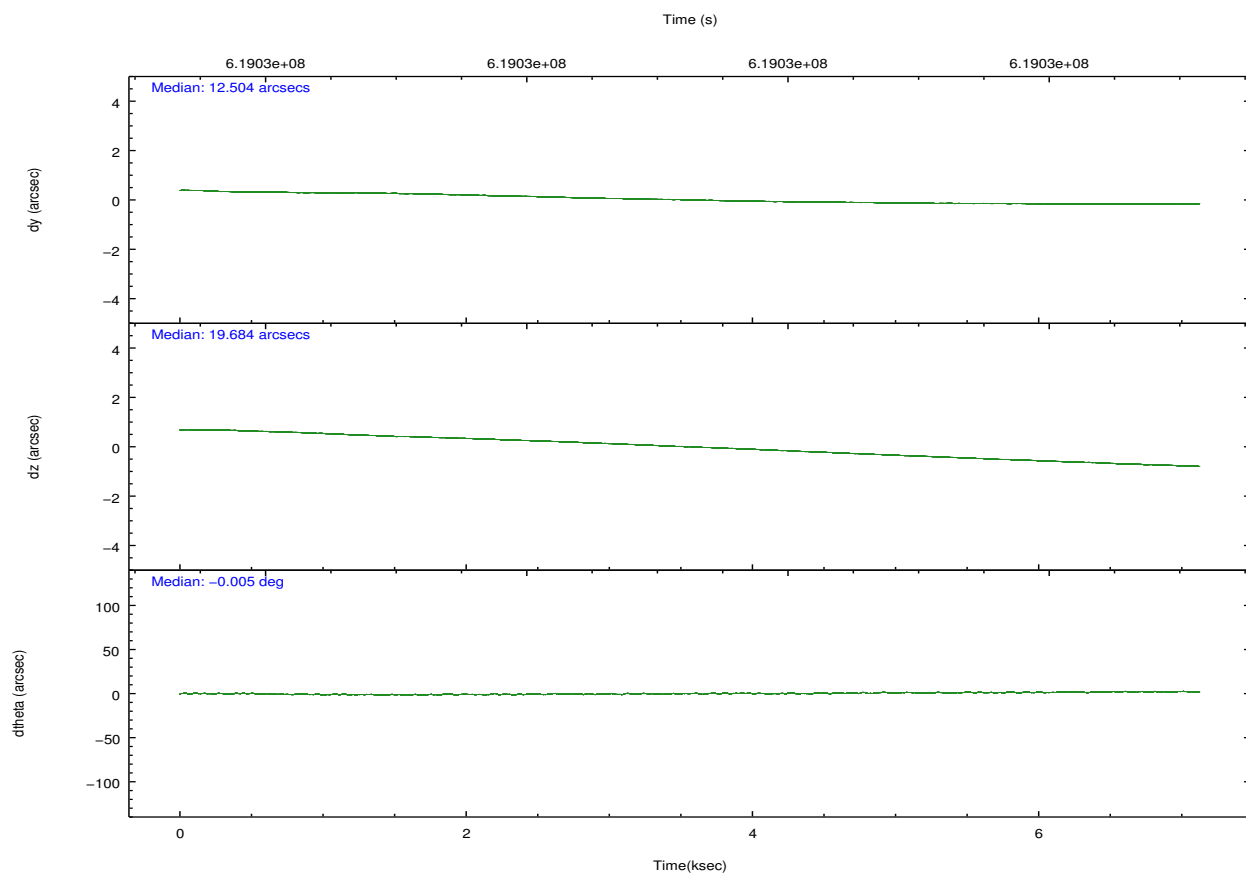
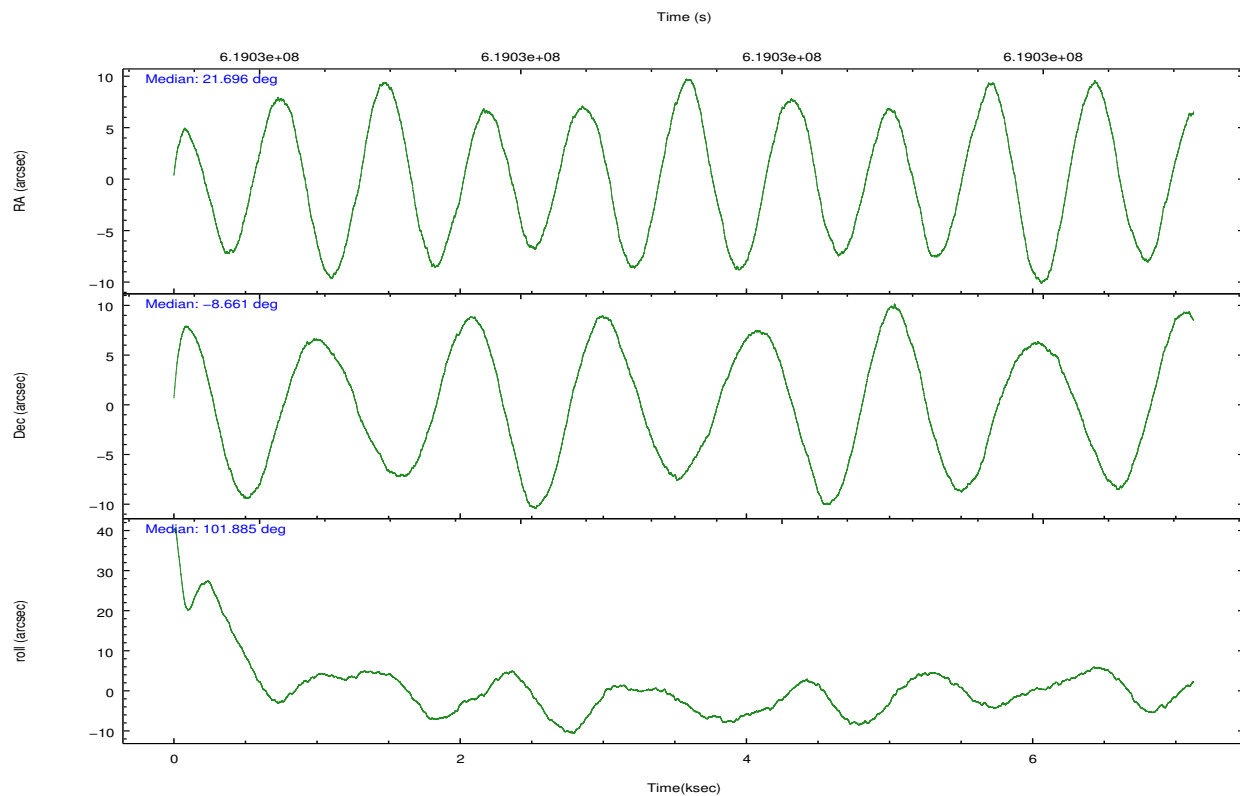
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1890	1983	1959	2390	5450
	4%	4%	3%	3%	8%
grade 1 events	35	33	26	84	54
	0%	0%	0%	0%	0%
grade 2 events	1370	1066	1370	5897	4410
	2%	2%	2%	9%	6%
grade 3 events	545	598	563	2303	1938
	1%	1%	1%	3%	2%
grade 4 events	552	548	546	2327	1925
	1%	1%	1%	3%	2%
grade 5 events	1947	2361	2340	6432	3563
	4%	4%	4%	10%	5%
grade 6 events	1023	1098	1249	14793	4552
	2%	2%	2%	23%	7%
grade 7 events	39822	40060	41255	29343	43038
	84%	83%	83%	46%	66%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	21.714526	21.69569778366023	CCD I2 on	O1	Y
[deg] Pointing Dec	-8.681160	-8.660945220823567	CCD I3 on	O2	Y
[deg] Pointing Roll	101.734716	101.8885457362544	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	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	619025820.184000	619024731.60378	CCD S5 on	N	N
Observation start date	2017-08-13T15:35:51	2017-08-13T15:18:51	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	619032820.184000	619033645.5168	On-chip summing requested	N	N
Observation end date	2017-08-13T17:32:31	2017-08-13T17:47:25	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



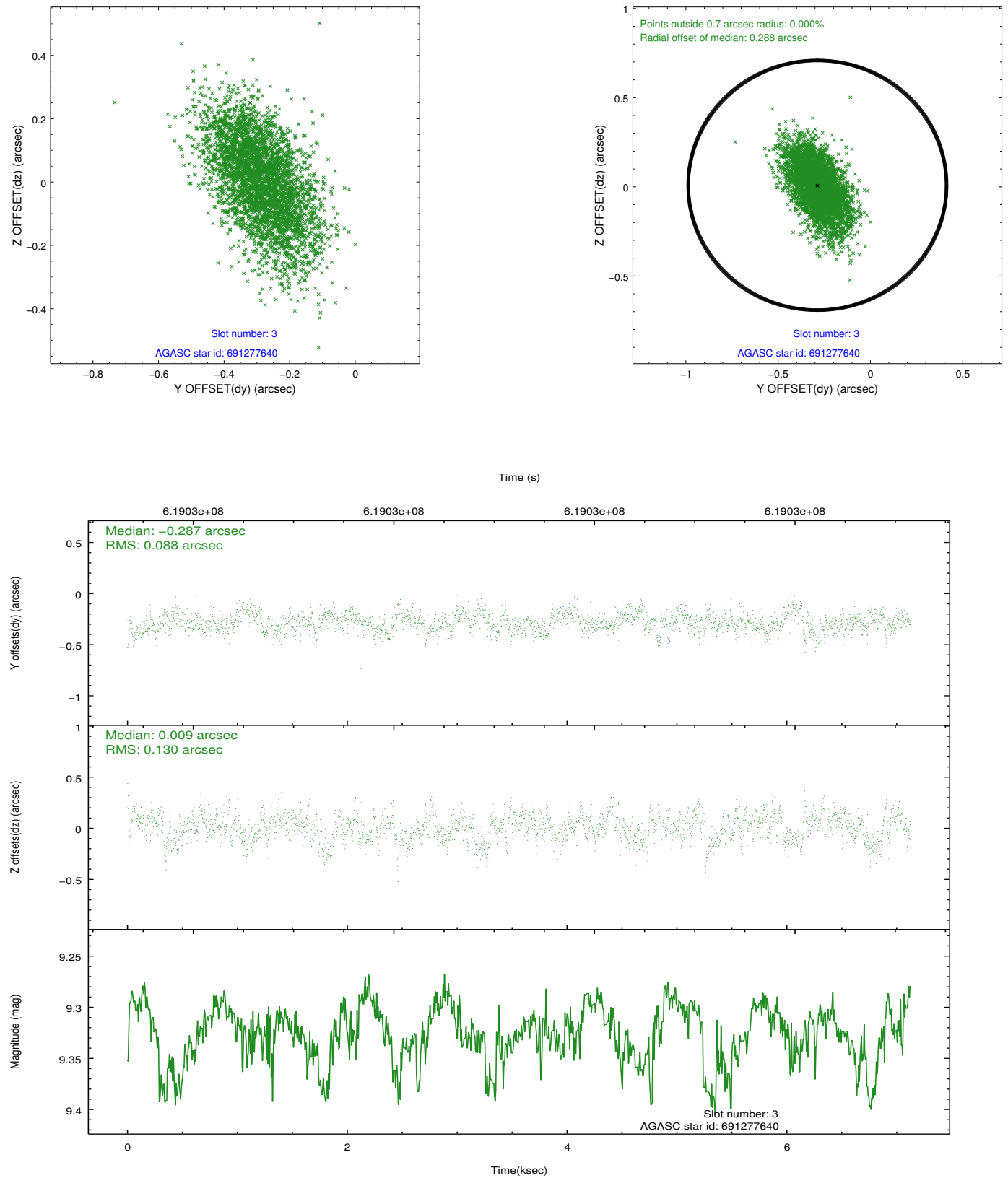


Slot Statistics

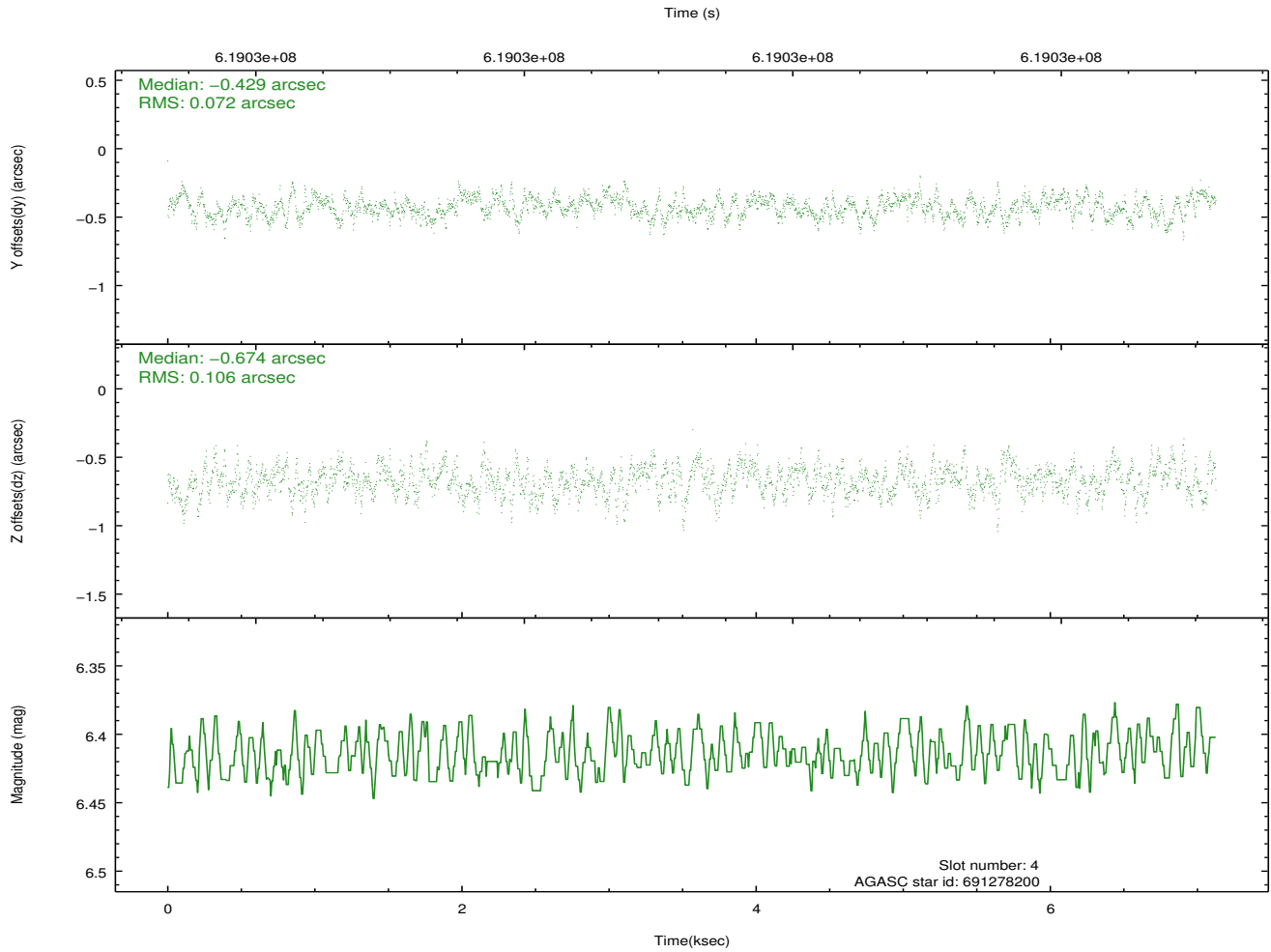
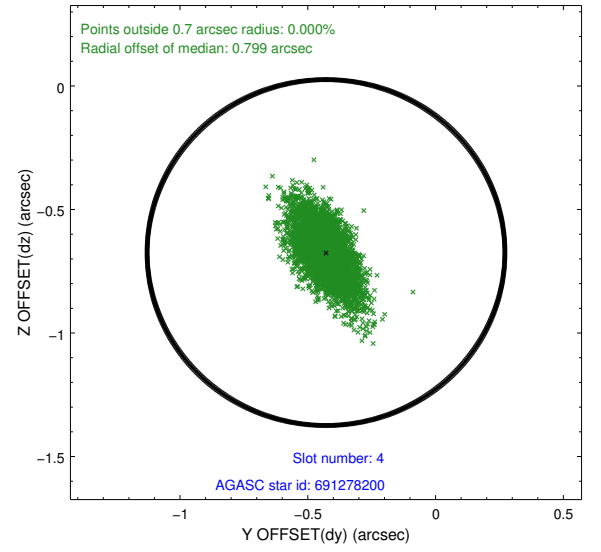
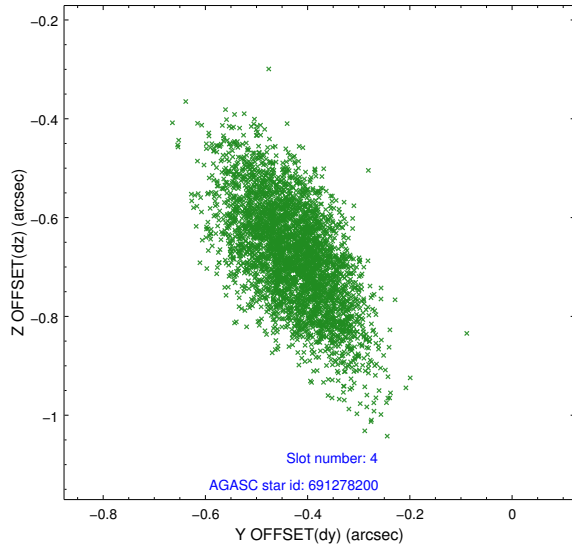
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.91	1738	-0.150	-0.019	0.015	0.029	0.000000	0.000000	-765.56	-1741.21
1	FID		ACIS-S-4	7.04	1738	0.360	0.078	0.009	0.017	0.000000	0.000000	2147.81	166.60
2	FID		ACIS-S-5	7.04	1739	-0.244	-0.050	0.014	0.025	0.000000	0.000000	-1817.50	160.97
3	GUIDE	used	691277640	9.32	3468	-0.287	0.009	0.162	0.285	22.101320	-8.393708	729.68	-1557.19
4	GUIDE	used	691278200	6.42	3477	-0.429	-0.674	0.132	0.230	21.479902	-8.504397	792.18	687.51
5	GUIDE	used	691284768	9.45	3474	0.183	0.095	0.145	0.249	22.032804	-9.127250	-1802.26	-780.58
6	GUIDE	used	691280384	6.44	3477	-0.058	0.118	0.113	0.204	21.867903	-9.297148	-2283.11	-82.91
7	GUIDE	used	691274176	9.86	3467	0.589	0.463	0.240	0.390	22.416266	-8.782933	-868.53	-2368.92

2.4 Star Slots

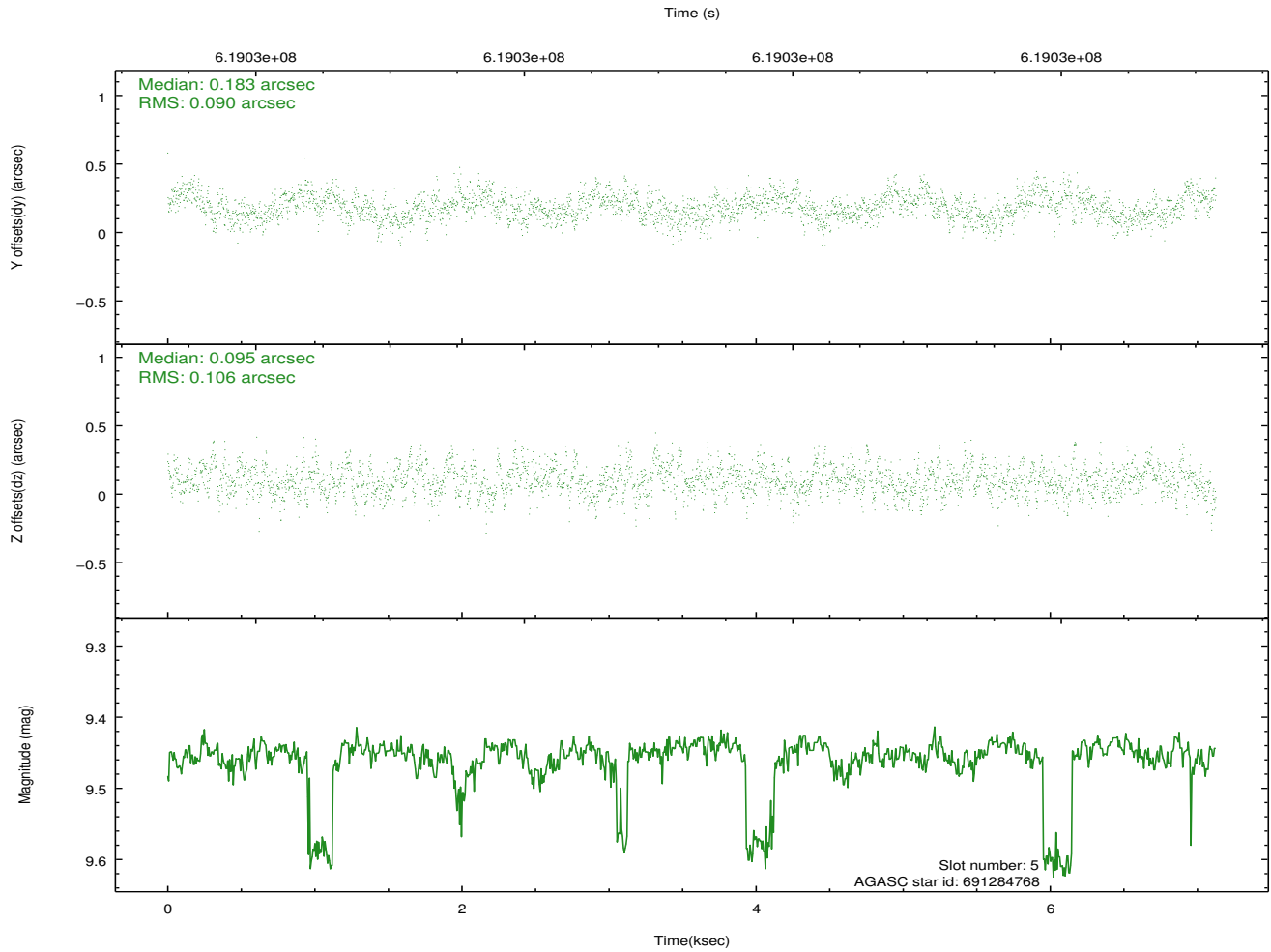
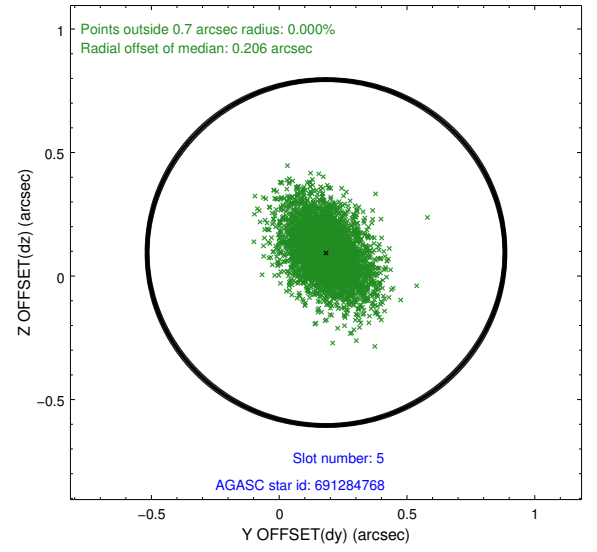
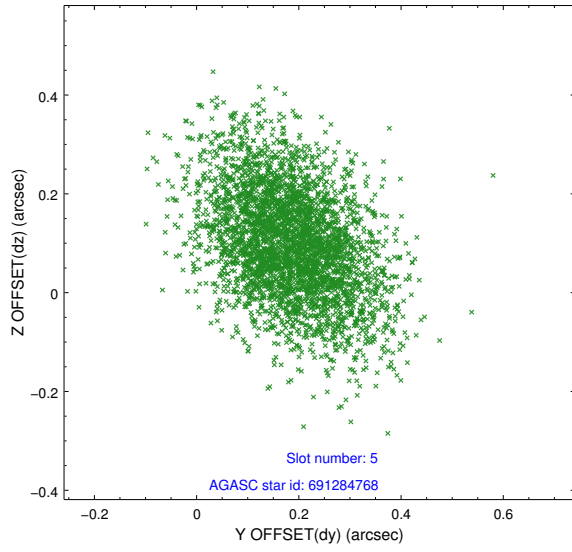
2.4.1 Slot 3



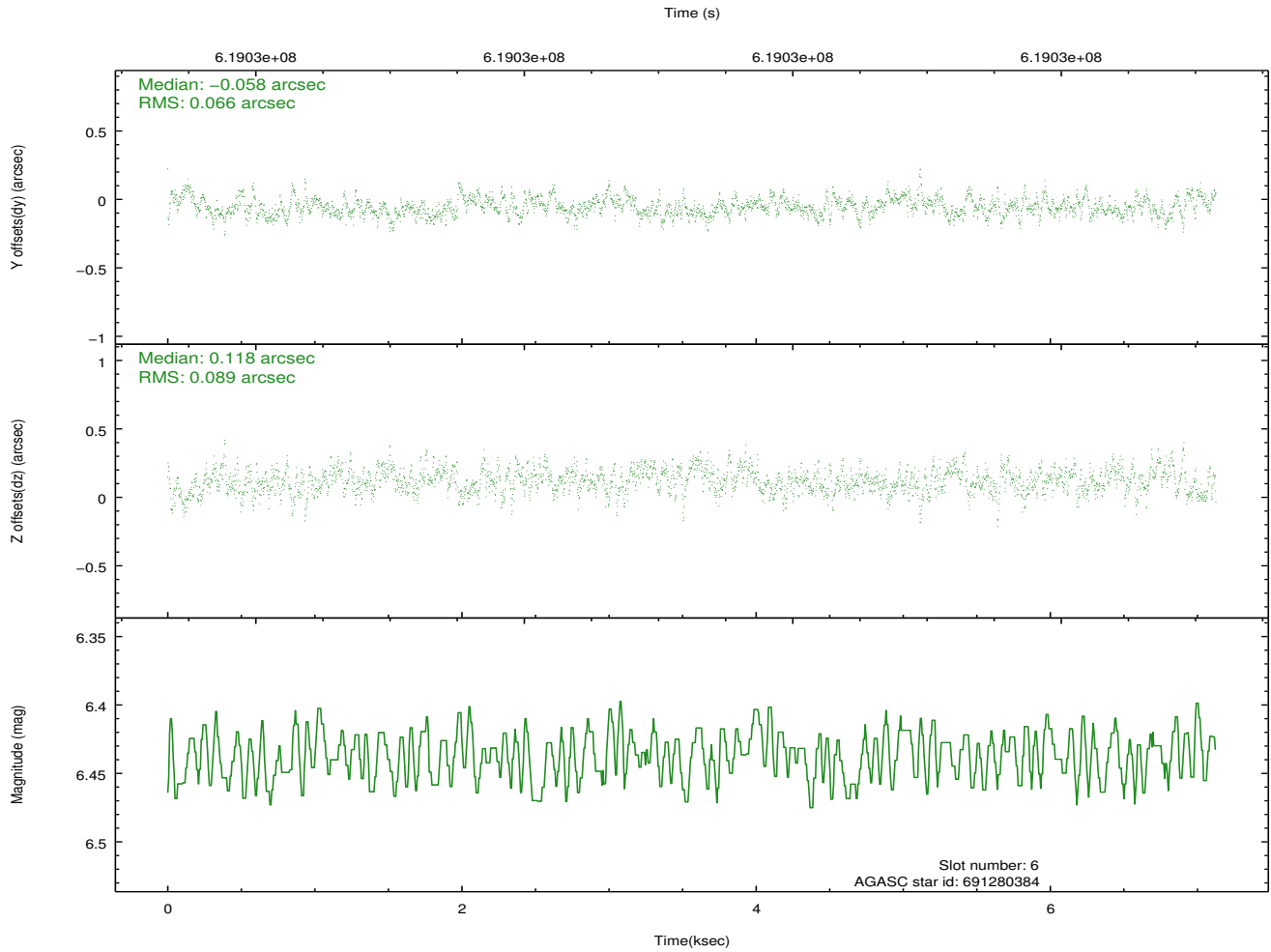
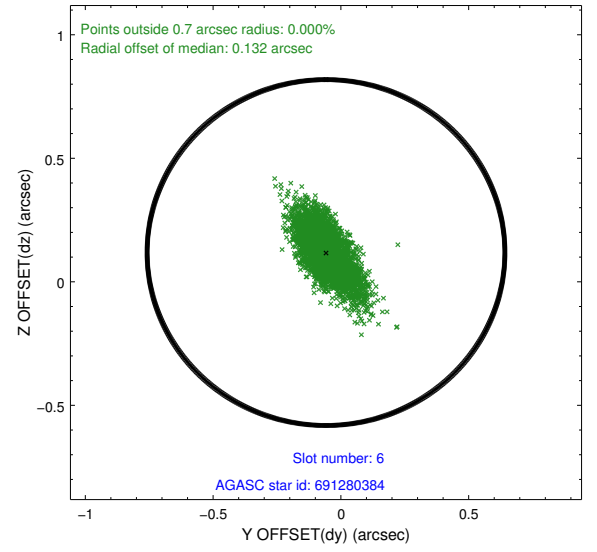
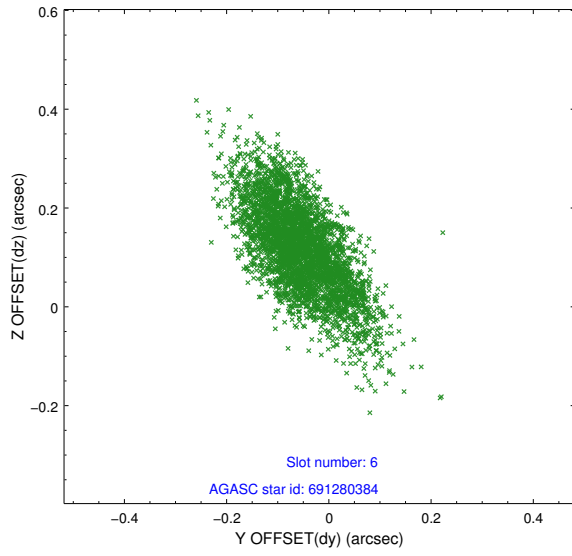
2.4.2 Slot 4



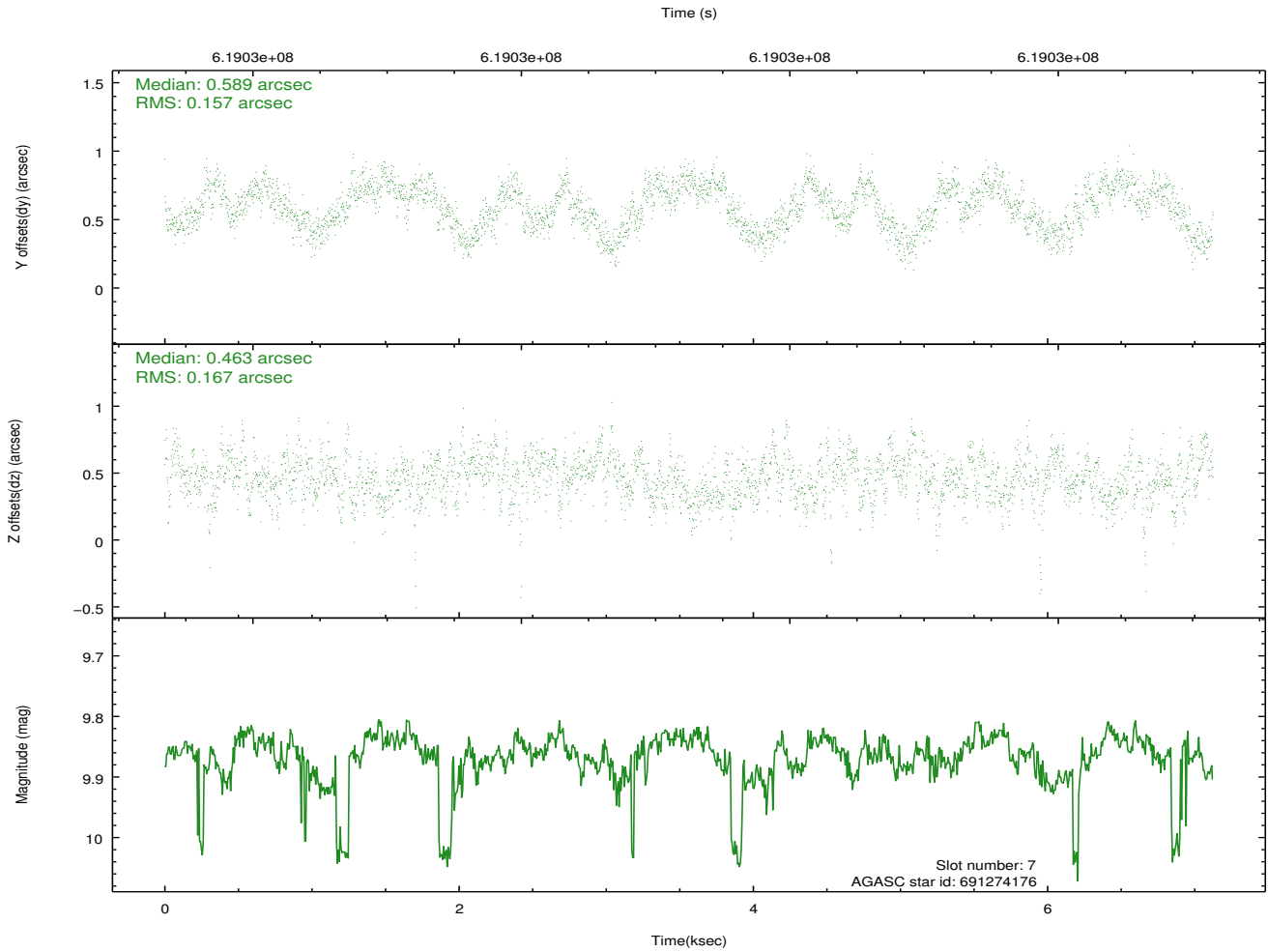
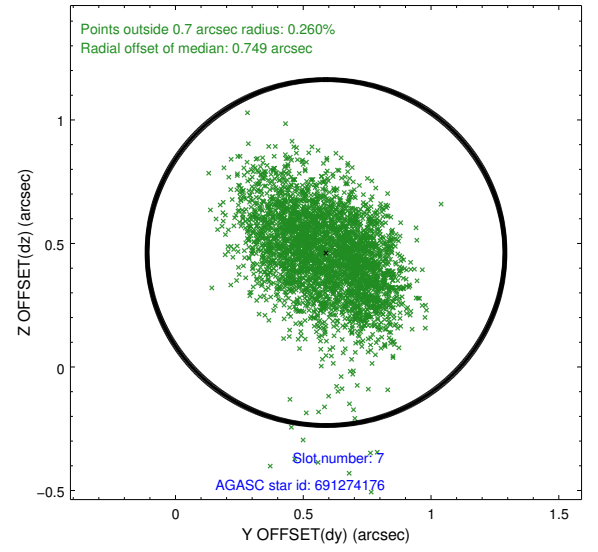
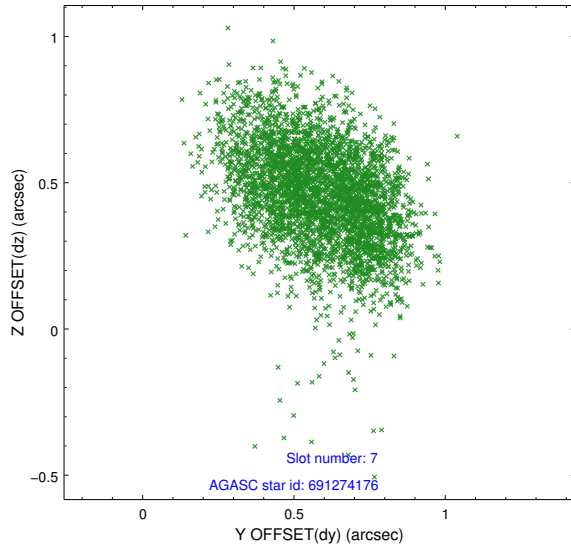
2.4.3 Slot 5



2.4.4 Slot 6

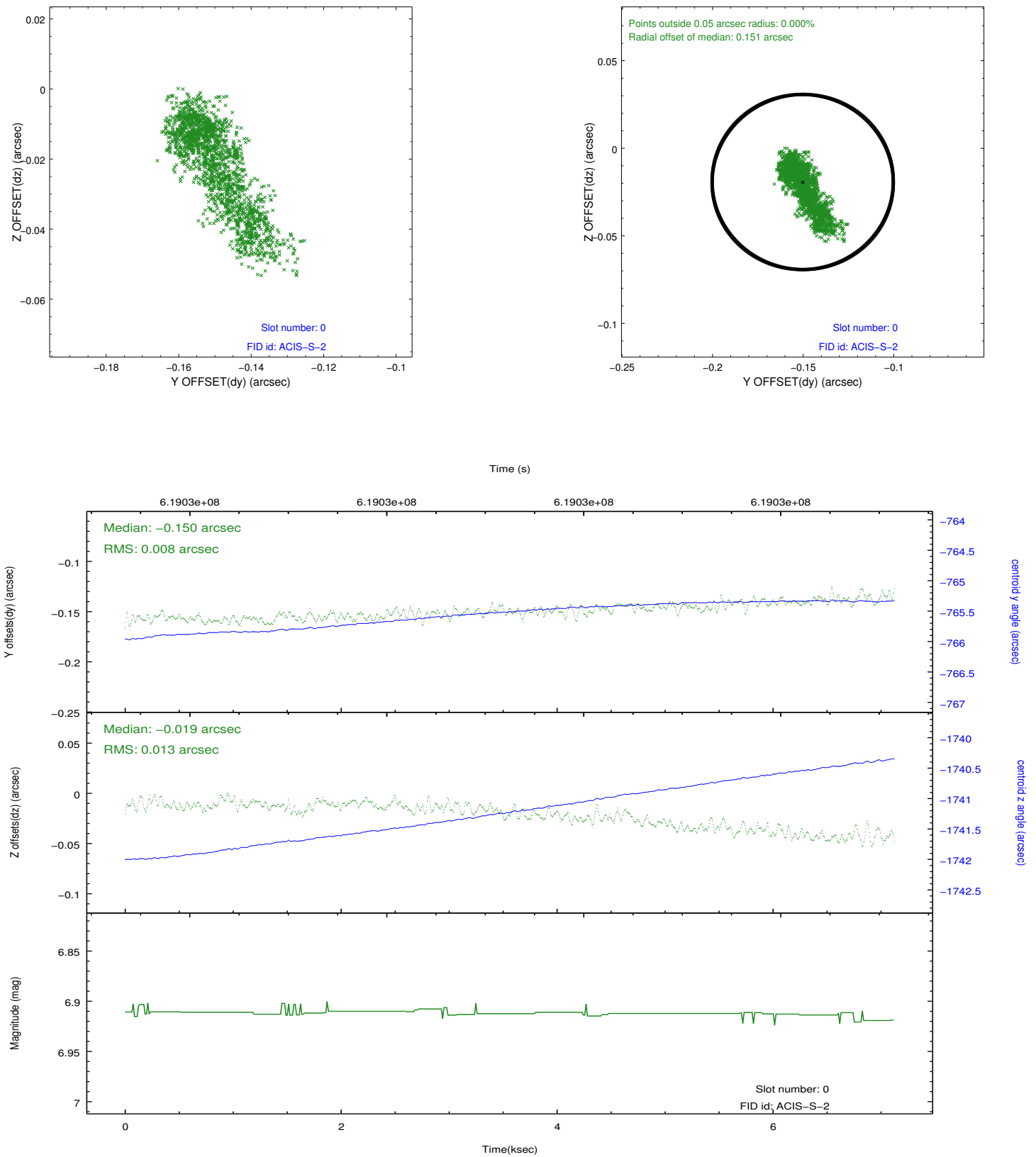


2.4.5 Slot 7

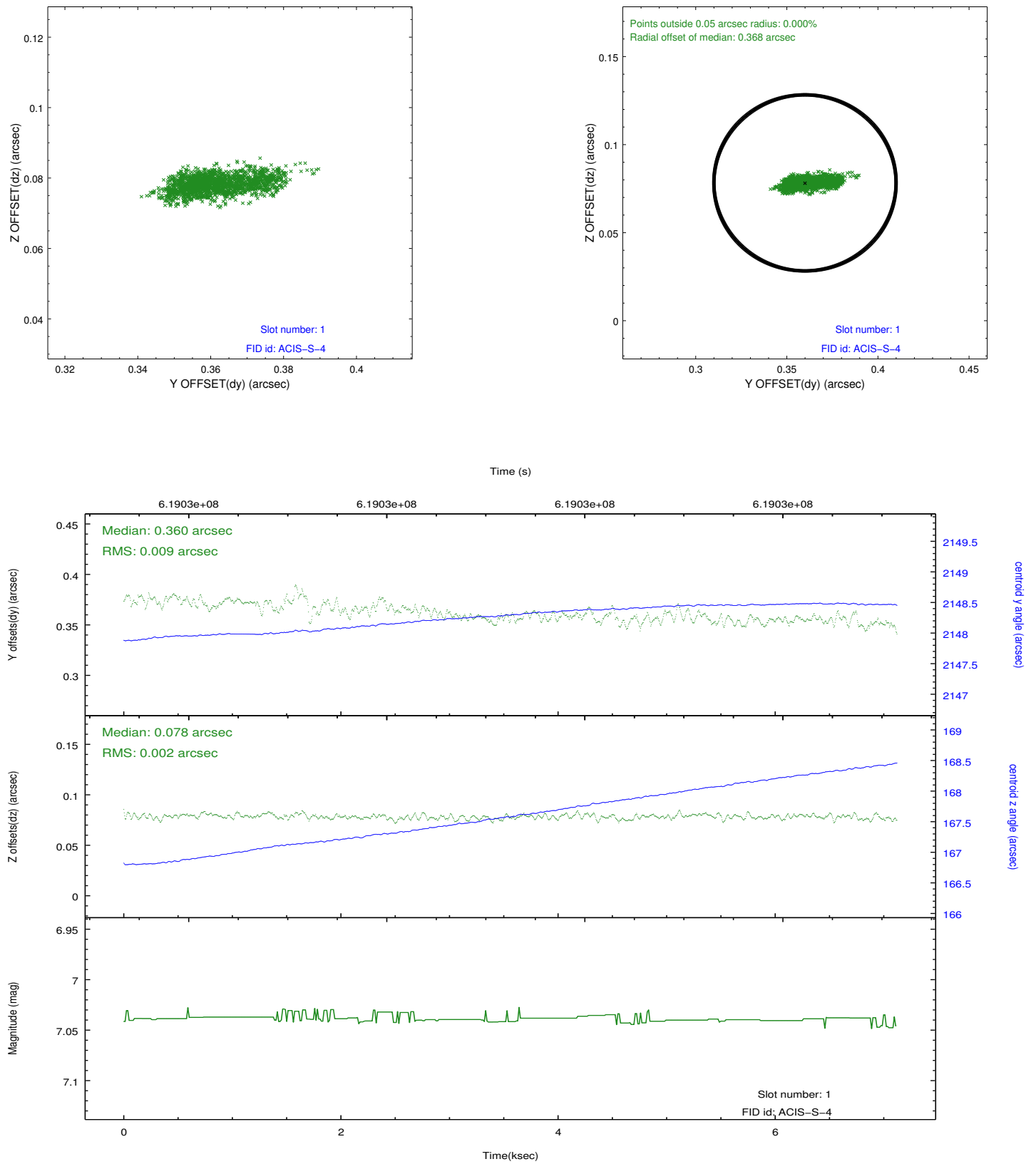


2.5 FID Slots

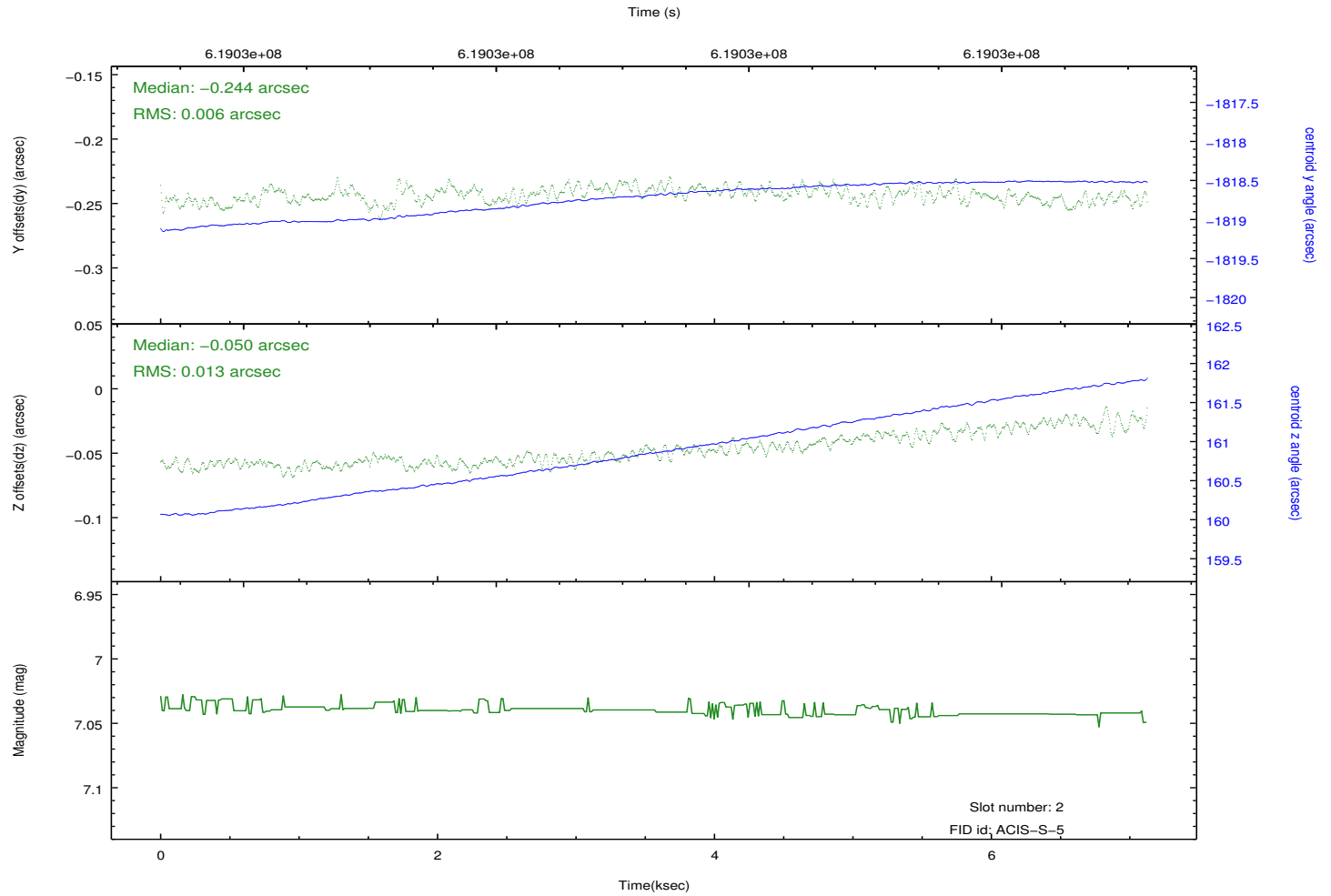
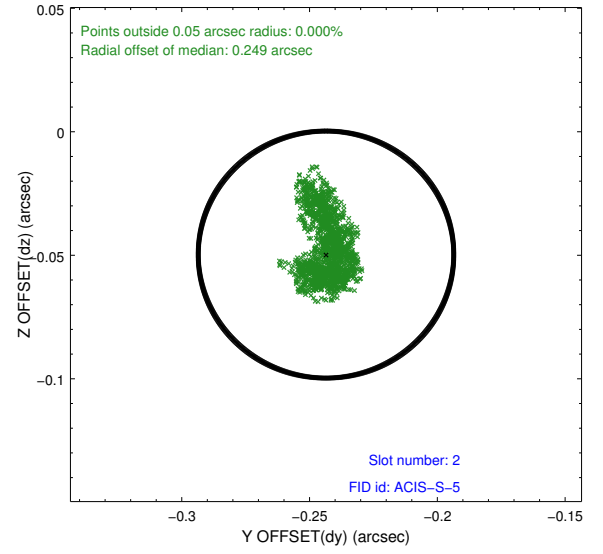
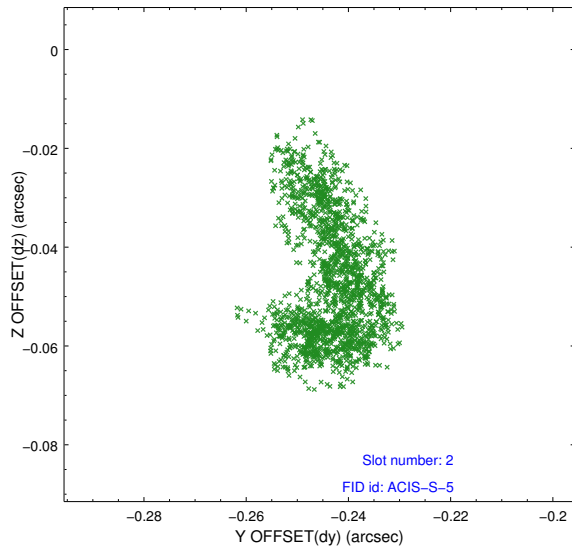
2.5.1 Slot 0



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)	2017.08.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.0587000544071

A.2 Comments

A spatial region of the original bias map for CCD = 3 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (21.90022,-8.68920), (21.90387,-8.68845), (21.89460,-8.64510), (21.89095,-8.64585).