

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 20593 - L2 Version 1  
Chandra X-Ray Center

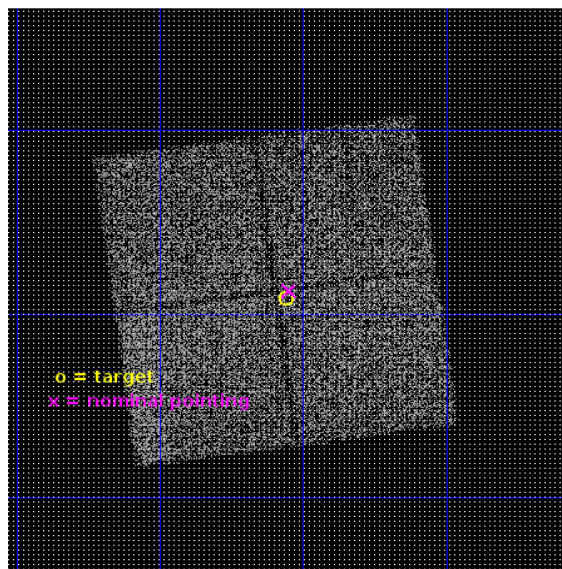
L2 Processing Date : Feb 26 2019

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# 1 Front

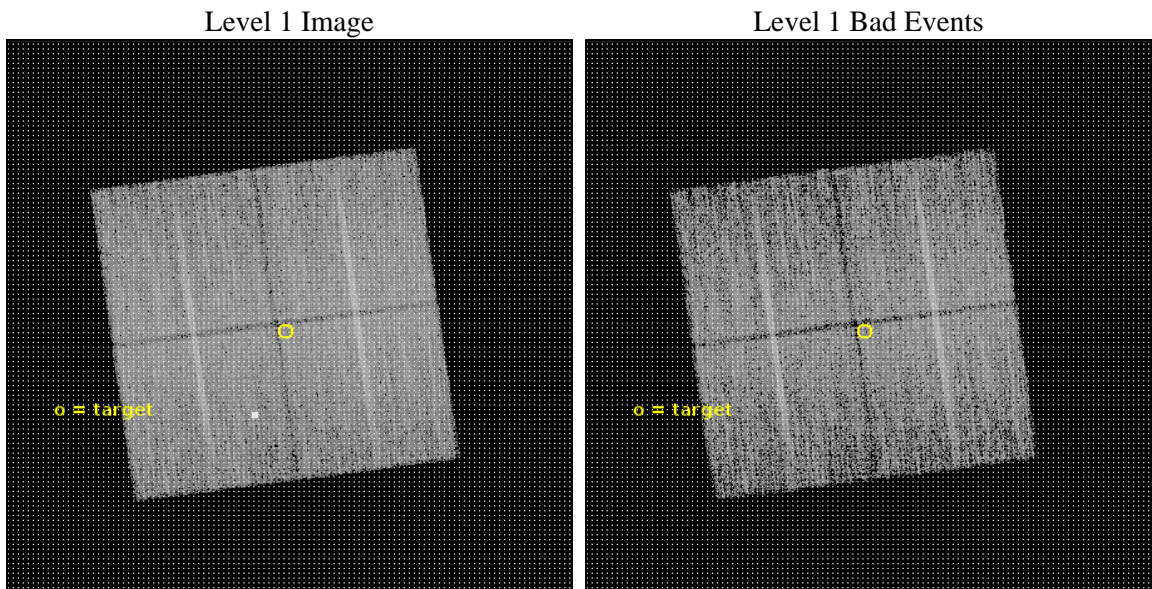
seq_num	801789	Sequence number
obs_id	20593	Observation id
title	Exploring the largest radii of the smallest cluster	Proposal title
observer	Yuanyuan Su	Principal investigator
object	MKW4-N	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	181.139583	Observer's specified target RA [deg]
dec_targ	2.514	Observer's specified target Dec [deg]
ra_nom	181.13699739959	Nominal RA [deg]
dec_nom	2.5209503019583	Nominal Dec [deg]
roll_nom	82.208687749944	Nominal Roll [deg]
revision	1	Processing version of data
ontime	14074.000108361	Sum of GTIs [s]
livetime	13890.112935817	Livetime [s]
ontime0	14074.000108361	Sum of GTIs [s]
ontime1	14074.000108361	Sum of GTIs [s]
ontime2	14070.859048128	Sum of GTIs [s]
ontime3	14074.000108361	Sum of GTIs [s]
l2events	40500	Number of level 2 events



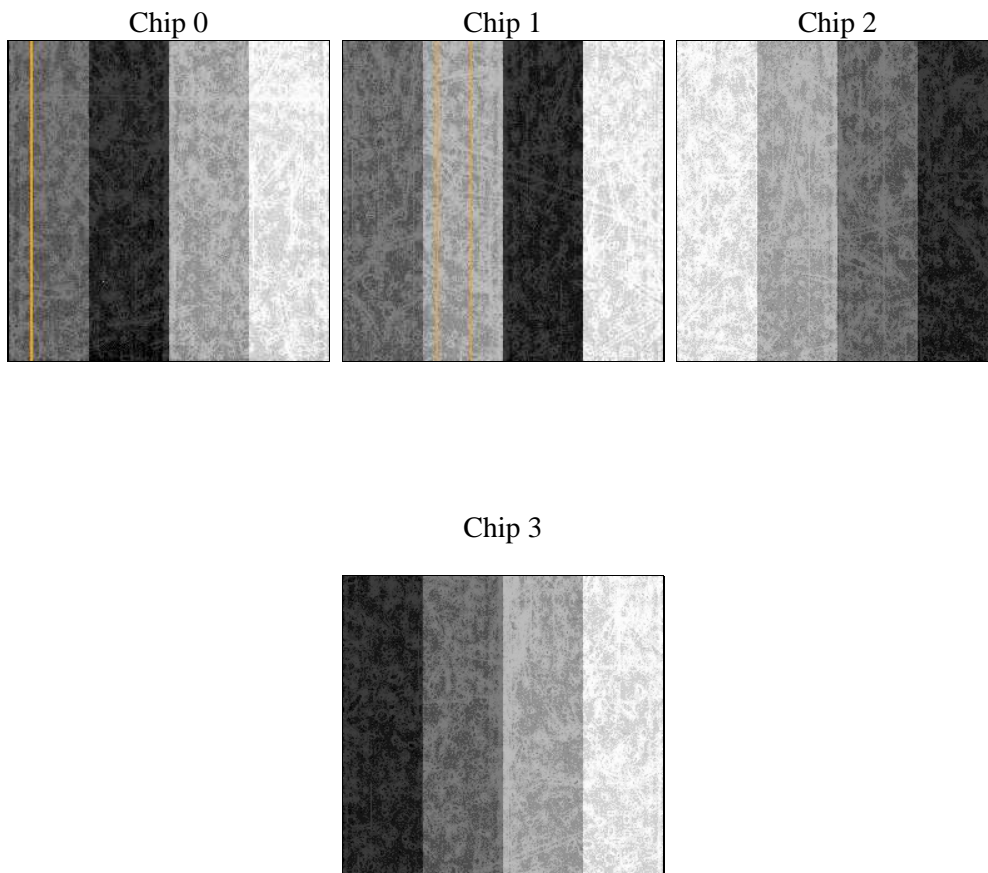
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	14074.000108361	Sum of GTIs [s]
caldbver	4.8.2	&#160	ontime0	14074.000108361	Sum of GTIs [s]
date	2019-02-26T05:23:52	Date and time of file creation	ontime1	14074.000108361	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	14070.859048128	Sum of GTIs [s]
			ontime3	14074.000108361	Sum of GTIs [s]
			l1events	430877	Number of level 1 events

### 2.1.4 Events

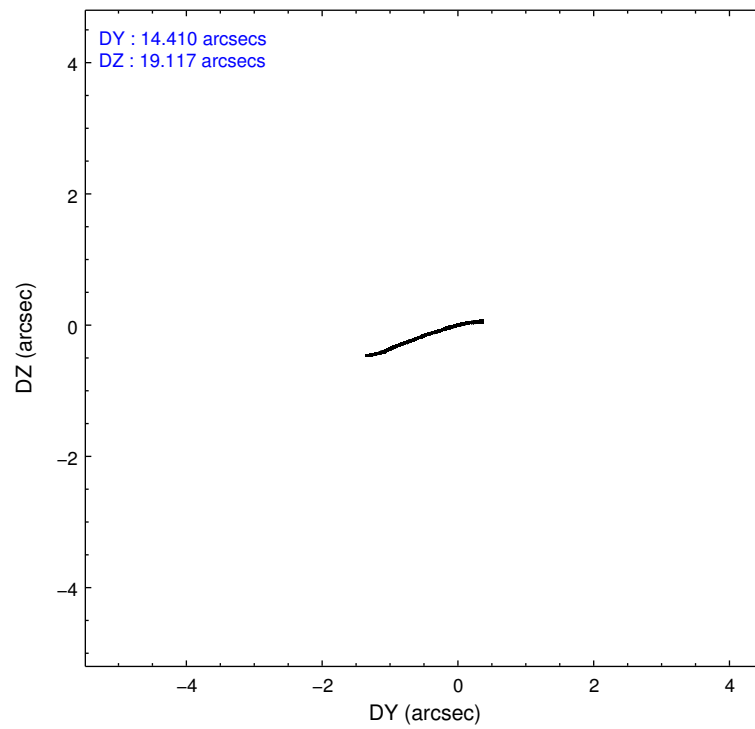
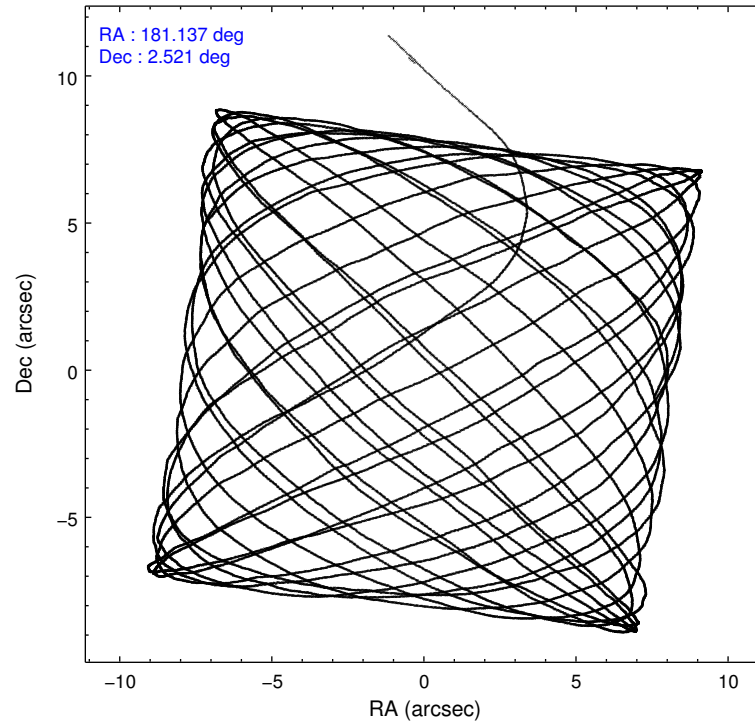
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	103935	107053	111967	107922
rejected events	91800	89503	100586	96512
rejected %	88%	83%	89%	89%

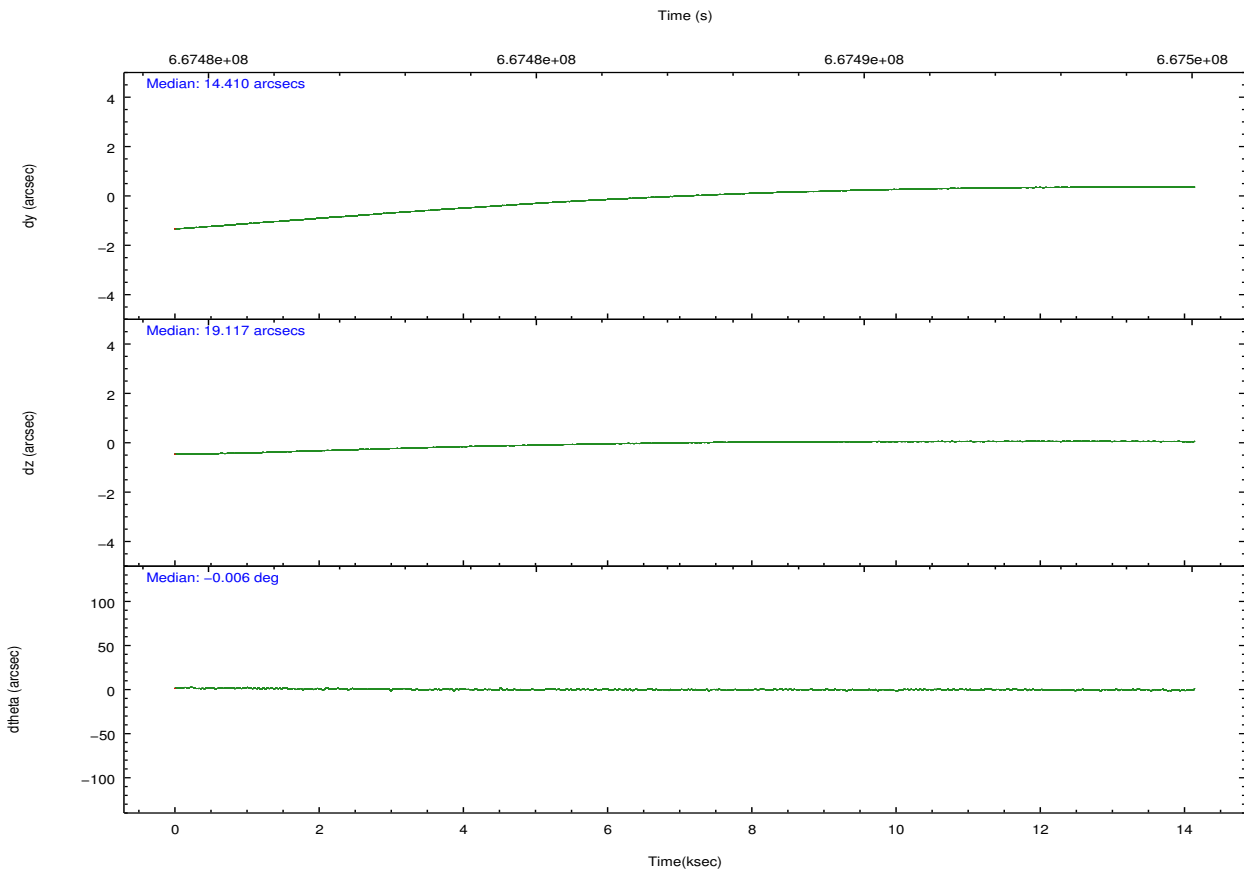
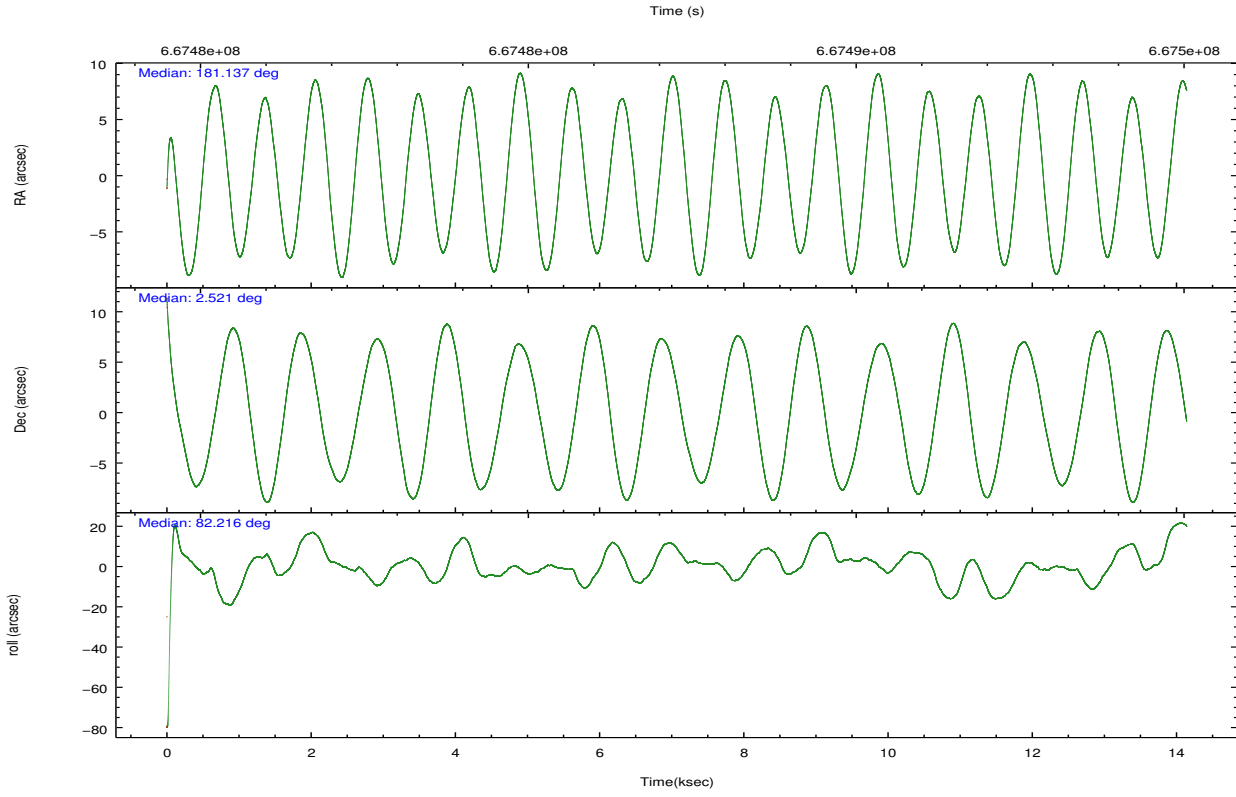
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	3935	4030	3933	4077
	3%	3%	3%	3%
grade 1 events	55	43	66	65
	0%	0%	0%	0%
grade 2 events	3064	7938	2777	2494
	2%	7%	2%	2%
grade 3 events	1255	1258	1147	1230
	1%	1%	1%	1%
grade 4 events	1177	1125	1200	1182
	1%	1%	1%	1%
grade 5 events	4592	4649	4307	4873
	4%	4%	3%	4%
grade 6 events	2709	3205	2331	2428
	2%	2%	2%	2%
grade 7 events	87148	84805	96206	91573
	83%	79%	85%	84%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	181.147548	181.1369973995909	Subarray requested	NONE	NONE
[deg] Pointing Dec	2.495417	2.520950301958323	Alternating exposures requested	N	N
[deg] Pointing Roll	81.999658	82.20868774994406	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	667480309.184000	667479192.59834			
Observation start date	2019-02-25T11:10:40	2019-02-25T10:53:12			
[s] Observation end time (MET)	667494309.184000	667495183.1118			
Observation end date	2019-02-25T15:04:00	2019-02-25T15:19:43			
Read mode	TIMED	TIMED			

## 2.3 Aspect





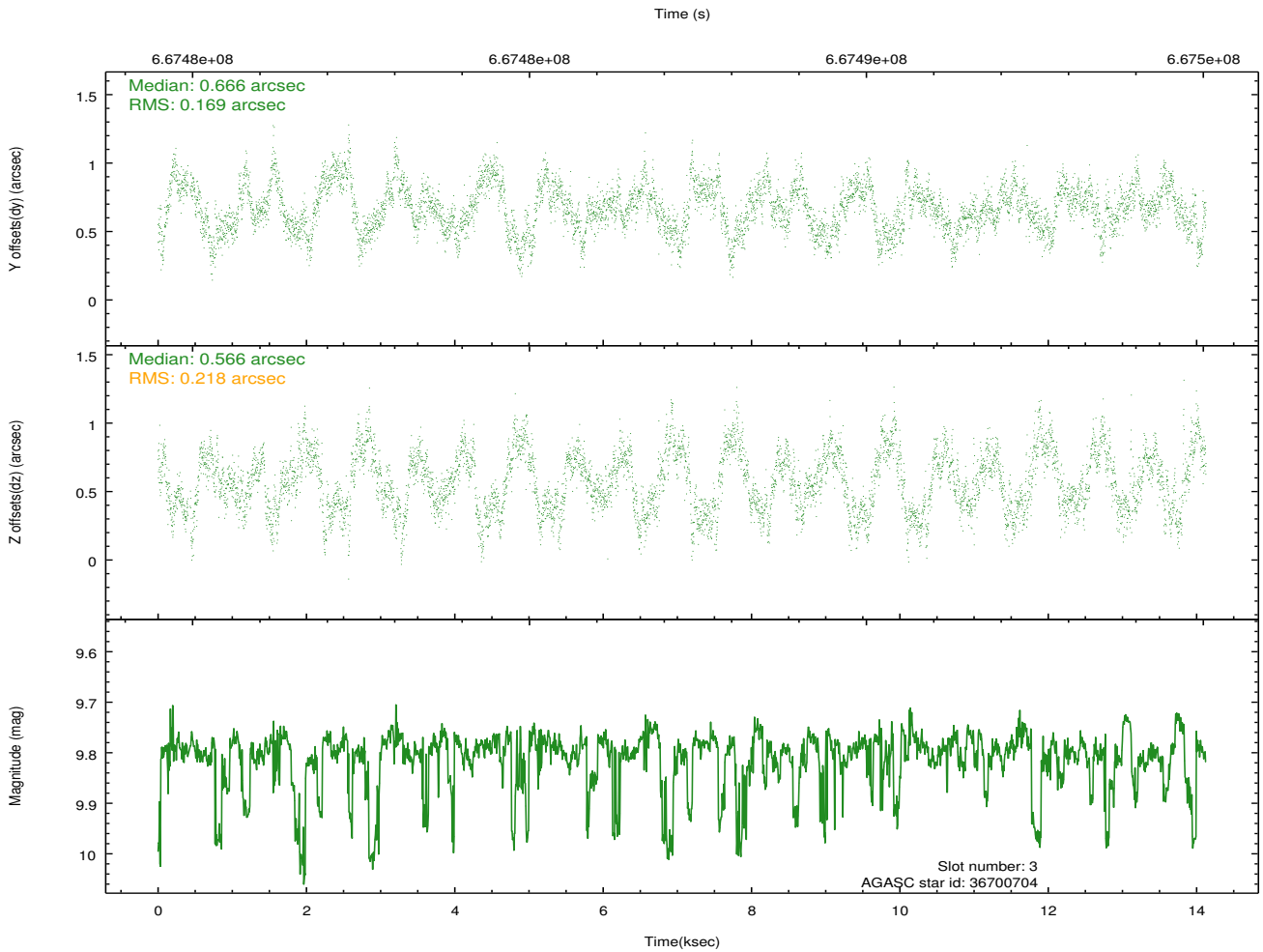
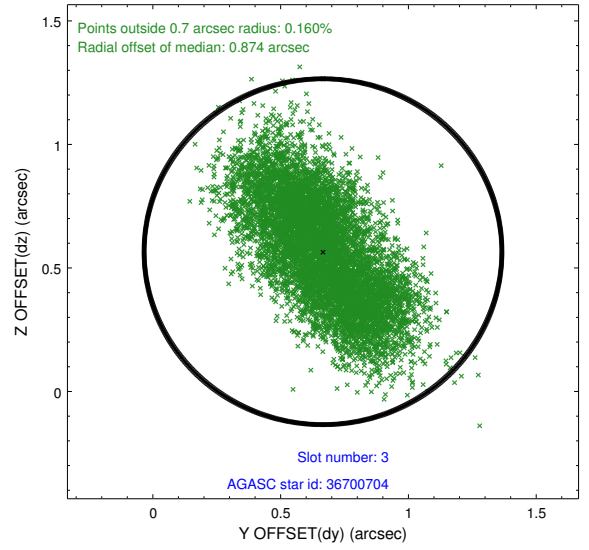
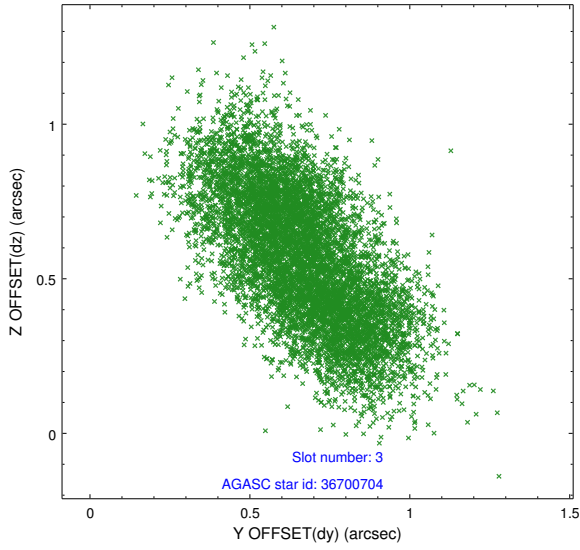
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-3	7.46	3450	1.000	-0.072	0.178	0.011	0.027	0.000000	0.000000	42.66	-975
1	FID		ACIS-I-5	7.23	3450	1.000	-0.421	-0.162	0.017	0.029	0.000000	0.000000	-1823.43	1054
2	FID		ACIS-I-6	7.24	3448	1.000	0.400	0.053	0.018	0.030	0.000000	0.000000	390.71	1699
3	GUIDE	used	36700704	9.80	6859	1.000	0.666	0.566	0.298	0.475	181.490734	2.322169	-446.11	-1308
4	GUIDE	used	37096144	9.41	6887	1.000	0.035	-0.157	0.303	0.419	181.058745	2.901149	1400.51	519
5	GUIDE	used	37096336	7.67	6896	1.000	-0.140	-0.133	0.092	0.148	181.150318	2.619834	444.48	52
6	GUIDE	used	37101216	7.46	6894	1.000	-0.396	-0.234	0.098	0.158	181.154524	3.161726	2377.75	307
7	GUIDE	used	37101424	9.78	6535	1.000	-0.162	-0.046	0.254	0.392	180.840816	3.225135	2447.95	1456

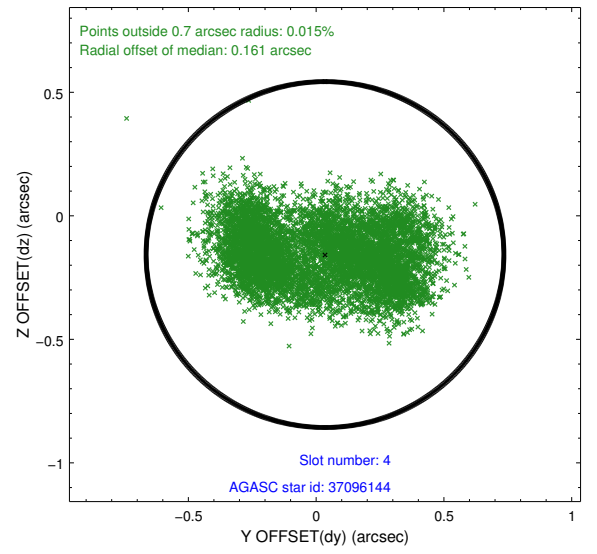
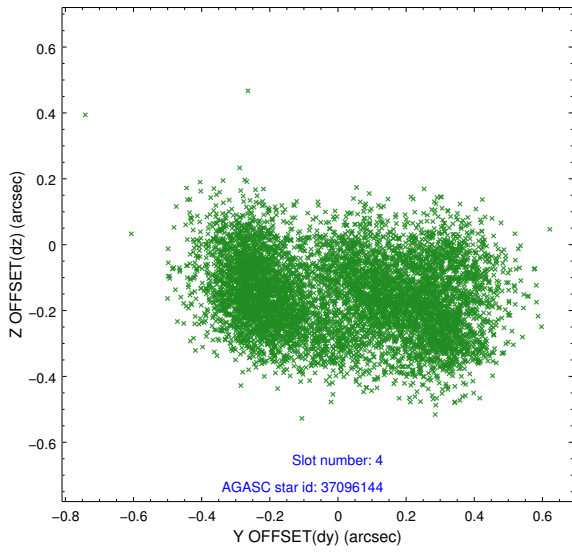
∞

## 2.4 Star Slots

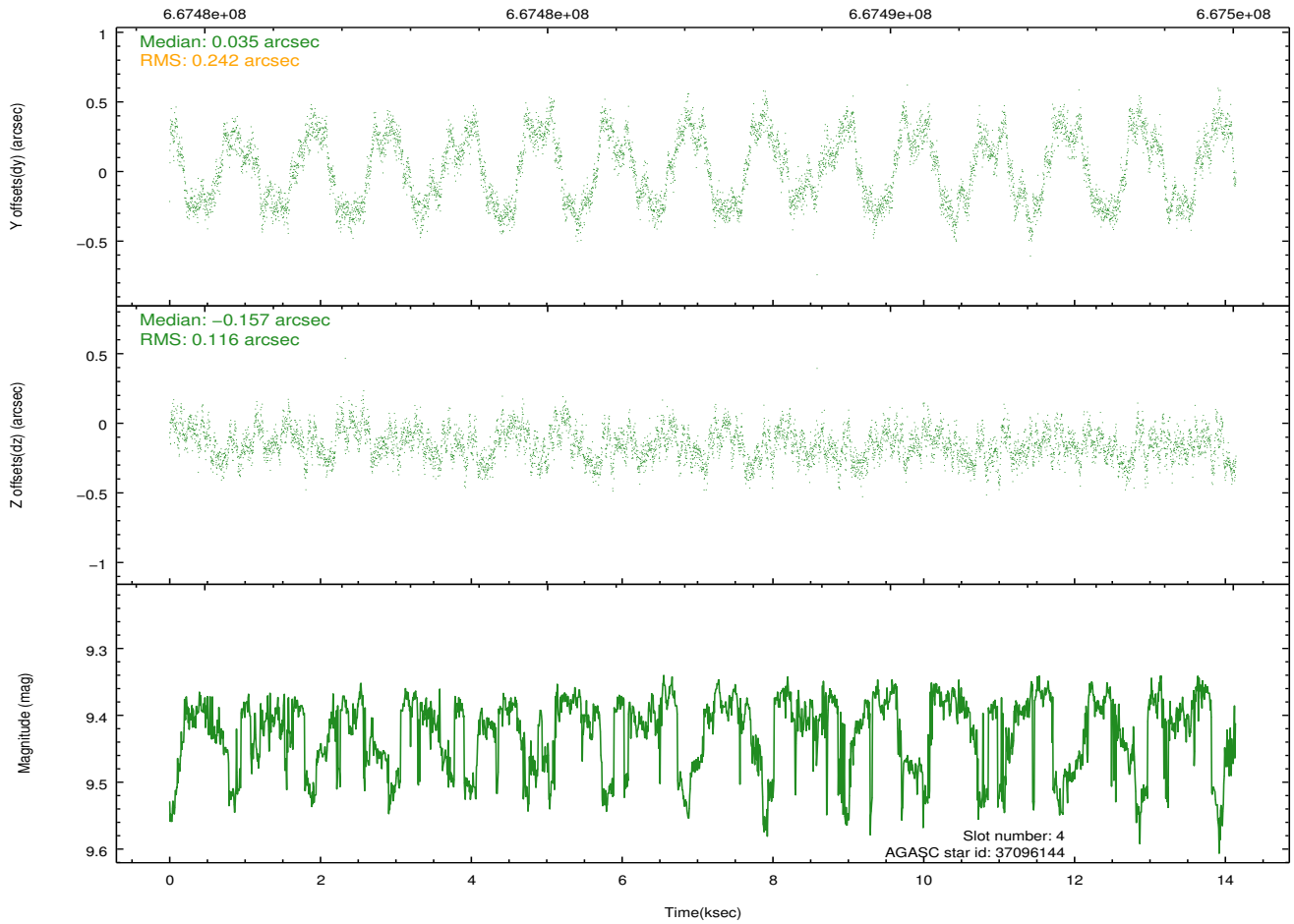
### 2.4.1 Slot 3



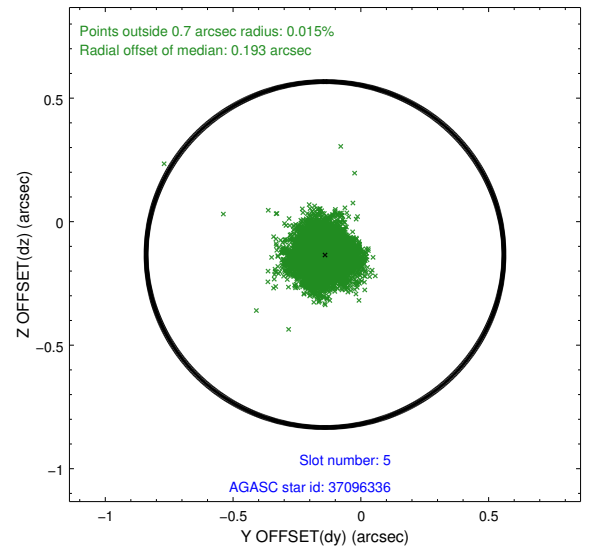
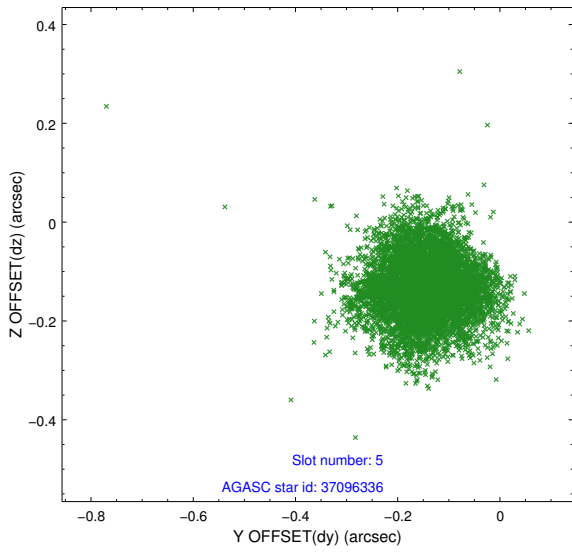
### 2.4.2 Slot 4



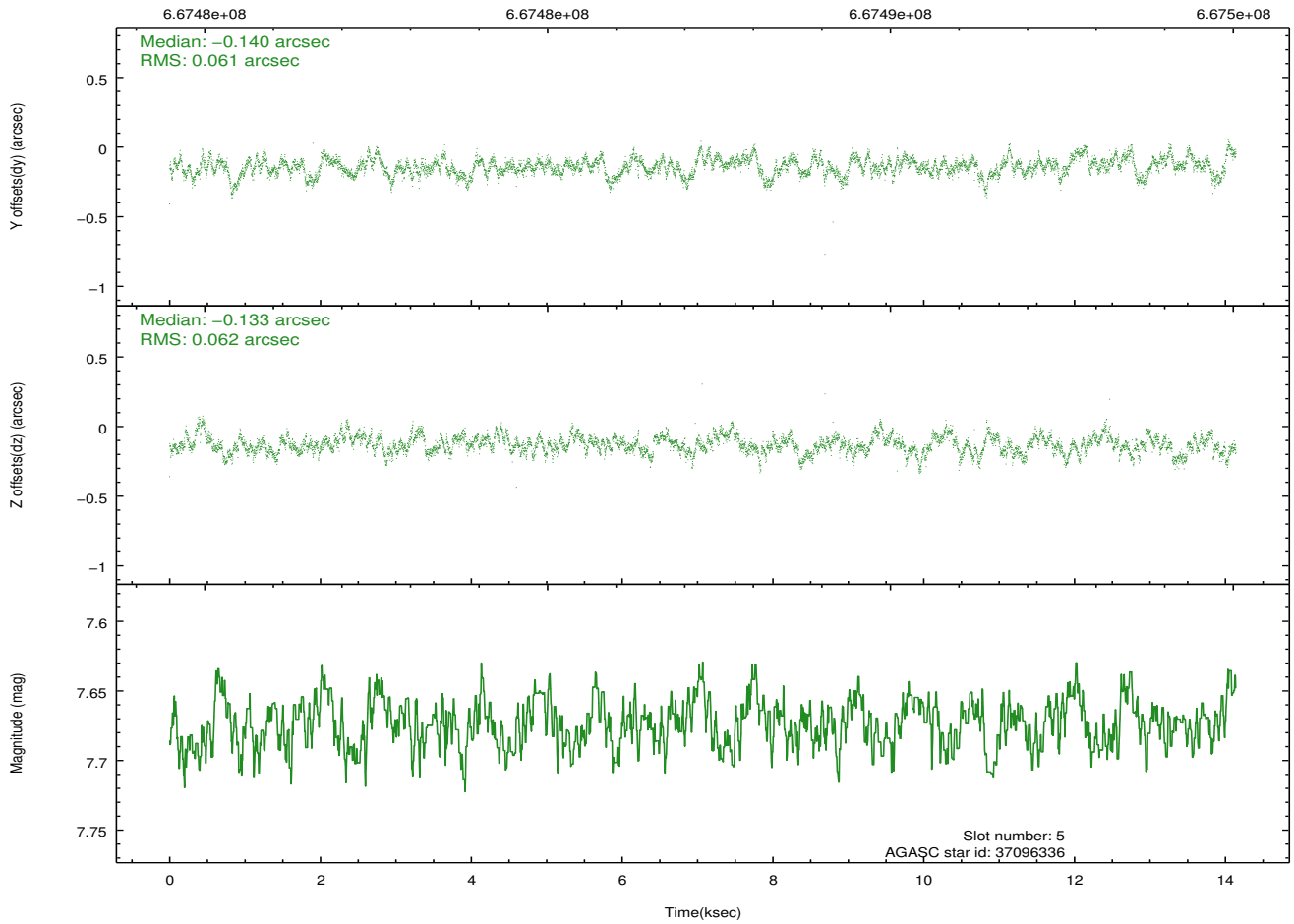
Time (s)



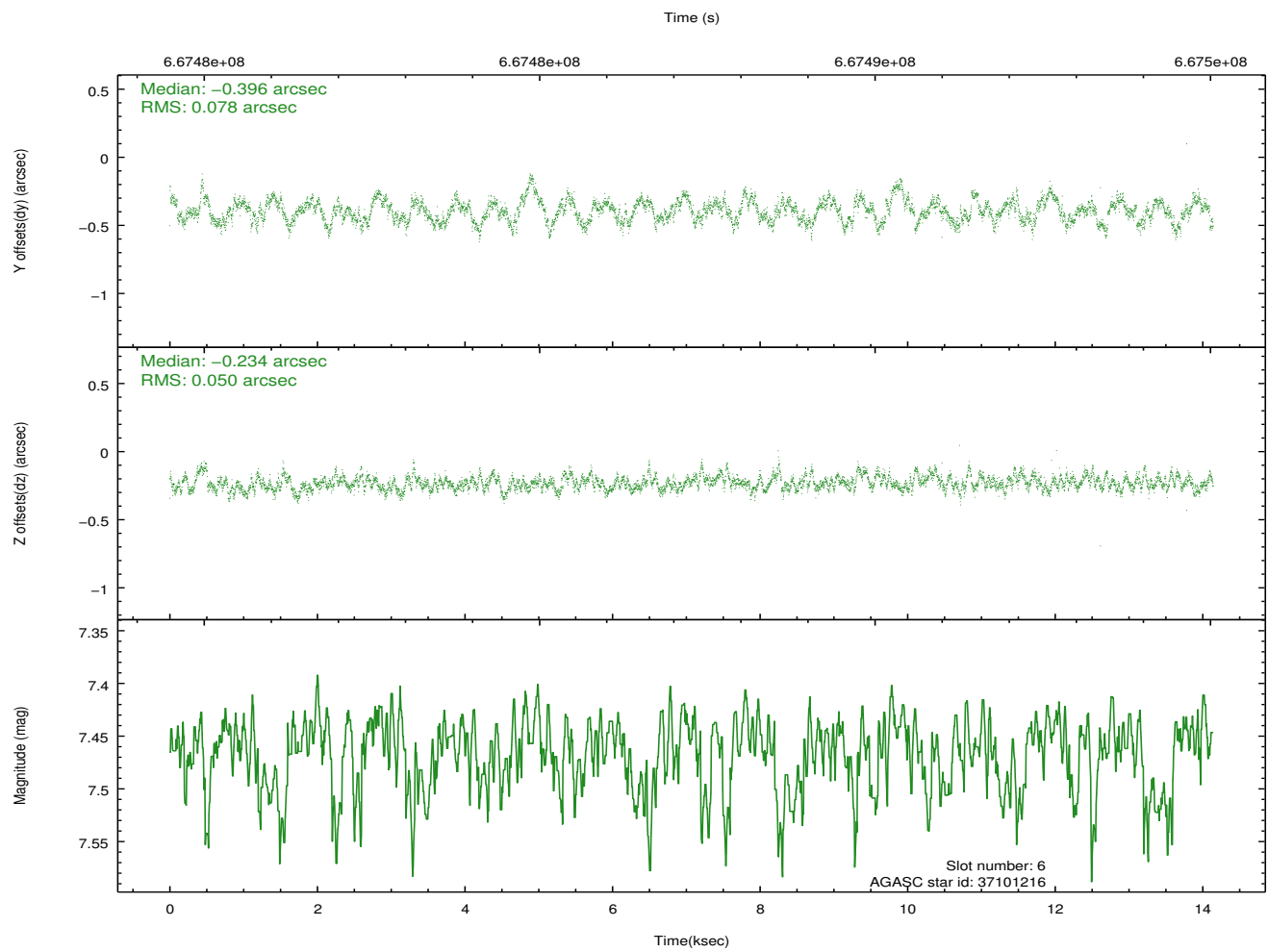
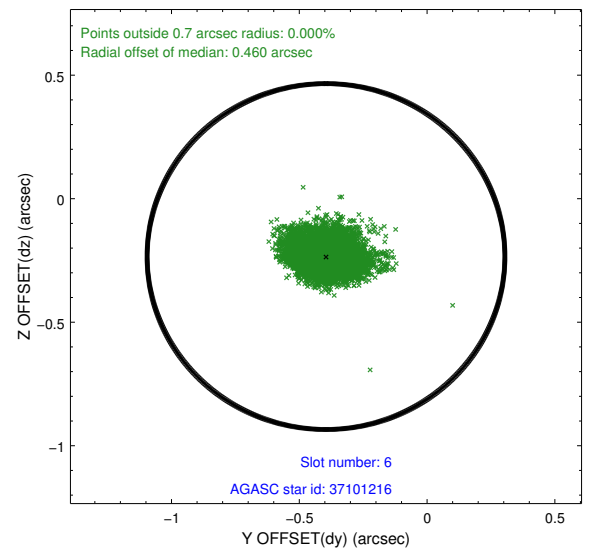
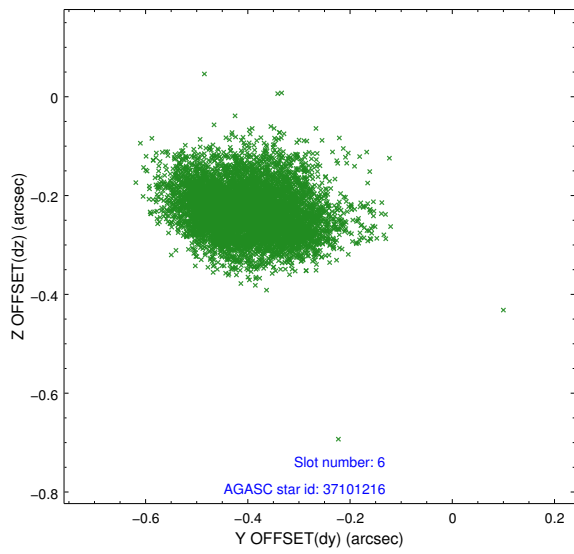
### 2.4.3 Slot 5



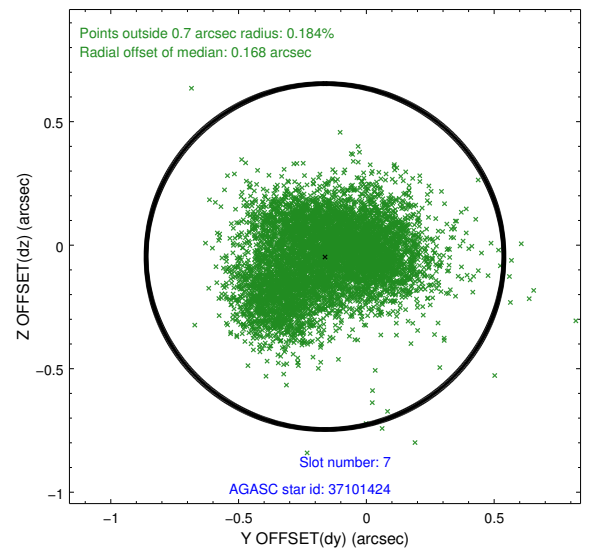
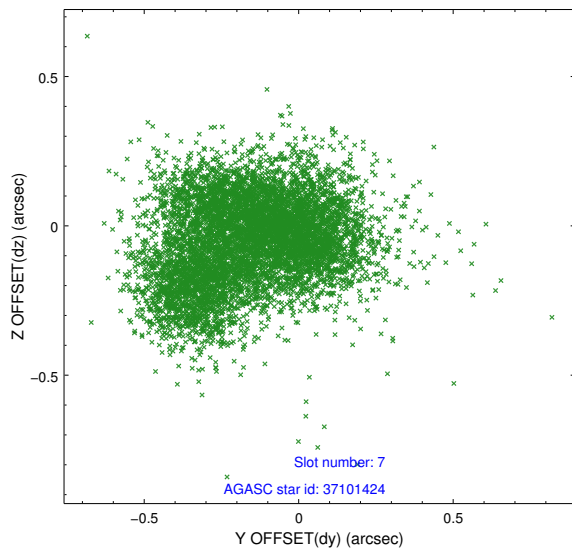
Time (s)



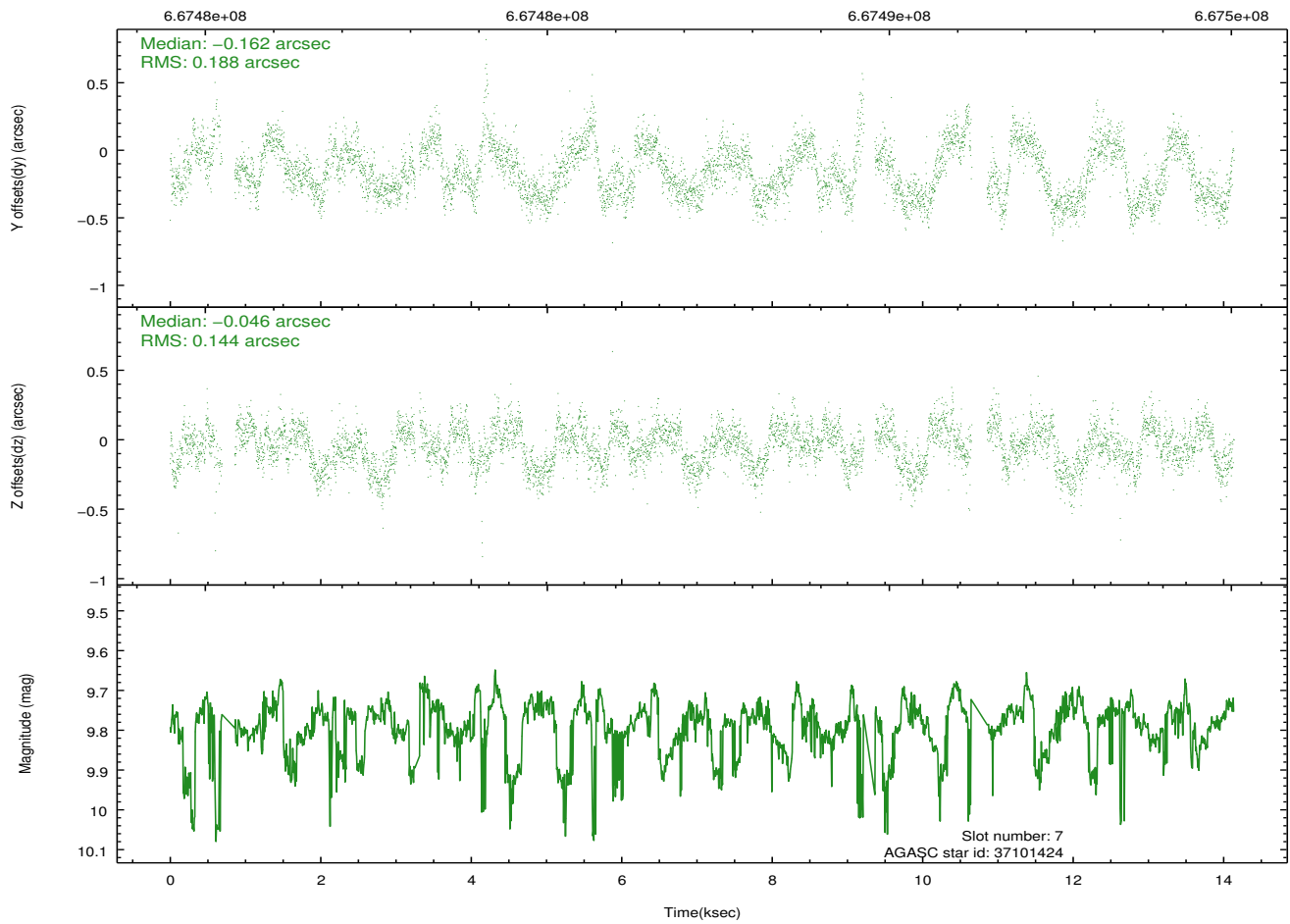
## 2.4.4 Slot 6



## 2.4.5 Slot 7

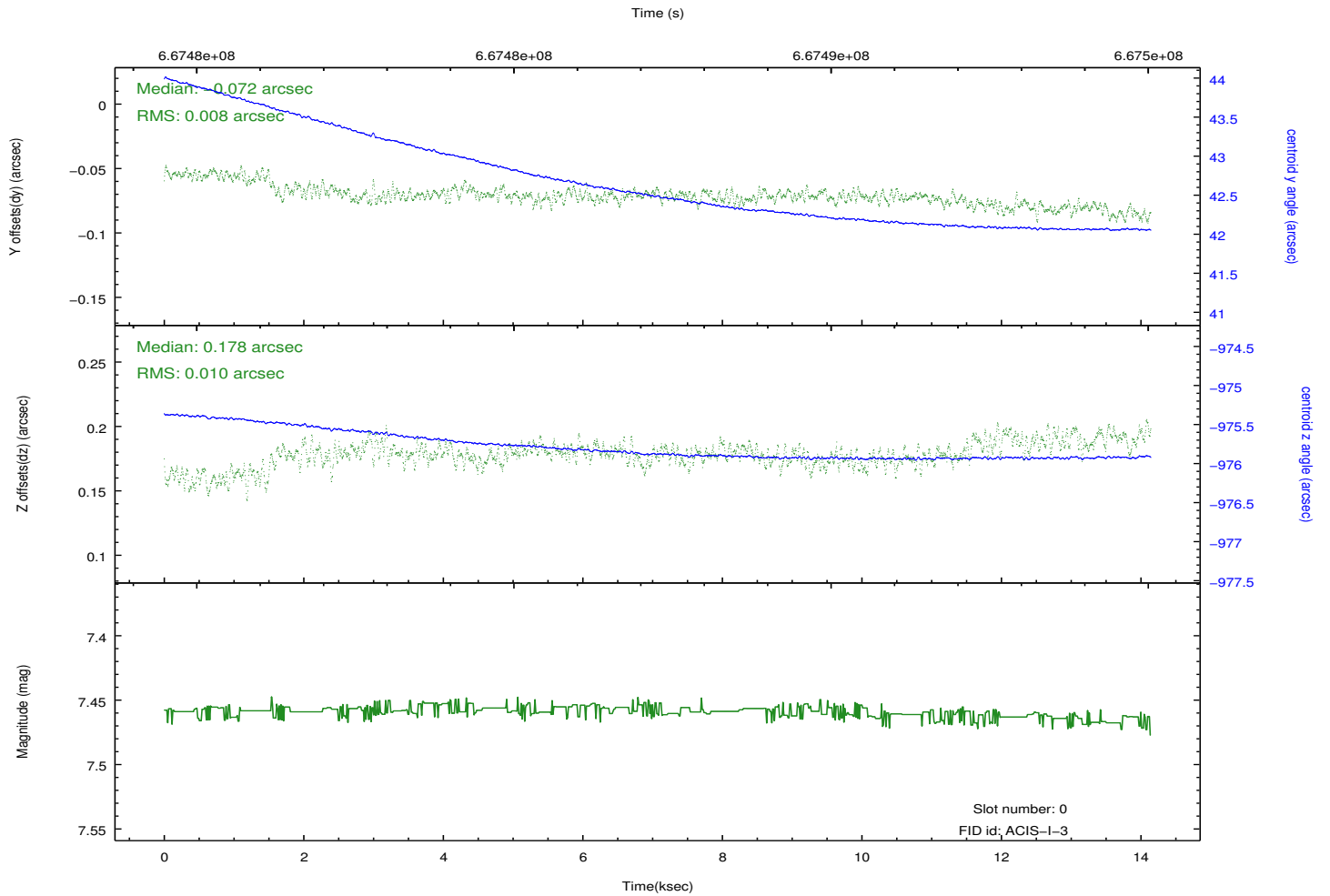
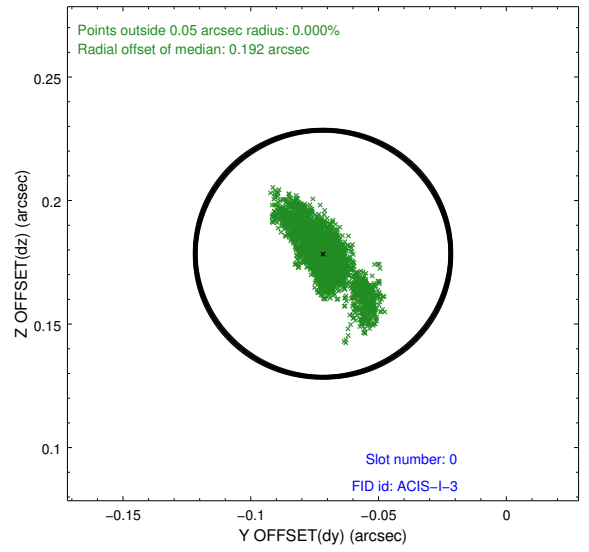
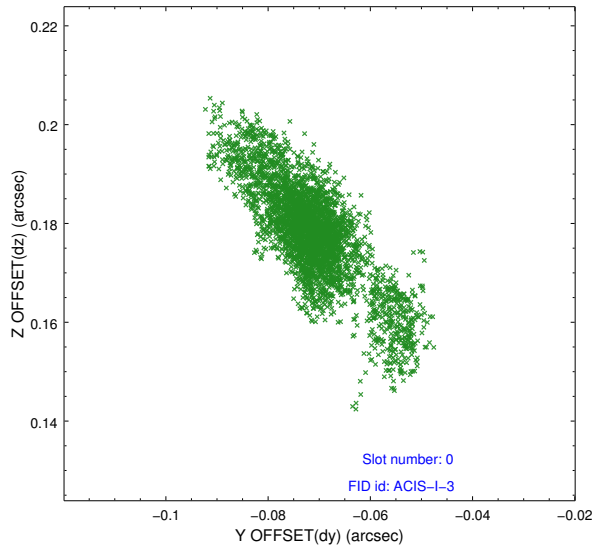


Time (s)

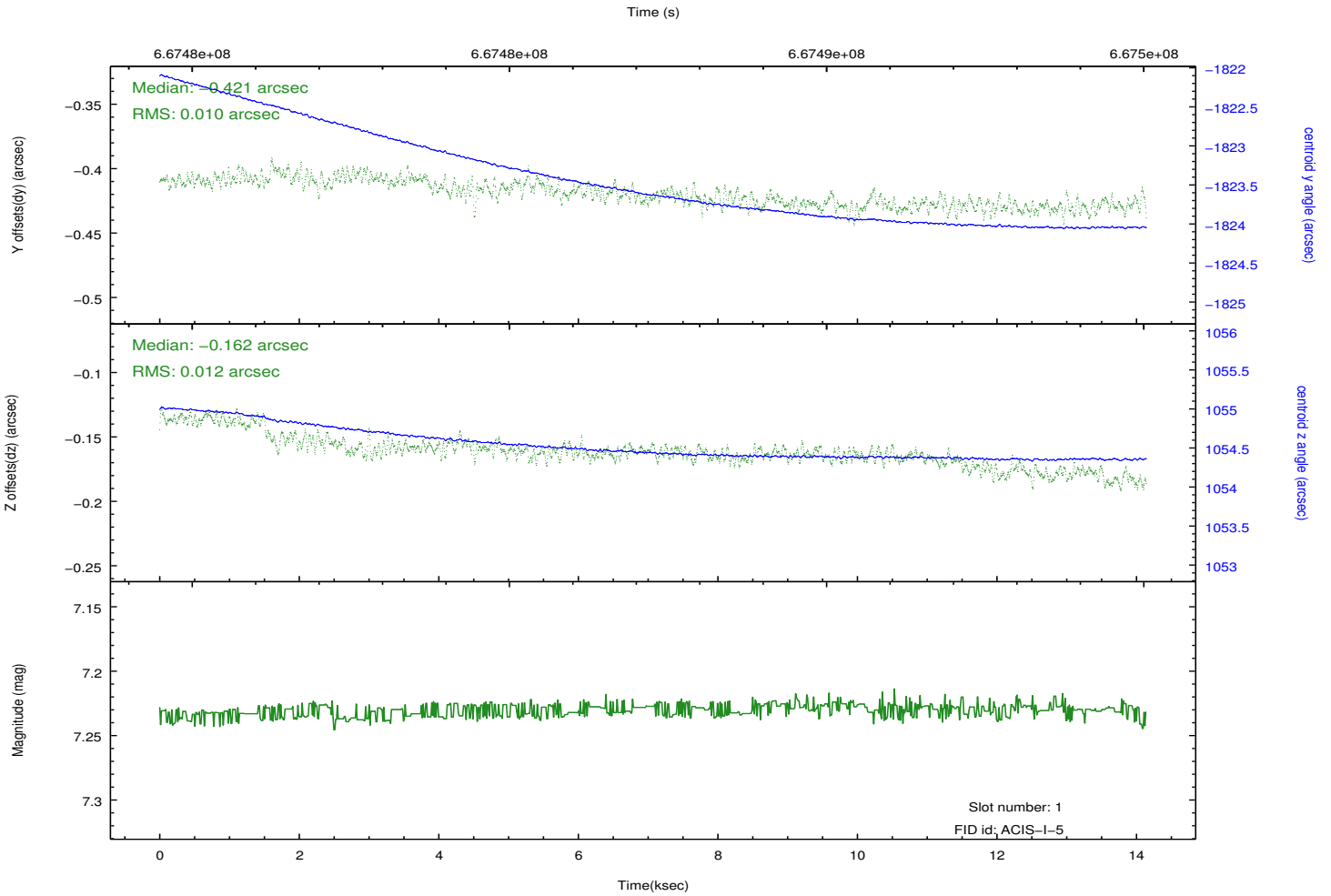
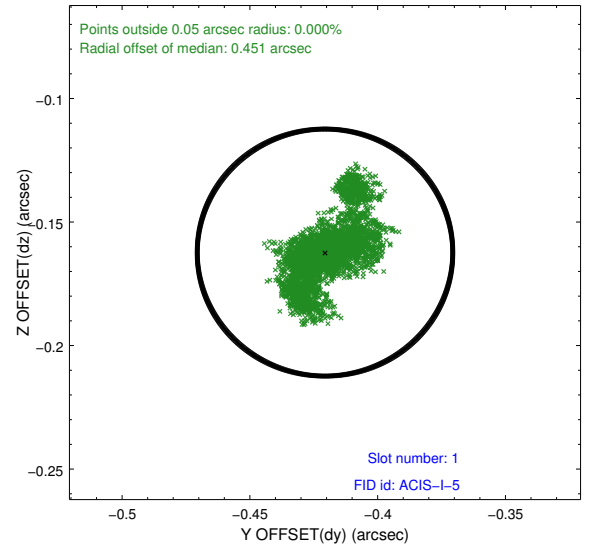
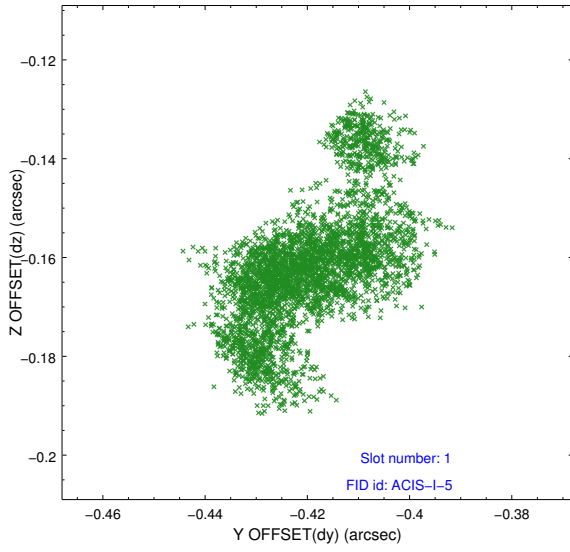


## 2.5 FID Slots

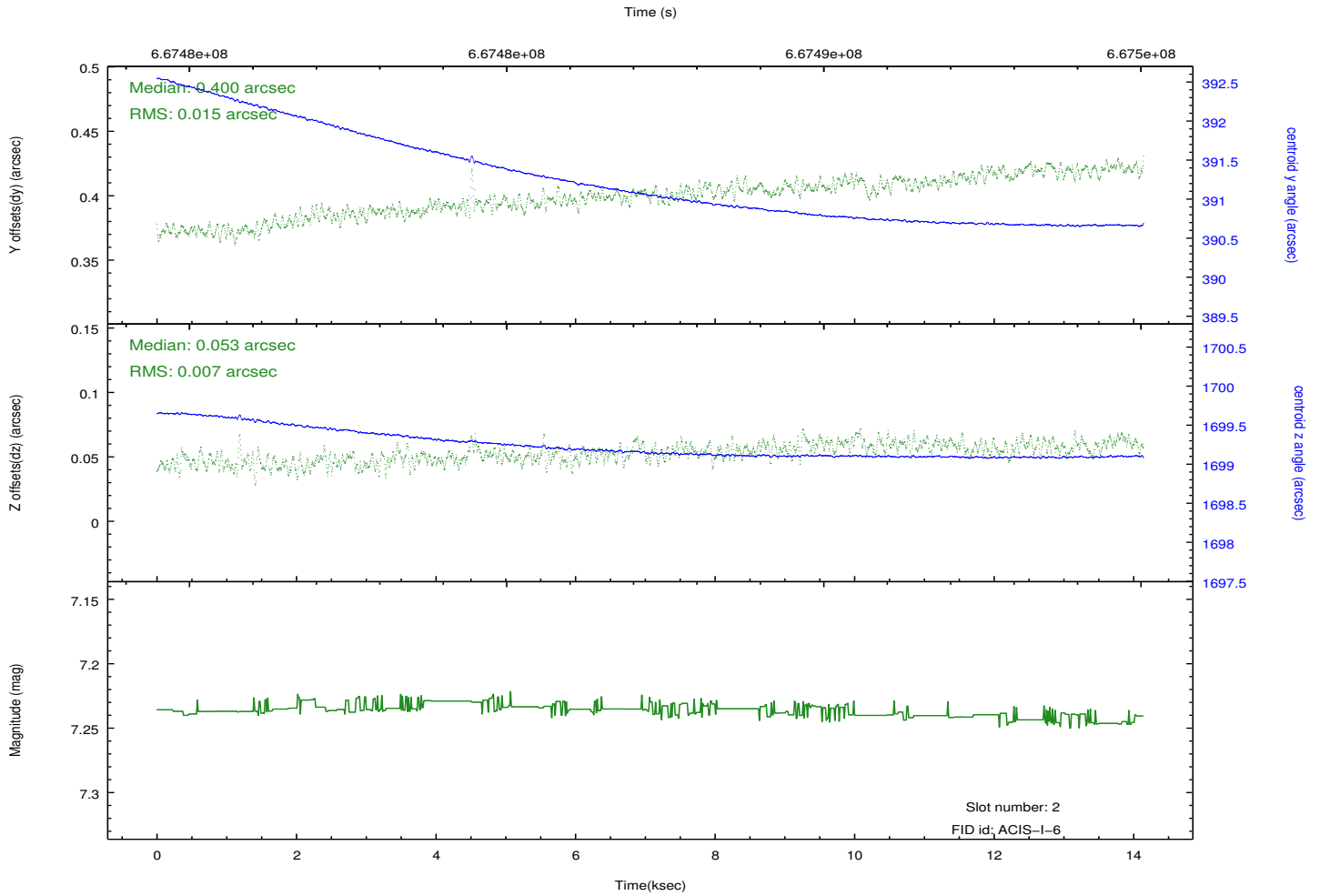
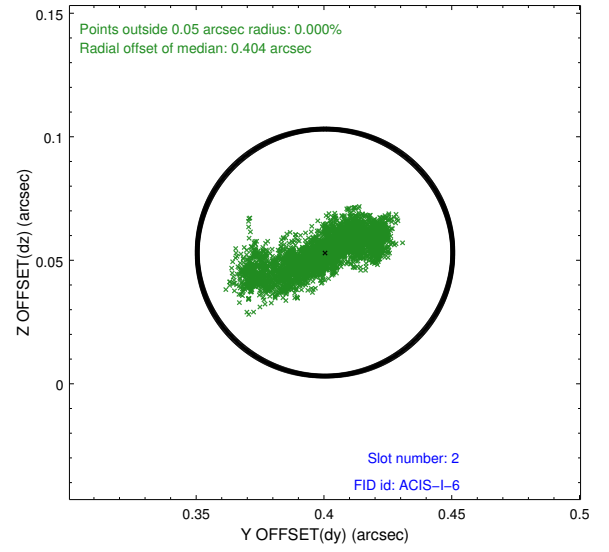
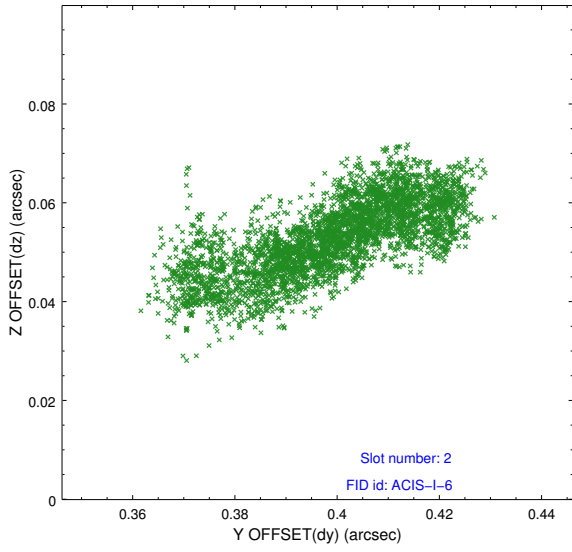
### 2.5.1 Slot 0



## 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)	2019.02.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.074000108361

## A.2 Comments