V&V Reference Report
L2 ASCDS Version : 8.1.2

Observation 877 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : Dec 5 2009

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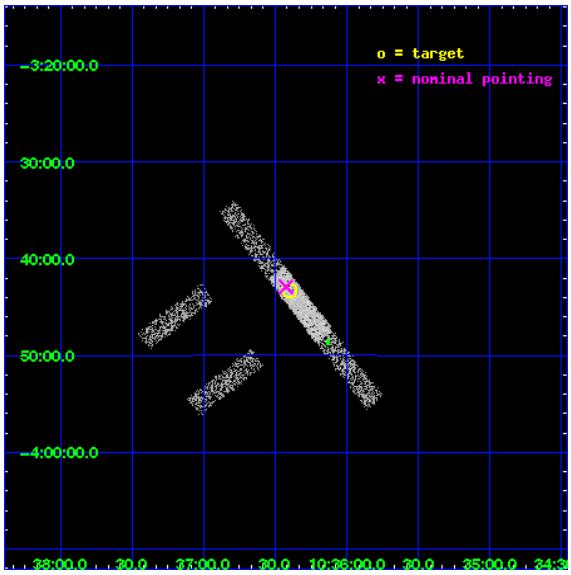
1 Front

seq_num	700182	Sequence number
obs_id	877	Observation id
title	SURVEY OF RADIO QUIET $Z>4$ QUASARS	Proposal title
observer	Dr. Jill Bechtold	Principal investigator
object	BRI 1033-0327	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	159.09875	Observer's specified target RA
dec_targ	-3.722222	Observer's specified target Dec
ra_nom	159.10641608832	Nominal RA
dec_nom	-3.7153361166258	Nominal Dec
roll_nom	52.549655328511	Nominal Roll
revision	3	Processing version of data
ontime	3588.9170083627	Sum of GTIs [s]
livetime	3447.4343045058	Livetime [s]
ontime2	3588.8759683594	Sum of GTIs [s]
ontime3	3588.7938883603	Sum of GTIs [s]
ontime6	3588.8349283636	Sum of GTIs [s]
ontime7	3588.9170083627	Sum of GTIs [s]
ontime8	3588.7528483644	Sum of GTIs [s]
l2events	6627	Number of level 2 events

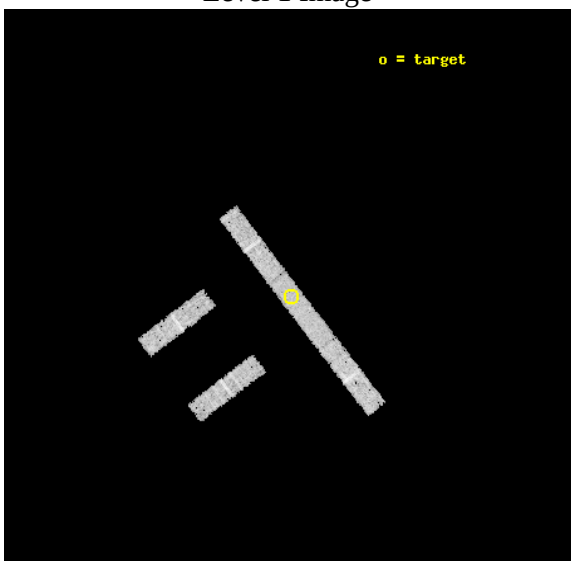


2 OBI

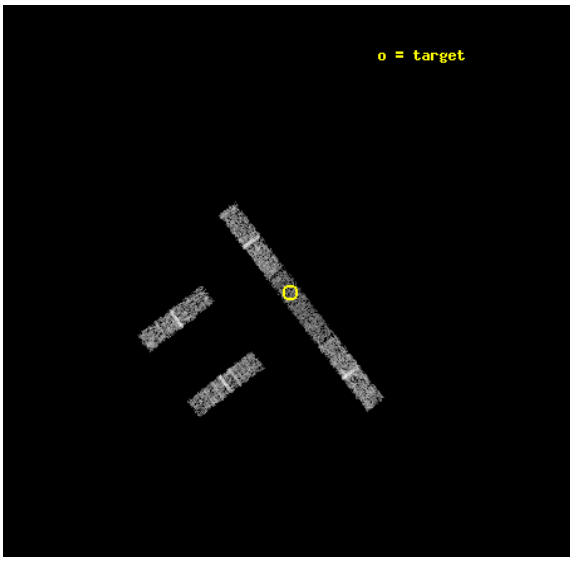
2.1 OBI

2.1.1 Images

Level 1 Image

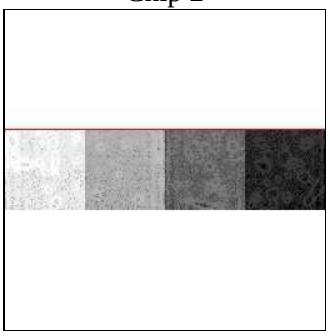


Level 1 Bad Events

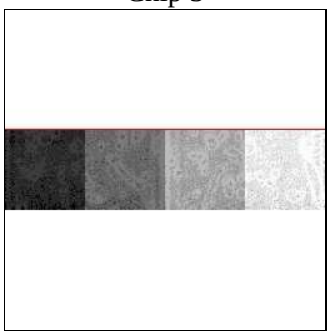


2.1.2 Bias

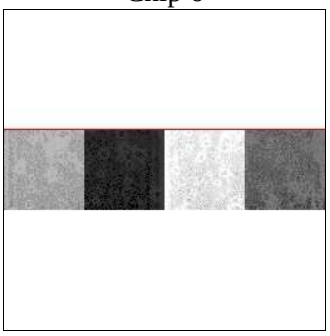
Chip 2



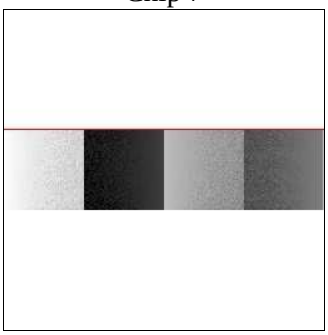
Chip 3



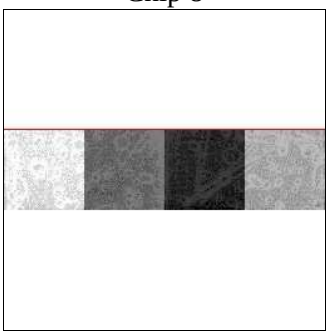
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	8.1.2	ASCDS version number
caldbver	4.1.4	
date	2009-12-05T09:46:56	Date and time of file creation
revision	3	Processing version of data

sched_exp_time	3900.000000	Scheduled observation exposure time
ontime	3588.9170083627	Sum of GTIs [s]
ontime2	3588.8759683594	Sum of GTIs [s]
ontime3	3588.7938883603	Sum of GTIs [s]
ontime6	3588.8349283636	Sum of GTIs [s]
ontime7	3588.9170083627	Sum of GTIs [s]
ontime8	3588.7528483644	Sum of GTIs [s]
l1events	49807	Number of level 1 events

2.1.4 Events

	ccd 2	**ccd 3**	**ccd 6**	**ccd 7**	**ccd 8**
level 1 events	9761	9506	9928	9049	11563
rejected events	8952	8662	9071	5225	9832
rejected %	91%	91%	91%	57%	85%

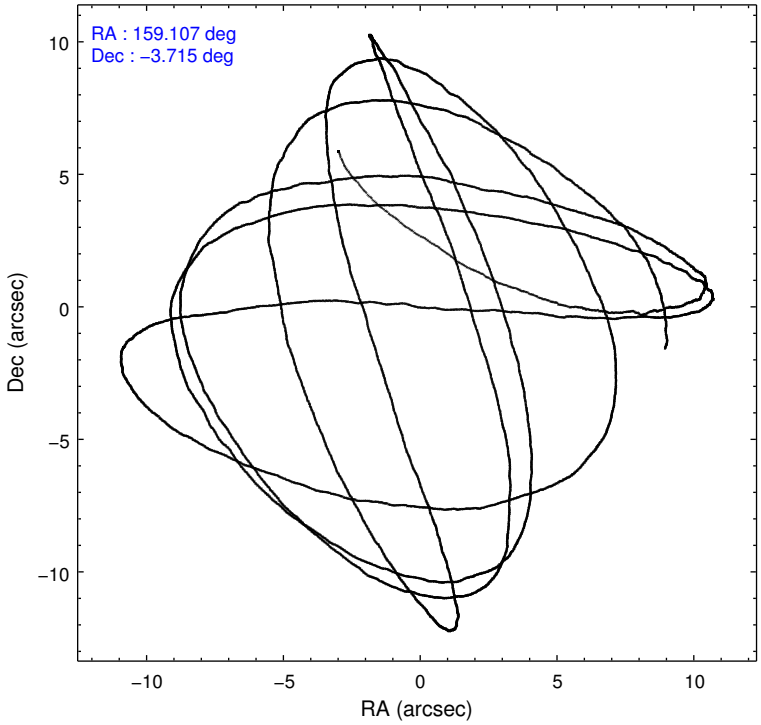
	ccd 2	**ccd 3**	**ccd 6**	**ccd 7**	**ccd 8**
grade 0 events	131	110	91	323	403
	1%	1%	0%	3%	3%
grade 1 events	1	1	0	1	2
	0%	0%	0%	0%	0%
grade 2 events	275	336	327	810	495
	2%	3%	3%	8%	4%
grade 3 events	116	86	125	279	197
	1%	0%	1%	3%	1%
grade 4 events	107	82	105	292	159
	1%	0%	1%	3%	1%
grade 5 events	119	129	155	492	183
	1%	1%	1%	5%	1%
grade 6 events	181	230	209	2123	477
	1%	2%	2%	23%	4%
grade 7 events	8831	8532	8916	4729	9647
	90%	89%	89%	52%	83%

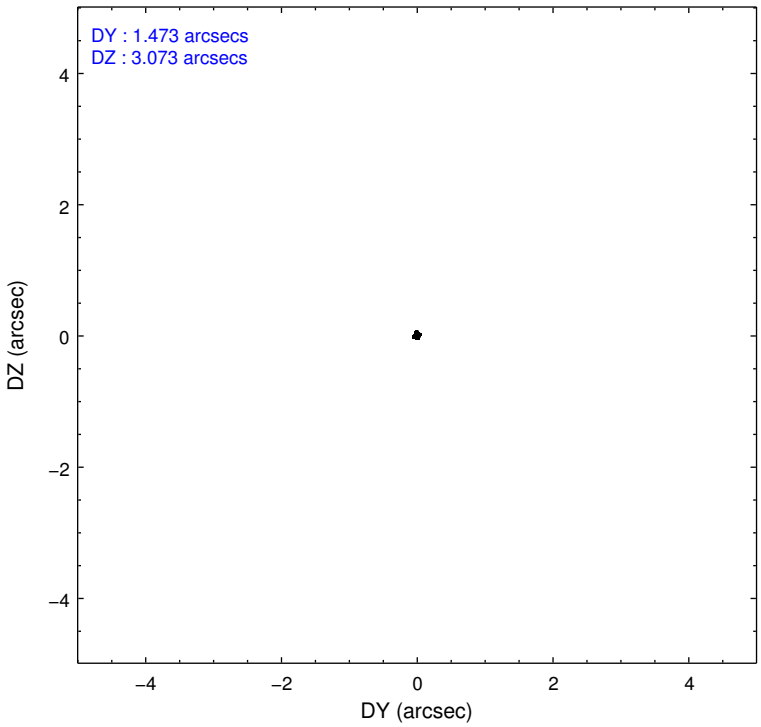
2.2 Compared Parameters

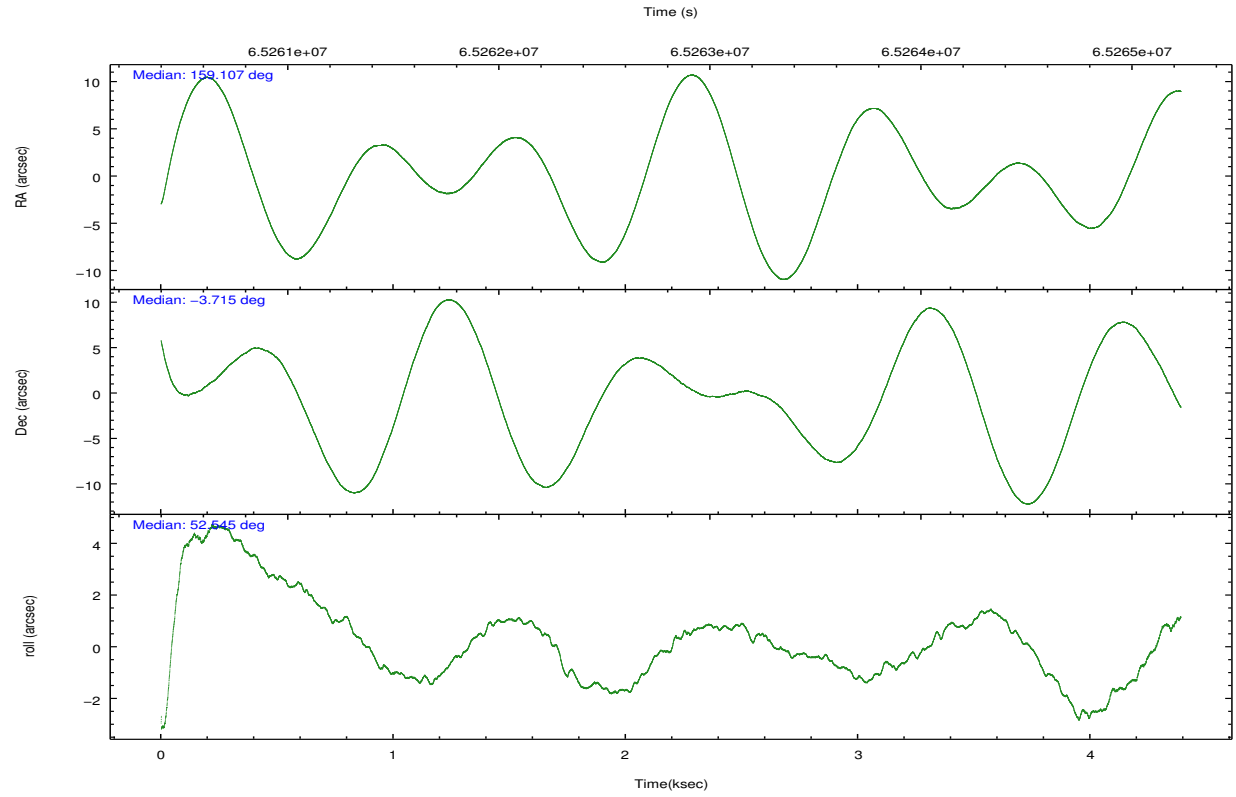
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23678	ACIS-23678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
Pointing RA	159.102726	159.1064160883199
Pointing Dec	-3.742749	-3.71533611662581
Pointing Roll	52.392807	52.54965532851137
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.001444936568705701
SIM translation stage pos (mm)	-190.132523	-190.1425803651734
SIM translation stage offset (mm)	0	0.01005778216563158
Observation start time	65261111.184000	65260000.402341
Observation start date	2000-01-26T08:04:07	2000-01-26T07:46:40
Observation end time	65265011.184000	65265616.377545
Observation end date	2000-01-26T09:09:07	2000-01-26T09:20:16
Read mode	TIMED	TIMED

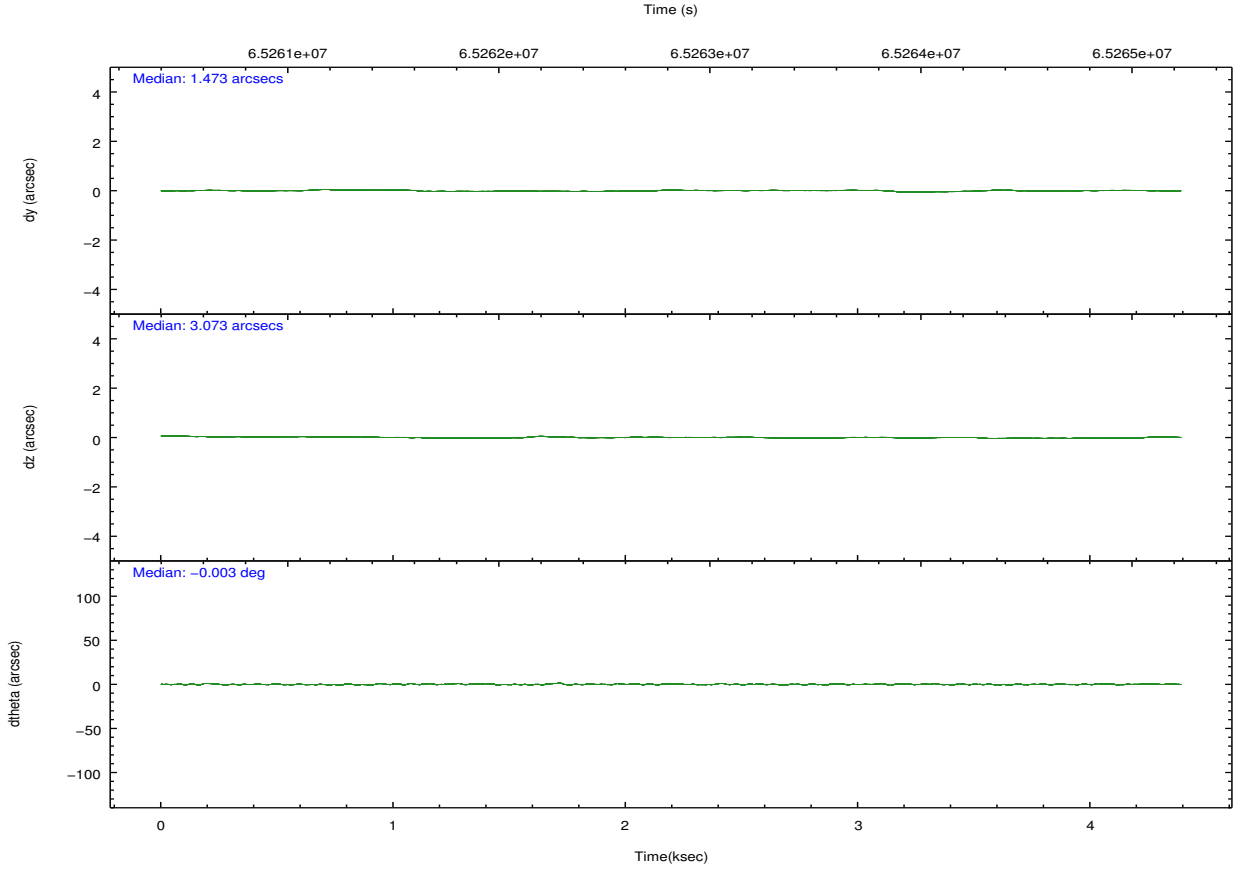
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/4
Subarray start row	385	385
Subarray row count	256	256
Alternating exposures requested	N	N
Primary exposure time	0.000000	1

2.3 Aspect


RA : 159.107 deg
Dec : −3.715 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 1.473 arcsecs
DZ : 3.073 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
6.5261e+07
6.5262e+07
6.5263e+07
6.5264e+07
6.5265e+07
Median: 159.107 deg
RA (arcsec)
Median: −3.715 deg
Dec (arcsec)
Median: 52.645 deg
roll (arcsec)
Time(ksec)

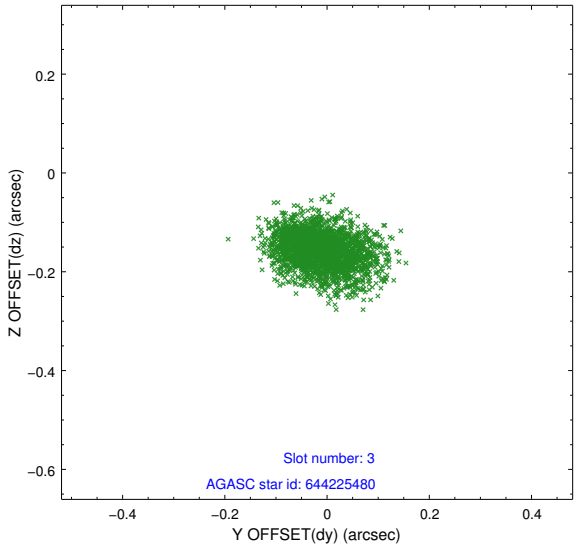

Time (s)
6.5261e+07
6.5262e+07
6.5263e+07
6.5264e+07
6.5265e+07
Median: 1.473 arcsecs
dy (arcsec)
Median: 3.073 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

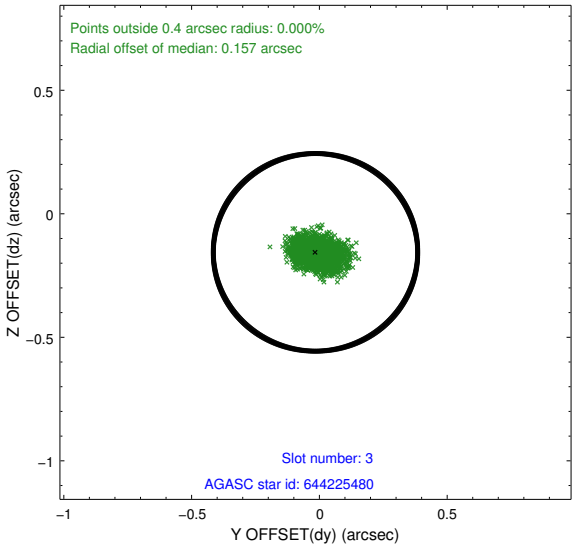
Slot Statistics

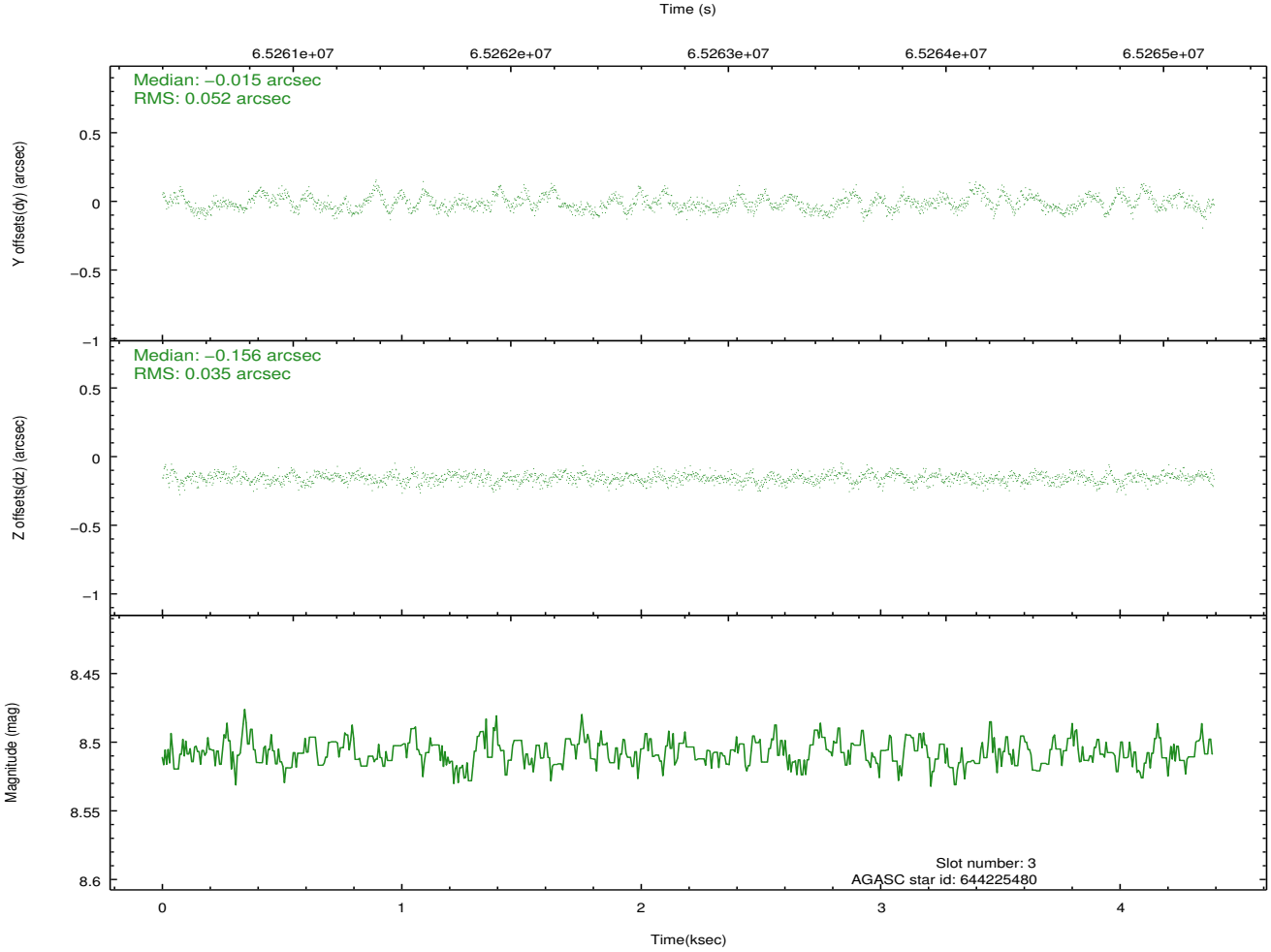
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.20	1071	0.039	-0.048	0.006	0.011	0.000000	0.000000	941.93	-1719.79
1	FID	ACIS-S-5	7.24	1072	-0.026	0.039	0.006	0.010	0.000000	0.000000	-1806.26	176.52
2	FID	ACIS-S-6	7.36	1071	-0.034	0.020	0.007	0.011	0.000000	0.000000	406.00	821.96
3	GUIDE	644225480	8.51	2143	-0.015	-0.156	0.067	0.108	158.581834	-3.695514	-1008.56	1585.95
4	GUIDE	644219896	9.50	2141	-0.089	-0.192	0.095	0.155	158.858999	-3.041208	1464.59	2236.26
5	GUIDE	644220832	9.85	2140	-0.136	-0.065	0.122	0.197	159.314065	-3.071240	2378.46	874.78
6	GUIDE	644229912	9.83	2143	0.218	0.248	0.103	0.162	159.281004	-4.525480	-1841.19	-2225.78
7	GUIDE	644228208	10.01	2139	0.020	0.165	0.126	0.198	159.503092	-4.346950	-847.76	-2466.83

2.4 Star Slots

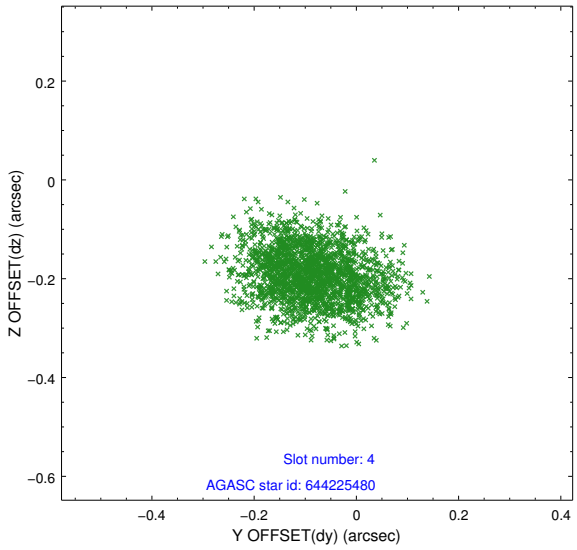
2.4.1 Slot 3

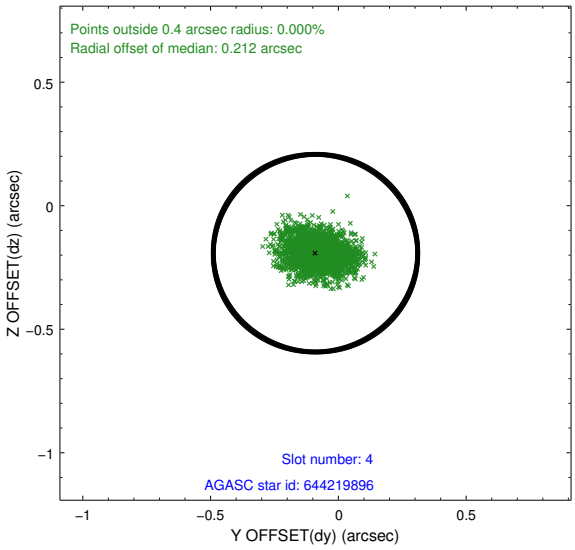


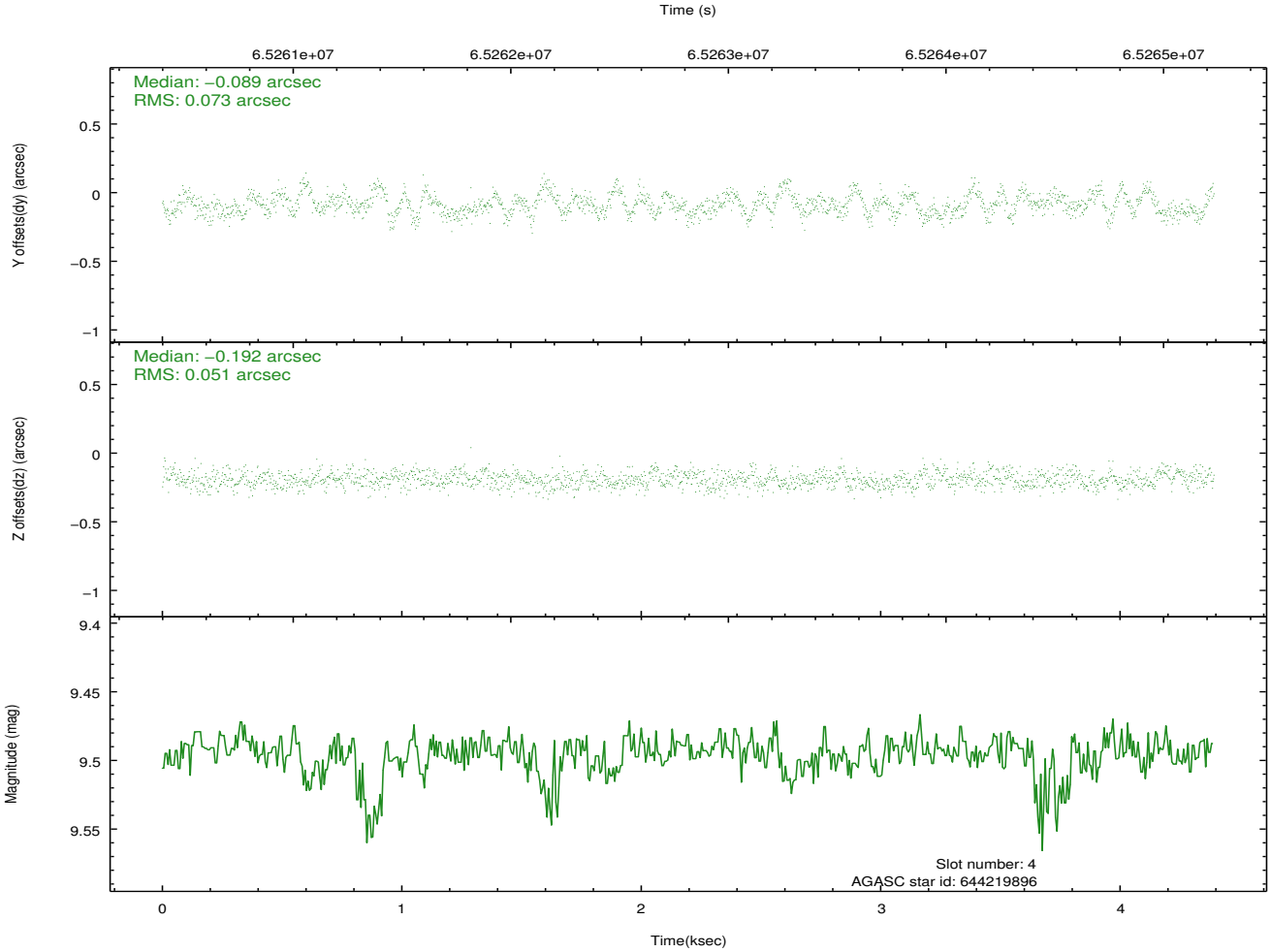




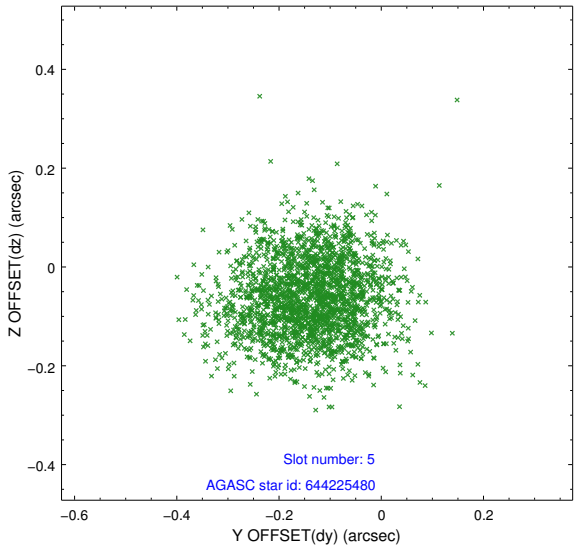
2.4.2 Slot 4

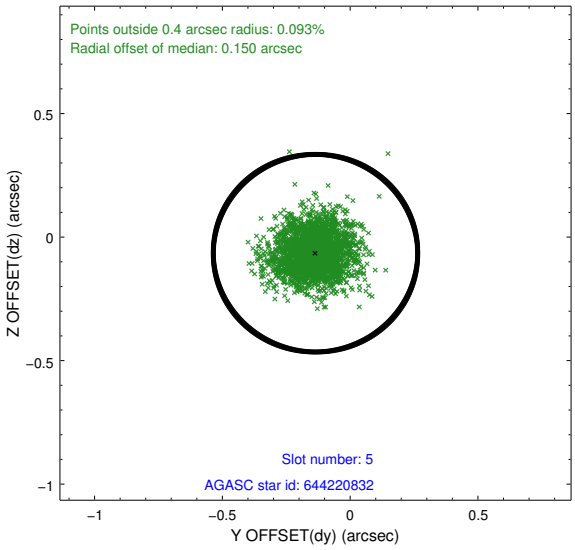

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 644225480

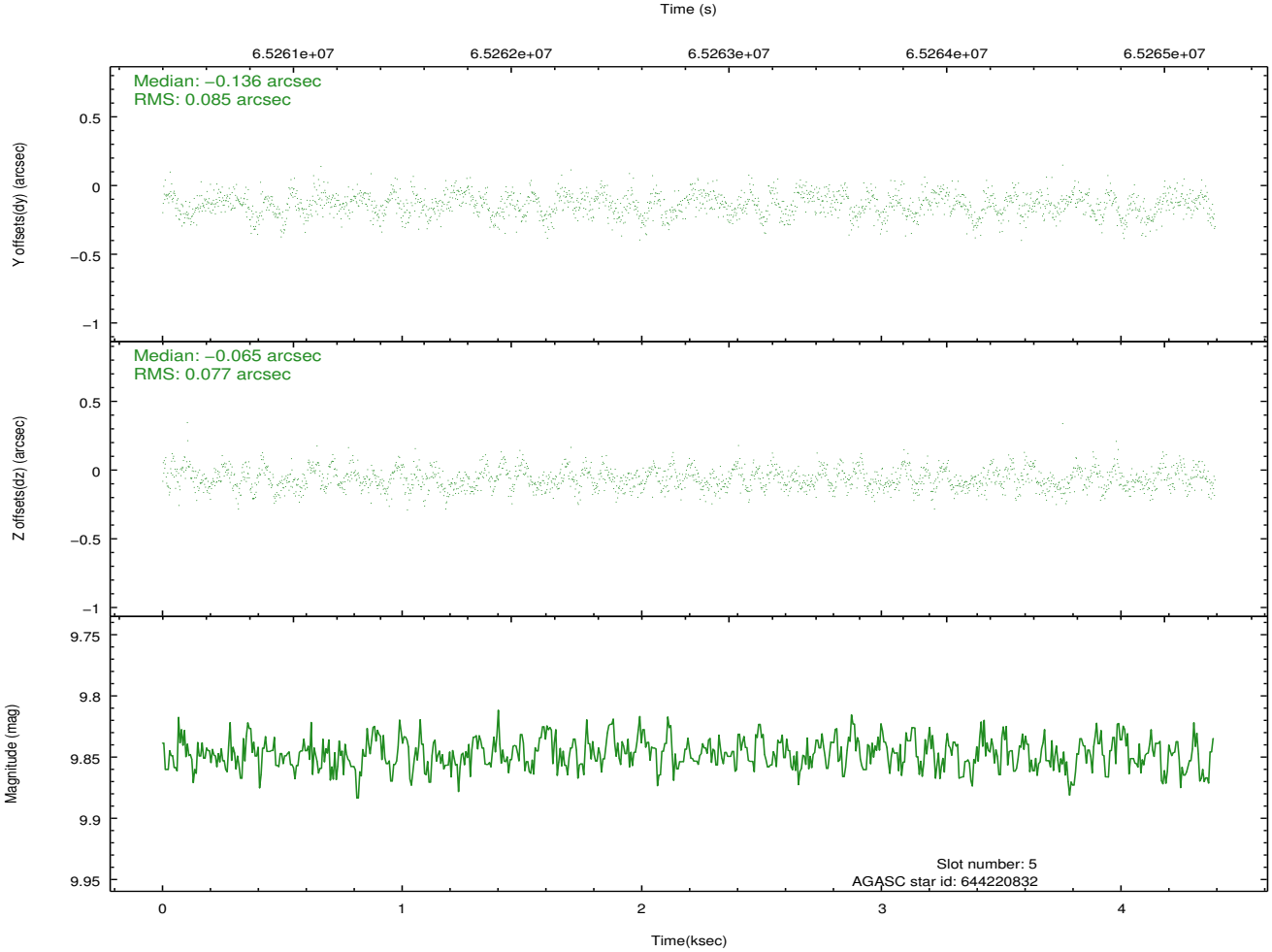

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.212 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 644219896


Time (s)
Median: −0.089 arcsec
RMS: 0.073 arcsec
Y offsets(dy) (arcsec)
Median: −0.192 arcsec
RMS: 0.051 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 644219896
Time(ksec)

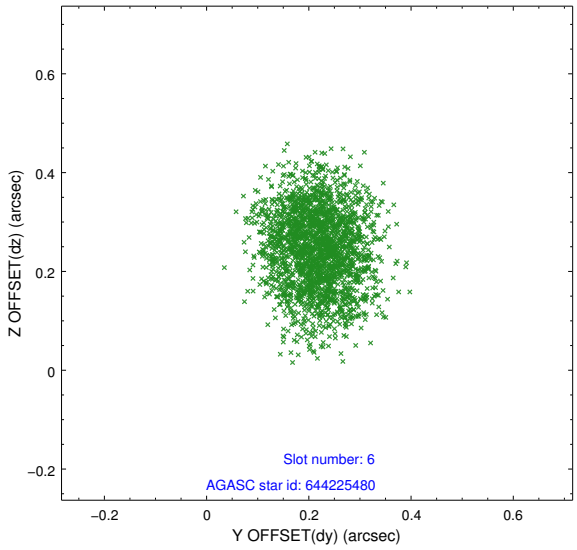
2.4.3 Slot 5

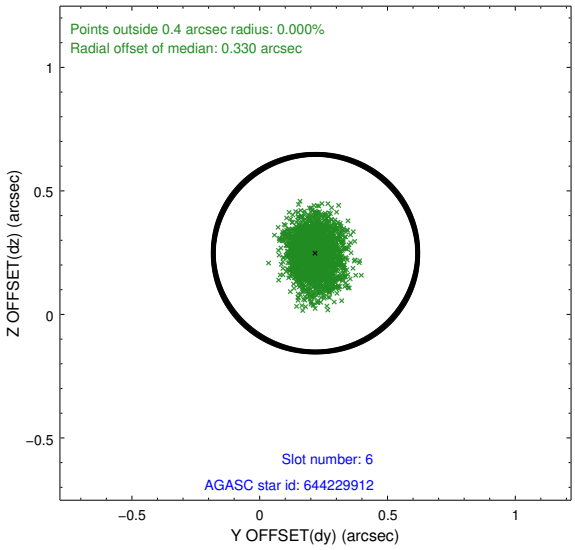

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 644225480

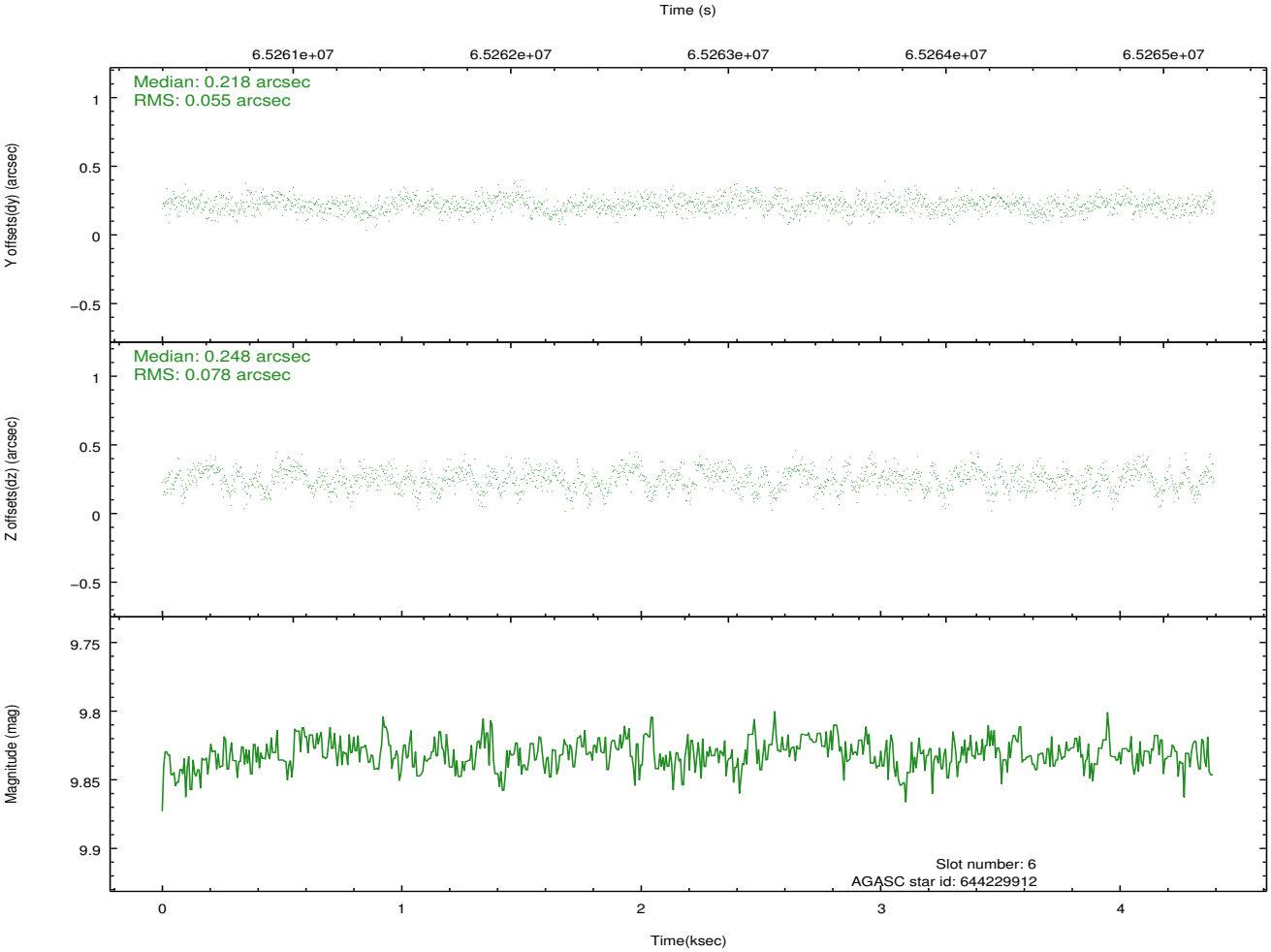

Points outside 0.4 arcsec radius: 0.093%
Radial offset of median: 0.150 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 644220832


Time (s)
Median: −0.136 arcsec
RMS: 0.085 arcsec
Y offsets(dy) (arcsec)
Median: −0.065 arcsec
RMS: 0.077 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 644220832
Time(ksec)

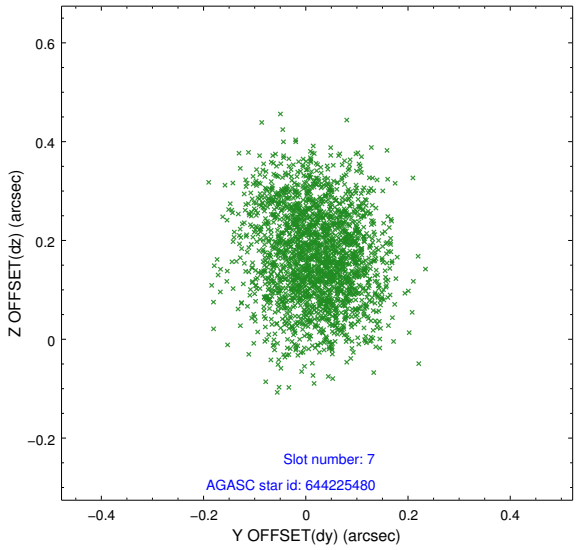
2.4.4 Slot 6

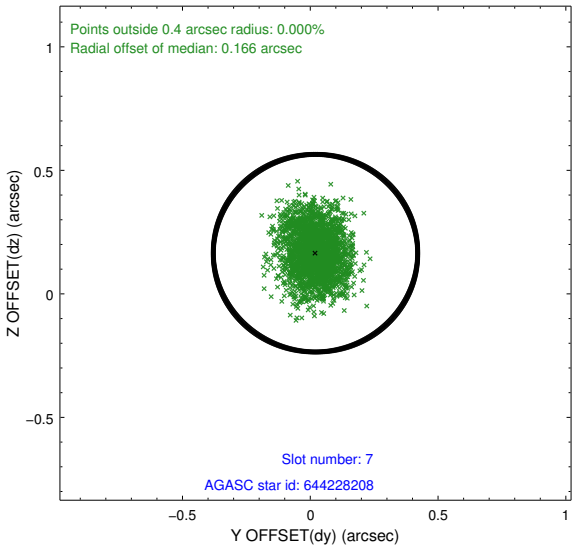

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 644225480

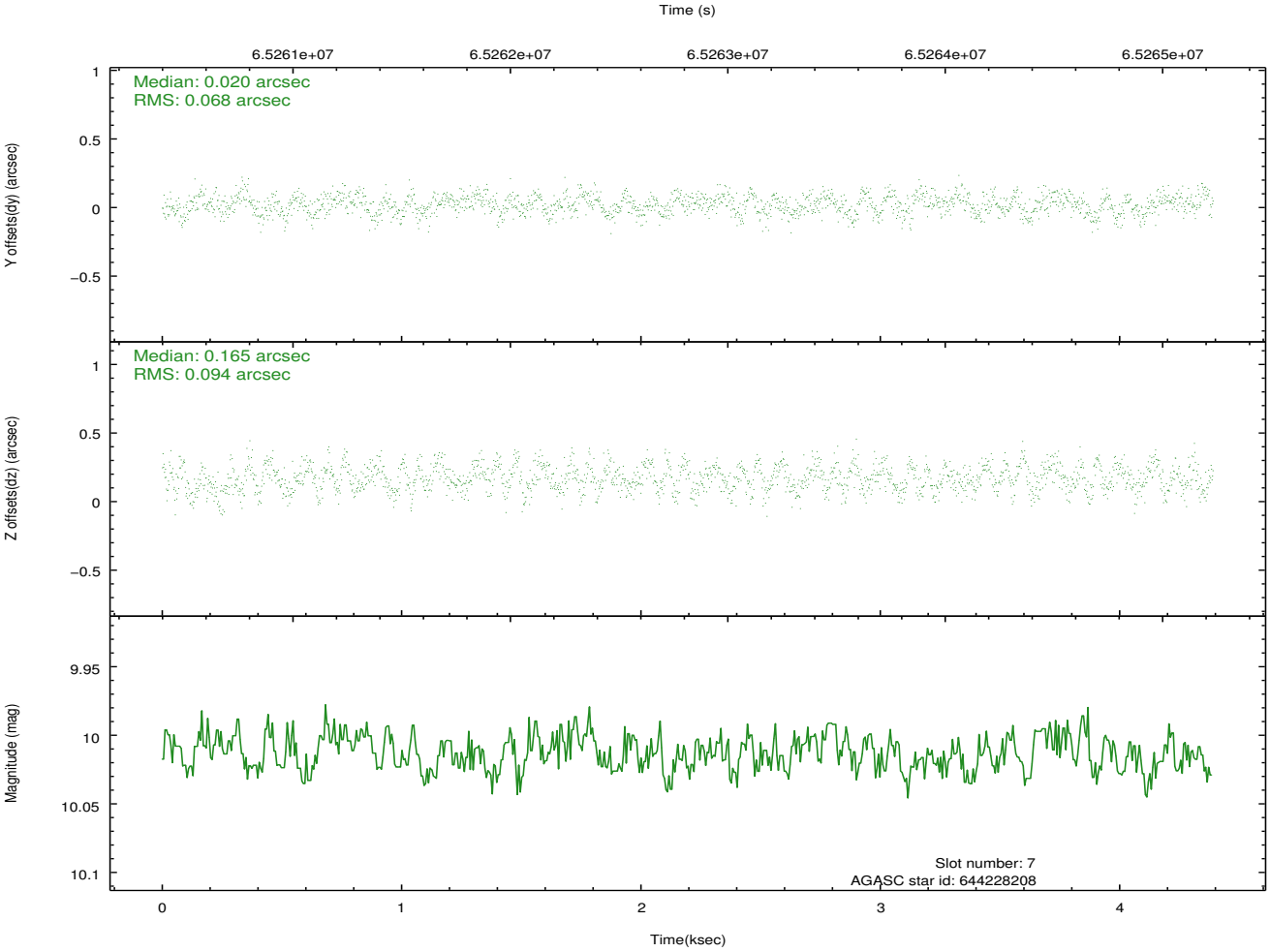

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.330 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 644229912


Time (s)
Median: 0.218 arcsec
RMS: 0.055 arcsec
Y offsets(dy) (arcsec)
Median: 0.248 arcsec
RMS: 0.078 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 644229912
Time(ksec)

2.4.5 Slot 7

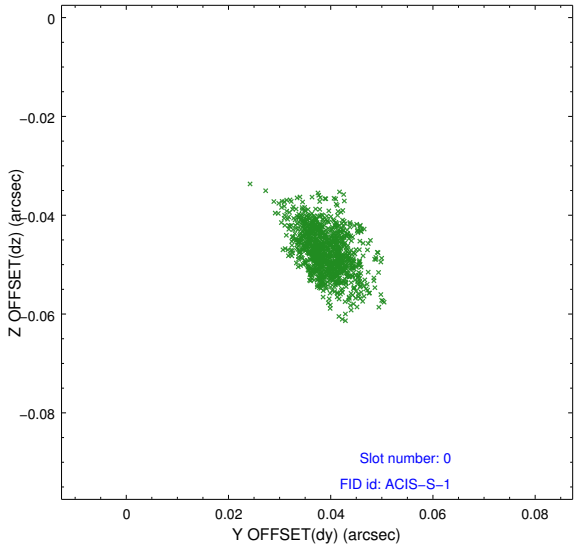

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 644225480

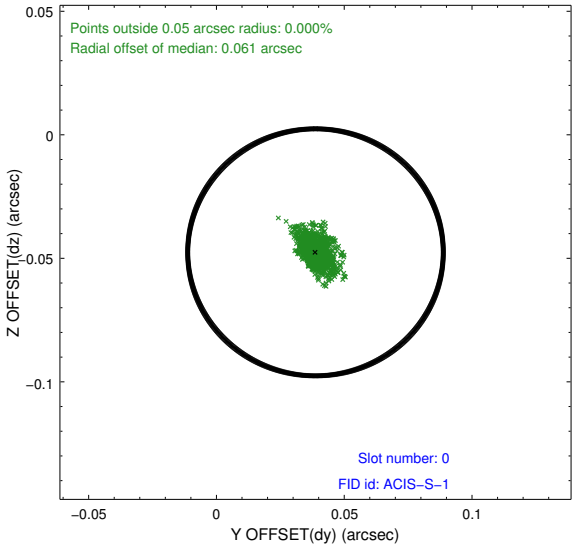

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.166 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 644228208

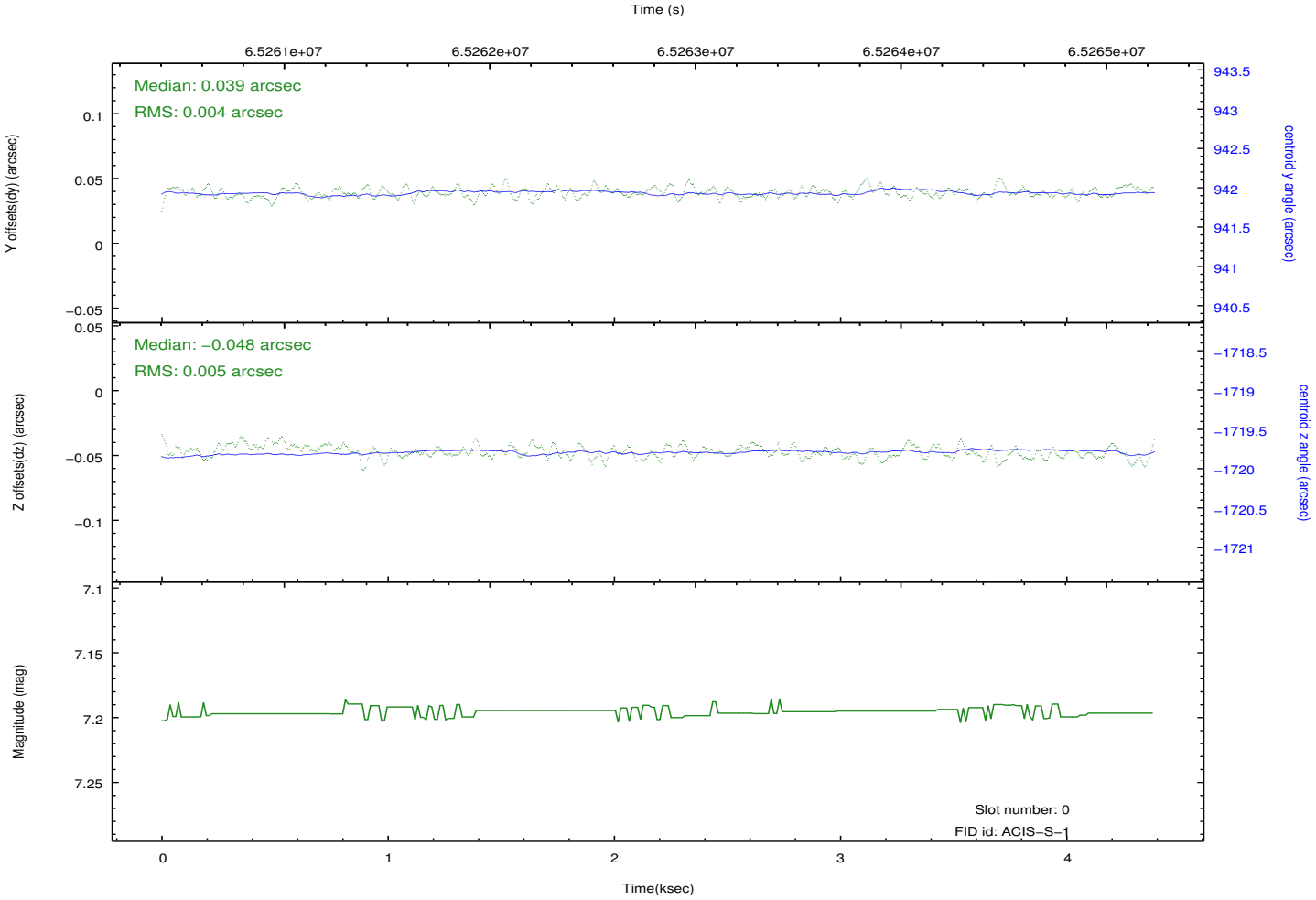

Time (s)
Median: 0.020 arcsec
RMS: 0.068 arcsec
Y offsets(dy) (arcsec)
Median: 0.165 arcsec
RMS: 0.094 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 644228208
Time(ksec)

2.5 FID Slots

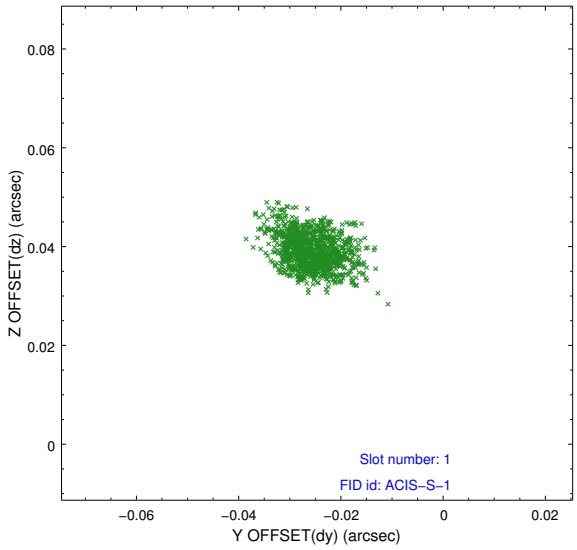
2.5.1 Slot 0

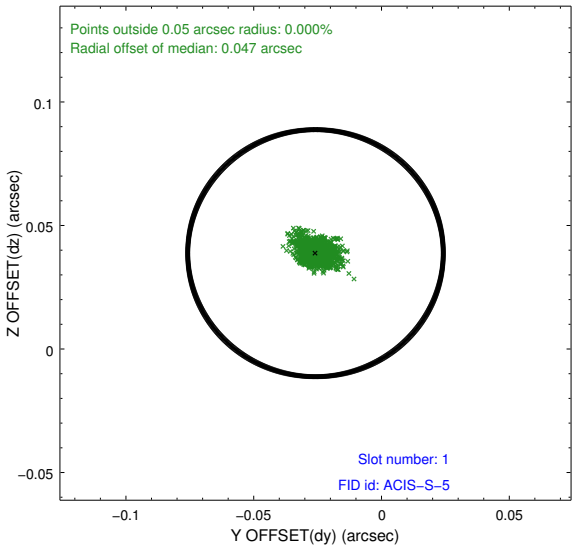


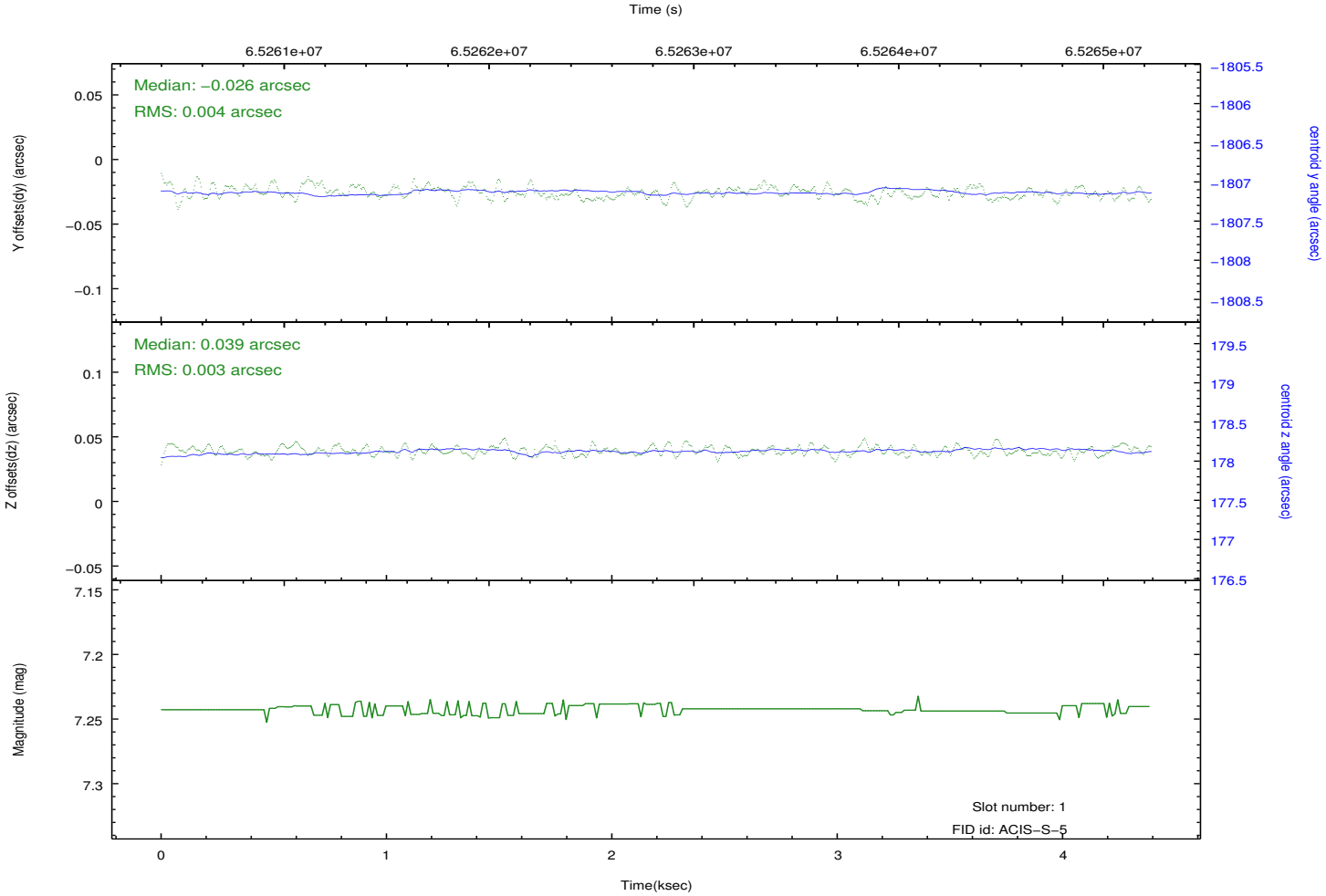




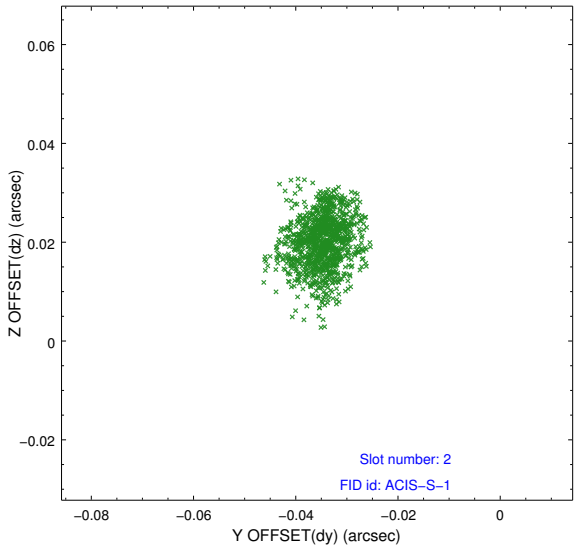
2.5.2 Slot 1

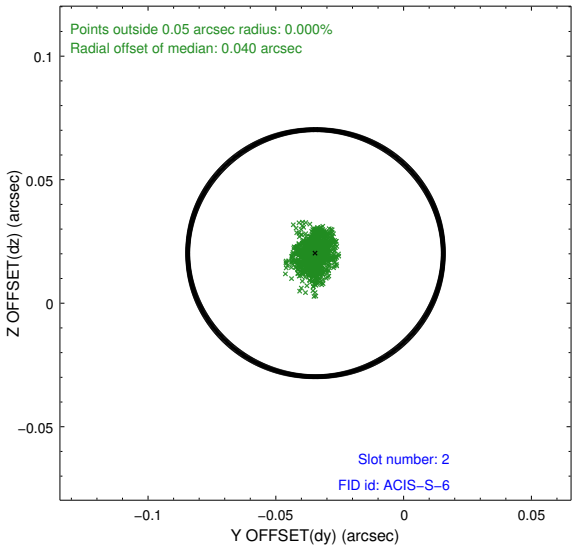

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−1

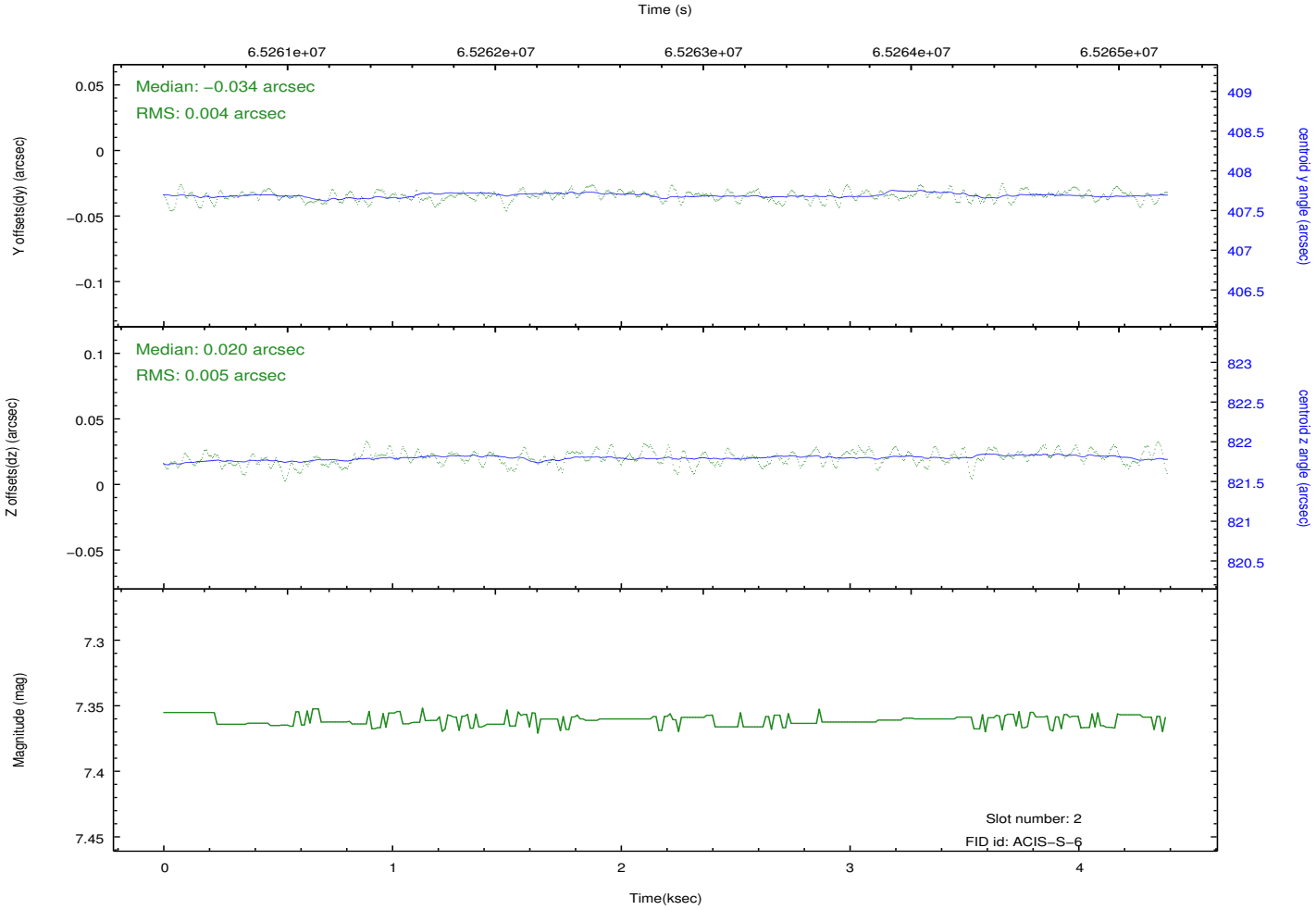

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.047 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5


Time (s)
Median: −0.026 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.039 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−S−5
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−1


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.040 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Time (s)
Median: −0.034 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.020 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS−S−6
Time(ksec)

3 Point Sources

7.30 arcmin

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2009.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.589

A.2 Comments

Focal plane temperature is warmer than -118.7 C degrees during the entire observation. This temperature is the upper limit of the verified ACIS calibration for the front-illuminated chips. The focal plane temperature is also warmer than -116.7 degrees C for the entire observation. This temperature is the upper limit of the verified ACIS calibration for the back-illuminated chips. The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.