

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13683 - L2 Version 1  
Chandra X-Ray Center

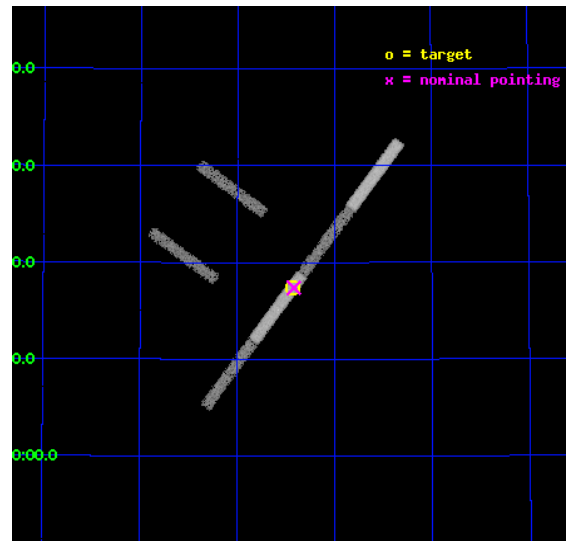
L2 Processing Date : Jun 13 2012

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# 1 Front

seq_num	401369	Sequence number
obs_id	13683	Observation id
title	A Further Drop into Quiescence by the Neutron Star and Possible Hierarchical Triple 4U2129+47	Proposal title
observer	Dr. Michael Nowak	Principal investigator
object	4U 2129+47	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	322.859167	Observer's specified target RA [deg]
dec_targ	47.29	Observer's specified target Dec [deg]
ra_nom	322.85469008634	Nominal RA [deg]
dec_nom	47.289808842447	Nominal Dec [deg]
roll_nom	126.52982364312	Nominal Roll [deg]
revision	1	Processing version of data
ontime	20254.499655008	Sum of GTIs [s]
livetime	19132.772533879	Livetime [s]
ontime2	20254.499655008	Sum of GTIs [s]
ontime3	20254.499655008	Sum of GTIs [s]
ontime5	20254.499655008	Sum of GTIs [s]
ontime6	20254.499655008	Sum of GTIs [s]
ontime7	20254.499655008	Sum of GTIs [s]
ontime8	20254.499655008	Sum of GTIs [s]
l2events	30253	Number of level 2 events

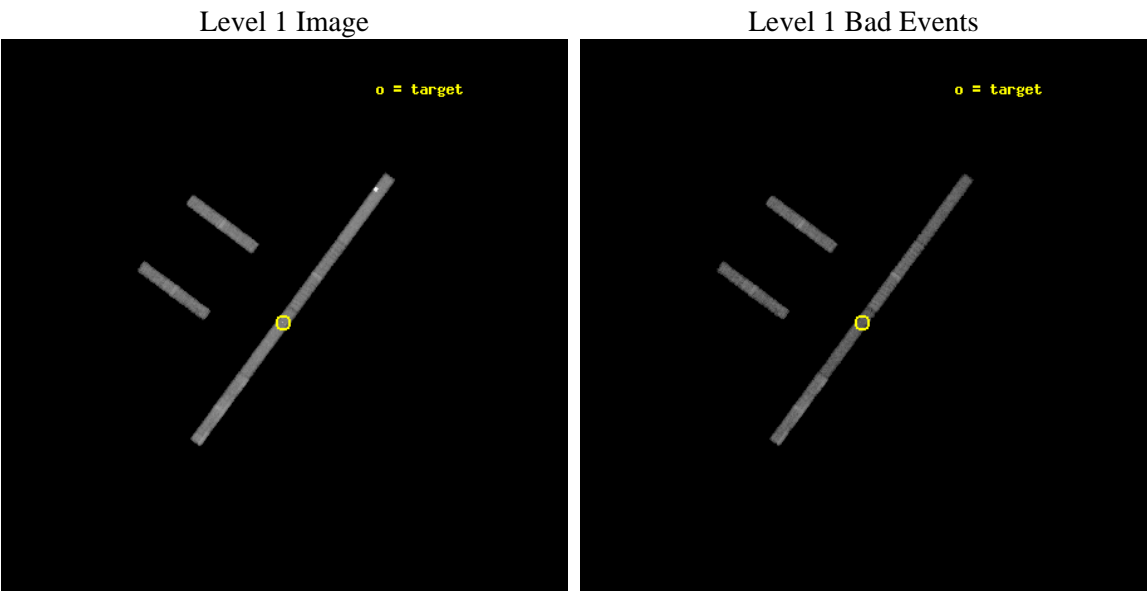




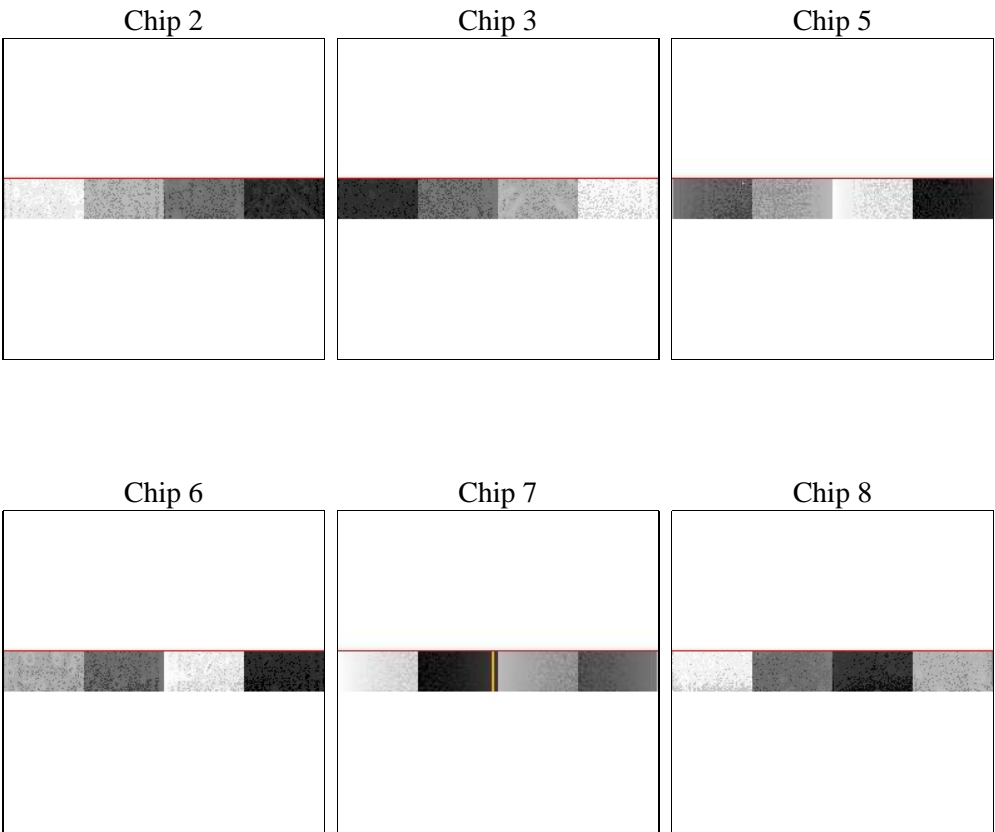
# 2 OBI

## 2.1 OBI

### 2.1.1 Images



### 2.1.2 Bias



Chip 6



Chip 7



Chip 8



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	20254.499655008	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime2	20254.499655008	Sum of GTIs [s]
date	2012-06-13T20:01:45	Date and time of file creation	ontime3	20254.499655008	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	20254.499655008	Sum of GTIs [s]
			ontime6	20254.499655008	Sum of GTIs [s]
			ontime7	20254.499655008	Sum of GTIs [s]
			ontime8	20254.499655008	Sum of GTIs [s]
			l1events	161840	Number of level 1 events

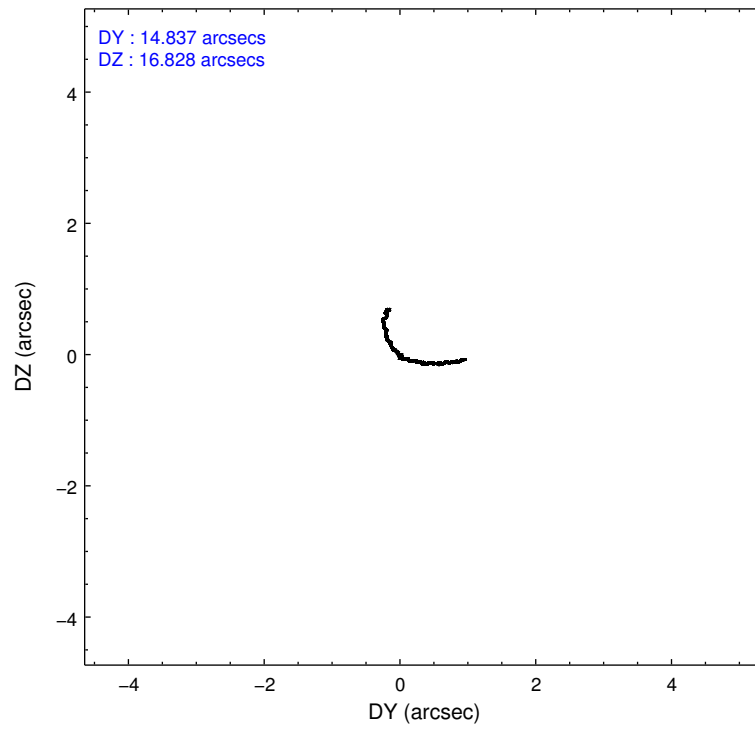
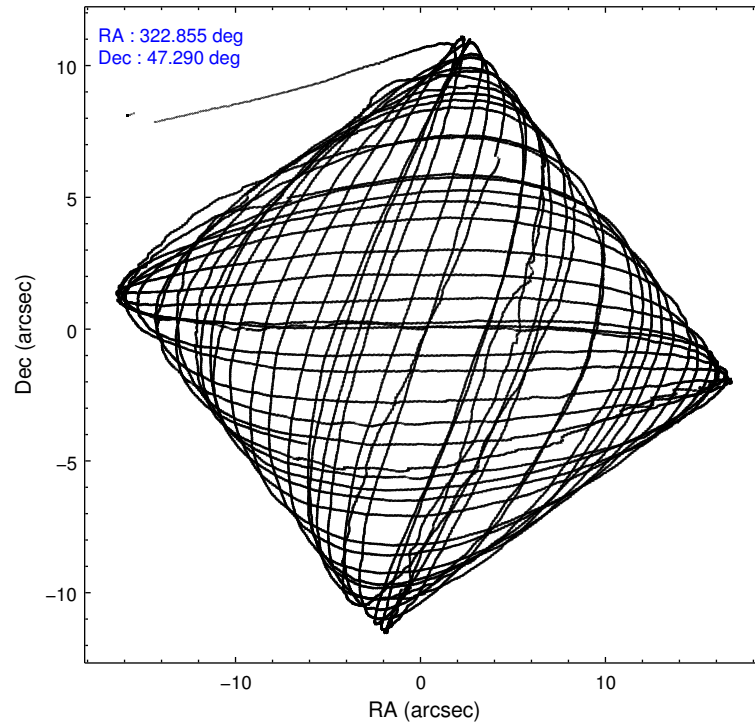
### 2.1.4 Events

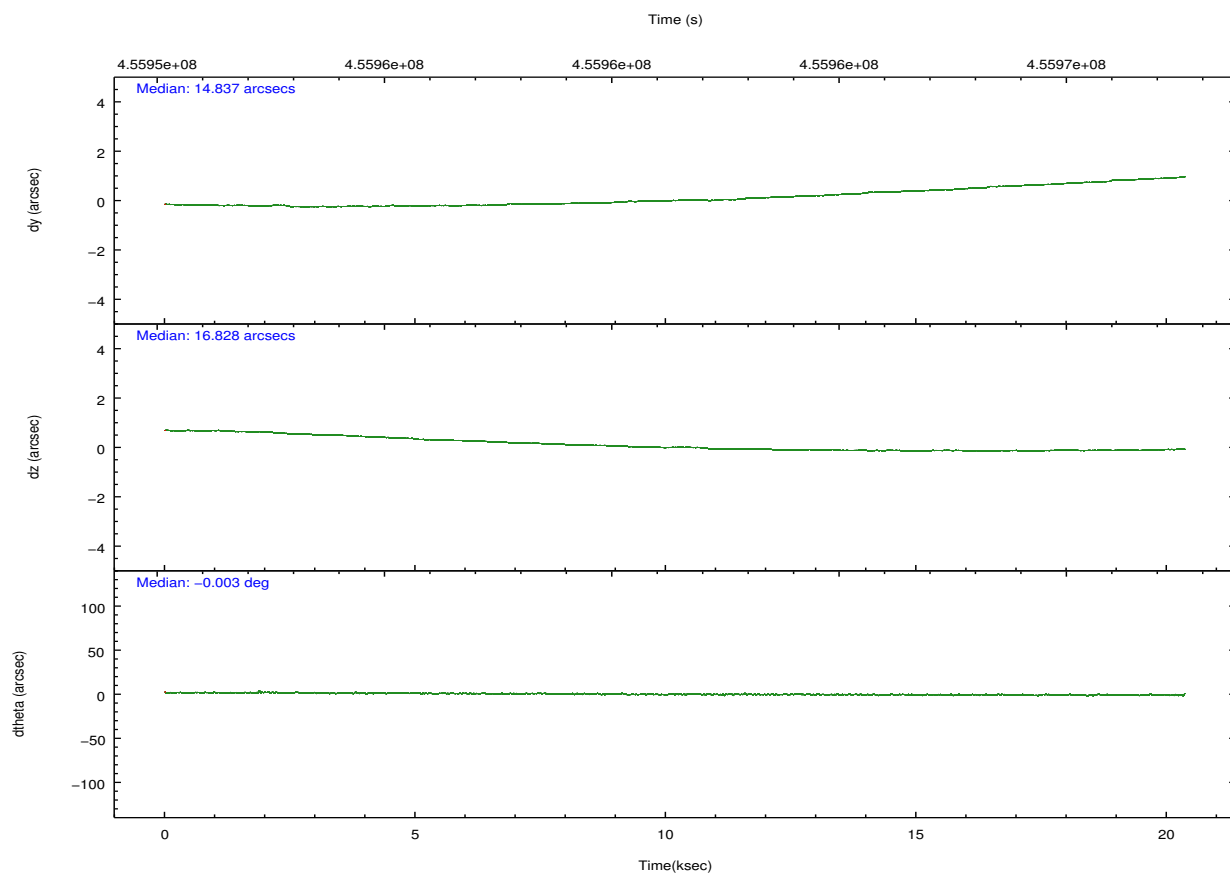
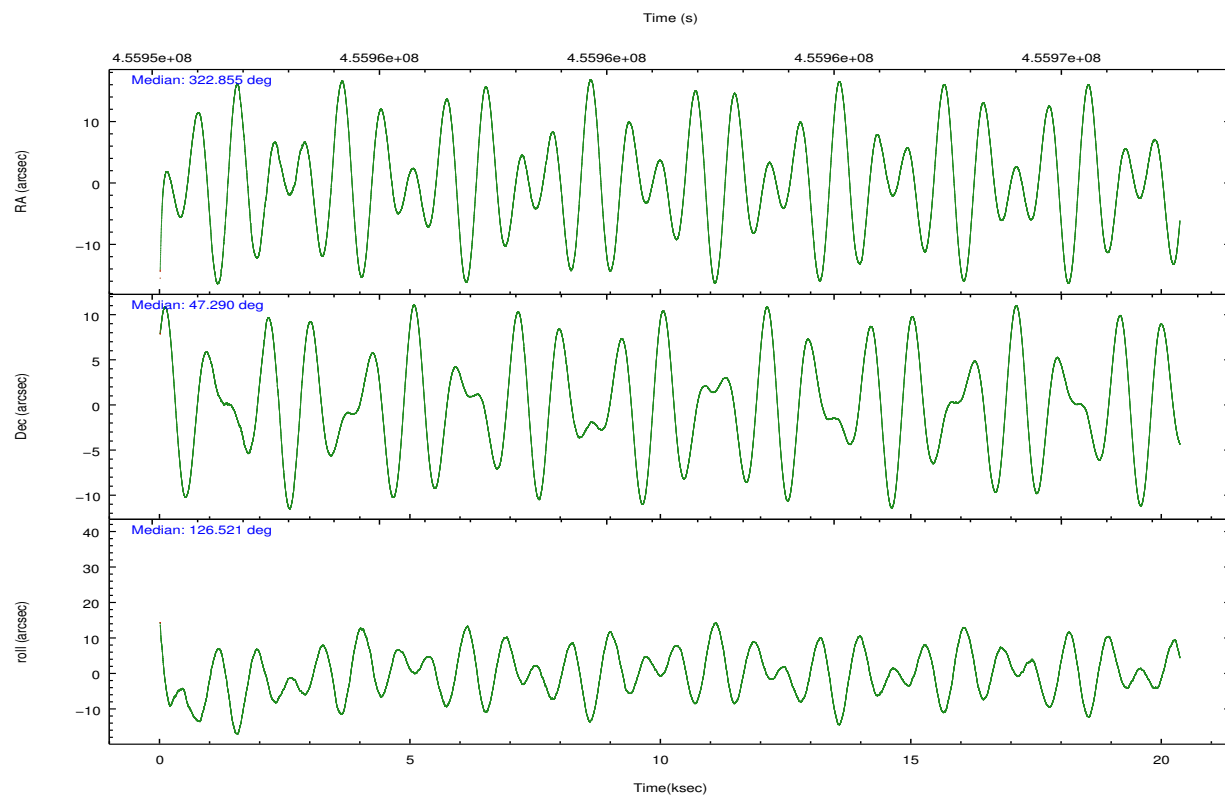
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	21171	17323	52069	19724	22719	28834	grade 0 events	673	577	20841	671	1171	1636
rejected events	18915	15339	13336	17390	12000	22312		3%	3%	40%	3%	5%	5%
rejected %	89%	88%	25%	88%	52%	77%	grade 1 events	7	5	97	9	33	18
								0%	0%	0%	0%	0%	0%
							grade 2 events	495	410	9893	434	2295	1396
								2%	2%	18%	2%	10%	4%
							grade 3 events	340	328	865	416	1206	690
								1%	1%	1%	2%	5%	2%
							grade 4 events	339	309	901	387	1203	656
								1%	1%	1%	1%	5%	2%
							grade 5 events	731	791	2416	801	2291	1087
								3%	4%	4%	4%	10%	3%
							grade 6 events	409	360	6235	426	4845	2144
								1%	2%	11%	2%	21%	7%
							grade 7 events	18177	14543	10821	16580	9675	21207
								85%	83%	20%	84%	42%	73%

## 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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	322.891898	322.8546900863392	CCD I2 on	O1	Y
[deg] Pointing Dec	47.279229	47.2898088424467	CCD I3 on	O2	Y
[deg] Pointing Roll	126.345859	126.5298236431176	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O4	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O5	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	O3	Y
[s] Observation start time (MET)	455951372.184000	455950384.91935	CCD S5 on	N	N
Observation start date	2012-06-13T05:08:26	2012-06-13T04:53:04	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	455971572.184000	455972636.13303	On-chip summing requested	N	N
Observation end date	2012-06-13T10:45:06	2012-06-13T11:03:56	Subarray requested	CUSTOM	1/8
Read mode	TIMED	TIMED	Subarray start row	449	449
			Subarray row count	128	128
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0.7

## 2.3 Aspect



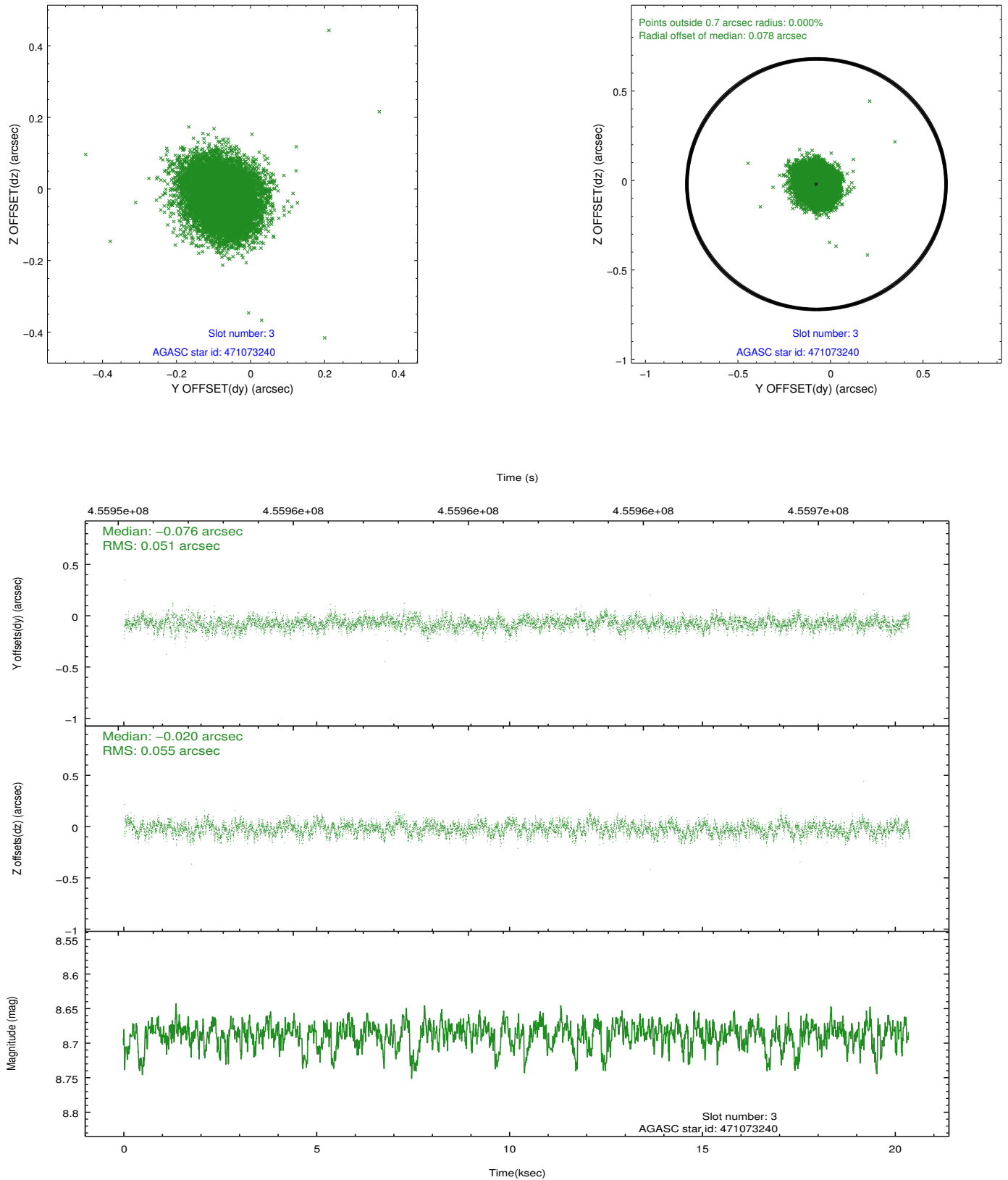


### Slot Statistics

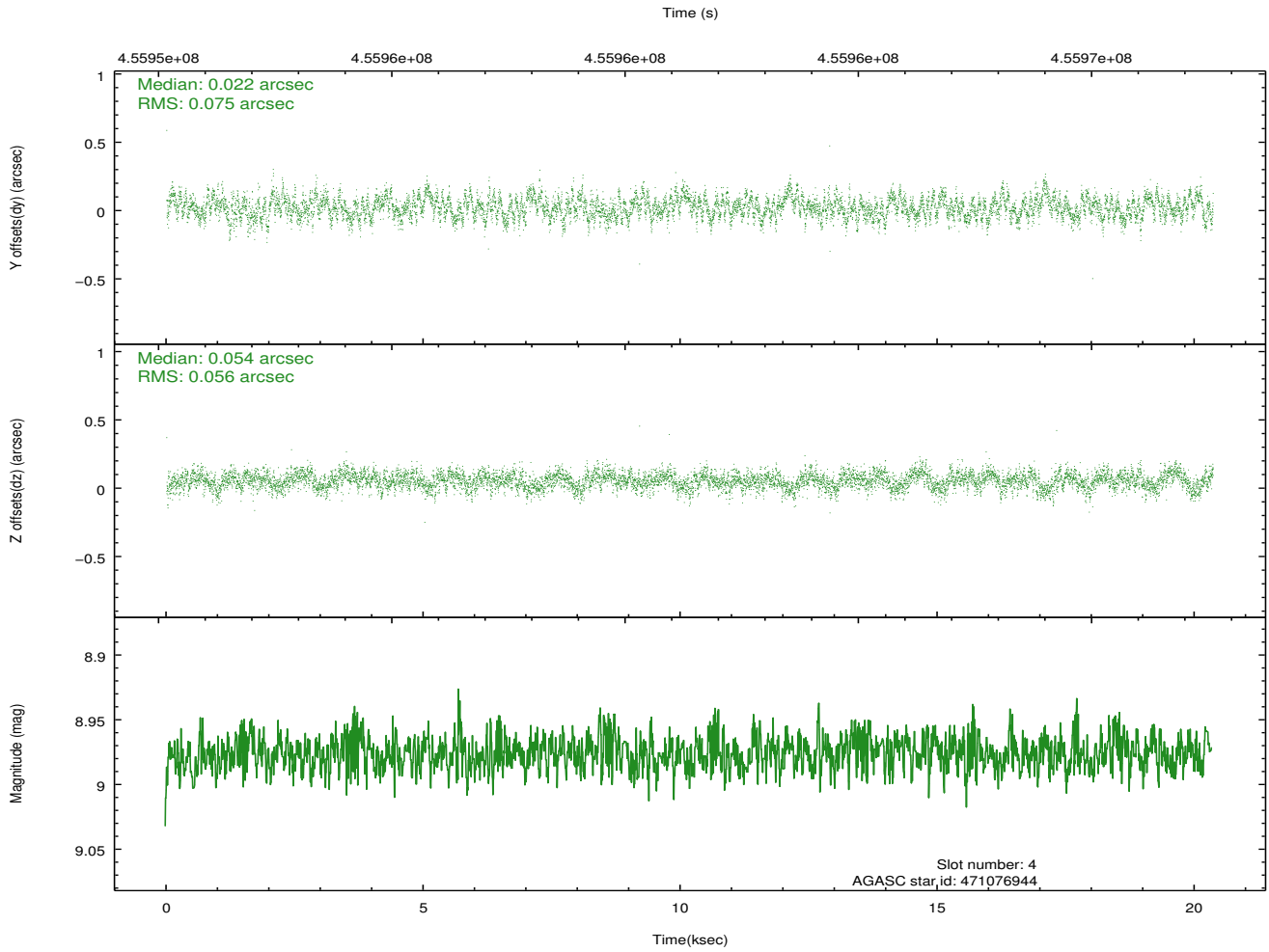
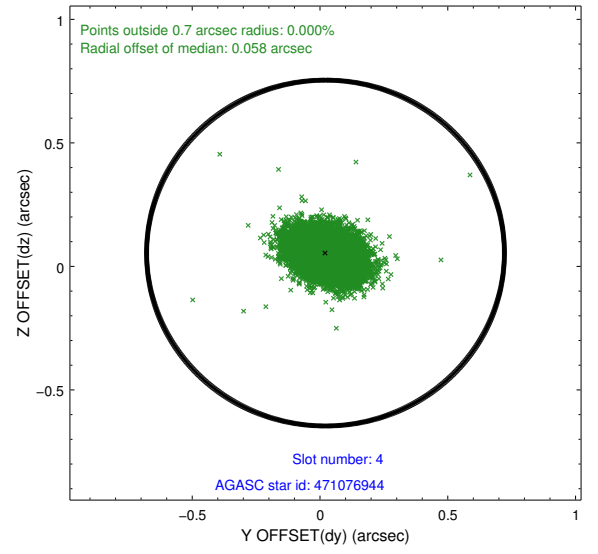
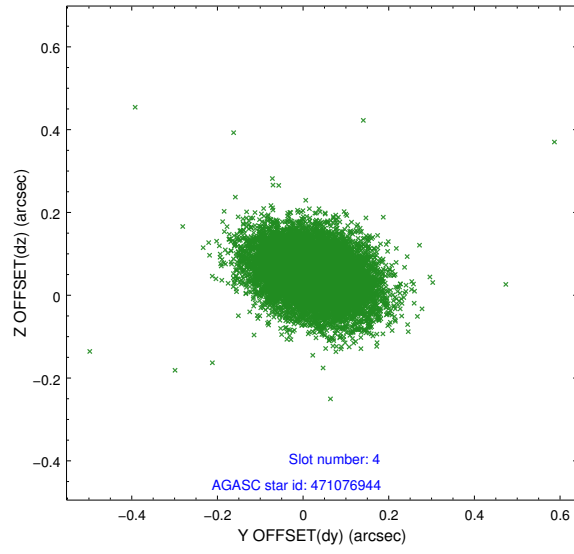
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	4966	-0.099	-0.048	0.017	0.024	0.000000	0.000000	-768.08	-1738.41
1	FID	ACIS-S-4	6.98	4966	0.271	0.061	0.011	0.023	0.000000	0.000000	2145.53	169.92
2	FID	ACIS-S-5	7.02	4965	-0.206	-0.005	0.026	0.040	0.000000	0.000000	-1820.74	163.83
3	GUIDE	471073240	8.69	9923	-0.076	-0.020	0.080	0.128	322.948313	47.442940	393.71	-459.83
4	GUIDE	471076944	8.98	9925	0.022	0.054	0.098	0.161	323.173612	47.958519	1568.78	-1997.64
5	GUIDE	471091056	8.83	9925	-0.047	-0.105	0.117	0.184	323.297085	47.790378	904.19	-1881.41
6	GUIDE	471093808	9.15	9926	-0.077	-0.171	0.097	0.156	322.810499	47.588788	1015.31	-501.34
7	GUIDE	471222144	8.98	9877	0.182	0.245	0.101	0.165	323.817294	47.572573	-469.66	-2443.70

## 2.4 Star Slots

### 2.4.1 Slot 3

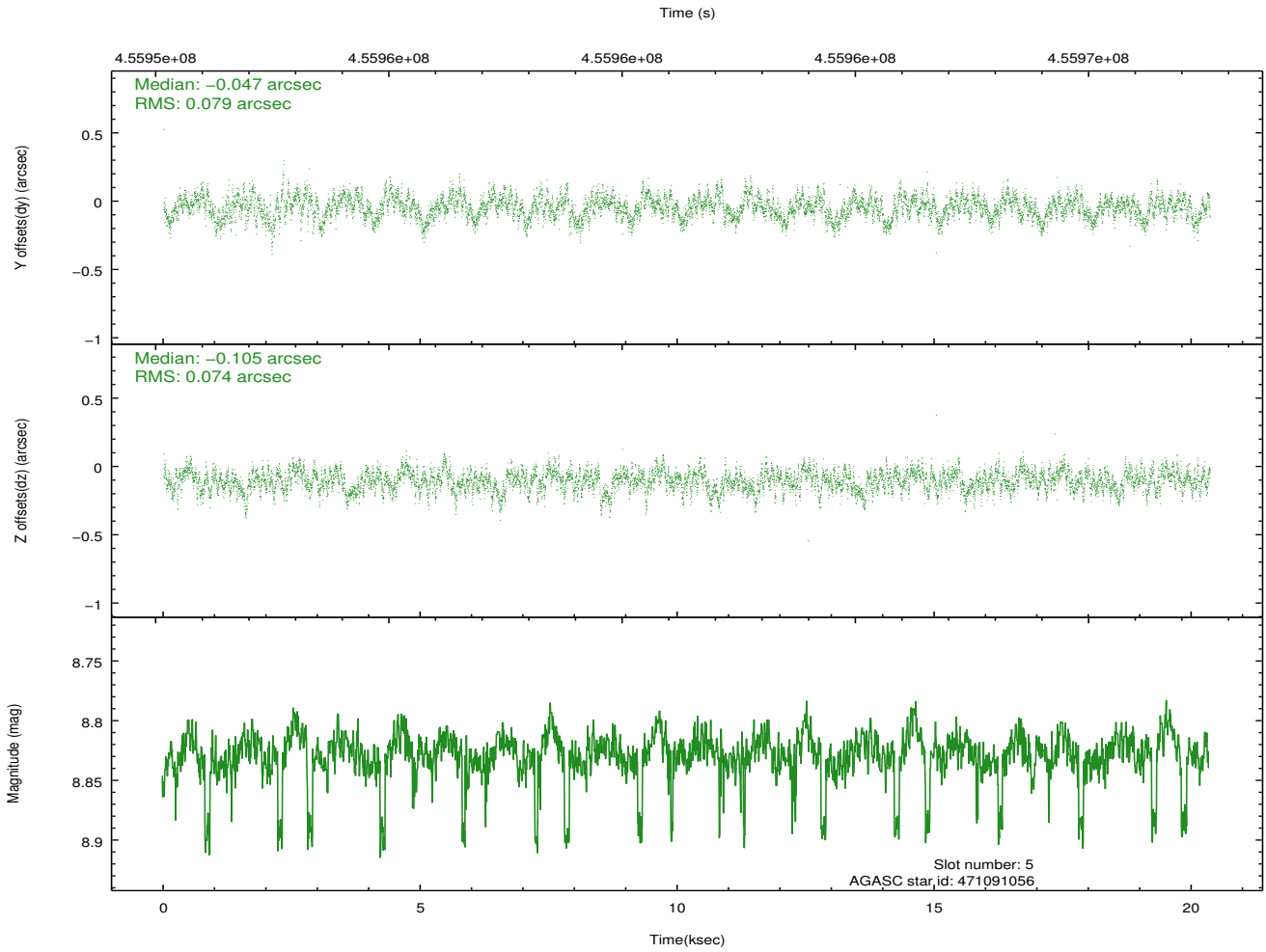
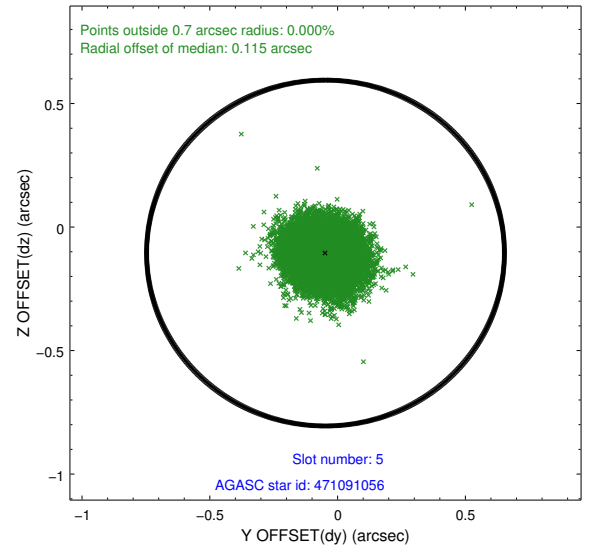
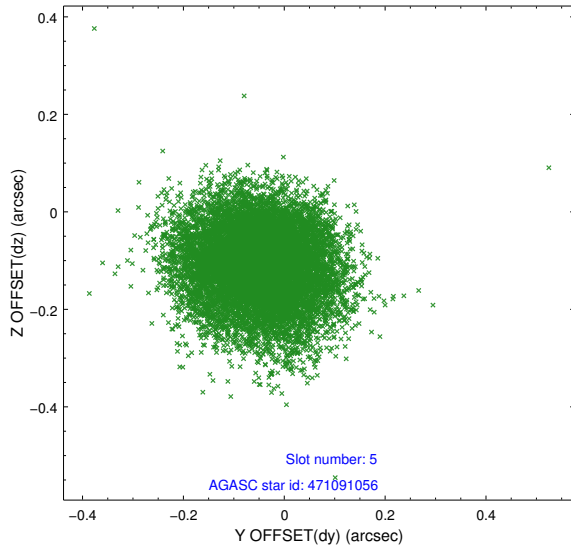


## 2.4.2 Slot 4

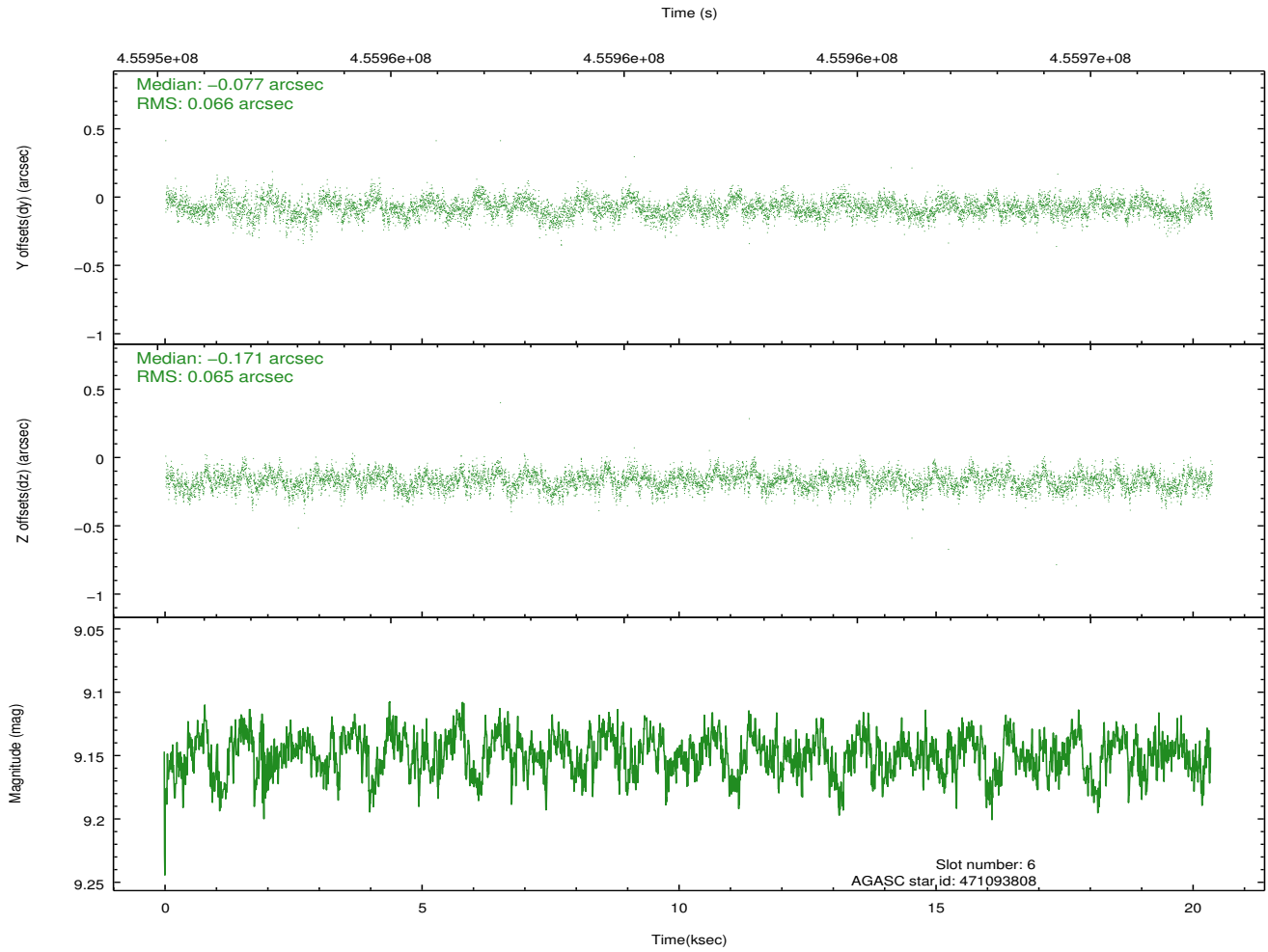
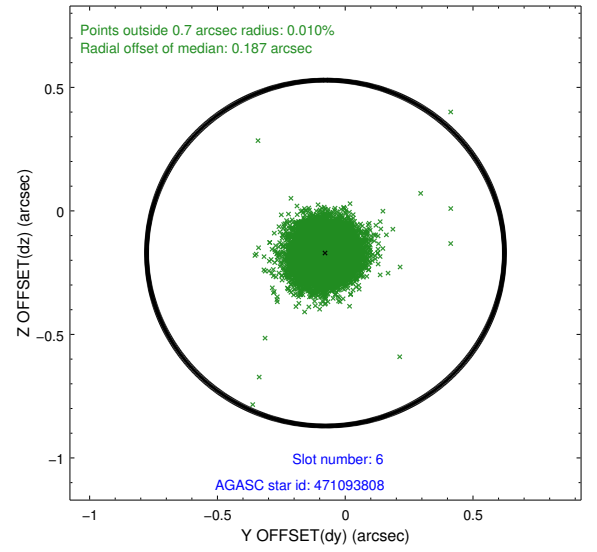
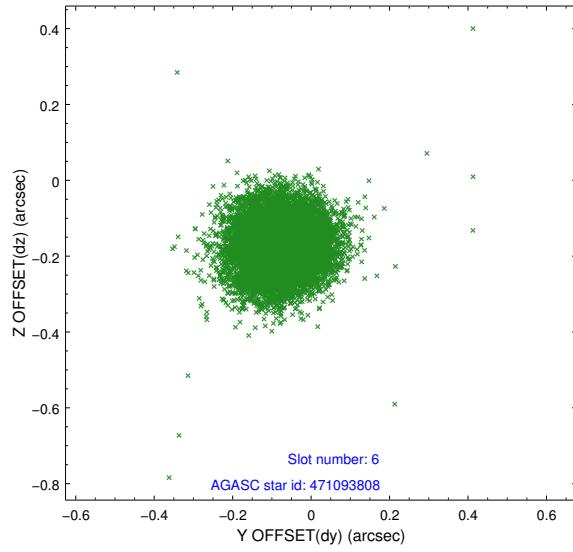




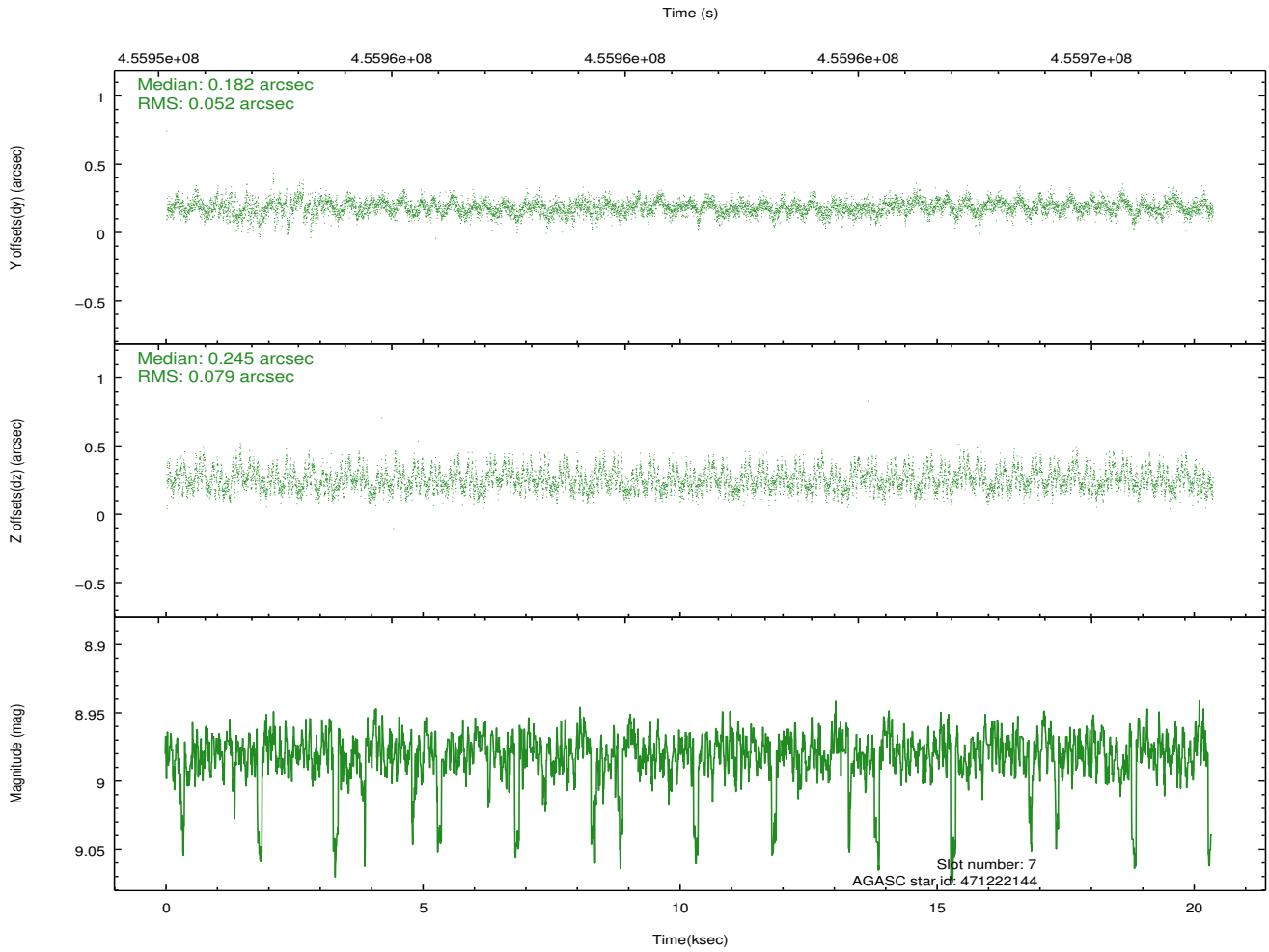
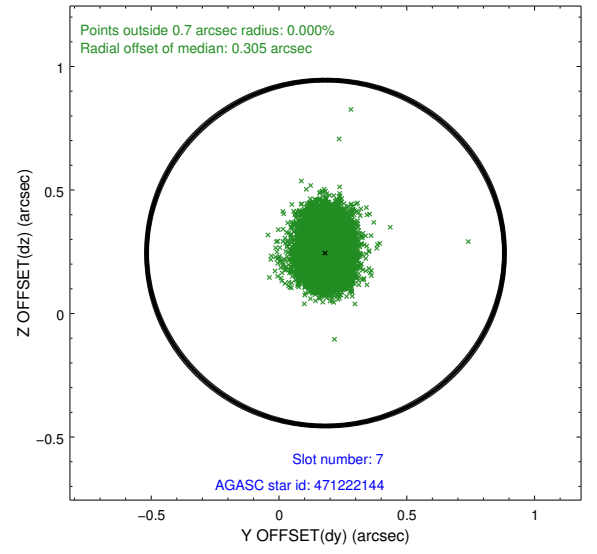
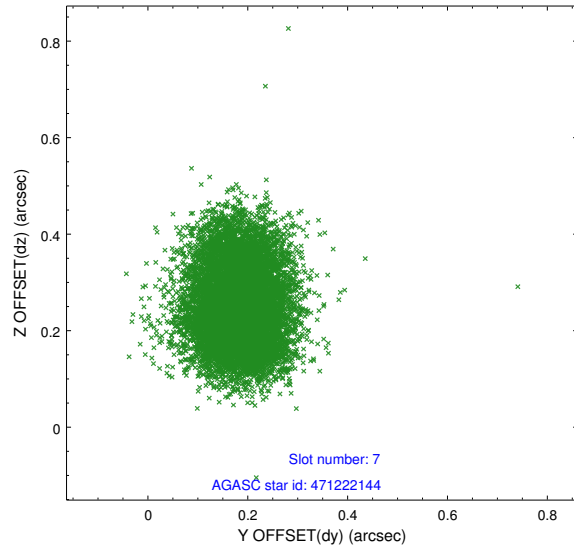
### 2.4.3 Slot 5



## 2.4.4 Slot 6

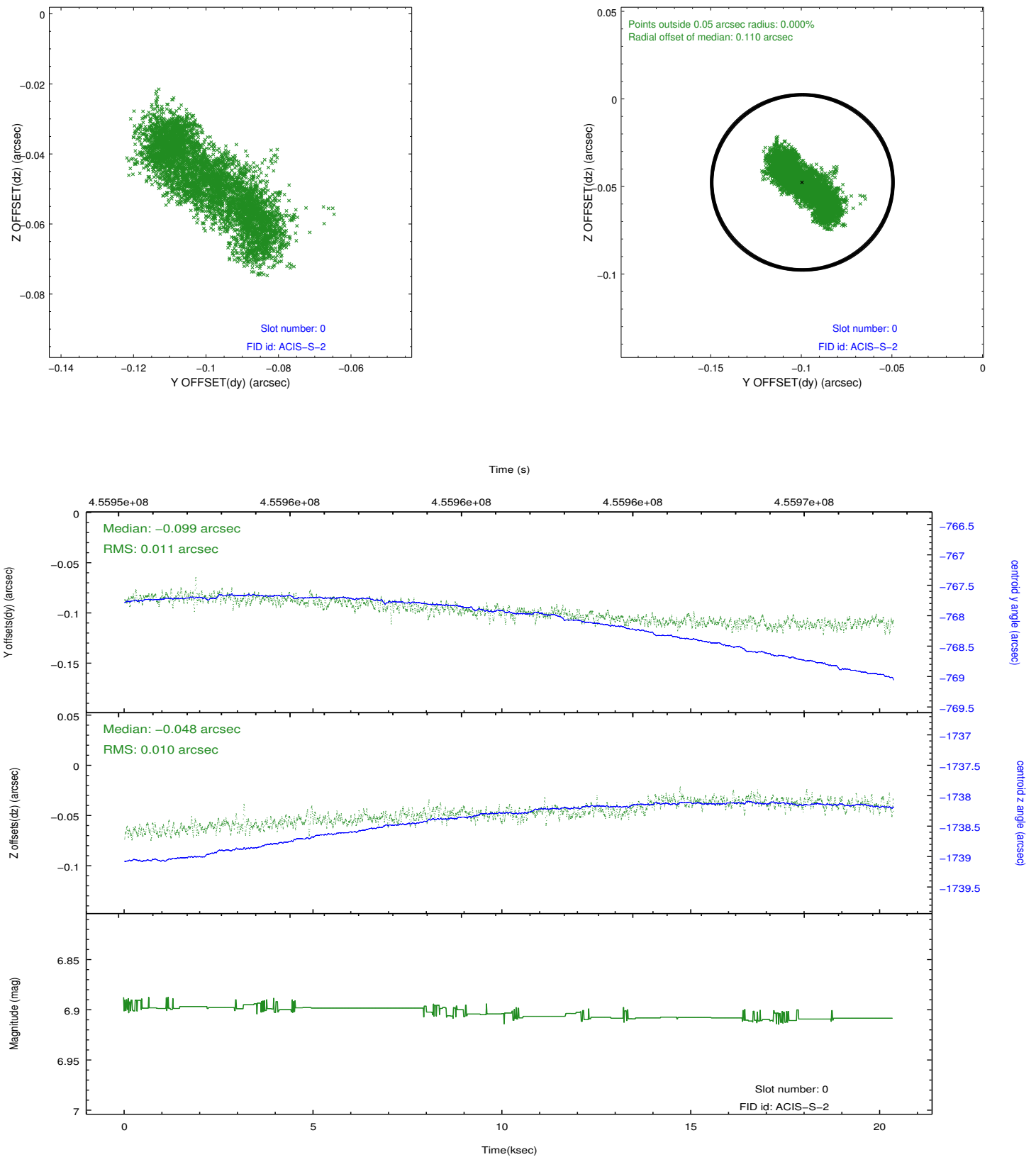


## 2.4.5 Slot 7

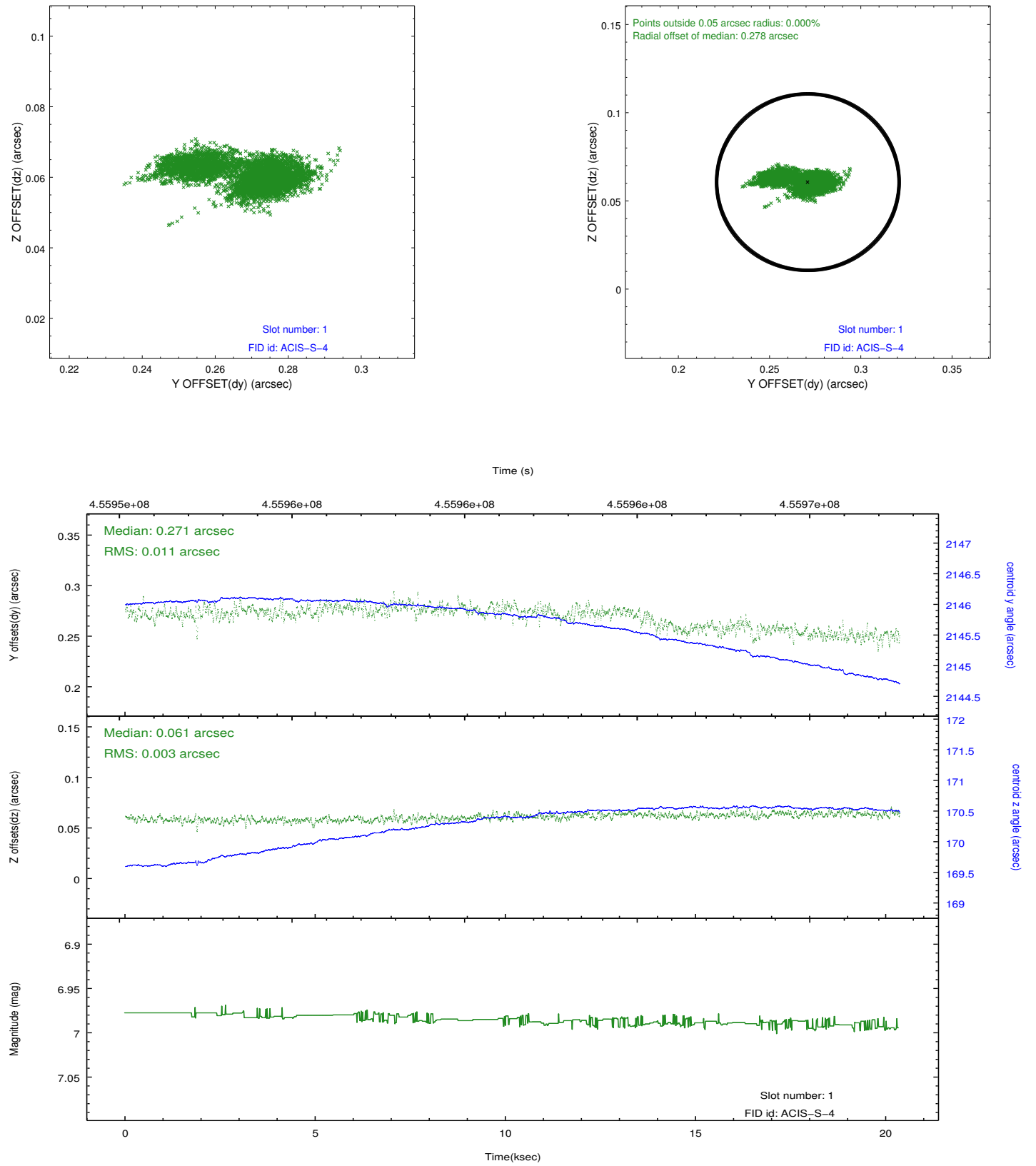


## 2.5 FID Slots

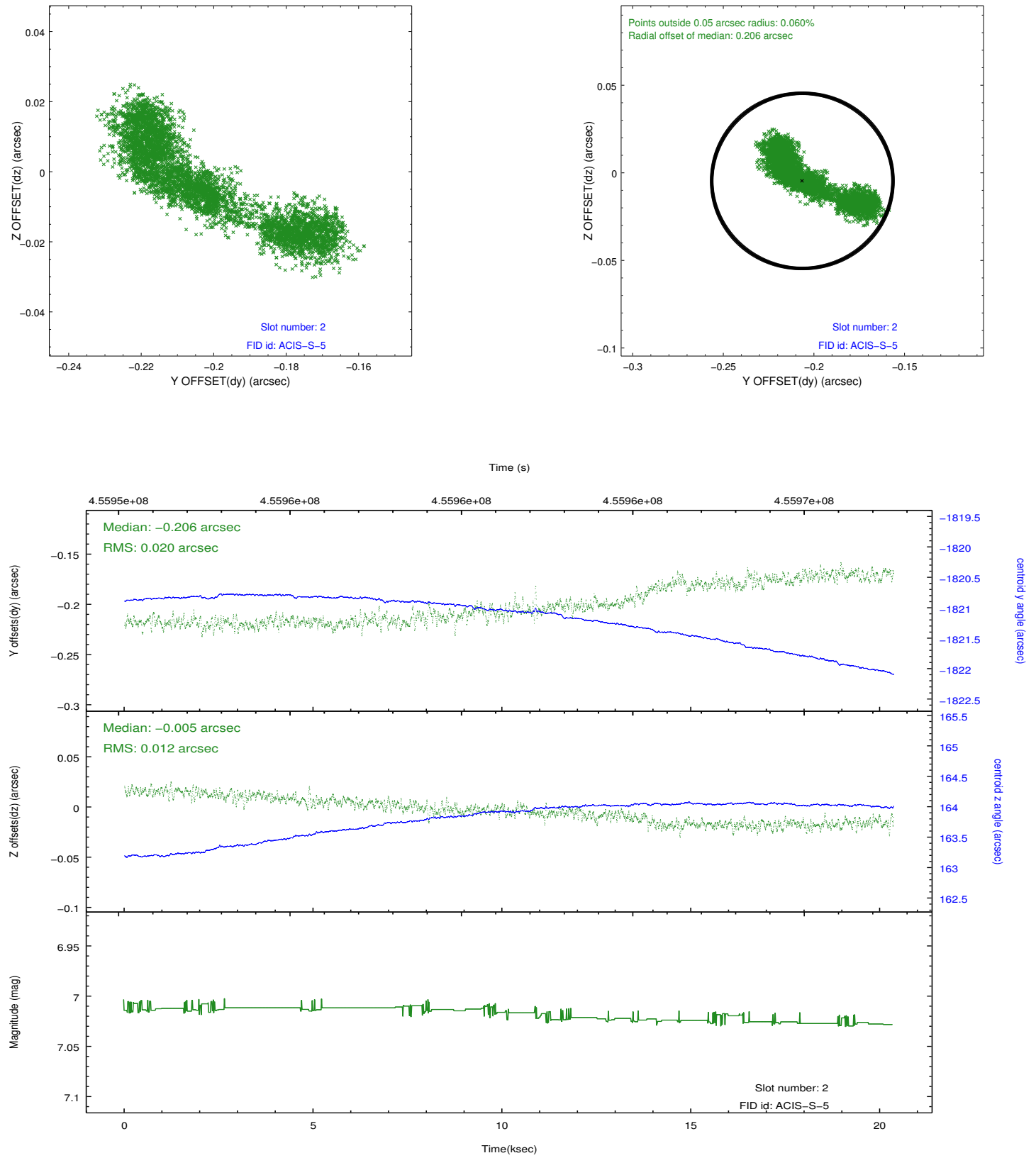
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.254499655008

### A.2 Comments