

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13409 - L2 Version 2  
Chandra X-Ray Center

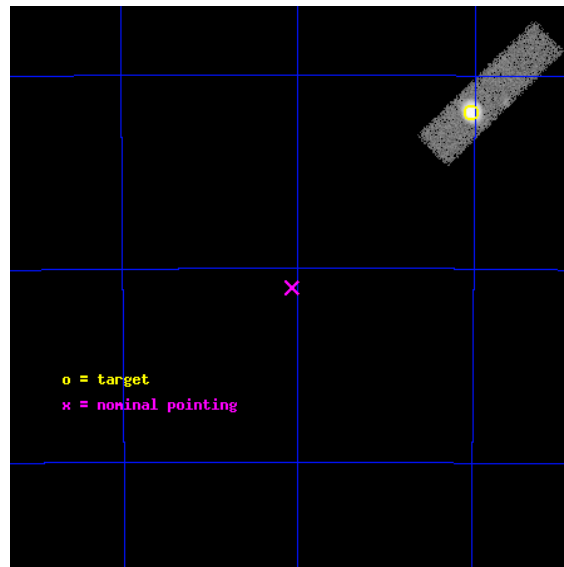
L2 Processing Date : Feb 10 2012

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# 1 Front

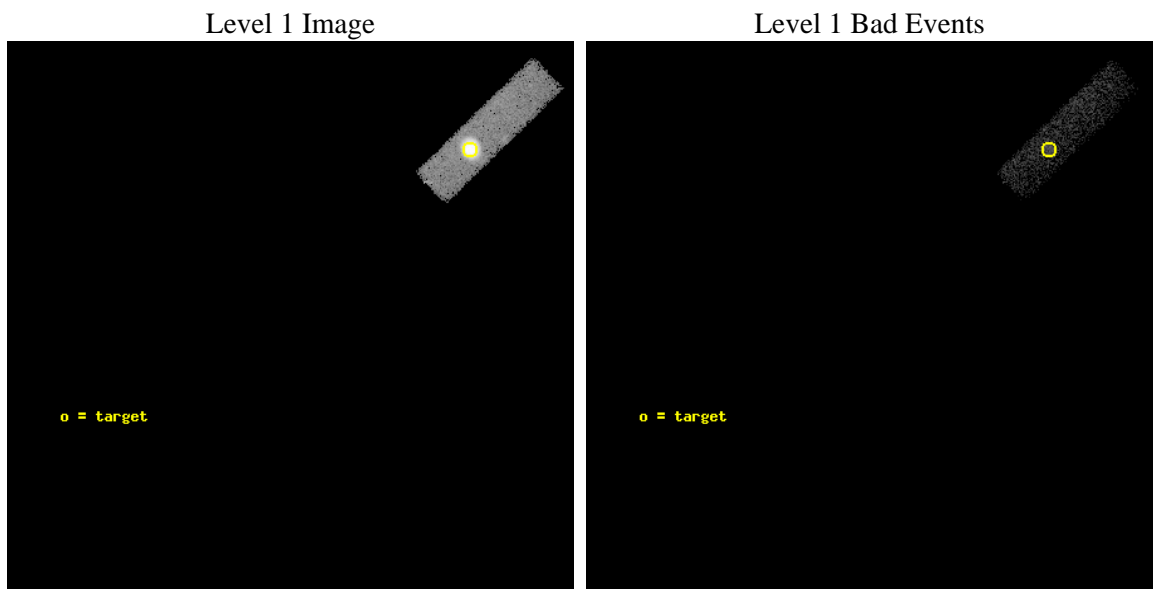
seq_num	890054	Sequence number
obs_id	13409	Observation id
title	Mapping the Spatial Distribution of the ACIS Contaminant	Proposal
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	16.517521072674	Nominal RA [deg]
dec_nom	-72.183566097799	Nominal Dec [deg]
roll_nom	135.78220309011	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10028.000149488	Sum of GTIs [s]
livetime	9538.6665552064	Livetime [s]
ontime5	10028.000149488	Sum of GTIs [s]
l2events	44490	Number of level 2 events



## 2 OBI

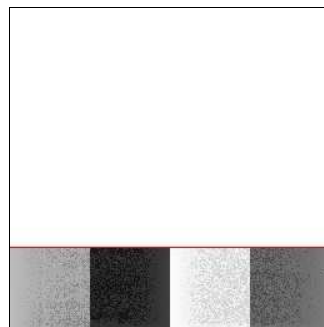
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 5



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10028.000149488	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime5	10028.000149488	Sum of GTIs [s]
date	2012-02-11T00:36:54	Date and time of file creation	l1events	56946	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

	<b>ccd 5</b>
level 1 events	56946
rejected events	10041
rejected %	17%

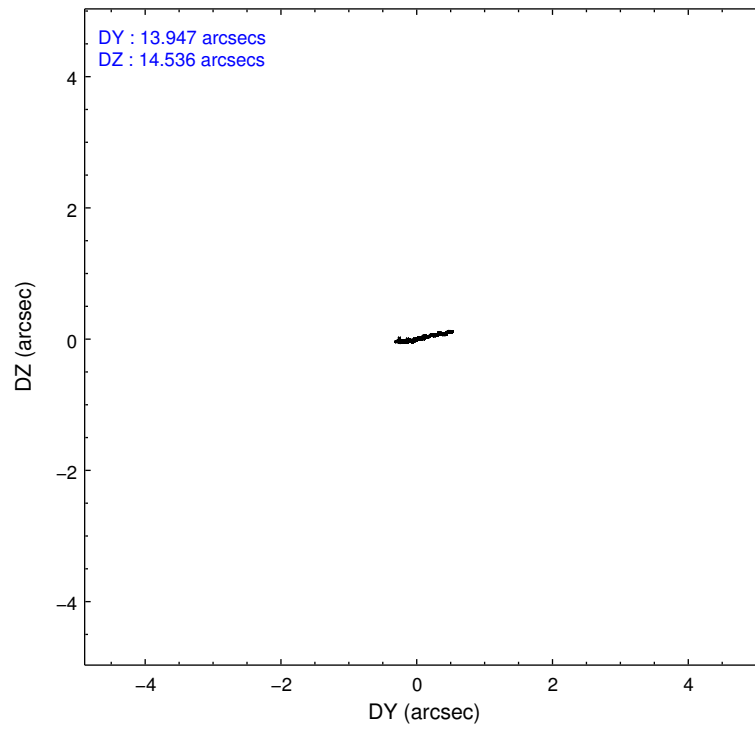
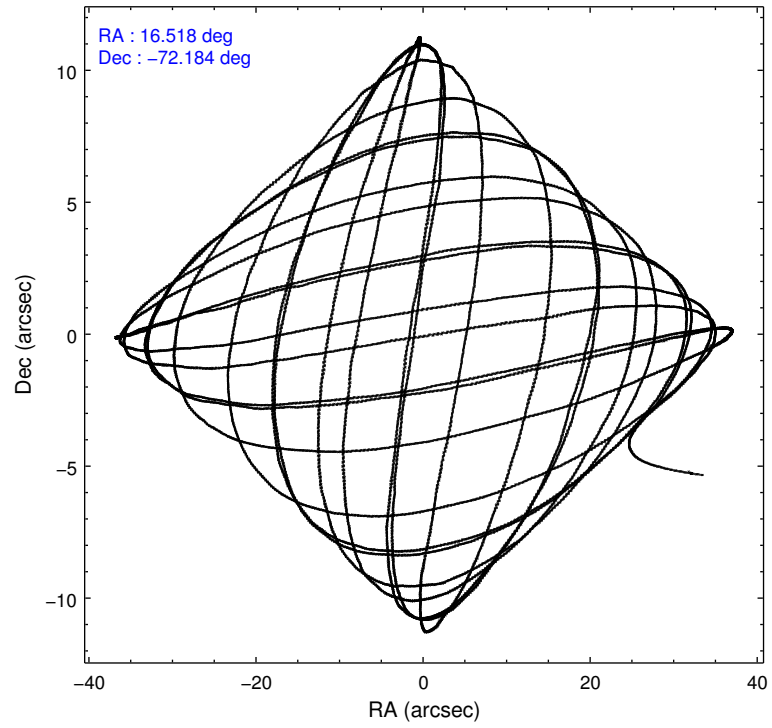
	<b>ccd 5</b>
grade 0 events	17080
	29%
grade 1 events	67
	0%
grade 2 events	12348
	21%
grade 3 events	4380
	7%
grade 4 events	4413
	7%
grade 5 events	2246
	3%
grade 6 events	8686
	15%
grade 7 events	7726
	13%

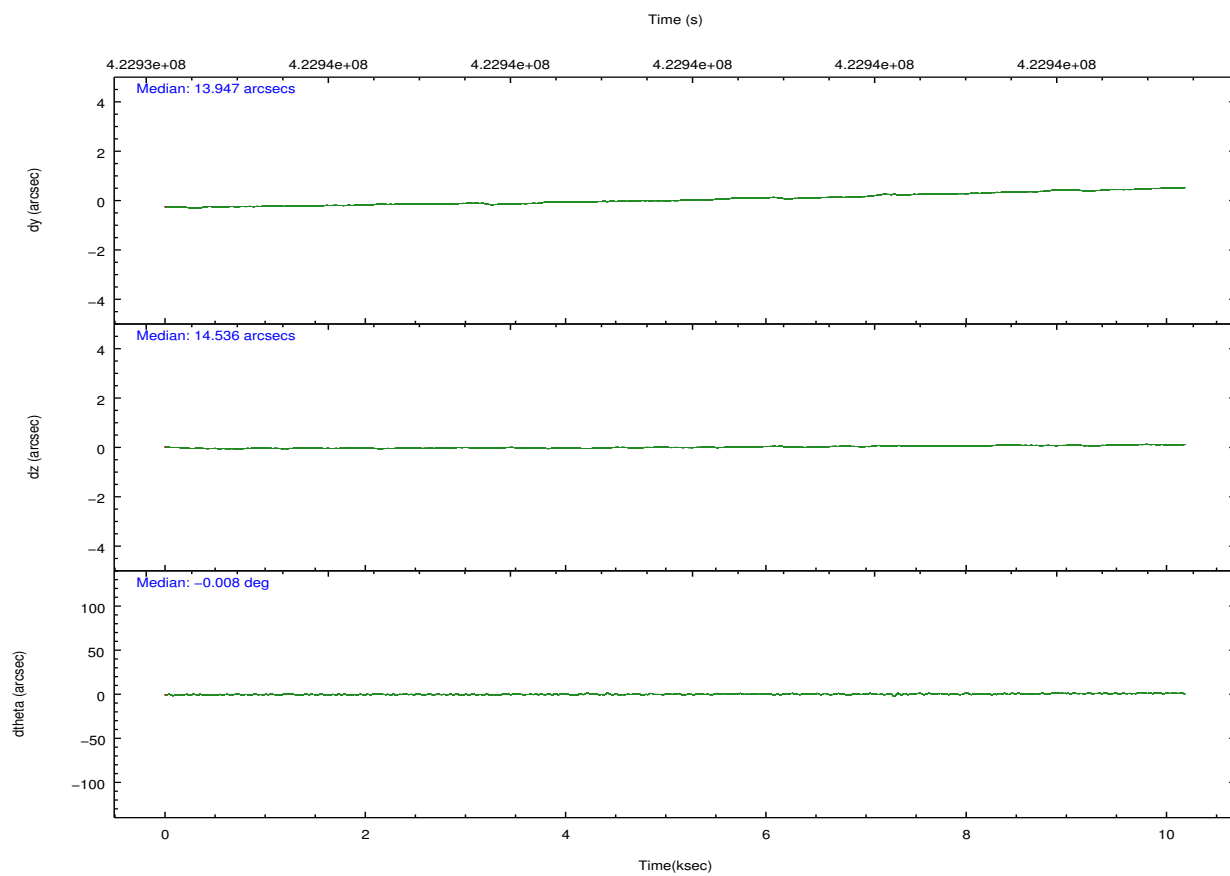
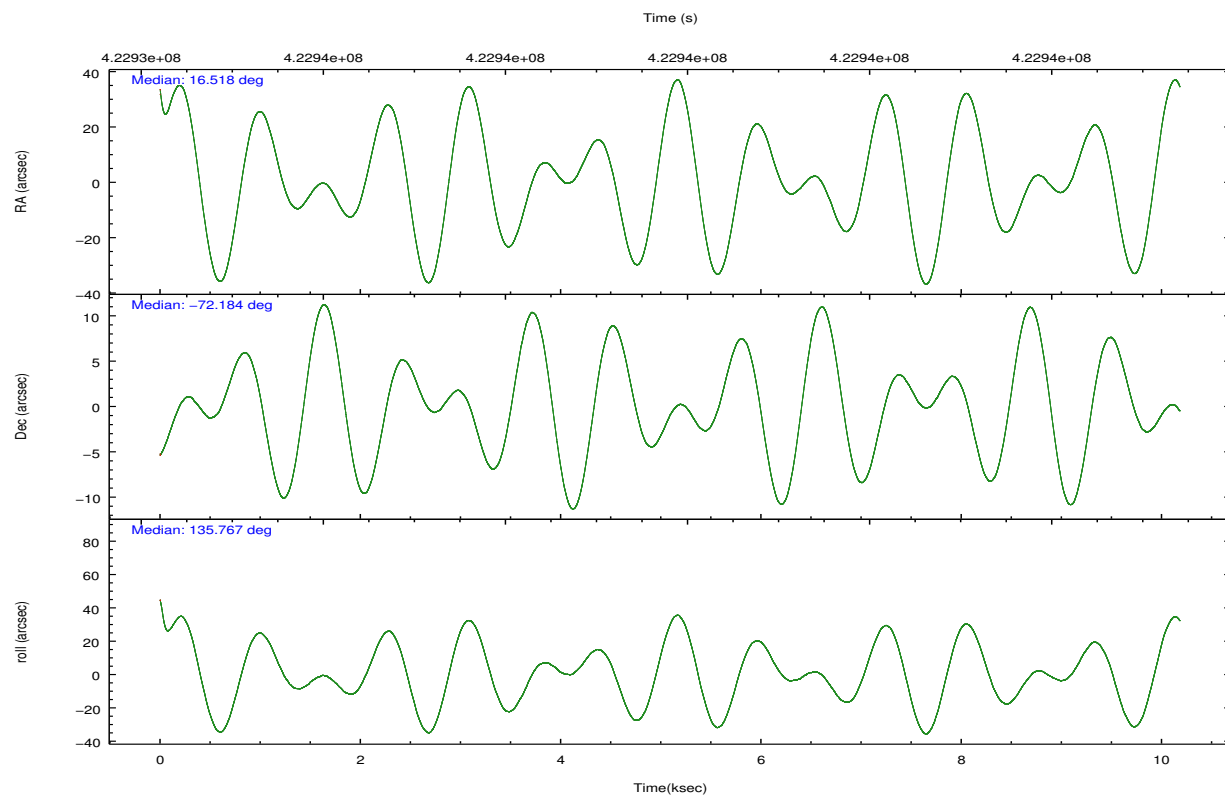
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5	ACIS-5
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	16.604274	16.51752107267373
[deg] Pointing Dec	-72.189892	-72.1835660977994
[deg] Pointing Roll	135.708155	135.7822030901147
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-181.332523	-181.3299052332056
[mm] SIM translation stage offset	-8.800000000000001	-8.802617349802176
[s] Observation start time (MET)	422934904.184000	422933940.15595
Observation start date	2011-05-28T01:53:58	2011-05-28T01:39:00
[s] Observation end time (MET)	422944904.184000	422945038.85653
Observation end date	2011-05-28T04:40:38	2011-05-28T04:43:58
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	1/4
Subarray start row	1	1
Subarray row count	256	256
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	0.8

## 2.3 Aspect



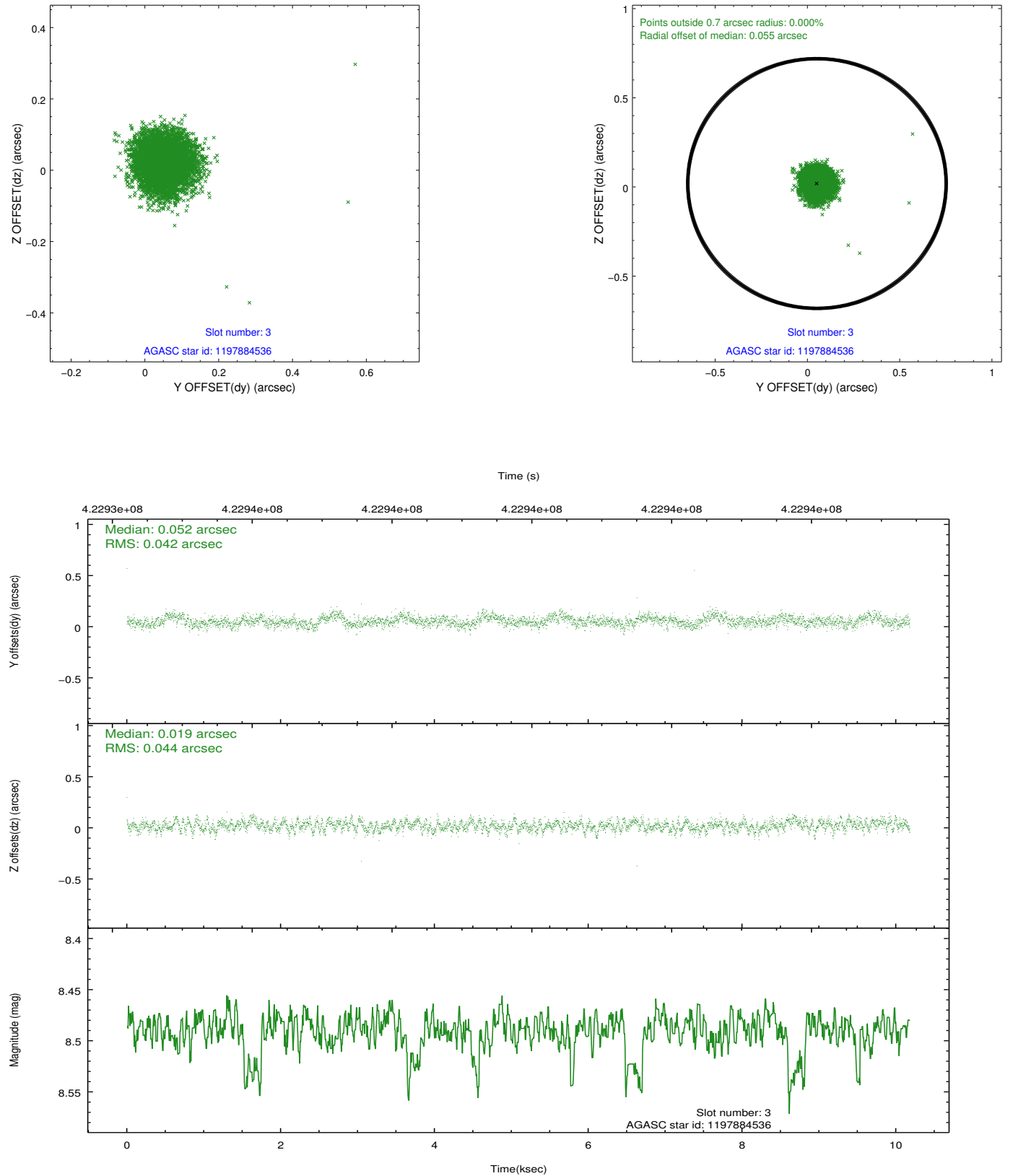


### Slot Statistics

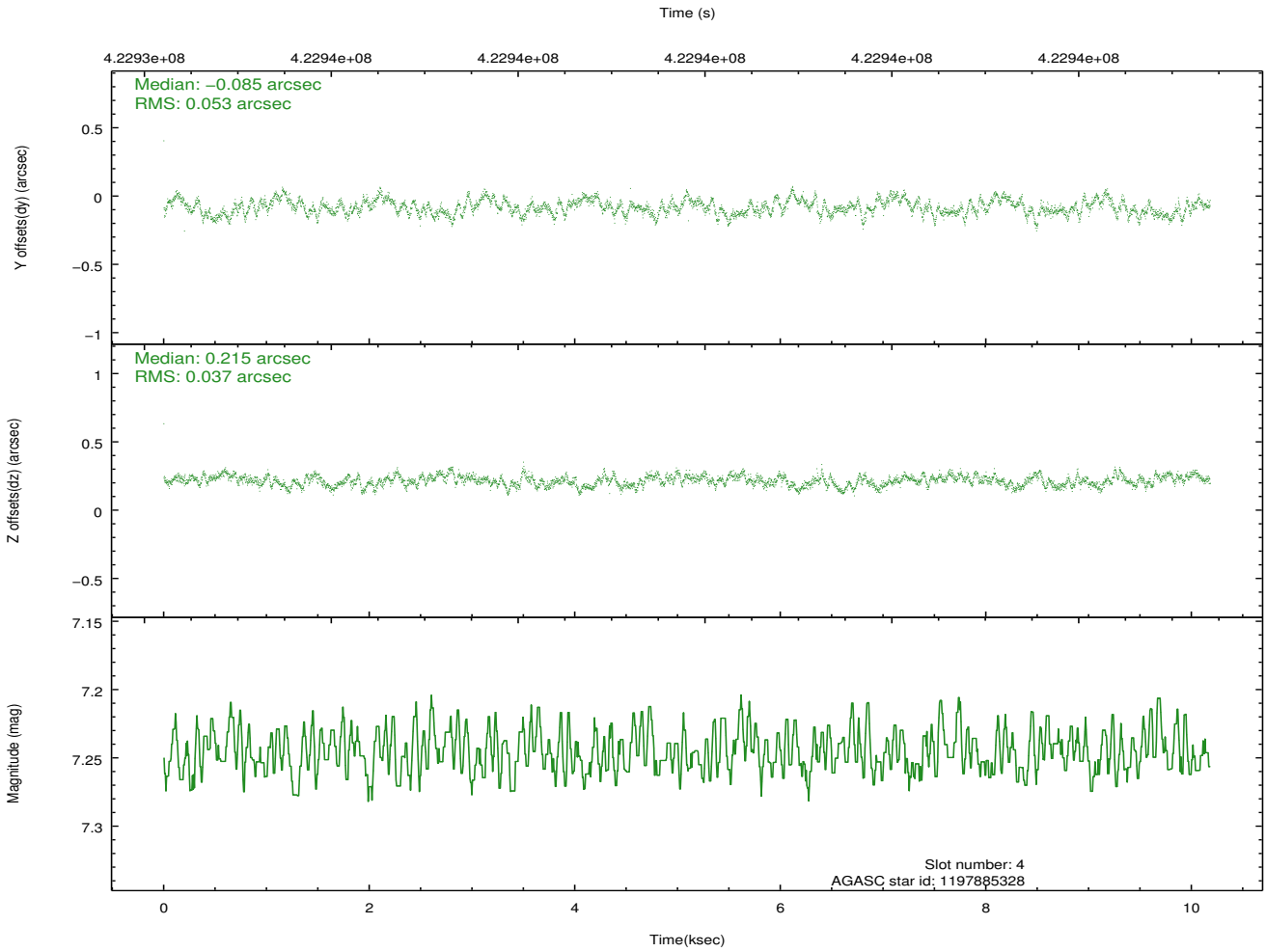
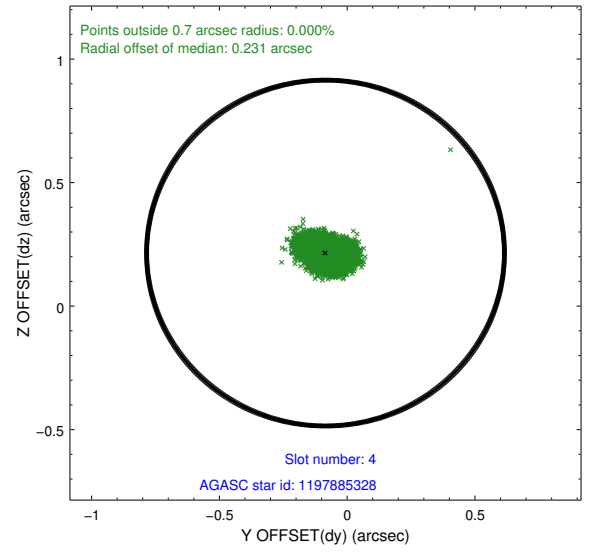
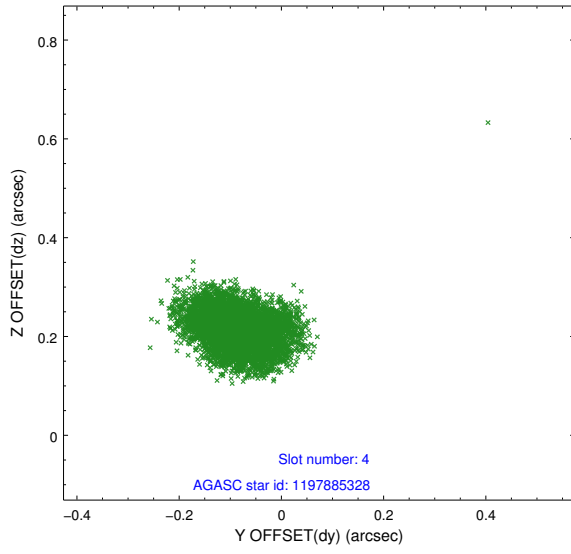
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.95	2484	0.083	0.135	0.012	0.023	0.000000	0.000000	929.90	-1912.68
1	FID	ACIS-S-2	6.87	2484	-0.178	-0.119	0.013	0.020	0.000000	0.000000	-765.97	-1918.17
2	FID	ACIS-S-6	7.16	2483	0.074	-0.013	0.008	0.018	0.000000	0.000000	395.20	627.86
3	GUIDE	1197884536	8.49	4967	0.052	0.019	0.063	0.102	17.160729	-71.835289	443.41	-1347.23
4	GUIDE	1197885328	7.25	4968	-0.085	0.215	0.070	0.108	16.283090	-71.733943	1405.33	-921.63
5	GUIDE	1198283128	7.70	4965	-0.036	0.095	0.051	0.079	17.272580	-72.642428	-1653.57	667.65
6	GUIDE	1197884712	8.30	4968	-0.039	-0.045	0.075	0.130	16.087398	-72.252690	246.37	560.22
7	GUIDE	1198189696	7.37	4966	0.103	-0.279	0.076	0.112	15.223750	-72.697522	-230.23	2352.49

## 2.4 Star Slots

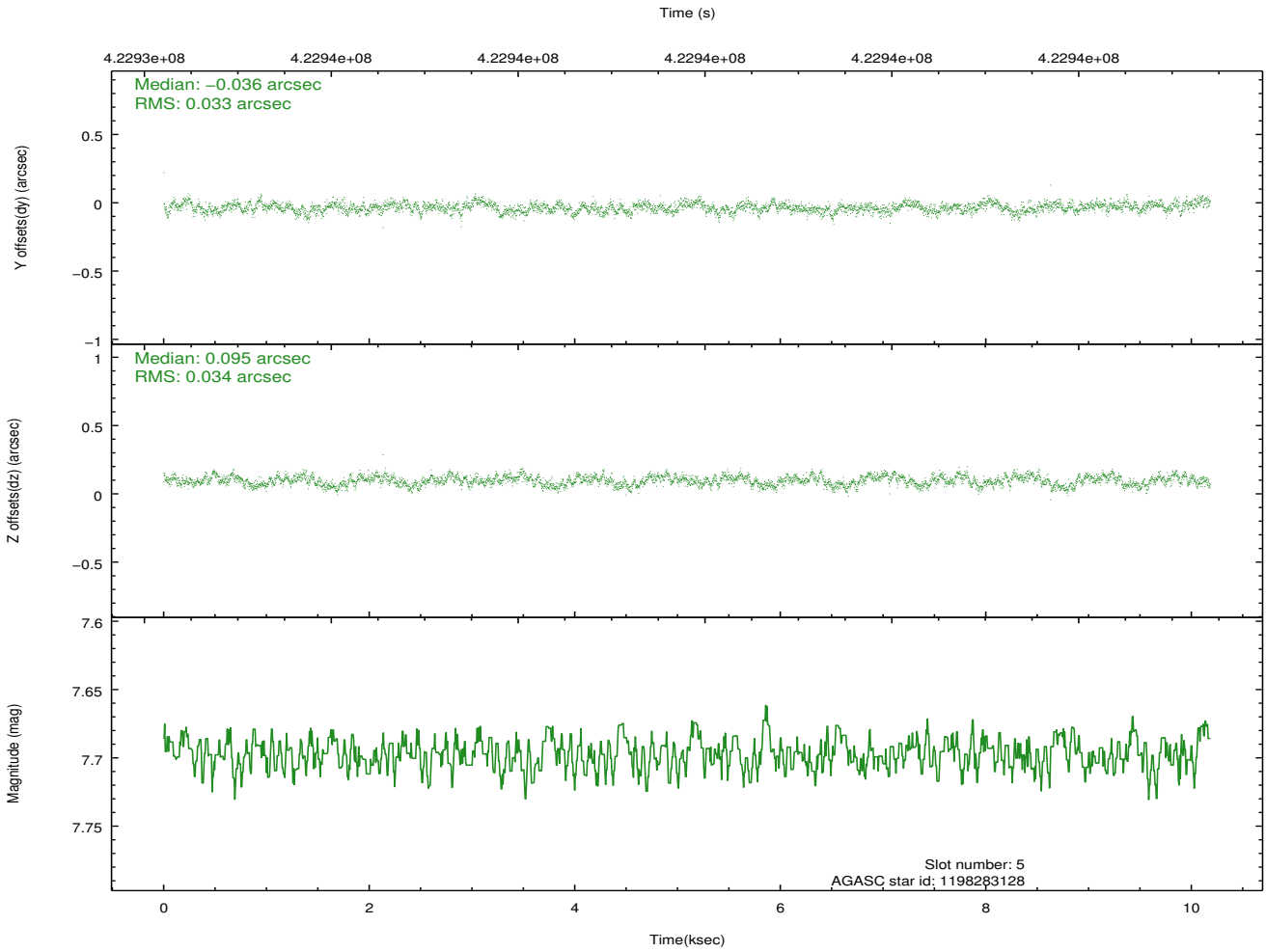
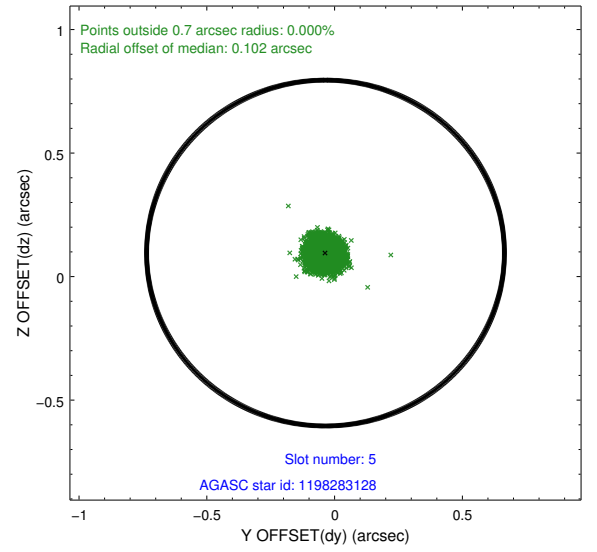
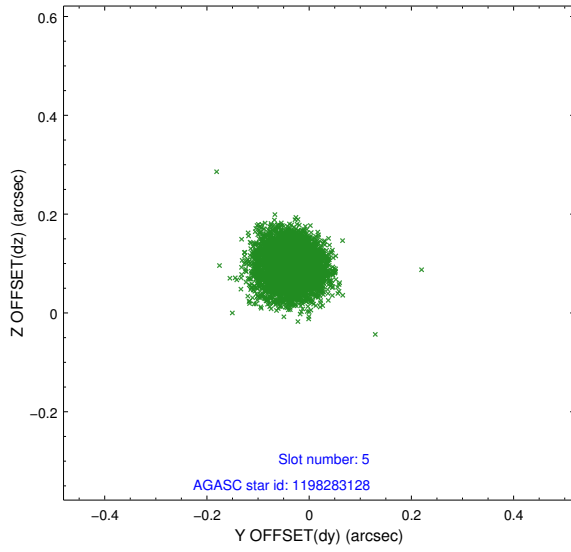
### 2.4.1 Slot 3



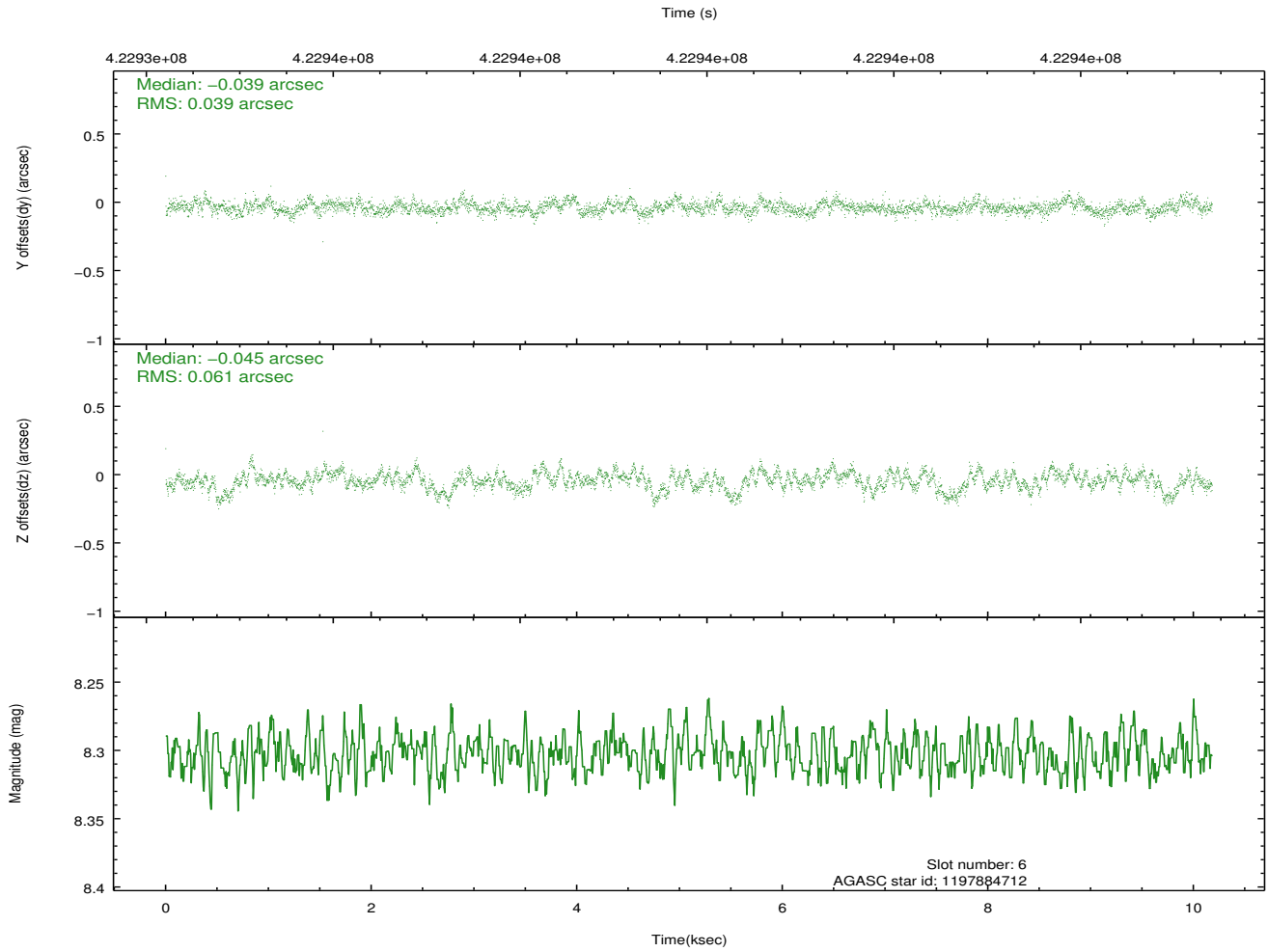
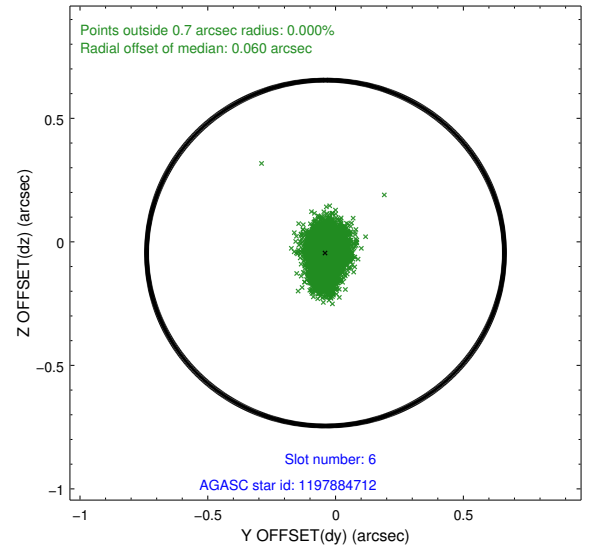
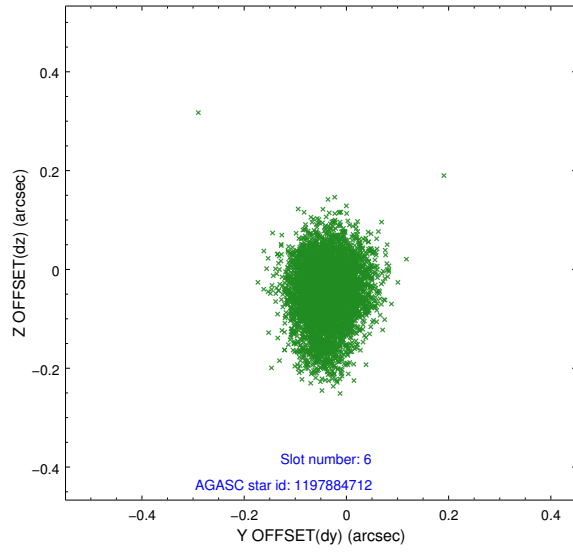
## 2.4.2 Slot 4



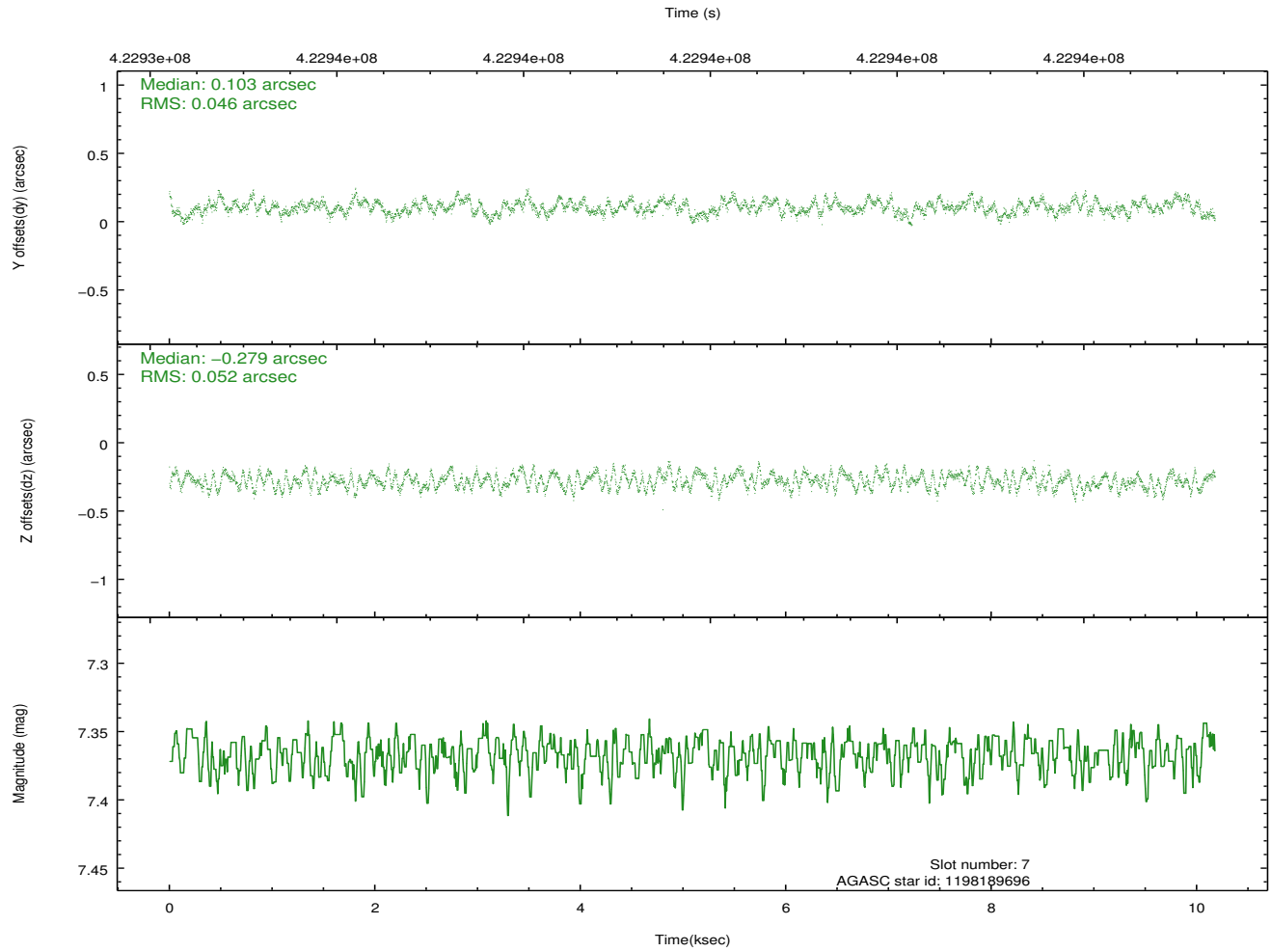
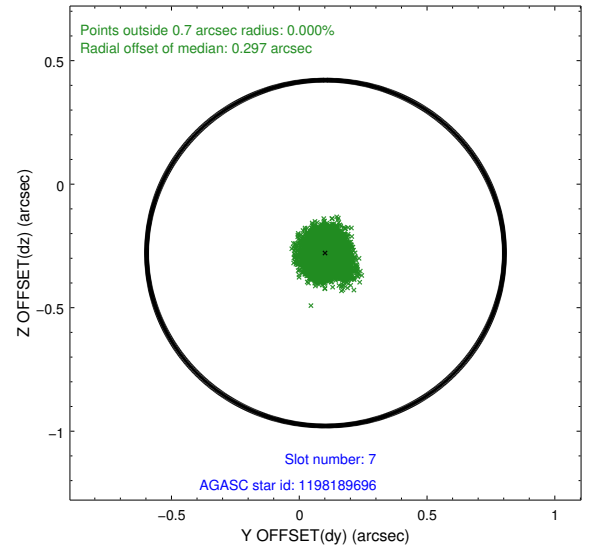
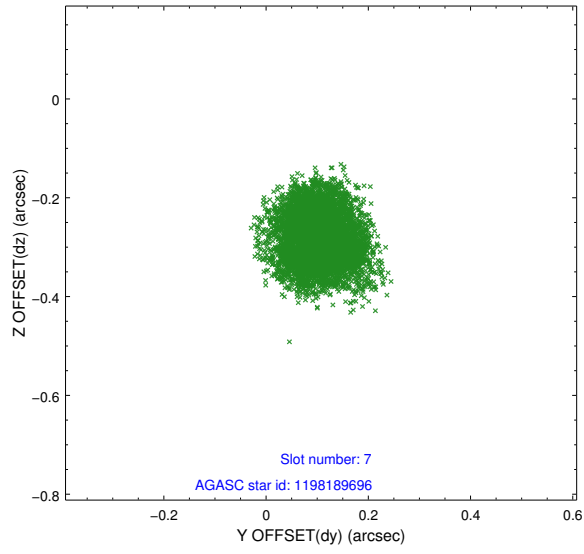
### 2.4.3 Slot 5



## 2.4.4 Slot 6

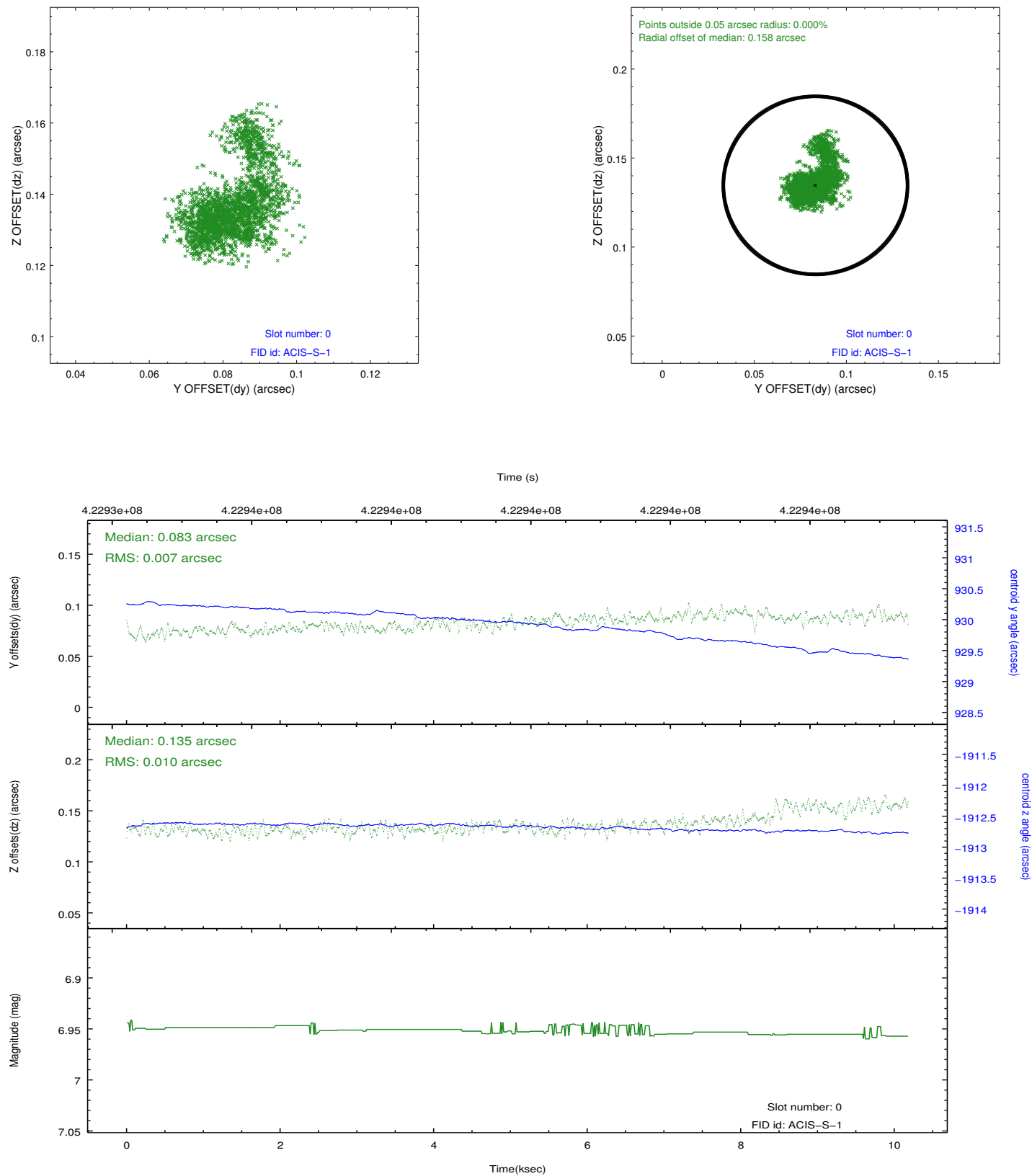


## 2.4.5 Slot 7

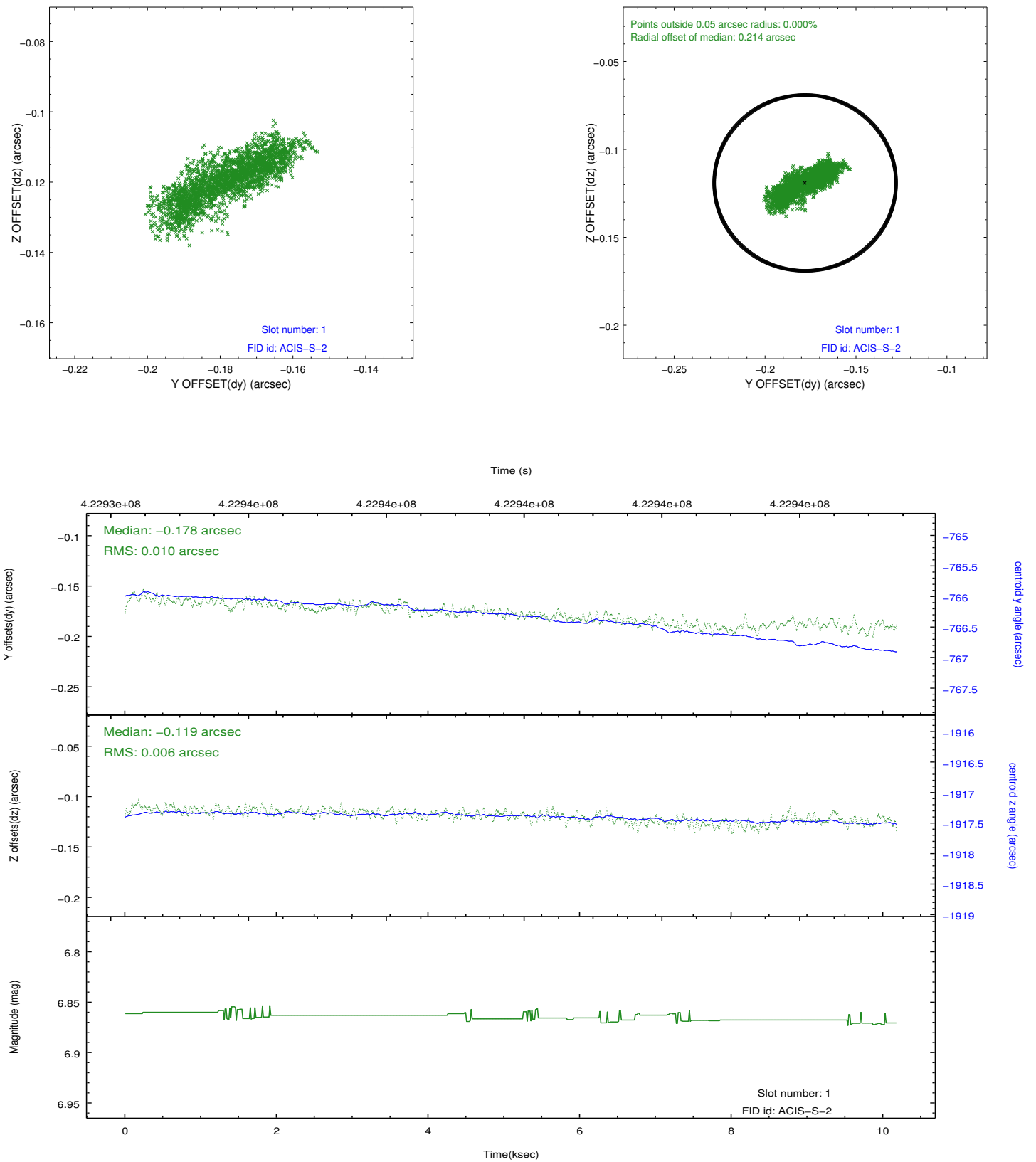


## 2.5 FID Slots

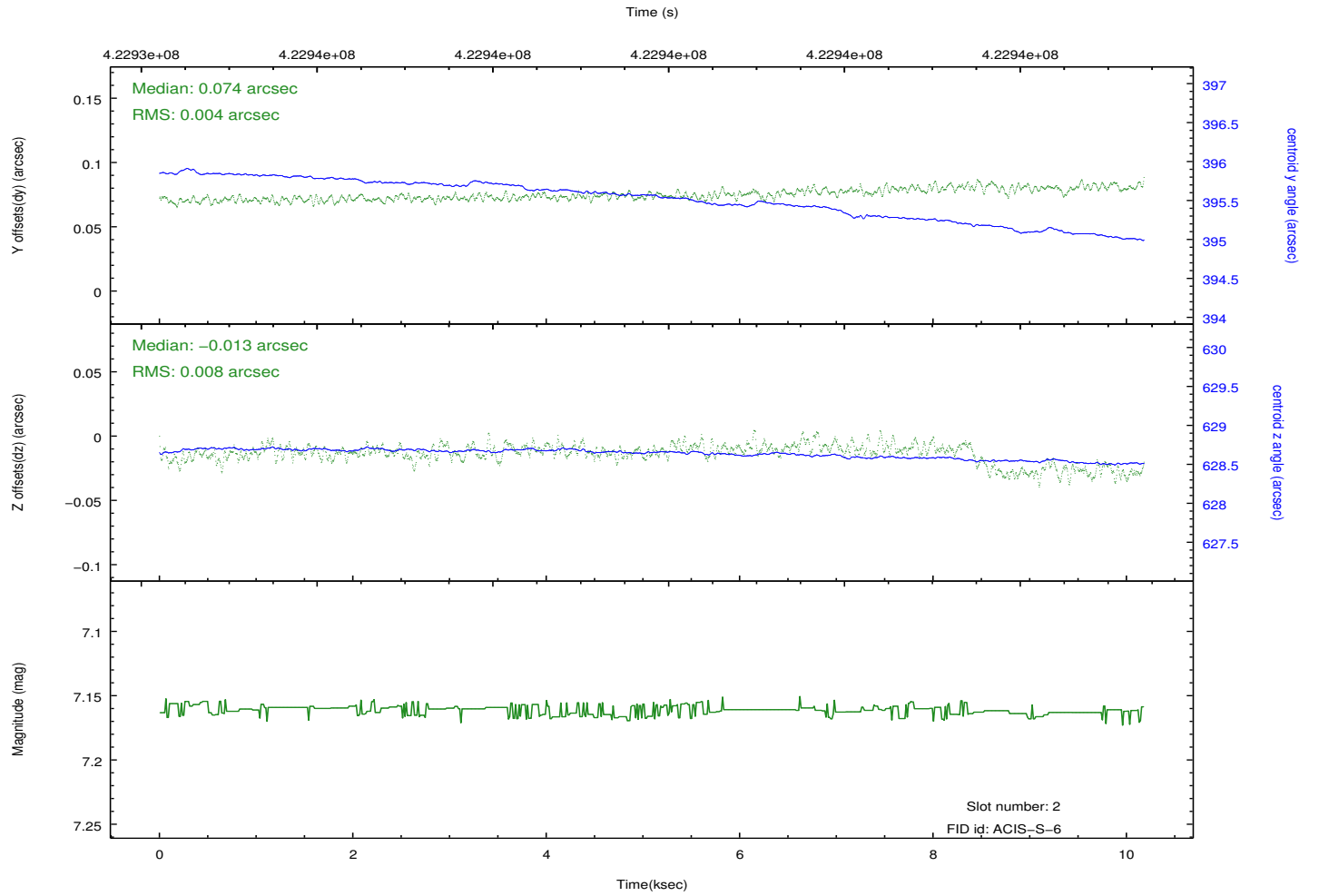
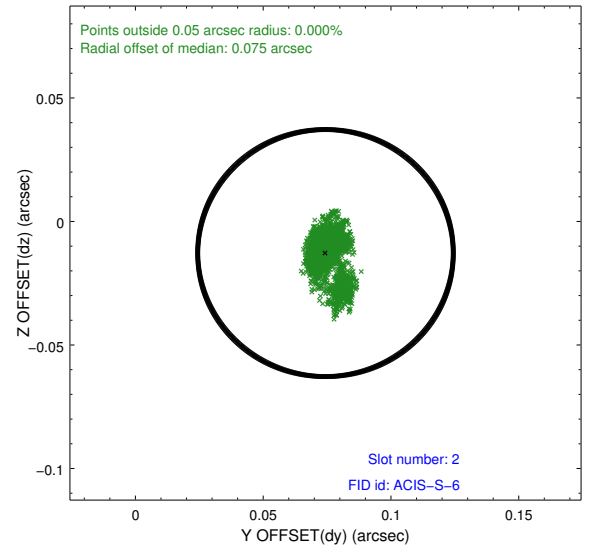
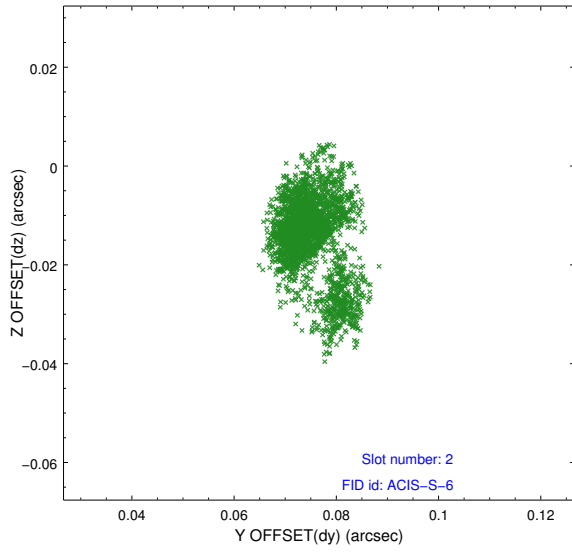
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.028000149488

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.

=====

Target is very off-axis.