

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 15982 - L2 Version 2  
Chandra X-Ray Center

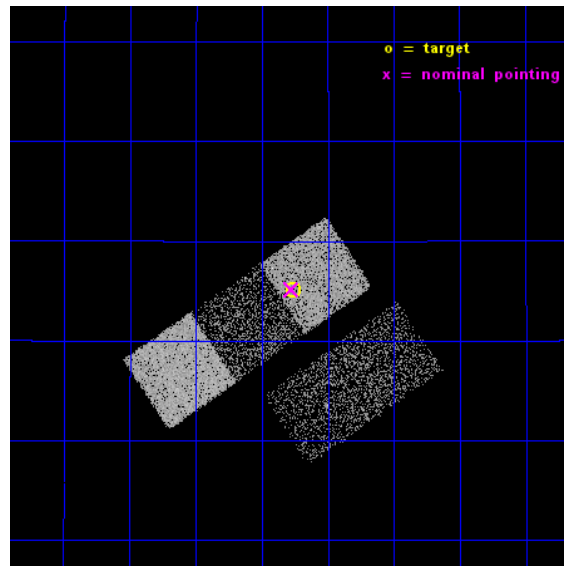
L2 Processing Date : Dec 9 2014

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# 1 Front

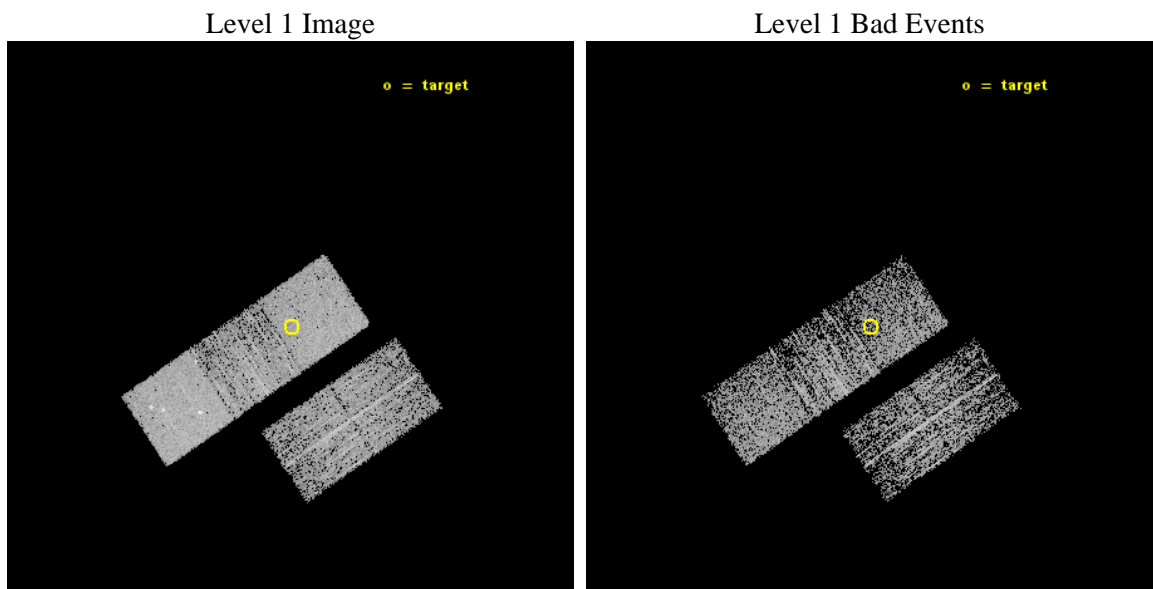
seq_num	502215	Sequence number
obs_id	15982	Observation id
title	Where Have All The Central Compact Objects Gone?	Proposal title
observer	Dr. Eric Gotthelf	Principal investigator
object	PSR J2048+2255	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	312.190833	Observer's specified target RA [deg]
dec_targ	22.918139	Observer's specified target Dec [deg]
ra_nom	312.19399086318	Nominal RA [deg]
dec_nom	22.919300538124	Nominal Dec [deg]
roll_nom	325.97050363543	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3270.3716297746	Sum of GTIs [s]
livetime	3227.641816819	Livetime [s]
ontime2	3270.2074697614	Sum of GTIs [s]
ontime3	3270.2484899163	Sum of GTIs [s]
ontime5	3270.3305699229	Sum of GTIs [s]
ontime6	3270.289549768	Sum of GTIs [s]
ontime7	3270.3716297746	Sum of GTIs [s]
l2events	25457	Number of level 2 events



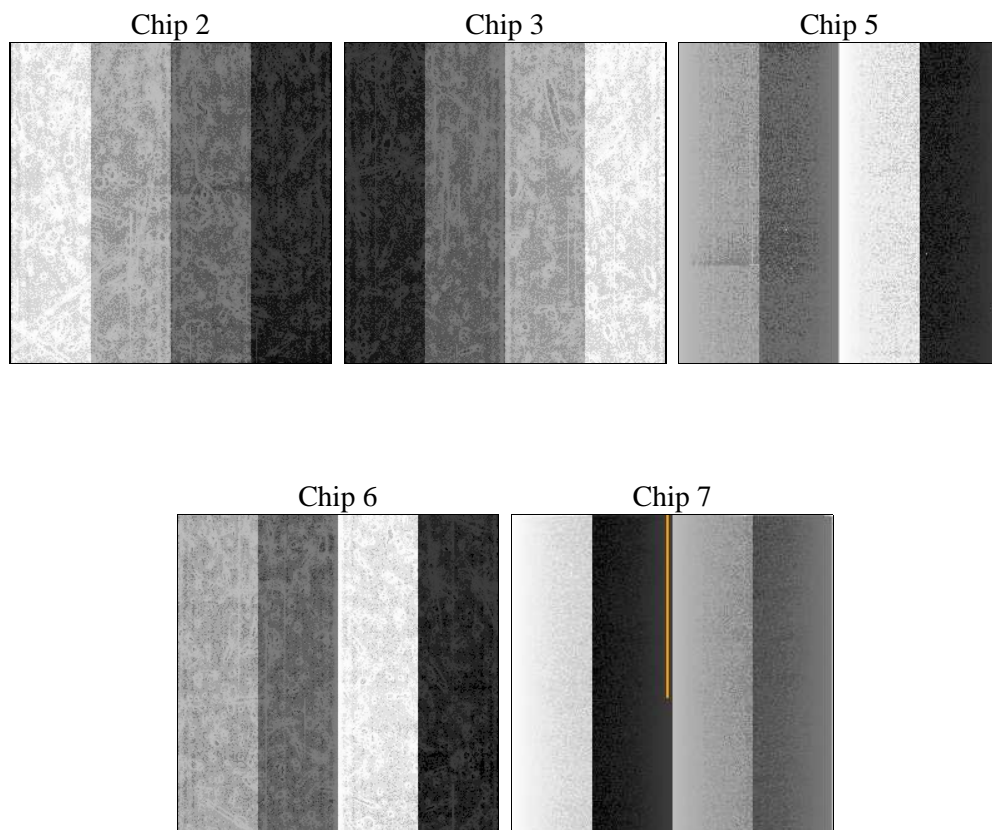
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3500.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	3270.3716297746	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	3270.2074697614	Sum of GTIs [s]
date	2014-12-09T08:33:29	Date and time of file creation	ontime3	3270.2484899163	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	3270.3305699229	Sum of GTIs [s]
			ontime6	3270.289549768	Sum of GTIs [s]
			ontime7	3270.3716297746	Sum of GTIs [s]
			l1events	91745	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	14658	13726	26029	16254	21078
rejected events	12873	12042	13131	14291	11886
rejected %	87%	87%	50%	87%	56%

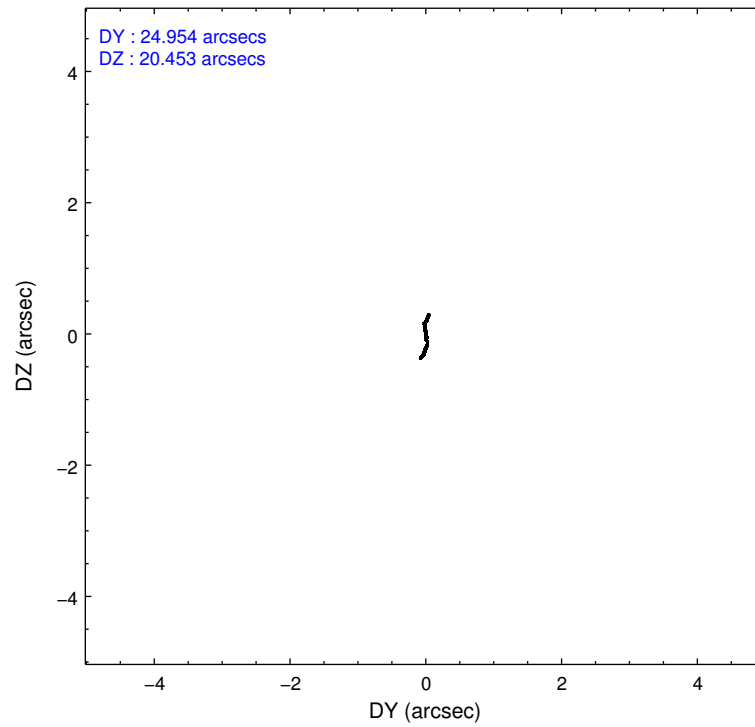
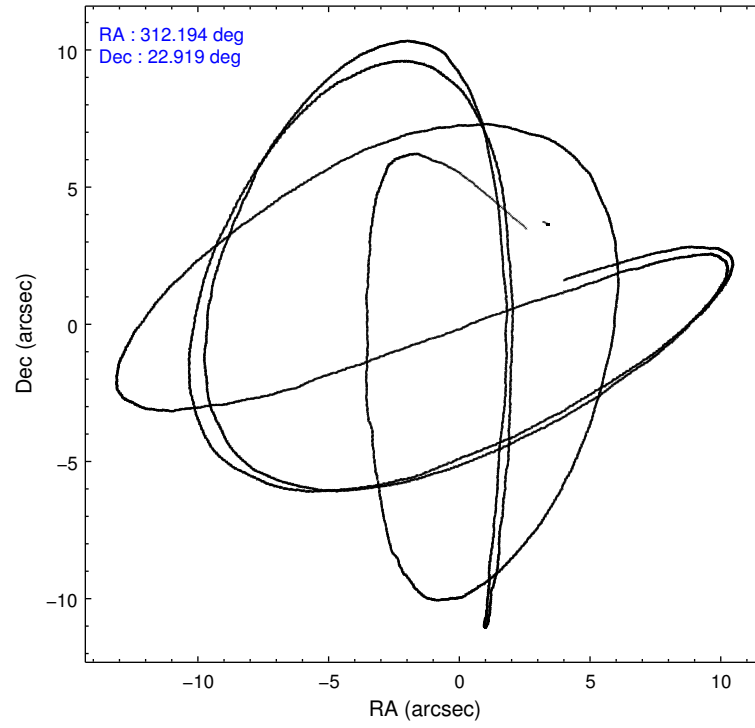
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	608	555	1528	658	785
	4%	4%	5%	4%	3%
grade 1 events	8	11	69	6	17
	0%	0%	0%	0%	0%
grade 2 events	464	395	3663	447	1861
	3%	2%	14%	2%	8%
grade 3 events	172	193	439	199	791
	1%	1%	1%	1%	3%
grade 4 events	204	189	434	200	799
	1%	1%	1%	1%	3%
grade 5 events	720	767	1835	783	2123
	4%	5%	7%	4%	10%
grade 6 events	339	355	6865	464	4966
	2%	2%	26%	2%	23%
grade 7 events	12143	11261	11196	13497	9736
	82%	82%	43%	83%	46%

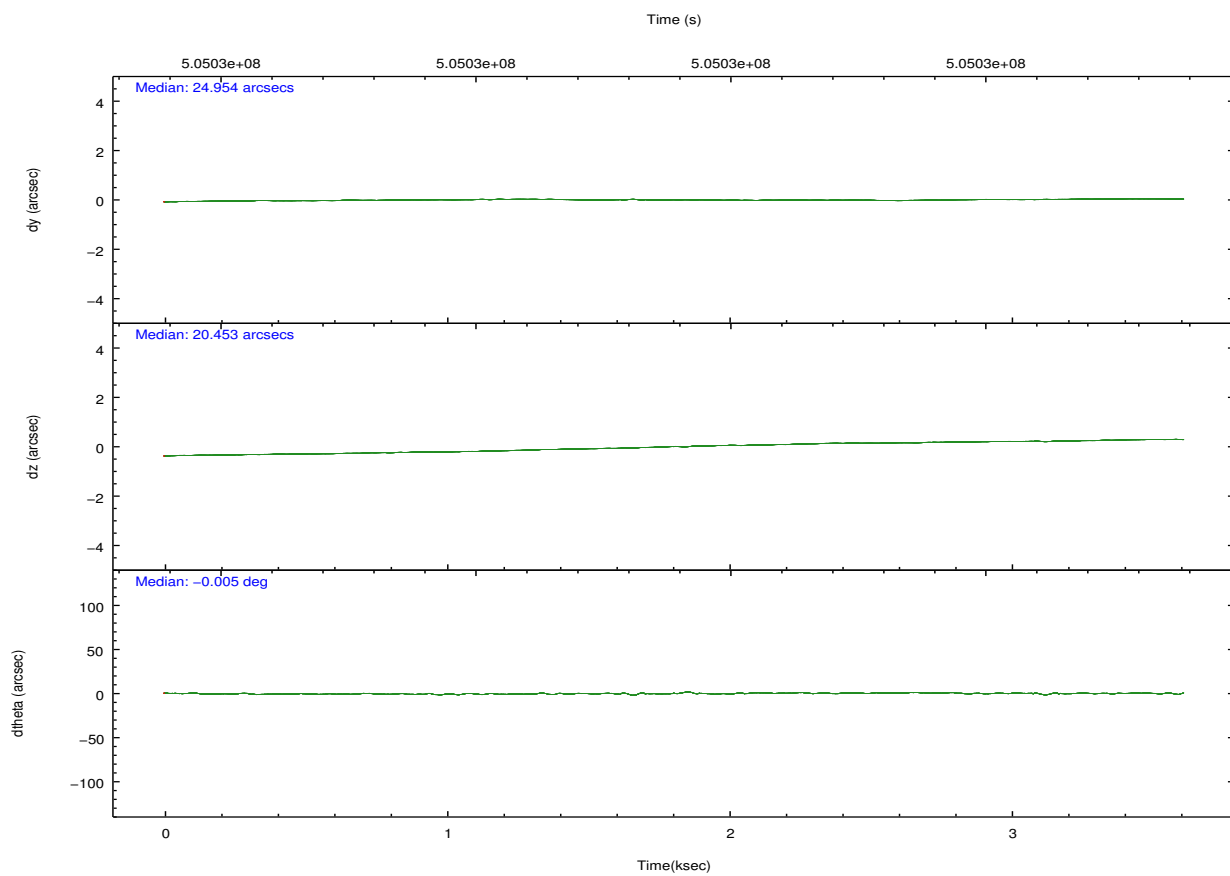
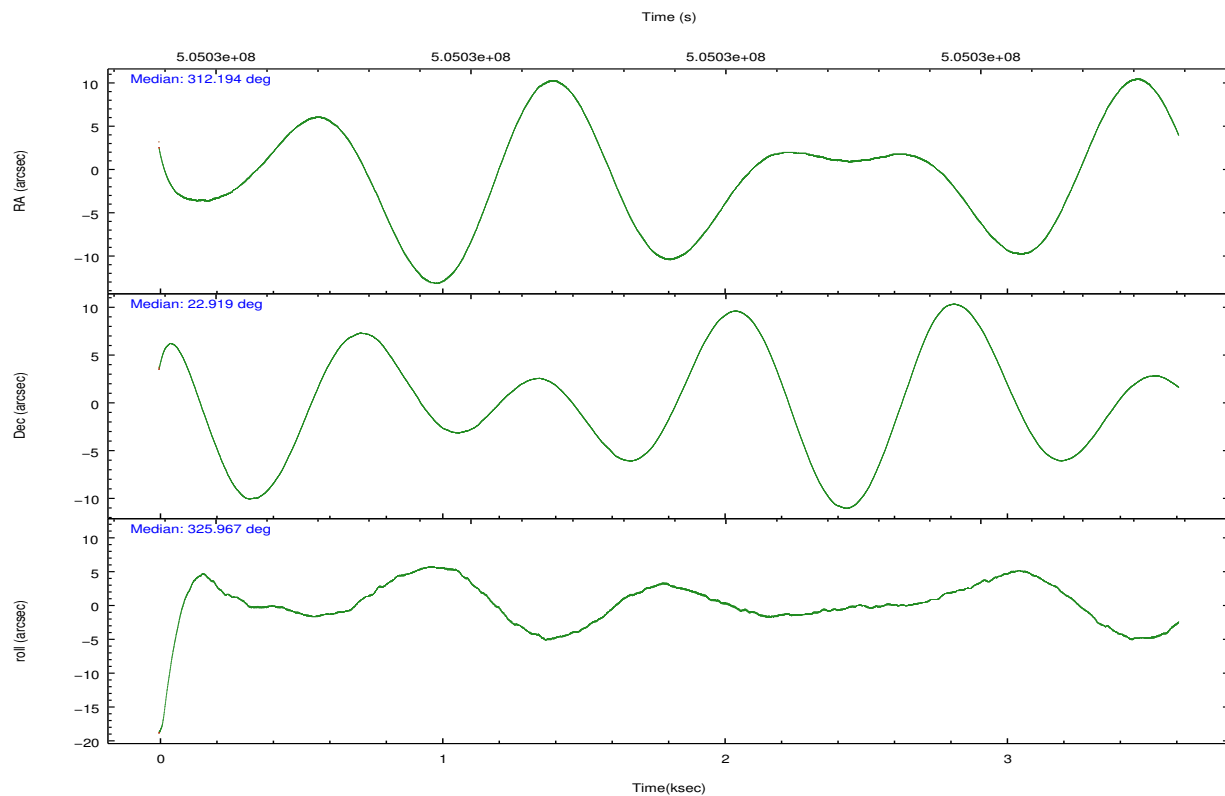


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	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	312.164215	312.193990863177	CCD I2 on	O2	Y
[deg] Pointing Dec	22.920887	22.91930053812395	CCD I3 on	O3	Y
[deg] Pointing Roll	325.825539	325.9705036354313	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O4	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	N	N
[s] Observation start time (MET)	505028075.184000	505026289.28725	CCD S5 on	N	N
Observation start date	2014-01-02T05:33:28	2014-01-02T05:04:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	505031575.184000	505032565.87509	On-chip summing requested	N	N
Observation end date	2014-01-02T06:31:48	2014-01-02T06:49:25	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



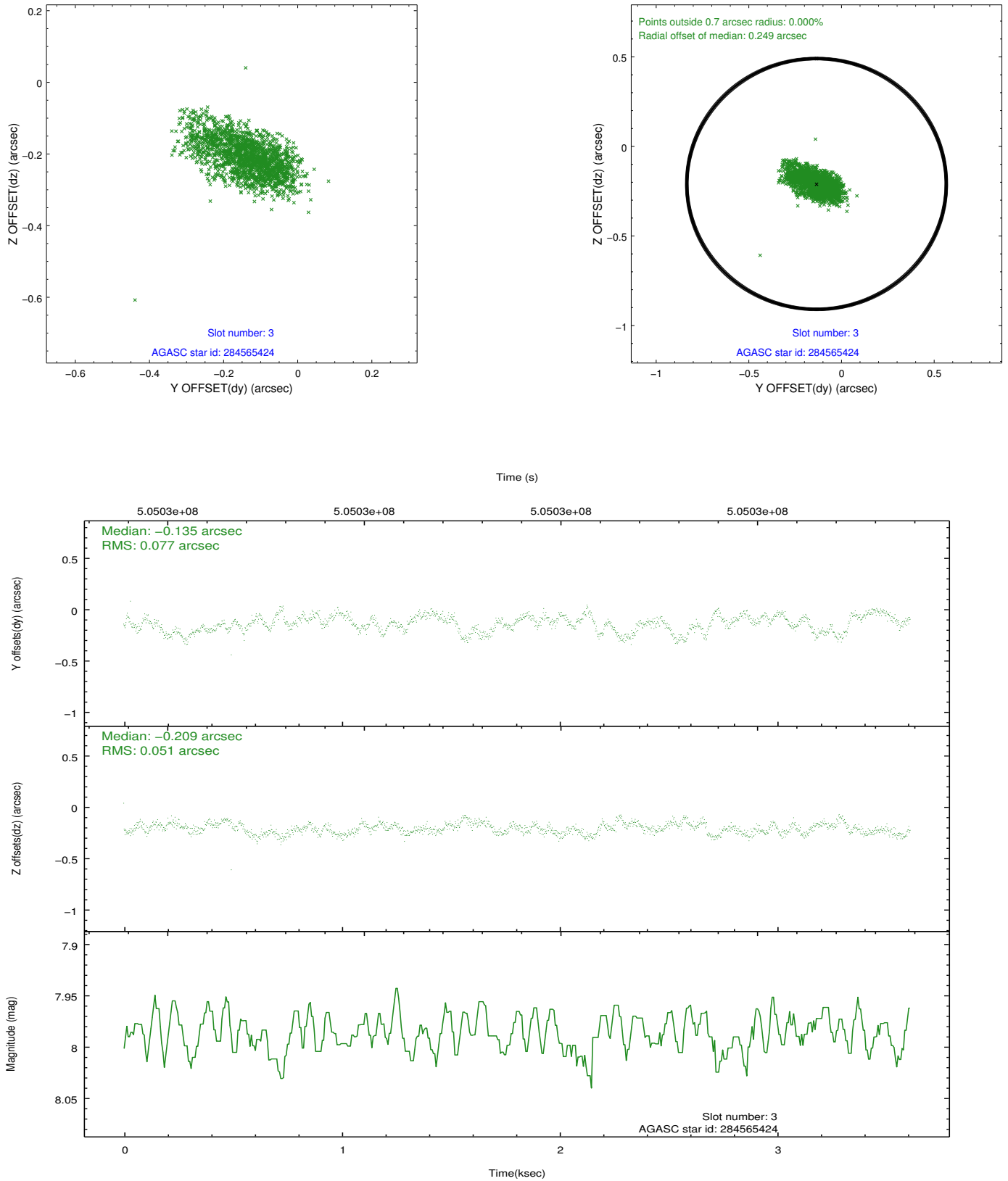


### Slot Statistics

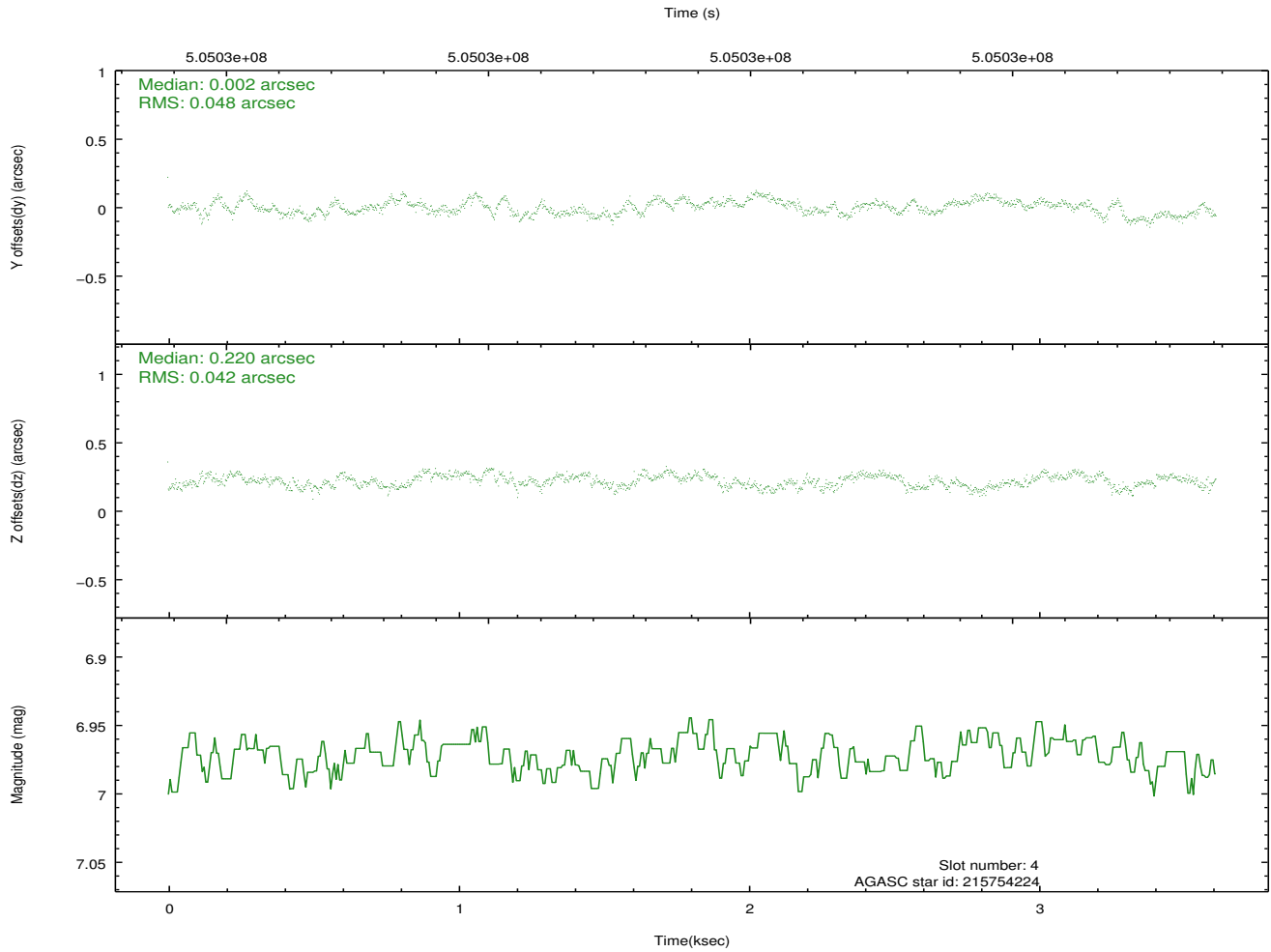
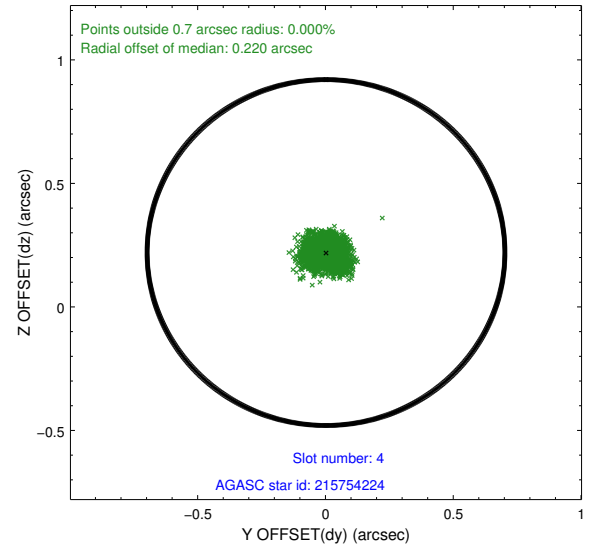
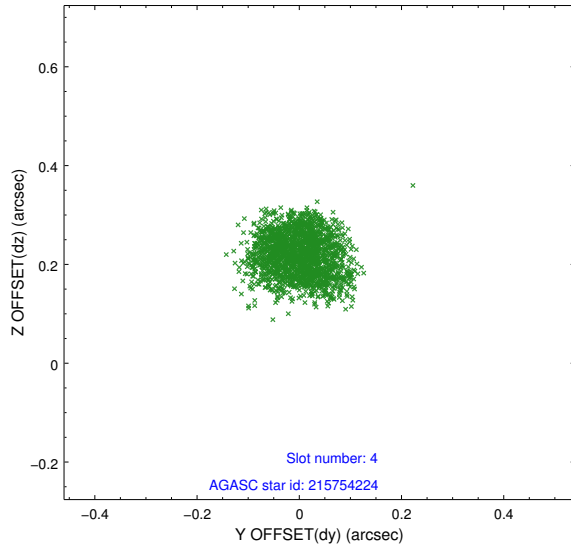
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.99	881	-0.195	-0.003	0.007	0.013	0.000000	0.000000	-778.37	-1741.92
1	FID		ACIS-S-4	7.08	882	0.359	0.095	0.007	0.014	0.000000	0.000000	2134.63	164.88
2	FID		ACIS-S-5	7.10	881	-0.196	-0.083	0.007	0.012	0.000000	0.000000	-1829.01	160.32
3	GUIDE	used	284565424	7.99	1763	-0.135	-0.209	0.097	0.164	312.616094	22.884235	1313.97	734.19
4	GUIDE	used	215754224	6.97	1762	0.002	0.220	0.069	0.105	311.949765	22.255197	755.67	-2383.26
5	GUIDE	used	284443304	7.64	1763	0.276	0.242	0.095	0.151	311.418152	23.017510	-2243.39	-1096.89
6	GUIDE	used	284559312	8.58	1761	-0.345	-0.172	0.095	0.154	312.513611	23.230125	328.41	1570.62
7	GUIDE	used	284573080	7.98	1761	0.213	-0.088	0.078	0.127	312.660698	22.730396	1747.85	361.81

## 2.4 Star Slots

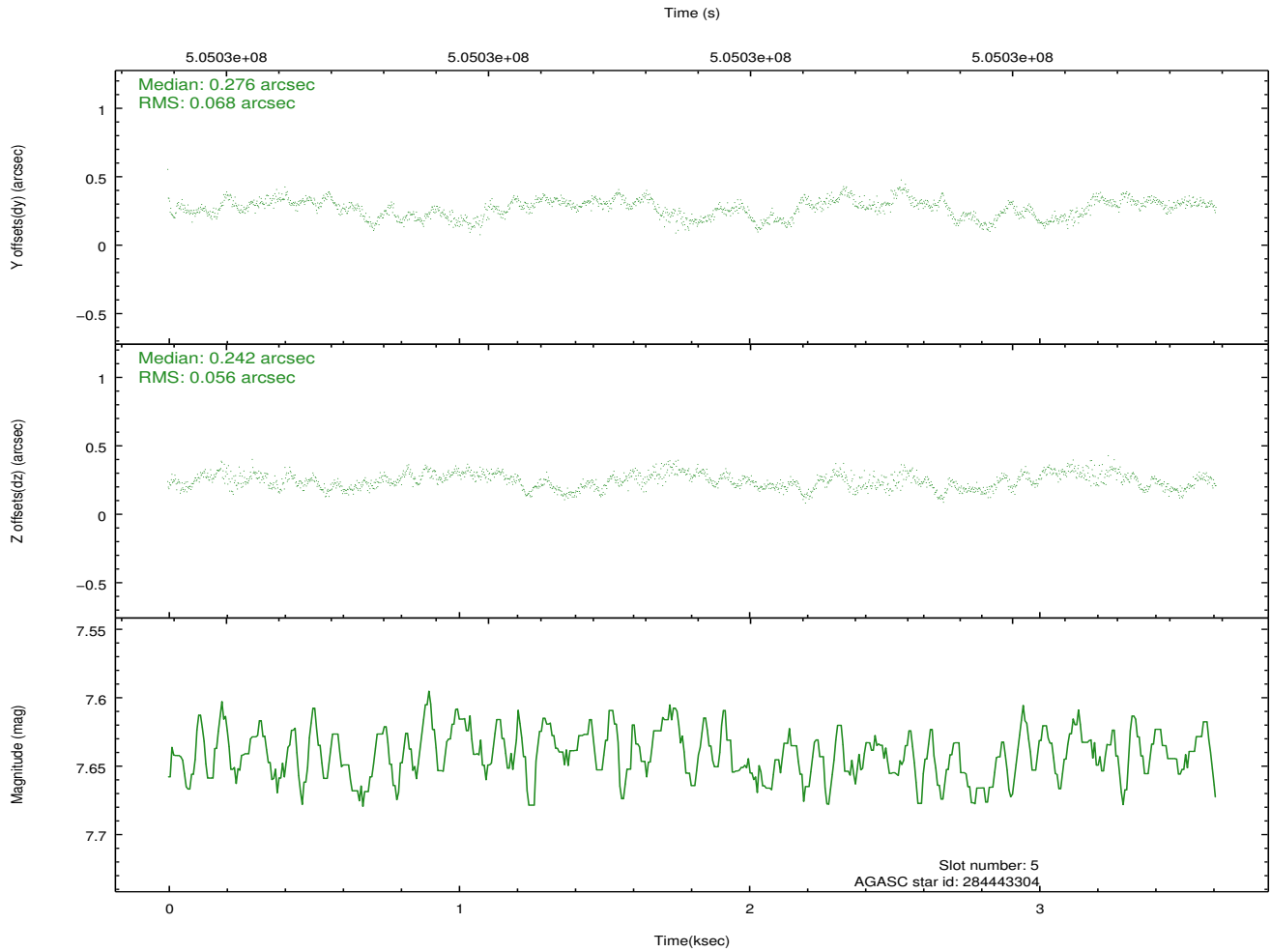
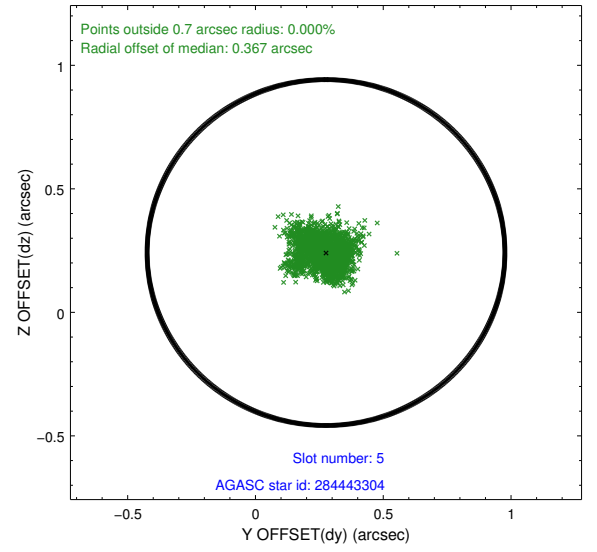
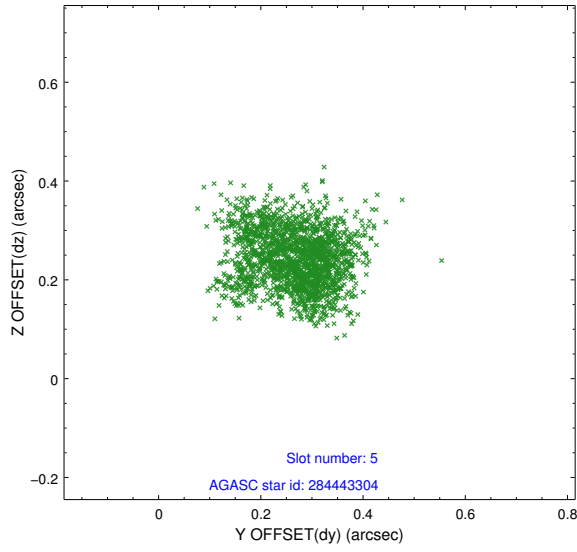
### 2.4.1 Slot 3



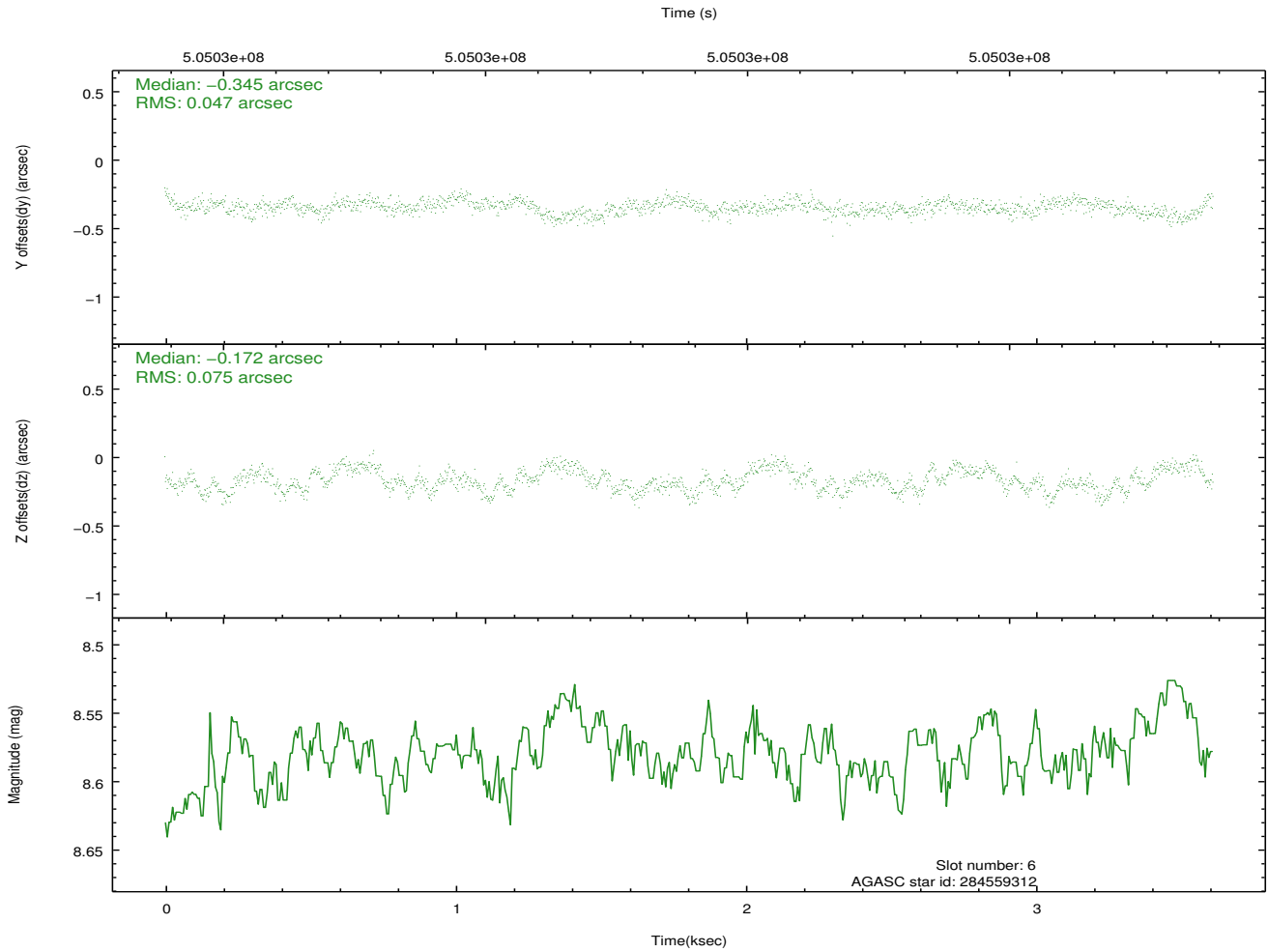
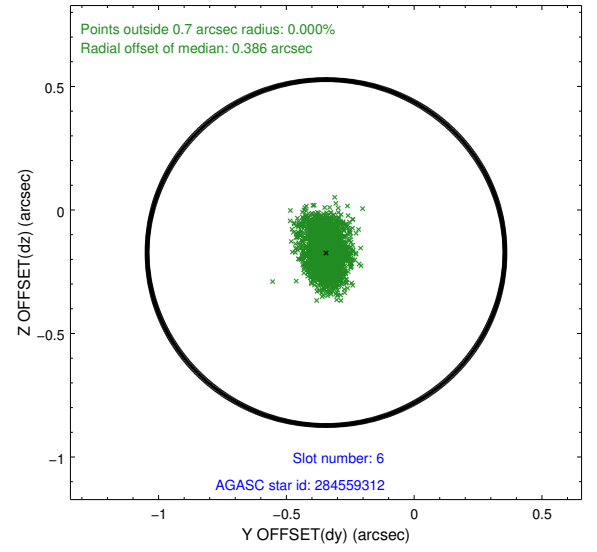
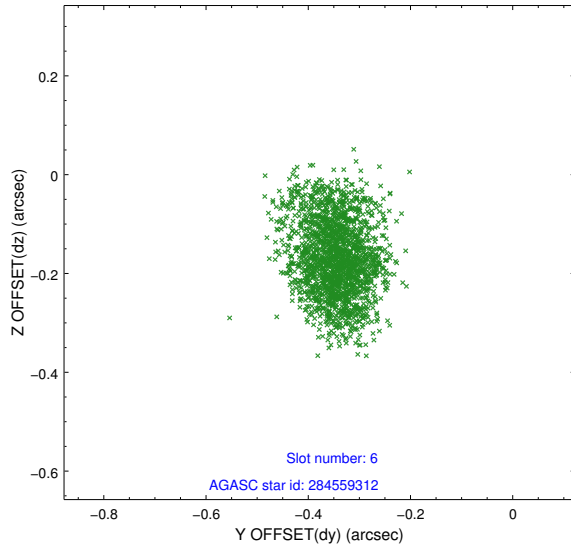
## 2.4.2 Slot 4



### 2.4.3 Slot 5

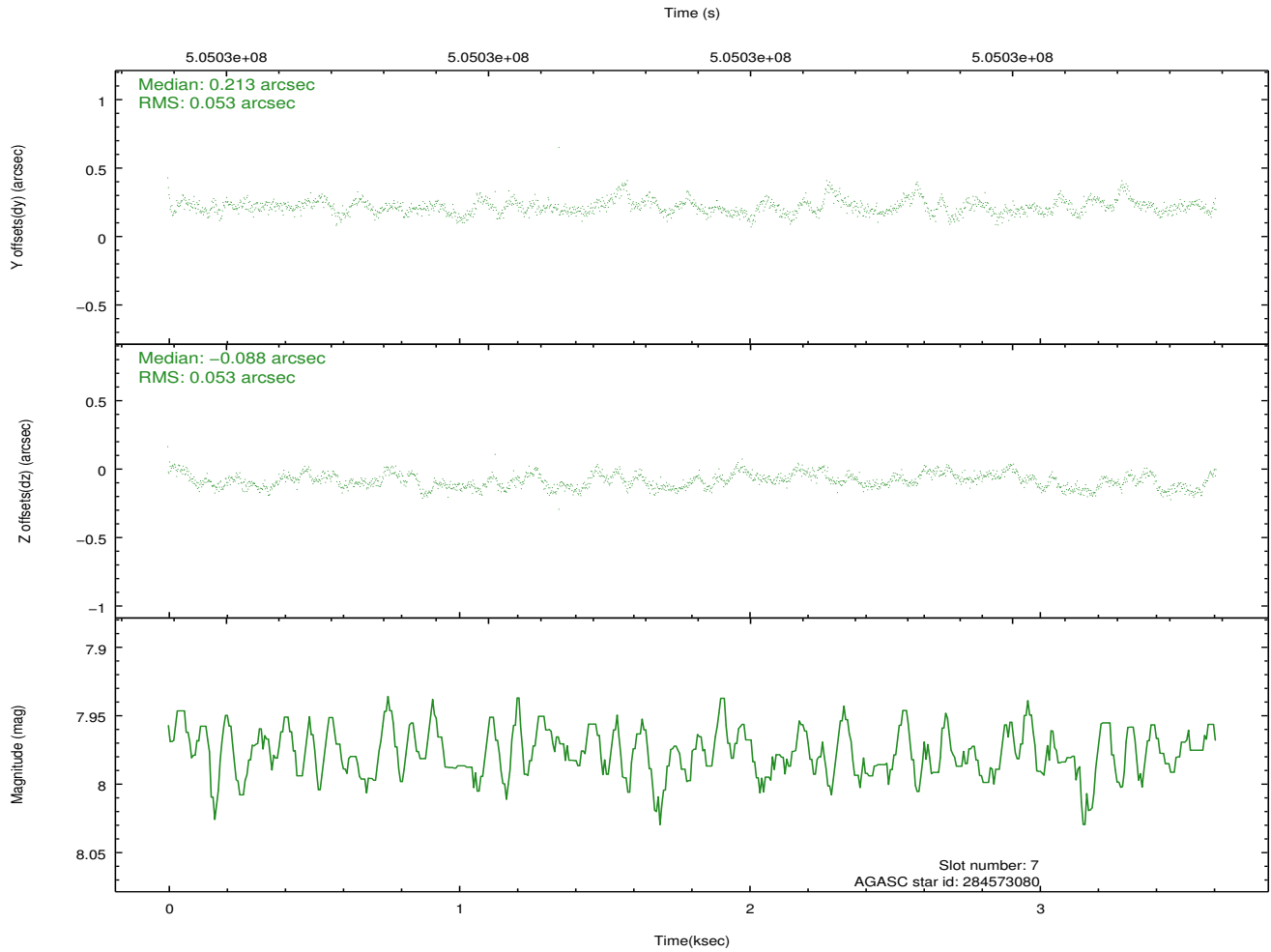
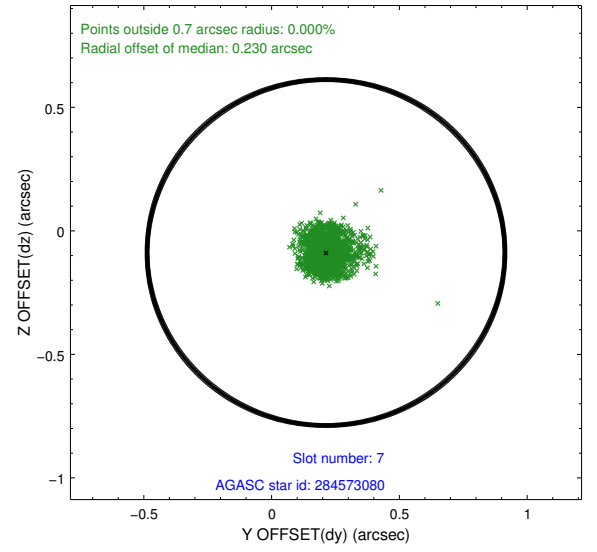
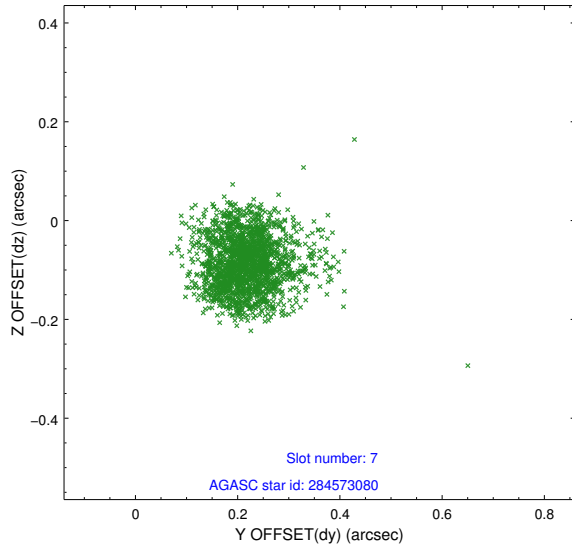


## 2.4.4 Slot 6



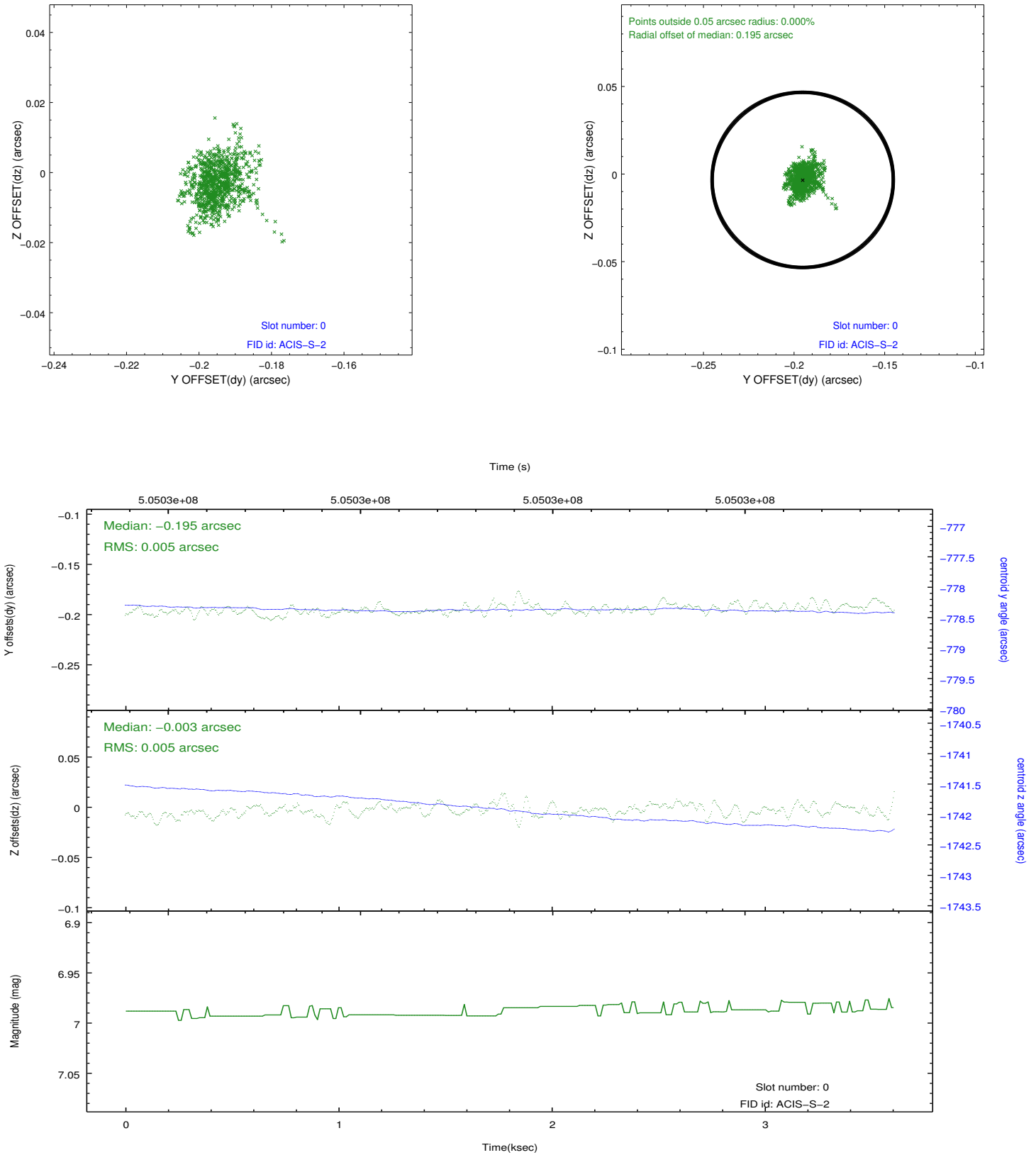


## 2.4.5 Slot 7

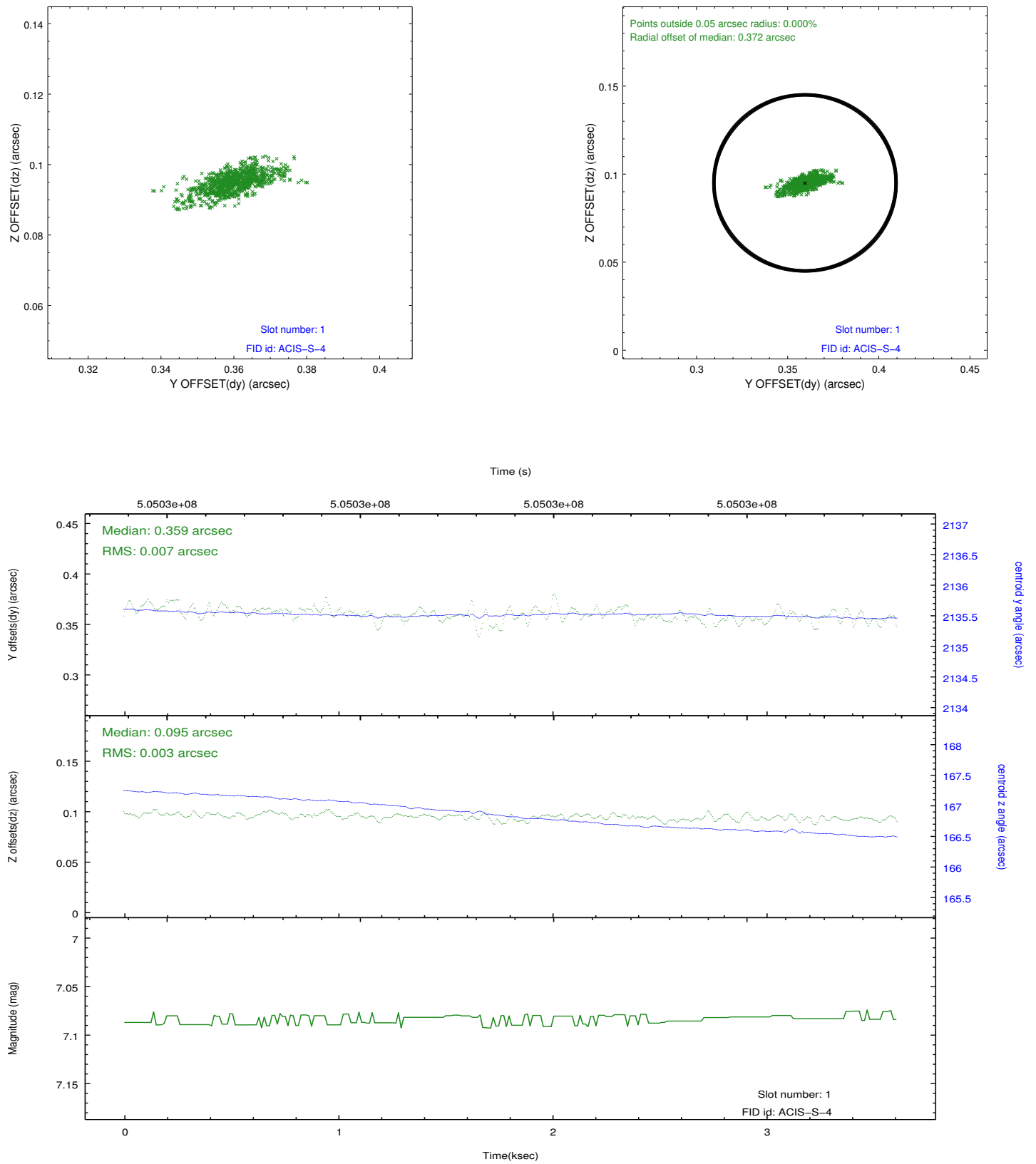


## 2.5 FID Slots

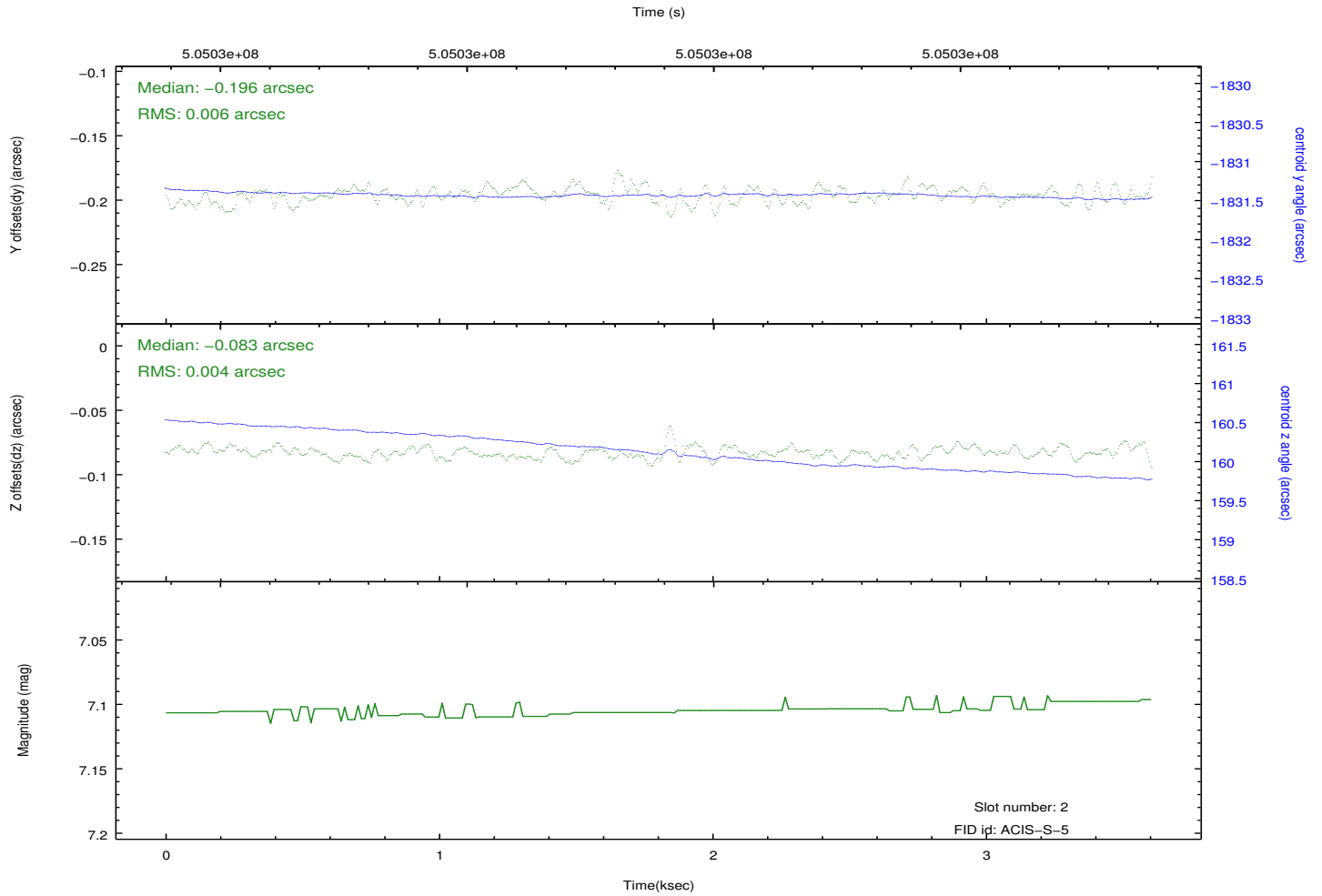
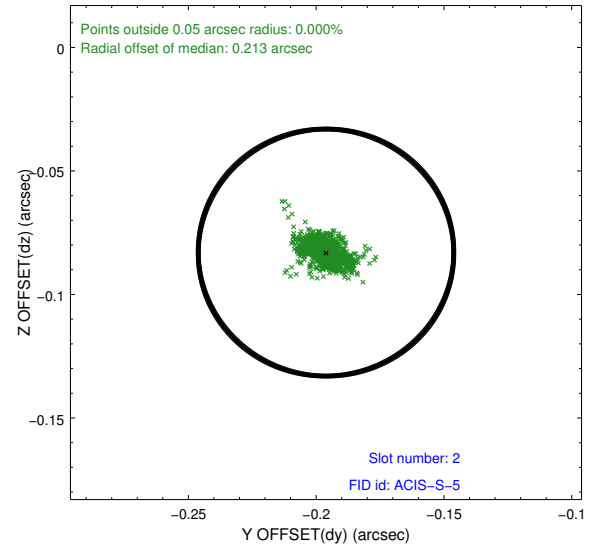
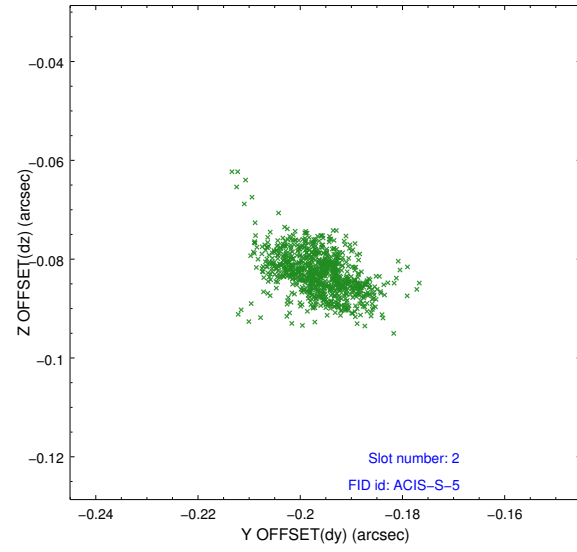
### 2.5.1 Slot 0



## 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)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.2703716297746

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.