

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6337 - L2 Version 4  
Chandra X-Ray Center

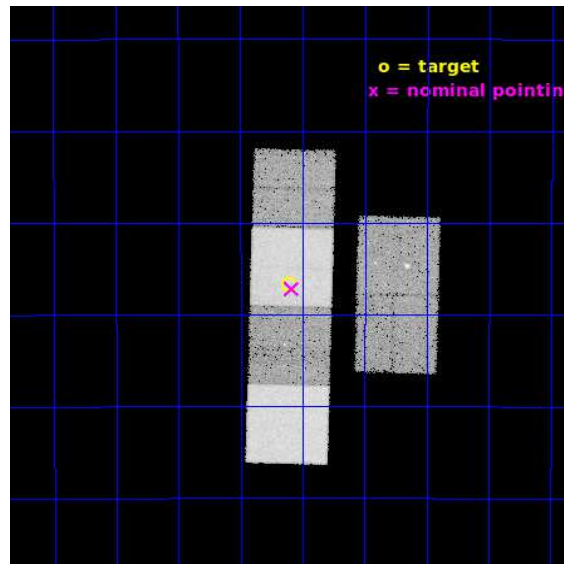
L2 Processing Date : Oct 9 2020

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

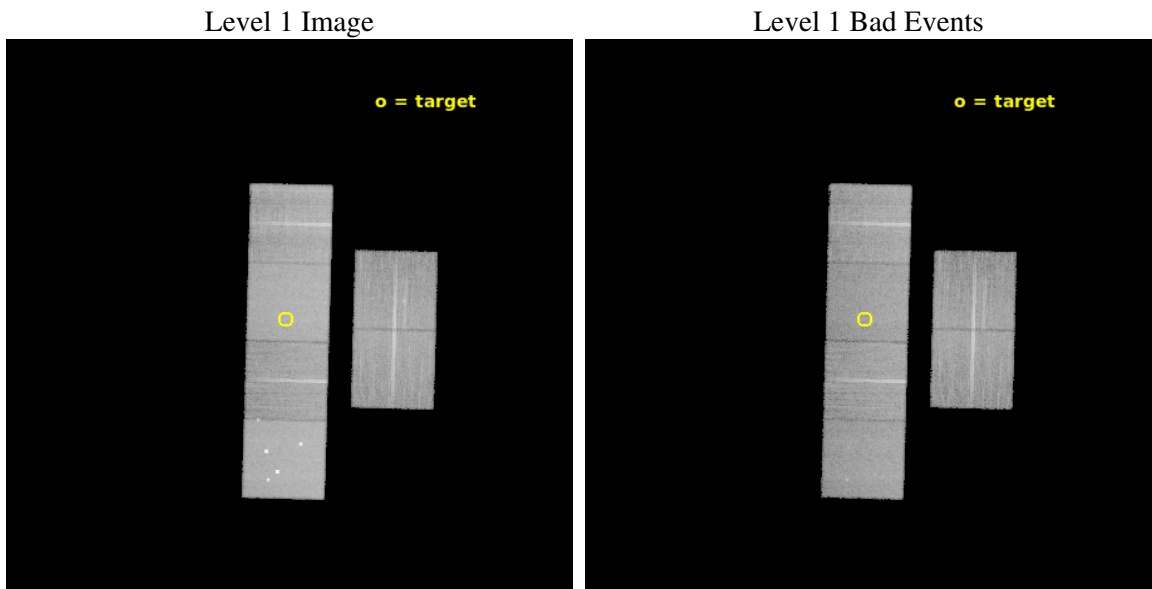
seq_num	400399	Sequence number
obs_id	6337	Observation id
title	Cooling curves of accretion-heated neutron stars	Proposal title
observer	Rudy Wijnands	Principal investigator
object	MXB 1659-29	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	255.526667	Observer's specified target RA [deg]
dec_targ	-29.945639	Observer's specified target Dec [deg]
ra_nom	255.52152250643	Nominal RA [deg]
dec_nom	-29.95311091362	Nominal Dec [deg]
roll_nom	271.46054903731	Nominal Roll [deg]
revision	4	Processing version of data
ontime	18956.067294061	Sum of GTIs [s]
livetime	18716.03415601	Livetime [s]
ontime2	18956.108334064	Sum of GTIs [s]
ontime3	18955.944174051	Sum of GTIs [s]
ontime5	18956.026254058	Sum of GTIs [s]
ontime6	18952.744233727	Sum of GTIs [s]
ontime7	18956.067294061	Sum of GTIs [s]
ontime8	18955.903134078	Sum of GTIs [s]
l2events	256993	Number of level 2 events



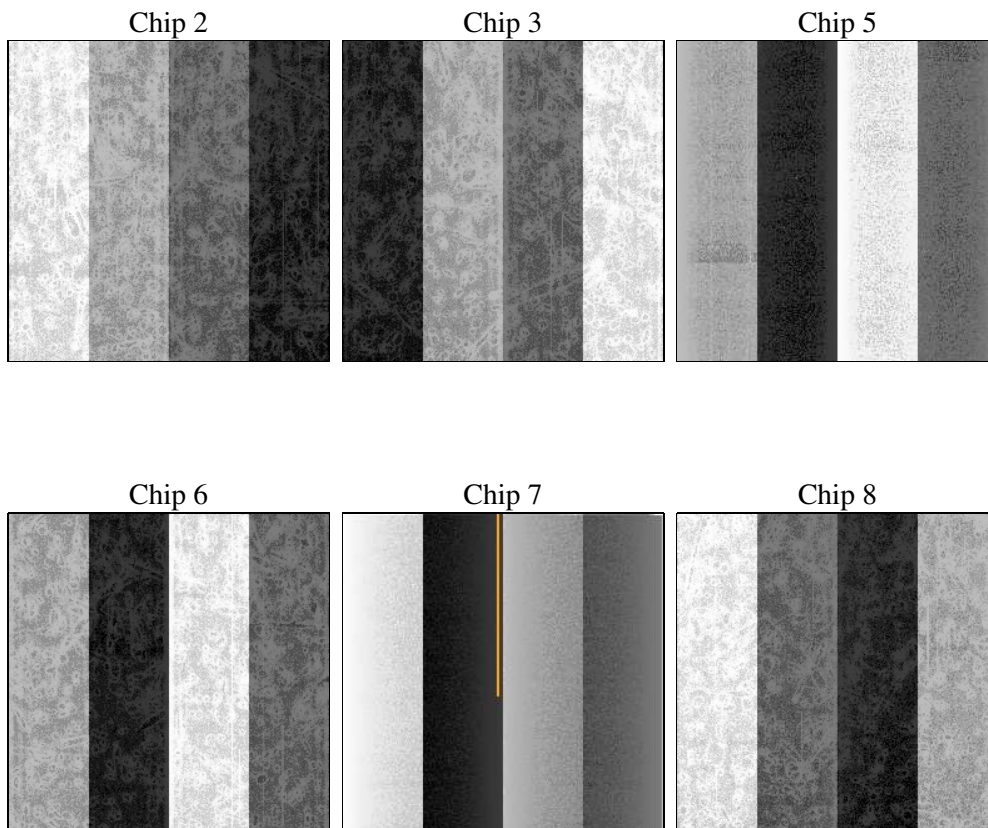
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	18956.067294061	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime2	18956.108334064	Sum of GTIs [s]
date	2020-10-09T14:09:03	Date and time of file creation	ontime3	18955.944174051	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	18956.026254058	Sum of GTIs [s]
			ontime6	18952.744233727	Sum of GTIs [s]
			ontime7	18956.067294061	Sum of GTIs [s]
			ontime8	18955.903134078	Sum of GTIs [s]
			l1events	1091769	Number of level 1 events

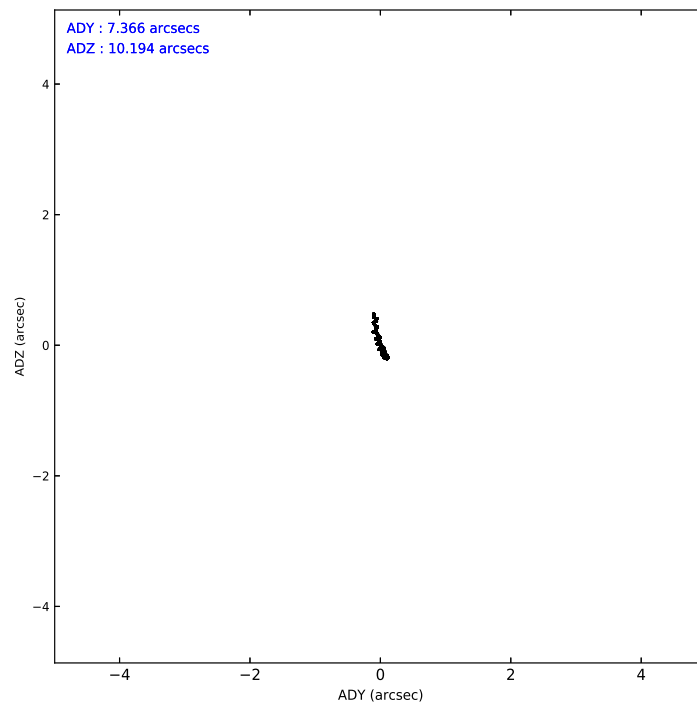
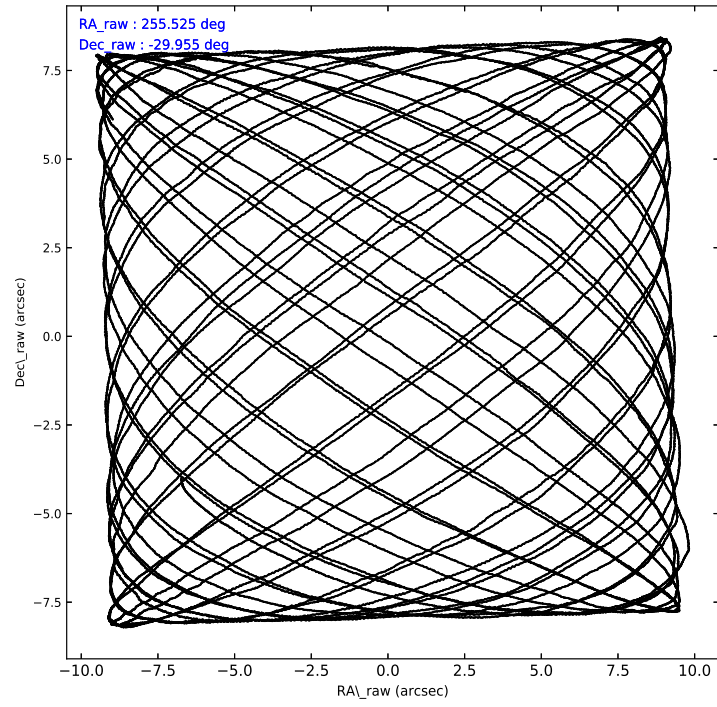
### 2.1.4 Events

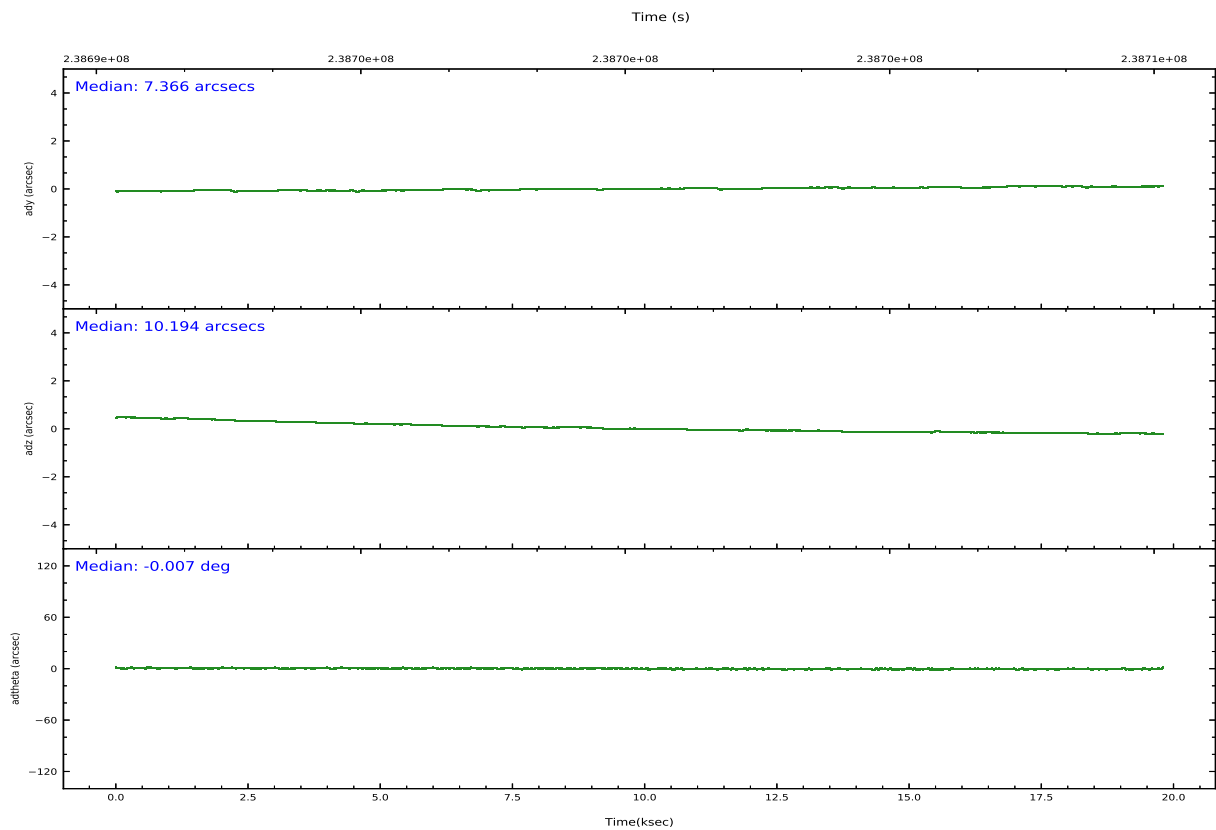
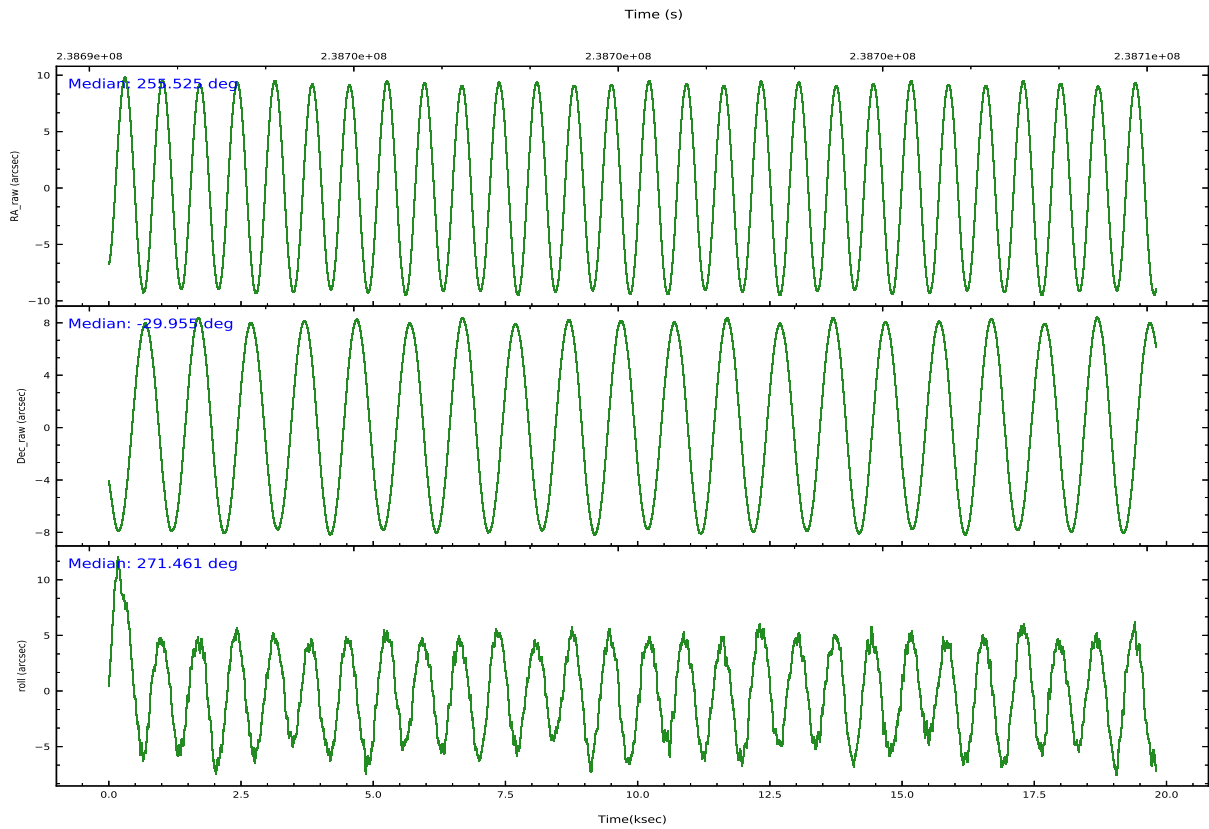
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	151794	145465	238439	153628	209989	192454	grade 0 events	8918	9537	19420	8352	8879	14812
rejected events	132956	125872	122767	134238	119724	148615		5%	6%	8%	5%	4%	7%
rejected %	87%	86%	51%	87%	57%	77%	grade 1 events	97	115	307	77	250	125
								0%	0%	0%	0%	0%	0%
							grade 2 events	3619	3426	32604	3911	18507	9472
								2%	2%	13%	2%	8%	4%
							grade 3 events	1720	1796	4103	1776	8055	4533
								1%	1%	1%	1%	3%	2%
							grade 4 events	1614	1767	3947	1688	7905	4168
								1%	1%	1%	1%	3%	2%
							grade 5 events	6039	6645	16214	6975	19529	9119
								3%	4%	6%	4%	9%	4%
							grade 6 events	2969	3071	55621	3666	46931	10863
								1%	2%	23%	2%	22%	5%
							grade 7 events	126818	119108	106223	127183	99933	139362
								83%	81%	44%	82%	47%	72%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	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	255.508227	255.52152250643	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.932161	-29.95311091362	Alternating exposures requested	N	N
[deg] Pointing Roll	271.298774	271.46054903731	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	238691171.184000	238689898.98178			
Observation start date	2005-07-25T15:05:07	2005-07-25T14:44:58			
[s] Observation end time (MET)	238710171.184000	238711306.10776			
Observation end date	2005-07-25T20:21:47	2005-07-25T20:41:46			
Read mode	TIMED	TIMED			

## 2.3 Aspect





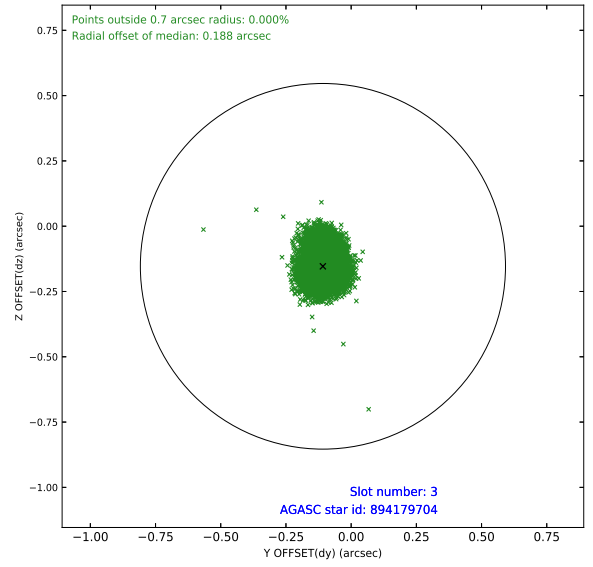
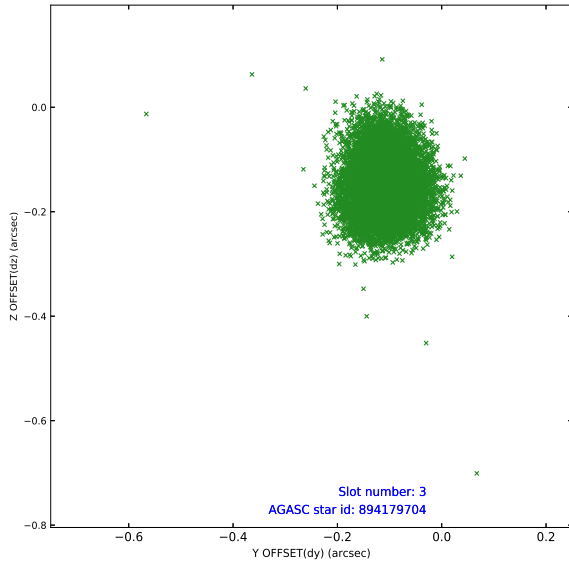
### Slot Statistics

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	7.19	4829	1.000	0.050	-0.076	0.014	0.026	0.000000	0.000000	935.99	-1727
1	FID		ACIS-S-5	7.24	4831	1.000	-0.116	0.019	0.007	0.012	0.000000	0.000000	-1813.10	170
2	FID		ACIS-S-6	7.35	4831	1.000	0.045	0.070	0.016	0.027	0.000000	0.000000	401.29	814
3	GUIDE	used	894179704	8.74	9657	1.000	-0.108	-0.154	0.073	0.117	254.813840	-29.808957	-485.47	-2158
4	GUIDE	used	894311560	8.27	9661	1.000	-0.043	0.078	0.056	0.090	255.968048	-29.561250	-1299.52	1469
5	GUIDE	used	964690752	8.79	9645	1.000	0.098	0.141	0.078	0.128	255.992274	-30.082811	579.55	1495
6	GUIDE	used	964693496	8.88	9651	1.000	0.152	-0.060	0.087	0.135	255.191226	-30.516598	2084.15	-1030
7	GUIDE	used	894312440	8.37	9658	1.000	-0.105	-0.002	0.073	0.115	256.267206	-29.720309	-700.86	2389

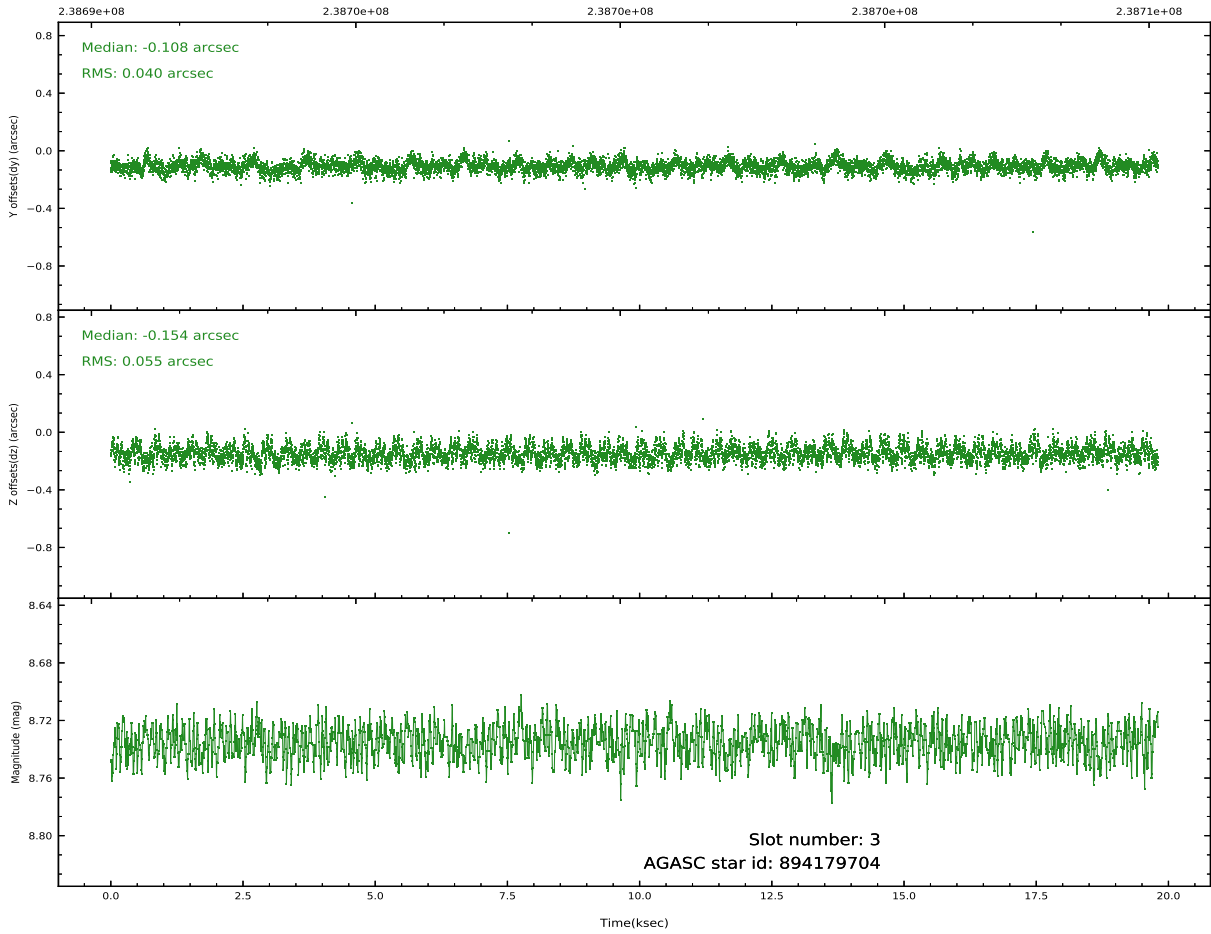
∞

## 2.4 Star Slots

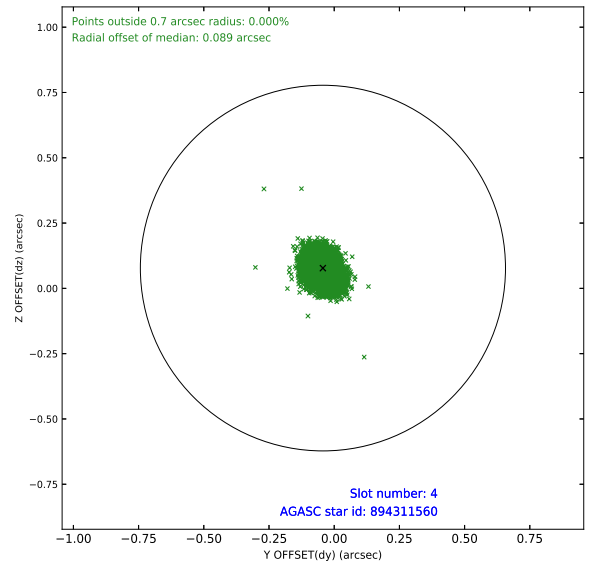
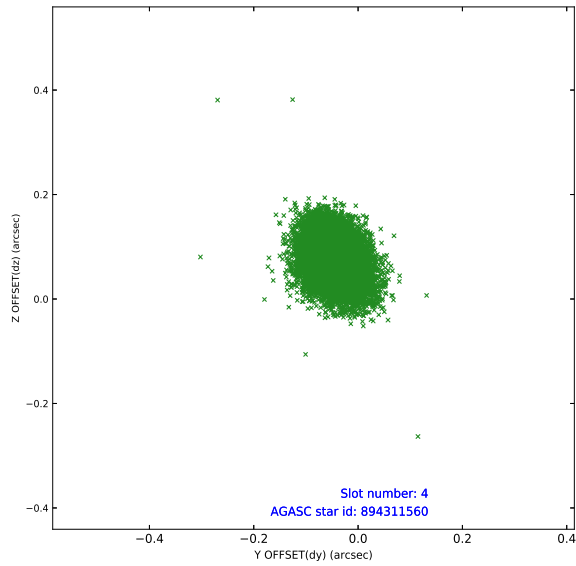
### 2.4.1 Slot 3



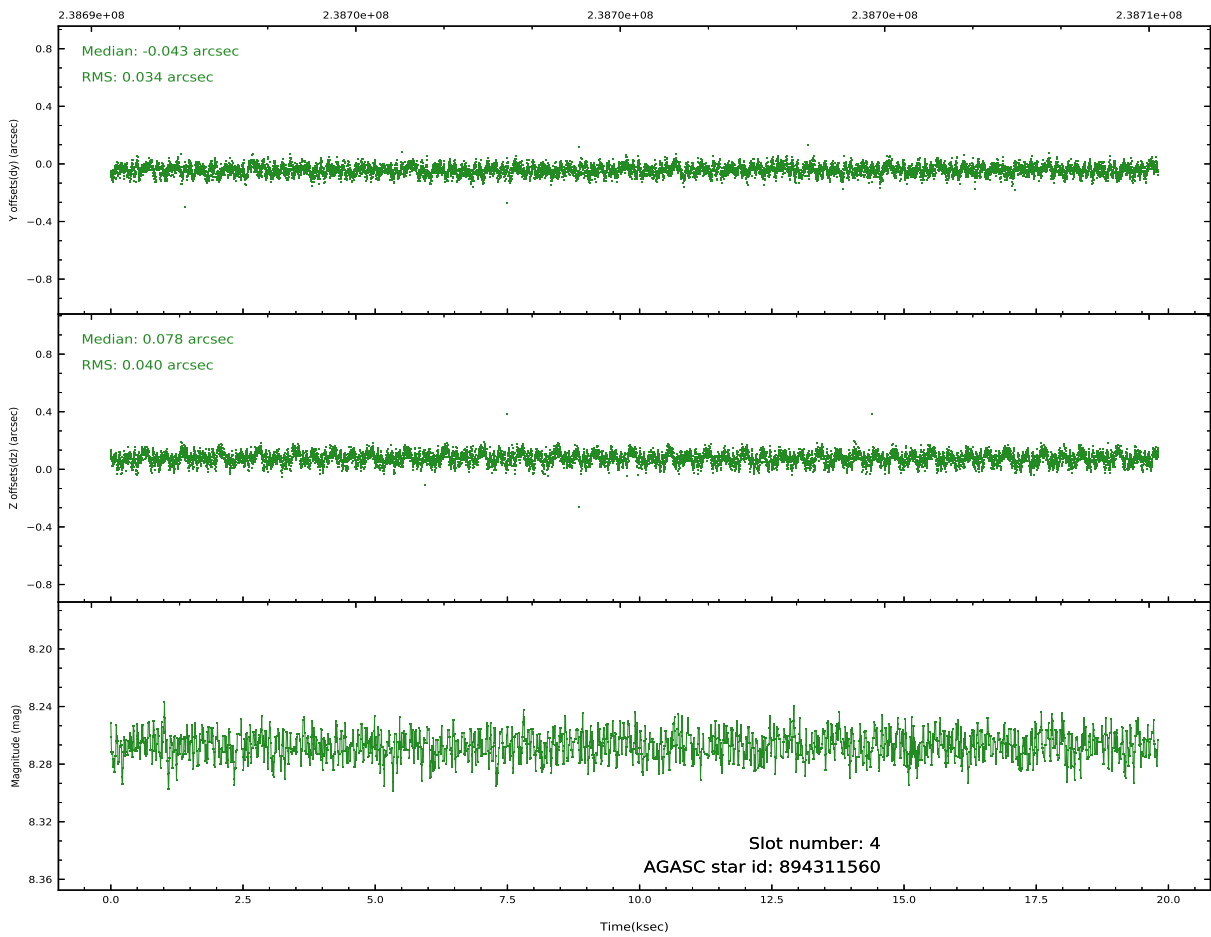
Time (s)



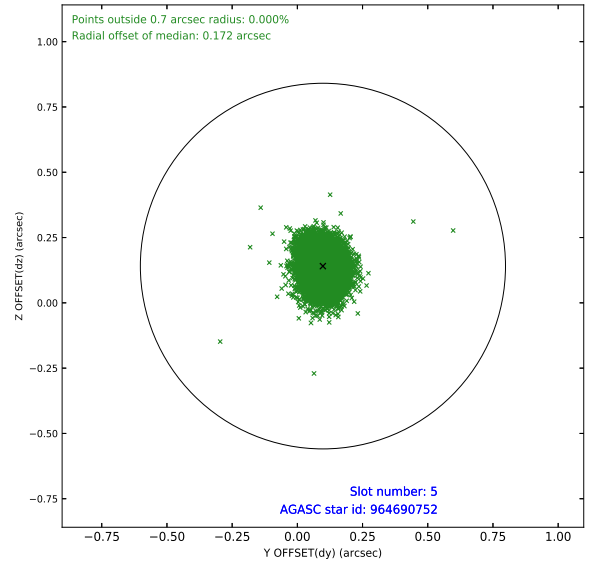
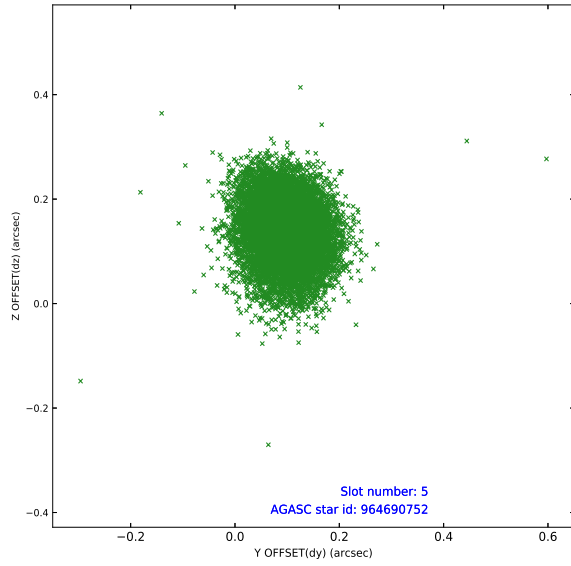
## 2.4.2 Slot 4



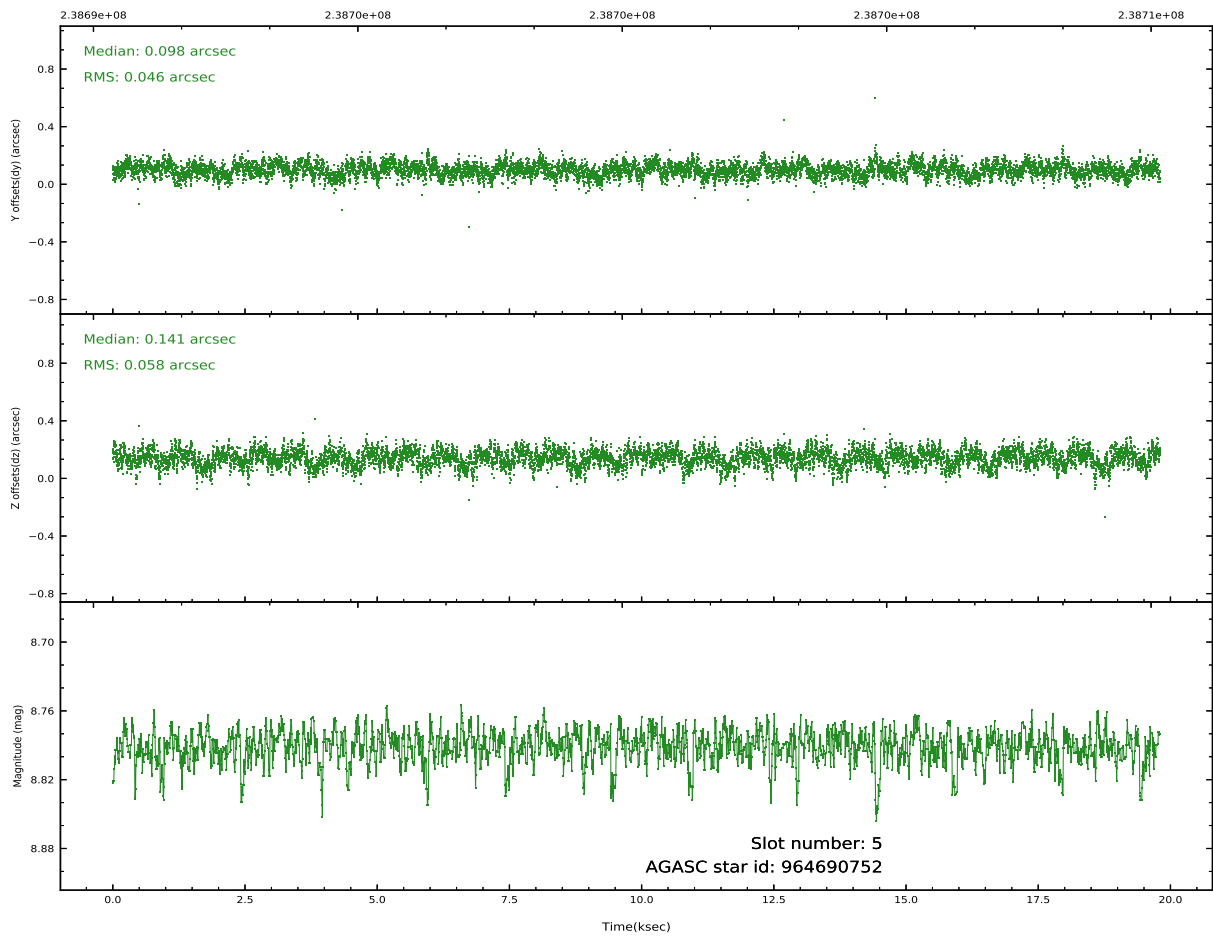
Time (s)



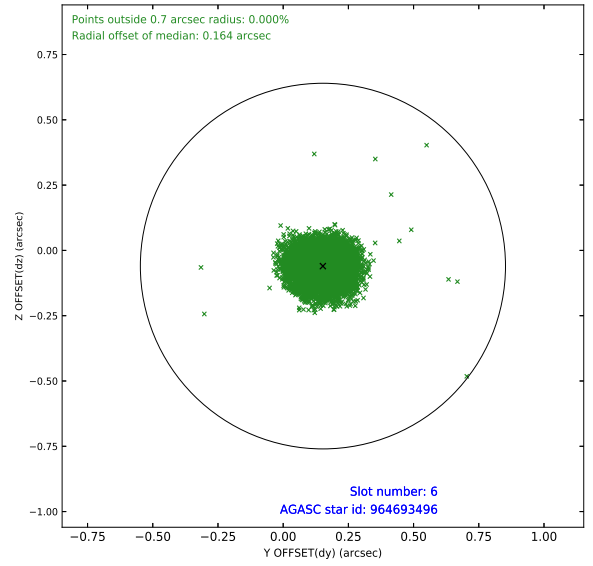
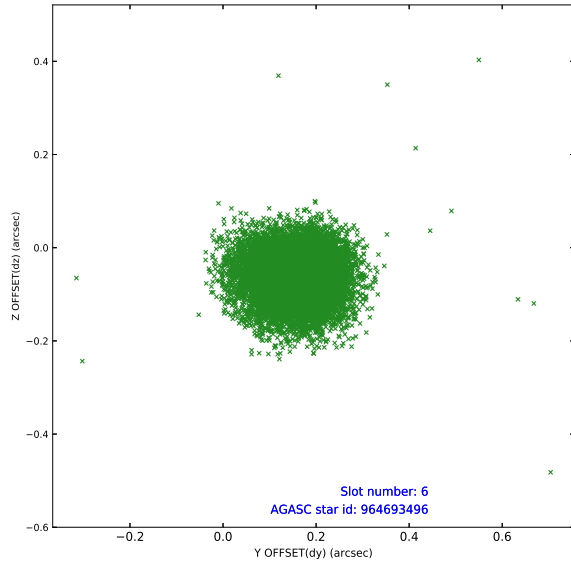
### 2.4.3 Slot 5



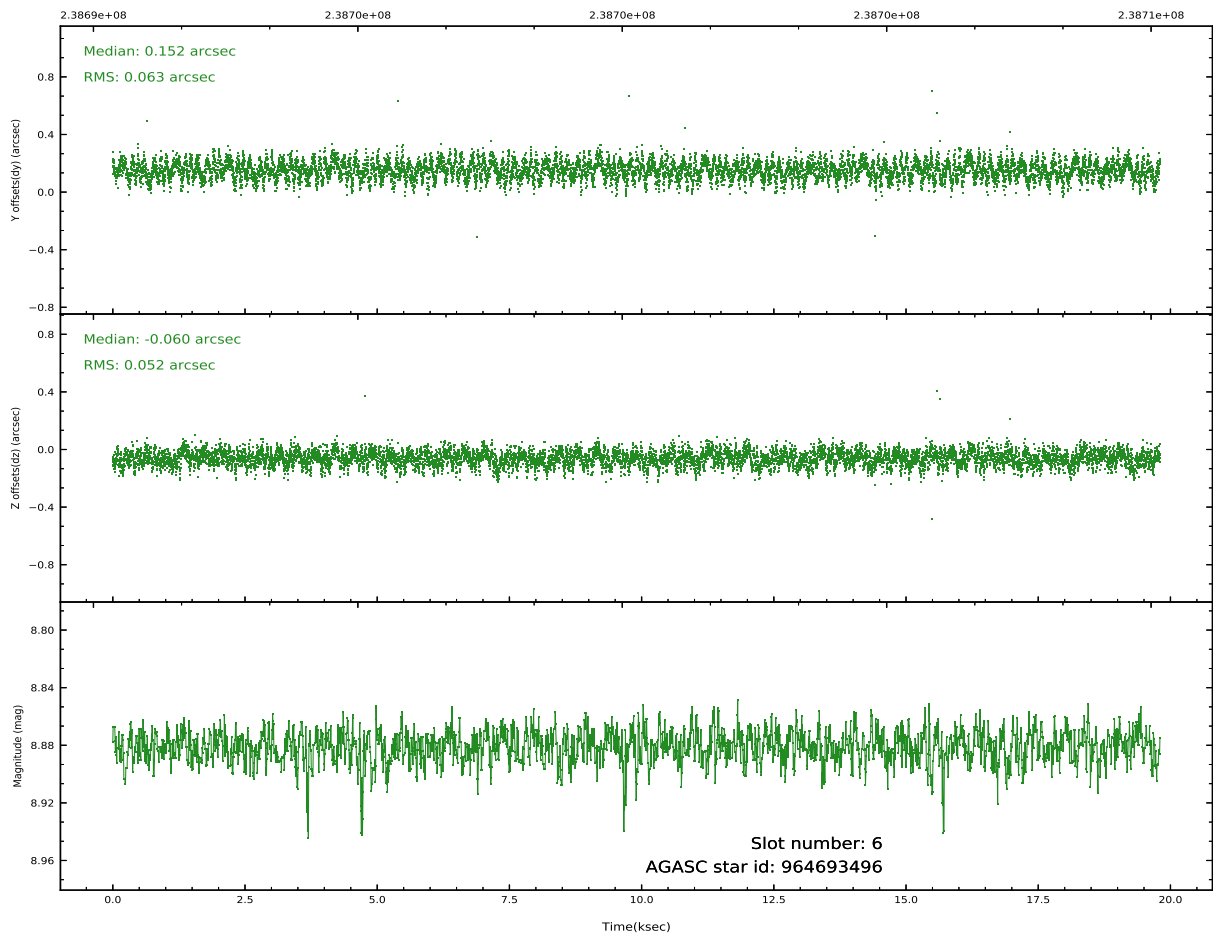
Time (s)



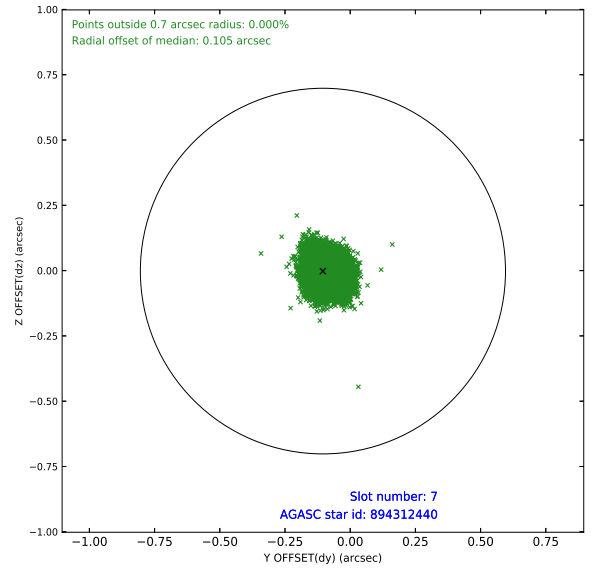
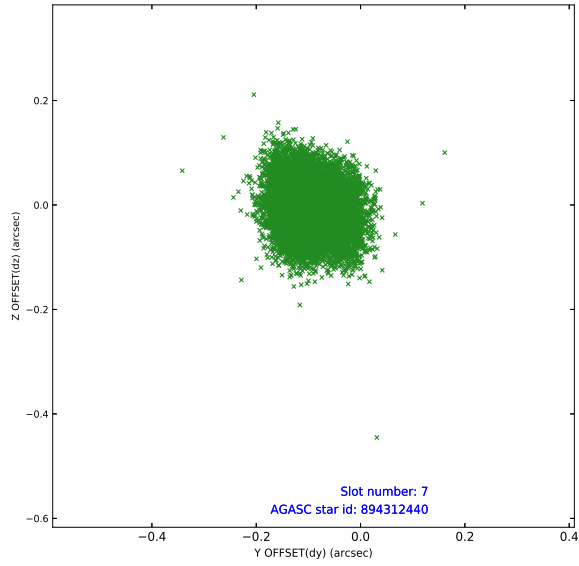
## 2.4.4 Slot 6



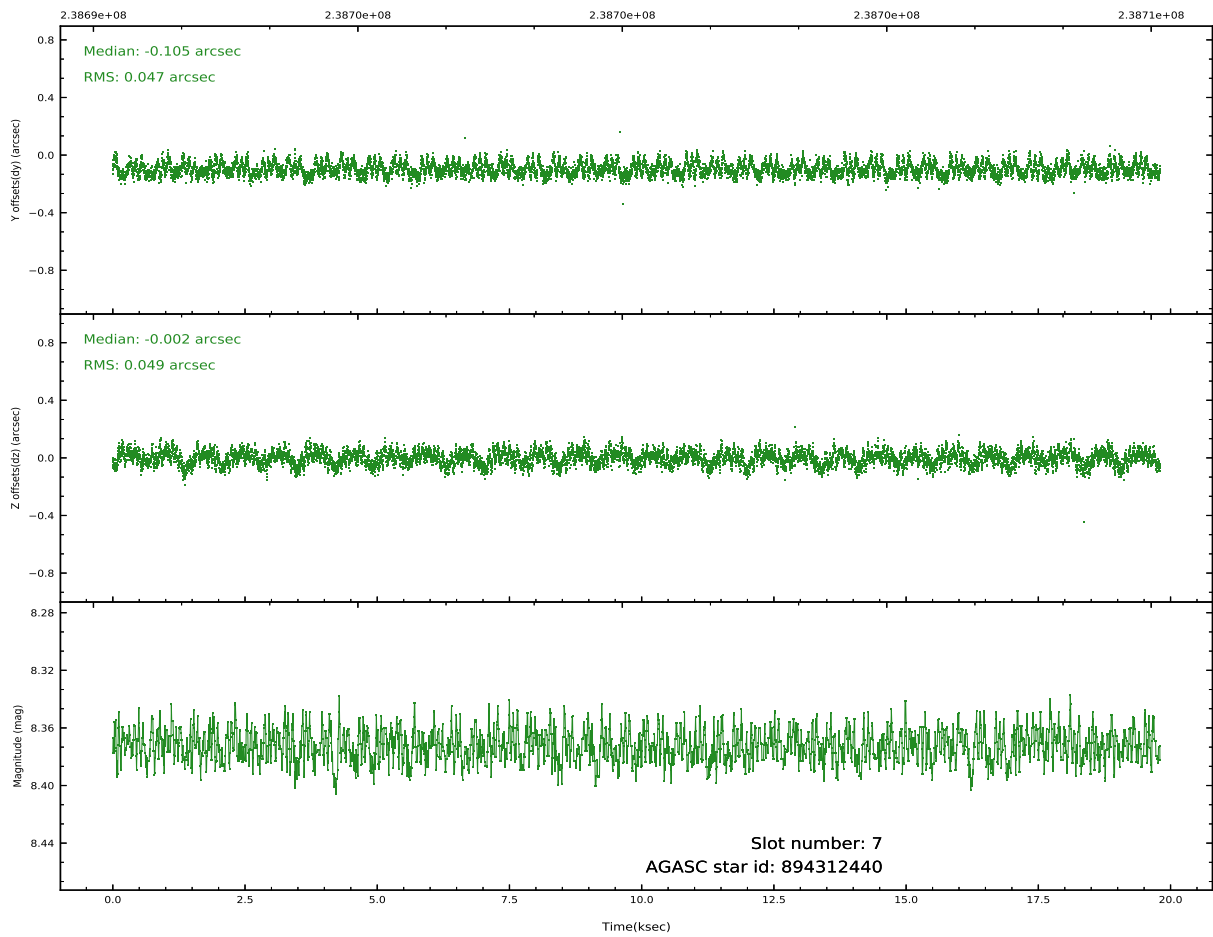
Time (s)



## 2.4.5 Slot 7

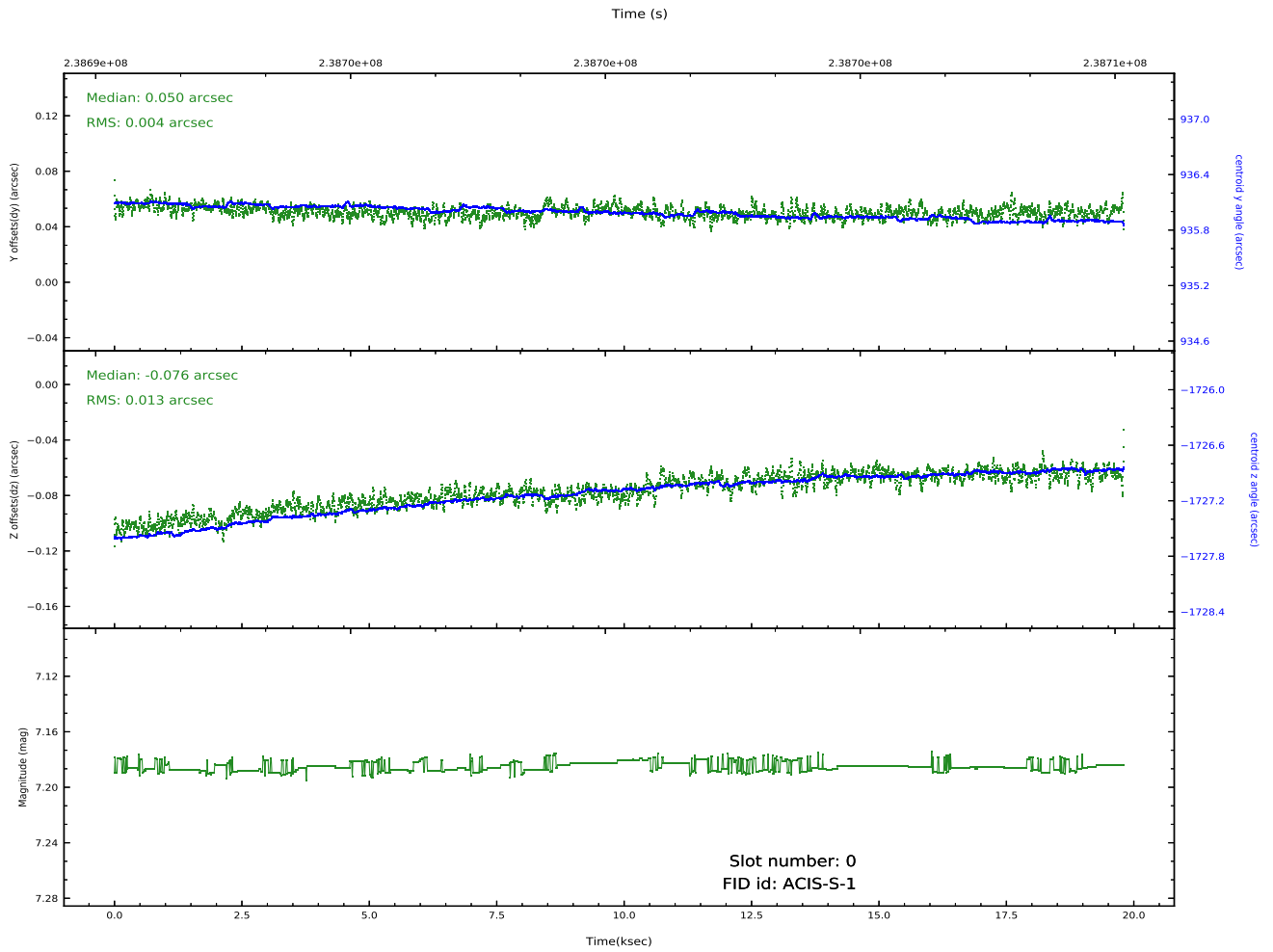
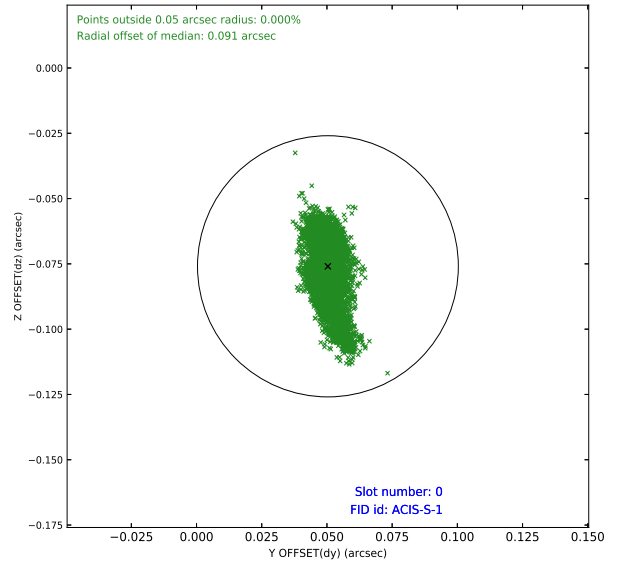
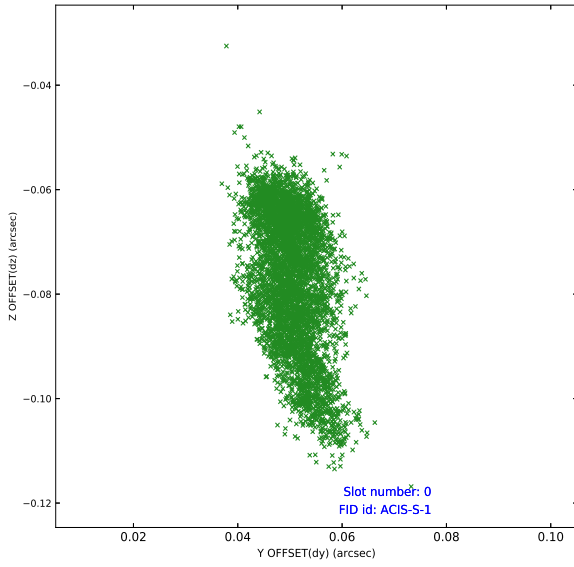


Time (s)

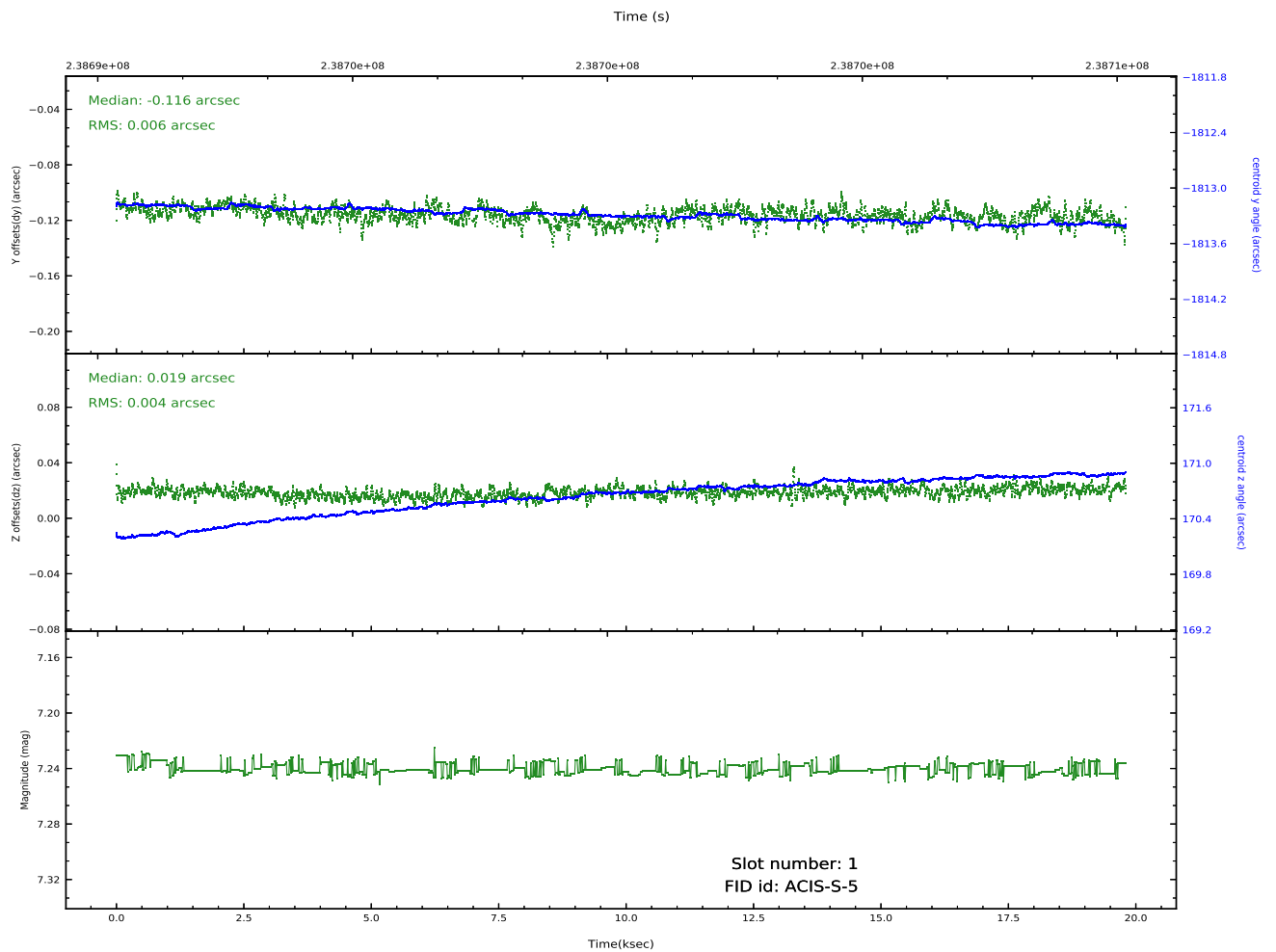
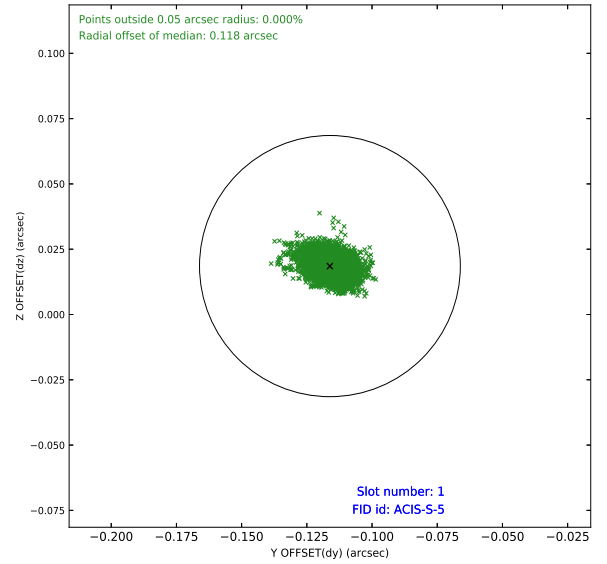
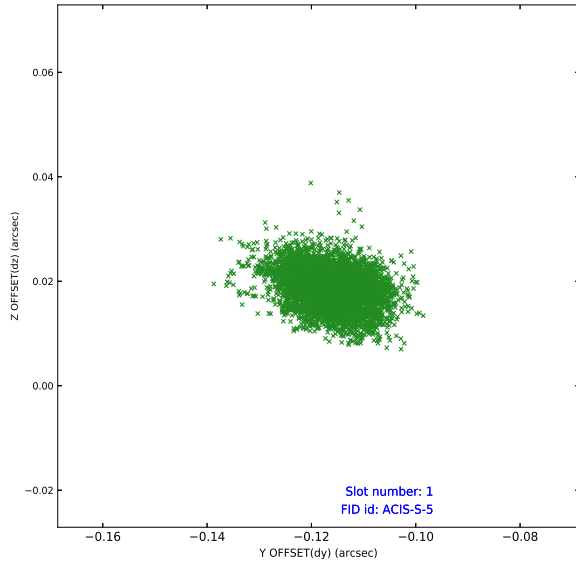


## 2.5 FID Slots

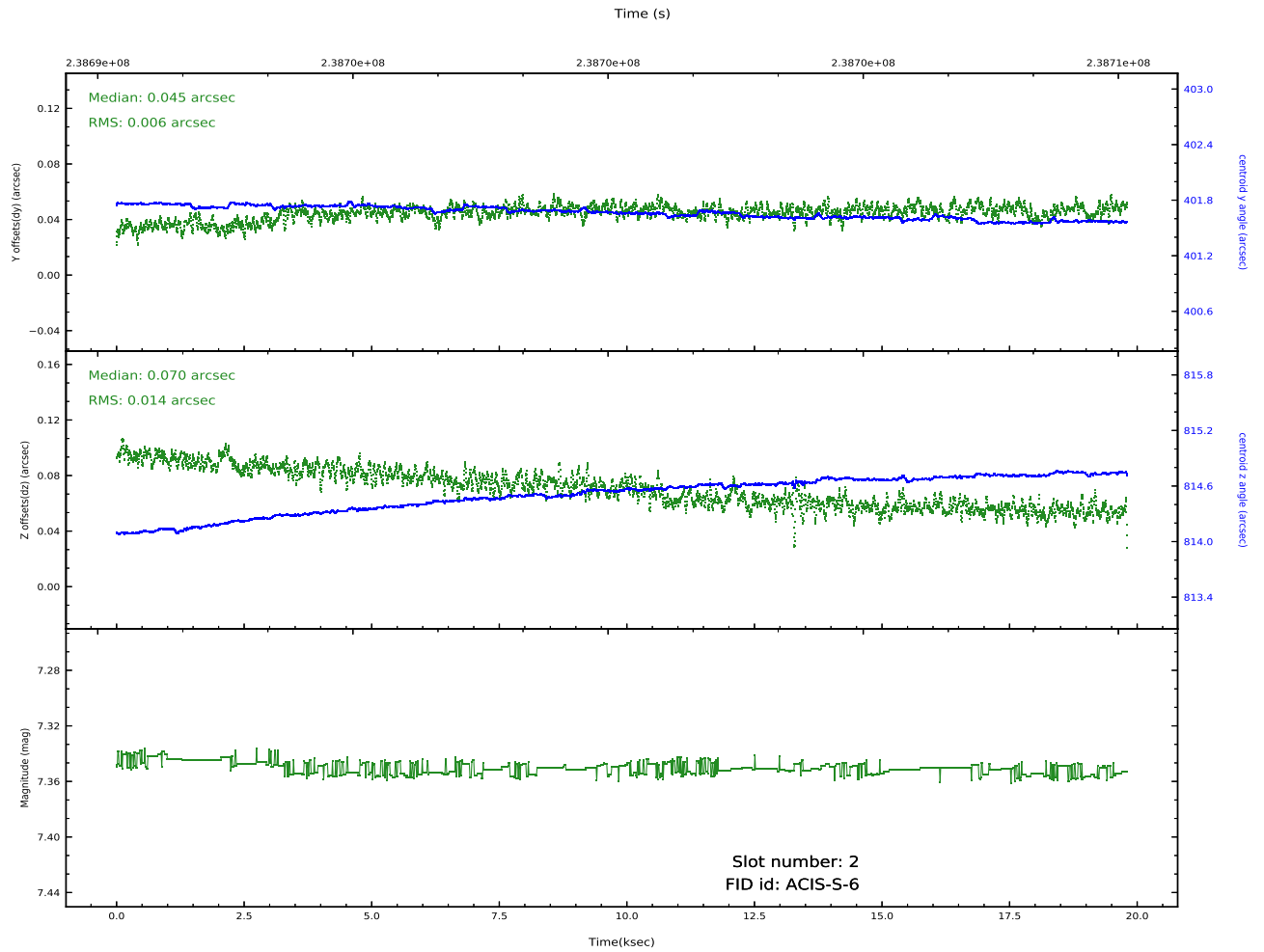
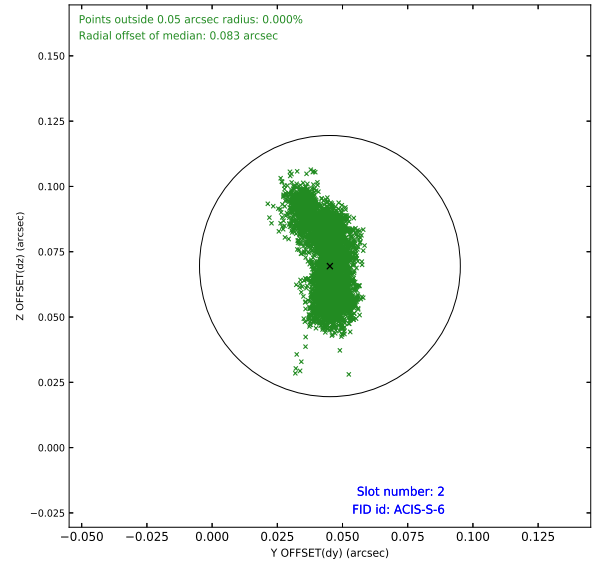
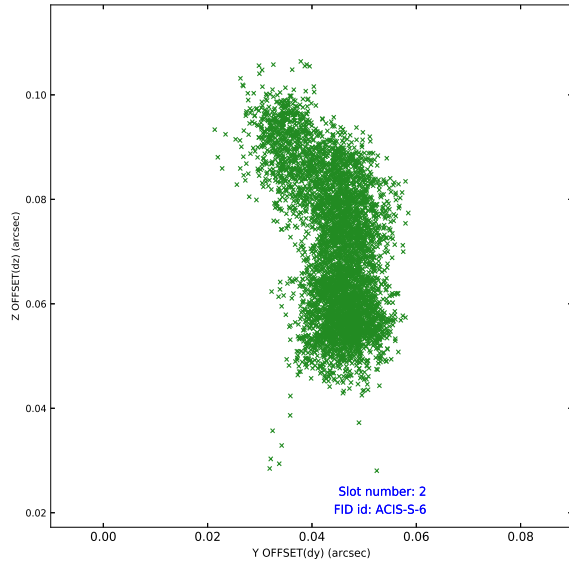
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Francesca Civano
V&V Date (YYYY-MM-DD)	2020.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.95991

## A.2 Comments