

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13257 - L2 Version 2  
Chandra X-Ray Center

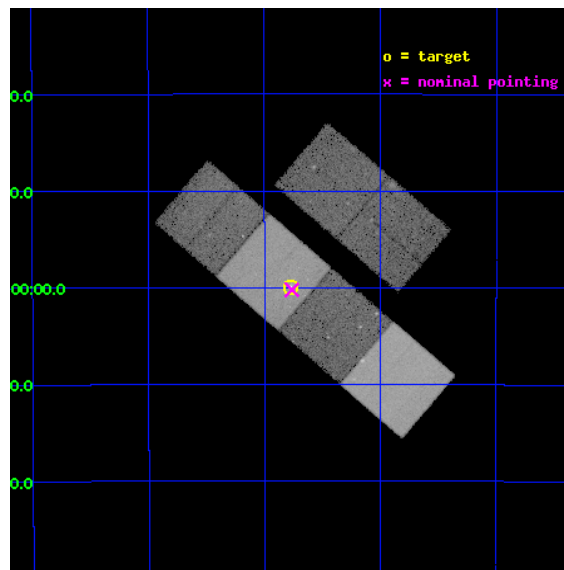
L2 Processing Date : Feb 8 2012

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# 1 Front

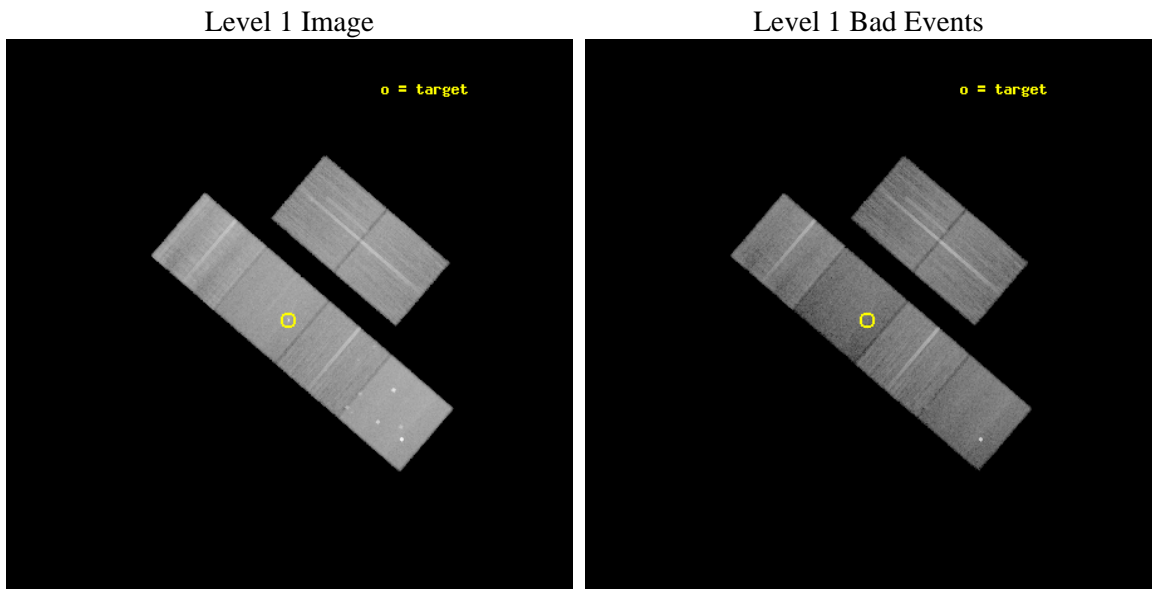
seq_num	900944	Sequence number
obs_id	13257	Observation id
title	A CHandra survey of Extended Emission-line Regions in nearby Seyfert galaxies (CHEERS)	Proposal title
observer	Dr. Junfeng Wang	Principal investigator
object	NGC 1386	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	54.1925	Observer's specified target RA [deg]
dec_targ	-35.99925	Observer's specified target Dec [deg]
ra_nom	54.190698925217	Nominal RA [deg]
dec_nom	-36.003858482636	Nominal Dec [deg]
roll_nom	220.63747456797	Nominal Roll [deg]
revision	2	Processing version of data
ontime	34255.999872446	Sum of GTIs [s]
livetime	33822.229775574	Livetime [s]
ontime2	34252.758912086	Sum of GTIs [s]
ontime3	34252.758882225	Sum of GTIs [s]
ontime5	34255.999872446	Sum of GTIs [s]
ontime6	34252.758902073	Sum of GTIs [s]
ontime7	34255.999872446	Sum of GTIs [s]
ontime8	34252.758862376	Sum of GTIs [s]
l2events	328117	Number of level 2 events



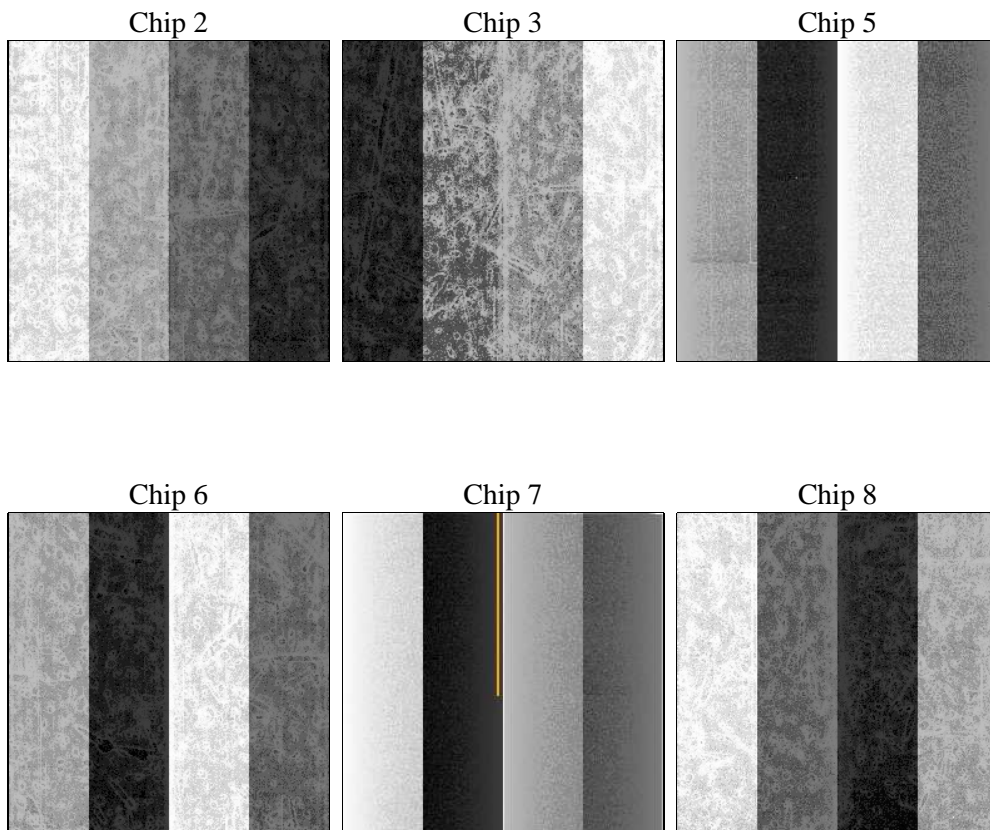
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	34200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	34255.999872446	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime2	34252.758912086	Sum of GTIs [s]
date	2012-02-08T04:45:35	Date and time of file creation	ontime3	34252.758882225	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	34255.999872446	Sum of GTIs [s]
			ontime6	34252.758902073	Sum of GTIs [s]
			ontime7	34255.999872446	Sum of GTIs [s]
			ontime8	34252.758862376	Sum of GTIs [s]
			l1events	1369017	Number of level 1 events

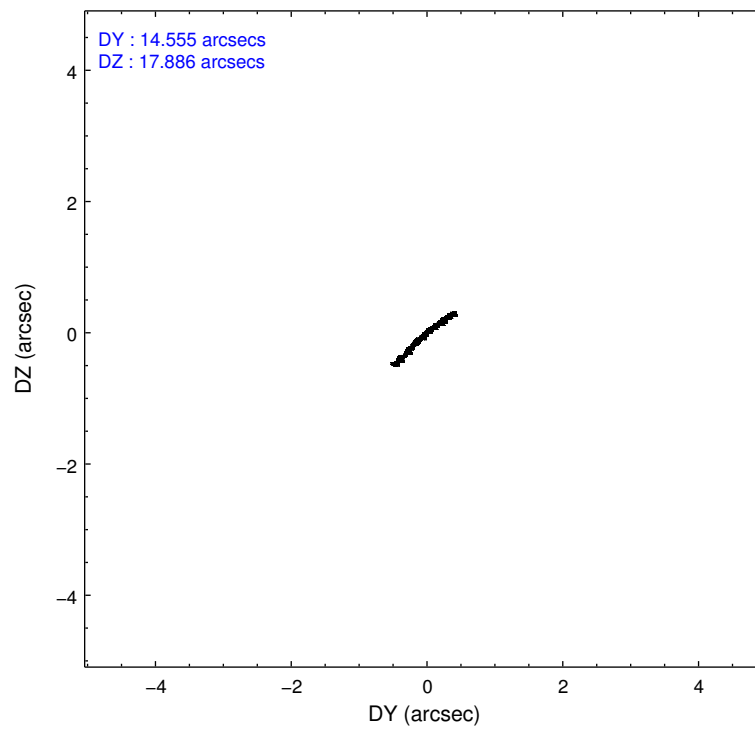
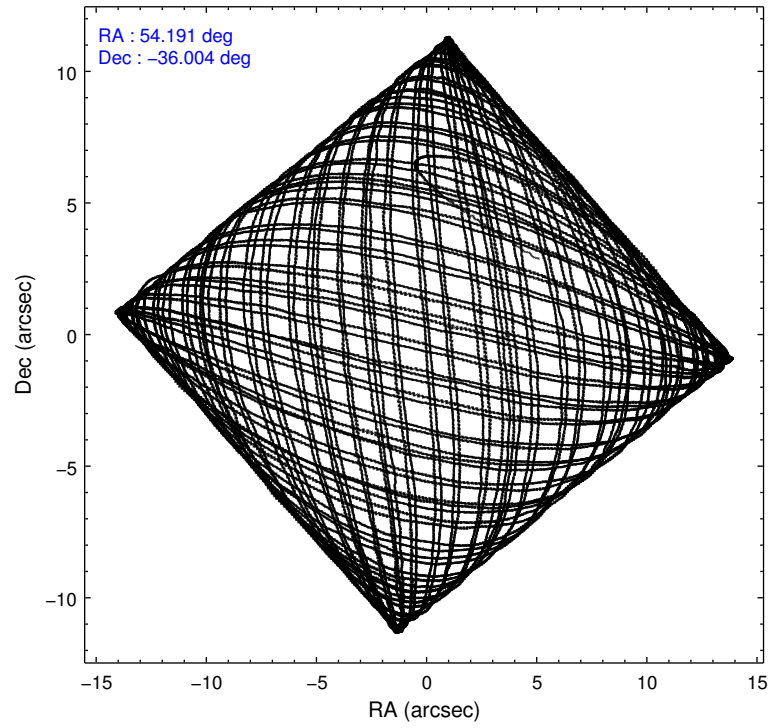
### 2.1.4 Events

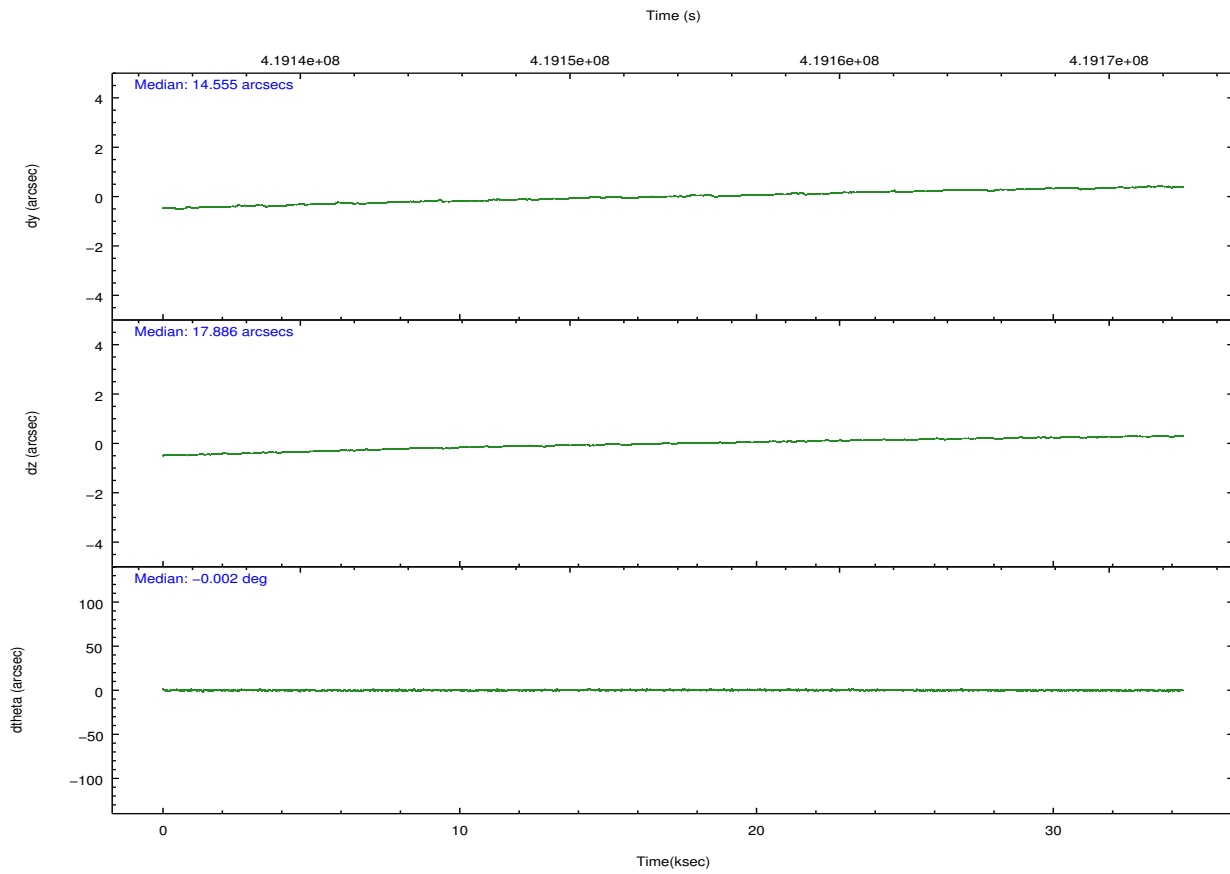
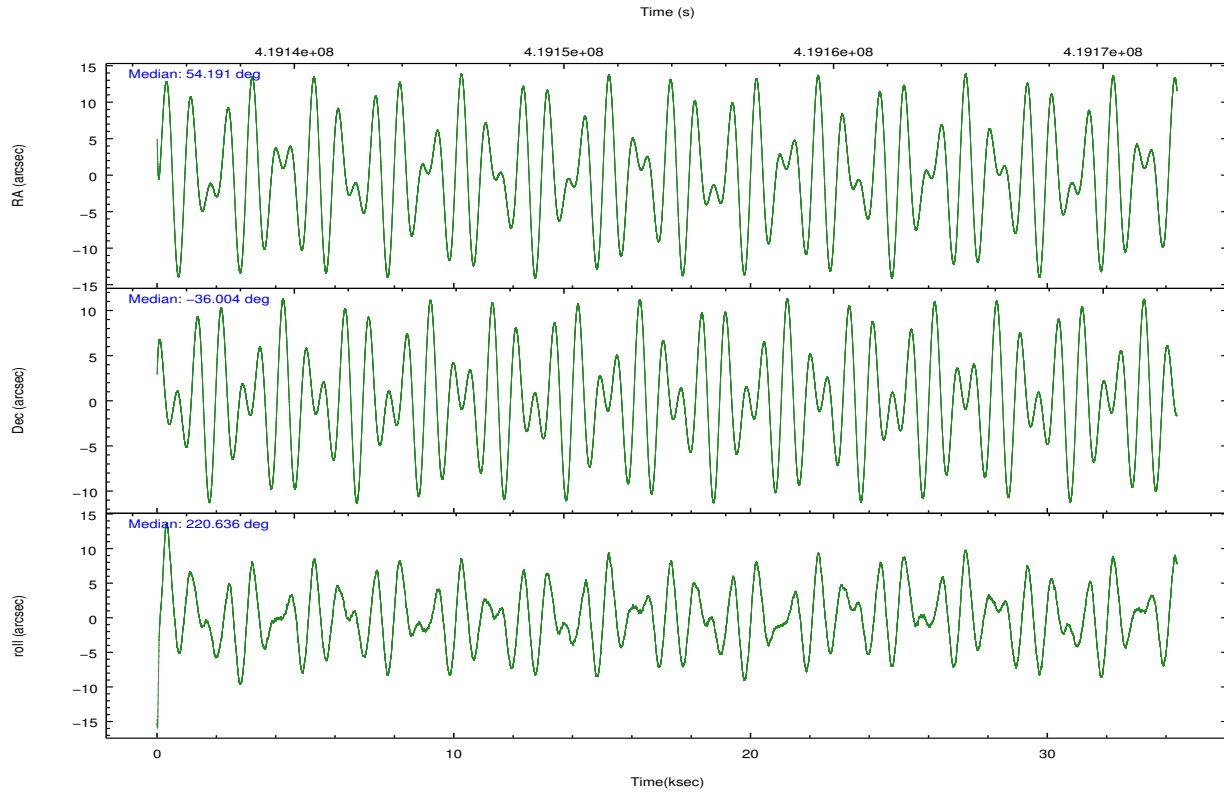
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	206331	189366	294351	198799	220803	259367	grade 0 events	8912	8637	19638	9514	12272	20909
rejected events	183548	167764	138549	174539	110723	187101		4%	4%	6%	4%	5%	8%
rejected %	88%	88%	47%	87%	50%	72%	grade 1 events	153	117	672	105	335	207
								0%	0%	0%	0%	0%	0%
							grade 2 events	5498	4465	48222	5238	23645	17318
								2%	2%	16%	2%	10%	6%
							grade 3 events	2227	2231	6473	2370	10102	7621
								1%	1%	2%	1%	4%	2%
							grade 4 events	2287	2227	5677	2389	10089	7143
								1%	1%	1%	1%	4%	2%
							grade 5 events	6631	7912	22906	8123	23194	12124
								3%	4%	7%	4%	10%	4%
							grade 6 events	3859	4046	75804	4749	53986	19284
								1%	2%	25%	2%	24%	7%
							grade 7 events	176764	159731	114959	166311	87180	174761
								85%	84%	39%	83%	39%	67%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	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	54.201437	54.19069892521708	CCD I2 on	O4	Y
[deg] Pointing Dec	-35.977948	-36.00385848263552	CCD I3 on	O3	Y
[deg] Pointing Roll	220.487165	220.637474567969	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O5	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	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	Y
[s] Observation start time (MET)	419136809.184000	419135701.49622	CCD S5 on	N	N
Observation start date	2011-04-14T02:52:23	2011-04-14T02:35:01	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	419171009.184000	419171877.3356	On-chip summing requested	N	N
Observation end date	2011-04-14T12:22:23	2011-04-14T12:37:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



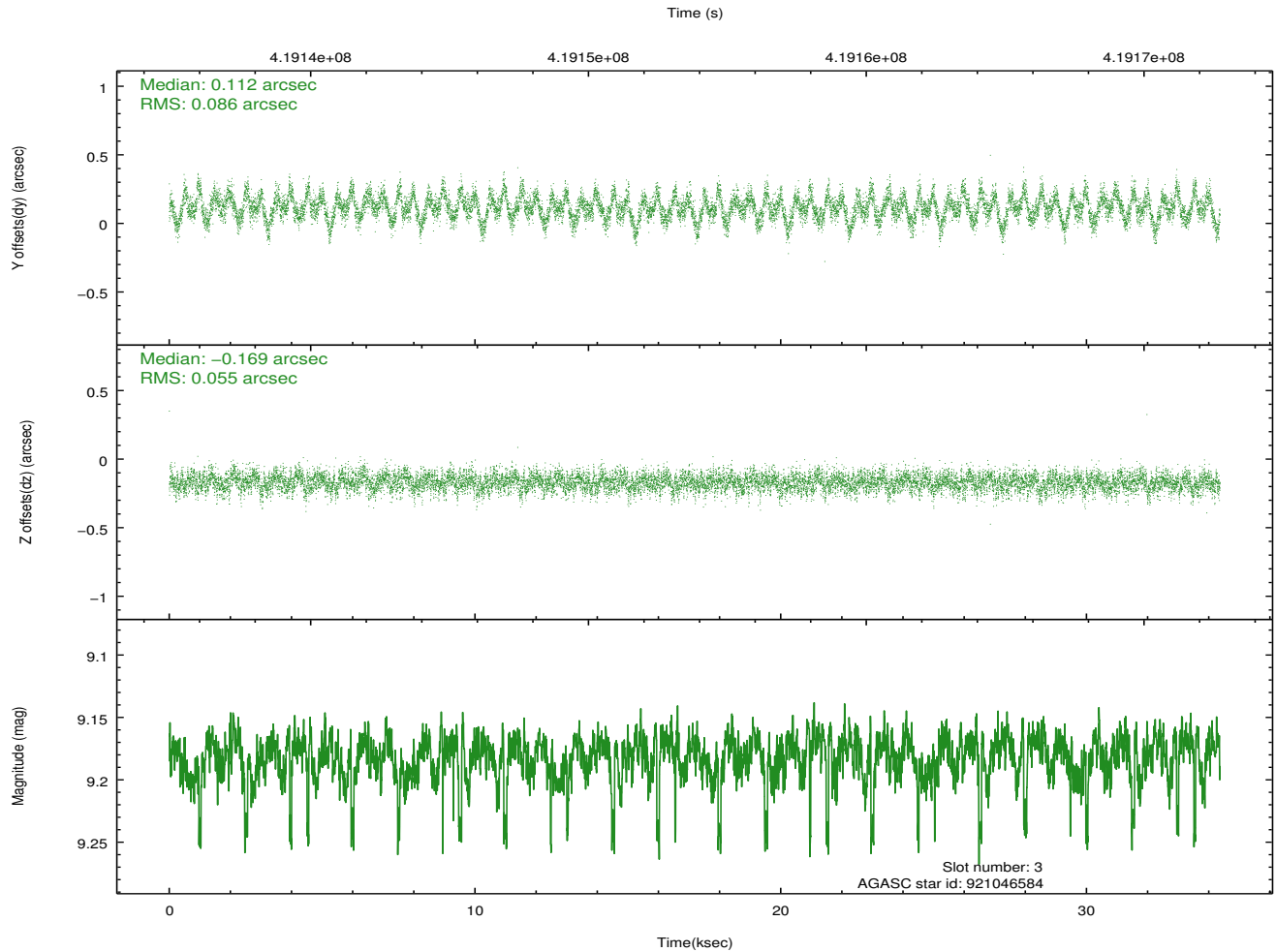
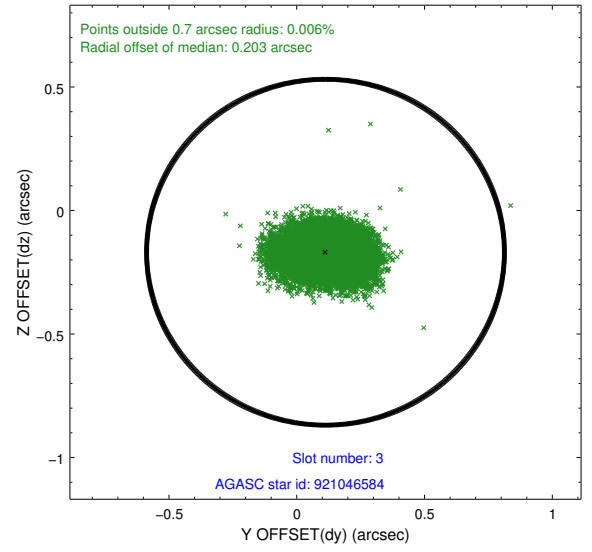
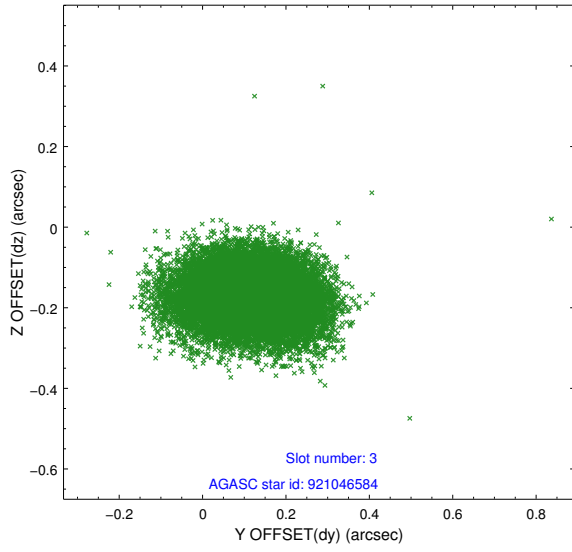


### Slot Statistics

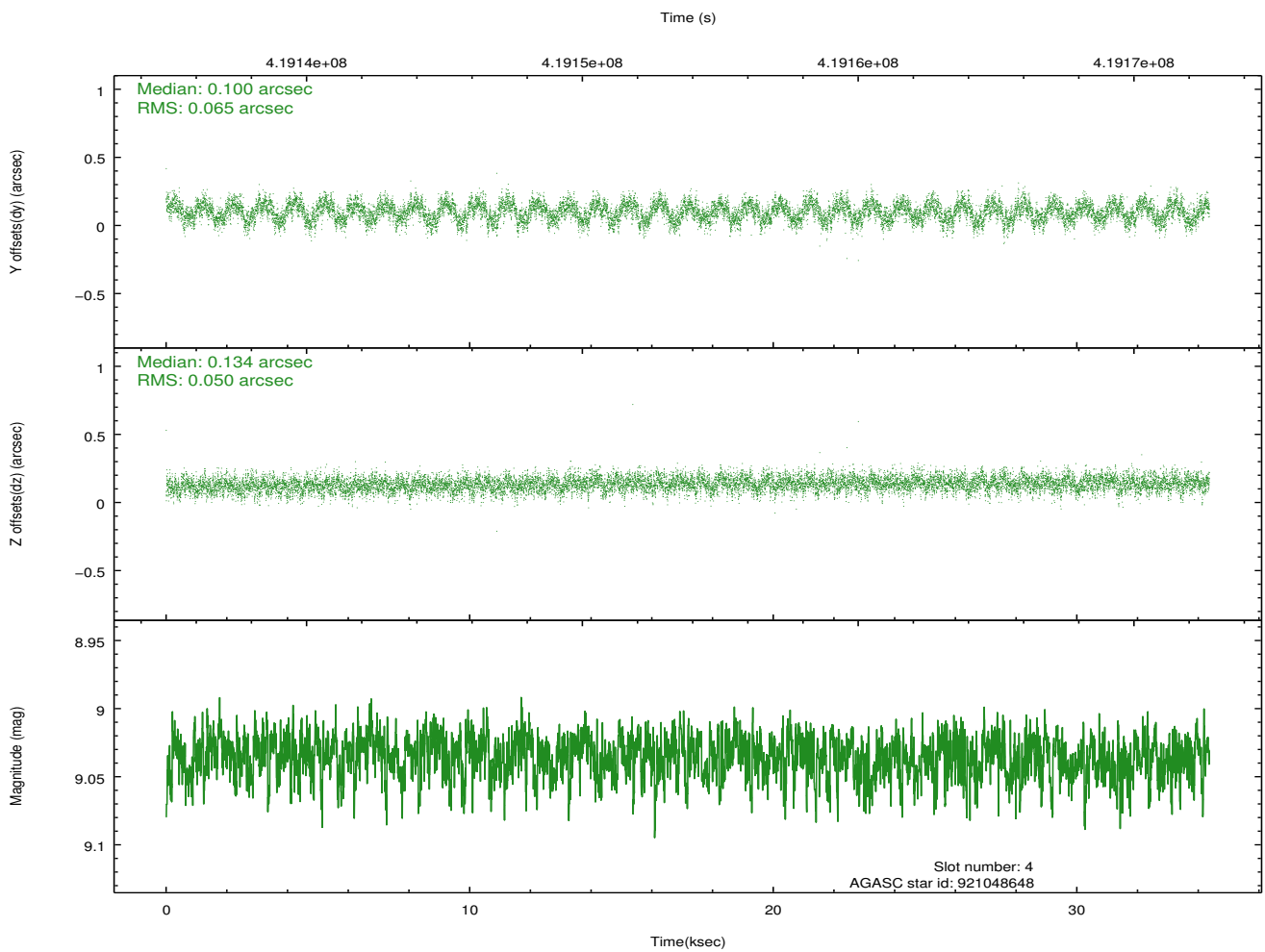
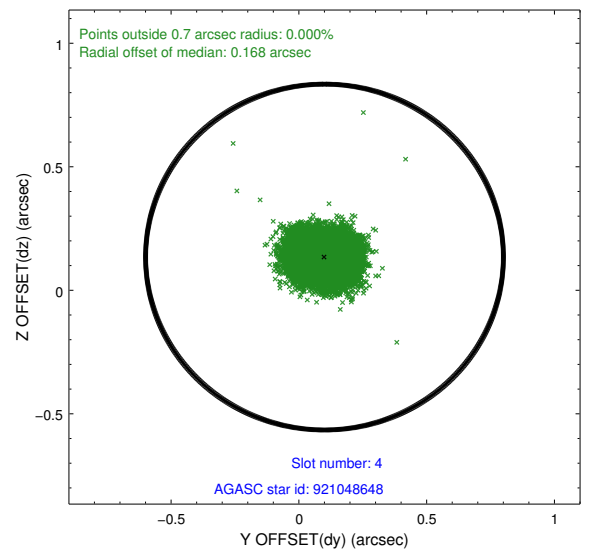
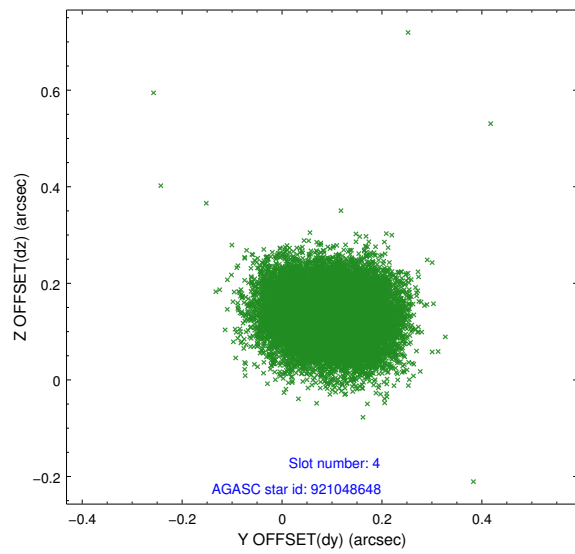
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.97	8381	0.066	0.009	0.015	0.028	0.000000	0.000000	928.49	-1734.99
1	FID	ACIS-S-2	6.89	8381	-0.155	-0.053	0.011	0.021	0.000000	0.000000	-767.61	-1739.54
2	FID	ACIS-S-4	6.96	8381	0.064	0.052	0.010	0.015	0.000000	0.000000	2145.82	169.11
3	GUIDE	921046584	9.18	16725	0.112	-0.169	0.107	0.181	53.976815	-36.314393	1282.88	499.06
4	GUIDE	921048648	9.04	16754	0.100	0.134	0.088	0.141	53.884610	-35.870023	451.60	-894.30
5	GUIDE	921965624	8.61	16752	-0.084	0.141	0.092	0.143	54.900706	-35.940077	-1633.70	1225.54
6	GUIDE	921966544	7.90	16760	0.003	-0.076	0.071	0.112	54.743508	-35.636012	-2001.86	97.12
7	GUIDE	921967072	7.65	16761	-0.139	-0.031	0.079	0.132	54.269247	-36.292226	585.00	988.58

## 2.4 Star Slots

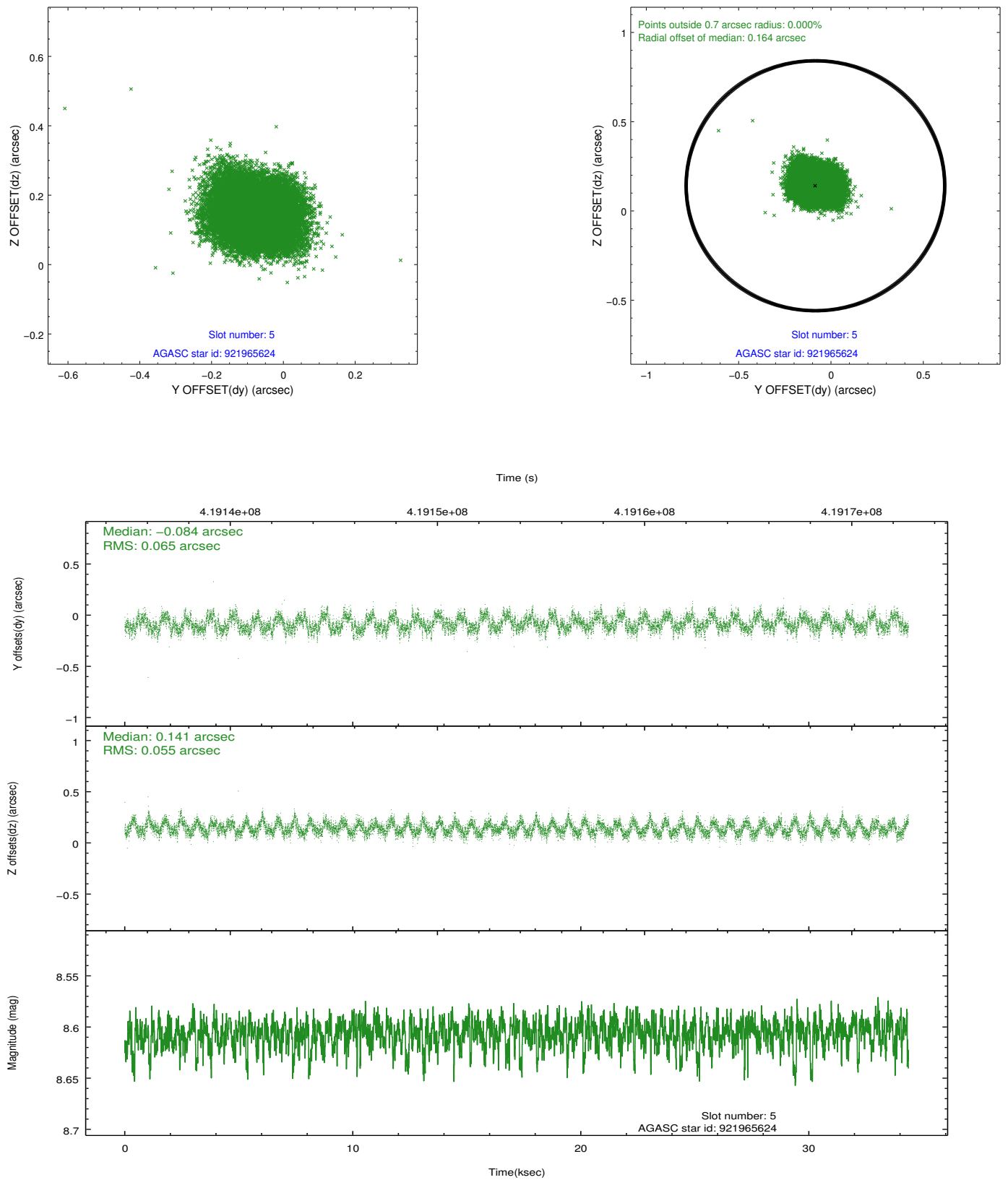
### 2.4.1 Slot 3



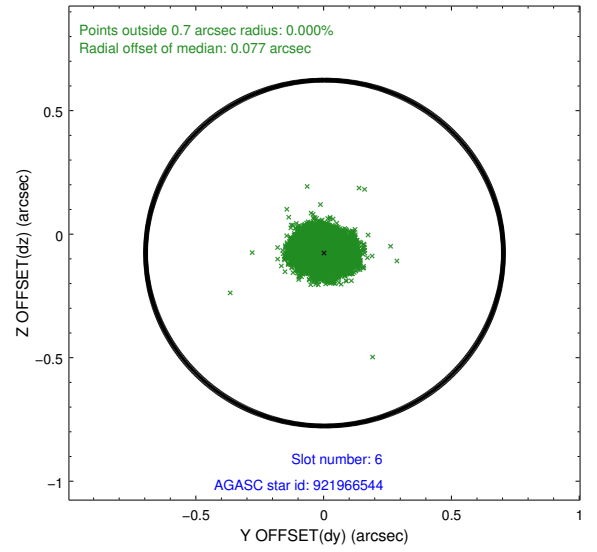
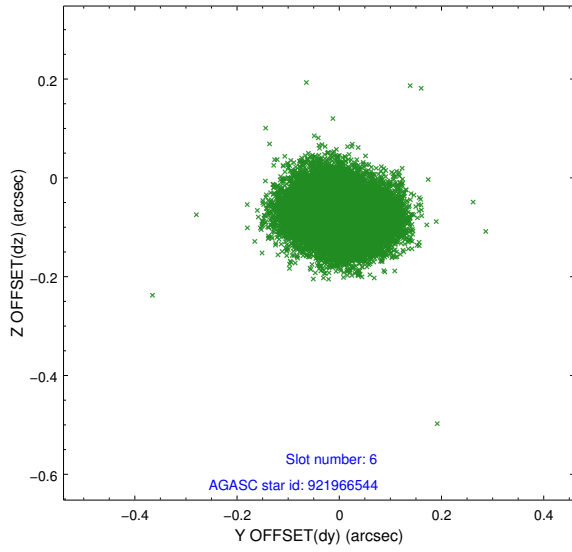
## 2.4.2 Slot 4



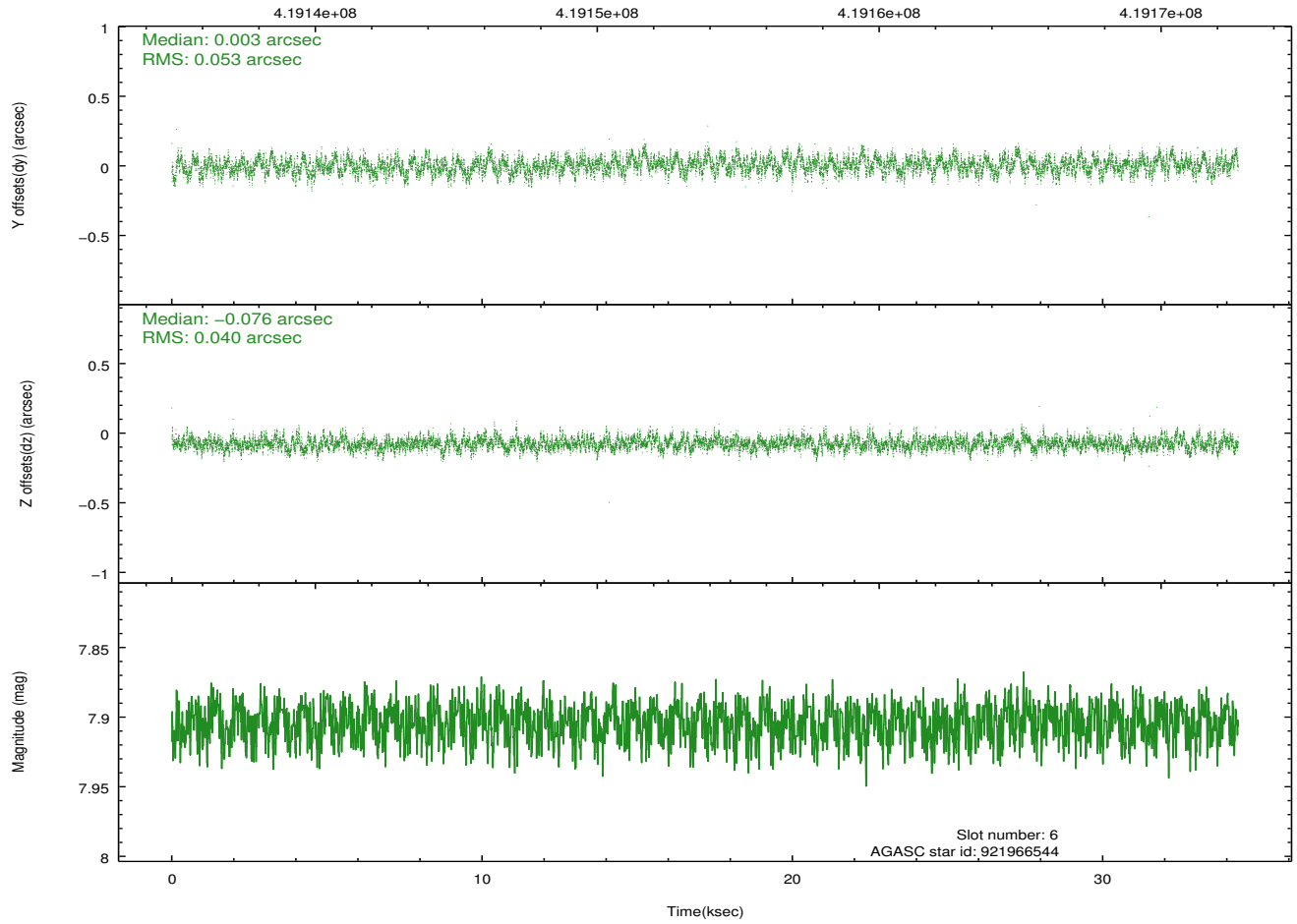
### 2.4.3 Slot 5



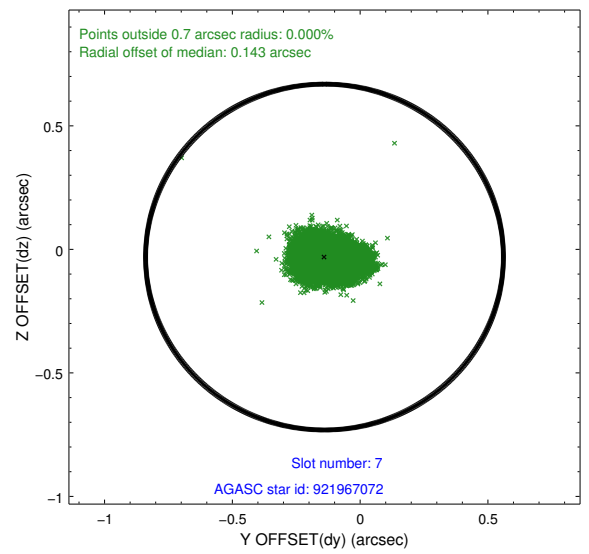
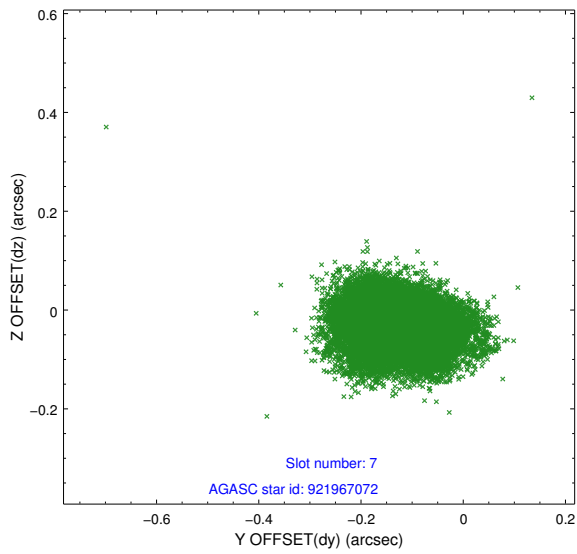
### 2.4.4 Slot 6



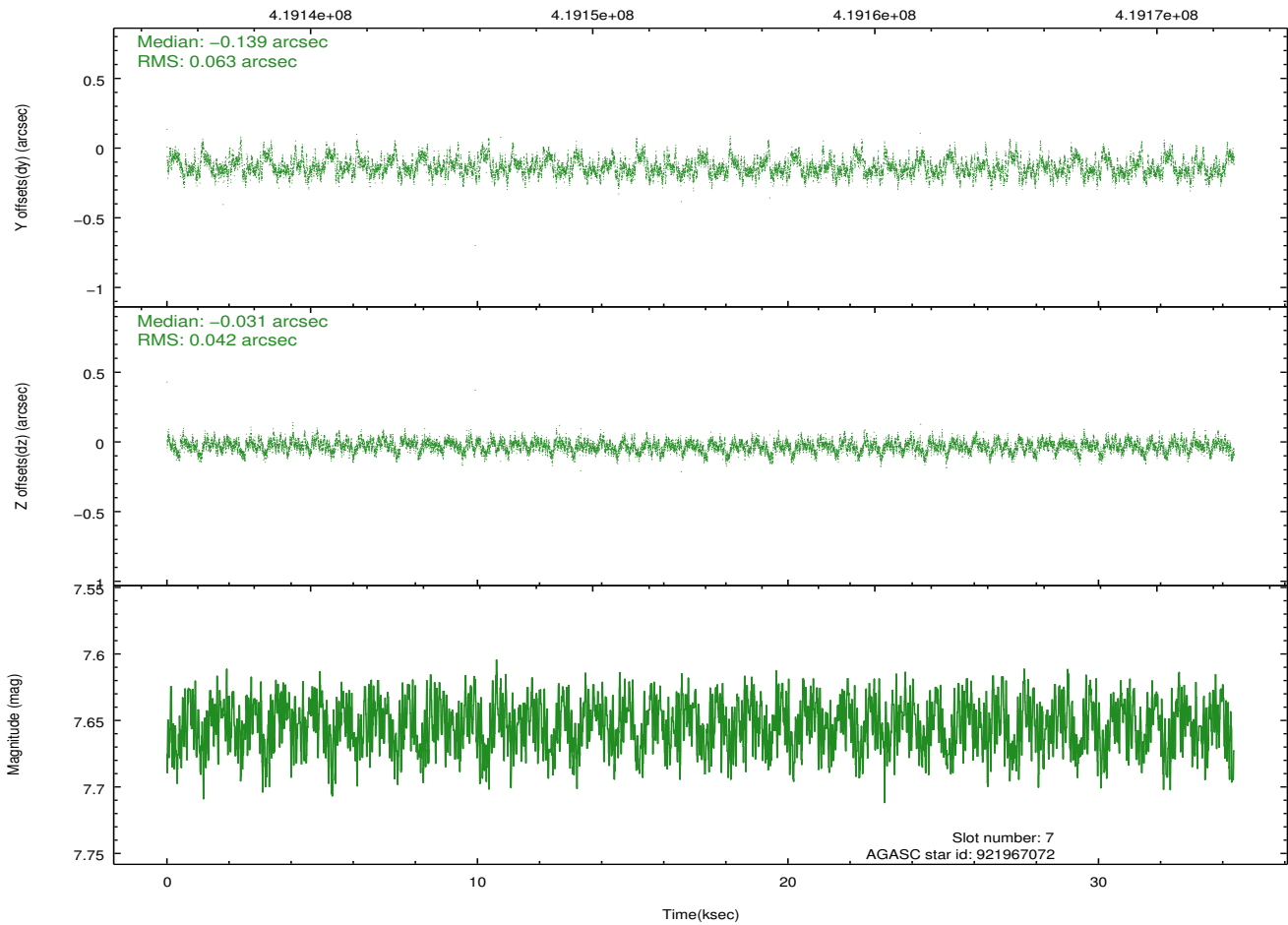
Time (s)



## 2.4.5 Slot 7

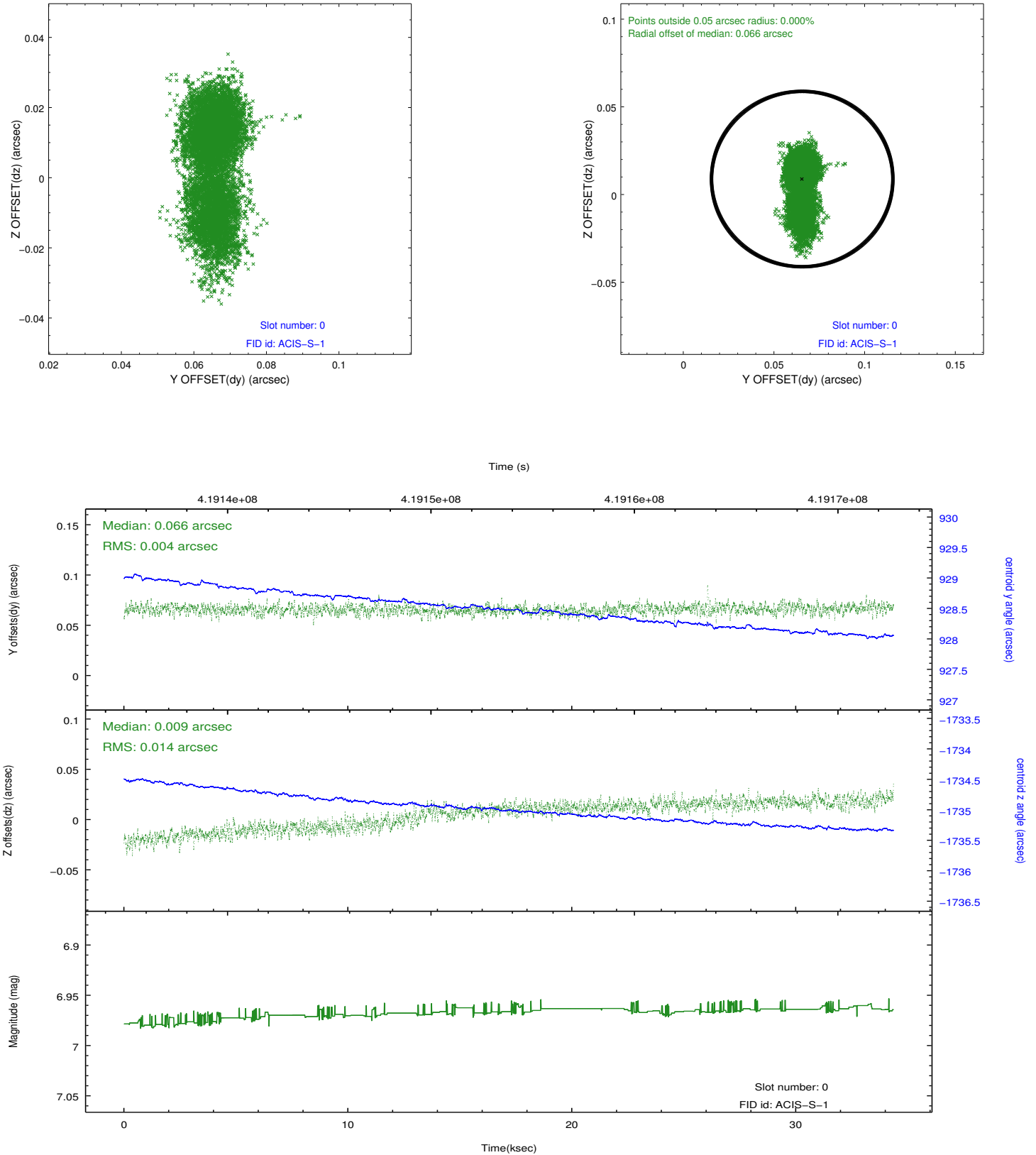


Time (s)

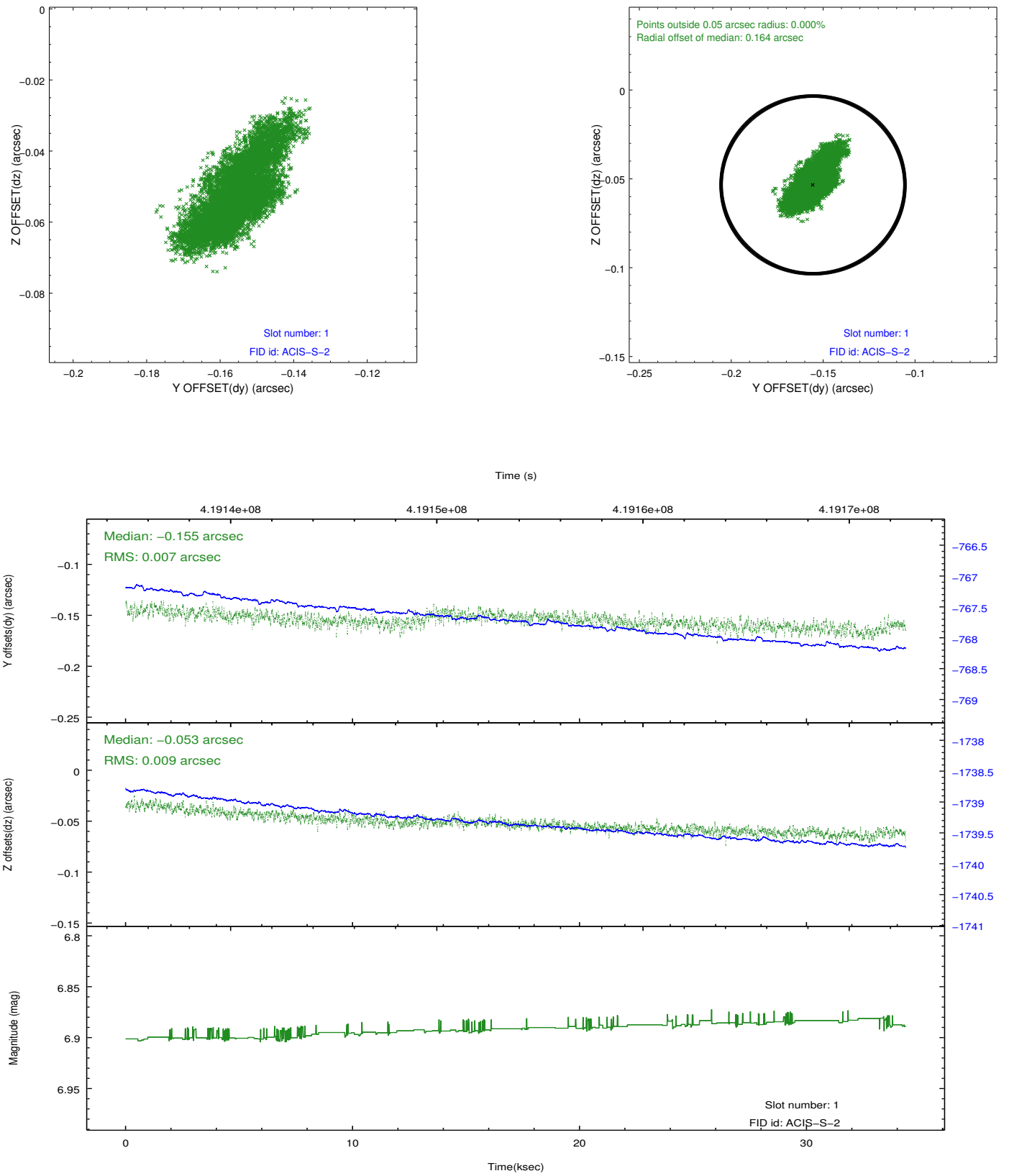


## 2.5 FID Slots

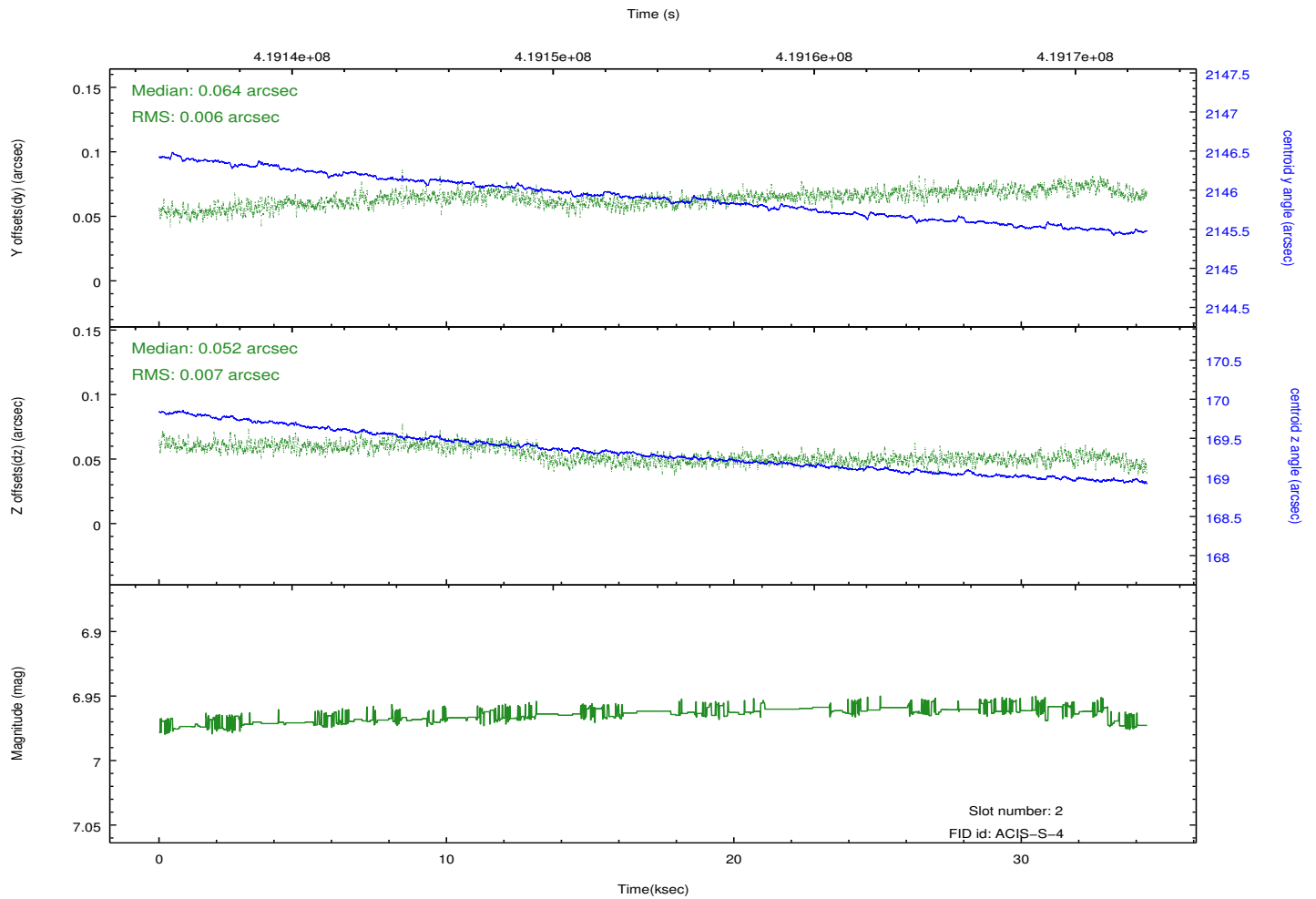
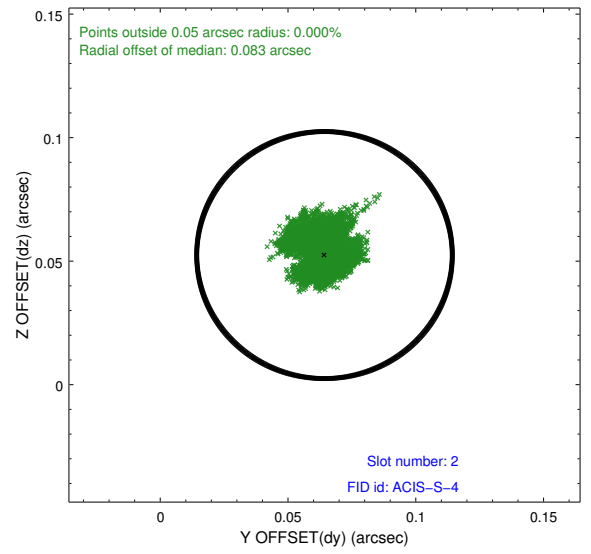
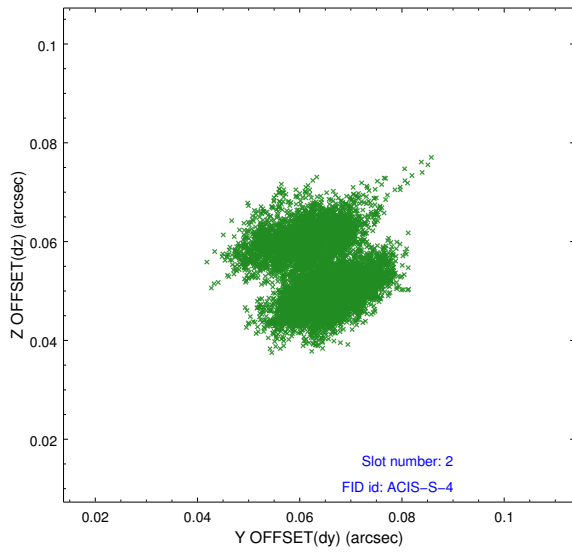
### 2.5.1 Slot 0



## 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)	2012.02.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	34.255999872446

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSEr algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.

=====

Joint proposal with HST.