

# V&V Reference Report

## L2 ASCDS Version : 10.0.1

Observation 14910 - L2 Version 3  
Chandra X-Ray Center

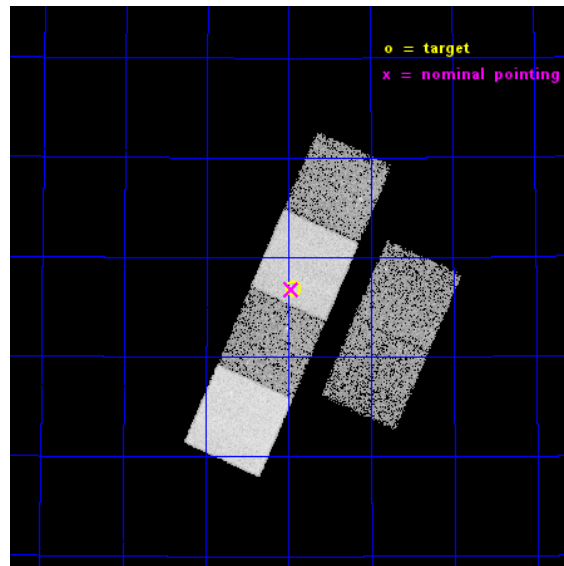
L2 Processing Date : Dec 6 2014

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# 1 Front

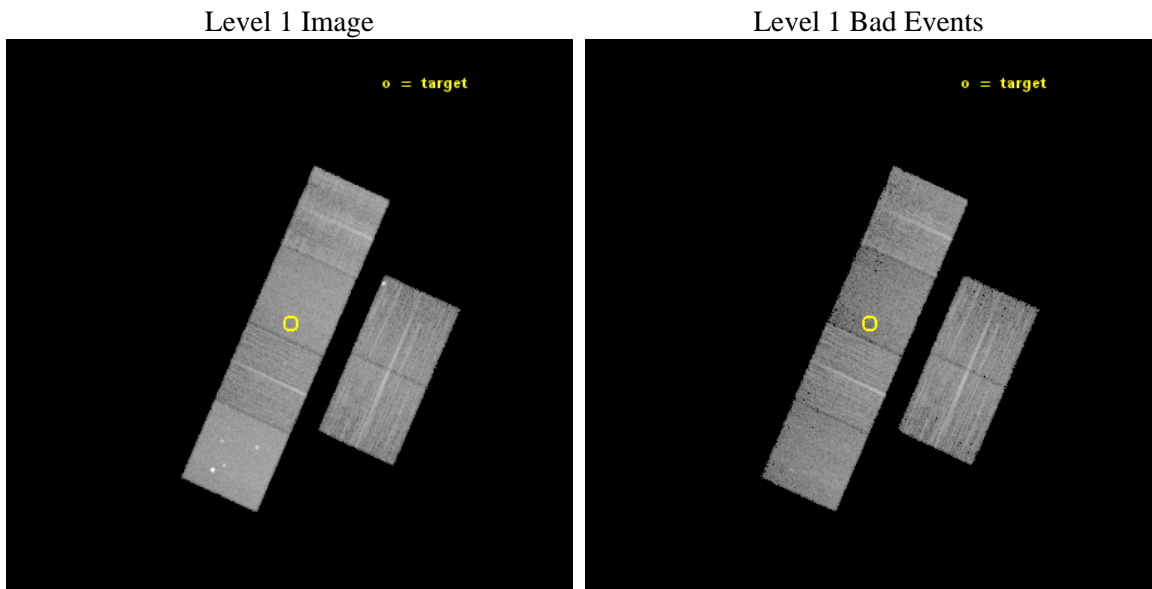
seq_num	601040	Sequence number
obs_id	14910	Observation id
title	The Origin of Elevated X-ray Emission in Strong Halpha Emitting Galaxies	Proposal title
observer	Dr. Ranga Ram Chary	Principal investigator
object	HAE 220	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	212.486667	Observer's specified target RA [deg]
dec_targ	54.946917	Observer's specified target Dec [deg]
ra_nom	212.4918757241	Nominal RA [deg]
dec_nom	54.946471474577	Nominal Dec [deg]
roll_nom	293.96725548072	Nominal Roll [deg]
revision	3	Processing version of data
ontime	17967.71035099	Sum of GTIs [s]
livetime	17740.19238367	Livetime [s]
ontime2	17967.751390994	Sum of GTIs [s]
ontime3	17967.58723098	Sum of GTIs [s]
ontime5	17967.669310987	Sum of GTIs [s]
ontime6	17967.628270984	Sum of GTIs [s]
ontime7	17967.71035099	Sum of GTIs [s]
ontime8	17967.546190977	Sum of GTIs [s]
l2events	134961	Number of level 2 events



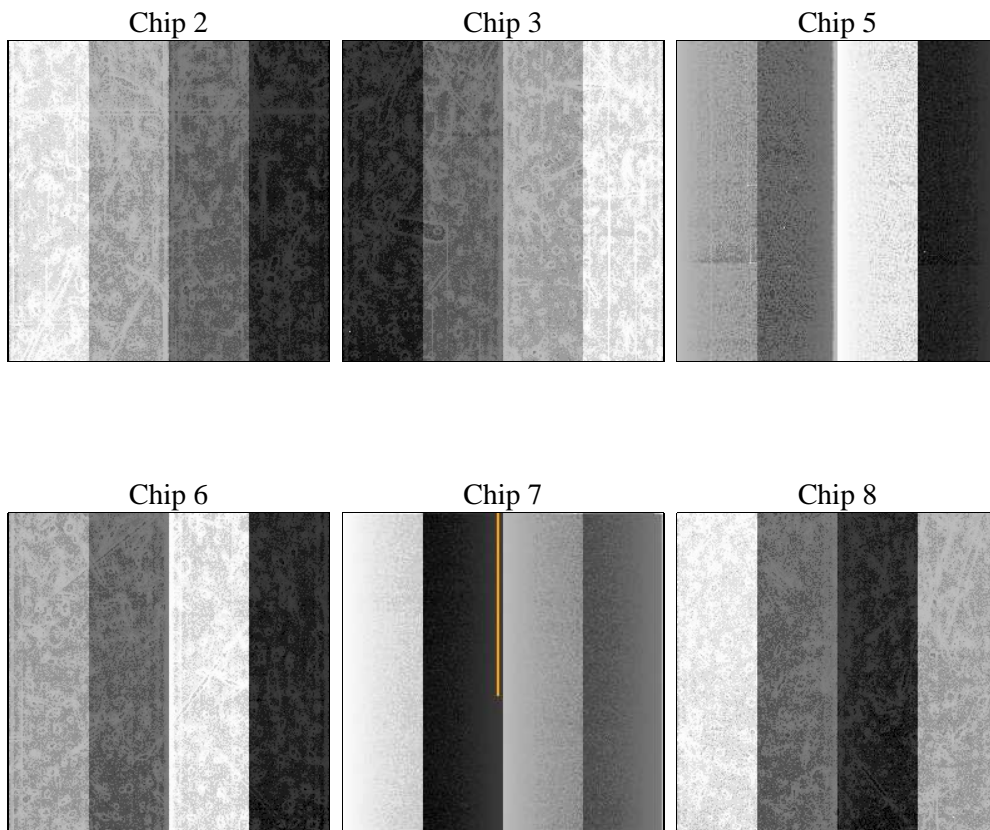
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	17967.71035099	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime2	17967.751390994	Sum of GTIs [s]
date	2014-12-06T12:14:19	Date and time of file creation	ontime3	17967.58723098	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	17967.669310987	Sum of GTIs [s]
			ontime6	17967.628270984	Sum of GTIs [s]
			ontime7	17967.71035099	Sum of GTIs [s]
			ontime8	17967.546190977	Sum of GTIs [s]
			l1events	563673	Number of level 1 events

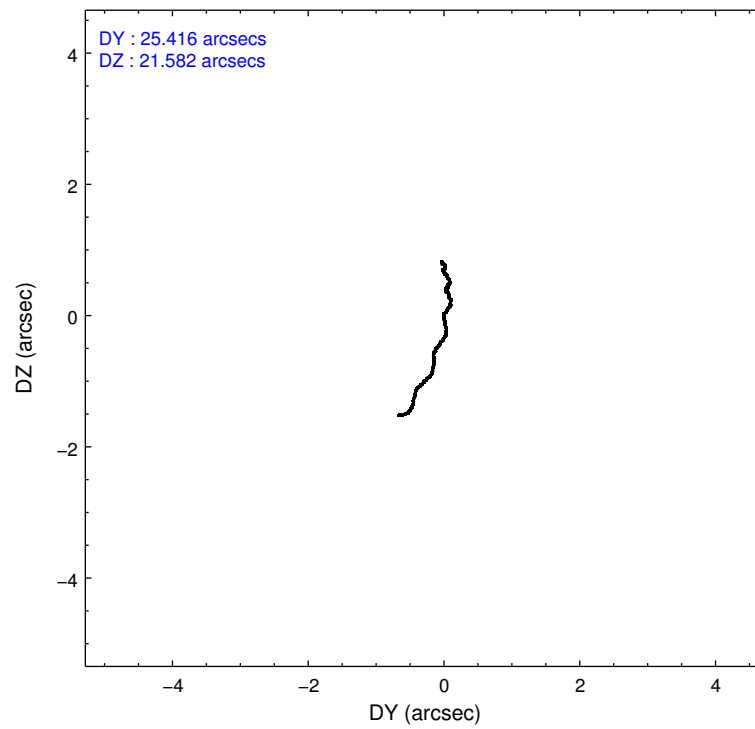
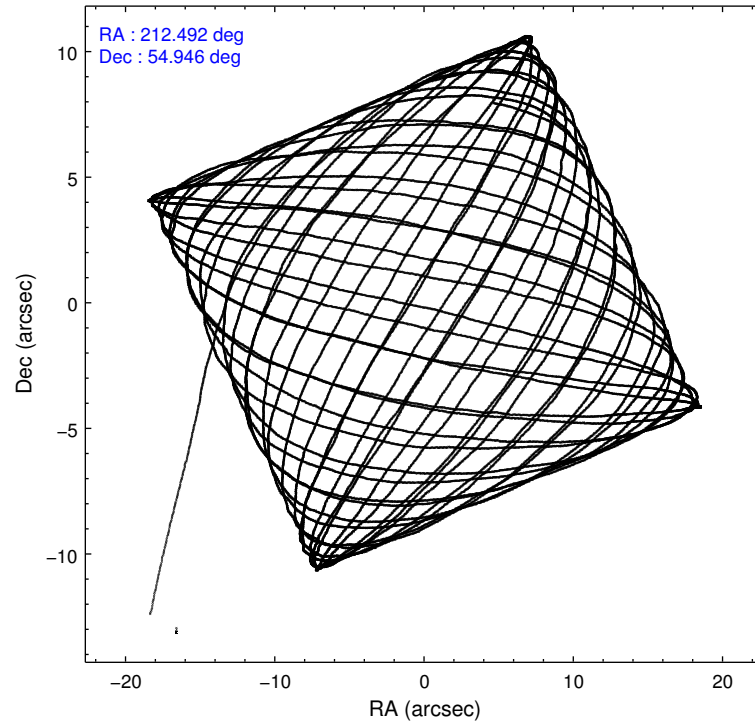
### 2.1.4 Events

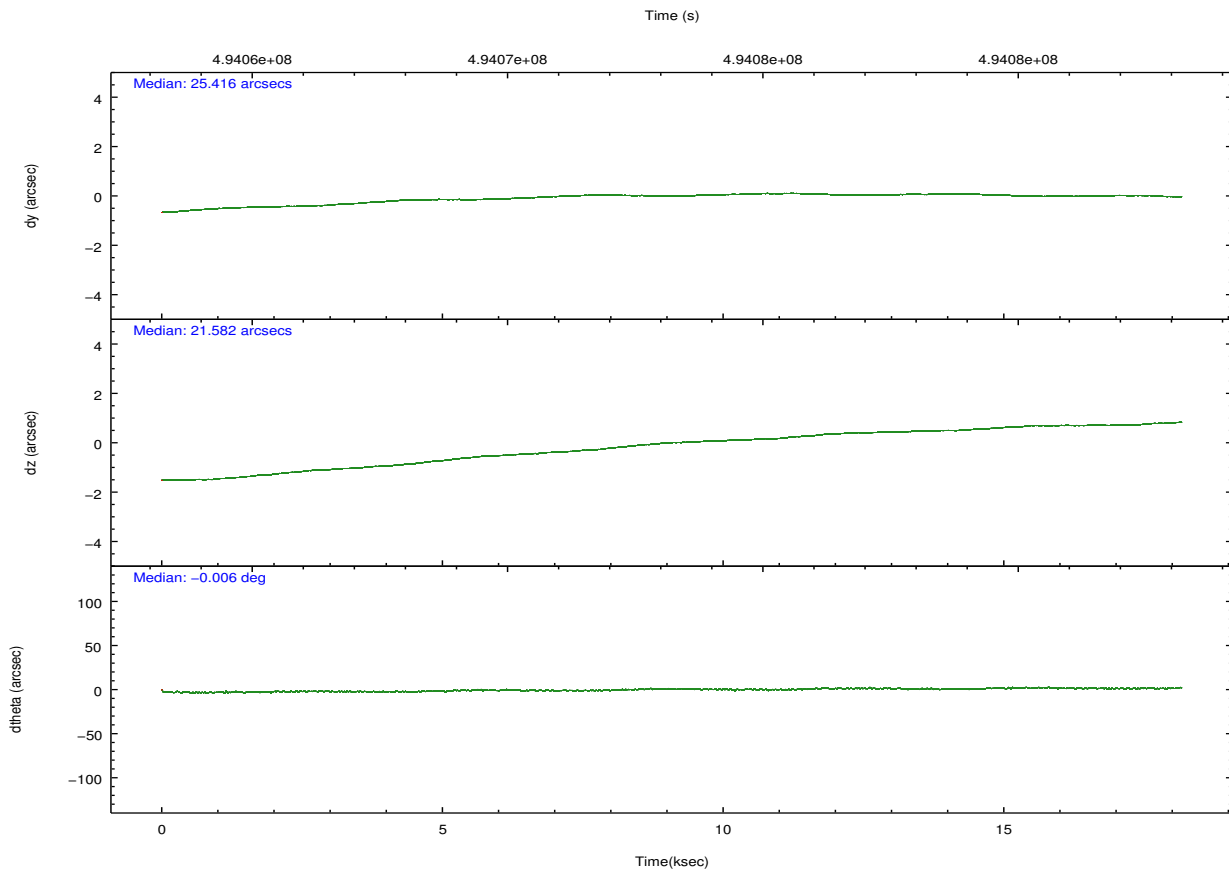
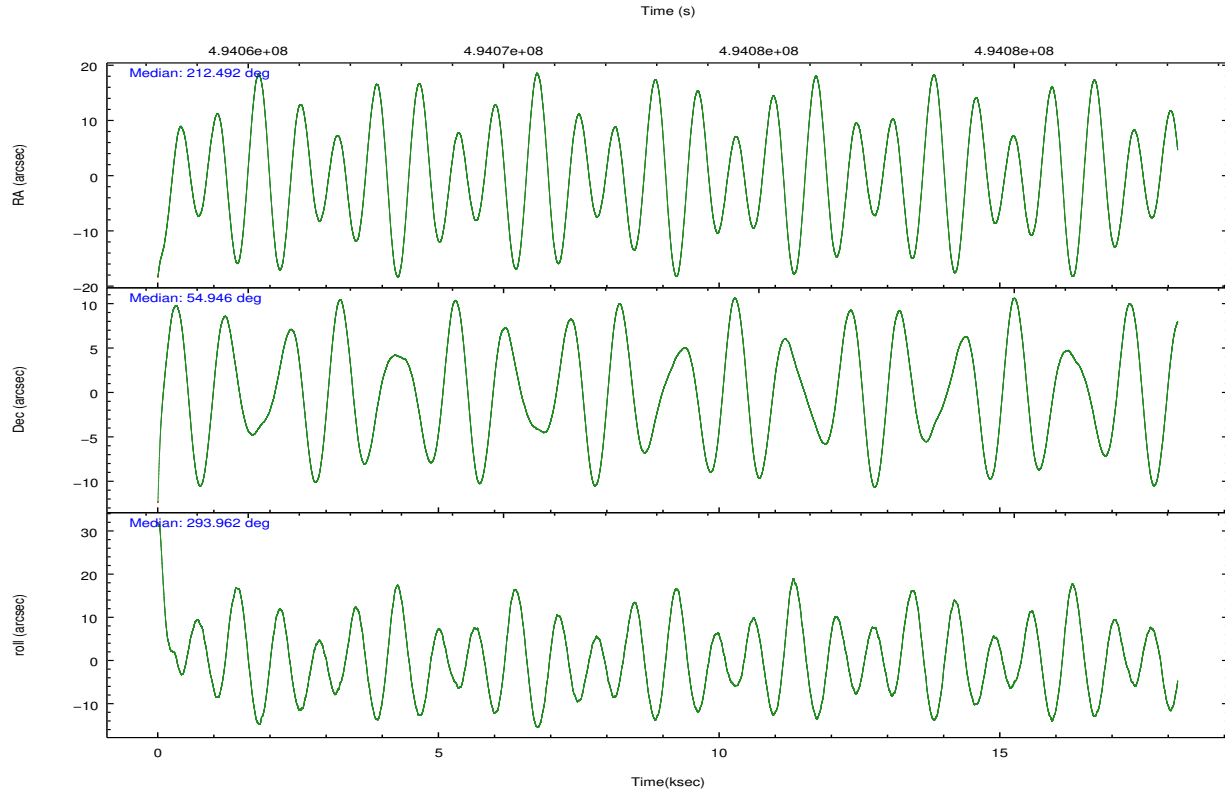
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	82776	77749	125780	79716	93238	104414	grade 0 events	3181	4793	6958	4050	4371	7819
rejected events	73930	67500	58300	69380	48923	74857		3%	6%	5%	5%	4%	7%
rejected %	89%	86%	46%	87%	52%	71%	grade 1 events	44	44	340	41	133	87
								0%	0%	0%	0%	0%	0%
							grade 2 events	2364	1973	23508	2271	9501	7145
								2%	2%	18%	2%	10%	6%
							grade 3 events	824	905	2342	999	3943	3089
								0%	1%	1%	1%	4%	2%
							grade 4 events	866	884	2322	986	3876	3022
								1%	1%	1%	1%	4%	2%
							grade 5 events	2957	3650	9389	3610	9968	5494
								3%	4%	7%	4%	10%	5%
							grade 6 events	1611	1698	32358	2032	22631	8482
								1%	2%	25%	2%	24%	8%
							grade 7 events	70929	63802	48563	65727	38815	69276
								85%	82%	38%	82%	41%	66%

## 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	212.452990	212.4918757241045	CCD I2 on	Y	Y
[deg] Pointing Dec	54.962244	54.94647147457664	CCD I3 on	Y	Y
[deg] Pointing Roll	293.842452	293.9672554807194	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	Y	Y
[s] Observation start time (MET)	494064297.184000	494063063.96206	CCD S5 on	N	N
Observation start date	2013-08-28T08:03:50	2013-08-28T07:44:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	494082297.184000	494083356.91317	On-chip summing requested	N	N
Observation end date	2013-08-28T13:03:50	2013-08-28T13:22:36	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





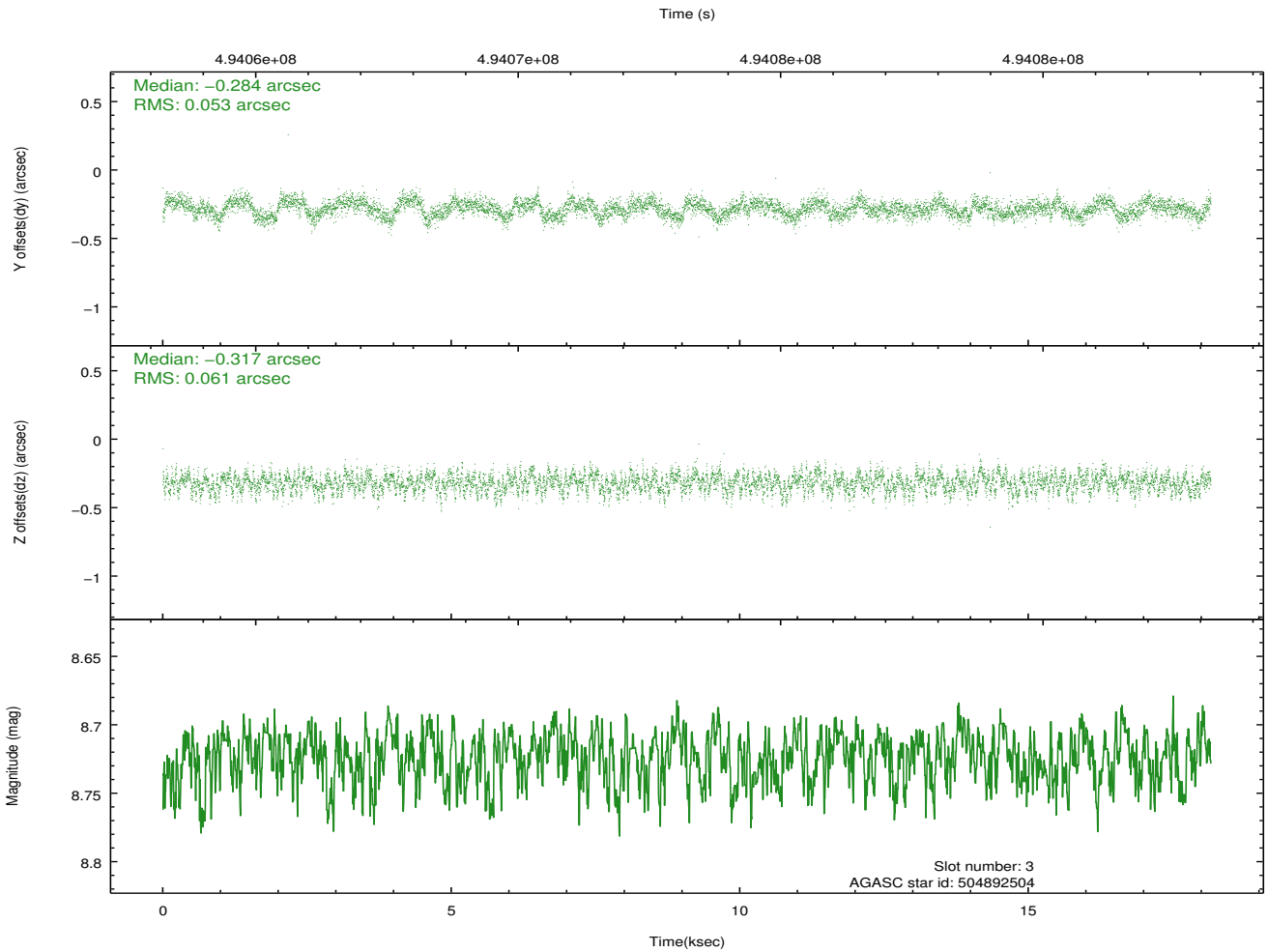
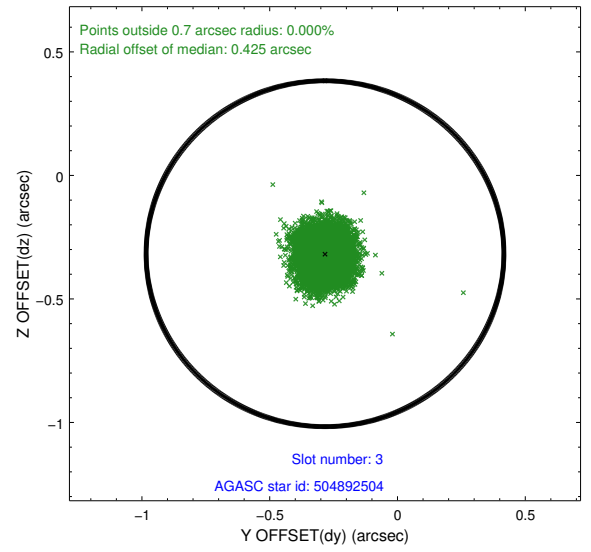
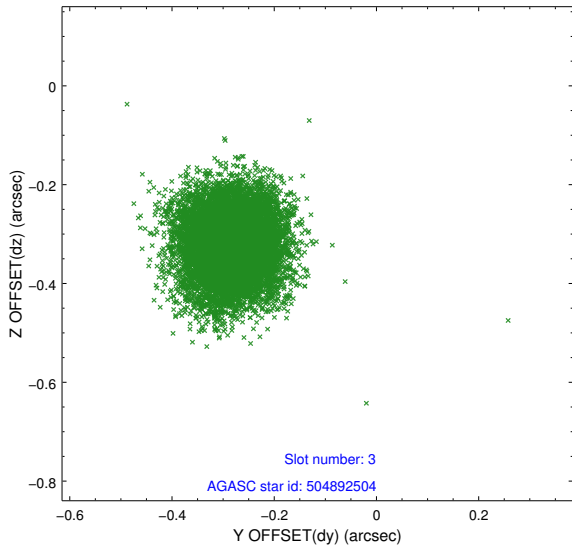
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.03	4430	0.072	-0.059	0.020	0.038	0.000000	0.000000	917.55	-1738.63
1	FID		ACIS-S-5	7.07	4431	-0.186	0.027	0.016	0.028	0.000000	0.000000	-1831.59	158.75
2	FID		ACIS-S-6	7.17	4431	0.090	0.050	0.030	0.042	0.000000	0.000000	382.87	803.00
3	GUIDE	used	504892504	8.72	8844	-0.284	-0.317	0.087	0.137	213.055460	54.883192	759.80	1028.45
4	GUIDE	used	504895120	7.98	8857	-0.081	-0.007	0.098	0.150	212.821804	54.409138	2131.81	-98.46
5	GUIDE	used	505289936	8.65	8862	0.325	0.261	0.094	0.143	211.265099	55.244504	-1932.68	-1810.08
6	GUIDE	used	505293224	8.01	8856	0.043	0.063	0.084	0.133	211.567203	55.430660	-2284.49	-968.86
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

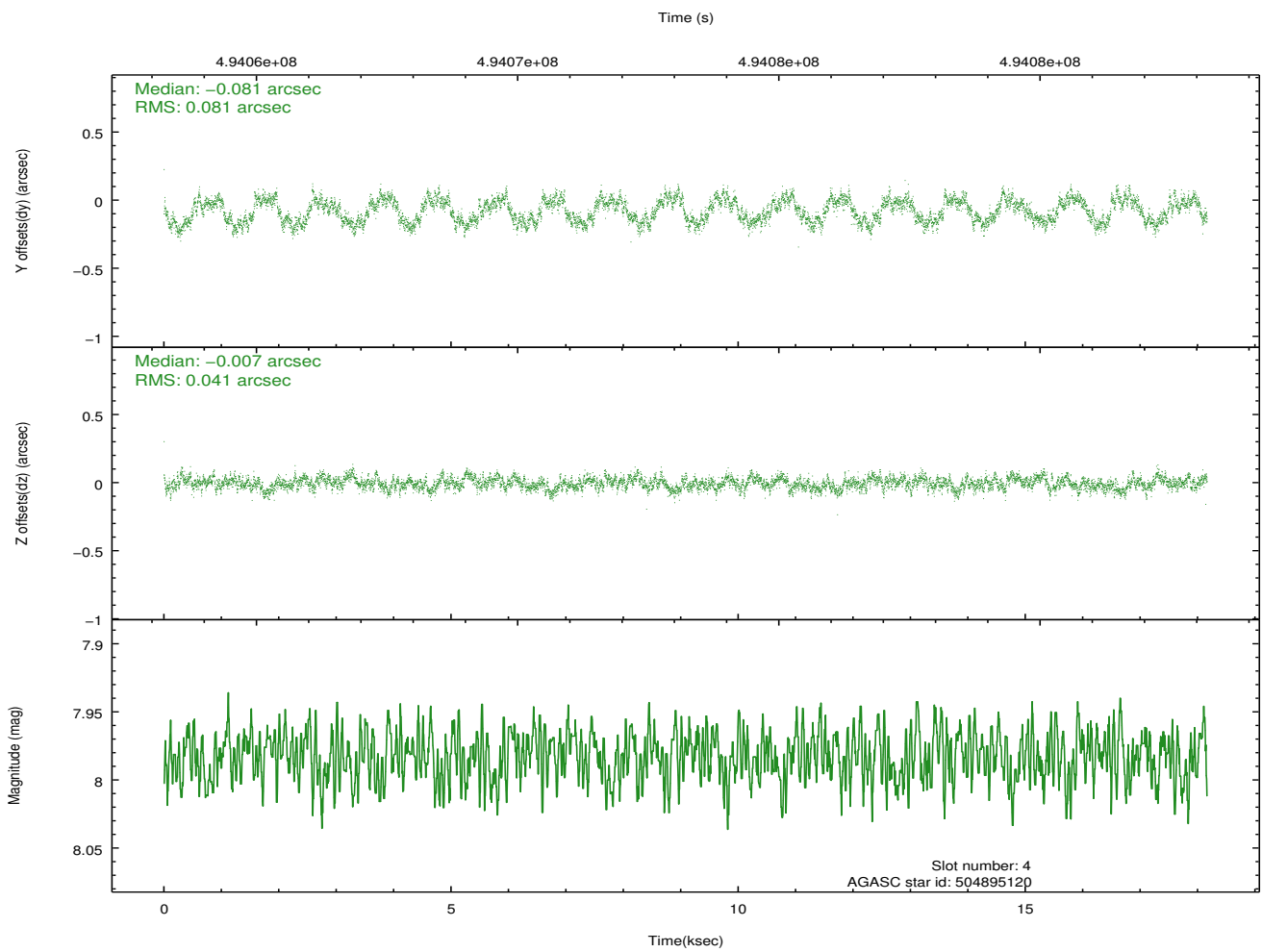
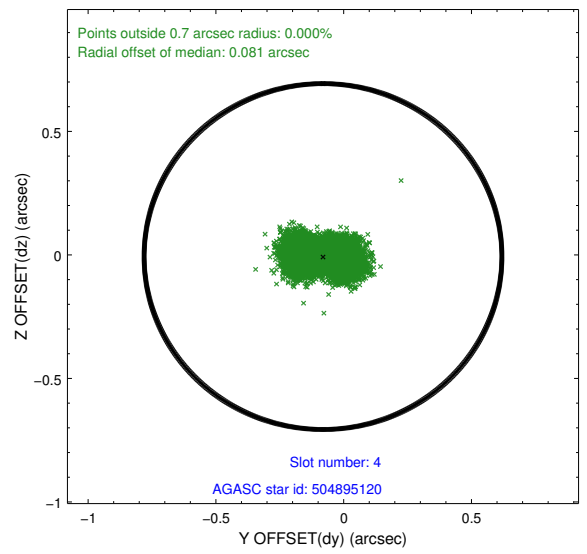
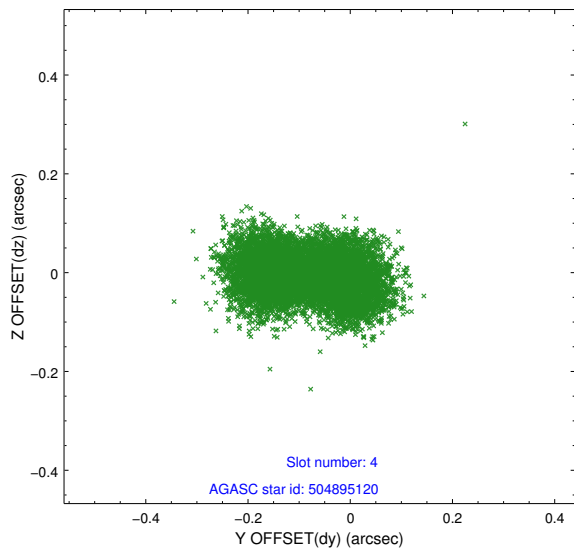
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## 2.4 Star Slots

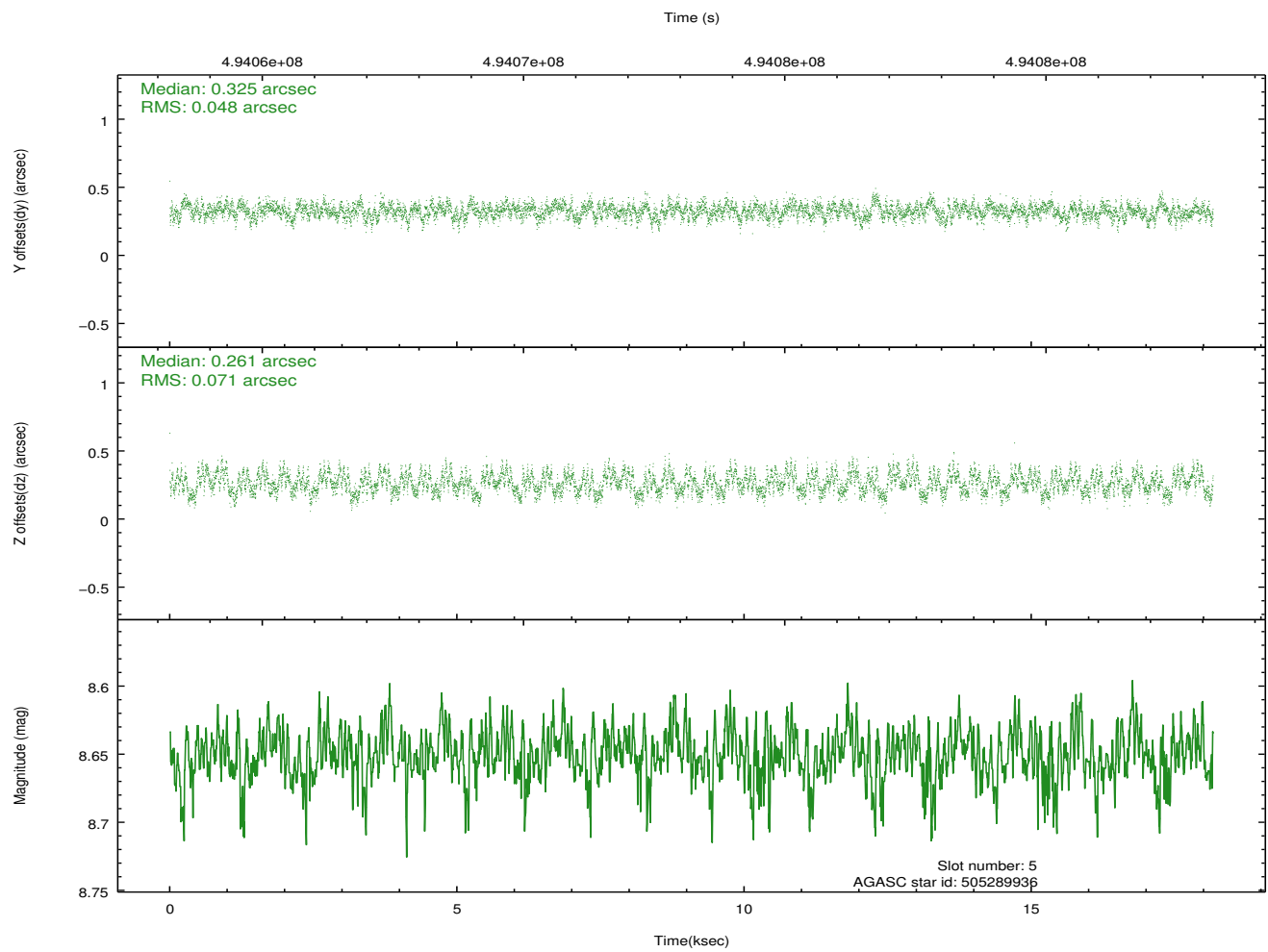
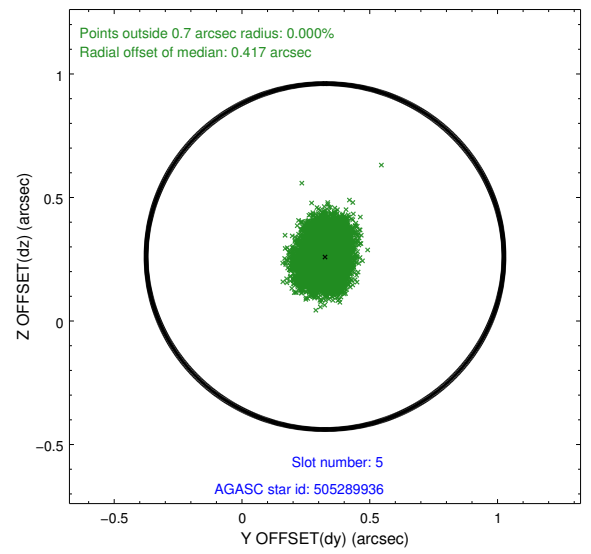
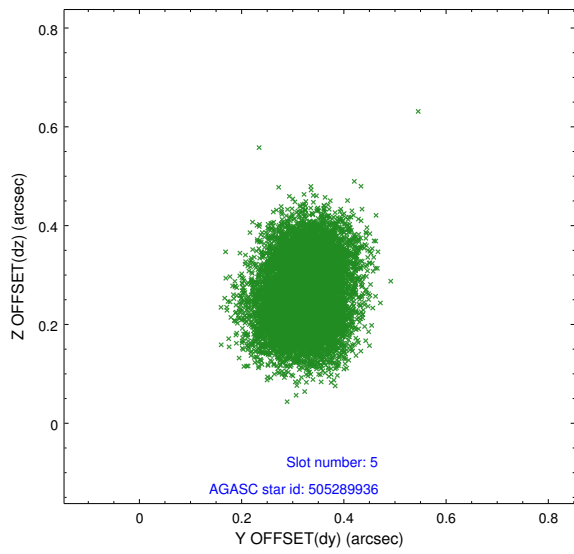
### 2.4.1 Slot 3



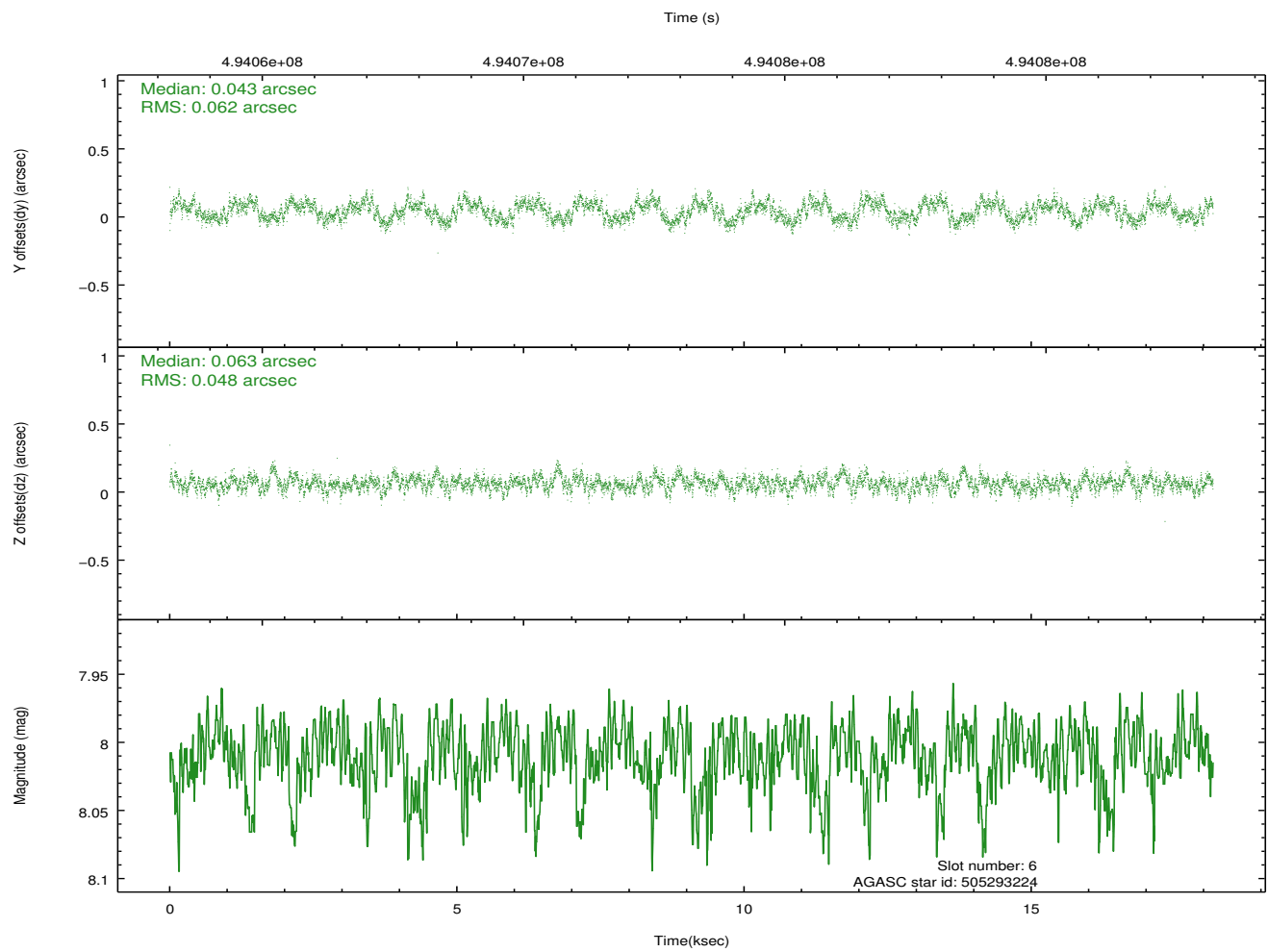
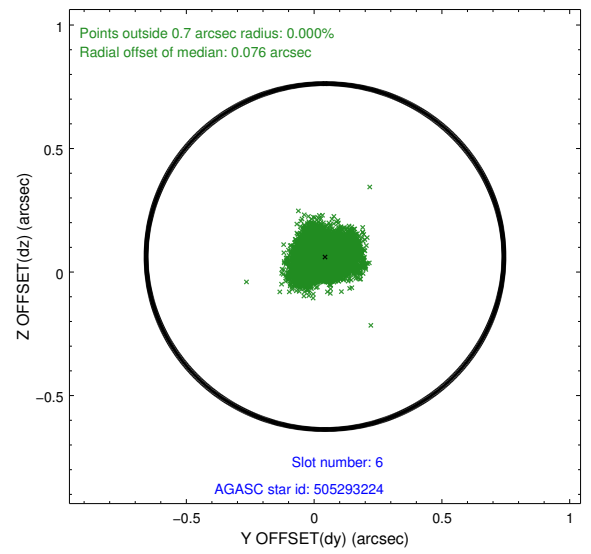
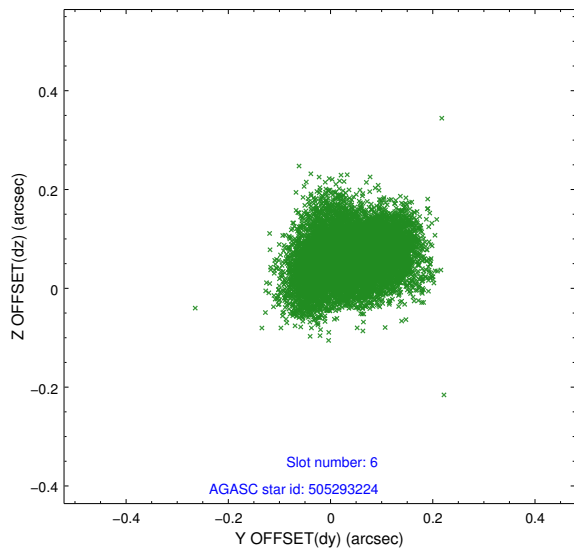
## 2.4.2 Slot 4



### 2.4.3 Slot 5

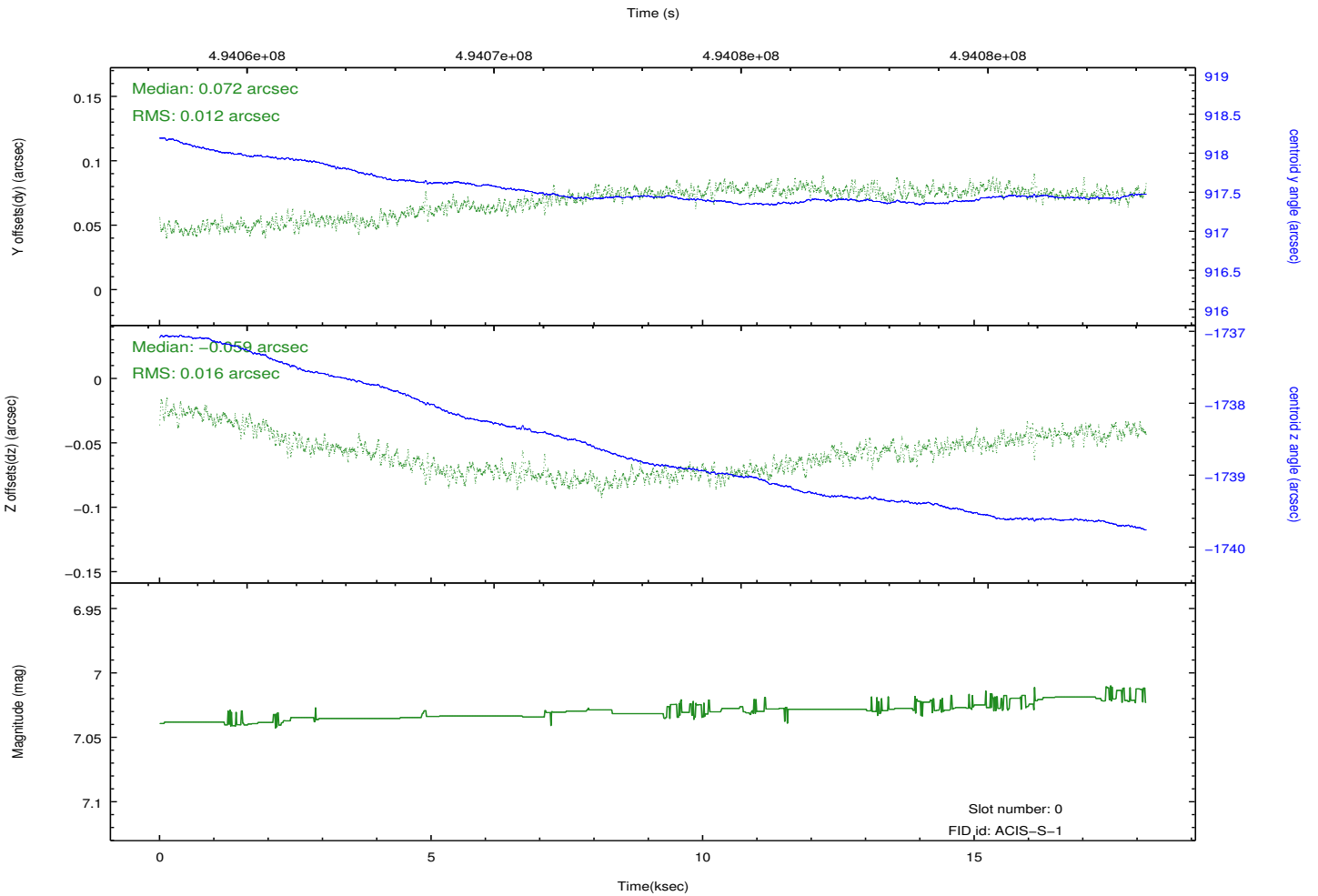
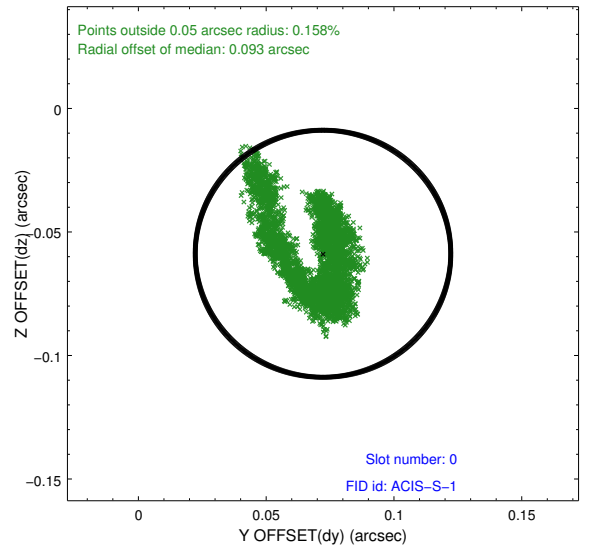
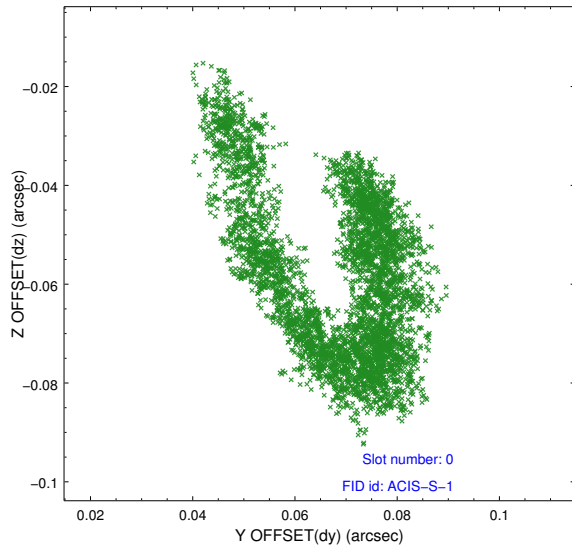


## 2.4.4 Slot 6

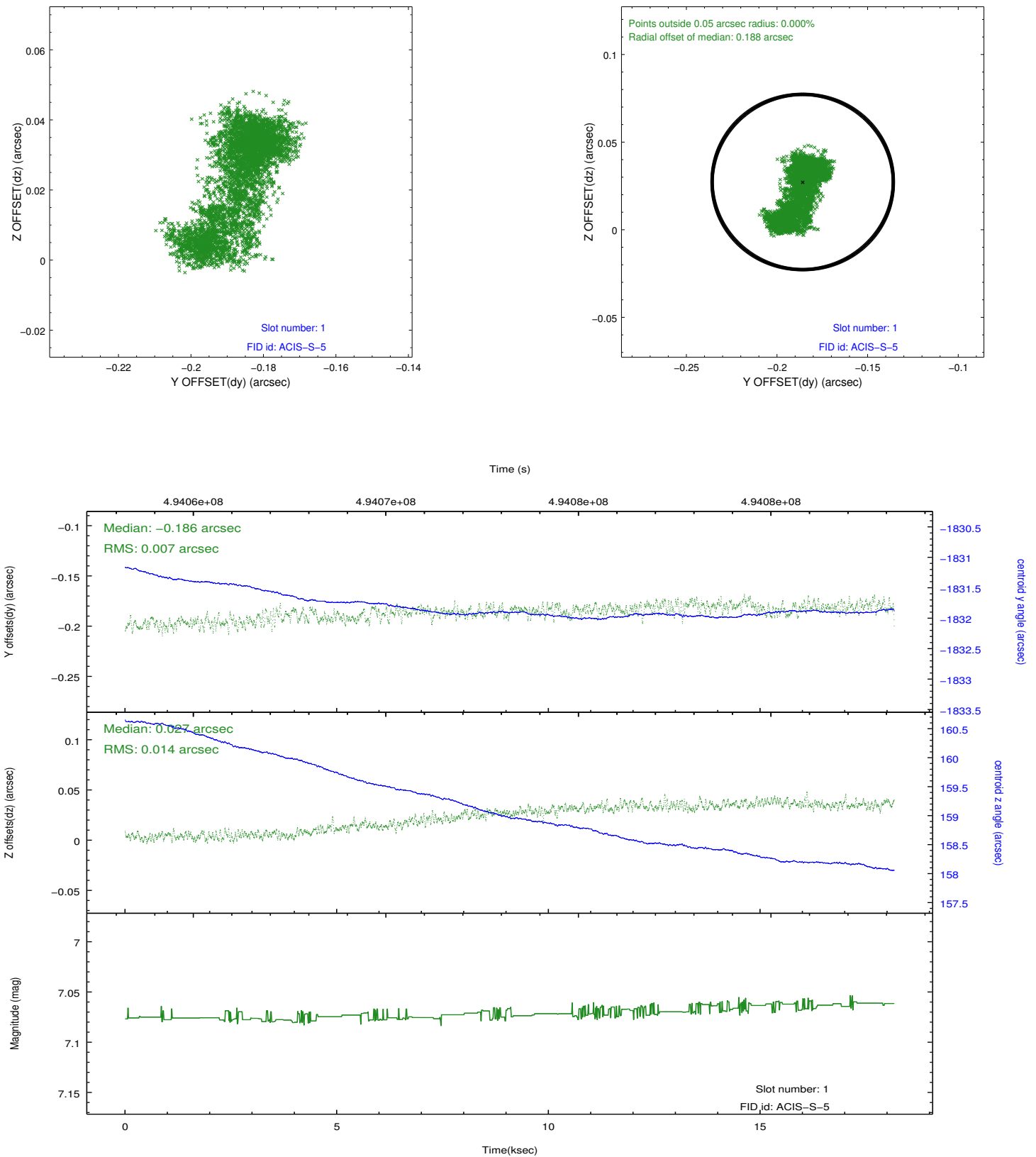


## 2.5 FID Slots

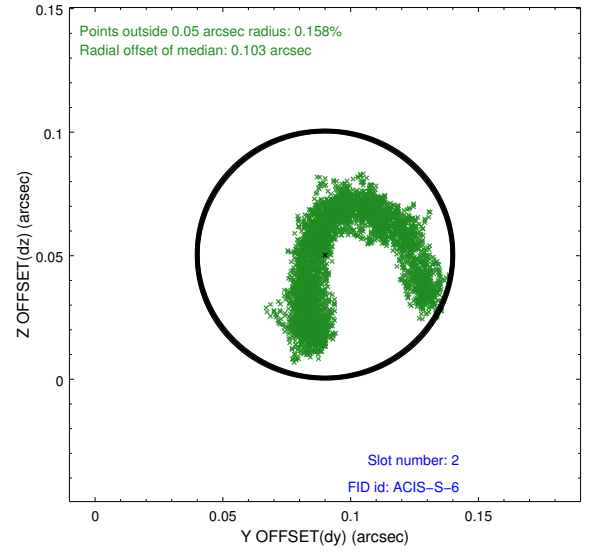
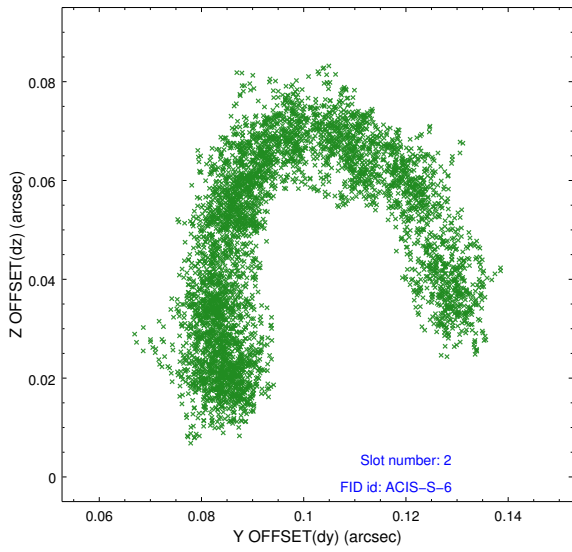
### 2.5.1 Slot 0



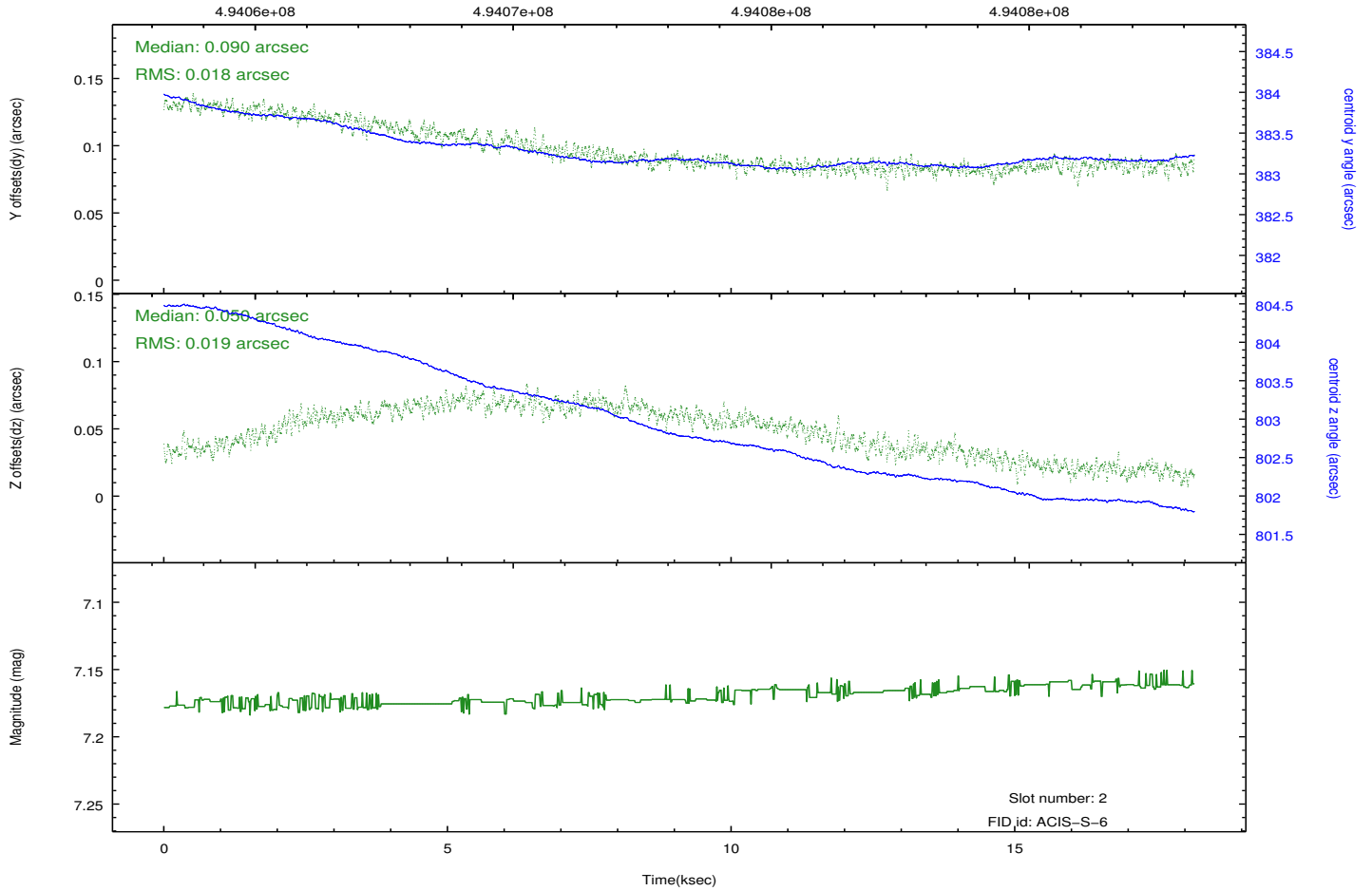
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.96771035099

## A.2 Comments

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star from the solution.

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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.