

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 21421 - L2 Version 1  
Chandra X-Ray Center

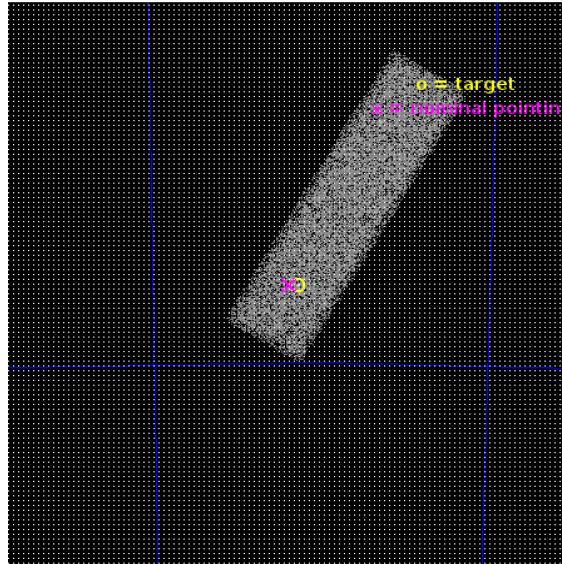
L2 Processing Date : Feb 18 2019

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# 1 Front

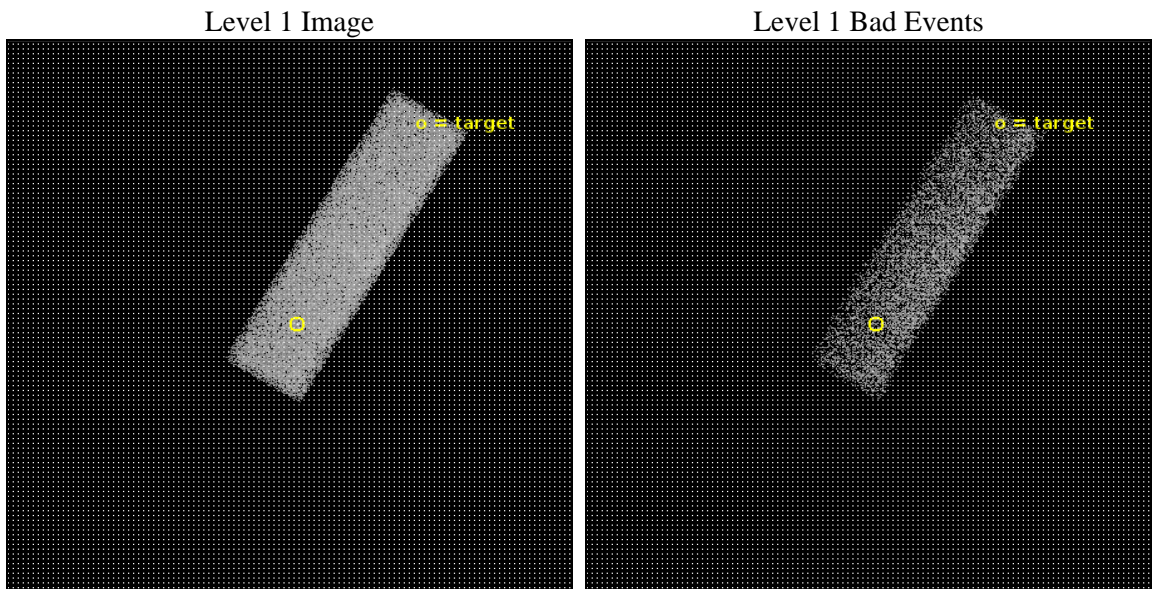
seq_num	703718	Sequence number
obs_id	21421	Observation id
title	THE TORUS AND THE HOST: Extended Hard Emission in Compton Thick AGN with NuSTAR Spectra	Proposal title
observer	Dr. Martin Elvis	Principal investigator
object	ESO005-G004	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	91.423333	Observer's specified target RA [deg]
dec_targ	-86.631944	Observer's specified target Dec [deg]
ra_nom	91.484493010295	Nominal RA [deg]
dec_nom	-86.631476794963	Nominal Dec [deg]
roll_nom	300.8033626247	Nominal Roll [deg]
revision	1	Processing version of data
ontime	23060.731505871	Sum of GTIs [s]
livetime	21935.443266309	Livetime [s]
ontime7	23060.731505871	Sum of GTIs [s]
l2events	26930	Number of level 2 events



## 2 OBI

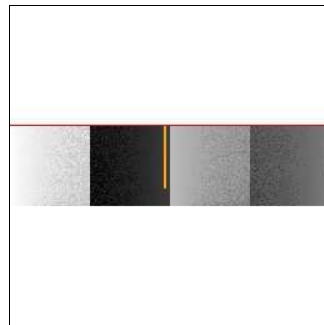
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	23060.731505871	Sum of GTIs [s]
caldbver	4.8.2	&#160	ontime7	23060.731505871	Sum of GTIs [s]
date	2019-02-19T01:55:15	Date and time of file creation	l1events	57948	Number of level 1 events
revision	1	Processing version of data			

### 2.1.4 Events

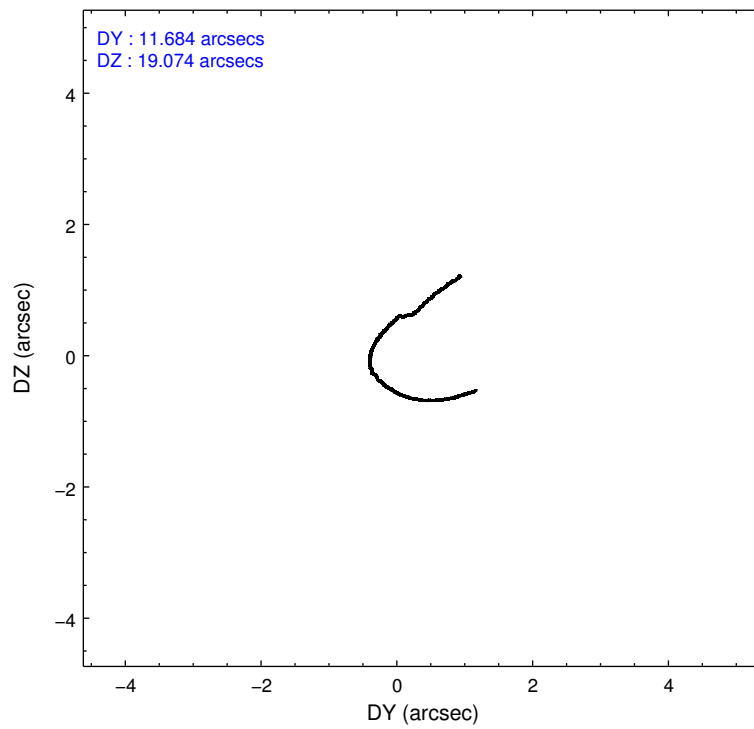
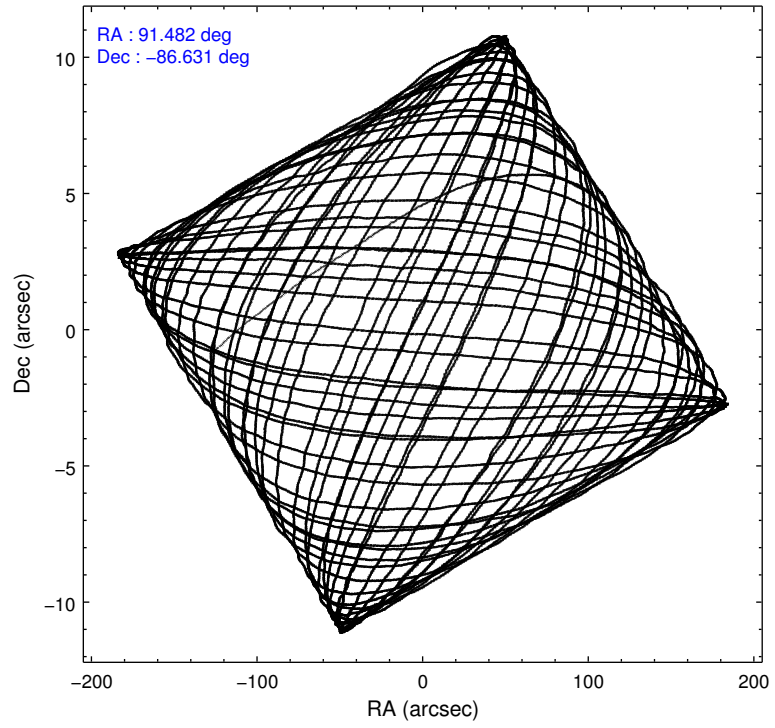
	<b>ccd 7</b>
level 1 events	57948
rejected events	30093
rejected %	<b>51%</b>

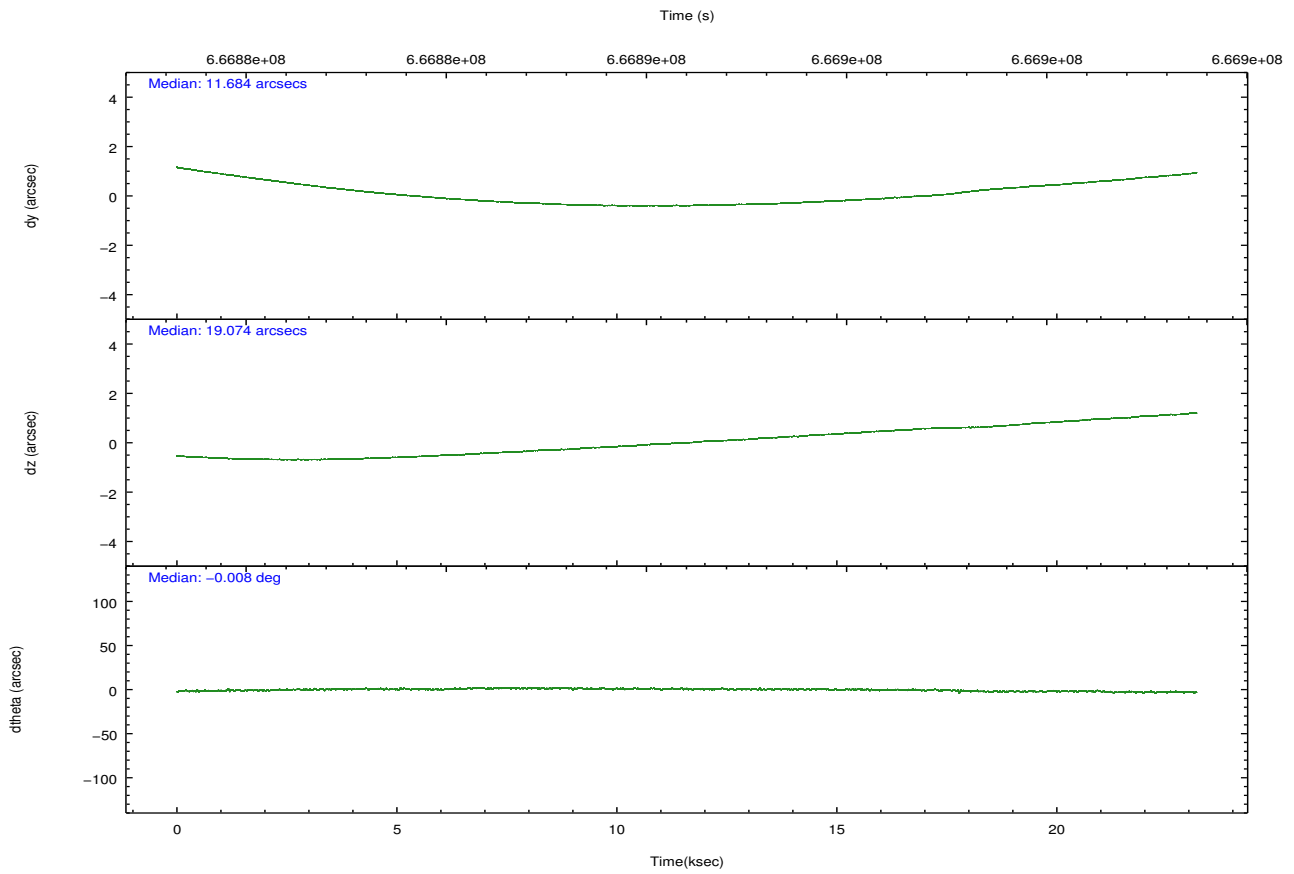
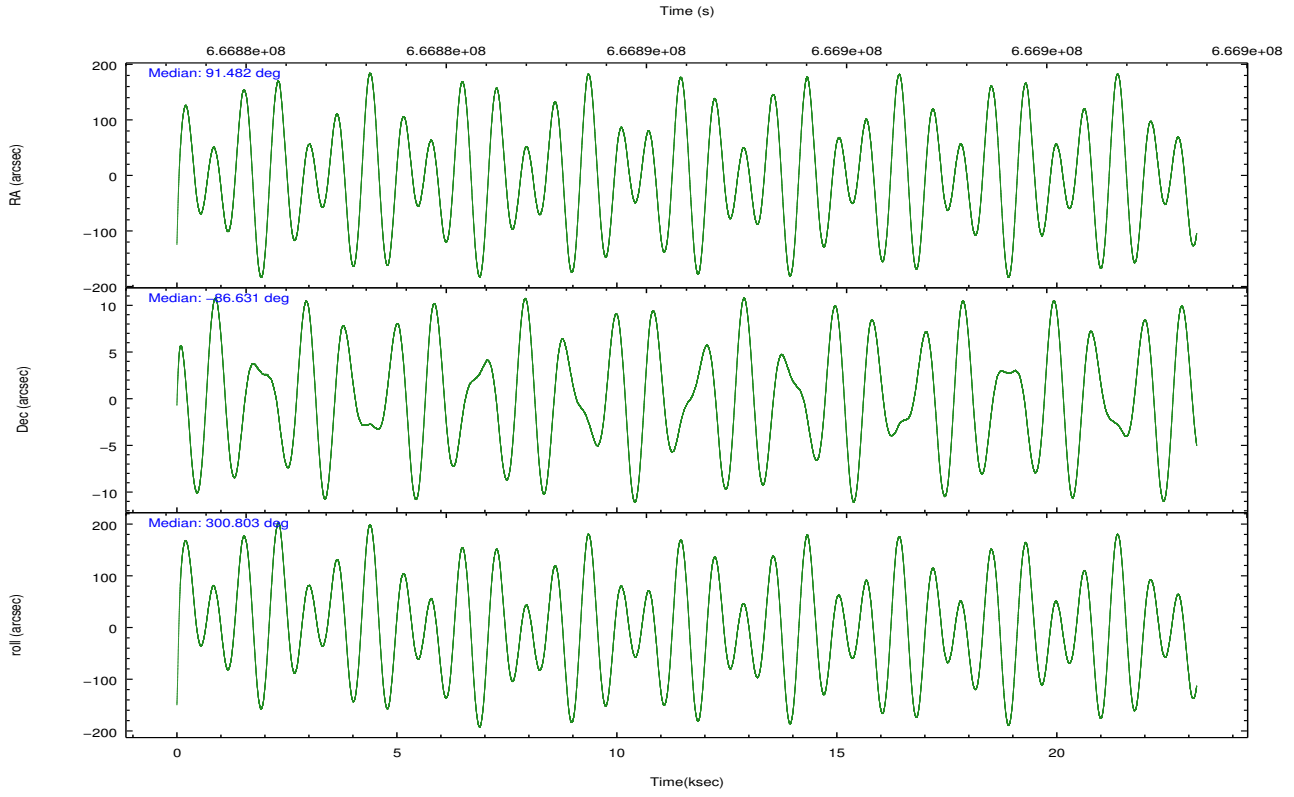
	<b>ccd 7</b>
grade 0 events	2788
	4%
grade 1 events	107
	0%
grade 2 events	5551
	9%
grade 3 events	3007
	5%
grade 4 events	2969
	5%
grade 5 events	5866
	10%
grade 6 events	13540
	23%
grade 7 events	24120
	41%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	91.075422	91.48449301029491	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-86.618283	-86.63147679496272	Subarray start row	385	385
[deg] Pointing Roll	300.238424	300.8033626247008	Subarray row count	256	256
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.8
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	666879582.184000	666878390.34991			
Observation start date	2019-02-18T12:18:33	2019-02-18T11:59:50			
[s] Observation end time (MET)	666902582.184000	666903545.3889199			
Observation end date	2019-02-18T18:41:53	2019-02-18T18:59:05			
Read mode	TIMED	TIMED			

## 2.3 Aspect





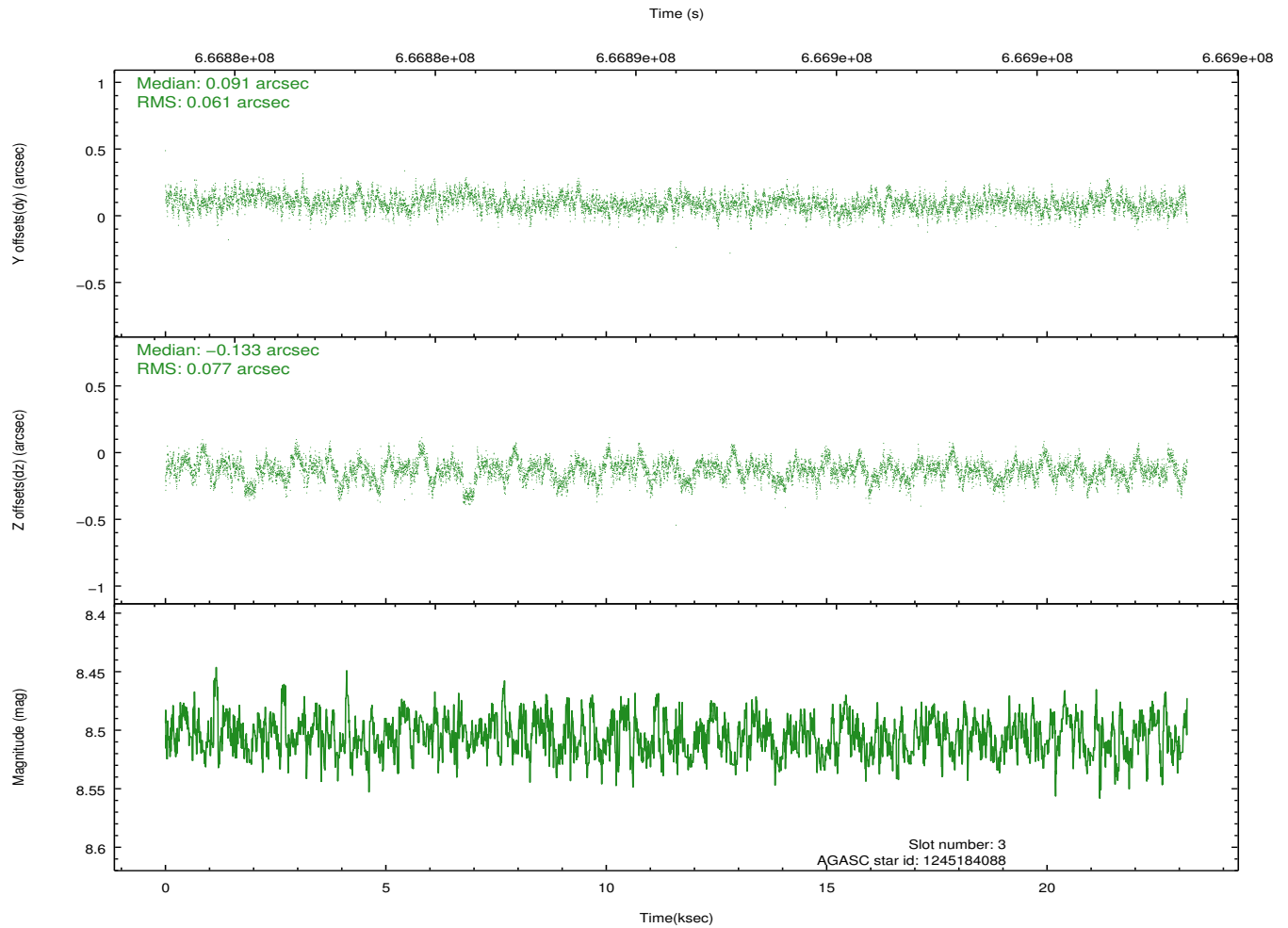
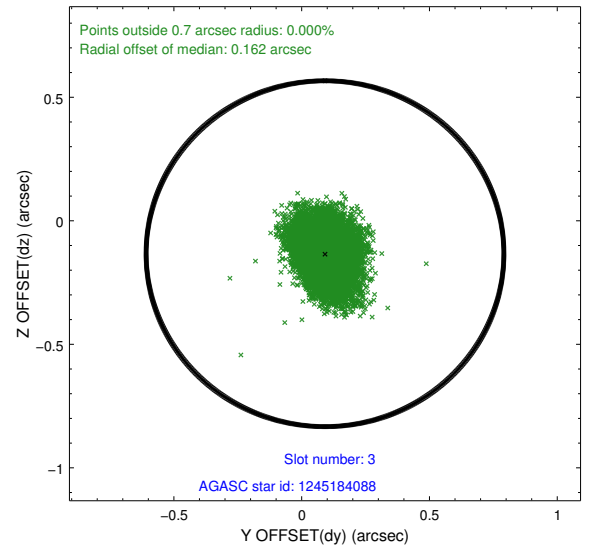
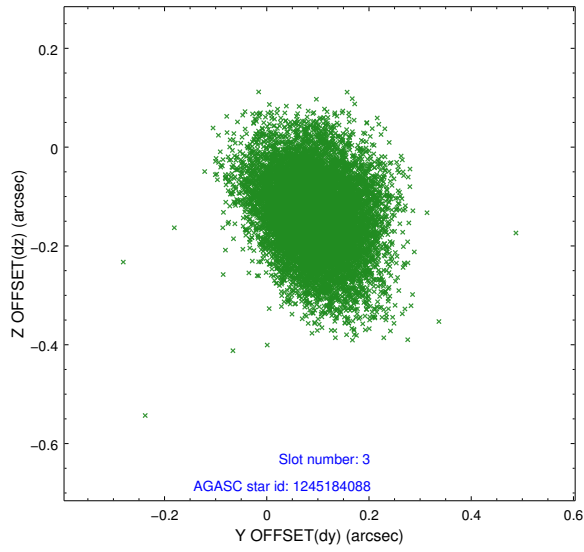
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.21	5653	1.000	0.166	-0.064	0.031	0.058	0.000000	0.000000	931.61	-1736
1	FID		ACIS-S-5	7.23	5653	1.000	-0.453	0.053	0.018	0.085	0.000000	0.000000	-1818.03	161
2	FID		ACIS-S-6	7.38	5654	1.000	0.269	0.015	0.028	0.053	0.000000	0.000000	396.99	805
3	GUIDE	used	1245184088	8.51	11301	1.000	0.091	-0.133	0.103	0.174	89.087634	-86.290349	-1245.91	191
4	GUIDE	used	1245188864	8.10	11304	1.000	0.129	0.155	0.123	0.199	86.042735	-86.902185	427.86	-1380
5	GUIDE	used	1245189336	7.94	11304	1.000	-0.071	0.202	0.104	0.171	88.042092	-86.735001	64.47	-756
6	GUIDE	used	1245320064	9.08	11295	1.000	-0.385	-0.274	0.228	0.357	102.460984	-86.932581	2262.76	1203
7	GUIDE	used	1244673992	8.34	11302	1.000	0.230	0.059	0.106	0.180	88.017431	-86.075097	-2051.36	324

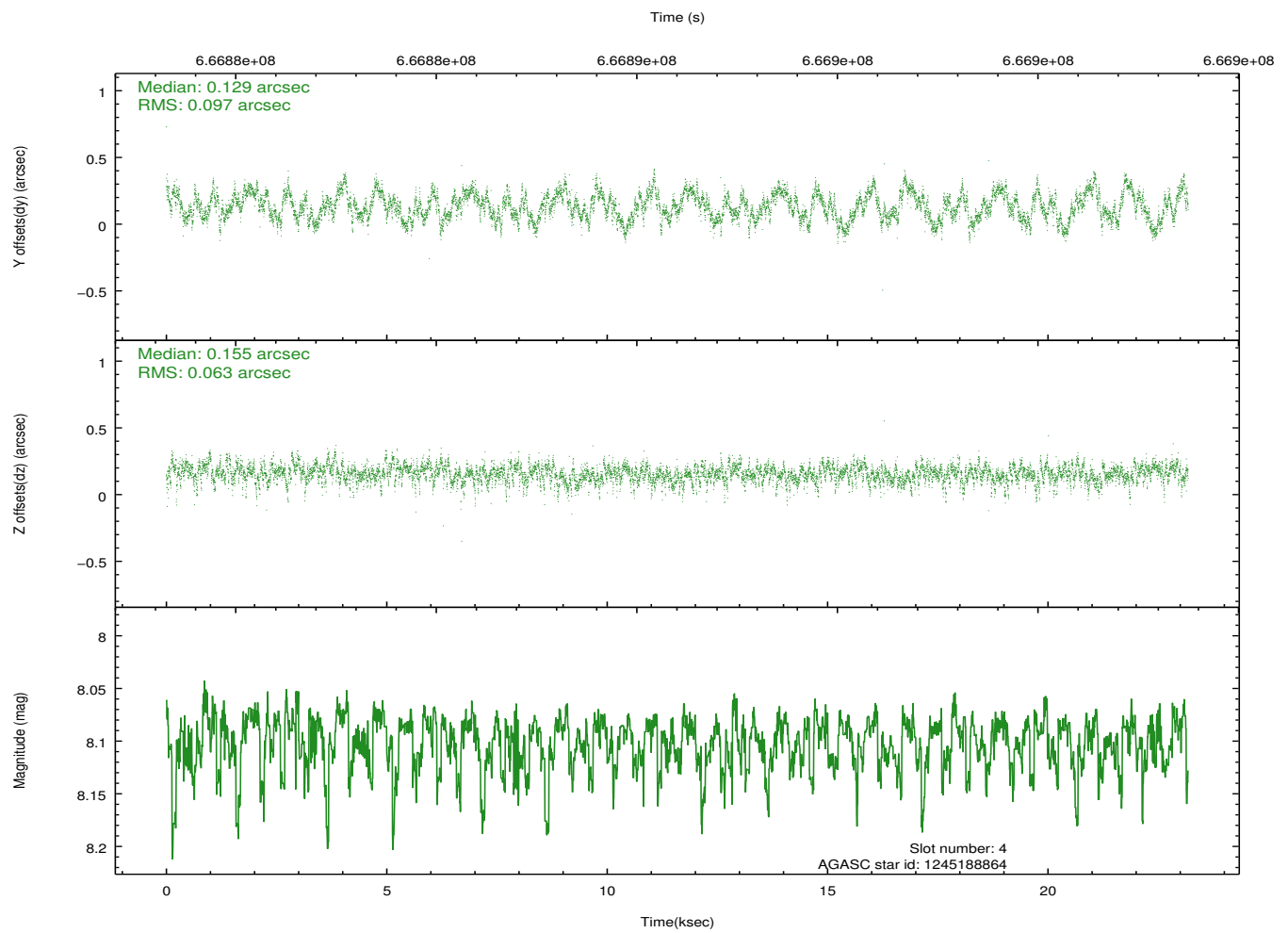
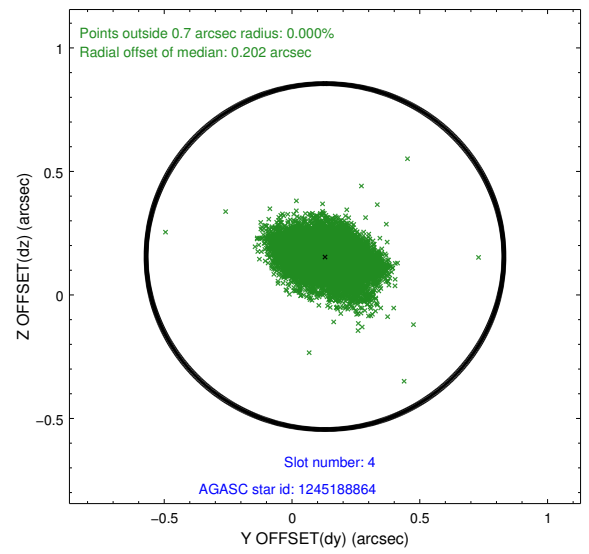
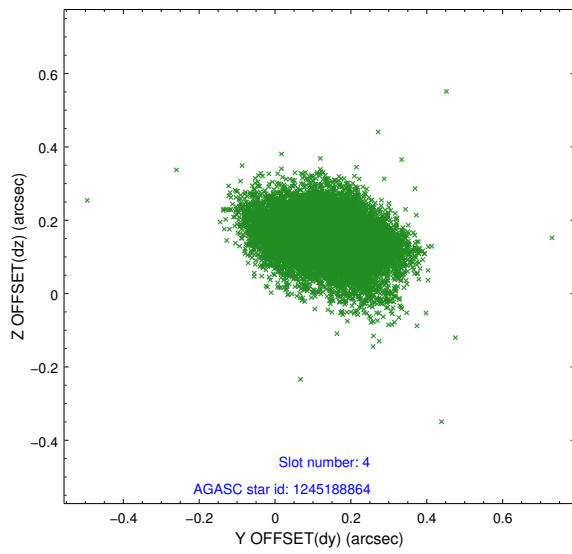
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## 2.4 Star Slots

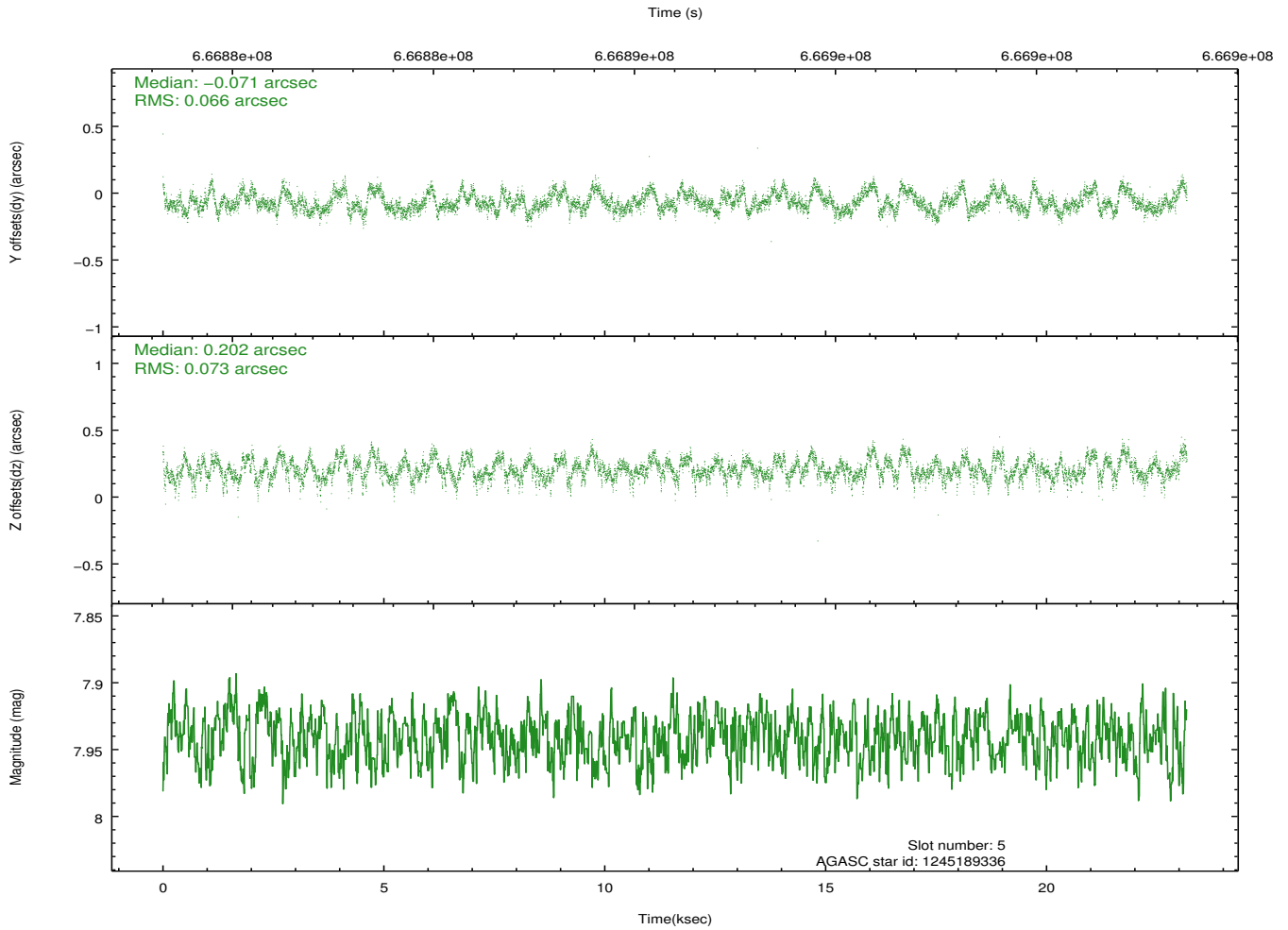
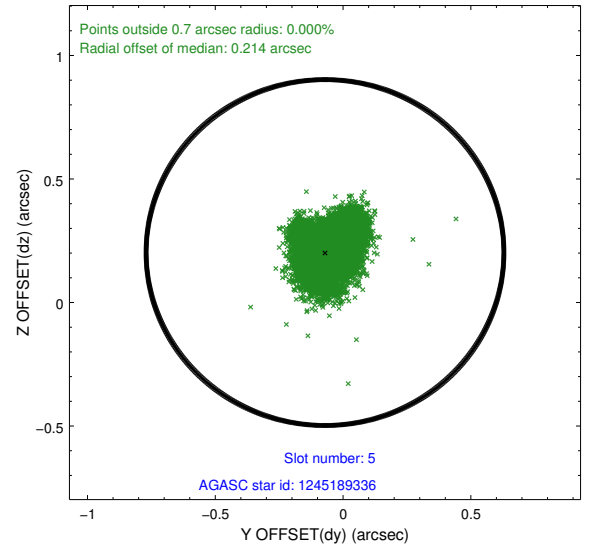
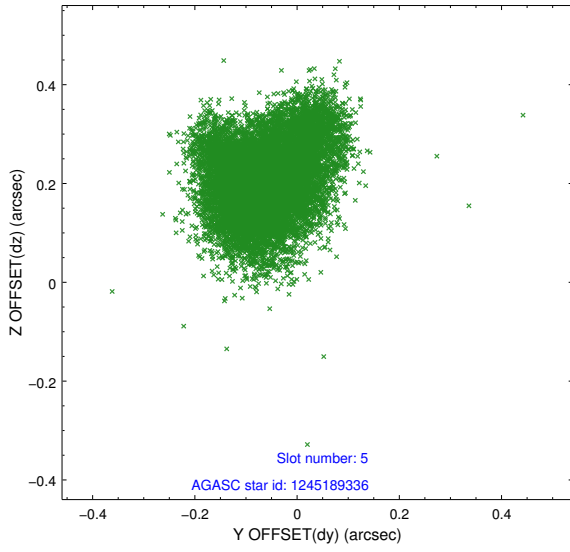
### 2.4.1 Slot 3



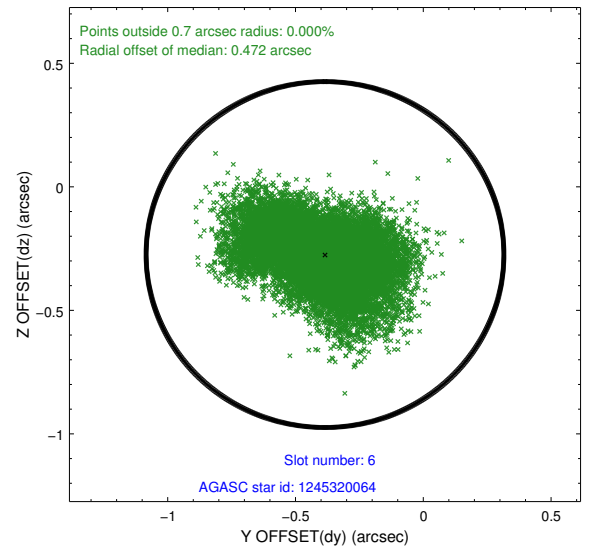
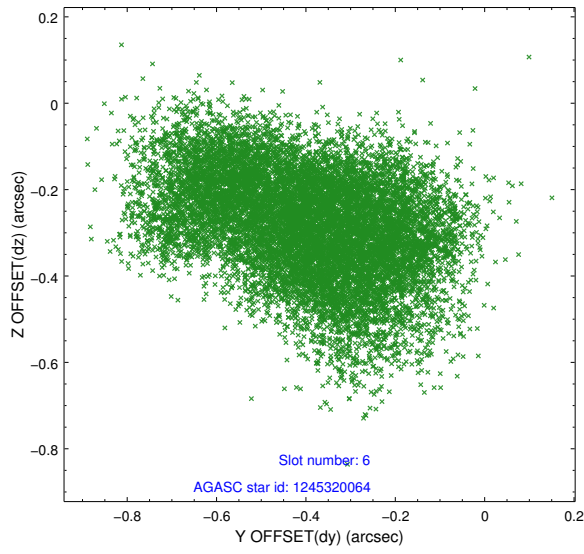
## 2.4.2 Slot 4



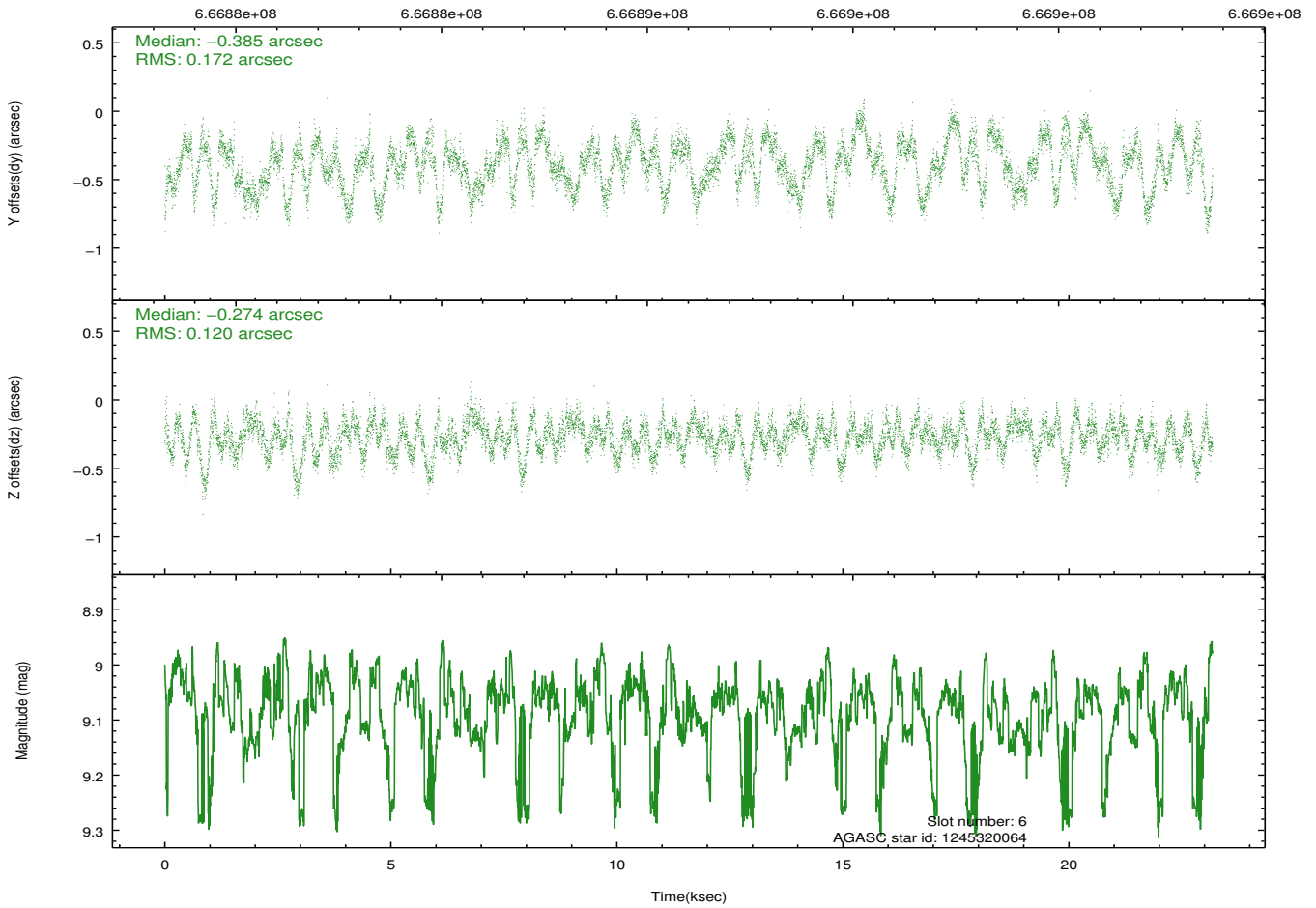
### 2.4.3 Slot 5



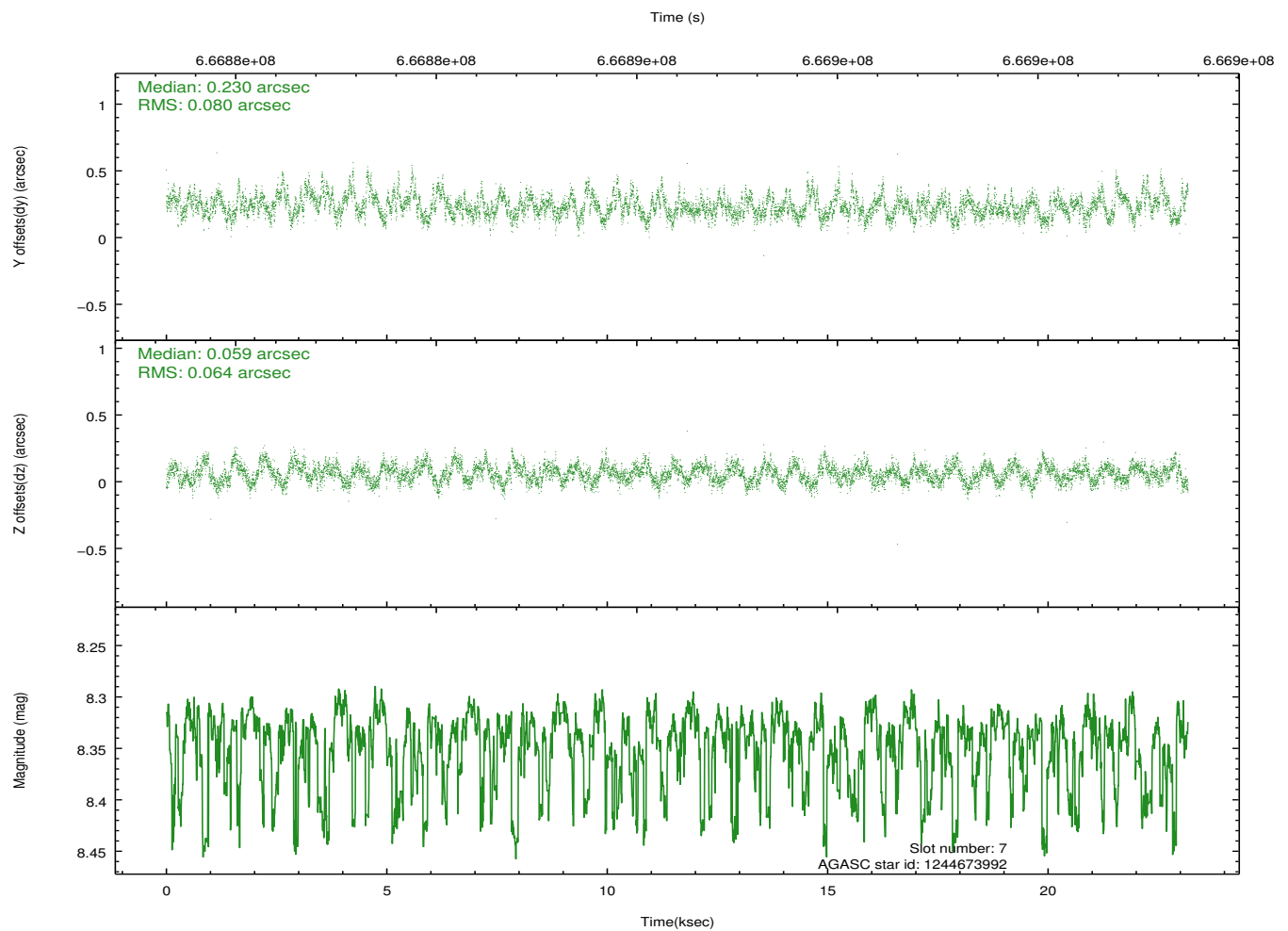
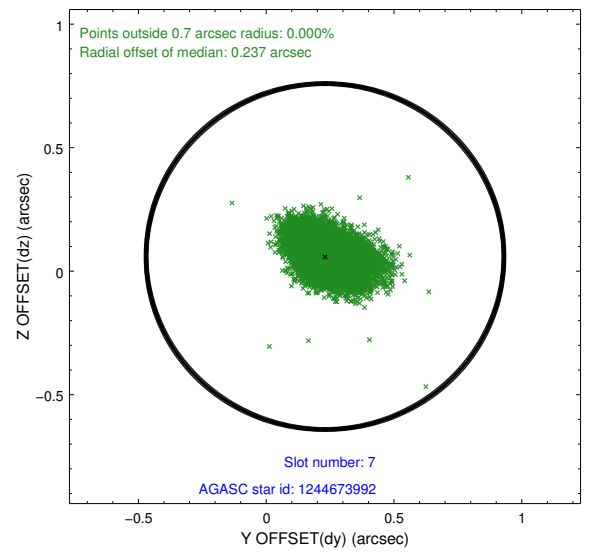
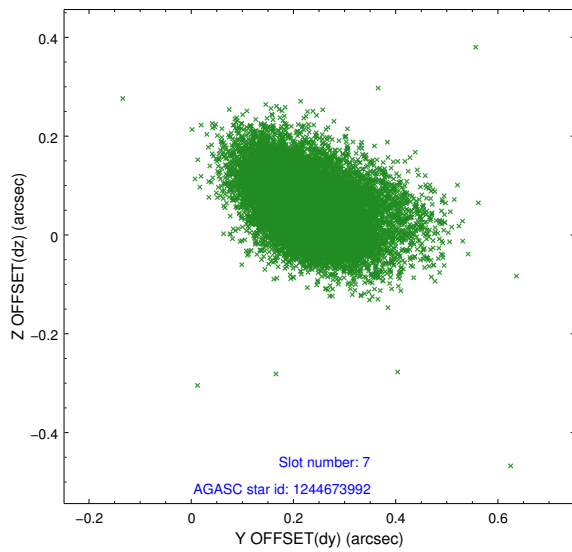
### 2.4.4 Slot 6



Time (s)

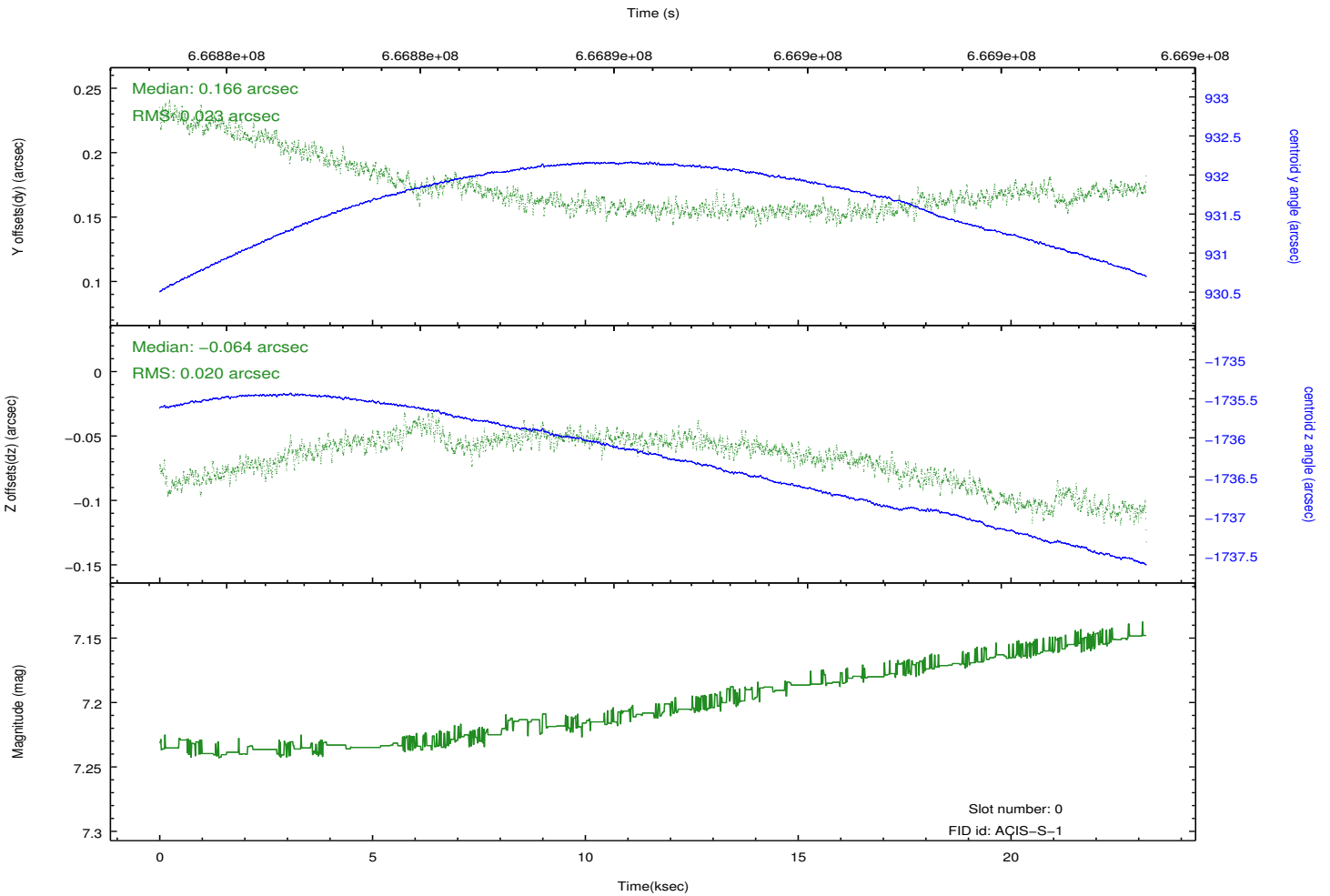
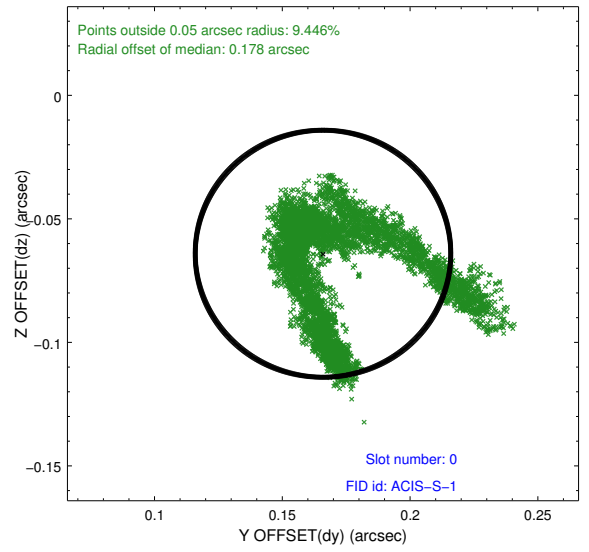
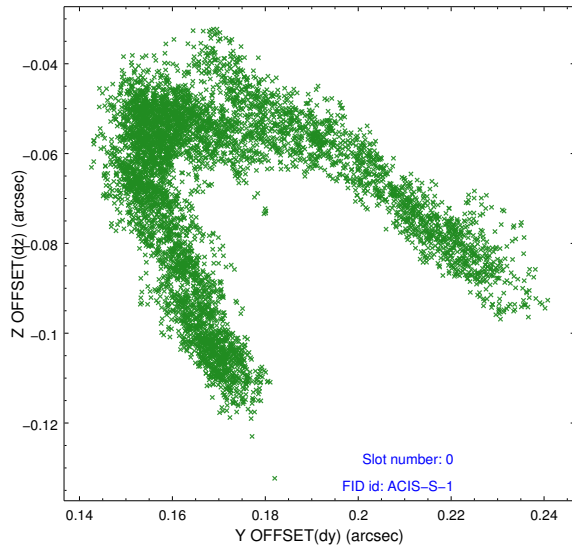


## 2.4.5 Slot 7

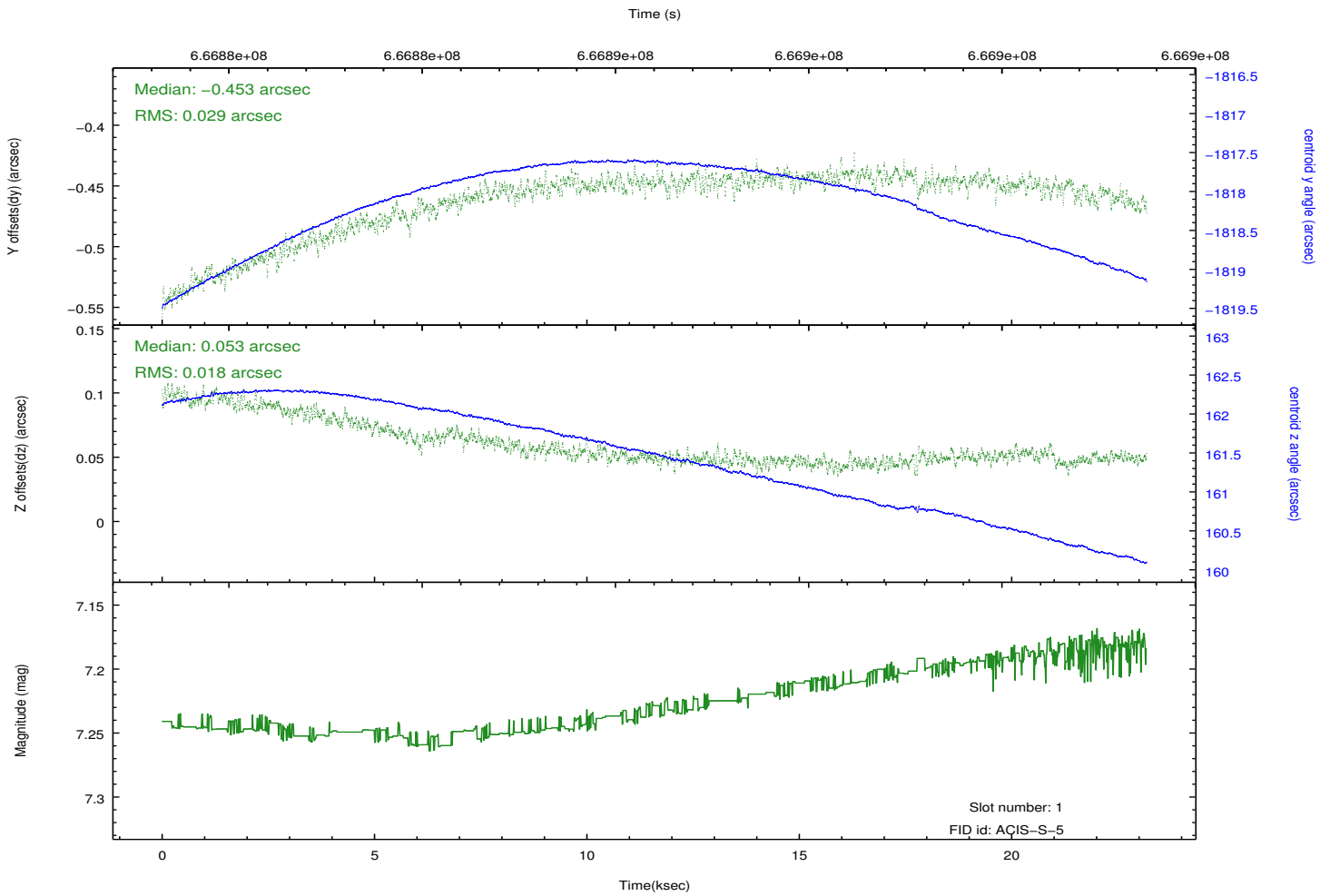
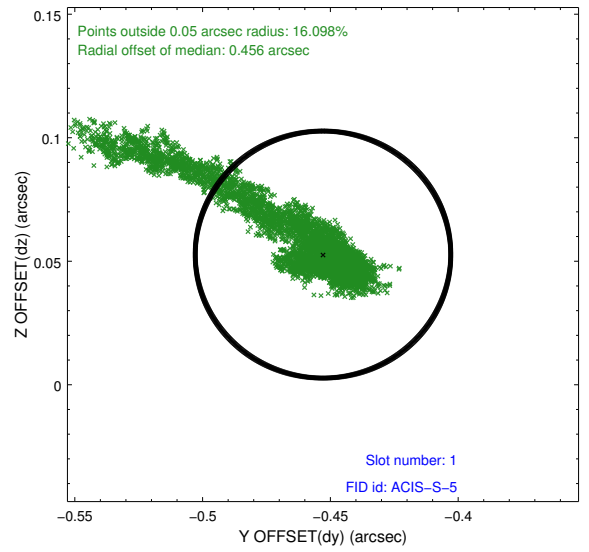
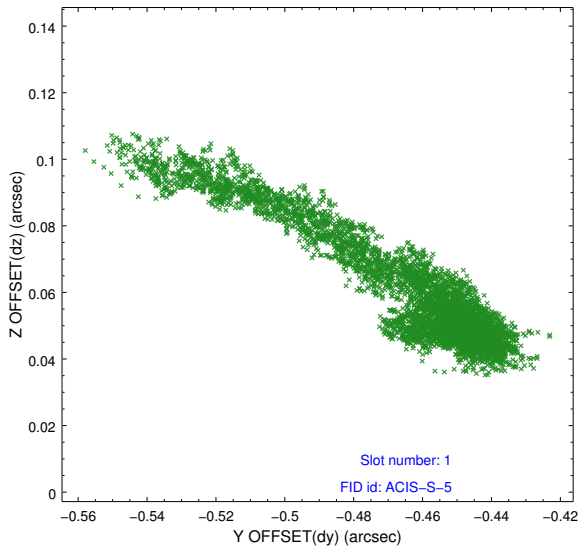


## 2.5 FID Slots

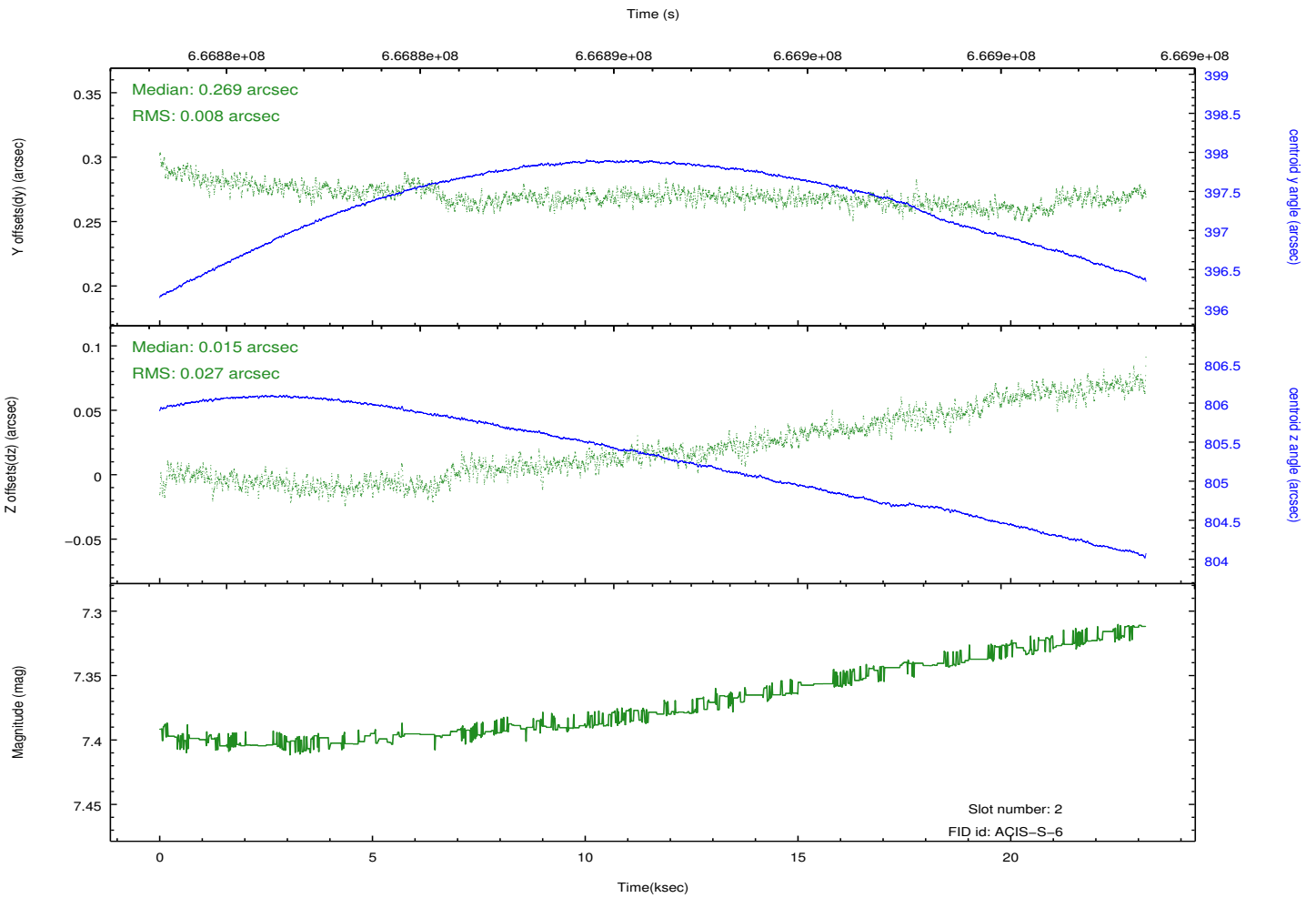
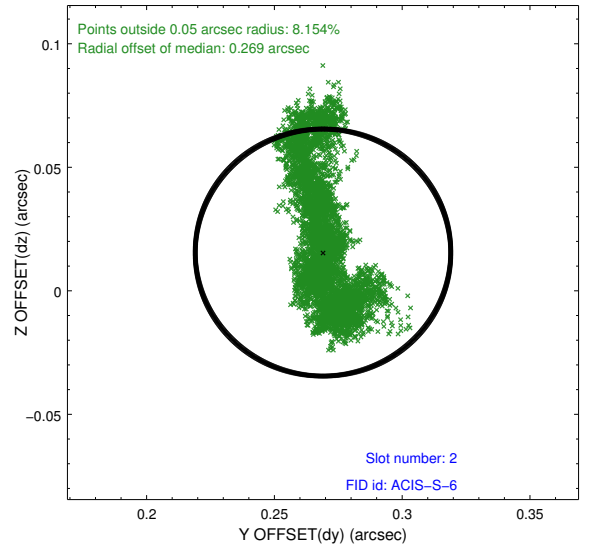
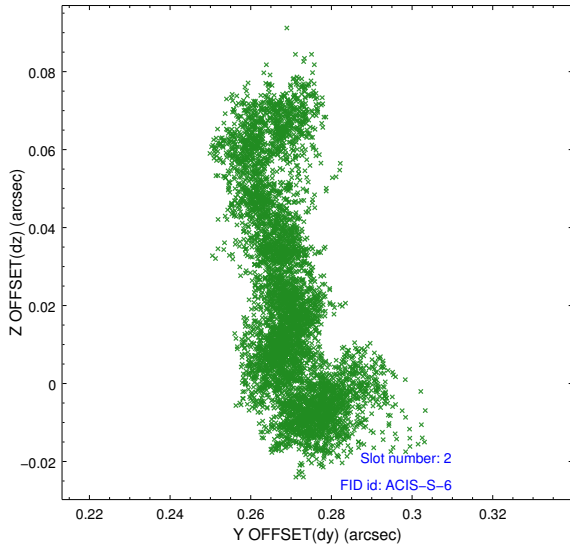
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2019.02.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.060731505871

## A.2 Comments