

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17036 - L2 Version 1  
Chandra X-Ray Center

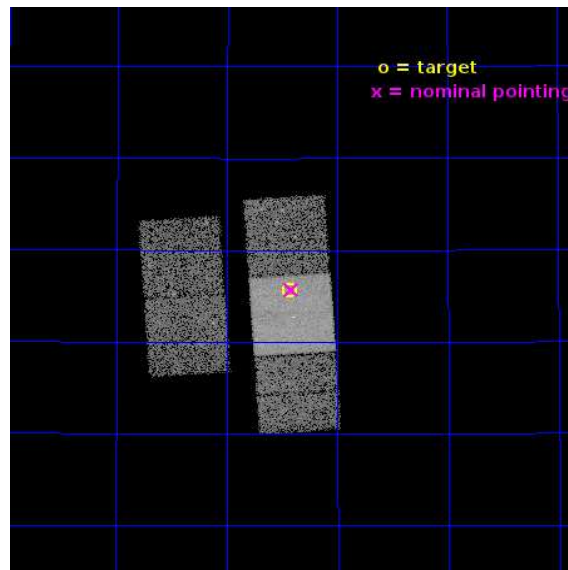
L2 Processing Date : Dec 7 2015

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# 1 Front

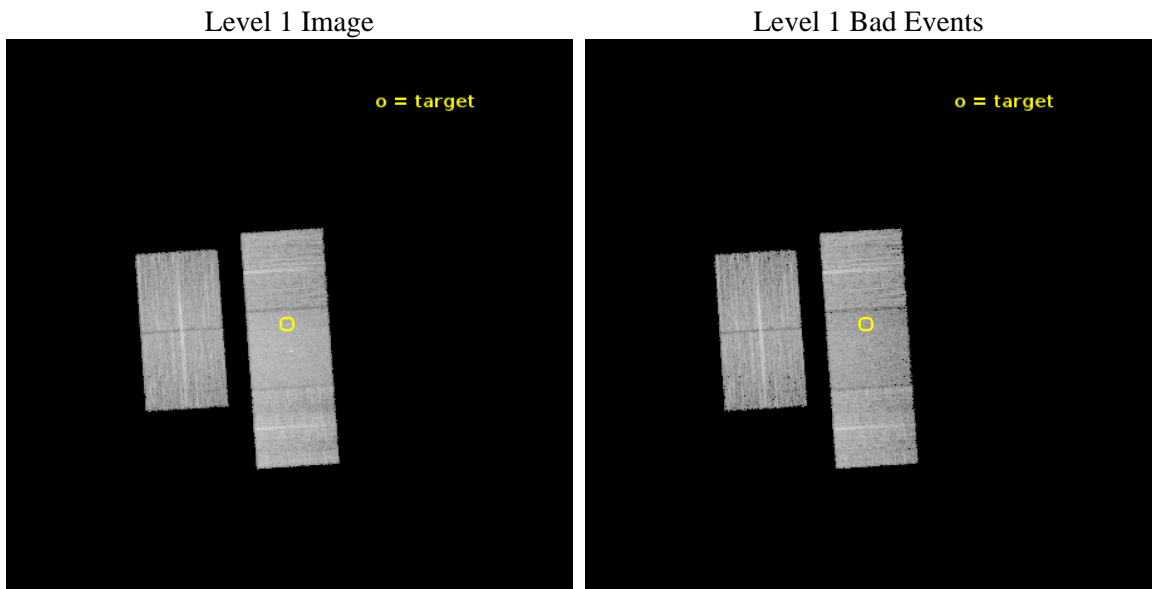
seq_num	703040	Sequence number
obs_id	17036	Observation id
title	Probing the Growth of Massive Black Holes in Dwarf Galaxies with Chandra and HST	Proposal title
observer	Dr. Amy Reines	Principal investigator
object	J085125.81+393541.7	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	132.8575	Observer's specified target RA [deg]
dec_targ	39.594917	Observer's specified target Dec [deg]
ra_nom	132.85438430234	Nominal RA [deg]
dec_nom	39.595033169499	Nominal Dec [deg]
roll_nom	86.158633268316	Nominal Roll [deg]
revision	1	Processing version of data
ontime	13057.200100541	Sum of GTIs [s]
livetime	12886.598168657	Livetime [s]
ontime2	13057.200100541	Sum of GTIs [s]
ontime3	13057.200100541	Sum of GTIs [s]
ontime6	13057.200100541	Sum of GTIs [s]
ontime7	13057.200100541	Sum of GTIs [s]
ontime8	13057.200100541	Sum of GTIs [s]
l2events	68204	Number of level 2 events



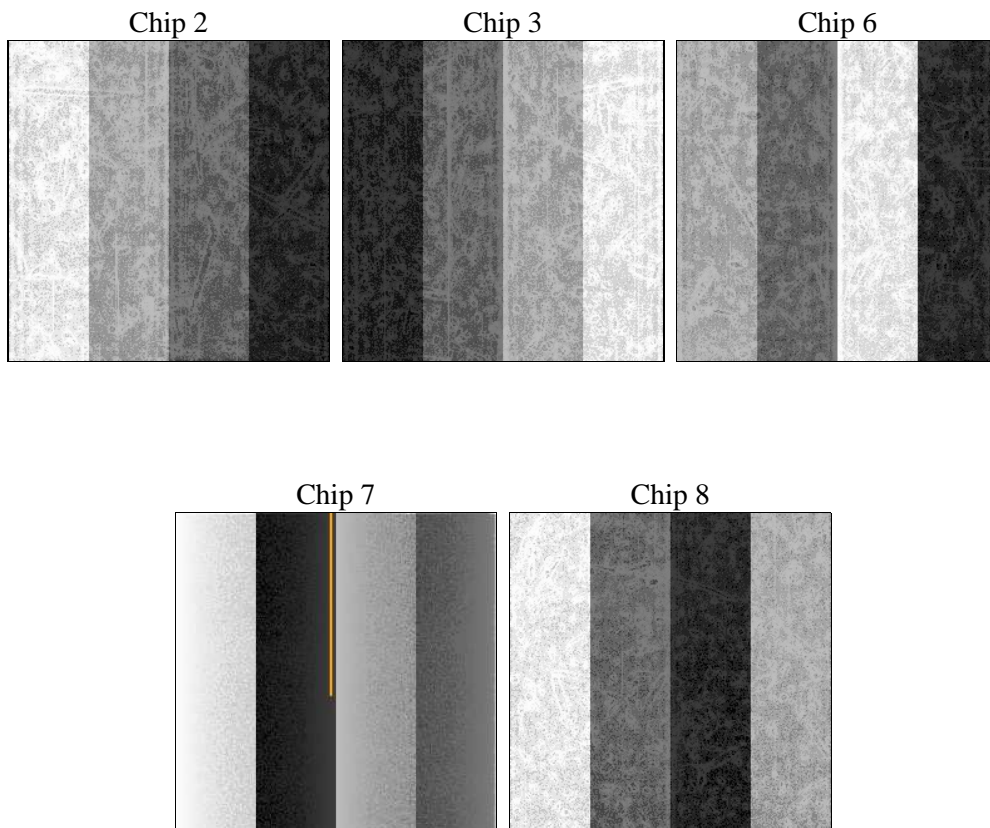
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	3	Obi number	sched_exp_time	13000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.2.1	Processing system revision	ontime	13057.200100541	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime2	13057.200100541	Sum of GTIs [s]
date	2015-12-08T03:37:43	Date and time of file creation	ontime3	13057.200100541	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	13057.200100541	Sum of GTIs [s]
			ontime7	13057.200100541	Sum of GTIs [s]
			ontime8	13057.200100541	Sum of GTIs [s]
			l1events	409300	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	70707	71816	74630	96258	95889
rejected events	63114	64206	66272	55414	72882
rejected %	89%	89%	88%	57%	76%

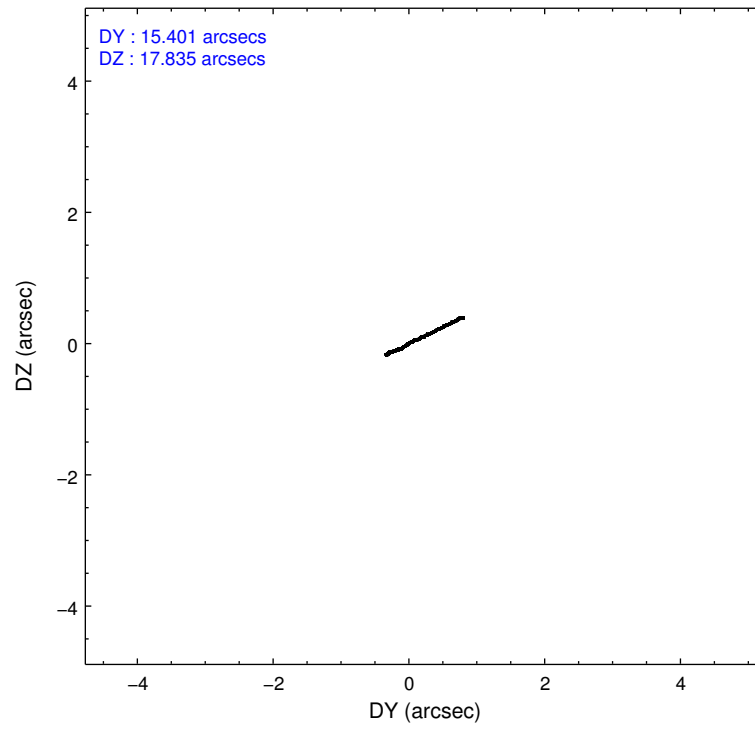
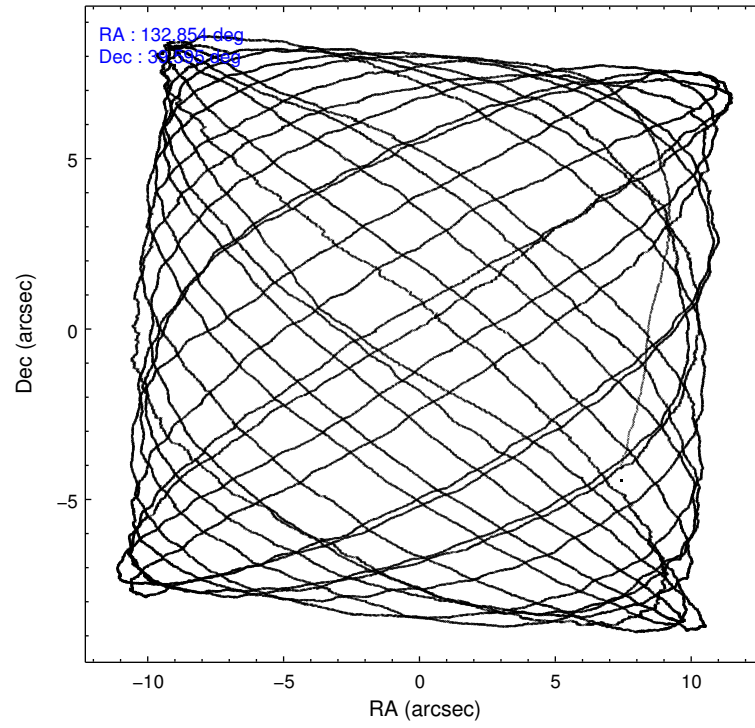
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	2731	2658	2664	3401	6250
	3%	3%	3%	3%	6%
grade 1 events	41	36	40	90	68
	0%	0%	0%	0%	0%
grade 2 events	1786	1632	1980	8629	5716
	2%	2%	2%	8%	5%
grade 3 events	759	811	784	2978	2293
	1%	1%	1%	3%	2%
grade 4 events	771	824	766	2978	2074
	1%	1%	1%	3%	2%
grade 5 events	2719	3522	3454	8808	5179
	3%	4%	4%	9%	5%
grade 6 events	1551	1691	2166	22876	6681
	2%	2%	2%	23%	6%
grade 7 events	60349	60642	62776	46498	67628
	85%	84%	84%	48%	70%

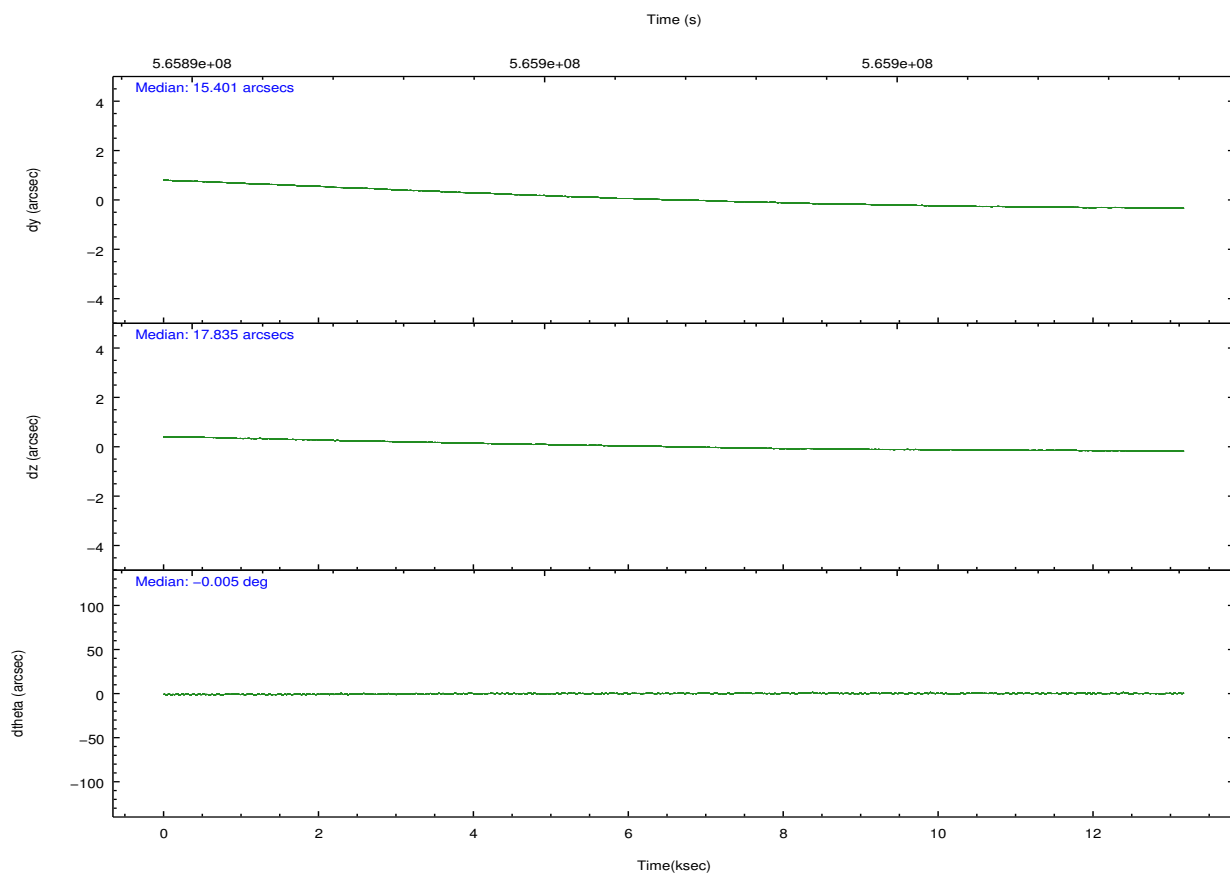
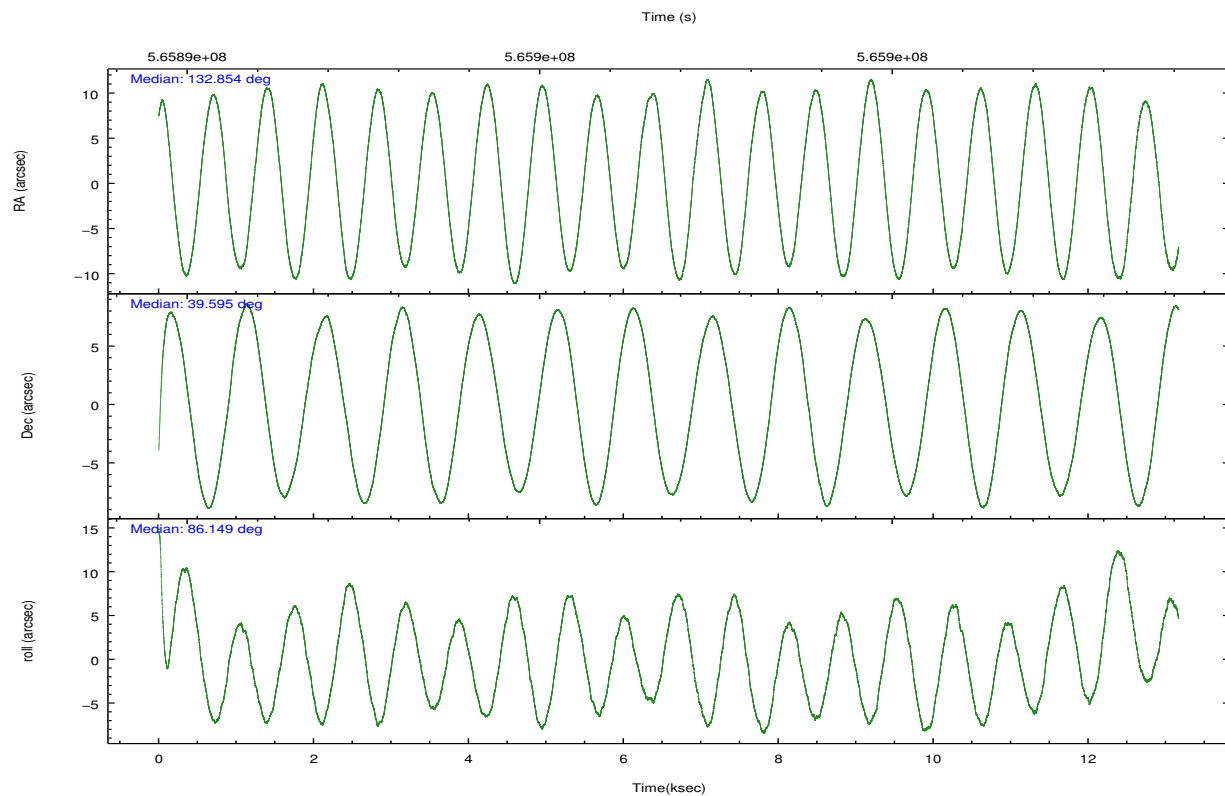


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	132.870550	132.8543843023365	CCD I2 on	Y	Y
[deg] Pointing Dec	39.570538	39.59503316949892	CCD I3 on	Y	Y
[deg] Pointing Roll	85.991683	86.15863326831621	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	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	O1	Y
[s] Observation start time (MET)	565890412.184000	565889149.3705	CCD S5 on	N	N
Observation start date	2015-12-07T15:45:44	2015-12-07T15:25:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	565903412.184000	565904022.63384	On-chip summing requested	N	N
Observation end date	2015-12-07T19:22:24	2015-12-07T19:33:42	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



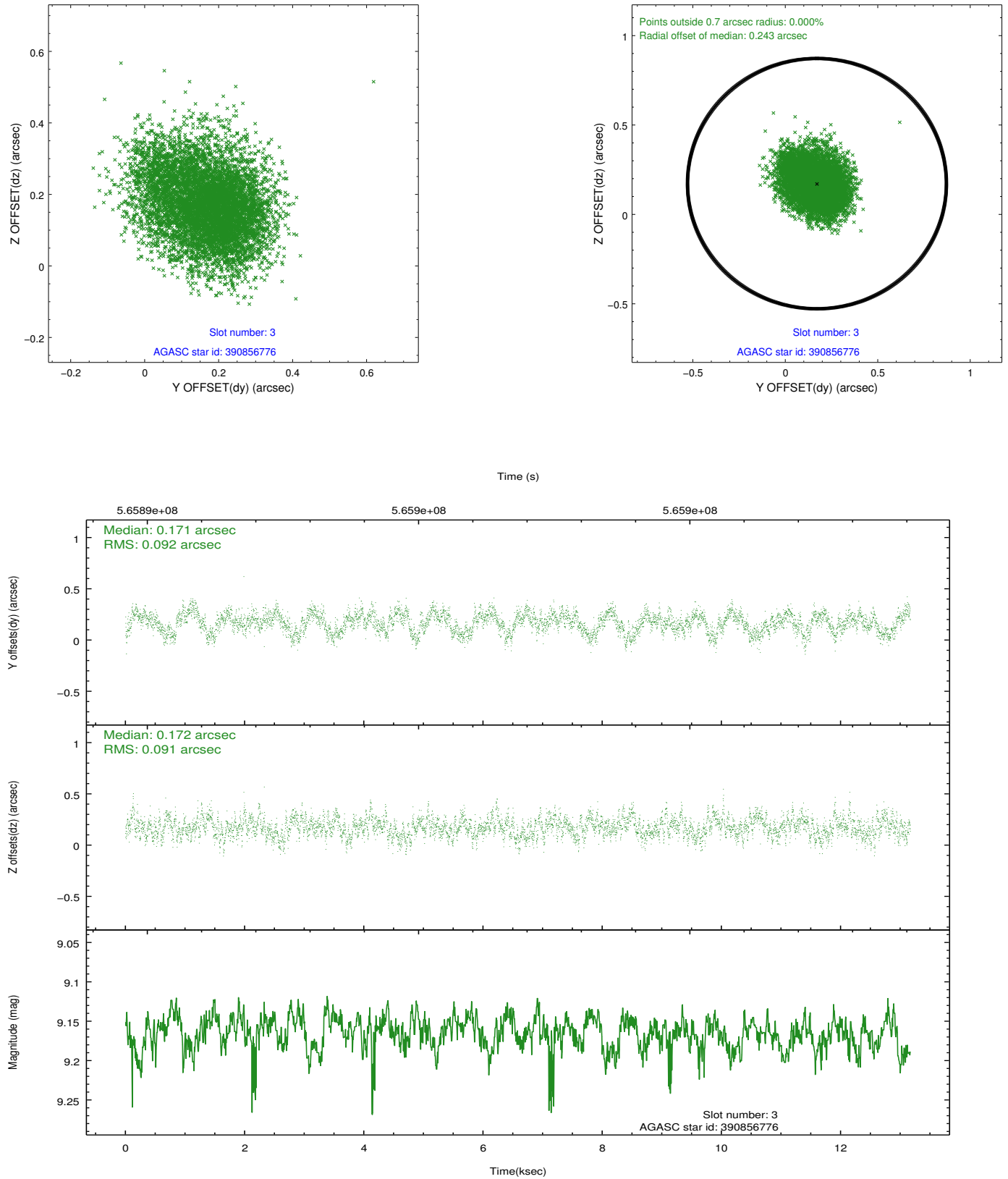


### Slot Statistics

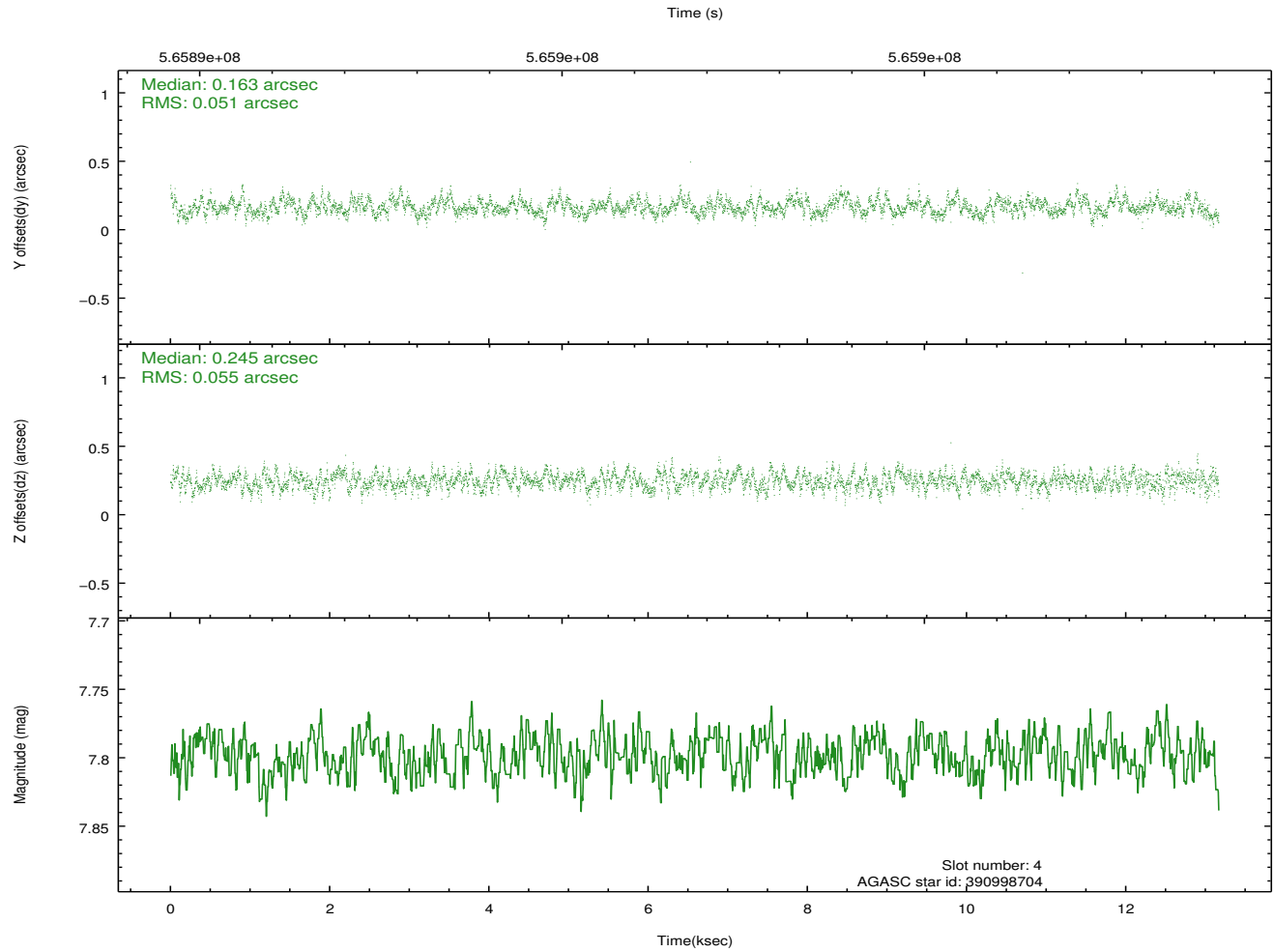
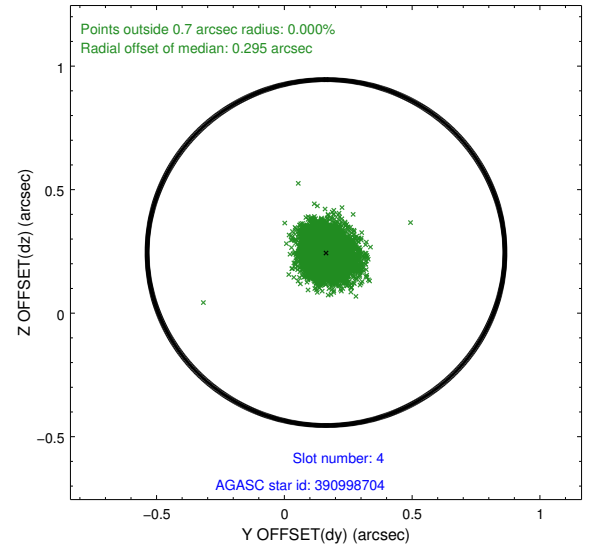
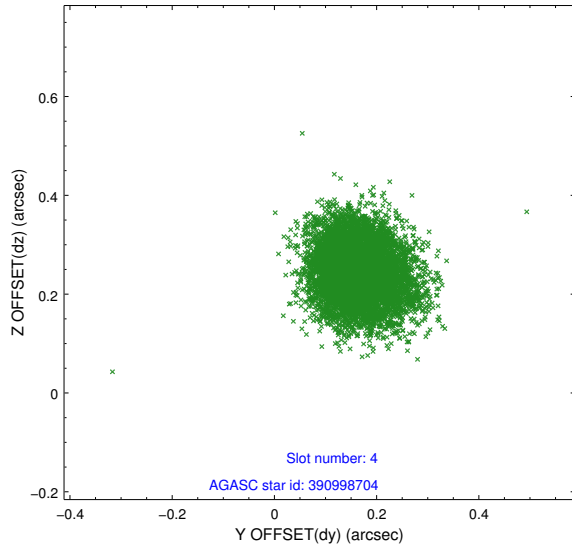
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.24	3212	0.061	-0.049	0.007	0.012	0.000000	0.000000	927.62	-1734.96
1	FID		ACIS-S-4	7.25	3212	0.332	0.010	0.007	0.012	0.000000	0.000000	2145.49	168.88
2	FID		ACIS-S-5	7.26	3212	-0.420	0.052	0.006	0.011	0.000000	0.000000	-1821.27	162.92
3	GUIDE	used	390856776	9.16	6420	0.171	0.172	0.140	0.221	133.191978	39.391478	-579.16	-937.19
4	GUIDE	used	390998704	7.80	6423	0.163	0.245	0.081	0.127	133.538735	39.254759	-996.27	-1936.62
5	GUIDE	used	391394592	7.72	6423	-0.180	0.012	0.087	0.148	133.625500	40.133273	2172.54	-1931.40
6	GUIDE	used	390869280	7.57	6423	-0.391	-0.809	0.093	0.153	132.005592	39.597446	-60.06	2399.99
7	GUIDE	used	390868744	8.92	6419	0.237	0.380	0.116	0.187	132.965320	38.905191	-2371.05	-430.96

## 2.4 Star Slots

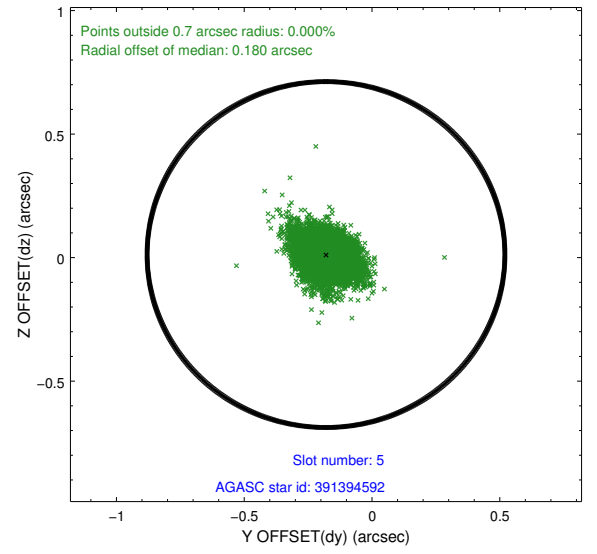
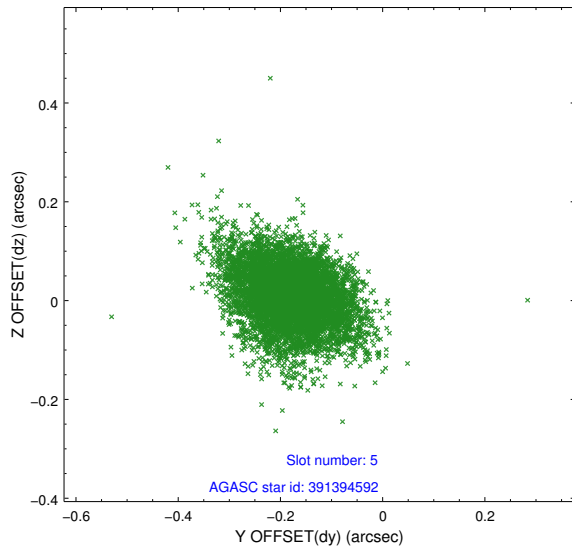
### 2.4.1 Slot 3



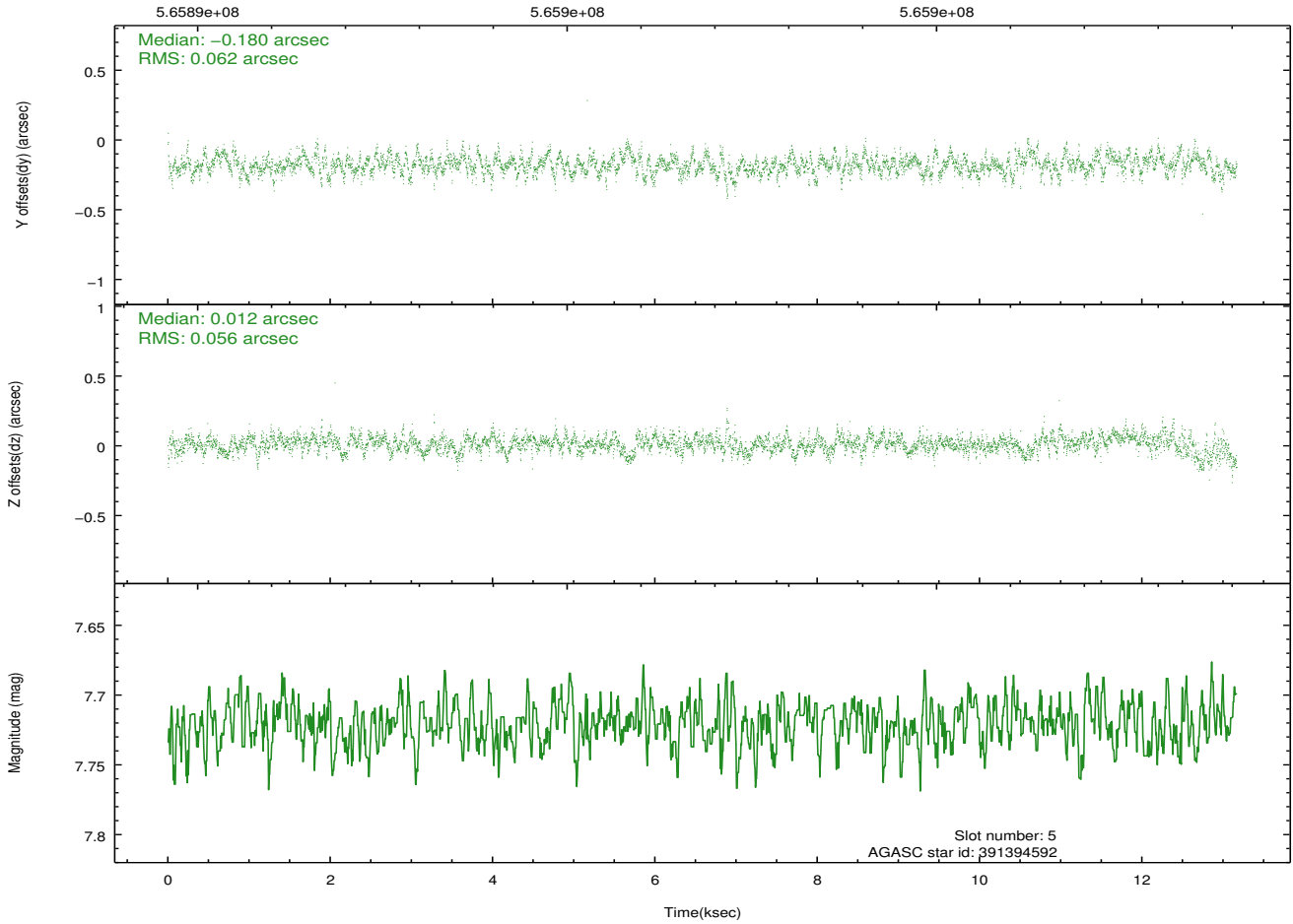
## 2.4.2 Slot 4



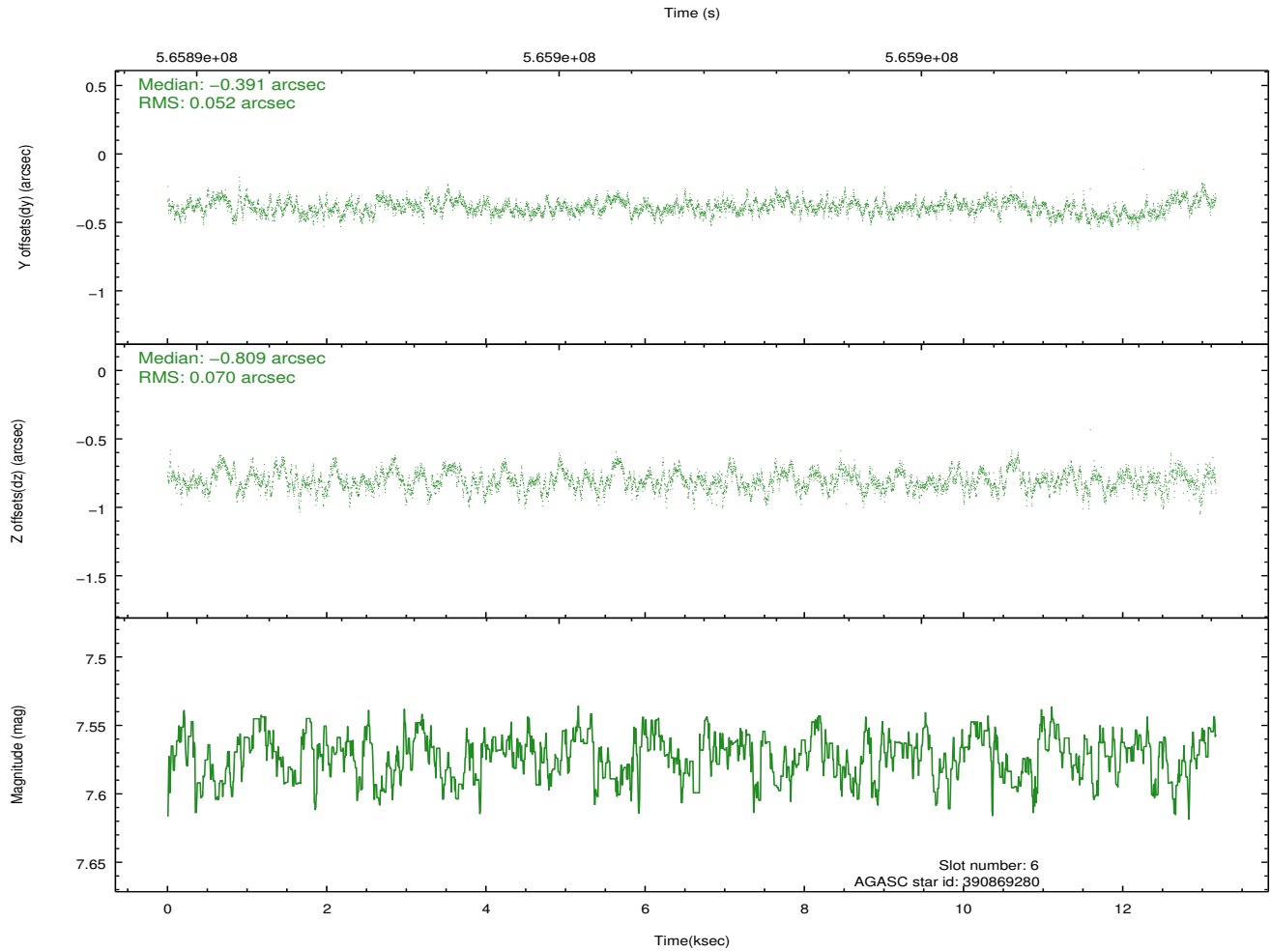
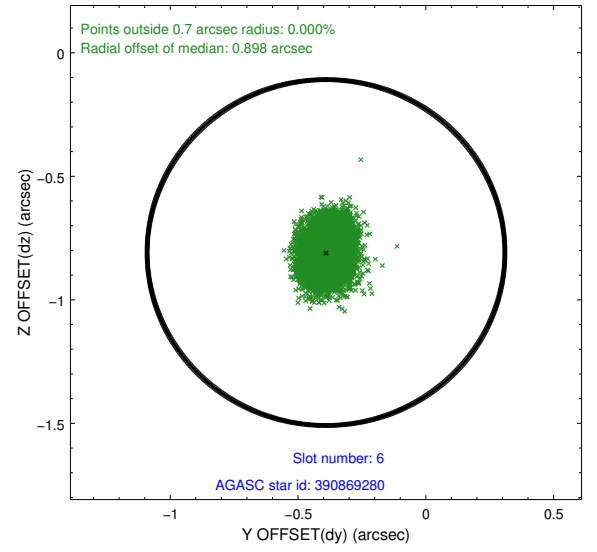
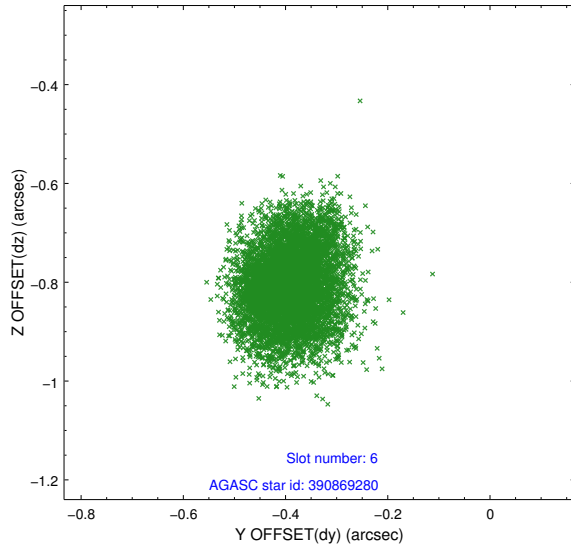
### 2.4.3 Slot 5



Time (s)

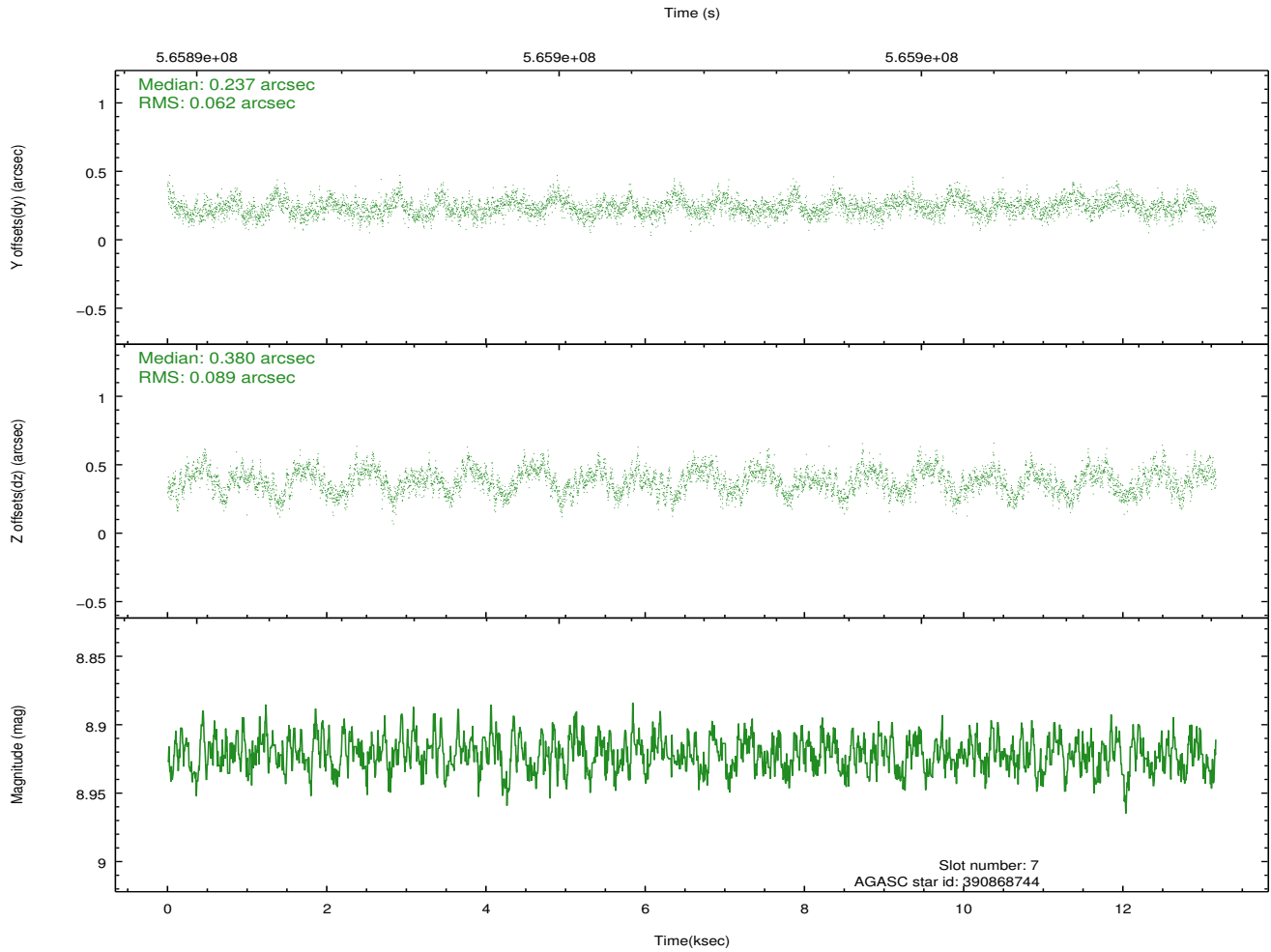
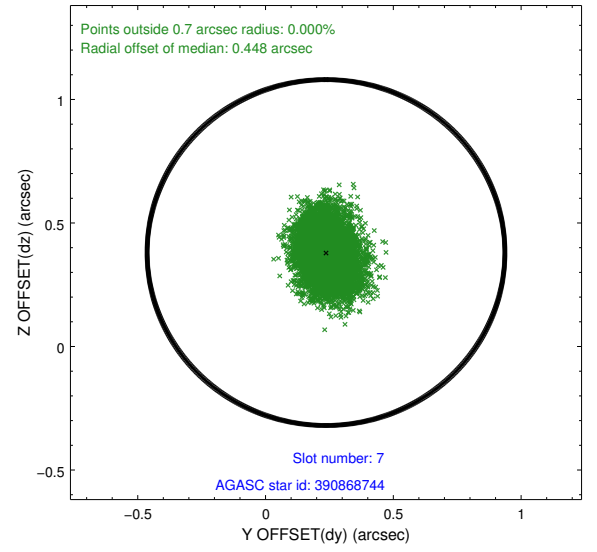
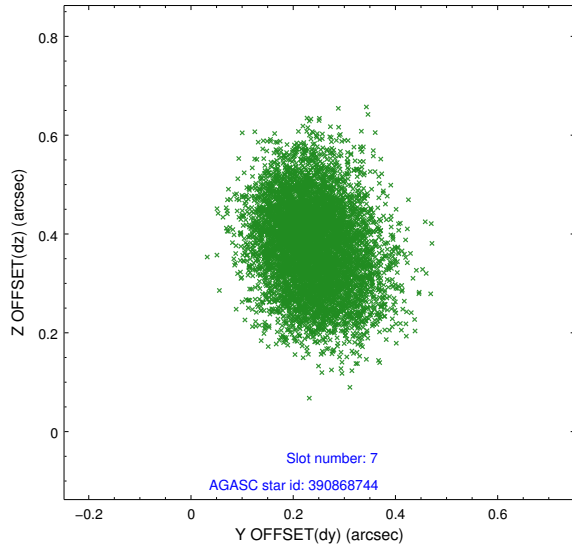


## 2.4.4 Slot 6



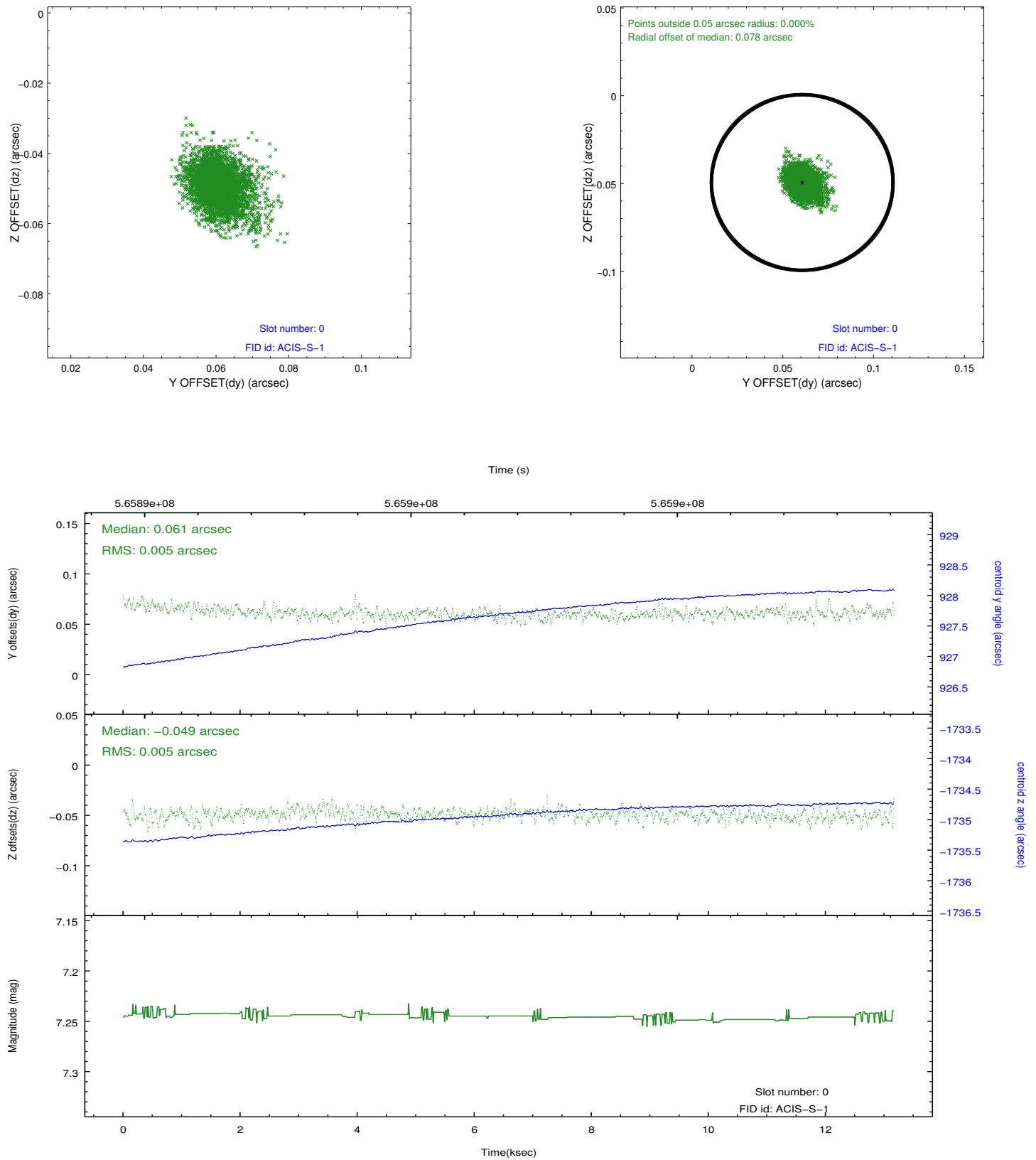


## 2.4.5 Slot 7

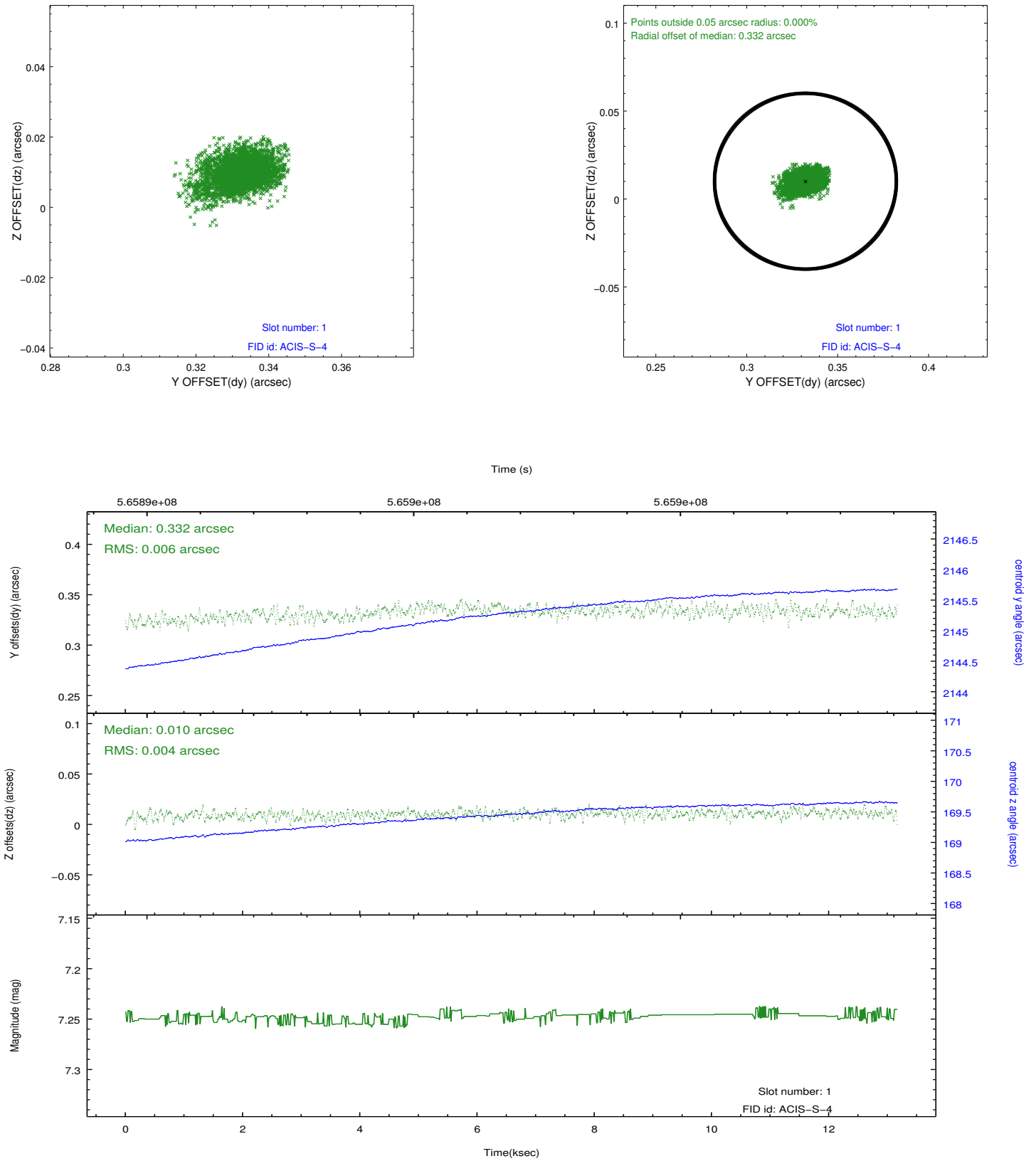


## 2.5 FID Slots

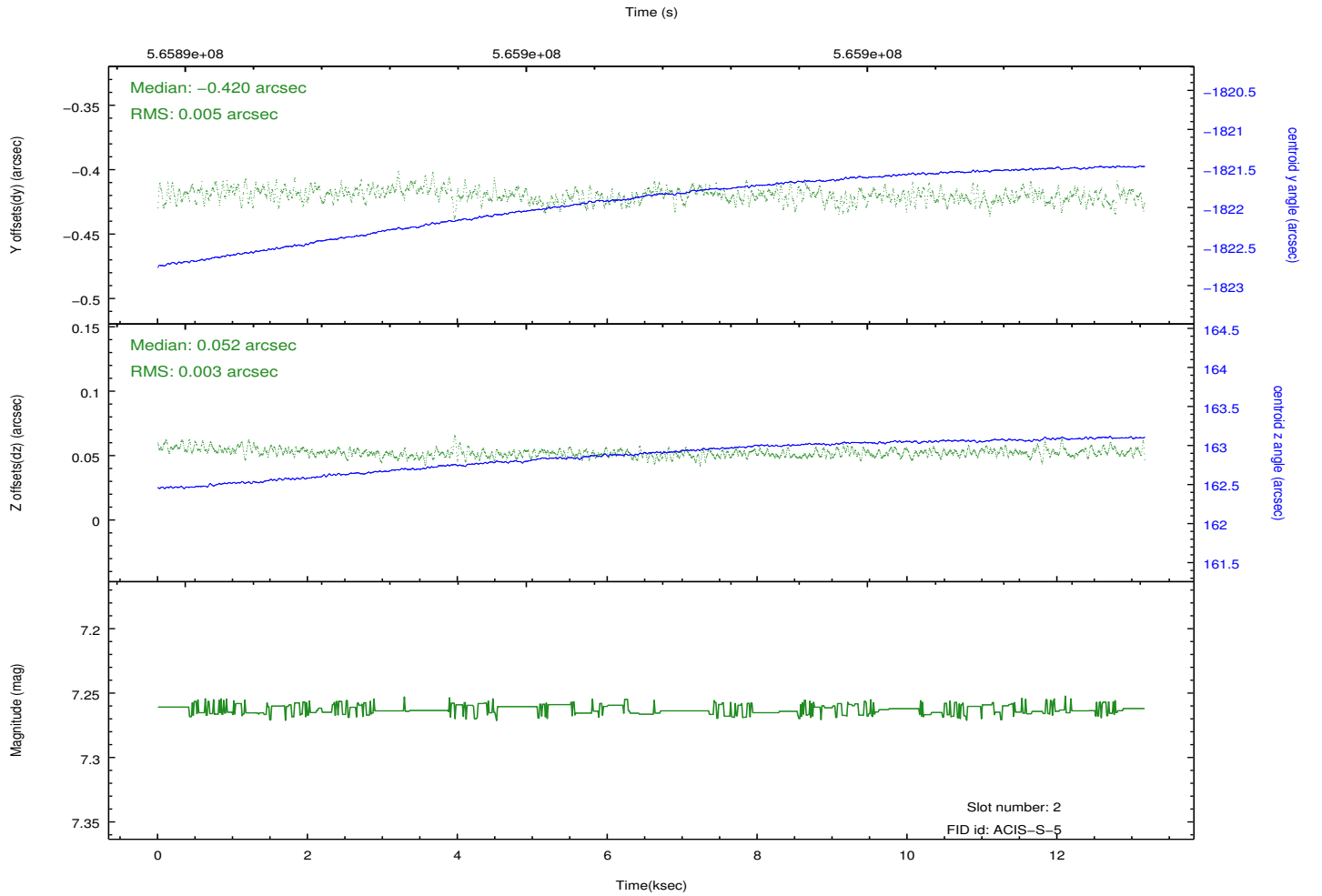
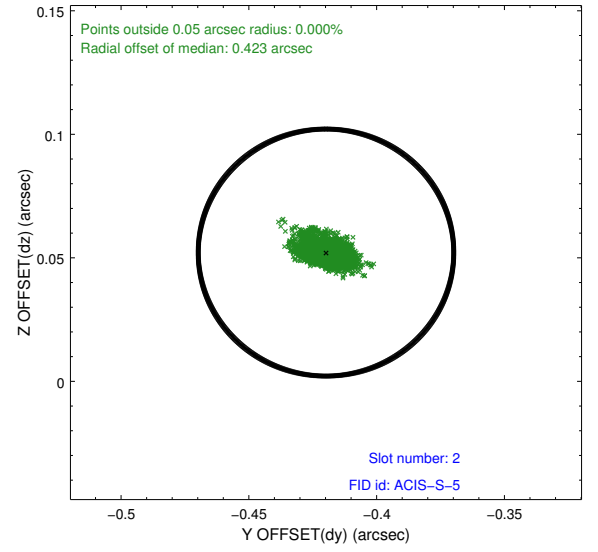
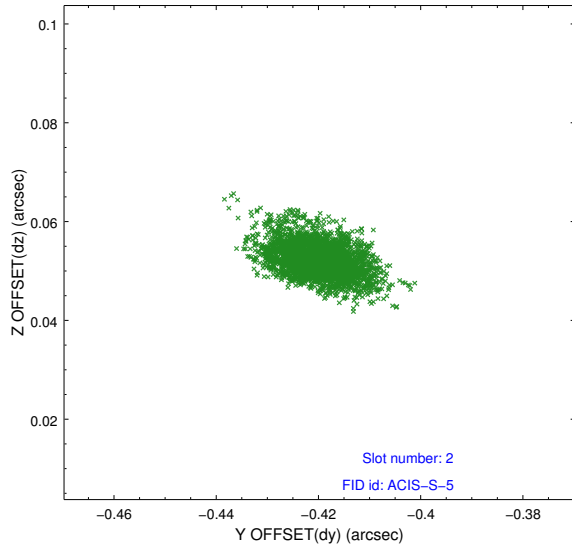
### 2.5.1 Slot 0



## 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)	2015.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.057200100541

### A.2 Comments

Joint proposal with HST.