

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12040 - L2 Version 2  
Chandra X-Ray Center

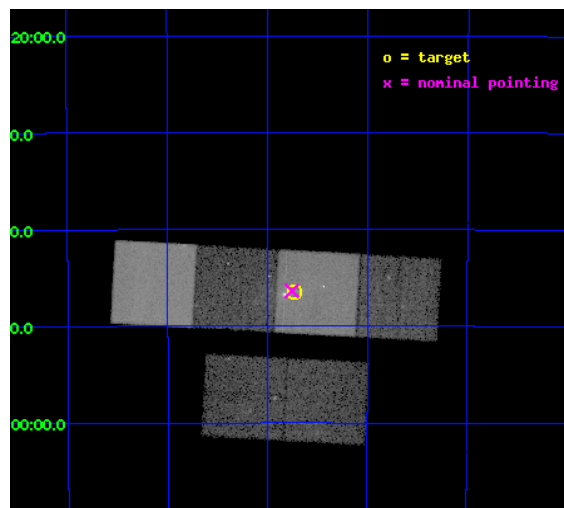
L2 Processing Date : Jun 17 2012

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# 1 Front

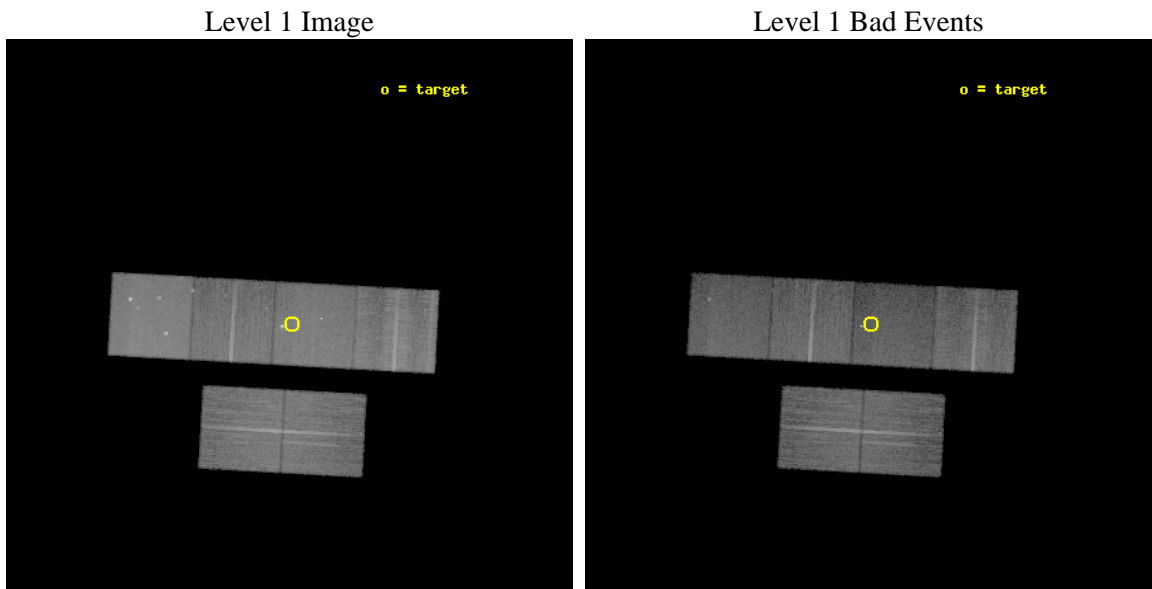
seq_num	702172	Sequence number
obs_id	12040	Observation id
title	Variability and particle acceleration in the jet of Pictor A	Propo
observer	Dr Martin Hardcastle	Principal investigator
object	Pictor A Jet	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.933333	Observer's specified target RA [deg]
dec_targ	-45.775556	Observer's specified target Dec [deg]
ra_nom	79.938999458062	Nominal RA [deg]
dec_nom	-45.772765509907	Nominal Dec [deg]
roll_nom	3.1606814650359	Nominal Roll [deg]
revision	2	Processing version of data
ontime	17541.222719789	Sum of GTIs [s]
livetime	17319.105195654	Livetime [s]
ontime2	17541.263759792	Sum of GTIs [s]
ontime3	17541.099599779	Sum of GTIs [s]
ontime5	17541.181679785	Sum of GTIs [s]
ontime6	17541.140639782	Sum of GTIs [s]
ontime7	17541.222719789	Sum of GTIs [s]
ontime8	17541.058559775	Sum of GTIs [s]
l2events	249849	Number of level 2 events



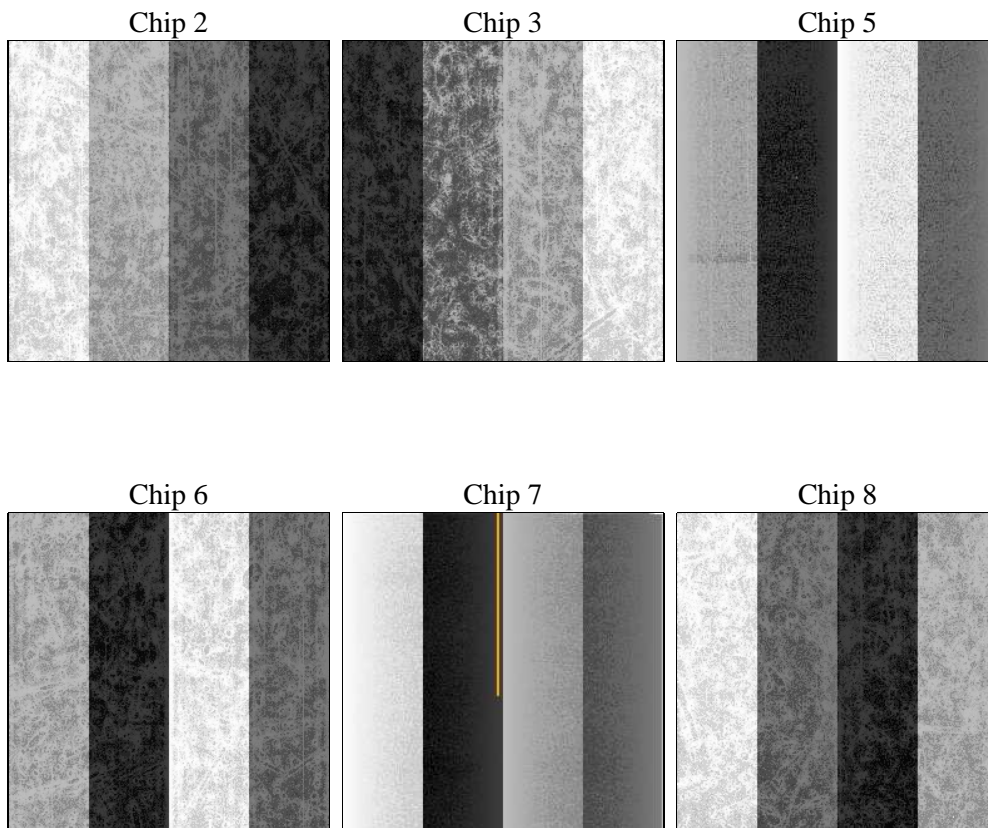
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	17500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	17541.222719789	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime2	17541.263759792	Sum of GTIs [s]
date	2012-06-17T18:20:35	Date and time of file creation	ontime3	17541.099599779	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	17541.181679785	Sum of GTIs [s]
			ontime6	17541.140639782	Sum of GTIs [s]
			ontime7	17541.222719789	Sum of GTIs [s]
			ontime8	17541.058559775	Sum of GTIs [s]
			l1events	1078445	Number of level 1 events

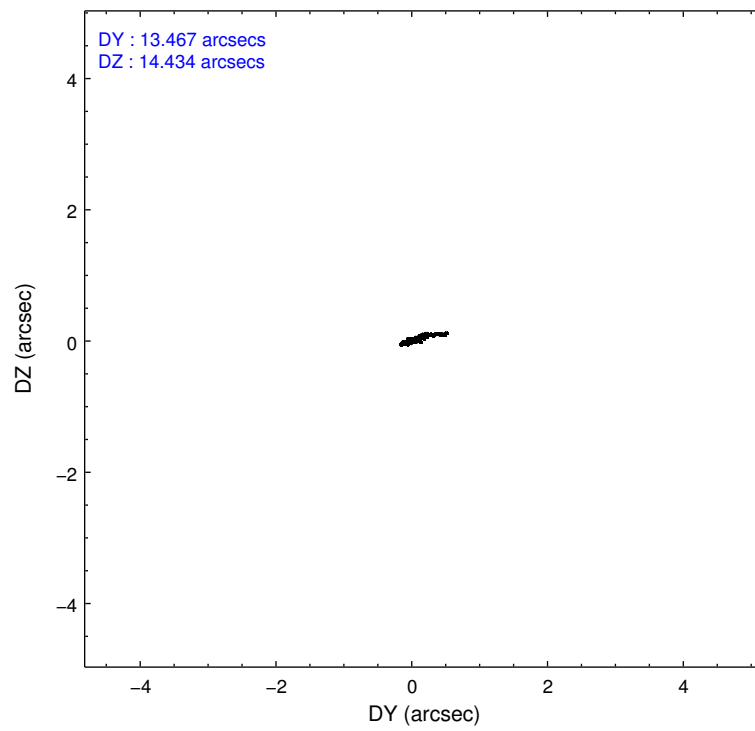
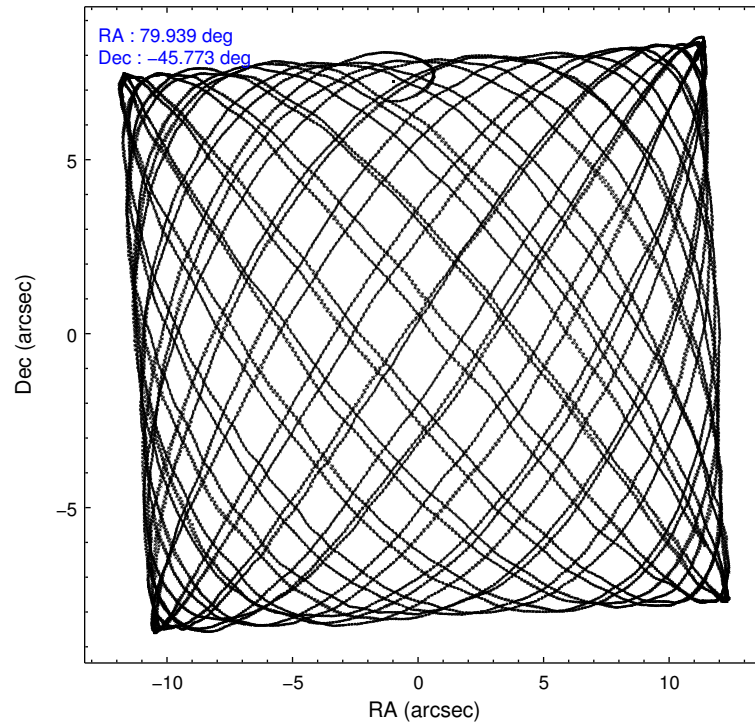
### 2.1.4 Events

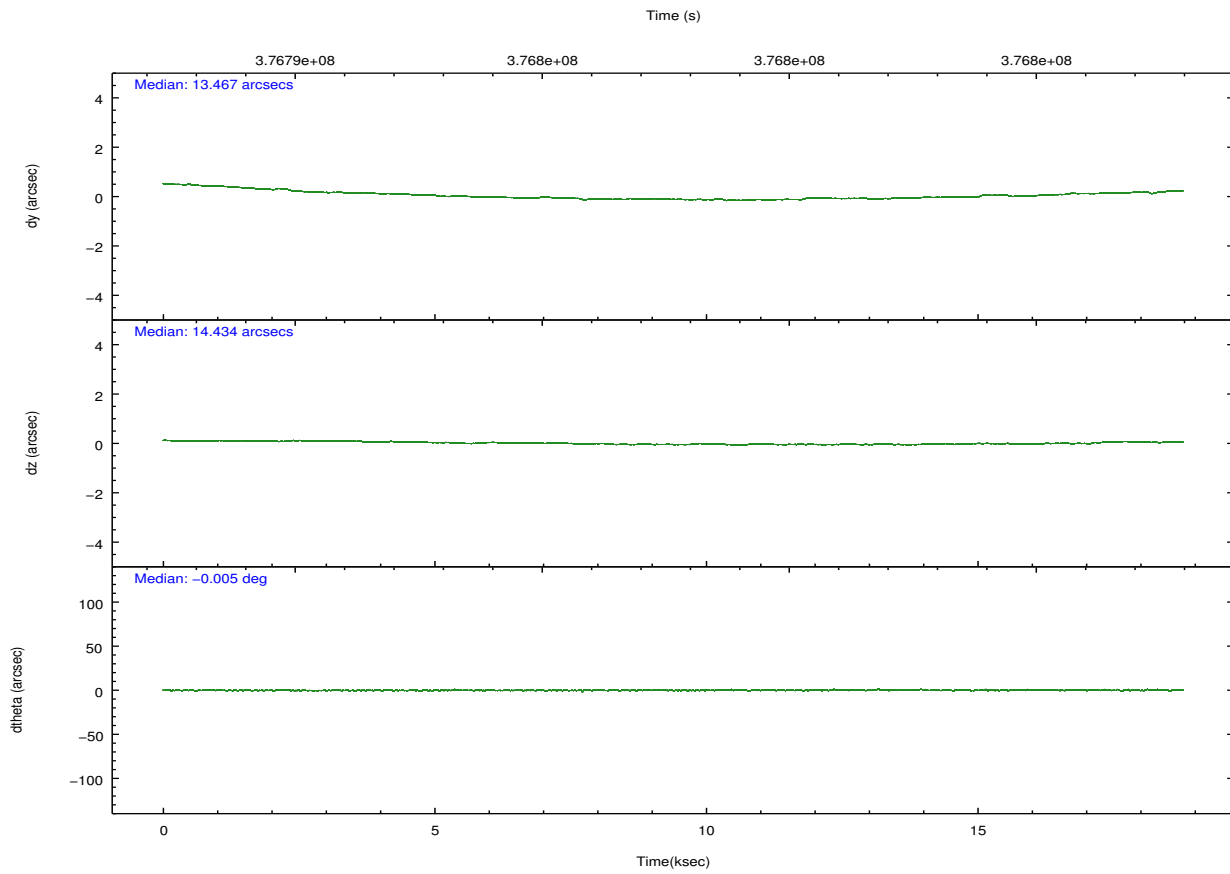
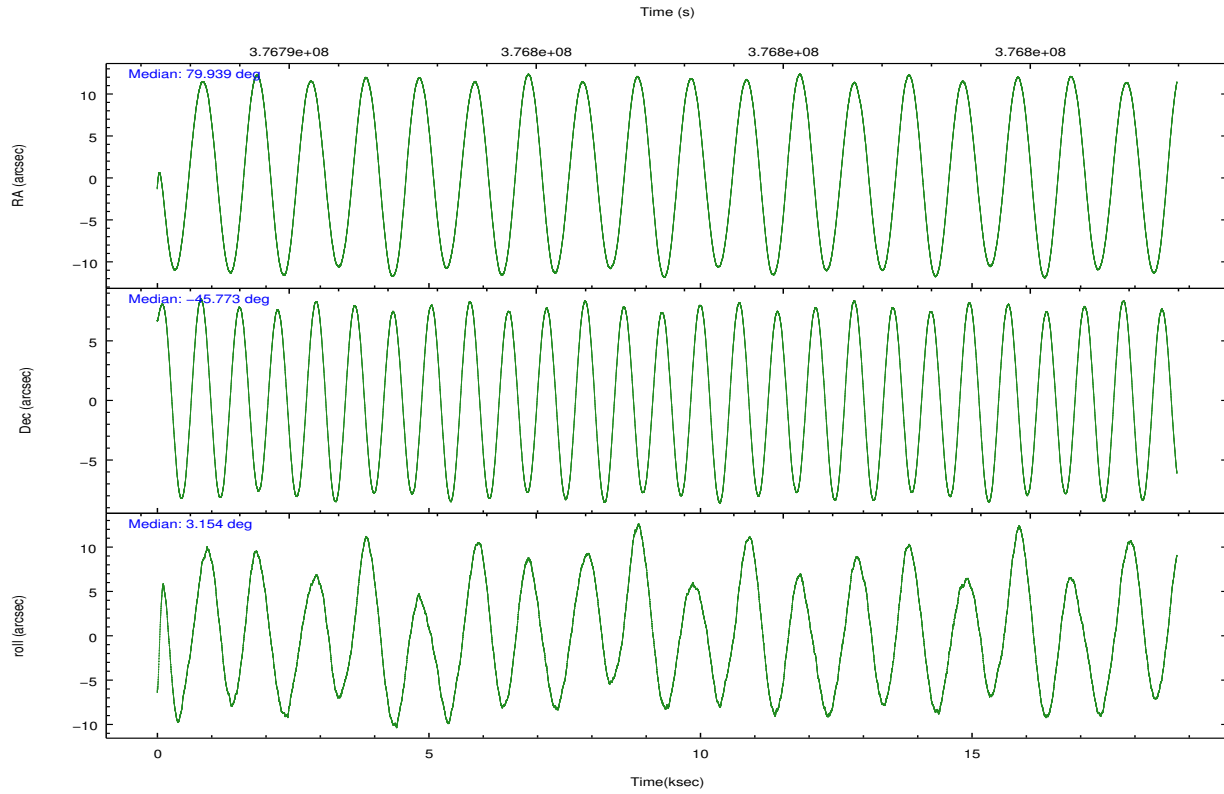
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	162646	150849	223205	156062	189809	195874	grade 0 events	5793	5112	13194	6656	9817	15157
rejected events	146576	136428	110818	138539	99476	144848		3%	3%	5%	4%	5%	7%
rejected %	90%	90%	49%	88%	52%	73%	grade 1 events	83	93	908	90	368	175
								0%	0%	0%	0%	0%	0%
							grade 2 events	4010	3142	33194	3811	18951	12188
								2%	2%	14%	2%	9%	6%
							grade 3 events	1612	1628	4512	1757	8243	5313
								0%	1%	2%	1%	4%	2%
							grade 4 events	1671	1589	4495	1838	8316	4880
								1%	1%	2%	1%	4%	2%
							grade 5 events	5707	6197	17188	6587	19075	9313
								3%	4%	7%	4%	10%	4%
							grade 6 events	2991	2956	57039	3465	45034	13510
								1%	1%	25%	2%	23%	6%
							grade 7 events	140779	130132	92675	131858	80005	135338
								86%	86%	41%	84%	42%	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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	79.906512	79.9389994580618	CCD I2 on	O2	Y
[deg] Pointing Dec	-45.788046	-45.7727655099073	CCD I3 on	O3	Y
[deg] Pointing Roll	2.980772	3.160681465035893	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	O4	Y
[s] Observation start time (MET)	376789530.184000	376787515.80301	CCD S5 on	N	N
Observation start date	2009-12-09T23:44:24	2009-12-09T23:11:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	376807030.184000	376808097.29155	On-chip summing requested	N	N
Observation end date	2009-12-10T04:36:04	2009-12-10T04:54:57	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





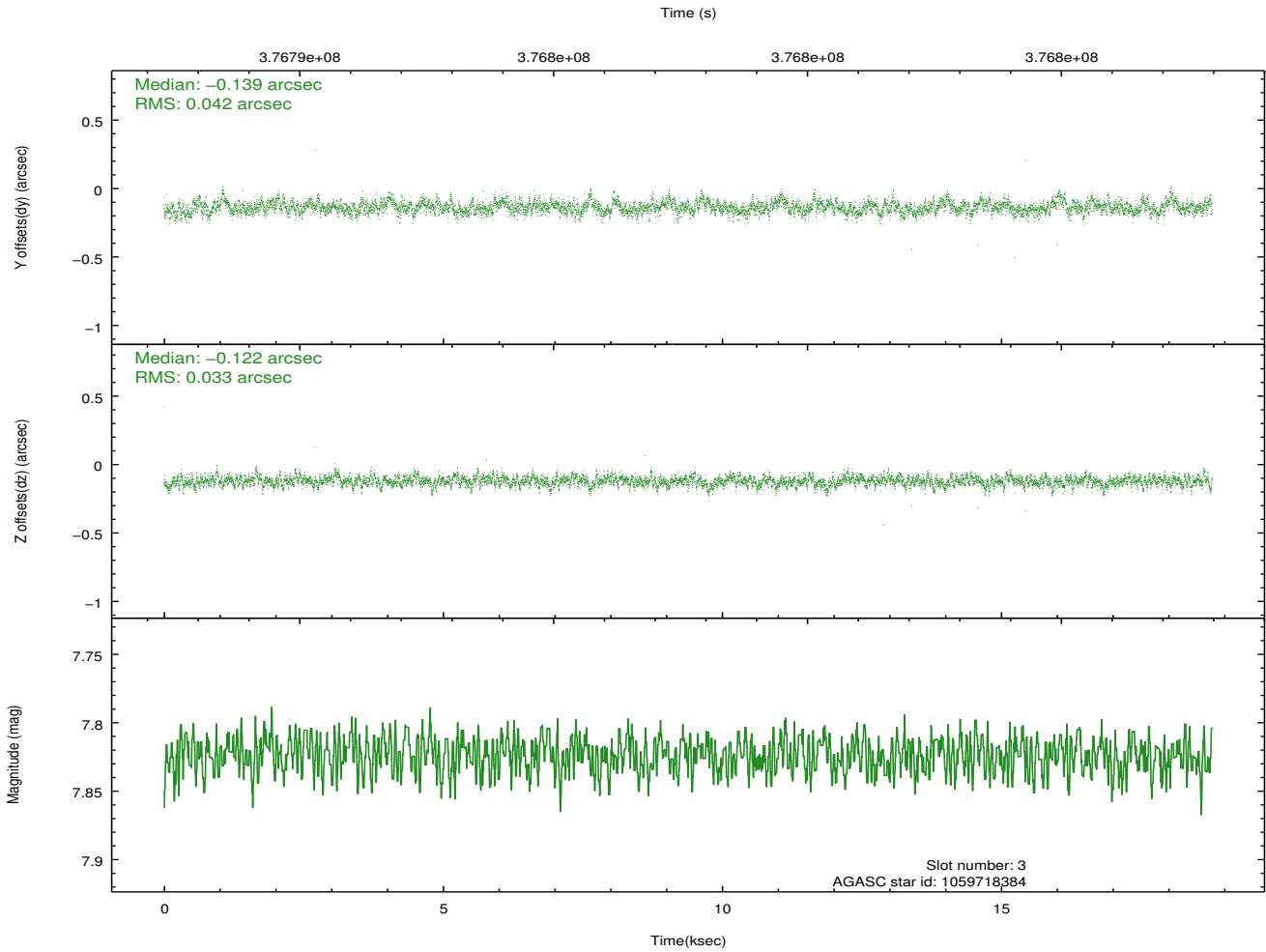
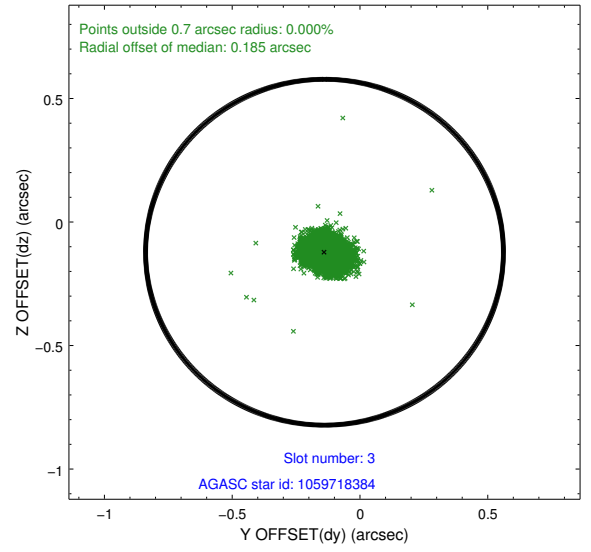
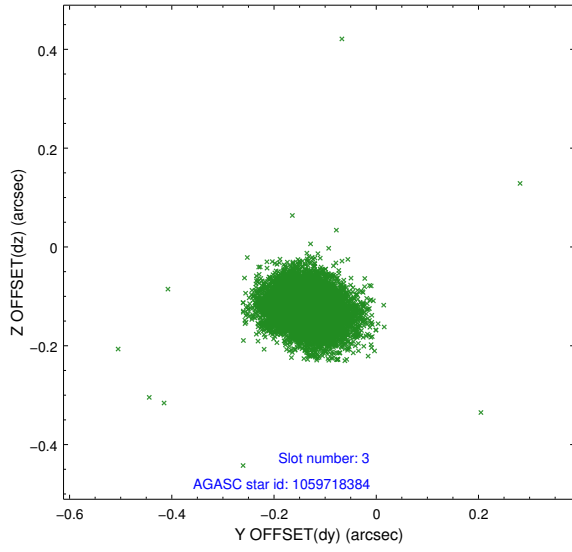
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.90	4580	-0.062	-0.051	0.009	0.016	0.000000	0.000000	-766.48	-1735.88
1	FID	ACIS-S-4	6.99	4580	0.210	0.043	0.011	0.021	0.000000	0.000000	2146.94	172.53
2	FID	ACIS-S-5	7.02	4580	-0.180	0.016	0.008	0.013	0.000000	0.000000	-1819.20	166.35
3	GUIDE	1059718384	7.82	9161	-0.139	-0.122	0.055	0.092	80.663676	-45.411103	1981.32	1247.02
4	GUIDE	1059719088	8.57	9148	-0.018	-0.095	0.067	0.107	80.358941	-45.341185	1227.16	1544.34
5	GUIDE	1059720912	8.89	9146	0.084	-0.075	0.104	0.171	80.344072	-46.279067	996.03	-1824.57
6	GUIDE	1059720952	9.28	9149	0.127	0.123	0.109	0.186	80.539931	-46.279907	1482.38	-1856.33
7	GUIDE	1059722304	7.54	9158	-0.057	0.167	0.065	0.110	79.157586	-45.913736	-1896.66	-363.23

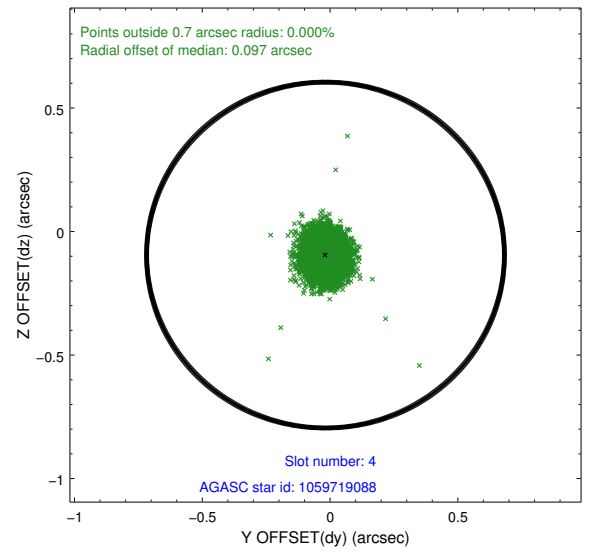
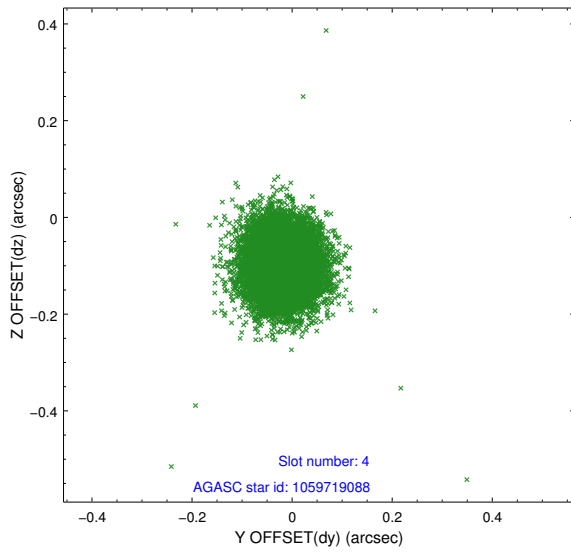
∞

## 2.4 Star Slots

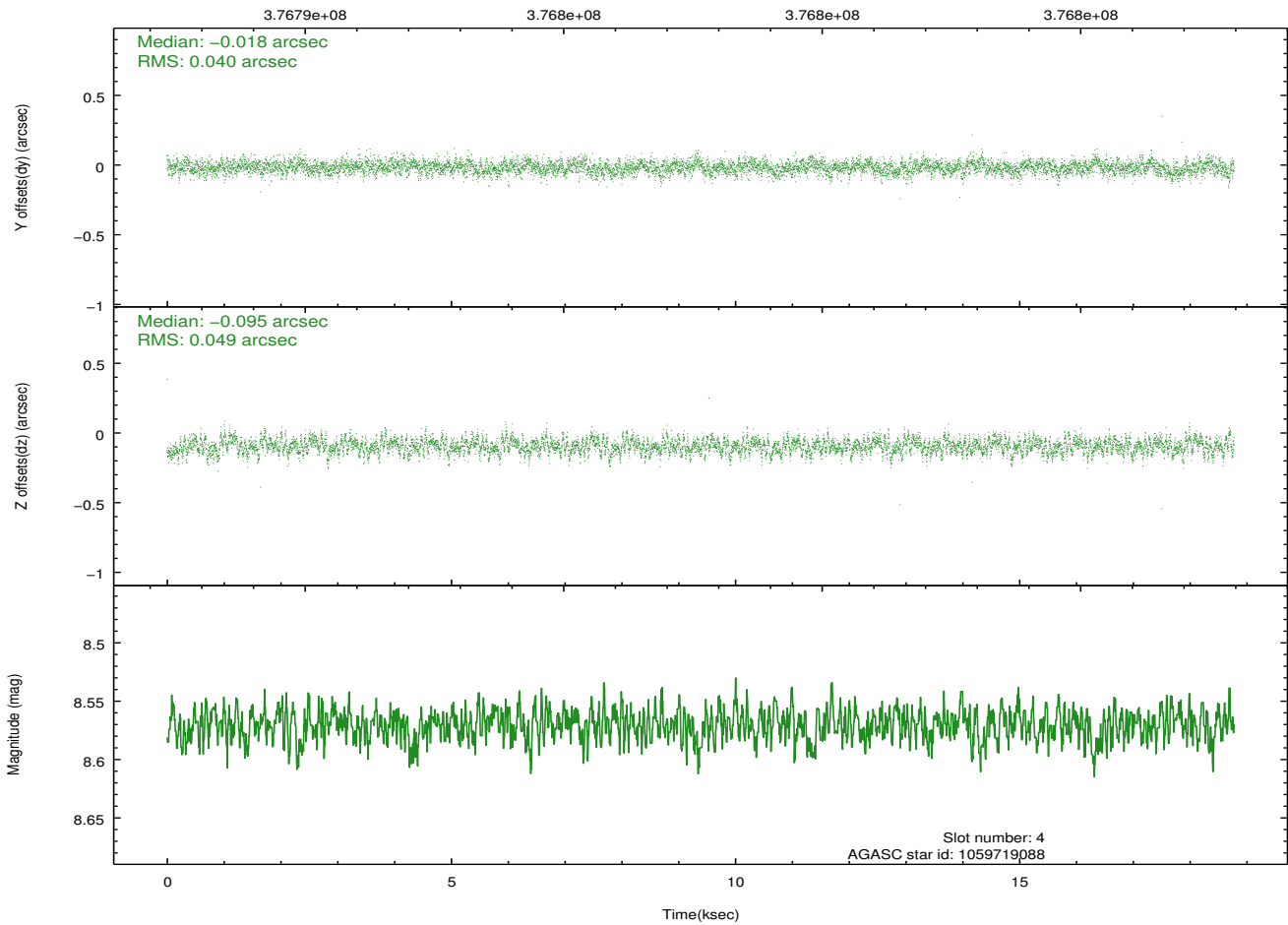
### 2.4.1 Slot 3



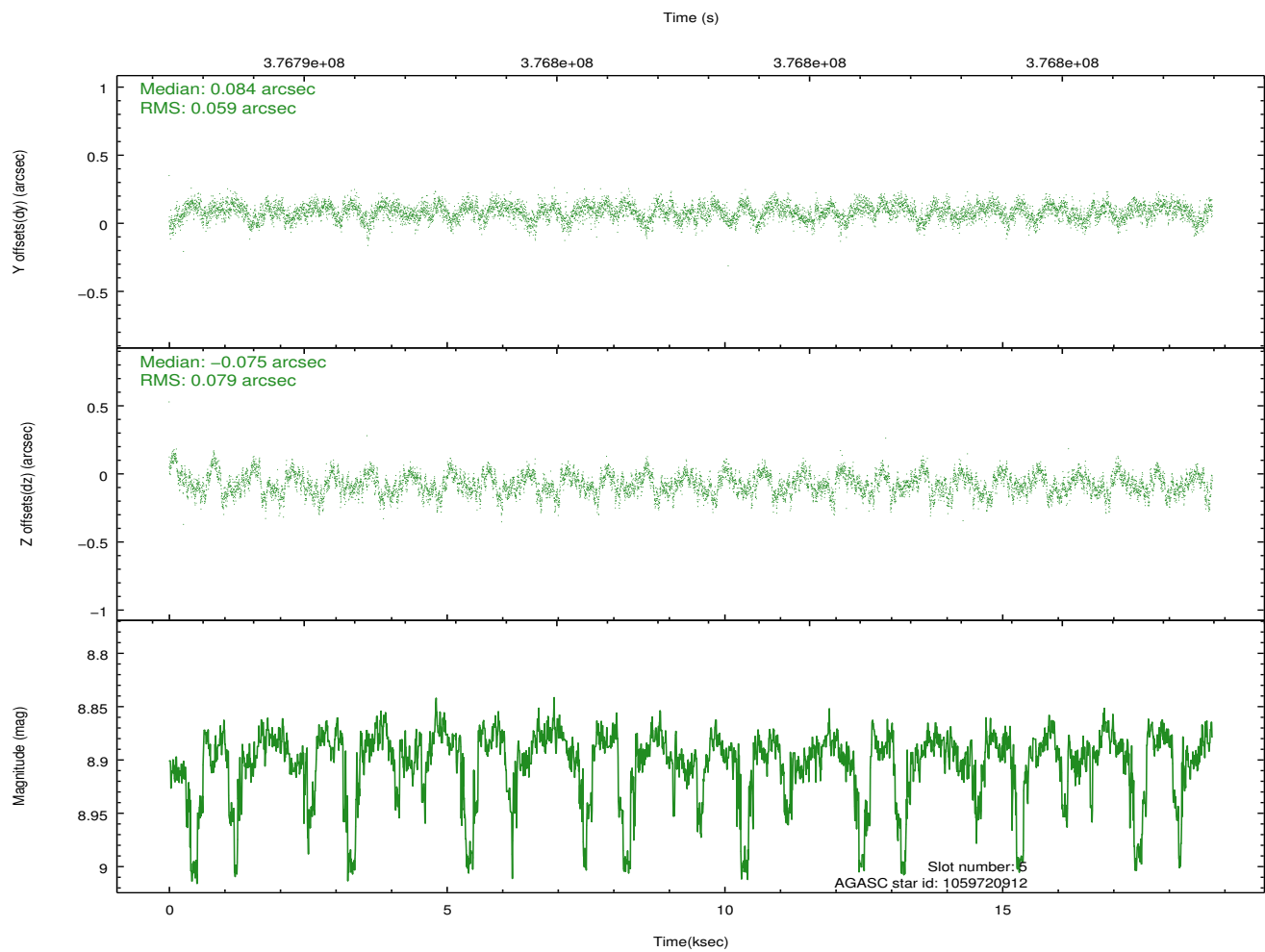
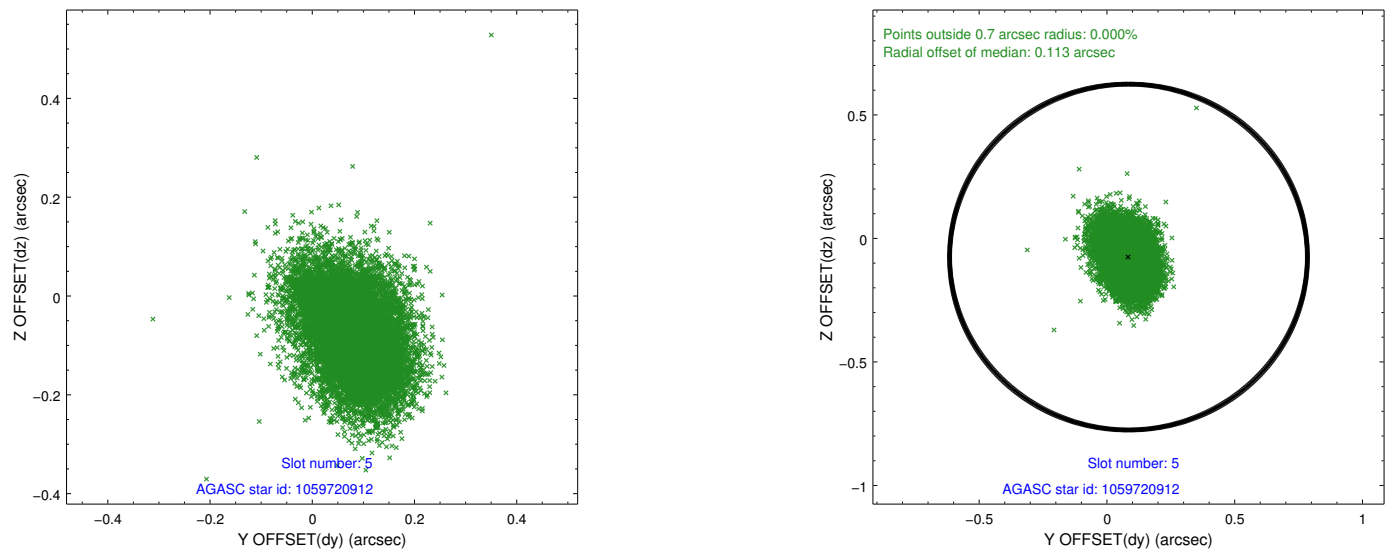
## 2.4.2 Slot 4



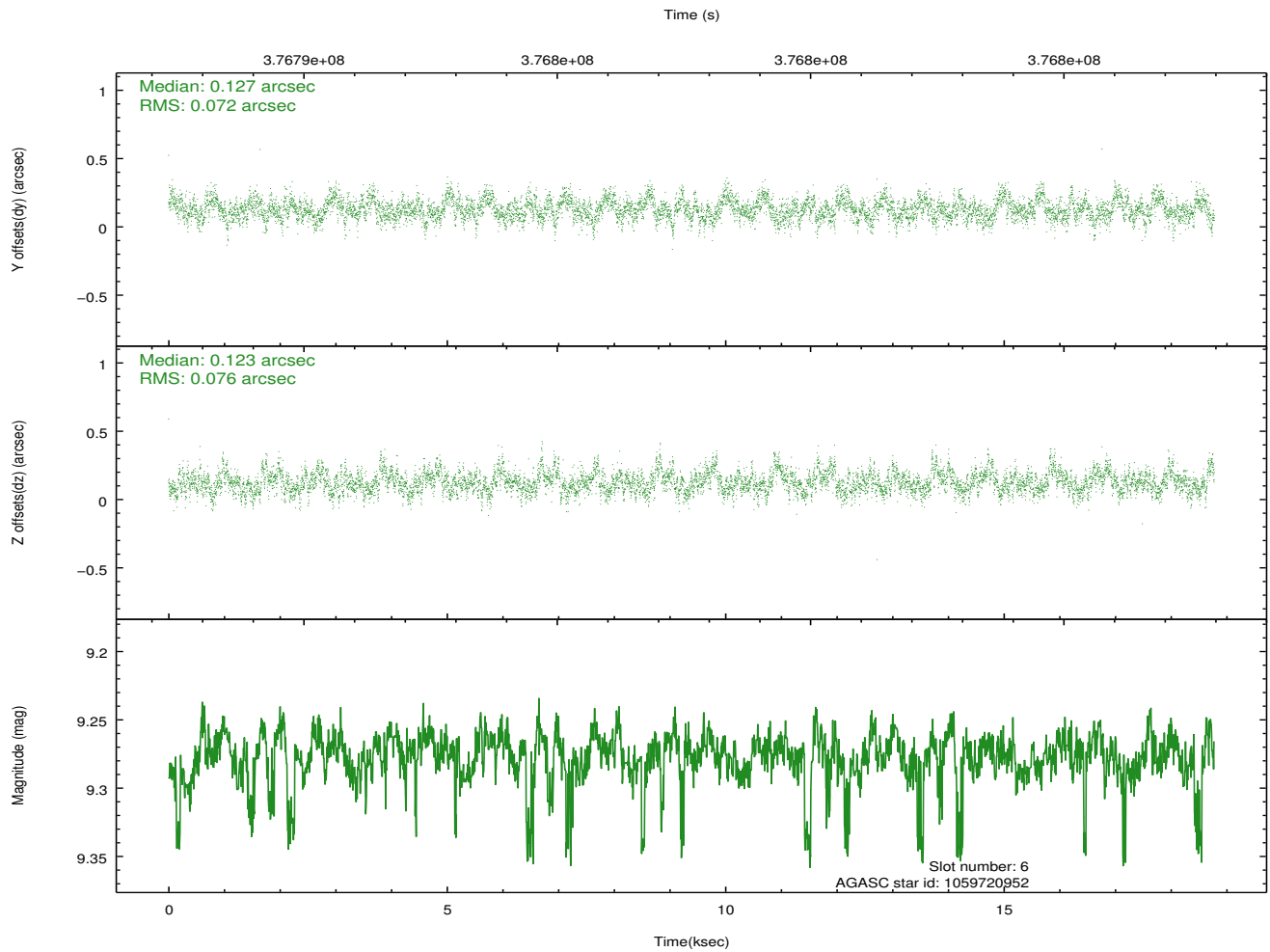
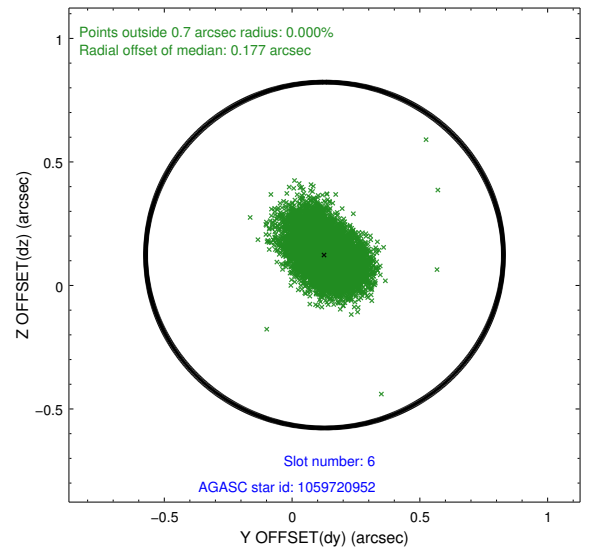
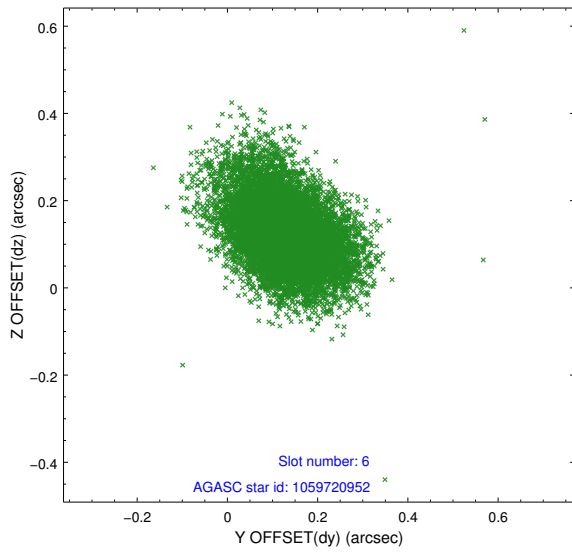
Time (s)



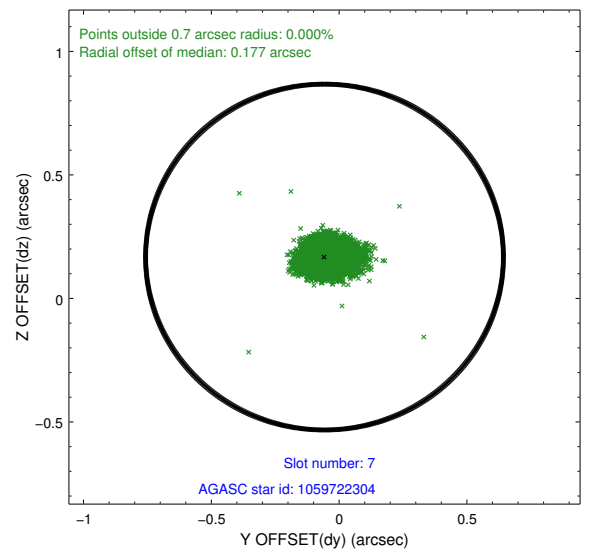
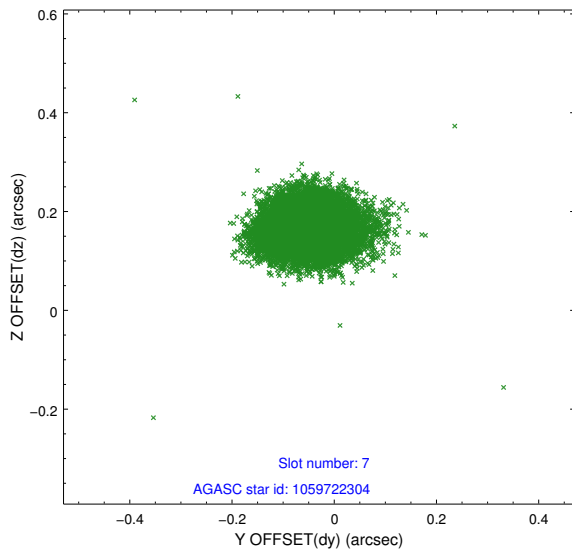
### 2.4.3 Slot 5



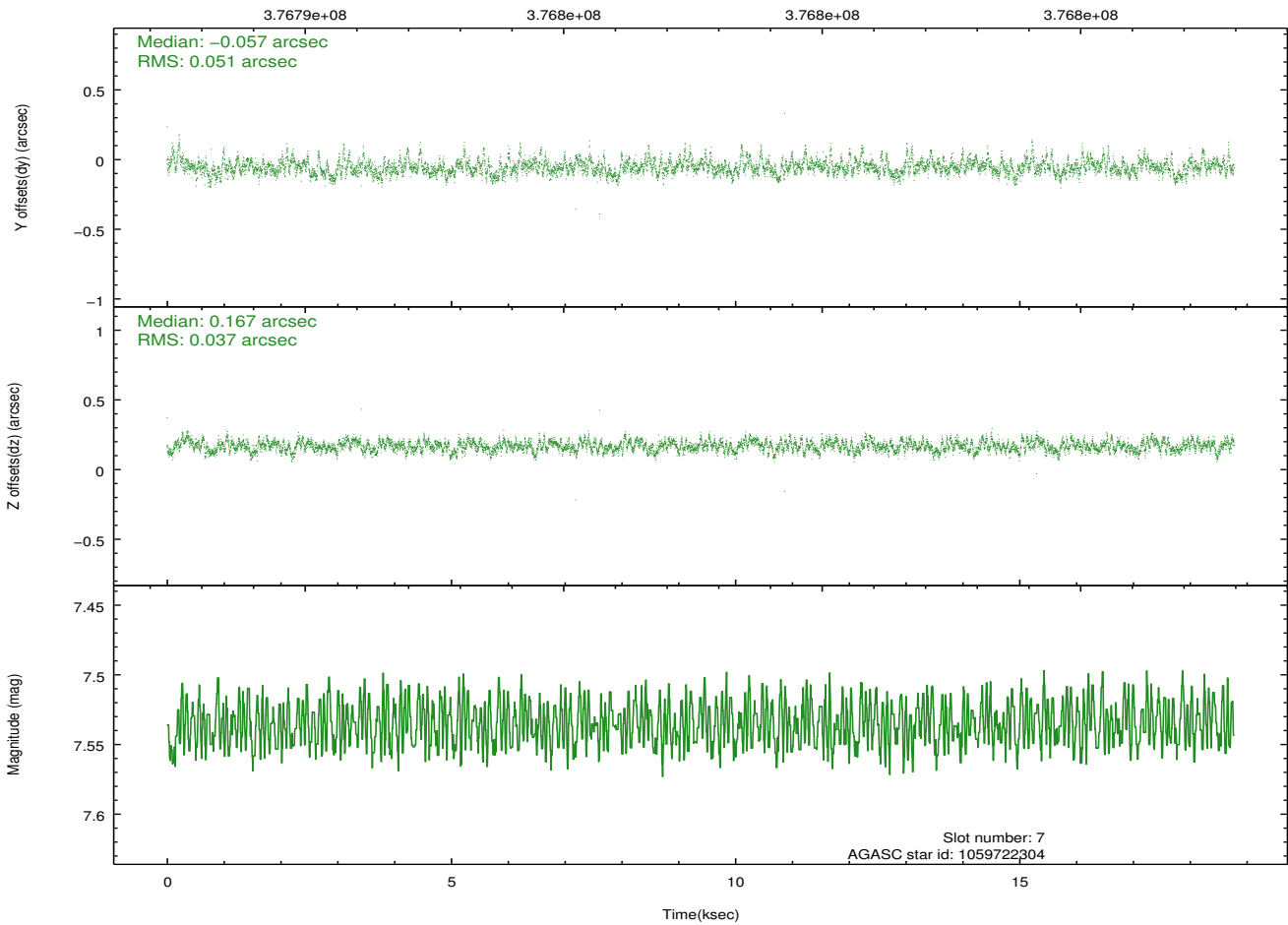
## 2.4.4 Slot 6



## 2.4.5 Slot 7

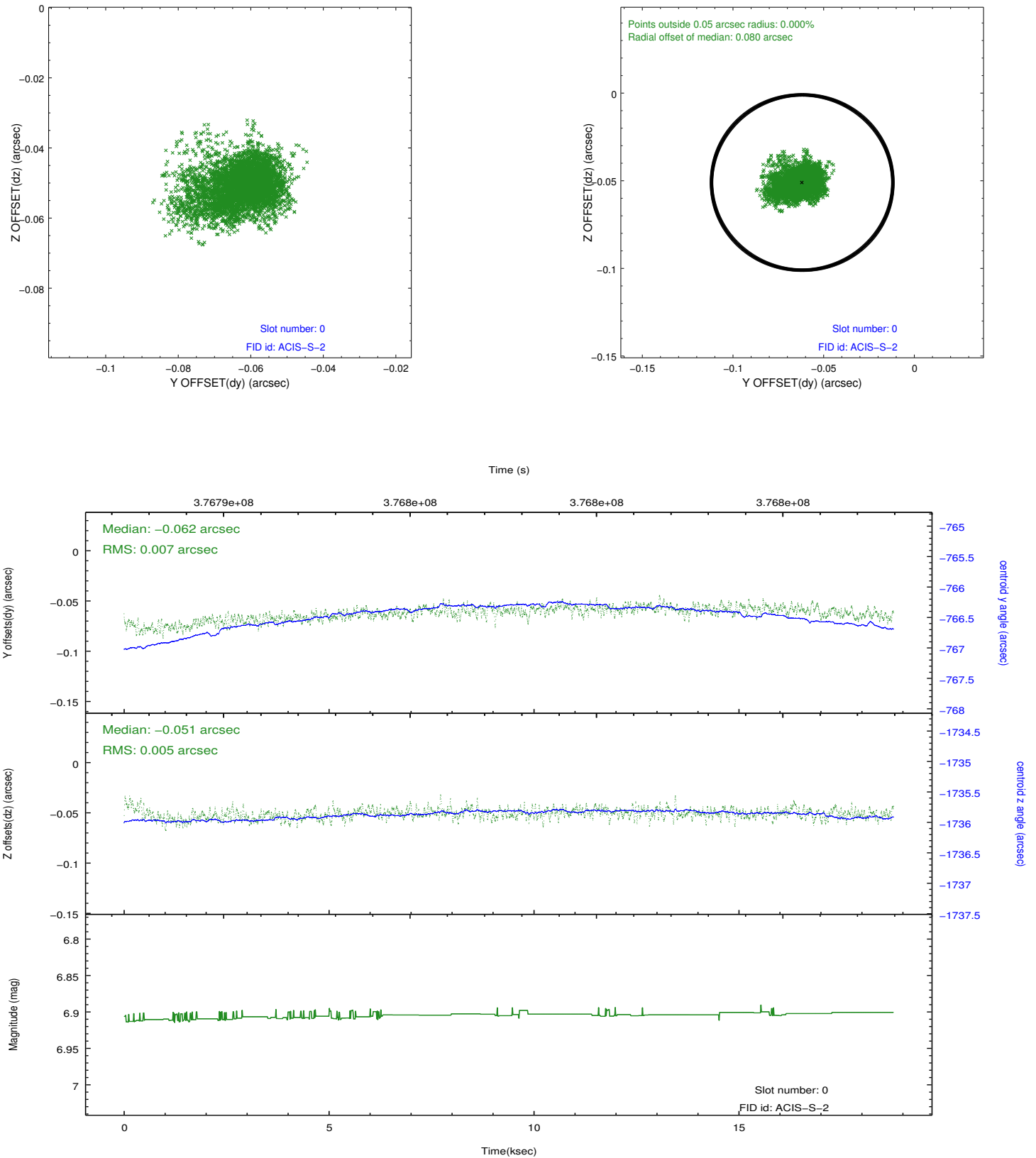


Time (s)

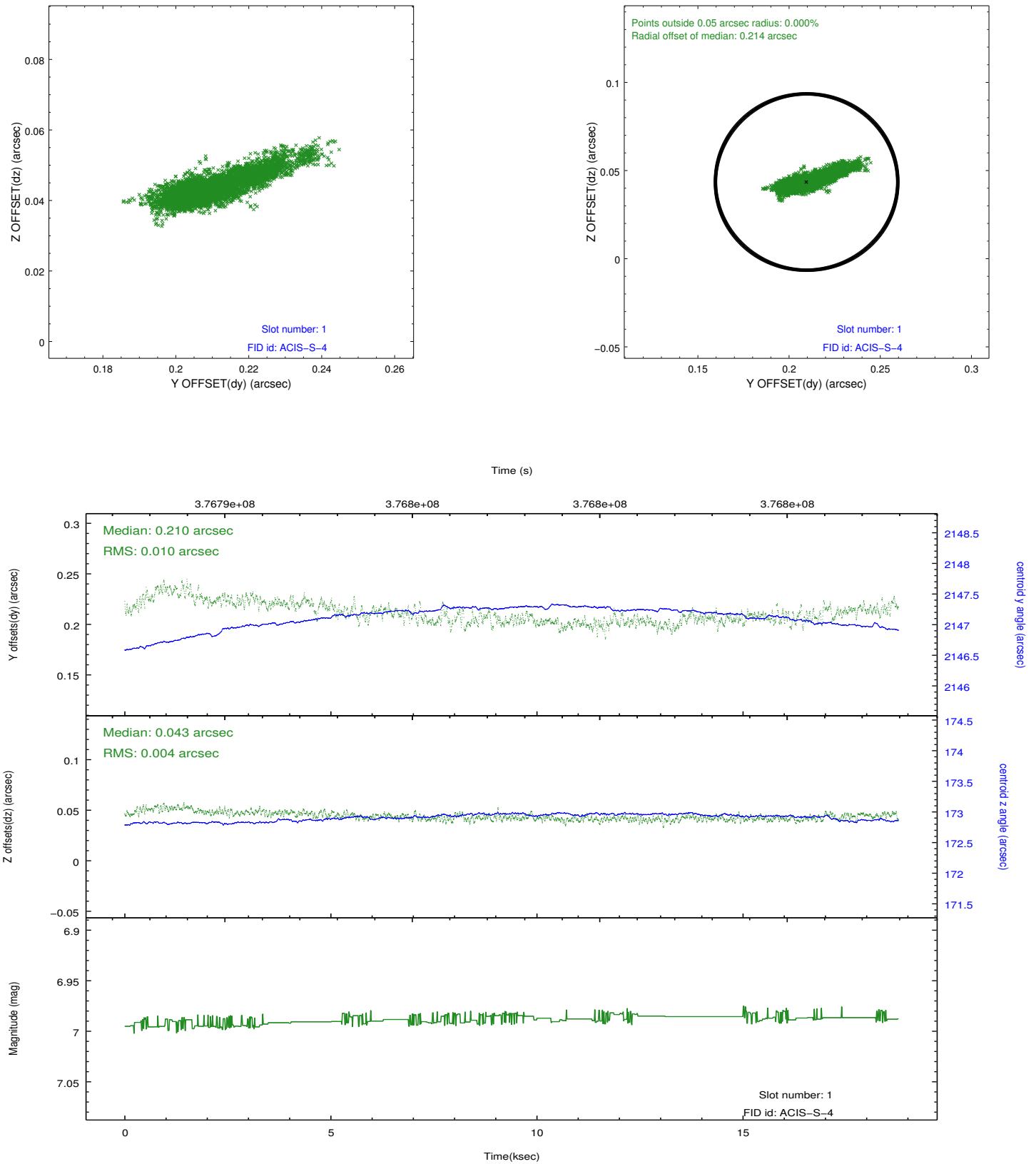


## 2.5 FID Slots

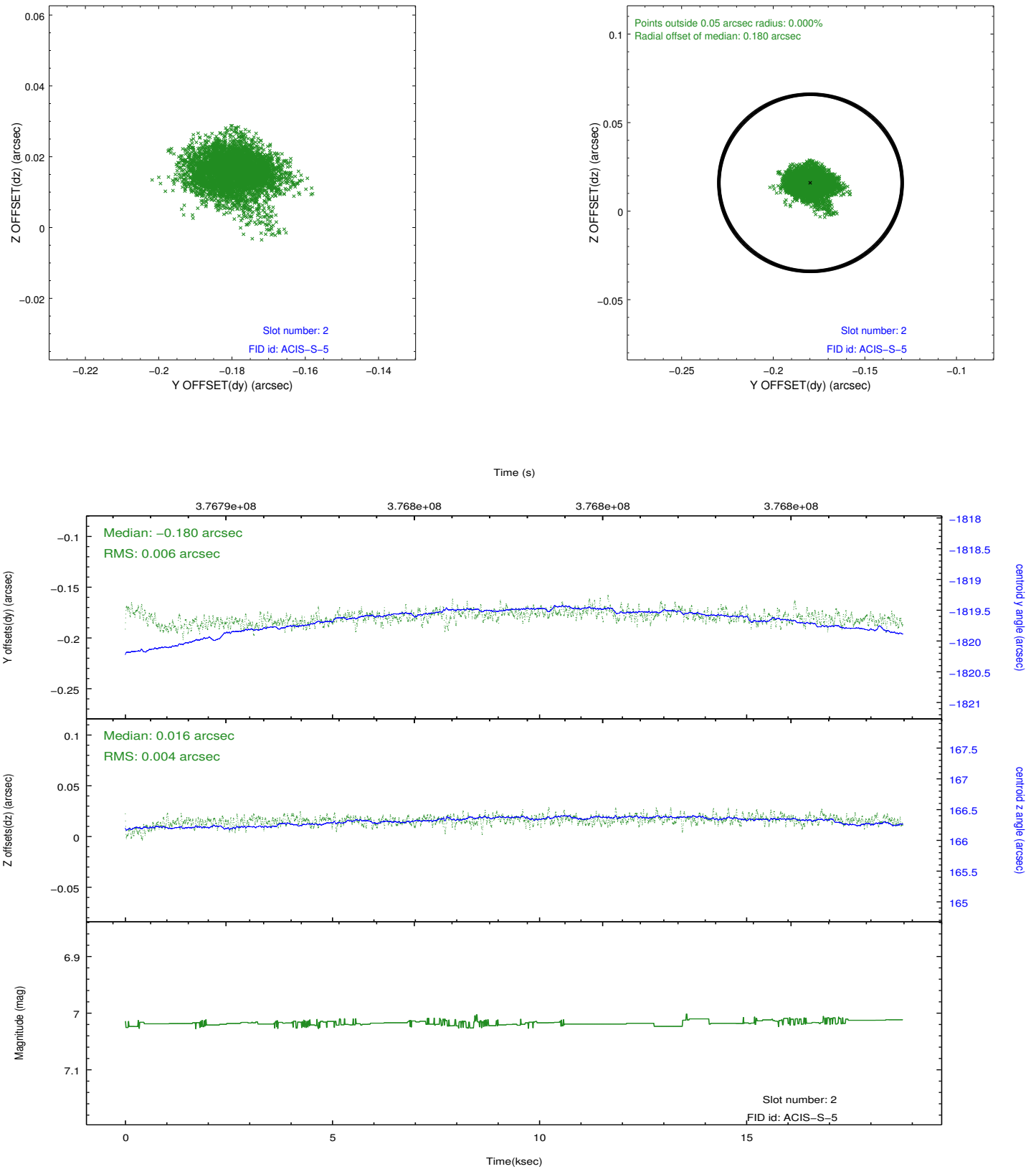
### 2.5.1 Slot 0



## 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)	2012.06.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.541222717702

## A.2 Comments

Roll constraint met. Pic A is offset from aim point. Aim point is on the jet, about half way along the extent of the jet.