

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20964 - L2 Version 2  
Chandra X-Ray Center

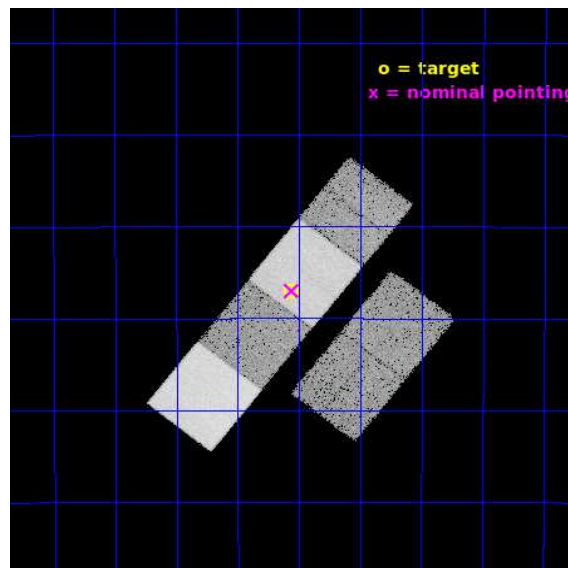
L2 Processing Date : Oct 24 2020

## 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

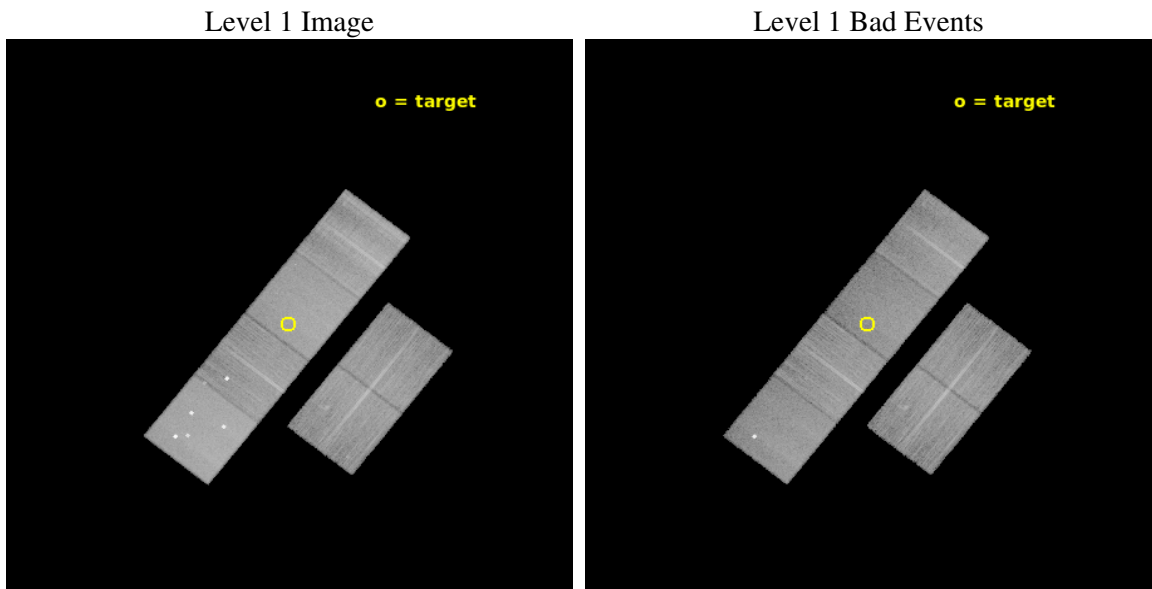
seq_num	601400	Sequence number
obs_id	20964	Observation id
title	The first X-ray study of NGC 2243, one of the most metal-poor Galactic open star clusters	Proposal title
observer	Dr Maureen van den Berg	Principal investigator
object	NGC 2243	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	97.391667	Observer's specified target RA [deg]
dec_targ	-31.283333	Observer's specified target Dec [deg]
ra_nom	97.389473499787	Nominal RA [deg]
dec_nom	-31.283107620624	Nominal Dec [deg]
roll_nom	308.15754868549	Nominal Roll [deg]
revision	2	Processing version of data
ontime	19952.000297308	Sum of GTIs [s]
livetime	19699.356055891	Livetime [s]
ontime2	19948.759246945	Sum of GTIs [s]
ontime3	19952.000297308	Sum of GTIs [s]
ontime5	19952.000297308	Sum of GTIs [s]
ontime6	19948.759266973	Sum of GTIs [s]
ontime7	19952.000297308	Sum of GTIs [s]
ontime8	19952.000297308	Sum of GTIs [s]
l2events	242418	Number of level 2 events



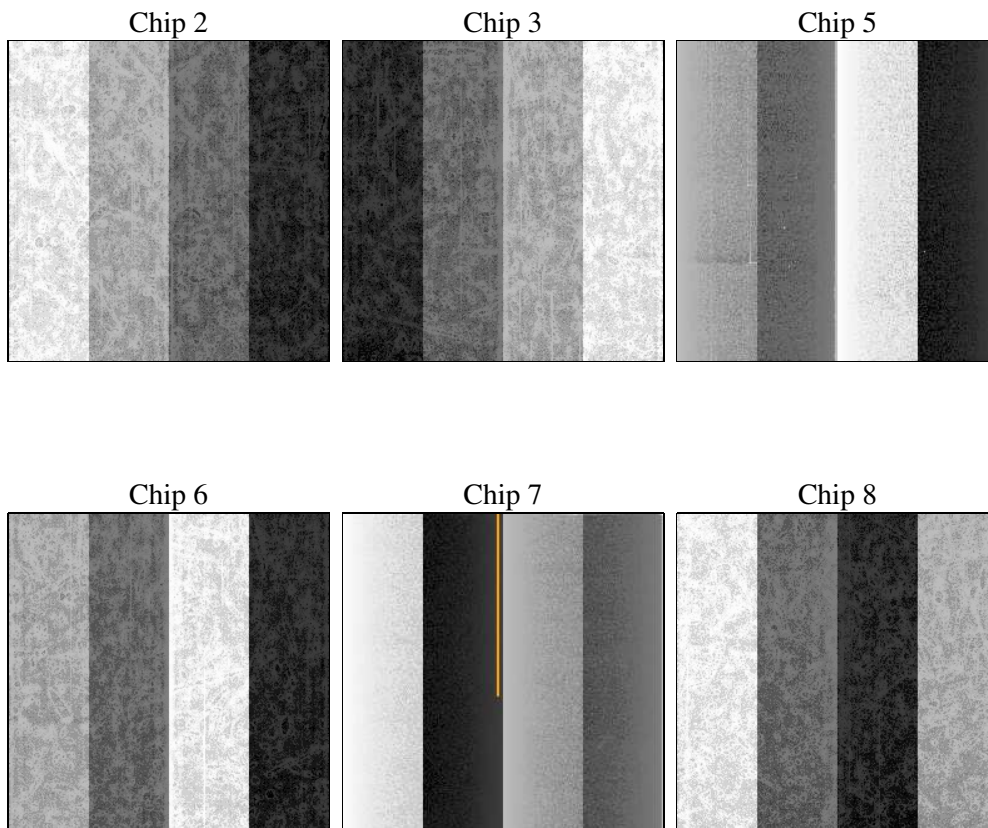
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	19952.000297308	Sum of GTIs [s]
caldbver	4.9.3	&#160	ontime2	19948.759246945	Sum of GTIs [s]
date	2020-10-24T15:43:38	Date and time of file creation	ontime3	19952.000297308	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	19952.000297308	Sum of GTIs [s]
			ontime6	19948.759266973	Sum of GTIs [s]
			ontime7	19952.000297308	Sum of GTIs [s]
			ontime8	19952.000297308	Sum of GTIs [s]
			l1events	1075422	Number of level 1 events

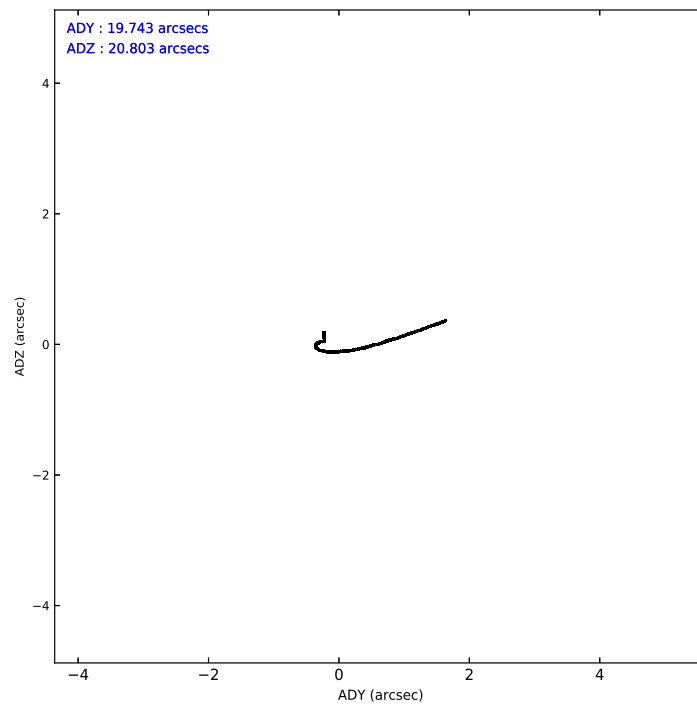
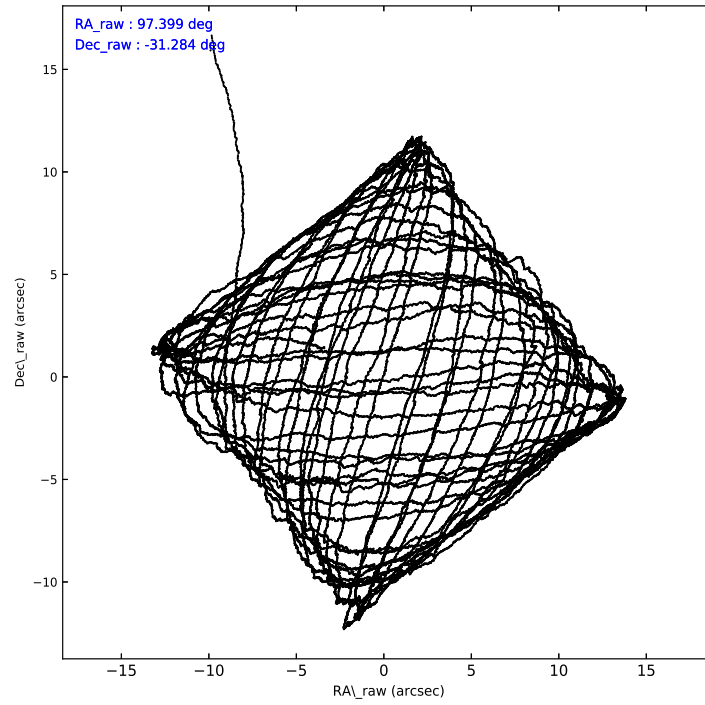
### 2.1.4 Events

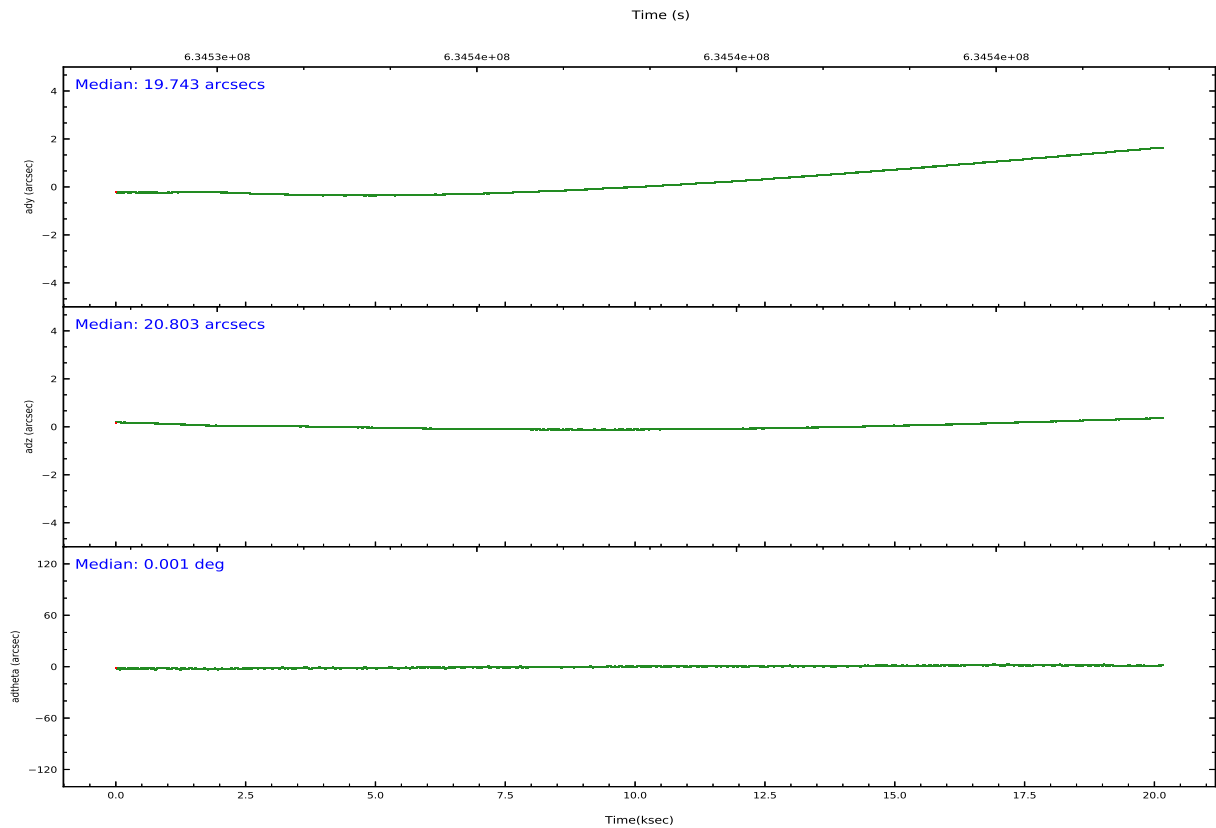
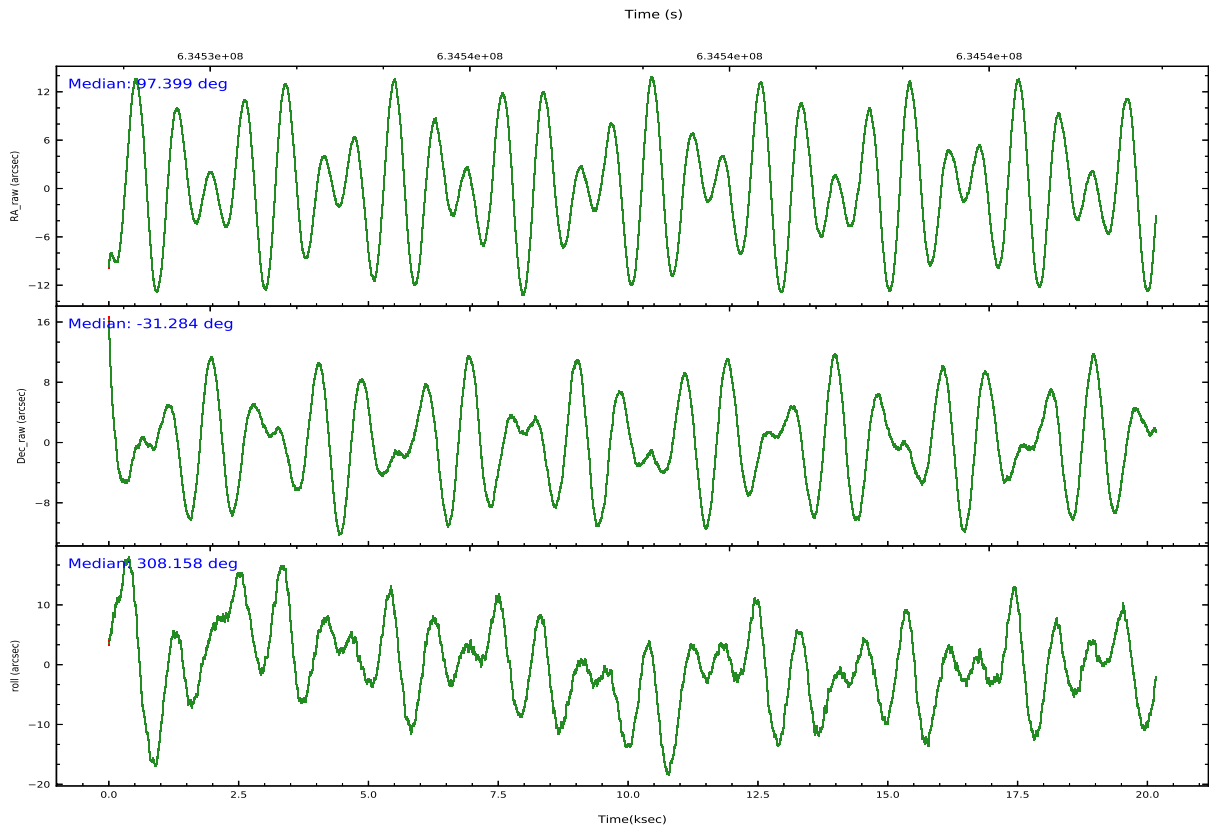
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	149242	140228	249848	156997	189460	189647	grade 0 events	5740	4930	19782	11346	6951	14873
rejected events	133146	125548	125214	134396	107380	137106		3%	3%	7%	7%	3%	7%
rejected %	89%	89%	50%	85%	56%	72%	grade 1 events	90	87	499	104	293	165
								0%	0%	0%	0%	0%	0%
							grade 2 events	4019	3257	36182	3975	17469	12760
								2%	2%	14%	2%	9%	6%
							grade 3 events	1574	1606	3781	1720	6649	5686
								1%	1%	1%	1%	3%	2%
							grade 4 events	1532	1614	3441	1621	6610	5251
								1%	1%	1%	1%	3%	2%
							grade 5 events	6122	6906	17981	7008	18888	10510
								4%	4%	7%	4%	9%	5%
							grade 6 events	3234	3277	61493	3947	44428	14019
								2%	2%	24%	2%	23%	7%
							grade 7 events	126931	118551	106689	127276	88172	126383
								85%	84%	42%	81%	46%	66%

## 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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	97.369219	97.389473499787	CCD I2 on	O2	Y
[deg] Pointing Dec	-31.274097	-31.283107620624	CCD I3 on	Y	Y
[deg] Pointing Roll	307.988349	308.15754868549	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	634528215.184000	634527151.28819	CCD S5 on	N	N
Observation start date	2018-02-09T01:49:06	2018-02-09T01:32:31	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	634548215.184000	634549560.35201	On-chip summing requested	N	N
Observation end date	2018-02-09T07:22:26	2018-02-09T07:46:00	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect





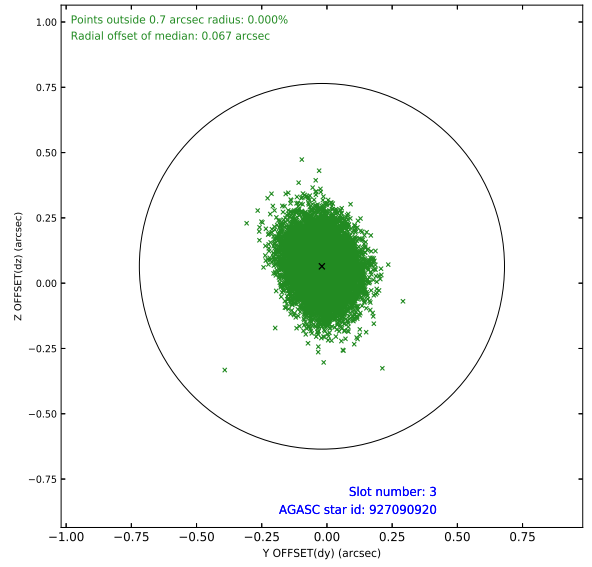
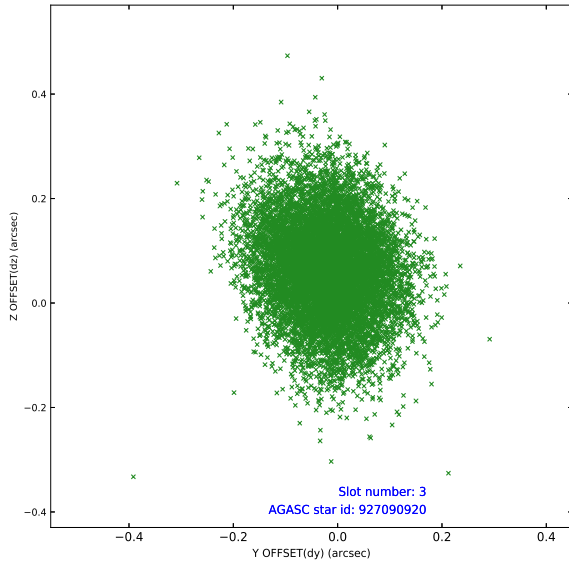
### Slot Statistics

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	7.04	4920	1.000	0.274	-0.203	0.010	0.016	0.000000	0.000000	923.01	-1738
1	FID		ACIS-S-5	7.07	4920	1.000	-0.228	0.212	0.025	0.042	0.000000	0.000000	-1826.18	159
2	FID		ACIS-S-6	7.22	4920	1.000	-0.063	0.001	0.021	0.049	0.000000	0.000000	388.29	803
3	GUIDE	used	927090920	8.19	9835	1.000	-0.019	0.065	0.121	0.198	96.357245	-31.152224	-2253.10	-2195
4	GUIDE	used	927205848	9.15	9830	1.000	0.135	-0.185	0.190	0.306	97.800577	-31.737487	2130.12	12
5	GUIDE	used	927210360	8.85	9825	1.000	0.061	0.102	0.141	0.235	97.559173	-31.118939	-78.93	805
6	GUIDE	used	927213352	8.01	9837	1.000	0.110	0.009	0.129	0.221	97.502570	-31.174473	-29.24	544
7	GUIDE	used	927214832	9.22	9826	1.000	-0.295	-0.004	0.204	0.334	97.641098	-30.513080	-1639.45	2350

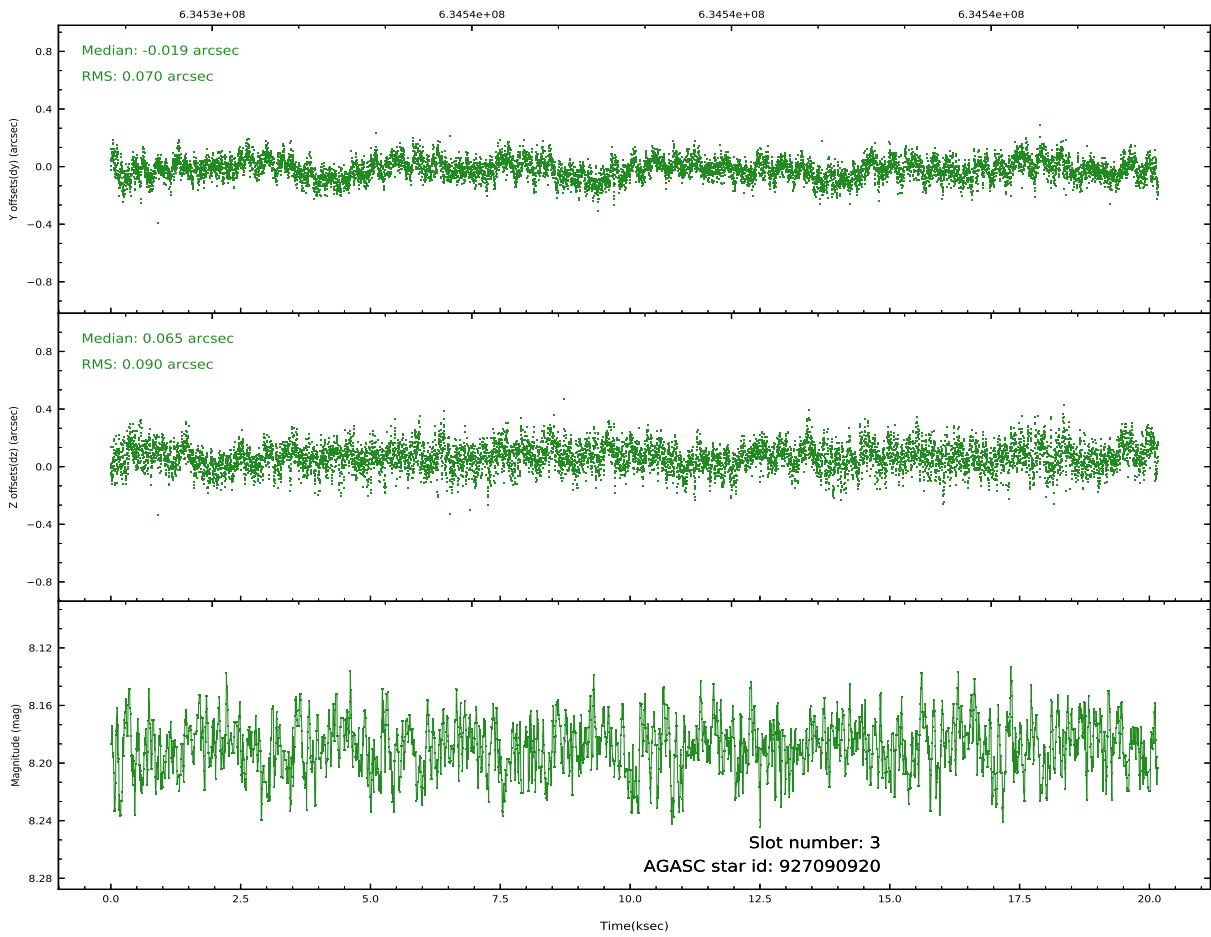
∞

## 2.4 Star Slots

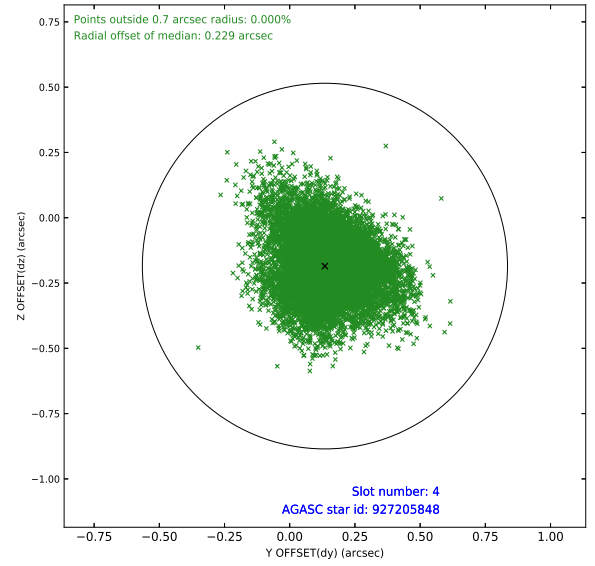
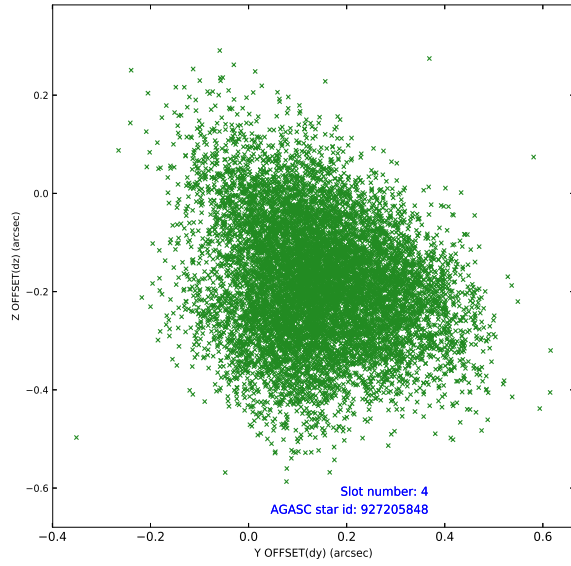
### 2.4.1 Slot 3



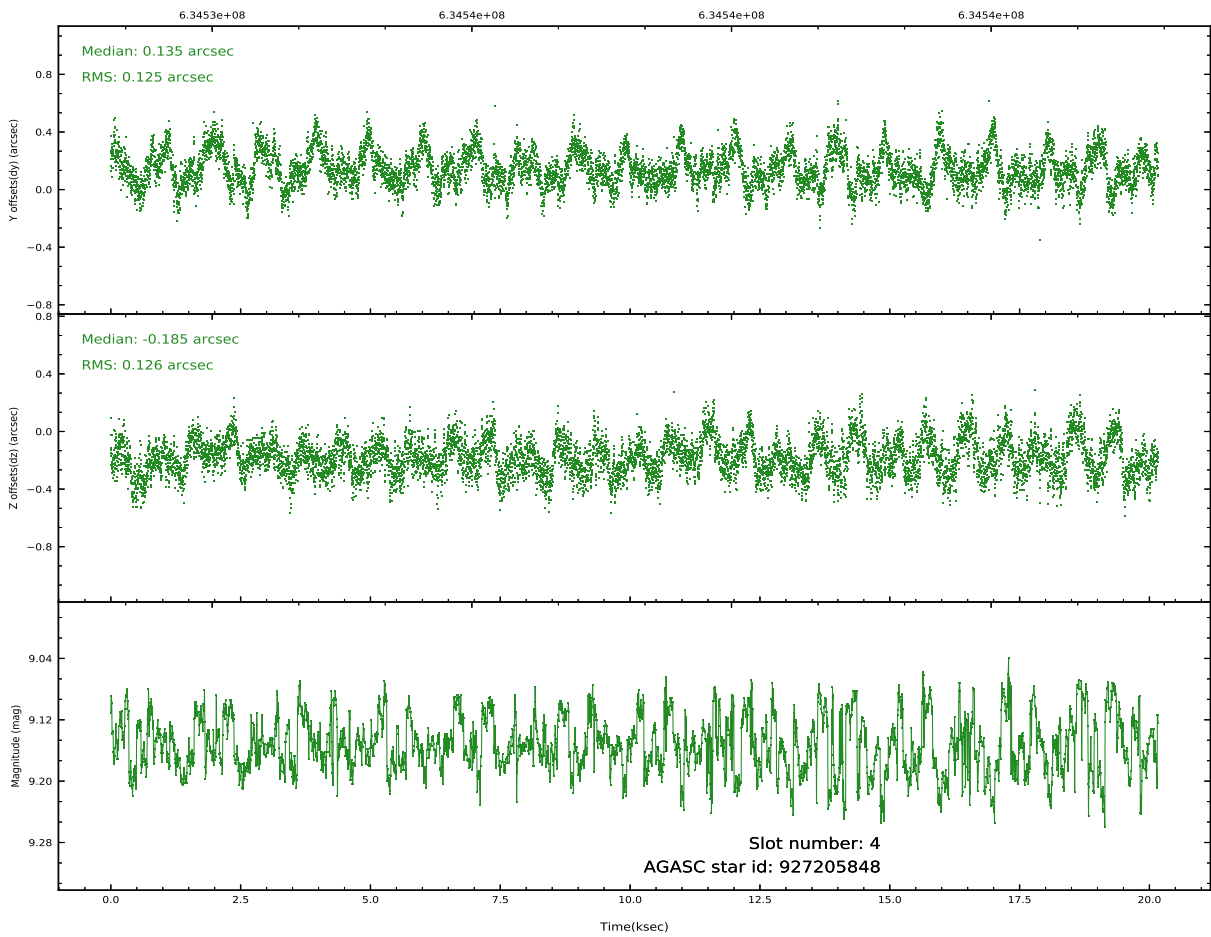
Time (s)



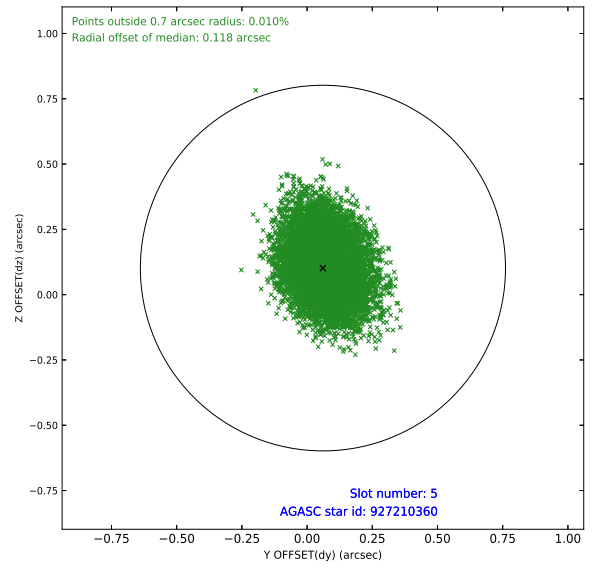
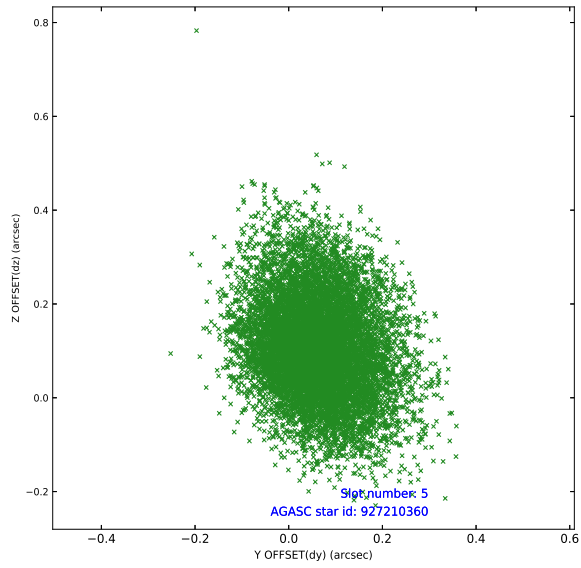
## 2.4.2 Slot 4



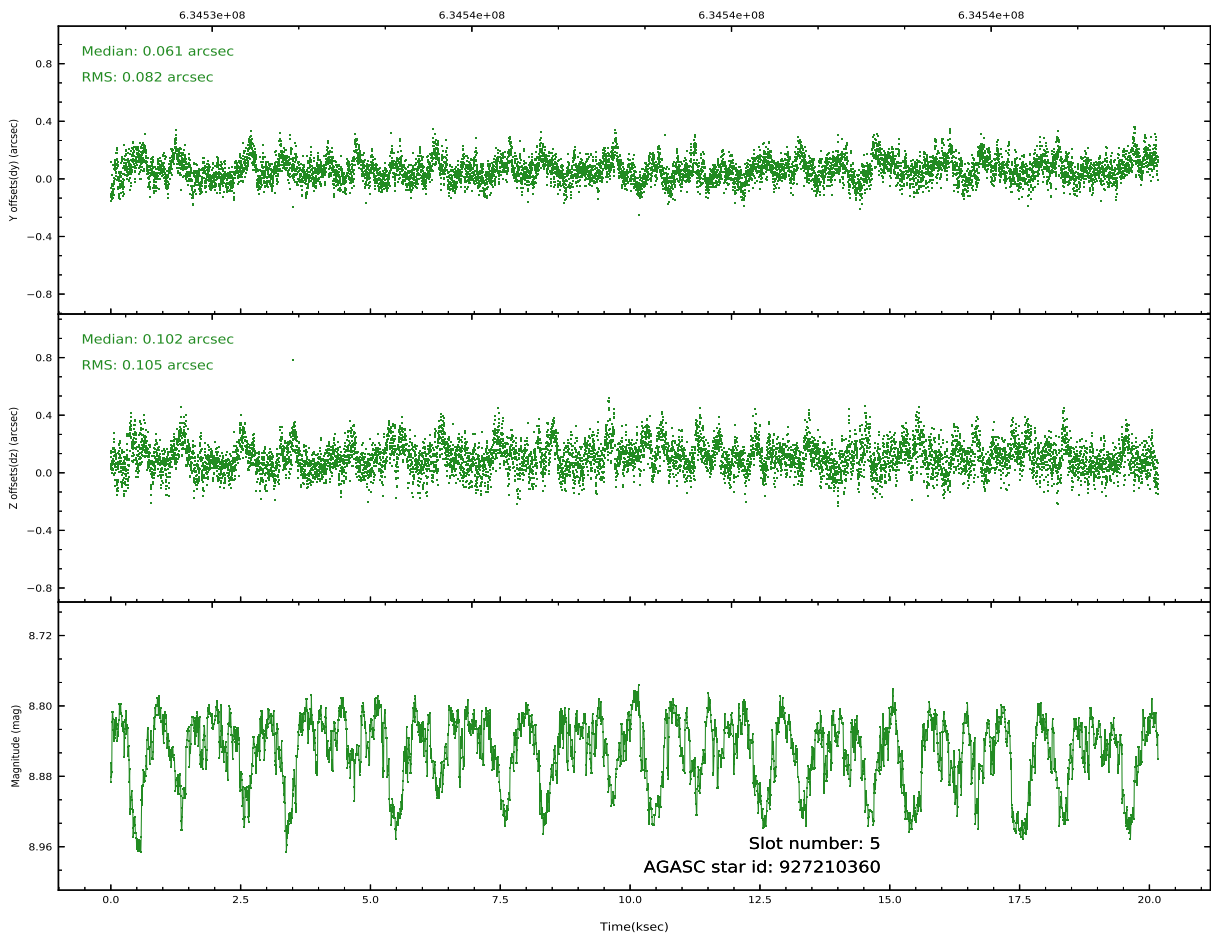
Time (s)



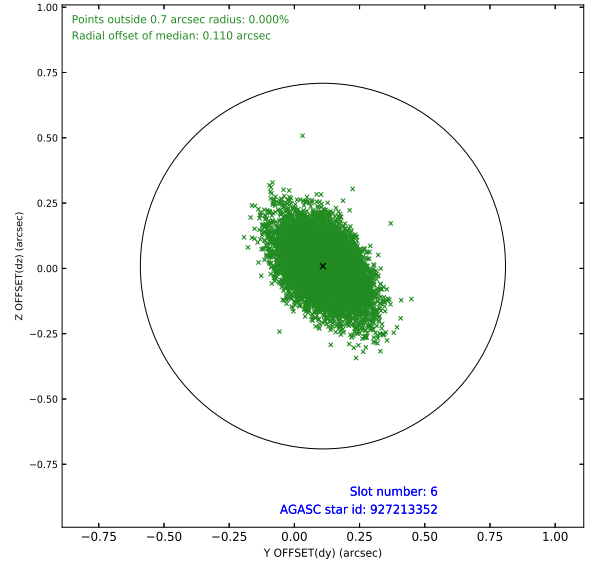
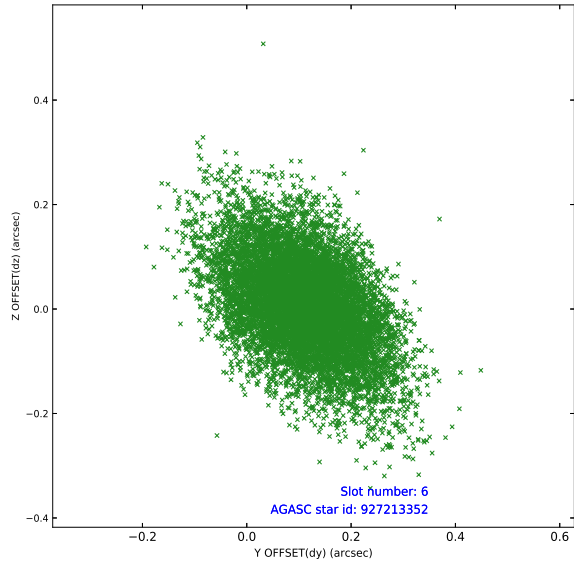
### 2.4.3 Slot 5



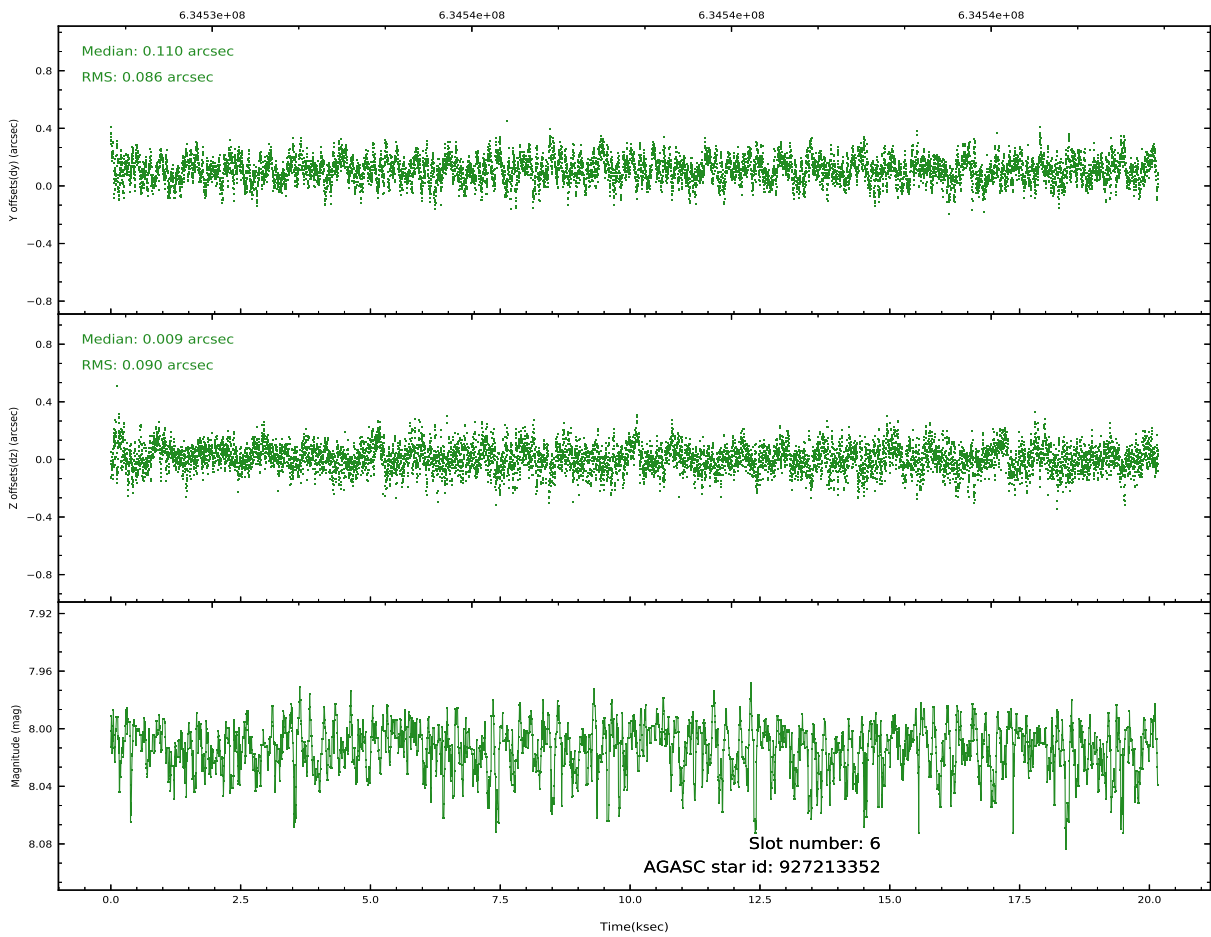
Time (s)



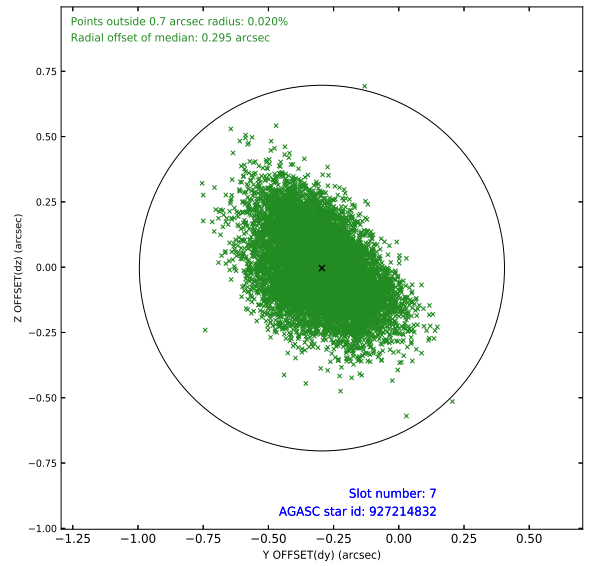
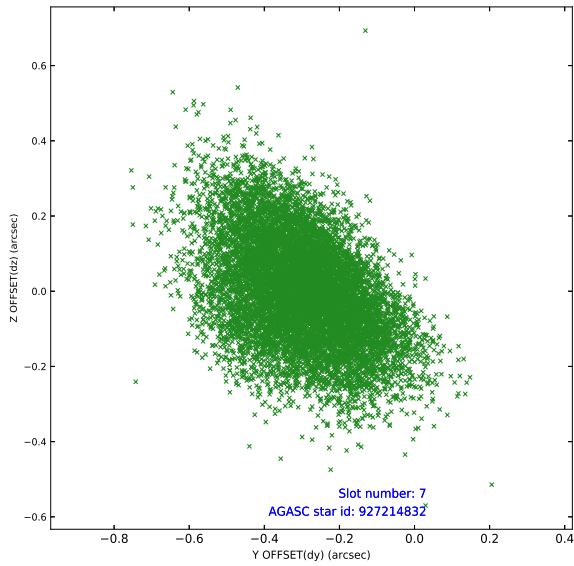
## 2.4.4 Slot 6



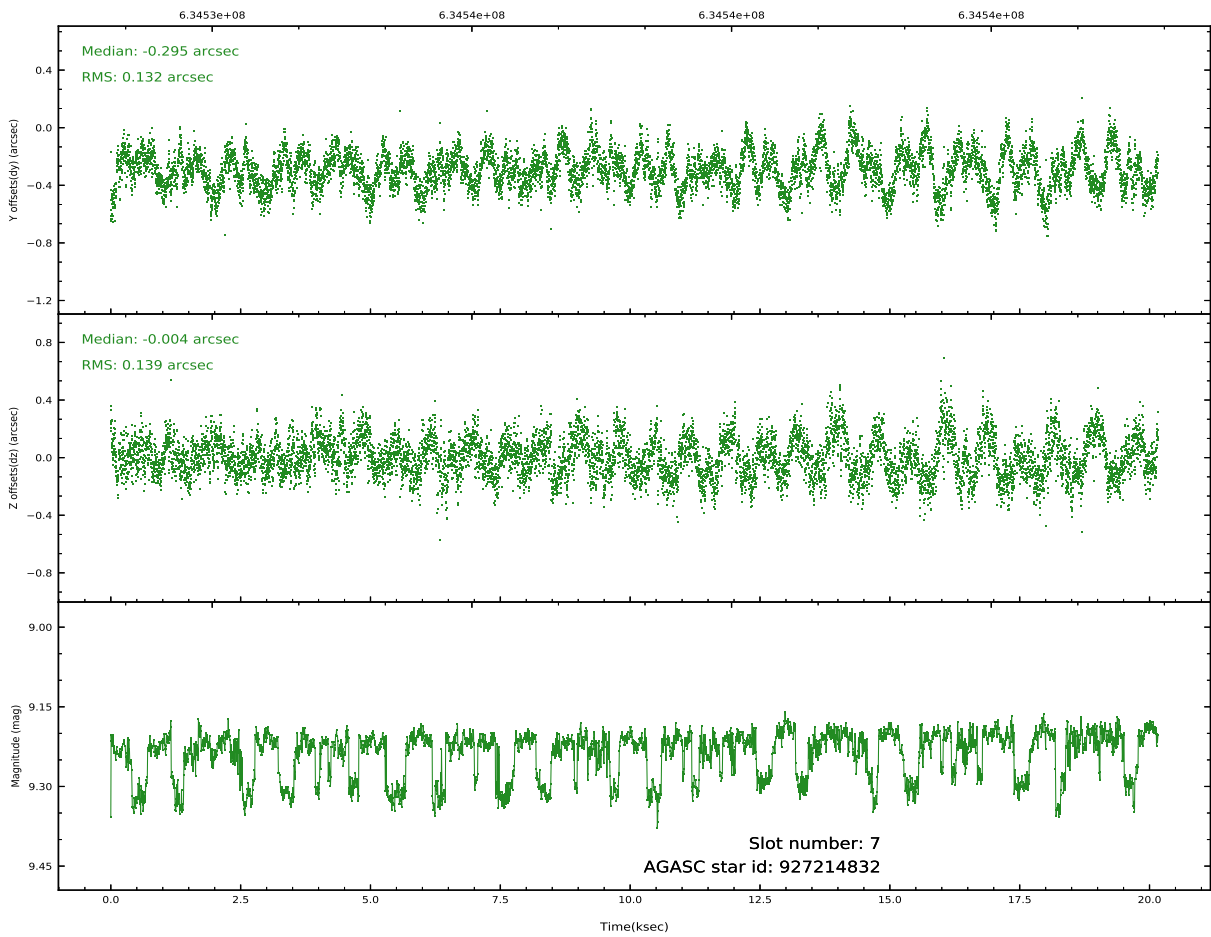
Time (s)



## 2.4.5 Slot 7

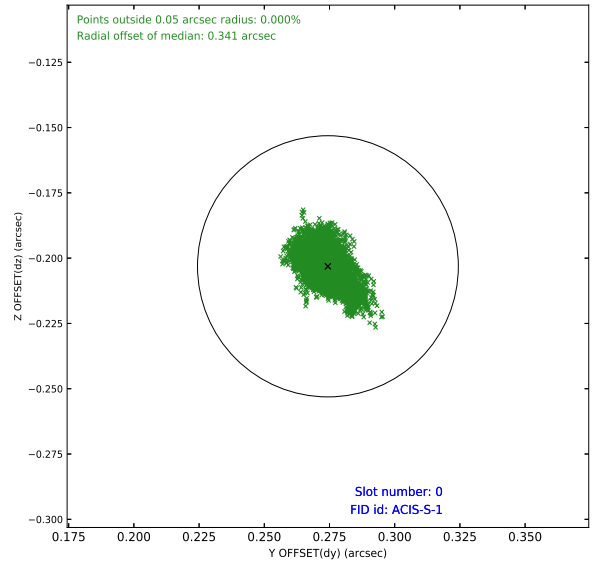
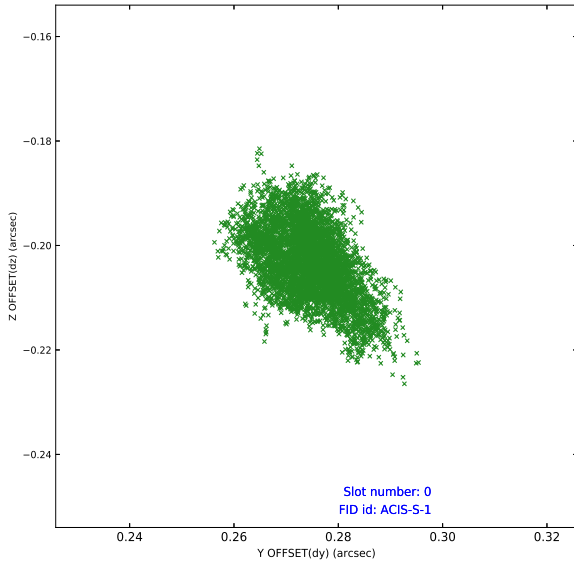


Time (s)

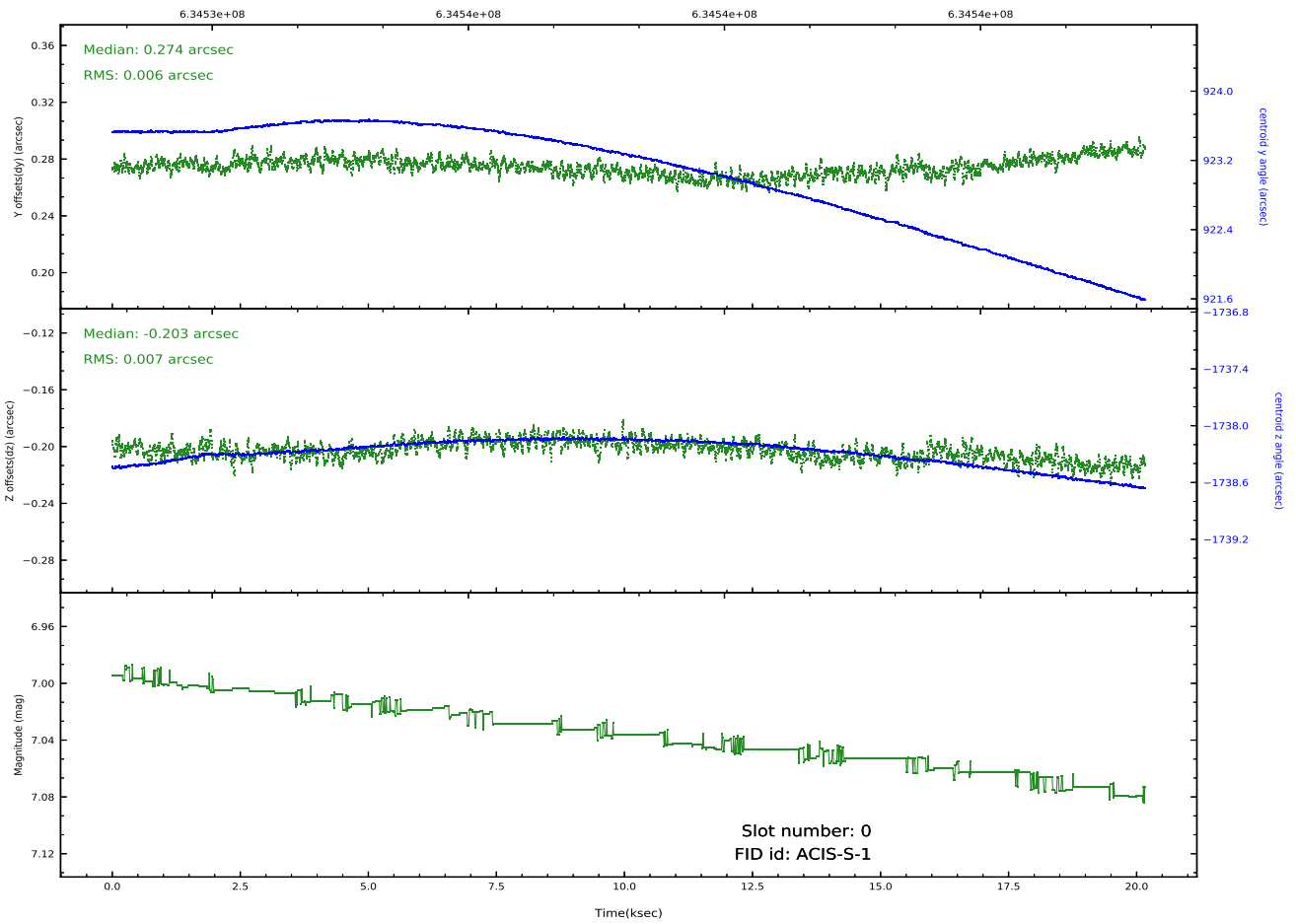


## 2.5 FID Slots

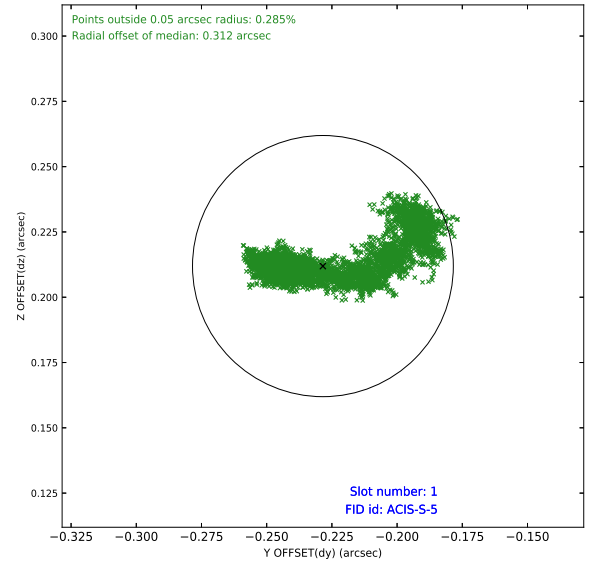
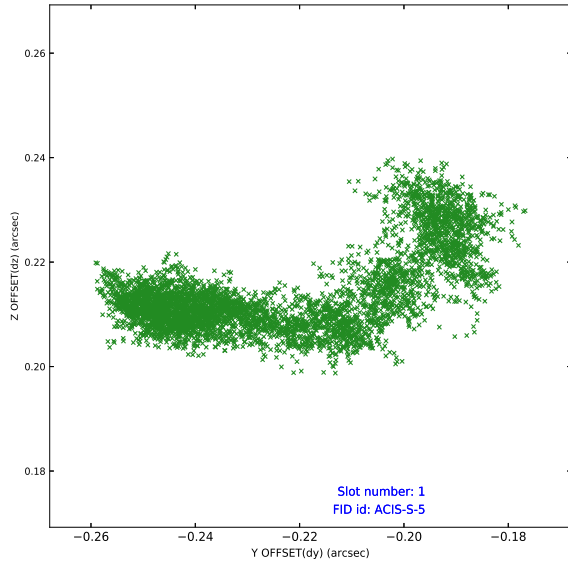
### 2.5.1 Slot 0



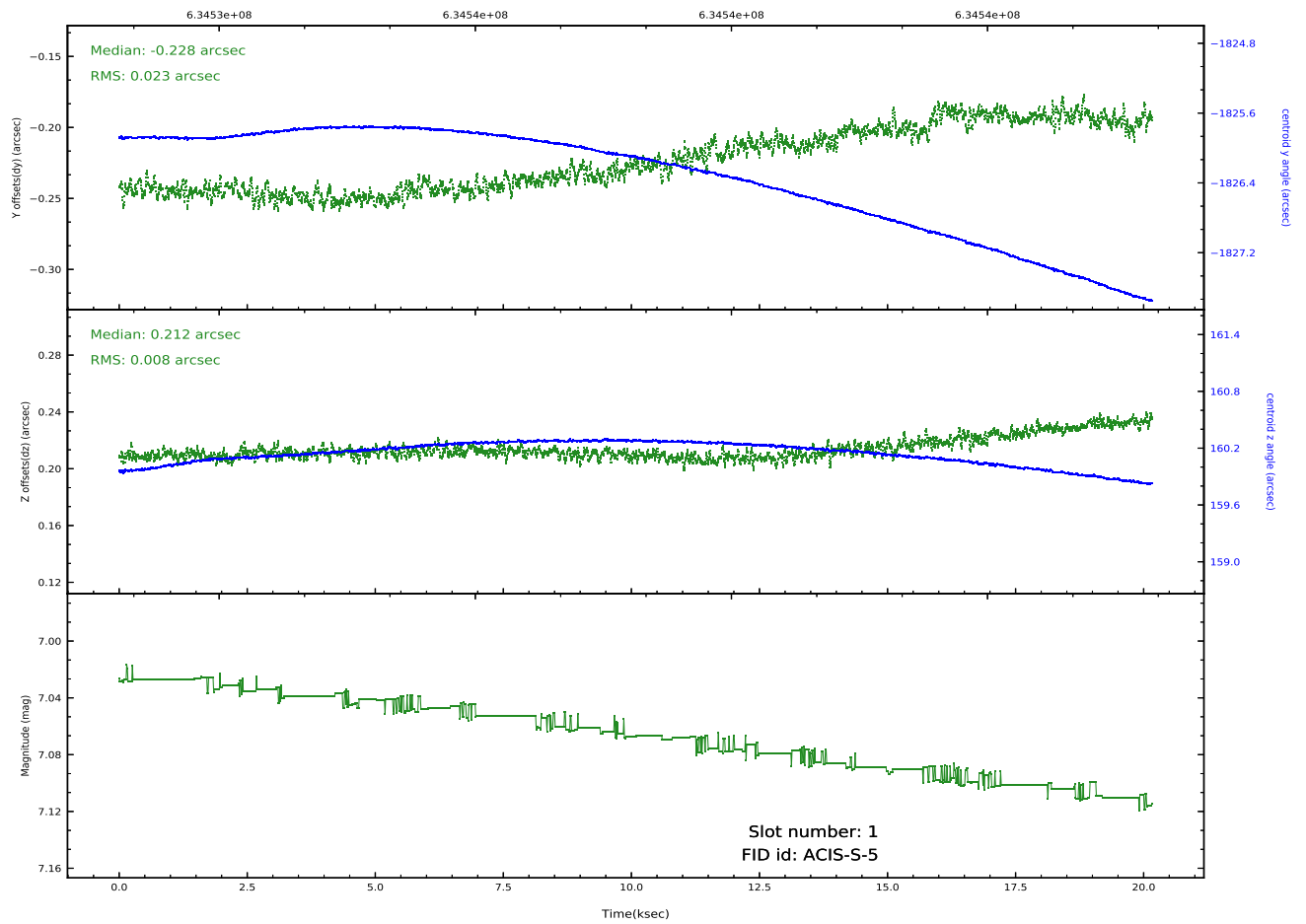
Time (s)



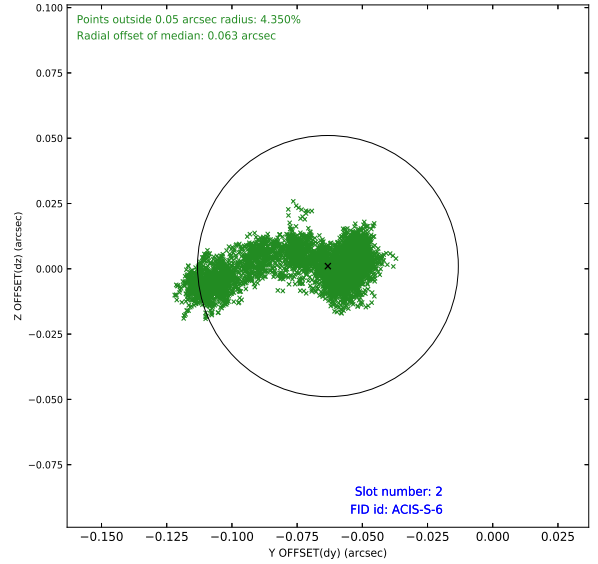
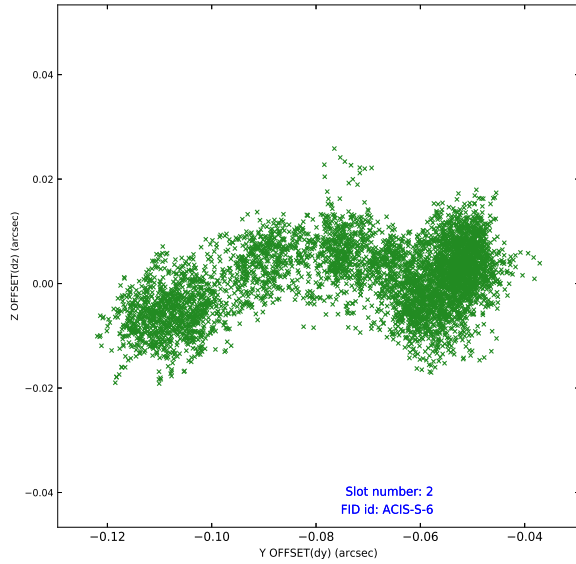
## 2.5.2 Slot 1



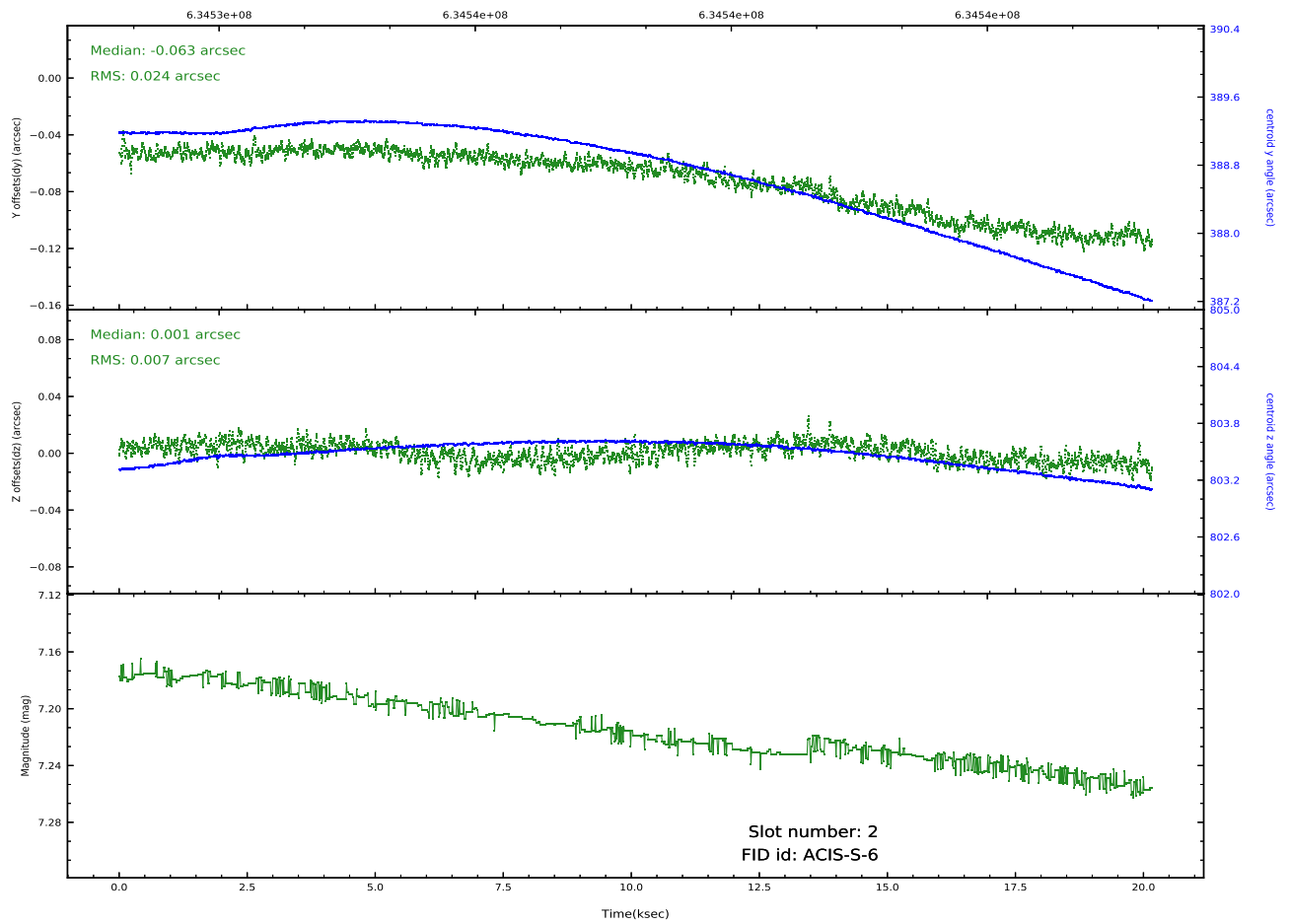
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.952000297308

## A.2 Comments