

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 19443 - L2 Version 1  
Chandra X-Ray Center

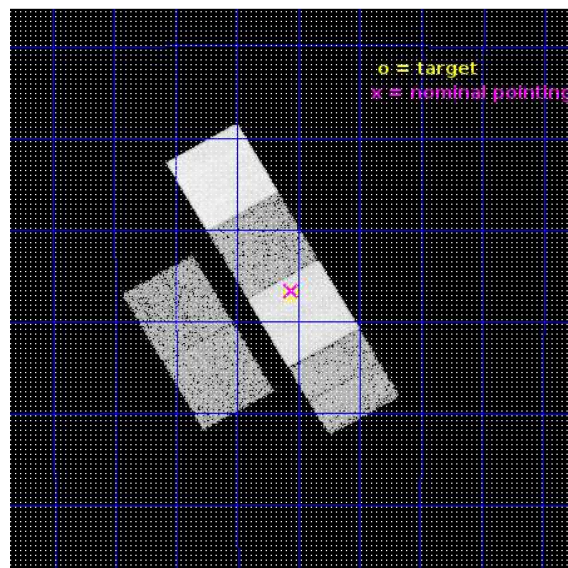
L2 Processing Date : Nov 17 2017

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# 1 Front

seq_num	601400	Sequence number
obs_id	19443	Observation id
title	The first X-ray study of NGC 2243, one of the most metal-poor Galactic open star clusters	Proposal title
observer	Maureen van den Berg	Principal investigator
object	NGC 2243	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	97.391667	Observer's specified target RA [deg]
dec_targ	-31.283333	Observer's specified target Dec [deg]
ra_nom	97.389485352674	Nominal RA [deg]
dec_nom	-31.277524713942	Nominal Dec [deg]
roll_nom	60.155480151152	Nominal Roll [deg]
revision	1	Processing version of data
ontime	17948.800267458	Sum of GTIs [s]
livetime	17721.521751001	Livetime [s]
ontime2	17945.559187174	Sum of GTIs [s]
ontime3	17948.800267458	Sum of GTIs [s]
ontime5	17948.800267458	Sum of GTIs [s]
ontime6	17948.800267458	Sum of GTIs [s]
ontime7	17948.800267458	Sum of GTIs [s]
ontime8	17945.559187174	Sum of GTIs [s]
l2events	206769	Number of level 2 events

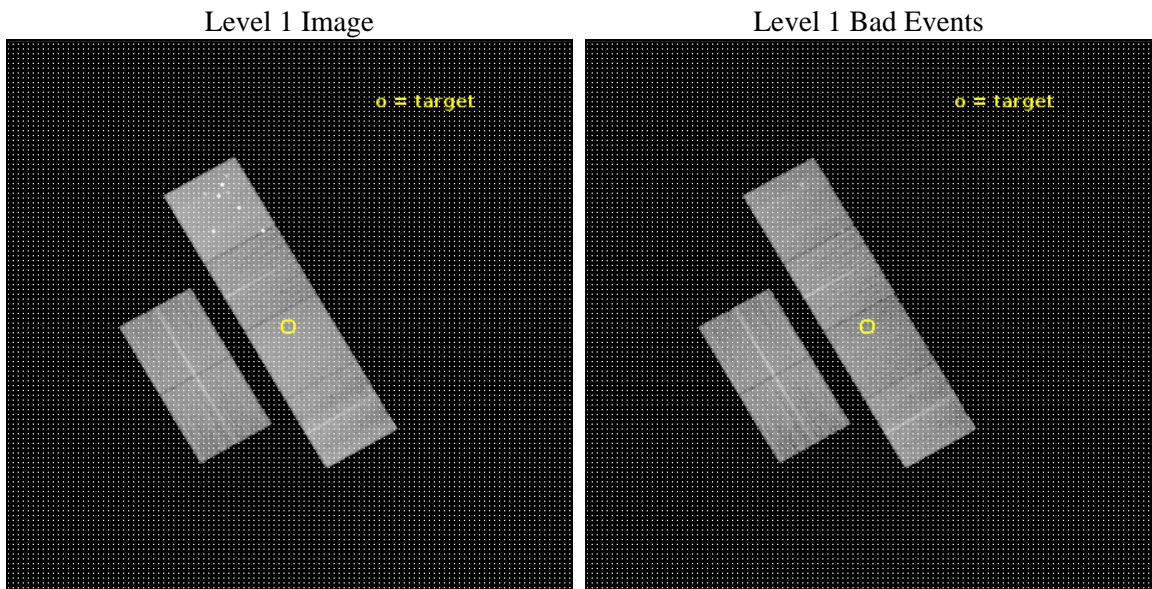




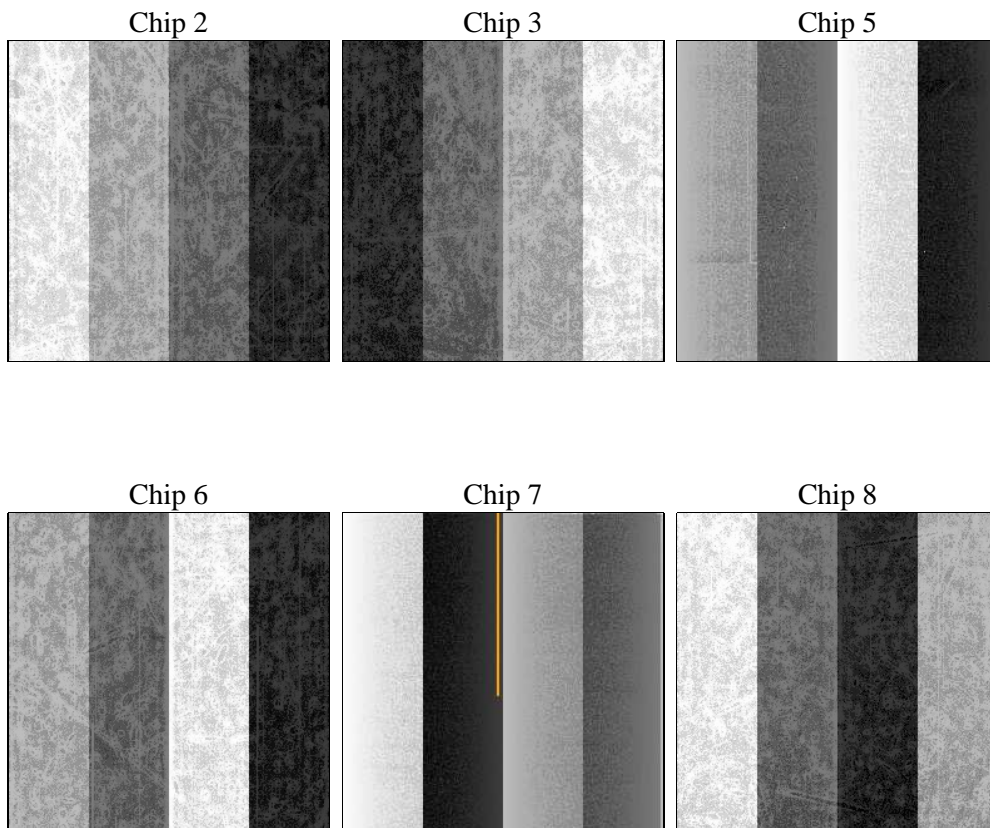
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	17948.800267458	Sum of GTIs [s]
caldsver	4.7.6	&#160	ontime2	17945.559187174	Sum of GTIs [s]
date	2017-11-17T22:15:10	Date and time of file creation	ontime3	17948.800267458	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	17948.800267458	Sum of GTIs [s]
			ontime6	17948.800267458	Sum of GTIs [s]
			ontime7	17948.800267458	Sum of GTIs [s]
			ontime8	17945.559187174	Sum of GTIs [s]
			l1events	931922	Number of level 1 events

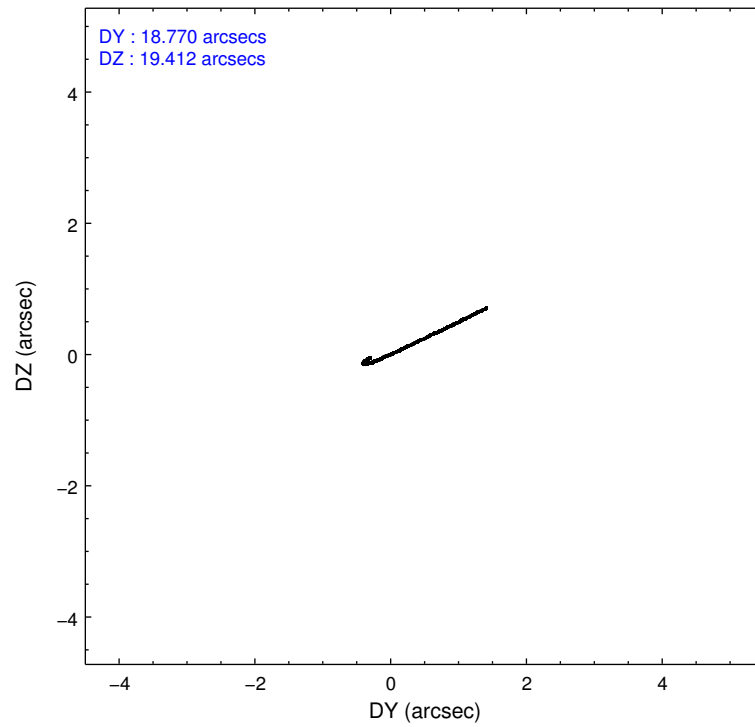
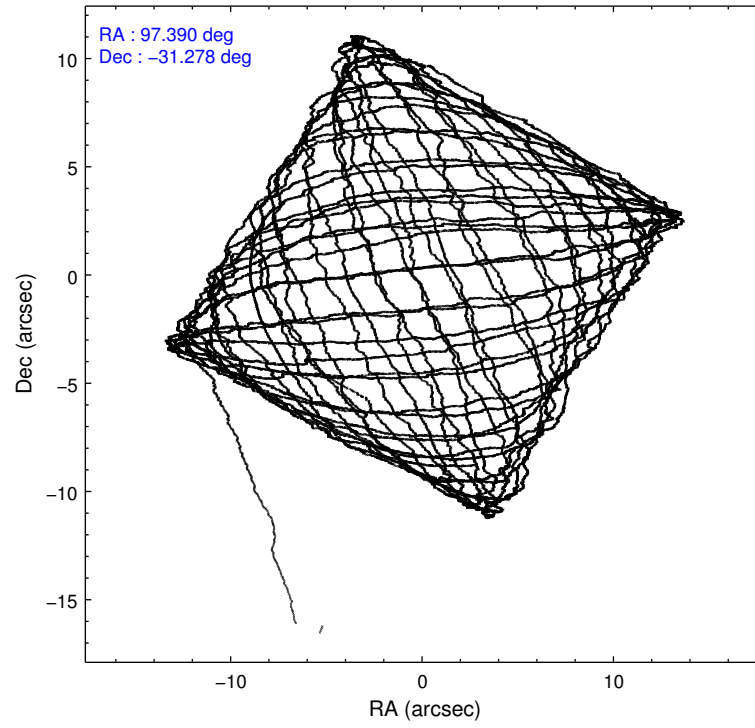
### 2.1.4 Events

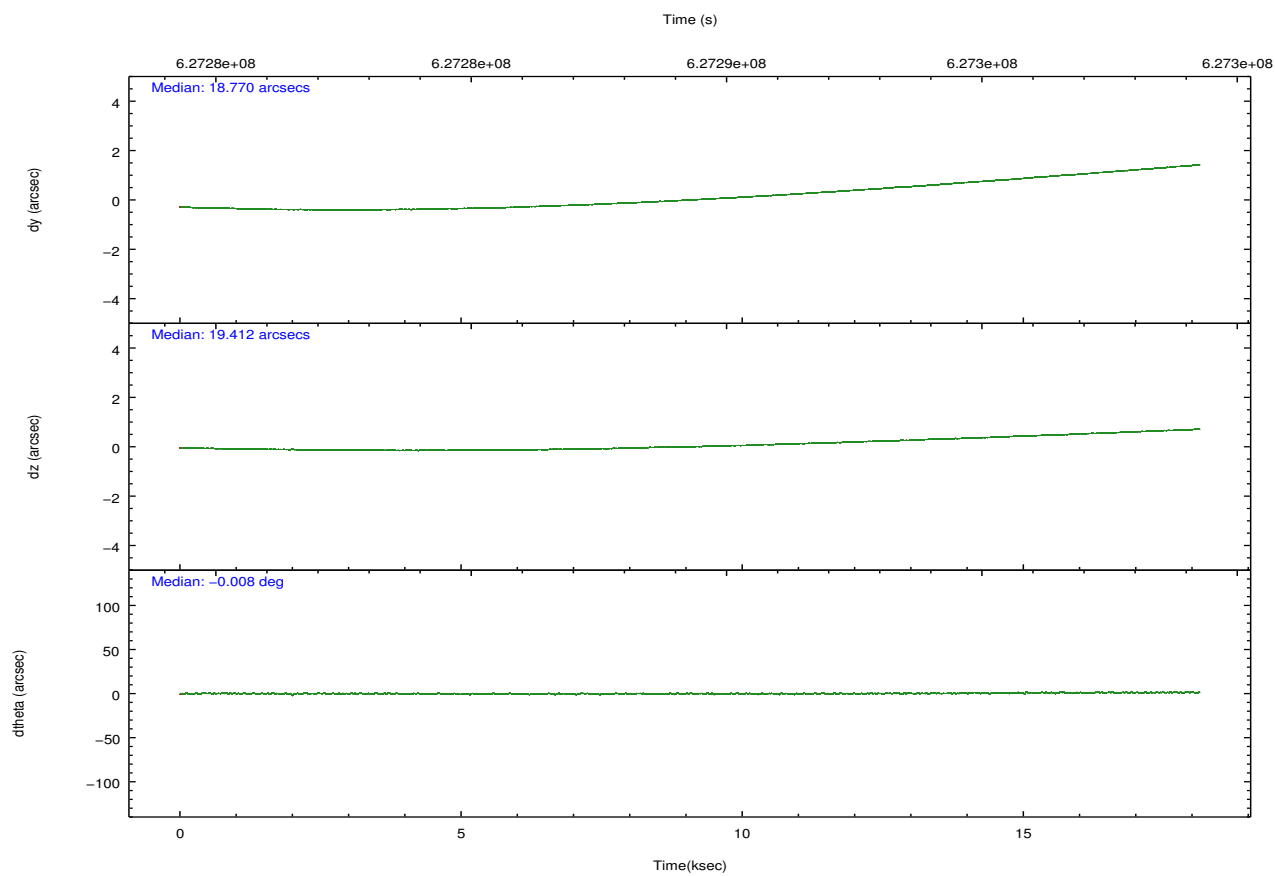
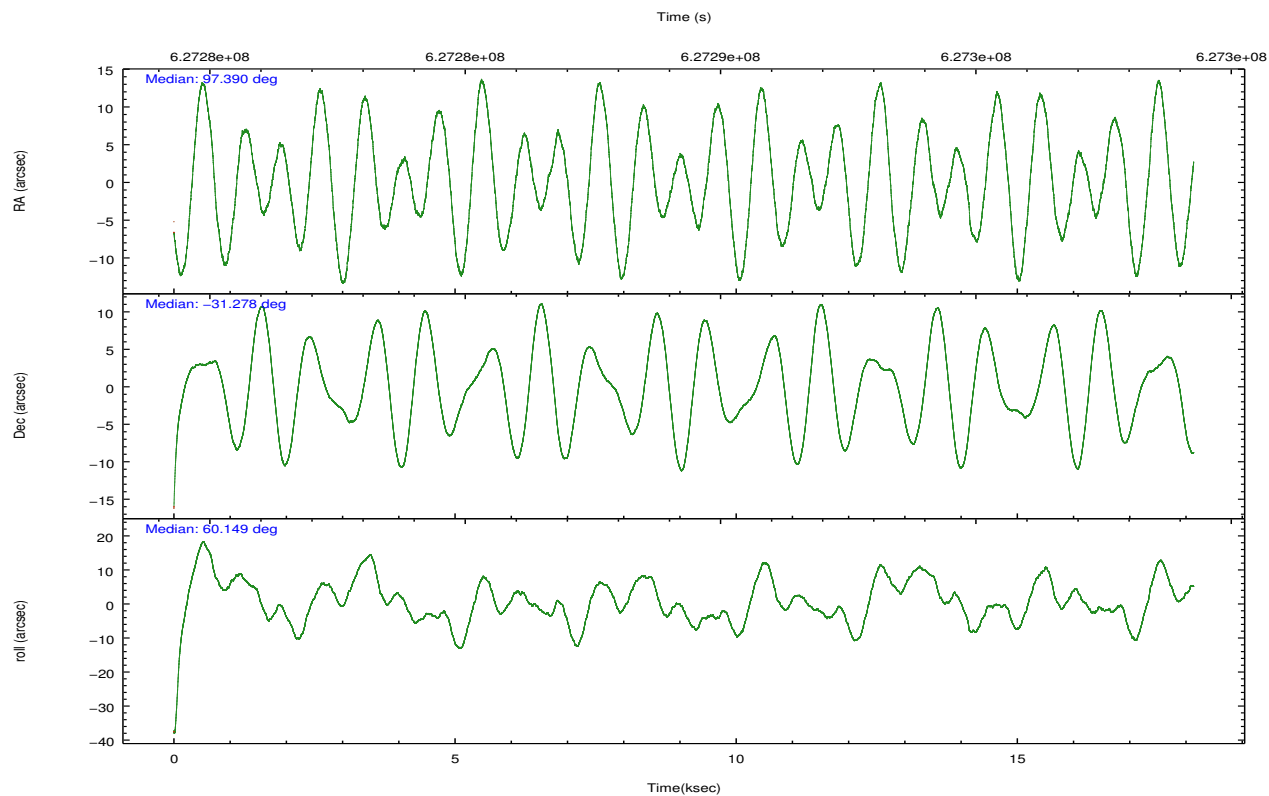
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	129674	122558	227185	131308	163523	157674	grade 0 events	4350	4294	25232	4327	6030	10710
rejected events	117085	110161	104326	117232	93122	118002		3%	3%	11%	3%	3%	6%
rejected %	90%	89%	45%	89%	56%	74%	grade 1 events	63	60	1014	63	209	120
								0%	0%	0%	0%	0%	0%
							grade 2 events	3082	2694	34506	3561	14517	10003
								2%	2%	15%	2%	8%	6%
							grade 3 events	1255	1369	4439	1323	5610	4060
								0%	1%	1%	1%	3%	2%
							grade 4 events	1286	1365	4593	1257	5596	3662
								0%	1%	2%	0%	3%	2%
							grade 5 events	5015	5739	13415	5454	16232	8687
								3%	4%	5%	4%	9%	5%
							grade 6 events	2622	2679	54127	3612	38671	11264
								2%	2%	23%	2%	23%	7%
							grade 7 events	112001	104358	89859	111711	76658	109168
								86%	85%	39%	85%	46%	69%

## 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	97.390043	97.389485352674	CCD I2 on	O2	Y
[deg] Pointing Dec	-31.304955	-31.27752471394242	CCD I3 on	Y	Y
[deg] Pointing Roll	59.999151	60.15548015115179	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	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)	627280326.184000	627279128.32455	CCD S5 on	N	N
Observation start date	2017-11-17T04:30:57	2017-11-17T04:12:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	627298326.184000	627299158.36323	On-chip summing requested	N	N
Observation end date	2017-11-17T09:30:57	2017-11-17T09:45:58	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



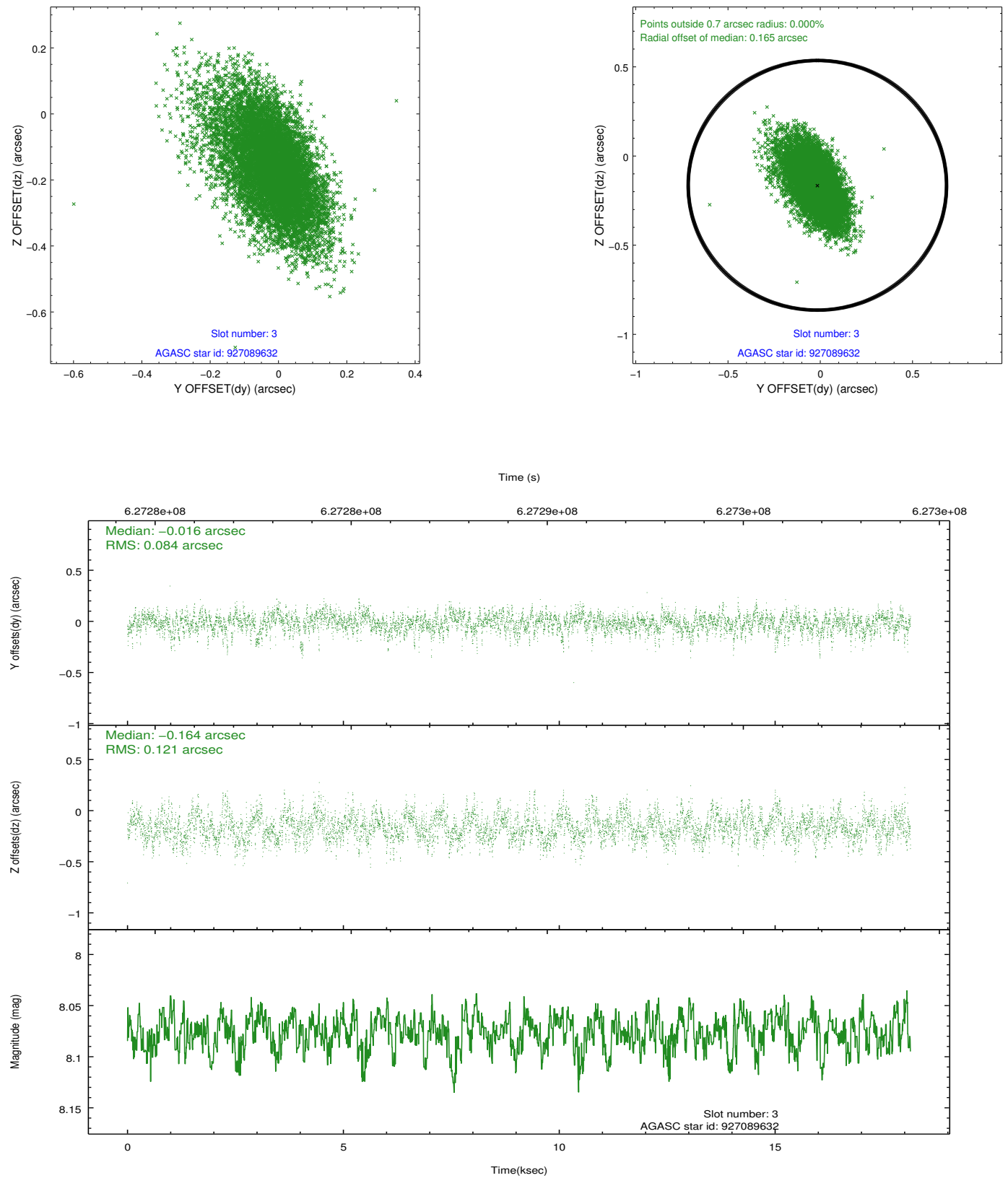


### Slot Statistics

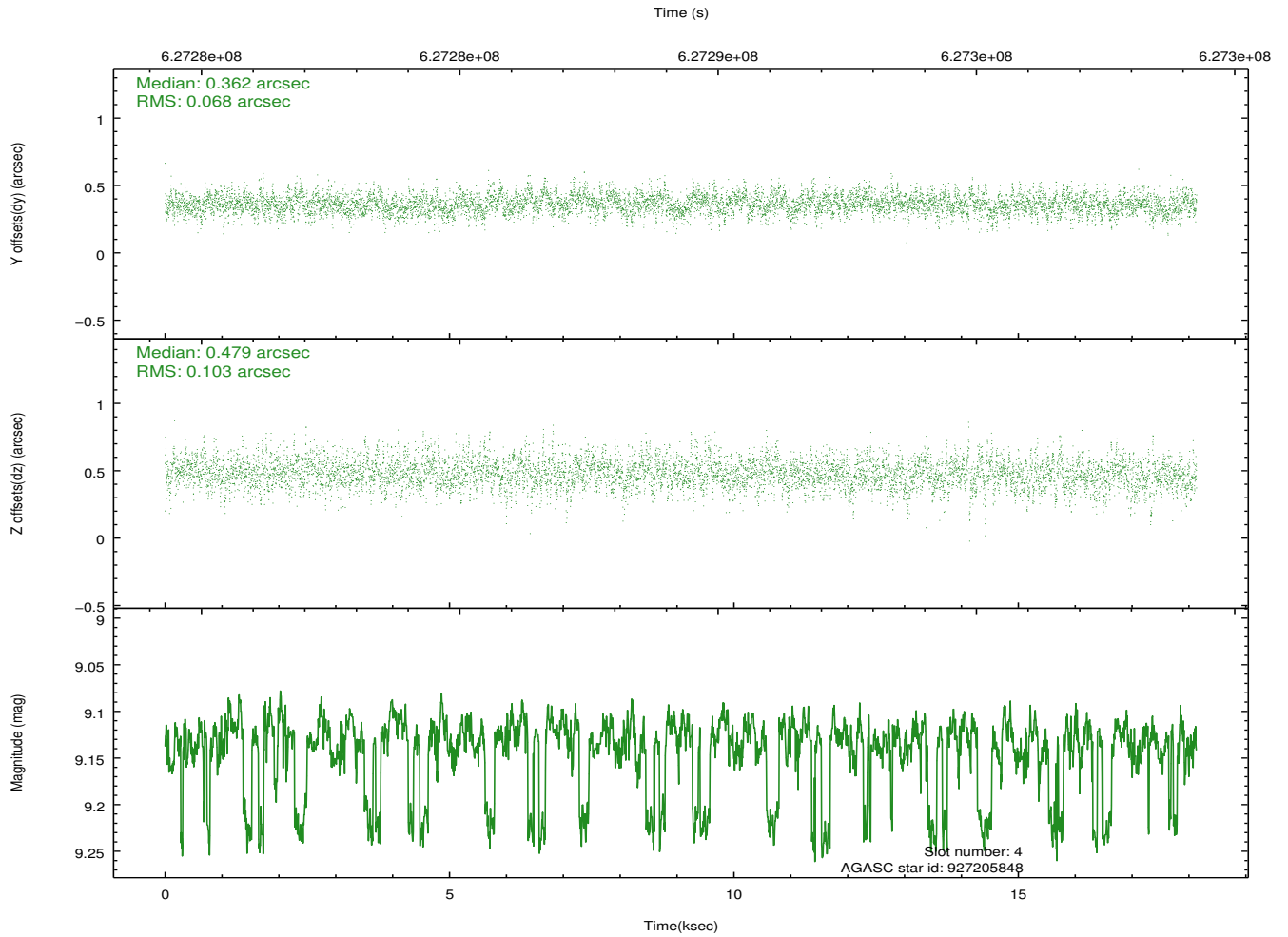
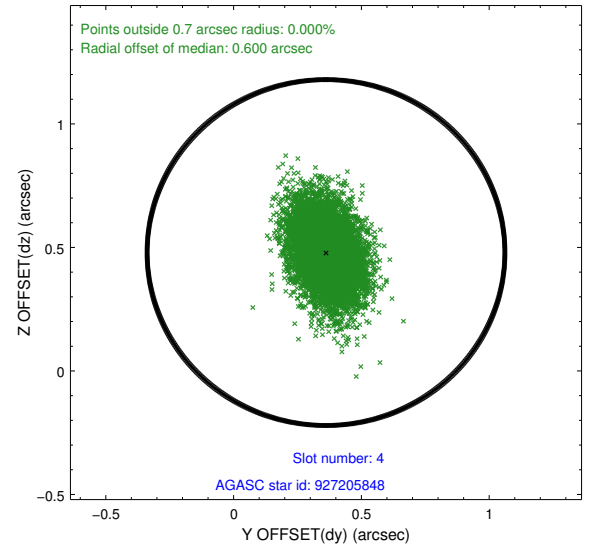
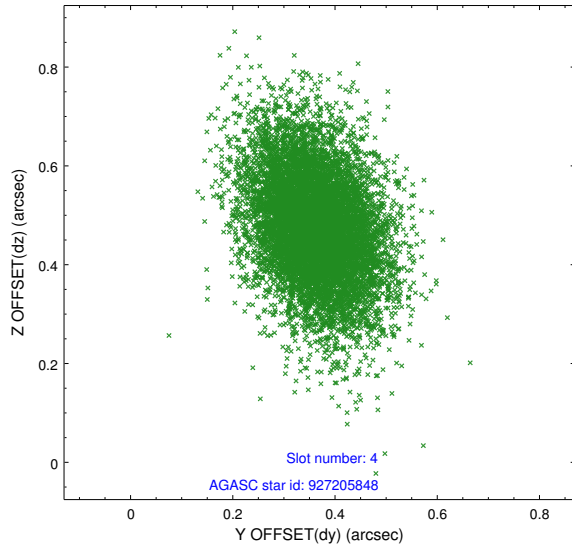
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.19	4424	0.038	-0.069	0.022	0.051	0.000000	0.000000	924.10	-1736.69
1	FID		ACIS-S-4	7.21	4424	0.430	0.034	0.019	0.042	0.000000	0.000000	2141.95	167.40
2	FID		ACIS-S-5	7.20	4423	-0.493	0.046	0.017	0.037	0.000000	0.000000	-1825.08	161.08
3	GUIDE	used	927089632	8.08	8847	-0.016	-0.164	0.151	0.271	96.410318	-31.480951	-2064.09	2280.22
4	GUIDE	used	927205848	9.13	8843	0.362	0.479	0.126	0.223	97.800577	-31.737487	-721.53	-1867.51
5	GUIDE	used	927210360	8.86	8845	0.065	0.083	0.137	0.231	97.559173	-31.118939	840.41	-116.69
6	GUIDE	used	927210664	8.88	8839	-0.262	0.347	0.175	0.299	98.300738	-31.077411	2103.70	-2027.28
7	GUIDE	used	927217616	9.50	8833	-0.145	-0.751	0.204	0.325	97.053531	-30.582611	1728.82	2201.63

## 2.4 Star Slots

### 2.4.1 Slot 3

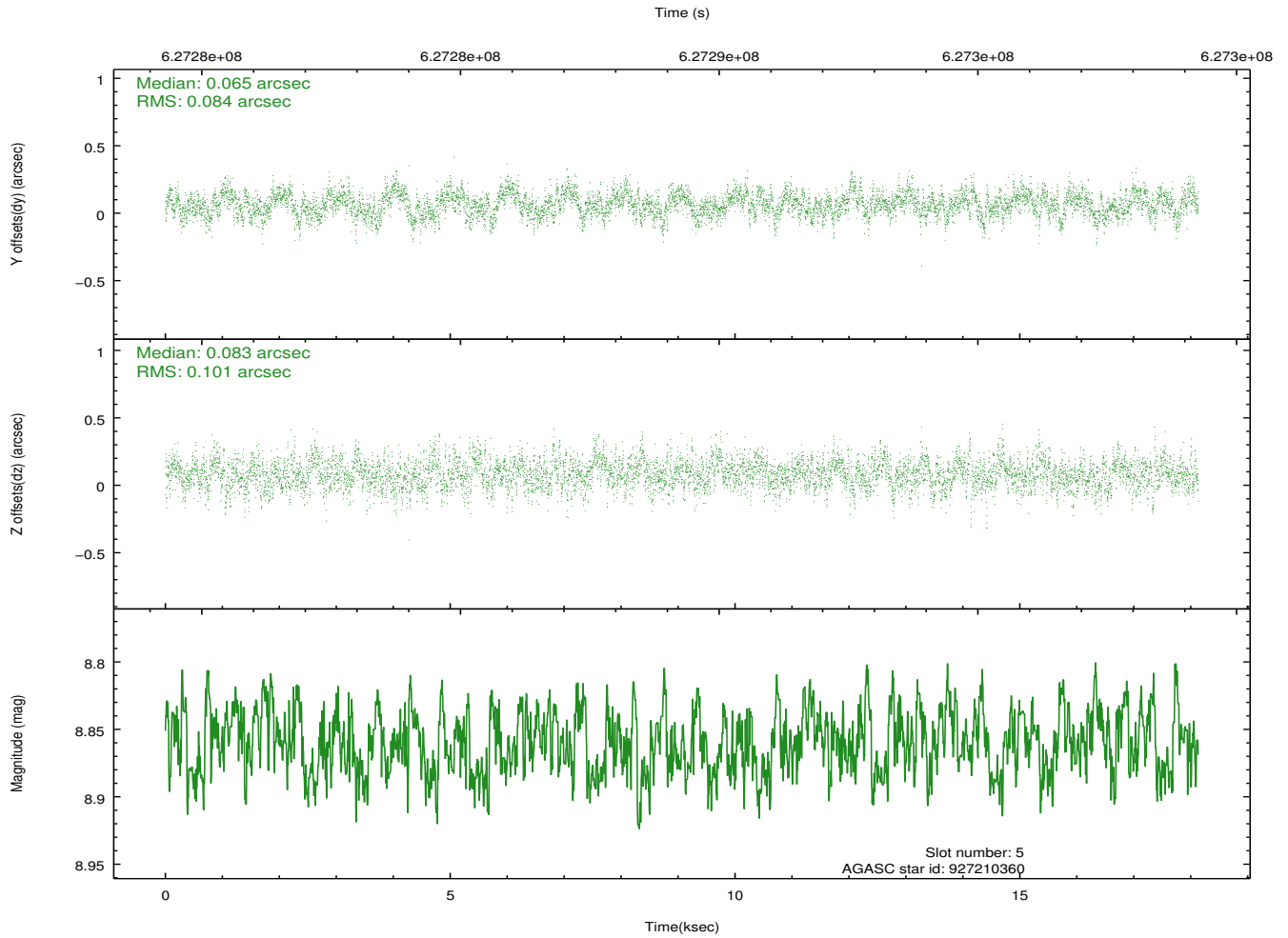
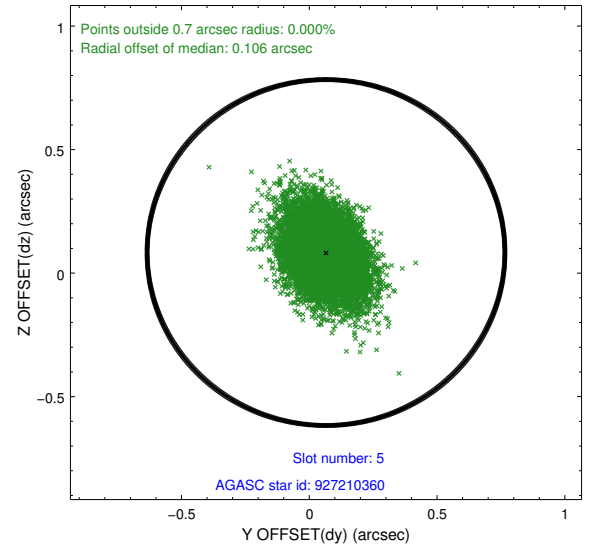
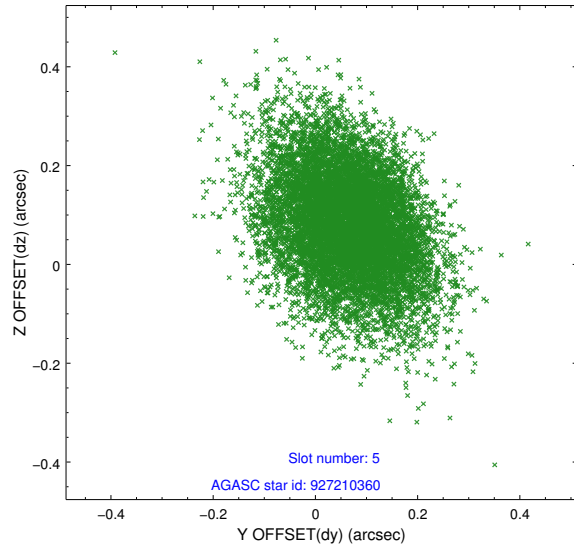


## 2.4.2 Slot 4

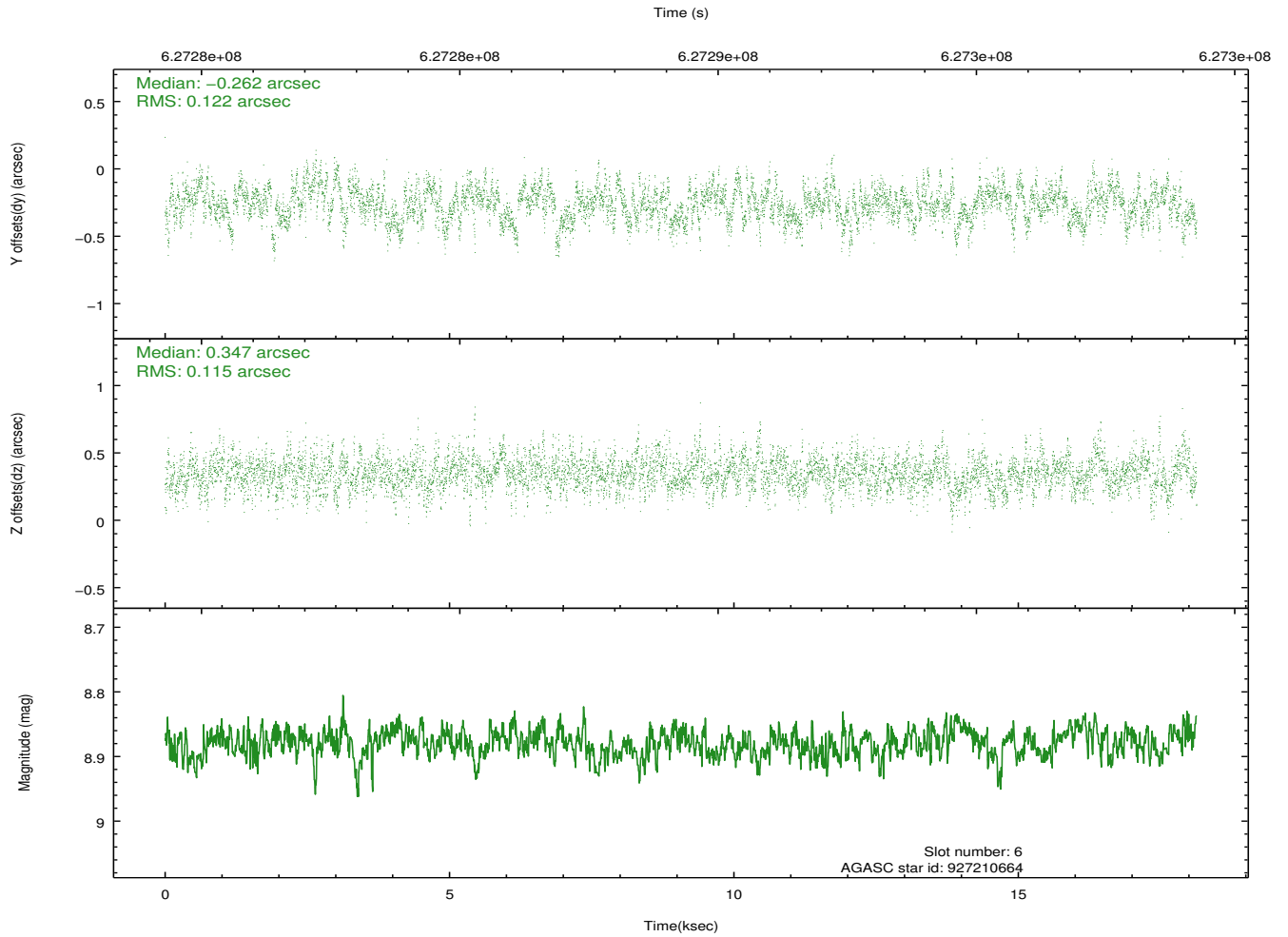
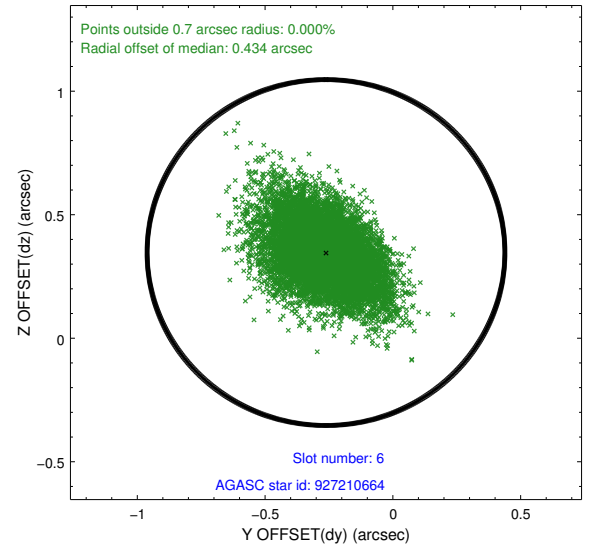
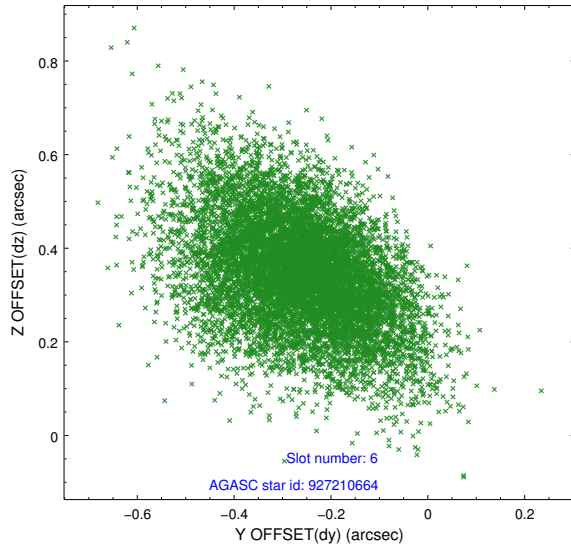




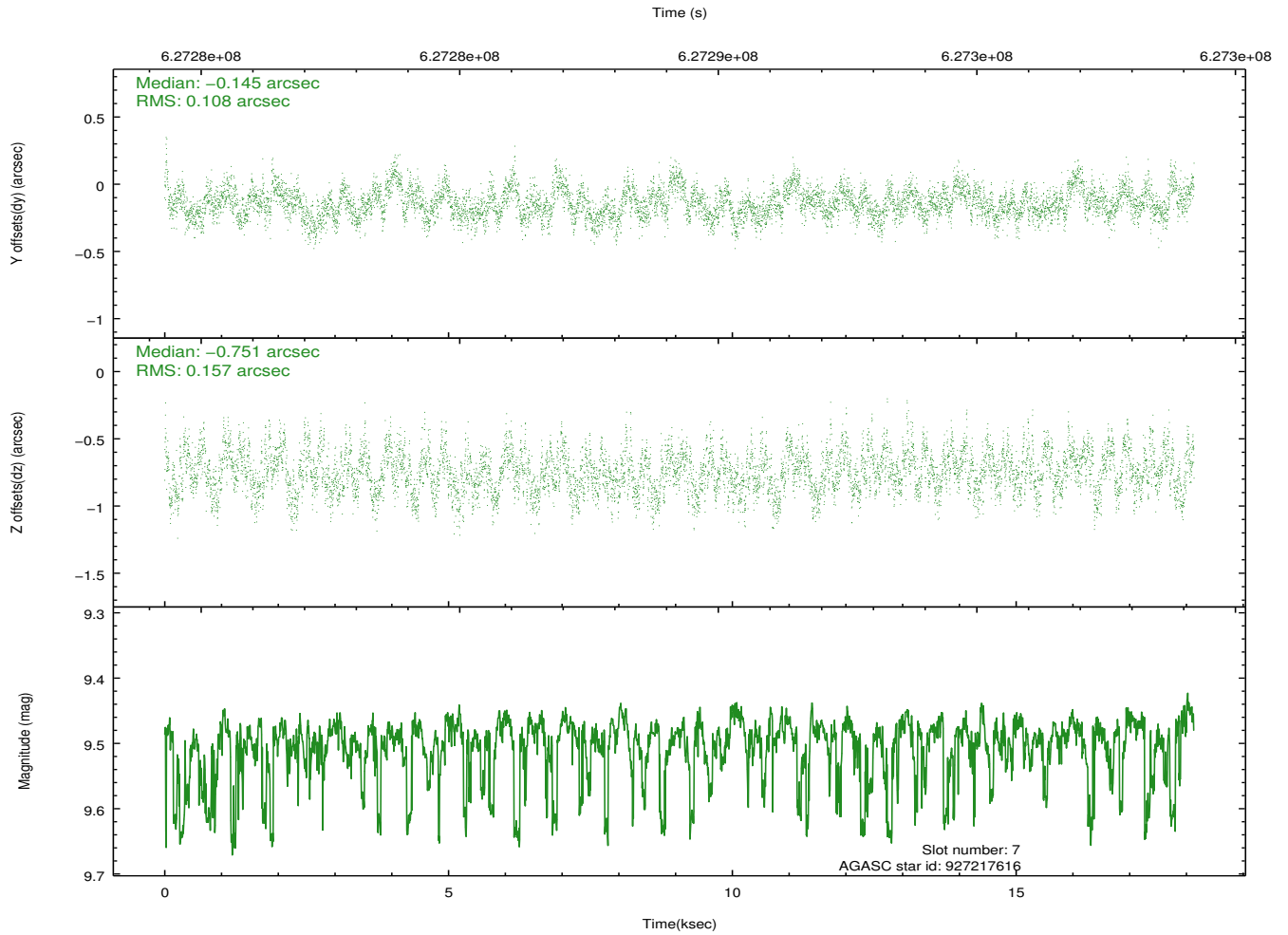
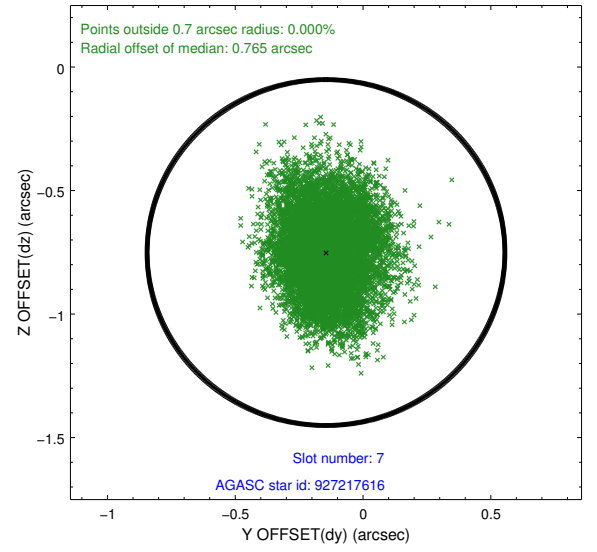
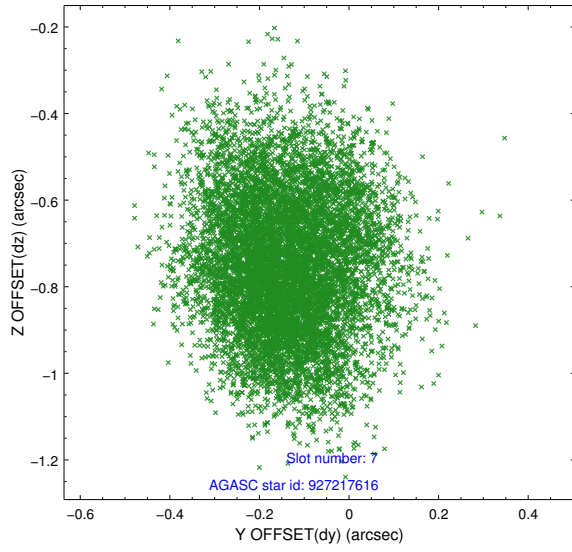
### 2.4.3 Slot 5



## 2.4.4 Slot 6

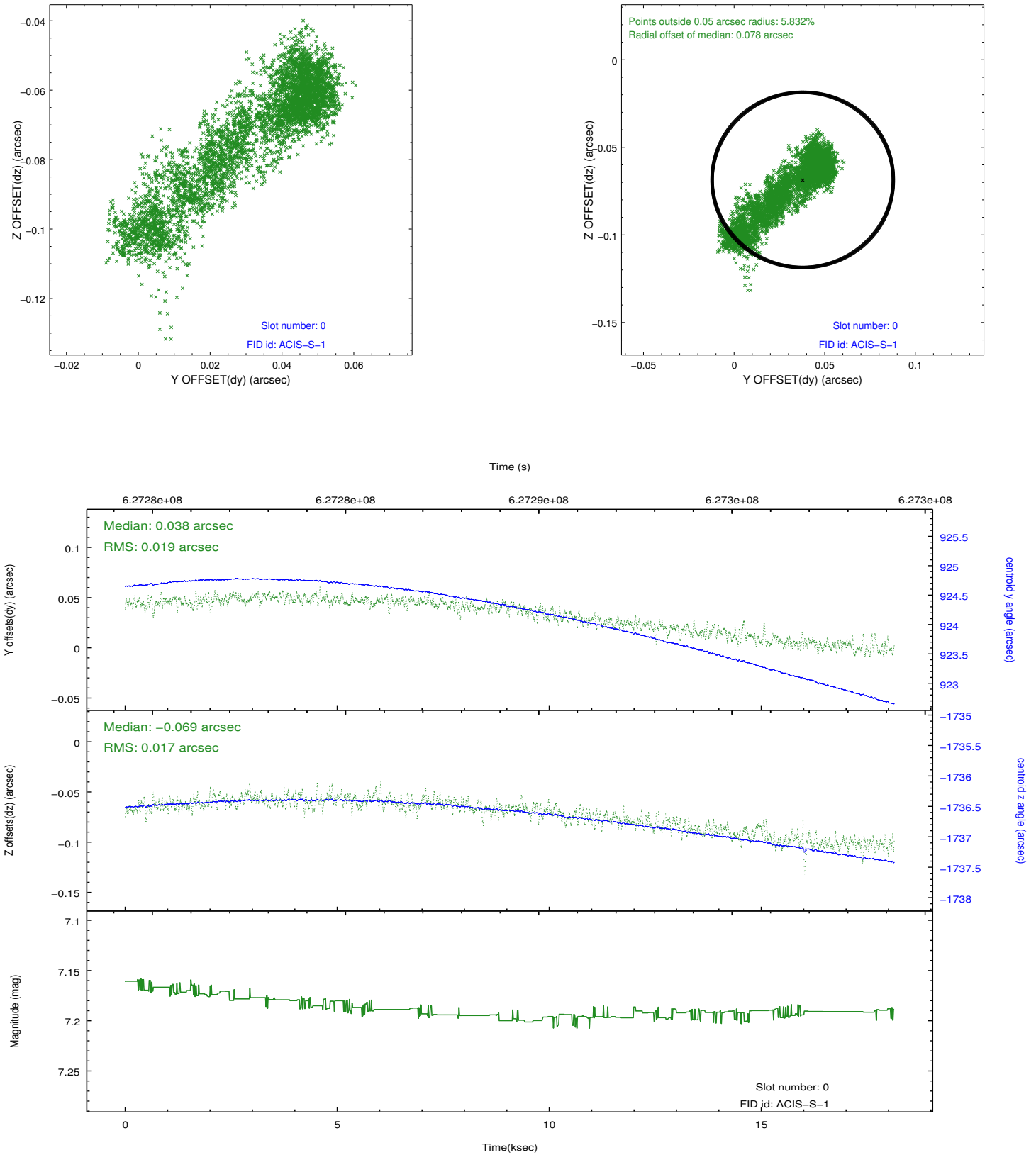


## 2.4.5 Slot 7

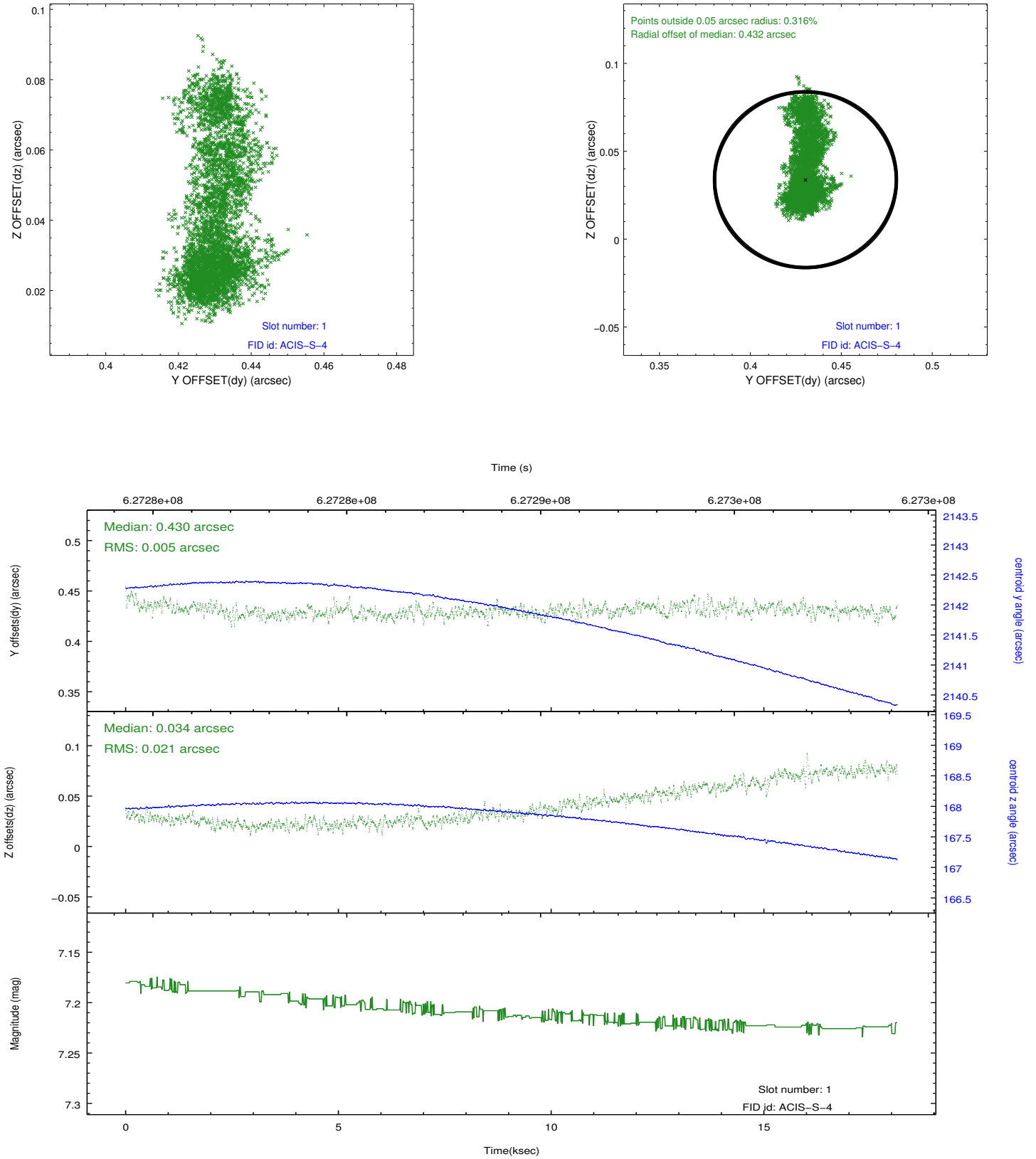


## 2.5 FID Slots

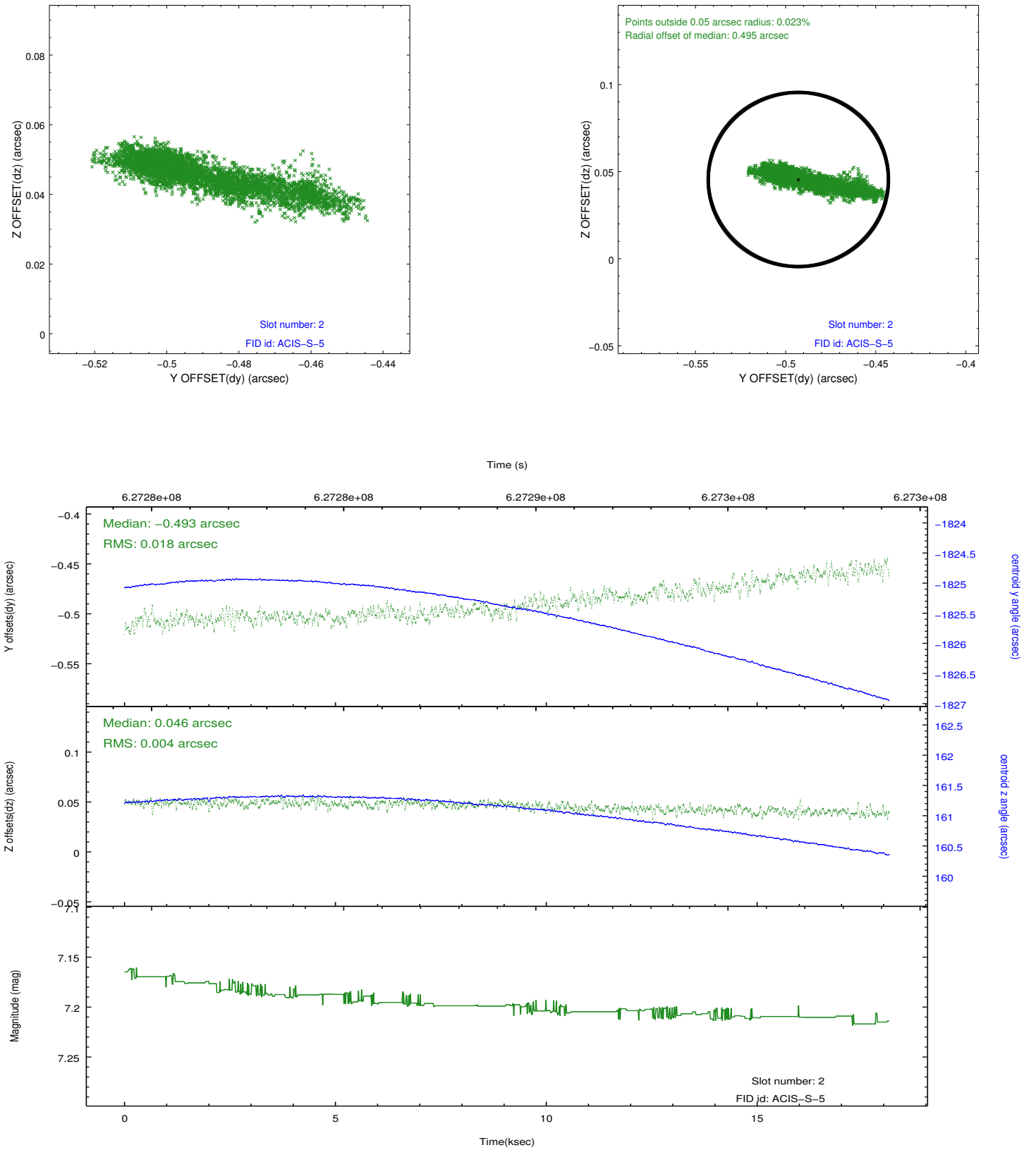
### 2.5.1 Slot 0



## 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)	2017.11.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.948800267458

### A.2 Comments