

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20092 - L2 Version 2  
Chandra X-Ray Center

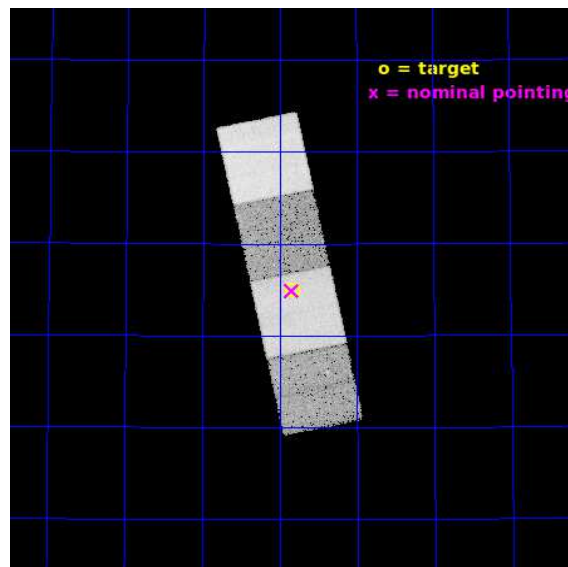
L2 Processing Date : Oct 24 2020

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# 1 Front

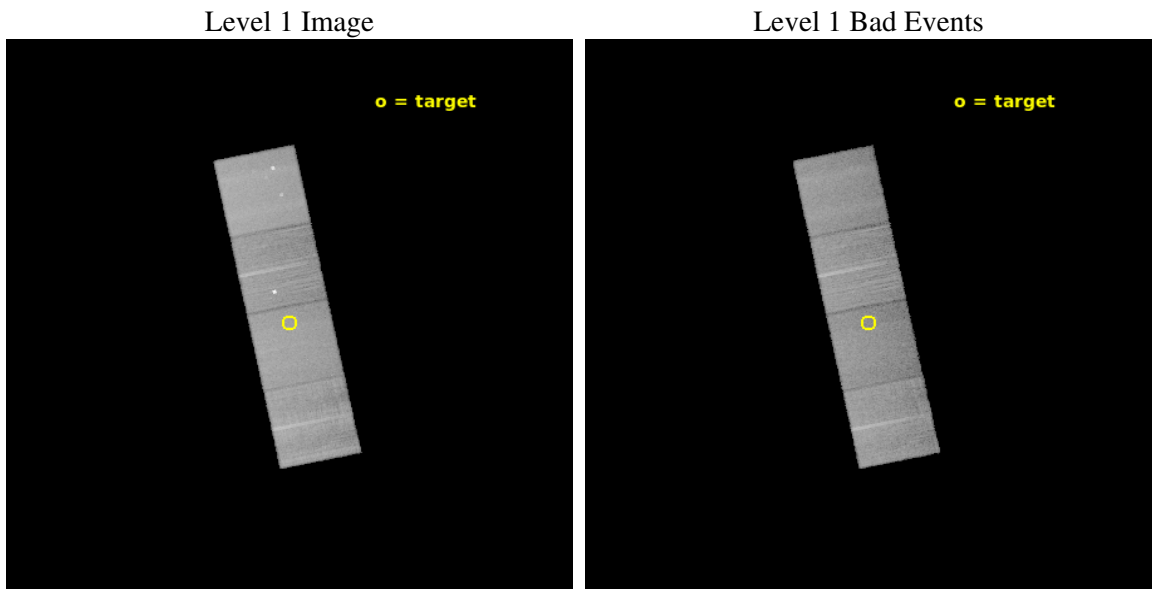
seq_num	703467	Sequence number
obs_id	20092	Observation id
title	Late-time X-ray and Radio Observations of the Unique Relativistic TDE Sw 1644+57	Proposal title
observer	Tarraneh Eftekhari	Principal investigator
object	Swift J164449.3+573451	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	251.207917	Observer's specified target RA [deg]
dec_targ	57.58325	Observer's specified target Dec [deg]
ra_nom	251.21041073118	Nominal RA [deg]
dec_nom	57.581771104614	Nominal Dec [deg]
roll_nom	78.161540655634	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20928.100161076	Sum of GTIs [s]
livetime	20654.659125428	Livetime [s]
ontime5	20928.100161076	Sum of GTIs [s]
ontime6	20924.95912075	Sum of GTIs [s]
ontime7	20928.100161076	Sum of GTIs [s]
ontime8	20928.100161076	Sum of GTIs [s]
l2events	222421	Number of level 2 events



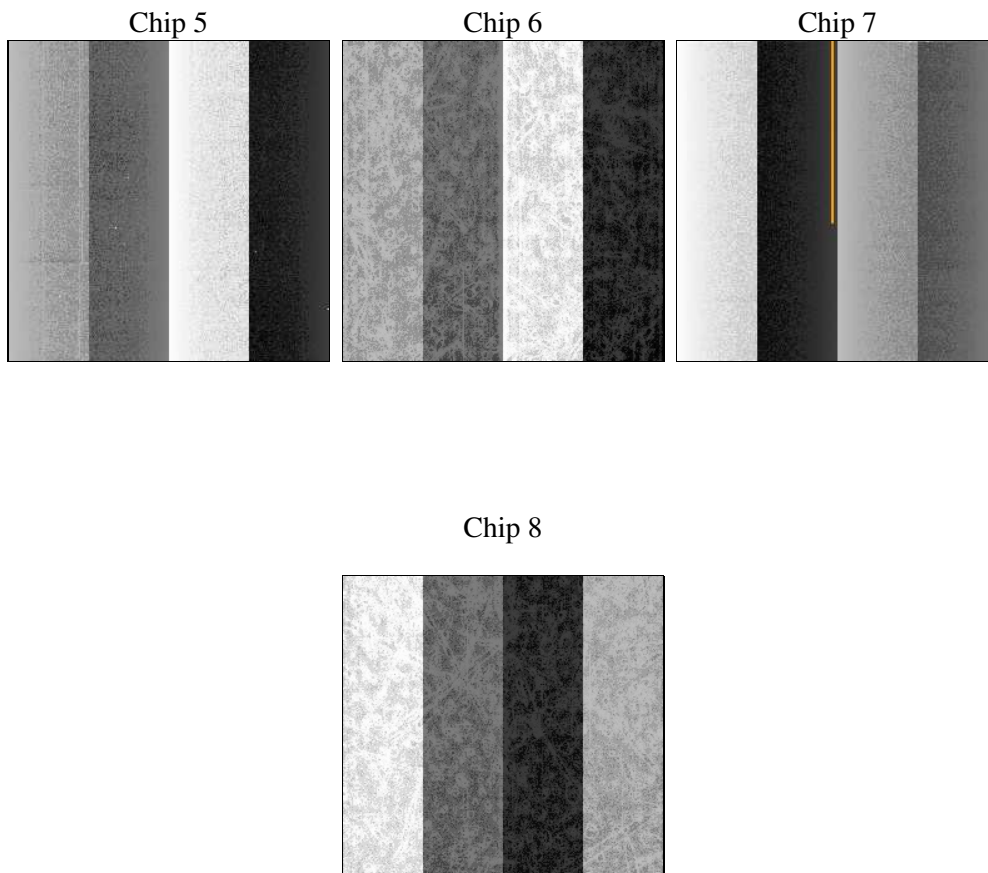
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20867.444000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	20928.100161076	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime5	20928.100161076	Sum of GTIs [s]
date	2020-10-24T15:03:35	Date and time of file creation	ontime6	20924.95912075	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	20928.100161076	Sum of GTIs [s]
			ontime8	20928.100161076	Sum of GTIs [s]
			l1events	807478	Number of level 1 events

### 2.1.4 Events

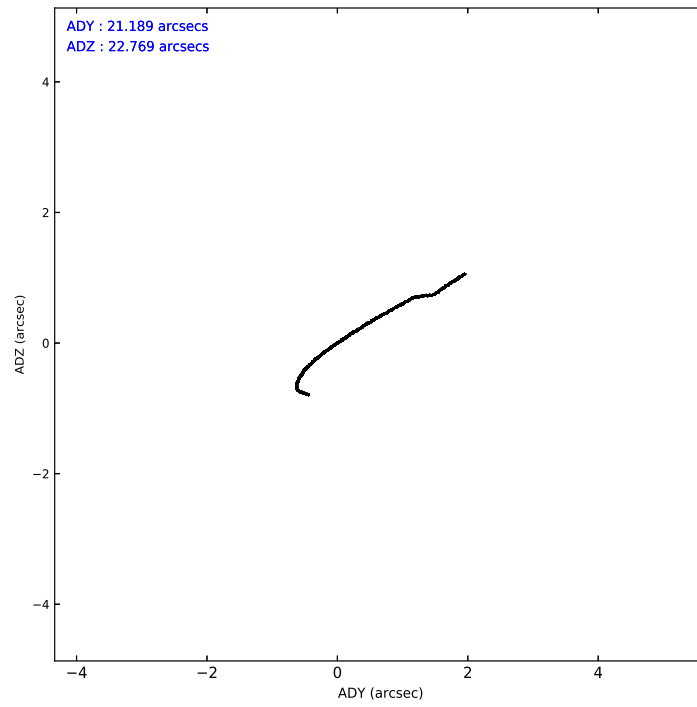
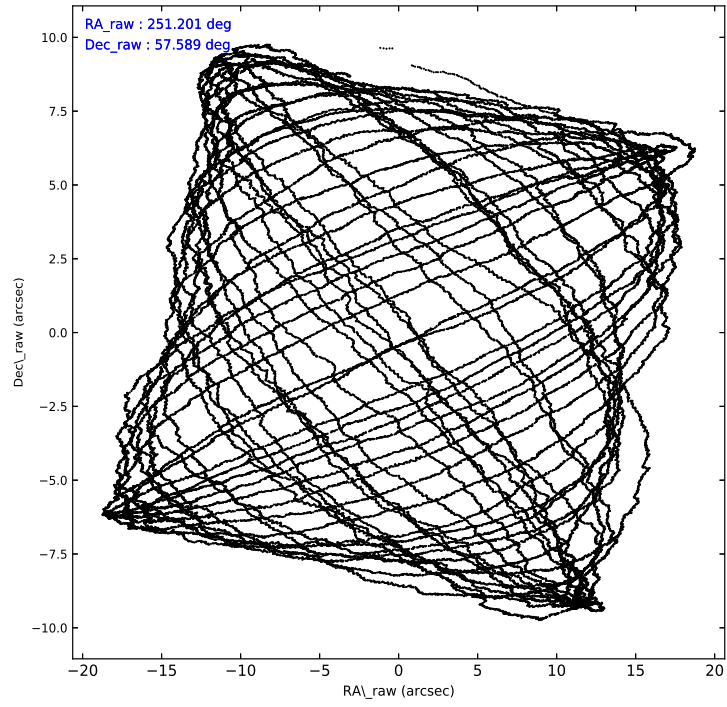
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	243287	166263	195119	202809
rejected events	126754	142663	111127	151210
rejected %	52%	85%	56%	74%

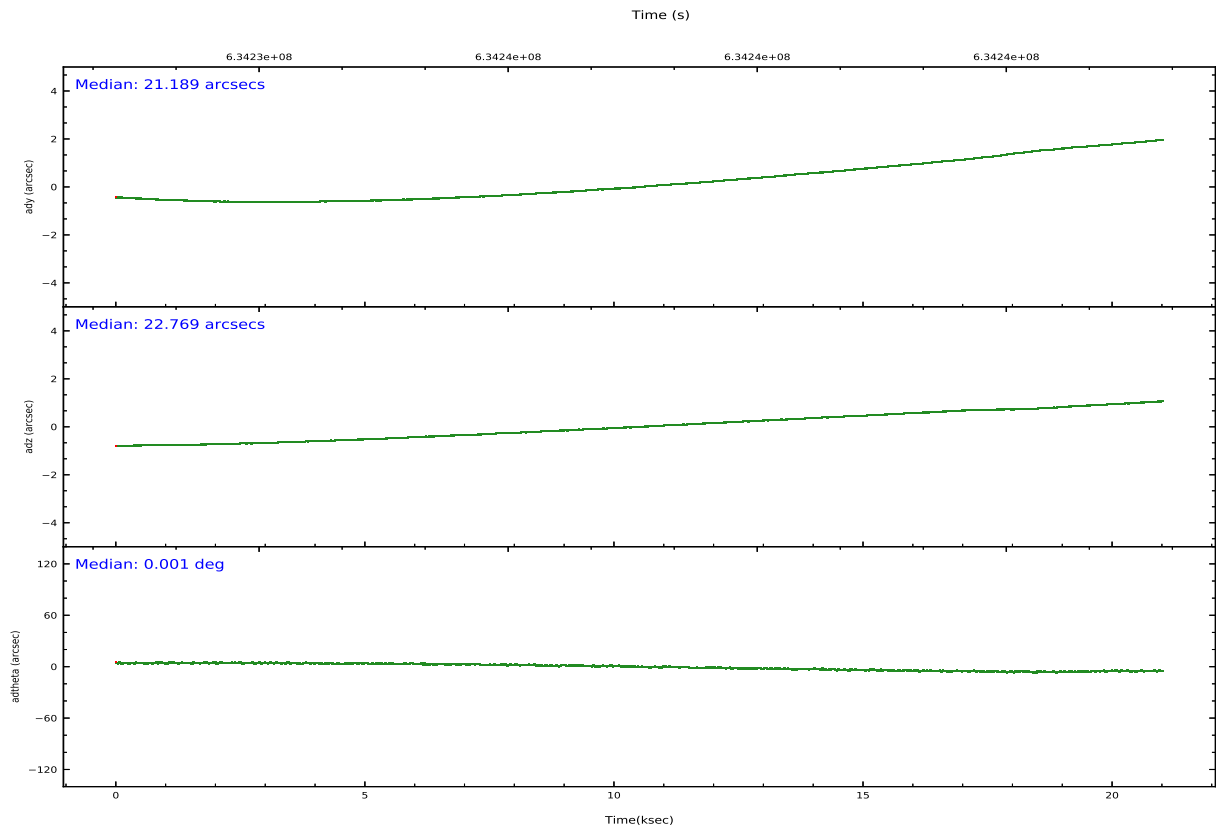
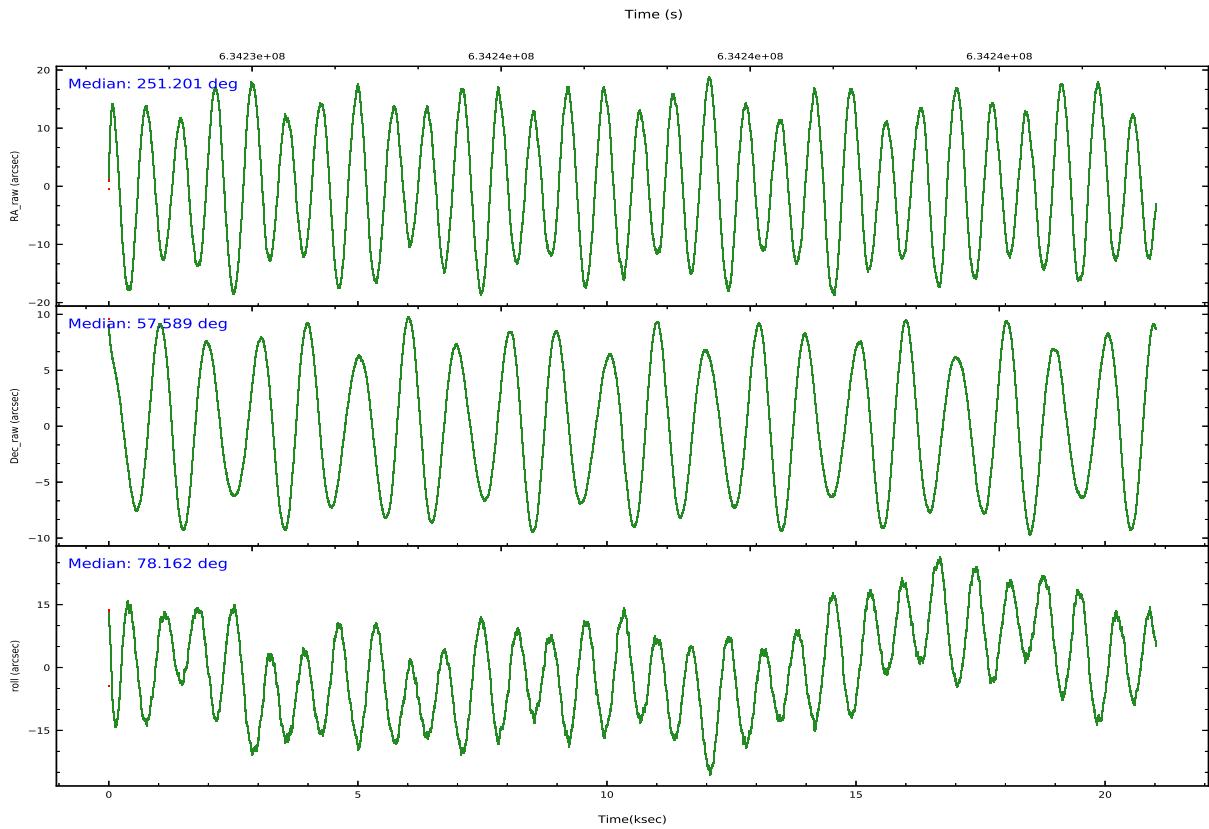
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	8865	11661	7101	14203
	3%	7%	3%	7%
grade 1 events	707	120	273	150
	0%	0%	0%	0%
grade 2 events	35643	4463	17303	12446
	14%	2%	8%	6%
grade 3 events	3464	1526	6706	5335
	1%	0%	3%	2%
grade 4 events	3313	1587	6546	4947
	1%	0%	3%	2%
grade 5 events	15760	6580	19049	10371
	6%	3%	9%	5%
grade 6 events	65263	4370	46354	14672
	26%	2%	23%	7%
grade 7 events	110272	135956	91787	140685
	45%	81%	47%	69%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	251.217423	251.21041073118	Subarray requested	NONE	NONE
[deg] Pointing Dec	57.563226	57.581771104614	Alternating exposures requested	N	N
[deg] Pointing Roll	77.991977	78.161540655634	[s] Primary exposure time	0.000000	3.1
[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)	634227281.184000	634226167.19546			
Observation start date	2018-02-05T14:13:32	2018-02-05T13:56:07			
[s] Observation end time (MET)	634248148.184000	634248923.7343			
Observation end date	2018-02-05T20:01:19	2018-02-05T20:15:23			
Read mode	TIMED	TIMED			

## 2.3 Aspect



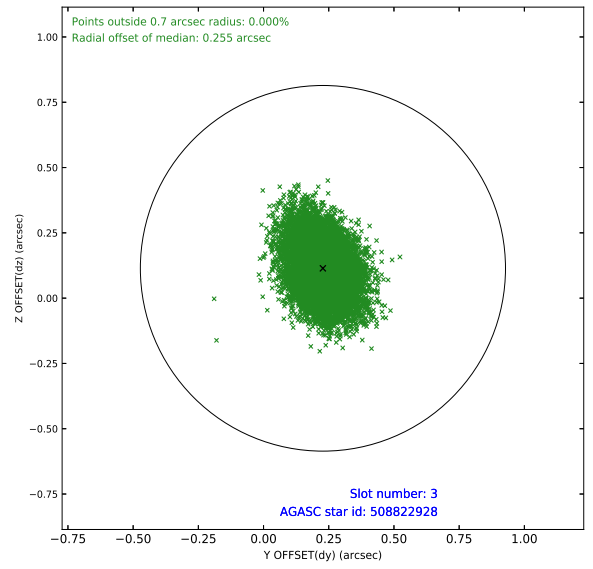
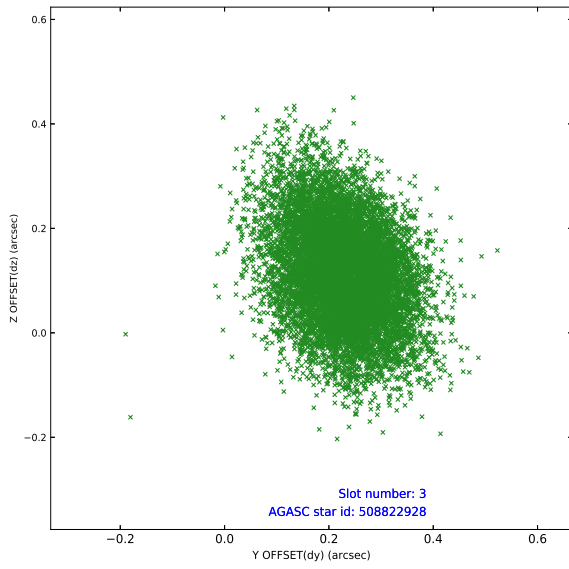


### Slot Statistics

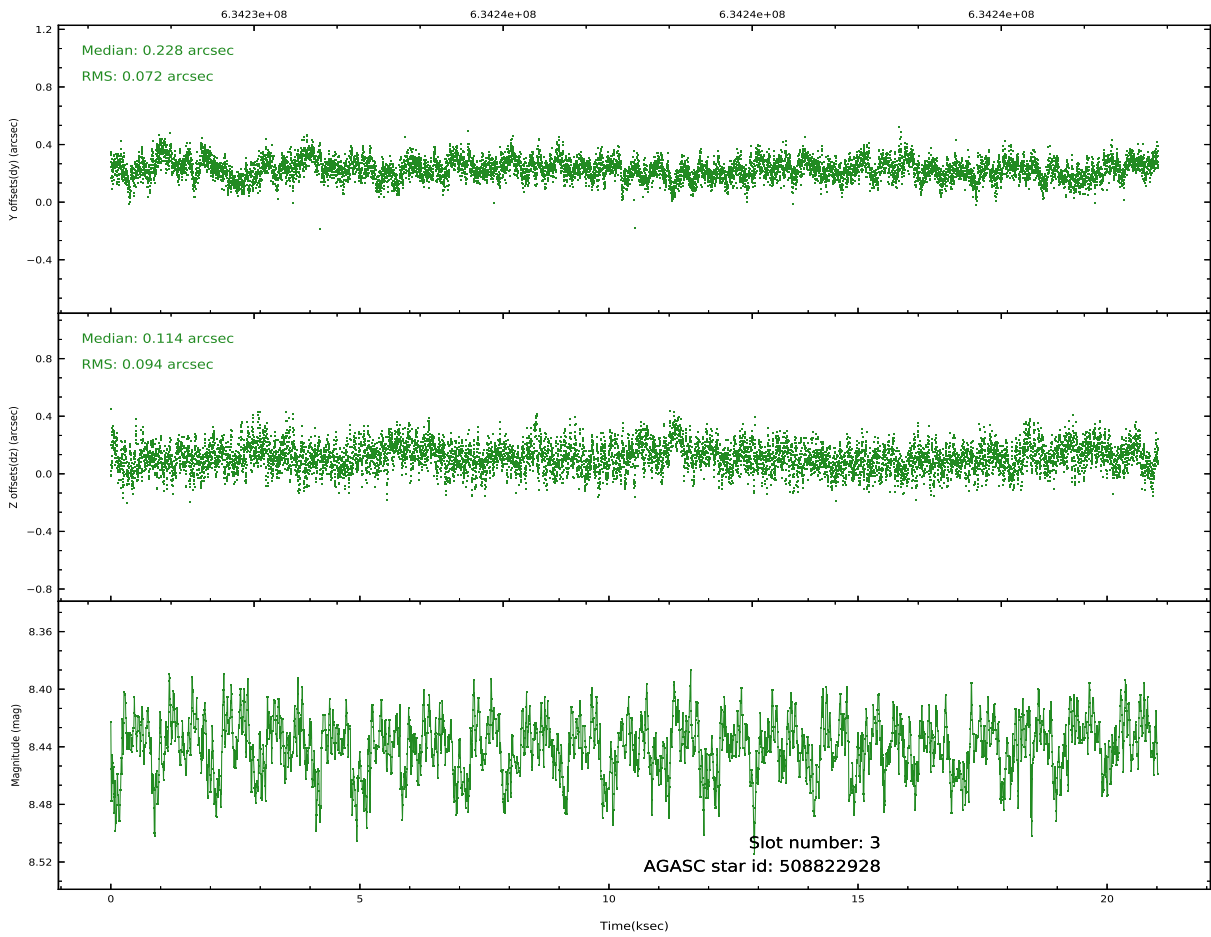
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-1	7.20	5129	1.000	0.250	-0.141	0.013	0.023	0.000000	0.000000	921.51	-1740
1	FID		ACIS-S-2	7.12	5128	1.000	0.002	-0.108	0.013	0.054	0.000000	0.000000	-774.55	-1744
2	FID		ACIS-S-5	7.23	5129	1.000	-0.276	0.255	0.011	0.031	0.000000	0.000000	-1828.04	157
3	GUIDE	used	508822928	8.44	10254	1.000	0.228	0.114	0.125	0.208	251.922984	56.892498	-2064.63	-1857
4	GUIDE	used	509214760	8.31	10251	1.000	-0.064	0.027	0.108	0.193	250.589992	57.556199	-271.41	1181
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
6	GUIDE	used	509223192	7.70	10254	1.000	-0.041	-0.173	0.104	0.185	251.320493	58.085113	1878.80	199
7	GUIDE	used	509227784	9.21	10244	1.000	-0.127	0.035	0.143	0.236	250.982124	57.635413	161.21	498

## 2.4 Star Slots

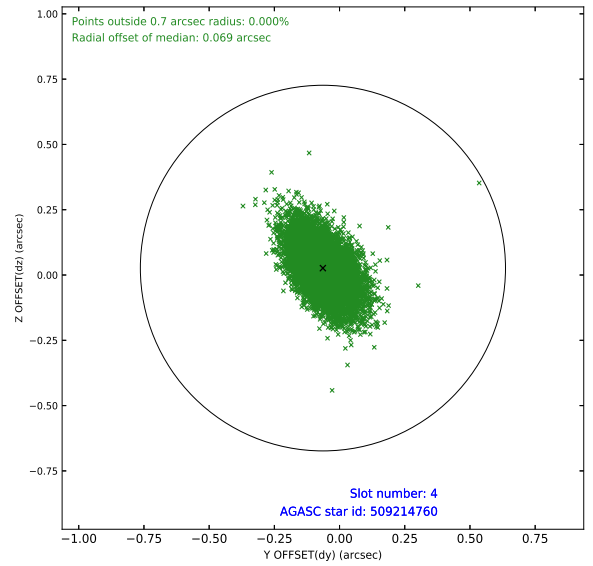
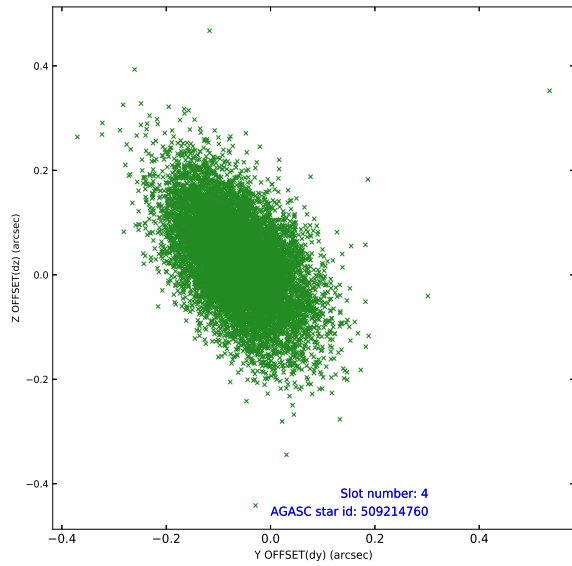
### 2.4.1 Slot 3



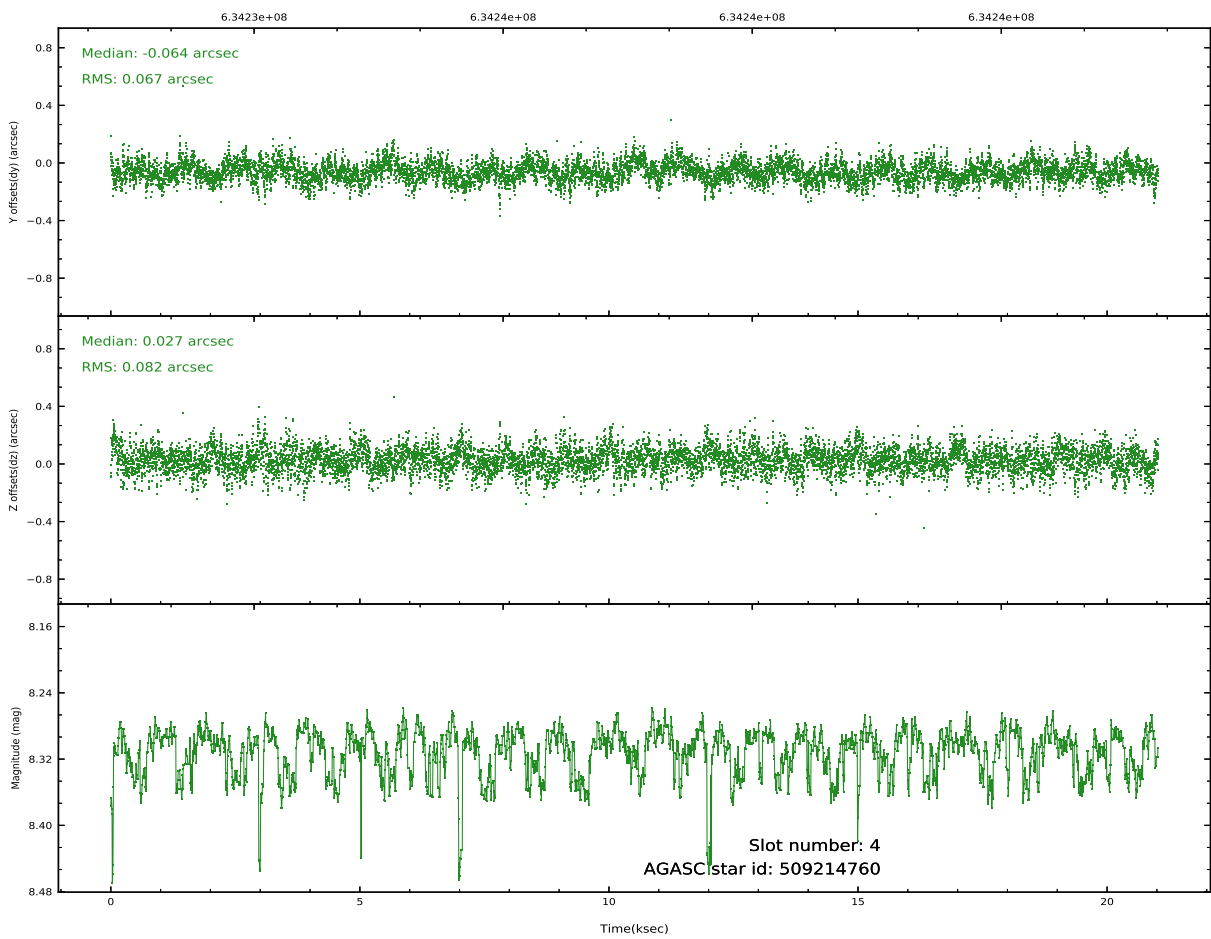
Time (s)



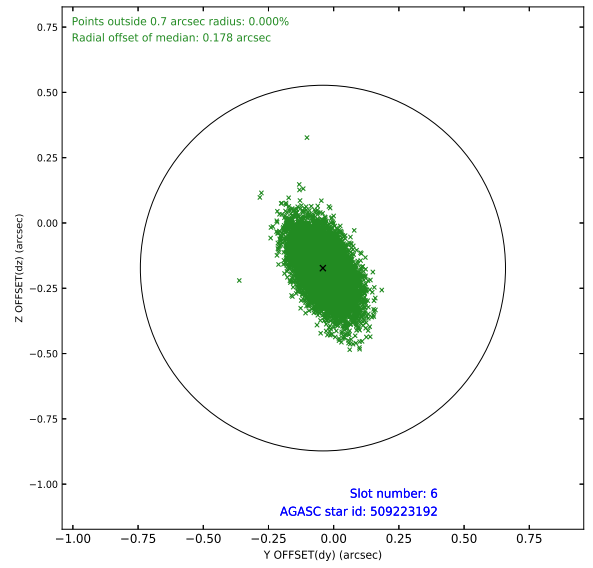
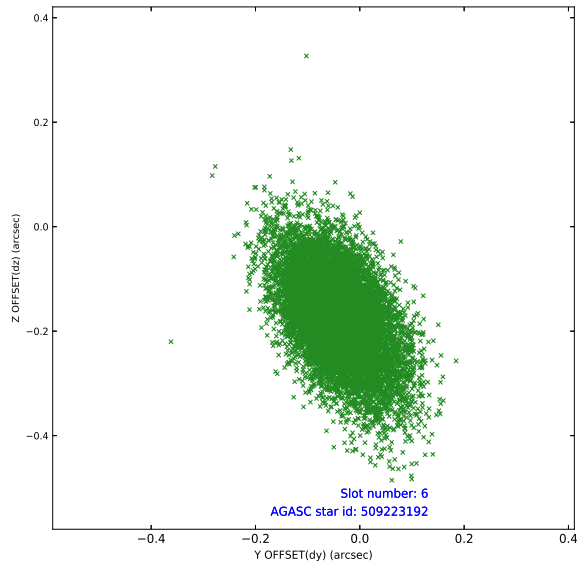
## 2.4.2 Slot 4



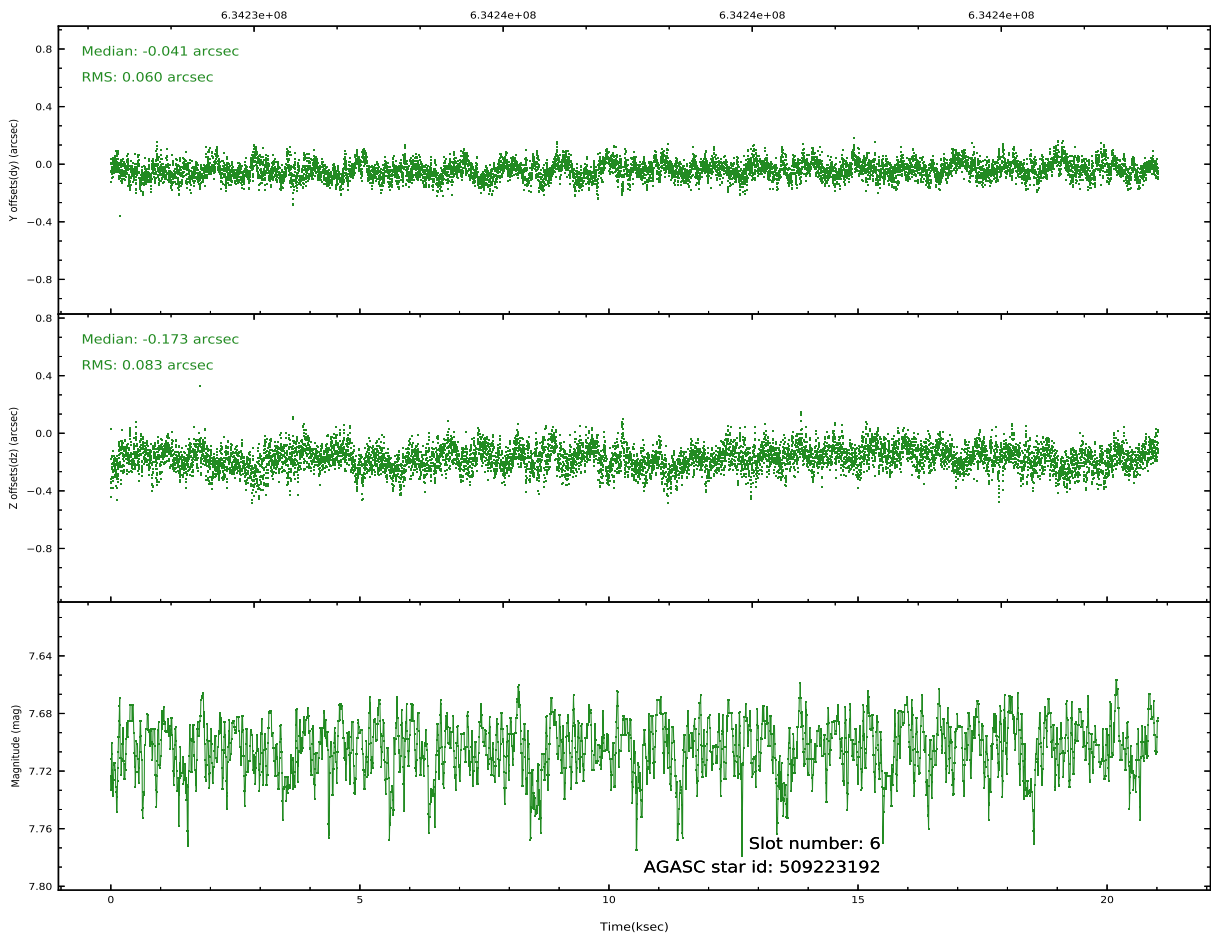
Time (s)



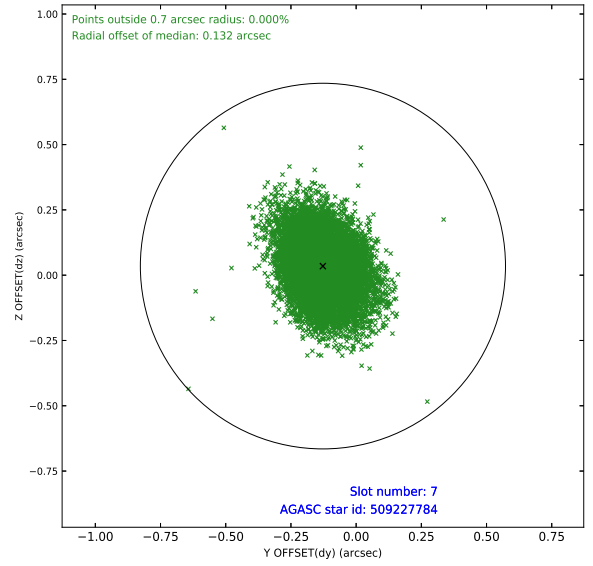
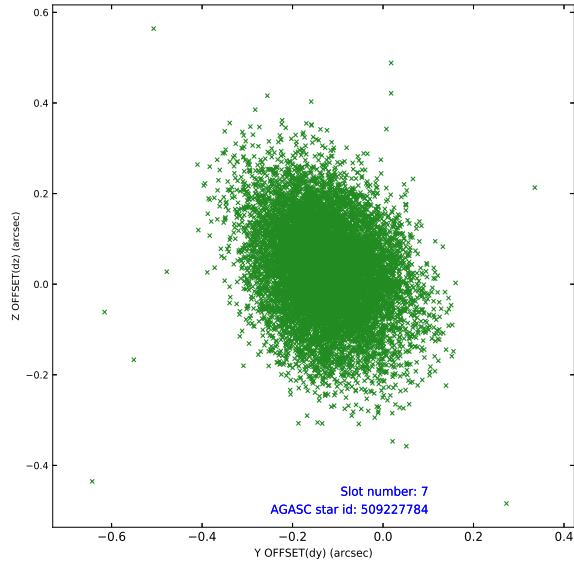
### 2.4.3 Slot 6



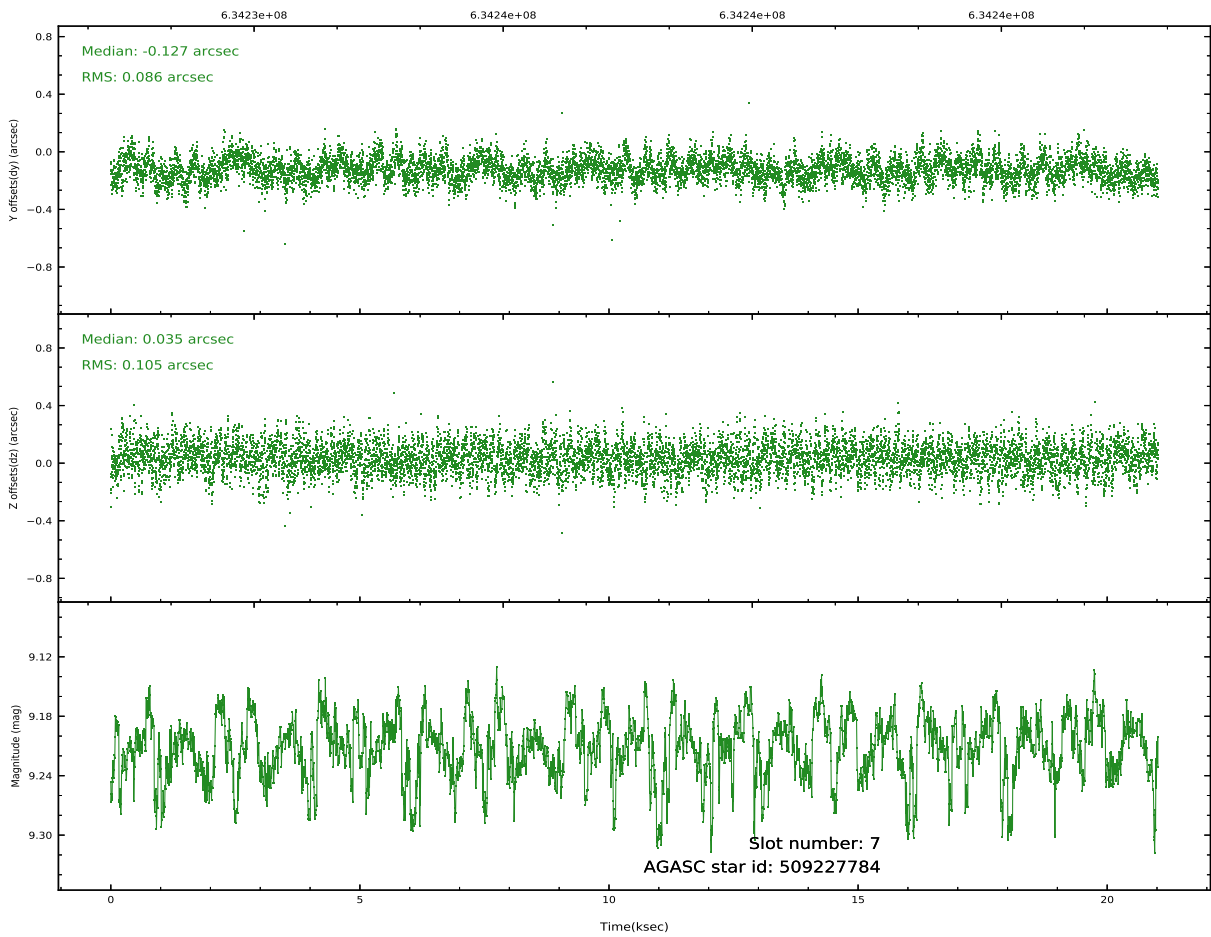
Time (s)



## 2.4.4 Slot 7

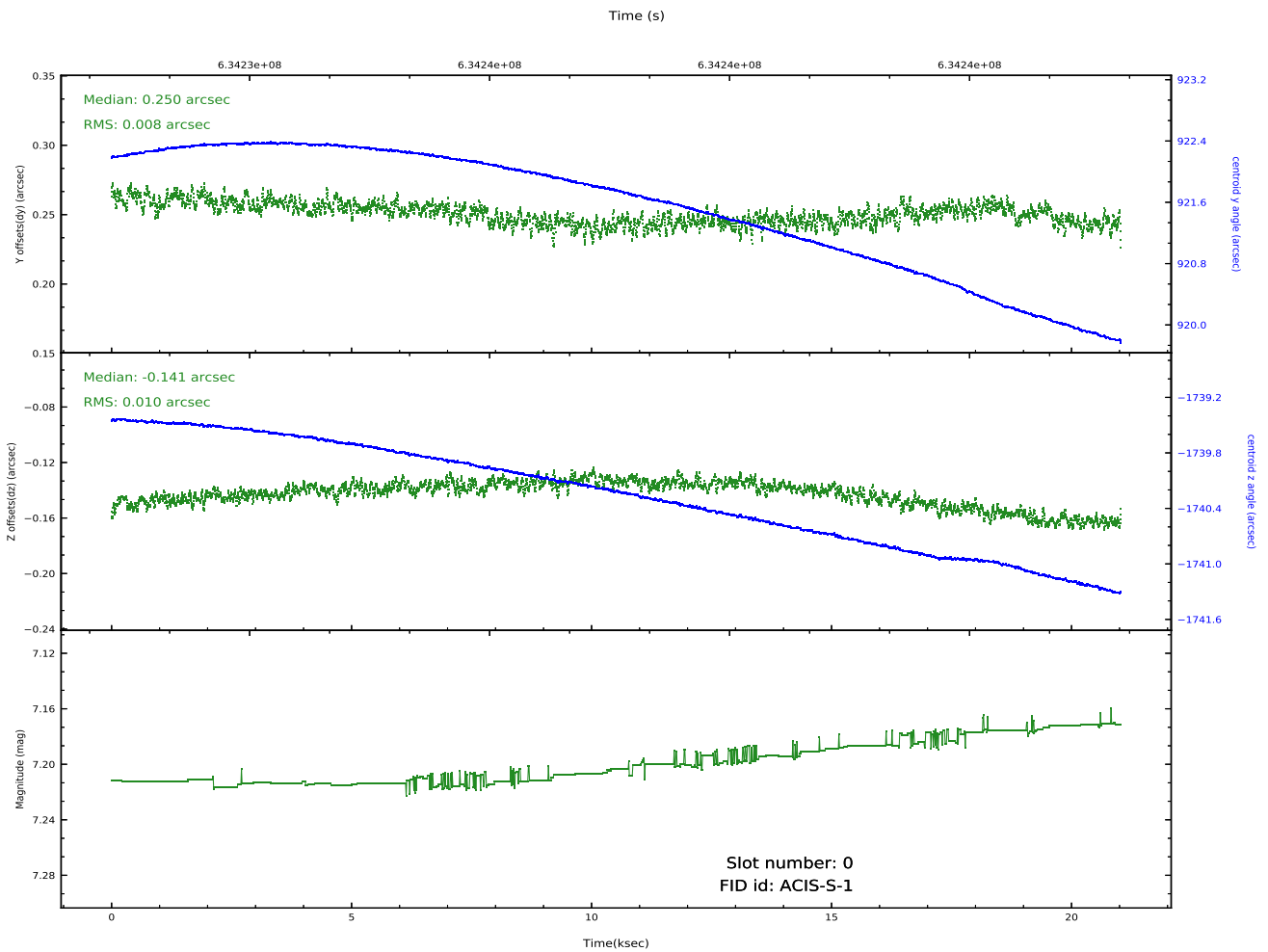
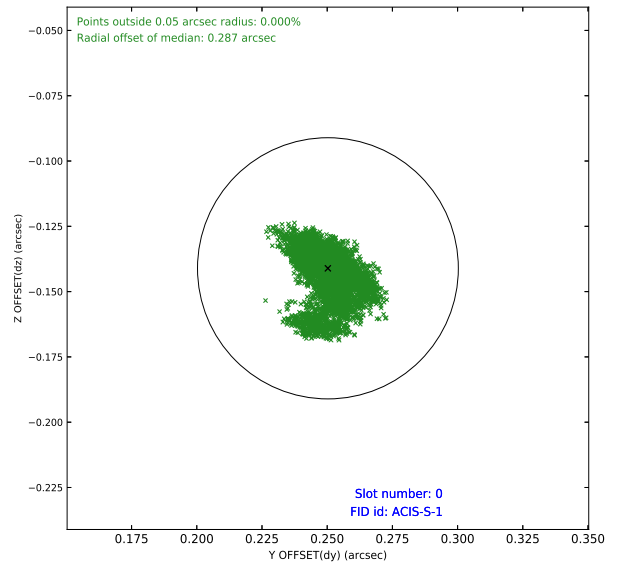
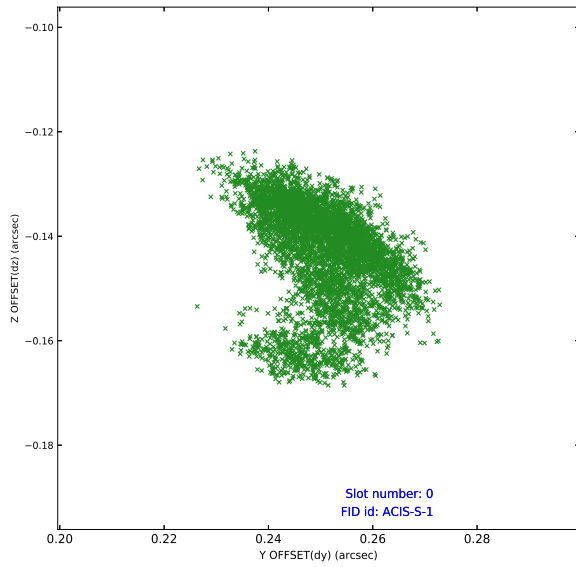


Time (s)

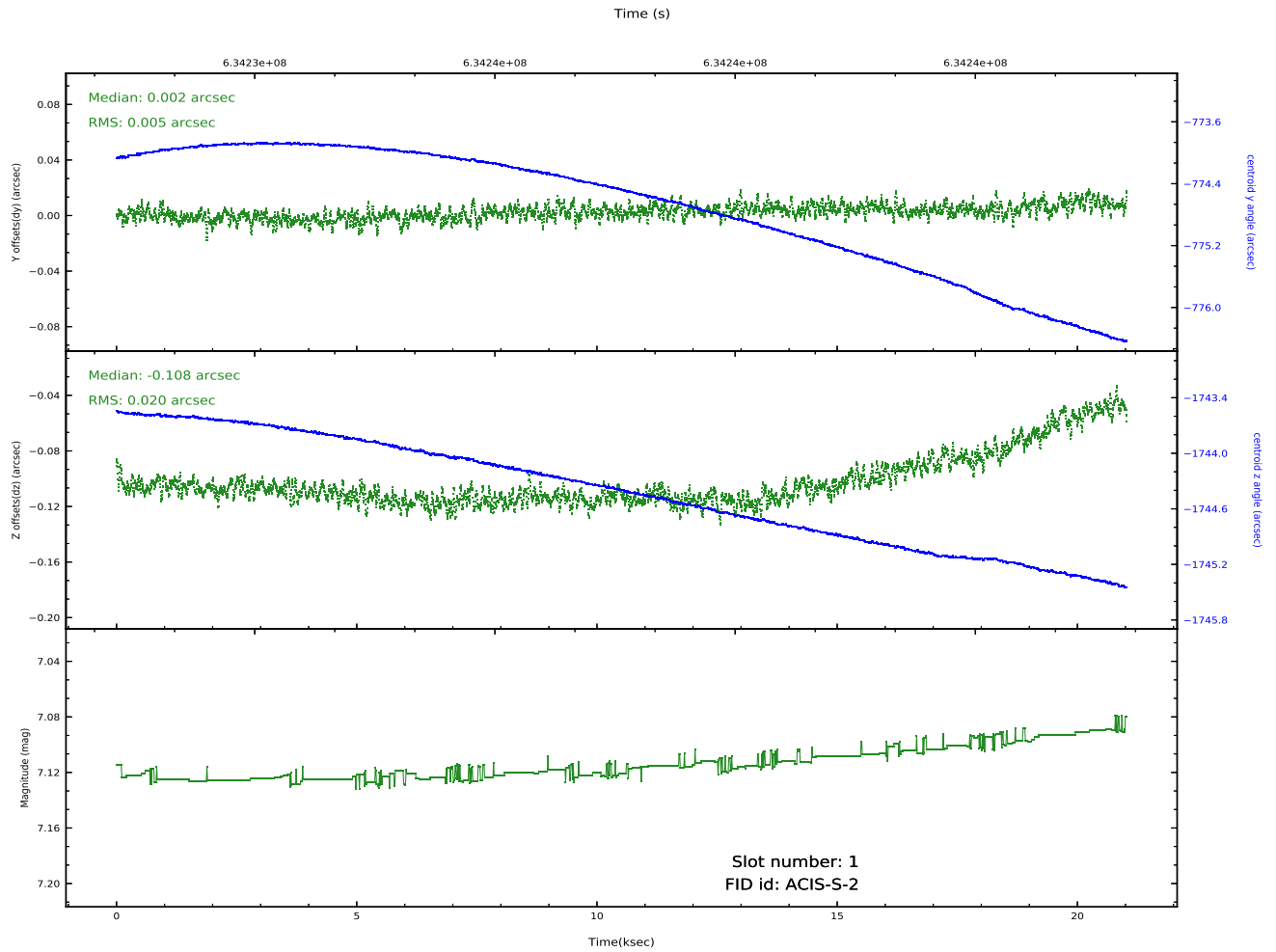
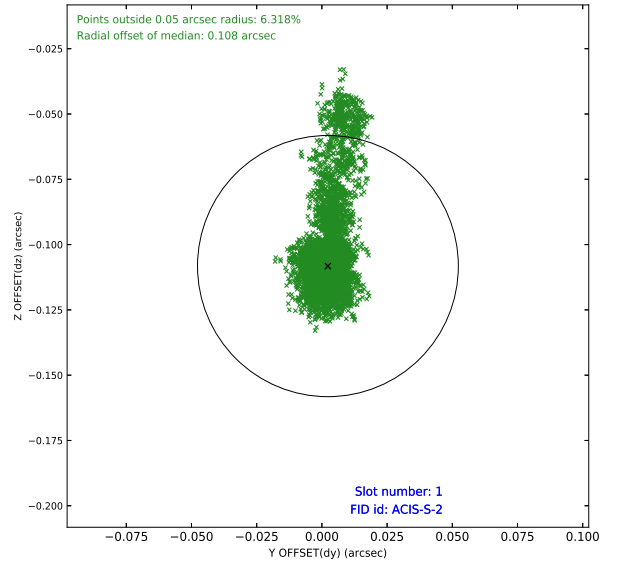
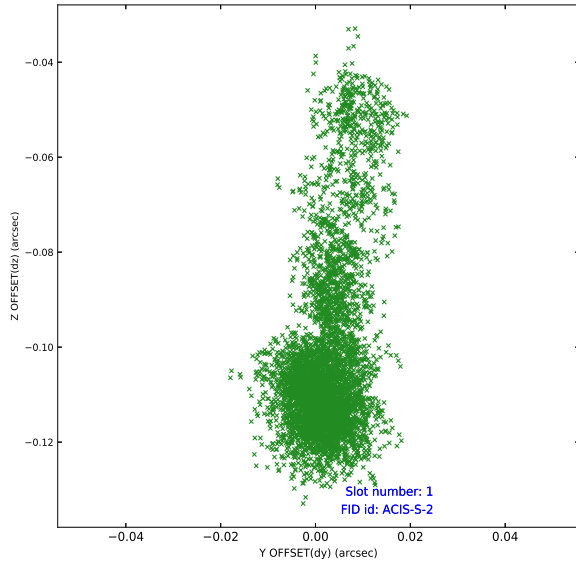


## 2.5 FID Slots

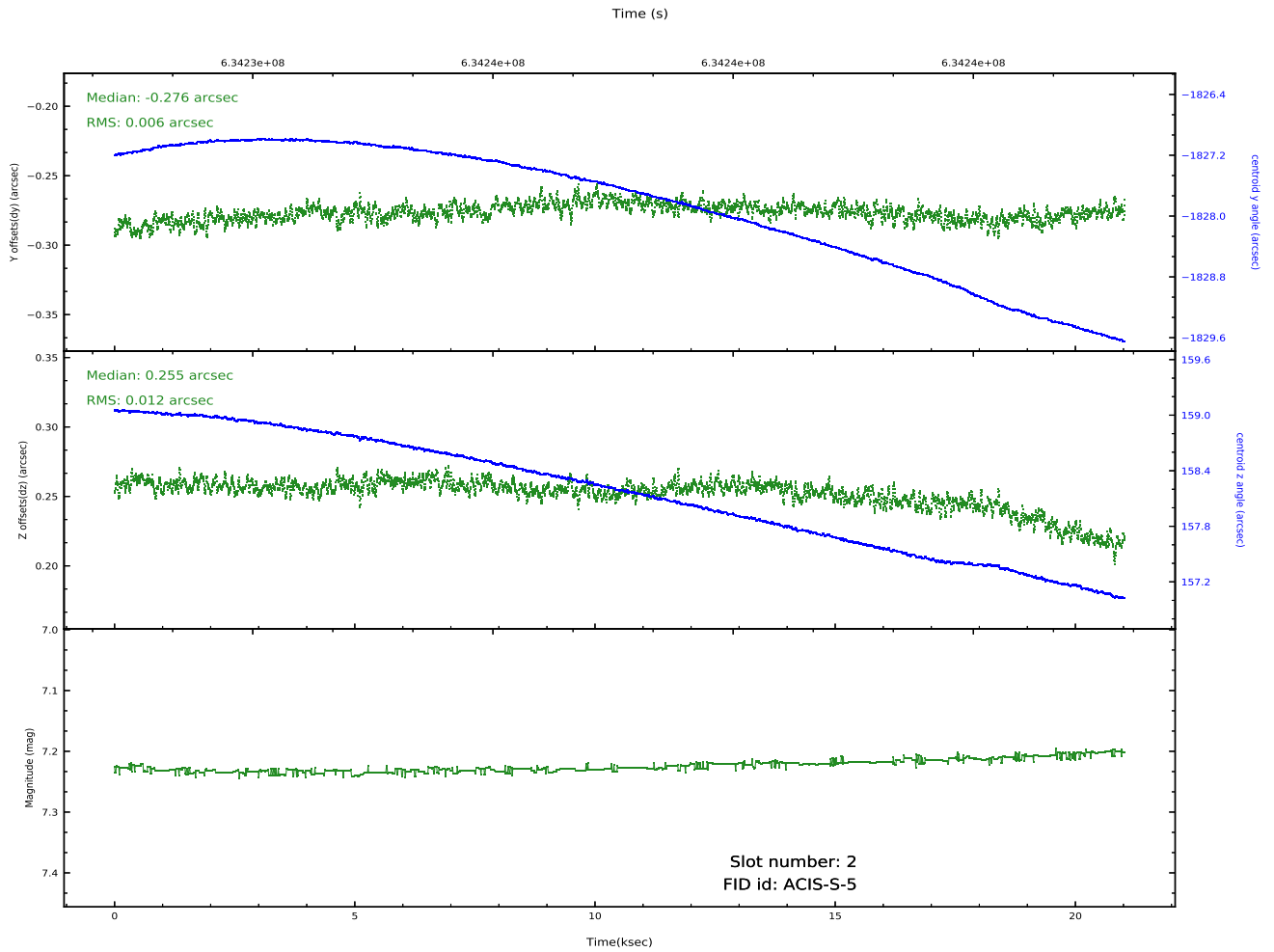
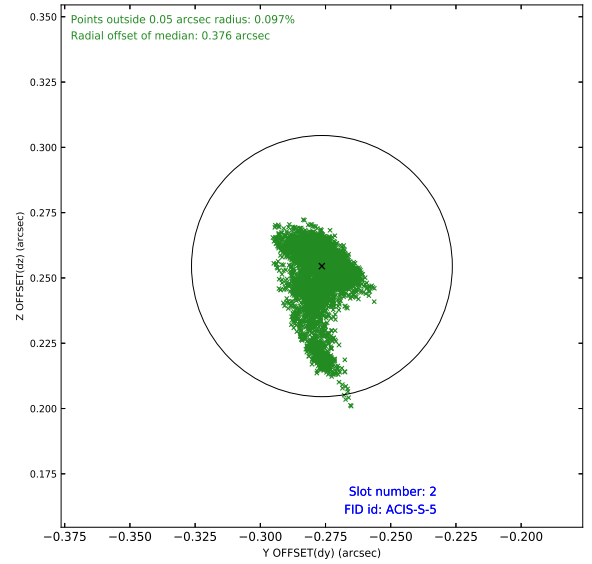
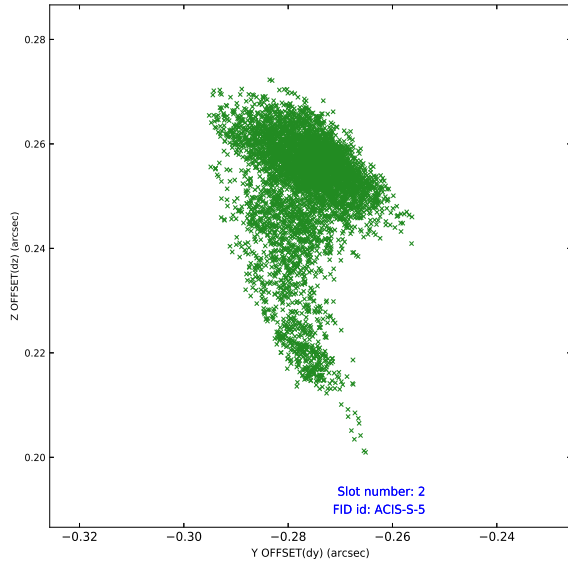
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.928100161076

## A.2 Comments

Joint proposal with NRAO.

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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 slot from the solution.