

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 14222 - L2 Version 2  
Chandra X-Ray Center

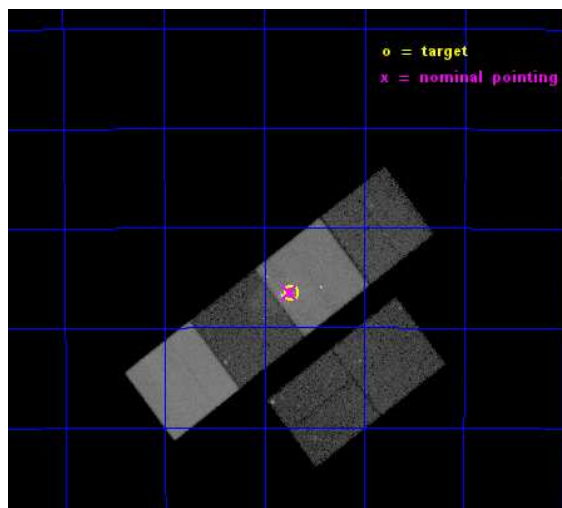
L2 Processing Date : Dec 9 2014

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# 1 Front

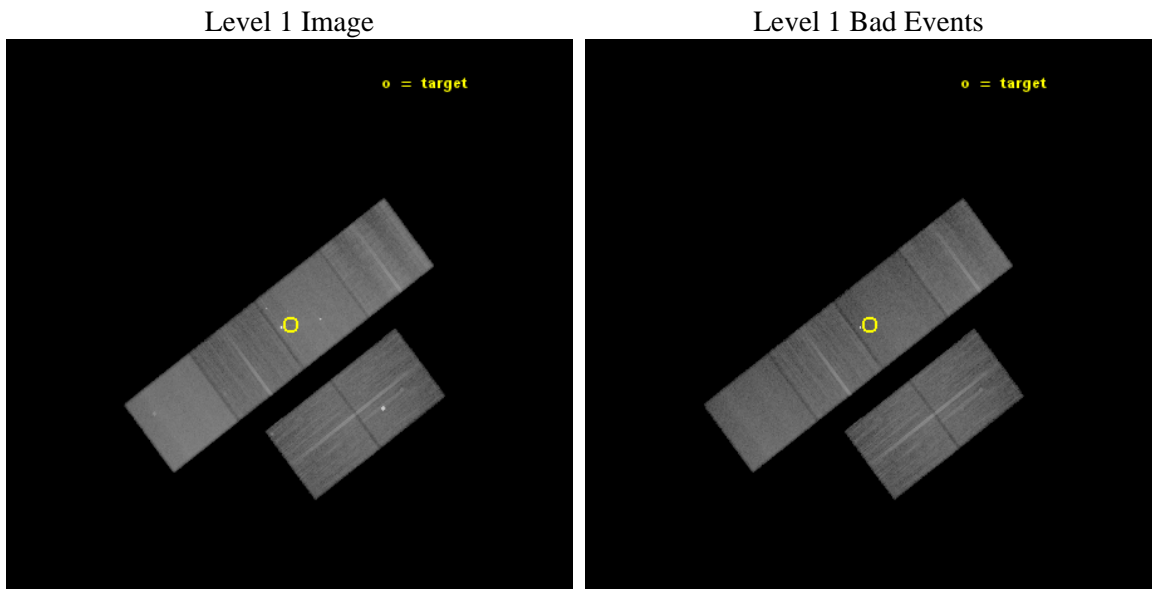
seq_num	702718	Sequence number
obs_id	14222	Observation id
title	Variability and particle acceleration in the jet of Pictor A	Propo
observer	Dr Martin Hardcastle	Principal investigator
object	Pictor A Jet	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.933333	Observer's specified target RA [deg]
dec_targ	-45.775556	Observer's specified target Dec [deg]
ra_nom	79.937403595596	Nominal RA [deg]
dec_nom	-45.774514175385	Nominal Dec [deg]
roll_nom	322.61223769187	Nominal Roll [deg]
revision	2	Processing version of data
ontime	45963.413213491	Sum of GTIs [s]
livetime	45381.396799537	Livetime [s]
ontime2	45963.454253495	Sum of GTIs [s]
ontime3	45963.290093482	Sum of GTIs [s]
ontime5	45963.372173488	Sum of GTIs [s]
ontime6	45963.331133485	Sum of GTIs [s]
ontime7	45963.413213491	Sum of GTIs [s]
ontime8	45963.249053478	Sum of GTIs [s]
l2events	410962	Number of level 2 events



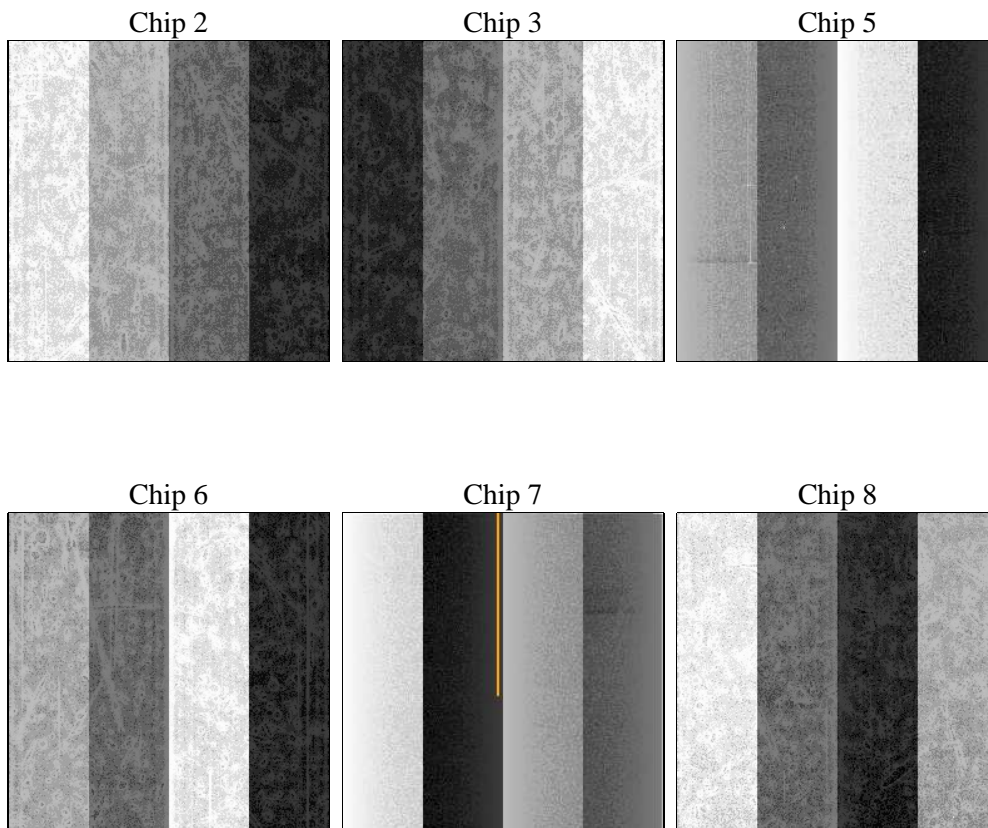
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	46000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	45963.413213491	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	45963.454253495	Sum of GTIs [s]
date	2014-12-10T01:28:08	Date and time of file creation	ontime3	45963.290093482	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	45963.372173488	Sum of GTIs [s]
			ontime6	45963.331133485	Sum of GTIs [s]
			ontime7	45963.413213491	Sum of GTIs [s]
			ontime8	45963.249053478	Sum of GTIs [s]
			l1events	1661162	Number of level 1 events

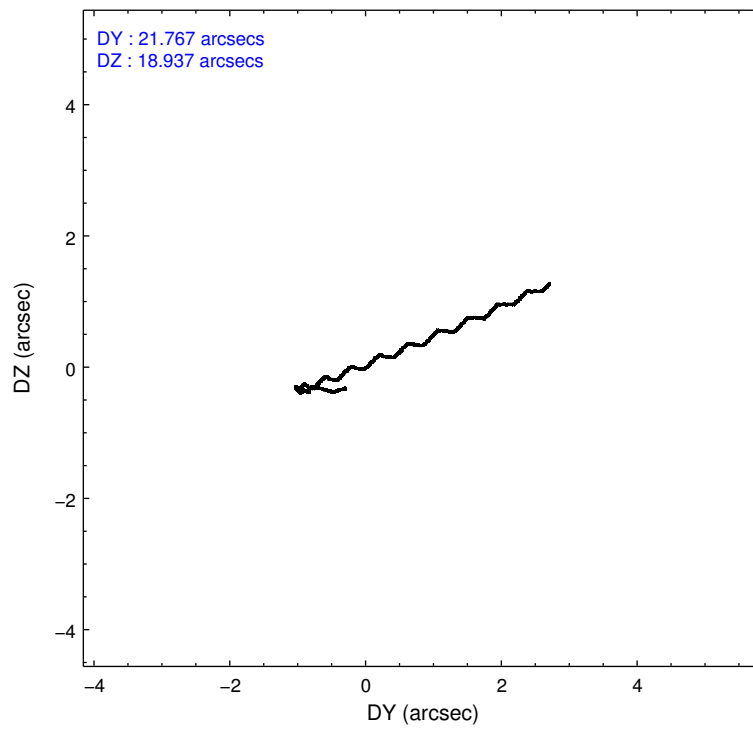
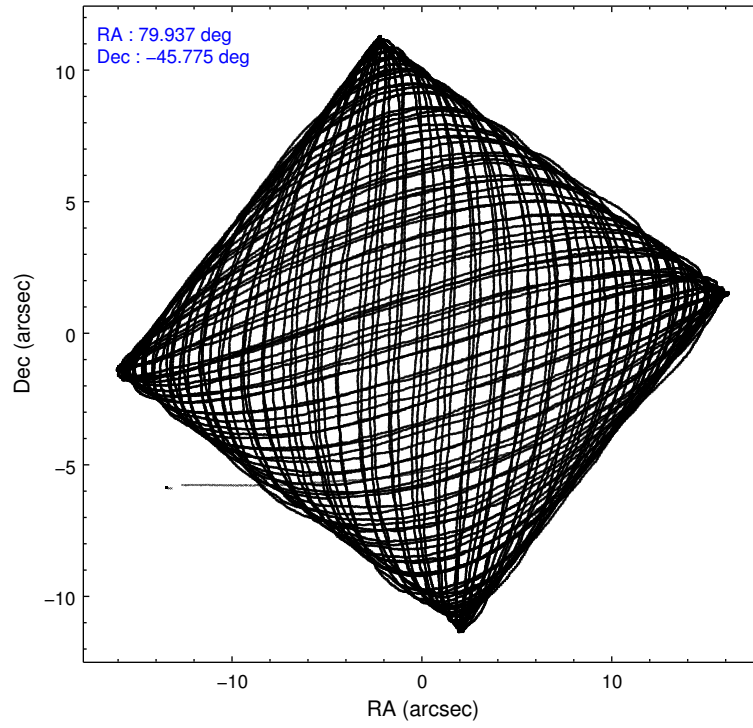
### 2.1.4 Events

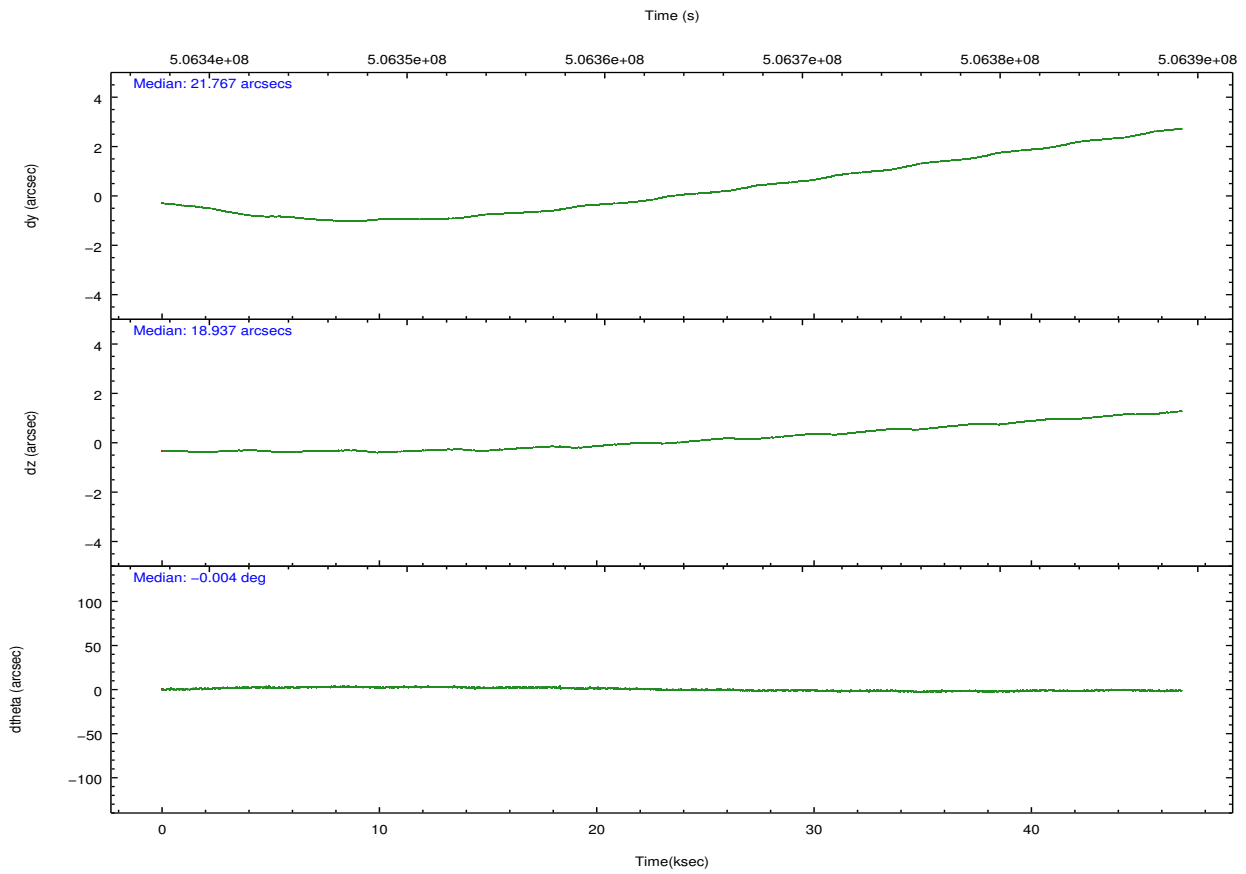
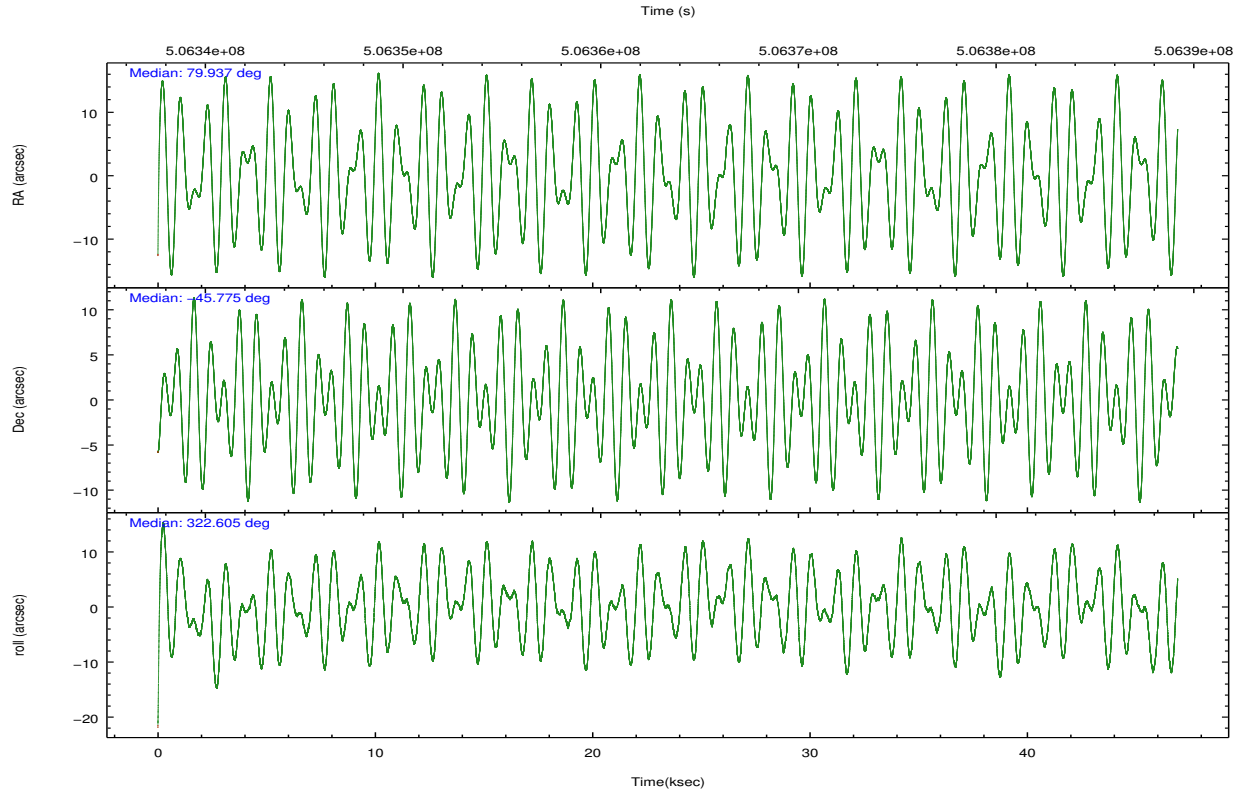
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	221788	225845	360530	223762	335061	294176	grade 0 events	9032	22093	10437	10616	15734	21636
rejected events	196418	187890	189874	195041	183125	216153		4%	9%	2%	4%	4%	7%
rejected %	88%	83%	52%	87%	54%	73%	grade 1 events	130	436	587	118	688	198
								0%	0%	0%	0%	0%	0%
							grade 2 events	6253	5375	52212	6336	31744	18660
								2%	2%	14%	2%	9%	6%
							grade 3 events	2519	2628	6012	2658	12708	8238
								1%	1%	1%	1%	3%	2%
							grade 4 events	2688	2596	5773	2771	12747	7790
								1%	1%	1%	1%	3%	2%
							grade 5 events	9967	11705	27023	11666	32916	16812
								4%	5%	7%	5%	9%	5%
							grade 6 events	4880	5265	96234	6343	79011	21699
								2%	2%	26%	2%	23%	7%
							grade 7 events	186319	175747	162252	183254	149513	199143
								84%	77%	45%	81%	44%	67%

## 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	79.898478	79.93740359559631	CCD I2 on	O3	Y
[deg] Pointing Dec	-45.771363	-45.7745141753847	CCD I3 on	O2	Y
[deg] Pointing Roll	322.427725	322.6122376918718	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	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	O1	Y
[s] Observation start time (MET)	506340850.184000	506339220.05939	CCD S5 on	N	N
Observation start date	2014-01-17T10:13:03	2014-01-17T09:47:00	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	506386850.184000	506387835.81206	On-chip summing requested	N	N
Observation end date	2014-01-17T22:59:43	2014-01-17T23:17:15	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





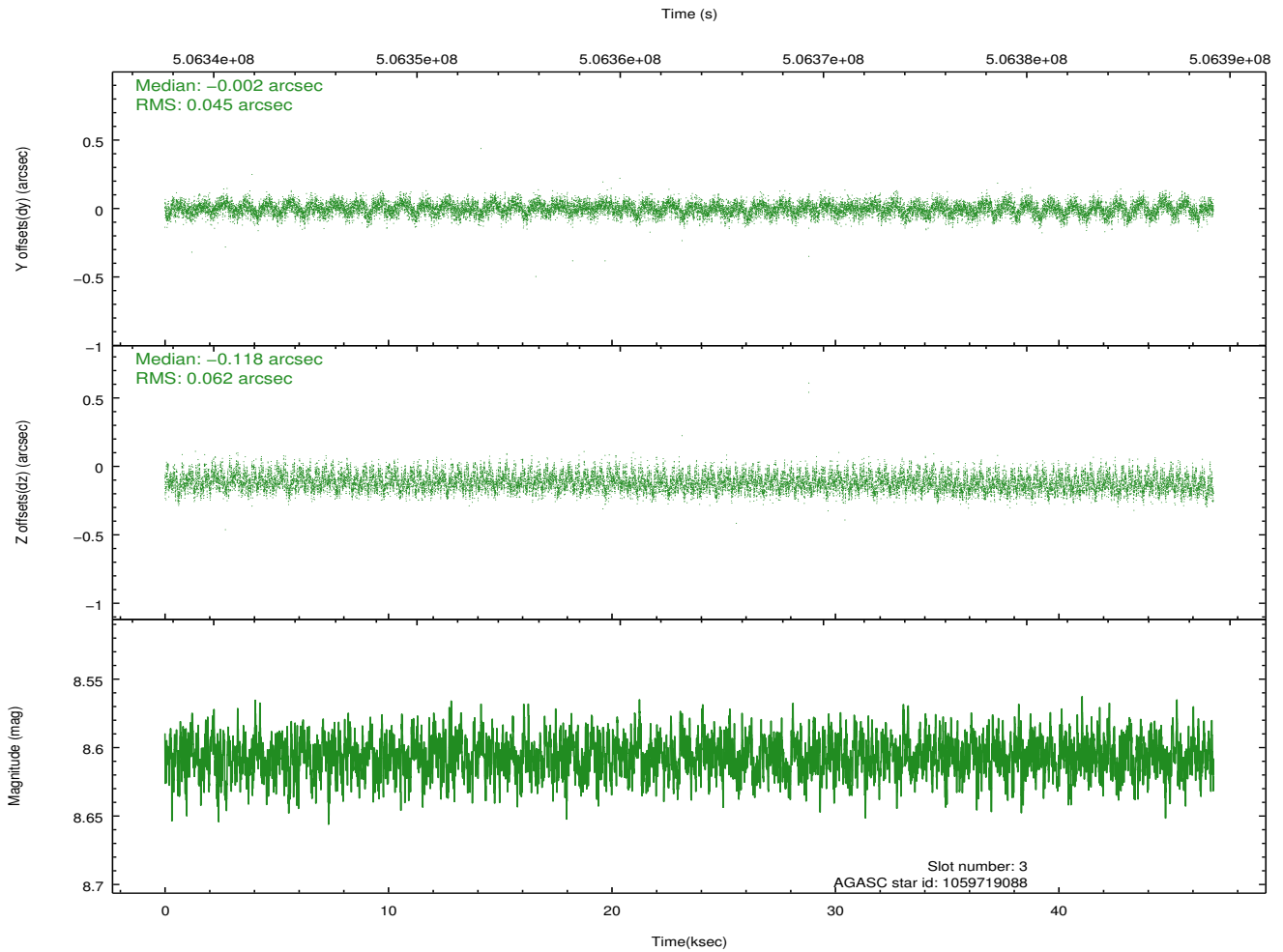
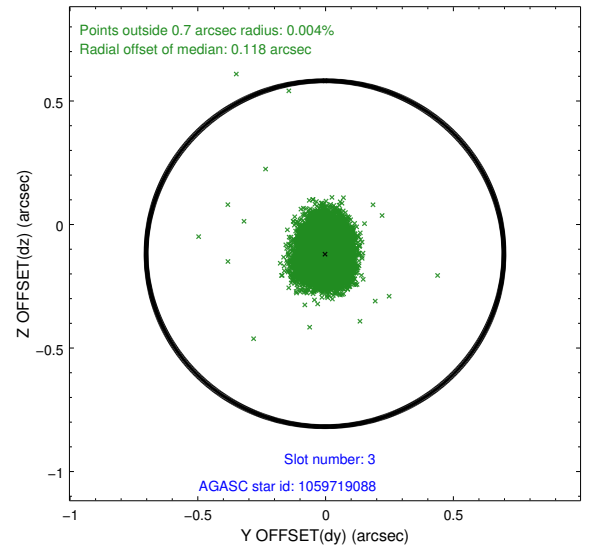
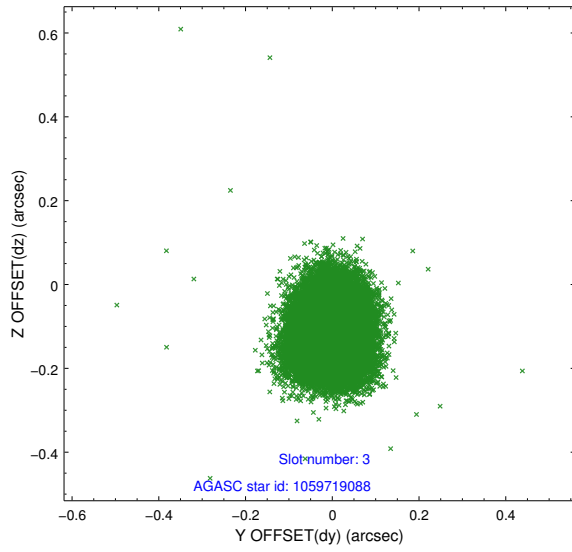
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	11445	-0.125	-0.049	0.018	0.060	0.000000	0.000000	-775.39	-1740.64
1	FID		ACIS-S-4	7.11	11444	0.266	0.075	0.037	0.097	0.000000	0.000000	2138.32	167.96
2	FID		ACIS-S-5	7.13	11445	-0.176	-0.014	0.033	0.066	0.000000	0.000000	-1828.29	161.53
3	GUIDE	used	1059719088	8.61	22878	-0.002	-0.118	0.082	0.131	80.358941	-45.341185	-19.01	1935.52
4	GUIDE	used	1059720720	7.52	22887	-0.111	0.010	0.095	0.164	80.088736	-46.563710	2113.48	-1973.59
5	GUIDE	used	1059720912	8.91	22873	0.060	0.087	0.108	0.179	80.344072	-46.279067	1995.74	-774.61
6	GUIDE	used	1059724224	9.21	22877	-0.075	0.069	0.157	0.246	79.882936	-45.125709	-1448.27	1818.25
7	GUIDE	used	1059725312	8.60	22881	0.123	-0.056	0.088	0.146	79.636160	-45.090752	-2021.62	1534.60

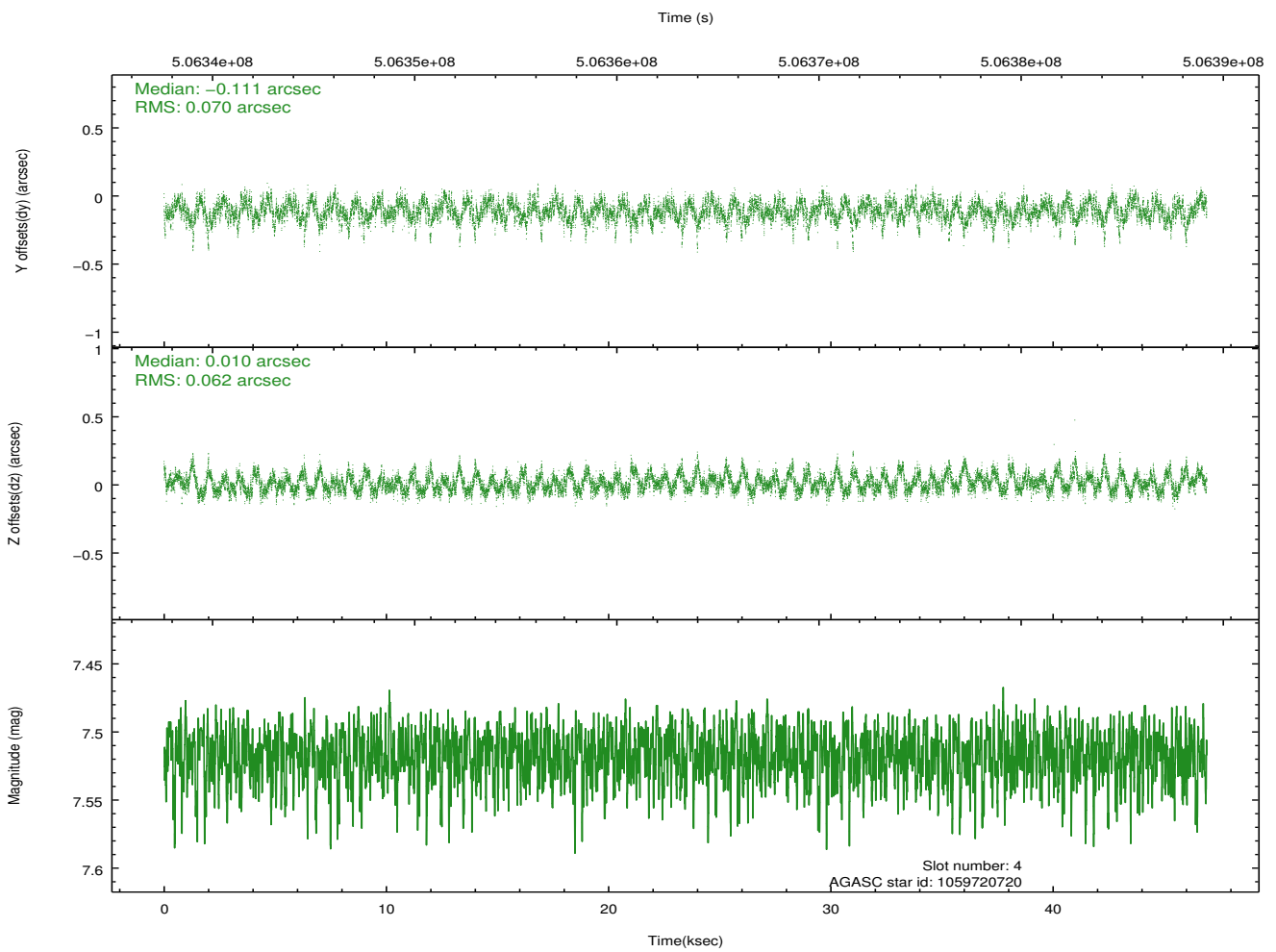
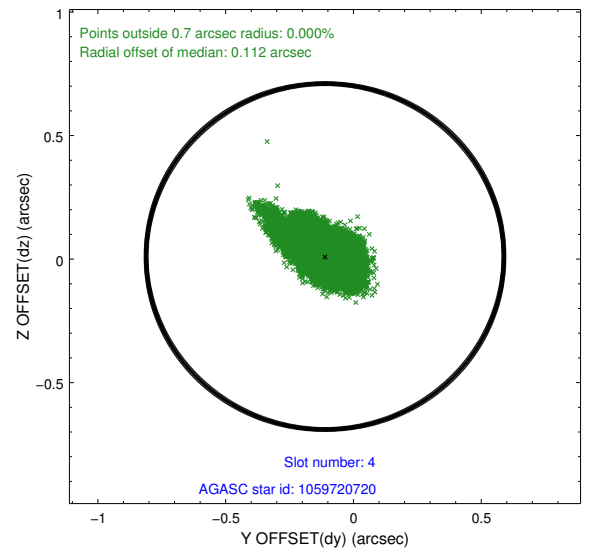
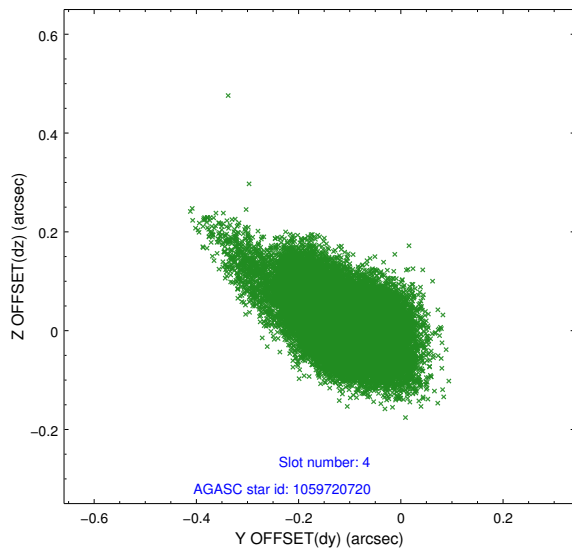
∞

## 2.4 Star Slots

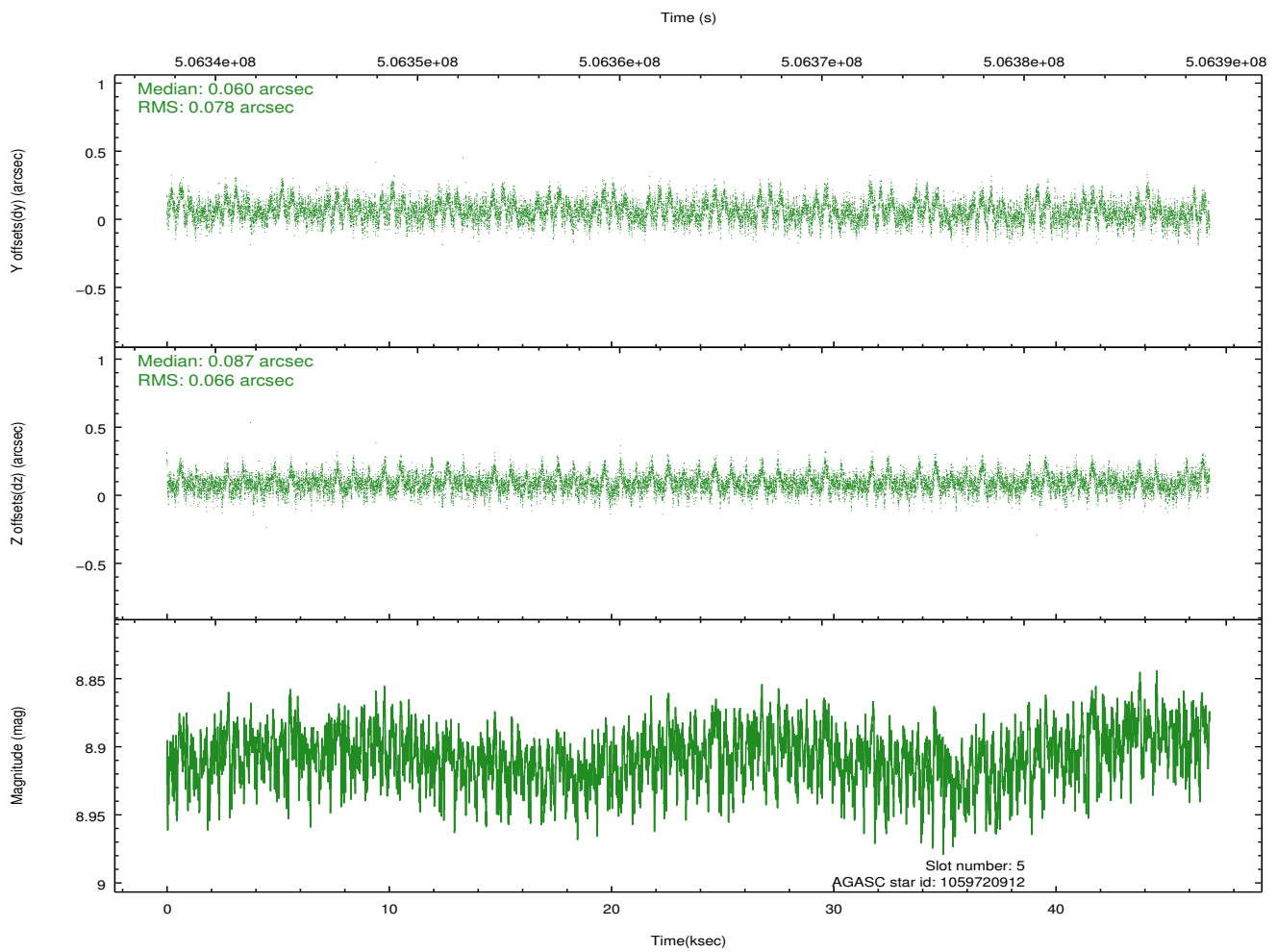
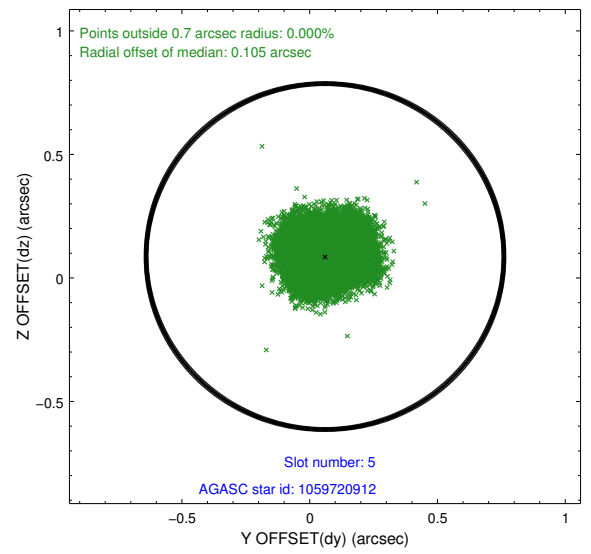
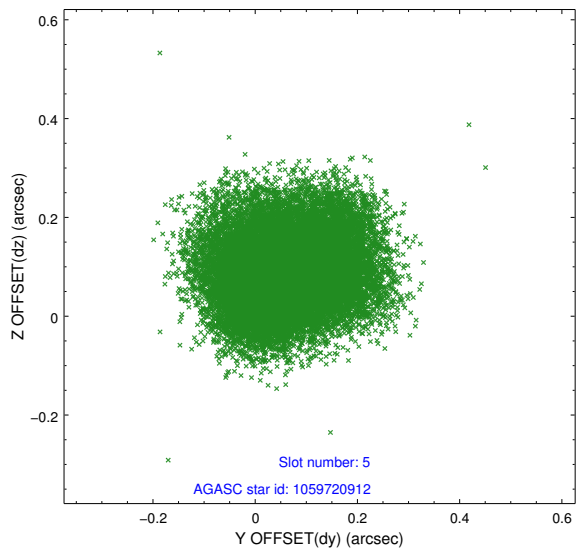
### 2.4.1 Slot 3



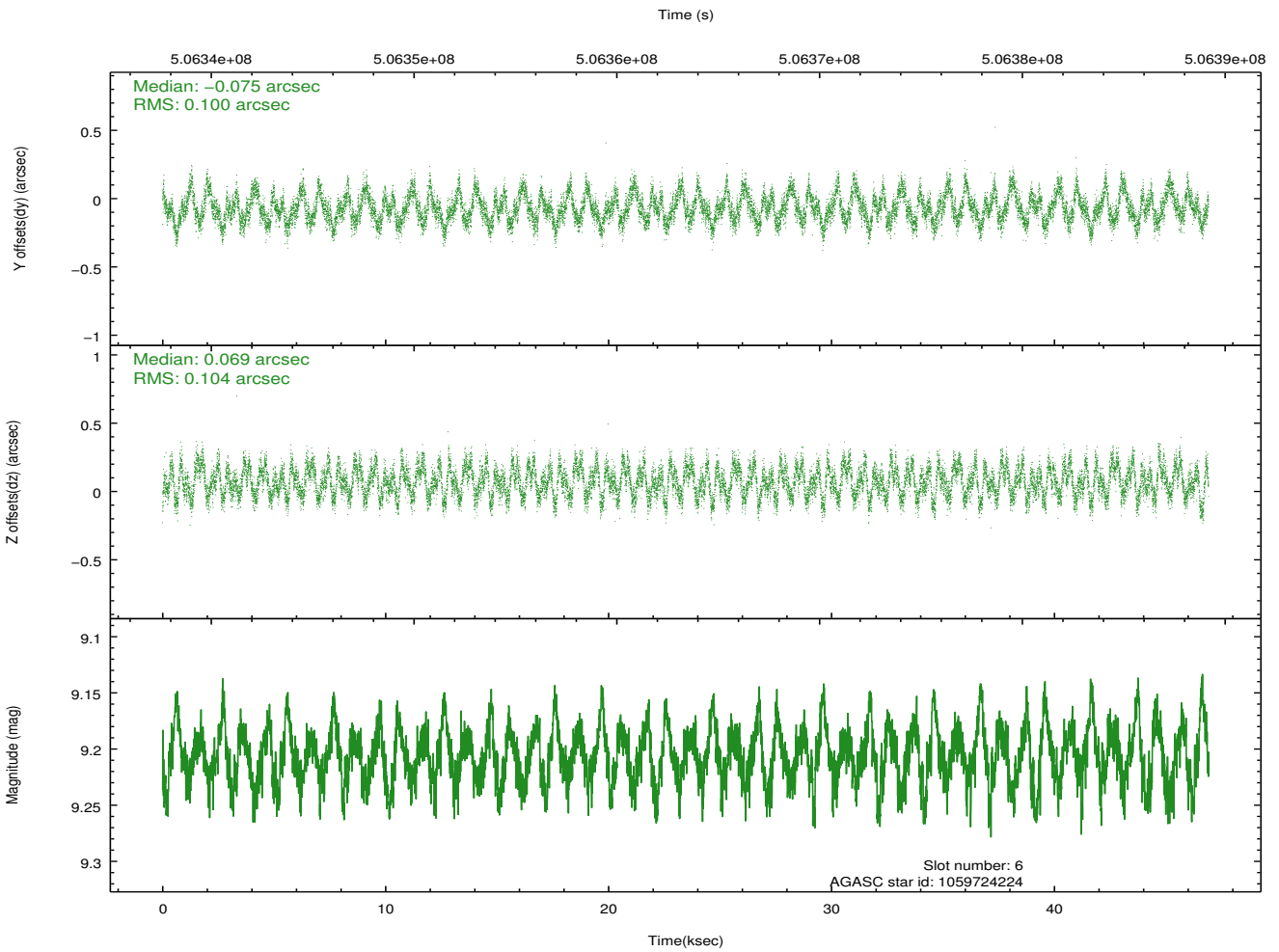
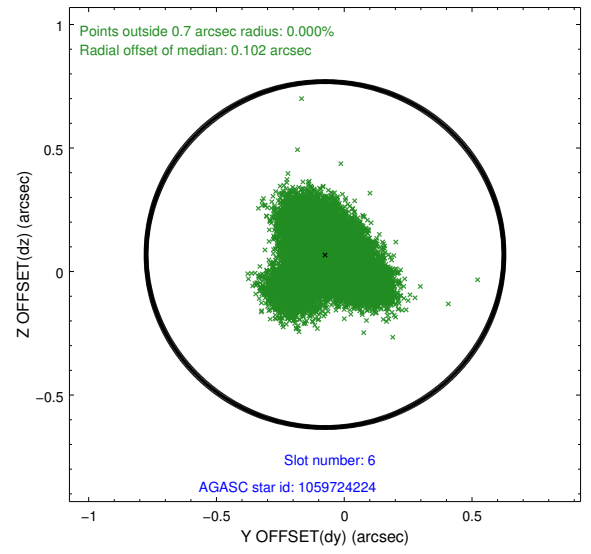
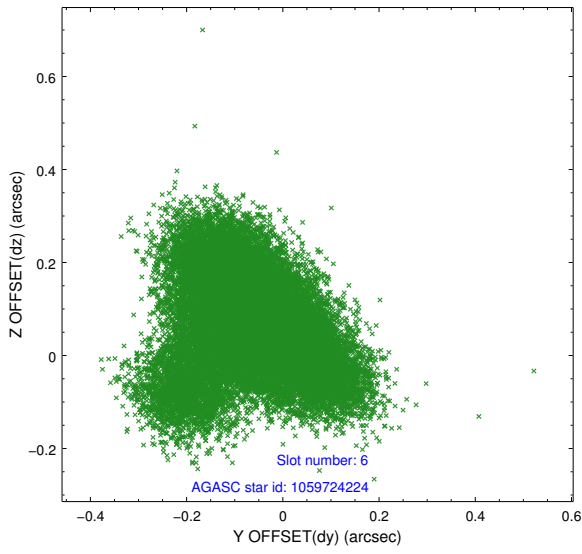
## 2.4.2 Slot 4



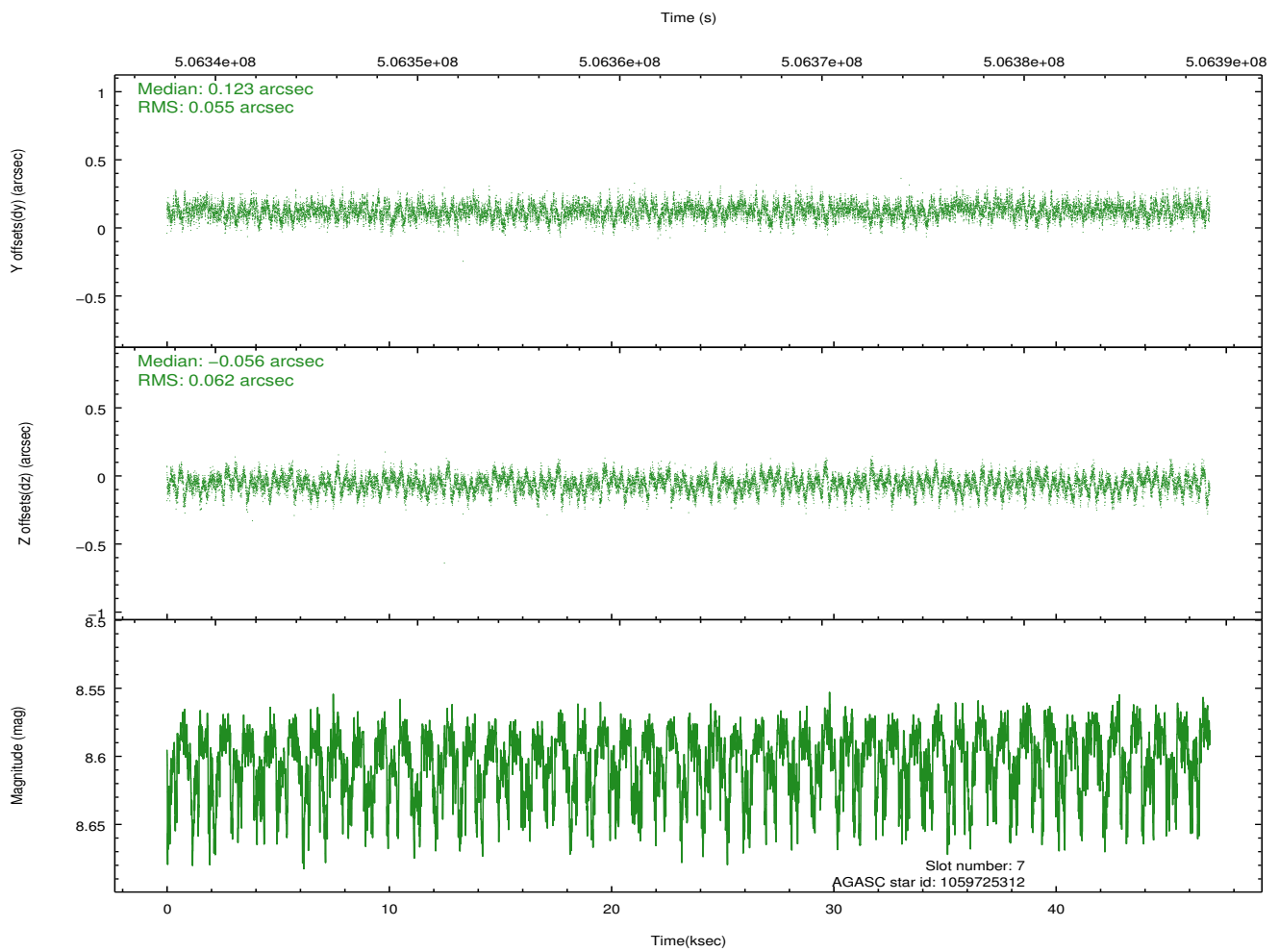
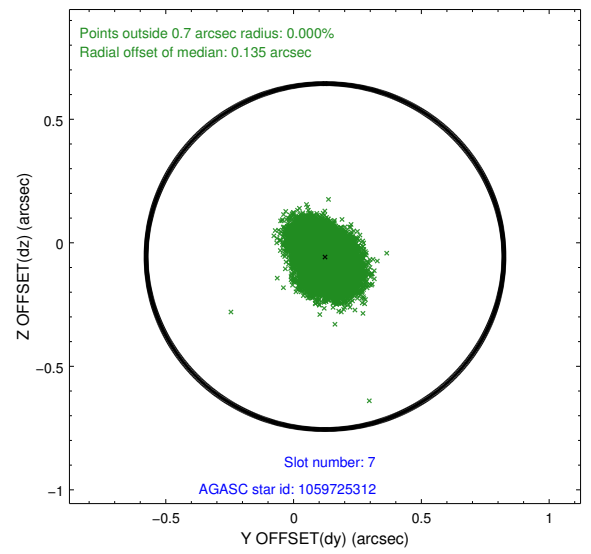
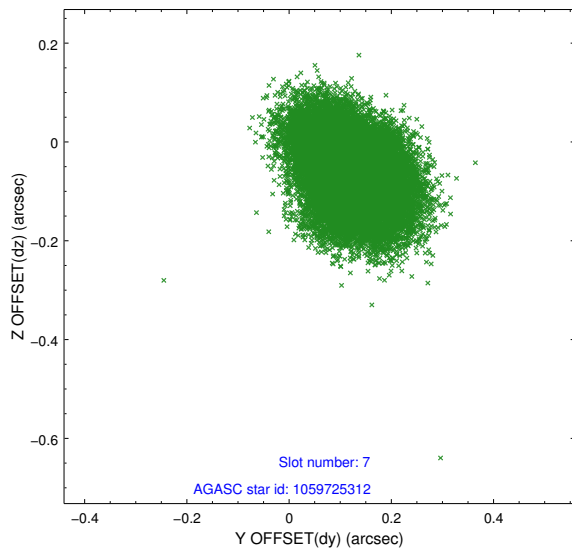
### 2.4.3 Slot 5



### 2.4.4 Slot 6

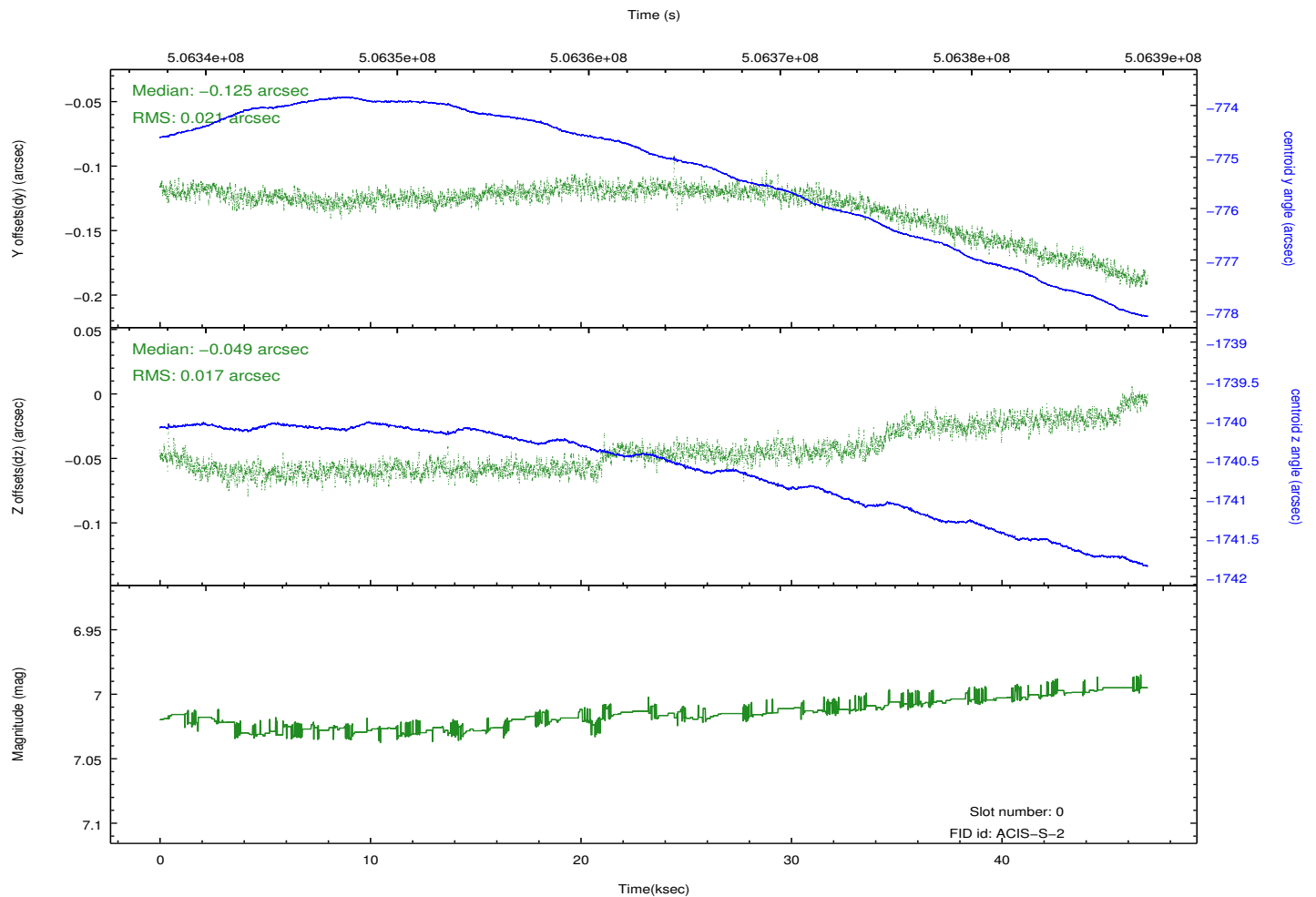
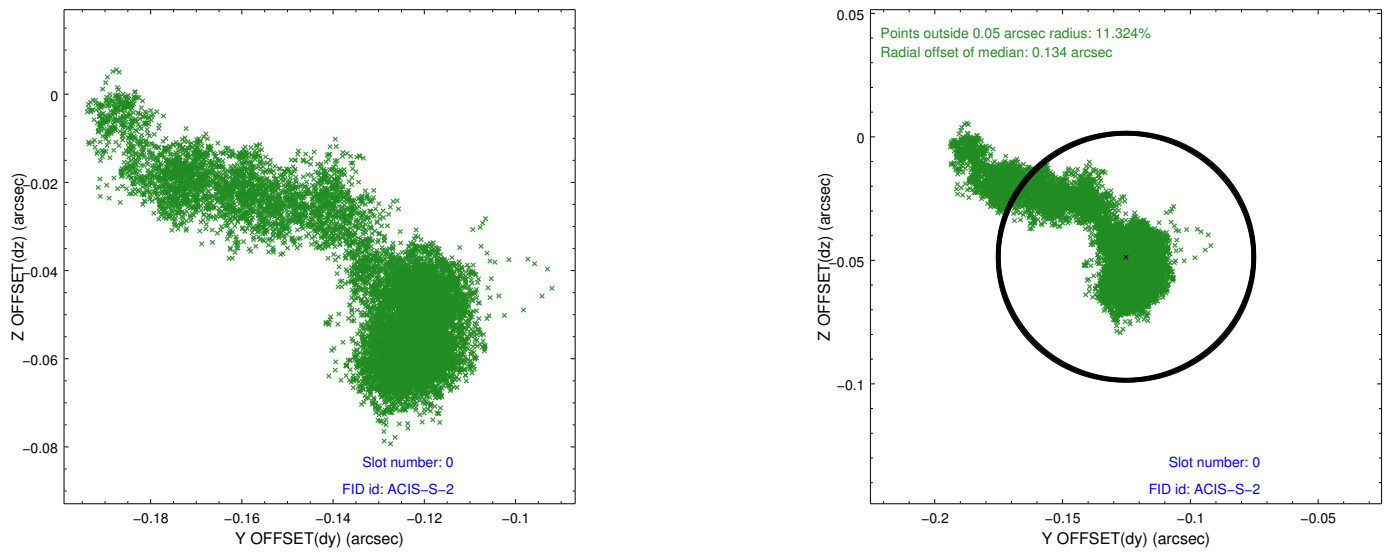


## 2.4.5 Slot 7

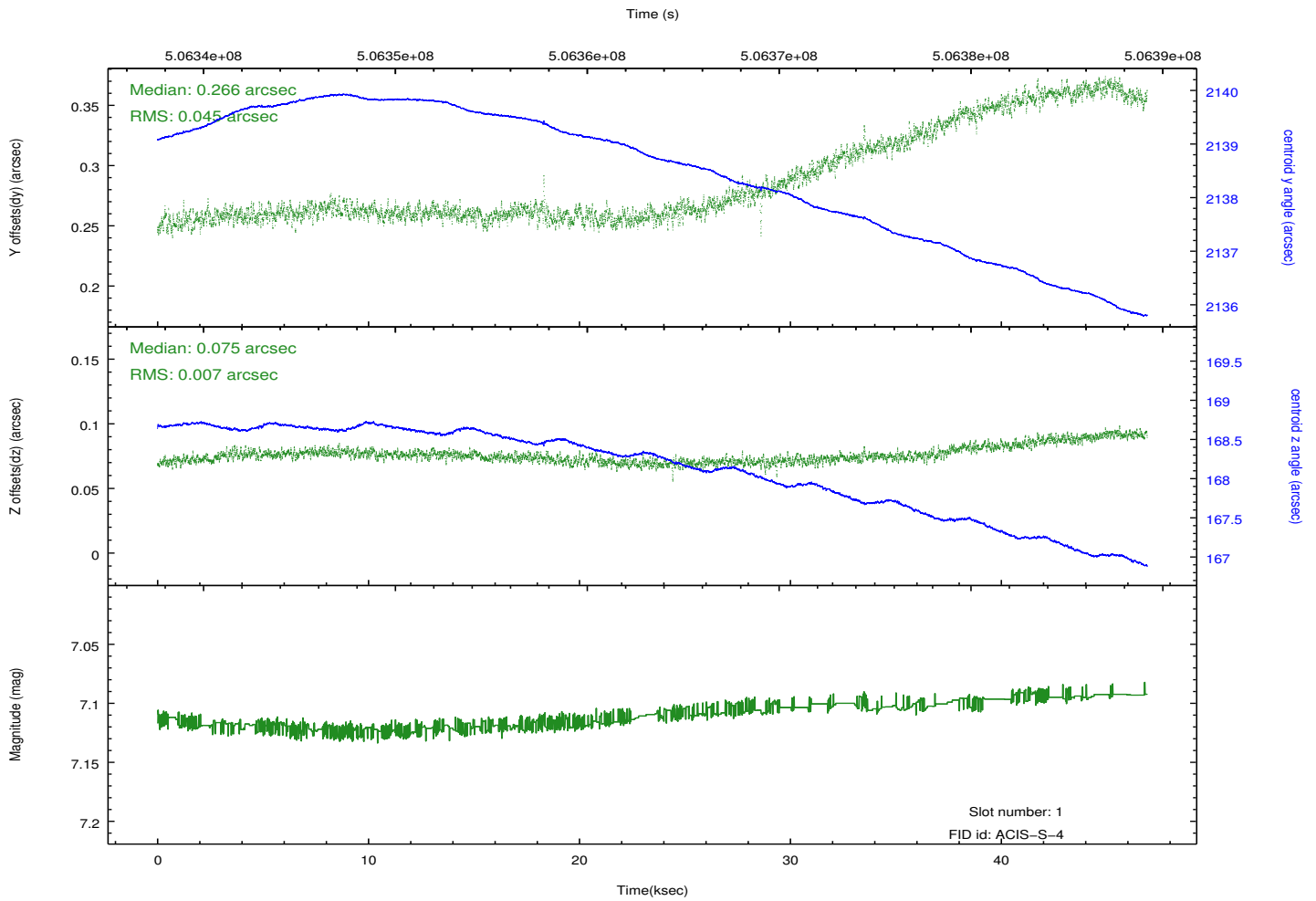
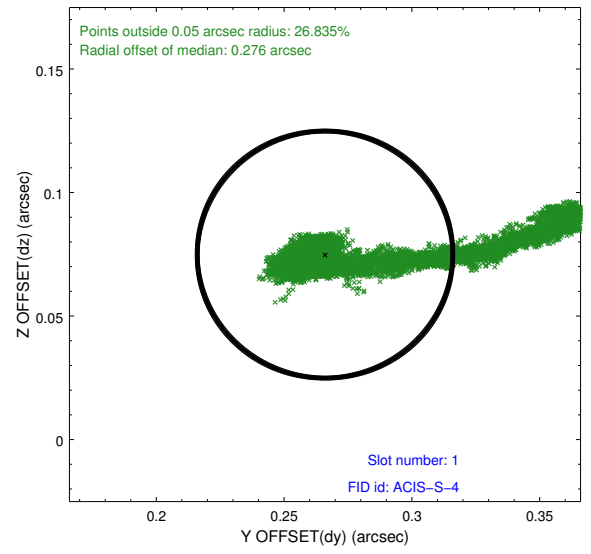
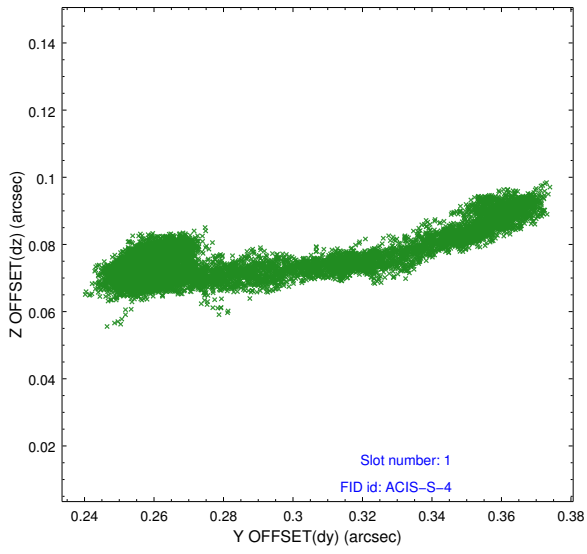


## 2.5 FID Slots

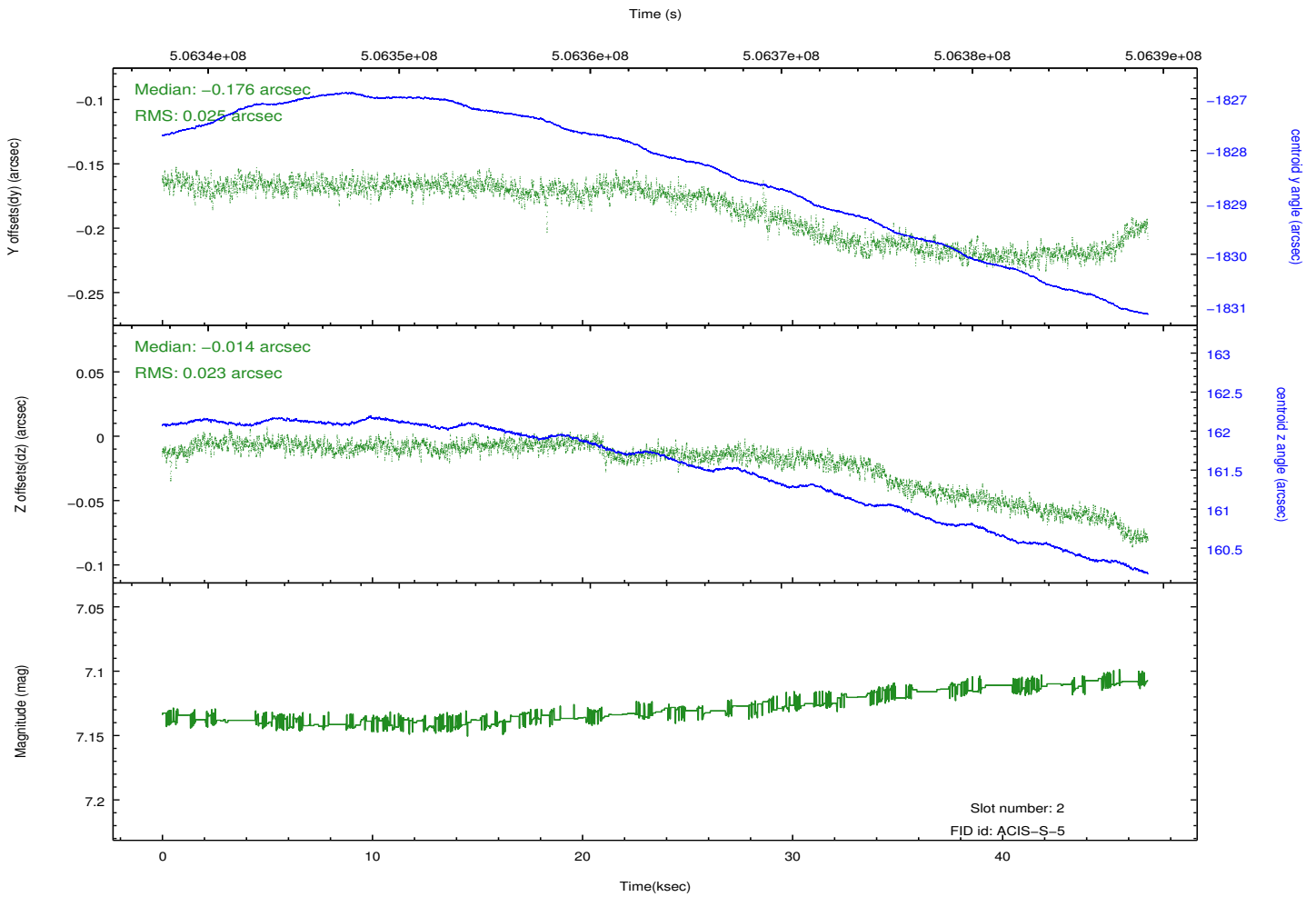
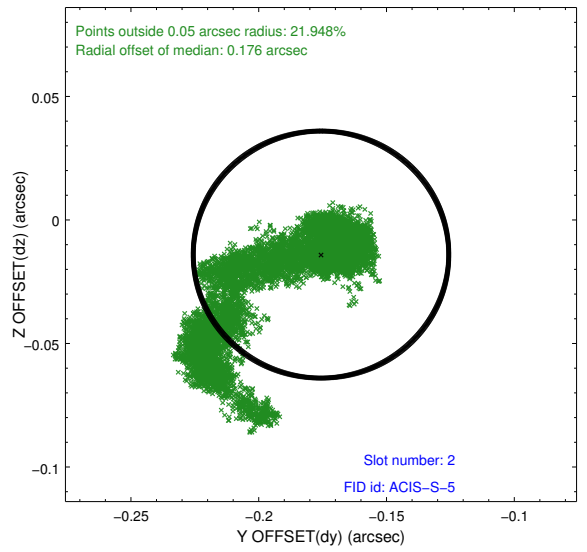
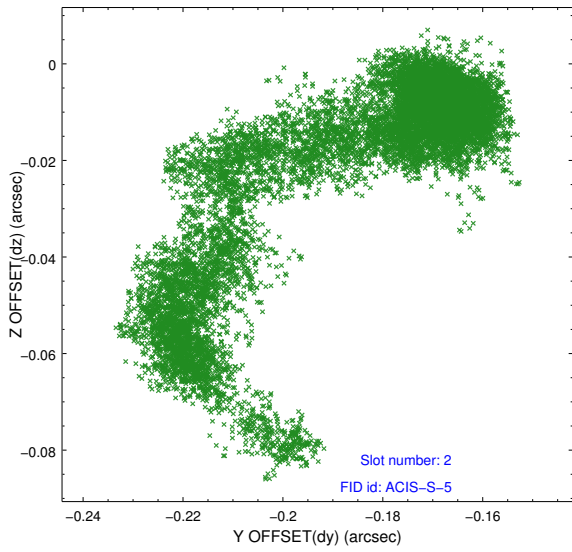
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.963413213491

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.