

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 20867 - L2 Version 2  
Chandra X-Ray Center

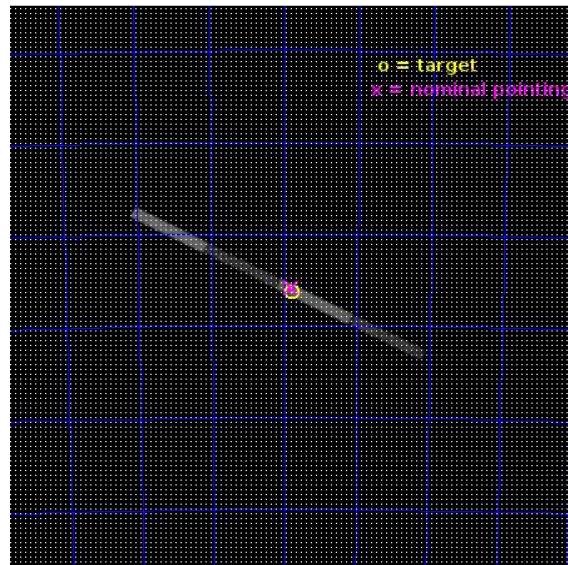
L2 Processing Date : Dec 4 2017

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# 1 Front

seq_num	703441	Sequence number
obs_id	20867	Observation id
title	The Physics of the Jets of Powerful Radio Galaxies and Quasars	Pro
observer	Eric Perlman	Principal investigator
object	PKS 0637-75	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	98.94375	Observer's specified target RA [deg]
dec_targ	-75.271306	Observer's specified target Dec [deg]
ra_nom	98.952486068451	Nominal RA [deg]
dec_nom	-75.264643757049	Nominal Dec [deg]
roll_nom	27.165061745467	Nominal Roll [deg]
revision	2	Processing version of data
ontime	24032.390125513	Sum of GTIs [s]
livetime	22493.813296062	Livetime [s]
ontime5	24032.349085569	Sum of GTIs [s]
ontime6	24032.308045506	Sum of GTIs [s]
ontime7	24032.390125513	Sum of GTIs [s]
ontime8	24032.267005563	Sum of GTIs [s]
l2events	49968	Number of level 2 events

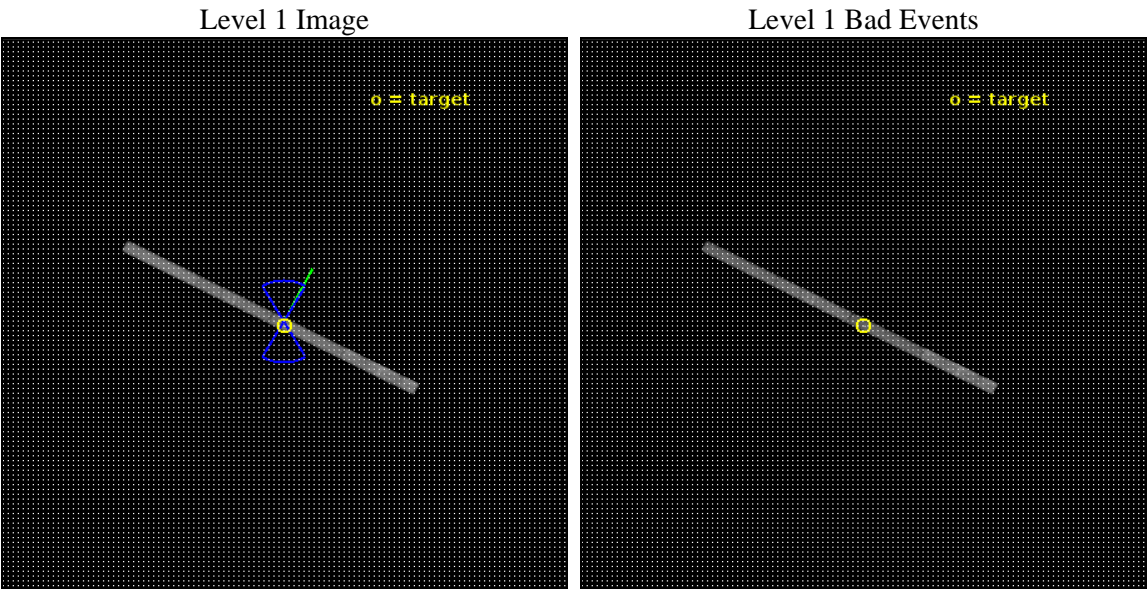




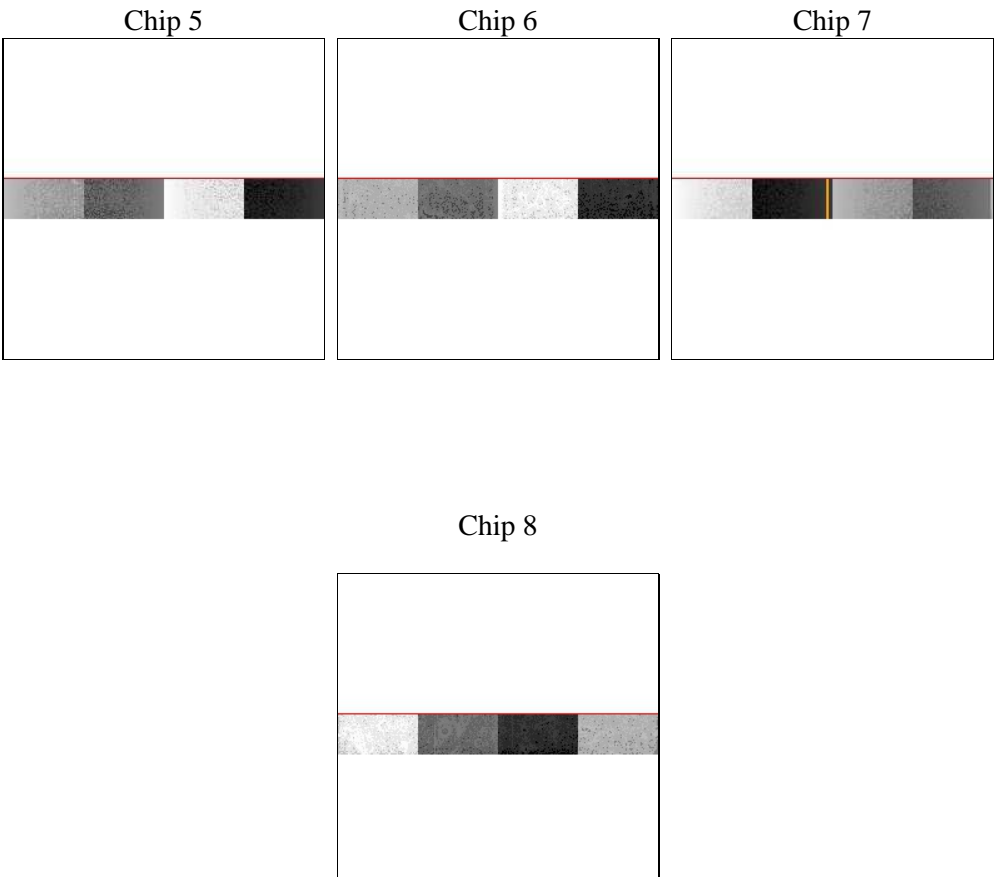
# 2 OBI

## 2.1 OBI

### 2.1.1 Images



### 2.1.2 Bias



Chip 8



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23945.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	24032.390125513	Sum of GTIs [s]
caldsver	4.7.6	&#160	ontime5	24032.349085569	Sum of GTIs [s]
date	2017-12-04T20:08:42	Date and time of file creation	ontime6	24032.308045506	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	24032.390125513	Sum of GTIs [s]
			ontime8	24032.267005563	Sum of GTIs [s]
			l1events	151958	Number of level 1 events

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	35572	27774	45968	42644
rejected events	18302	24525	17828	32935
rejected %	51%	88%	38%	77%

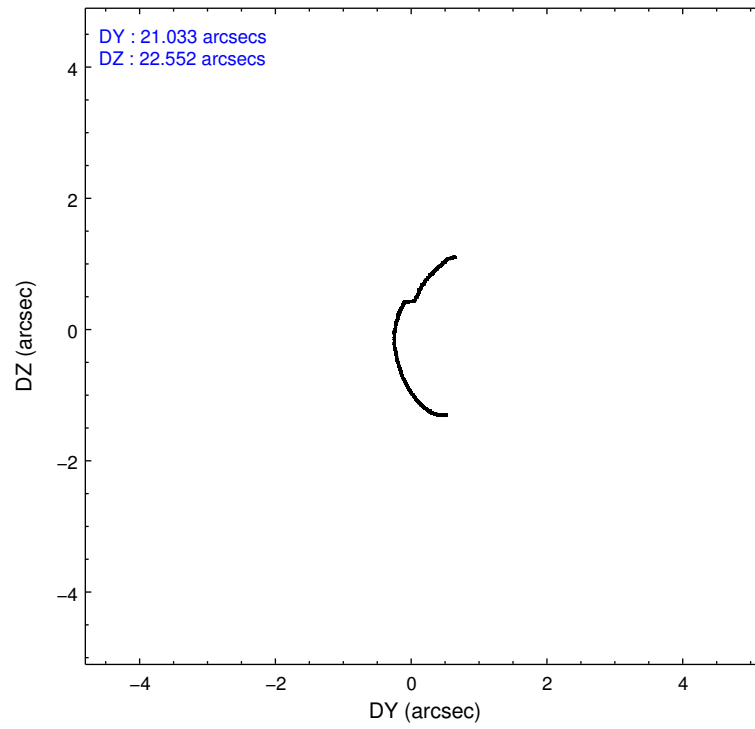
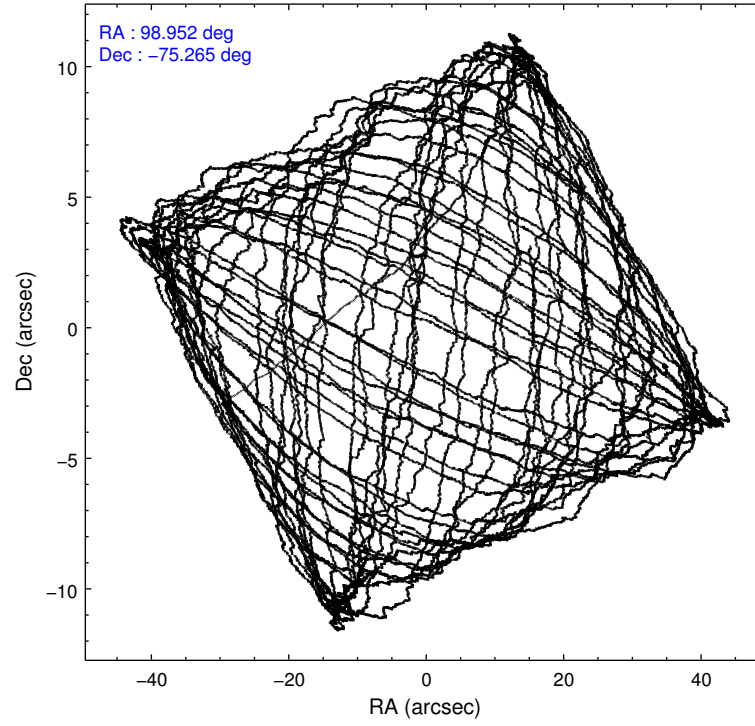
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	1156	924	4742	2235
	3%	3%	10%	5%
grade 1 events	97	11	157	19
	0%	0%	0%	0%
grade 2 events	5257	552	6313	2026
	14%	1%	13%	4%
grade 3 events	1035	525	3264	1110
	2%	1%	7%	2%
grade 4 events	931	564	3116	1035
	2%	2%	6%	2%
grade 5 events	2807	1052	3699	1555
	7%	3%	8%	3%
grade 6 events	8892	684	10706	3303
	24%	2%	23%	7%
grade 7 events	15397	23462	13971	31361
	43%	84%	30%	73%

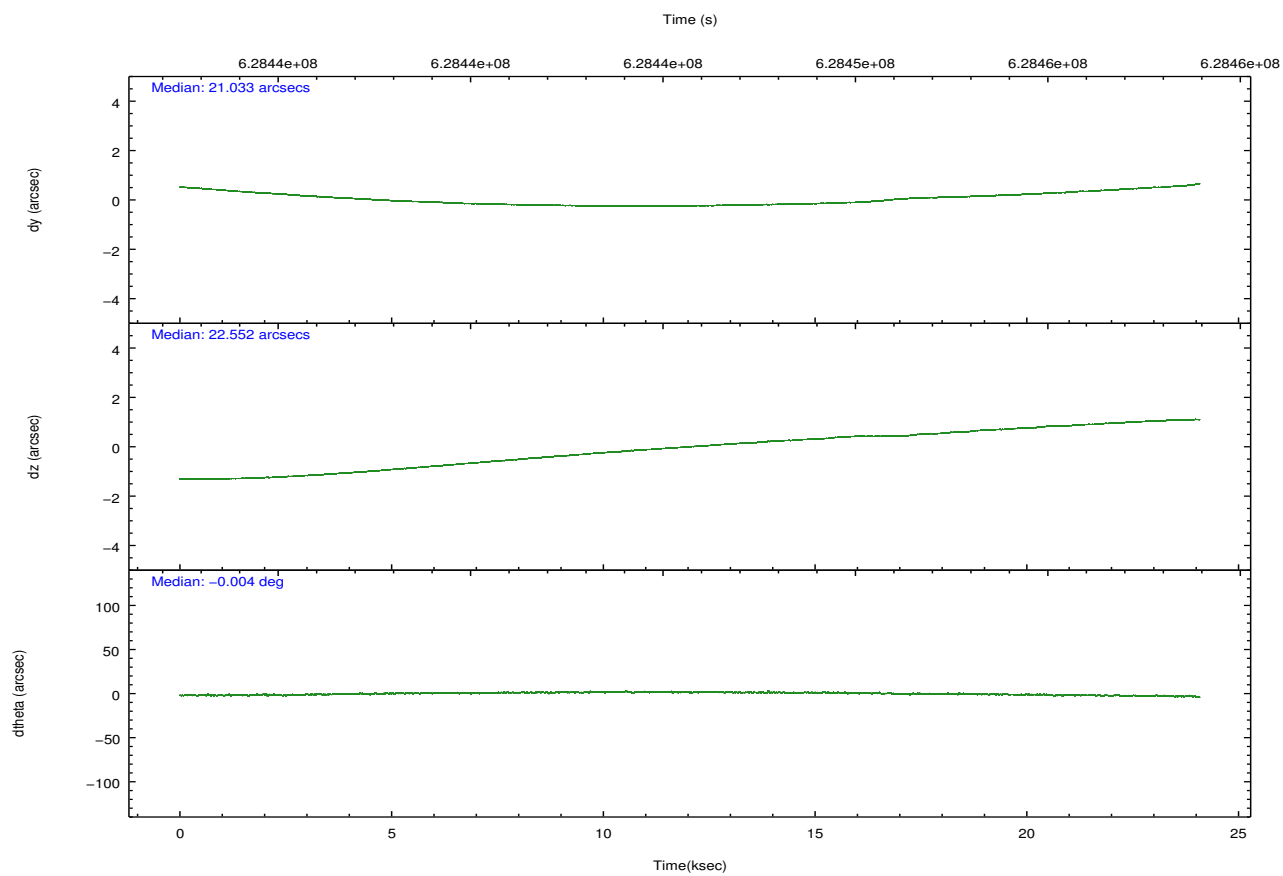
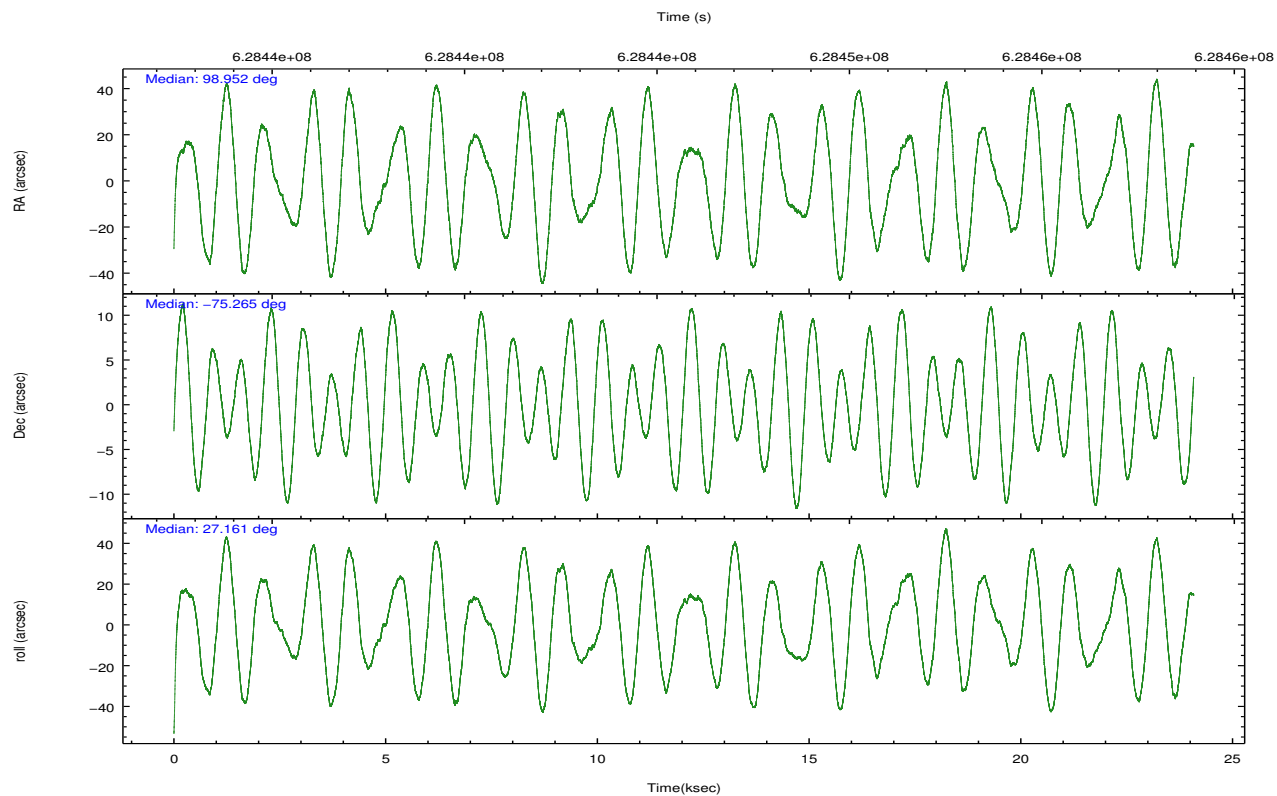
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5678	ACIS-5678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	98.895118	98.95248606845128
[deg] Pointing Dec	-75.287899	-75.26464375704911
[deg] Pointing Roll	26.952962	27.16506174546662
[deg] Roll angle	0.000000	0.000000
[deg] Roll tolerance	30.000000	30.000000
Roll constraint allows 180D rotation	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	628433817.184000	628432668.5172499
Observation start date	2017-11-30T12:55:48	2017-11-30T12:37:48
[s] Observation end time (MET)	628457762.184000	628458668.66878
Observation end date	2017-11-30T19:34:53	2017-11-30T19:51:08
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/8
Subarray start row	449	449
Subarray row count	128	128
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	0.6

## 2.3 Aspect



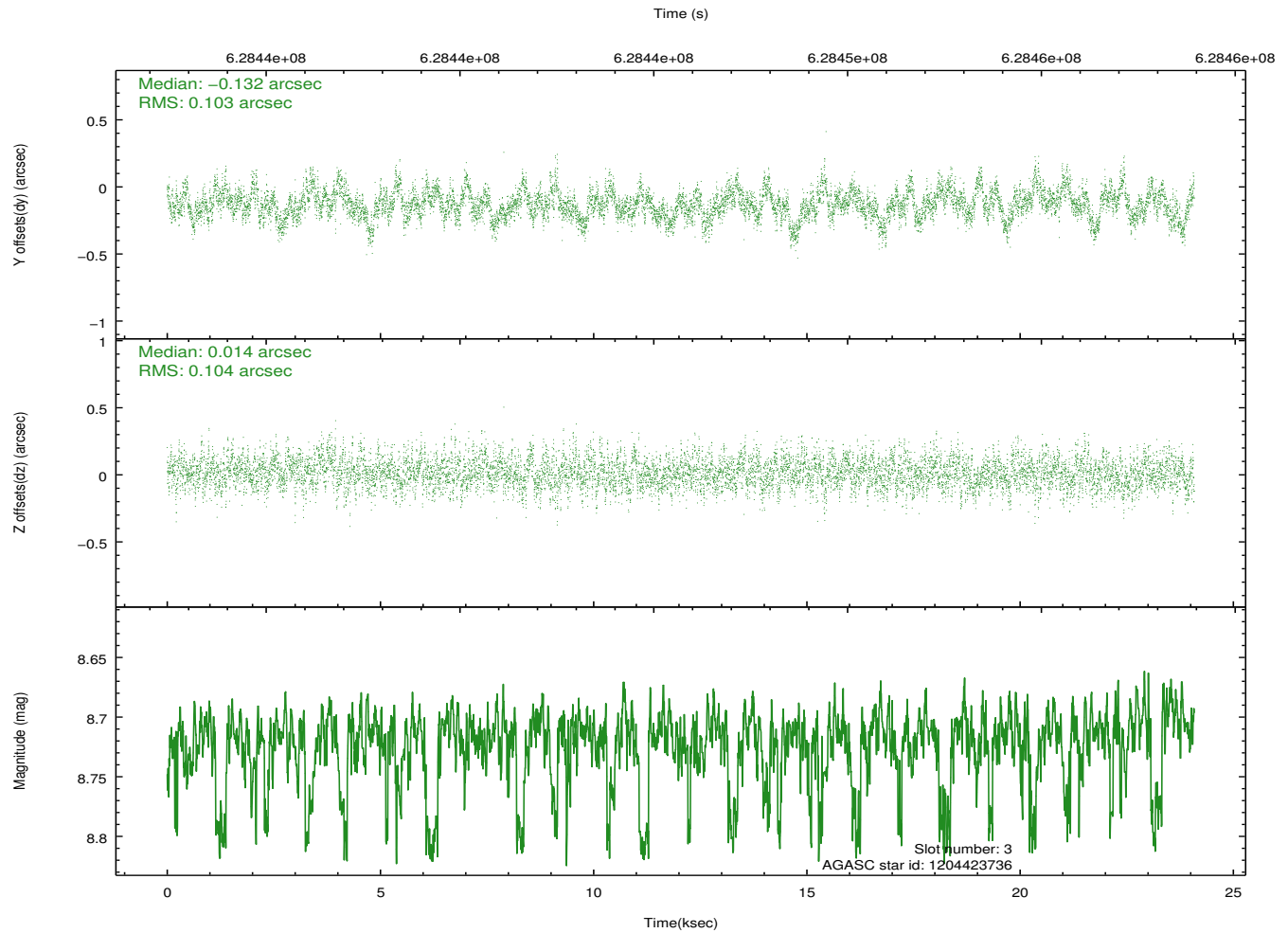
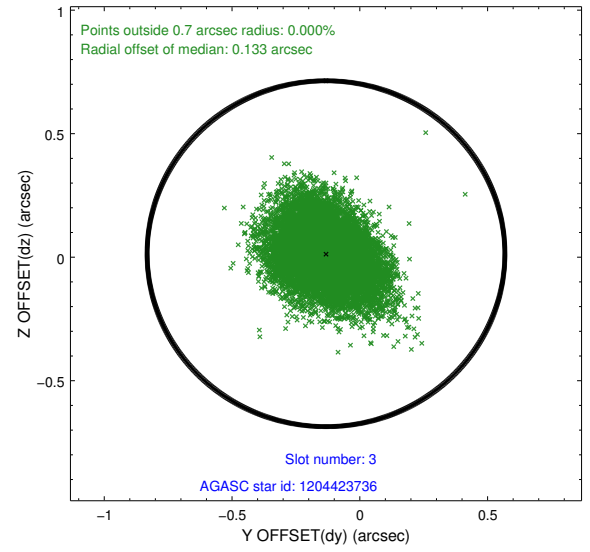
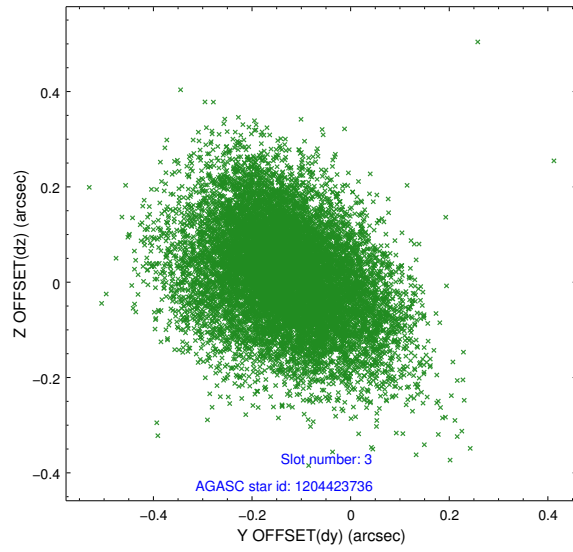


### Slot Statistics

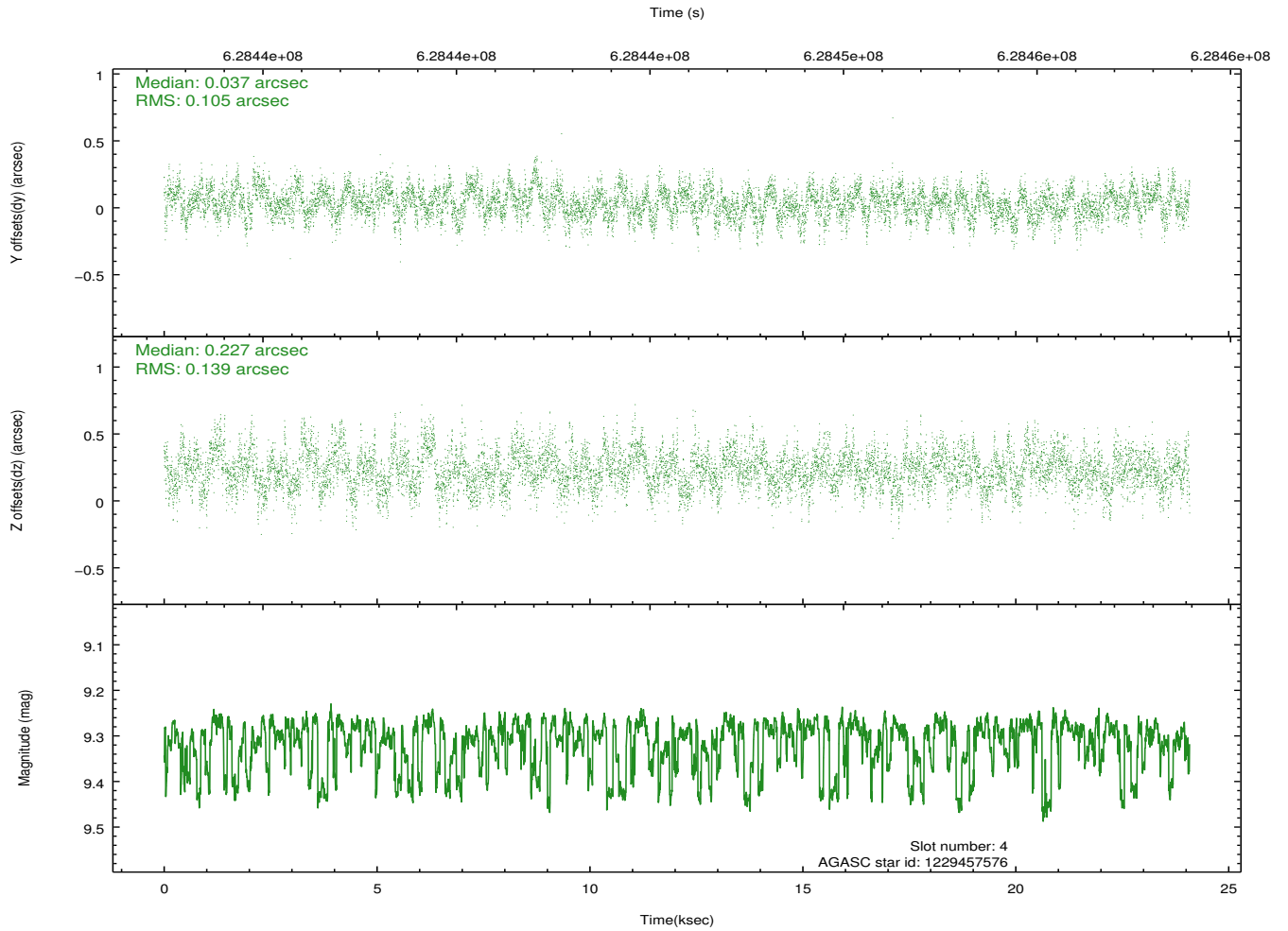
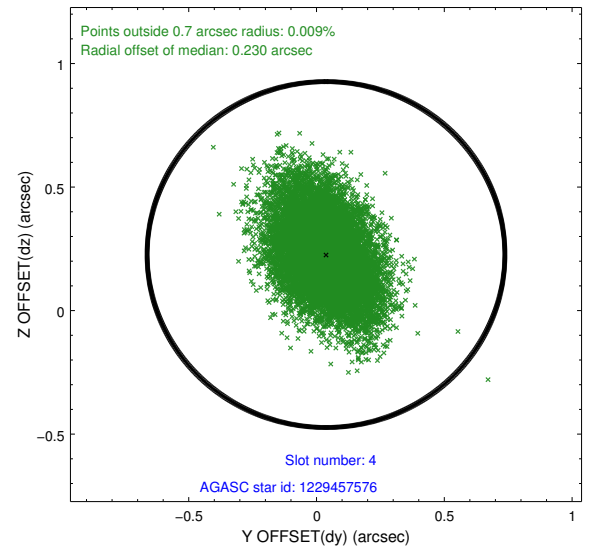
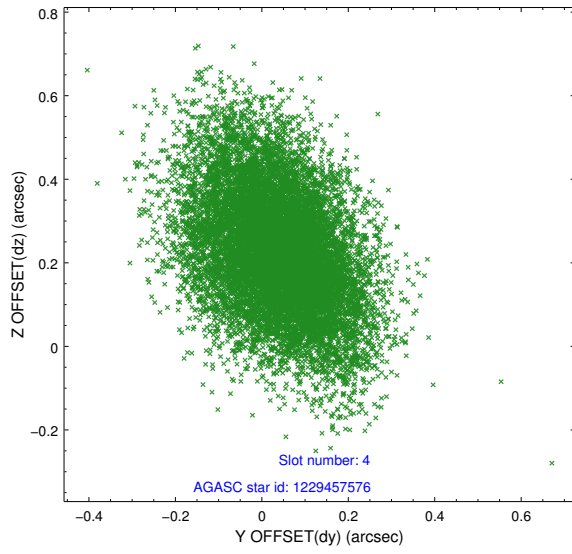
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.08	5873	-0.252	-0.164	0.013	0.022	0.000000	0.000000	-774.46	-1744.21
1	FID		ACIS-S-4	7.19	5874	0.548	0.165	0.007	0.013	0.000000	0.000000	2139.55	164.47
2	FID		ACIS-S-5	7.19	5875	-0.327	0.008	0.011	0.018	0.000000	0.000000	-1827.22	158.12
3	GUIDE	used	1204423736	8.72	11736	-0.132	0.014	0.156	0.256	99.272017	-74.796122	1119.28	1416.05
4	GUIDE	used	1229457576	9.31	11730	0.037	0.227	0.184	0.311	100.335360	-75.489746	822.15	-1250.32
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	used	1229457032	9.15	11743	0.145	0.315	0.163	0.275	100.958417	-75.581890	1154.30	-1810.39
7	GUIDE	used	1204429184	9.63	11722	-0.054	-0.556	0.226	0.355	99.730987	-74.425450	2125.21	2396.72

## 2.4 Star Slots

### 2.4.1 Slot 3

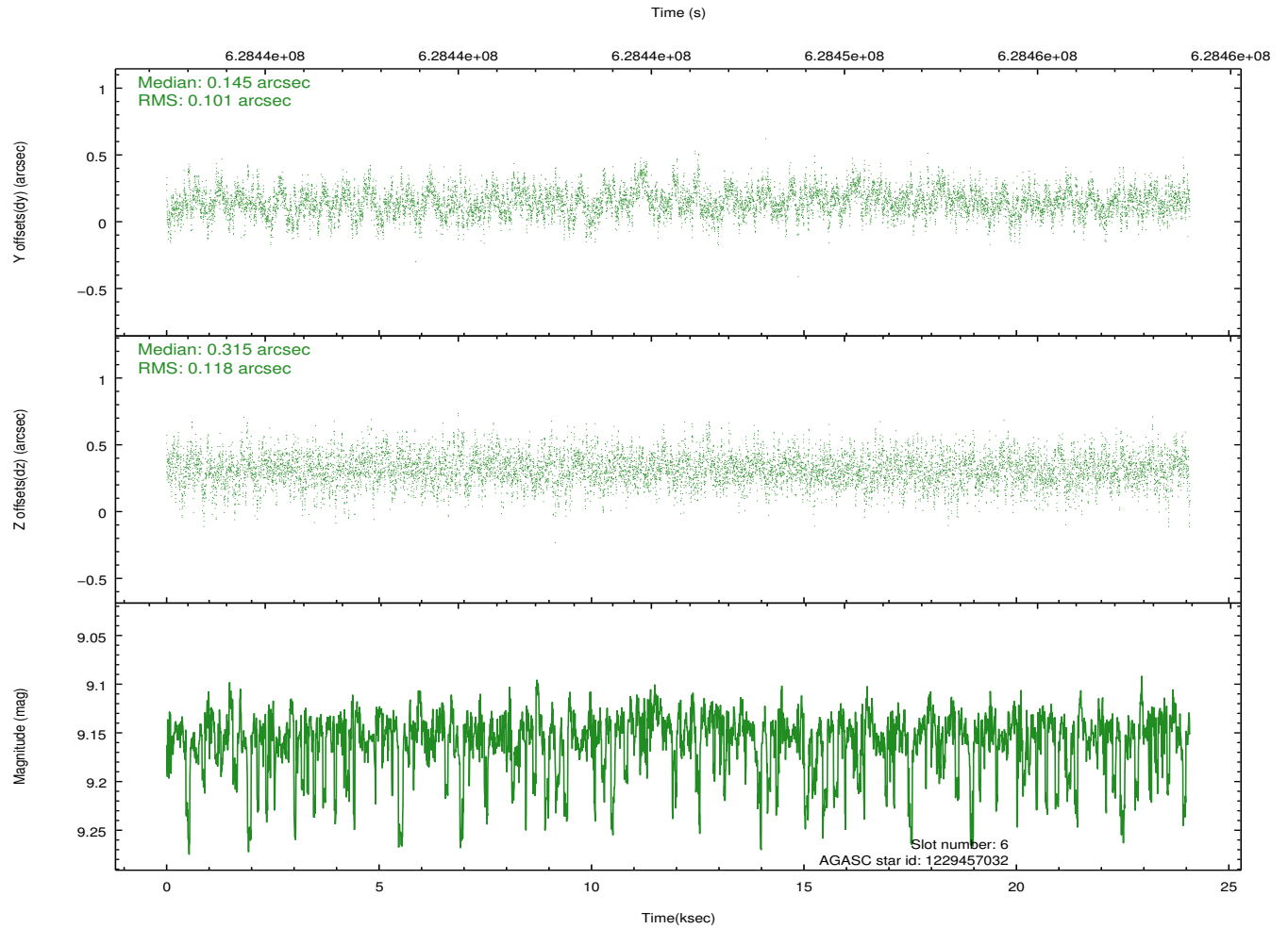
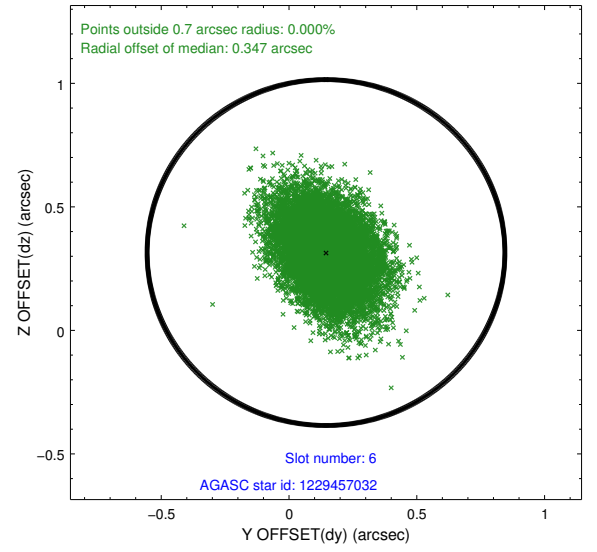
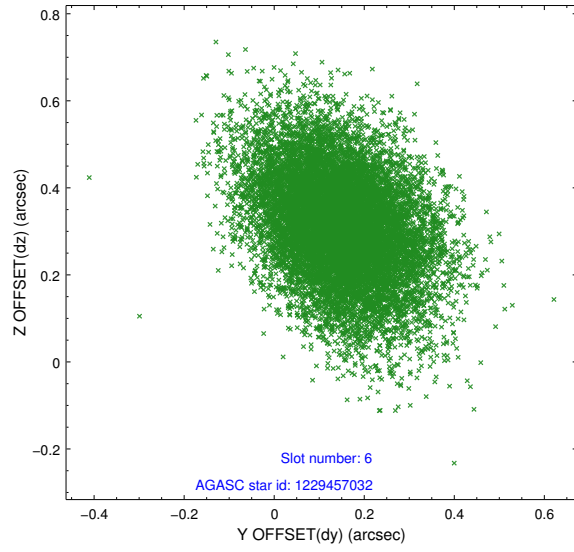


## 2.4.2 Slot 4

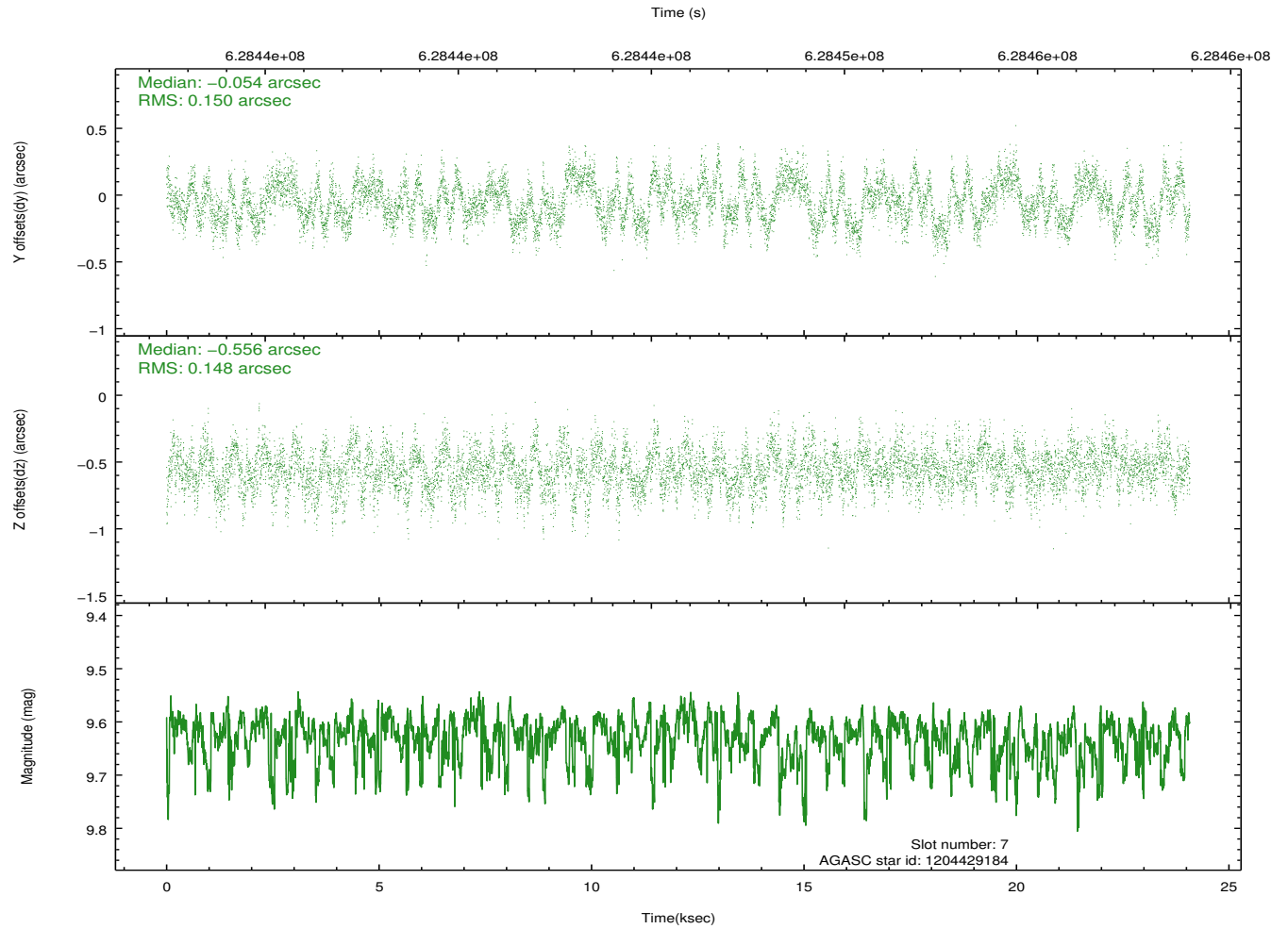
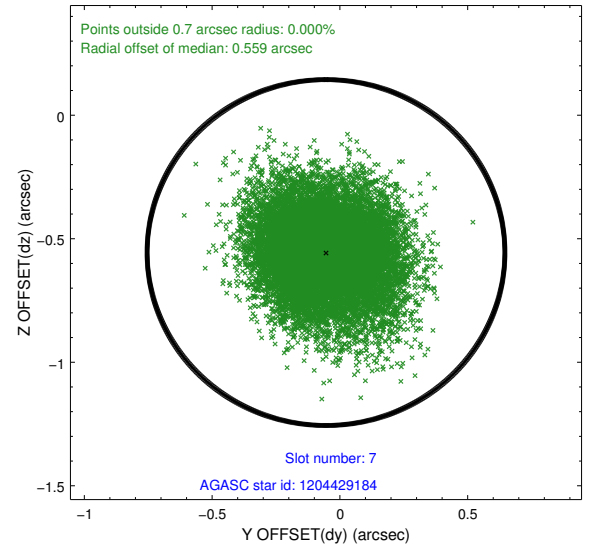
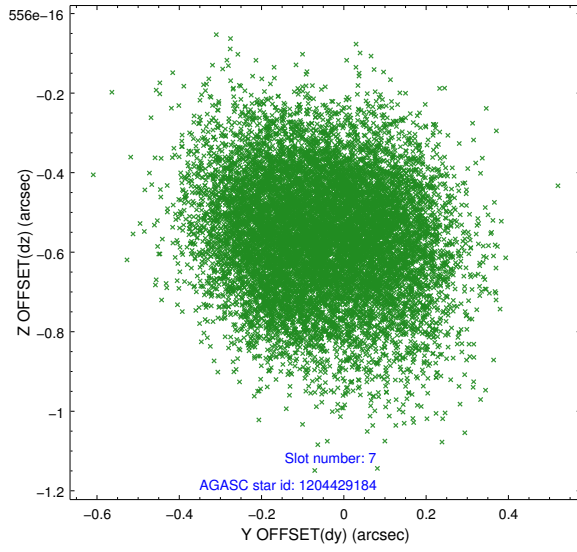




### 2.4.3 Slot 6

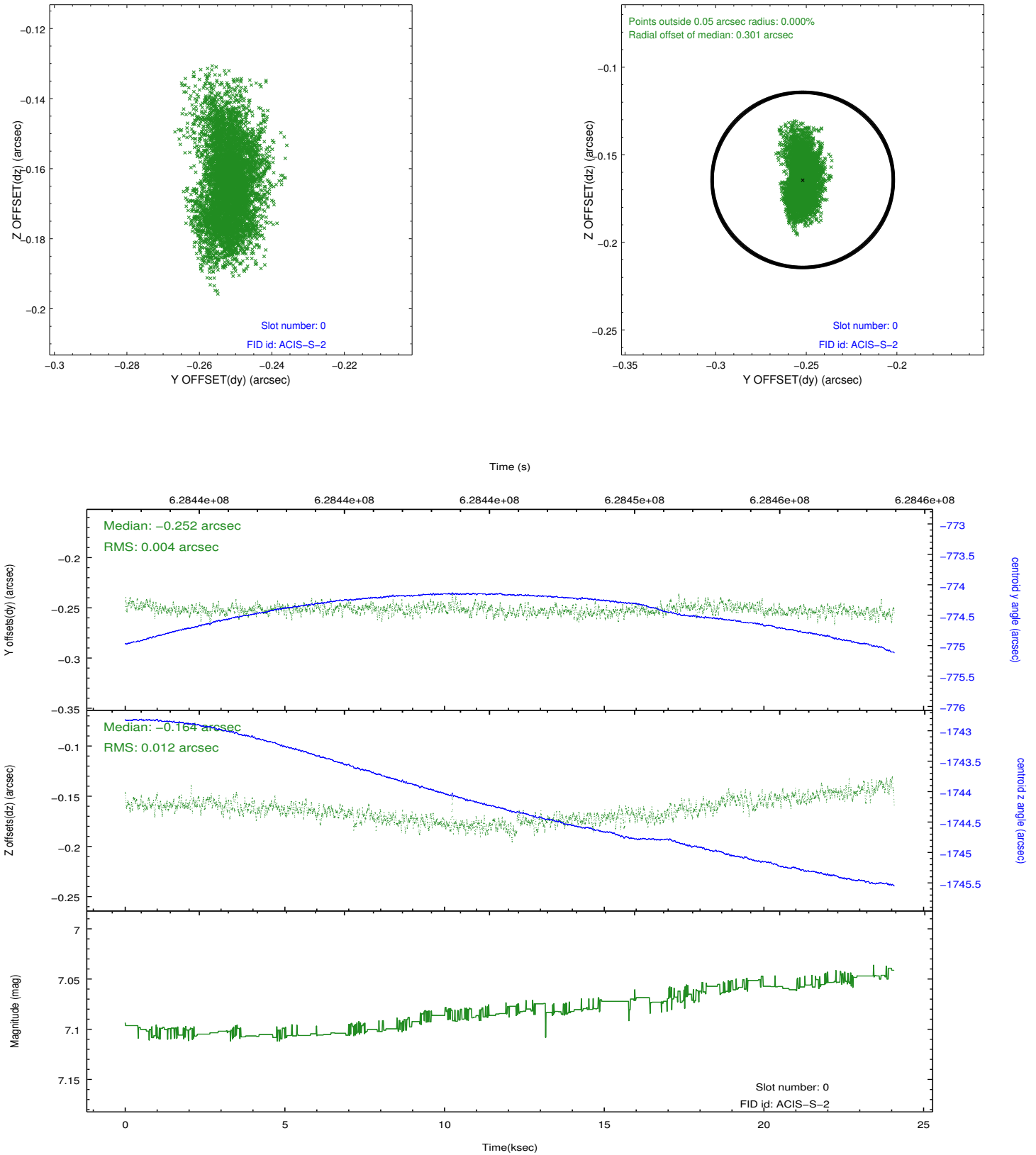


## 2.4.4 Slot 7

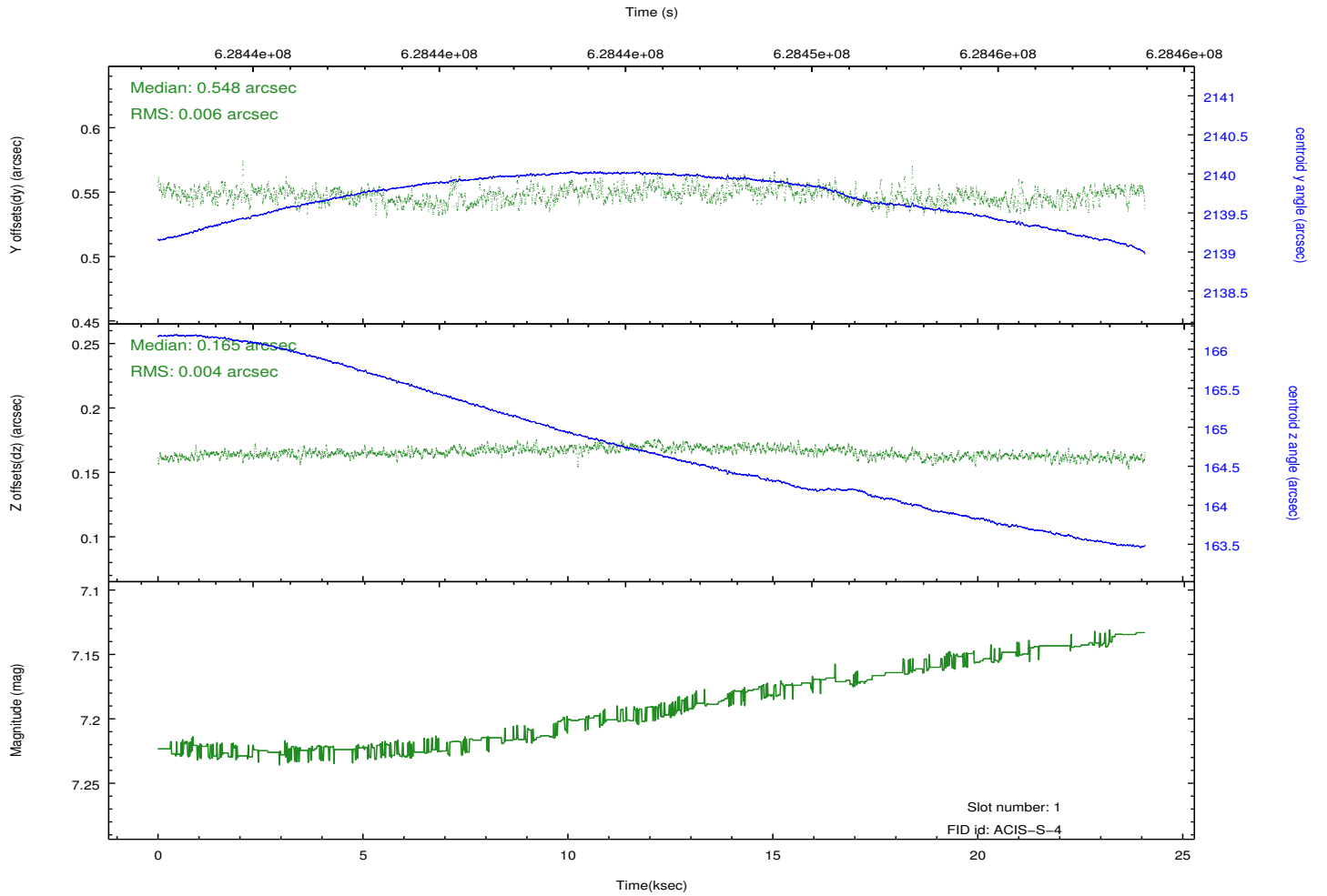
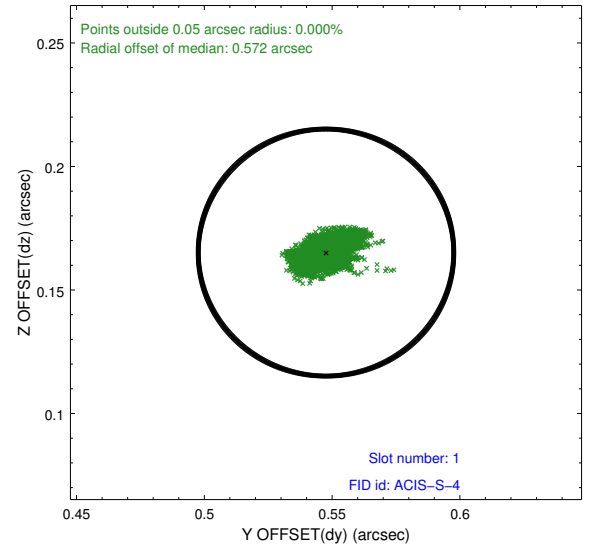
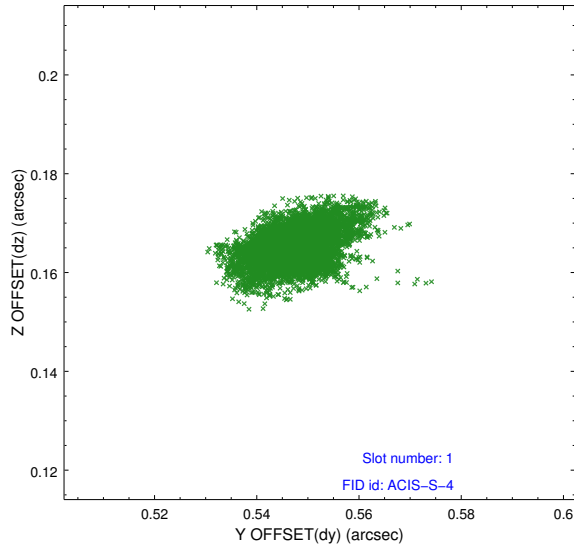


## 2.5 FID Slots

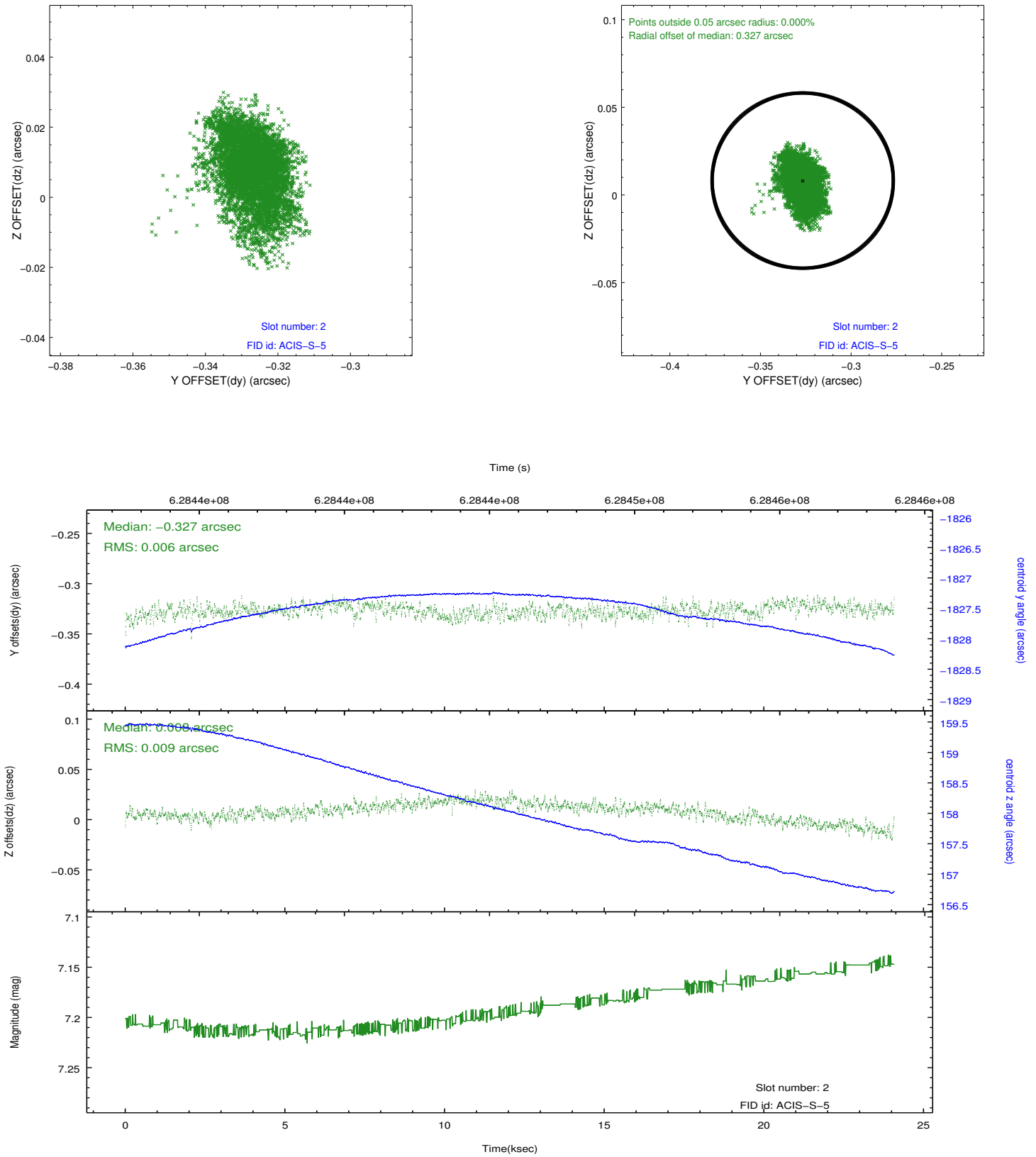
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2017.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.032390125513

## A.2 Comments

Joint Proposal: CX0-HST. Roll constraint met.

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The guide star in slot 5 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.