

V&V Reference Report

L2 ASCDS Version : 7.6.11.2

Observation 861 - L2 Version 5
Chandra X-Ray Center

L2 Processing Date : Nov 27 2007

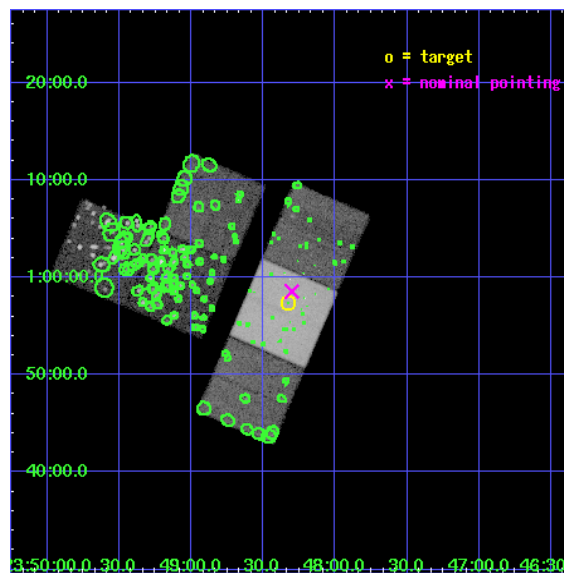
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1 Front

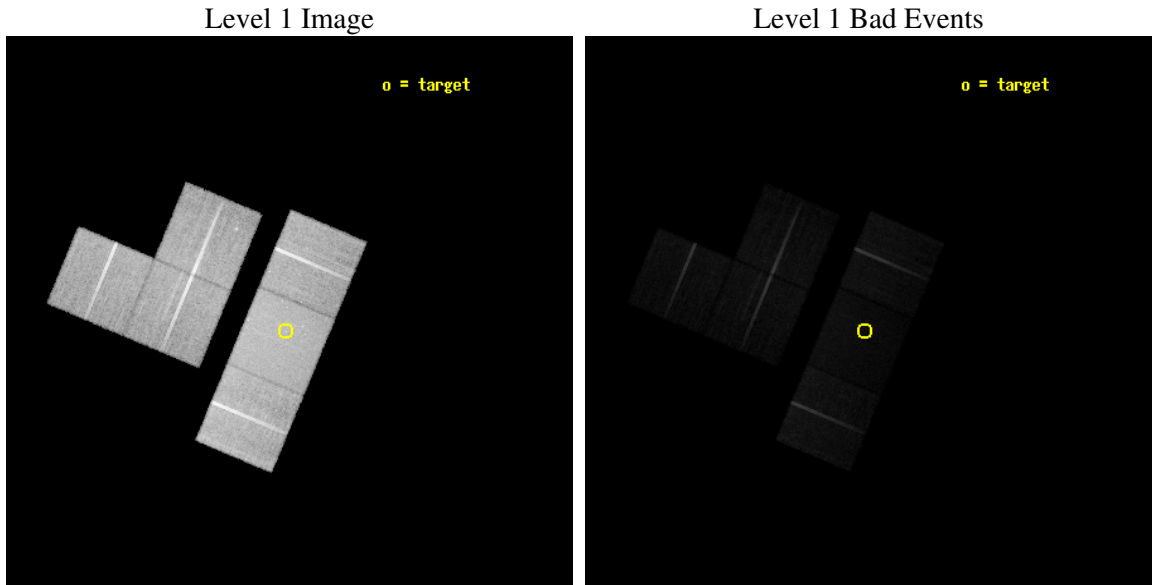
seq_num	700166
obs_id	861
title	WIDE SEPARATION QUASARS: PAIRS OR LENSES?
observer	Dr. Paul Green
object	Q2345+007
dtcycle	0
cycle	P
ra_targ	357.081667
dec_targ	0.955861
ra_nom	357.07527751234
dec_nom	0.97595116038076
roll_nom	112.71573273658
revision	5
ontime	75148.800069988
livetime	74197.220714327
ontime1	34364.211078182
ontime2	46505.069728374
ontime3	36830.765641615
ontime6	50267.883364722
ontime7	75148.800069988
ontime8	50922.560532168
l2events	414189



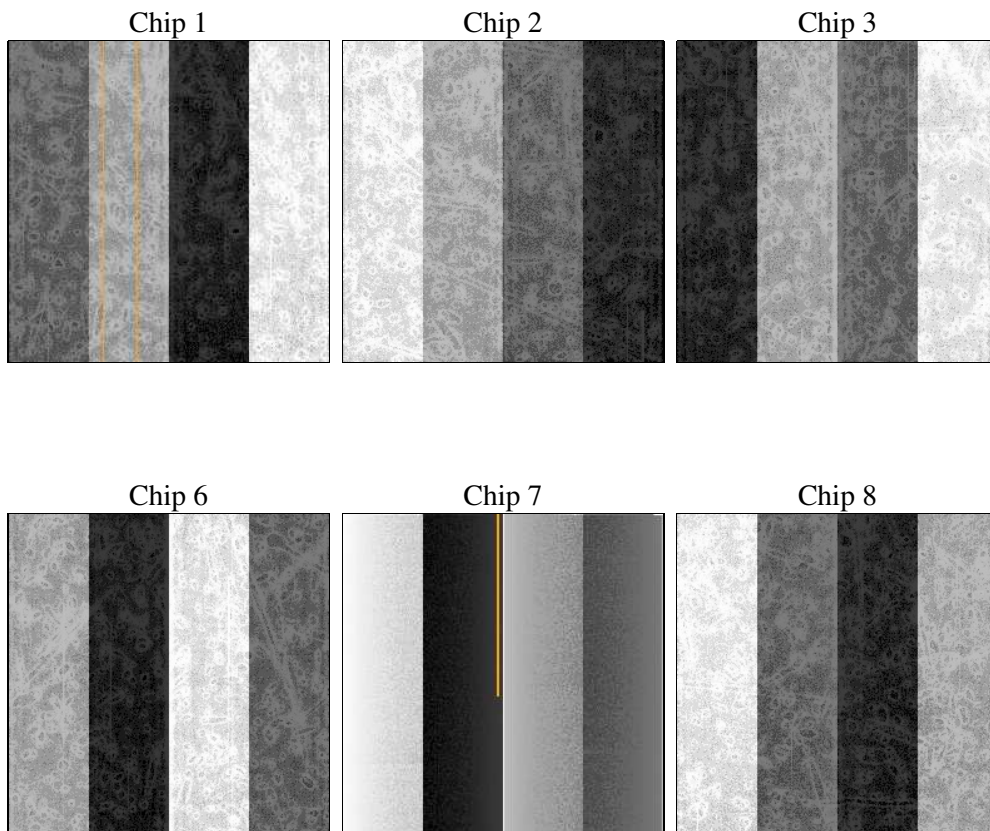
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-29T20:22:03
revision	3

sched_exp_time	23700.000000
ontime	23529.600021914
ontime1	23529.600021914
ontime2	23529.600021914
ontime3	23526.359061673
ontime6	23529.600021914
ontime7	23529.600021914
ontime8	23523.118071541
l1events	954925

2.1.4 Events

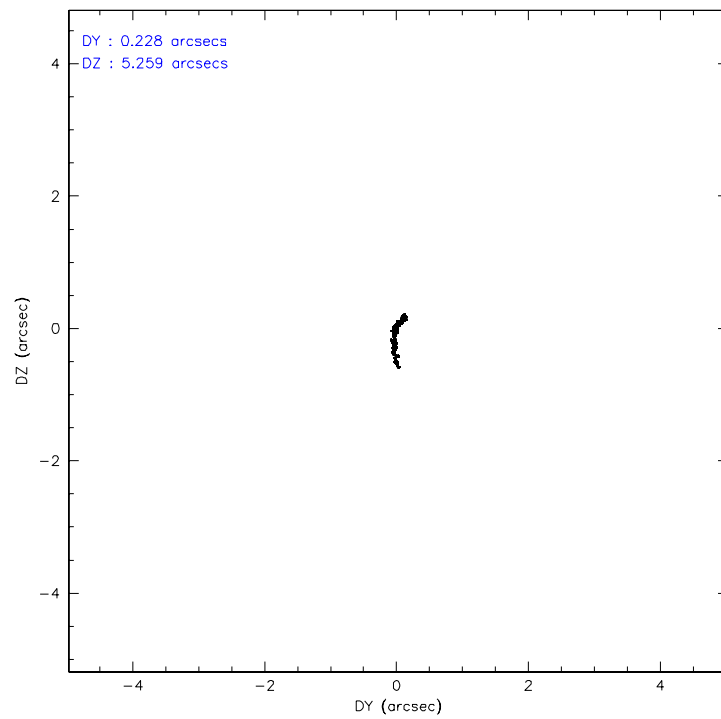
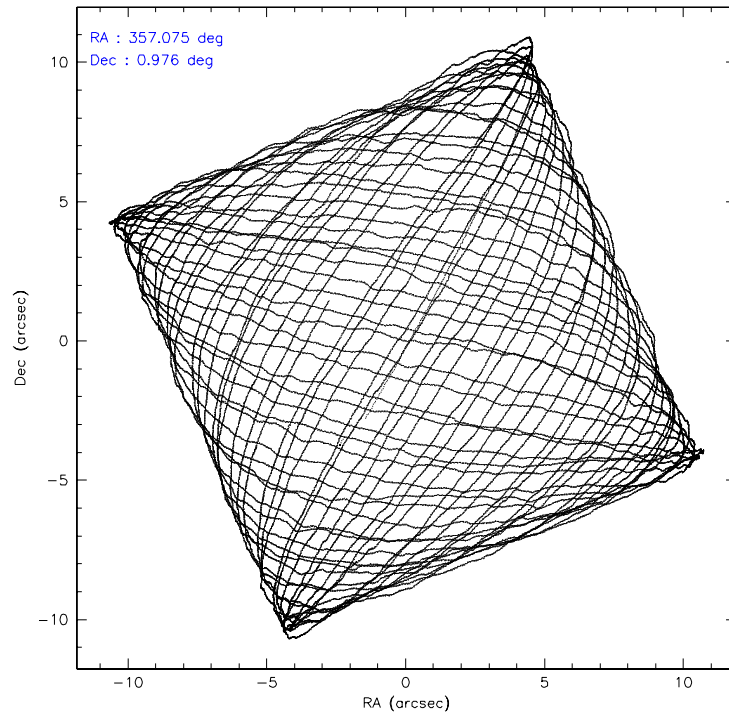
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	141912	148425	145122	153426	181806	184234
rejected events	124623	132243	129556	136387	101596	149541
rejected %	87%	89%	89%	88%	55%	81%

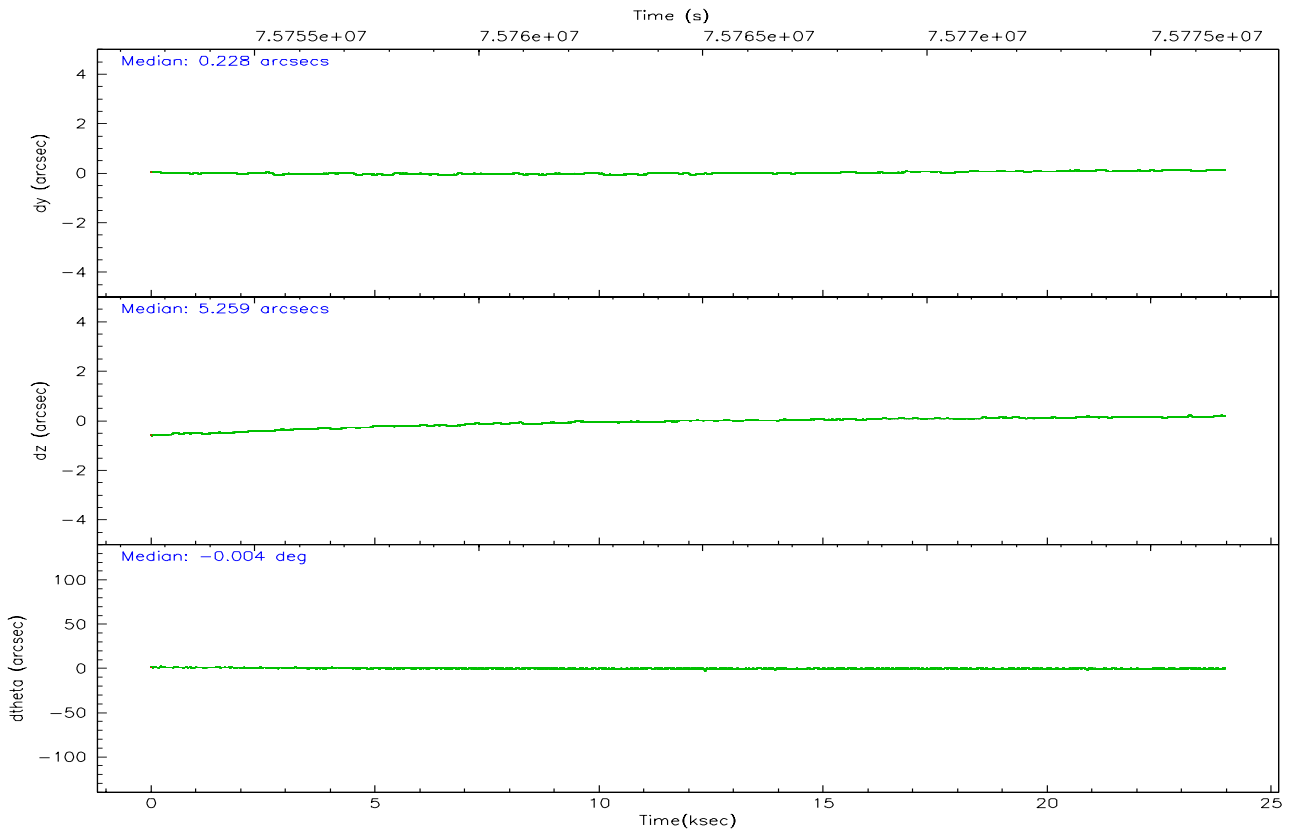
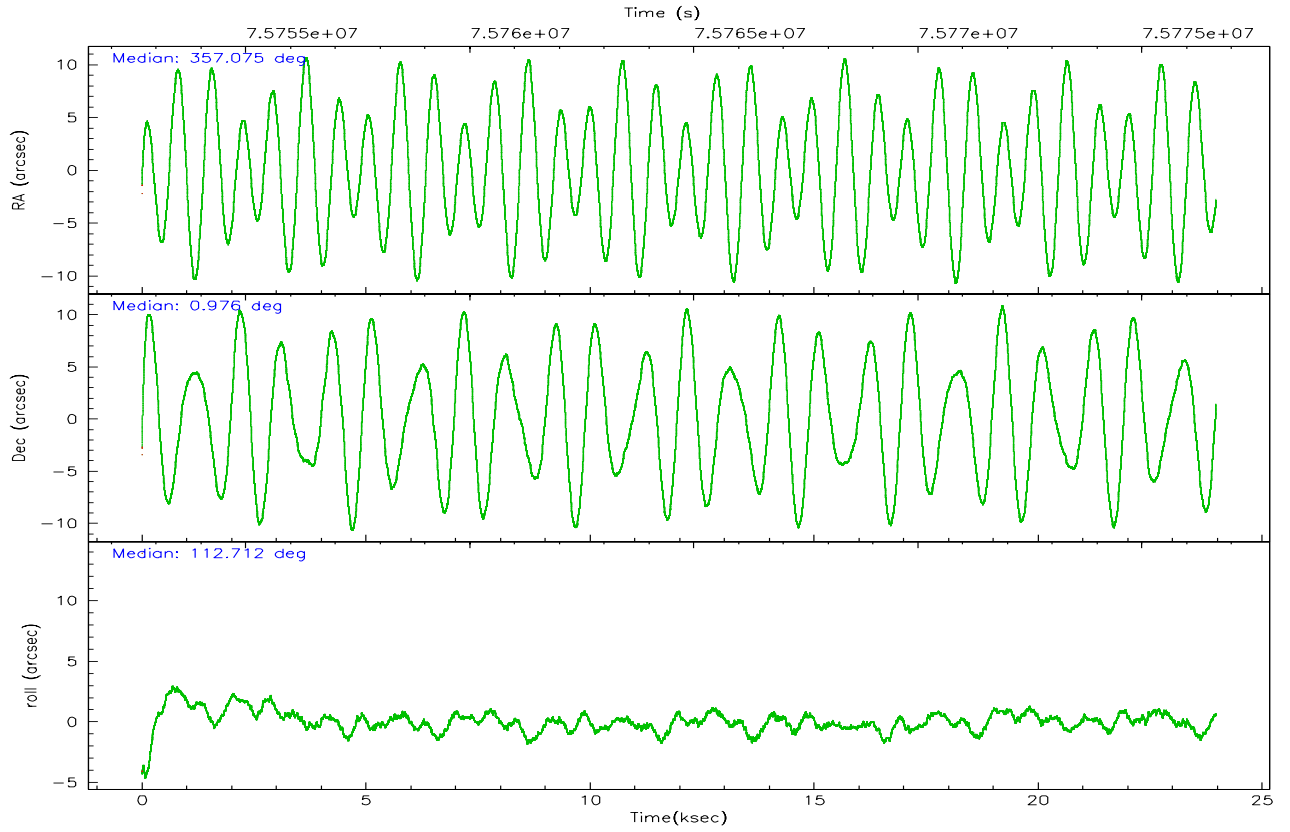
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	7046	7272	6719	7464	8239	11224
	4%	4%	4%	4%	4%	6%
grade 1 events	54	65	65	52	168	123
	0%	0%	0%	0%	0%	0%
grade 2 events	3408	3206	3001	3158	15681	7464
	2%	2%	2%	2%	8%	4%
grade 3 events	1844	1544	1563	1703	7389	3885
	1%	1%	1%	1%	4%	2%
grade 4 events	1830	1490	1580	1671	7376	3629
	1%	1%	1%	1%	4%	1%
grade 5 events	5243	4526	4985	5696	16928	7096
	3%	3%	3%	3%	9%	3%
grade 6 events	3164	2677	2705	3045	41547	8496
	2%	1%	1%	1%	22%	4%
grade 7 events	119323	127645	124504	130637	84478	142317
	84%	85%	85%	85%	46%	77%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-123678	ACIS-123678	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
Pointing RA	357.097158	357.0752775123417	Subarray requested	NONE	NONE
Pointing Dec	0.959405	0.9759511603807637	Alternating exposures requested	N	N
Pointing Roll	112.558733	112.7157327365846	Primary exposure time	3.200000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	75752964.184000	75751957.727593			
Observation start date	2000-05-26T18:28:20	2000-05-26T18:12:37			
Observation end time	75776664.184000	75777485.353532			
Observation end date	2000-05-27T01:03:20	2000-05-27T01:18:05			
Read mode	TIMED	TIMED			

2.3 Aspect



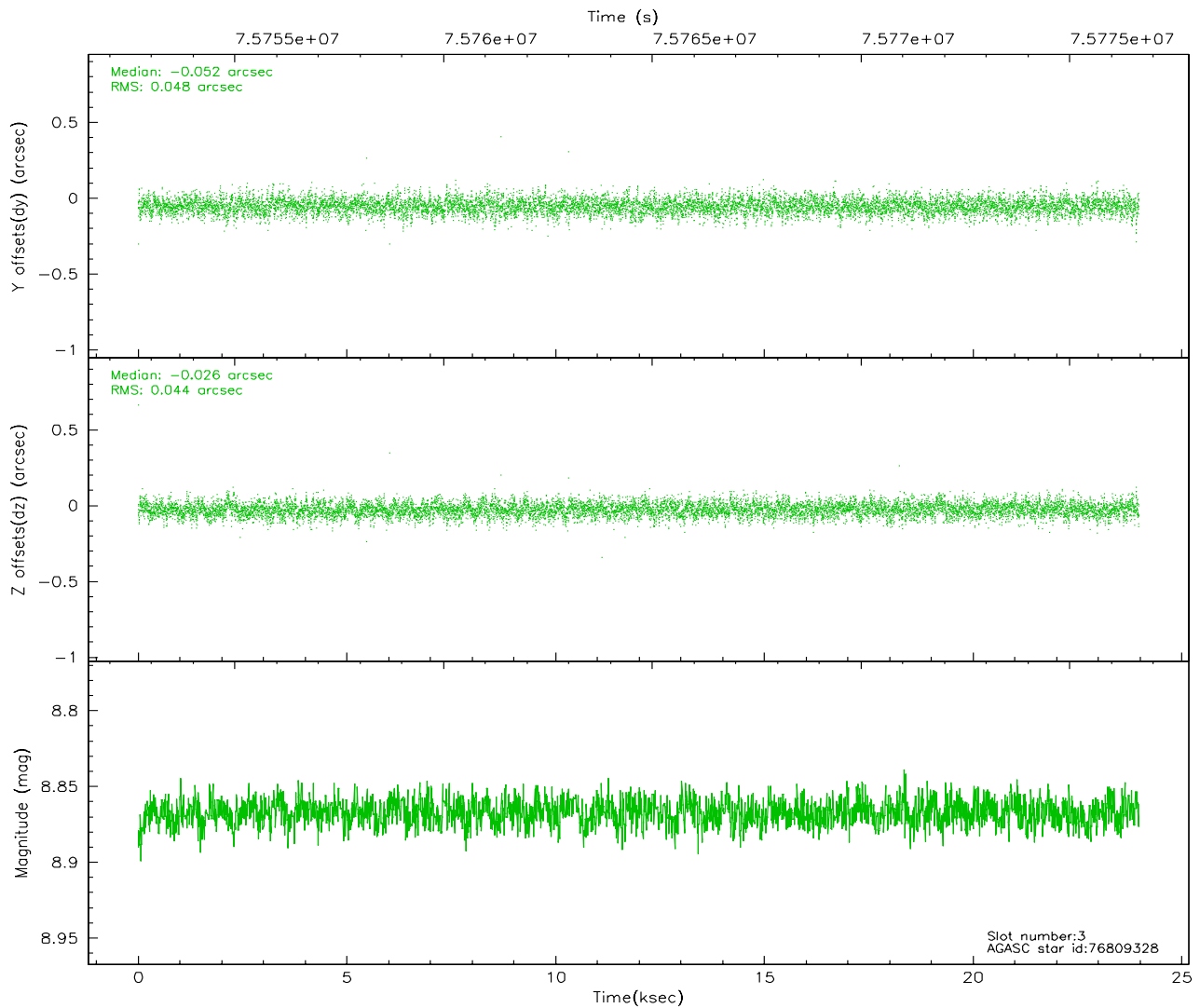
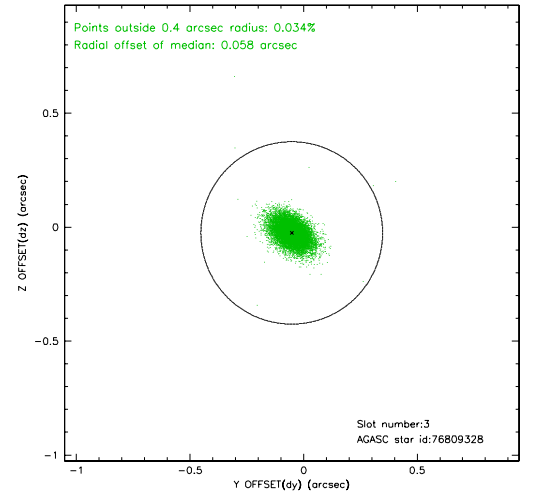
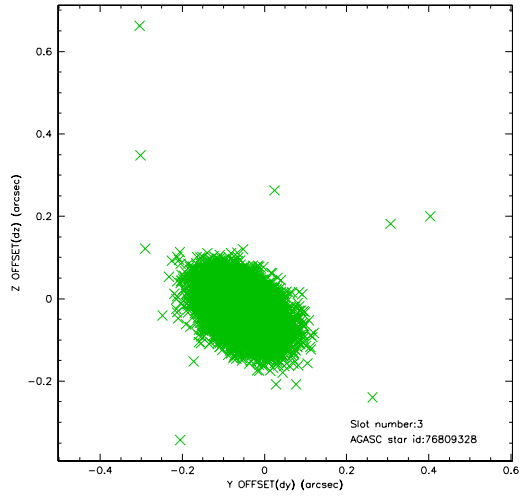


Slot Statistics

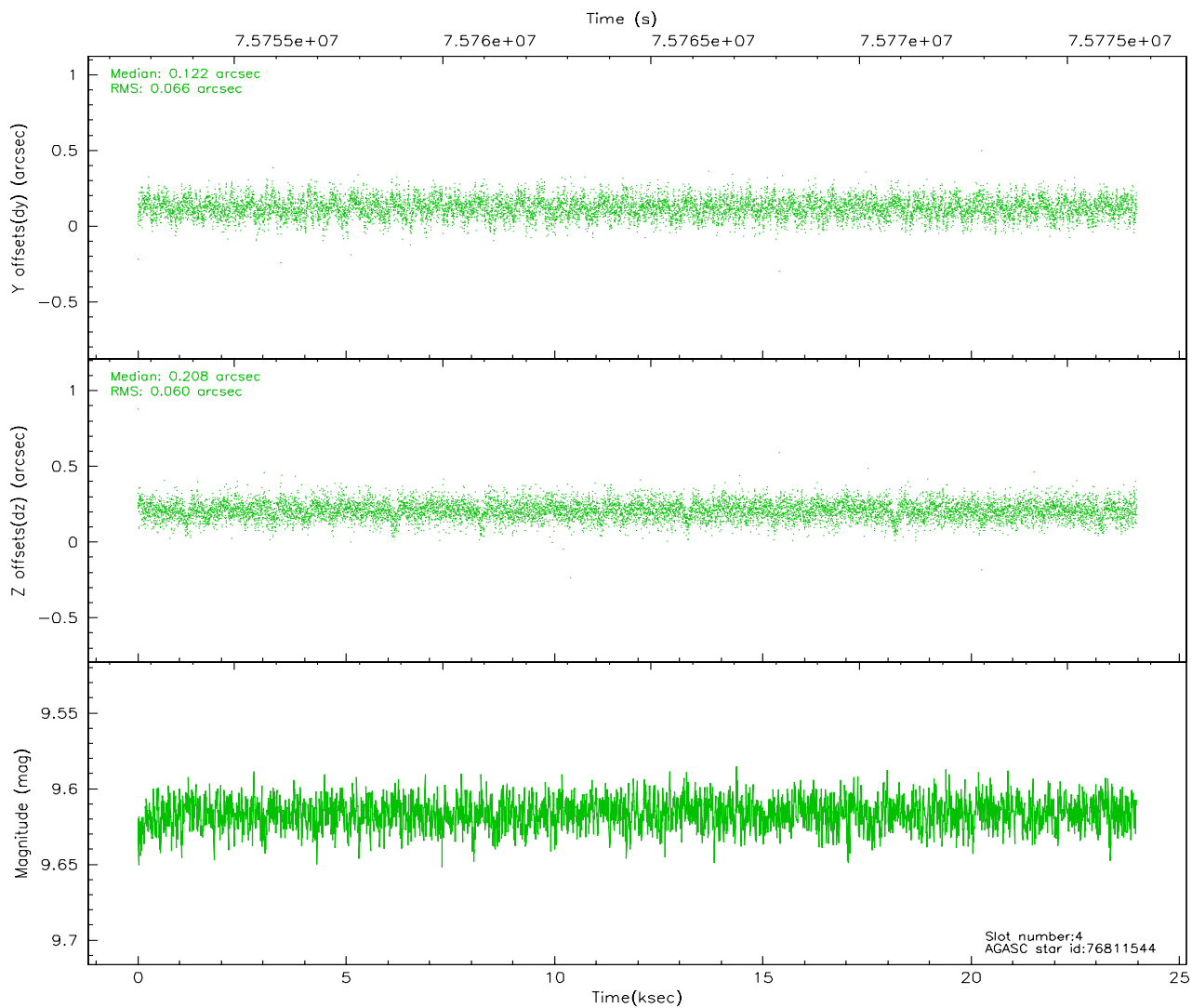
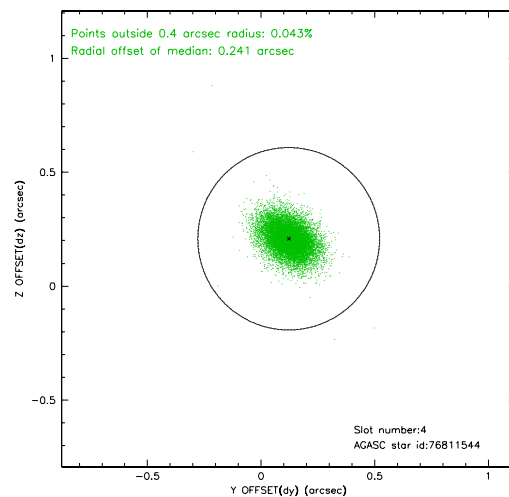
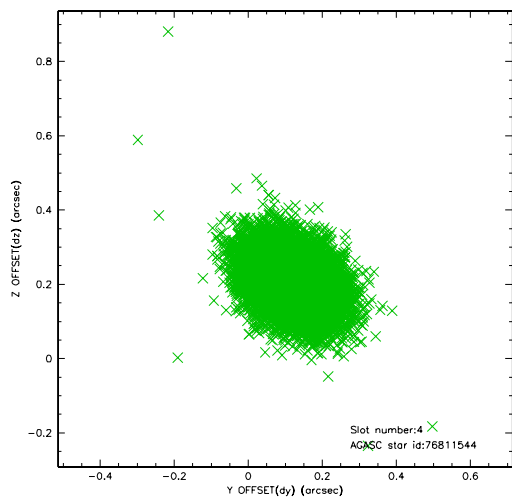
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	5849	-0.026	0.016	0.007	0.012	0.000000	0.000000	-752.82	-1726.30
1	FID	ACIS-S-4	7.21	5849	-0.011	0.008	0.005	0.009	0.000000	0.000000	2160.40	182.06
2	FID	ACIS-S-5	7.23	5848	0.005	-0.016	0.007	0.013	0.000000	0.000000	-1805.48	175.83
3	GUIDE	76809328	8.87	11697	-0.052	-0.026	0.067	0.115	356.868567	1.173816	1028.32	463.78
4	GUIDE	76811544	9.62	11691	0.122	0.208	0.093	0.155	357.277115	0.824081	-698.23	-411.08
5	GUIDE	76810184	10.47	11688	-0.227	0.019	0.134	0.220	356.734858	1.444116	2111.33	534.87
6	GUIDE	76816392	7.11	11696	-0.058	-0.195	0.065	0.110	356.644316	0.530045	-802.10	2098.26
7	GUIDE	76810320	9.45	11692	0.215	-0.011	0.110	0.182	356.923948	0.196601	-2296.85	1629.47

2.4 Star Slots

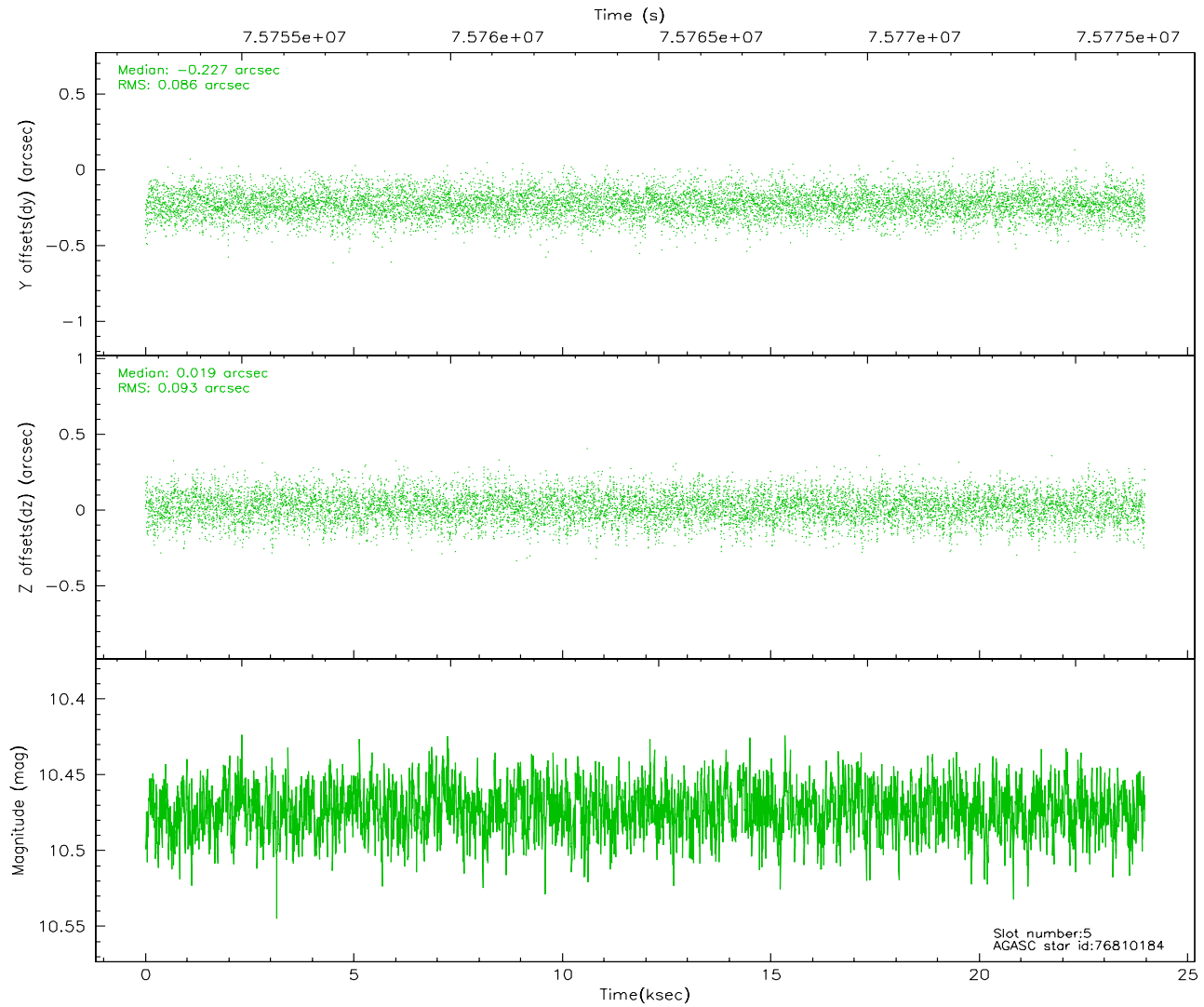
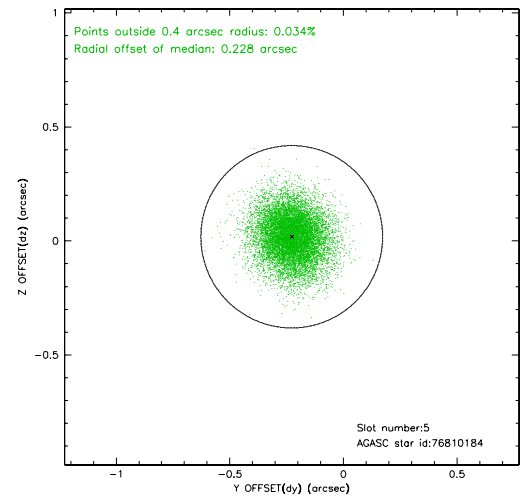
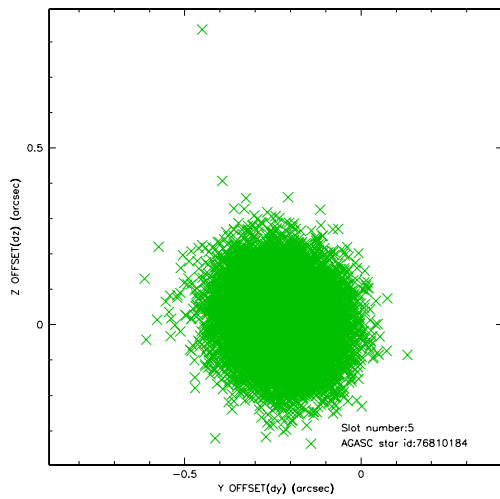
2.4.1 Slot 3



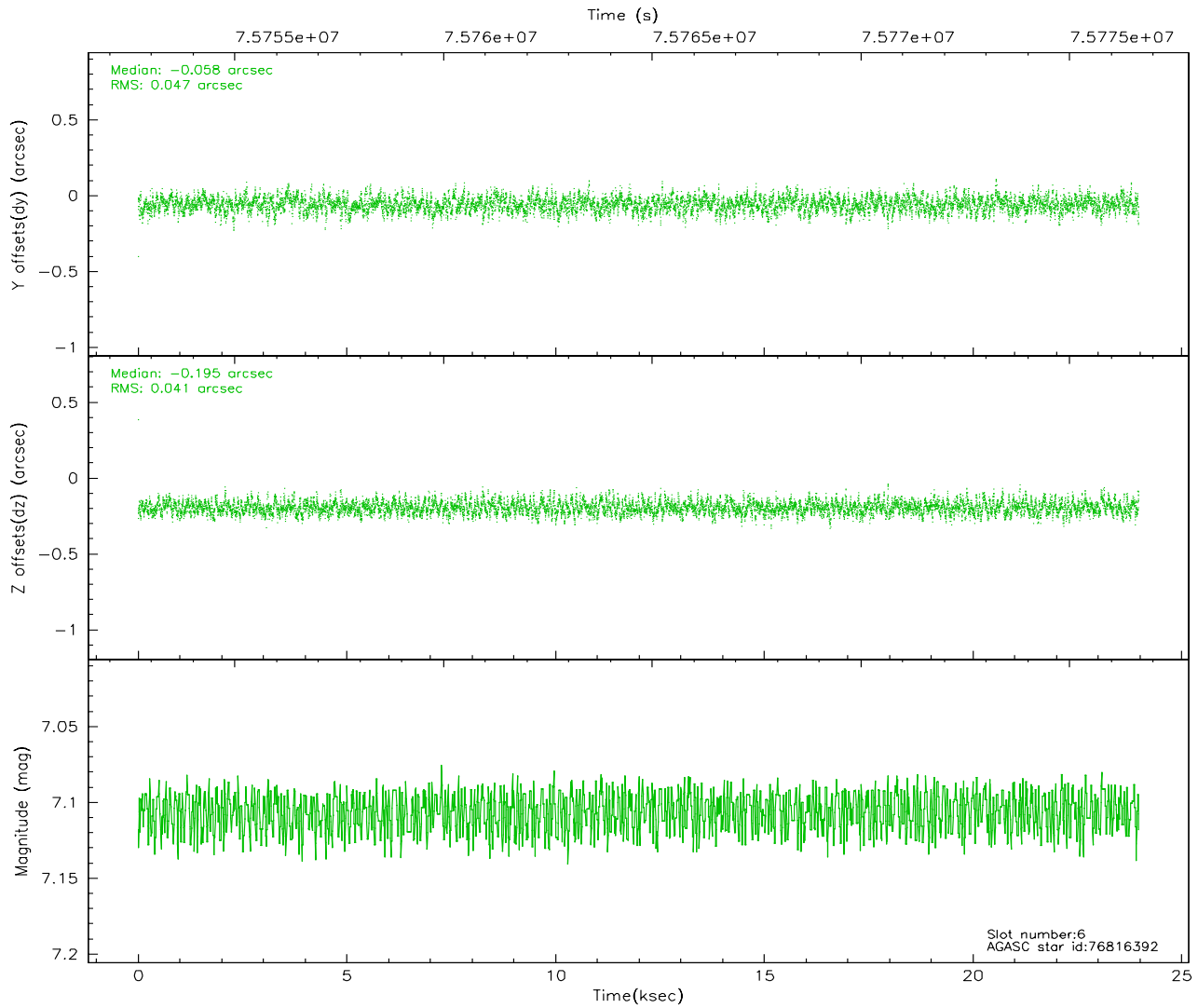
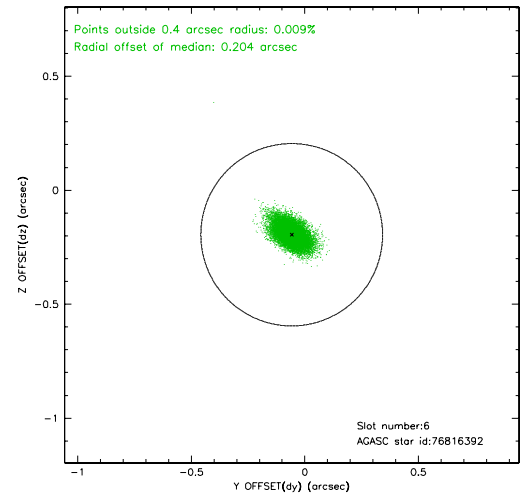
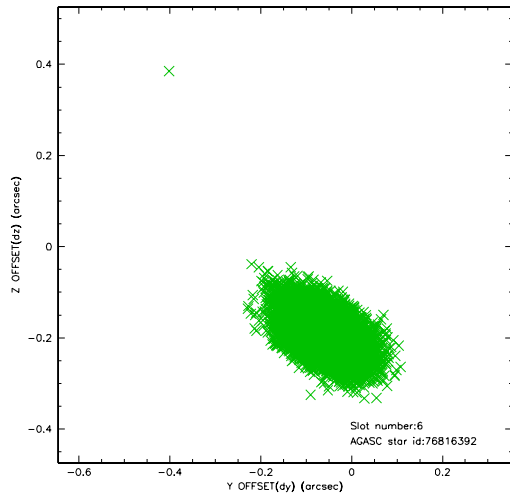
2.4.2 Slot 4



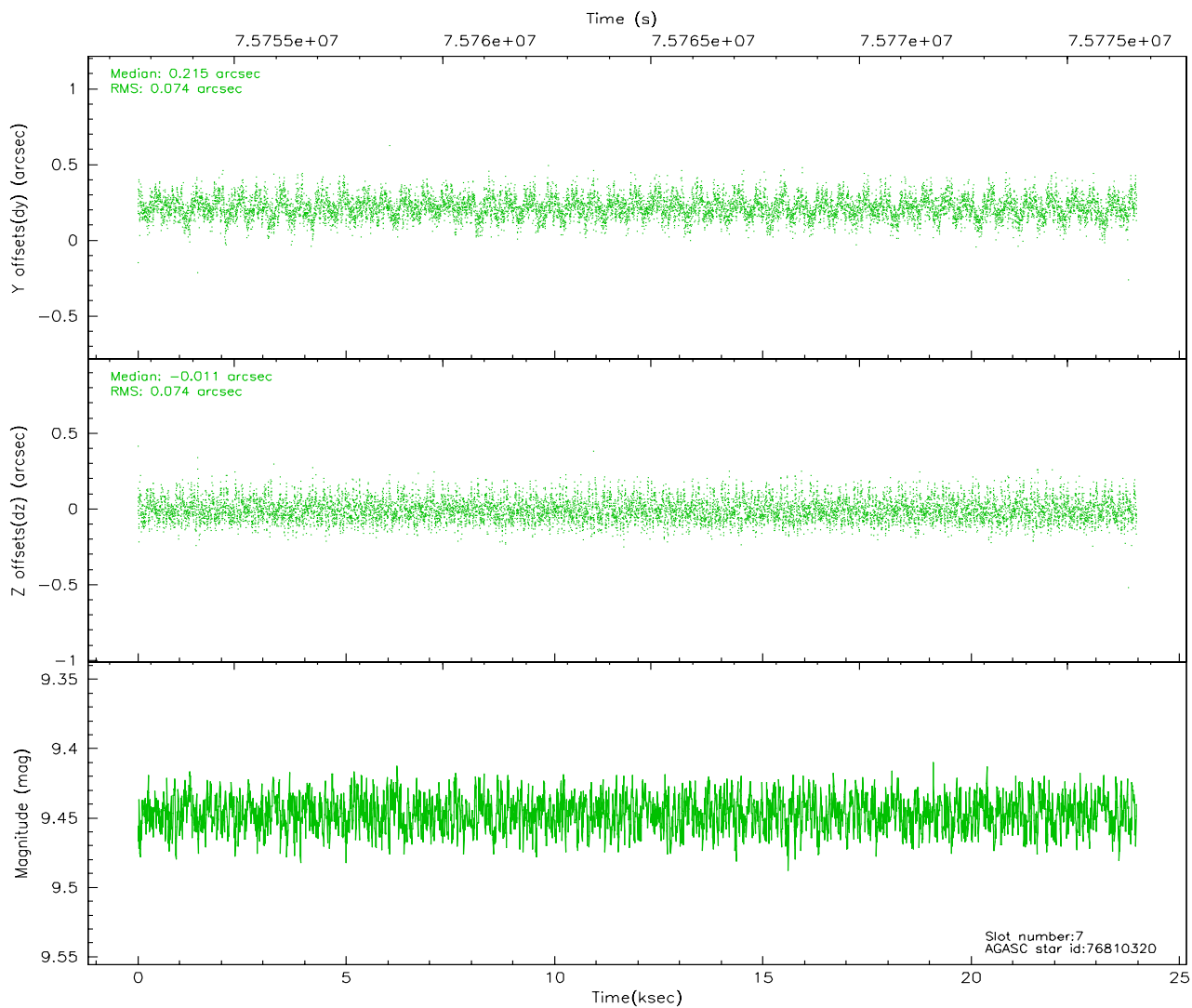
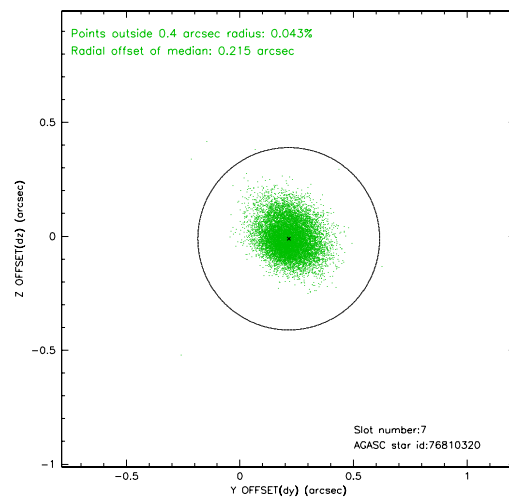
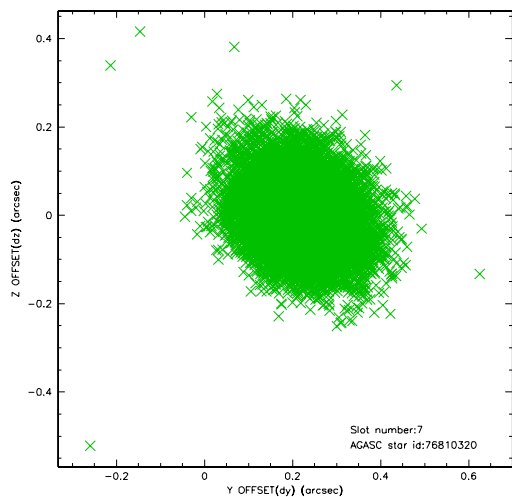
2.4.3 Slot 5



2.4.4 Slot 6

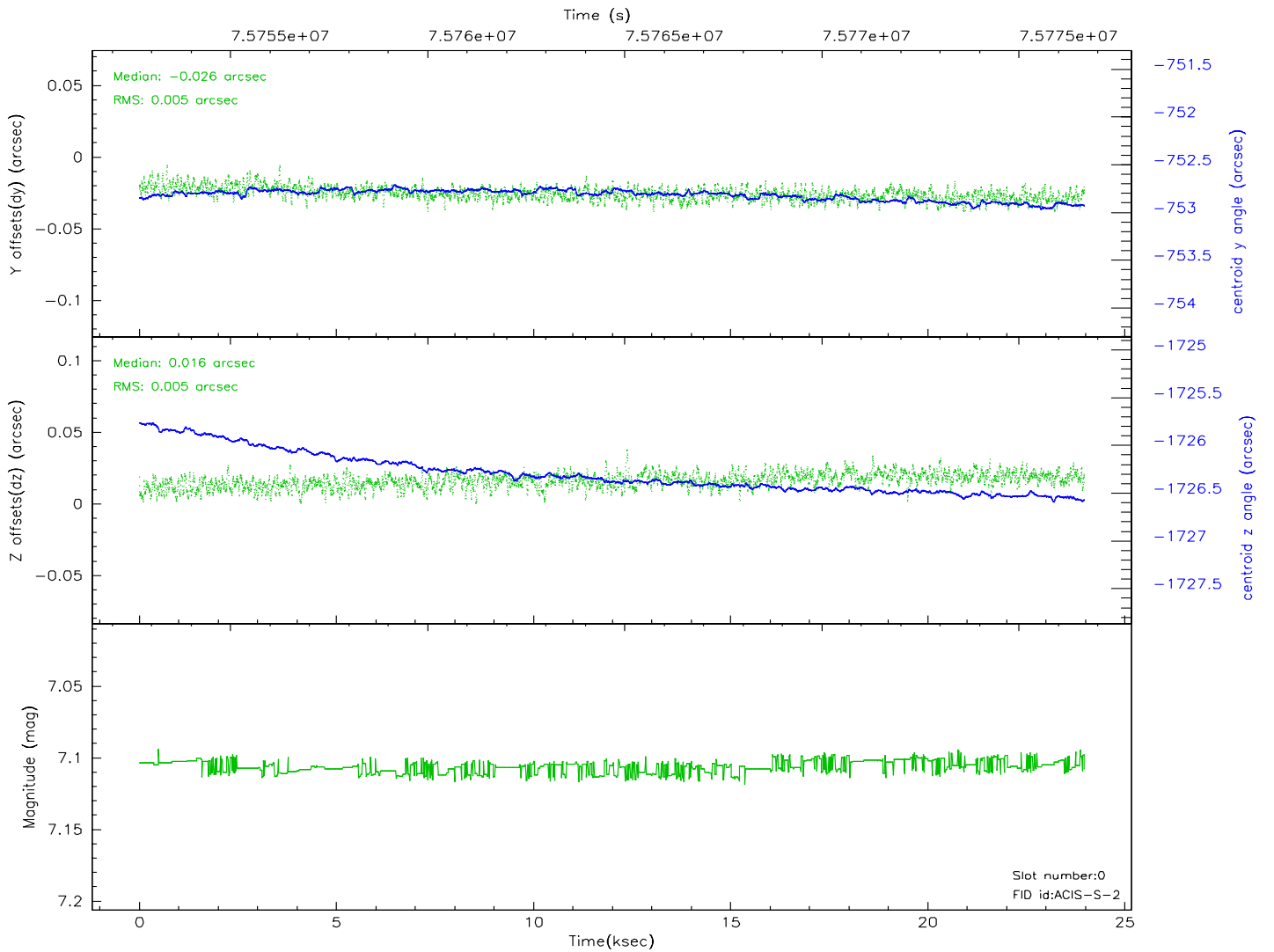
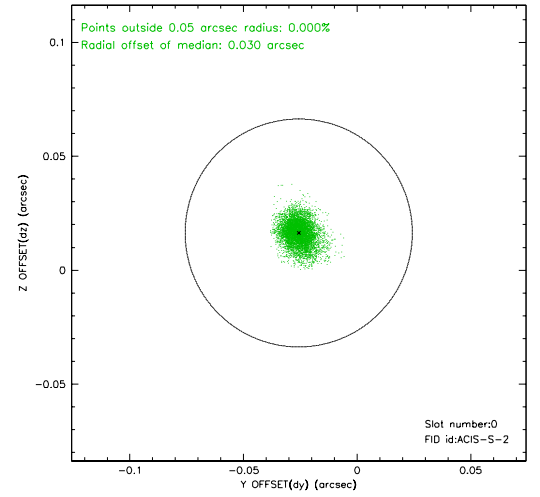
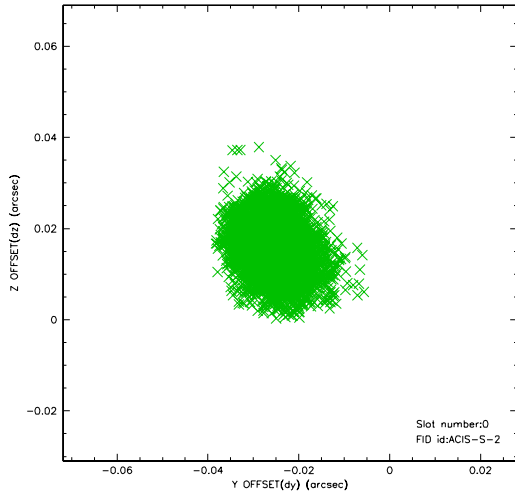


2.4.5 Slot 7

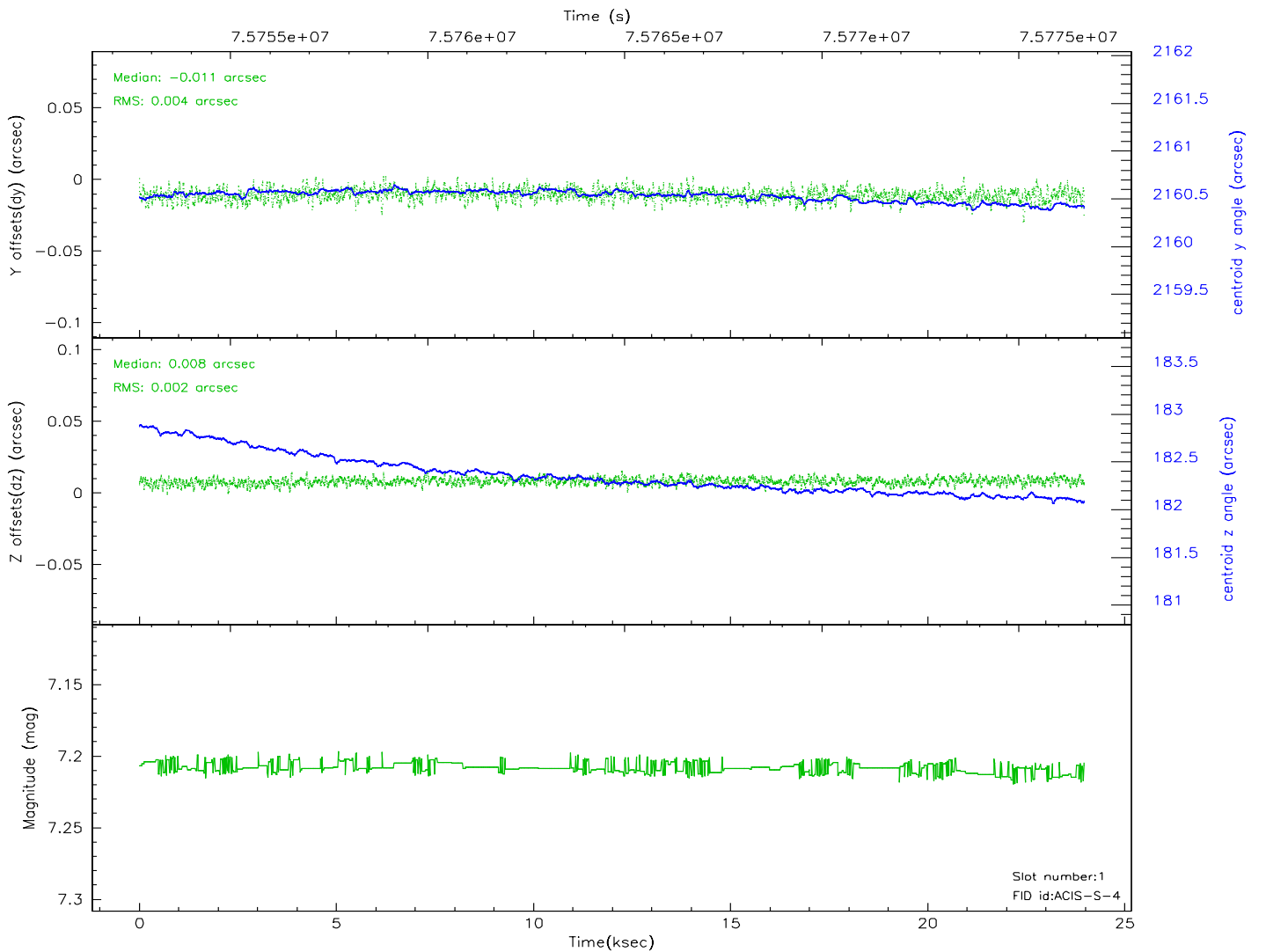
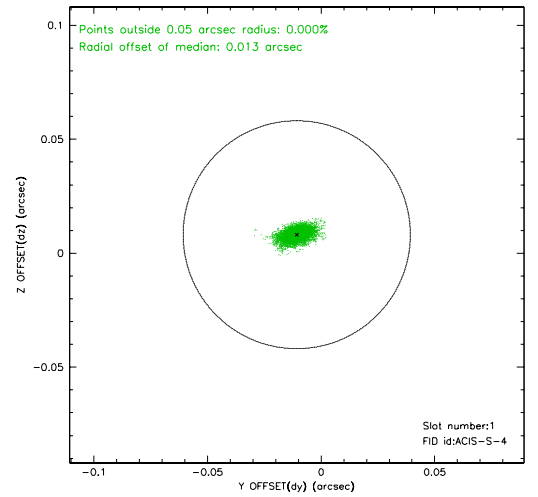
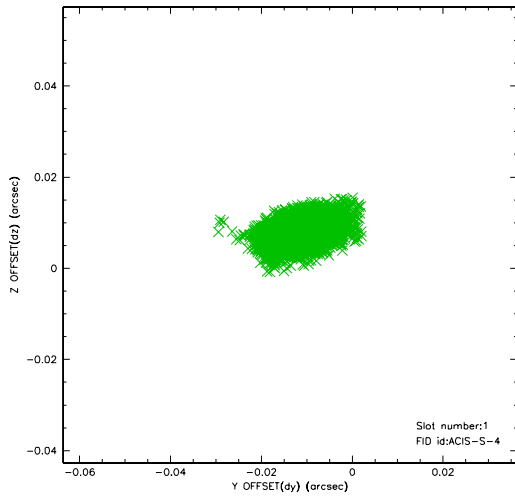


2.5 FID Slots

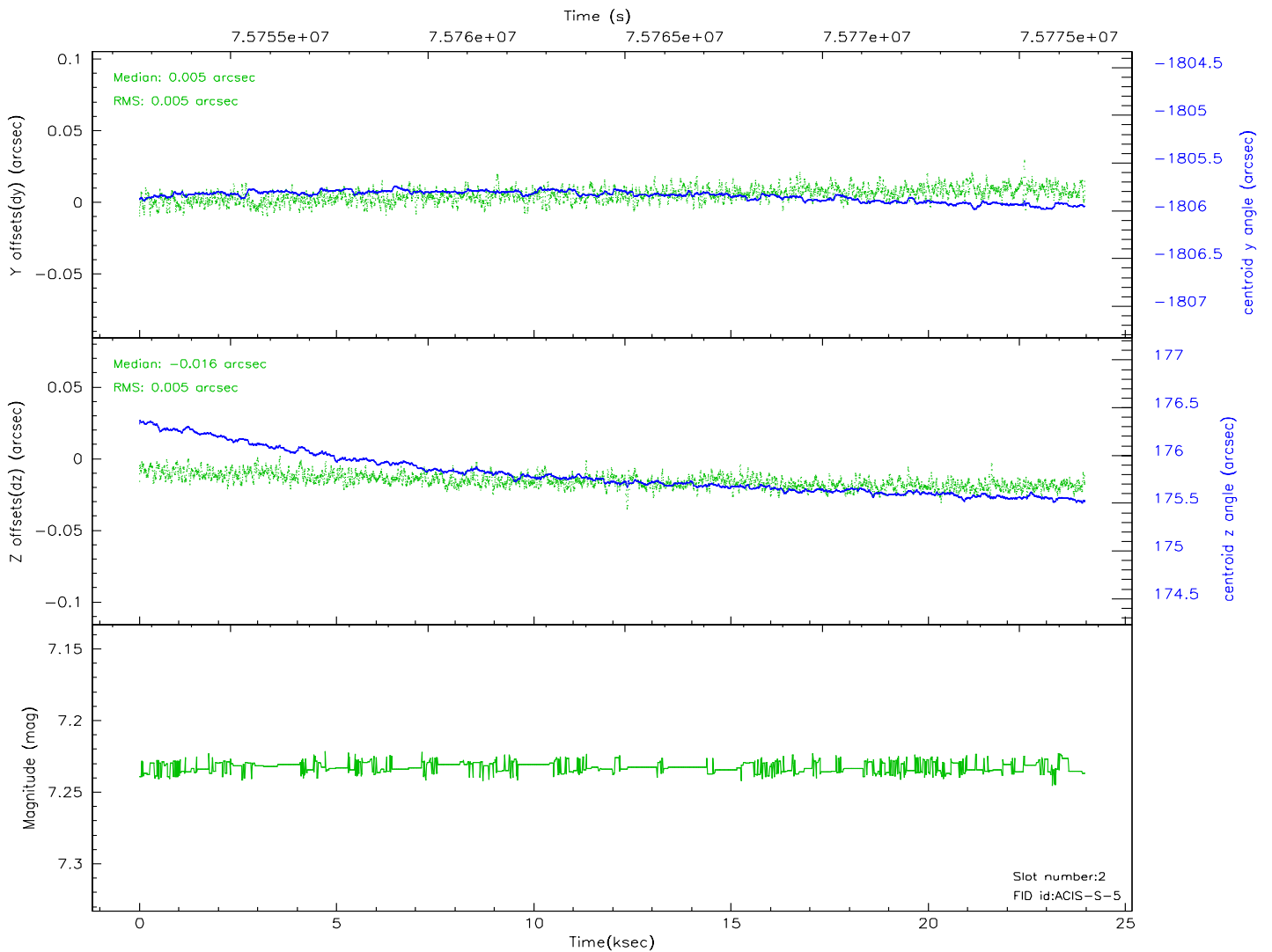
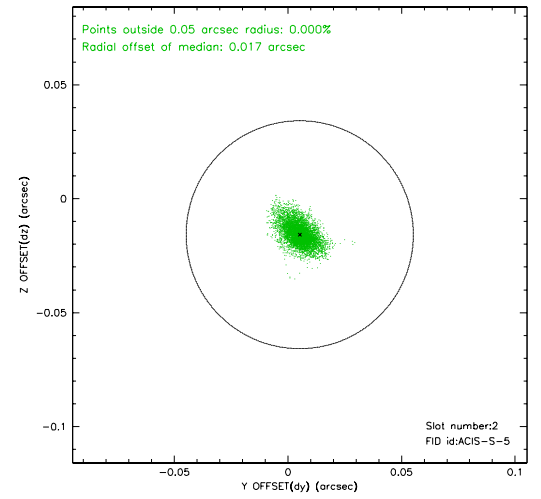
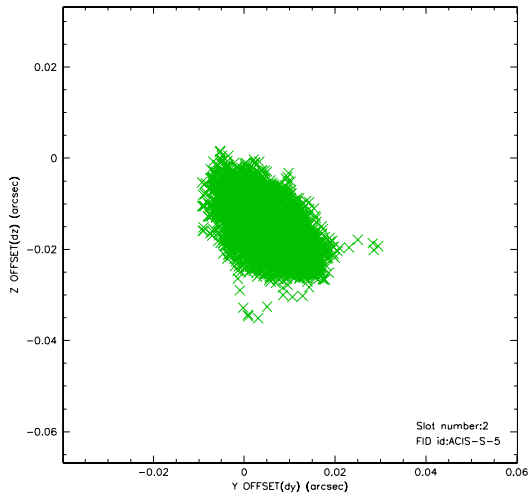
2.5.1 Slot 0



2.5.2 Slot 1



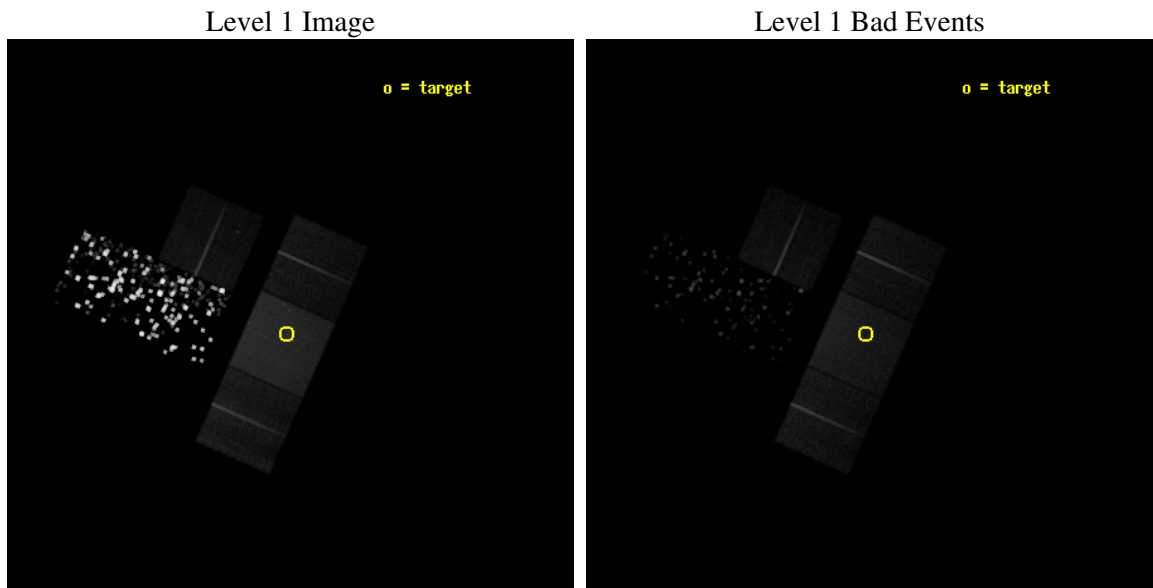
2.5.3 Slot 2



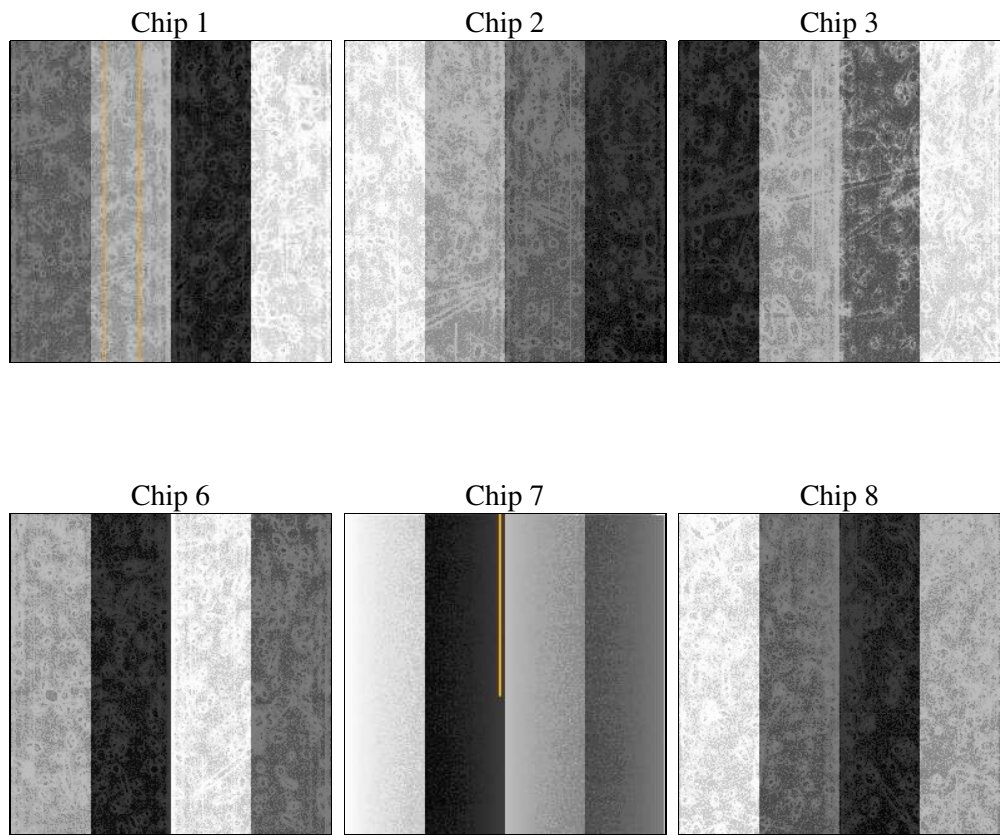
3 OBI

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	1
ascdsver	7.6.11.2
caldsver	3.4.1
date	2007-11-19T22:02:46
revision	4

sched_exp_time	51464.000000
ontime	51619.200048074
ontime1	10834.611056268
ontime2	22975.469706461
ontime3	13304.406579942
ontime6	26738.283342808
ontime7	51619.200048074
ontime8	27399.442460626
l1events	9345045

3.1.4 Events

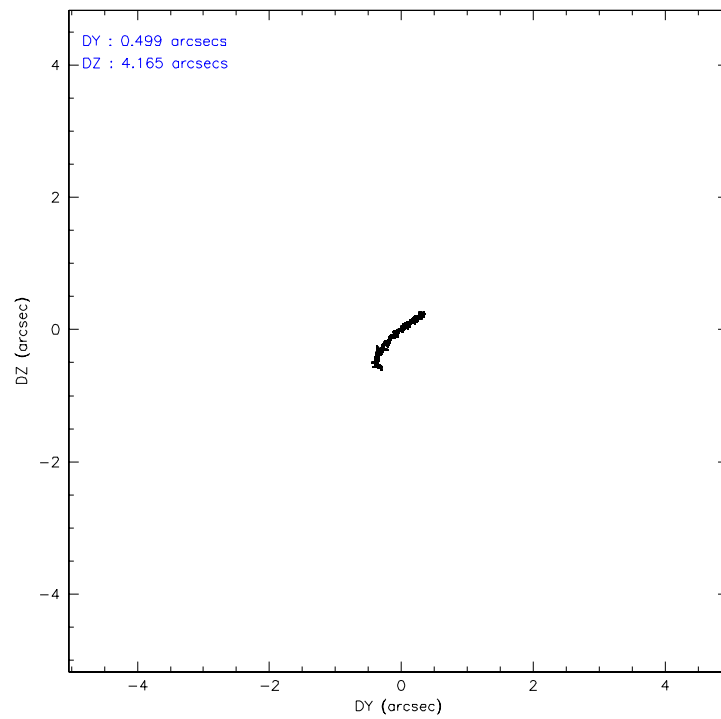
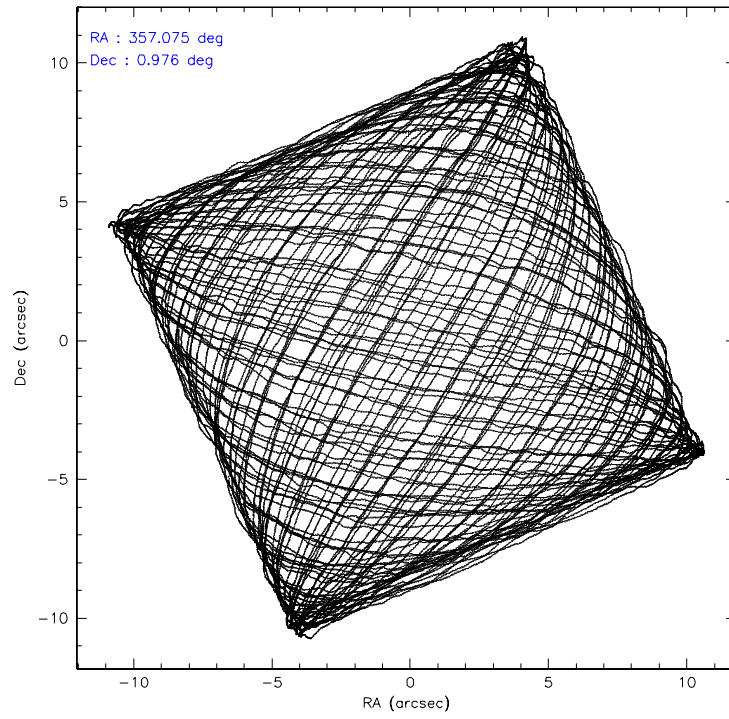
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	4201736	145739	4197901	175313	402963	221393
rejected events	32374	129811	31585	155424	227310	177295
rejected %	0%	89%	0%	88%	56%	80%

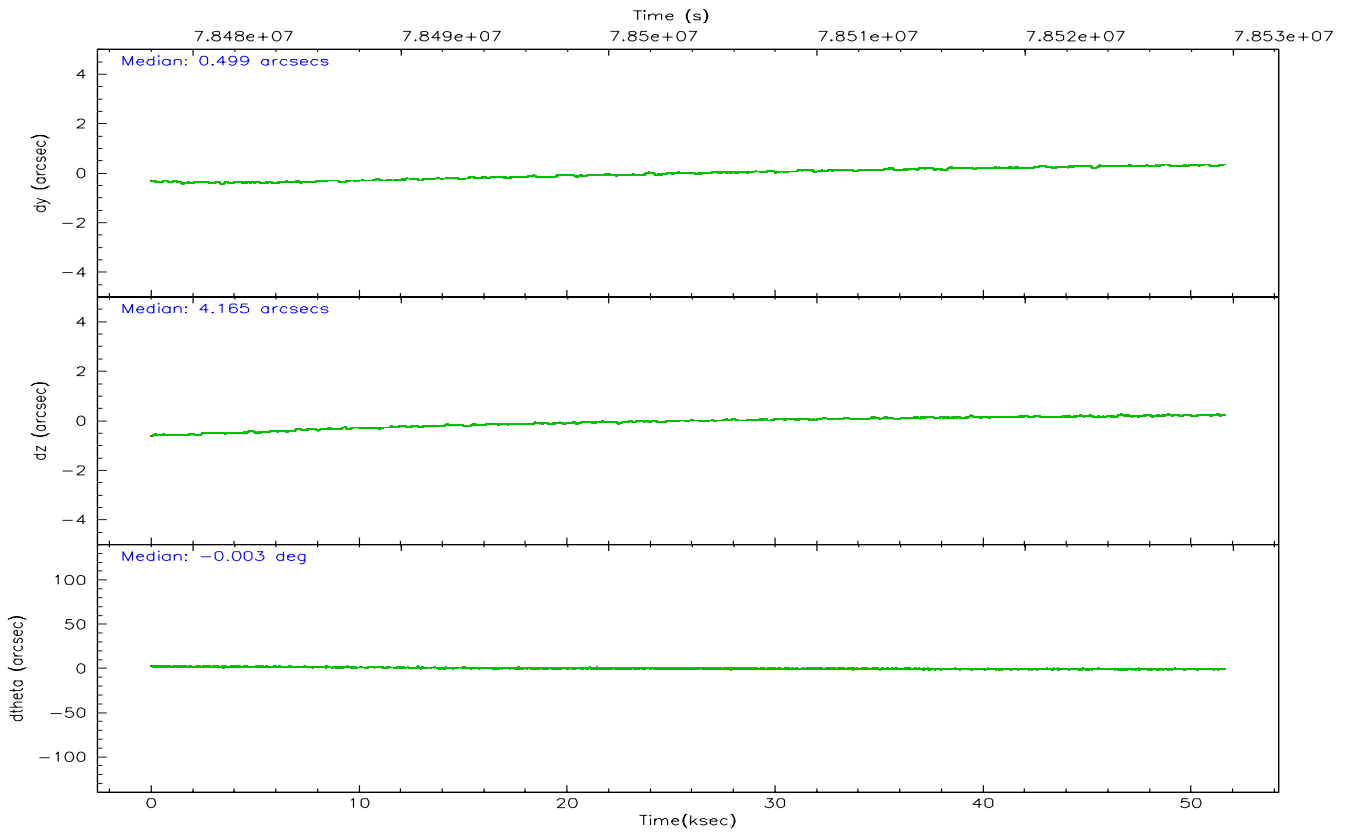
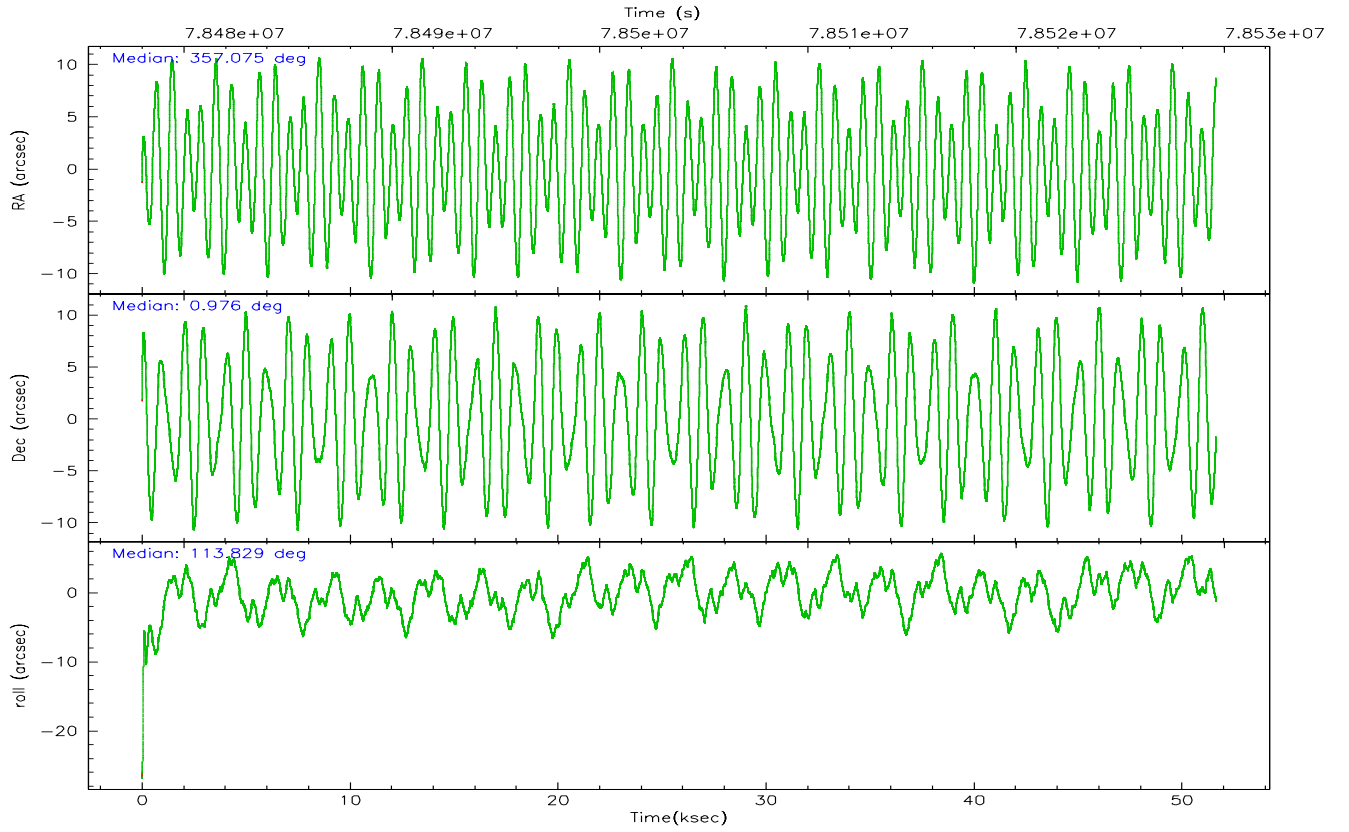
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	4163072	6819	4161251	8502	18079	14162
	99%	4%	99%	4%	4%	6%
grade 1 events	6879	75	6765	72	368	124
	0%	0%	0%	0%	0%	0%
grade 2 events	2417	3266	2207	3841	34615	9231
	0%	2%	0%	2%	8%	4%
grade 3 events	1899	1559	1809	1943	16427	5004
	0%	1%	0%	1%	4%	2%
grade 4 events	1381	1594	1281	1979	16281	4616
	0%	1%	0%	1%	4%	2%
grade 5 events	4070	4445	3873	6581	38392	8603
	0%	3%	0%	3%	9%	3%
grade 6	1854	2691	1650	3627	90260	11085

3.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-123678	ACIS-123678	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
Pointing RA	357.097090	357.074889866568	Subarray requested	NONE	NONE
Pointing Dec	0.959708	0.9757916018171393	Alternating exposures requested	N	N
Pointing Roll	113.673651	113.8306470280287	Primary exposure time	3.200000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	78478163.184000	78477103.290462			
Observation start date	2000-06-27T07:28:19	2000-06-27T07:11:43			
Observation end time	78529627.184000	78530393.55492701			
Observation end date	2000-06-27T21:46:03	2000-06-27T21:59:53			
Read mode	TIMED	TIMED			

3.3 Aspect



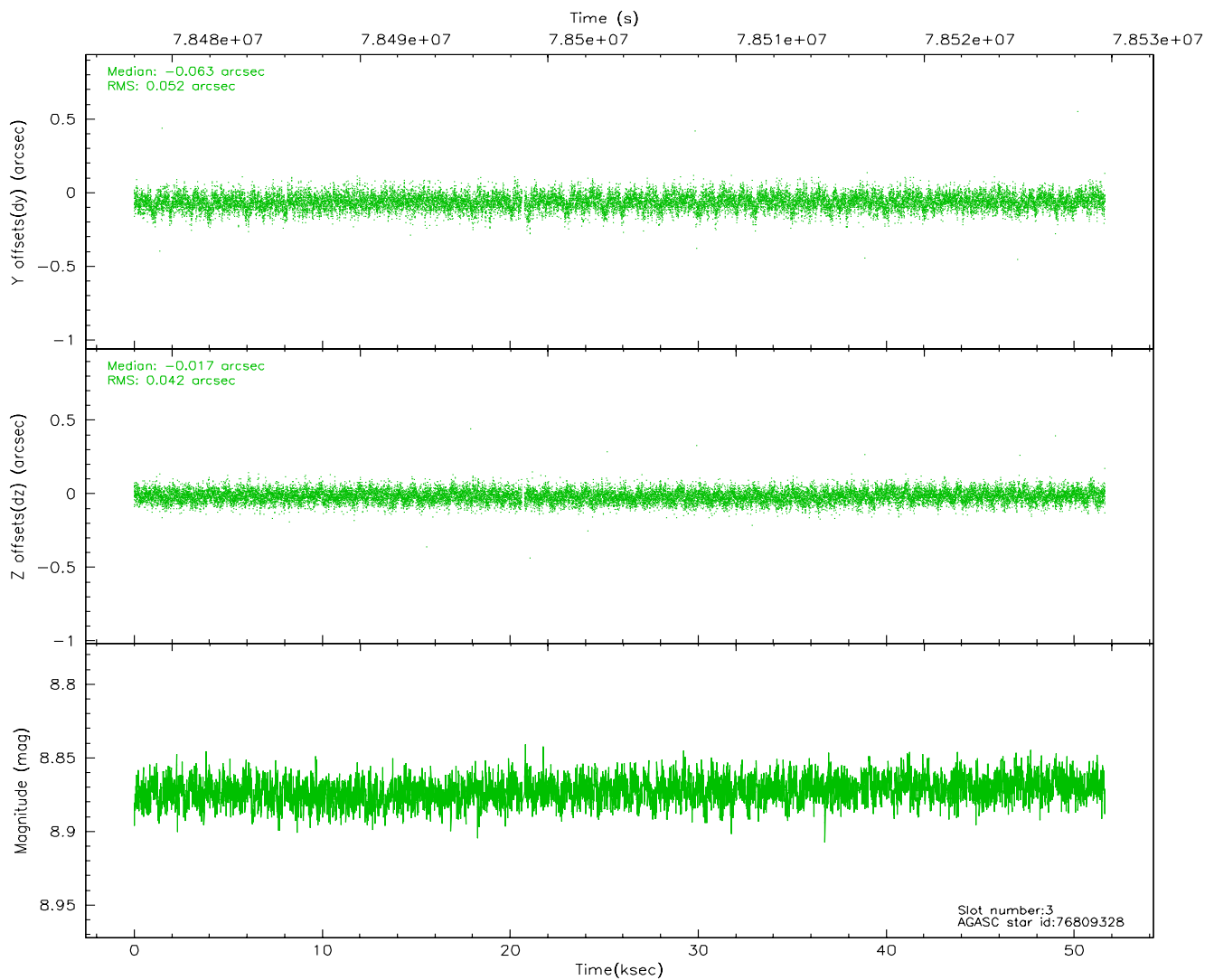
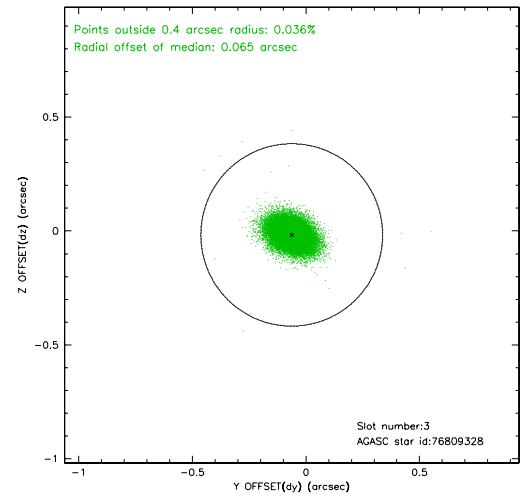
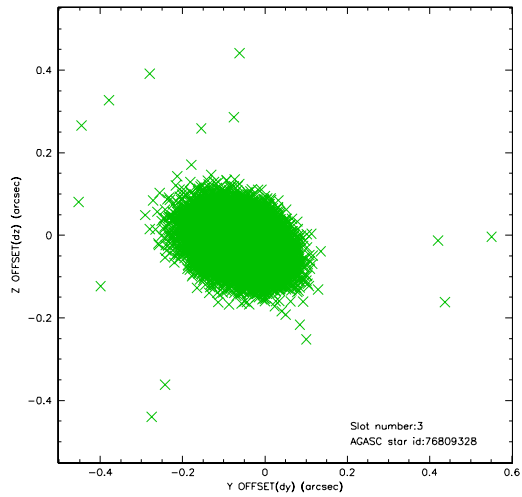


Slot Statistics

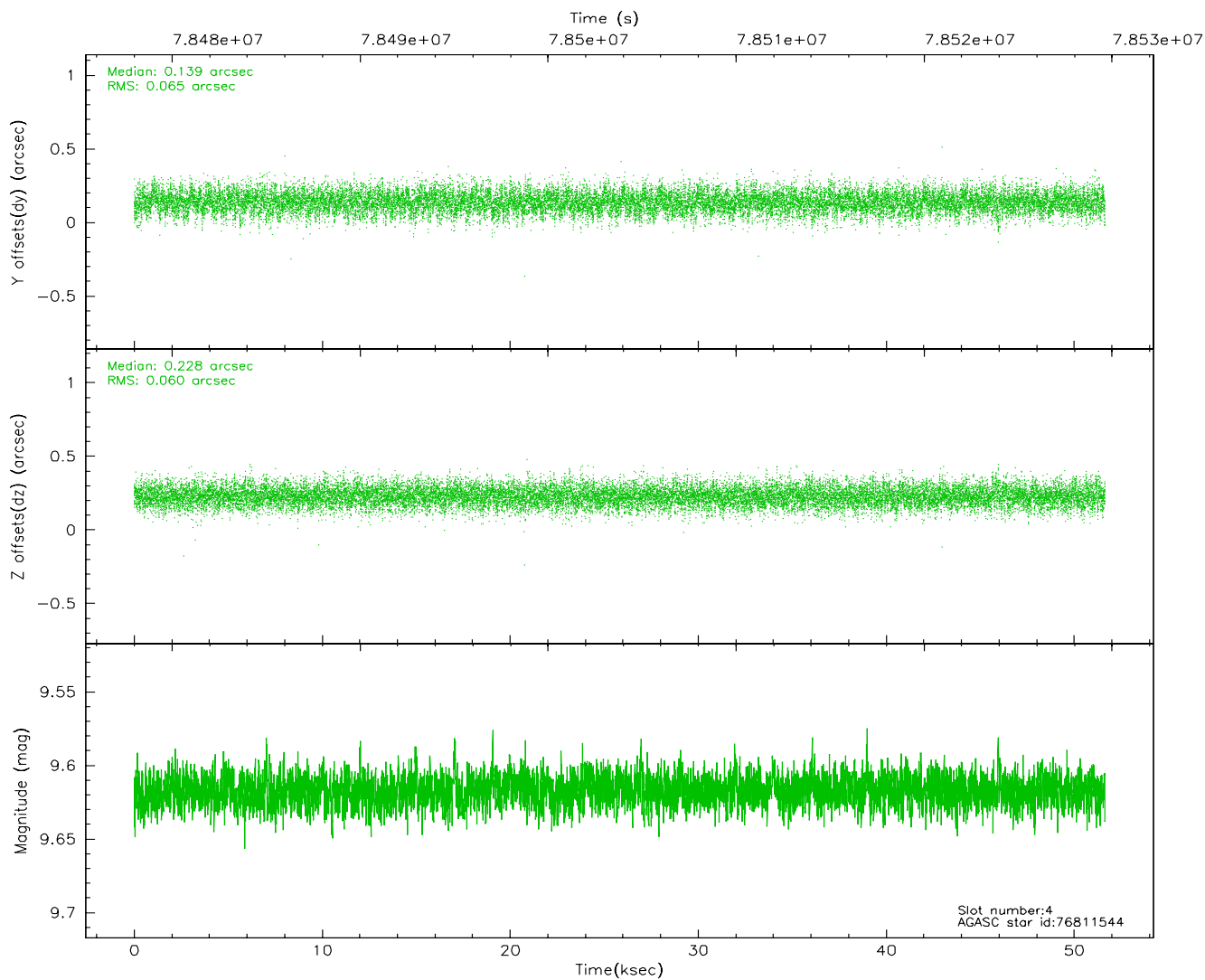
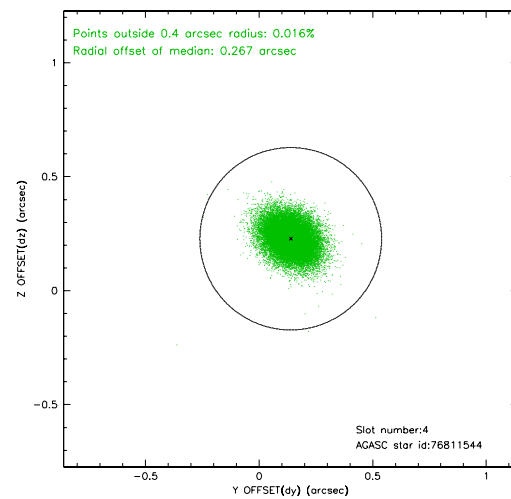
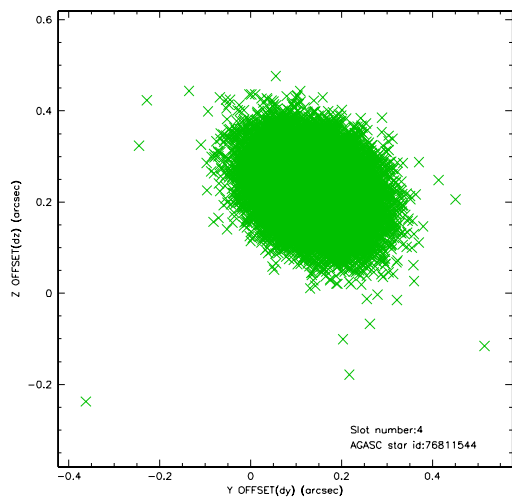
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	5849	-0.026	0.016	0.007	0.012	0.000000	0.000000	-752.82	-1726.30
1	FID	ACIS-S-4	7.21	5849	-0.011	0.008	0.005	0.009	0.000000	0.000000	2160.40	182.06
2	FID	ACIS-S-5	7.23	5848	0.005	-0.016	0.007	0.013	0.000000	0.000000	-1805.48	175.83
3	GUIDE	76809328	8.87	11697	-0.052	-0.026	0.067	0.115	356.868567	1.173816	1028.32	463.78
4	GUIDE	76811544	9.62	11691	0.122	0.208	0.093	0.155	357.277115	0.824081	-698.23	-411.08
5	GUIDE	76810184	10.47	11688	-0.227	0.019	0.134	0.220	356.734858	1.444116	2111.33	534.87
6	GUIDE	76816392	7.11	11696	-0.058	-0.195	0.065	0.110	356.644316	0.530045	-802.10	2098.26
7	GUIDE	76810320	9.45	11692	0.215	-0.011	0.110	0.182	356.923948	0.196601	-2296.85	1629.47

3.4 Star Slots

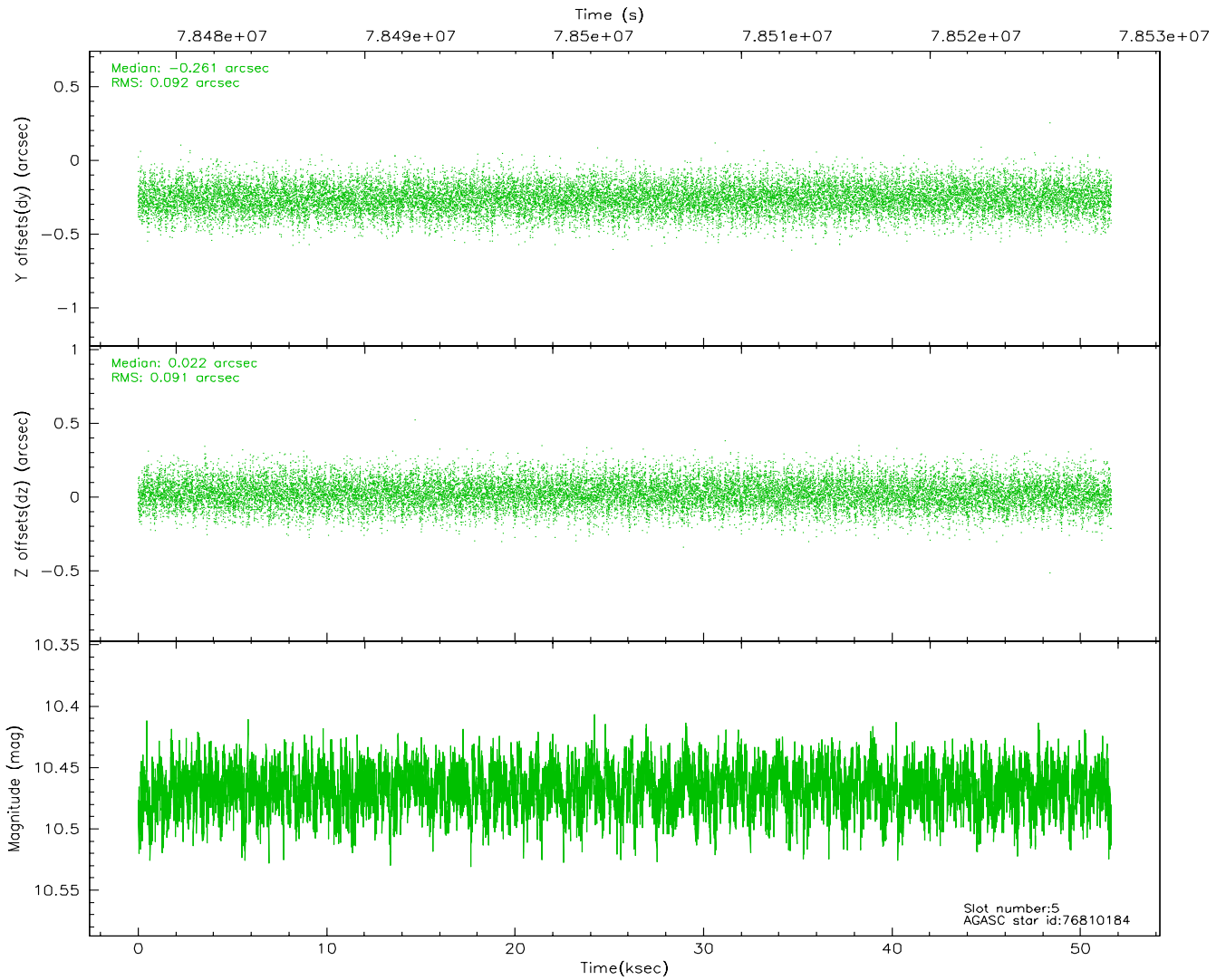
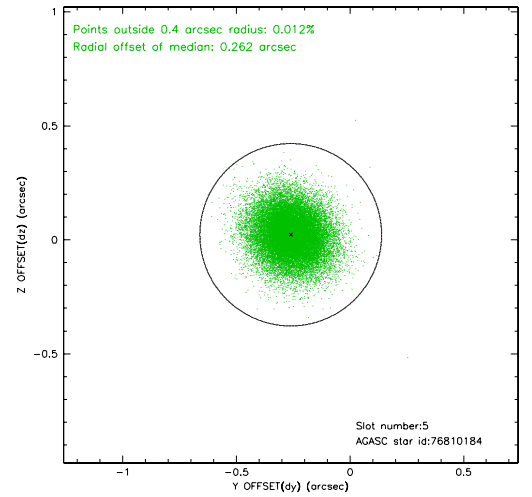
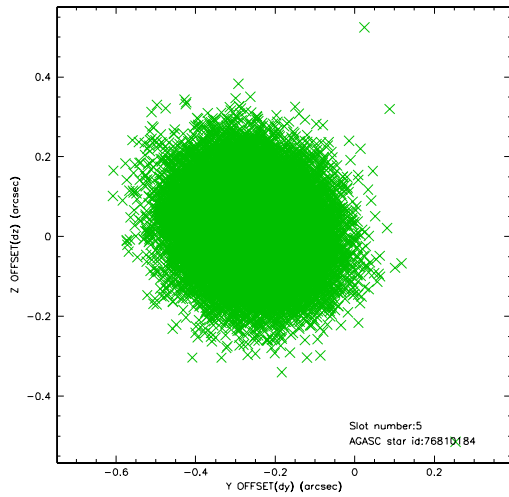
3.4.1 Slot 3



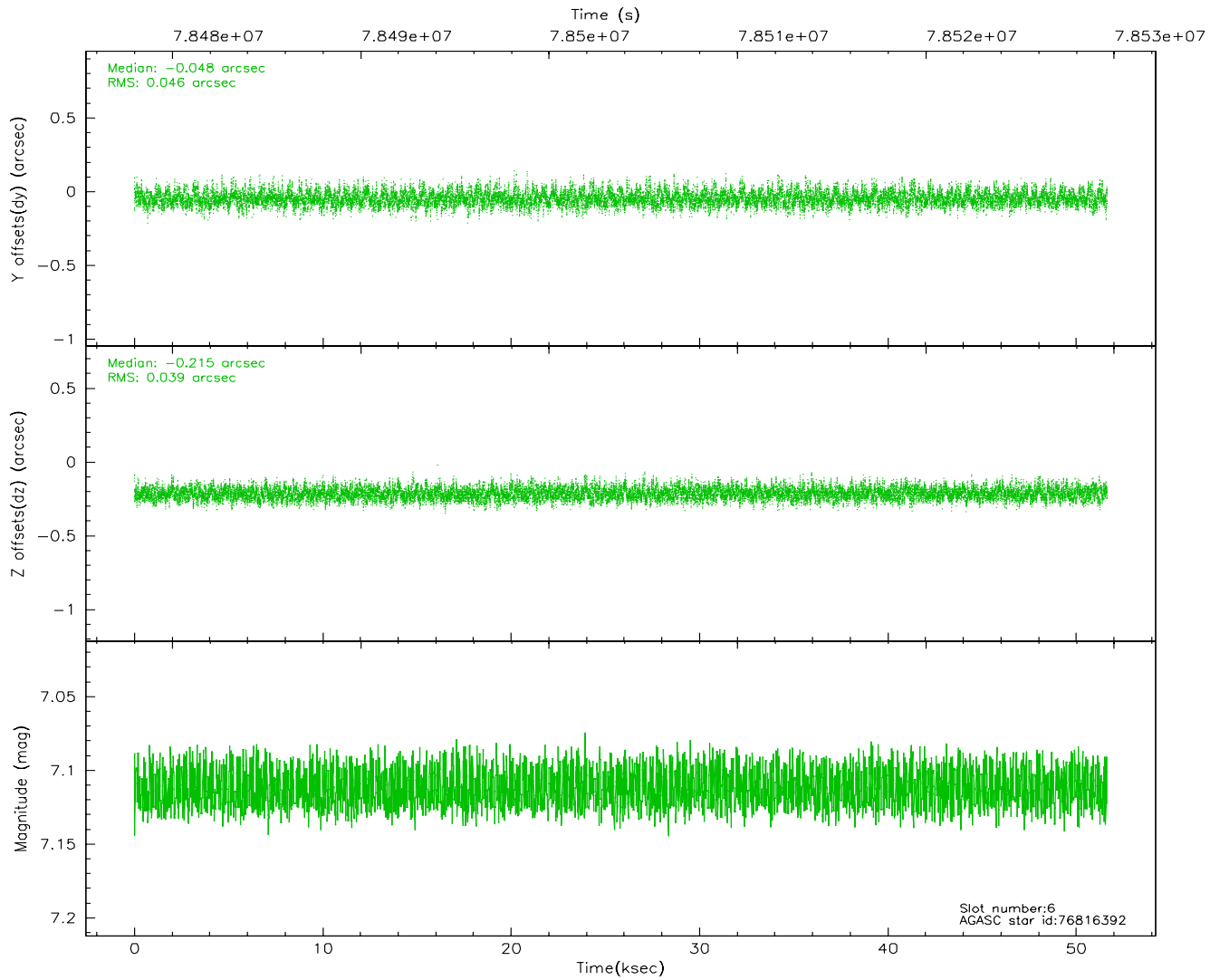
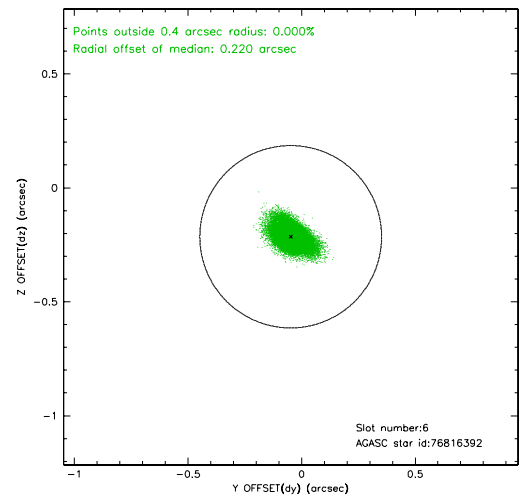
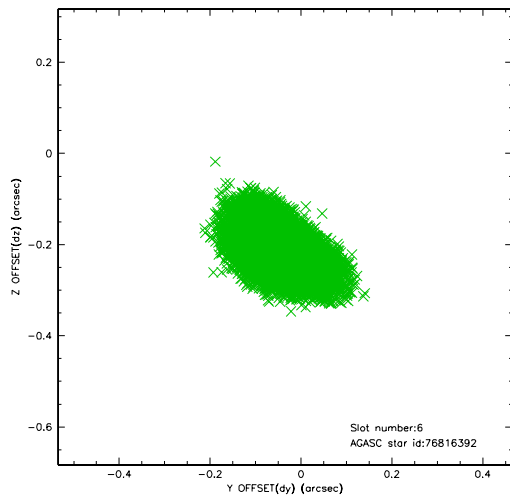
3.4.2 Slot 4



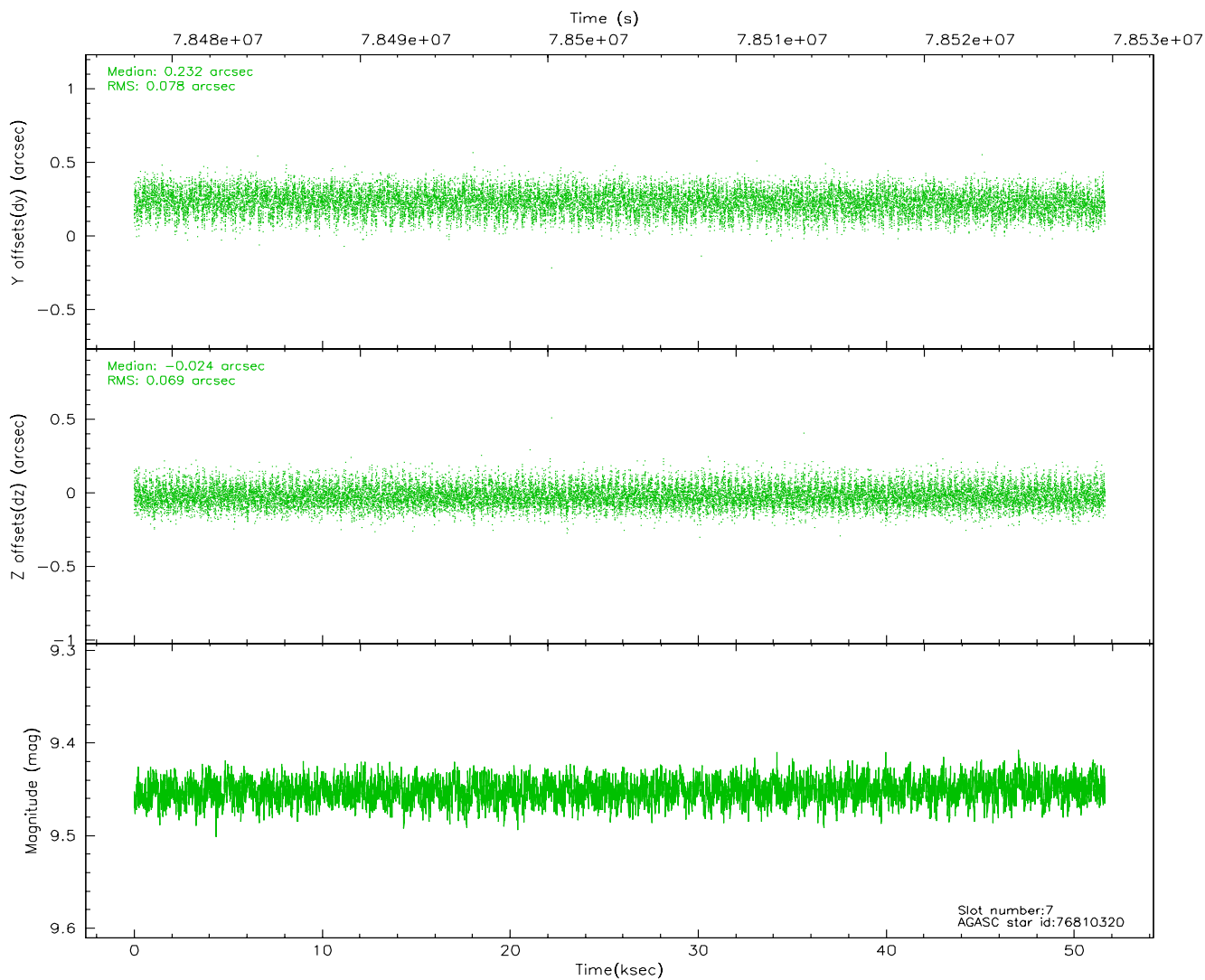
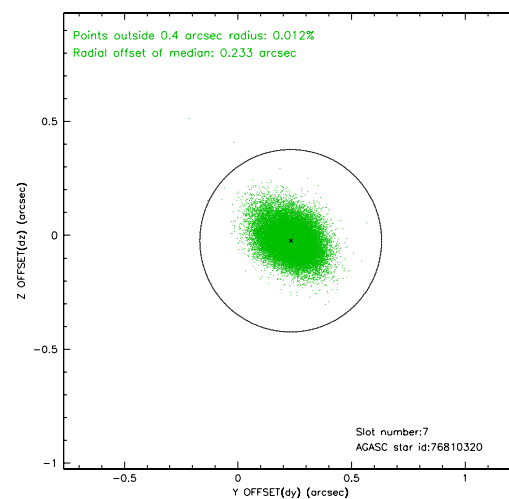
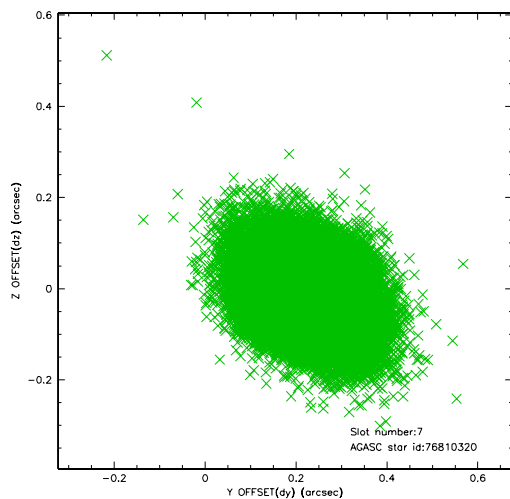
3.4.3 Slot 5



3.4.4 Slot 6

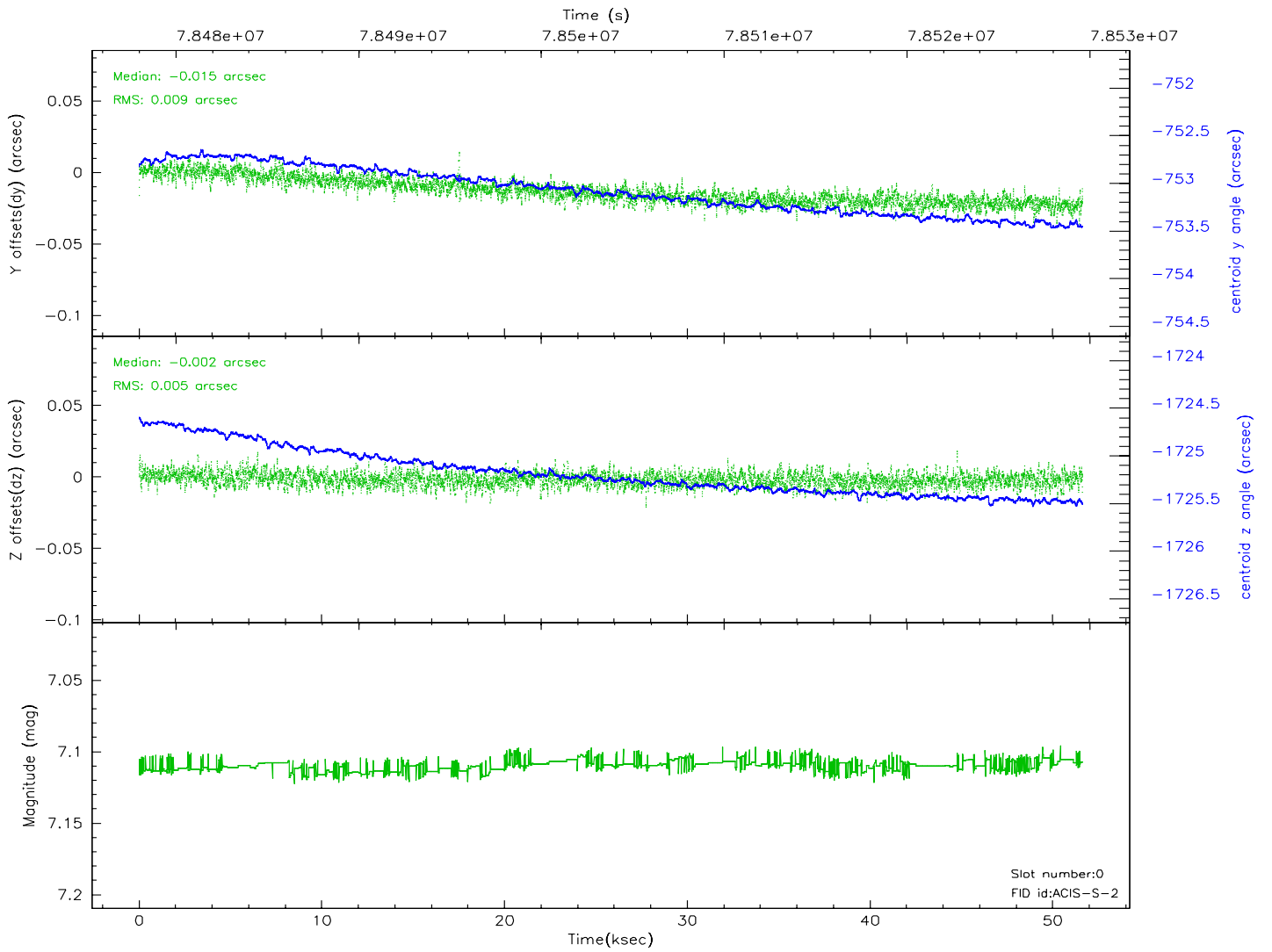
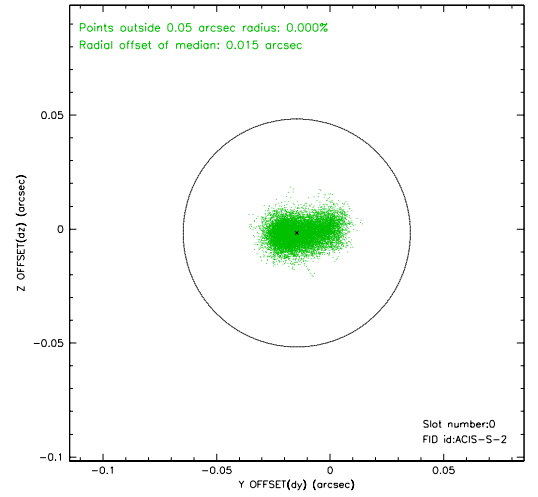
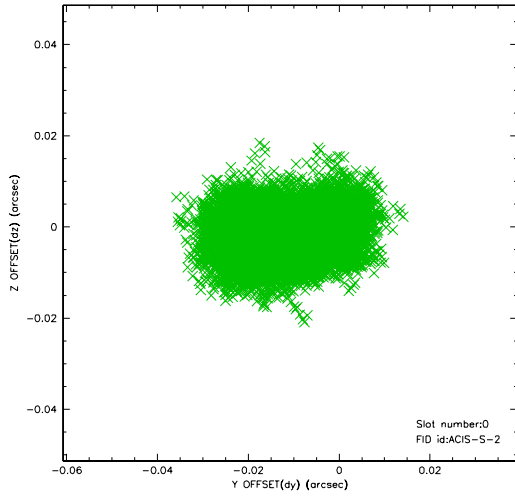


3.4.5 Slot 7

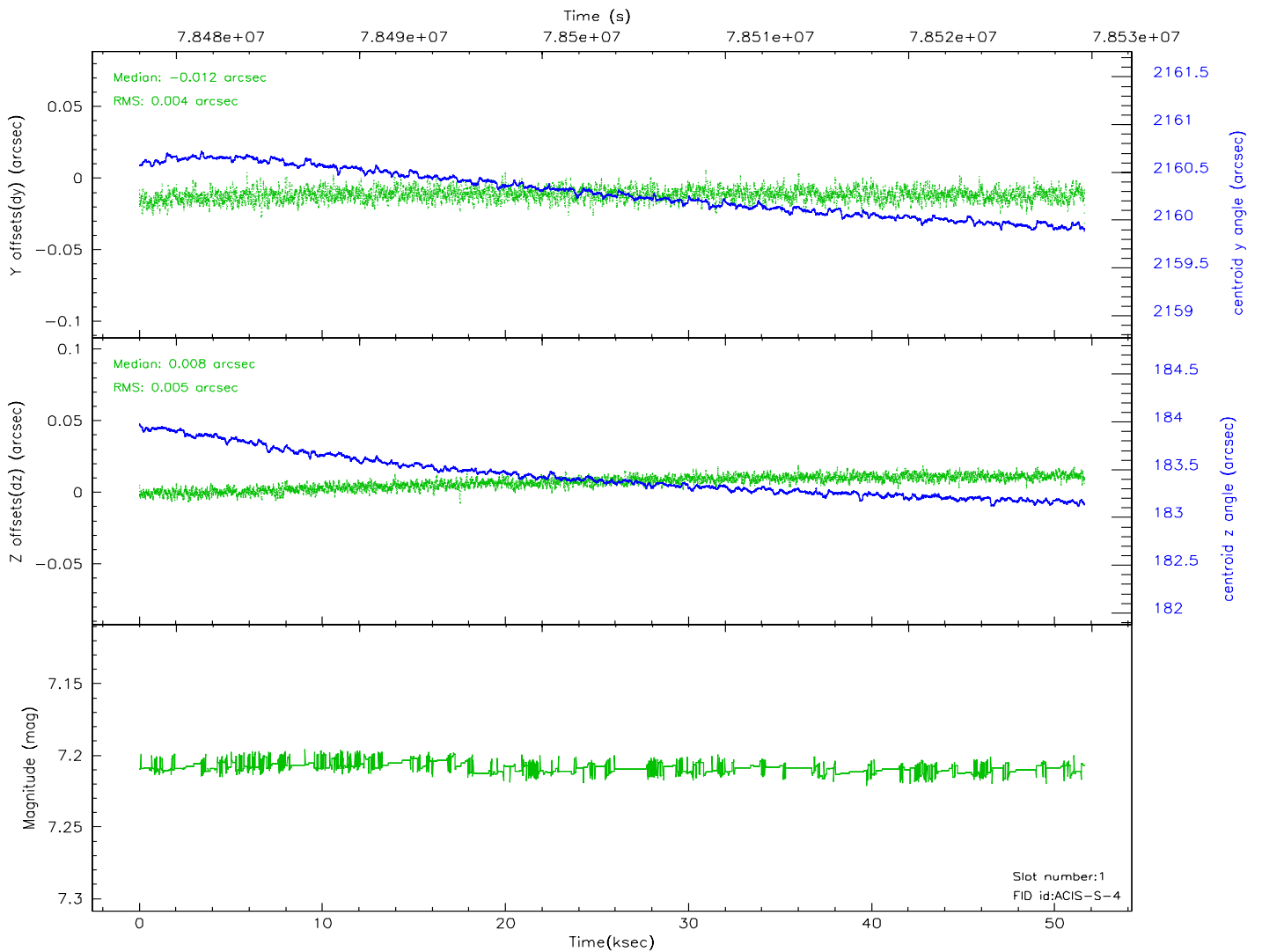
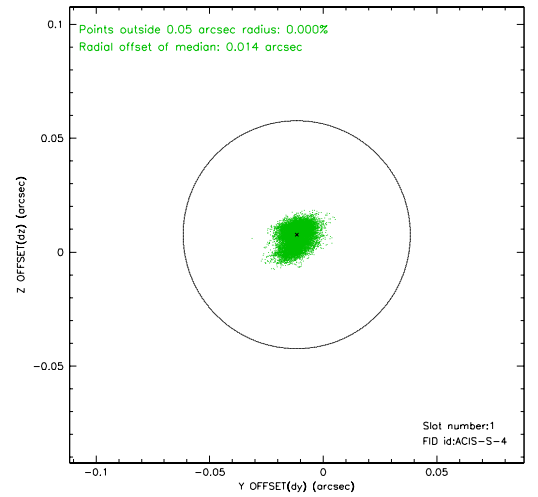
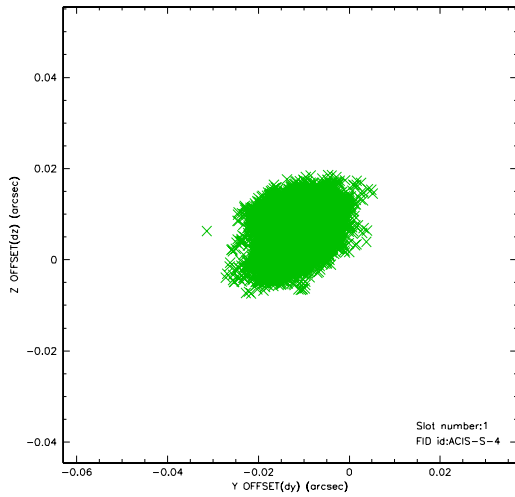


3.5 FID Slots

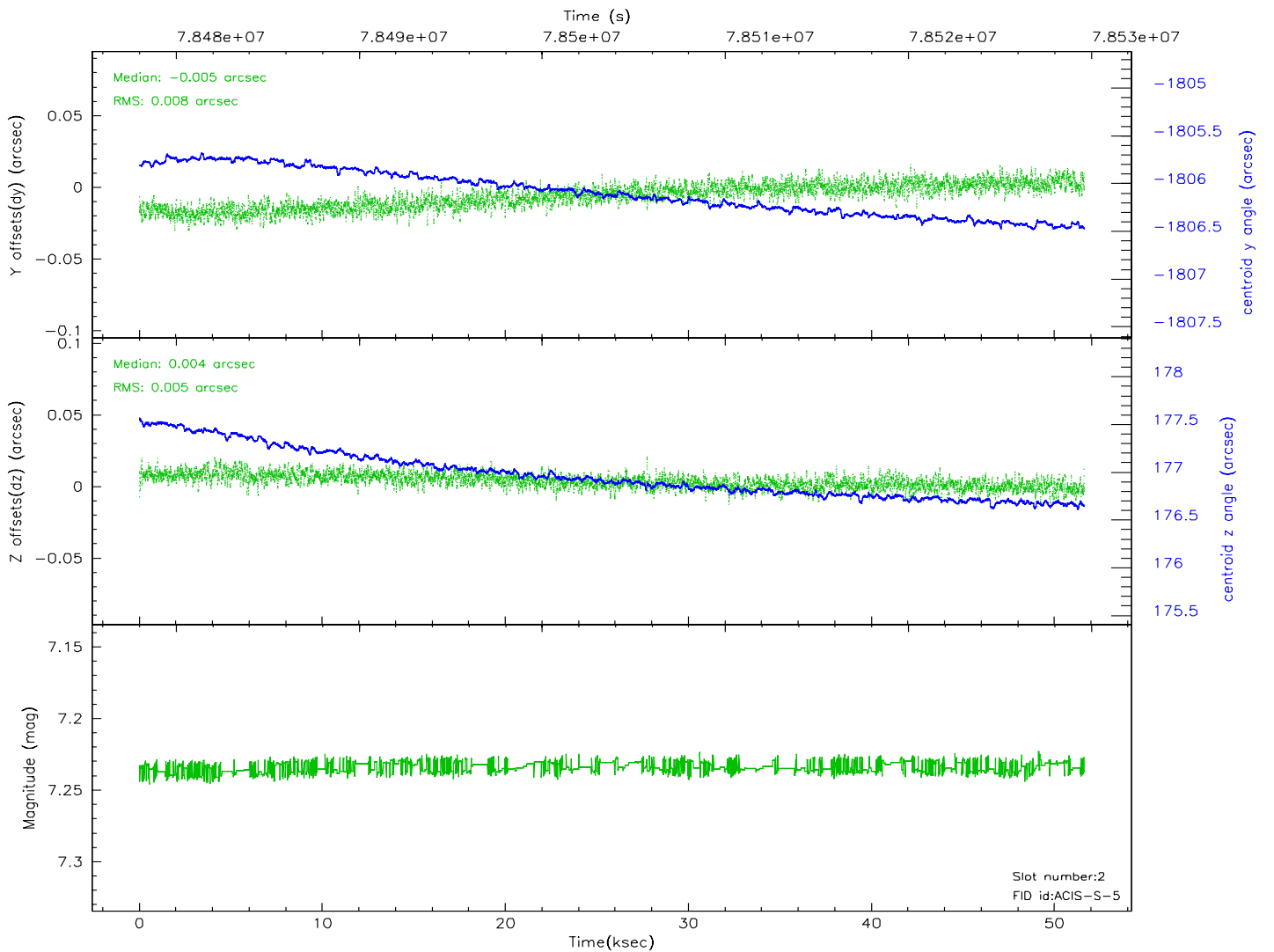
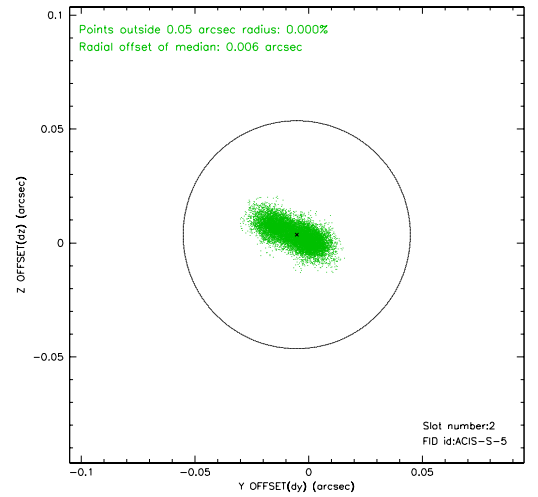
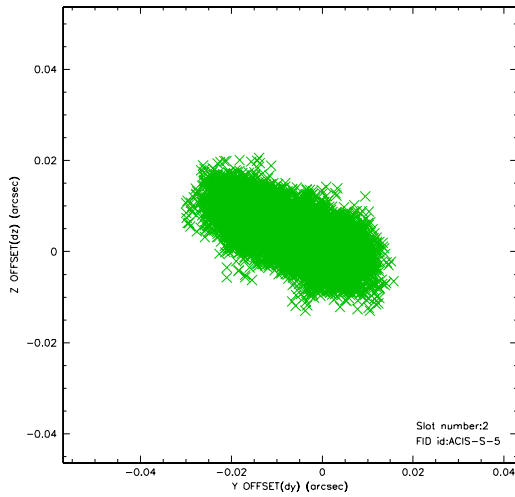
3.5.1 Slot 0



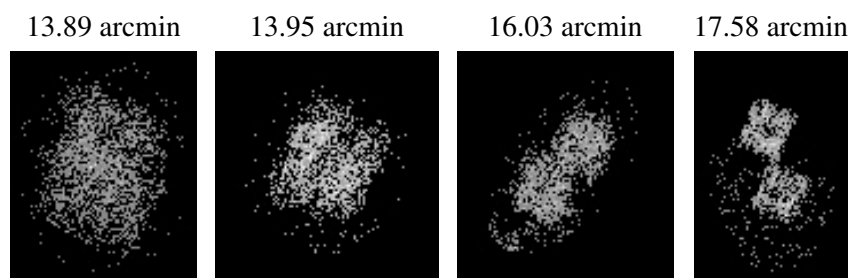
3.5.2 Slot 1



3.5.3 Slot 2



4 Point Sources



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.12.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	75.152

A.2 Comments

During obi=1, an ACIS Threshold-Plane Anomaly occurred for CCD chips 1 and 3. The flight s/w is intended to delay 'start events' until after 'end bias dump'. For some unknown reason, it occasionally fails to do so, and if the overlap lasts for more than a minute or so, one or more FEPs experience a firmware latch-up that renders them useless until they are power cycled. The anomaly occurred for chips 1 and 3 only. No event data were recorded for these chips; the bright pixels on these chips are due to previously known hot pixels with the applied dither correction.

CCD chips 6 and 8 are also appear to be affected. They have only about 27 ksec ontime compared chip 7, which has 51 ksec ontime. Obi=0 does not have this problem.