

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 897 - L2 Version 5  
Chandra X-Ray Center

L2 Processing Date : Nov 5 2012

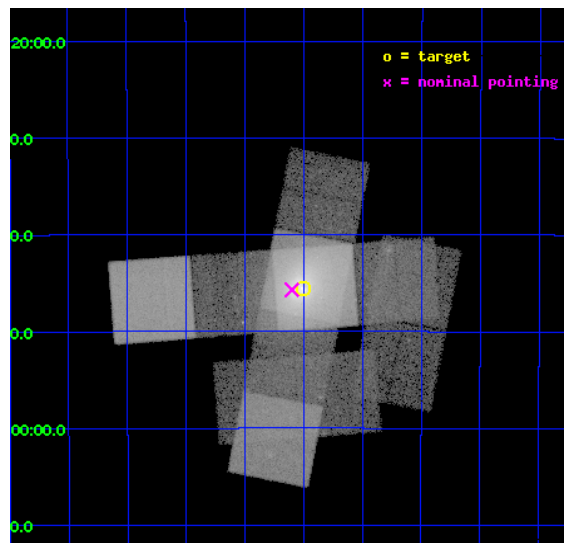
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# 1 Front

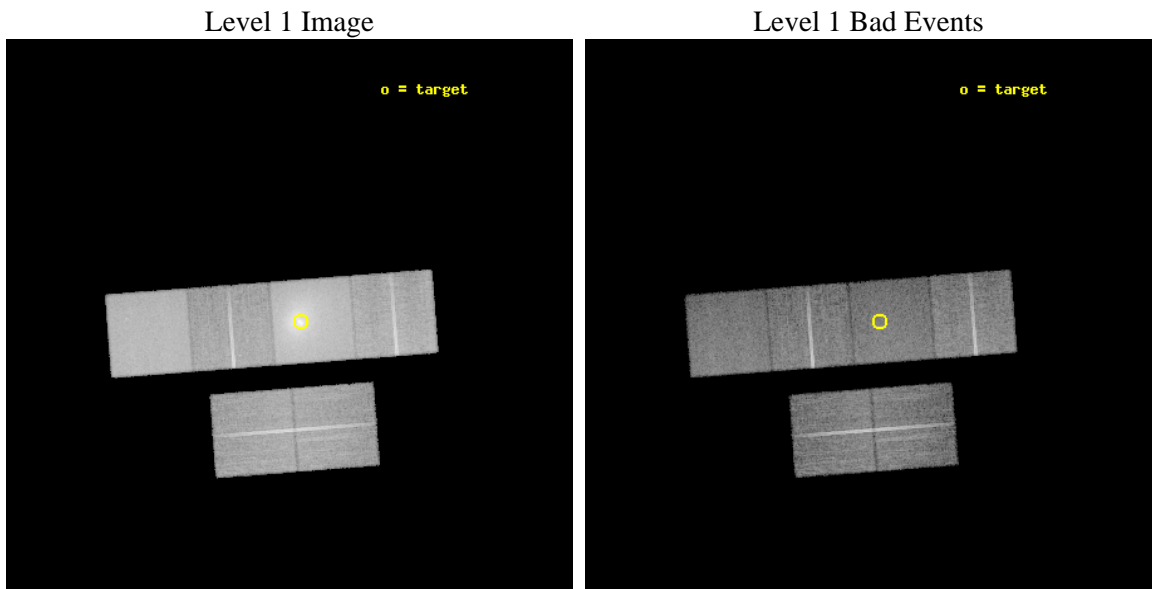
seq_num	800073	Sequence number
obs_id	897	Observation id
title	RADIO-GALAXY/CLUSTER INTERACTION: ACIS OBSERVATIONS OF A4059	Propo
observer	Prof Christopher Reynolds	Principal investigator
object	ABELL 4059	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	359.25	Observer's specified target RA [deg]
dec_targ	-34.758333	Observer's specified target Dec [deg]
ra_nom	359.27520137372	Nominal RA [deg]
dec_nom	-34.761758233974	Nominal Dec [deg]
roll_nom	355.60025842831	Nominal Roll [deg]
revision	5	Processing version of data
ontime	41186.090872854	Sum of GTIs [s]
livetime	40664.567790935	Livetime [s]
ontime2	41186.131912857	Sum of GTIs [s]
ontime3	41185.967752859	Sum of GTIs [s]
ontime5	41186.049832851	Sum of GTIs [s]
ontime6	41186.008792862	Sum of GTIs [s]
ontime7	41186.090872854	Sum of GTIs [s]
ontime8	41182.685623005	Sum of GTIs [s]
l2events	733458	Number of level 2 events



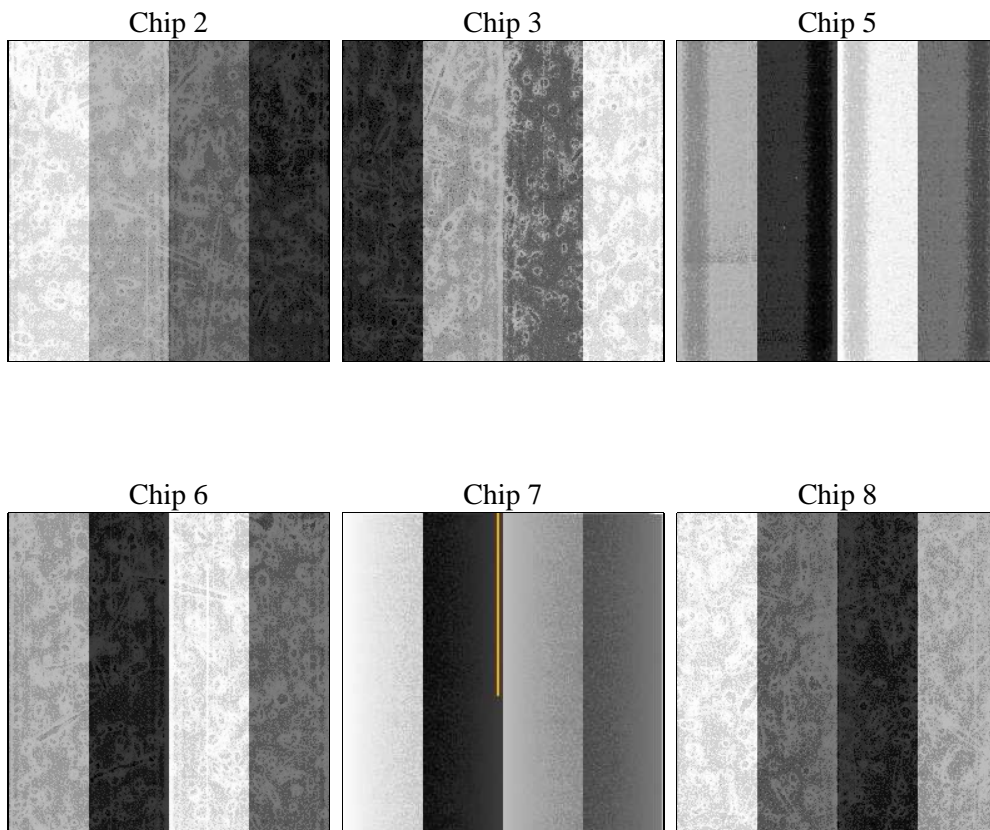
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	22832.239000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	22587.690855548	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime2	22587.731895551	Sum of GTIs [s]
date	2012-11-05T17:36:21	Date and time of file creation	ontime3	22587.567735553	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	22587.649815544	Sum of GTIs [s]
			ontime6	22587.608775556	Sum of GTIs [s]
			ontime7	22587.690855548	Sum of GTIs [s]
			ontime8	22584.285605699	Sum of GTIs [s]
			l1events	1180574	Number of level 1 events

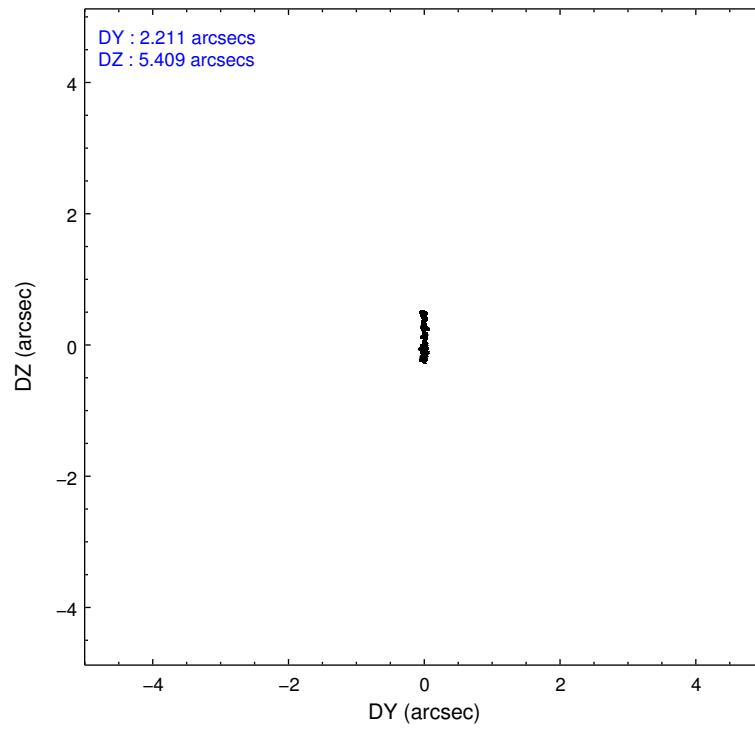
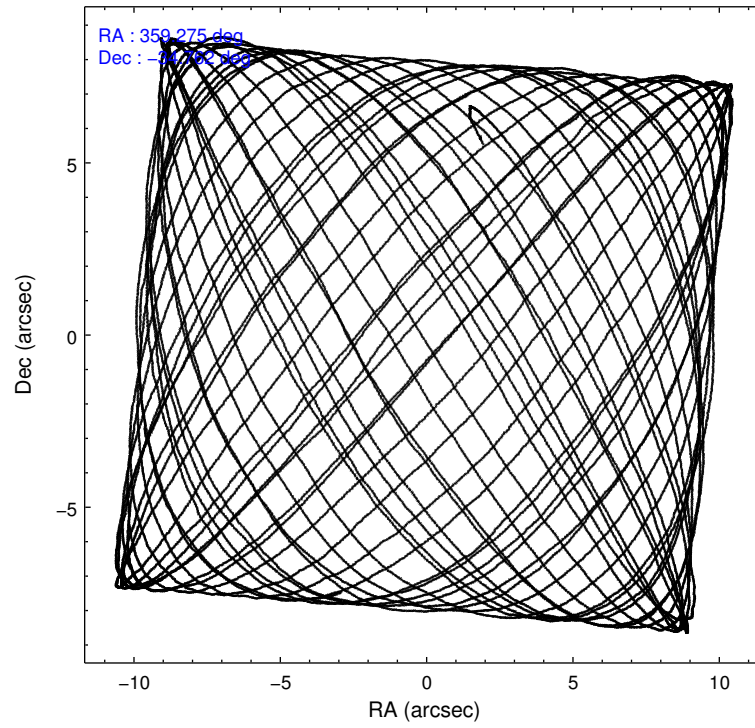
### 2.1.4 Events

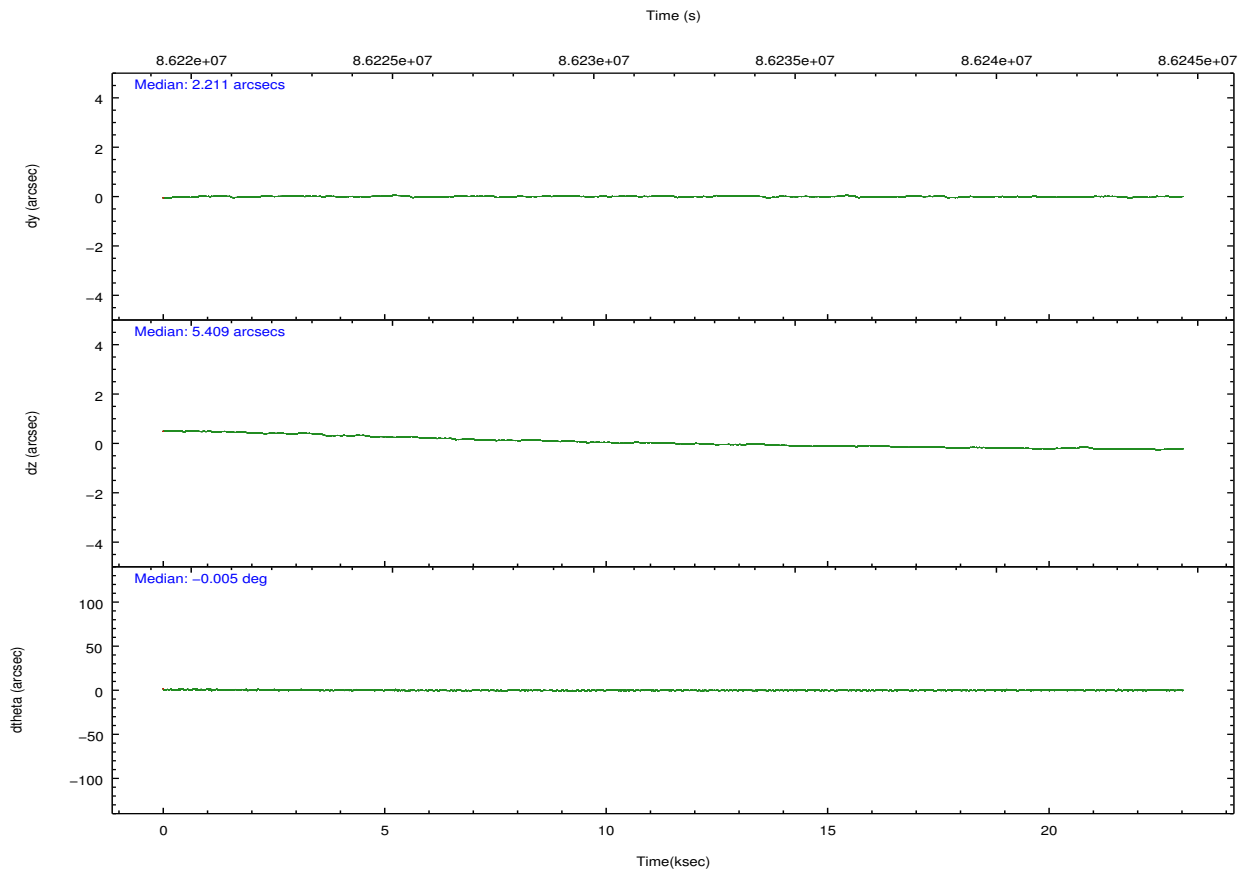
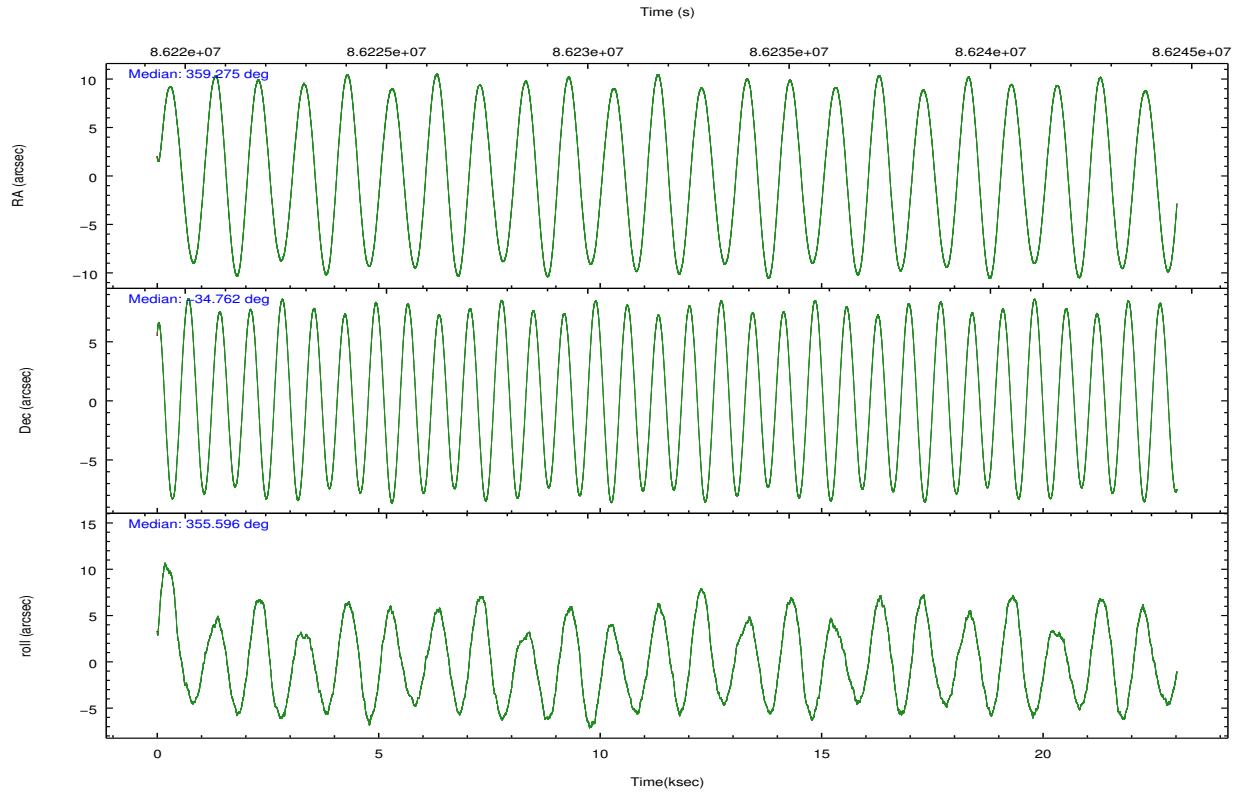
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	142127	134368	226936	146319	353619	177205	grade 0 events	7725	7980	15682	15038	59857	13909
rejected events	125336	117707	101680	120648	100599	140315		5%	5%	6%	10%	16%	7%
rejected %	88%	87%	44%	82%	28%	79%	grade 1 events	71	70	178	84	204	123
								0%	0%	0%	0%	0%	0%
							grade 2 events	3306	3042	35515	3850	57429	7595
								2%	2%	15%	2%	16%	4%
							grade 3 events	1486	1510	7340	1839	25939	3466
								1%	1%	3%	1%	7%	1%
							grade 4 events	1515	1508	7029	1804	25487	3125
								1%	1%	3%	1%	7%	1%
							grade 5 events	4602	4934	14937	5527	17619	7002
								3%	3%	6%	3%	4%	3%
							grade 6 events	2760	2626	59710	3148	84364	8799
								1%	1%	26%	2%	23%	4%
							grade 7 events	120662	112698	86545	115029	82720	133186
								84%	83%	38%	78%	23%	75%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	359.245238	359.2752013737248	Subarray requested	NONE	NONE
[deg] Pointing Dec	-34.773730	-34.76175823397426	Alternating exposures requested	N	N
[deg] Pointing Roll	355.426543	355.6002584283107	[s] Primary exposure time	3.200000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	86220645.184000	86219663.504252			
Observation start date	2000-09-24T22:09:41	2000-09-24T21:54:23			
[s] Observation end time (MET)	86243478.184000	86244250.180178			
Observation end date	2000-09-25T04:30:14	2000-09-25T04:44:10			
Read mode	TIMED	TIMED			

## 2.3 Aspect



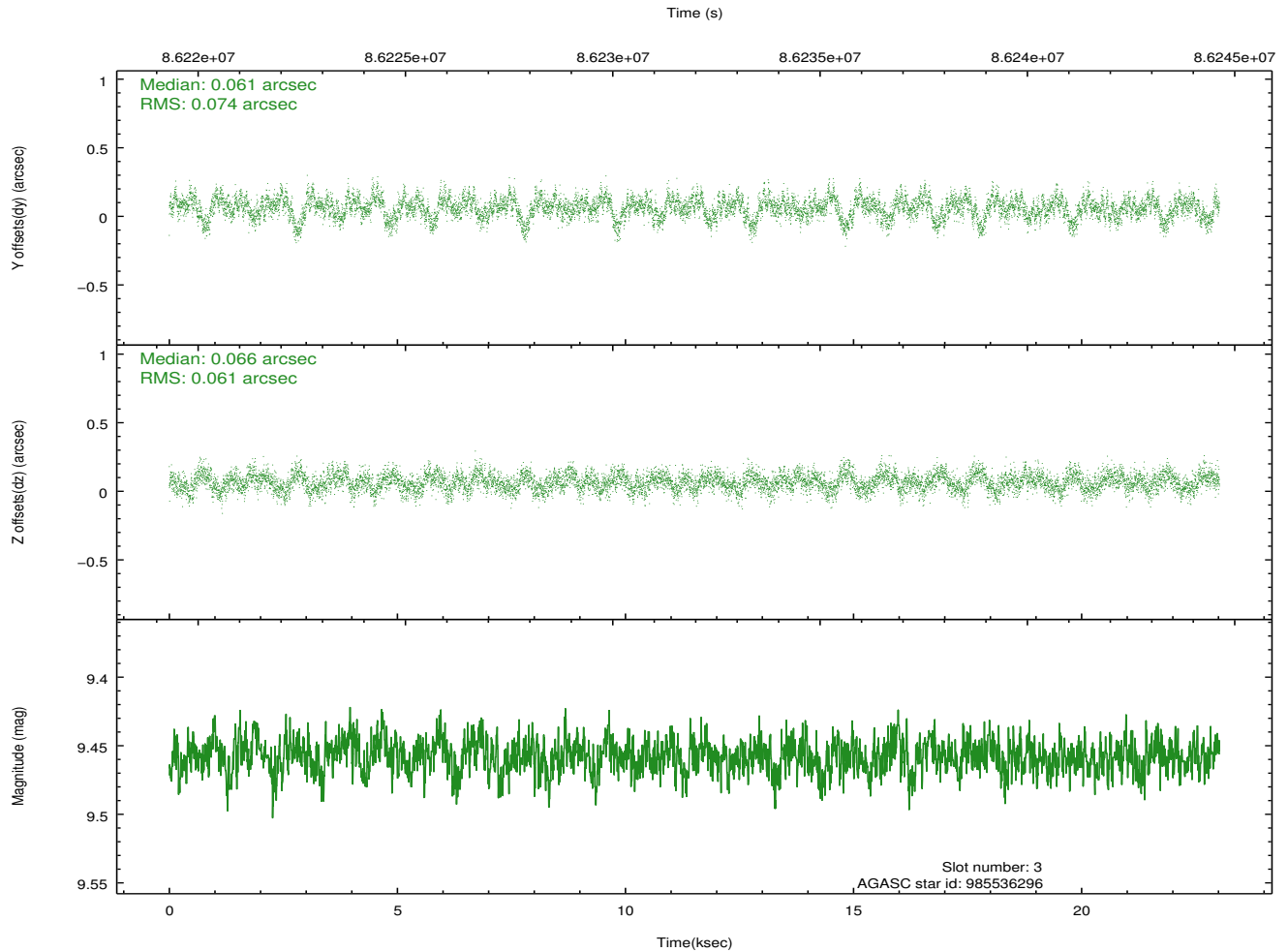
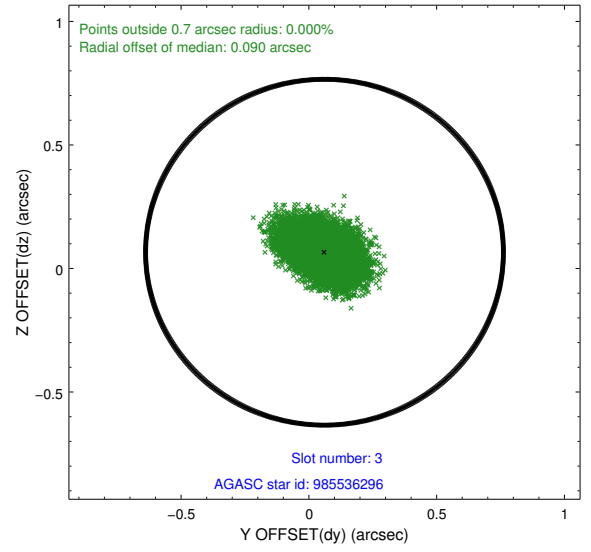
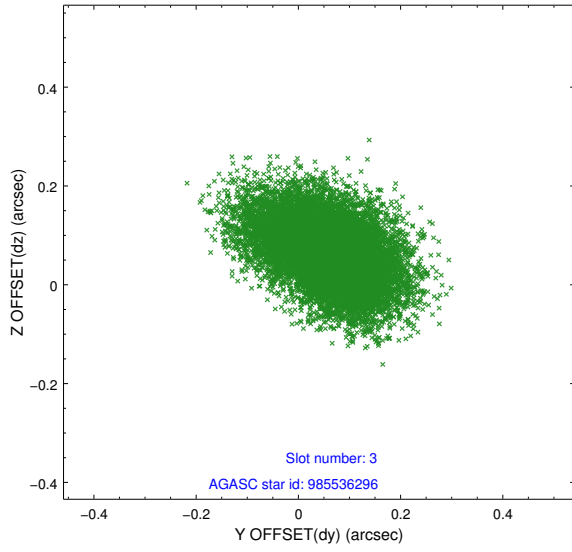


### Slot Statistics

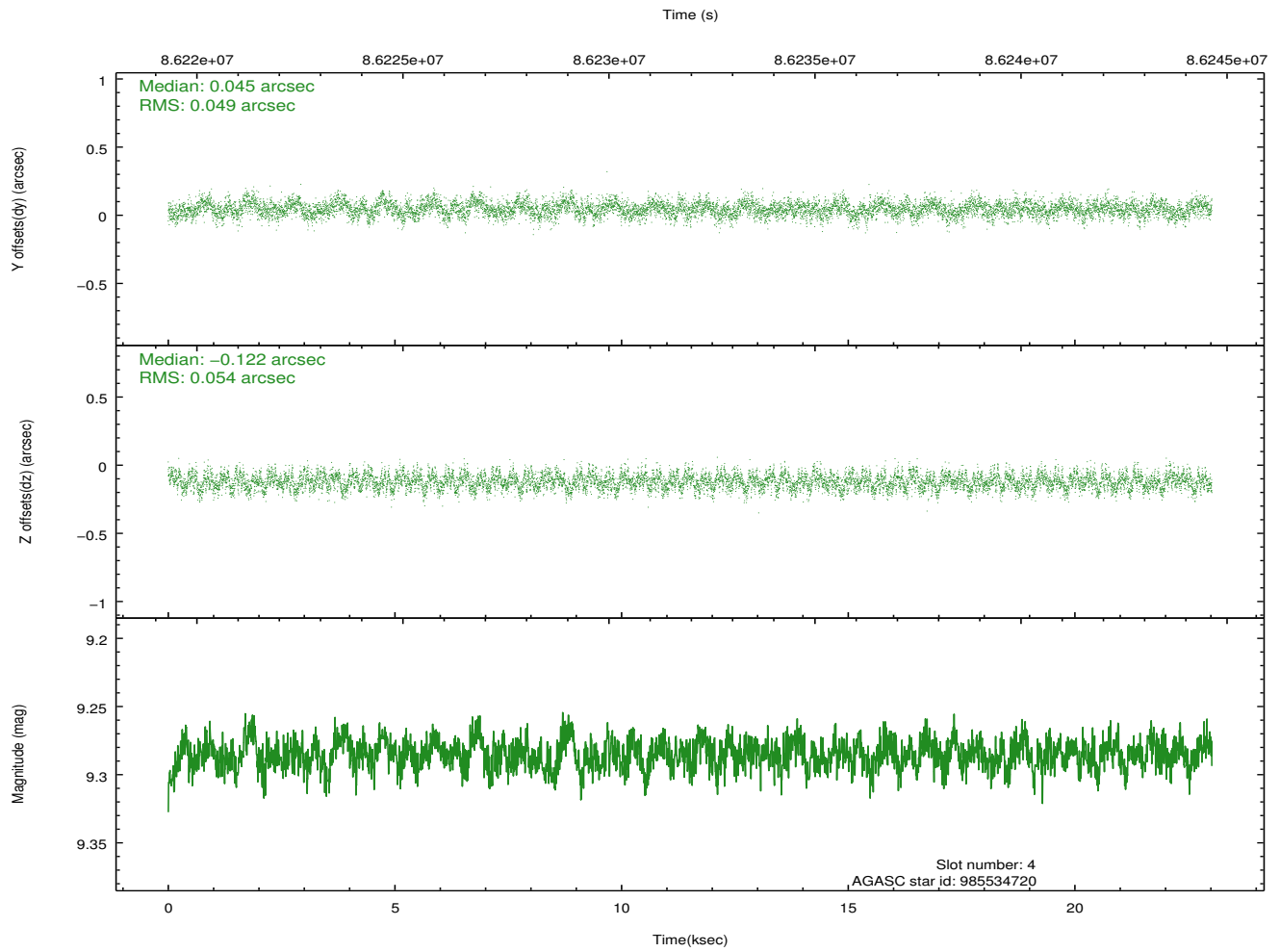
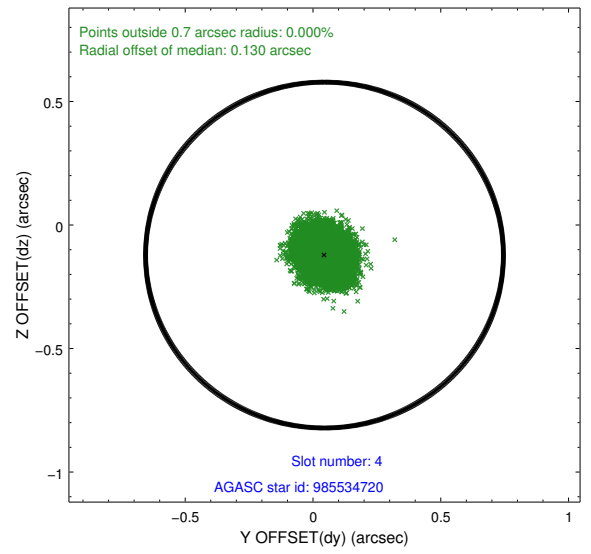
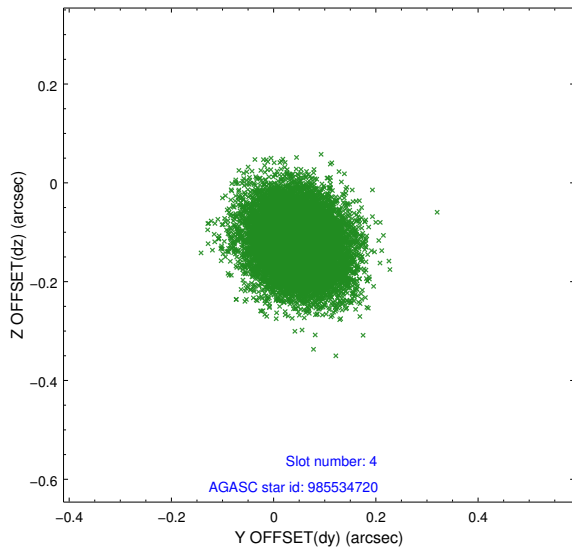
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	5616	-0.044	-0.004	0.007	0.011	0.000000	0.000000	-754.85	-1726.60
1	FID	ACIS-S-4	7.21	5615	-0.002	0.022	0.005	0.010	0.000000	0.000000	2158.38	181.81
2	FID	ACIS-S-5	7.24	5615	0.015	-0.009	0.007	0.011	0.000000	0.000000	-1807.47	175.55
3	GUIDE	985536296	9.46	11224	0.061	0.066	0.101	0.171	358.653610	-34.417416	-1853.58	1133.79
4	GUIDE	985534720	9.29	11227	0.045	-0.122	0.078	0.126	358.560006	-34.718570	-2036.84	29.64
5	GUIDE	985533504	8.20	11232	-0.064	-0.044	0.062	0.096	359.621834	-34.285981	976.15	1837.97
6	GUIDE	985538688	8.98	11226	0.059	0.035	0.078	0.123	359.925547	-34.998115	2064.76	-651.31
7	GUIDE	985926576	9.49	11224	-0.096	0.070	0.087	0.140	359.107966	-35.442581	-209.34	-2432.17

## 2.4 Star Slots

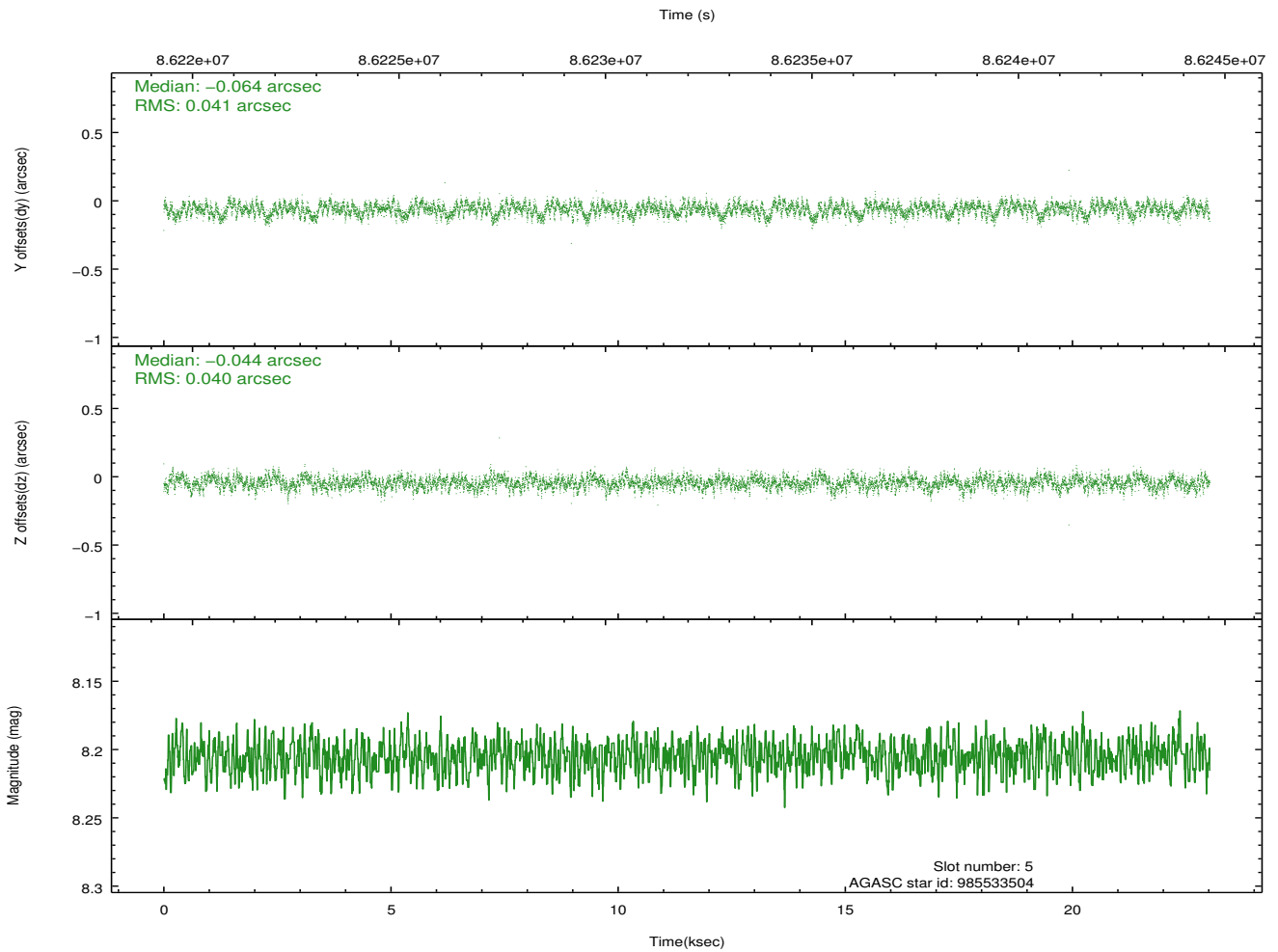
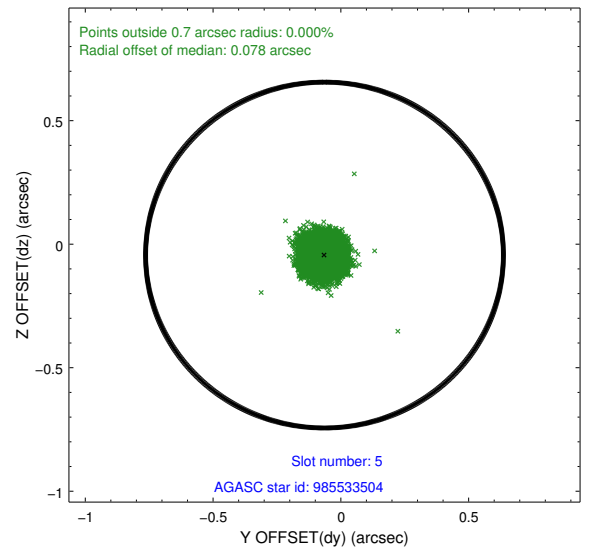
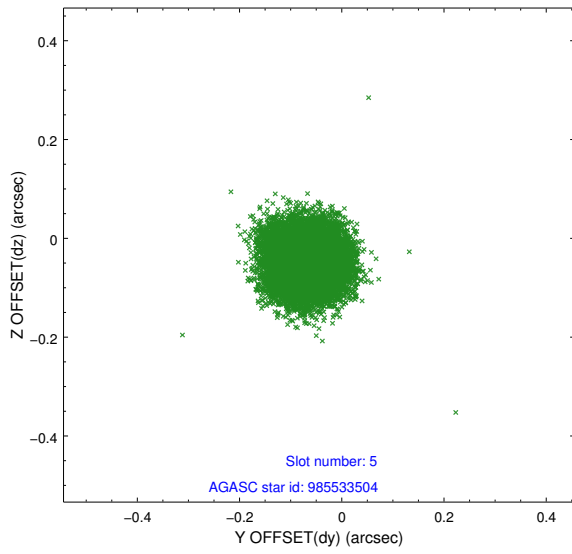
### 2.4.1 Slot 3



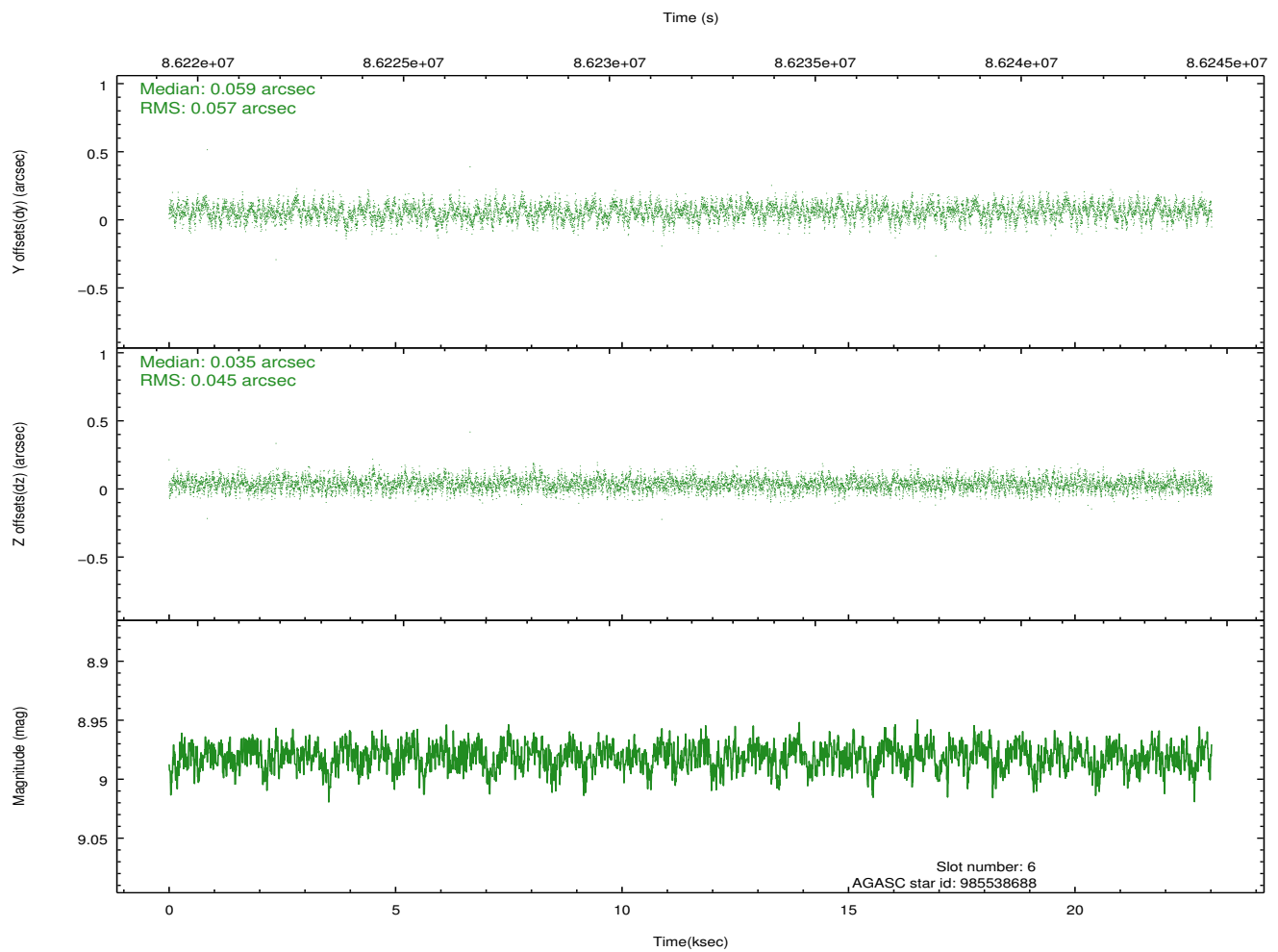
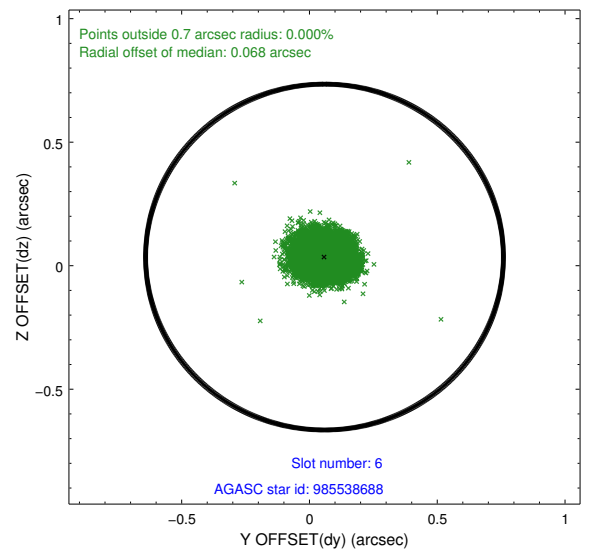
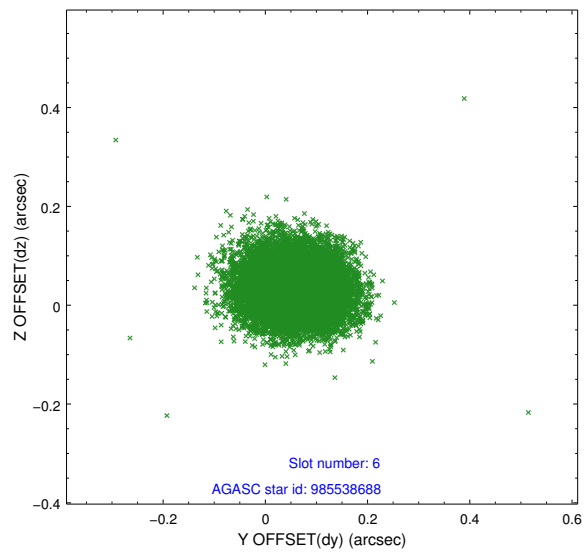
### 2.4.2 Slot 4



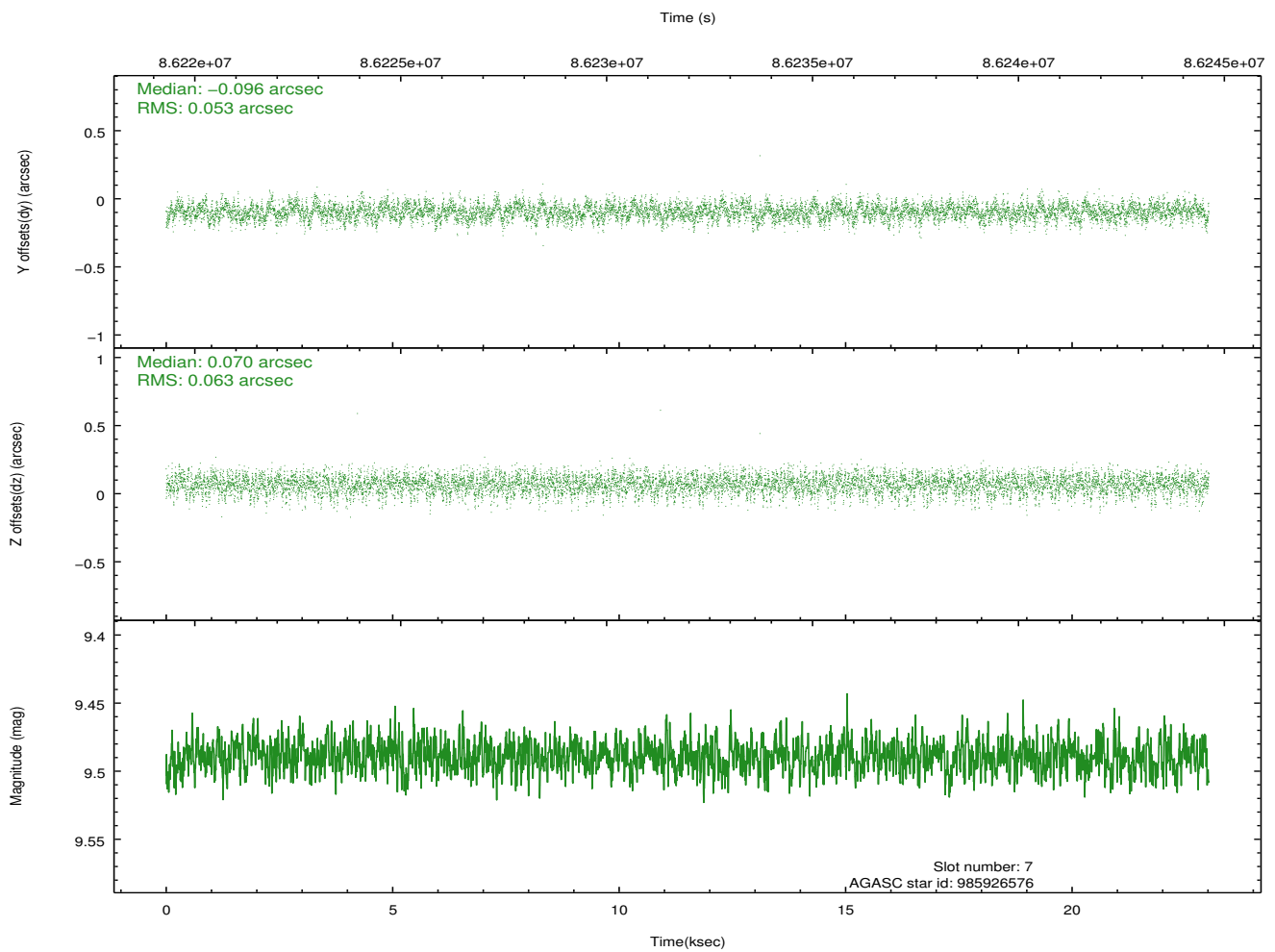
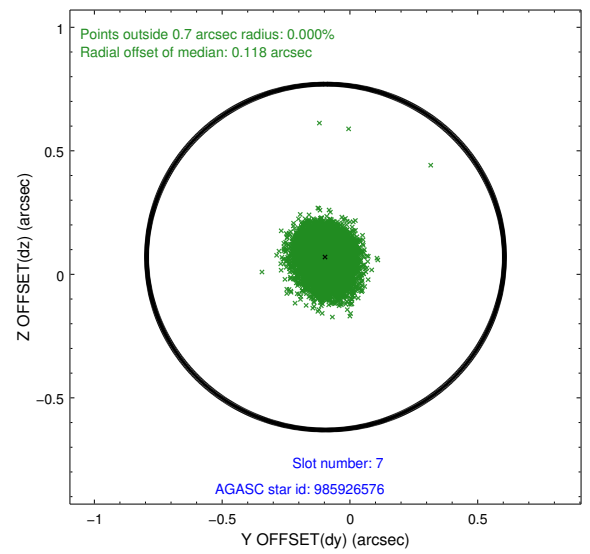
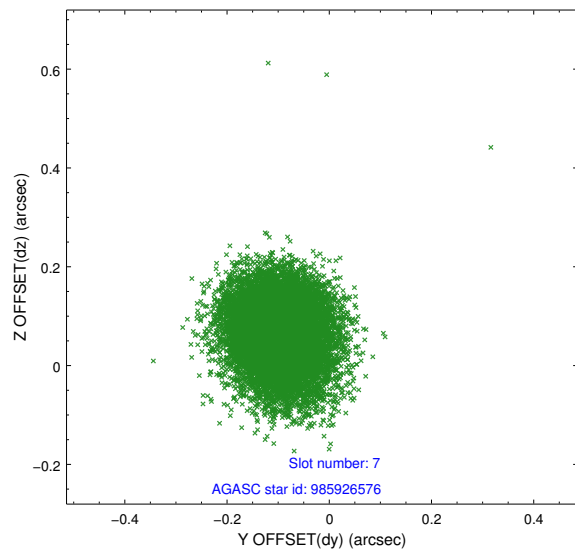
### 2.4.3 Slot 5



## 2.4.4 Slot 6

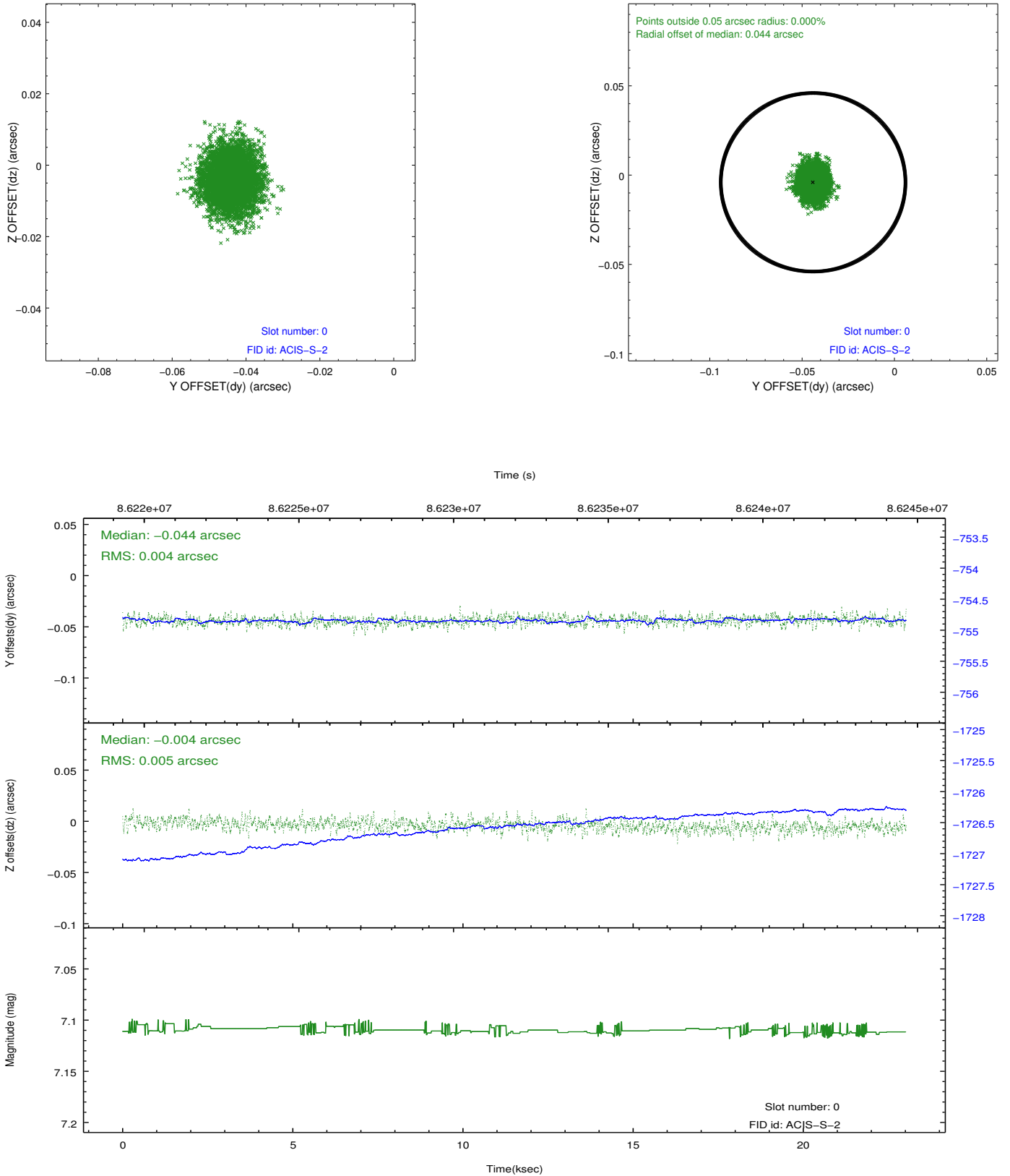


## 2.4.5 Slot 7

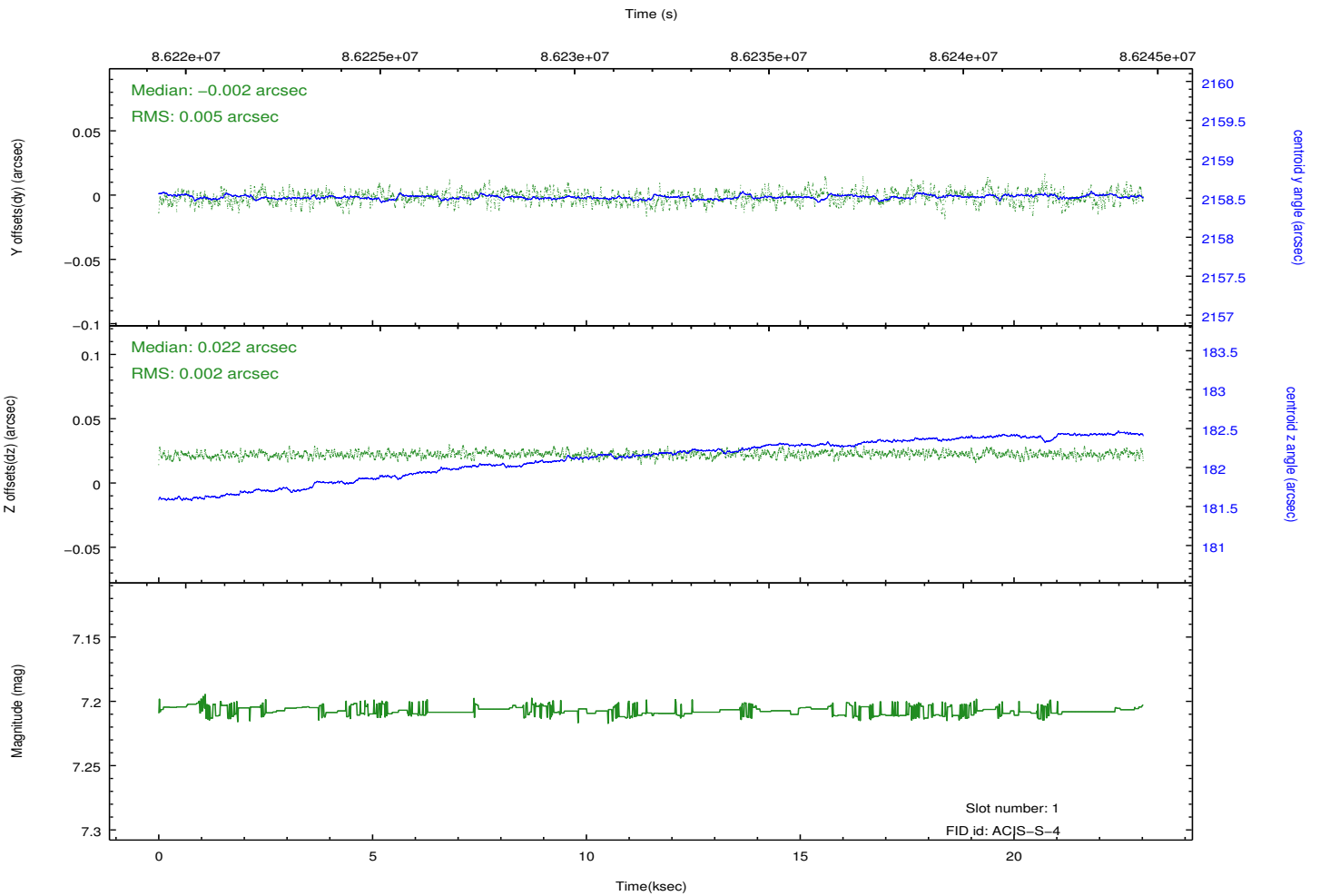
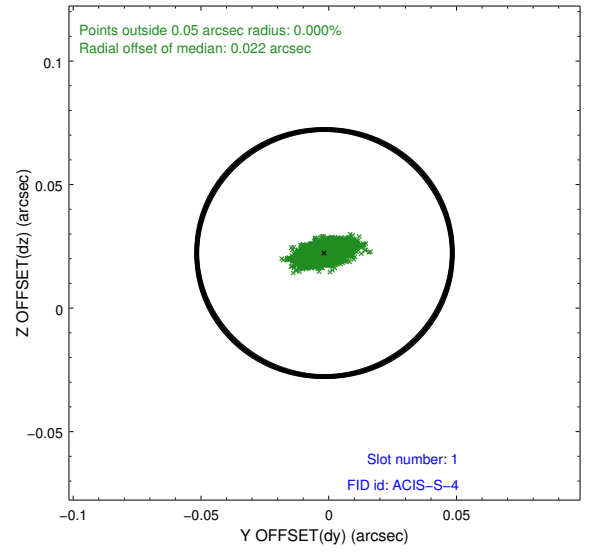
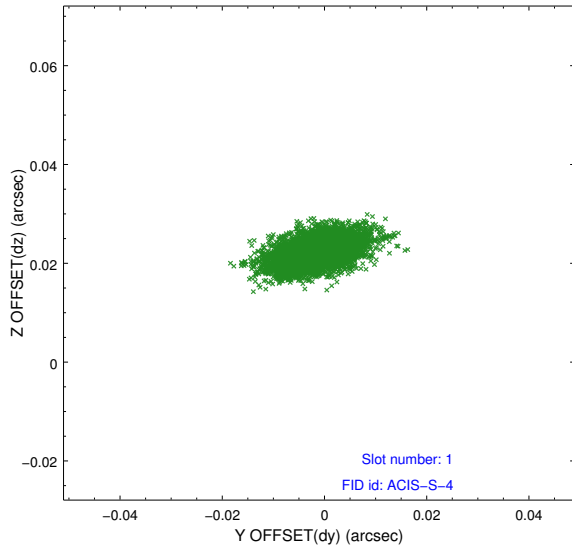


## 2.5 FID Slots

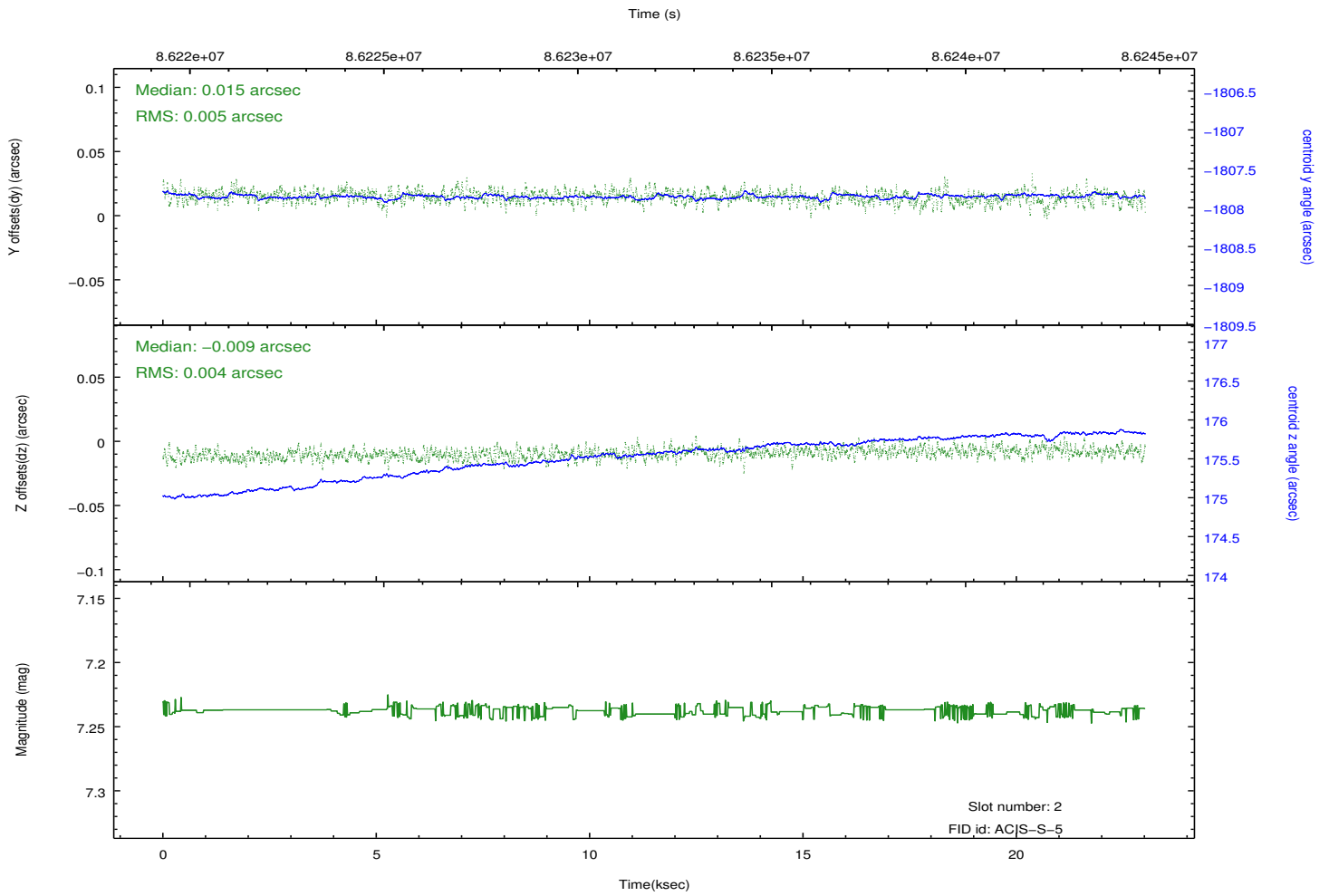
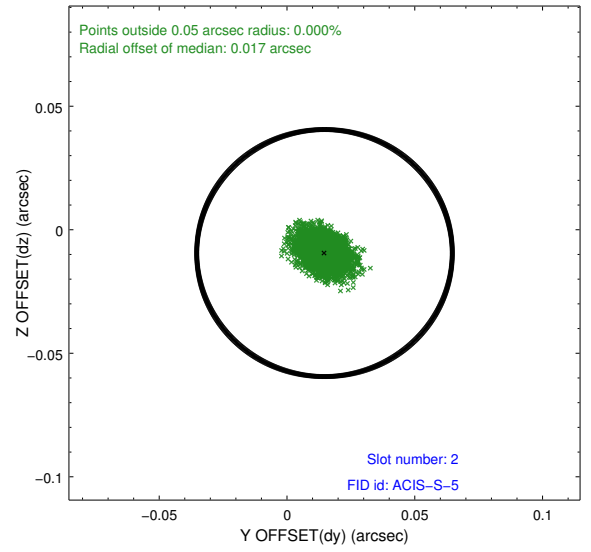
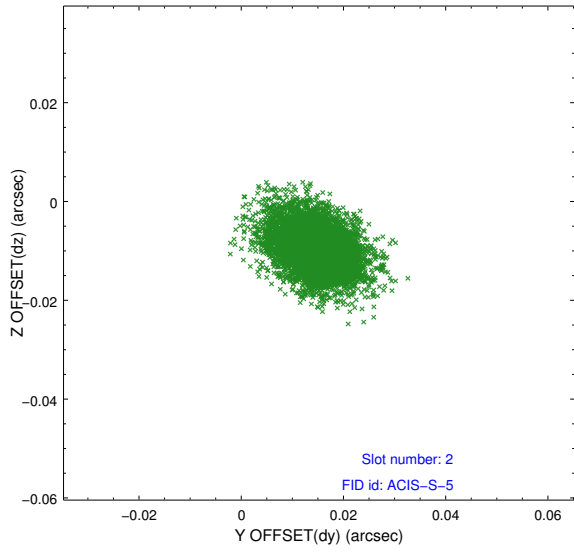
### 2.5.1 Slot 0



## 2.5.2 Slot 1



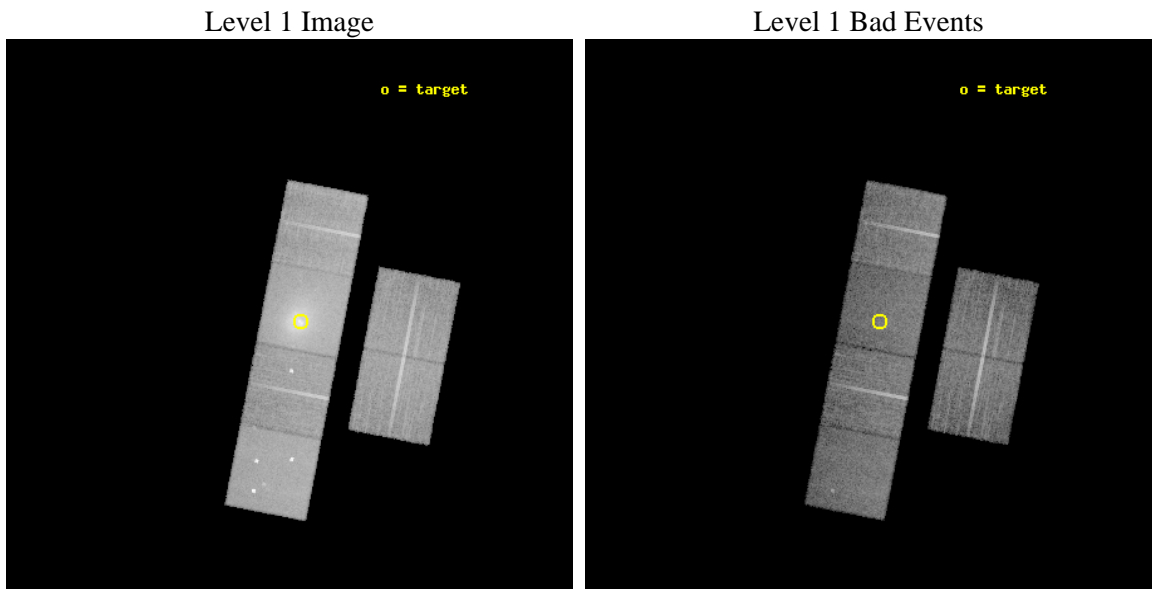
### 2.5.3 Slot 2



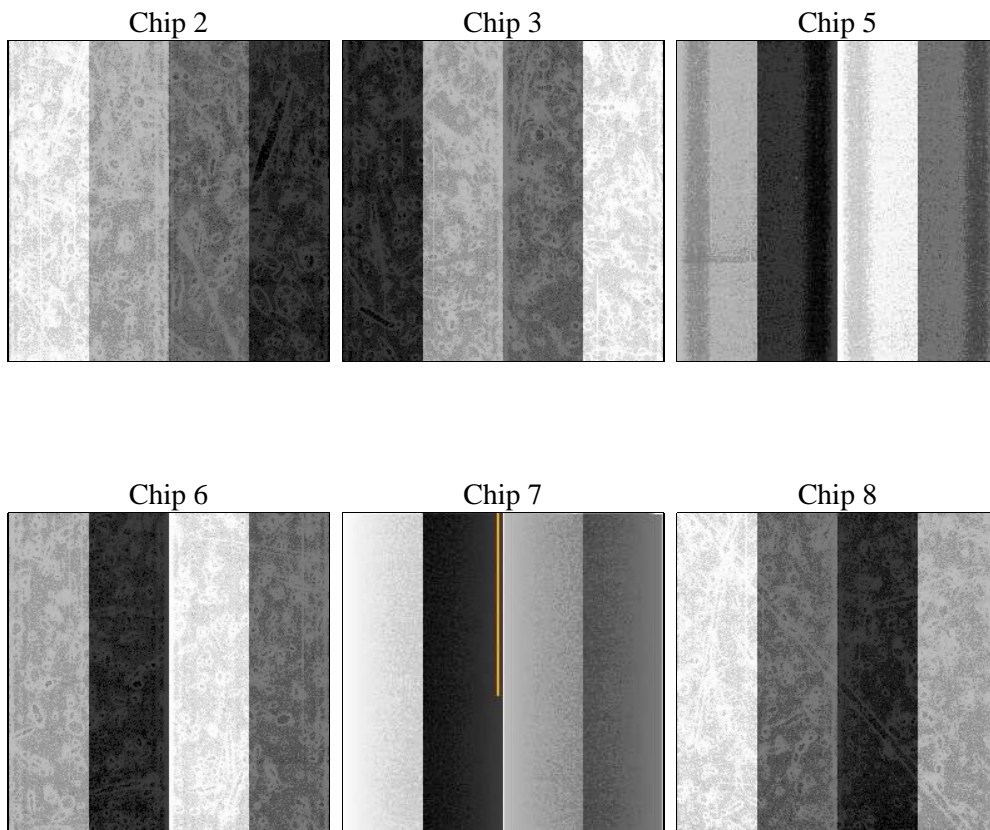
# 3 OBI

## 3.1 OBI

### 3.1.1 Images



### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	18491.305000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	18598.400017306	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime2	18598.400017306	Sum of GTIs [s]
date	2012-11-05T17:33:02	Date and time of file creation	ontime3	18598.400017306	Sum of GTIs [s]
revision	5	Processing version of data	ontime5	18598.400017306	Sum of GTIs [s]
			ontime6	18598.400017306	Sum of GTIs [s]
			ontime7	18598.400017306	Sum of GTIs [s]
			ontime8	18598.400017306	Sum of GTIs [s]
			l1events	929851	Number of level 1 events

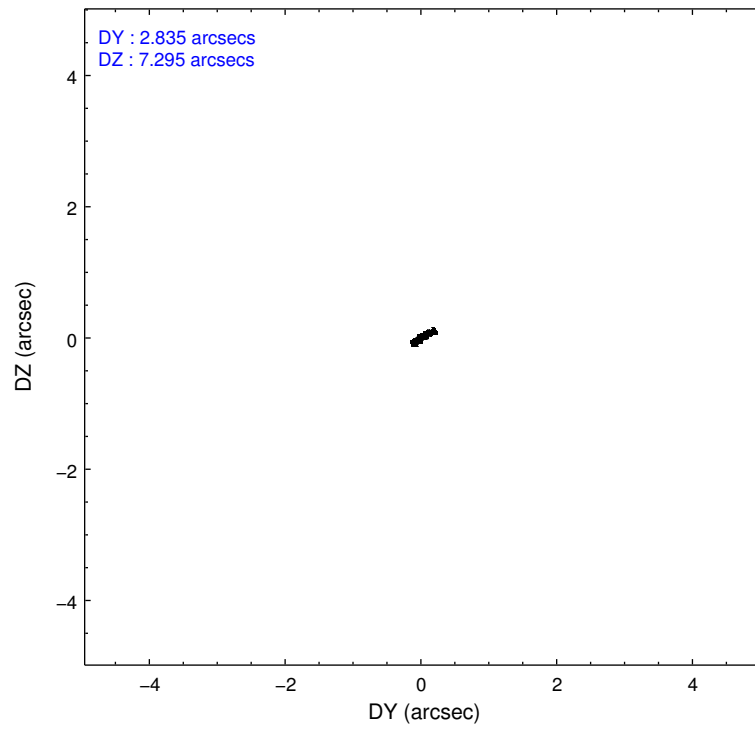
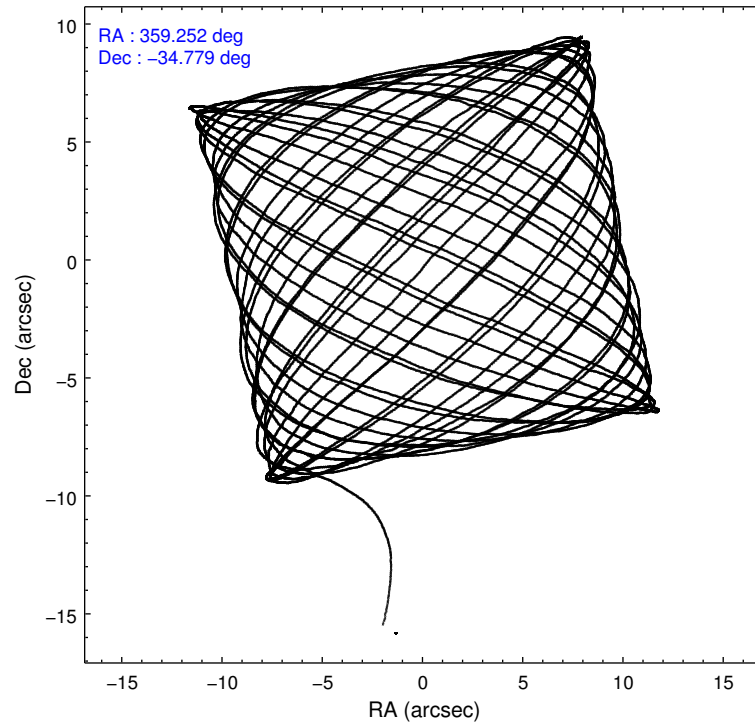
### 3.1.4 Events

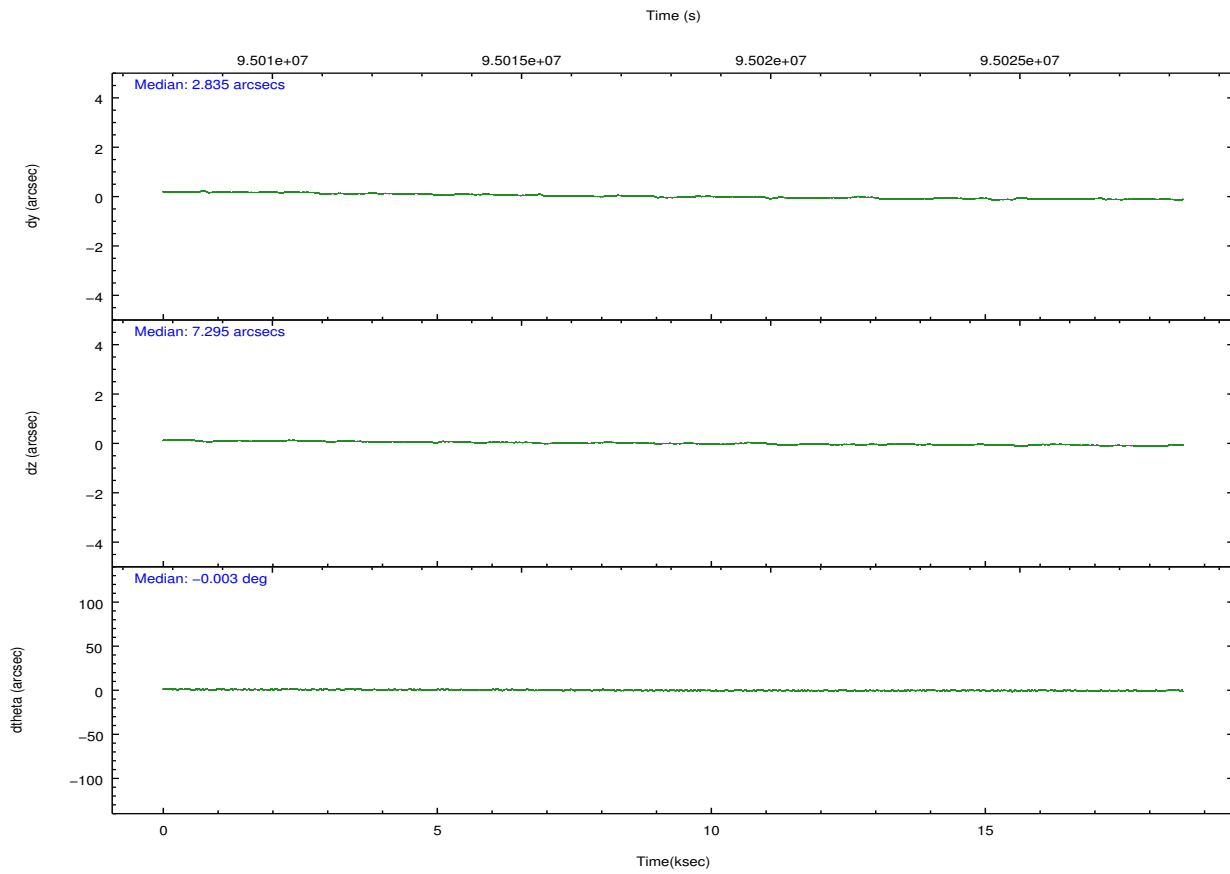
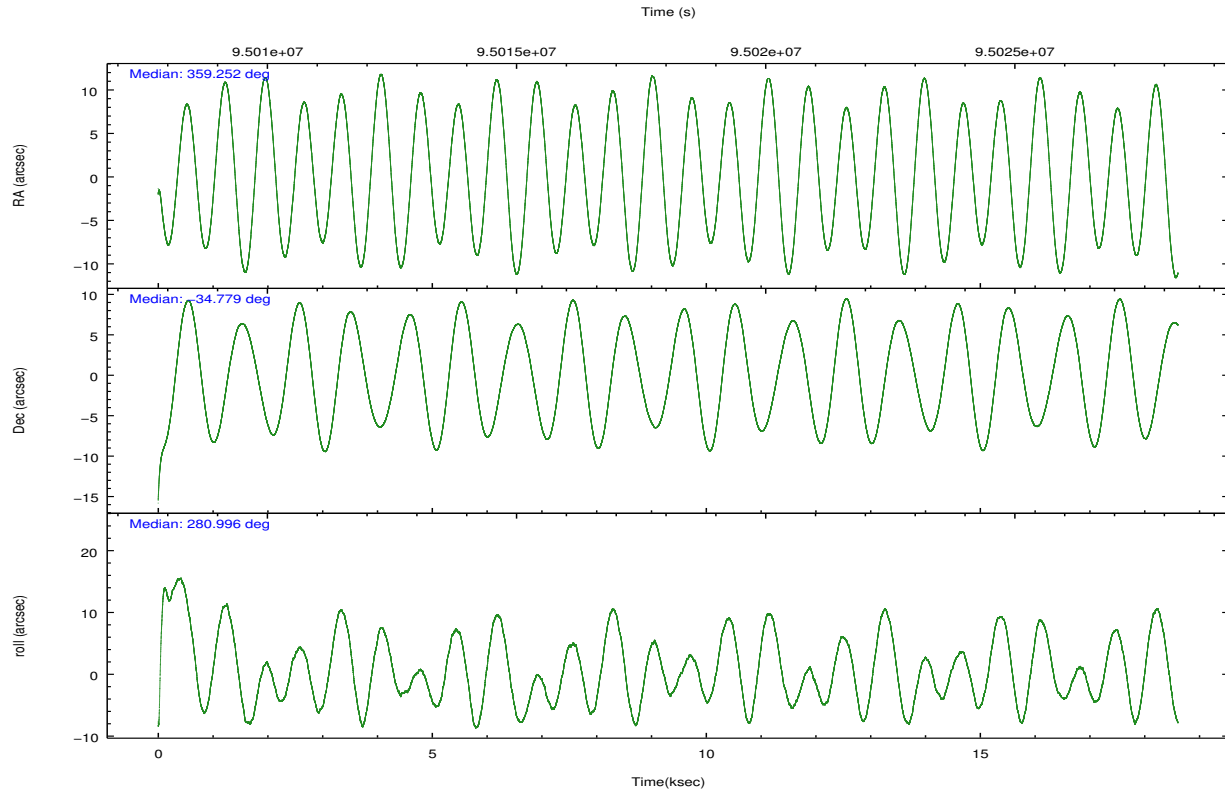
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	117359	112773	165871	126449	255874	151525	grade 0 events	6129	6276	14142	15413	43025	13028
rejected events	104049	99454	87014	102534	88959	118004		5%	5%	8%	12%	16%	8%
rejected %	88%	88%	52%	81%	34%	77%	grade 1 events	64	56	499	95	159	91
								0%	0%	0%	0%	0%	0%
							grade 2 events	2783	2564	22755	3391	40051	6735
								2%	2%	13%	2%	15%	4%
							grade 3 events	1191	1244	3514	1551	18281	3528
								1%	1%	2%	1%	7%	2%
							grade 4 events	1230	1230	3190	1512	18095	3274
								1%	1%	1%	1%	7%	2%
							grade 5 events	3917	4263	12305	4881	14735	6018
								3%	3%	7%	3%	5%	3%
							grade 6 events	2278	2276	37317	2628	50213	7565
								1%	2%	22%	2%	19%	4%
							grade 7 events	99767	94864	72149	96978	71315	111286
								85%	84%	43%	76%	27%	73%

### 3.2 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	359.230657	359.2526715489283	Subarray requested	NONE	NONE
[deg] Pointing Dec	-34.758657	-34.77913808149538	Alternating exposures requested	N	N
[deg] Pointing Roll	280.833588	281.0027483612608	[s] Primary exposure time	3.200000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	95008850.184000	95007560.275774			
Observation start date	2001-01-04T15:19:46	2001-01-04T14:59:20			
[s] Observation end time (MET)	95027341.184000	95027655.91404501			
Observation end date	2001-01-04T20:27:57	2001-01-04T20:34:15			
Read mode	TIMED	TIMED			

### 3.3 Aspect



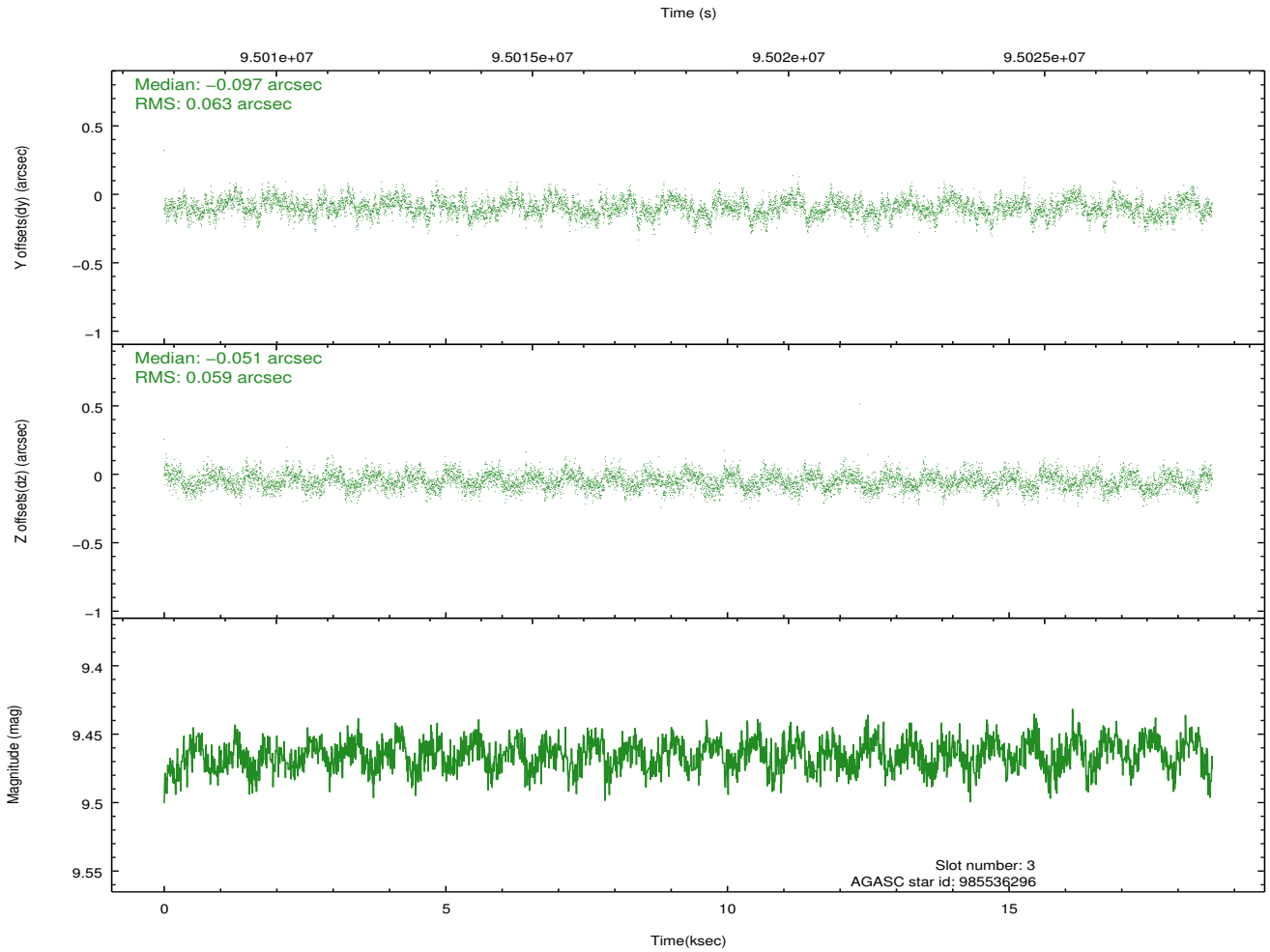
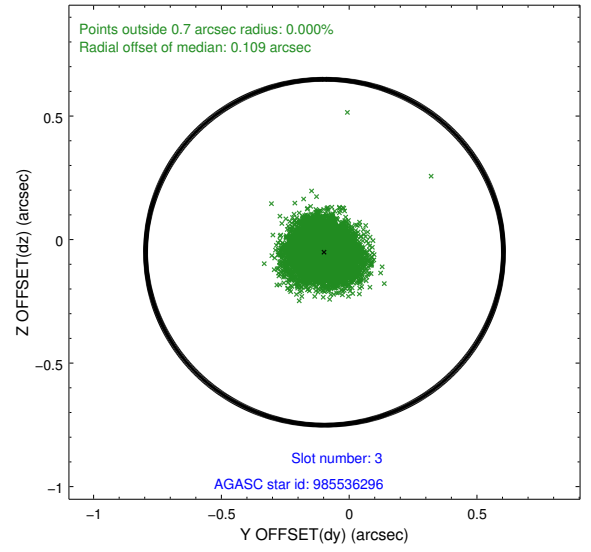
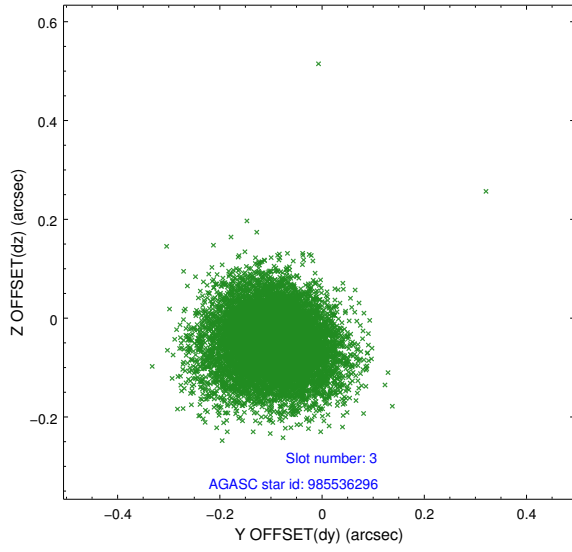


### Slot Statistics

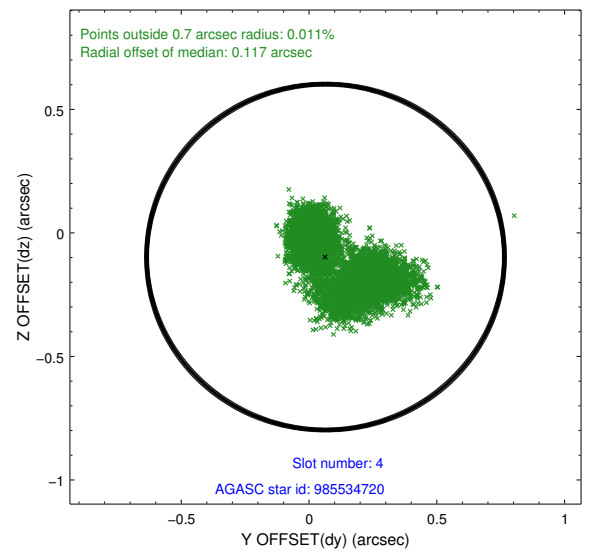
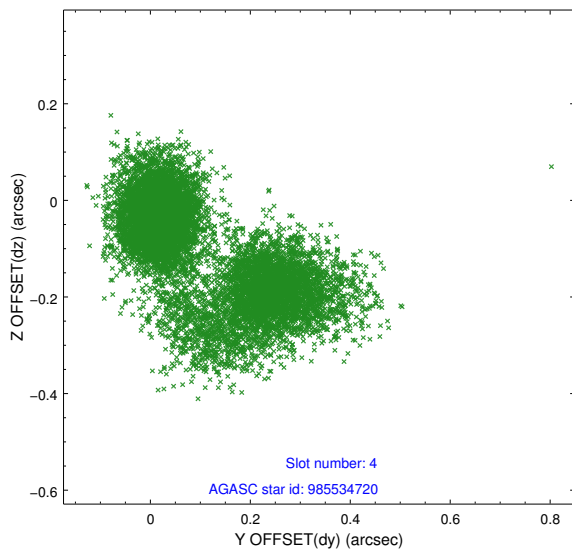
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	5616	-0.044	-0.004	0.007	0.011	0.000000	0.000000	-754.85	-1726.60
1	FID	ACIS-S-4	7.21	5615	-0.002	0.022	0.005	0.010	0.000000	0.000000	2158.38	181.81
2	FID	ACIS-S-5	7.24	5615	0.015	-0.009	0.007	0.011	0.000000	0.000000	-1807.47	175.55
3	GUIDE	985536296	9.46	11224	0.061	0.066	0.101	0.171	358.653610	-34.417416	-1853.58	1133.79
4	GUIDE	985534720	9.29	11227	0.045	-0.122	0.078	0.126	358.560006	-34.718570	-2036.84	29.64
5	GUIDE	985533504	8.20	11232	-0.064	-0.044	0.062	0.096	359.621834	-34.285981	976.15	1837.97
6	GUIDE	985538688	8.98	11226	0.059	0.035	0.078	0.123	359.925547	-34.998115	2064.76	-651.31
7	GUIDE	985926576	9.49	11224	-0.096	0.070	0.087	0.140	359.107966	-35.442581	-209.34	-2432.17

### 3.4 Star Slots

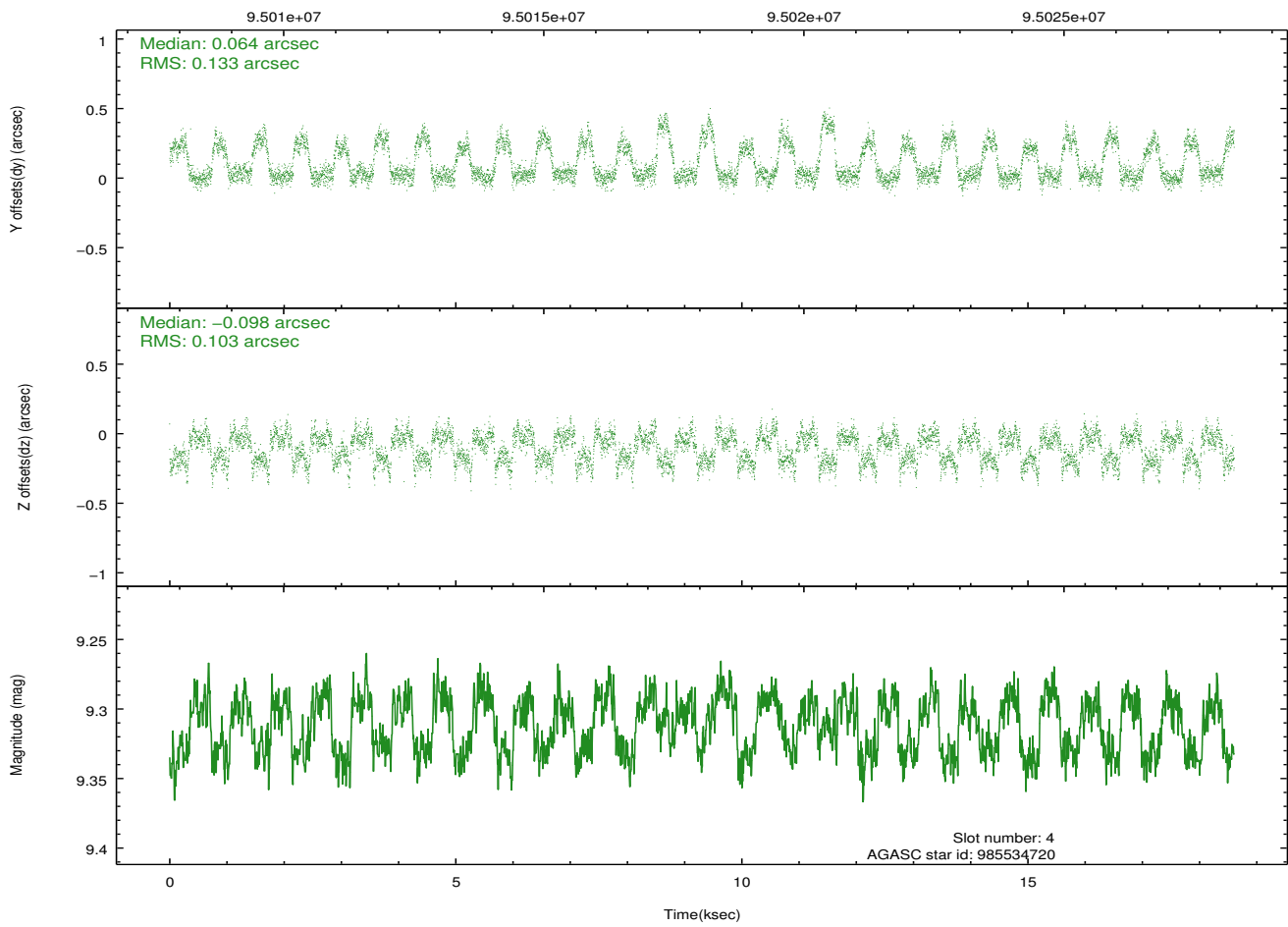
#### 3.4.1 Slot 3



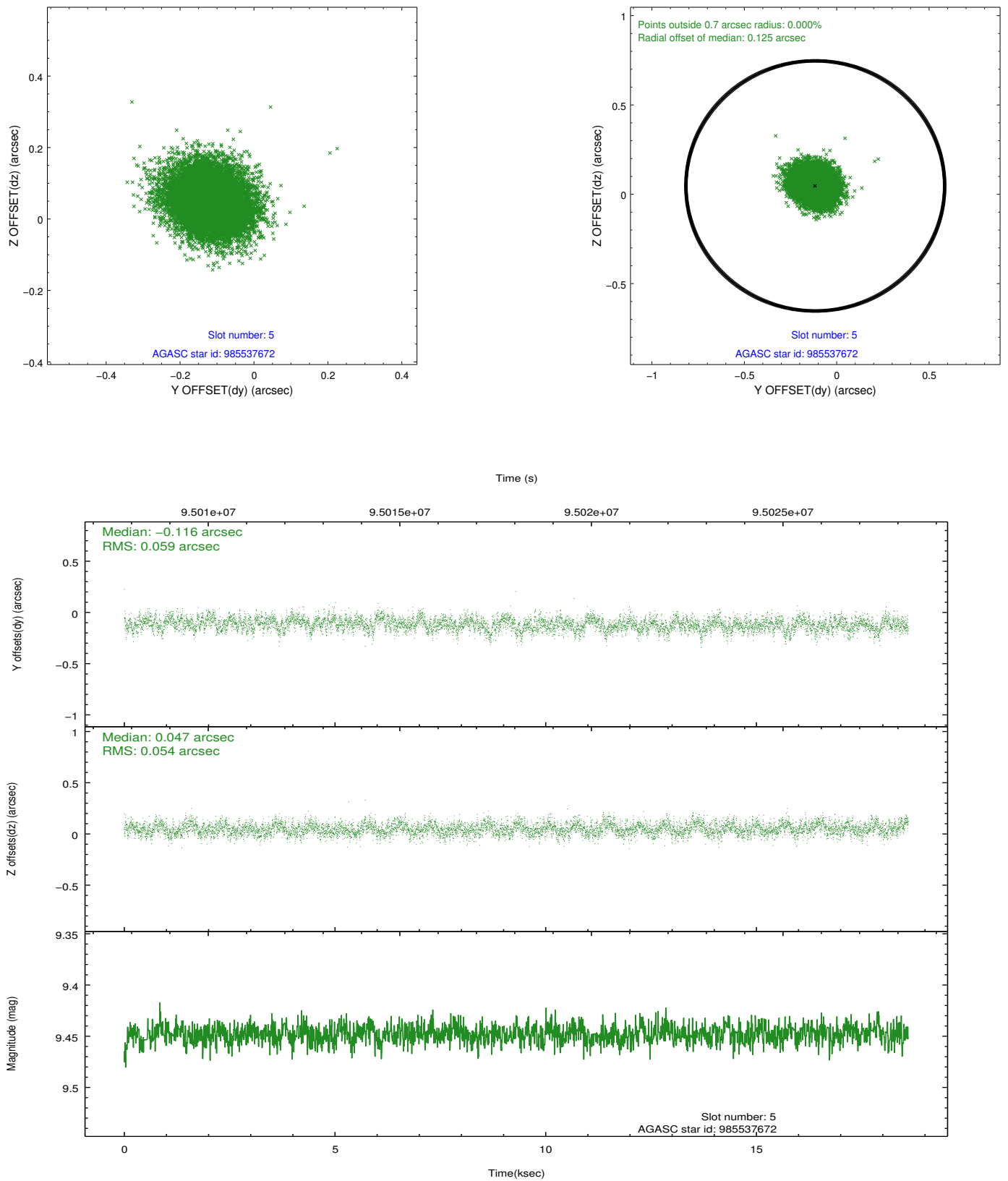
### 3.4.2 Slot 4



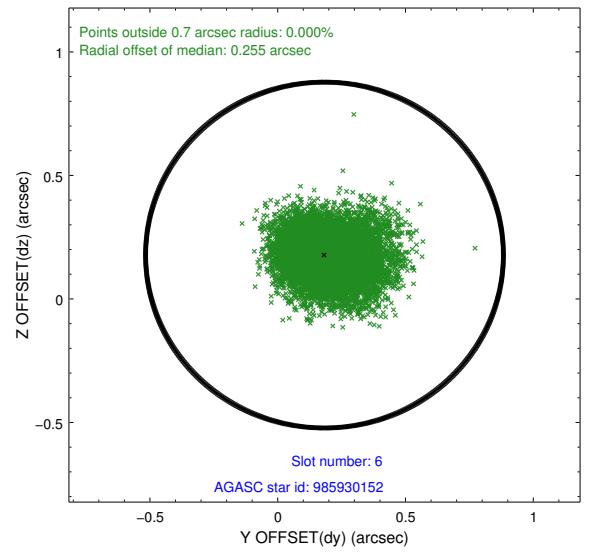
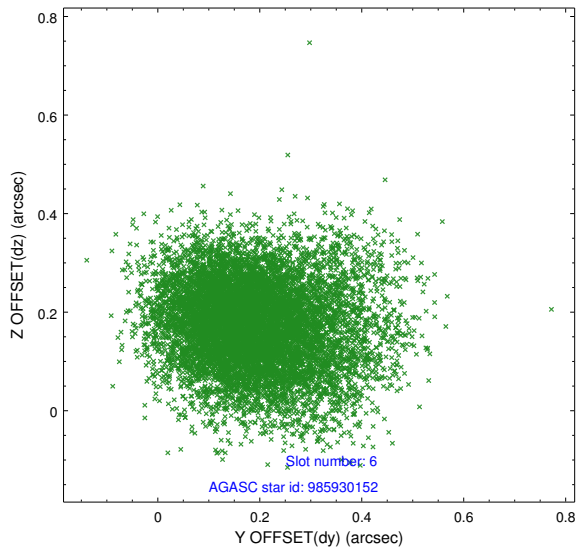
Time (s)



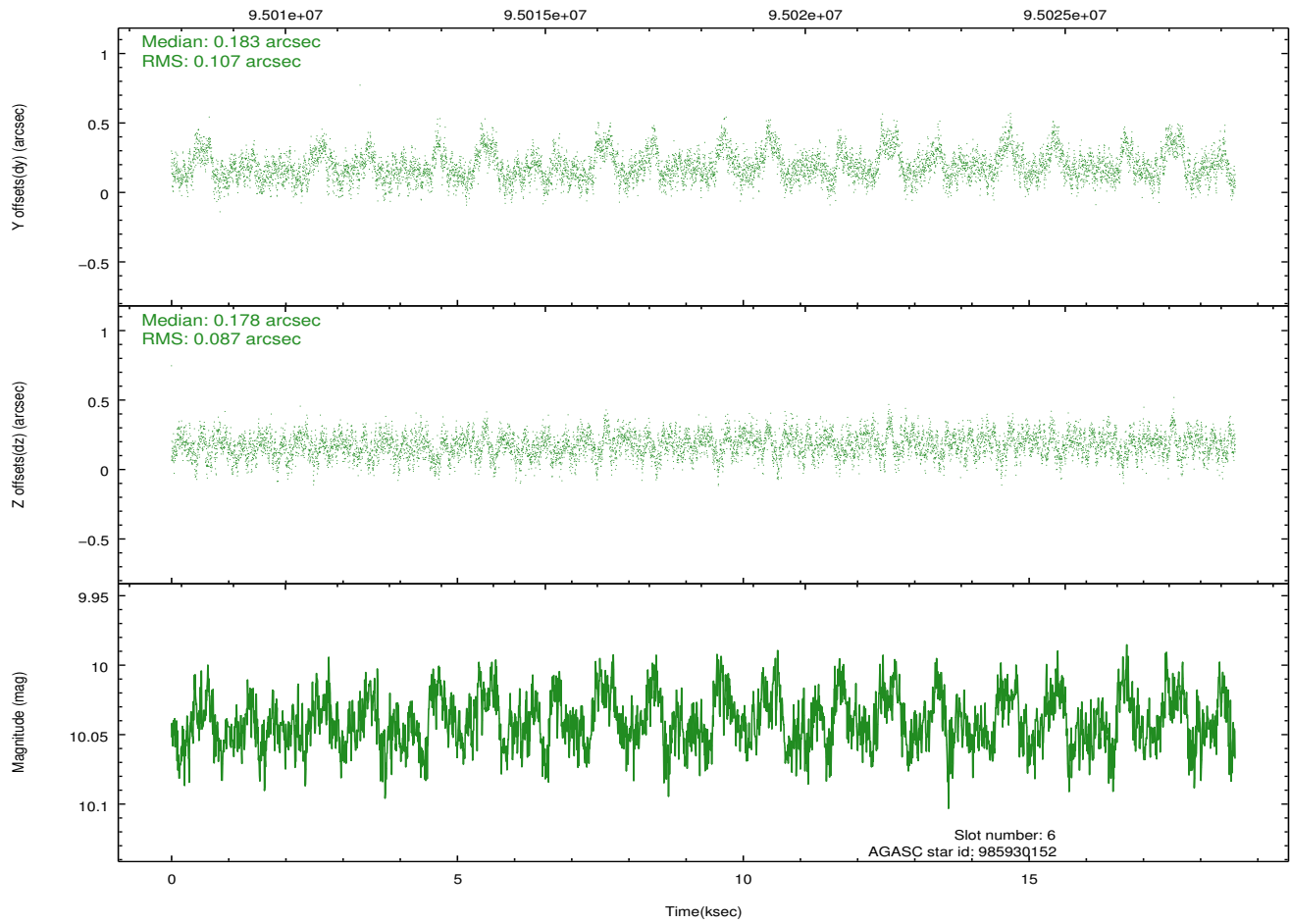
### 3.4.3 Slot 5



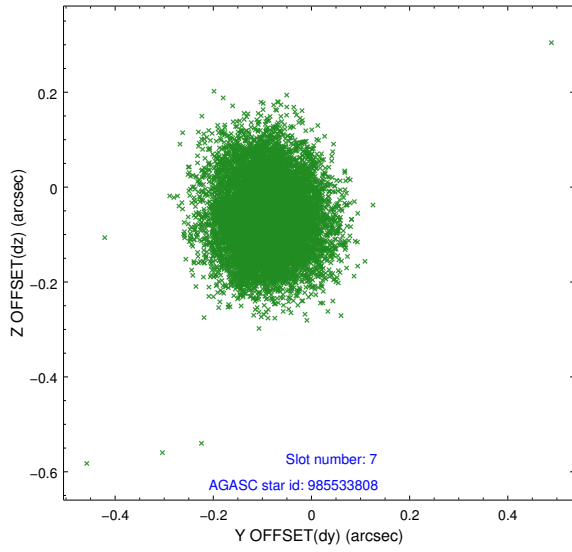
### 3.4.4 Slot 6



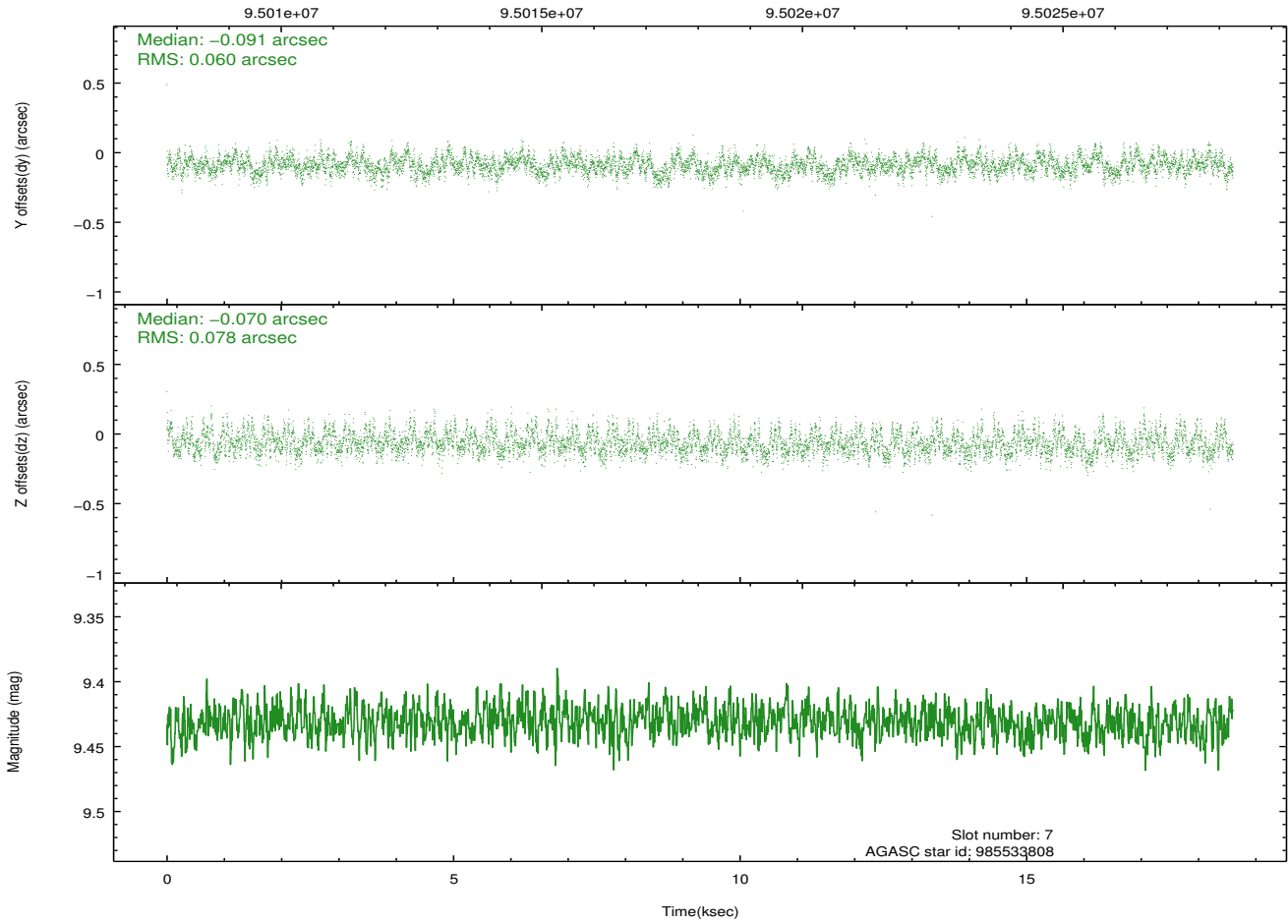
Time (s)



### 3.4.5 Slot 7

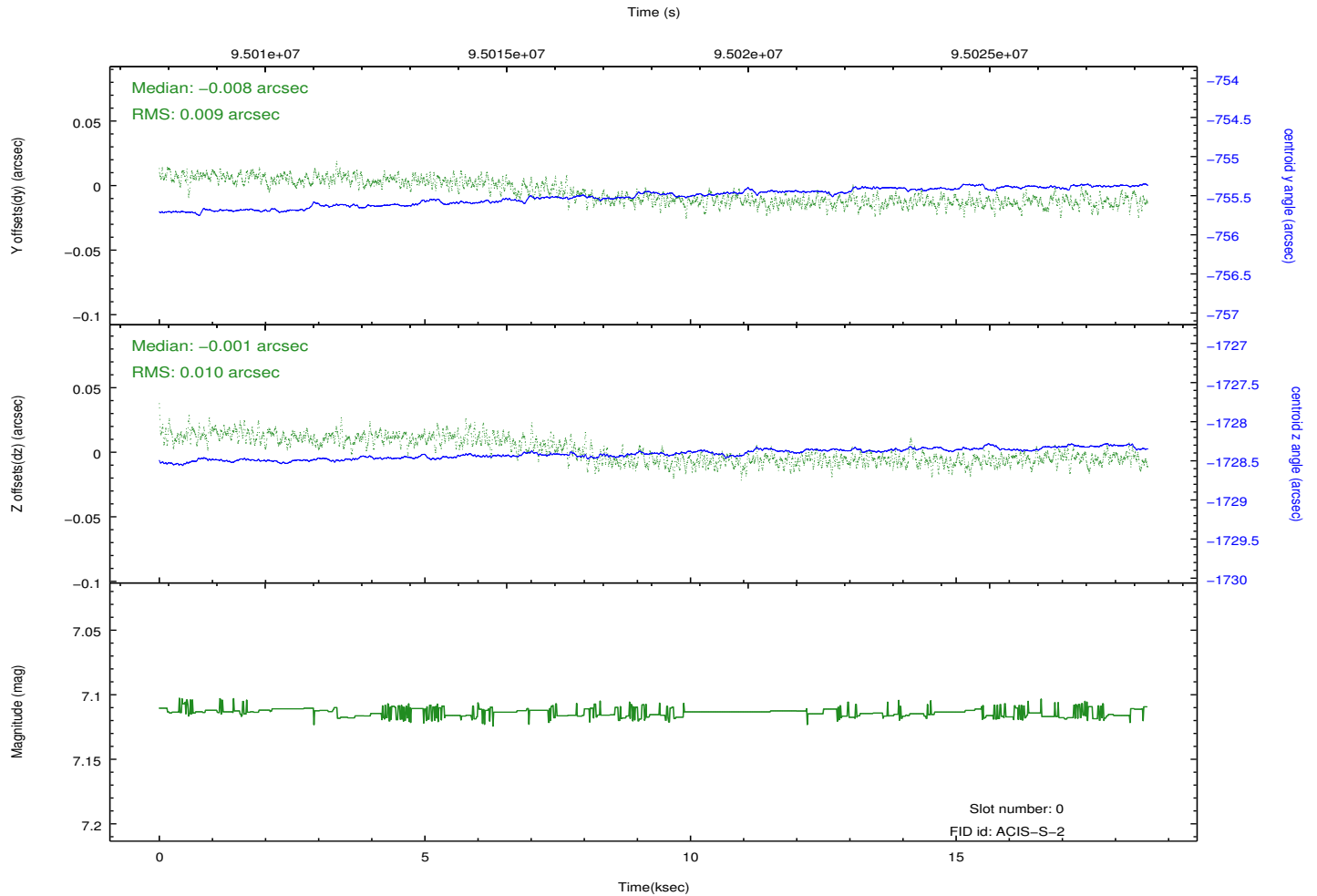
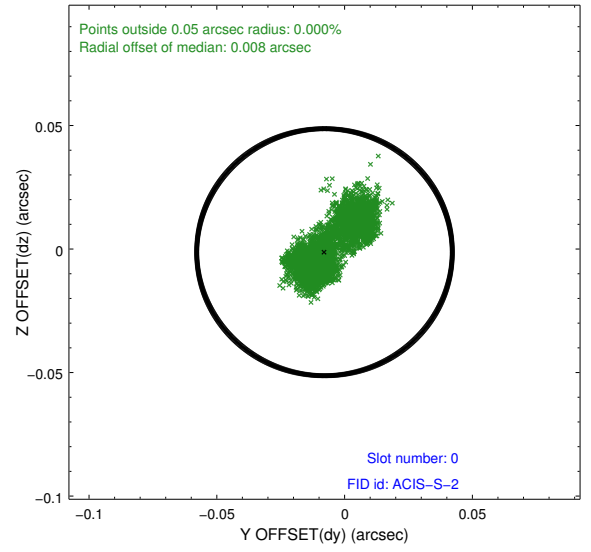
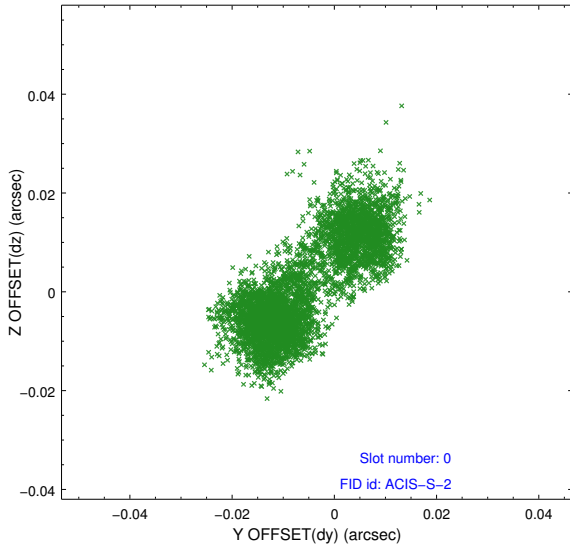


Time (s)

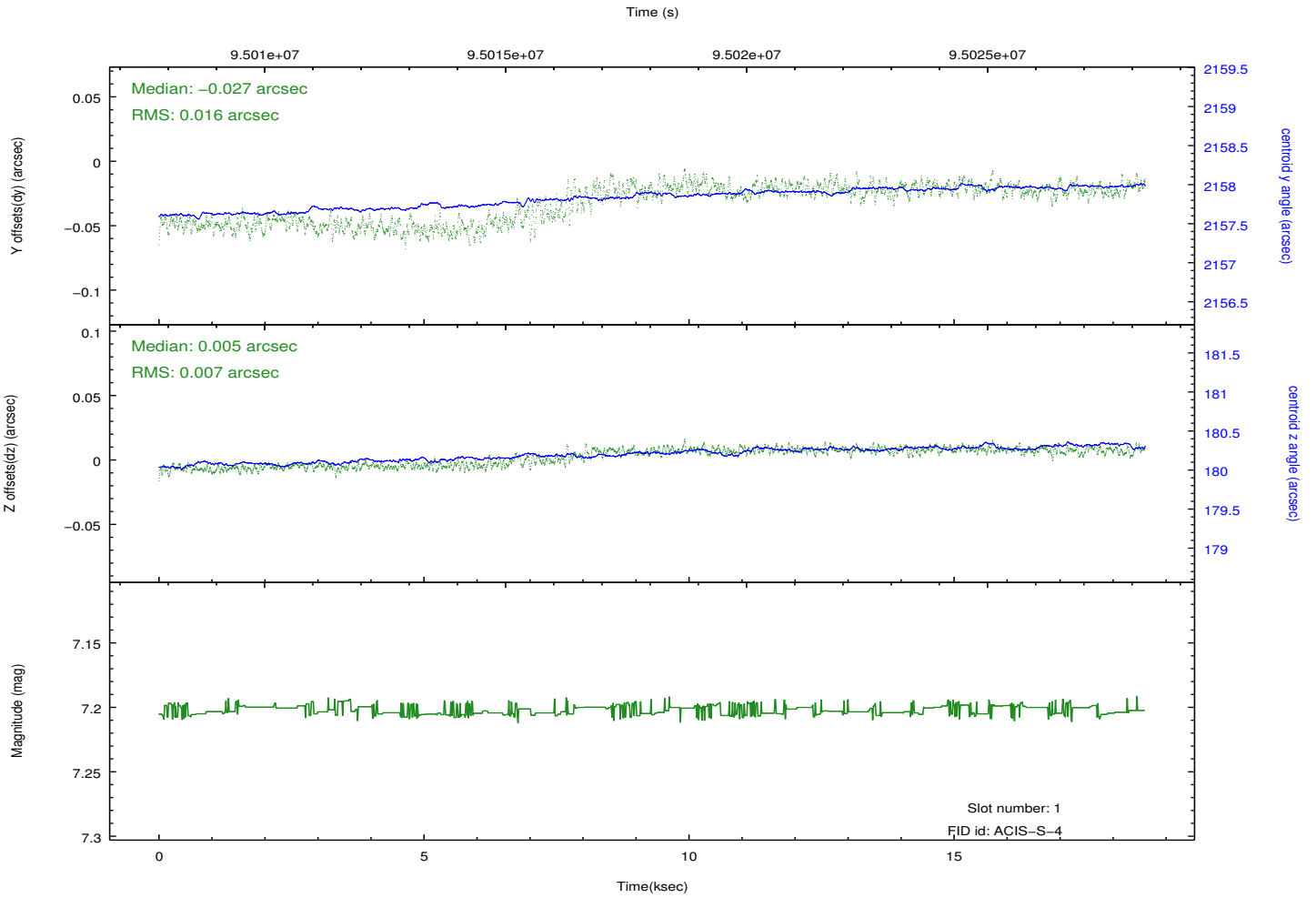
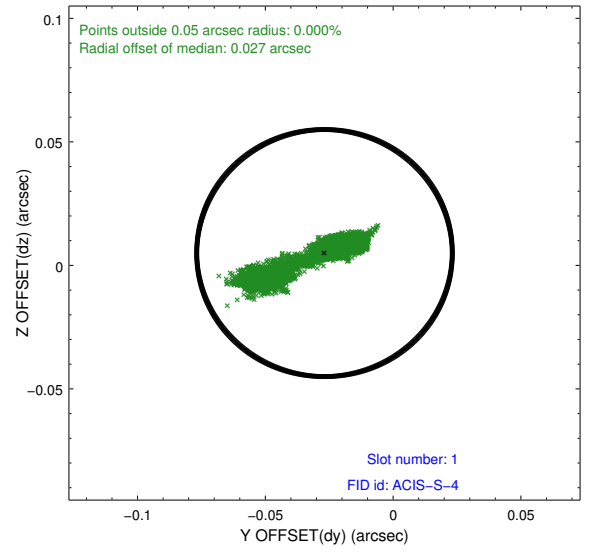
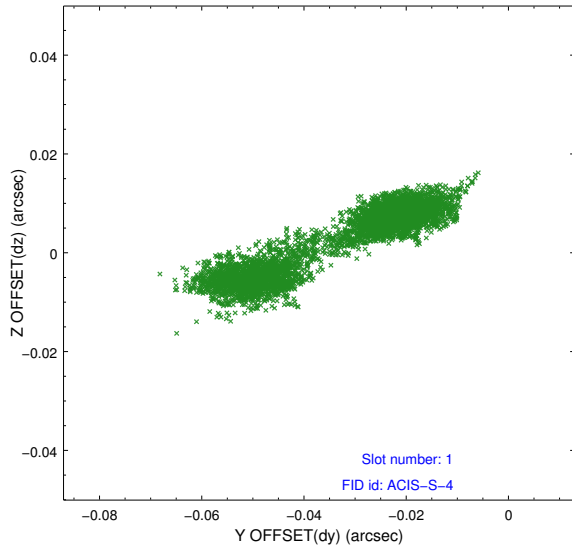


# 3.5 FID Slots

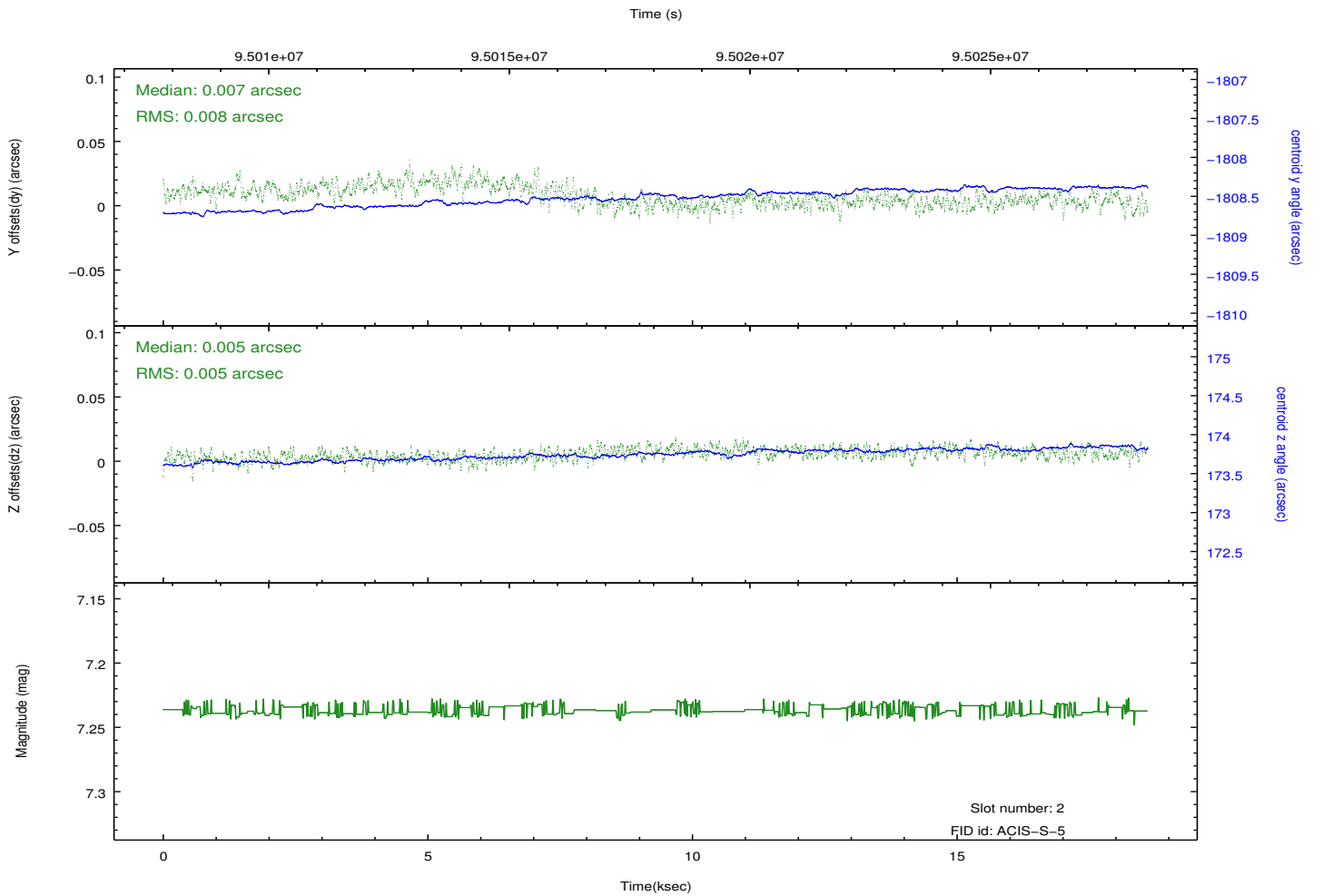
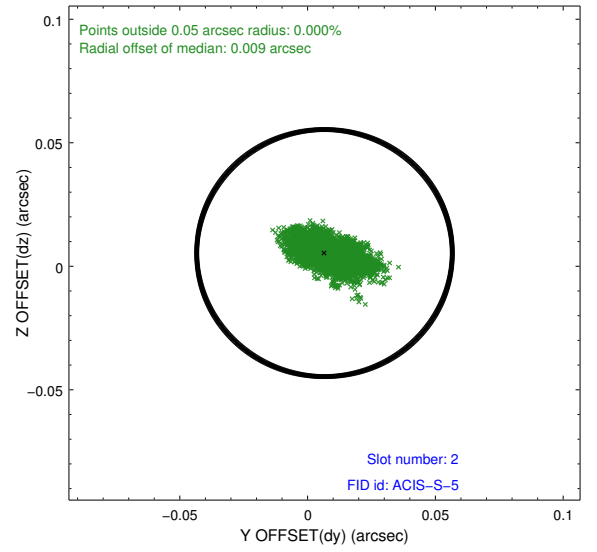
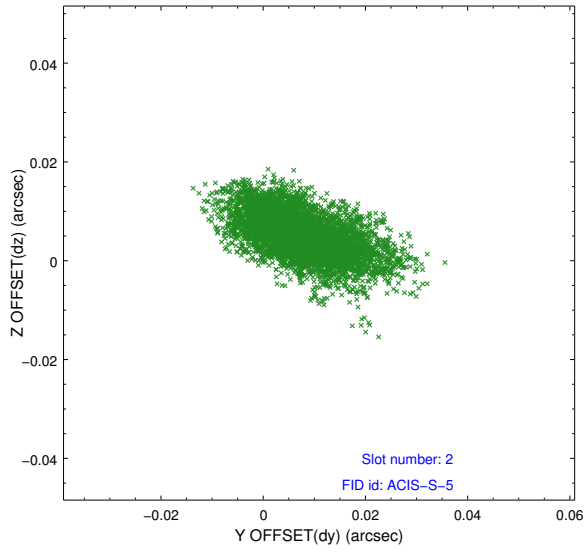
## 3.5.1 Slot 0



### 3.5.2 Slot 1



### 3.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	41.186

## A.2 Comments