

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19514 - L2 Version 2
Chandra X-Ray Center

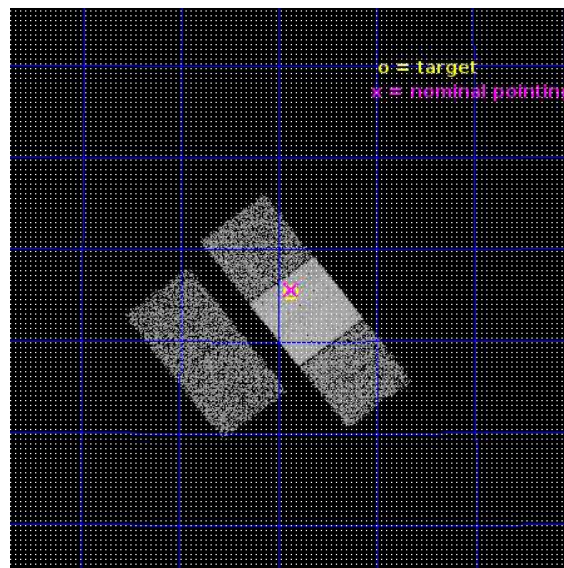
L2 Processing Date : Oct 26 2017

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1 Front

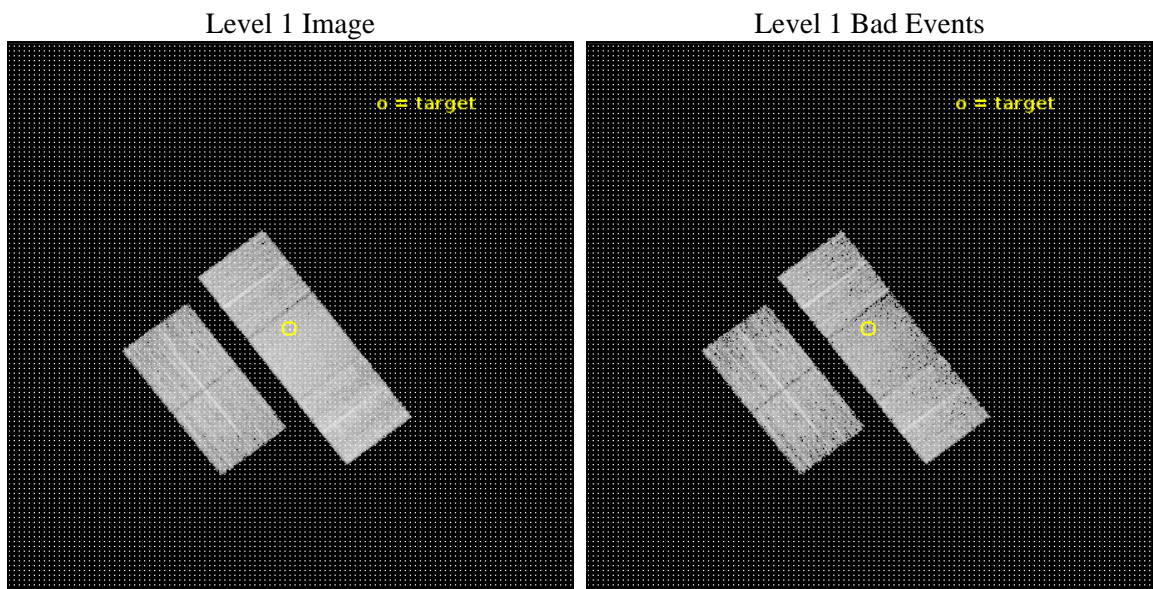
seq_num	703362	Sequence number
obs_id	19514	Observation id
title	Understanding AGN Accretion State Transitions via a Sample of Confirmed Changing-Look Quasars	Proposal title
observer	John Ruan	Principal investigator
object	SDSS J102152.33+464515.6	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	155.467917	Observer's specified target RA [deg]
dec_targ	46.754361	Observer's specified target Dec [deg]
ra_nom	155.46659304658	Nominal RA [deg]
dec_nom	46.760787531683	Nominal Dec [deg]
roll_nom	52.657575273004	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7058.7000544071	Sum of GTIs [s]
livetime	6966.4729416569	Livetime [s]
ontime2	7055.5590142012	Sum of GTIs [s]
ontime3	7055.5590341091	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	45953	Number of level 2 events



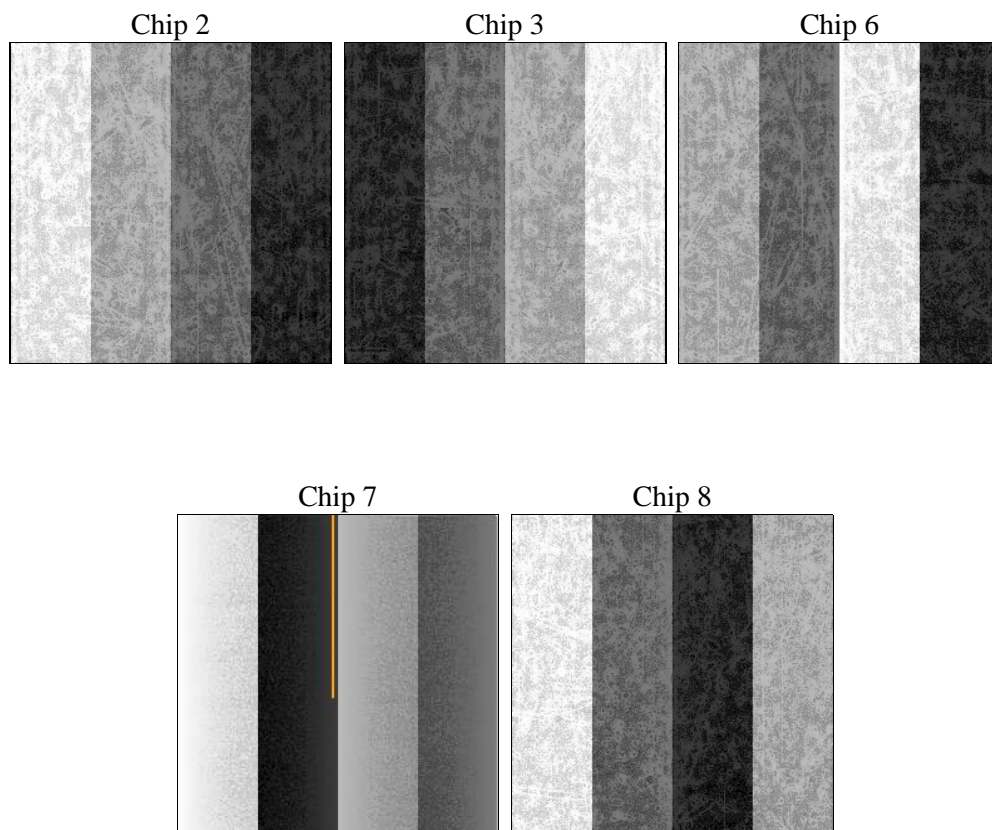
2 OBI

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	4.7.6	 	ontime2	7055.5590142012	Sum of GTIs [s]
date	2017-10-26T19:26:35	Date and time of file creation	ontime3	7055.5590341091	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	268424	Number of level 1 events

2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	45620	46051	49174	62799	64780
rejected events	40391	41006	43636	35463	47837
rejected %	88%	89%	88%	56%	73%

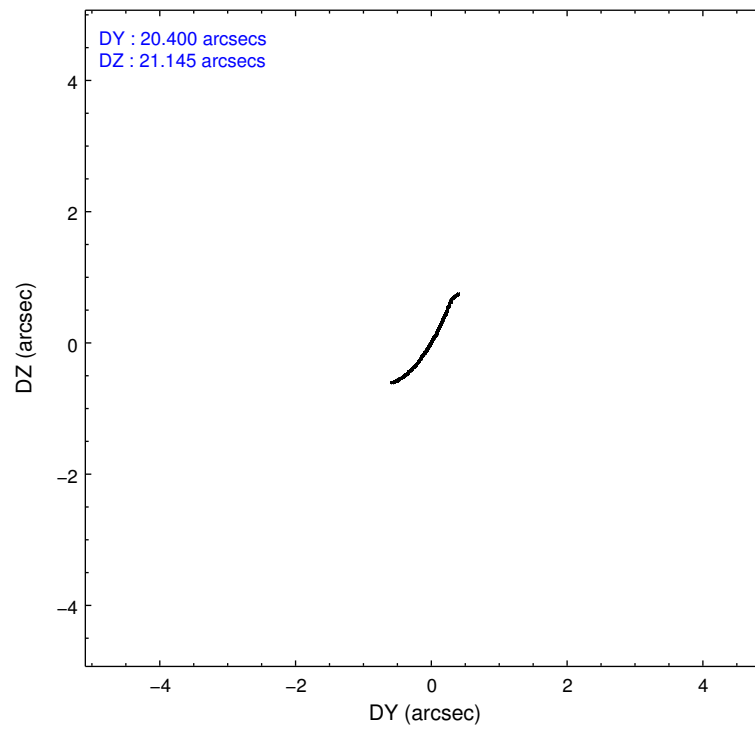
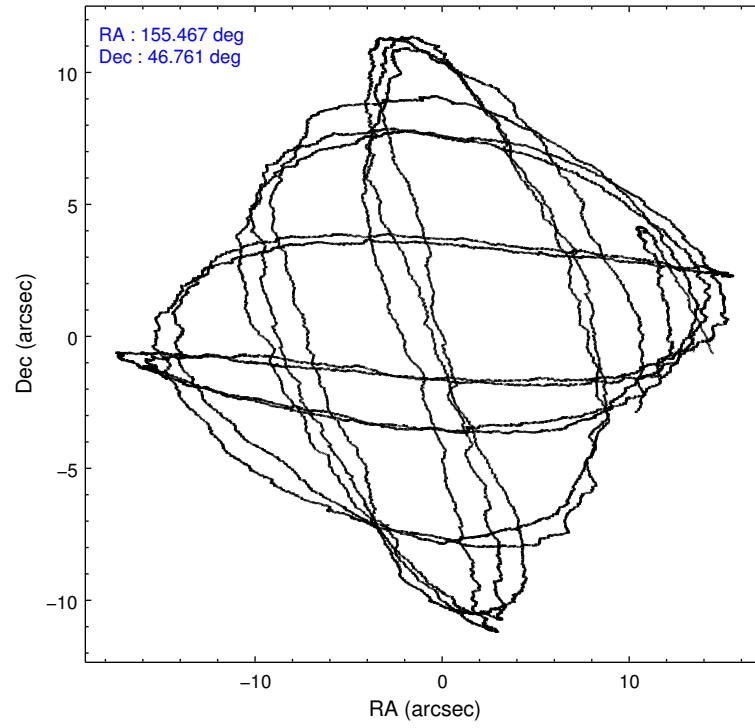
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1852	1741	1844	2333	4695
	4%	3%	3%	3%	7%
grade 1 events	26	32	34	90	50
	0%	0%	0%	0%	0%
grade 2 events	1319	1099	1306	5792	4156
	2%	2%	2%	9%	6%
grade 3 events	514	531	577	2235	1814
	1%	1%	1%	3%	2%
grade 4 events	559	551	548	2270	1675
	1%	1%	1%	3%	2%
grade 5 events	1985	2334	2328	6426	3554
	4%	5%	4%	10%	5%
grade 6 events	987	1127	1264	14718	4611
	2%	2%	2%	23%	7%
grade 7 events	38378	38636	41273	28935	44225
	84%	83%	83%	46%	68%

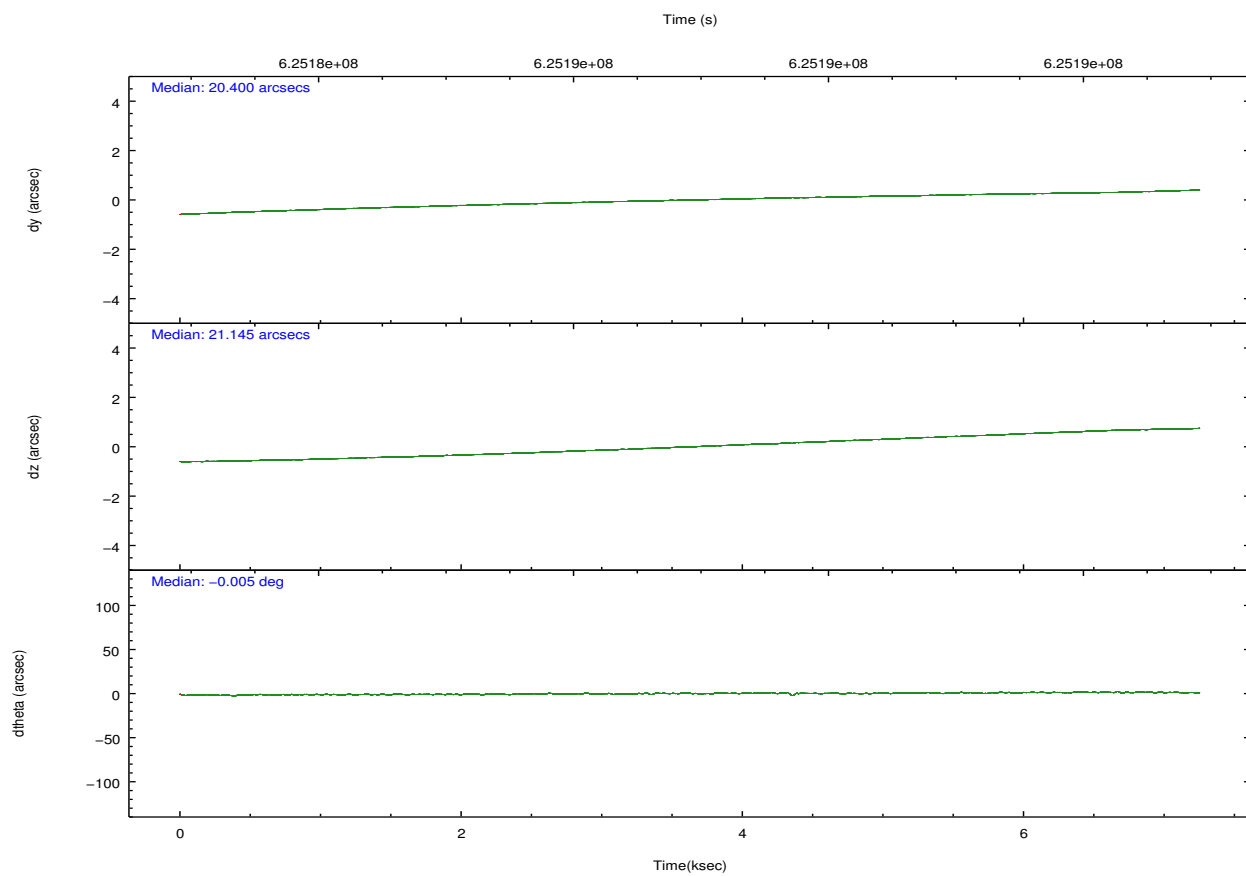
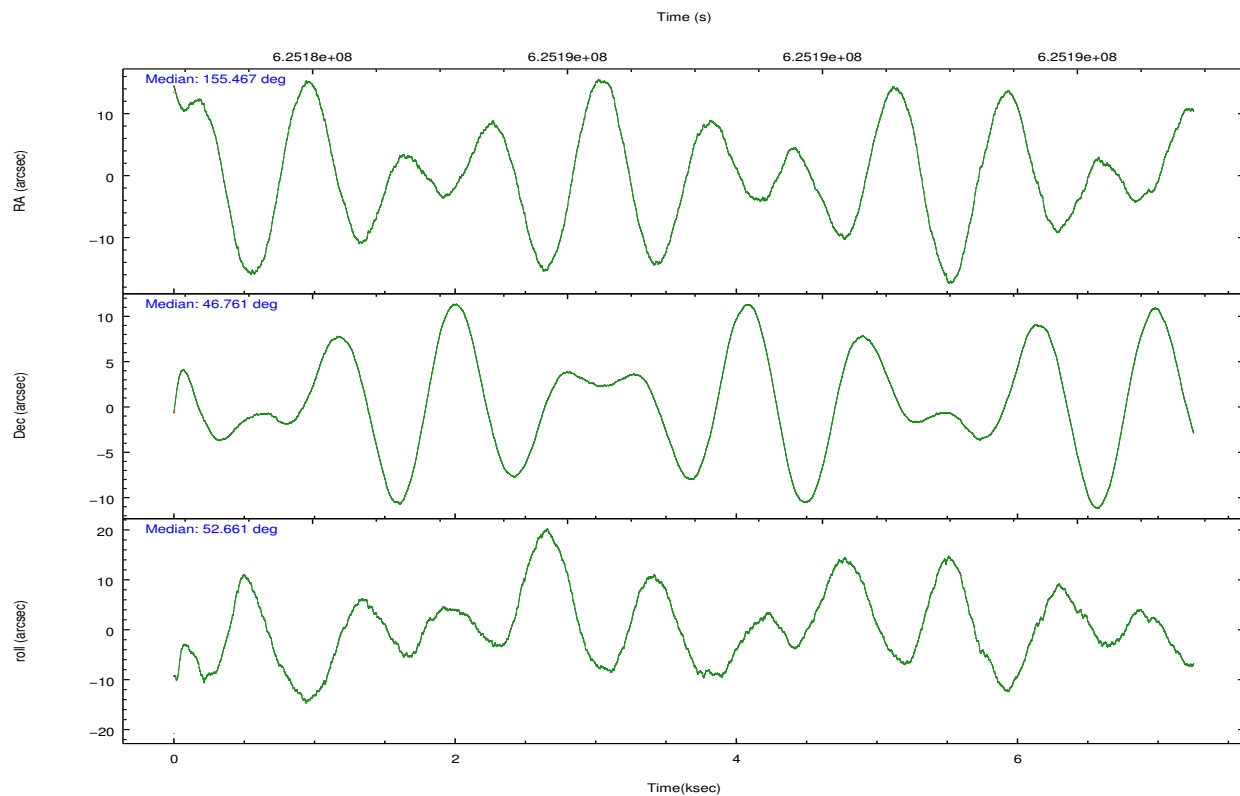
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23678	ACIS-23678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	155.461909	155.4665930465795
[deg] Pointing Dec	46.733505	46.7607875316828
[deg] Pointing Roll	52.504379	52.65757527300403
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	625183538.184000	625182413.8265899
Observation start date	2017-10-23T22:04:29	2017-10-23T21:46:53
[s] Observation end time (MET)	625190538.184000	625191962.72715
Observation end date	2017-10-24T00:01:09	2017-10-24T00:26:02
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	O1	Y
CCD I3 on	O2	Y
CCD S0 on	N	N
CCD S1 on	N	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	0	0
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



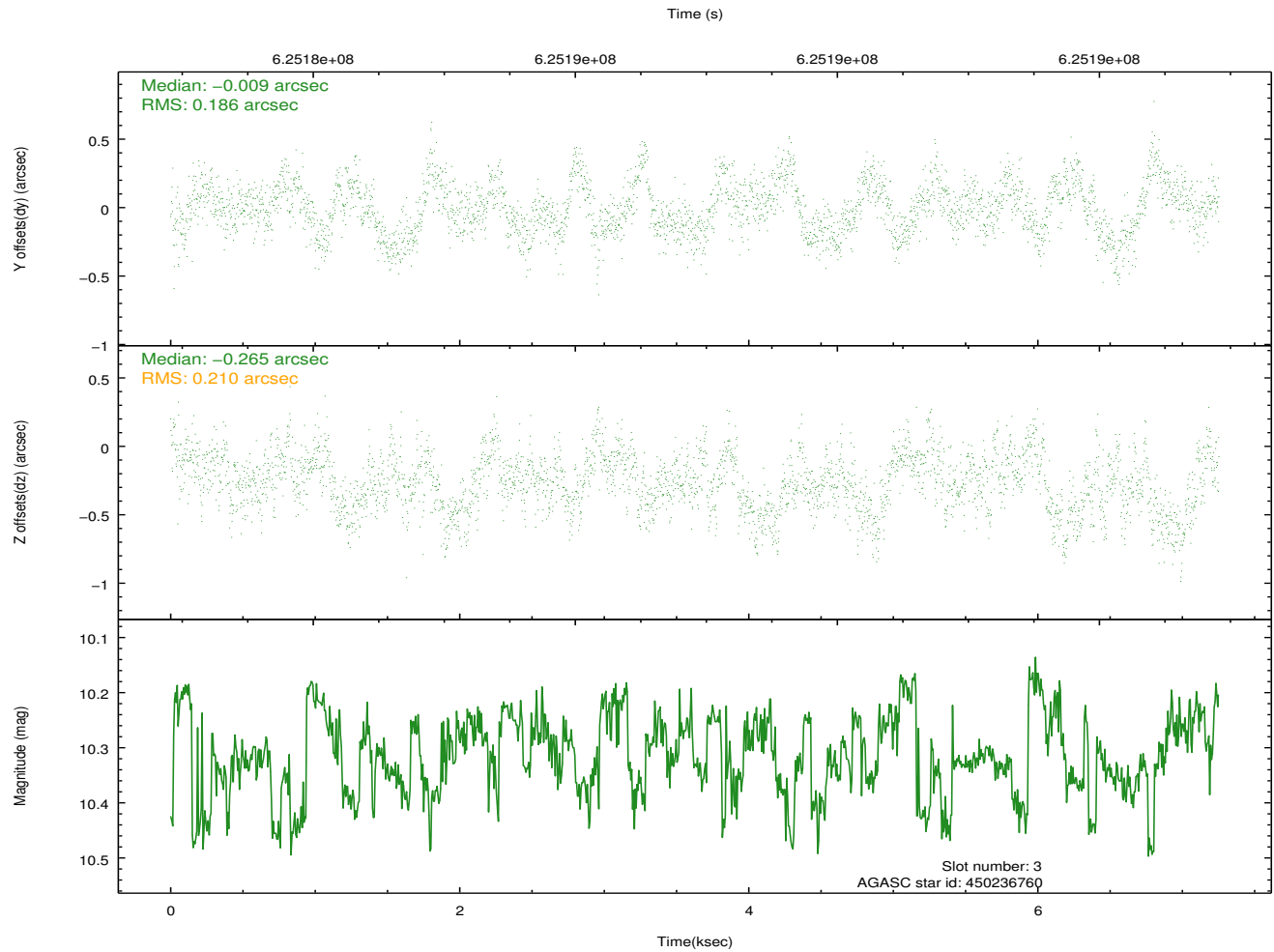
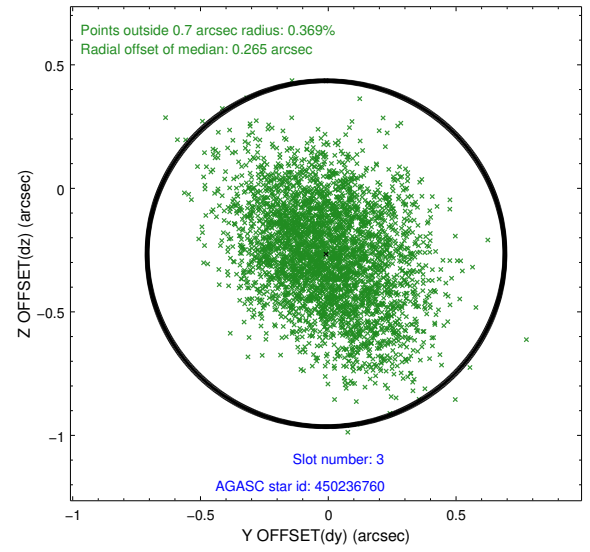
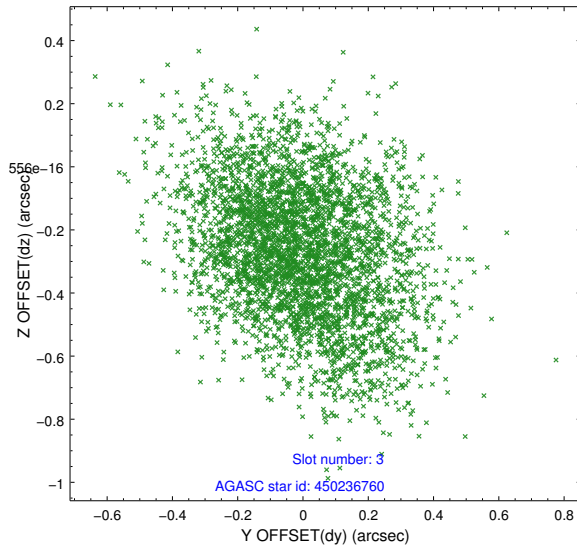


Slot Statistics

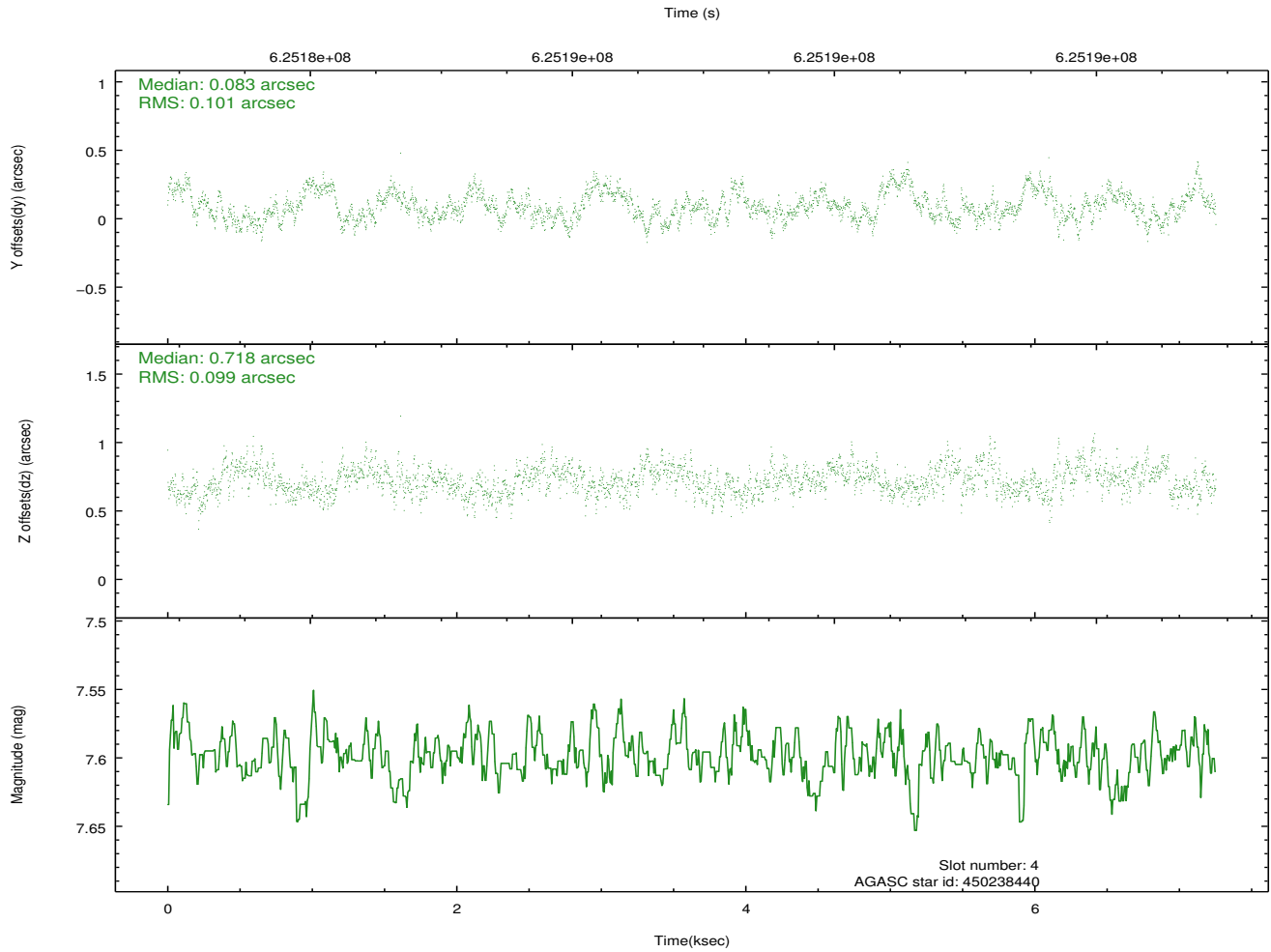
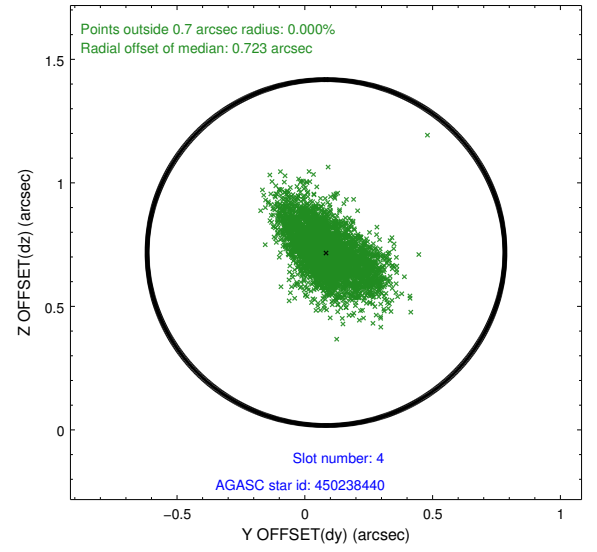
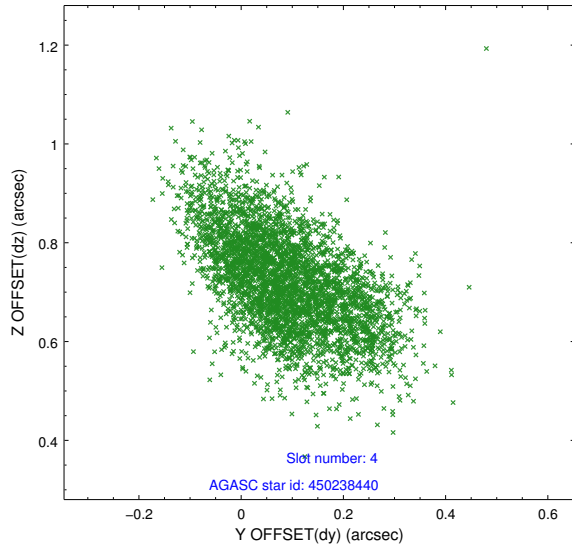
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.98	1770	-0.240	-0.109	0.015	0.024	0.000000	0.000000	-773.70	-1742.83
1	FID		ACIS-S-4	7.10	1768	0.490	0.145	0.012	0.024	0.000000	0.000000	2139.92	165.11
2	FID		ACIS-S-5	7.09	1770	-0.282	-0.028	0.015	0.023	0.000000	0.000000	-1825.59	159.47
3	GUIDE	used	450236760	10.32	3524	-0.009	-0.265	0.300	0.484	155.364102	46.831425	133.08	405.54
4	GUIDE	used	450238440	7.60	3538	0.083	0.718	0.147	0.248	155.317530	46.245836	-1611.48	-782.29
5	GUIDE	used	450238880	9.23	3531	0.506	0.603	0.169	0.279	155.545362	45.926448	-2178.10	-1933.78
6	GUIDE	used	450236560	10.04	3506	-0.402	-0.645	0.282	0.526	154.854797	47.062548	35.94	1905.55
7	GUIDE	used	450236608	6.19	3538	-0.185	-0.446	0.149	0.241	154.744705	46.760782	-993.49	1468.54

2.4 Star Slots

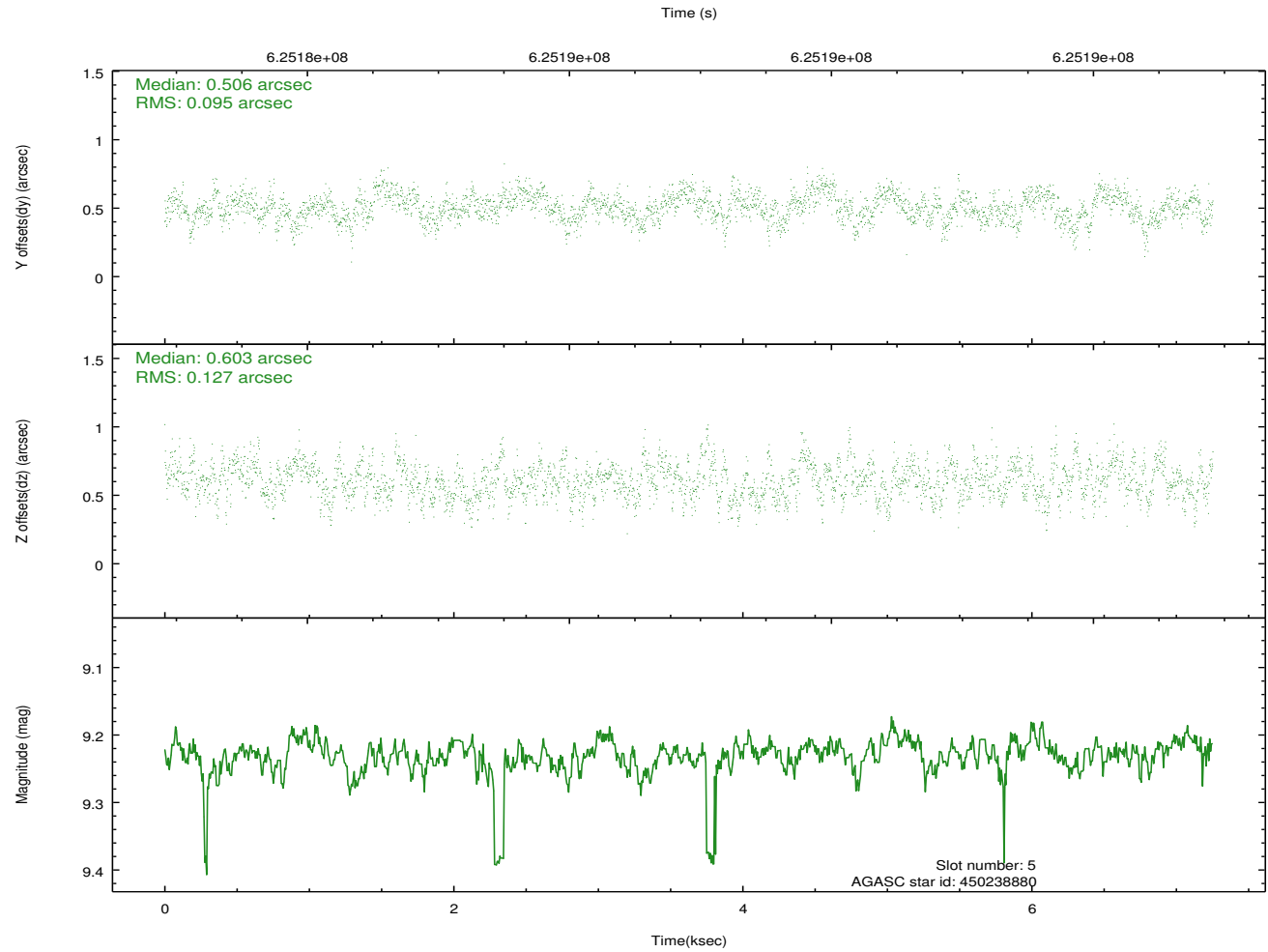
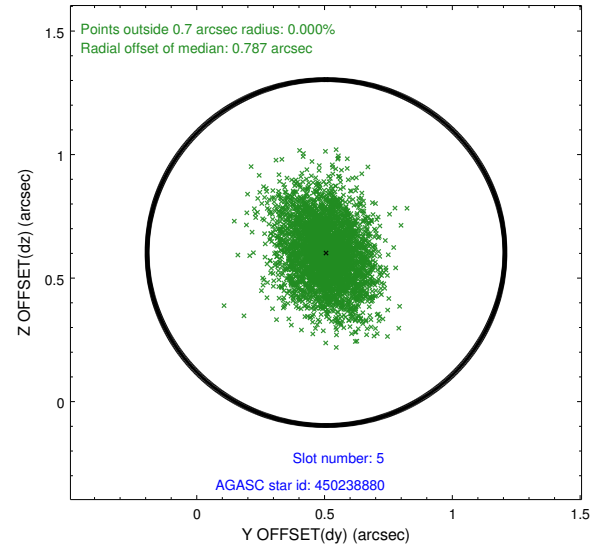
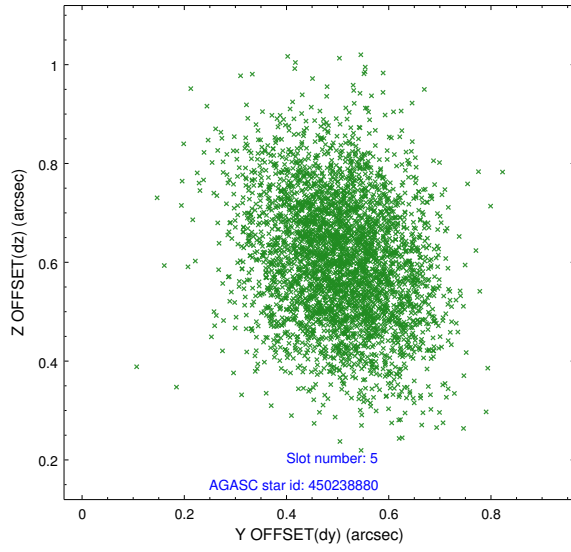
2.4.1 Slot 3



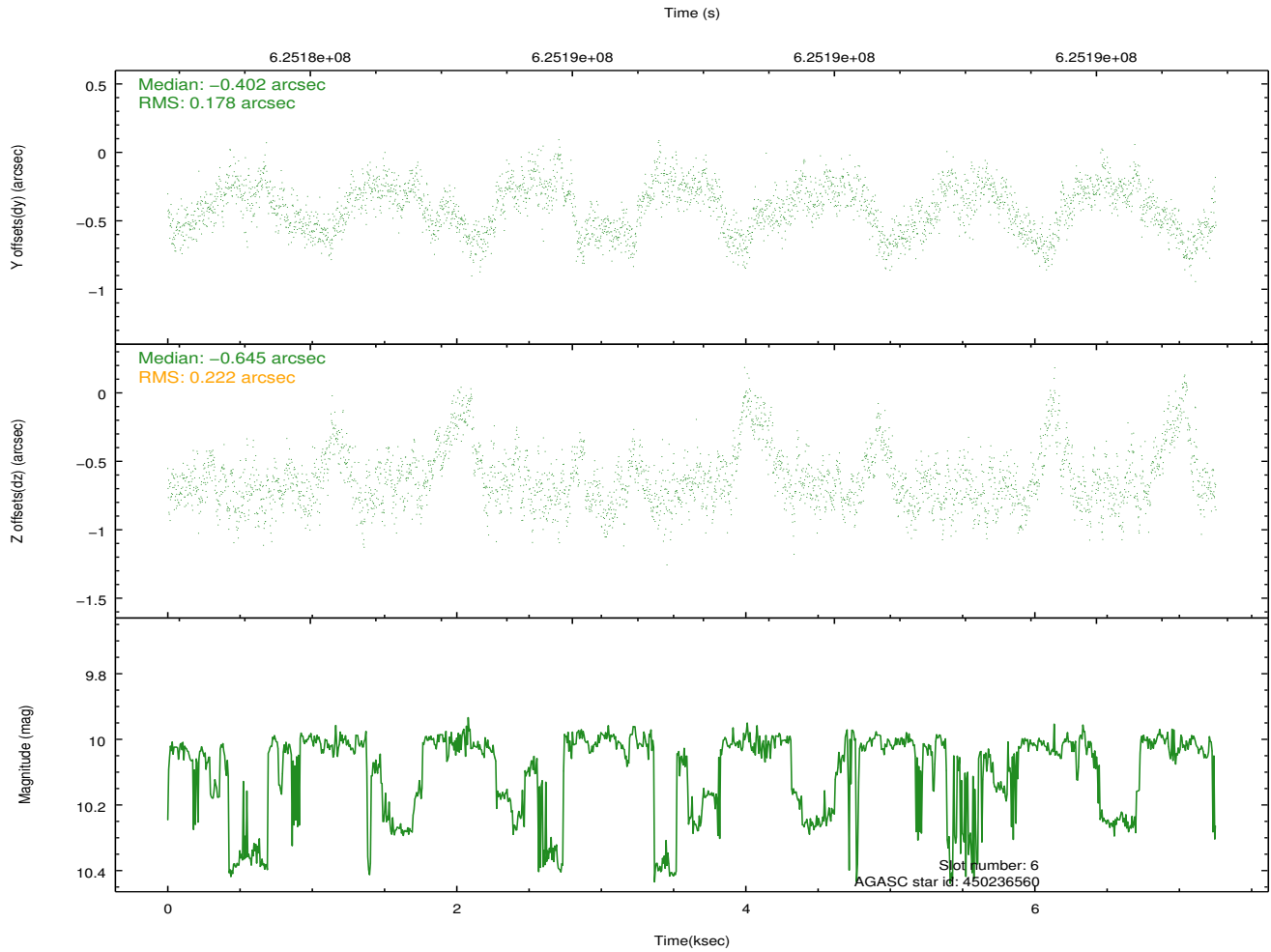
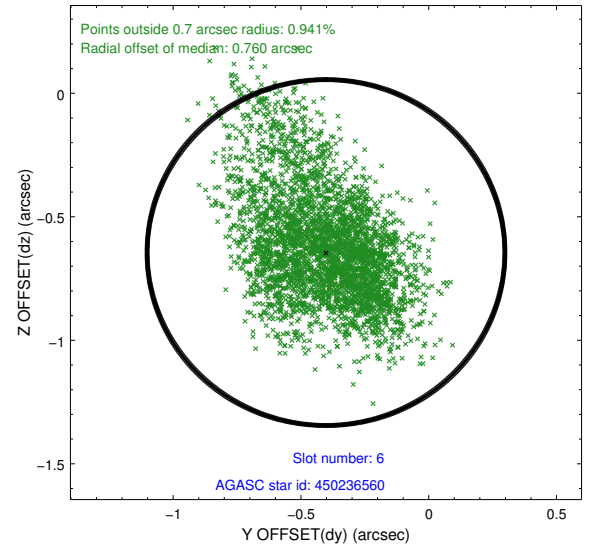
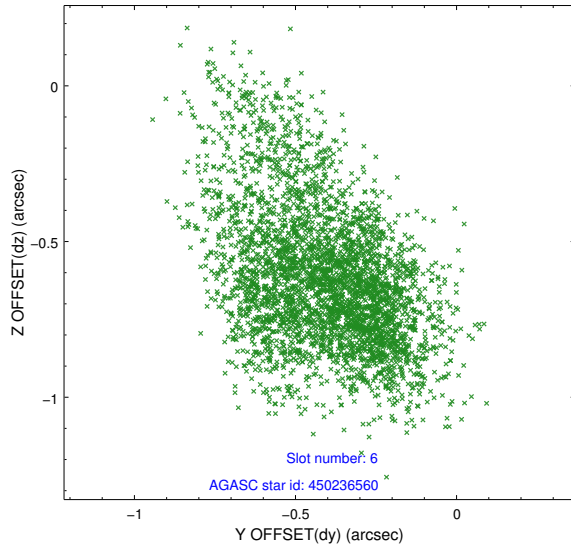
2.4.2 Slot 4



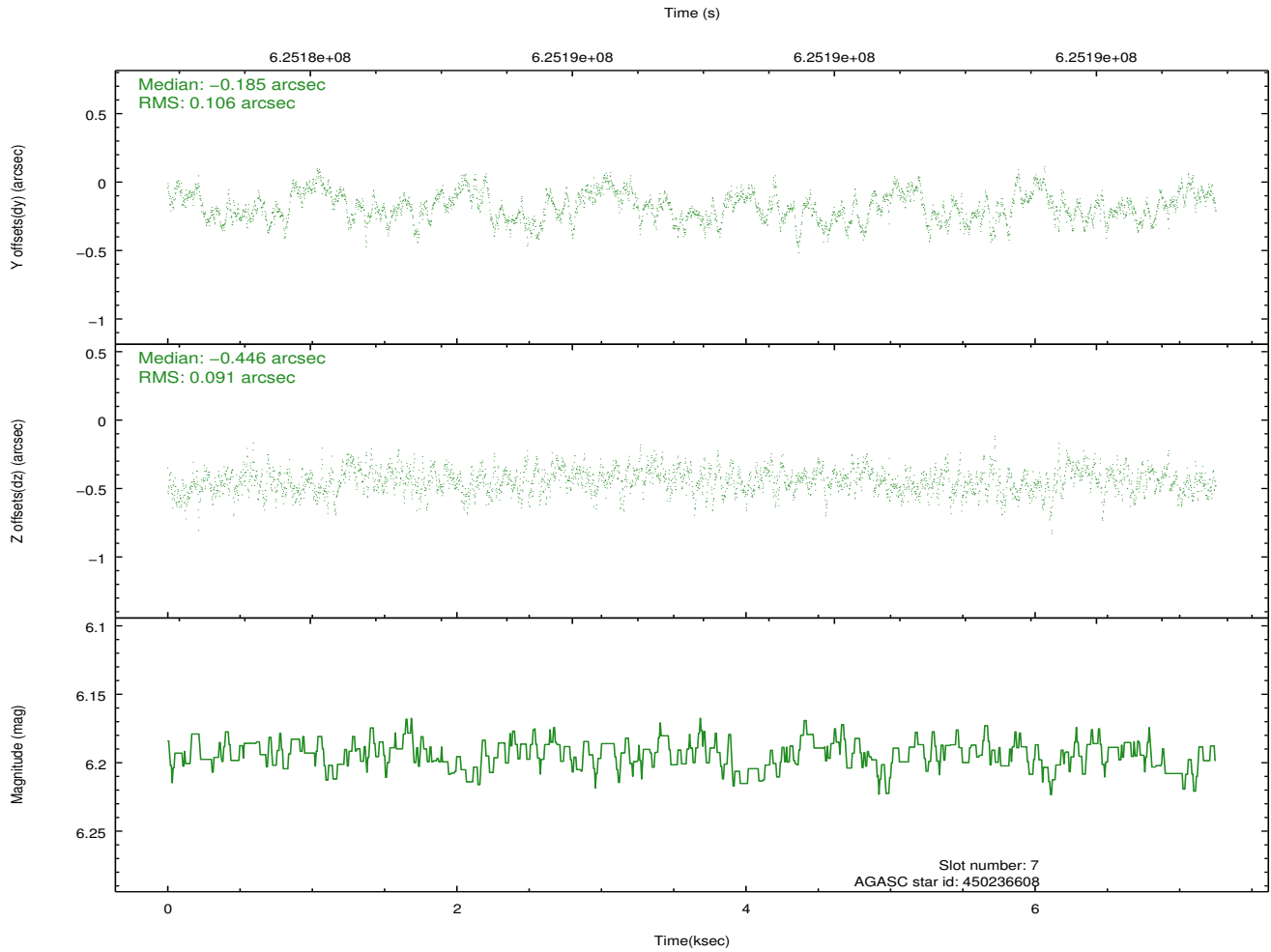
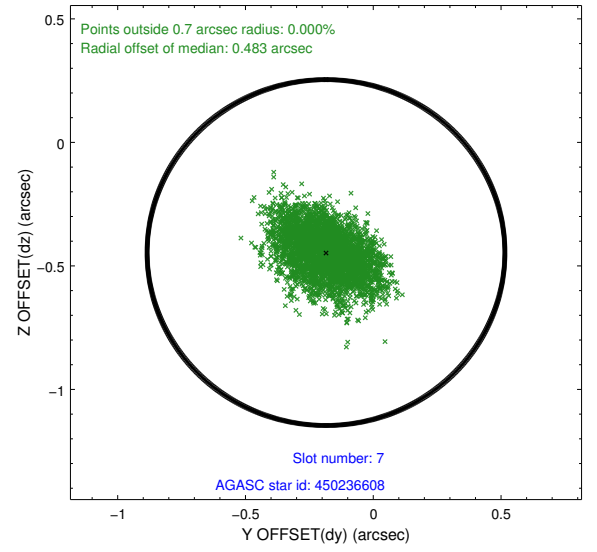
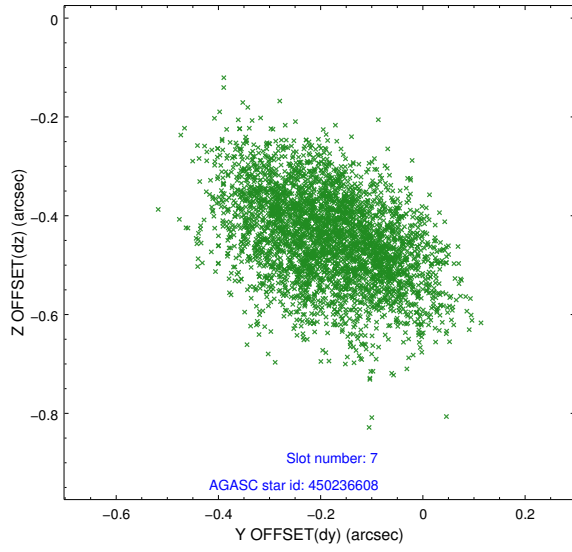
2.4.3 Slot 5



2.4.4 Slot 6

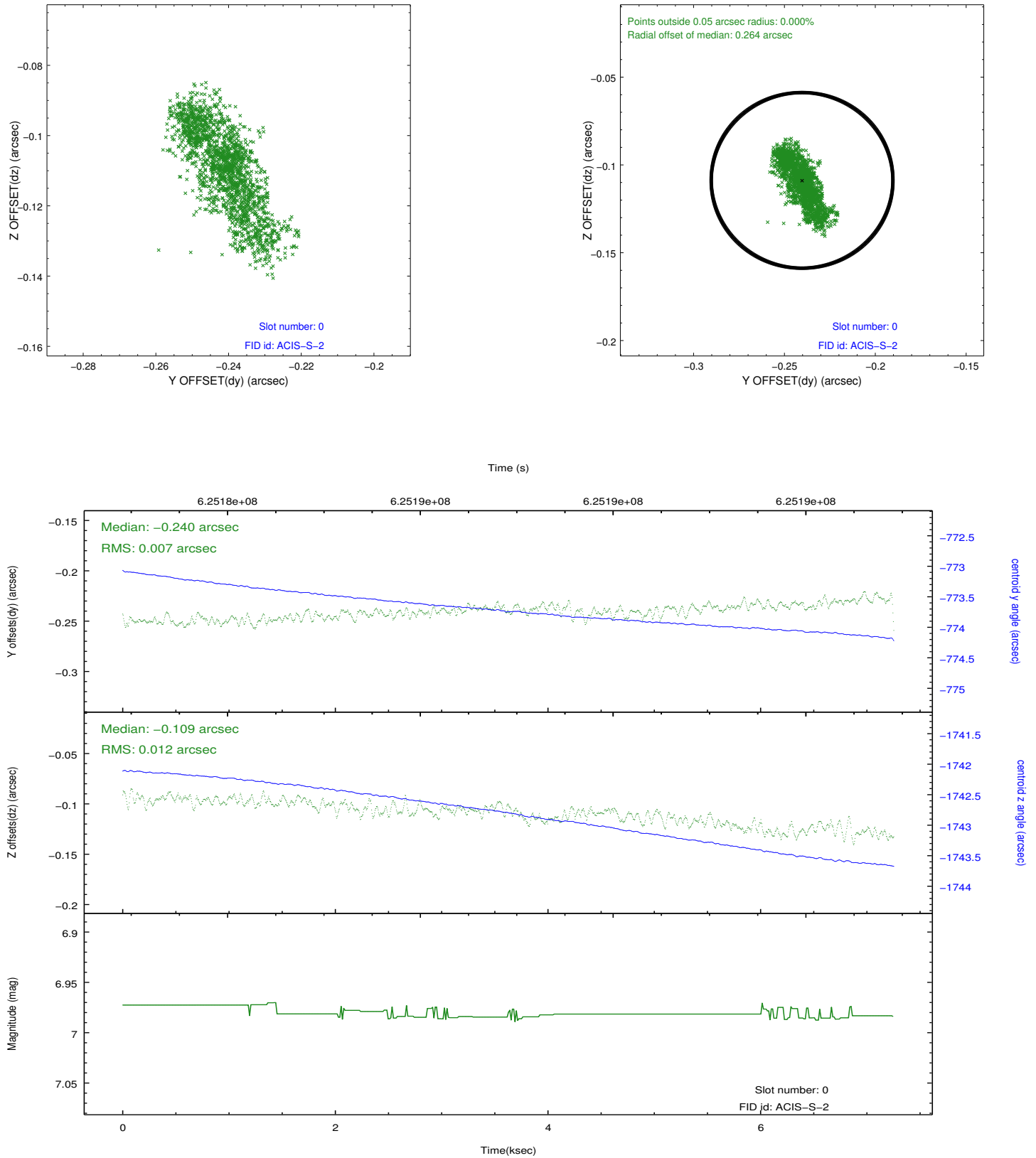


2.4.5 Slot 7

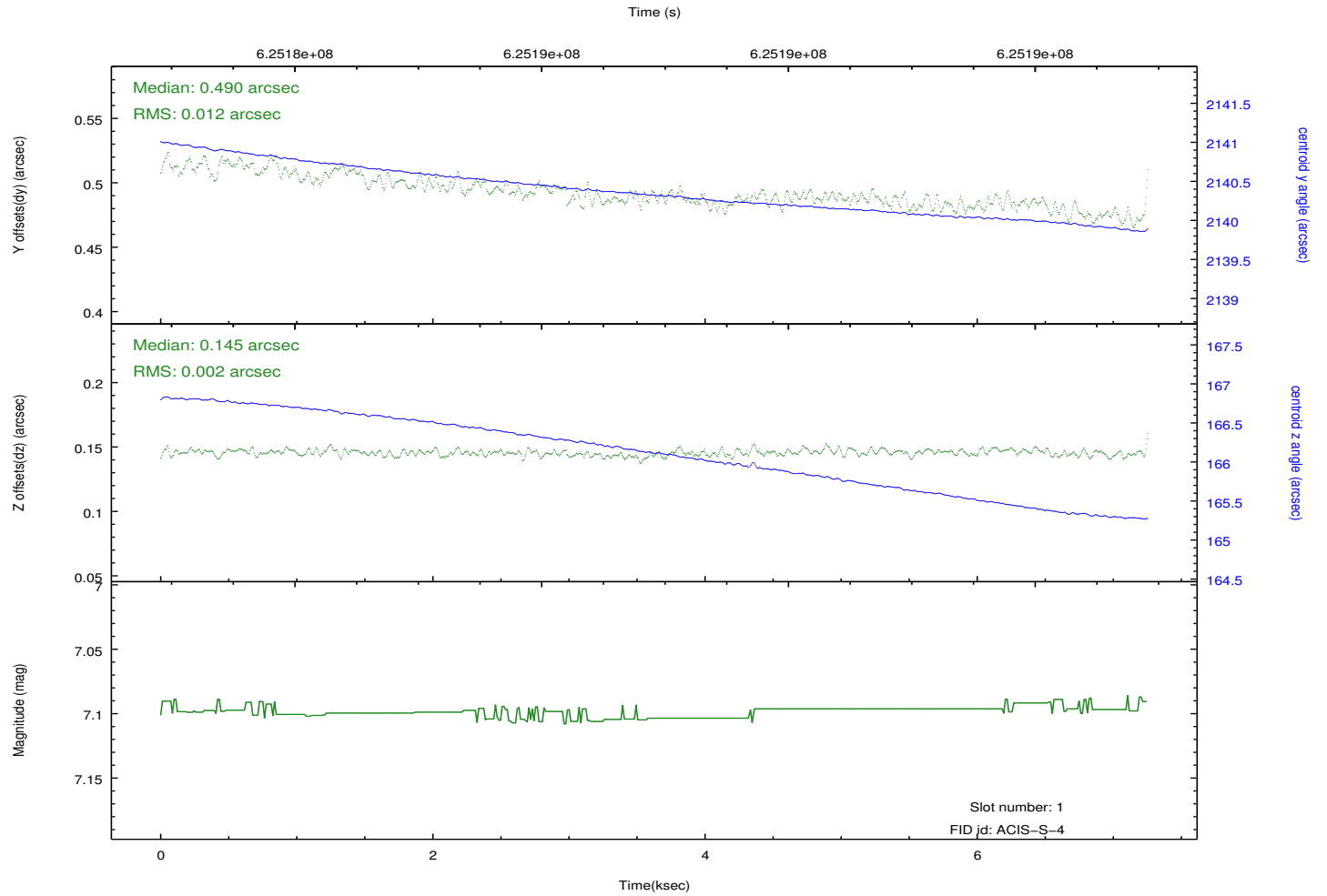
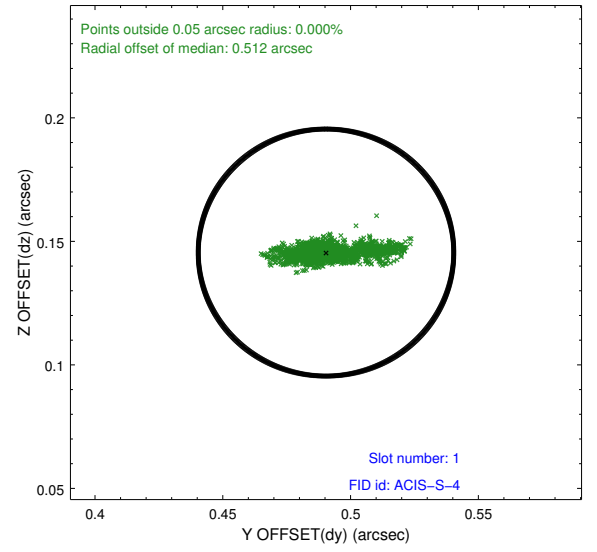
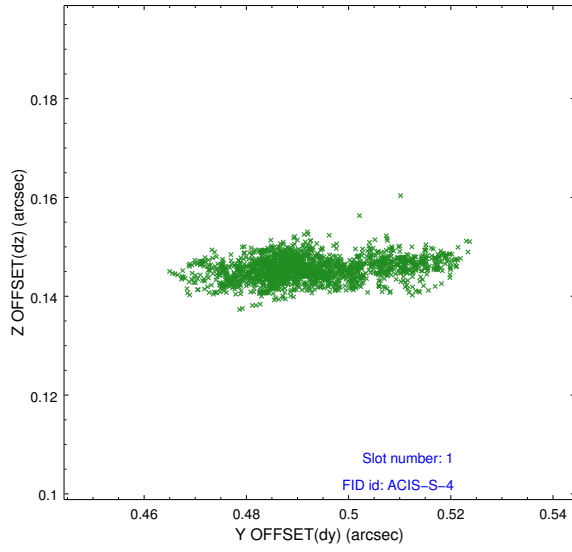


2.5 FID Slots

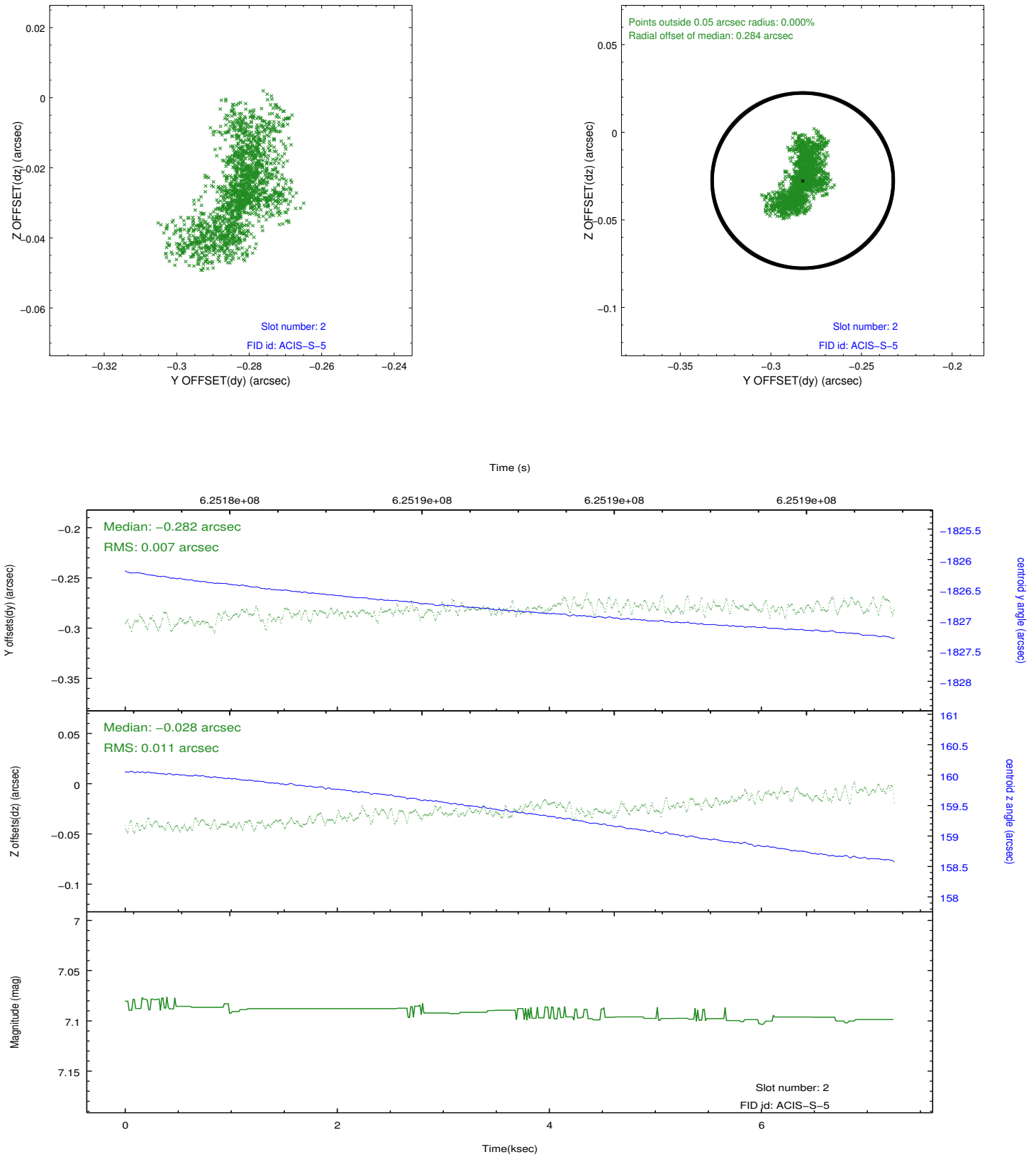
2.5.1 Slot 0



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)	2017.10.27
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: (155.56537,46.53140), (155.56945,46.52924), (155.69284,46.63996), (155.68875,46.64213).