

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 7211 - L2 Version 3  
Chandra X-Ray Center

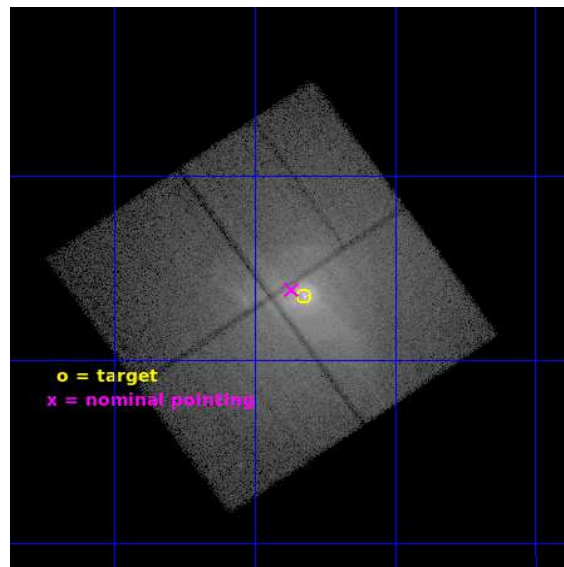
L2 Processing Date : Oct 11 2020

## 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

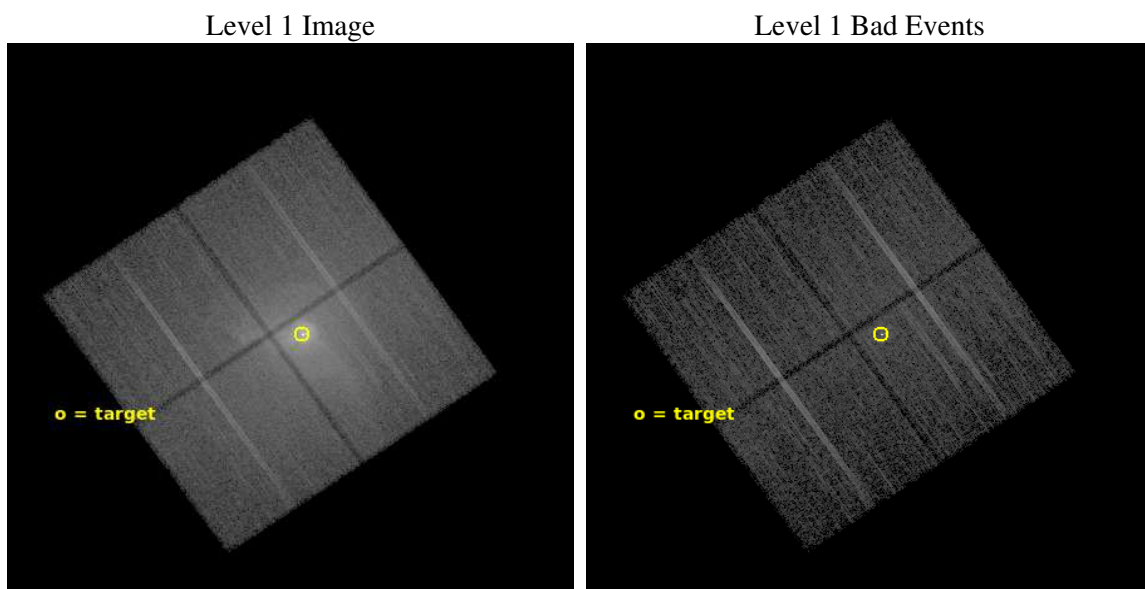
seq_num	800538	Sequence number
obs_id	7211	Observation id
title	The History of AGN Activity in M87 and the Interaction of Nuclear Outbursts with the Surrounding Atmosphere	Proposal title
observer	William Forman	Principal investigator
object	M87	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.70625	Observer's specified target RA [deg]
dec_targ	12.391111	Observer's specified target Dec [deg]
ra_nom	187.71691263003	Nominal RA [deg]
dec_nom	12.397116225425	Nominal Dec [deg]
roll_nom	55.204345443041	Nominal Roll [deg]
revision	3	Processing version of data
ontime	16836.099967599	Sum of GTIs [s]
livetime	16616.123926966	Livetime [s]
ontime0	16832.958967417	Sum of GTIs [s]
ontime1	16836.099967599	Sum of GTIs [s]
ontime2	16836.099967599	Sum of GTIs [s]
ontime3	16836.099967599	Sum of GTIs [s]
l2events	606142	Number of level 2 events



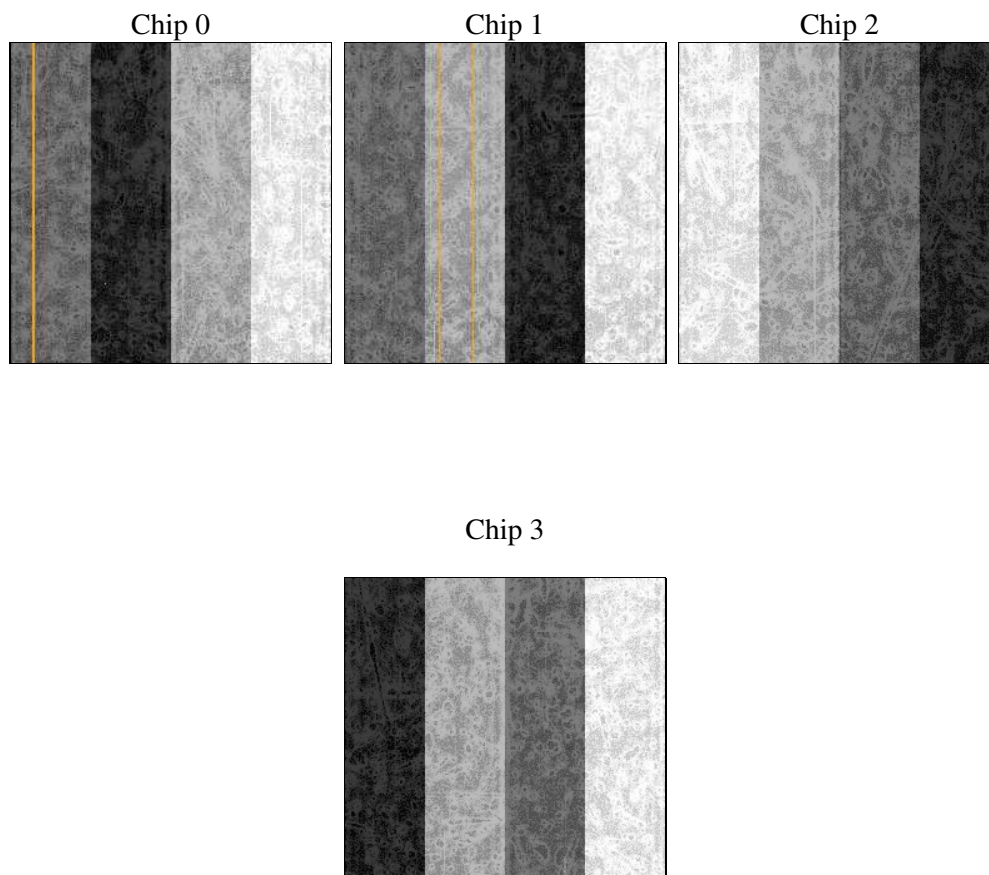
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	16709.722000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	16836.099967599	Sum of GTIs [s]
caldbver	4.9.2	&#160	ontime0	16832.958967417	Sum of GTIs [s]
date	2020-10-11T13:57:30	Date and time of file creation	ontime1	16836.099967599	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	16836.099967599	Sum of GTIs [s]
			ontime3	16836.099967599	Sum of GTIs [s]
			l1events	1089168	Number of level 1 events

### 2.1.4 Events

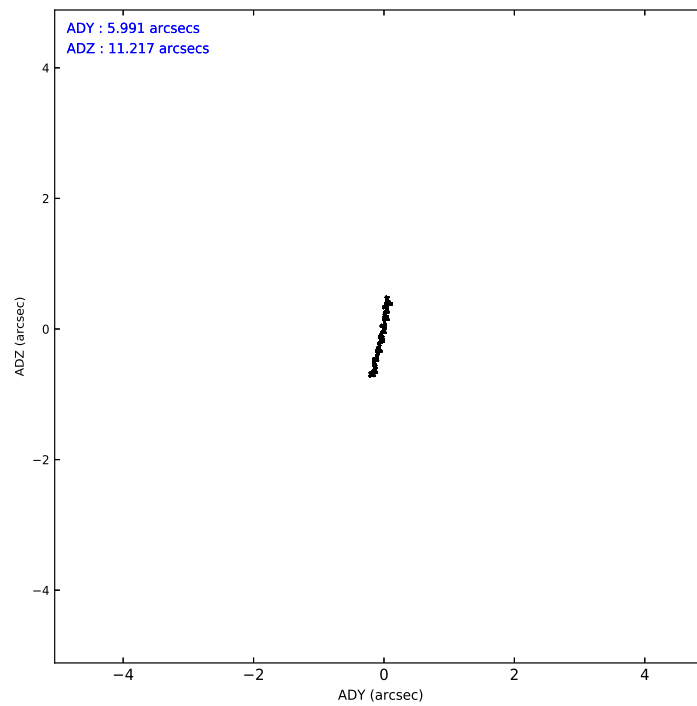
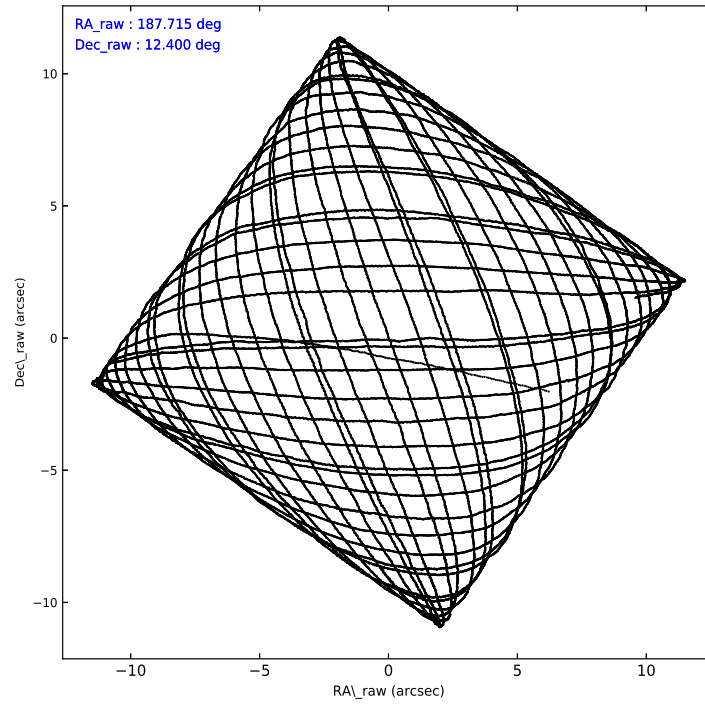
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	198506	226771	255886	408005
rejected events	106525	97190	118417	124597
rejected %	53%	42%	46%	30%

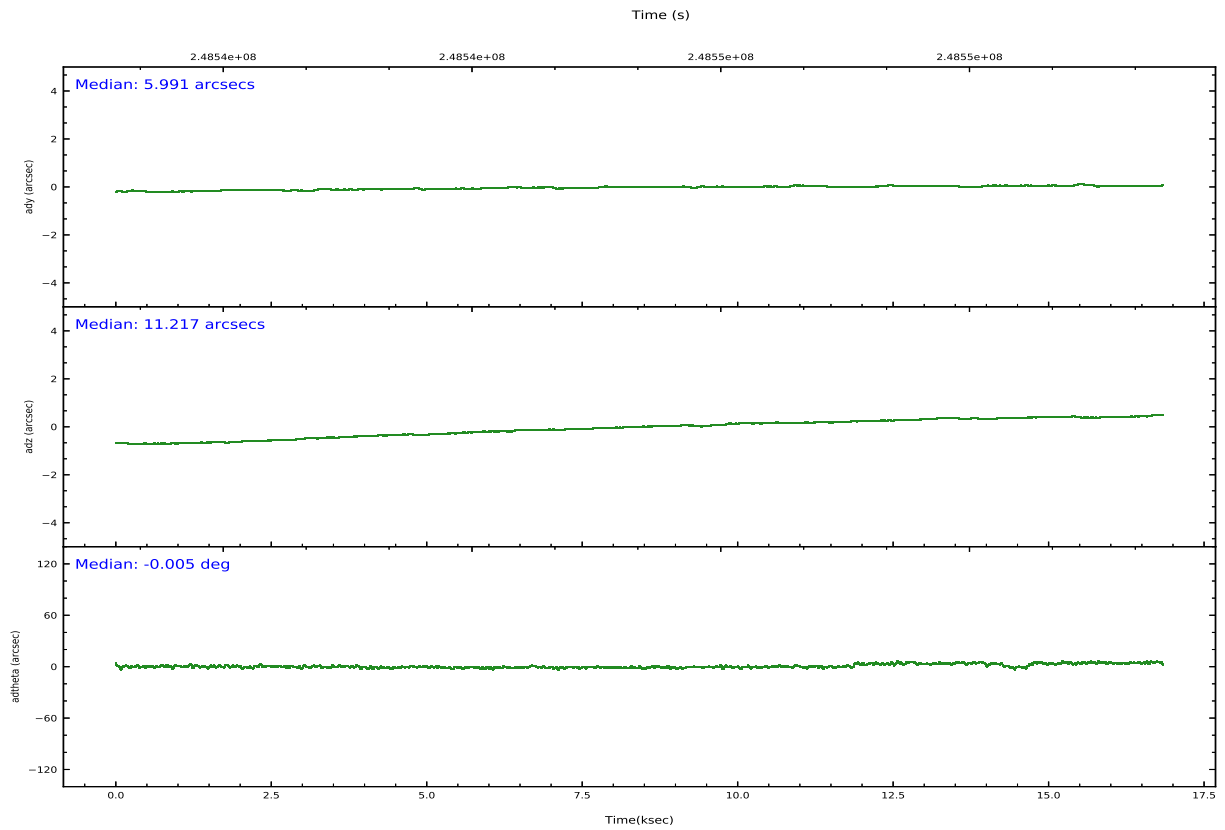
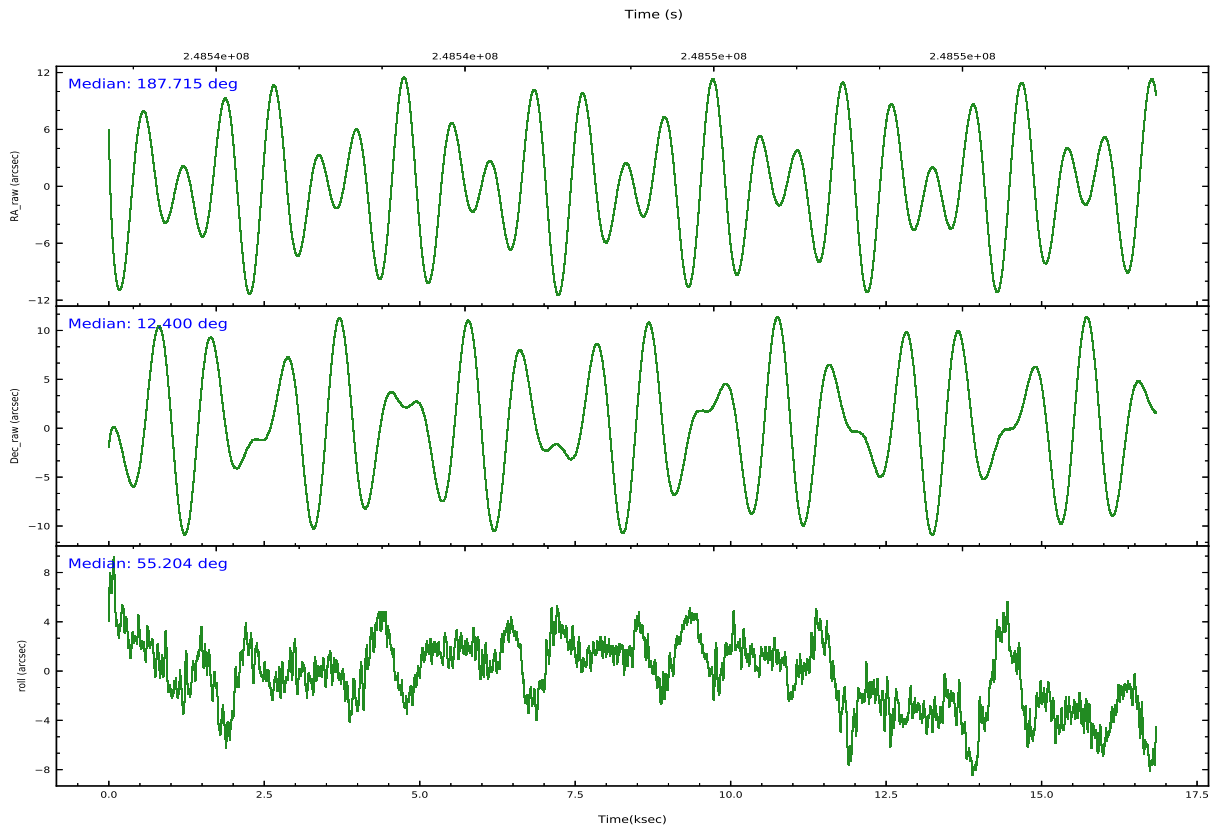
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	72527	104136	112214	236872
	36%	45%	43%	58%
grade 1 events	424	518	721	2511
	0%	0%	0%	0%
grade 2 events	10462	13891	13927	26401
	5%	6%	5%	6%
grade 3 events	3526	4560	4527	8237
	1%	2%	1%	2%
grade 4 events	3429	4551	4561	8354
	1%	2%	1%	2%
grade 5 events	4189	4934	4111	6979
	2%	2%	1%	1%
grade 6 events	3633	4730	4194	7358
	1%	2%	1%	1%
grade 7 events	100316	89451	111631	111293
	50%	39%	43%	27%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-0123	ACIS-0123	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	187.712927	187.71691263003	Subarray requested	NONE	NONE
[deg] Pointing Dec	12.373119	12.397116225425	Alternating exposures requested	N	N
[deg] Pointing Roll	54.998567	55.204345443041	[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	-231.592463	-231.5960967419932			
[mm] SIM translation stage offset	-2	-1.996356260936523			
[s] Observation start time (MET)	248538404.184000	248537170.7845			
Observation start date	2005-11-16T14:25:40	2005-11-16T14:06:10			
[s] Observation end time (MET)	248555114.184000	248555352.74784			
Observation end date	2005-11-16T19:04:10	2005-11-16T19:09:12			
Read mode	TIMED	TIMED			

## 2.3 Aspect





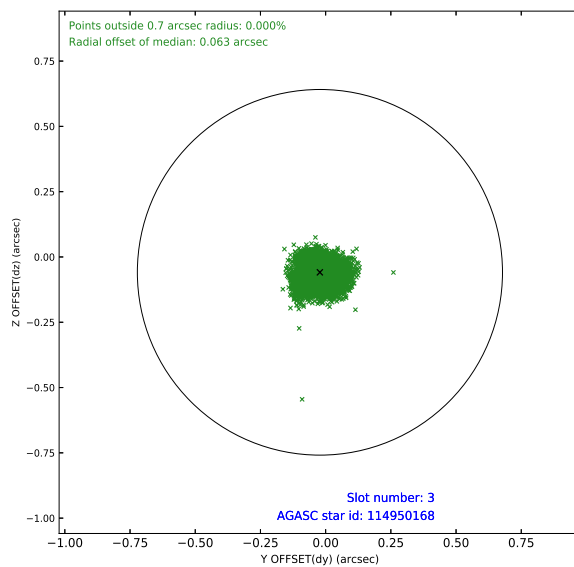
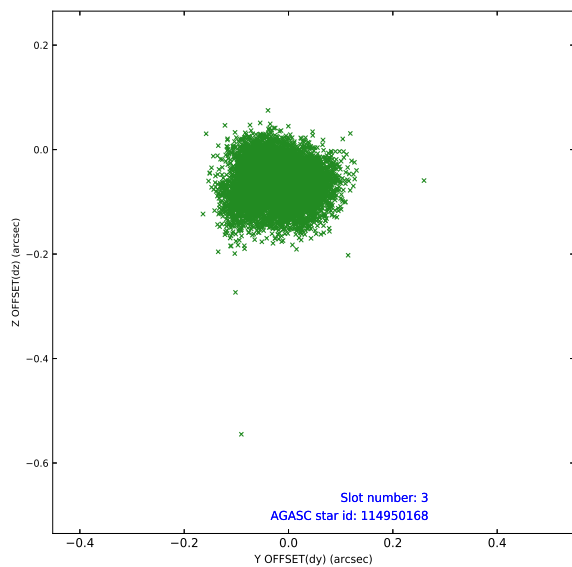
### Slot Statistics

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-1	7.25	4108	1.000	-0.030	-0.064	0.020	0.052	0.000000	0.000000	933.73	-875
1	FID		ACIS-I-2	7.15	4108	1.000	-0.180	-0.041	0.011	0.019	0.000000	0.000000	-760.47	-881
2	FID		ACIS-I-4	7.16	4107	1.000	0.111	0.171	0.013	0.038	0.000000	0.000000	2153.44	1024
3	GUIDE	used	114950168	7.84	8216	1.000	-0.022	-0.059	0.066	0.104	187.143398	12.117441	-1902.12	1115
4	GUIDE	used	114950584	9.19	8209	1.000	0.121	0.221	0.086	0.138	187.487323	11.827248	-2065.40	-475
5	GUIDE	used	114952824	8.57	8214	1.000	-0.210	-0.061	0.067	0.107	187.703904	12.486727	316.39	261
6	GUIDE	used	114954440	9.19	8213	1.000	0.067	-0.155	0.097	0.159	186.915066	12.219118	-2060.72	1983
7	GUIDE	used	114955056	8.34	8216	1.000	0.045	0.055	0.065	0.100	187.914001	12.127854	-317.19	-1085

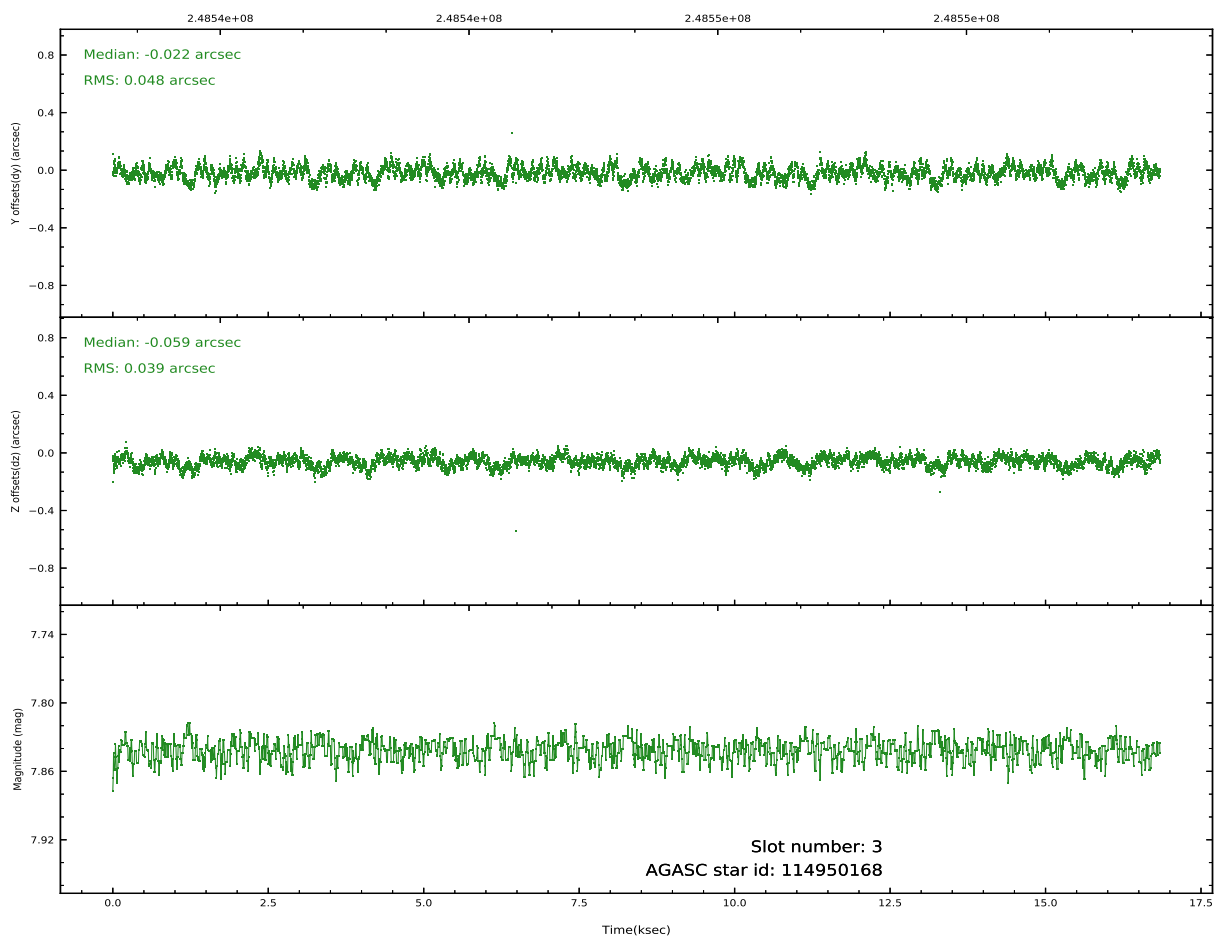
∞

## 2.4 Star Slots

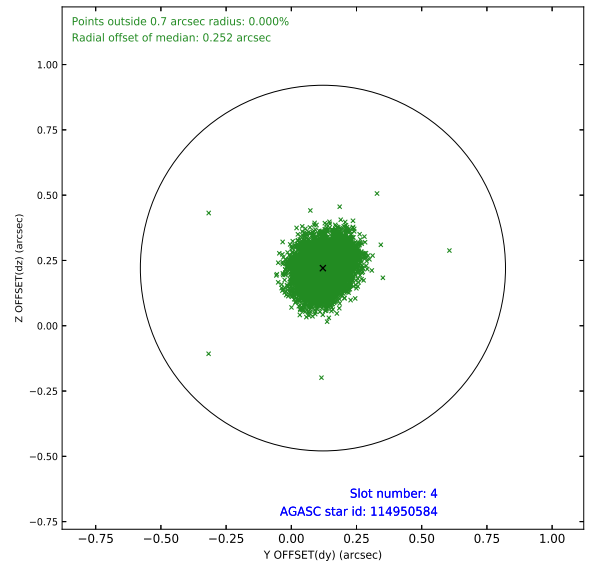
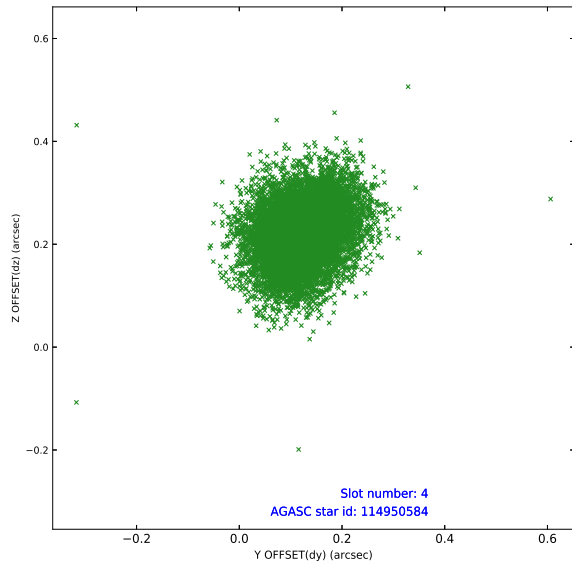
### 2.4.1 Slot 3



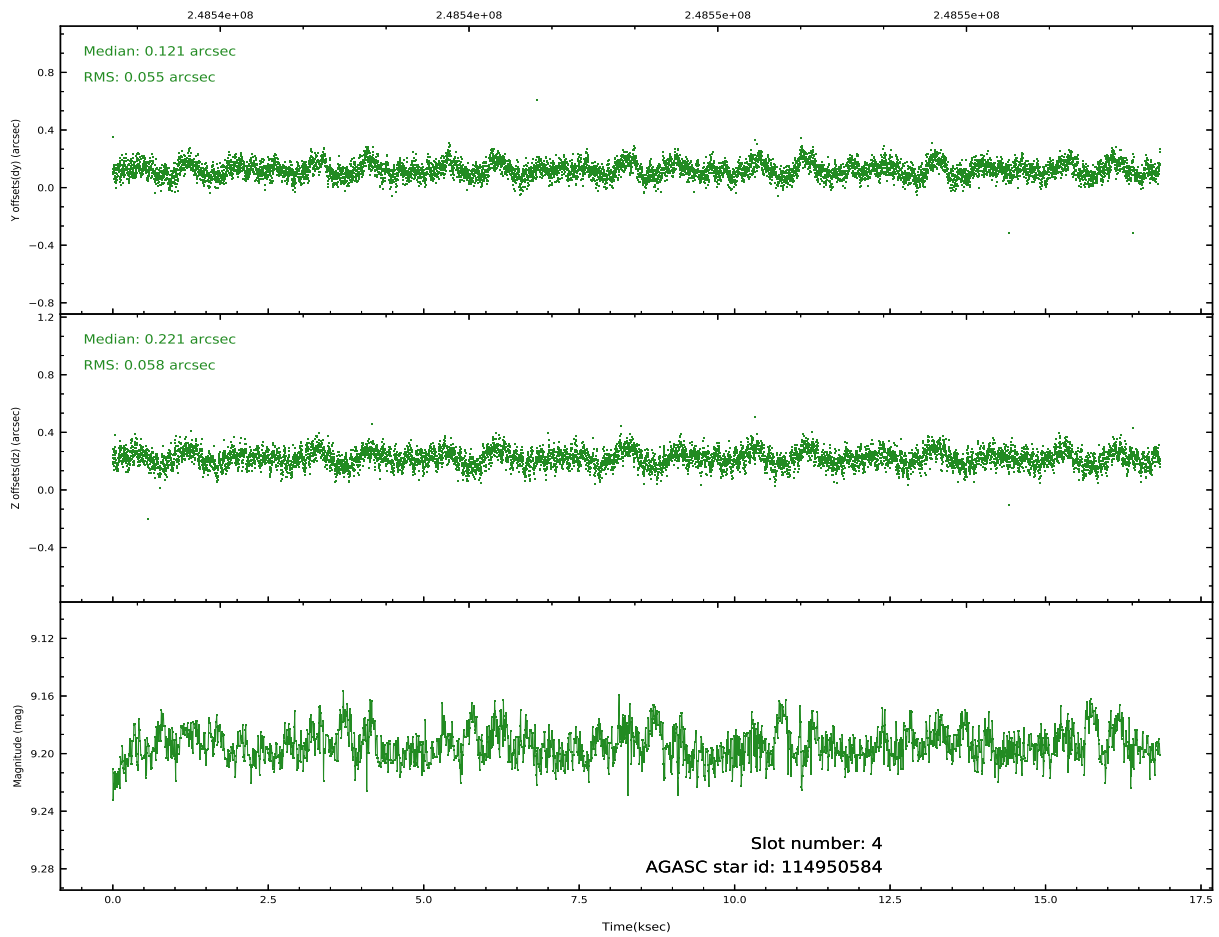
Time (s)



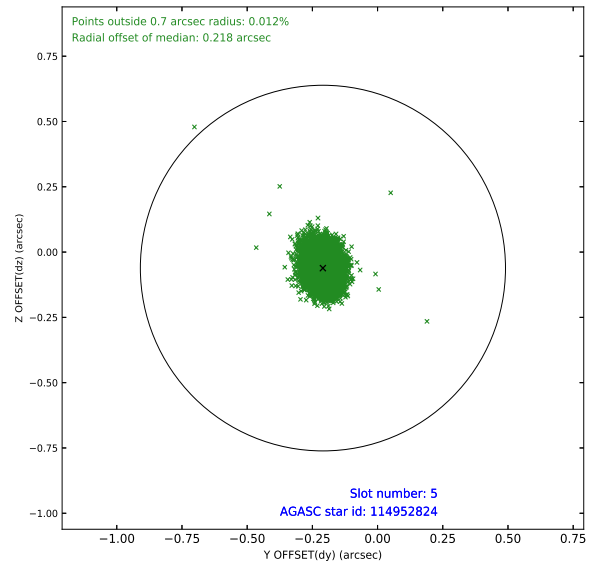
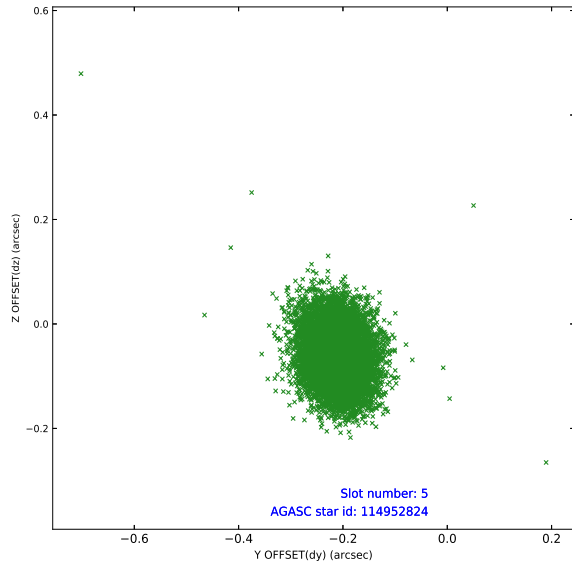
## 2.4.2 Slot 4



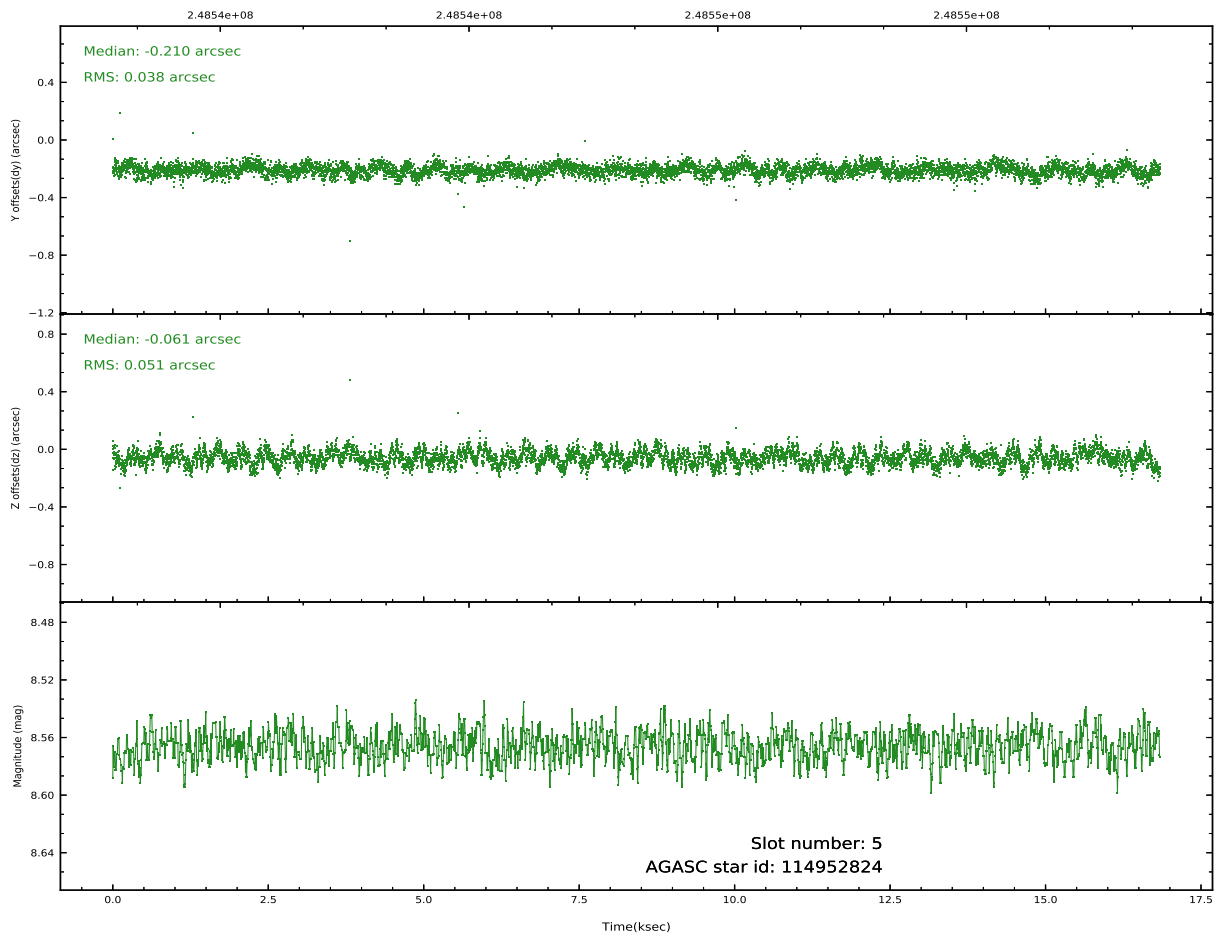
Time (s)



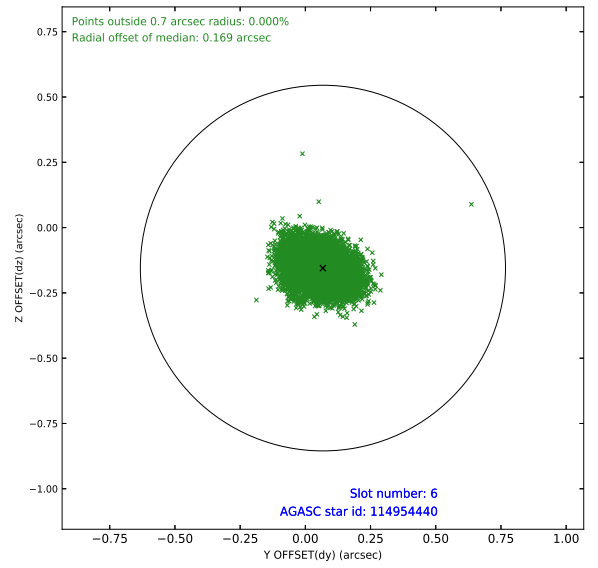
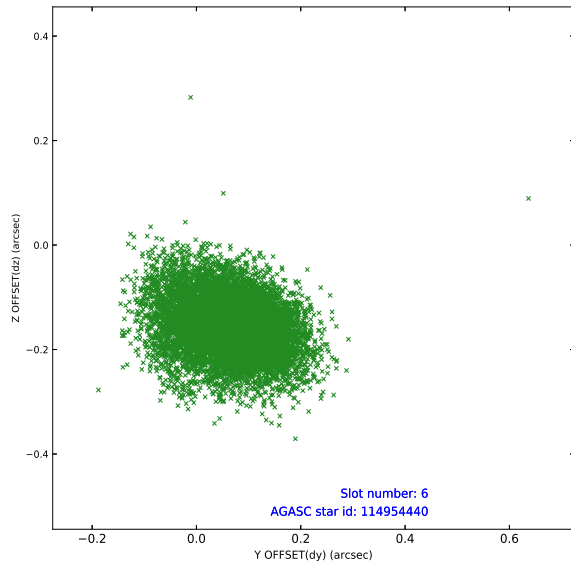
### 2.4.3 Slot 5



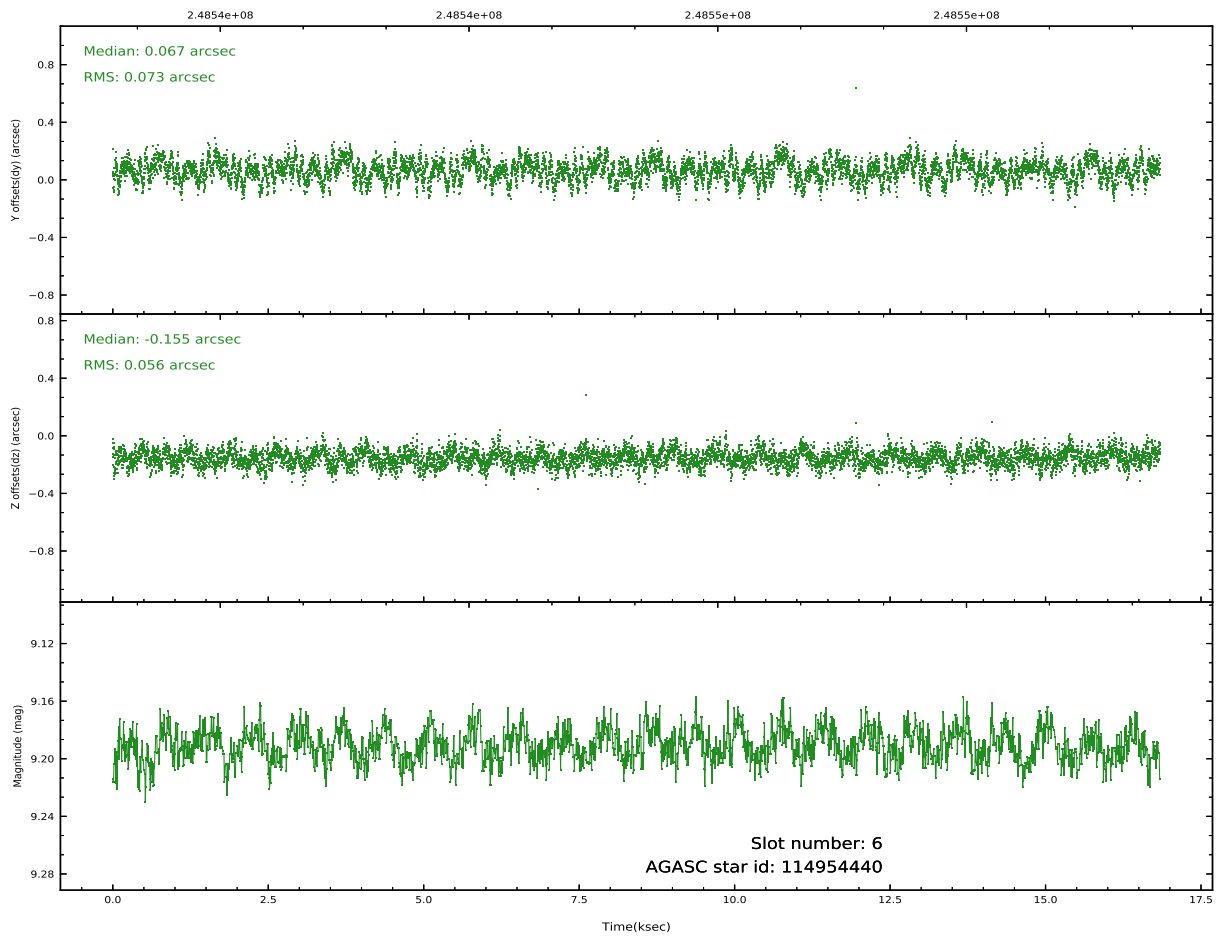
Time (s)



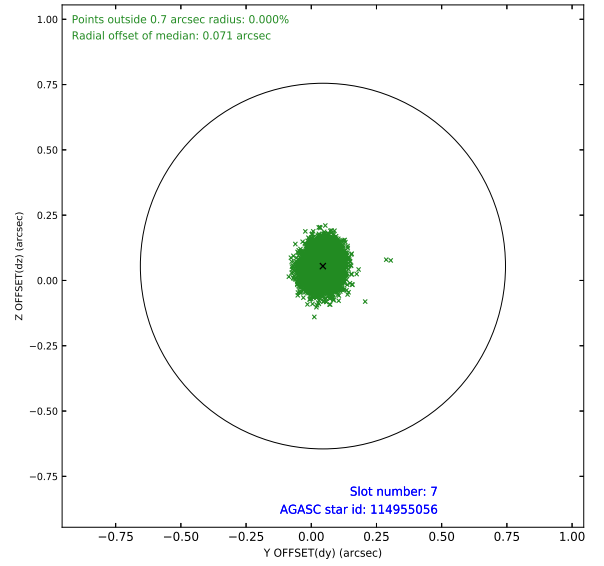
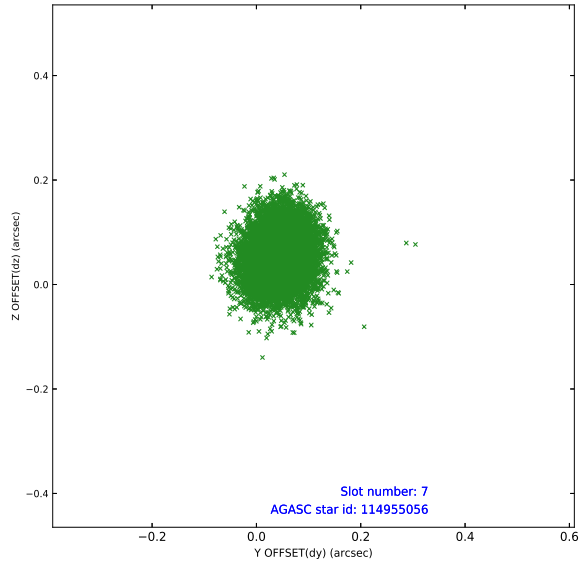
## 2.4.4 Slot 6



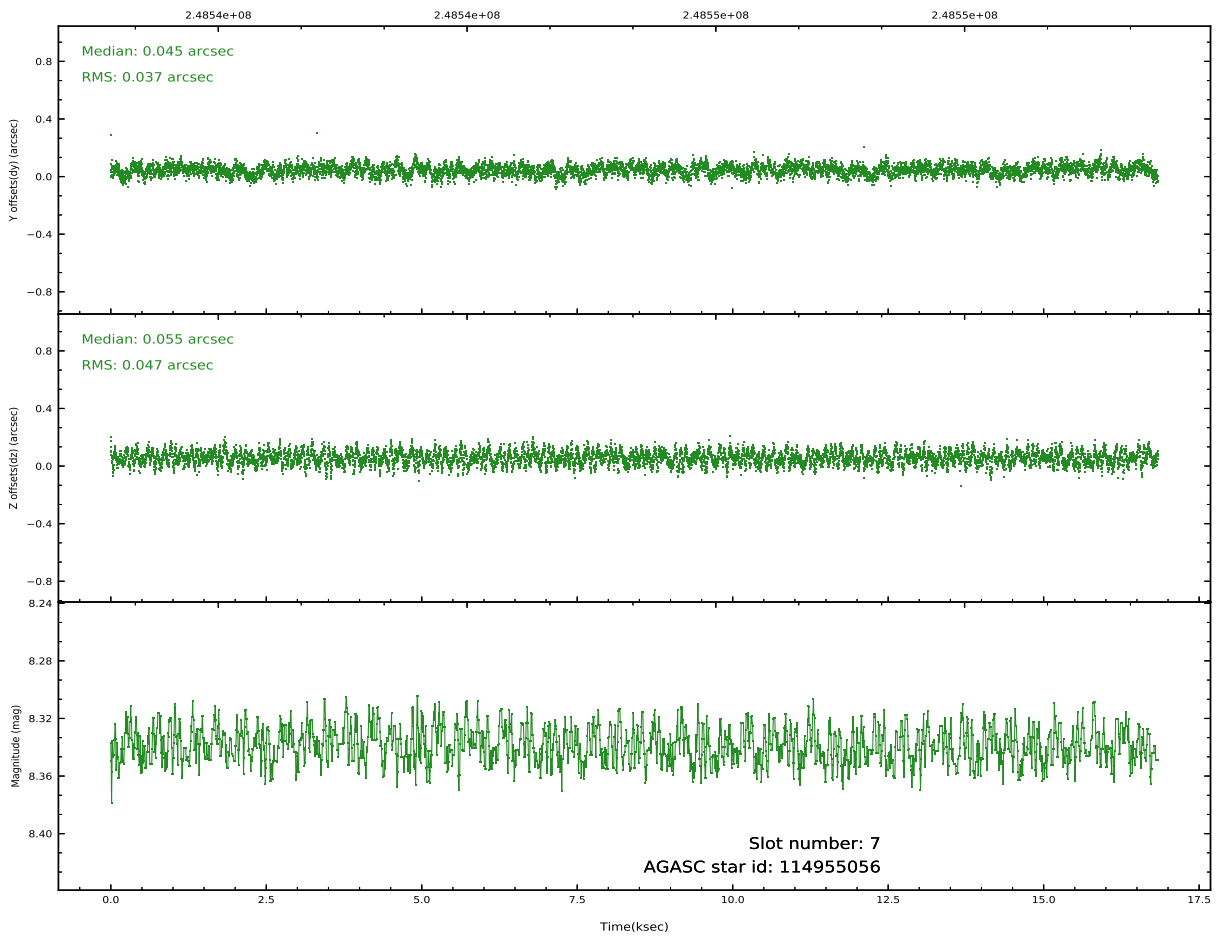
Time (s)



## 2.4.5 Slot 7

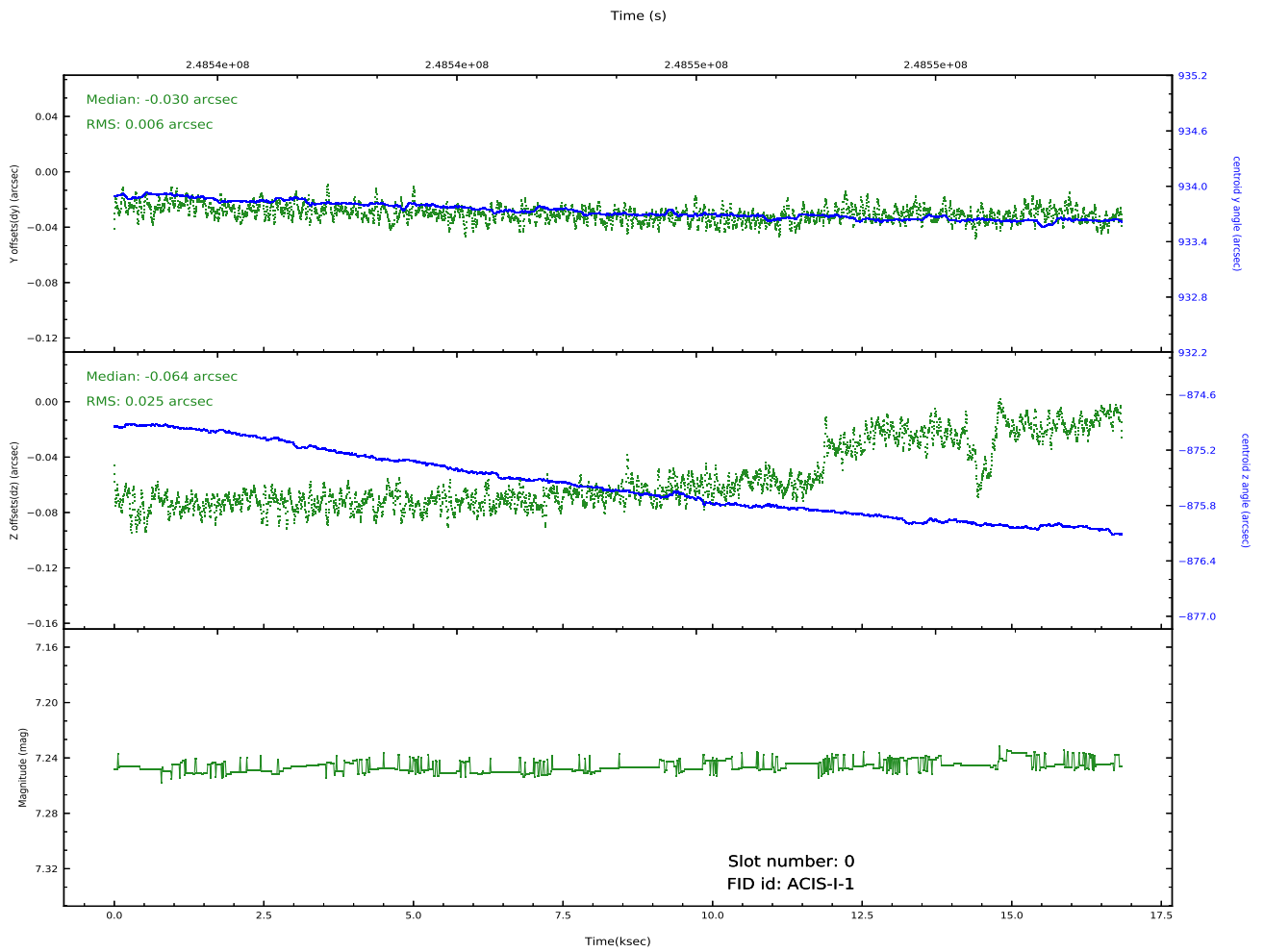
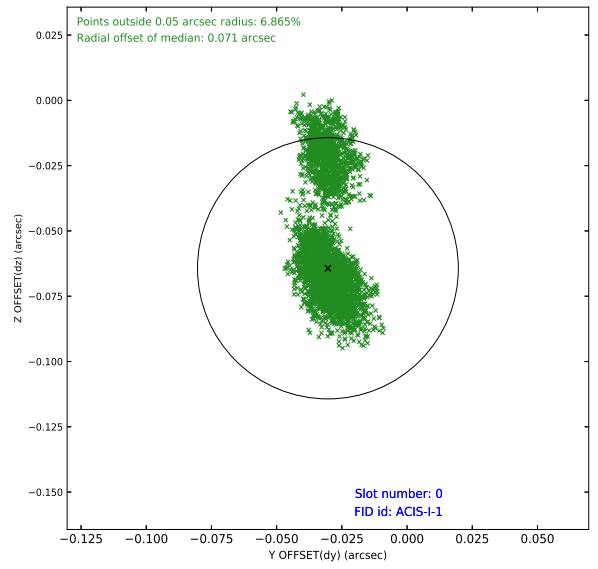
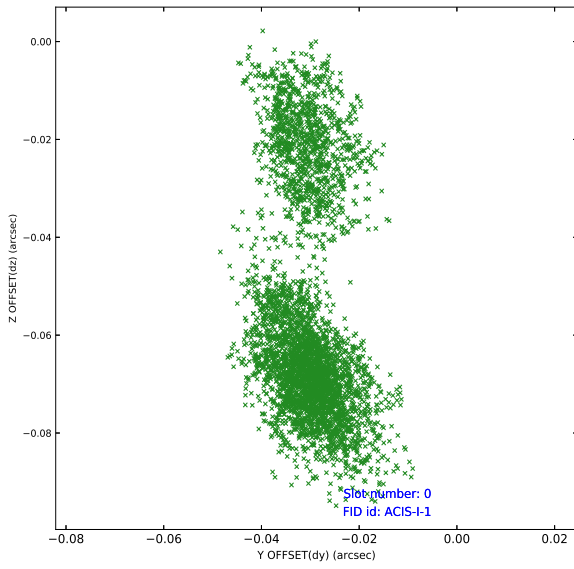


Time (s)

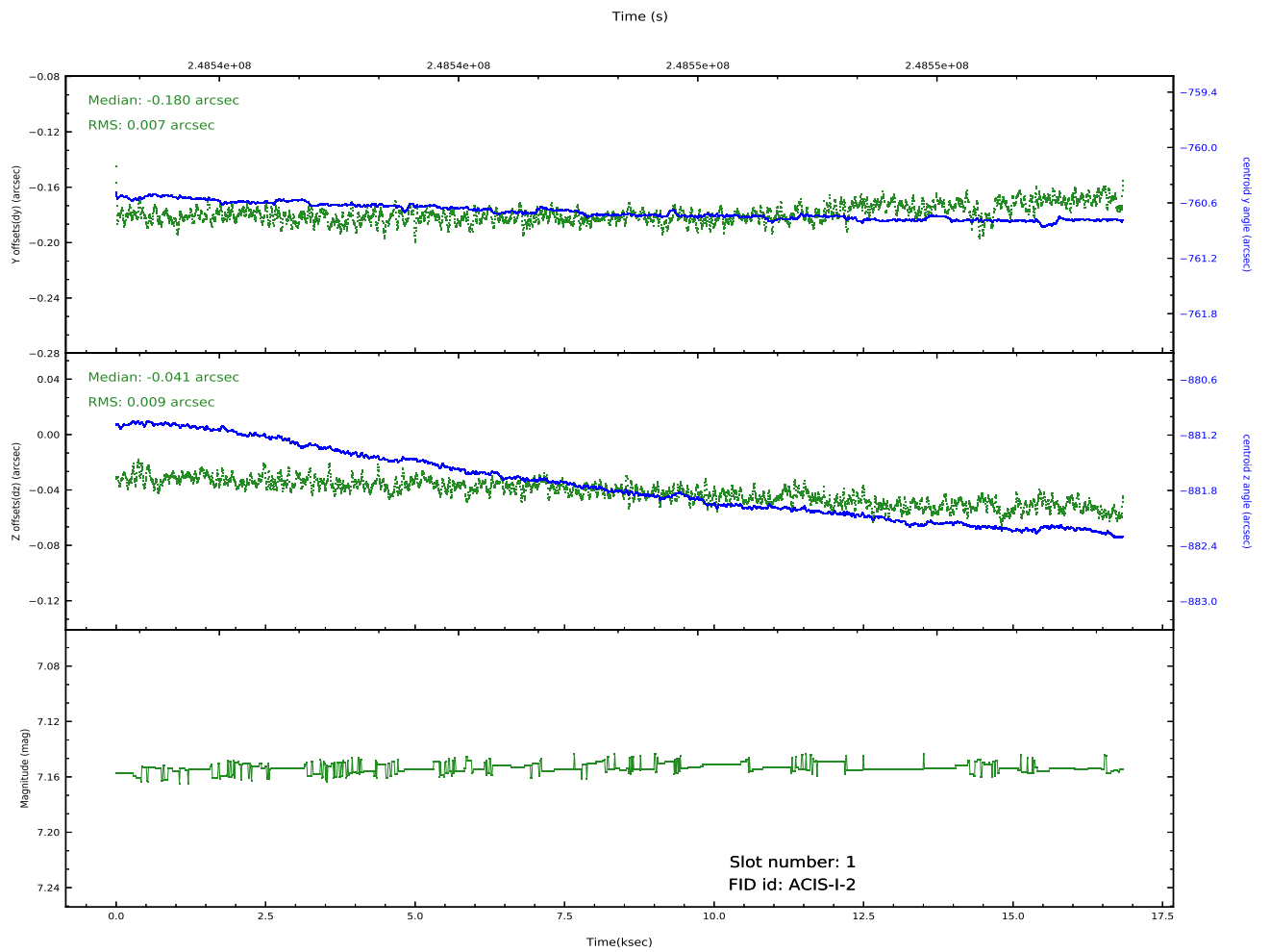
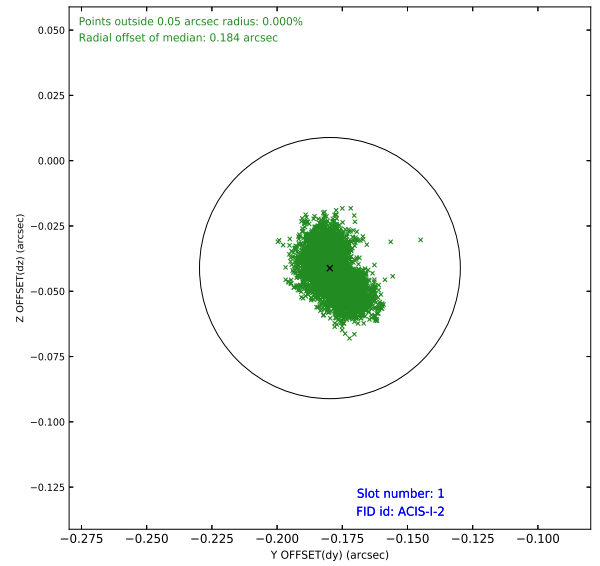
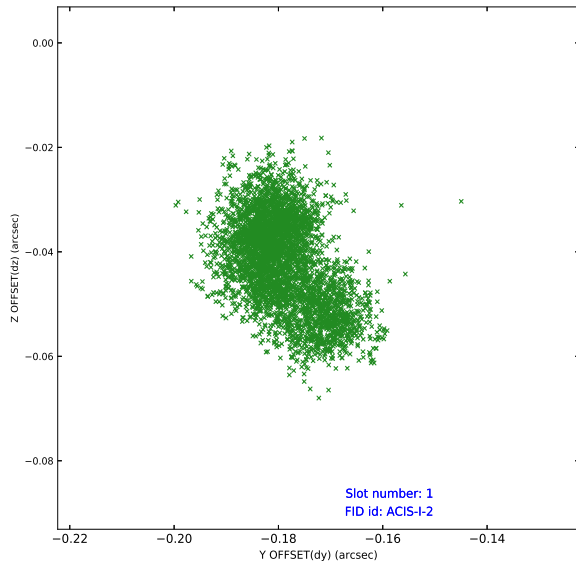


## 2.5 FID Slots

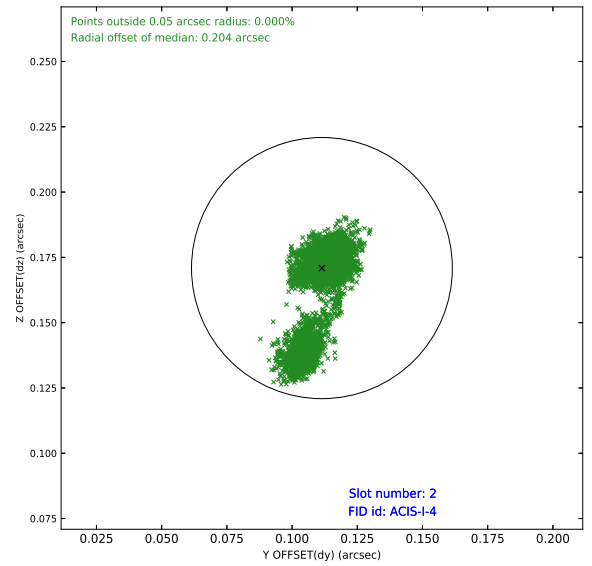
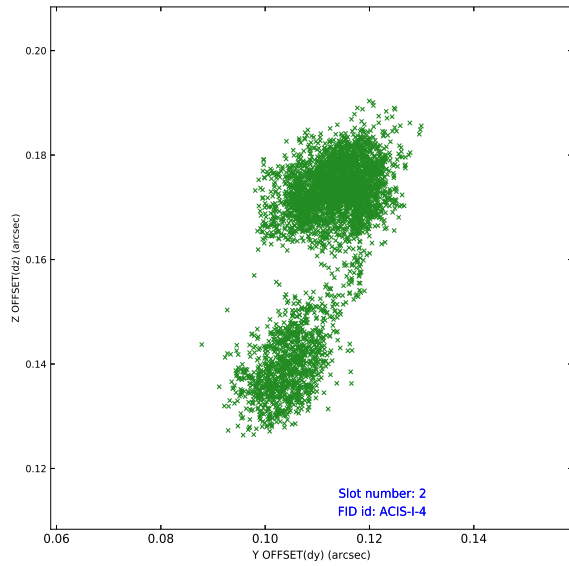
### 2.5.1 Slot 0



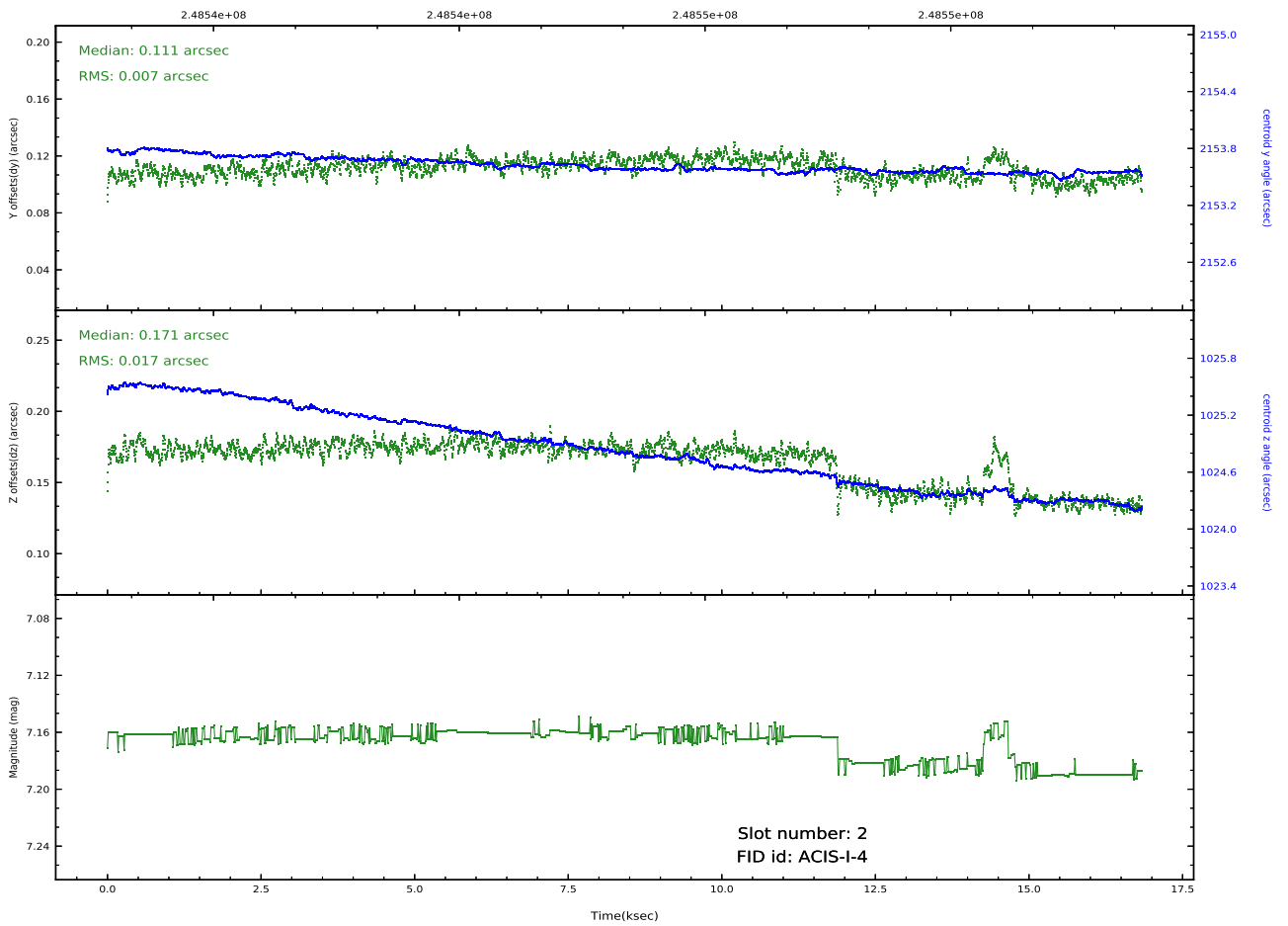
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	16.83609

## A.2 Comments