

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 19314 - L2 Version 2  
Chandra X-Ray Center

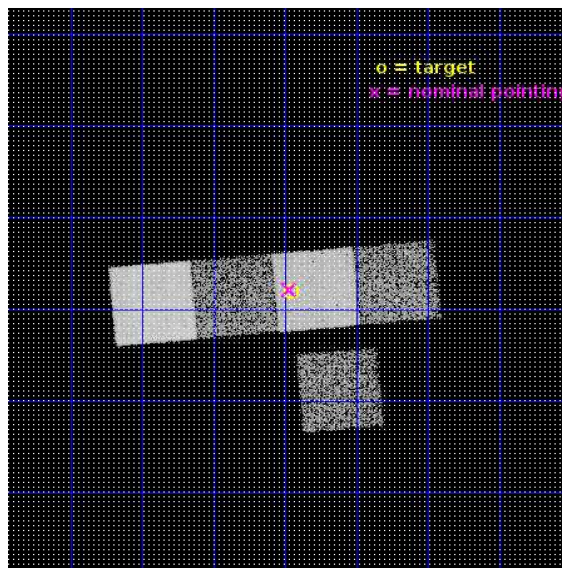
L2 Processing Date : Nov 25 2016

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# 1 Front

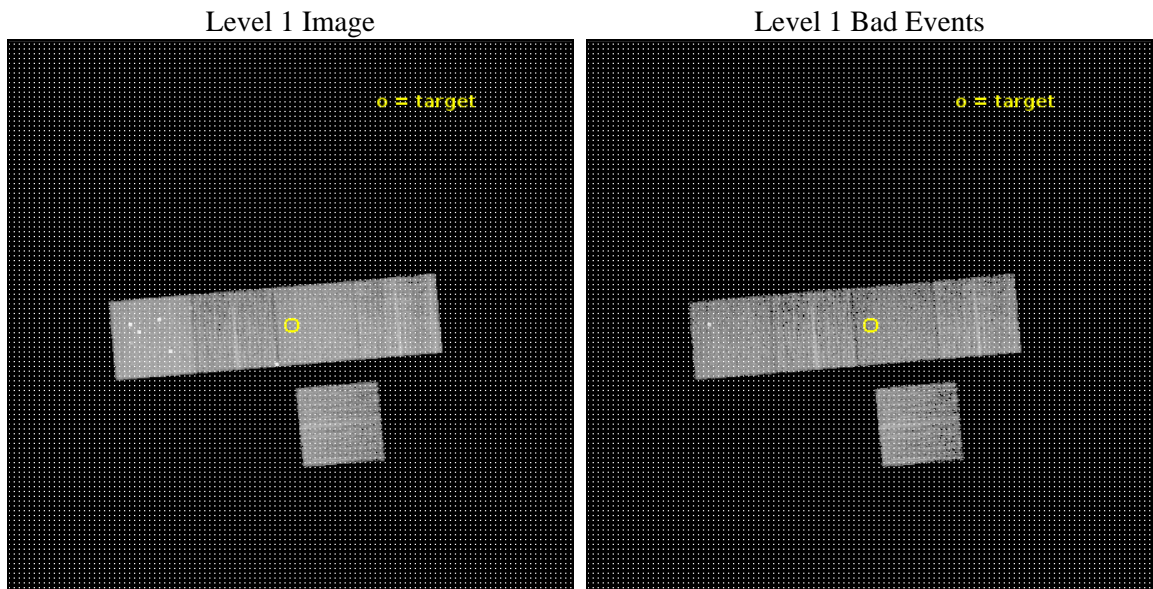
seq_num	601271	Sequence number
obs_id	19314	Observation id
title	A homogeneous view of X-ray halos in massive early-type galaxies	P
observer	Andy Goulding	Principal investigator
object	NGC1453	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	56.613333	Observer's specified target RA [deg]
dec_targ	-3.968889	Observer's specified target Dec [deg]
ra_nom	56.617706806309	Nominal RA [deg]
dec_nom	-3.9649429048633	Nominal Dec [deg]
roll_nom	354.93295722787	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8038.1896713972	Sum of GTIs [s]
livetime	7933.1648057113	Livetime [s]
ontime3	8038.0665514469	Sum of GTIs [s]
ontime5	8038.1486314535	Sum of GTIs [s]
ontime6	8034.9665211439	Sum of GTIs [s]
ontime7	8038.1896713972	Sum of GTIs [s]
ontime8	8038.025511384	Sum of GTIs [s]
l2events	85517	Number of level 2 events



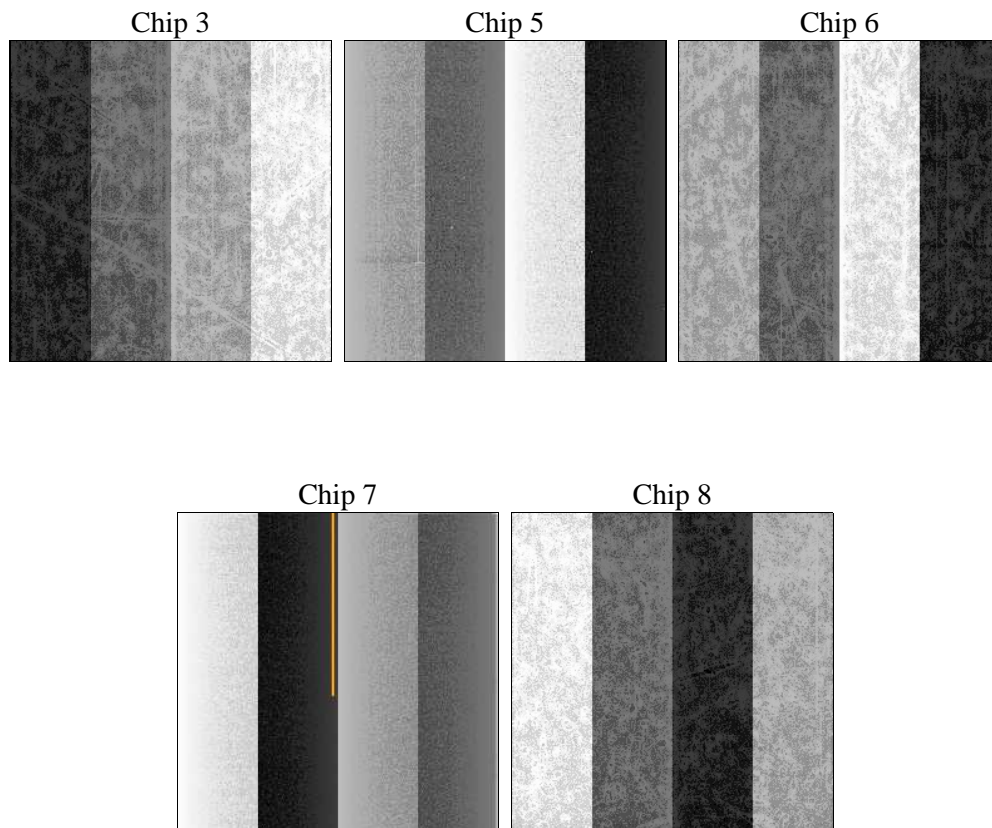
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	8038.1896713972	Sum of GTIs [s]
caldbver	4.7.2	&#160	ontime3	8038.0665514469	Sum of GTIs [s]
date	2016-11-25T15:10:40	Date and time of file creation	ontime5	8038.1486314535	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	8034.9665211439	Sum of GTIs [s]
			ontime7	8038.1896713972	Sum of GTIs [s]
			ontime8	8038.025511384	Sum of GTIs [s]
			l1events	352754	Number of level 1 events

### 2.1.4 Events

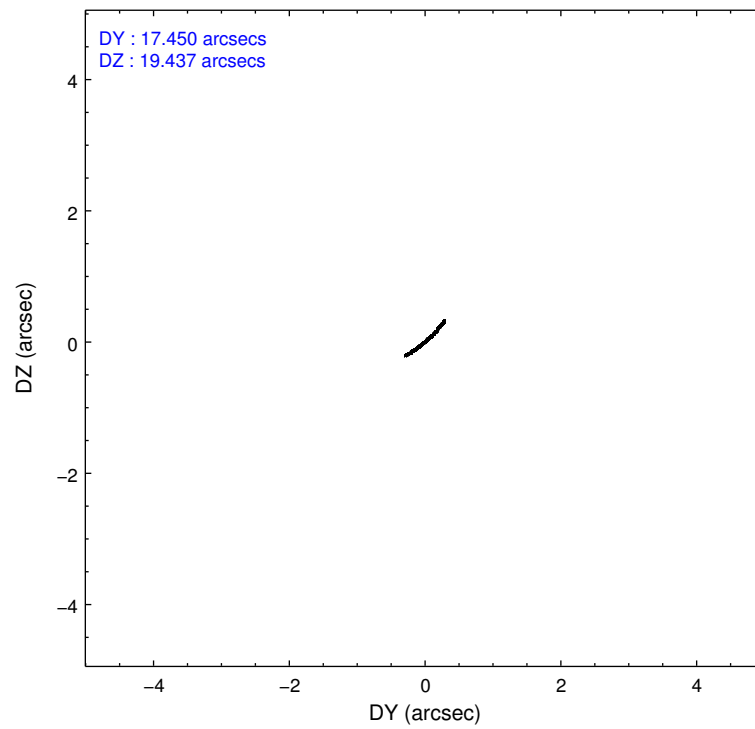
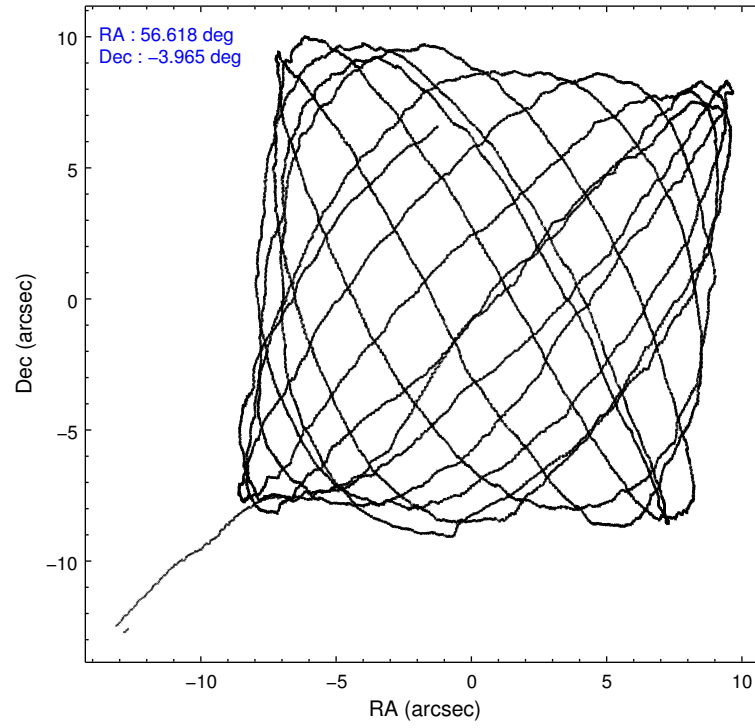
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	53444	96805	58384	72045	72076
rejected events	47925	47187	49772	41114	53414
rejected %	89%	48%	85%	57%	74%

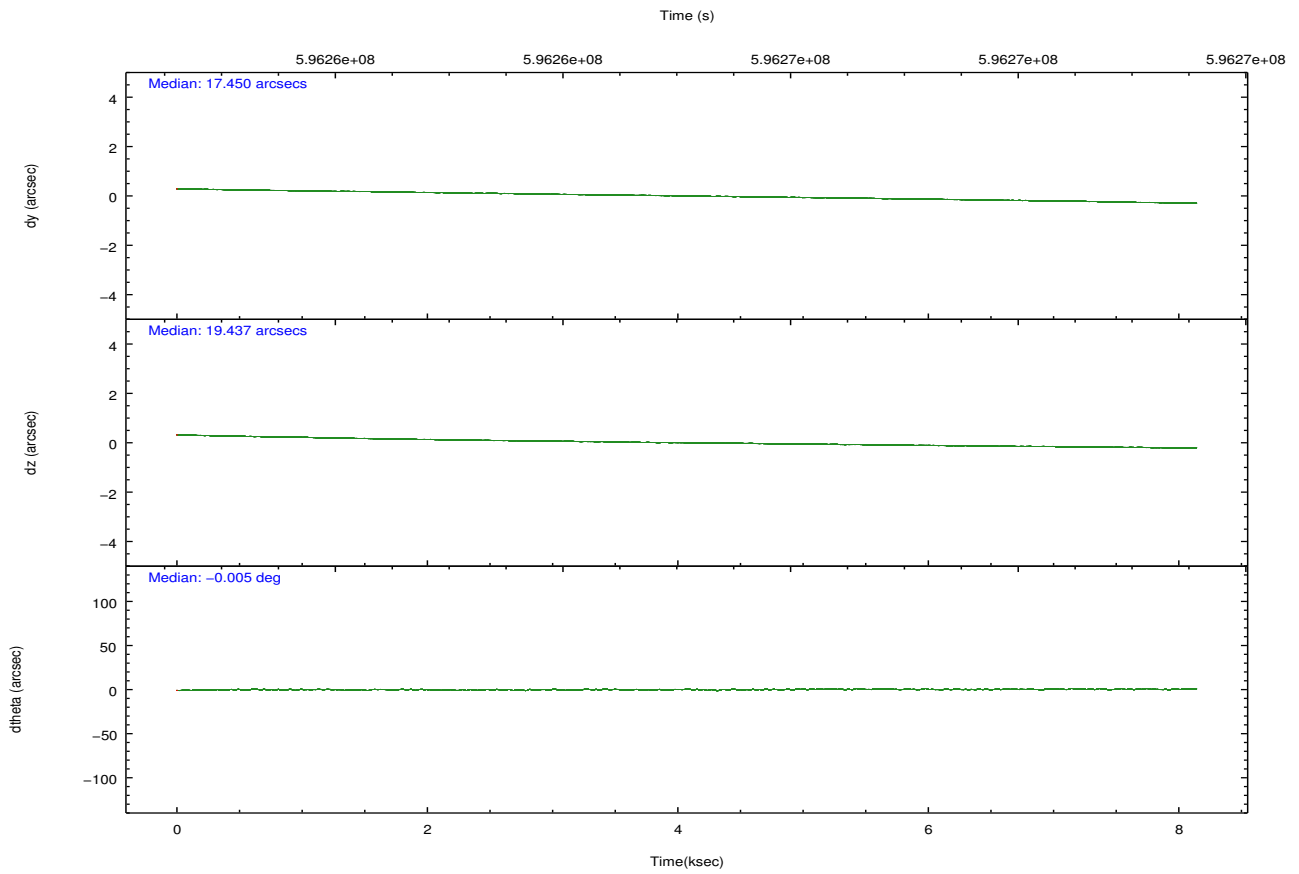
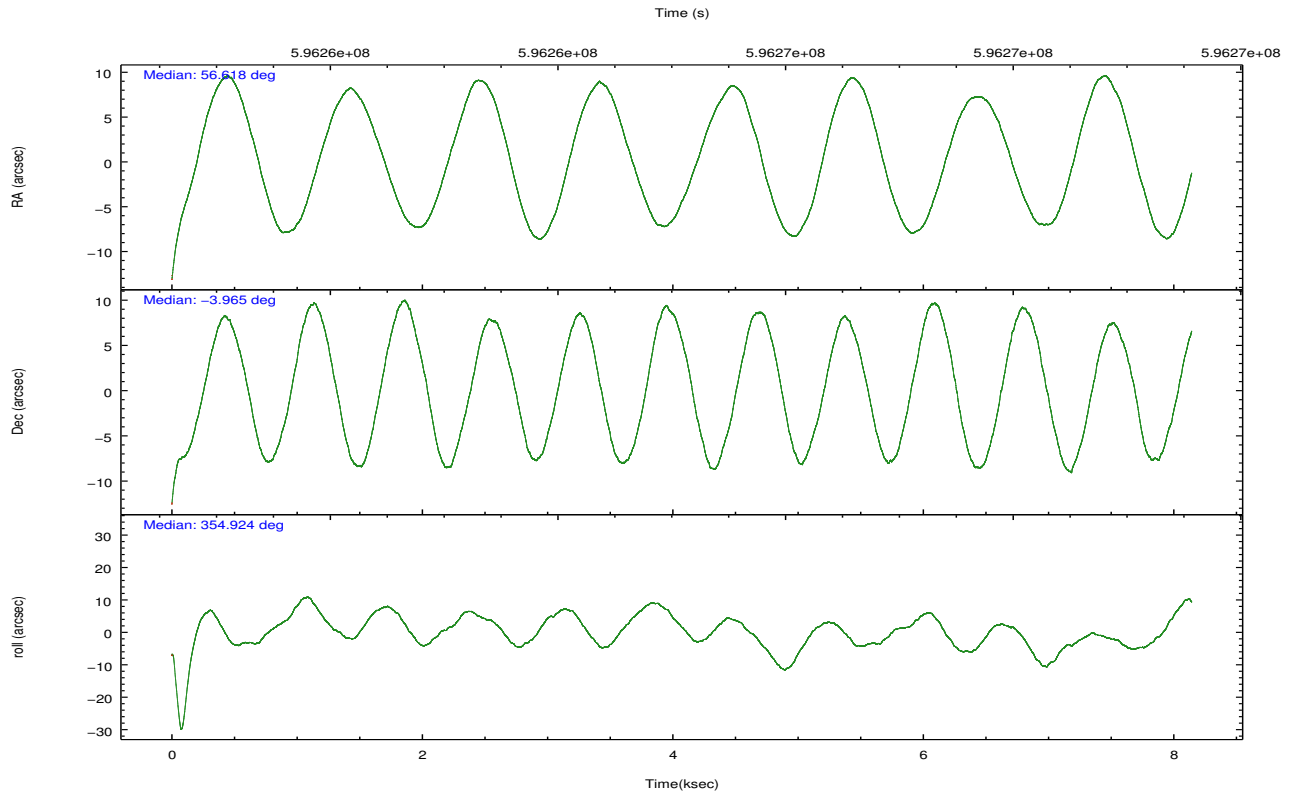
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	1841	9820	4396	2566	5355
	3%	10%	7%	3%	7%
grade 1 events	28	297	49	103	50
	0%	0%	0%	0%	0%
grade 2 events	1201	14532	1494	6571	4572
	2%	15%	2%	9%	6%
grade 3 events	669	1403	614	2393	2047
	1%	1%	1%	3%	2%
grade 4 events	580	1254	613	2419	1804
	1%	1%	1%	3%	2%
grade 5 events	2634	6193	2668	7157	3846
	4%	6%	4%	9%	5%
grade 6 events	1233	22665	1498	17000	4921
	2%	23%	2%	23%	6%
grade 7 events	45258	40641	47052	33836	49481
	84%	41%	80%	46%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-35678	ACIS-35678	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	56.592937	56.6177068063093	CCD I2 on	O1	N
[deg] Pointing Dec	-3.976796	-3.964942904863274	CCD I3 on	O2	Y
[deg] Pointing Roll	354.774591	354.9329572278695	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	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)	596261149.184000	596260066.06941	CCD S5 on	N	N
Observation start date	2016-11-23T04:04:41	2016-11-23T03:47:46	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	596269149.184000	596269772.30747	On-chip summing requested	N	N
Observation end date	2016-11-23T06:18:01	2016-11-23T06:29:32	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





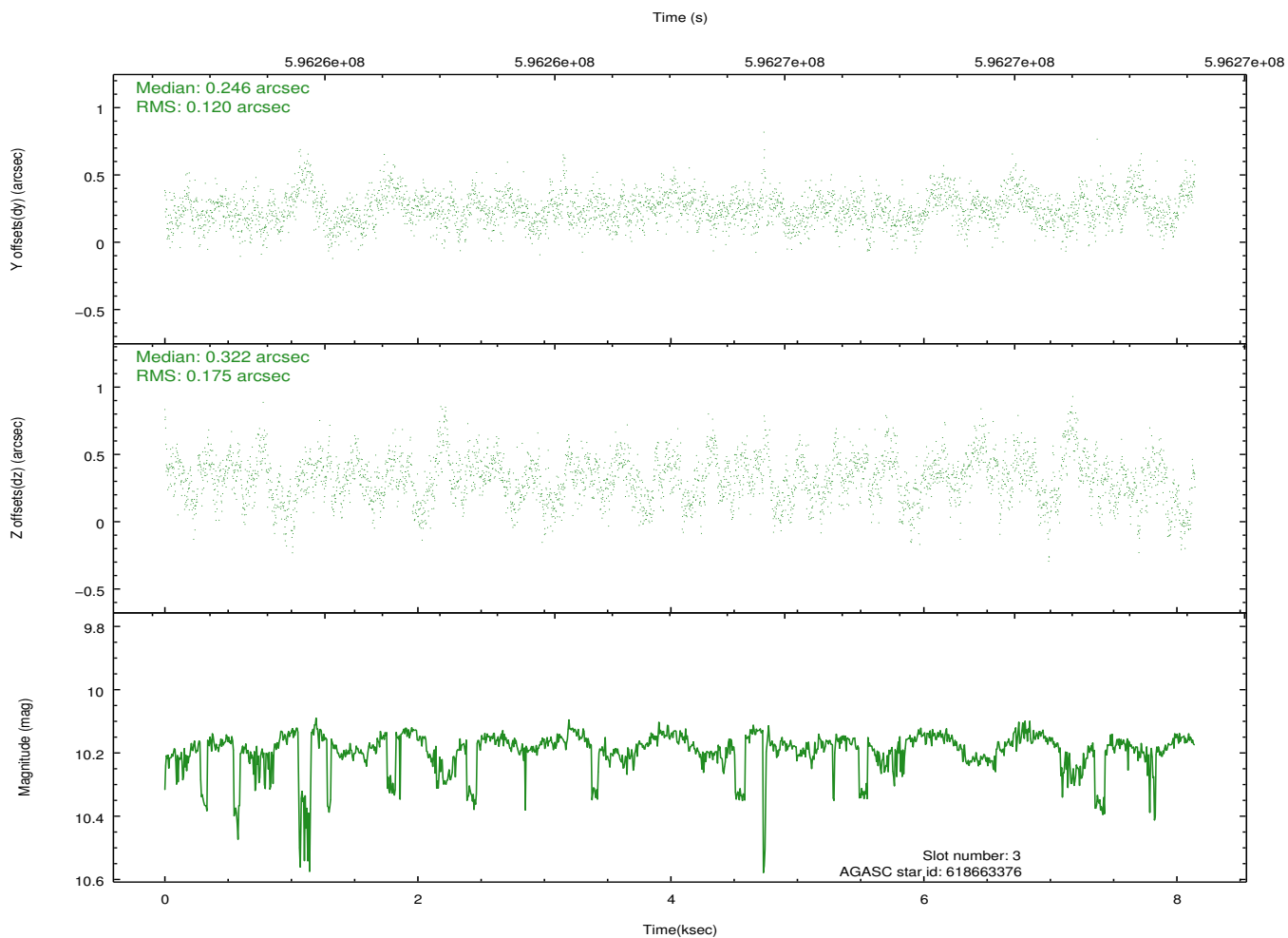
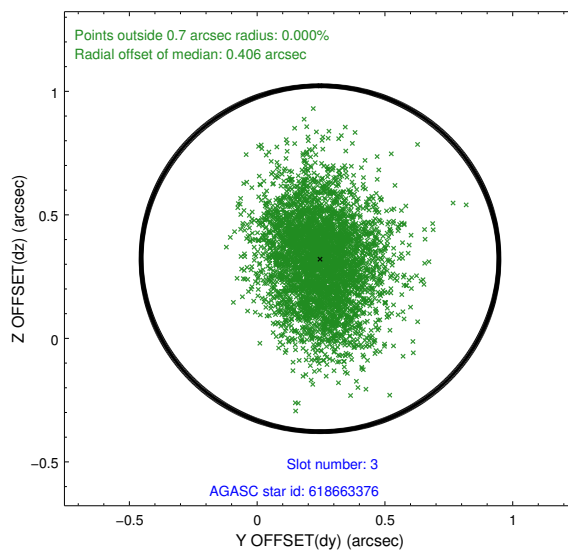
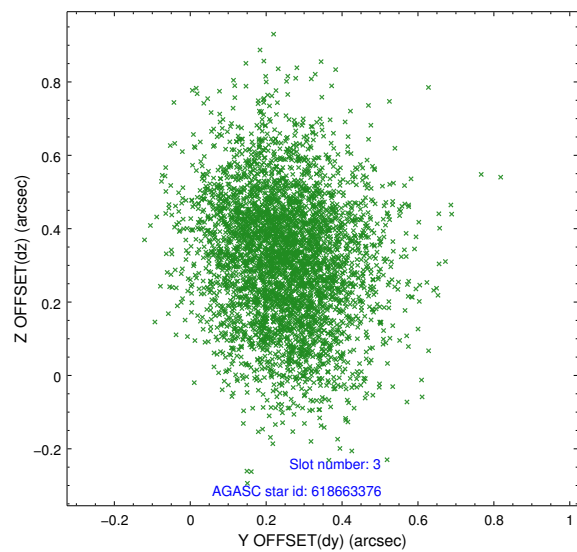
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.07	1987	-0.199	-0.108	0.010	0.016	0.000000	0.000000	-770.65	-1741.07
1	FID		ACIS-S-4	7.18	1987	0.468	0.125	0.006	0.010	0.000000	0.000000	2142.94	166.98
2	FID		ACIS-S-5	7.17	1987	-0.300	-0.009	0.010	0.015	0.000000	0.000000	-1822.75	161.23
3	GUIDE	used	618663376	10.18	3952	0.246	0.322	0.223	0.374	56.224867	-4.374606	-1184.56	-1545.73
4	GUIDE	used	618663856	7.63	3973	-0.148	0.079	0.152	0.251	57.158072	-4.421302	2166.58	-1408.95
5	GUIDE	used	618664944	9.95	3964	-0.108	-0.450	0.206	0.381	56.822041	-3.350684	615.02	2319.73
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	used	618667688	8.87	3968	-0.007	0.051	0.179	0.289	57.117072	-4.527242	2054.82	-1801.13

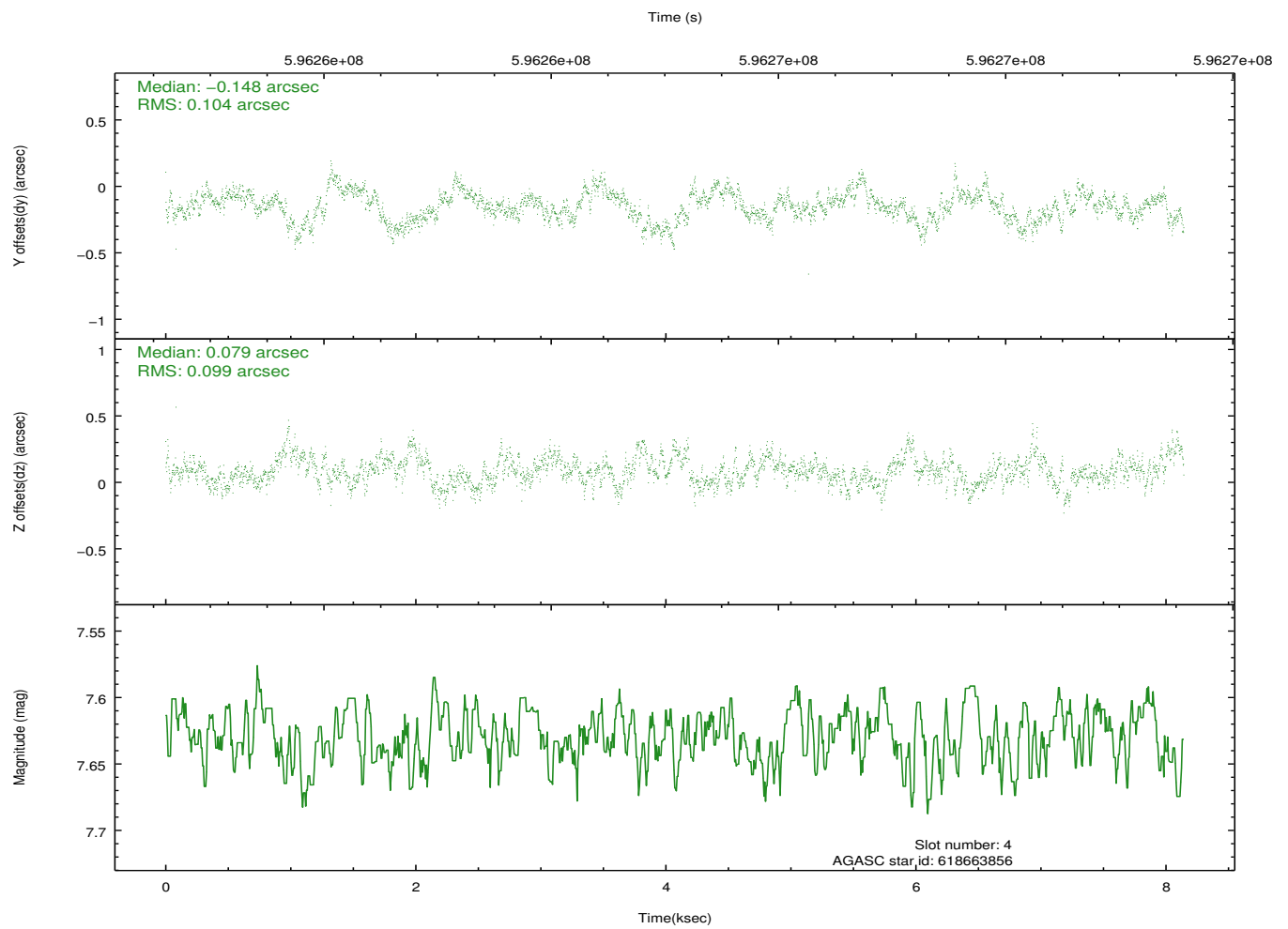
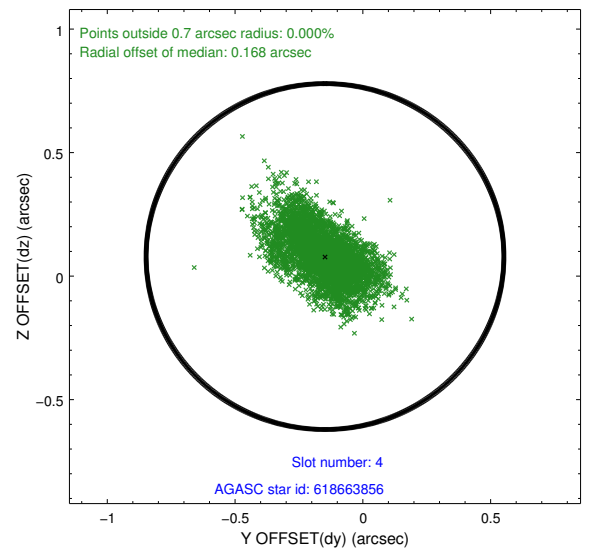
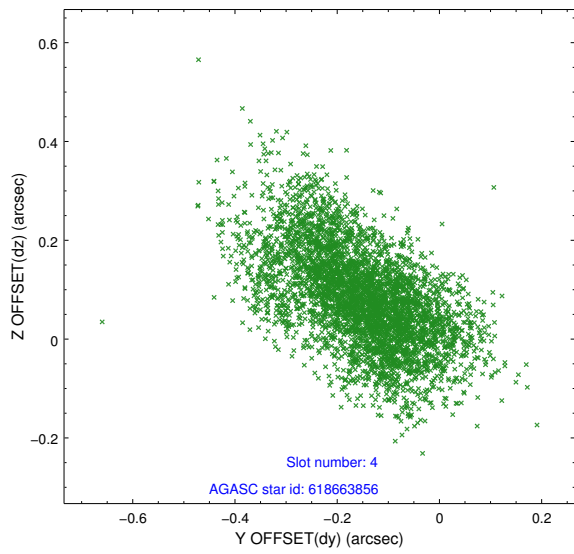
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## 2.4 Star Slots

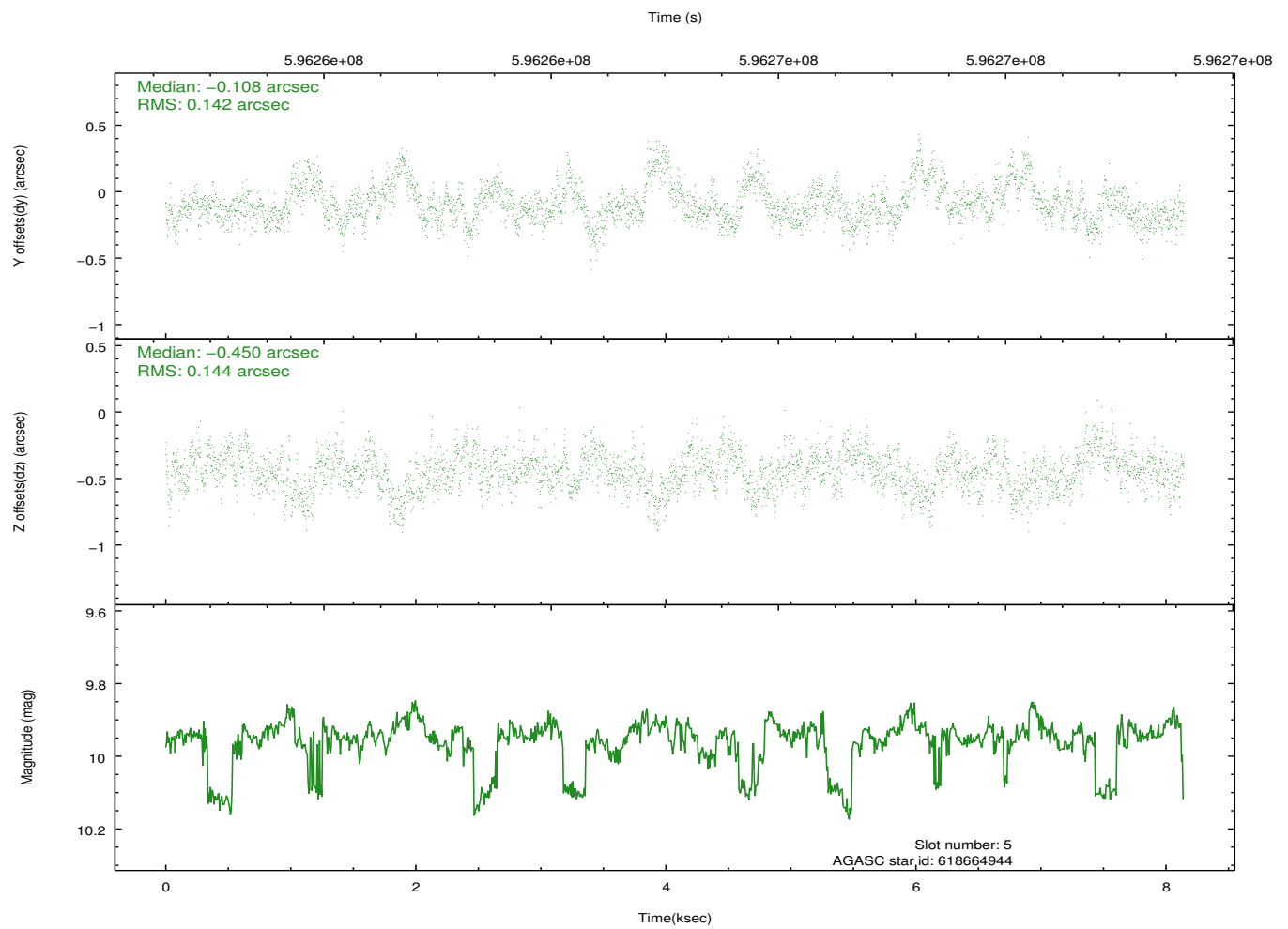
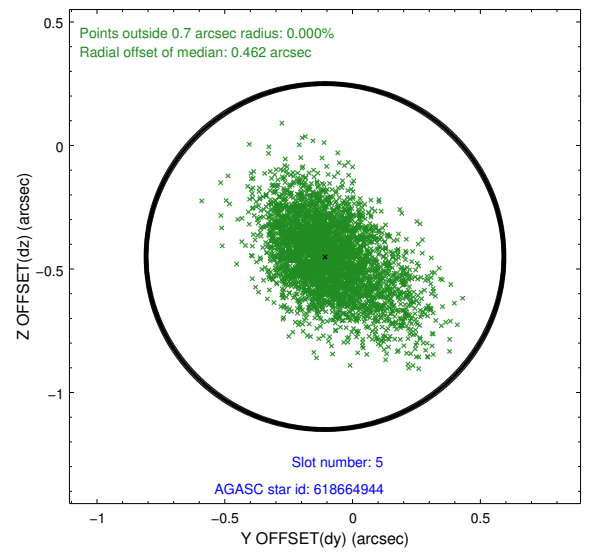
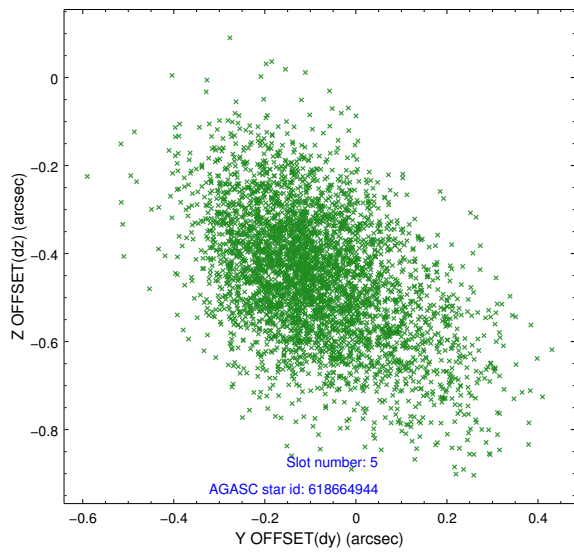
### 2.4.1 Slot 3



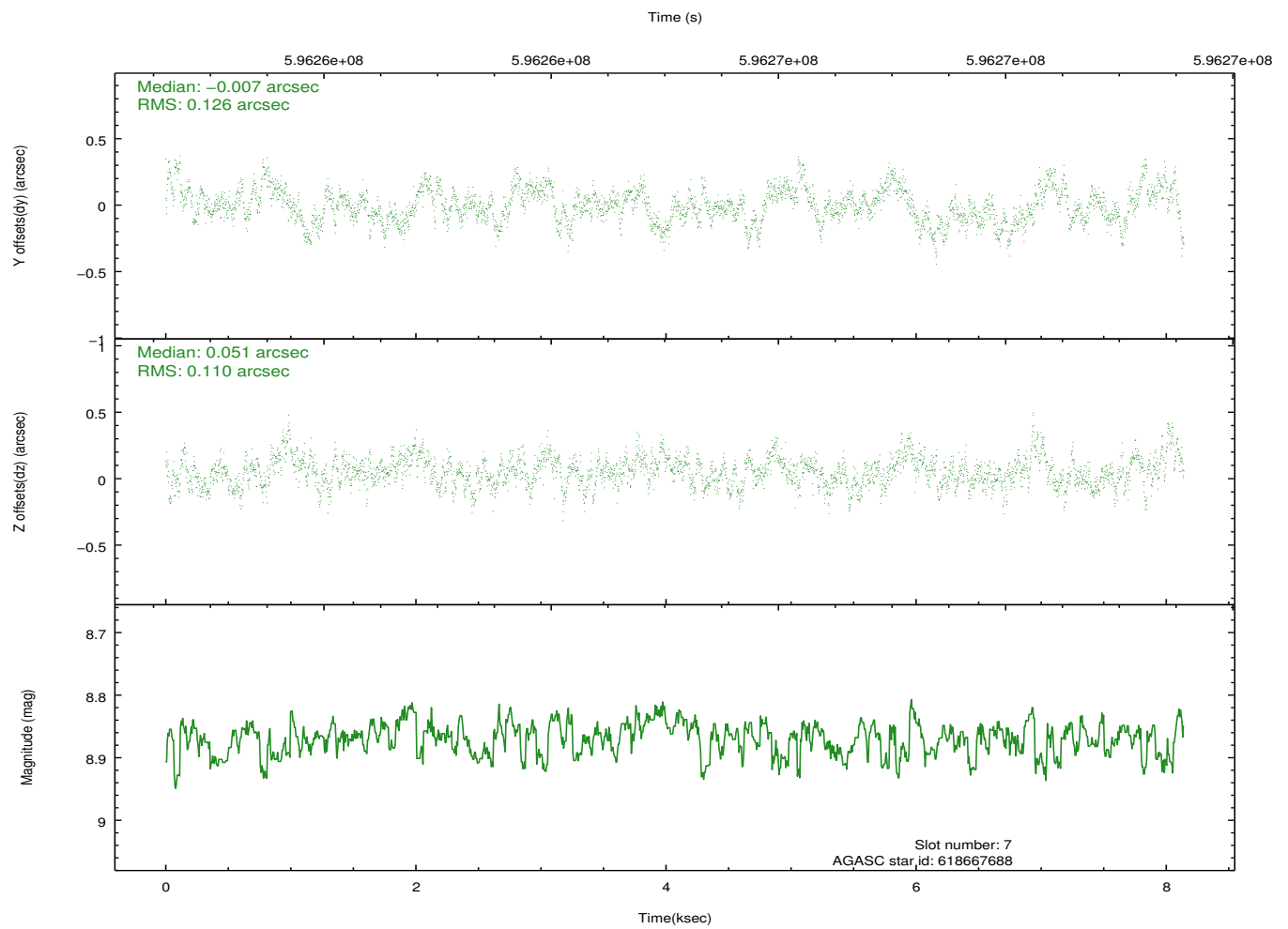
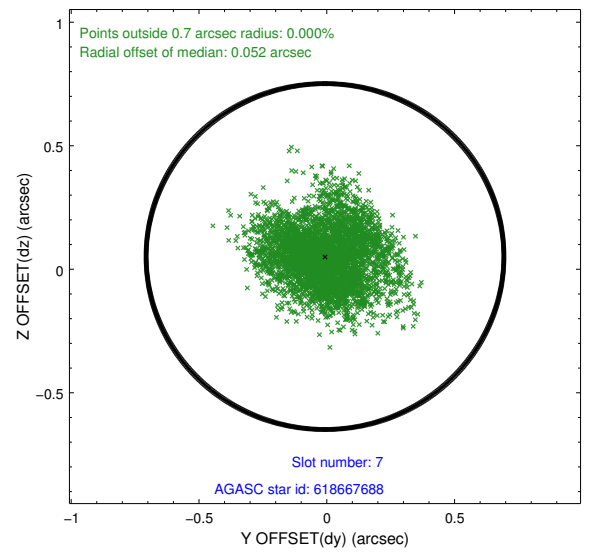
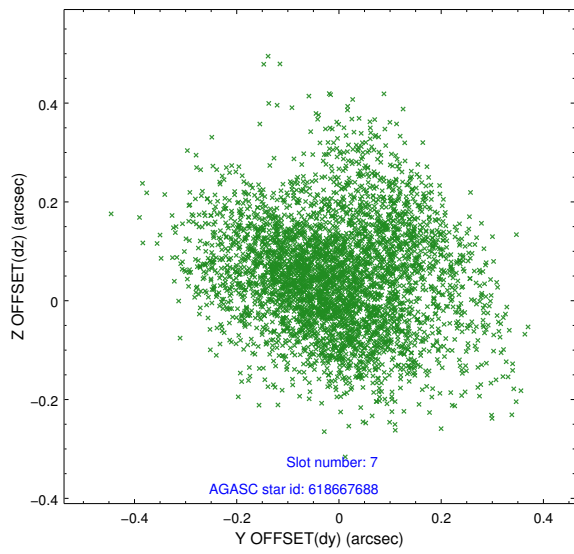
## 2.4.2 Slot 4



### 2.4.3 Slot 5

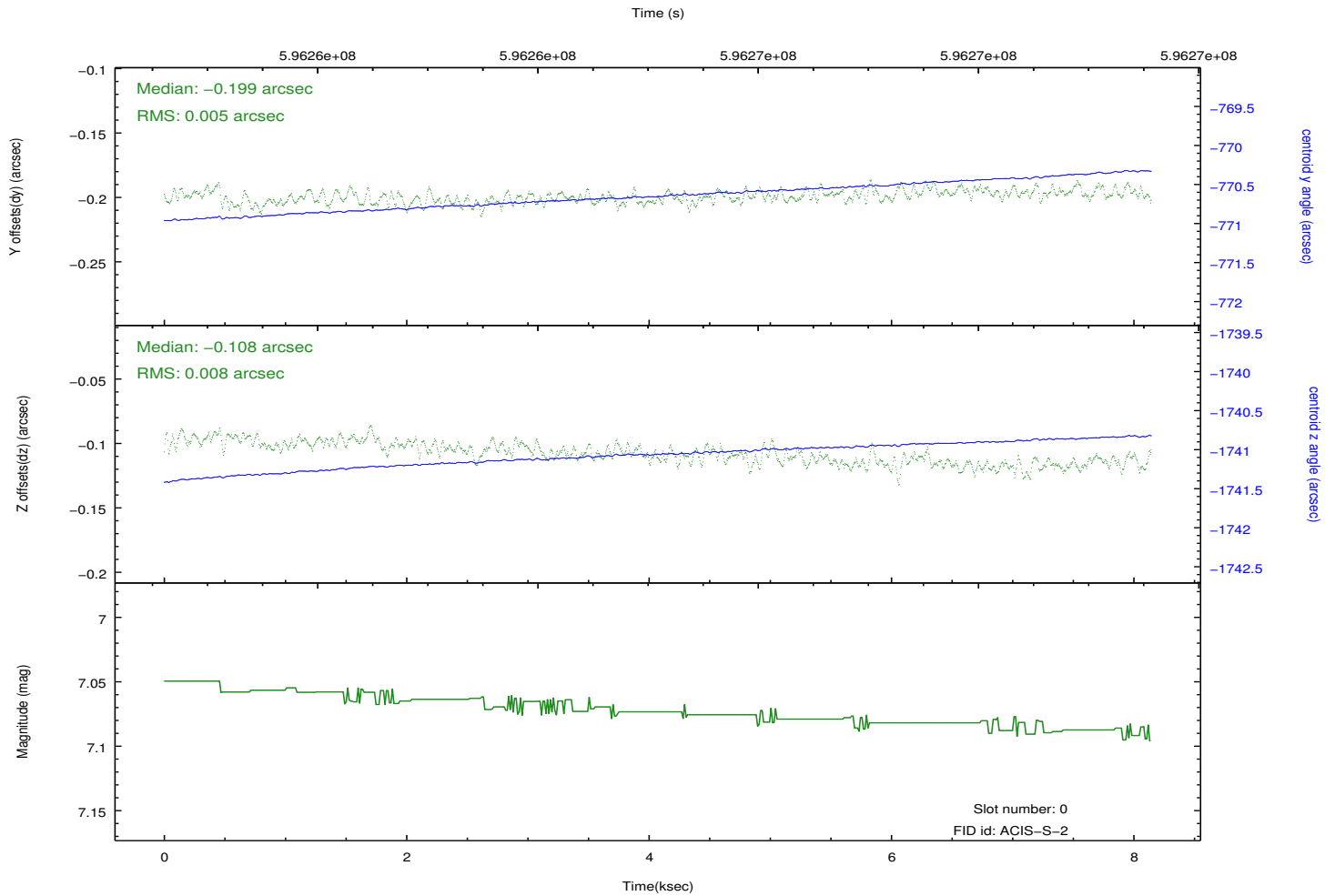
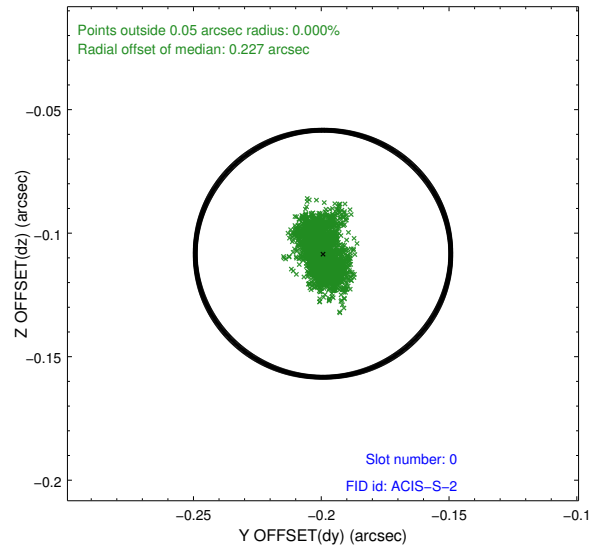
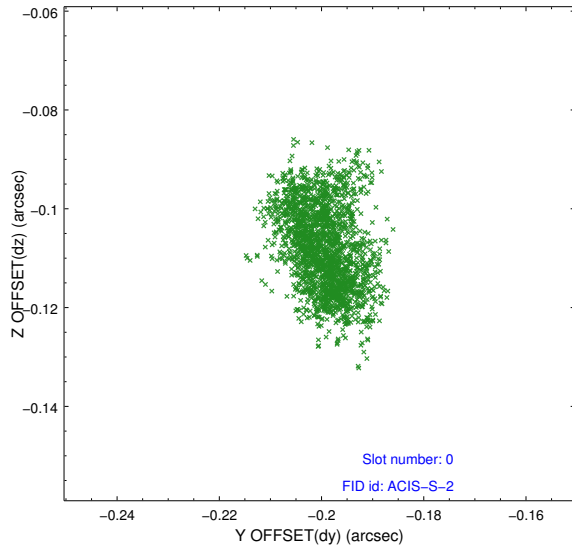


## 2.4.4 Slot 7

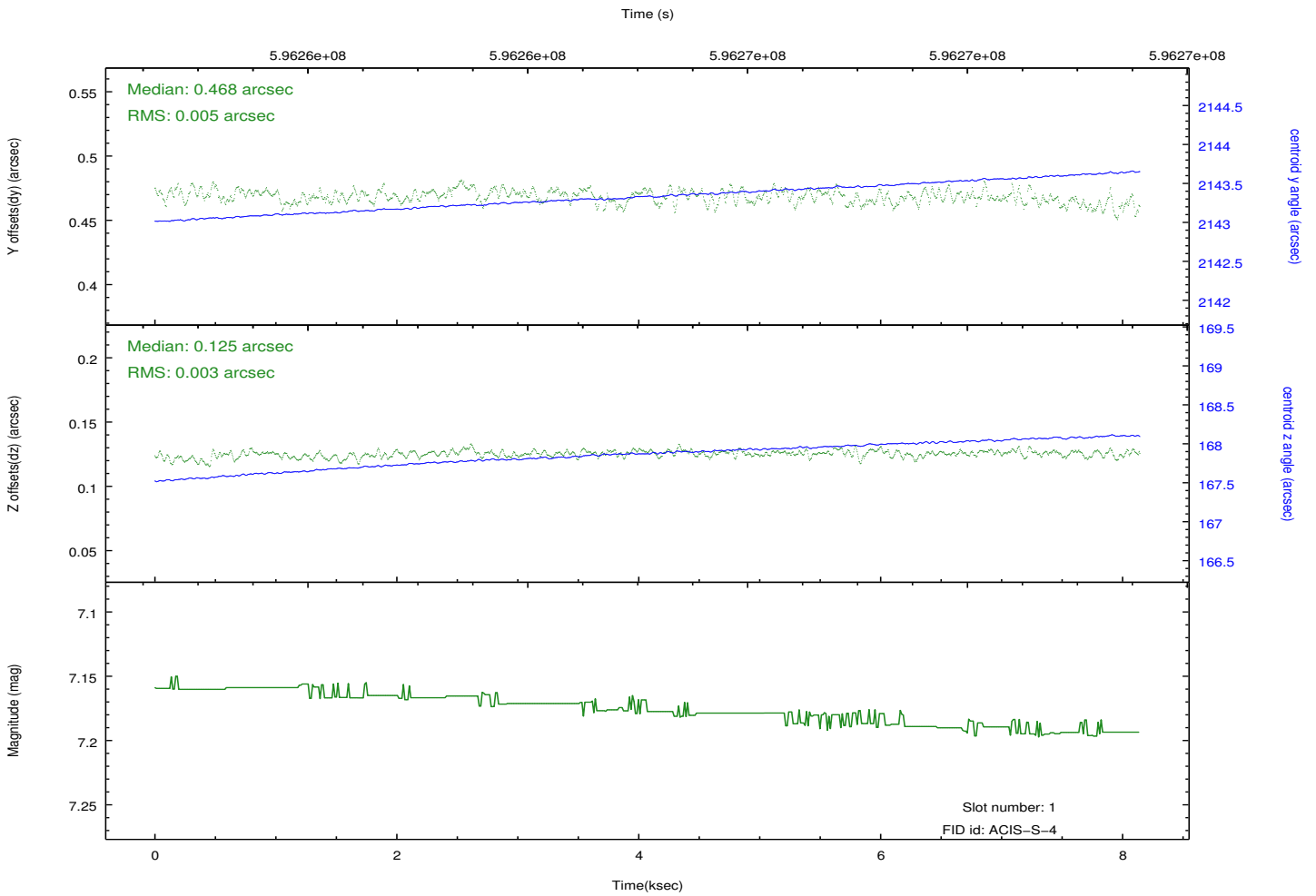
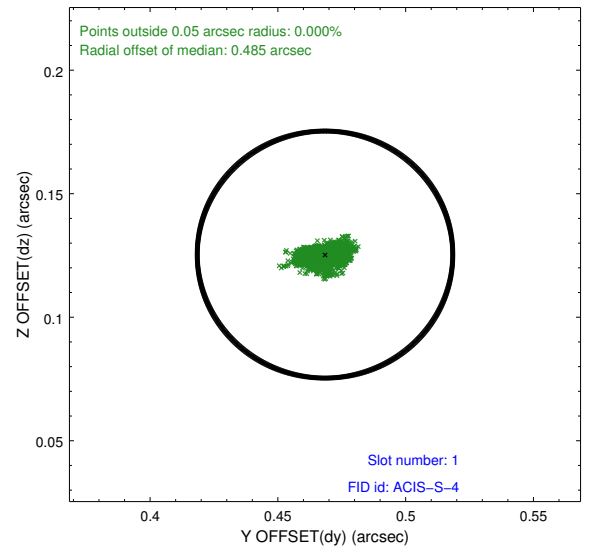
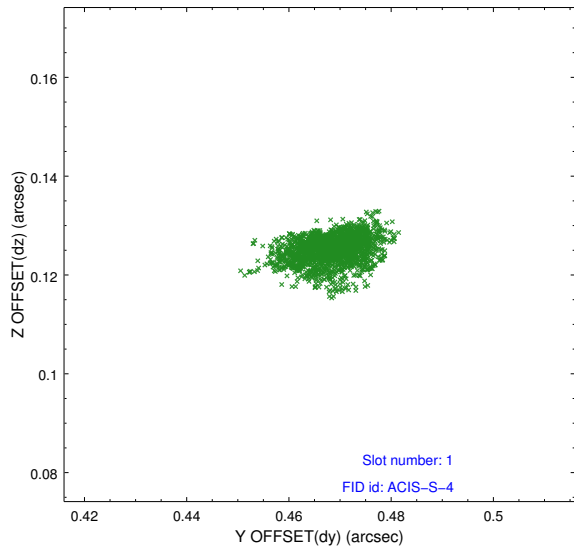


## 2.5 FID Slots

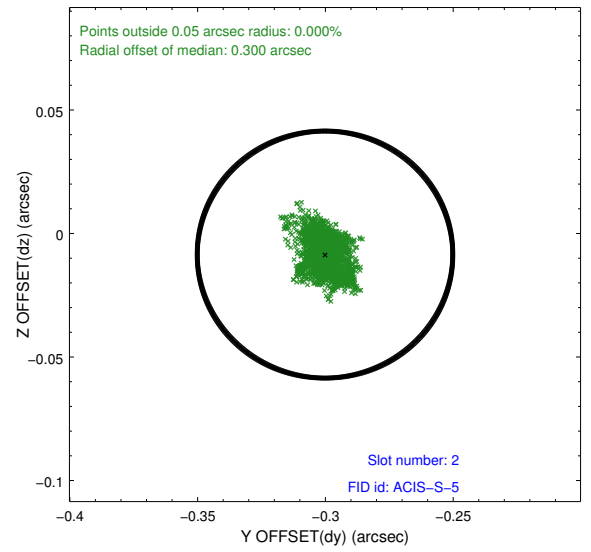
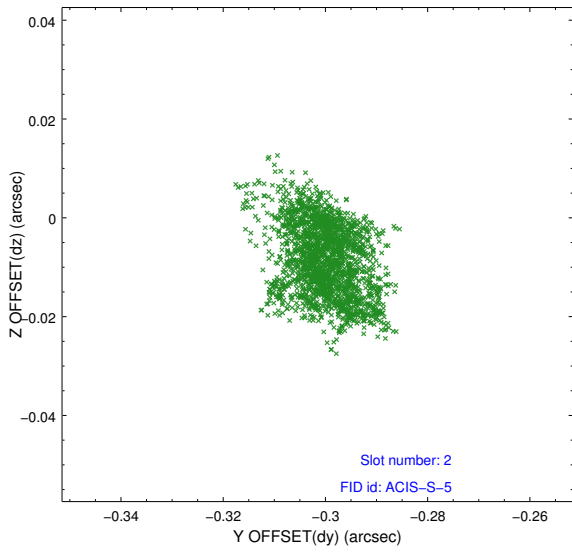
### 2.5.1 Slot 0



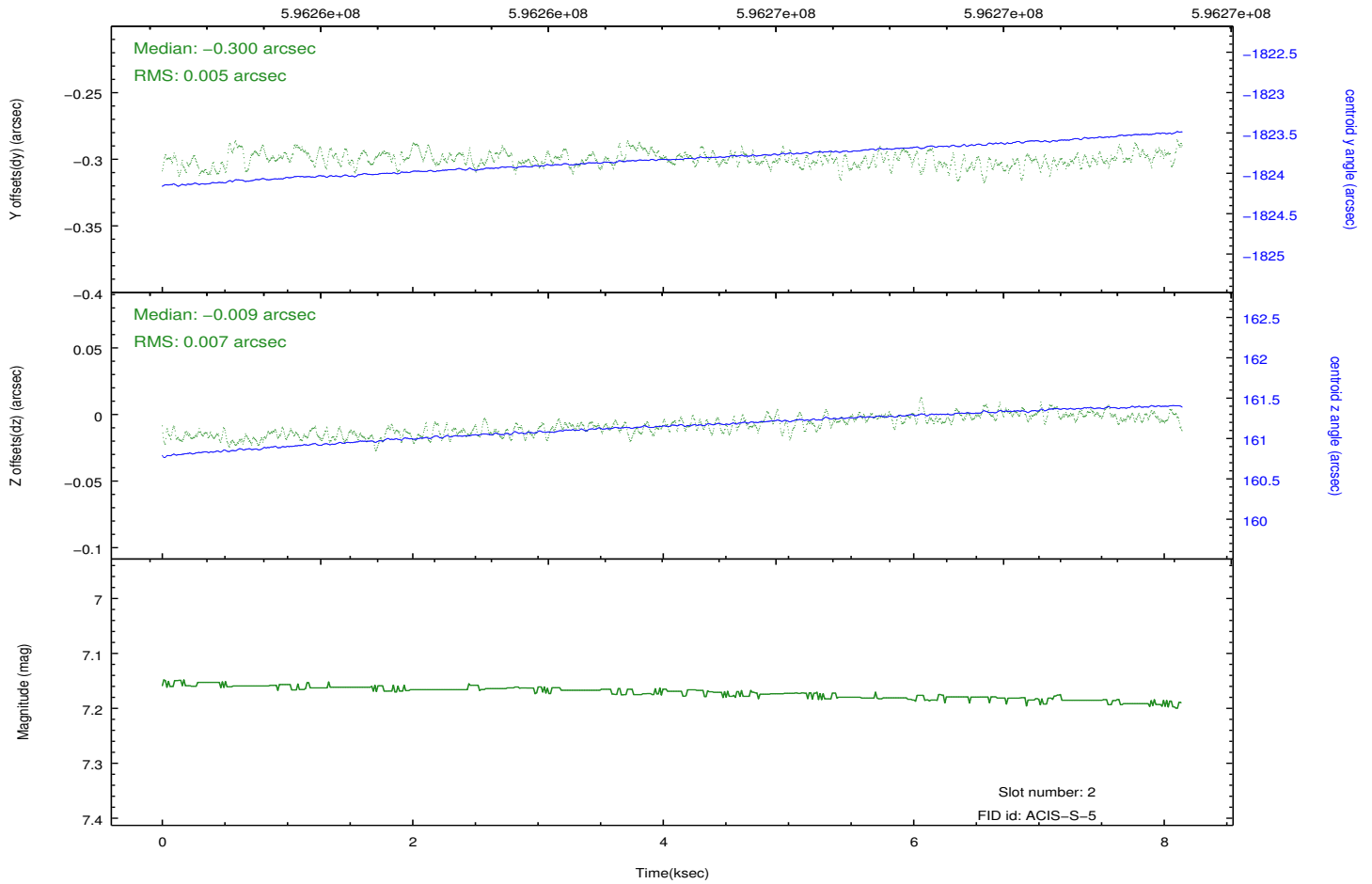
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2016.11.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0381896713972

## A.2 Comments

One optional chip was dropped.

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.