

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12835 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Feb 3 2012

## Contents

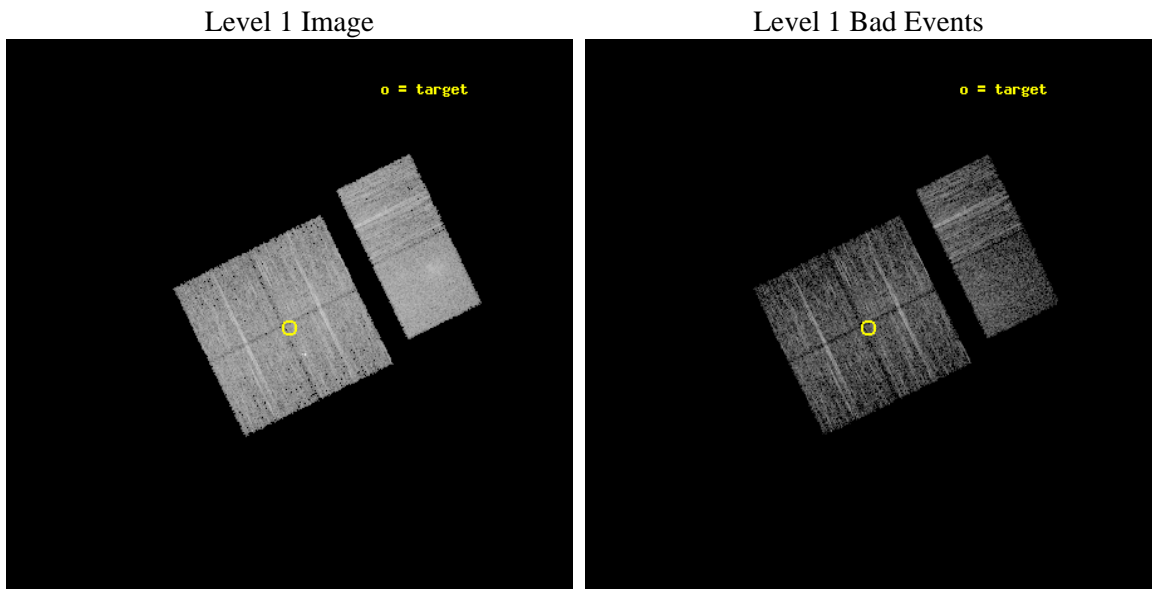
<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 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



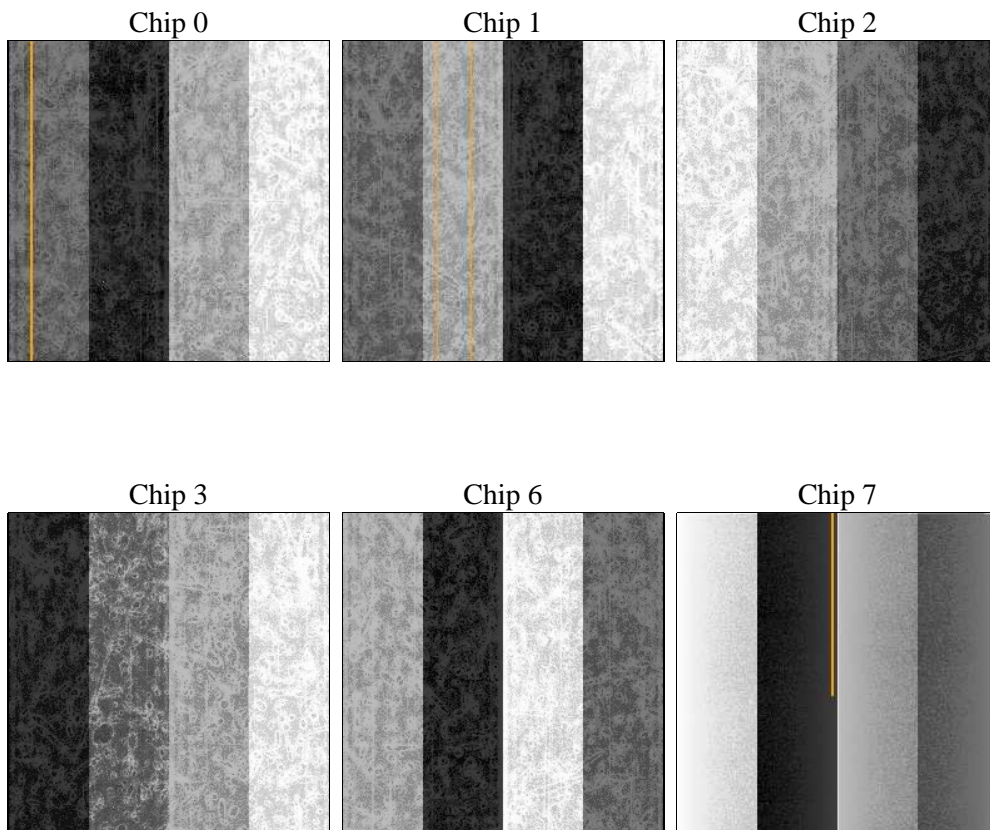
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	5055.6137773395	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime0	5055.4906573296	Sum of GTIs [s]
date	2012-02-03T15:57:55	Date and time of file creation	ontime1	5055.5316973329	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	5055.5727373362	Sum of GTIs [s]
			ontime3	5055.6137773395	Sum of GTIs [s]
			ontime6	5055.6958573461	Sum of GTIs [s]
			ontime7	5055.6548173428	Sum of GTIs [s]
			l1events	221891	Number of level 1 events

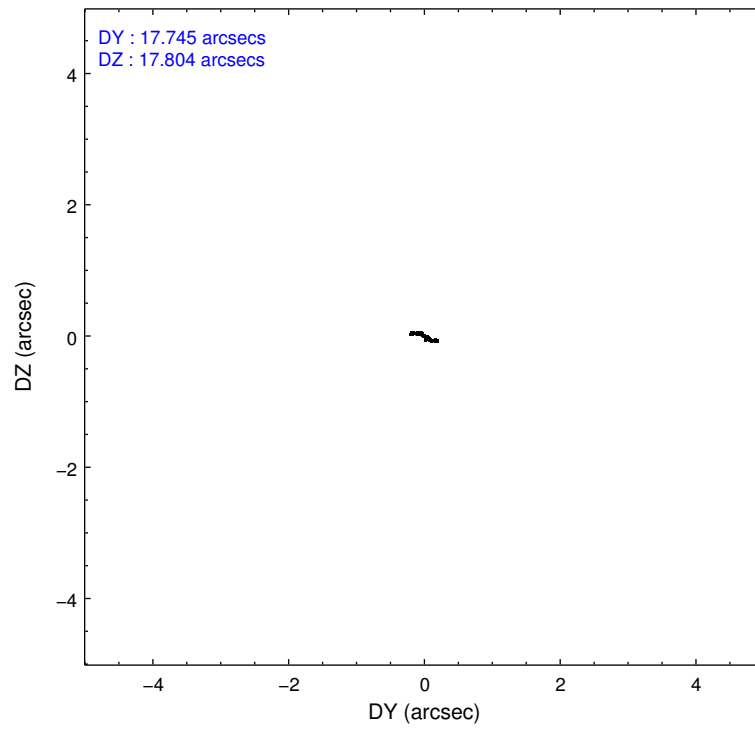
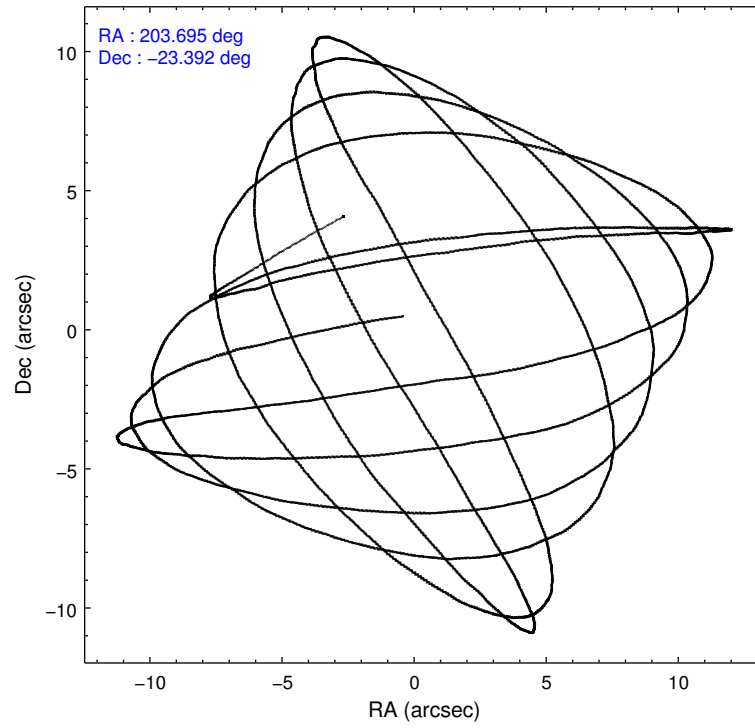
### 2.1.4 Events

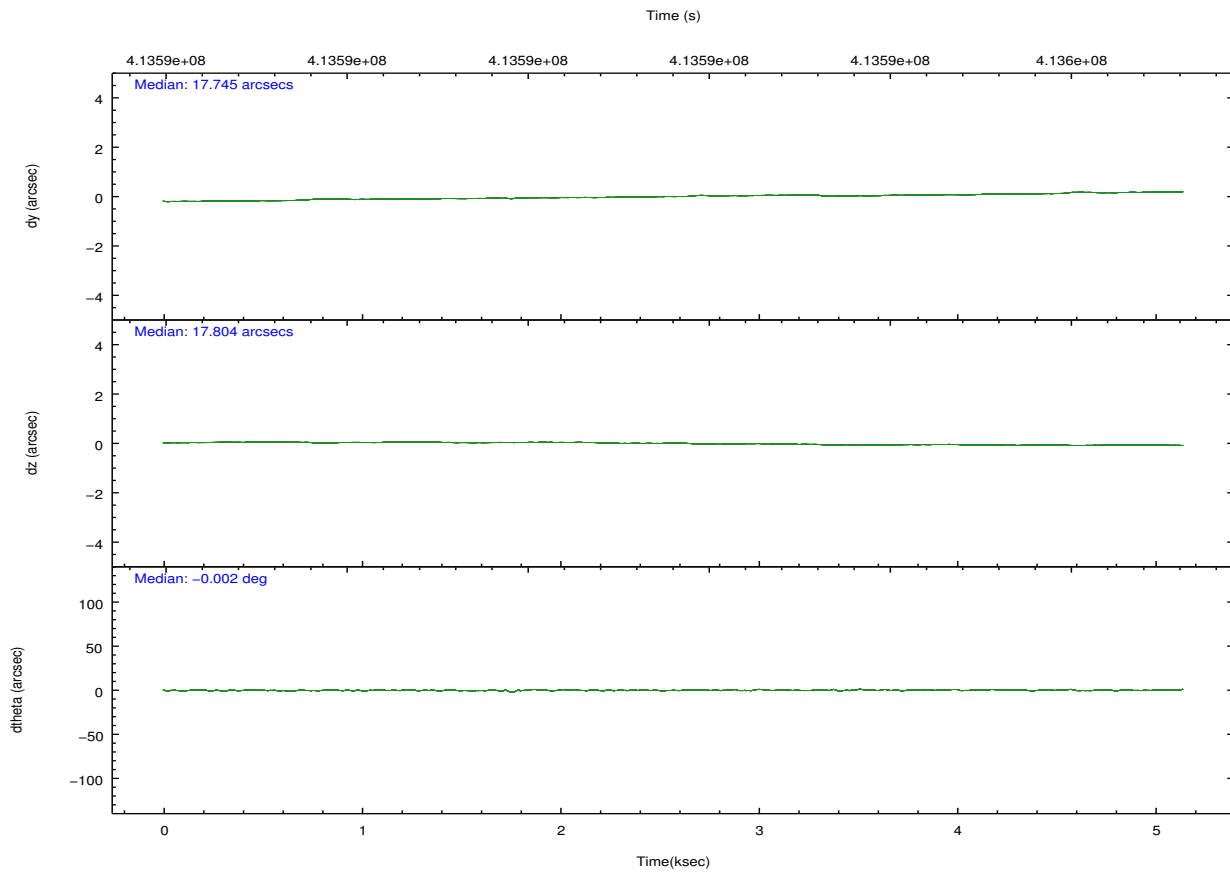
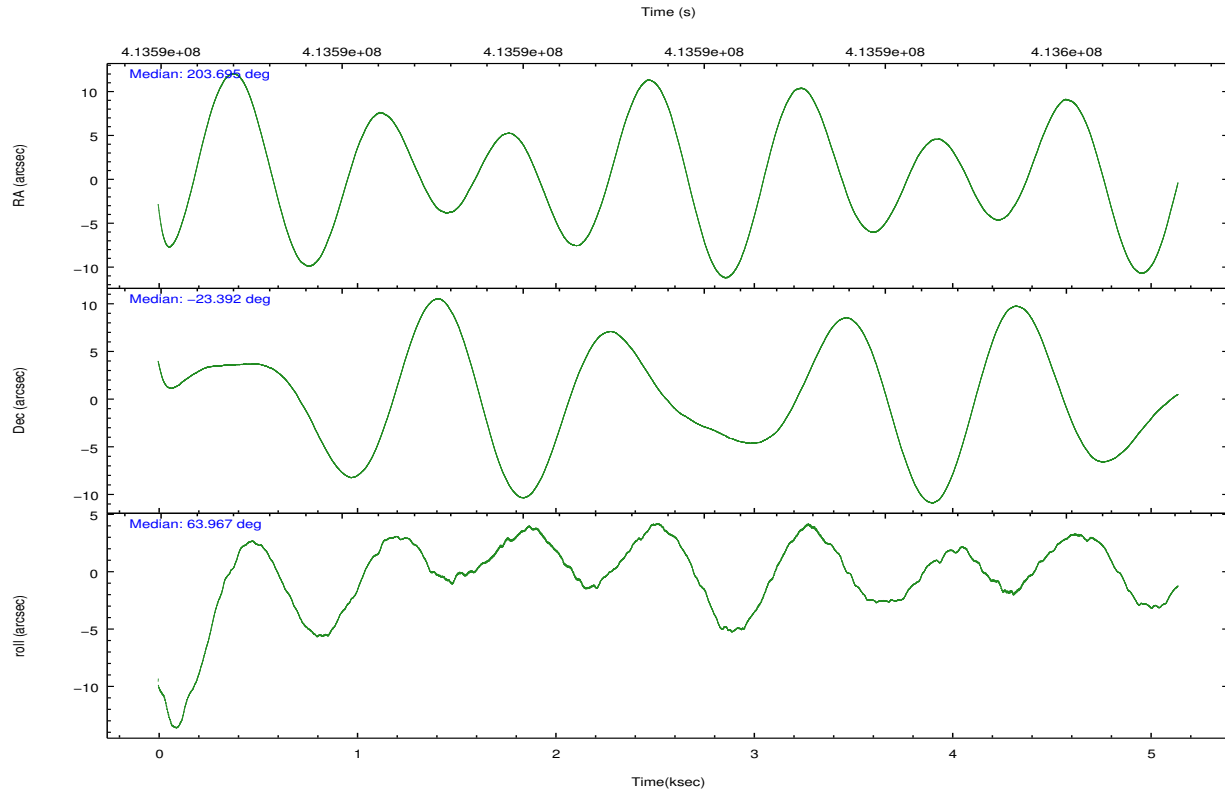
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	31574	33305	35755	34379	39046	47832	grade 0 events	1368	1869	1498	1695	1493	2855
rejected events	27748	28538	31756	30087	34842	24611		4%	5%	4%	4%	3%	5%
rejected %	87%	85%	88%	87%	89%	51%	grade 1 events	28	16	14	41	18	52
								0%	0%	0%	0%	0%	0%
							grade 2 events	900	1023	909	942	974	4972
								2%	3%	2%	2%	2%	10%
							grade 3 events	436	457	371	412	439	2177
								1%	1%	1%	1%	1%	4%
							grade 4 events	392	475	435	442	394	2123
								1%	1%	1%	1%	1%	4%
							grade 5 events	1474	1554	1421	1712	1690	4726
								4%	4%	3%	4%	4%	9%
							grade 6 events	731	947	786	803	908	11111
								2%	2%	2%	2%	2%	23%
							grade 7 events	26245	26964	30321	28332	33130	19816
								83%	80%	84%	82%	84%	41%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	203.696863	203.6945976282896	CCD I2 on	Y	Y
[deg] Pointing Dec	-23.419544	-23.39209755719137	CCD I3 on	Y	Y
[deg] Pointing Roll	63.762586	63.97038174968428	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	413590376.184000	413589258.62142	CCD S5 on	N	N
Observation start date	2011-02-08T22:11:50	2011-02-08T21:54:18	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	413595376.184000	413596144.05927	On-chip summing requested	N	N
Observation end date	2011-02-08T23:35:10	2011-02-08T23:49:04	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



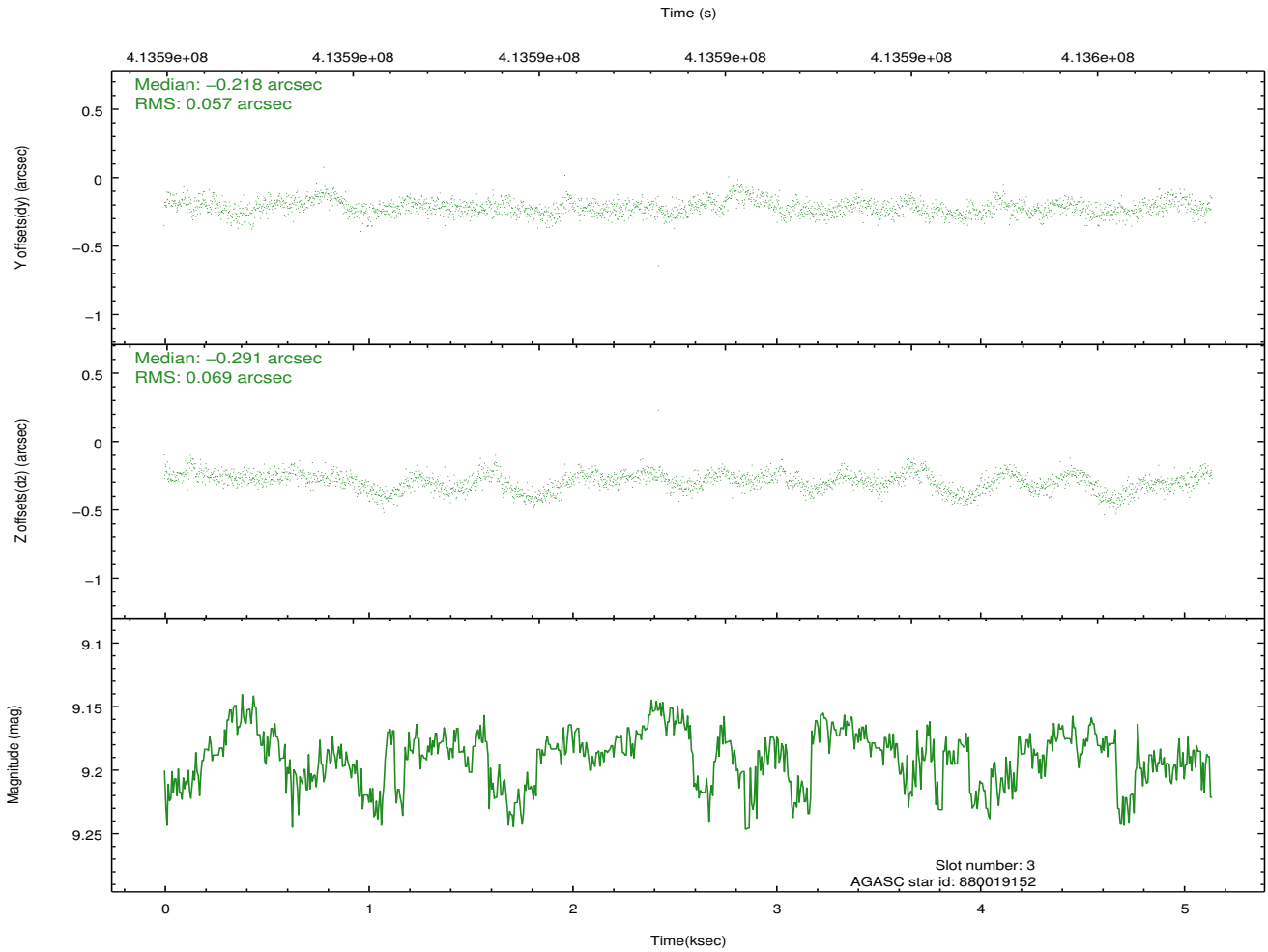
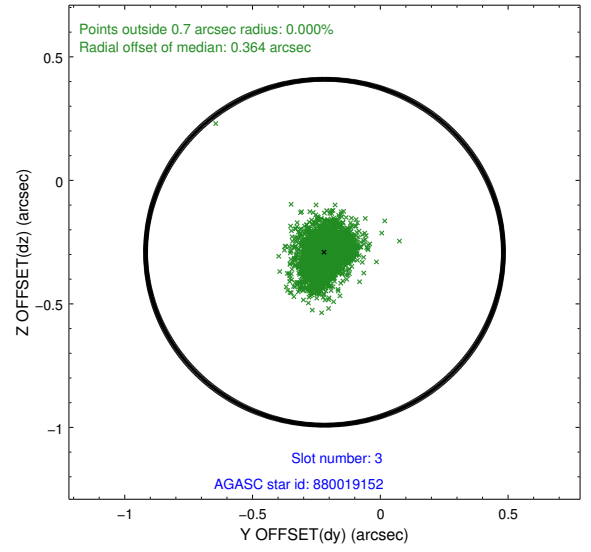
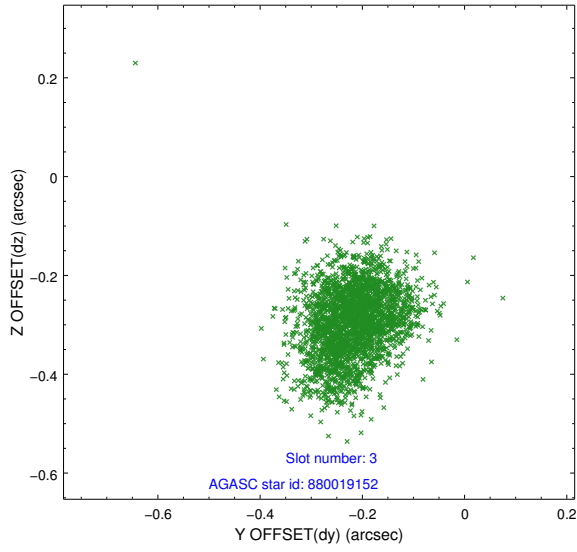


### Slot Statistics

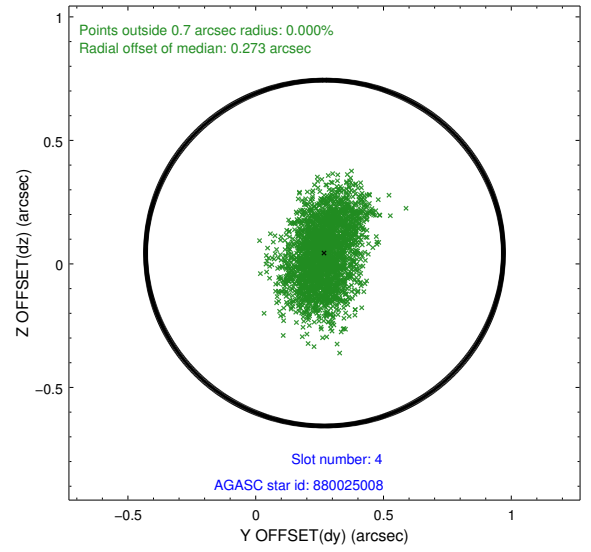
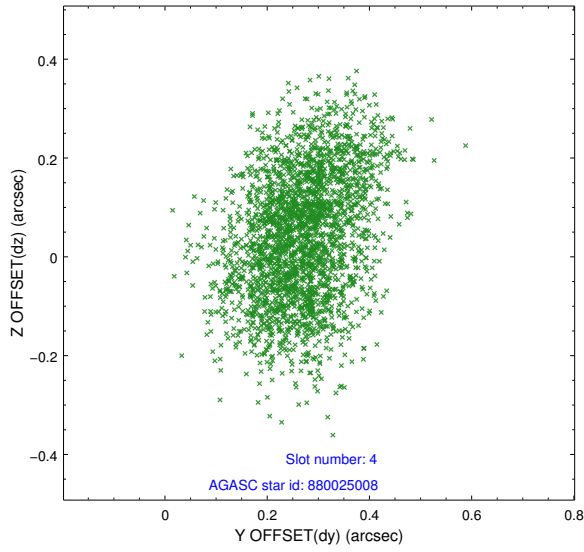
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.99	1254	0.043	0.017	0.008	0.015	0.000000	0.000000	921.69	-841.45
1	FID	ACIS-I-5	6.98	1254	-0.221	0.052	0.007	0.013	0.000000	0.000000	-1826.04	1055.47
2	FID	ACIS-I-6	7.00	1254	0.087	0.002	0.007	0.011	0.000000	0.000000	385.98	1701.27
3	GUIDE	880019152	9.19	2505	-0.218	-0.291	0.093	0.157	203.456228	-22.655562	2112.87	1932.57
4	GUIDE	880025008	9.73	2505	0.269	0.044	0.160	0.256	204.045614	-23.654193	-251.35	-1403.66
5	GUIDE	880026888	7.44	2509	-0.172	0.139	0.065	0.110	204.293979	-23.616010	232.15	-2081.39
6	GUIDE	880026448	9.17	2503	0.371	-0.101	0.088	0.147	203.057058	-23.845808	-2311.48	1208.11
7	GUIDE	880017960	9.41	2508	-0.248	0.214	0.108	0.185	204.145650	-22.884020	2384.21	-483.09

## 2.4 Star Slots

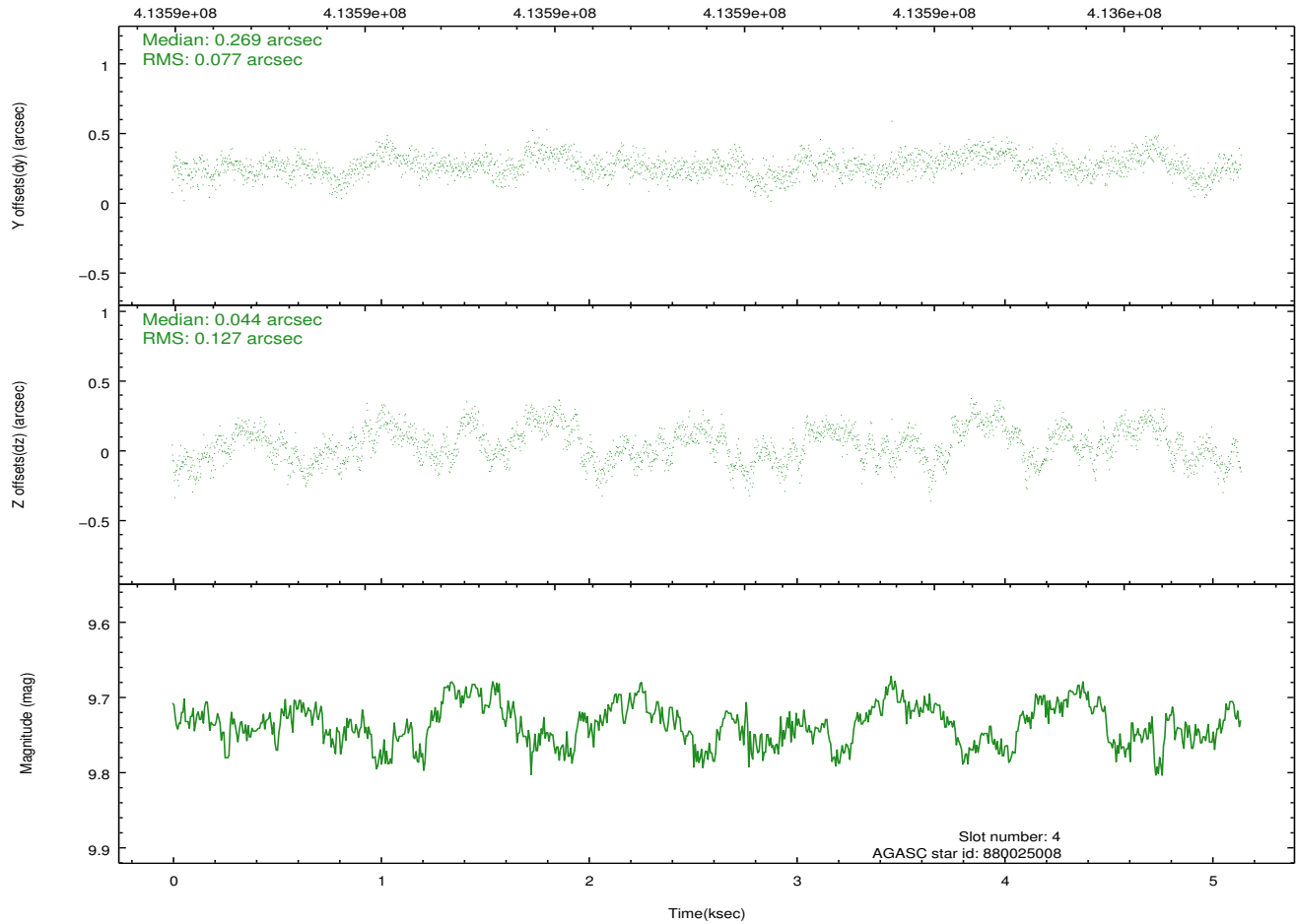
### 2.4.1 Slot 3



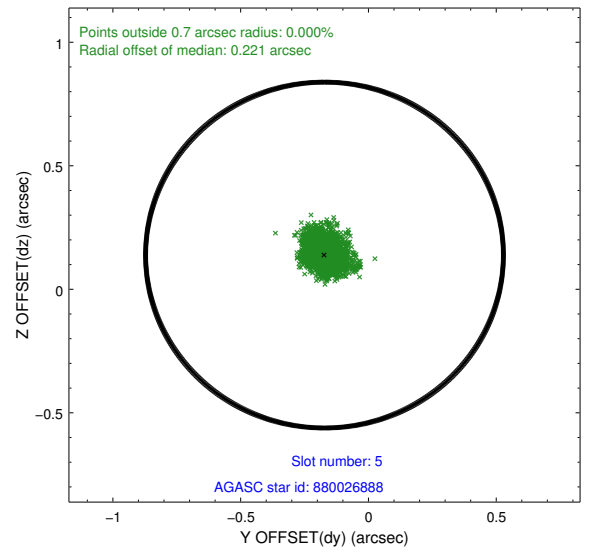
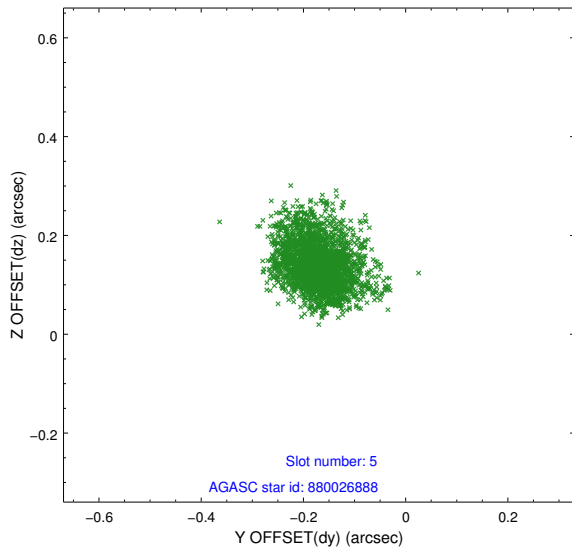
### 2.4.2 Slot 4



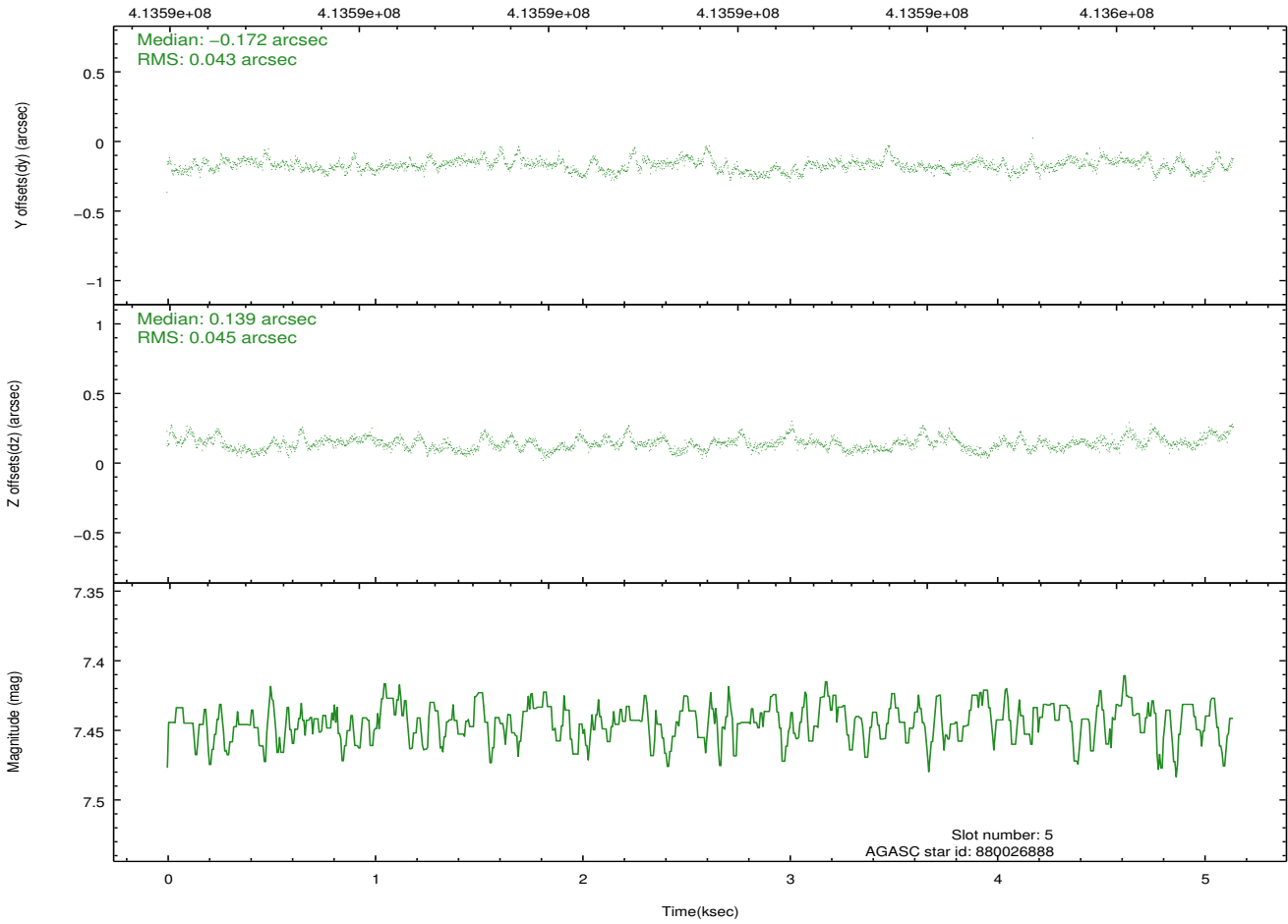
Time (s)



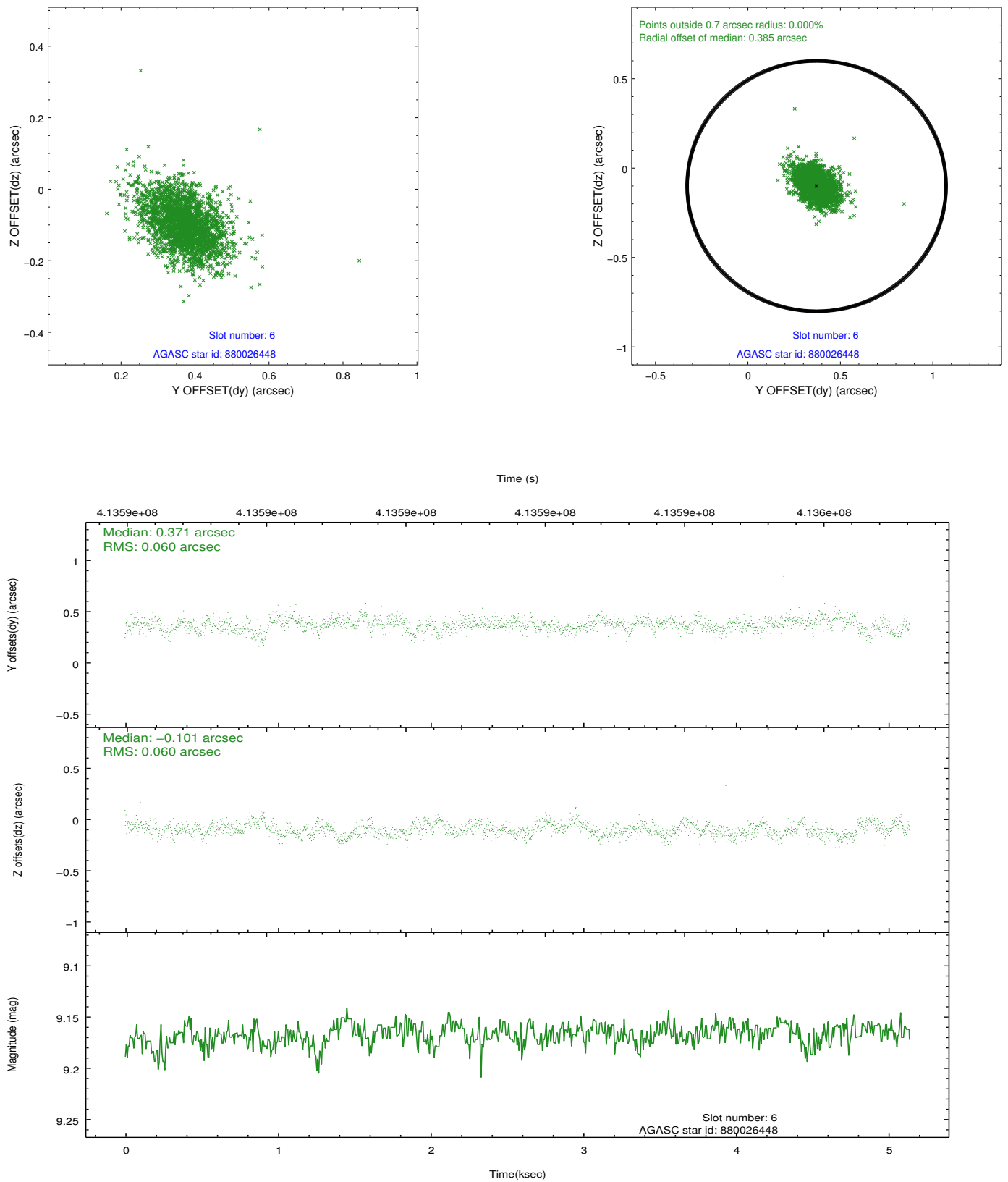
### 2.4.3 Slot 5



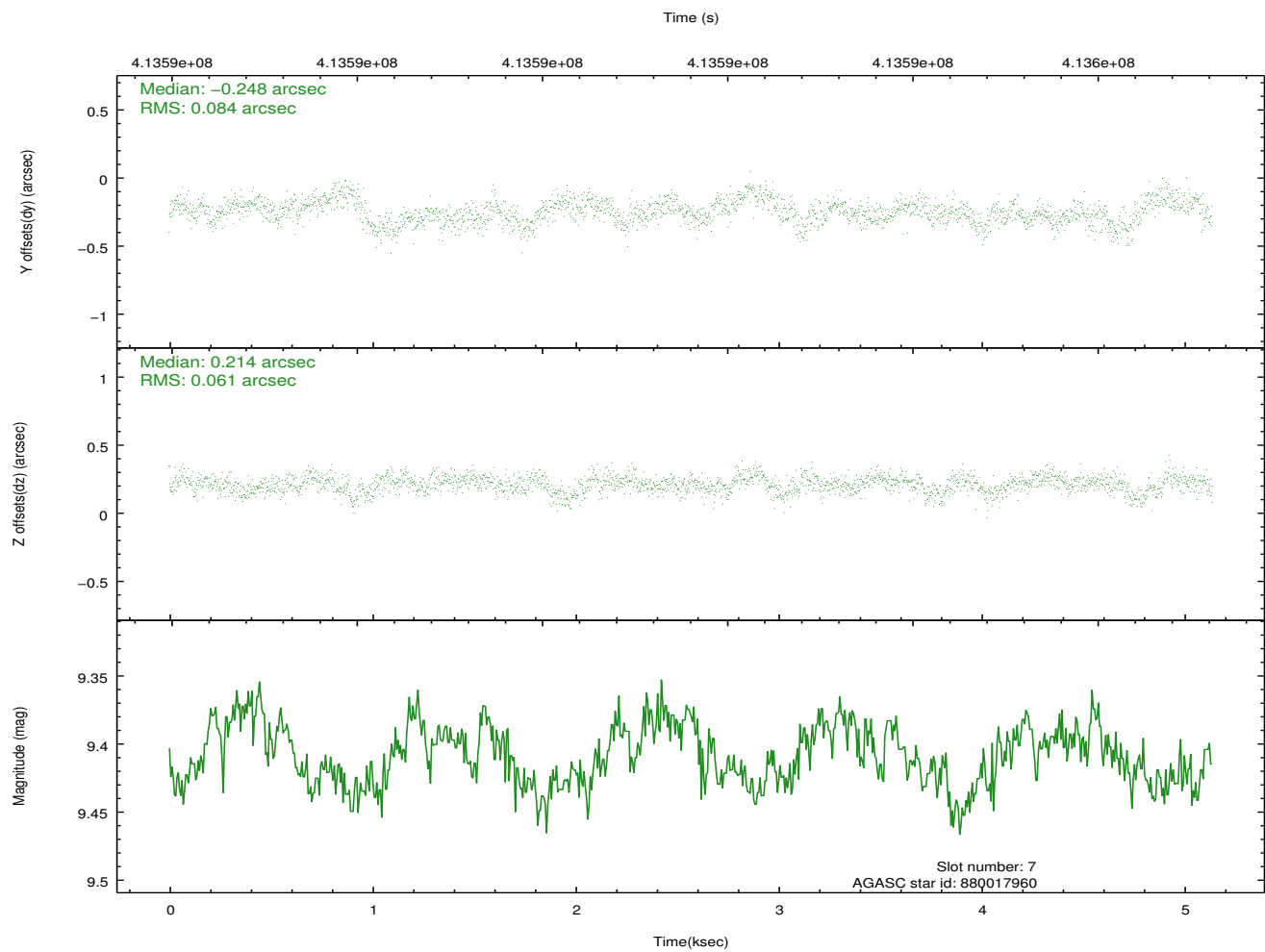
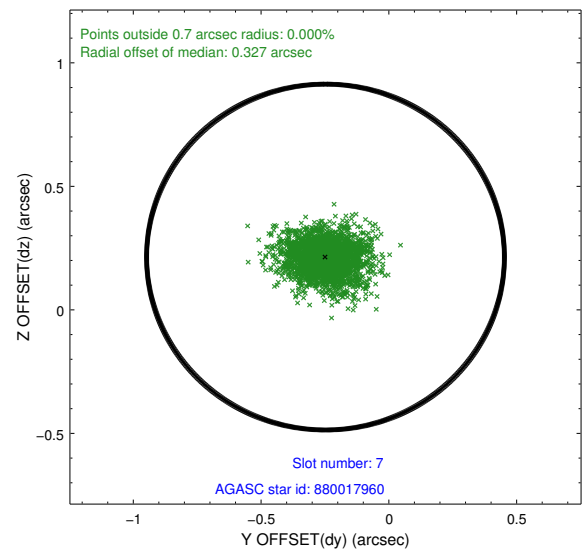
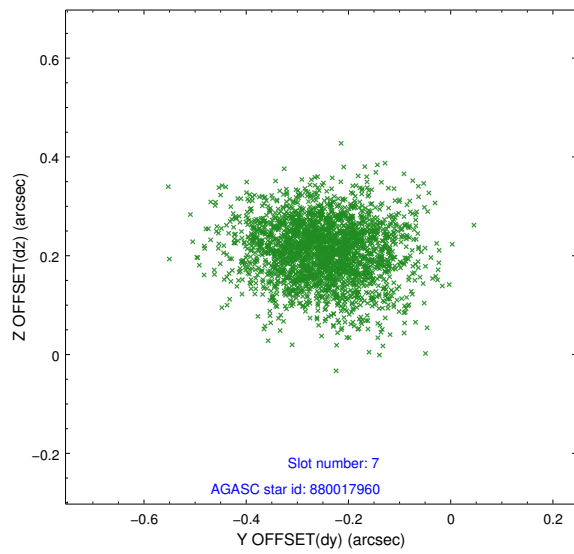
Time (s)



## 2.4.4 Slot 6

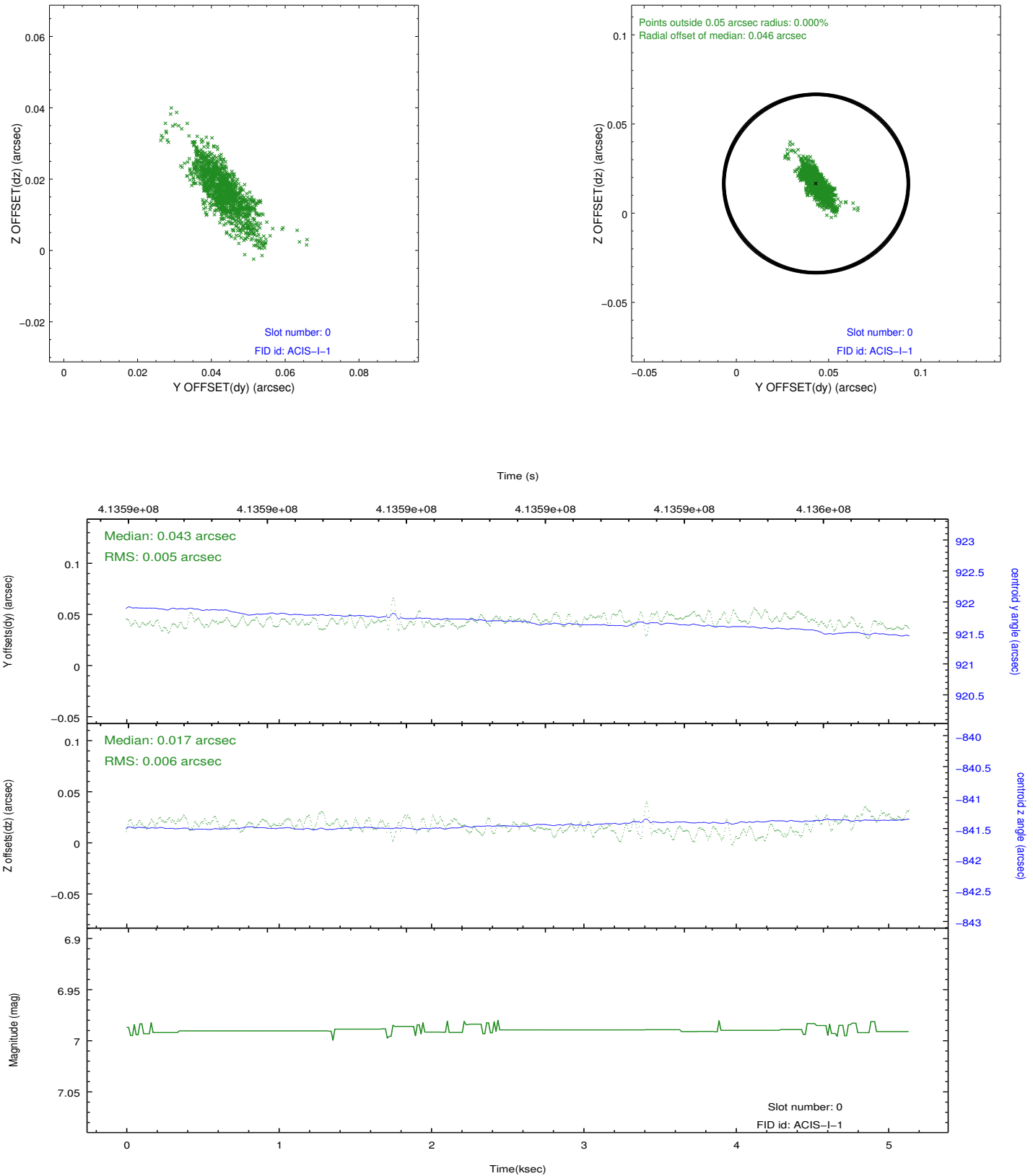


## 2.4.5 Slot 7

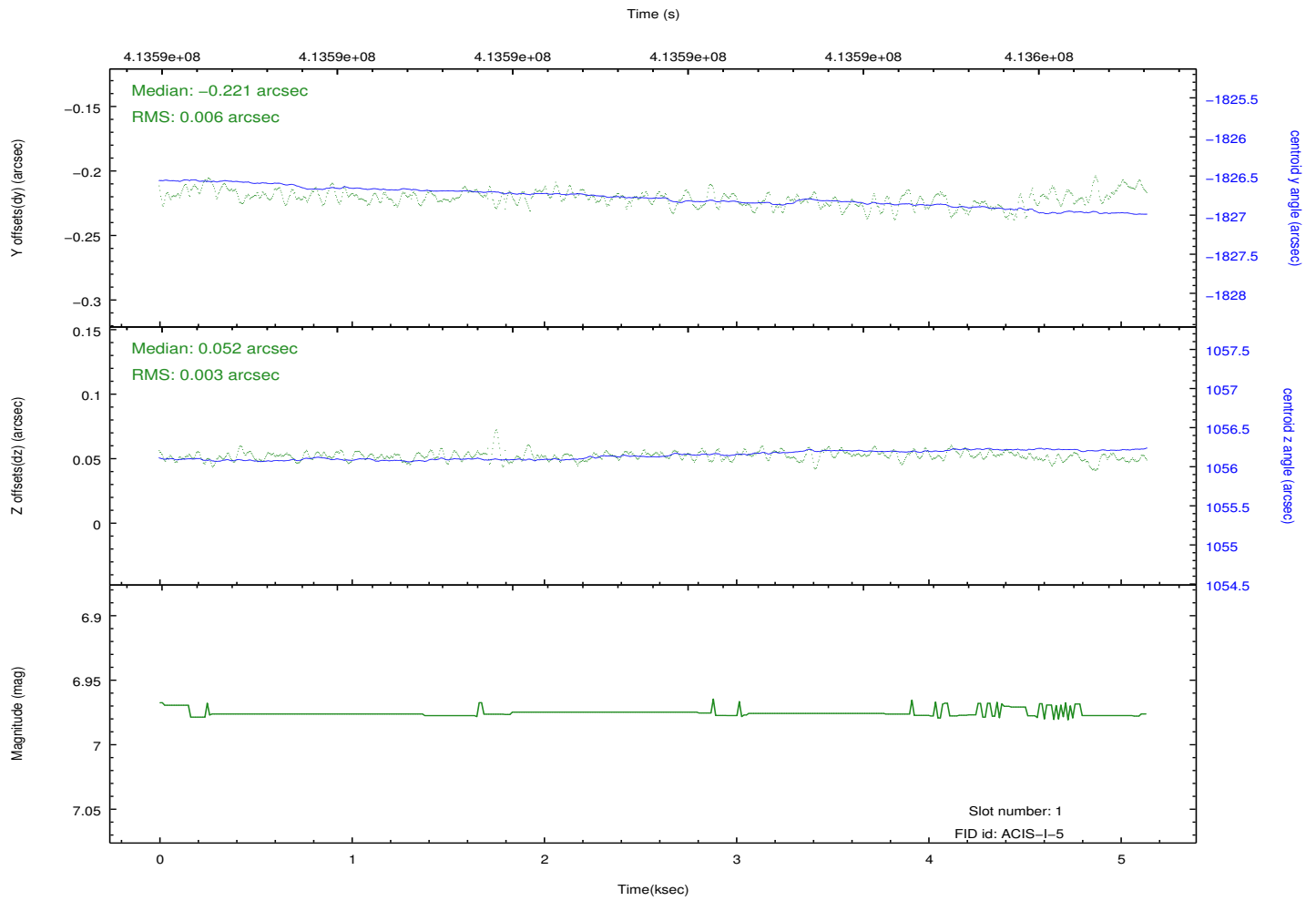
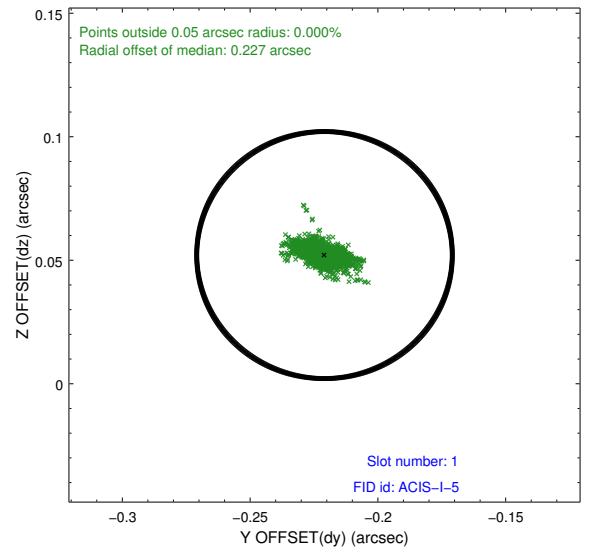
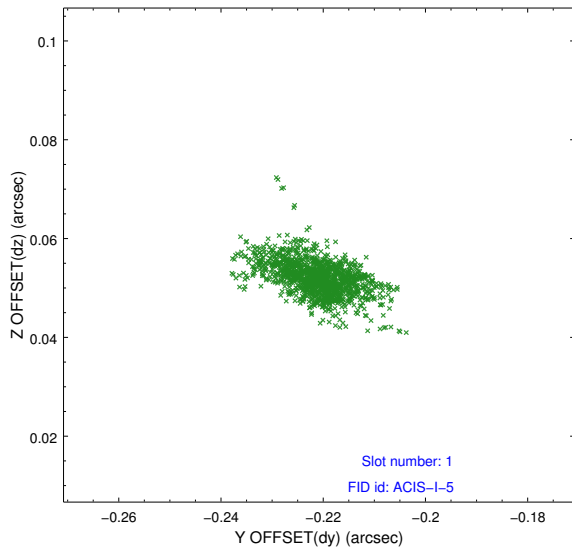


## 2.5 FID Slots

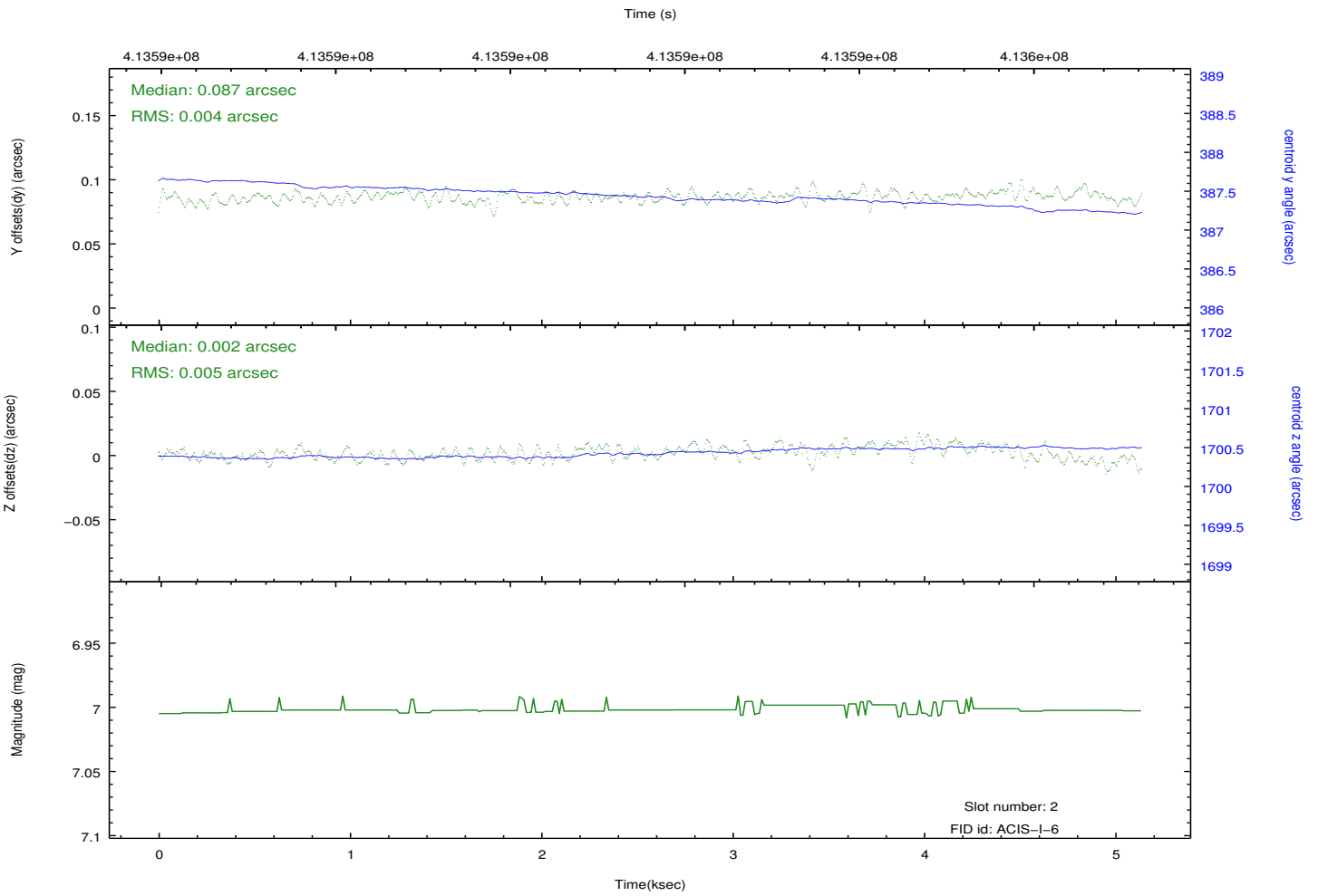
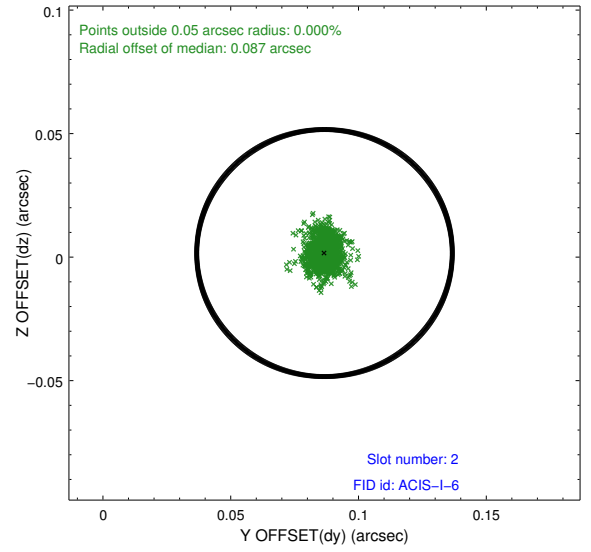
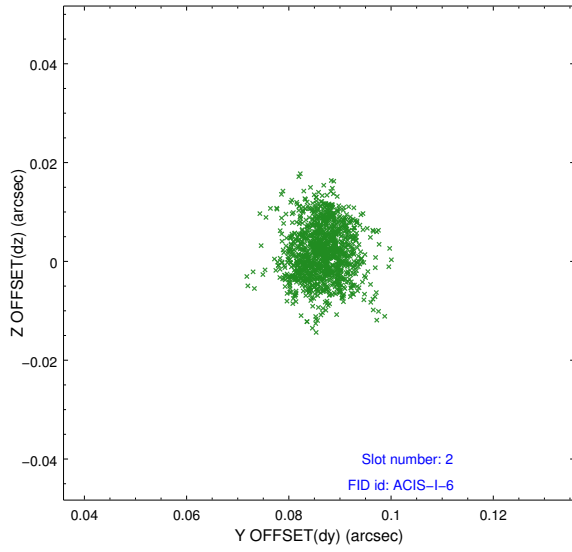
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0556137728691

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.