

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1548 - L2 Version 3  
Chandra X-Ray Center

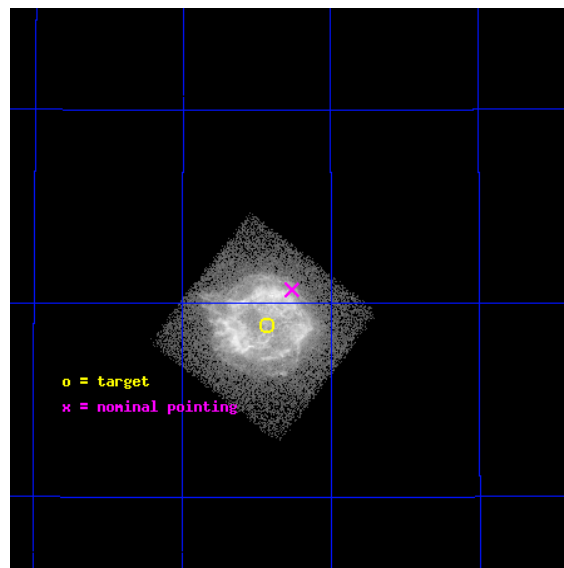
L2 Processing Date : Sep 20 2012

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# 1 Front

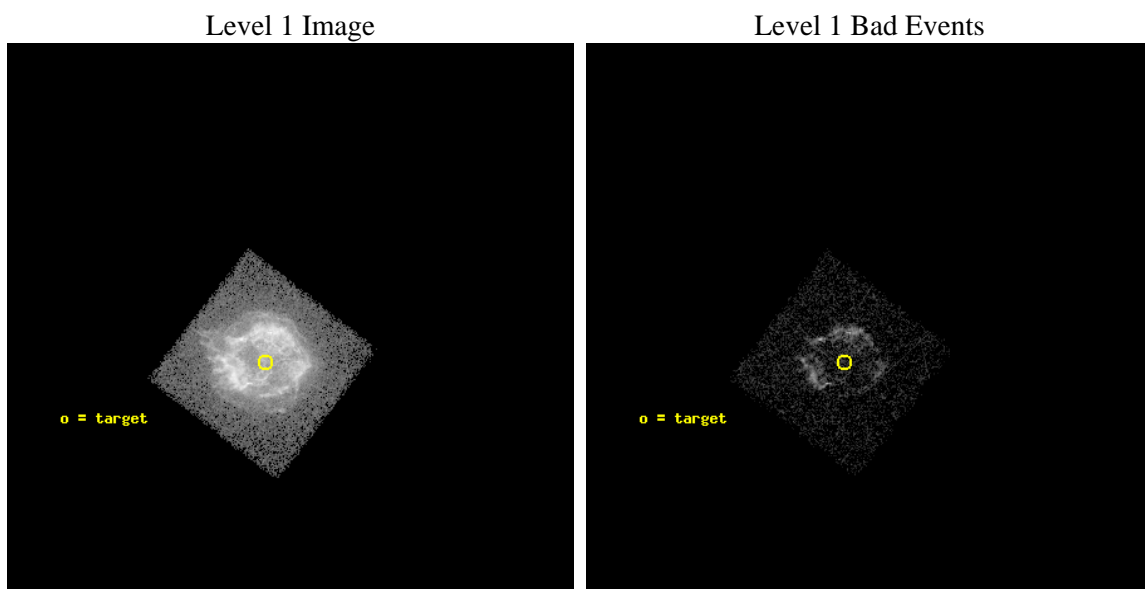
seq_num	590157	Sequence number
obs_id	1548	Observation id
title	CALIBRATION OBSERVATIONS OF THE STANDARD CANDLE CAS A	Proposal tit
observer	Dr. CXC Calibration	Principal investigator
object	CAS A [Chip S3, T=120, Offsets=-2,0,0]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	350.8575	Observer's specified target RA [deg]
dec_targ	58.814833	Observer's specified target Dec [deg]
ra_nom	350.81586911412	Nominal RA [deg]
dec_nom	58.845261688671	Nominal Dec [deg]
roll_nom	127.80872388198	Nominal Roll [deg]
revision	3	Processing version of data
ontime	1078.1915220469	Sum of GTIs [s]
livetime	1064.5388117858	Livetime [s]
ontime4	1770.7929993868	Sum of GTIs [s]
ontime5	1929.6000017822	Sum of GTIs [s]
ontime6	1929.6000017822	Sum of GTIs [s]
ontime7	1078.1915220469	Sum of GTIs [s]
ontime8	1929.6000017822	Sum of GTIs [s]
ontime9	1929.6000017822	Sum of GTIs [s]
l2events	333025	Number of level 2 events



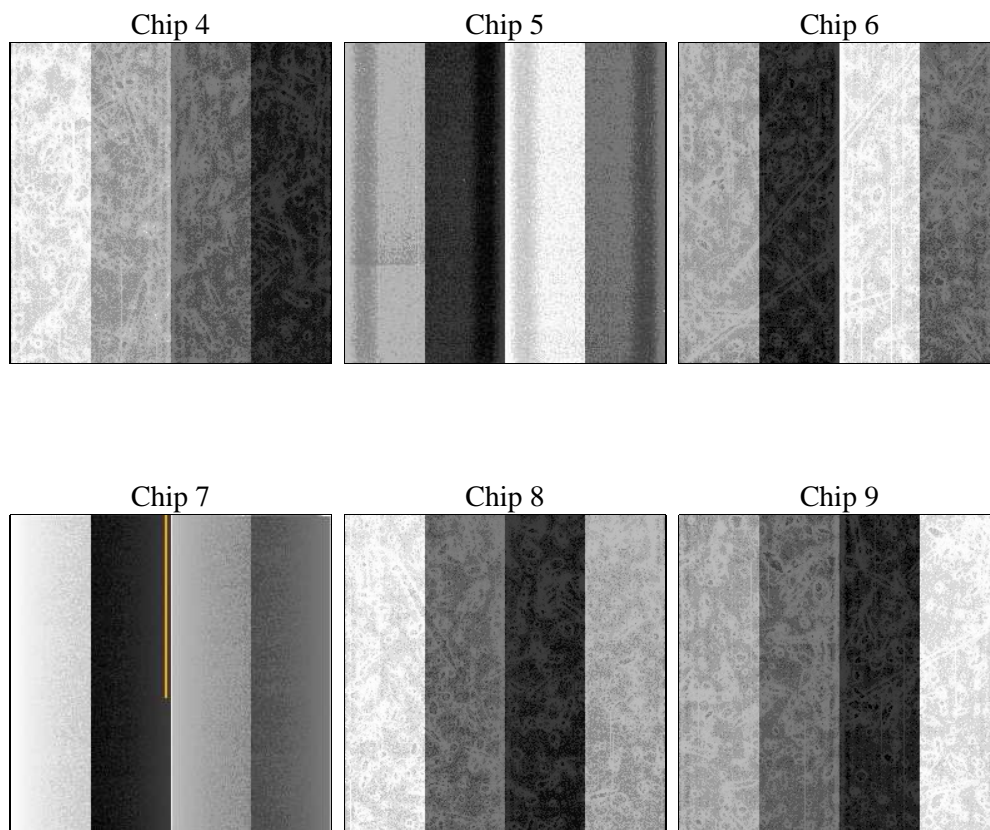
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	1078.1915220469	Sum of GTIs [s]
caldsver	4.5.1.1	&#160	ontime4	1770.7929993868	Sum of GTIs [s]
date	2012-09-20T05:04:04	Date and time of file creation	ontime5	1929.6000017822	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	1929.6000017822	Sum of GTIs [s]
			ontime7	1078.1915220469	Sum of GTIs [s]
			ontime8	1929.6000017822	Sum of GTIs [s]
			ontime9	1929.6000017822	Sum of GTIs [s]
			l1events	373523	Number of level 1 events

### 2.1.4 Events

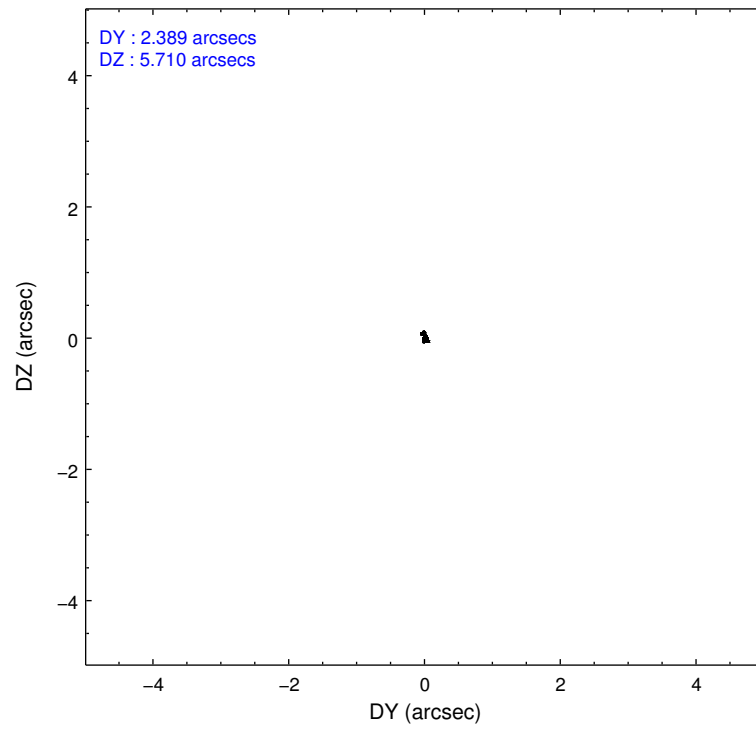
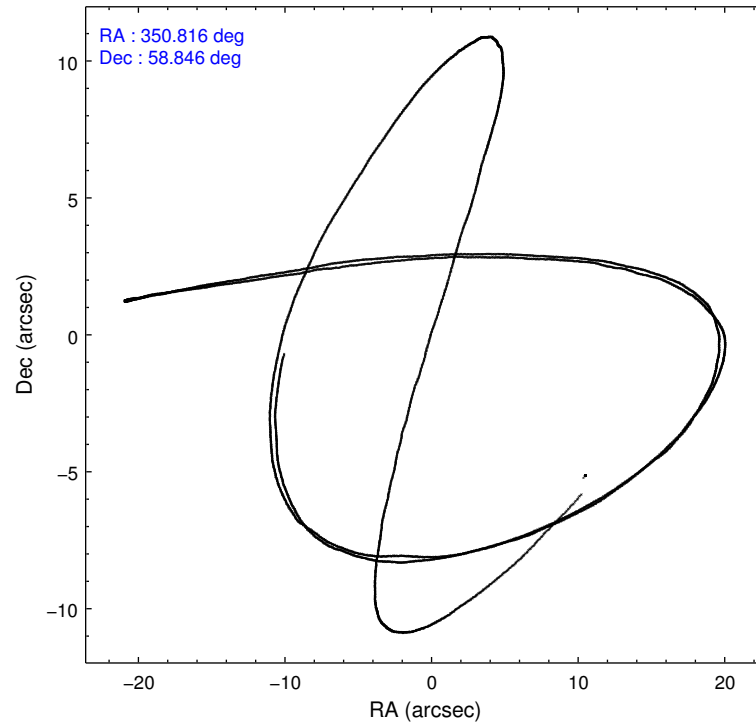
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	0	0	0	373523	0	0
rejected events	0	0	0	37653	0	0
rejected %	0%	0%	0%	10%	0%	0%

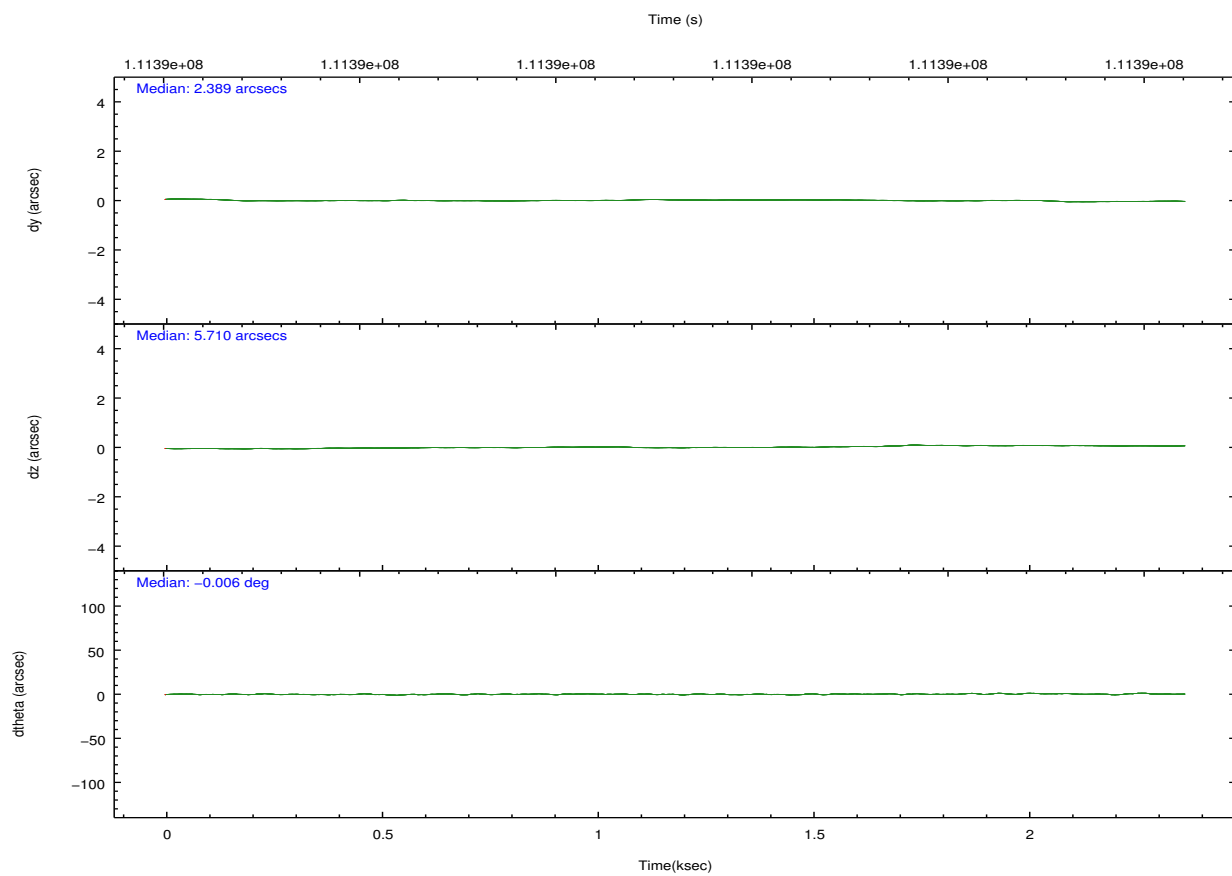
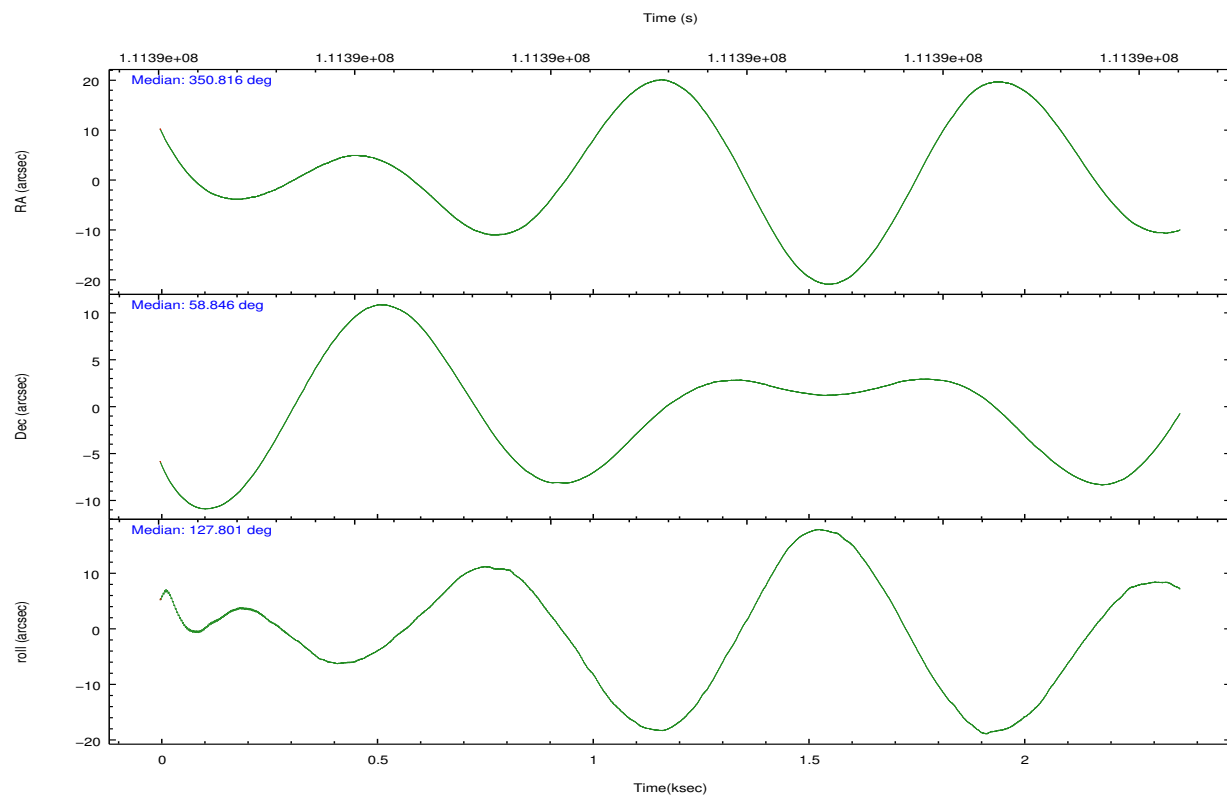
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	0	0	0	85246	0	0
	0%	0%	0%	22%	0%	0%
grade 1 events	0	0	0	1897	0	0
	0%	0%	0%	0%	0%	0%
grade 2 events	0	0	0	90102	0	0
	0%	0%	0%	24%	0%	0%
grade 3 events	0	0	0	39693	0	0
	0%	0%	0%	10%	0%	0%
grade 4 events	0	0	0	39133	0	0
	0%	0%	0%	10%	0%	0%
grade 5 events	0	0	0	7266	0	0
	0%	0%	0%	1%	0%	0%
grade 6 events	0	0	0	82724	0	0
	0%	0%	0%	22%	0%	0%
grade 7 events	0	0	0	27462	0	0
	0%	0%	0%	7%	0%	0%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-456789	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	350.864962	350.8158691141235	CCD I2 on	Y	N
[deg] Pointing Dec	58.835476	58.84526168867079	CCD I3 on	Y	N
[deg] Pointing Roll	127.610003	127.8087238819828	CCD S0 on	N	Y
[s] Window start time (MET)	110332864.184000	110332864.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	112838464.184000	112838464.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S5 on	N	Y
[mm] SIM translation stage offset	0	0.00754346686406393	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	111386983.184000	111385938.02285	On-chip summing requested	N	N
Observation start date	2001-07-13T04:48:39	2001-07-13T04:32:18	Subarray requested	NONE	NONE
[s] Observation end time (MET)	111388983.184000	111389163.18548	Alternating exposures requested	N	N
Observation end date	2001-07-13T05:21:59	2001-07-13T05:26:03	[s] Primary exposure time	0.000000	3.2
Read mode	TIMED	TIMED			

## 2.3 Aspect





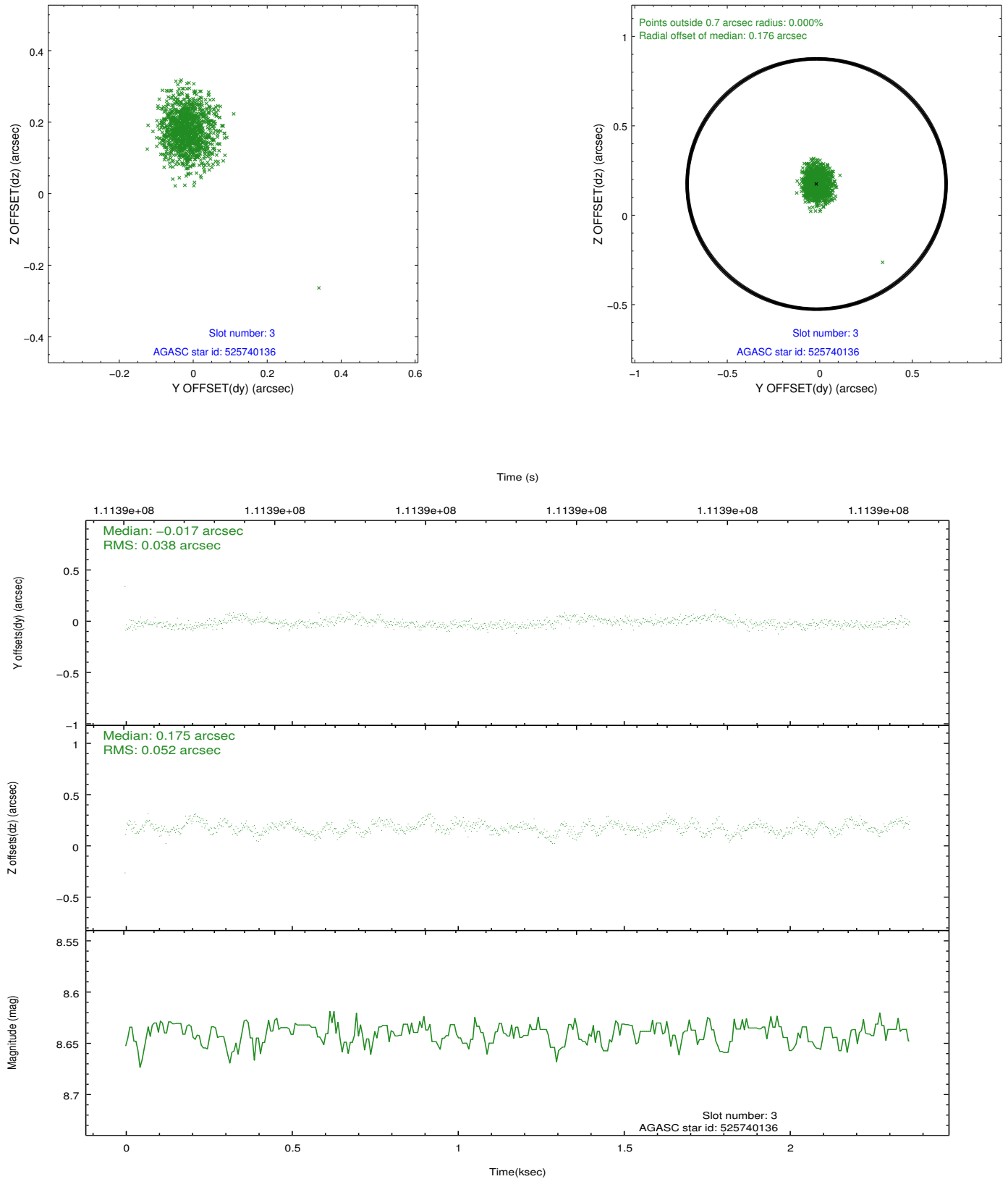
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	577	-0.041	-0.003	0.006	0.010	0.000000	0.000000	-755.01	-1726.88
1	FID	ACIS-S-4	7.20	577	-0.021	0.020	0.005	0.009	0.000000	0.000000	2157.00	178.88
2	FID	ACIS-S-5	7.24	577	0.030	-0.009	0.006	0.010	0.000000	0.000000	-1804.29	175.54
3	GUIDE	525740136	8.64	1153	-0.017	0.175	0.068	0.110	352.585881	58.767876	-2119.62	-2421.47
4	GUIDE	525735976	8.89	1154	-0.023	-0.279	0.097	0.164	350.142956	58.277622	-752.79	2301.18
5	GUIDE	525736400	9.07	1154	0.043	0.071	0.071	0.122	350.974563	59.175145	845.40	-904.48
6	GUIDE	525732528	9.36	1154	0.031	0.221	0.101	0.167	351.607241	59.298932	496.63	-2104.26
7	GUIDE	525606576	9.44	1153	-0.041	-0.190	0.104	0.180	349.543555	58.678895	1082.36	2286.06

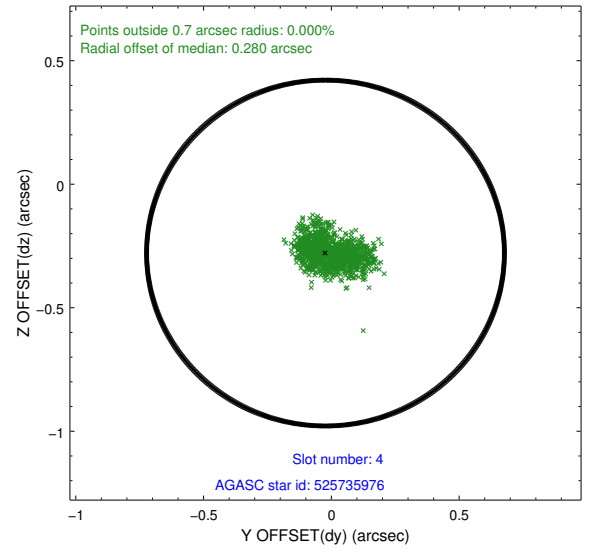
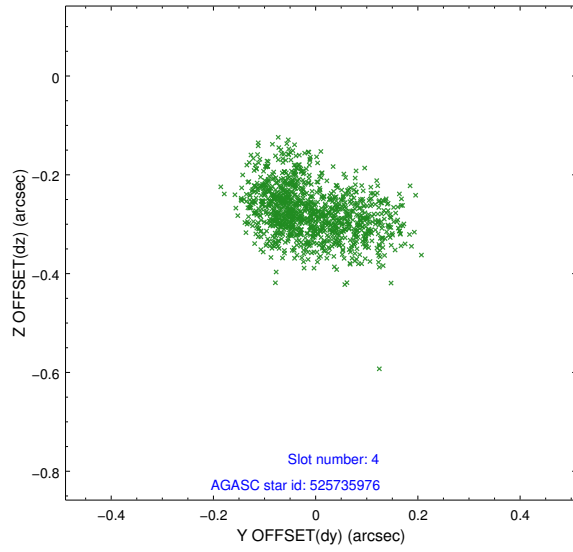


## 2.4 Star Slots

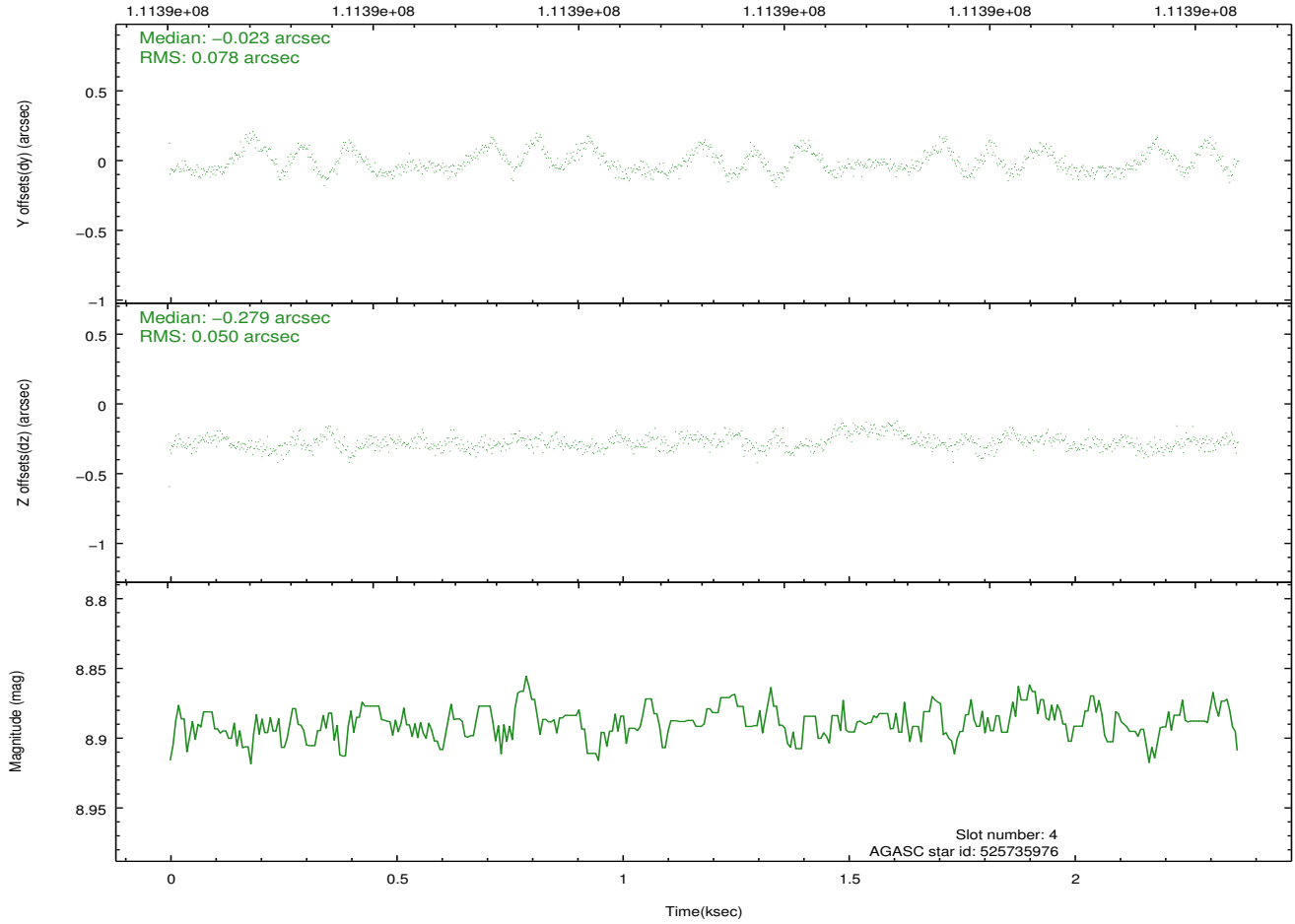
### 2.4.1 Slot 3



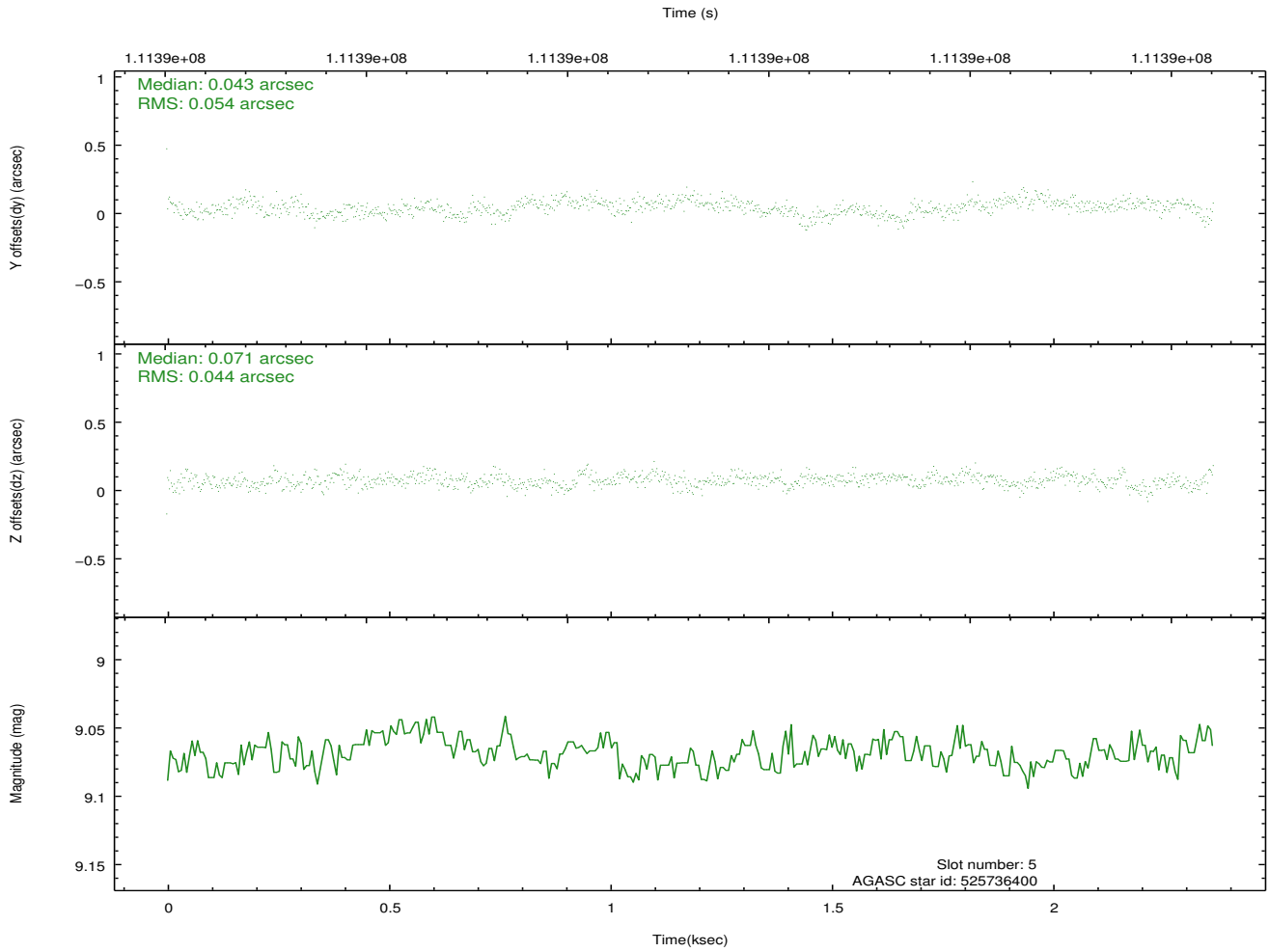
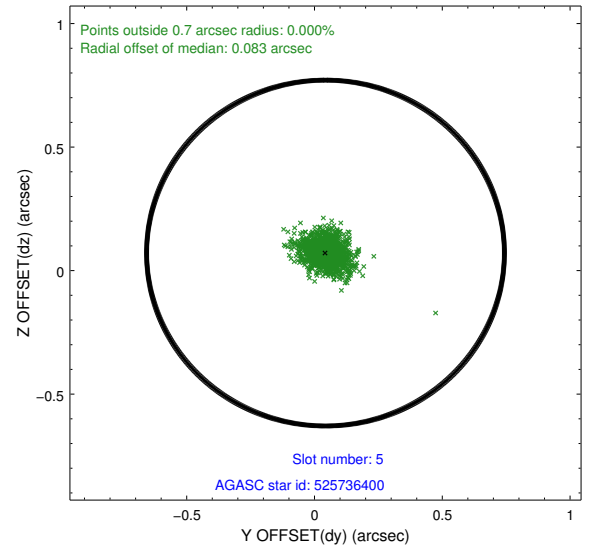
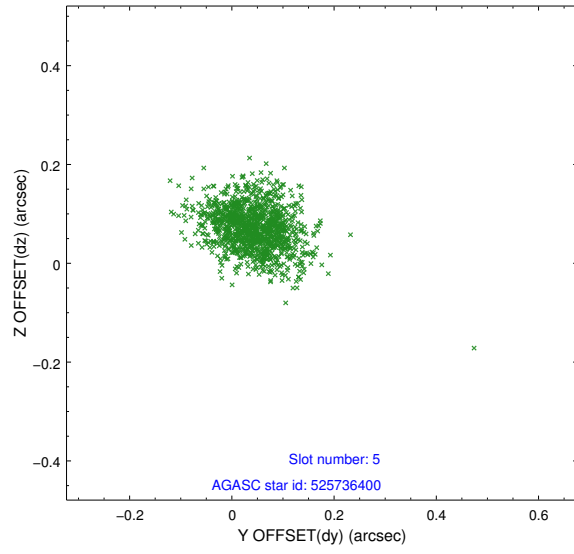
## 2.4.2 Slot 4



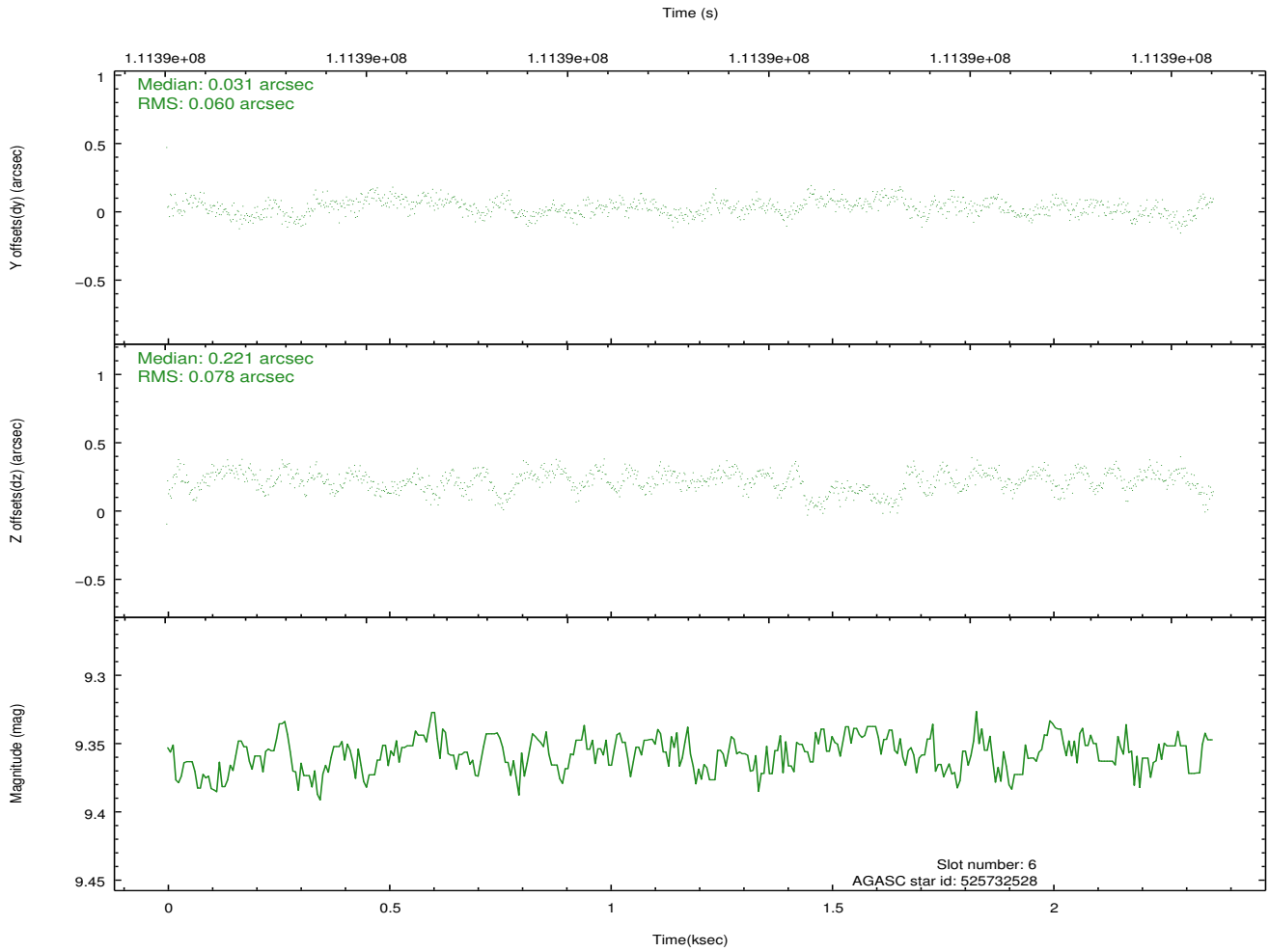
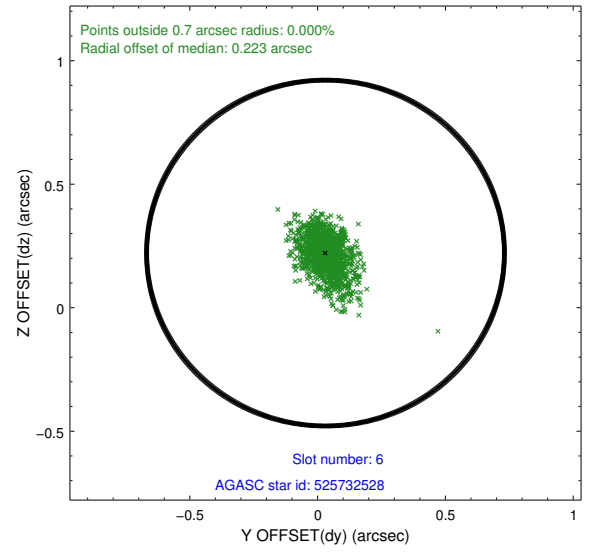
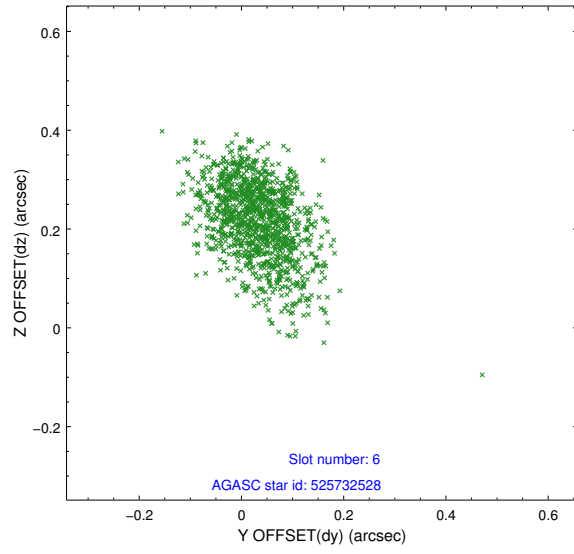
Time (s)



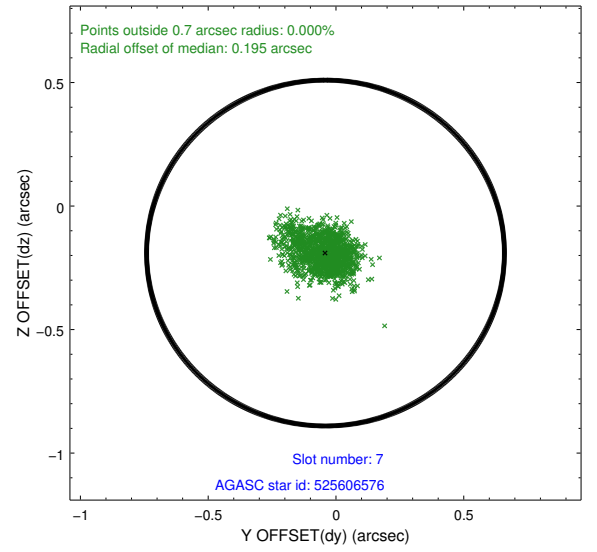
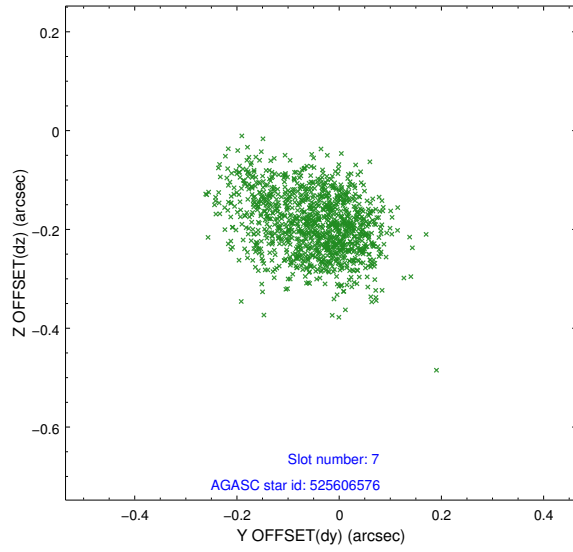
### 2.4.3 Slot 5



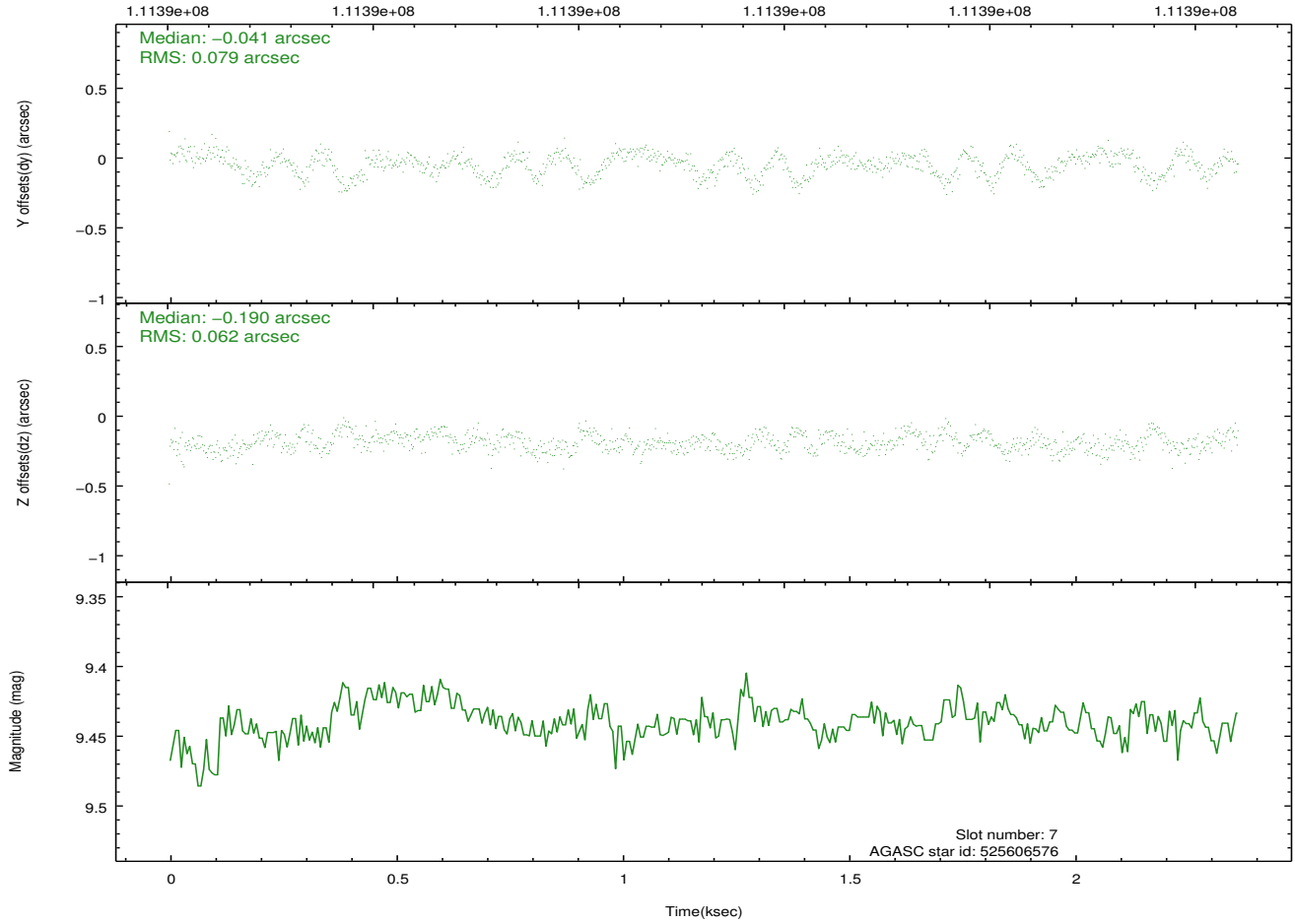
## 2.4.4 Slot 6



## 2.4.5 Slot 7

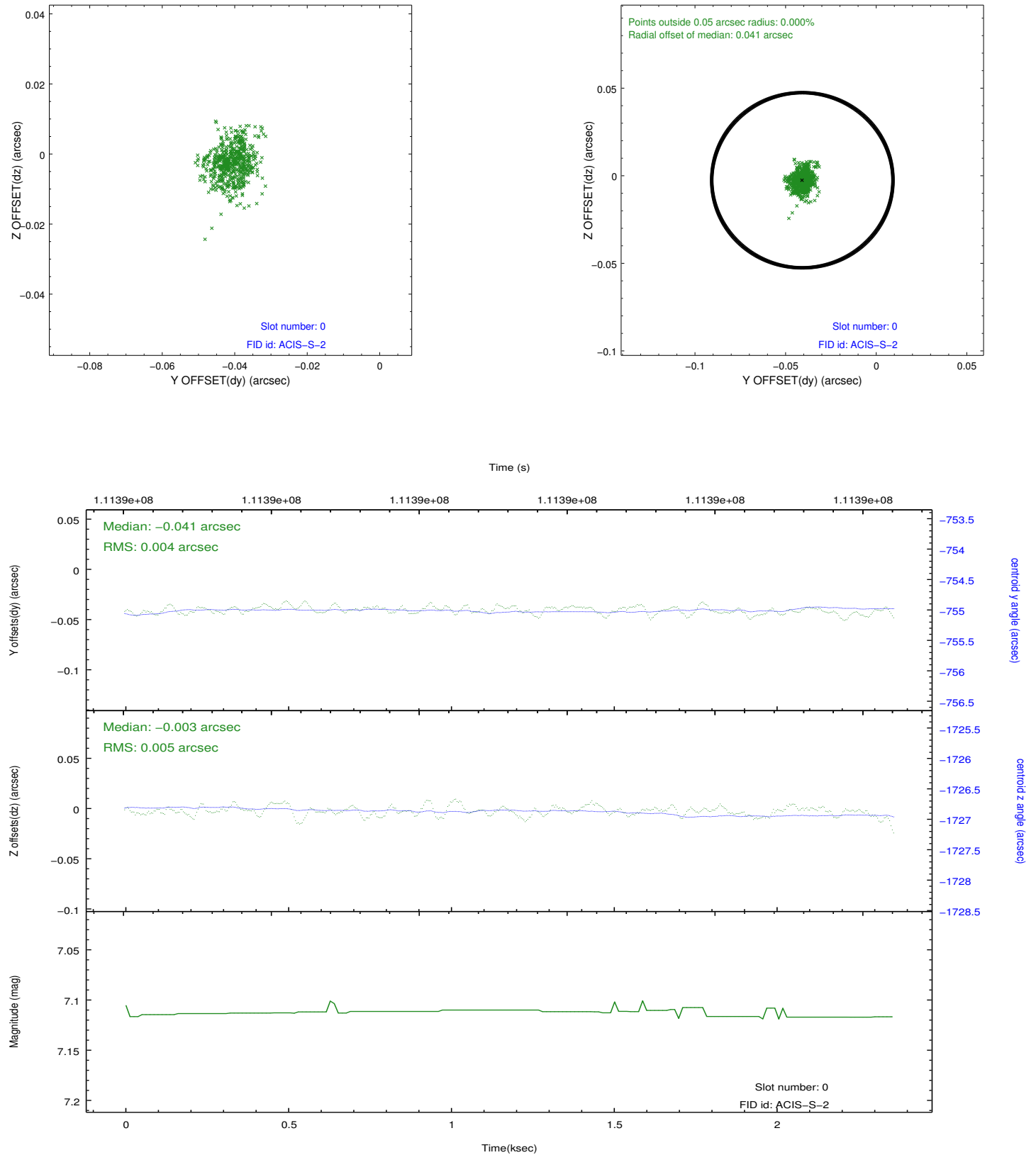


Time (s)

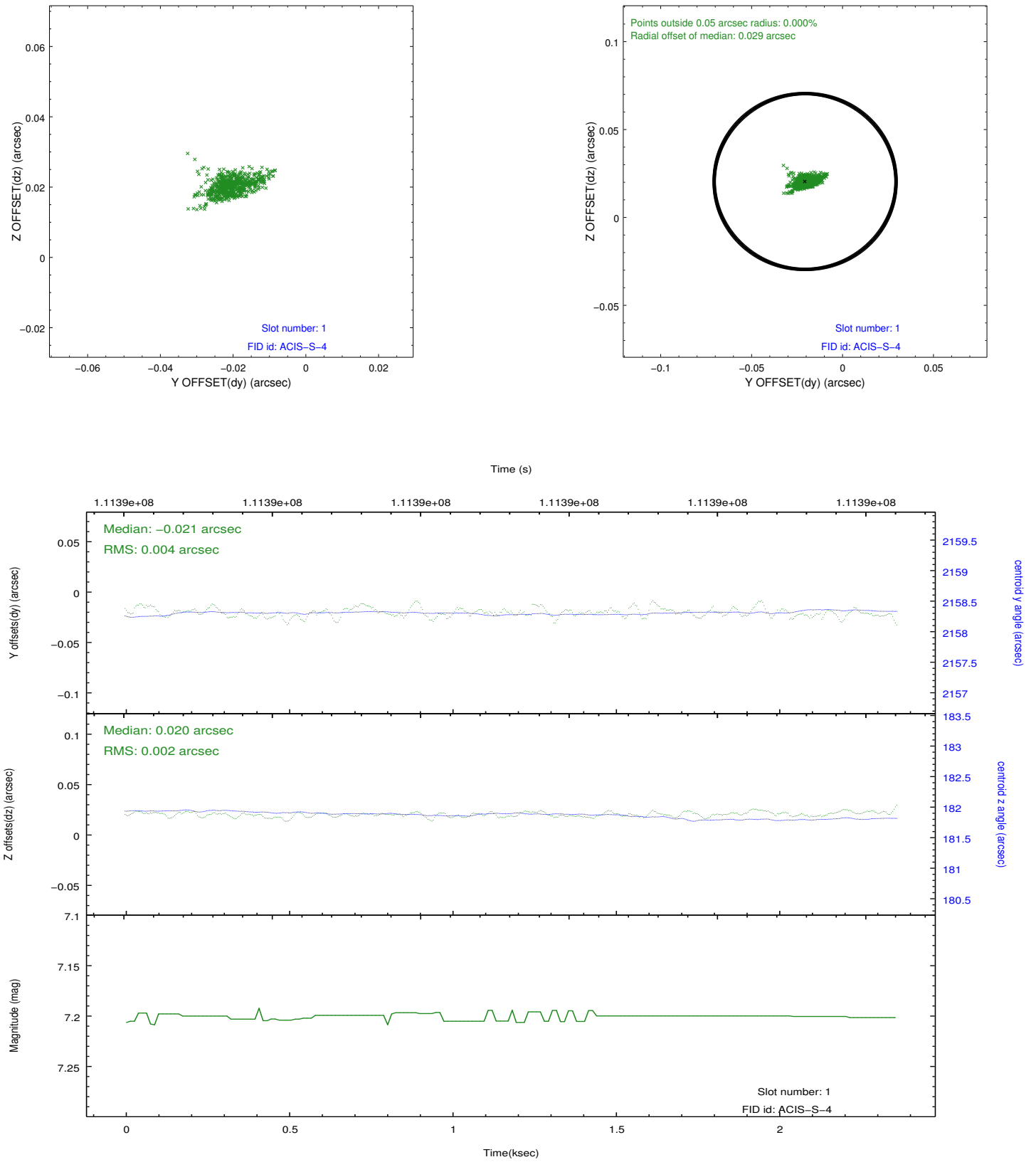


## 2.5 FID Slots

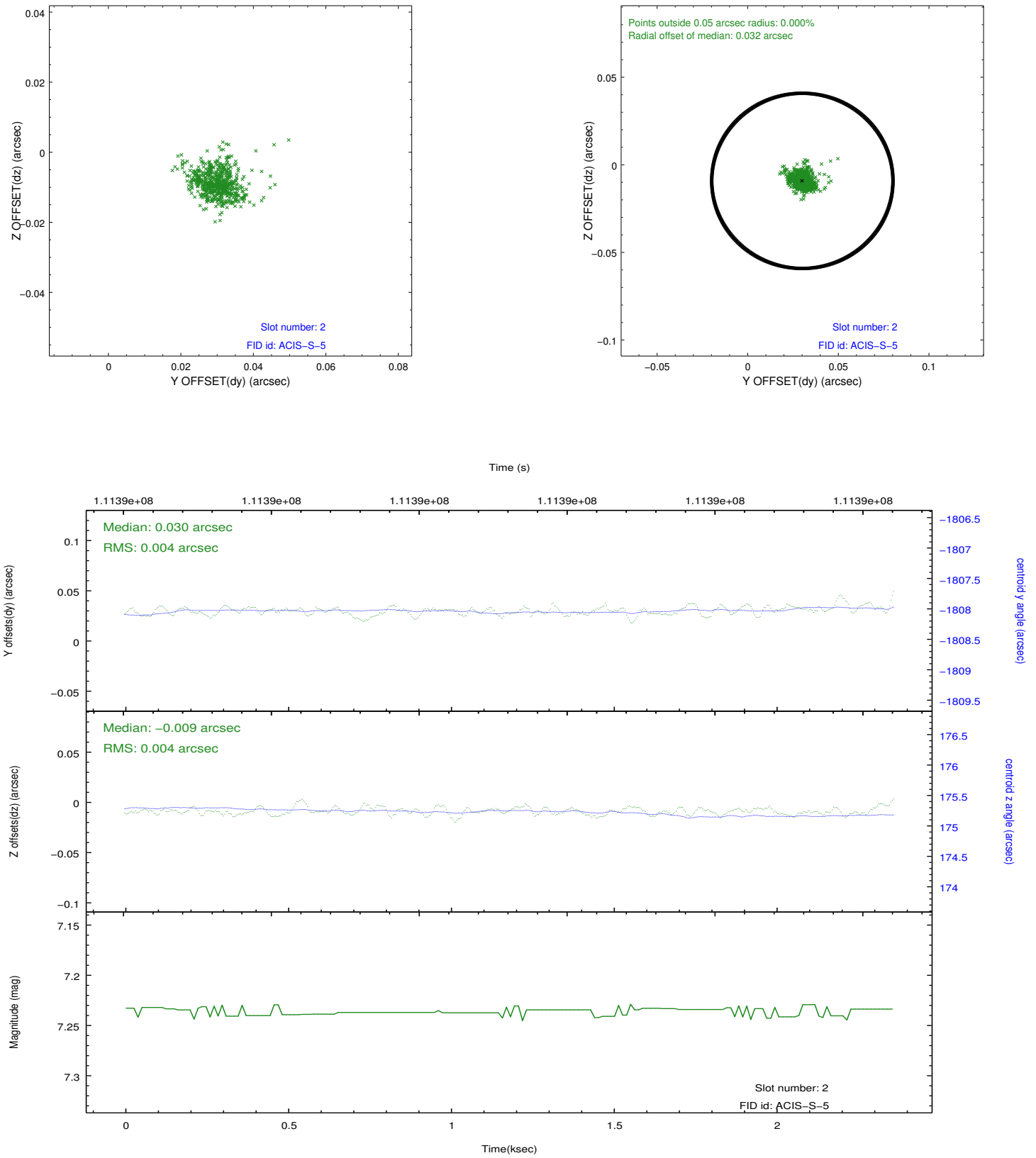
### 2.5.1 Slot 0



## 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)	2012.09.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.08

## A.2 Comments

Although 6 chips were turned on for this observation, all but S3 were excluded from telemetry. Only chip S3 is usable. The entire Cas A supernova remnant is on S3. There are many dropped exposures due to telemetry saturation. Window constraint met.