

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15092 - L2 Version 2  
Chandra X-Ray Center

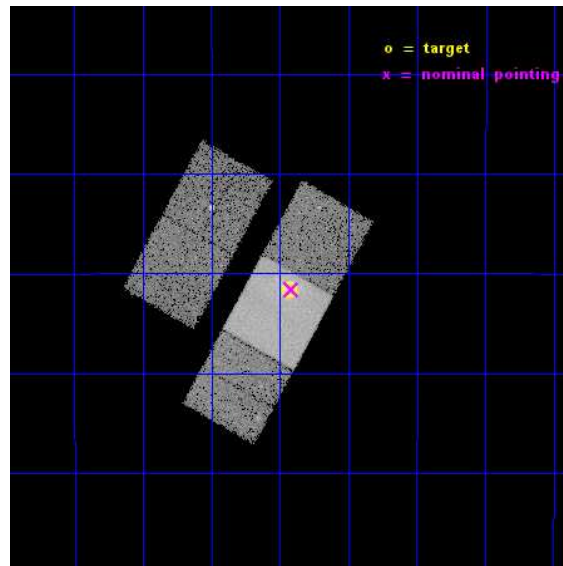
L2 Processing Date : Dec 2 2014

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# 1 Front

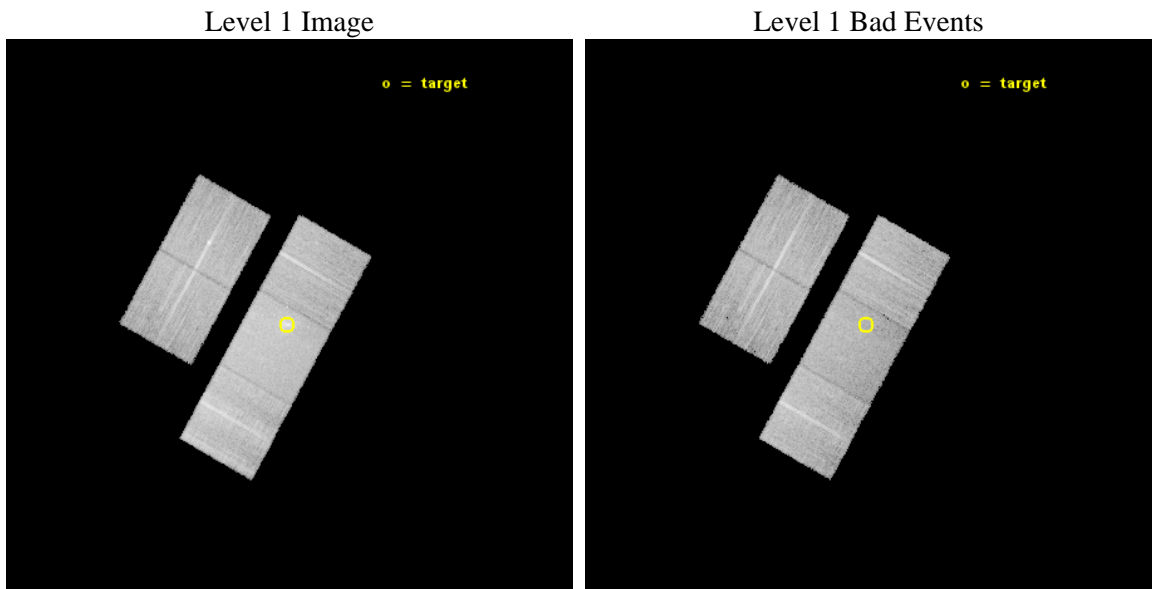
seq_num	801223	Sequence number
obs_id	15092	Observation id
title	The strongest shock around an FR II radio galaxy?	Proposal title
observer	Dr Judith Croston	Principal investigator
object	3C 444	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	333.607083	Observer's specified target RA [deg]
dec_targ	-17.026778	Observer's specified target Dec [deg]
ra_nom	333.60392624769	Nominal RA [deg]
dec_nom	-17.02661832487	Nominal Dec [deg]
roll_nom	119.15568267405	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20069.400154352	Sum of GTIs [s]
livetime	19807.178666458	Livetime [s]
ontime2	20069.400154352	Sum of GTIs [s]
ontime3	20066.259164095	Sum of GTIs [s]
ontime6	20069.400154352	Sum of GTIs [s]
ontime7	20069.400154352	Sum of GTIs [s]
ontime8	20069.400154352	Sum of GTIs [s]
l2events	117589	Number of level 2 events



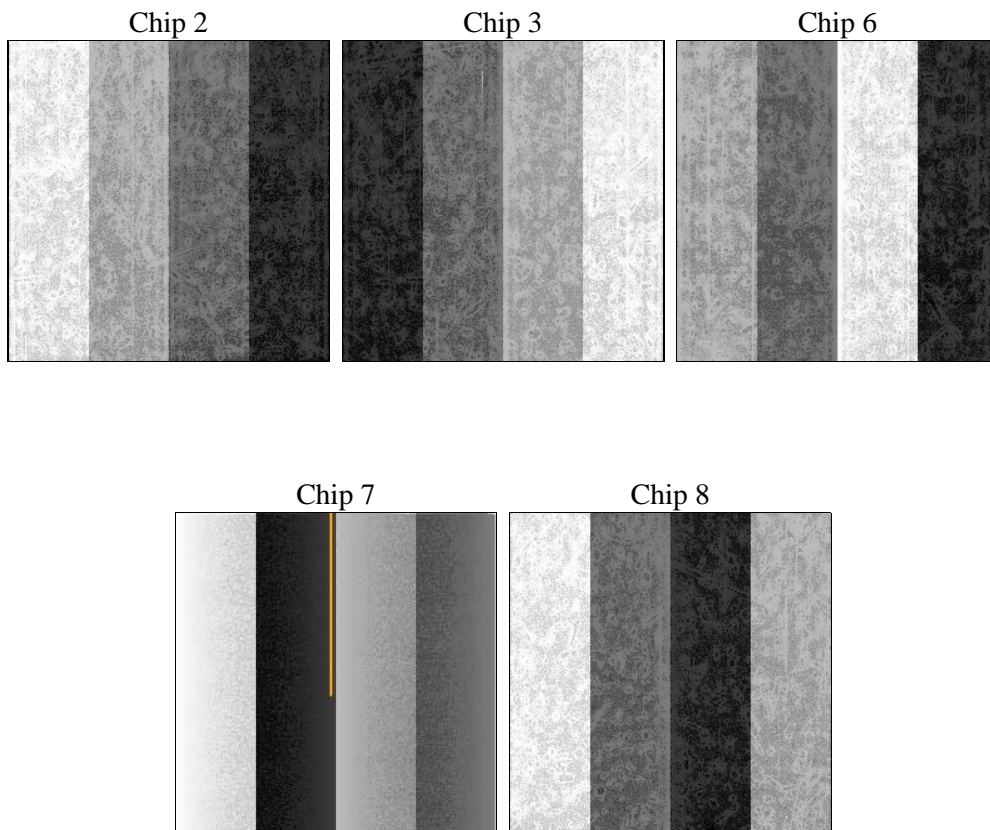
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	20069.400154352	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	20069.400154352	Sum of GTIs [s]
date	2014-12-02T15:25:03	Date and time of file creation	ontime3	20066.259164095	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	20069.400154352	Sum of GTIs [s]
			ontime7	20069.400154352	Sum of GTIs [s]
			ontime8	20069.400154352	Sum of GTIs [s]
			l1events	623059	Number of level 1 events

### 2.1.4 Events

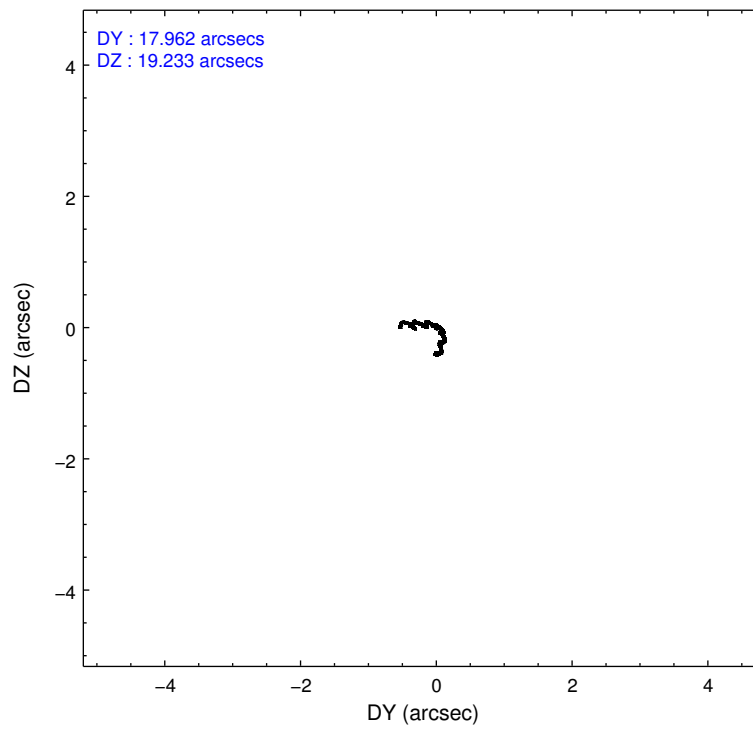
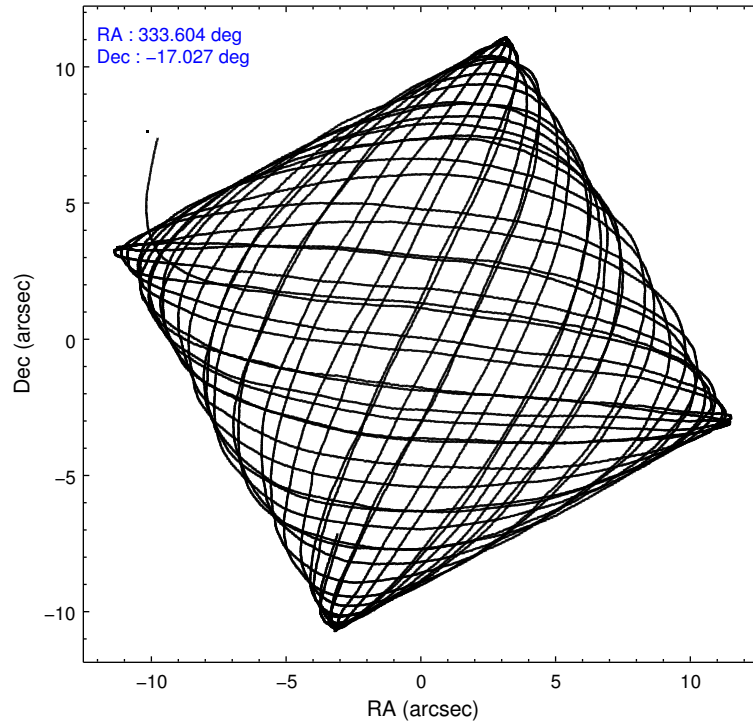
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	106826	103443	112125	153396	147269
rejected events	93851	91545	98522	81770	107415
rejected %	87%	88%	87%	53%	72%

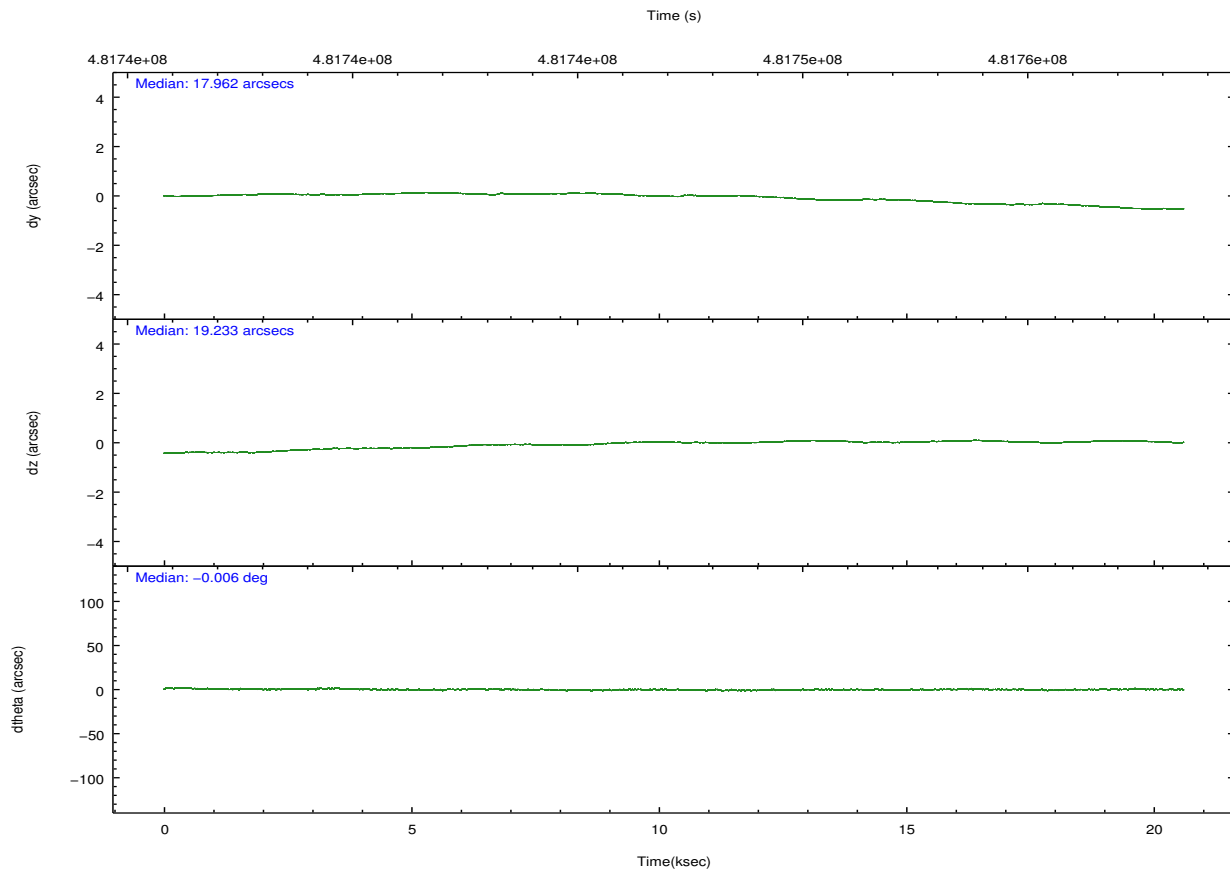
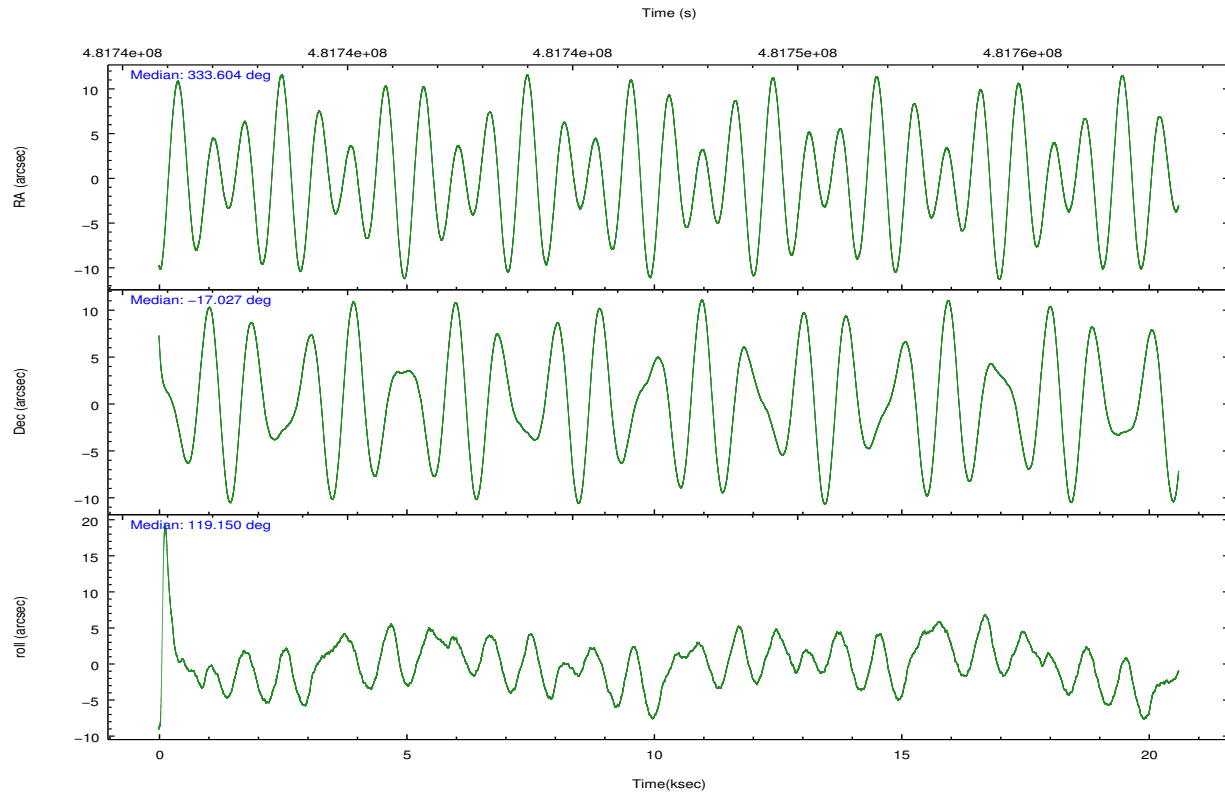
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	5087	3998	4807	8018	11621
	4%	3%	4%	5%	7%
grade 1 events	56	68	43	160	105
	0%	0%	0%	0%	0%
grade 2 events	3080	2645	3085	14964	9344
	2%	2%	2%	9%	6%
grade 3 events	1297	1257	1317	6493	4177
	1%	1%	1%	4%	2%
grade 4 events	1237	1291	1361	6411	3957
	1%	1%	1%	4%	2%
grade 5 events	4483	5598	5742	15223	8230
	4%	5%	5%	9%	5%
grade 6 events	2276	2710	3034	35751	10767
	2%	2%	2%	23%	7%
grade 7 events	89310	85876	92736	66376	99068
	83%	83%	82%	43%	67%

## 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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	333.628679	333.6039262476897	CCD I2 on	O1	Y
[deg] Pointing Dec	-17.040297	-17.02661832486968	CCD I3 on	O2	Y
[deg] Pointing Roll	119.006326	119.1556826740467	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	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	481737426.184000	481736275.42992	CCD S5 on	N	N
Observation start date	2013-04-07T15:55:59	2013-04-07T15:37:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	481757426.184000	481758623.50613	On-chip summing requested	N	N
Observation end date	2013-04-07T21:29:19	2013-04-07T21:50:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



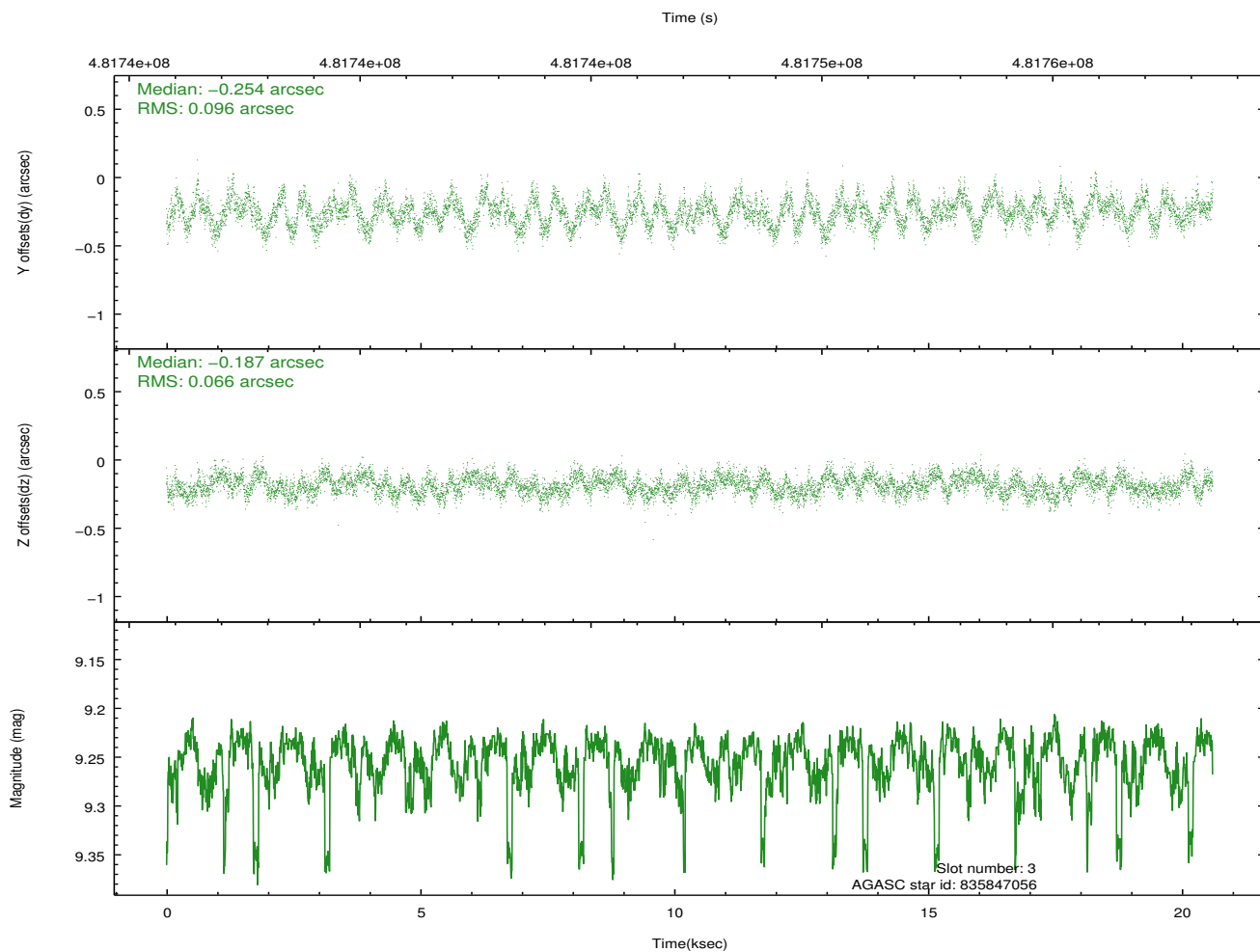
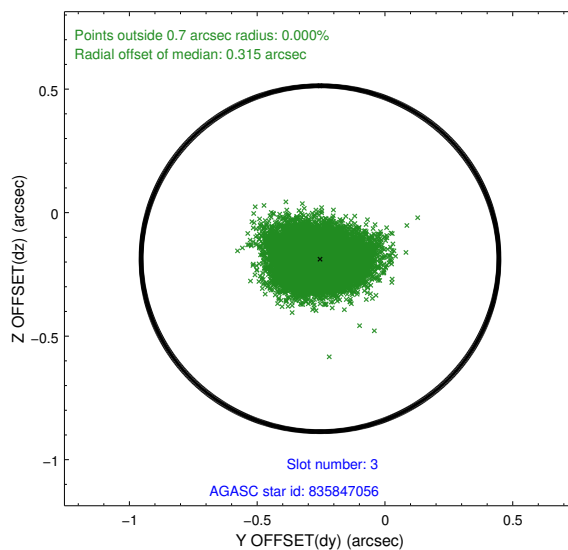
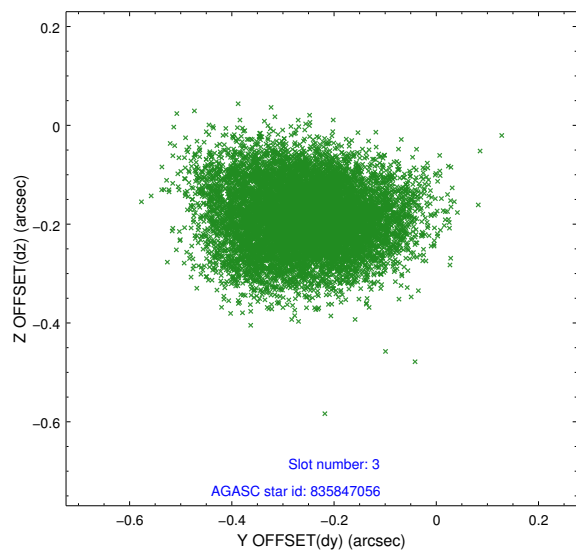


### Slot Statistics

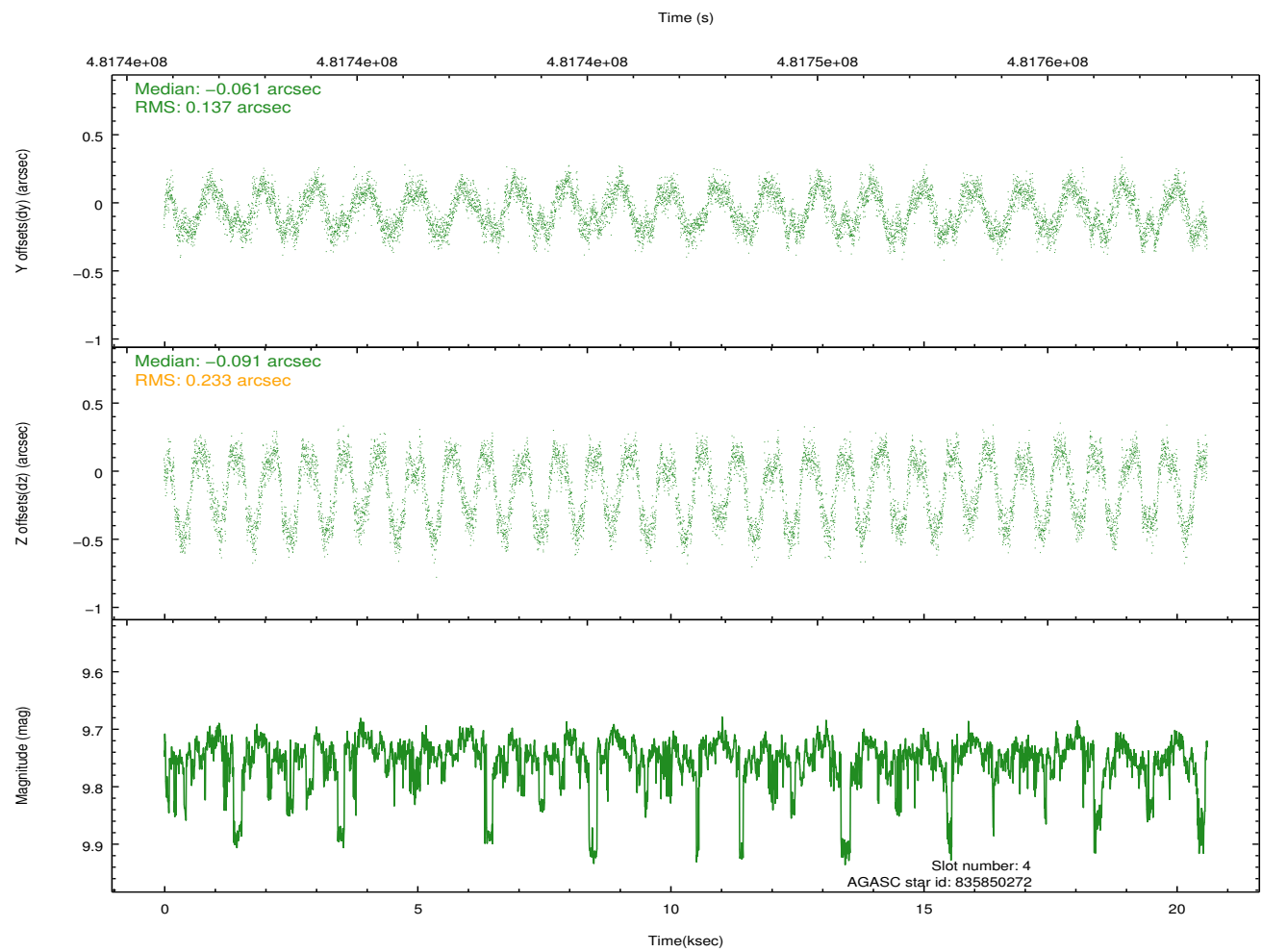
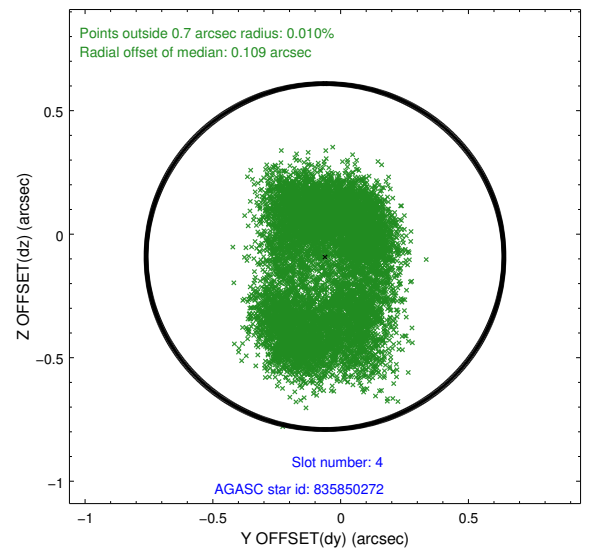
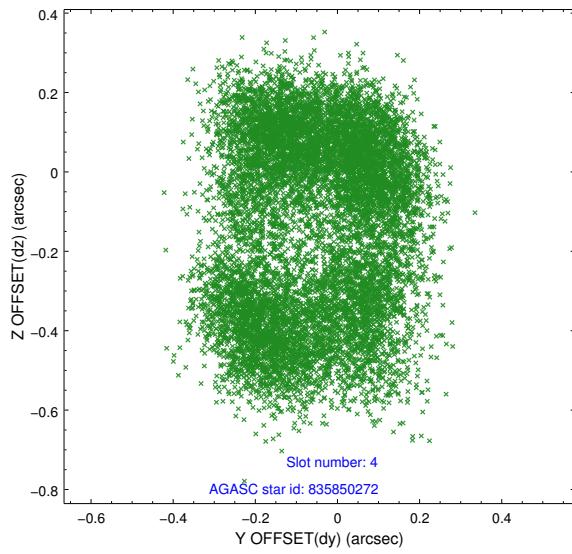
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.05	5026	0.062	0.001	0.010	0.016	0.000000	0.000000	925.19	-1736.27
1	FID		ACIS-S-4	7.05	5025	0.165	-0.025	0.009	0.014	0.000000	0.000000	2142.77	167.70
2	FID		ACIS-S-5	7.07	5026	-0.253	0.038	0.009	0.015	0.000000	0.000000	-1823.80	161.50
3	GUIDE	used	835847056	9.25	10012	-0.254	-0.187	0.125	0.200	333.278171	-16.621840	1902.87	327.65
4	GUIDE	used	835850272	9.75	9992	-0.061	-0.091	0.292	0.430	333.242614	-17.411688	-527.24	1809.03
5	GUIDE	used	835977888	9.44	10005	0.024	-0.052	0.182	0.259	333.352822	-17.230918	-140.90	1162.68
6	GUIDE	used	835978224	9.11	10033	0.079	0.142	0.134	0.219	334.068991	-17.205246	-1254.61	-1035.20
7	GUIDE	used	835978912	9.38	10041	0.214	0.226	0.148	0.227	334.237511	-16.984216	-842.23	-1929.00

## 2.4 Star Slots

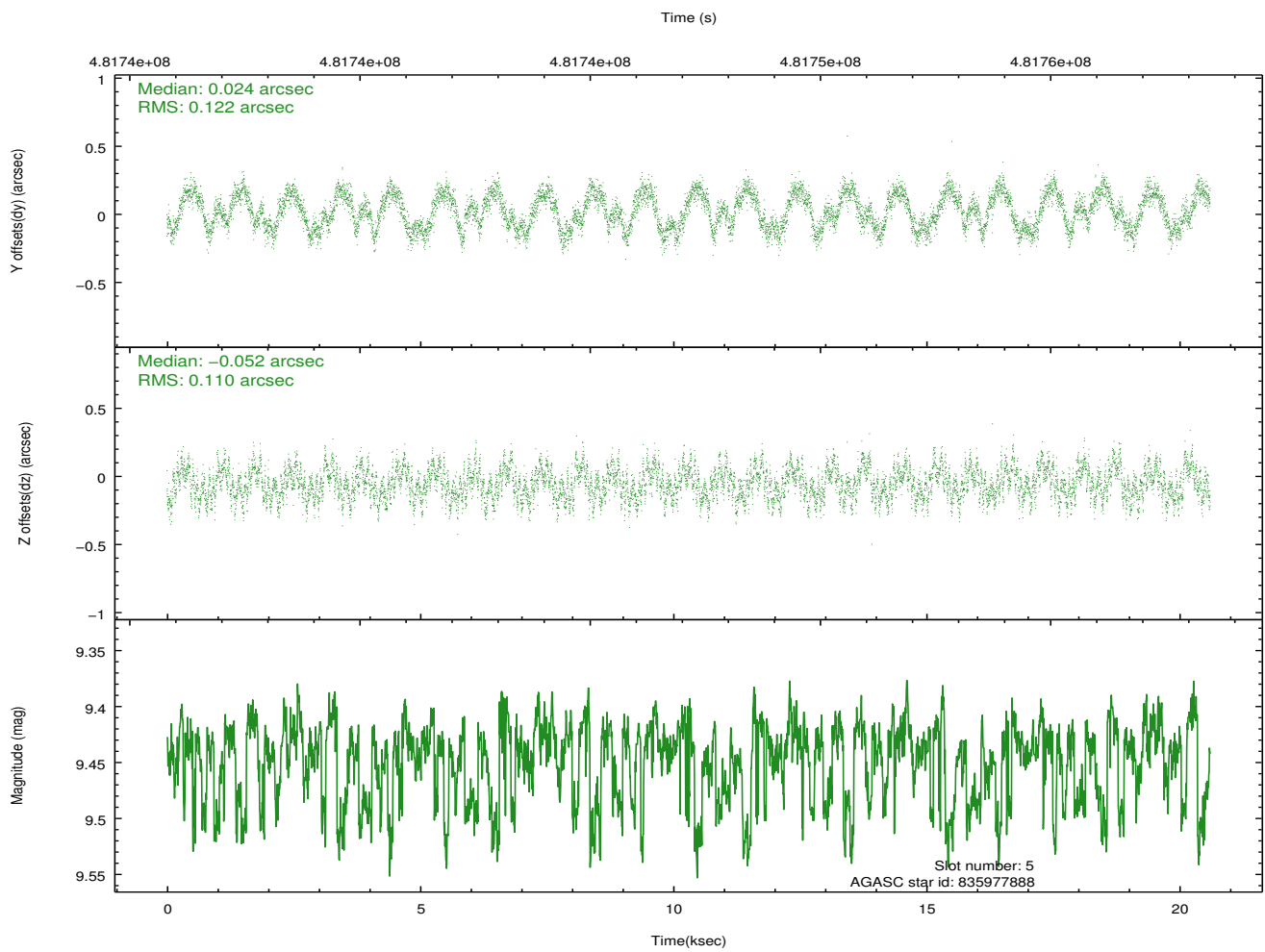
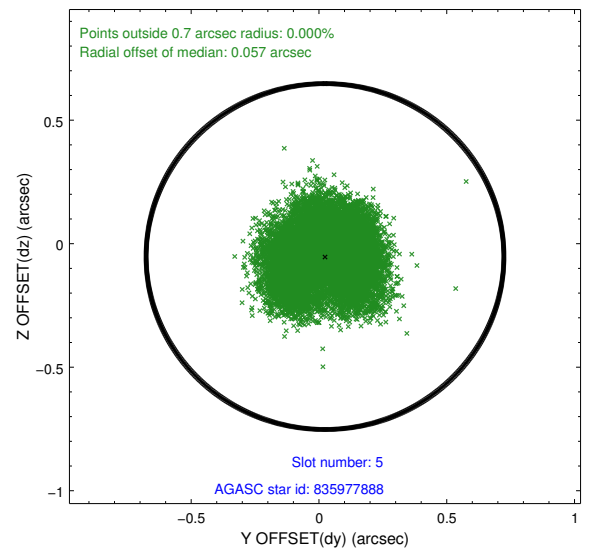
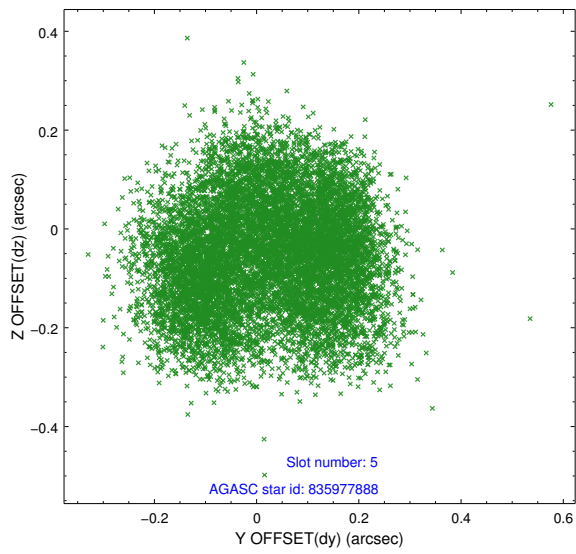
### 2.4.1 Slot 3



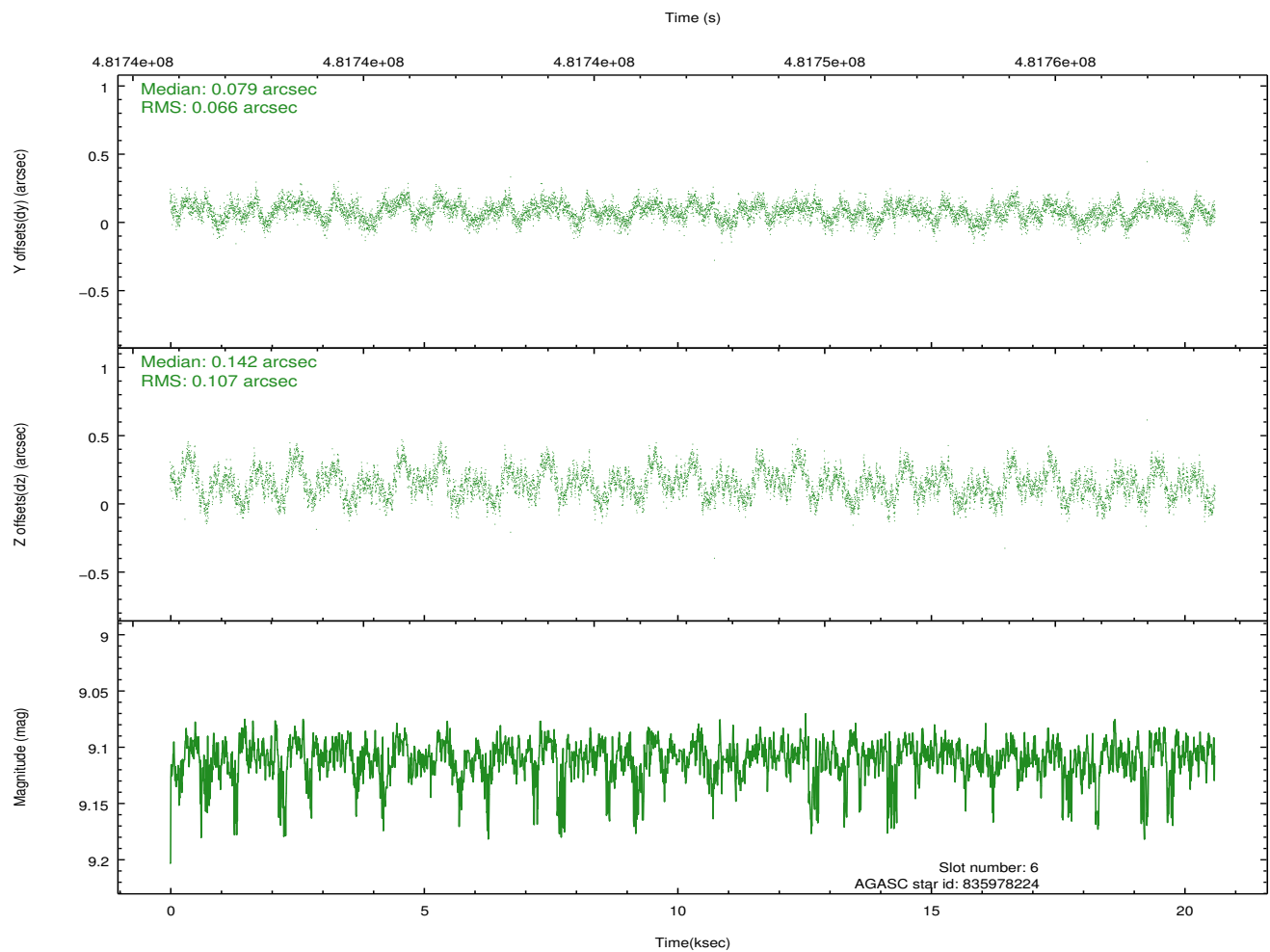
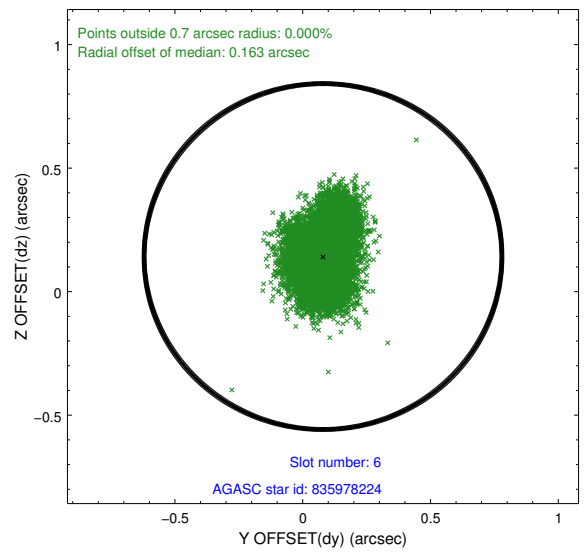
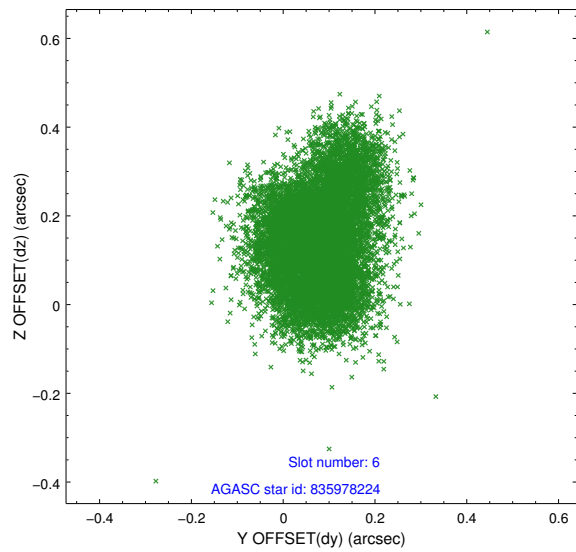
## 2.4.2 Slot 4



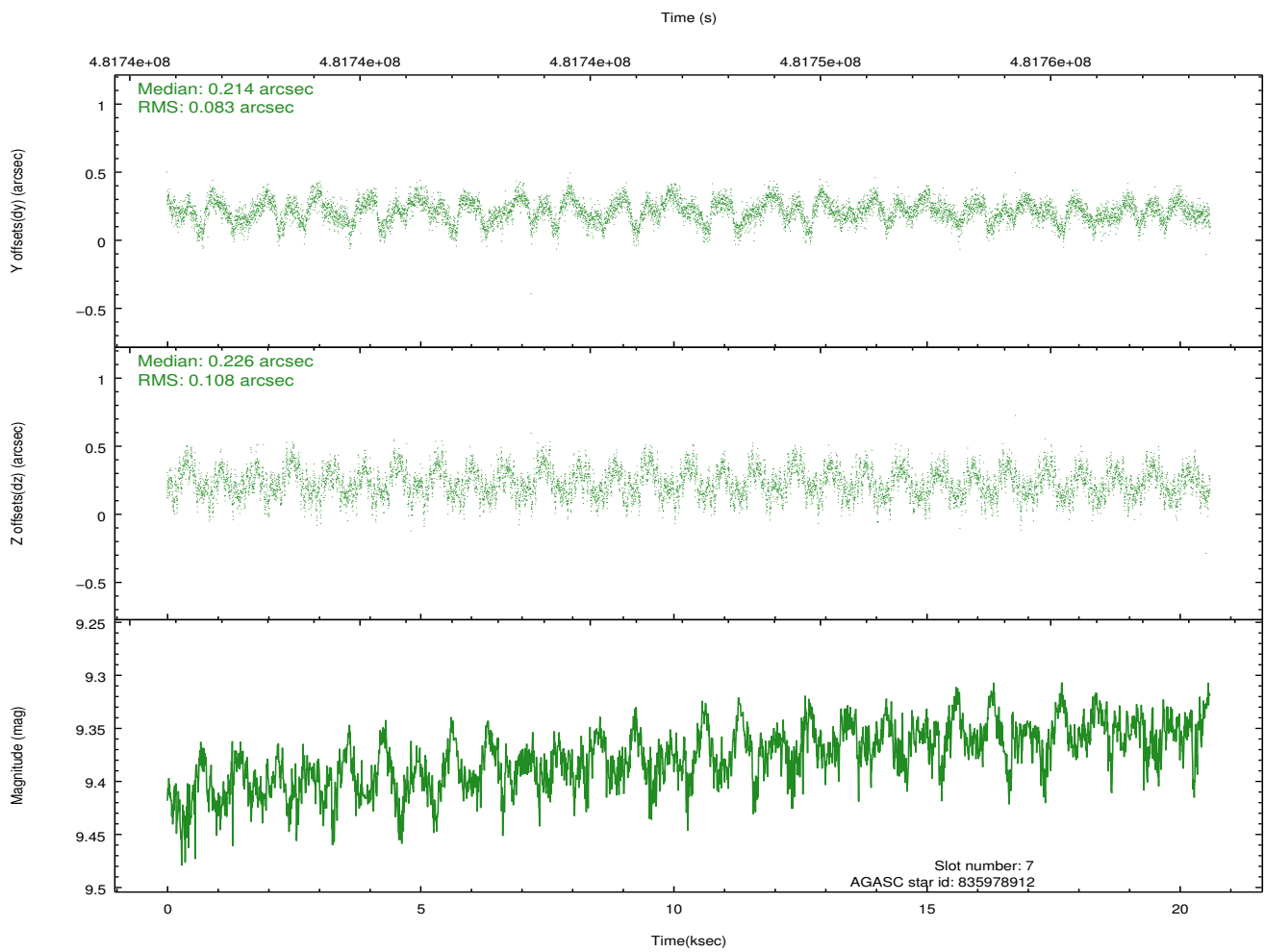
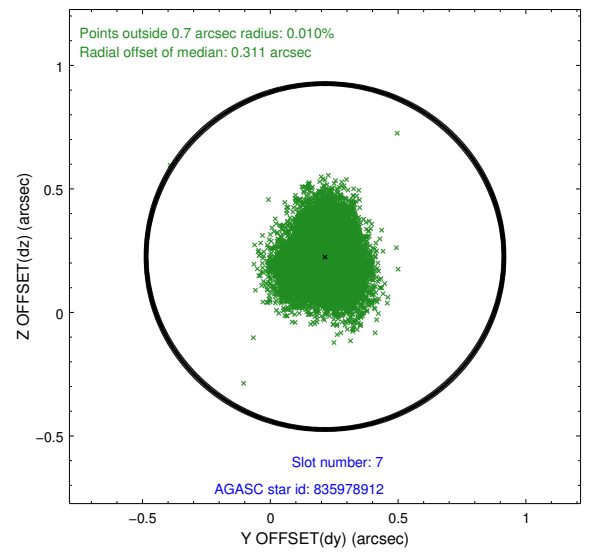
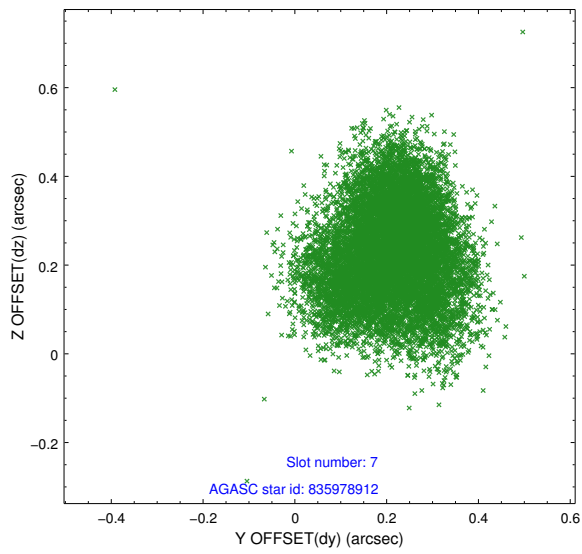
### 2.4.3 Slot 5



## 2.4.4 Slot 6

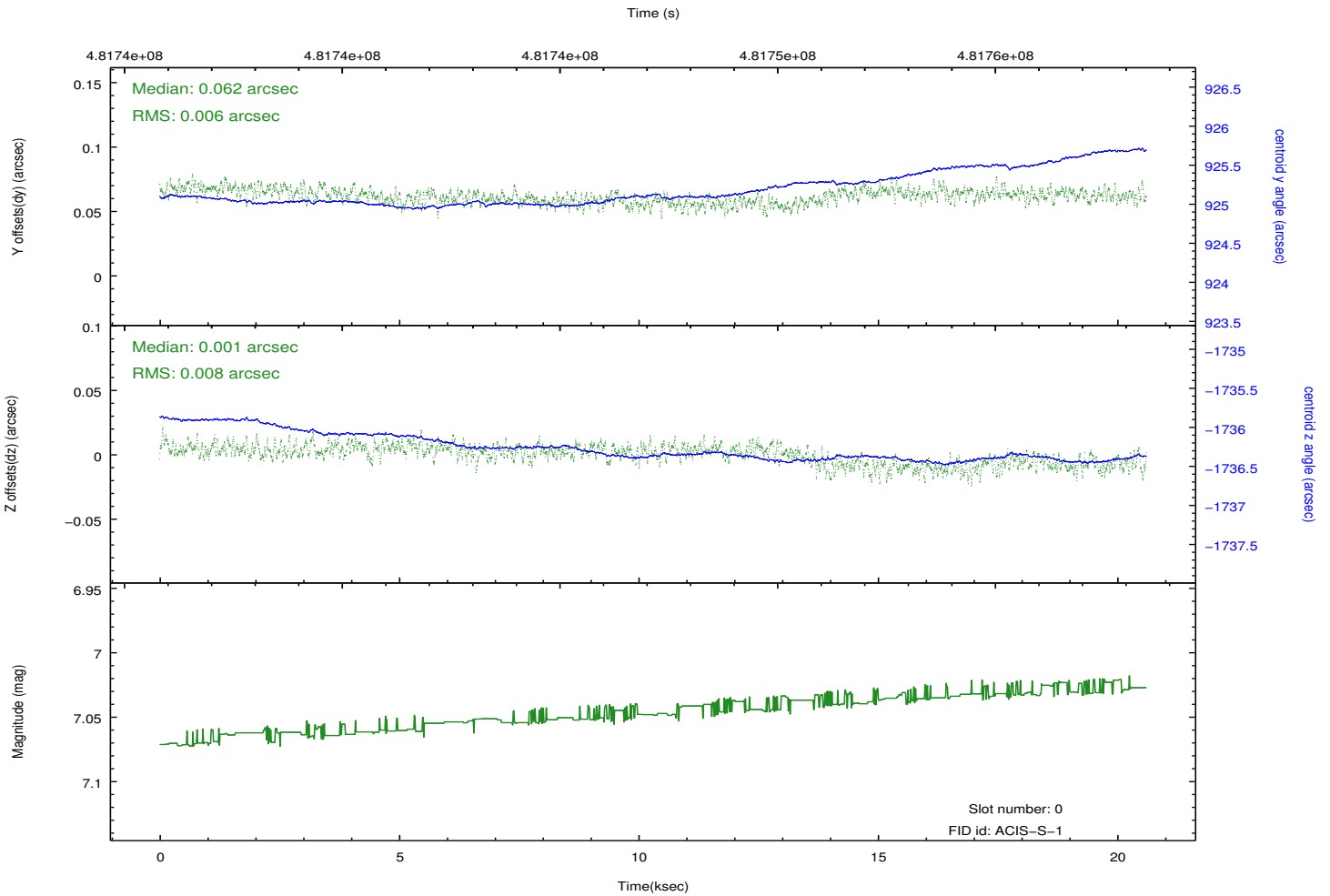
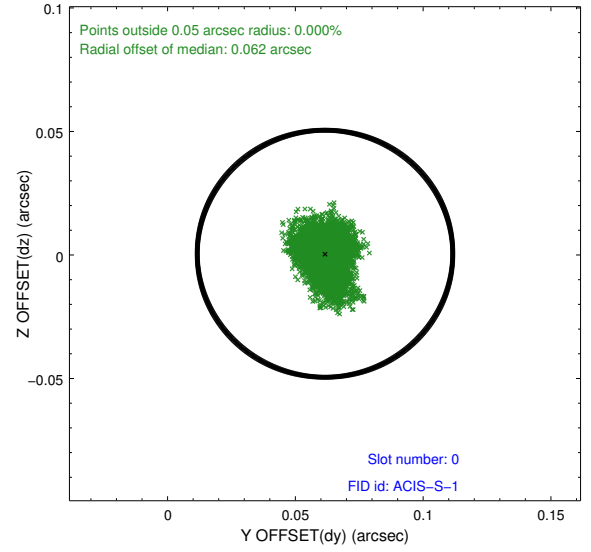
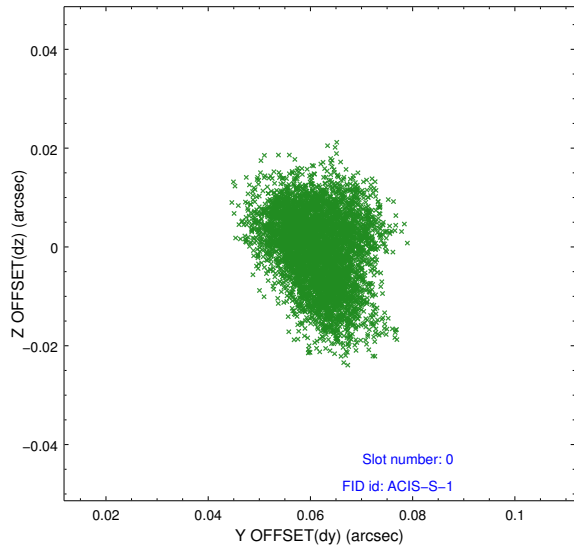


## 2.4.5 Slot 7

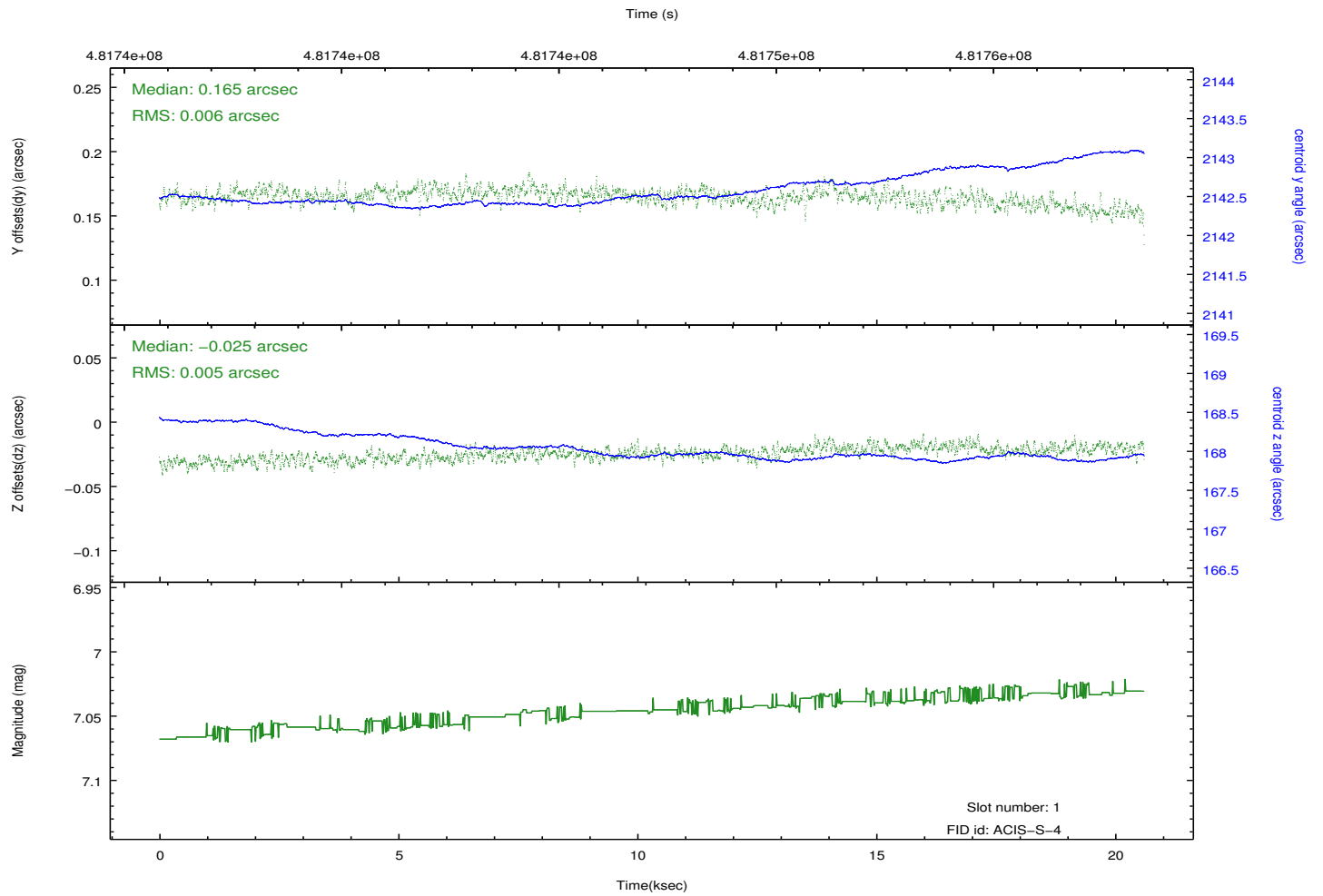
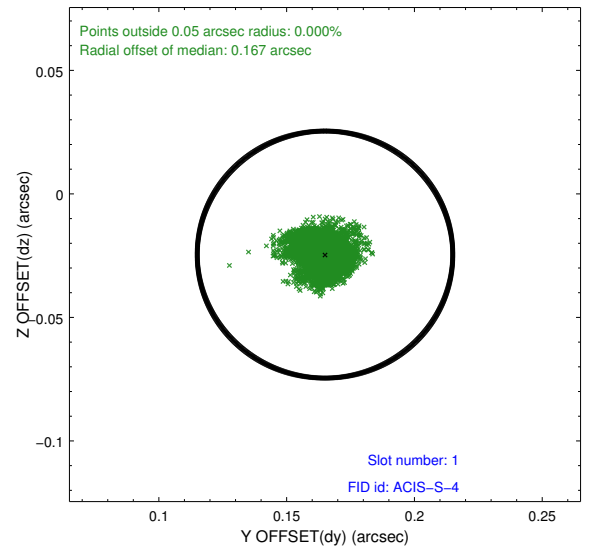
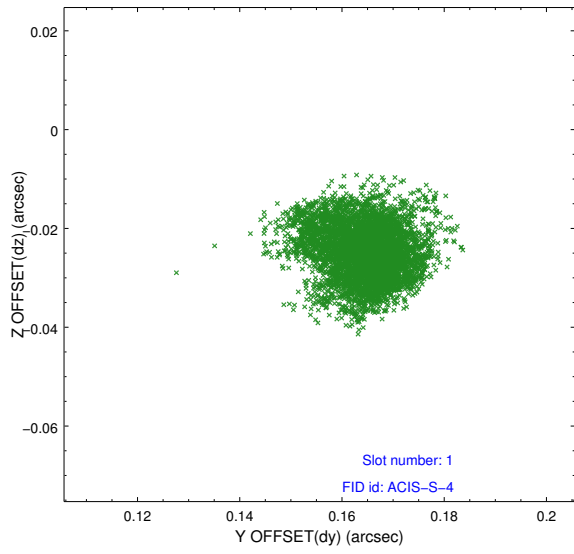


## 2.5 FID Slots

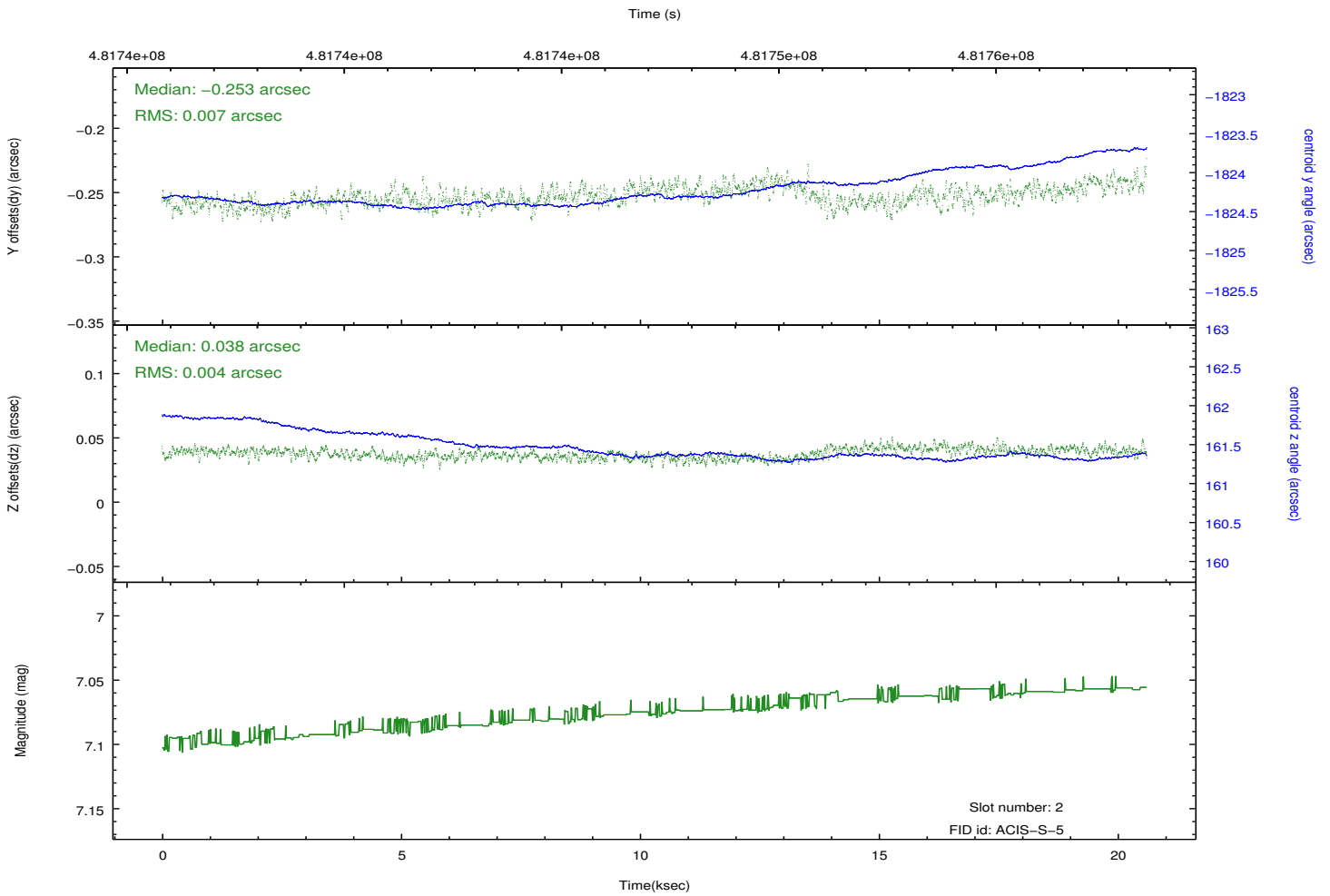
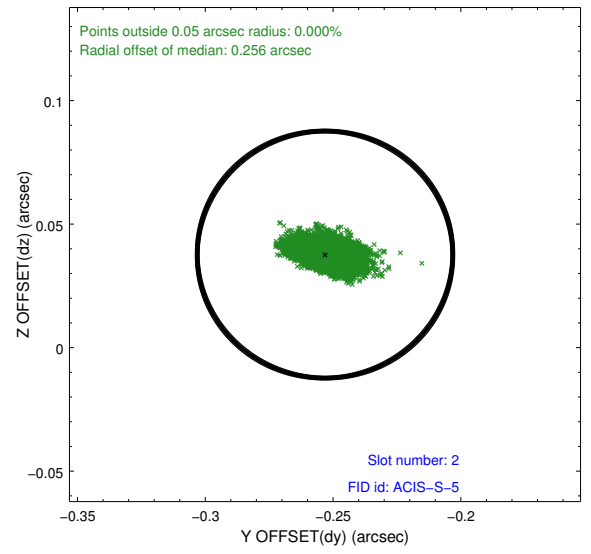
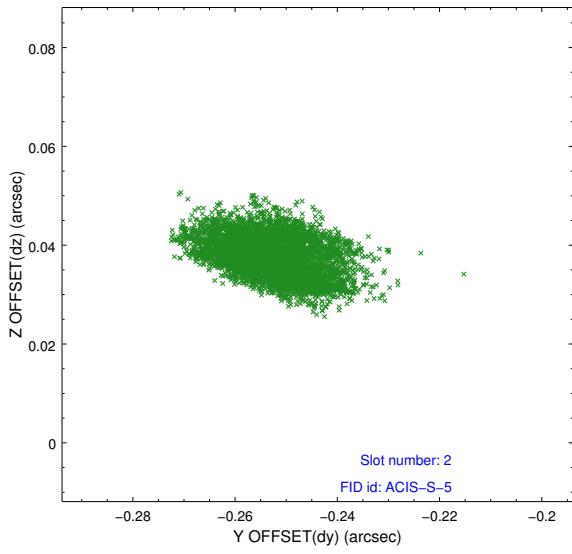
### 2.5.1 Slot 0



## 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)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.069400154352

## 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.