

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 20051 - L2 Version 2  
Chandra X-Ray Center

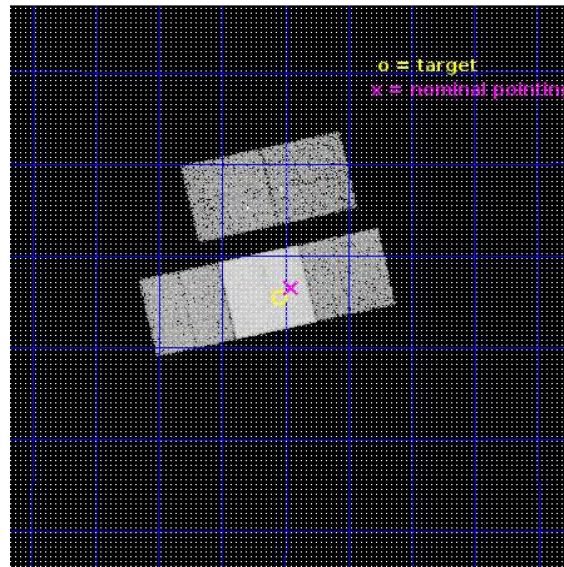
L2 Processing Date : Apr 4 2017

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# 1 Front

seq_num	801561	Sequence number
obs_id	20051	Observation id
title	Tales of tails: the Coma episodes	Proposal title
observer	Ming Sun	Principal investigator
object	NGC 4848	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	194.5111	Observer's specified target RA [deg]
dec_targ	28.2576	Observer's specified target Dec [deg]
ra_nom	194.48762942772	Nominal RA [deg]
dec_nom	28.275911380208	Nominal Dec [deg]
roll_nom	167.16778233761	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15049.12149477	Sum of GTIs [s]
livetime	14852.493643439	Livetime [s]
ontime2	15048.957334757	Sum of GTIs [s]
ontime3	15049.039414763	Sum of GTIs [s]
ontime6	15049.080454826	Sum of GTIs [s]
ontime7	15049.12149477	Sum of GTIs [s]
ontime8	15048.99837482	Sum of GTIs [s]
l2events	111880	Number of level 2 events

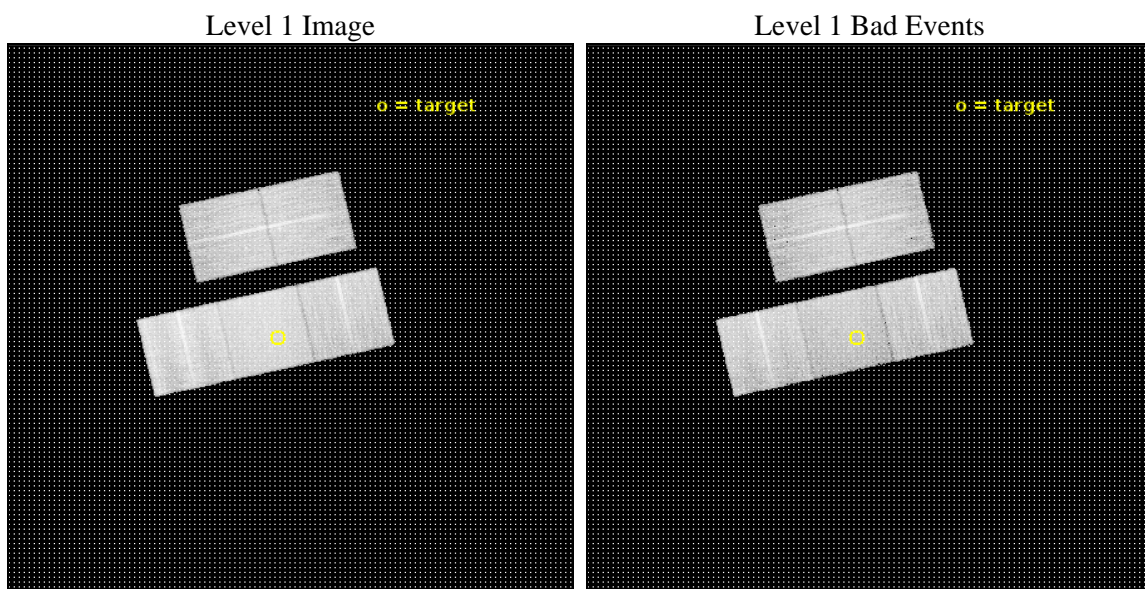




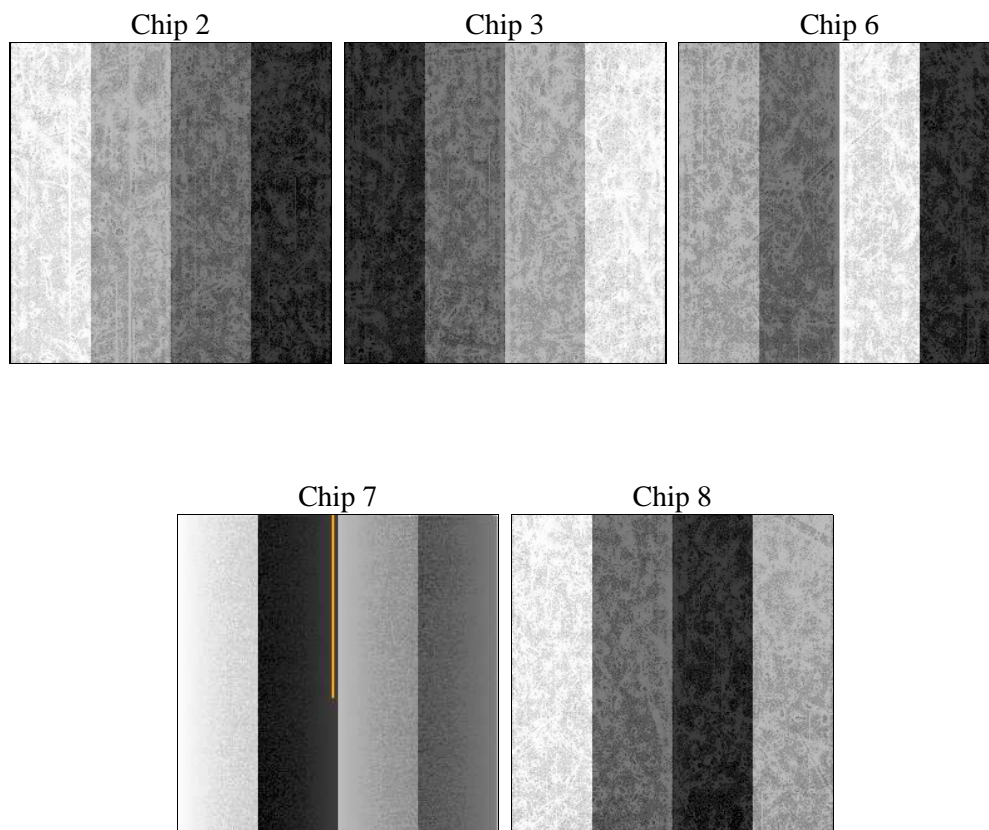
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	15049.12149477	Sum of GTIs [s]
caldsver	4.7.3	&#160	ontime2	15048.957334757	Sum of GTIs [s]
date	2017-04-04T17:01:32	Date and time of file creation	ontime3	15049.039414763	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15049.080454826	Sum of GTIs [s]
			ontime7	15049.12149477	Sum of GTIs [s]
			ontime8	15048.99837482	Sum of GTIs [s]
			l1events	602903	Number of level 1 events

### 2.1.4 Events

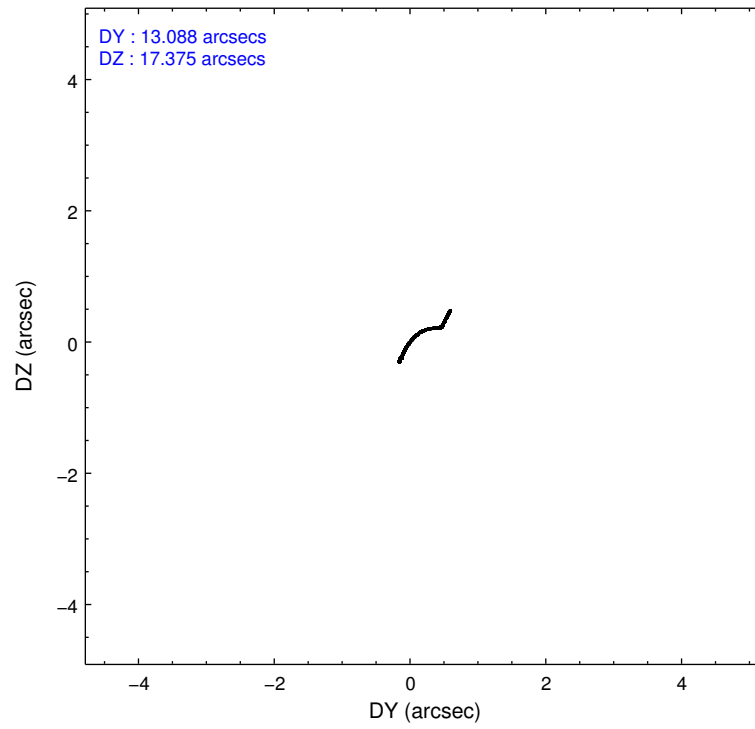
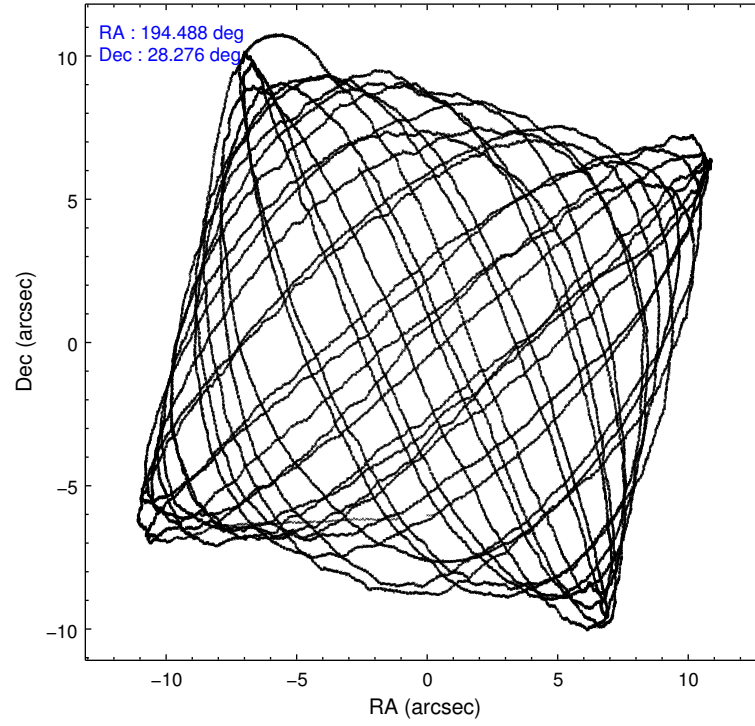
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	104727	101761	108300	143071	145044
rejected events	92491	89412	94882	79176	103470
rejected %	88%	87%	87%	55%	71%

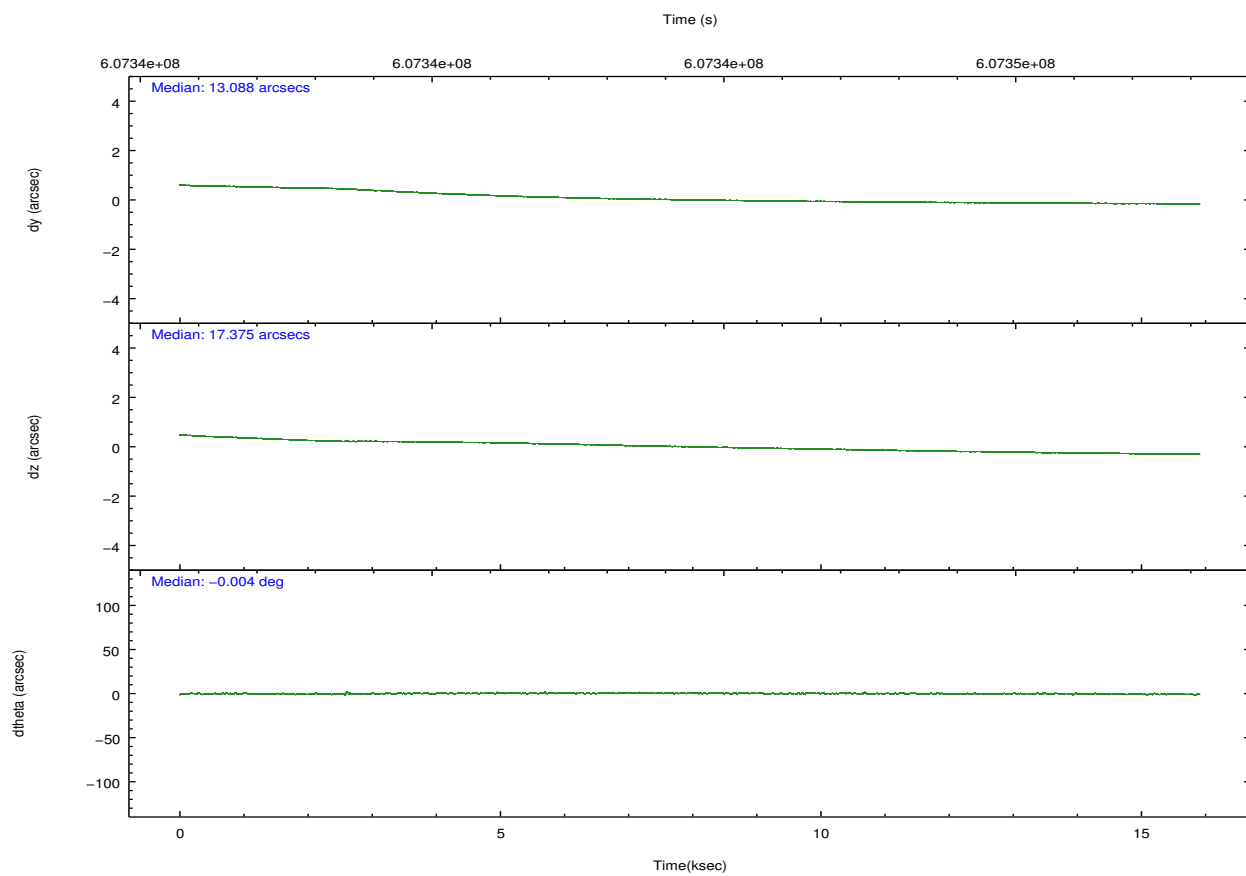
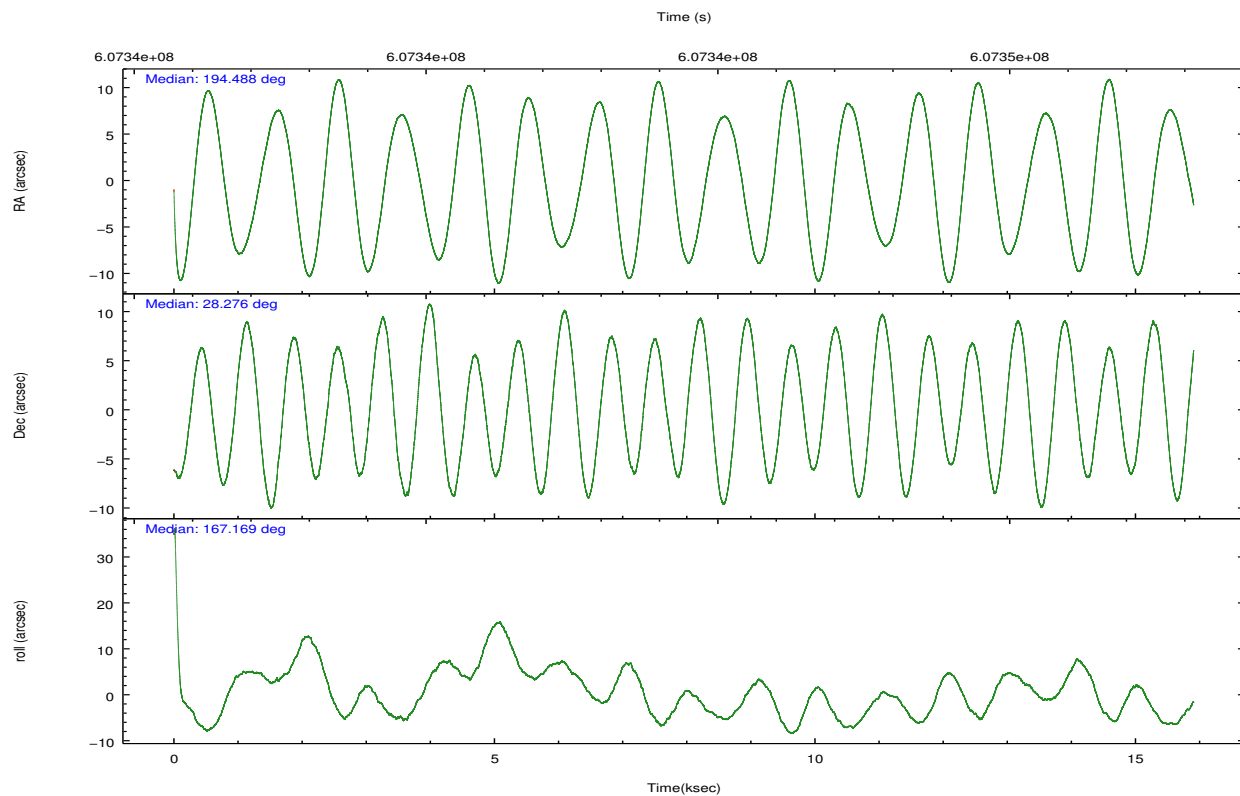
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	4721	4906	4865	6078	13875
	4%	4%	4%	4%	9%
grade 1 events	70	55	61	190	139
	0%	0%	0%	0%	0%
grade 2 events	2900	2548	3040	13868	9780
	2%	2%	2%	9%	6%
grade 3 events	1212	1230	1255	5139	3934
	1%	1%	1%	3%	2%
grade 4 events	1150	1225	1286	5151	3763
	1%	1%	1%	3%	2%
grade 5 events	4060	5016	5135	13950	7764
	3%	4%	4%	9%	5%
grade 6 events	2259	2442	2974	33692	10226
	2%	2%	2%	23%	7%
grade 7 events	88355	84339	89684	65003	95563
	84%	82%	82%	45%	65%

## 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	194.517274	194.4876294277192	CCD I2 on	O1	Y
[deg] Pointing Dec	28.284389	28.2759113802081	CCD I3 on	Y	Y
[deg] Pointing Roll	166.997070	167.1677823376106	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)	607337380.184000	607334861.66071	CCD S5 on	N	N
Observation start date	2017-03-31T08:48:31	2017-03-31T08:07:41	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	607352380.184000	607353775.4743	On-chip summing requested	N	N
Observation end date	2017-03-31T12:58:31	2017-03-31T13:22:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



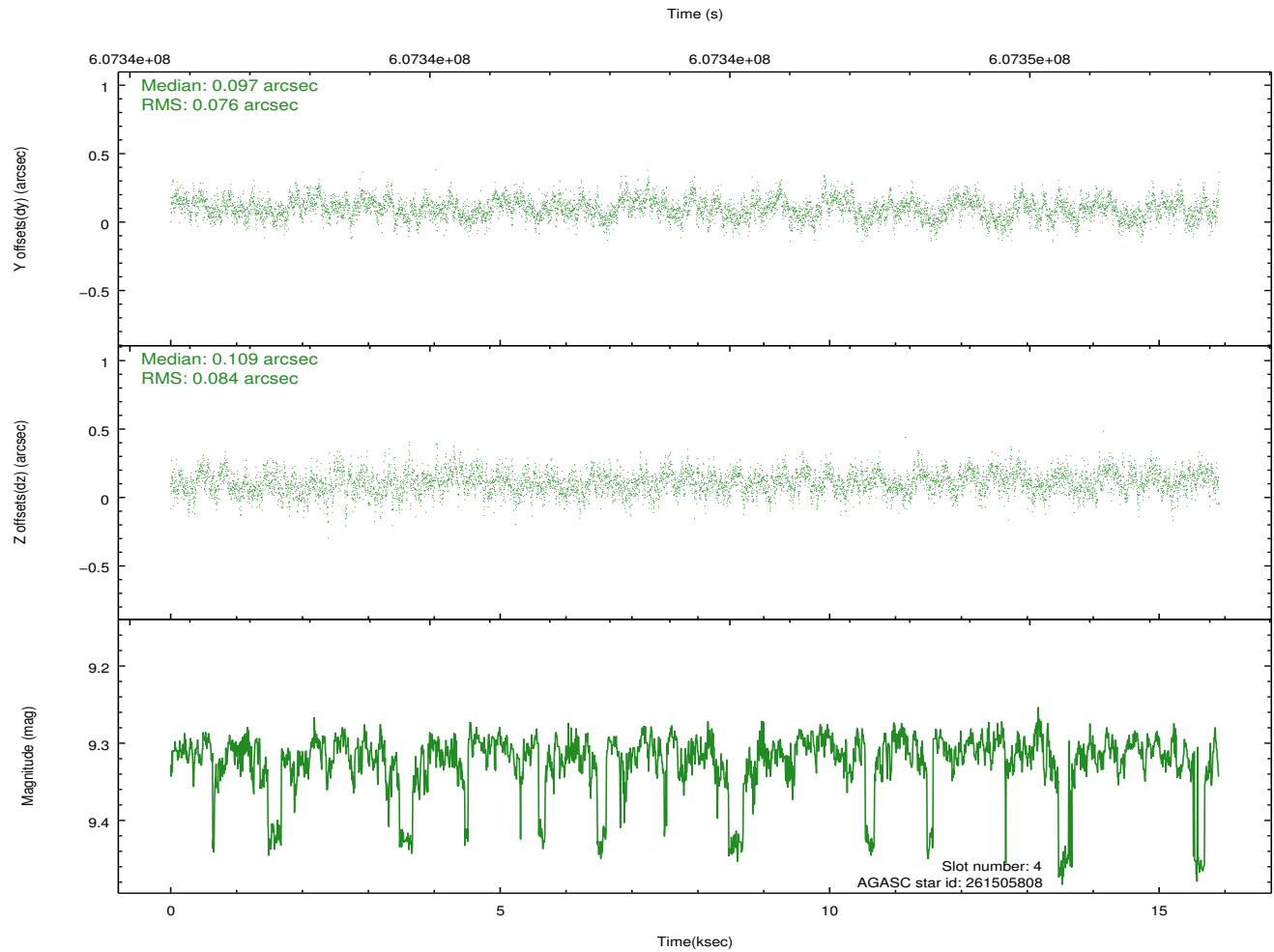
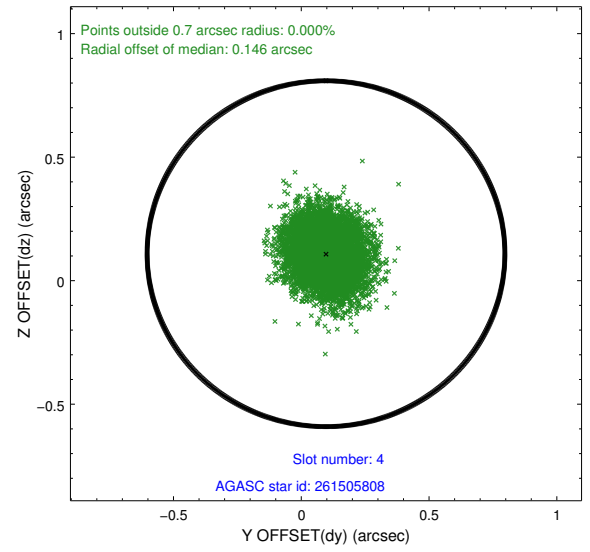
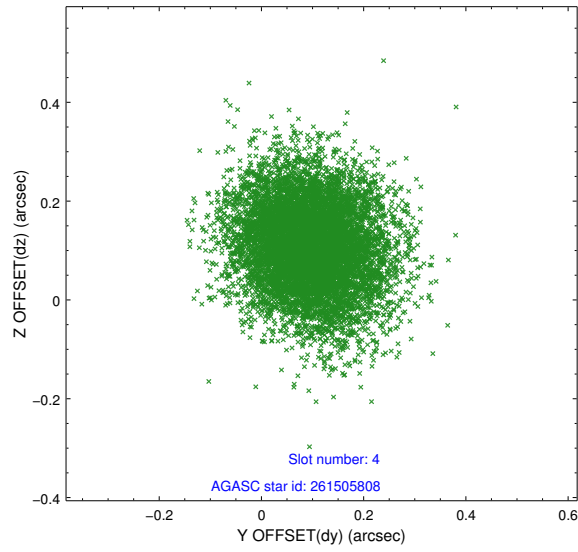


Slot Statistics

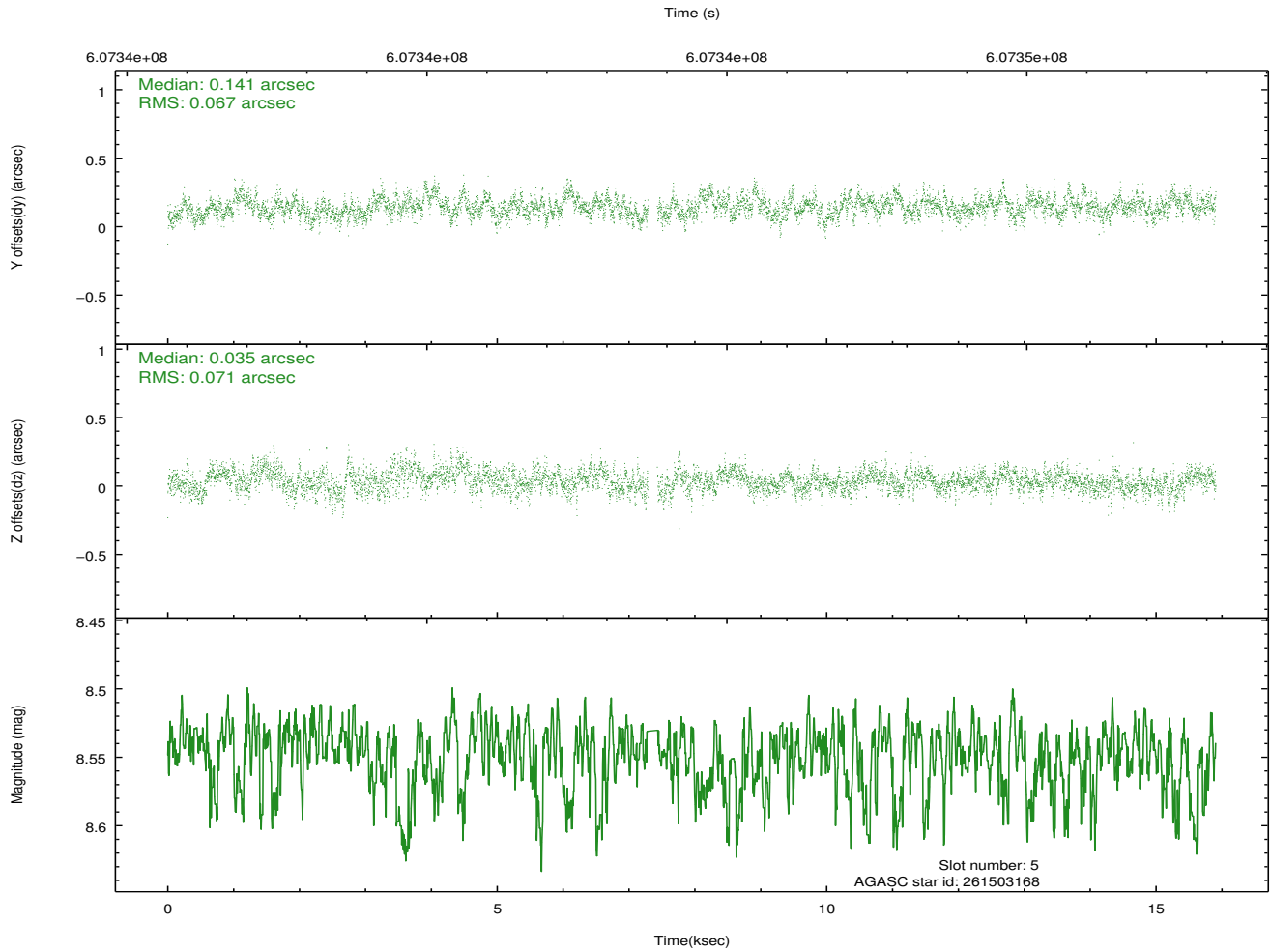
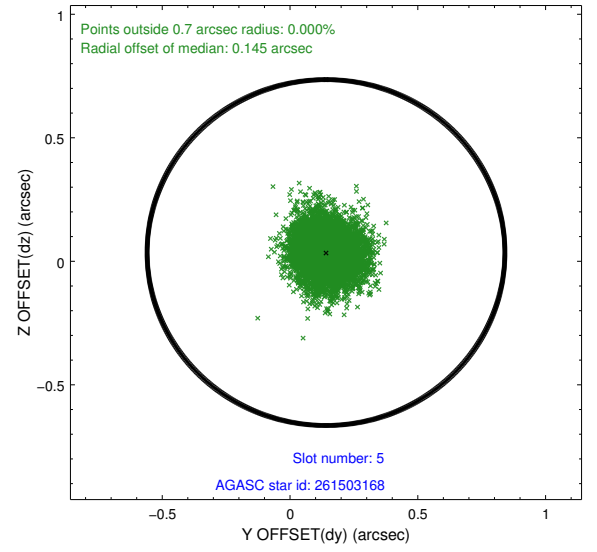
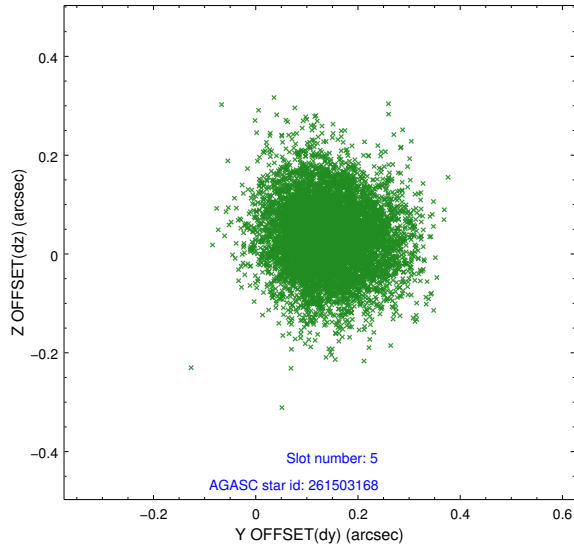
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.91	3881	-0.133	-0.068	0.013	0.023	0.000000	0.000000	-766.23	-1738.90
1	FID		ACIS-S-4	7.01	3881	0.407	0.082	0.018	0.035	0.000000	0.000000	2147.46	169.45
2	FID		ACIS-S-5	7.02	3880	-0.306	-0.005	0.014	0.023	0.000000	0.000000	-1818.90	163.33
3	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
4	GUIDE	used	261505808	9.32	7750	0.097	0.109	0.121	0.195	193.710324	27.913269	2202.74	1871.04
5	GUIDE	used	261503168	8.55	7689	0.141	0.035	0.104	0.169	193.765545	28.234101	2284.34	705.85
6	GUIDE	used	261503592	7.84	7759	-0.109	-0.178	0.103	0.167	193.784432	27.766358	1856.84	2336.58
7	GUIDE	used	261502496	7.34	7758	-0.135	0.035	0.110	0.197	194.887297	28.065668	-1321.92	501.19

## 2.4 Star Slots

### 2.4.1 Slot 4

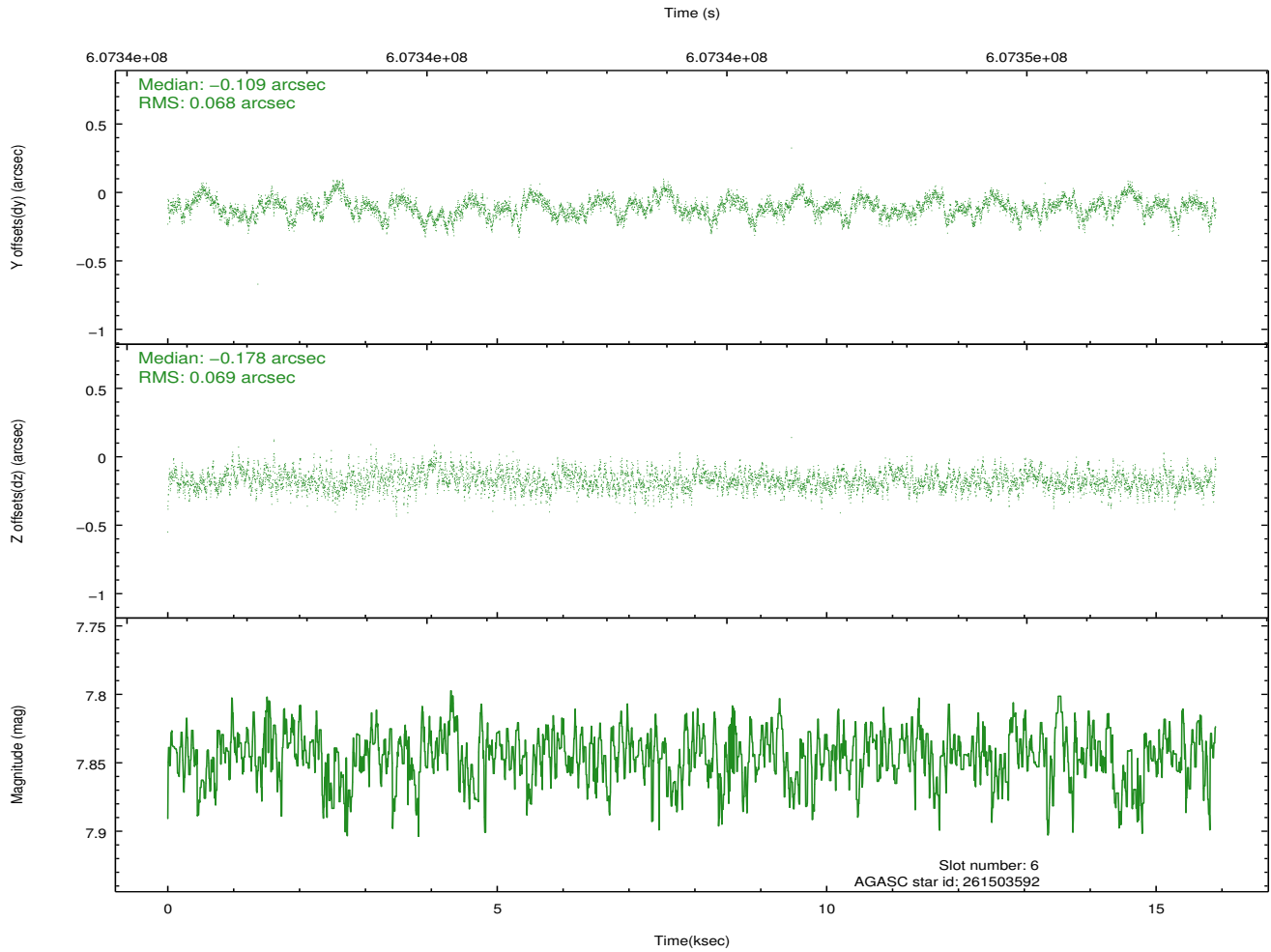
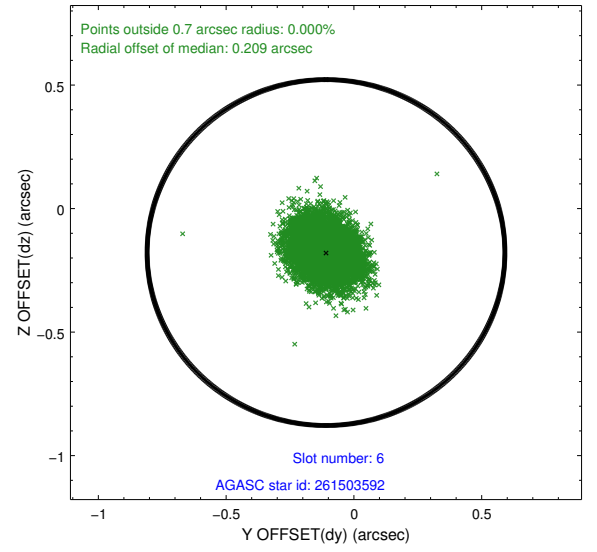
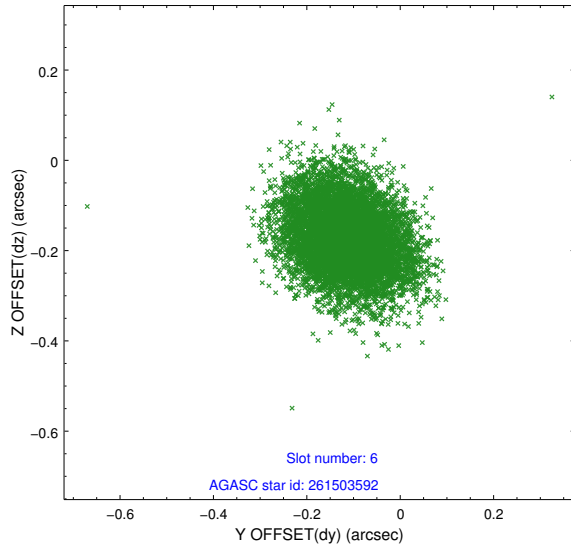


## 2.4.2 Slot 5

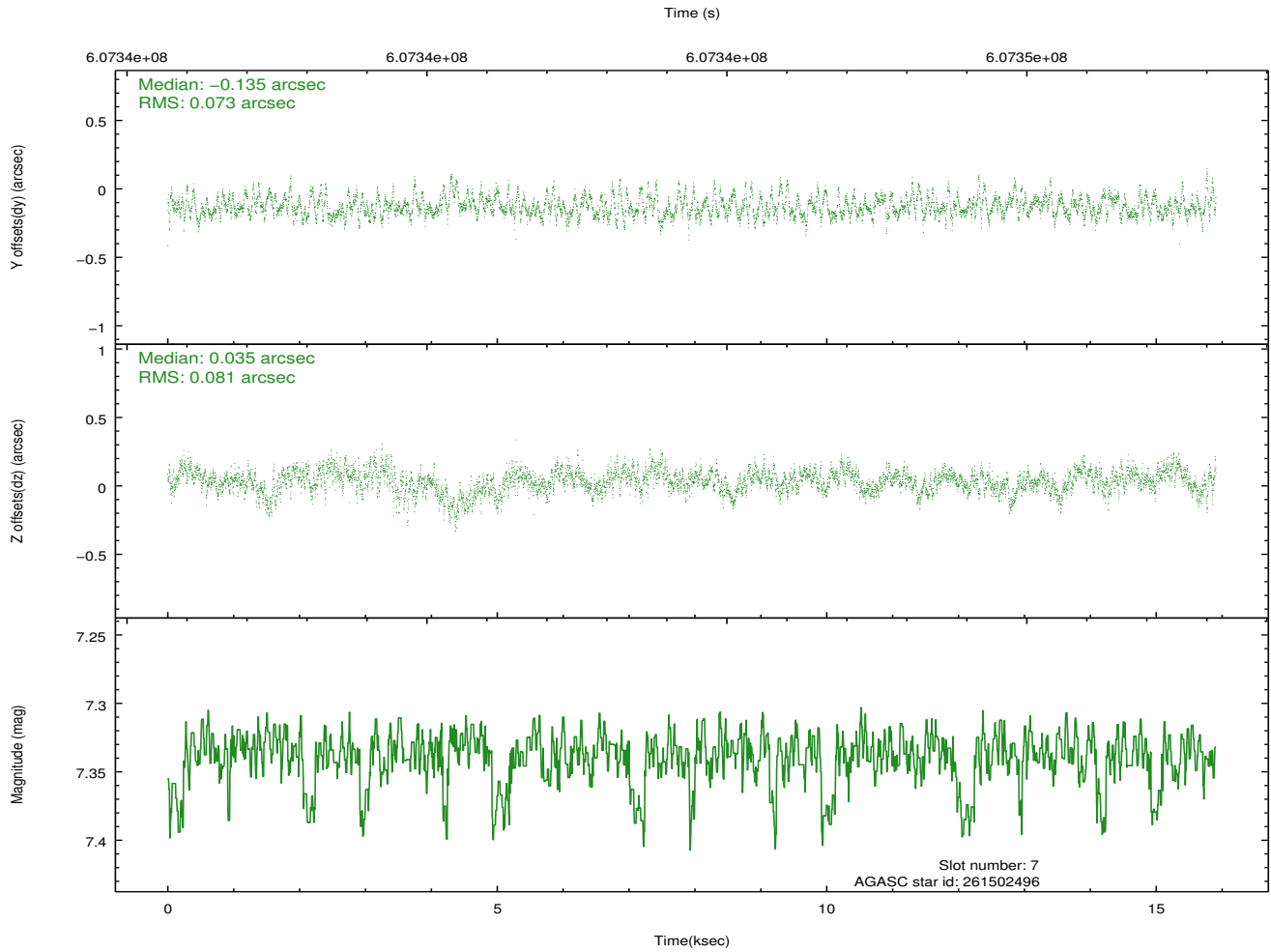
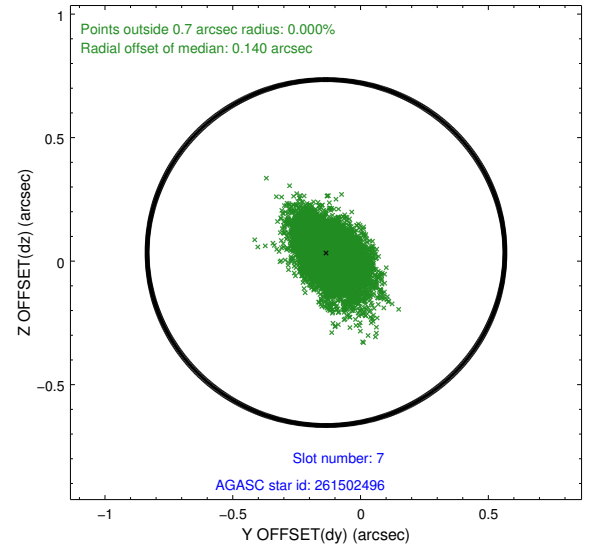
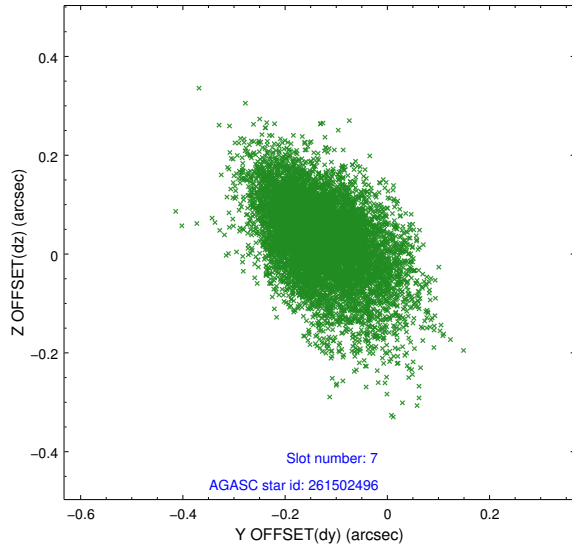




### 2.4.3 Slot 6

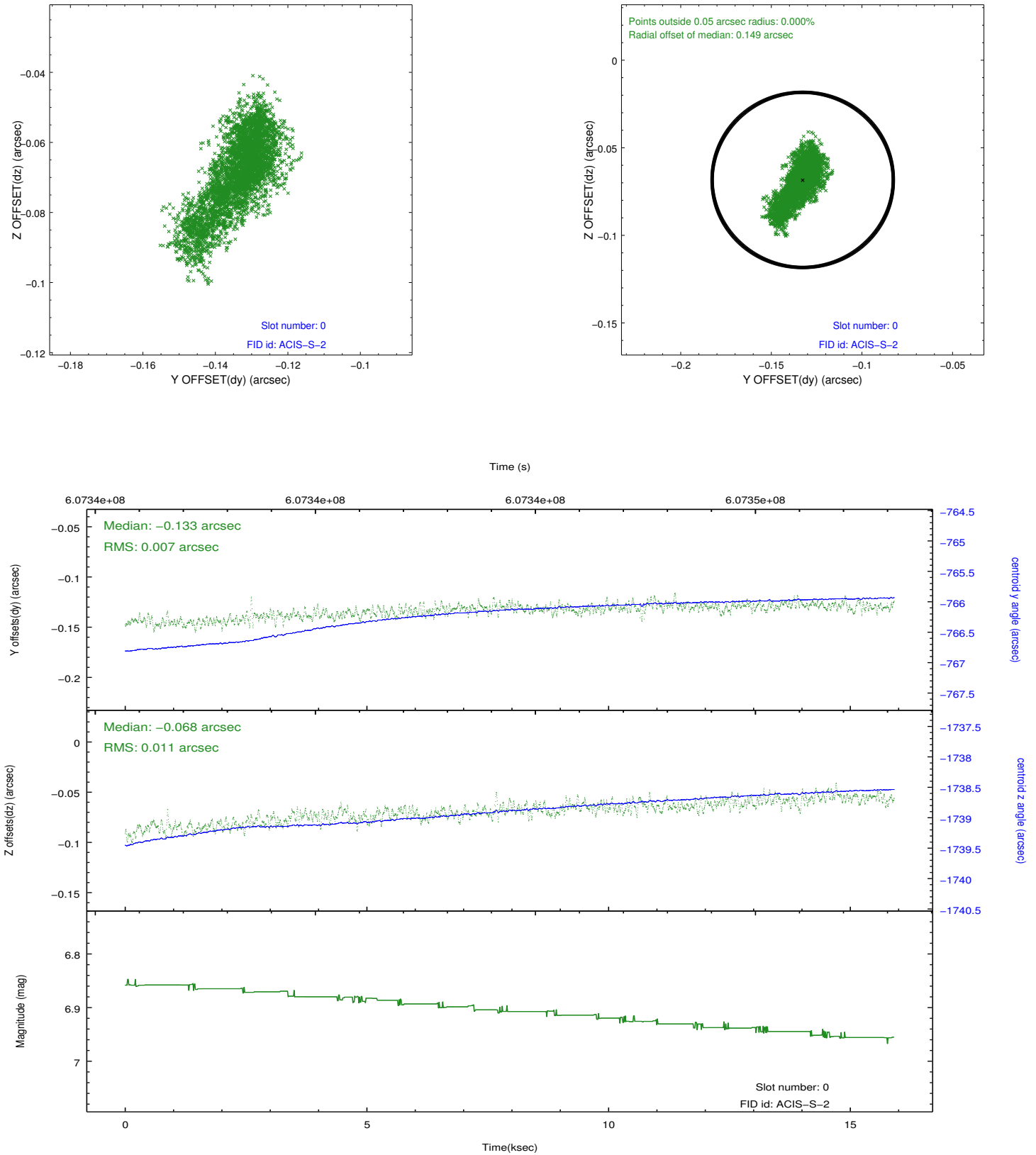


## 2.4.4 Slot 7

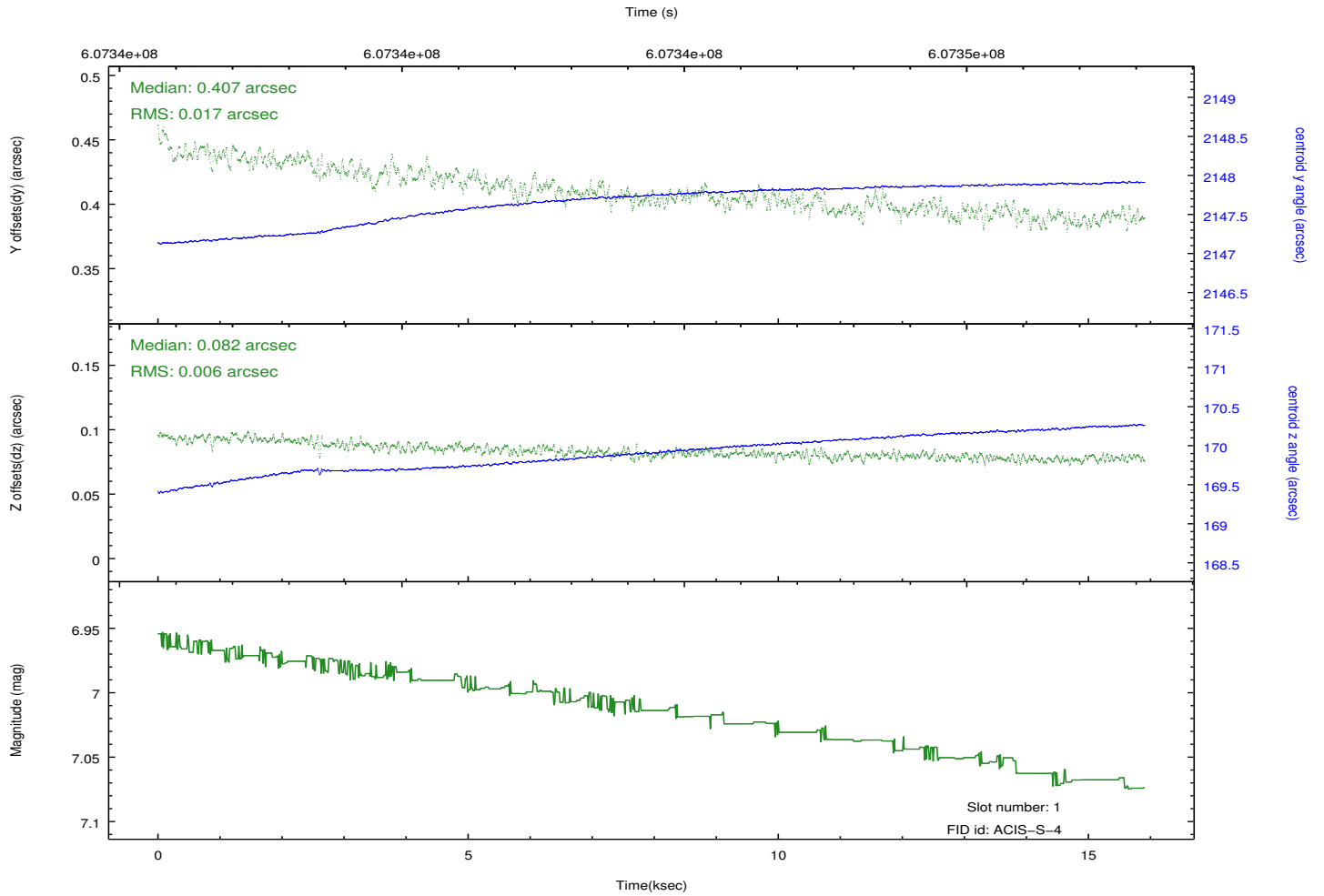
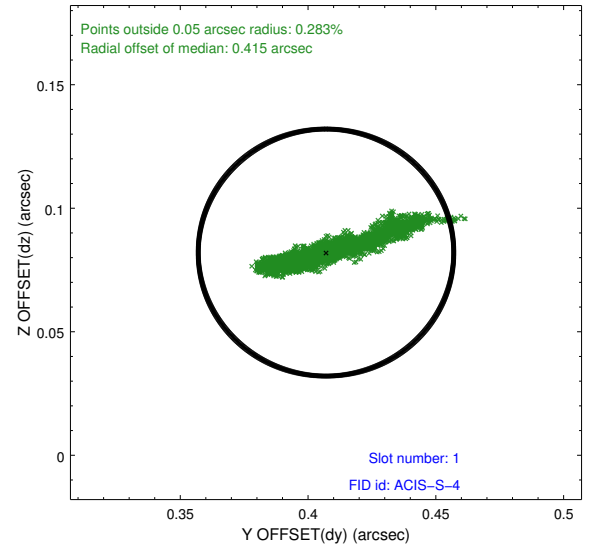
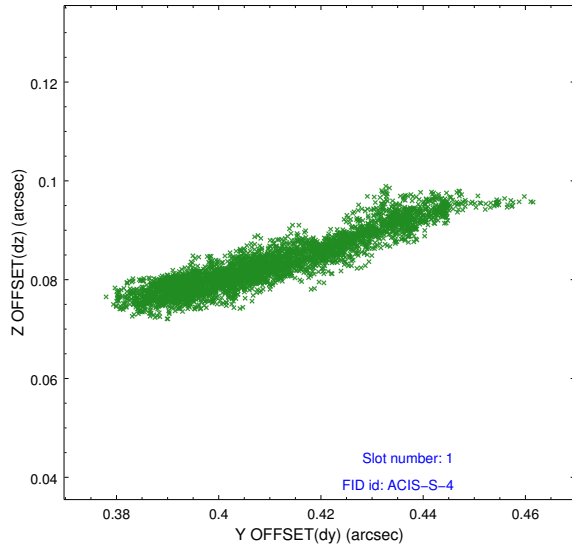


## 2.5 FID Slots

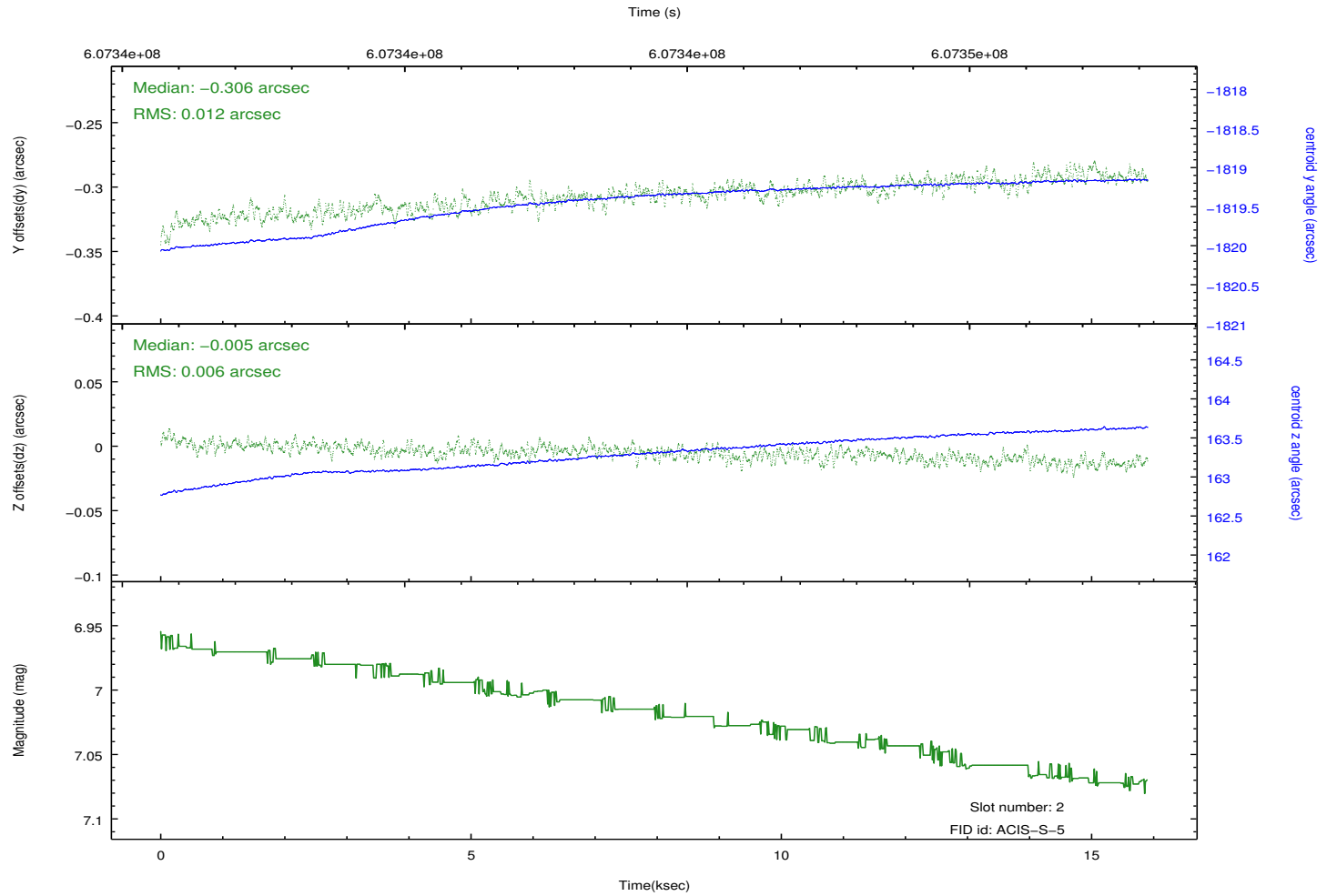
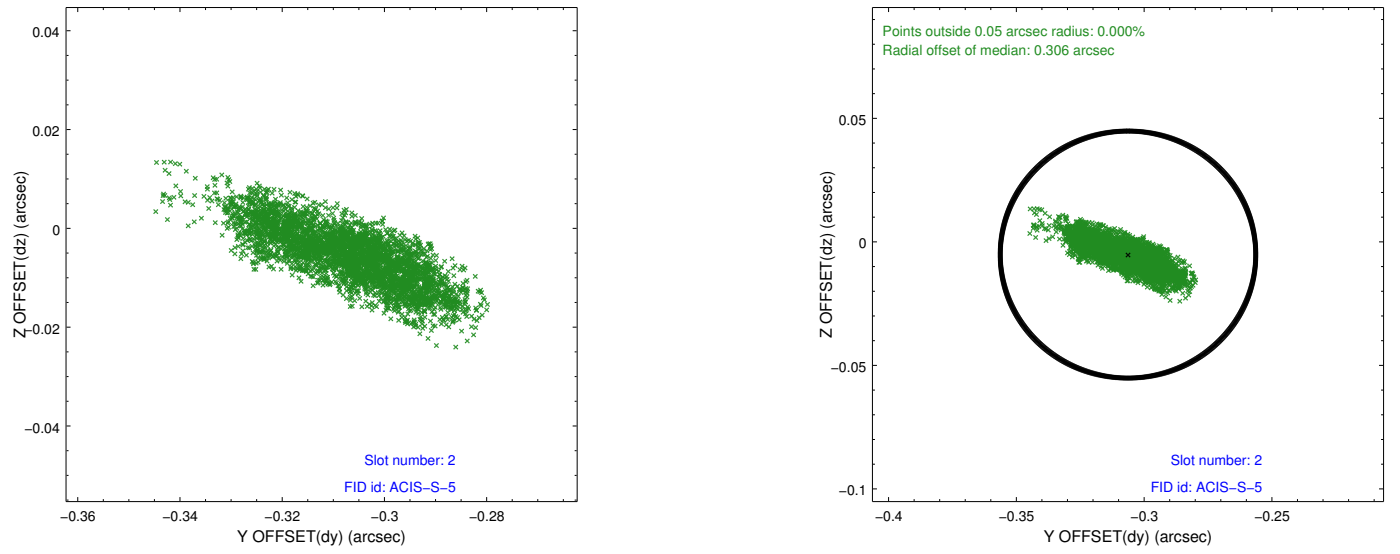
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.04.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.04912149477

### A.2 Comments

The guide star in slot 3 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.