Plot of Hitomi Attitude Accuracy (STT ON/OFF)

Ver. 5.3 16/12/06

- Image position
  - stability
    - variation (1-sigma) of median 50 percentile (python “media_grouped”) at every 300 sec (crab 60sec) exposure
    - criteria: photon Number > 50 at each exposure (IGR_J and RXJ : photon Number >15)
  - accuracy
    - image center determined by fitting with 2-dimensional Lorentz fitting at total exposure
    - offset from simbad center to above center
- Data : DET (non ATT corrected) and SKY (ATT corrected)
  - plotted at (SAT-X) and -(SAT-Y) coordinate
- 4 pattern
  - 1: STT-ALL (containing patterns 2, 3, and 4)
  - 2: STT-QV (equivalent to "STT available" in Hitomi-memo 2016-001)
  - 3: STT-CTL (equivalent to "STT controlled" in Hitomi-memo 2016-001)
  - 4: STT-OFF (equivalent to "STT unavailable in Hitomi-memo 2016-001)
- Comparison of 3 data/attitude file
  - 1st release data and ATT (“8/1” in this document)
  - 2nd release data and ATT (“9/E” in this document)
  - 3nd release data and ATT (“12/E” in this document)

position error at each exposure

	Exp	Stderr
Perseus	300s	~0.5”
N132D	300s	~0.7”
IGR_J	300s	~5”
RXJ	300s	~3”
G21.5	300s	~1”
RXJ	300s	~3”
Crab	60s	~0.7”

Summary (1)

8/1 : 1st ATT (8/1 release)
9/E : 2nd ATT (9/24 release)

Stability: median
Accuracy: 2d-lorentz

Target	Seq ID	SKY Stability								SKY Accuracy (simbad)							
		8/1 STT-ALL	8/1 STT-QV	8/1 STT-CTL	8/1 STT-OFF	9/E STT-ALL	9/E STT-QV	9/E STT-CTL	9/E STT-OFF	8/1 STT-ALL	8/1 STT-QV	8/1 STT-CTL	8/1 STT-OFF	9/E STT-ALL	9/E STT-QV	9/E STT-CTL	9/E STT-OFF
Perseus_core	100040010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Perseus_core_adjustment	100040020	7.9”	6.1”	4.9”	8.8”	7.1”	6.2”	5.0”	10.3”	5.8”	9.3”	12.6”	14.4”	2.9”	3.4”	6.9”	10.8”
Perseus	100040030	10.3”	7.7”	5.6”	7.6”	9.6”	7.7”	5.6”	12.7”	7.5”	8.5”	11.6”	20.3”	6.7”	4.9”	5.9”	14.4”
	100040040	11.3”	9.7”	6.1”	8.8”	10.0”	9.3”	5.9”	12.1”	9.1”	8.8”	12.3”	21.5”	7.7”	5.8”	6.4”	14.5”
	100040050	11.3”	8.6”	7.1”	8.7”	12.7”	8.9”	7.4”	7.1”	10.2”	12.0”	19.4”	11.5”	13.4”	6.8”	12.6”	23.6”
Perseus_adjustment	100040060	8.8”	7.0”	5.3”	8.1”	8.3”	8.3”	5.6”	11.0”	25.7”	24.8”	24.9”	31.4”	17.1”	17.1”	16.4”	21.9”
N132D (SXI)	100041010	23.6”	23.8”	2.0”	△	23.6”	23.9”	1.9”	△	23.9”	23.8”	23.4”	△	6.1”	5.7”	3.1”	△
	100041020	8.0”	7.8”	7.7”	7.4”	7.6”	7.7”	7.5”	4.3”	21.7”	21.8”	22.1”	20.8”	3.1”	3.4”	3.4”	3.3”
IGR_J16318-4848 (SXI)	100042010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042030	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042040	8.5”	8.0”	7.3”	8.6”	8.4”	8.1”	7.4”	7.9”	8.2”	7.7”	7.9”	15.2”	4.9”	5.5”	5.4”	6.4”
RXJ1856.5-3754 (SXI)	100043010	7.1”	7.4”	8.0”	6.6”	6.7”	7.5”	8.0”	5.5”	22.5”	22.8”	25.2”	20.1”	22.7”	20.8”	18.8”	21.0”
	100043020																
	100043030																
	100043040																
G21.5-0.9	100050010	6.5”	5.9”	4.9”	10.2”	5.8”	5.5”	4.9”	7.5”	9.8”	9.5”	8.9”	10.7”	9.1”	9.3”	9.1”	7.5”
	100050020	7.4”	6.3”	4.9”	11.0”	6.0”	5.8”	4.8”	7.7”	10.8”	10.1”	9.0”	14.9”	9.8”	9.7”	9.1”	11.4”
	100050030	6.9”	4.9”	4.8”	12.3”	5.2”	5.0”	5.0”	6.2”	9.8”	9.3”	9.1”	17.0”	9.2”	9.3”	9.2”	11.0”
	100050040	6.4”	5.9”	5.0”	8.7”	5.8”	5.6”	4.9”	7.2”	9.9”	9.4”	8.9”	13.5”	9.6”	9.6”	9.3”	11.0”
	100050050	3.5”	6.1”	2.5”	△	4.0”	3.2”	3.3”	△	10.1”	10.2”	6.7”	16.1”	11.4”	13.3”	13.9”	31.4”
RXJ1856.5-3754 (SXI)	100043050	9.1”	9.3”	9.2”	7.0”	9.3”	9.4”	9.3”	6.9”	19.0”	18.6”	18.4”	17.1”	18.8”	17.8”	18.0”	17.3”
	100043060	8.6”	8.8”	9.3”	6.1”	8.7”	8.7”	9.3”	5.9”	19.7”	19.2”	18.8”	21.1”	19.6”	19.0”	18.7”	22.0”
Crab	100044010	7.9”	3.3”	3.1”	6.5”	3.9”	3.1”	2.9”	4.2”	6.4”	4.4”	4.4”	20.6”	5.1”	3.4”	4.5”	9.1”

△ : short exposure because of STT-OFF

Summary (2)

8/1 : 1st ATT (8/1 release)
12/E : 3rd ATT (12/E release)

Stability: median
Accuracy: 2d-lorentz

Target	Seq ID	SKY Stability								SKY Accuracy (simbad)							
		8/1 STT-ALL	8/1 STT-QV	8/1 STT-CTL	8/1 STT-OFF	12/E STT-ALL	12/E STT-QV	12/E STT-CTL	12/E STT-OFF	8/1 STT-ALL	8/1 STT-QV	8/1 STT-CTL	8/1 STT-OFF	12/E STT-ALL	12/E STT-QV	12/E STT-CTL	12/E STT-OFF
Perseus_core	100040010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Perseus_core_adjustment	100040020	7.9”	6.1”	4.9”	8.8”	6.2”	5.7”	4.8”	7.4”	5.8”	9.3”	12.6”	14.4”	4.0”	6.9”	8.8”	2.3”
Perseus	100040030	10.3”	7.7”	5.6”	7.6”	7.6”	6.0”	4.8”	8.9”	7.5”	8.5”	11.6”	20.3”	1.1”	4.9”	8.3”	6.9”
	100040040	11.3”	9.7”	6.1”	8.8”	7.8”	7.5”	5.2”	8.7”	9.1”	8.8”	12.3”	21.5”	0.9”	4.5”	8.4”	5.6”
	100040050	11.3”	8.6”	7.1”	8.7”	12.6”	7.8”	6.4”	10.0”	10.2”	12.0”	19.4”	11.5”	5.9”	9.9”	17.2”	15.2”
Perseus_adjustment	100040060	8.8”	7.0”	5.3”	8.1”	6.0”	4.7”	4.0”	8.0”	25.7”	24.8”	24.9”	31.4”	17.1”	17.6”	18.0”	16.8”
N132D (SXI)	100041010	23.6”	23.8”	2.0”	△	26.5”	26.7”	1.8”	△	23.9”	23.8”	23.4”	△	3.4”	2.9”	1.3”	△
	100041020	8.0”	7.8”	7.7”	7.4”	7.0”	7.2”	7.2”	4.8”	21.7”	21.8”	22.1”	20.8”	6.8”	5.6”	6.2”	6.2”
IGR_J16318-4848 (SXI)	100042010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042030	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042040	8.5”	8.0”	7.3”	8.6”	8.0”	7.4”	7.1”	7.9”	8.2”	7.7”	7.9”	15.2”	5.7”	6.6”	7.1”	4.7”
RXJ1856.5-3754 (SXI)	100043010	7.1”	7.4”	8.0”	6.6”	6.7”	7.3”	8.0”	5.0”	22.5”	22.8”	25.2”	20.1”	22.5”	23.7”	22.7”	20.2”
	100043020																
	100043030																
	100043040																
G21.5-0.9	100050010	6.5”	5.9”	4.9”	10.2”	5.2”	5.0”	4.4”	6.8”	9.8”	9.5”	8.9”	10.7”	8.2”	8.4”	8.4”	5.5”
	100050020	7.4”	6.3”	4.9”	11.0”	5.0”	5.0”	4.6”	6.3”	10.8”	10.1”	9.0”	14.9”	8.4”	8.6”	8.5”	6.6”
	100050030	6.9”	4.9”	4.8”	12.3”	4.7”	4.6”	4.8”	4.9”	9.8”	9.3”	9.1”	17.0”	8.1”	8.4”	8.4”	7.2”
	100050040	6.4”	5.9”	5.0”	8.7”	5.5”	5.2”	5.1”	7.4”	9.9”	9.4”	8.9”	13.5”	7.7”	7.8”	7.8”	6.1”
	100050050	3.5”	6.1”	2.5”	△	—	—	—	—	10.1”	10.2”	6.7”	16.1”	—	—	—	—
RXJ1856.5-3754 (SXI)	100043050	9.1”	9.3”	9.2”	7.0”	9.0”	9.4”	9.2”	6.2”	19.0”	18.6”	18.4”	17.1”	17.7”	16.8”	16.3”	20.4”
	100043060	8.6”	8.8”	9.3”	6.1”	8.6”	8.8”	9.3”	6.0”	19.7”	19.2”	18.8”	21.1”	18.3”	17.2”	16.8”	19.5”
Crab	100044010	7.9”	3.3”	3.1”	6.5”	3.6”	3.0”	2.9”	4.0”	6.4”	4.4”	4.4”	20.6”	0.2”	0.1”	0.2”	3.3”

△ : short exposure because of STT-OFF

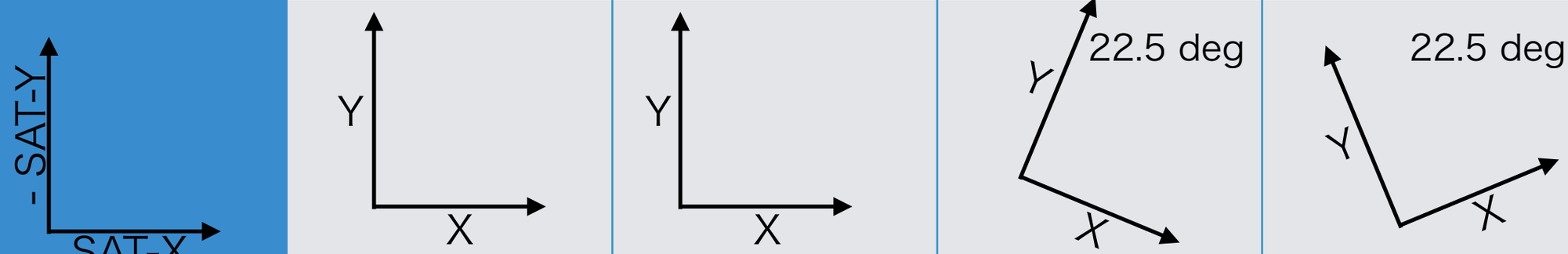
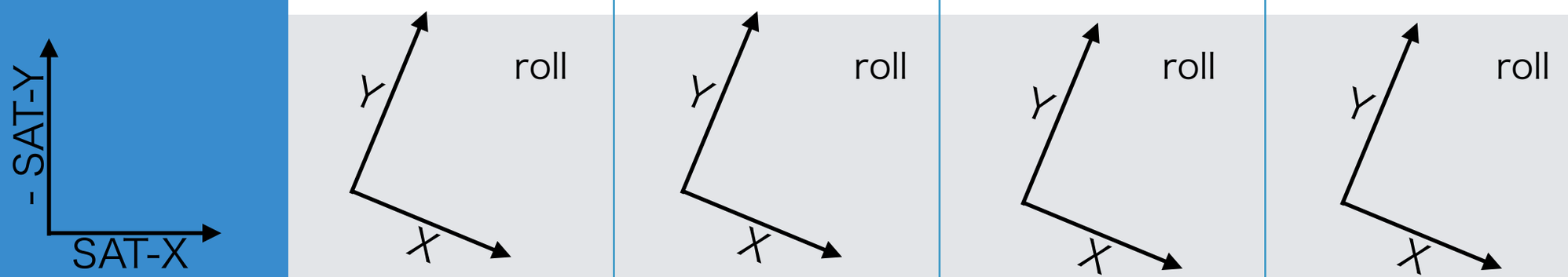
Detector (STT-ALL)

9/E : 2st ATT (8/1 release)
12/E : 3rd ATT (12/E release)

Stability: median
Accuracy: 2d-lorentz

Target	Seq ID	STT-ALL Stability								STT-ALL Accuracy (simbad)							
		9/E SXS	9/E SXI	9/E HX1	9/E HX2	12/E SXS	12/E SXI	12/E HX1	12/E HX2	9/E SXS	9/E SXI	9/E HX1	9/E HX2	12/E SXS	12/E SXI	12/E HX1	12/E HX2
Perseus_core	100040010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Perseus_core_adjustment	100040020	7.1”	—	—	—	6.2”	—	—	—	2.9”	—	—	—	4.0”	—	—	—
Perseus	100040030	9.6”	—	—	—	7.6”	—	—	—	6.7”	—	—	—	1.1”	—	—	—
	100040040	10.0”	—	—	—	7.8”	—	—	—	7.7”	—	—	—	0.9”	—	—	—
	100040050	12.7”	—	—	—	12.6”	—	—	—	13.4”	—	—	—	5.9”	—	—	—
Perseus_adjustment	100040060	8.3”	7.8”	—	—	6.0”	5.4”	—	—	17.1”	1.1”	—	—	17.1”	6.1”	—	—
N132D (SXI)	100041010	—	23.6”	—	—	—	26.5”	—	—	—	6.1”	—	—	—	3.4”	—	—
	100041020	—	7.6”	—	—	—	7.0”	—	—	—	3.1”	—	—	—	6.8”	—	—
IGR_J16318-4848 (SXI)	100042010	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042020	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042030	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100042040	—	8.4”	—	—	—	8.0”	—	—	—	4.9”	—	—	—	5.7”	—	—
RXJ1856.5-3754 (SXI)	100043010	—	6.7”	—	—	—	6.7”	—	—	—	22.7”	—	—	—	22.5”	—	—
	100043020																
	100043030																
	100043040																
G21.5-0.9	100050010	5.8”	6.9”	6.0”	7.9”	5.2”	6.1”	5.2”	7.4”	9.1”	6.2”	2.6”	7.6”	8.2”	3.8”	3.6”	3.8”
	100050020	6.0”	6.7”	5.6”	6.9”	5.0”	6.0”	4.6”	6.1”	9.8”	7.6”	4.3”	9.2”	8.4”	4.3”	3.4”	4.9”
	100050030	5.2”	6.4”	5.6”	5.7”	4.7”	5.7”	4.9”	5.4”	9.2”	6.5”	3.3”	8.2”	8.1”	4.3”	3.4”	5.0”
	100050040	5.8”	5.7”	5.9”	5.9”	5.5”	5.1”	5.1”	5.2”	9.6”	6.4”	4.6”	9.0”	7.7”	3.1”	3.9”	5.2”
	100050050	4.0”	2.8”	5.1”	4.9”	—	—	—	—	11.4”	1.7”	9.5”	10.6”	—	—	—	—
RXJ1856.5-3754 (SXI)	100043050	—	9.3”	—	—	—	9.0”	—	—	—	18.8”	—	—	—	17.7”	—	—
	100043060	—	8.7”	—	—	—	8.6”	—	—	—	19.6”	—	—	—	18.3”	—	—
Crab	100044010	3.9”	4.2”	2.9”	2.6”	3.6”	4.0”	2.5”	2.2”	5.1”	18.4”	12.2”	17.6”	0.2”	15.7”	10.2”	13.6”

DET/SKY coordinates

	SXS	SXI	HXI1	HXI2	memo
NAME **center** **look-up**	DET 3.5, 3.5 29.982”/pix	DET 747.8, 748.6 1.768”/pix	DET 128.5, 128.5 4.297”/pix	DET 128.5, 128.5 4.297”/pix	DET ATT non-corrected
					
Name **center** **look-up**	SKY 1215.5, 1215.5 1.768”/pix	SKY 1215.5, 1215.5 1.768”/pix	SKY 1215.5, 1215.5 1.768”/pix	SKY 1215.5, 1215.5 1.768”/pix	SKY ATT corrected
					

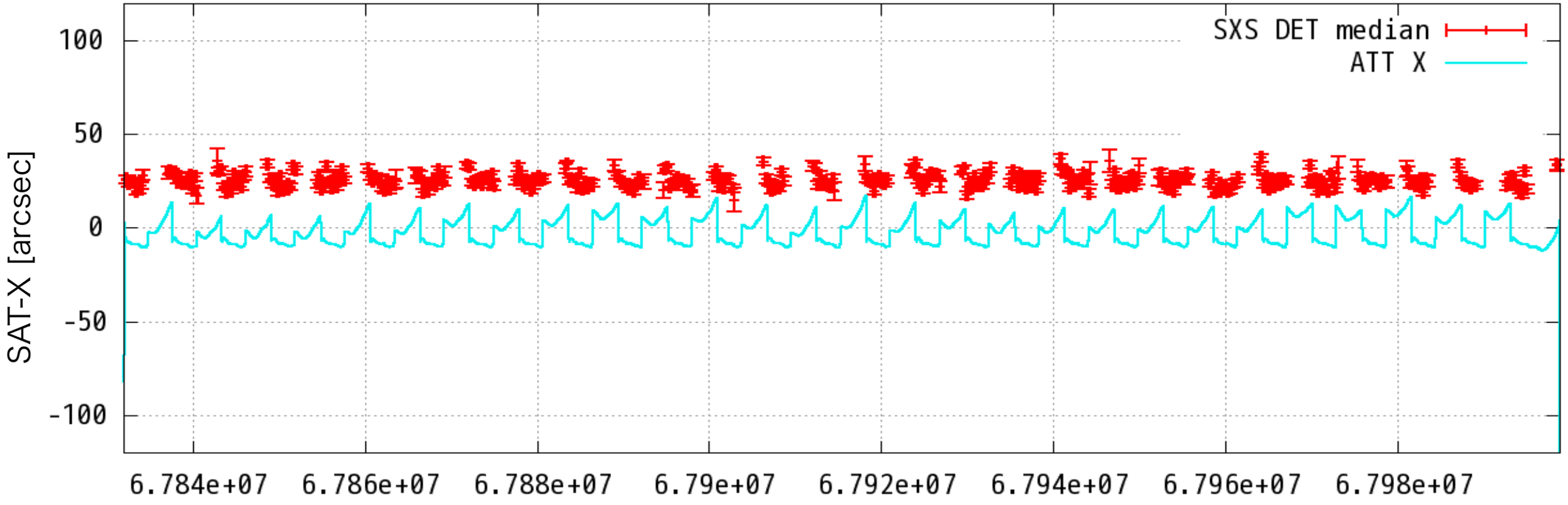
Perseus_core_adjustment

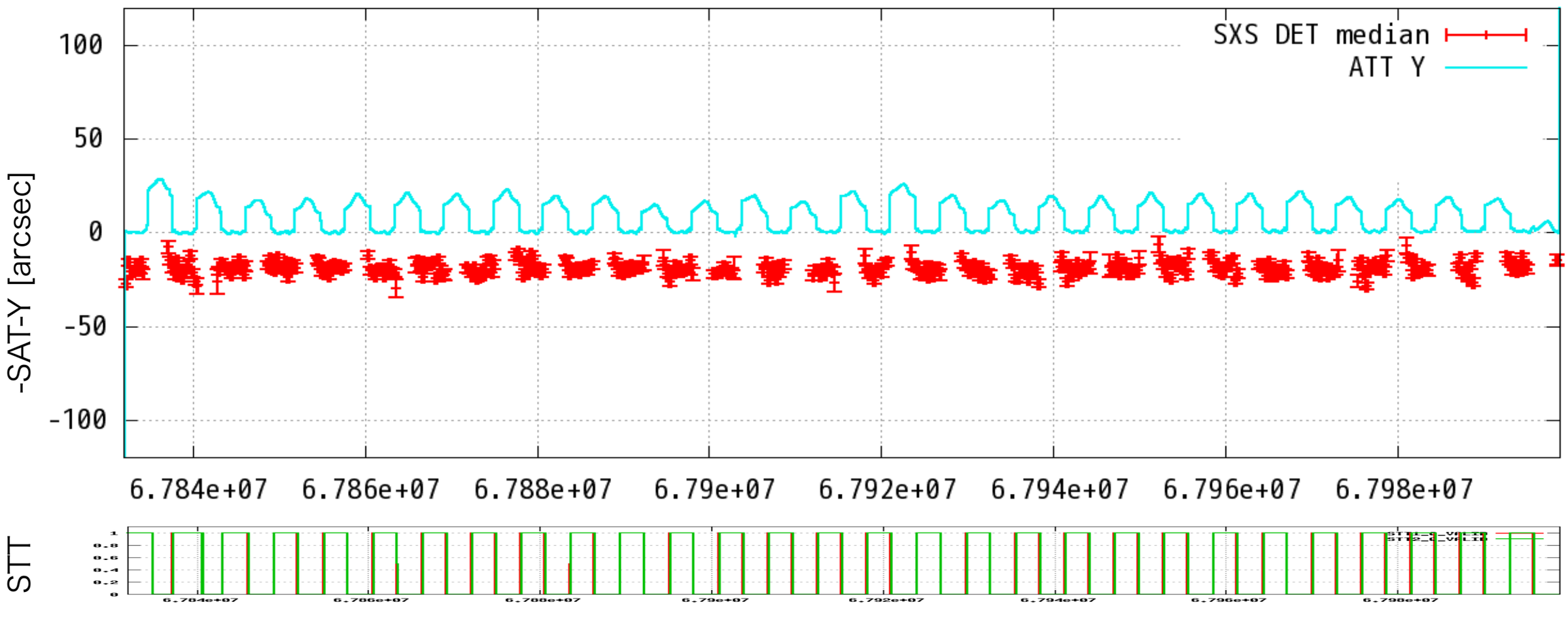
100040020

100040020

Perseus_core_adjustment DET-X/DET-Y (unit: arcsec)

STT-ALL

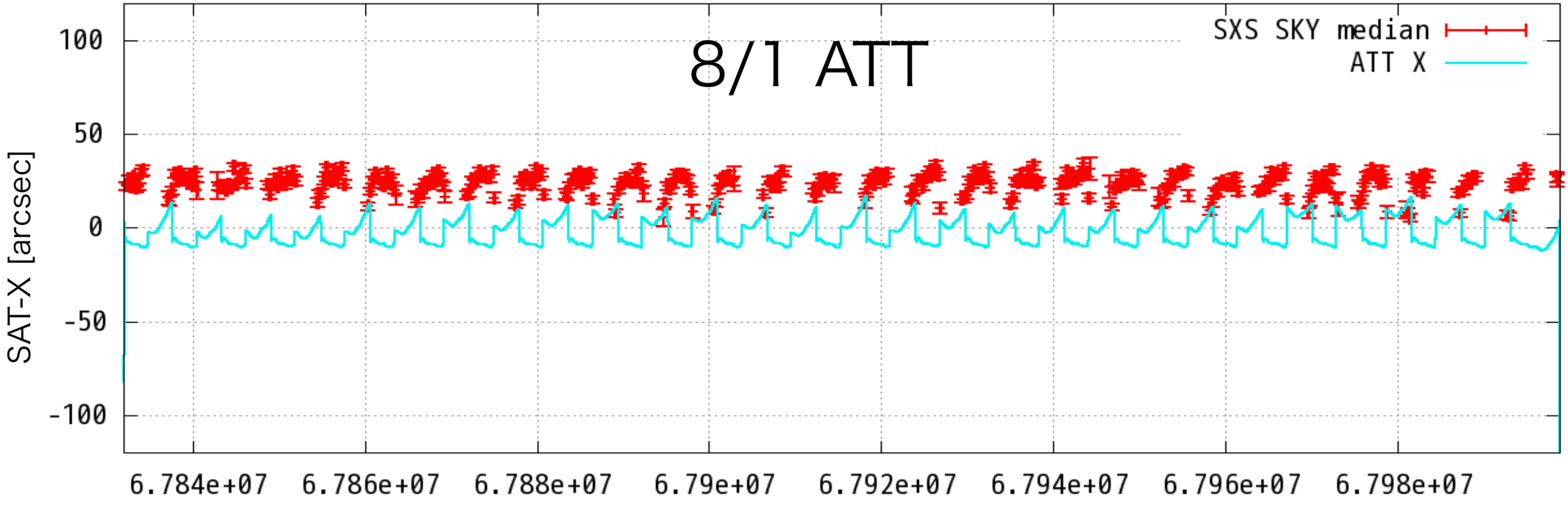


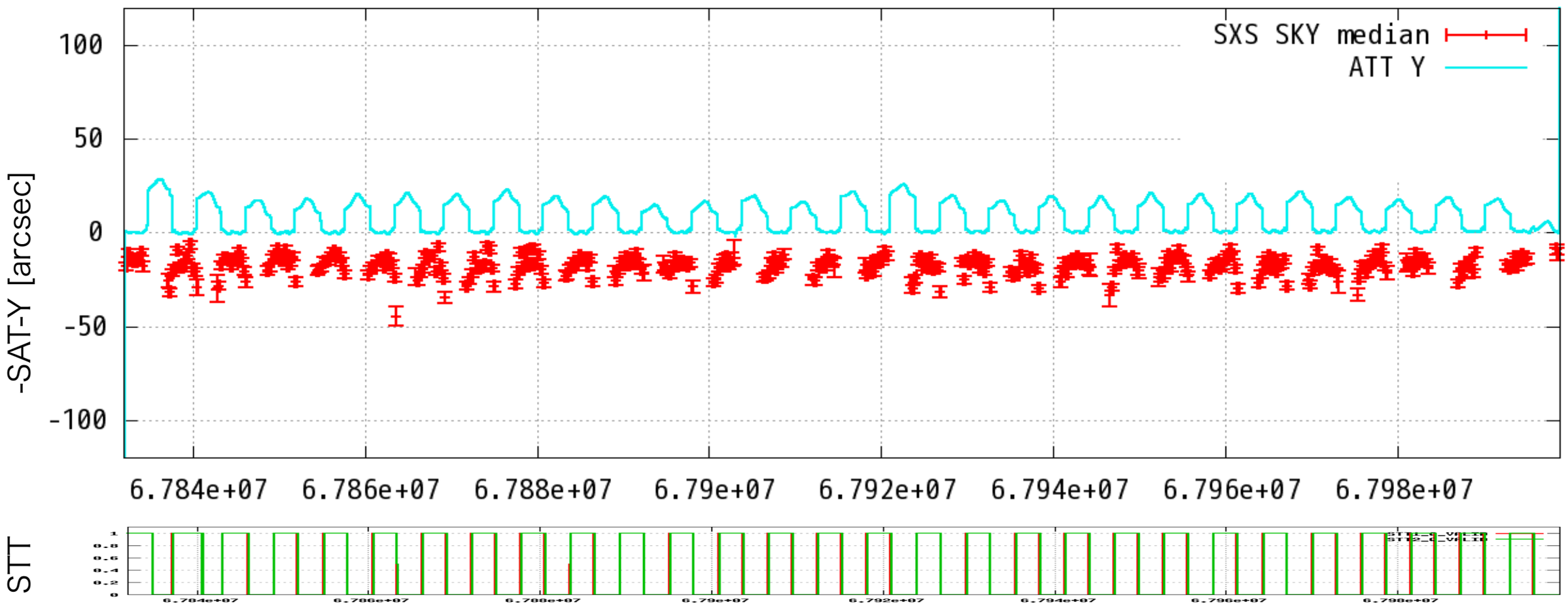


100040020

Perseus_core_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-ALL

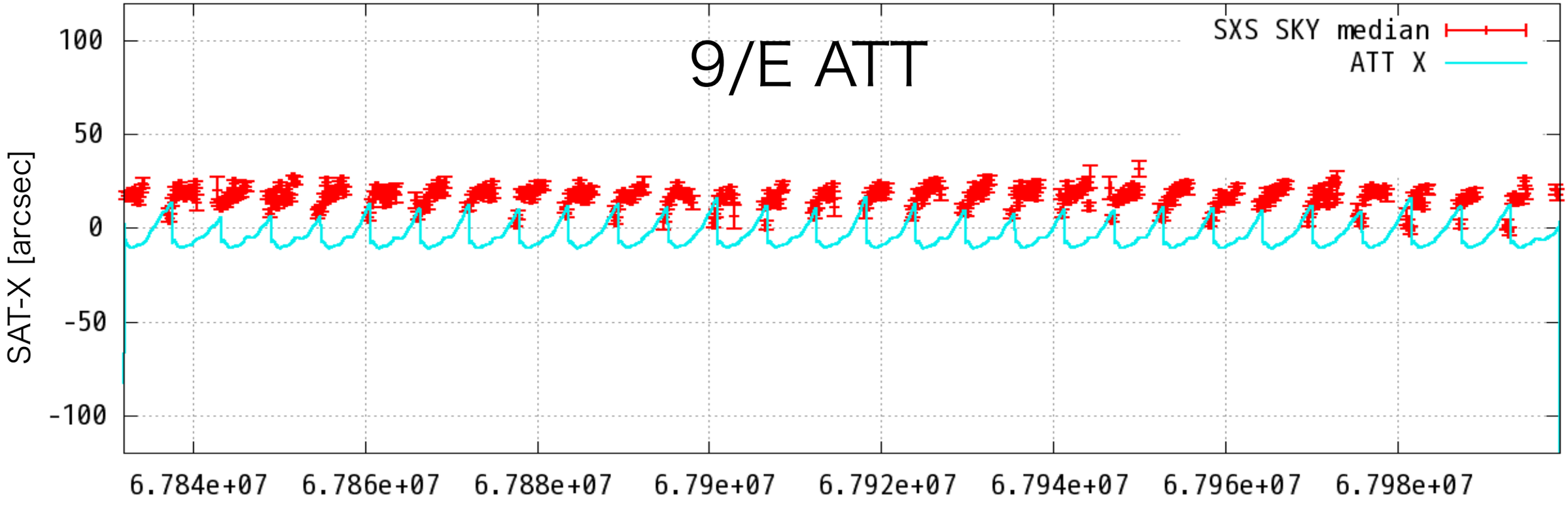


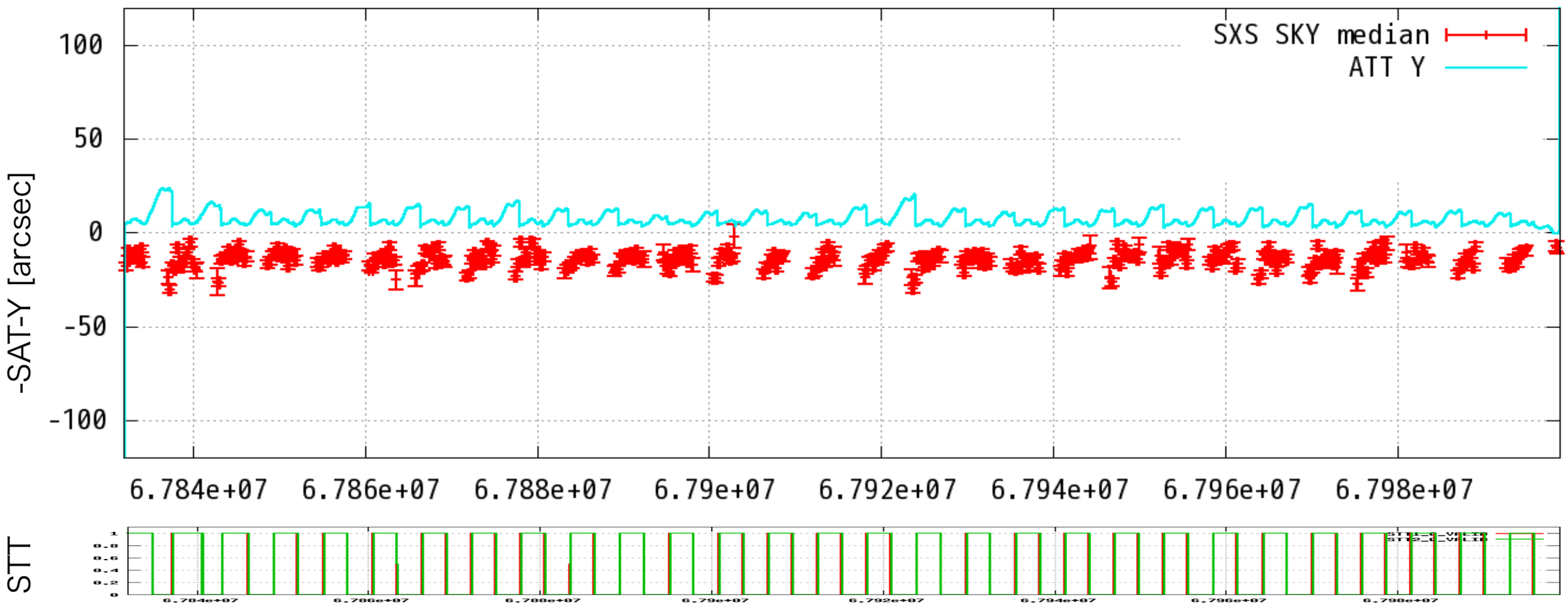


100040020

Perseus_core_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-ALL

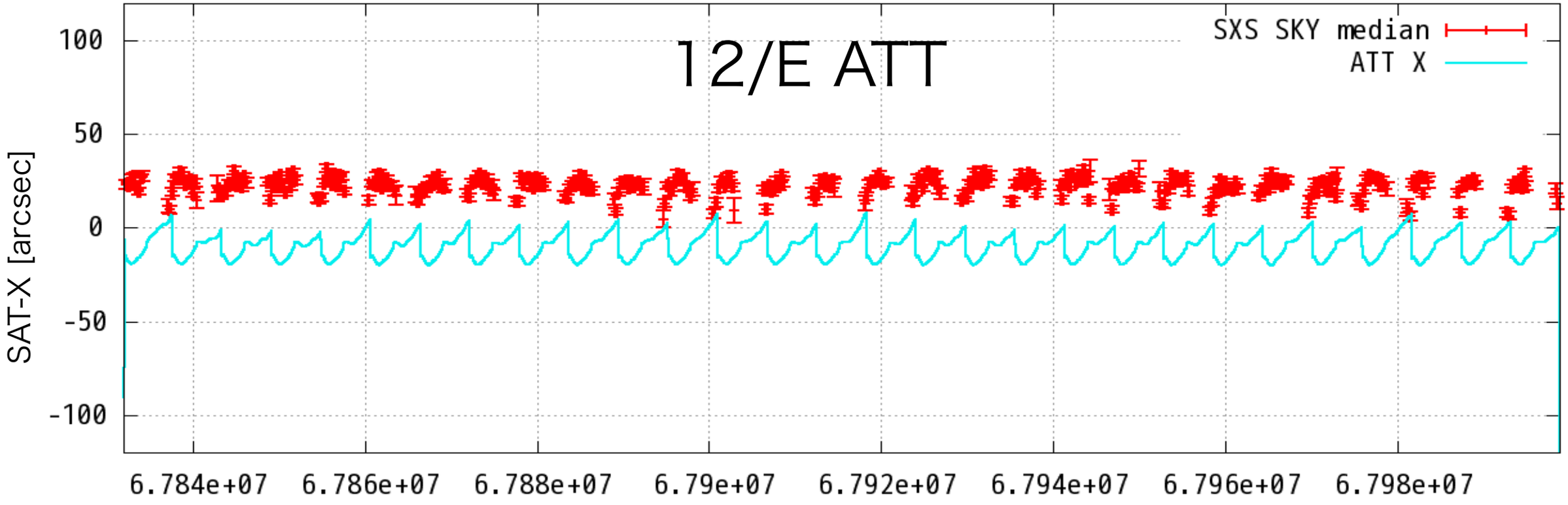


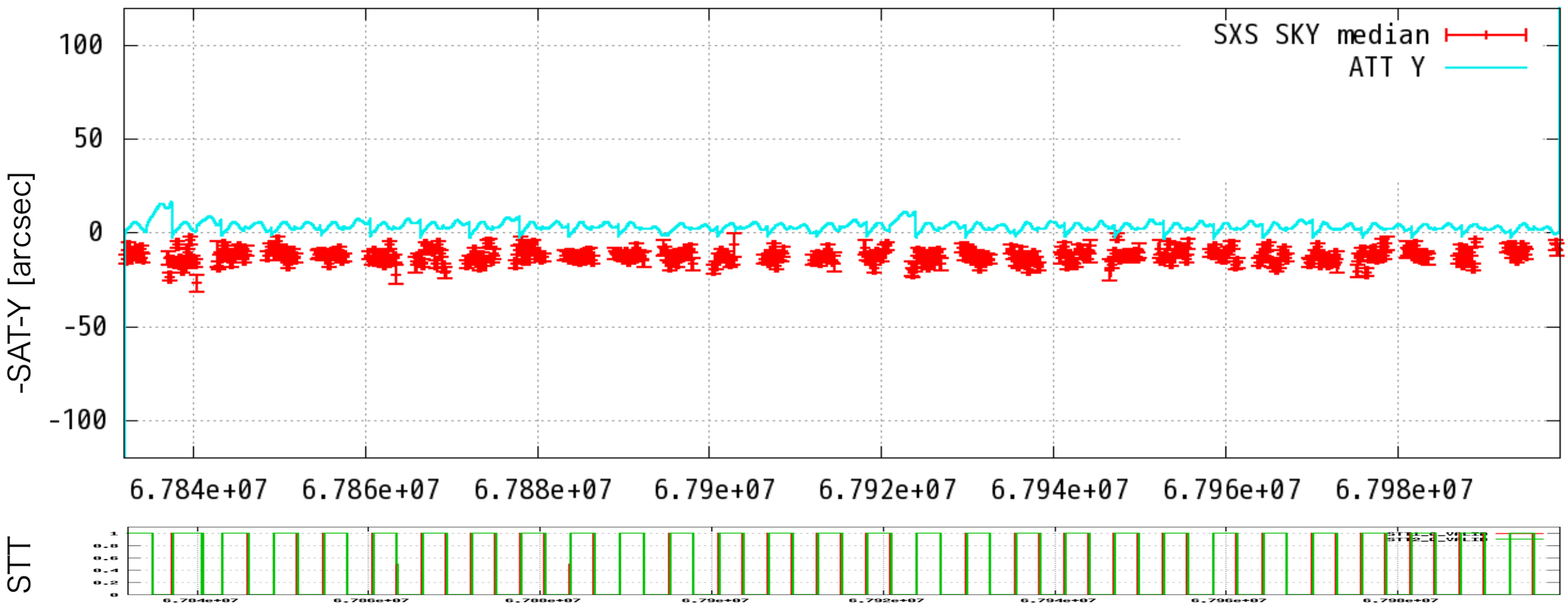


100040020

Perseus_core_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-ALL

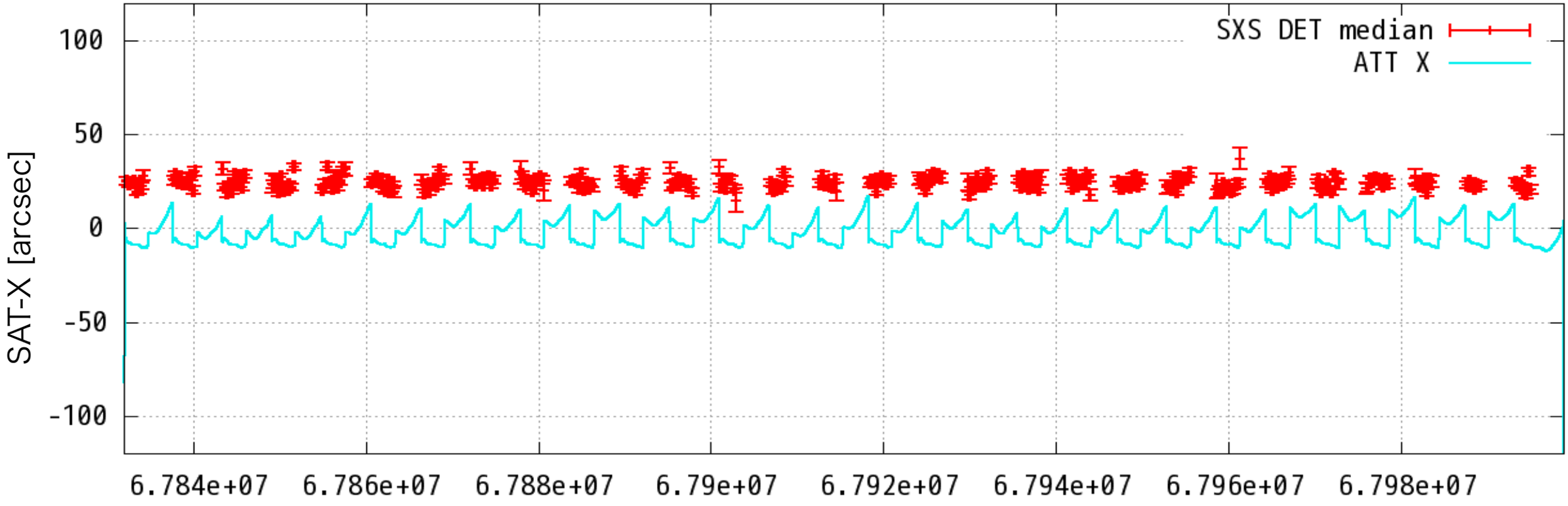


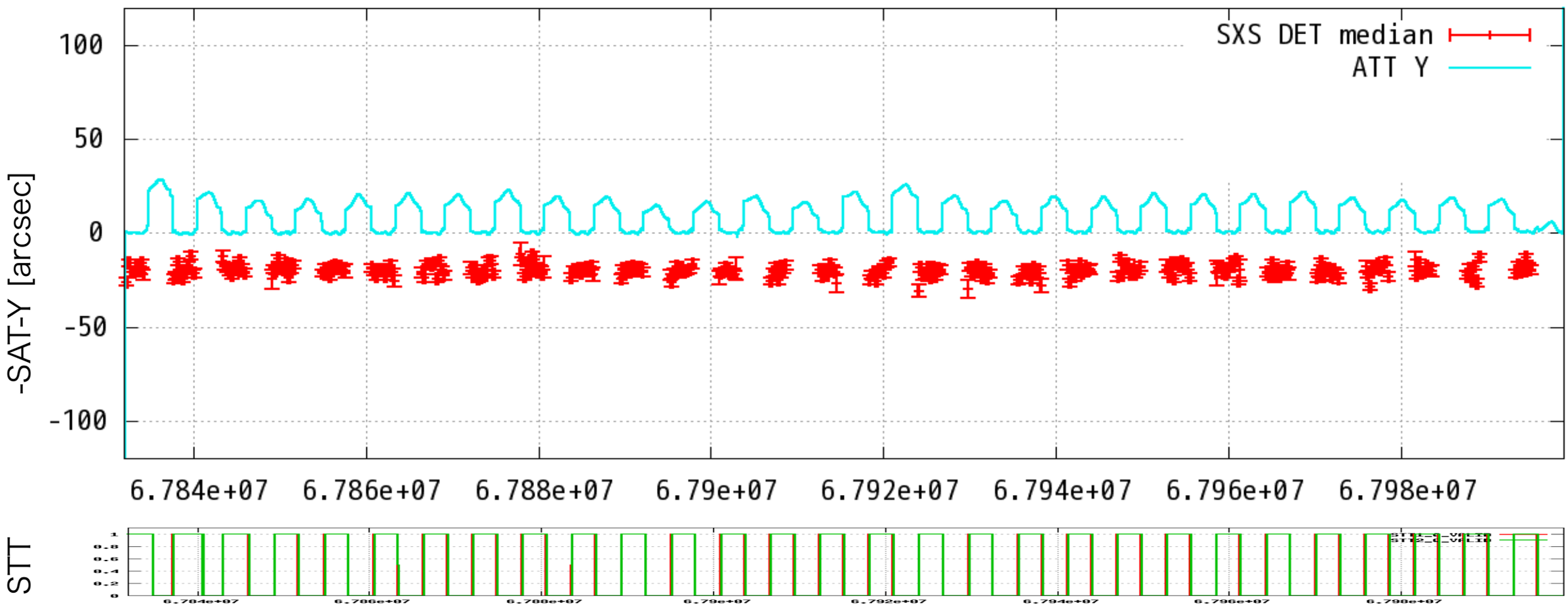


100040020

Perseus_core_adjustment DET-X/DET-Y (unit: arcsec)

STT-CTL

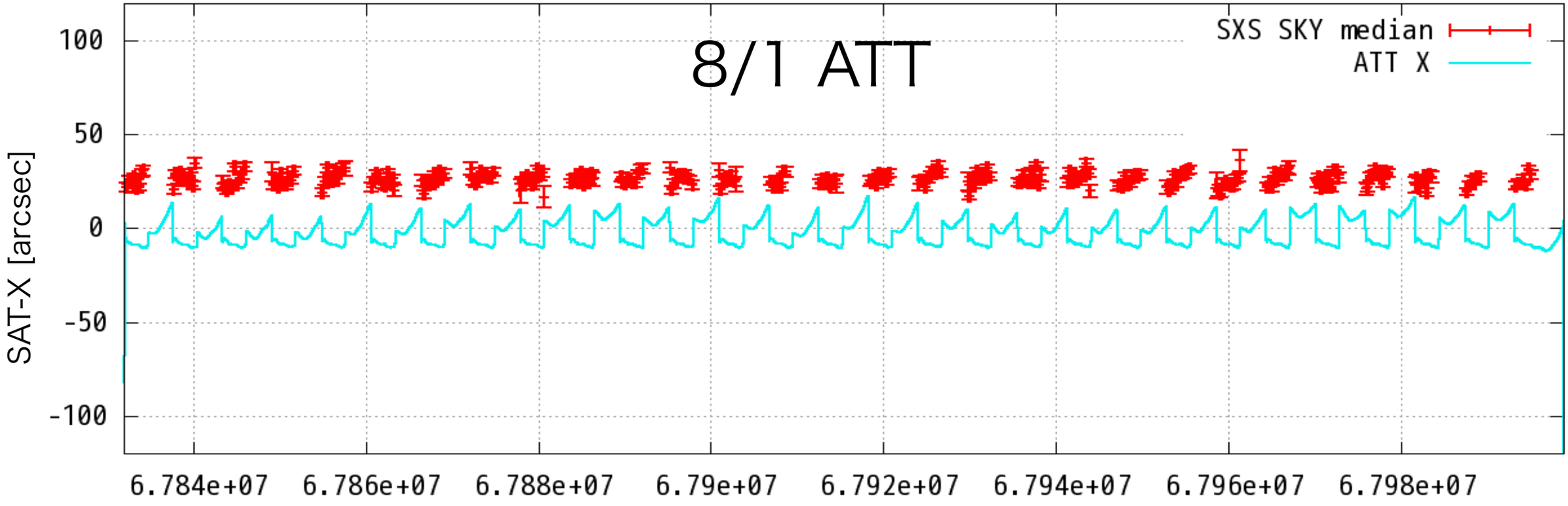


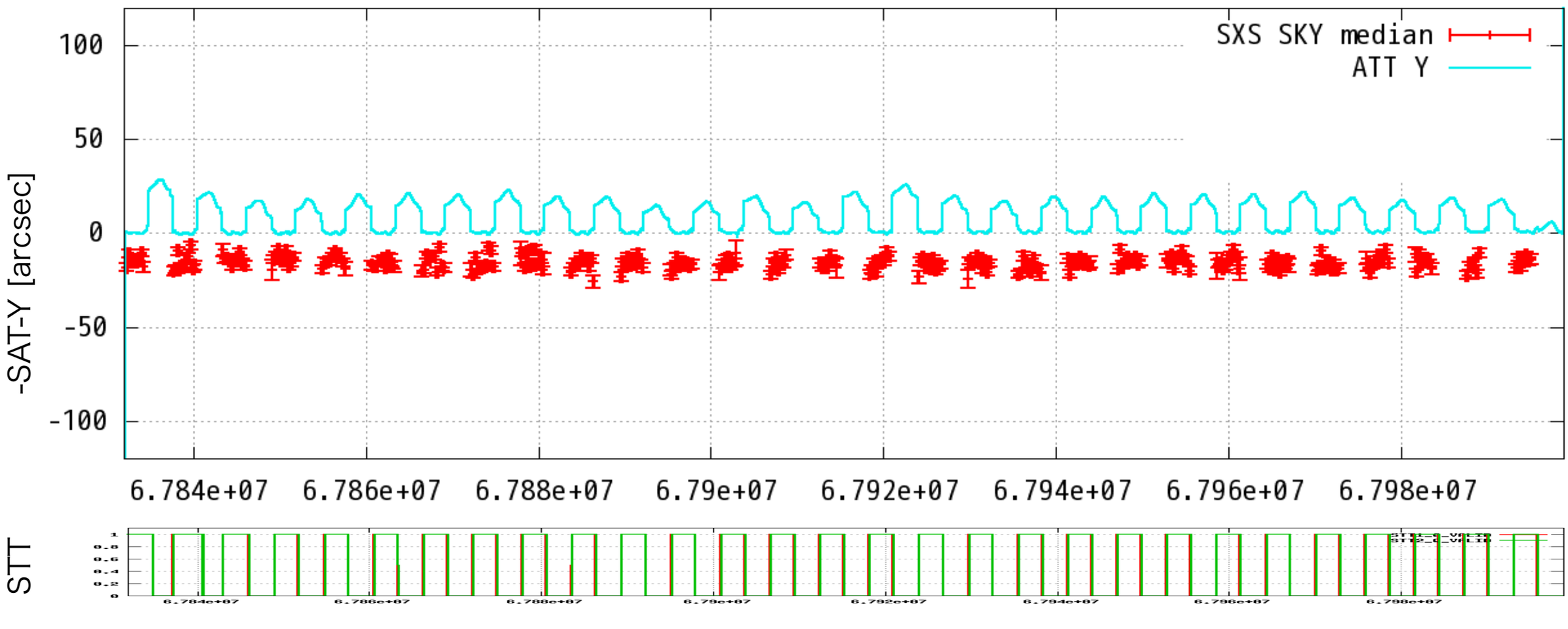


100040020

Perseus_core_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-CTL

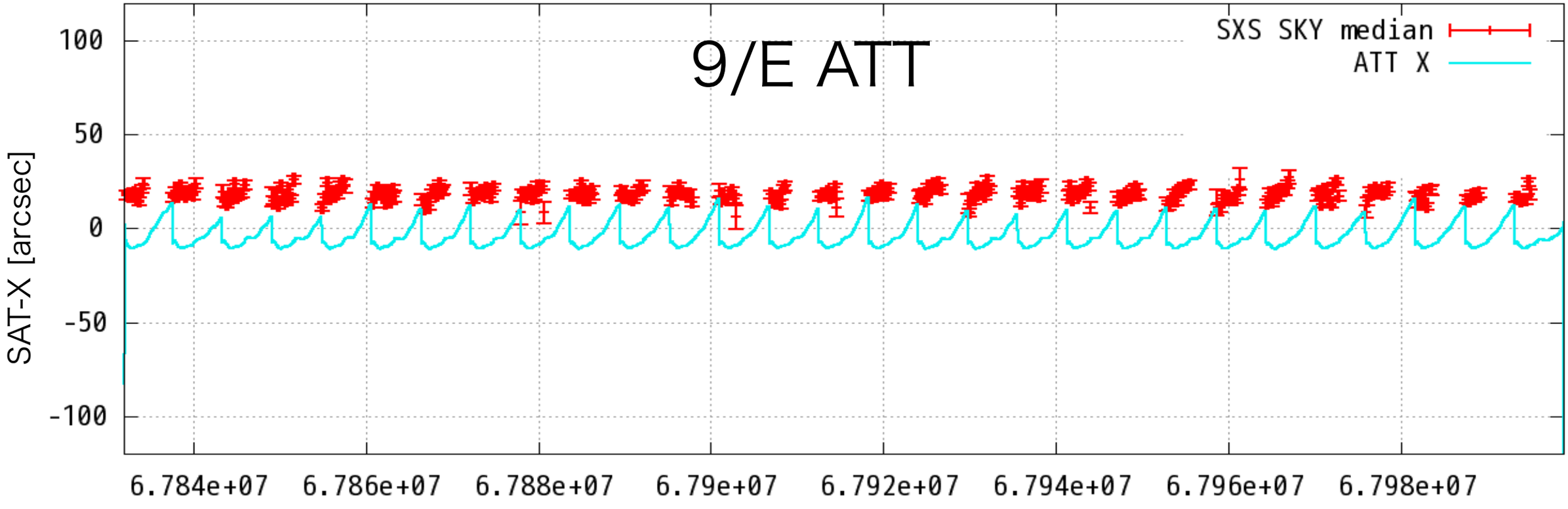


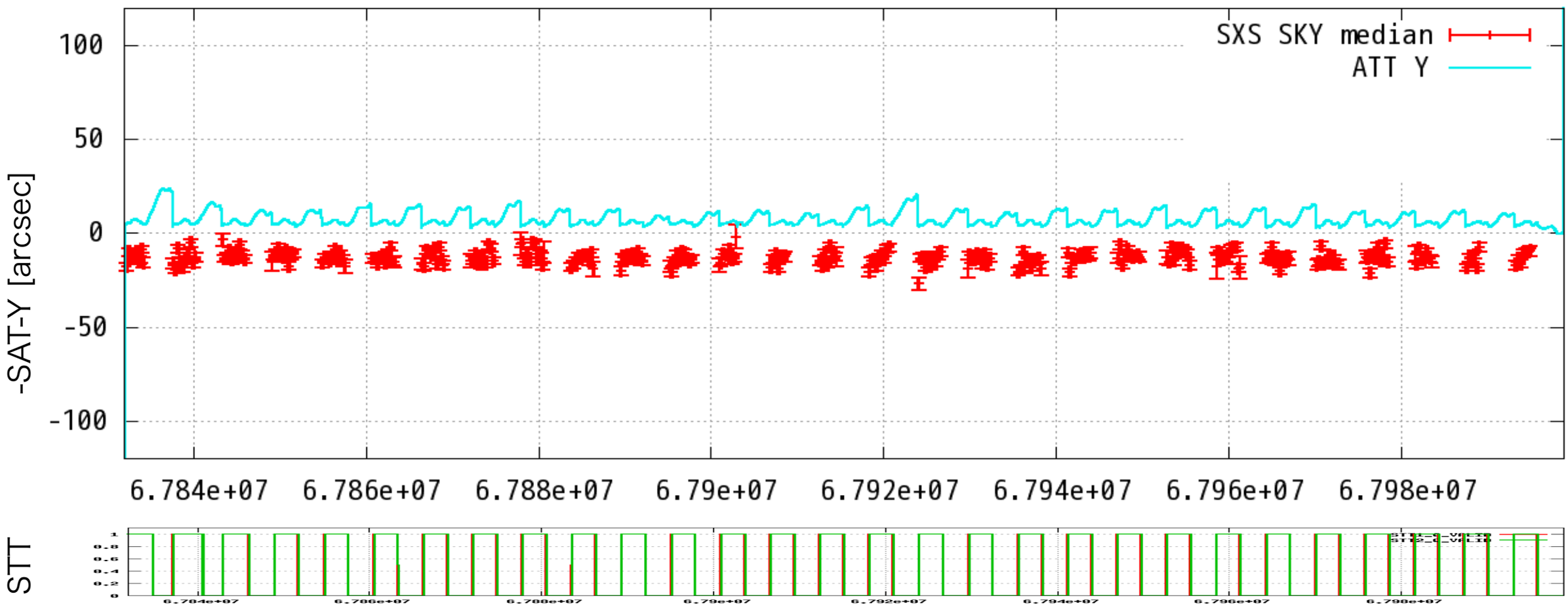


100040020

Perseus_core_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-CTL

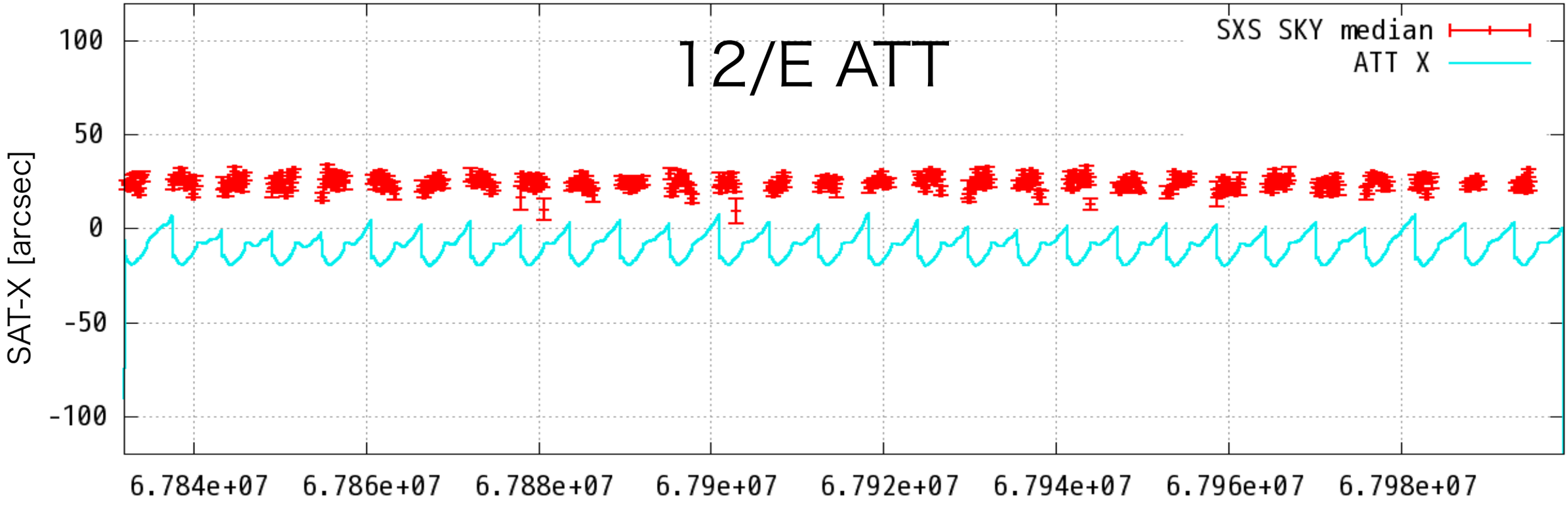


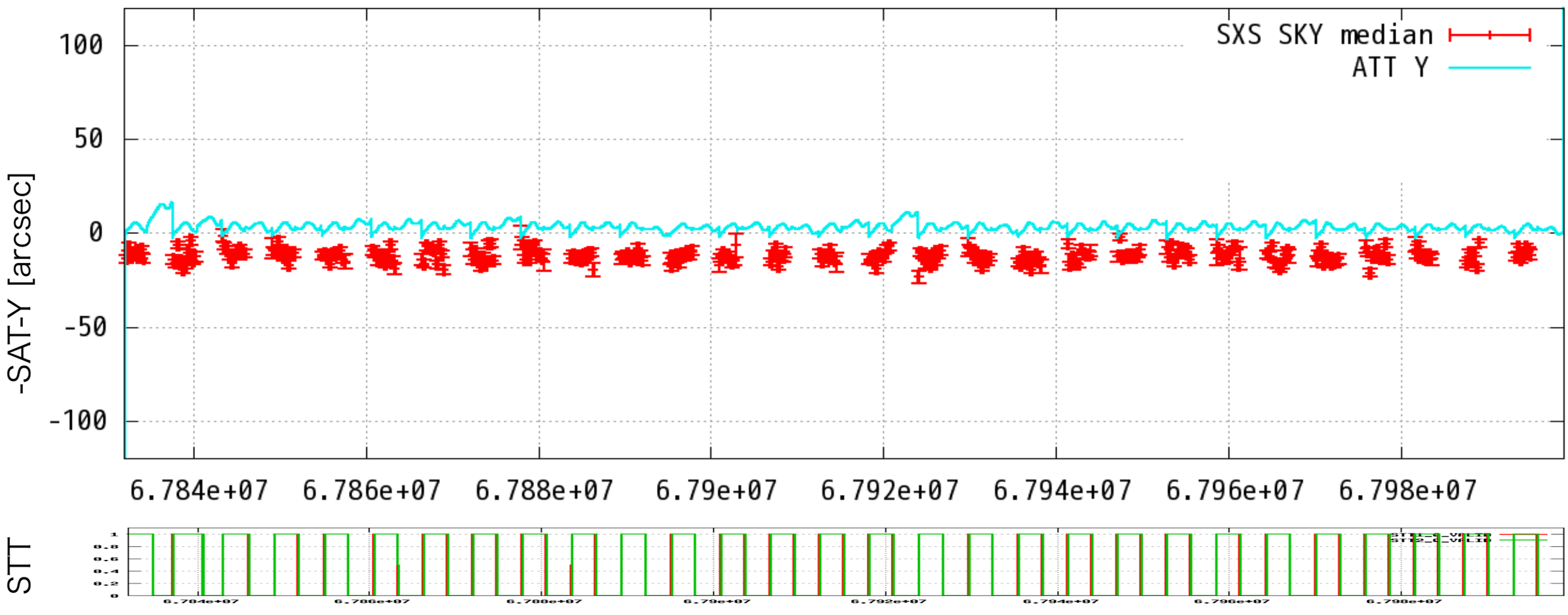


100040020

Perseus_core_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-CTL

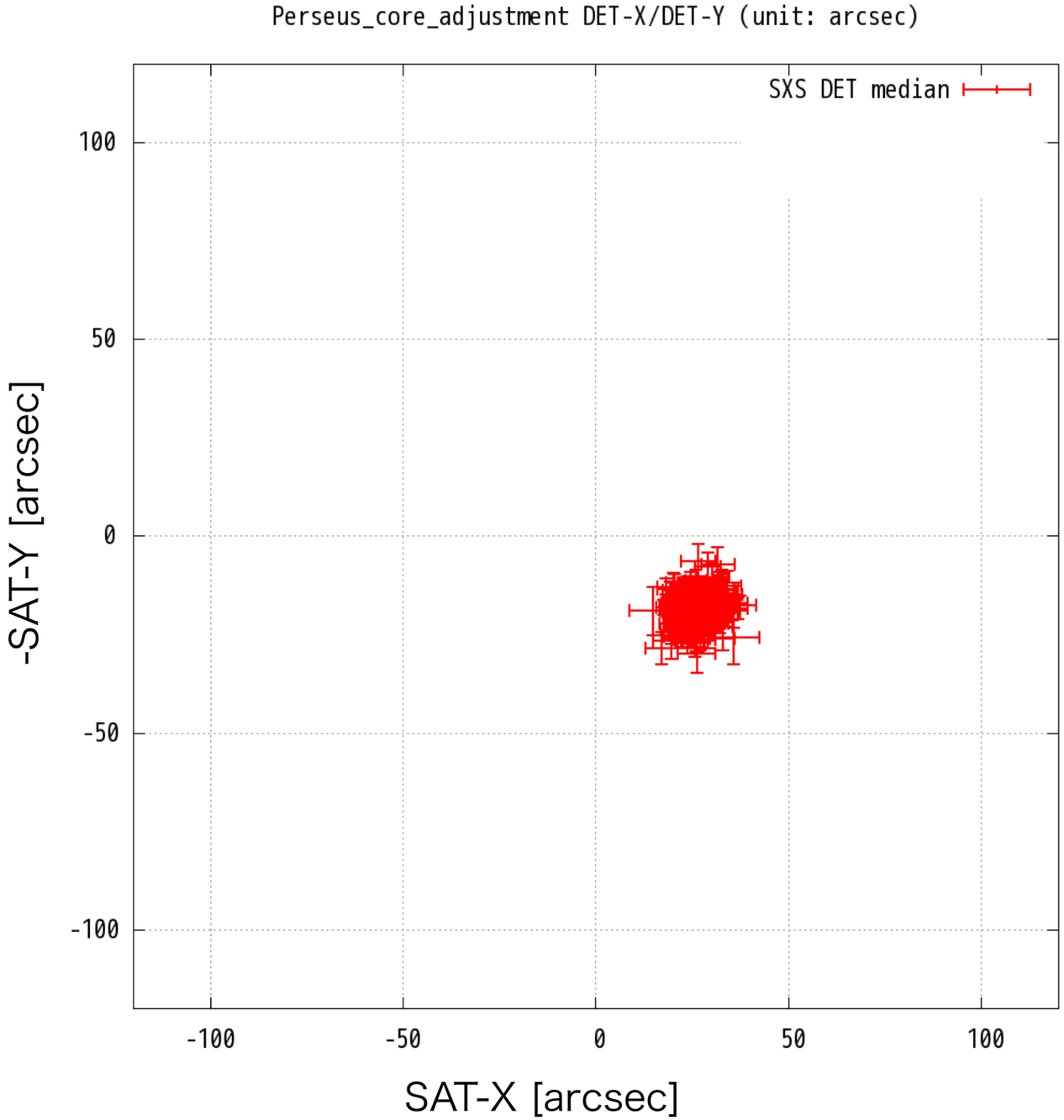




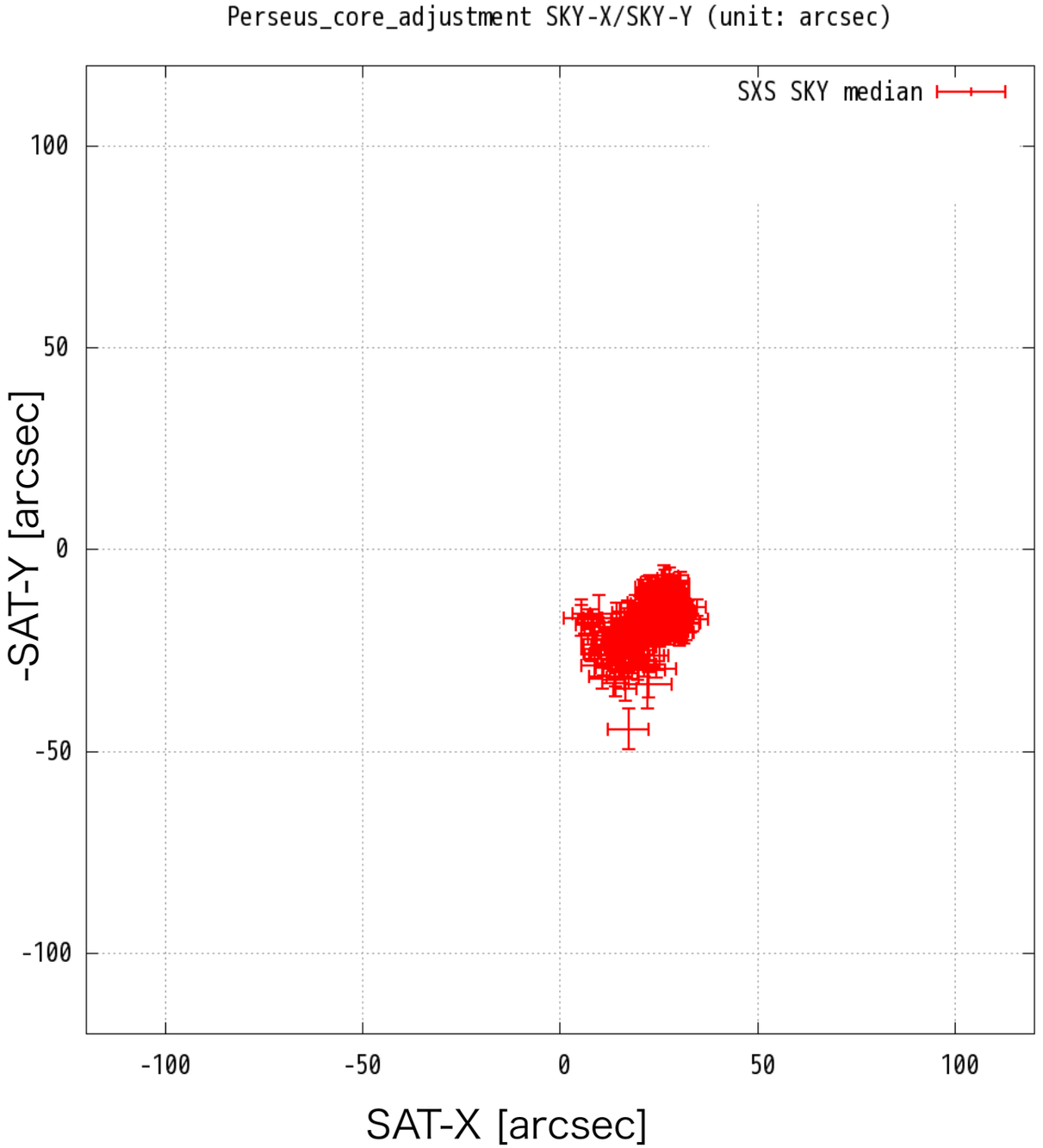
Perseus_core_adjustment (STT-ALL)
seq: 100040020

8/1 ATT

DET

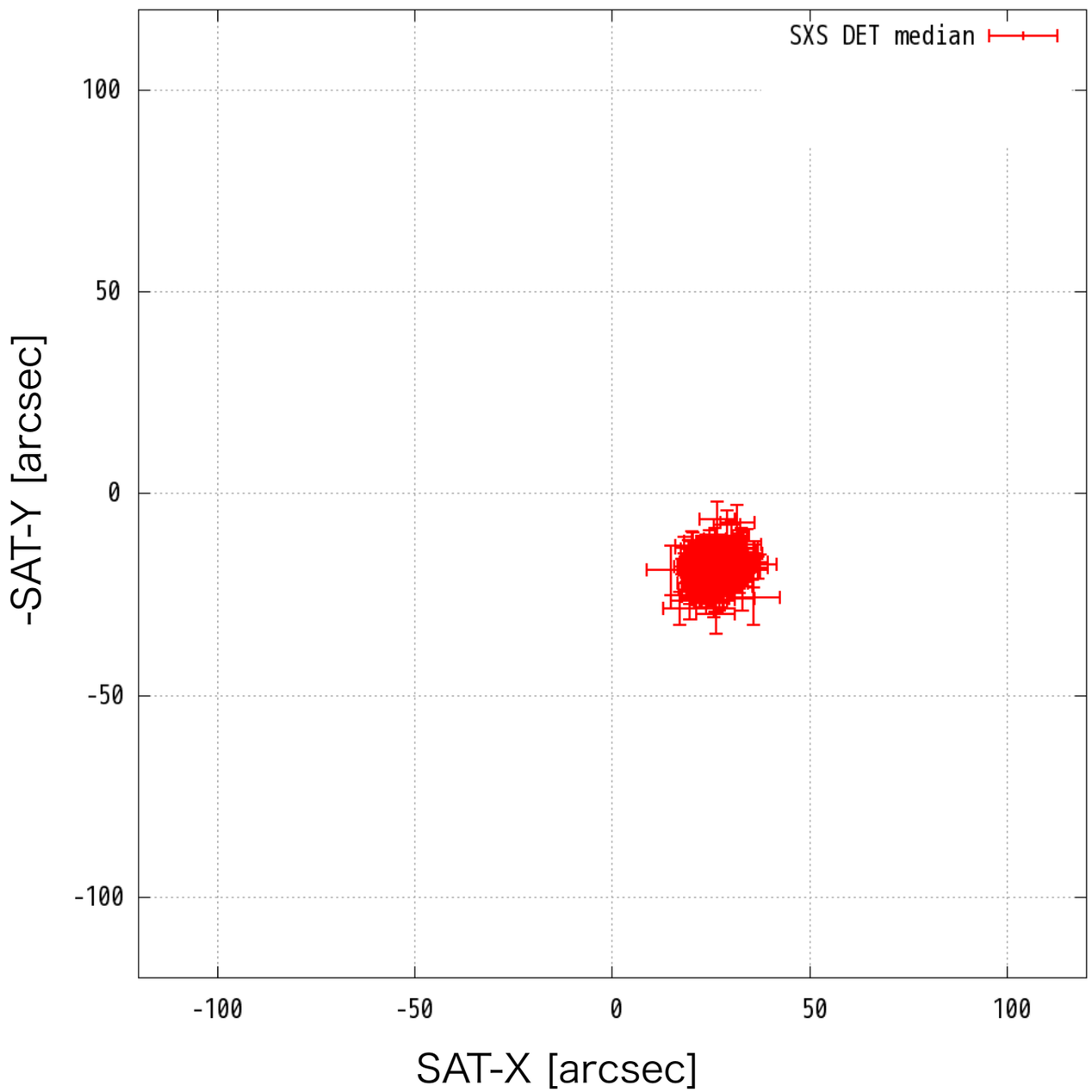


SKY



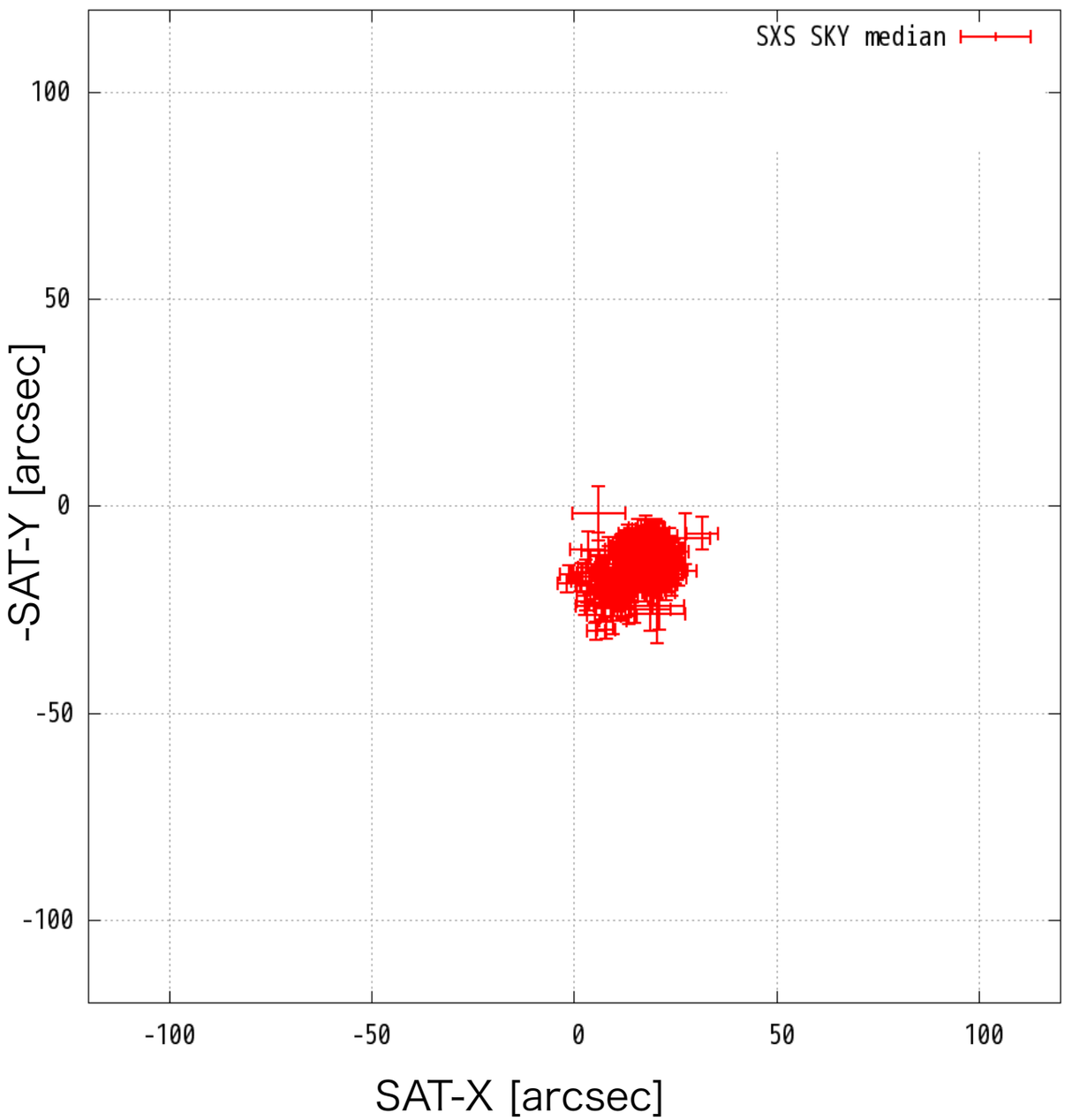
Perseus_core_adjustment (STT-ALL)
seq: 100040020

DET



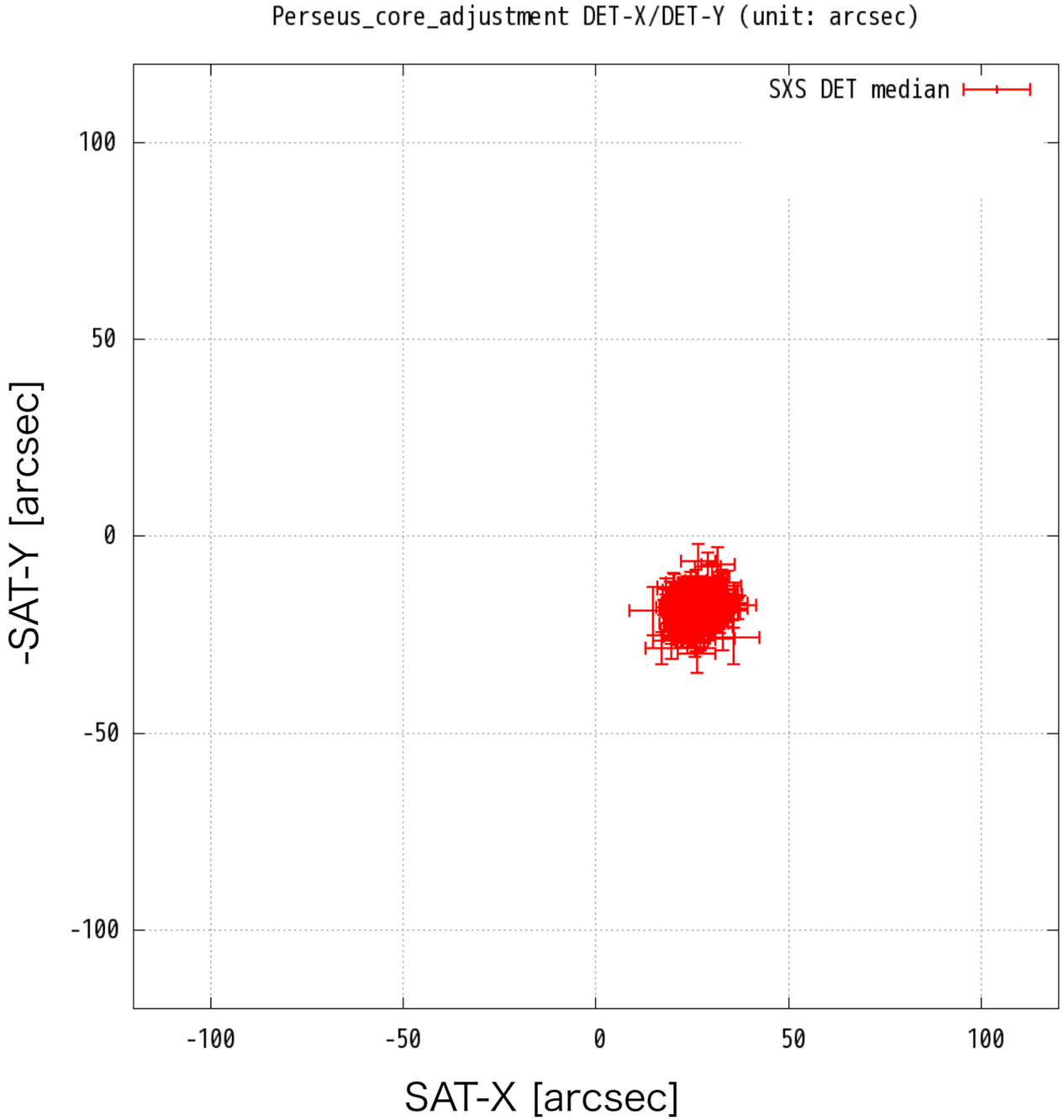
SKY

9/E ATT



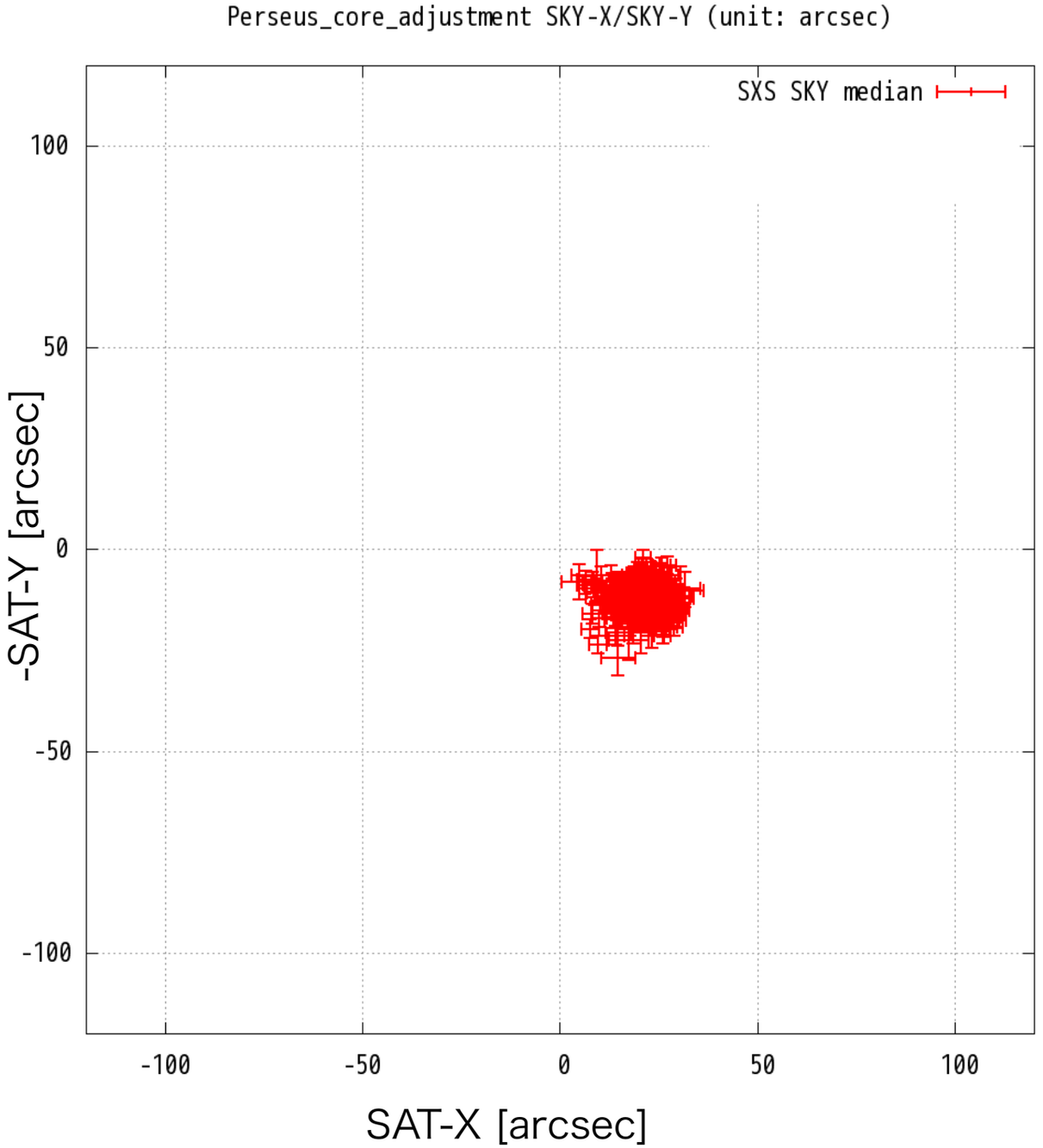
Perseus_core_adjustment (STT-ALL)
seq: 100040020

DET



SKY

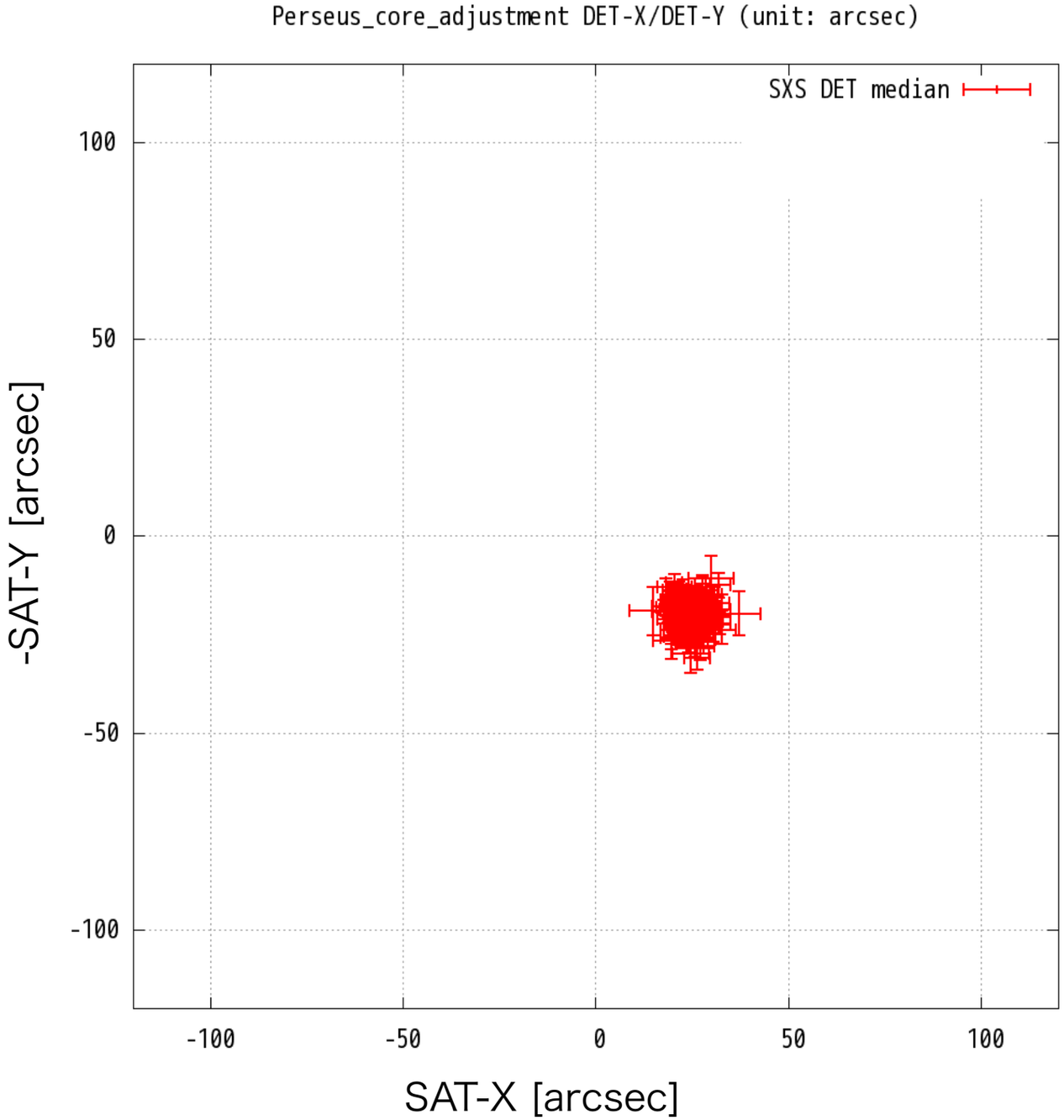
12/E ATT



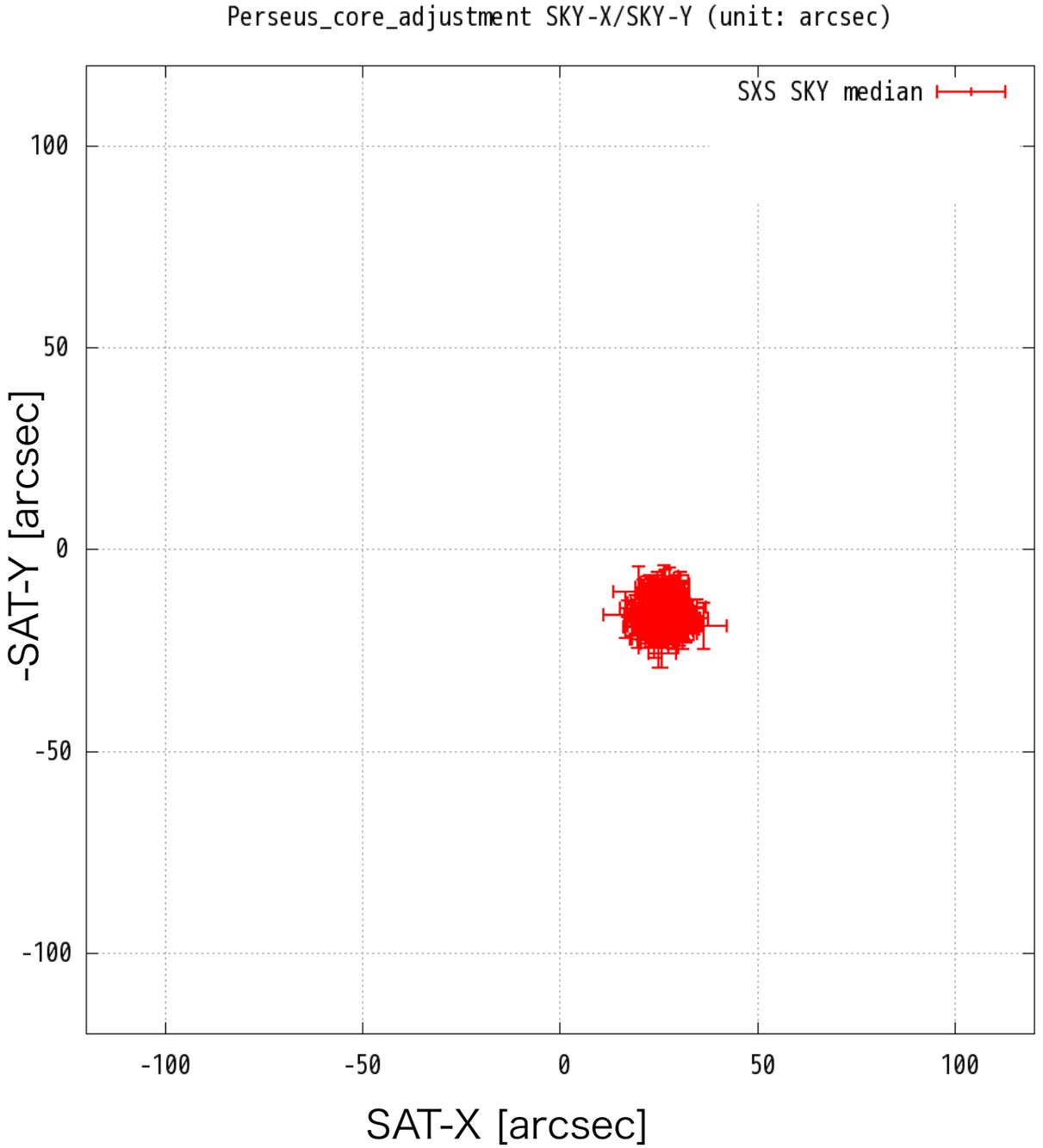
Perseus_core_adjustment (STT-CTL)
seq: 100040020

8/1 ATT

DET

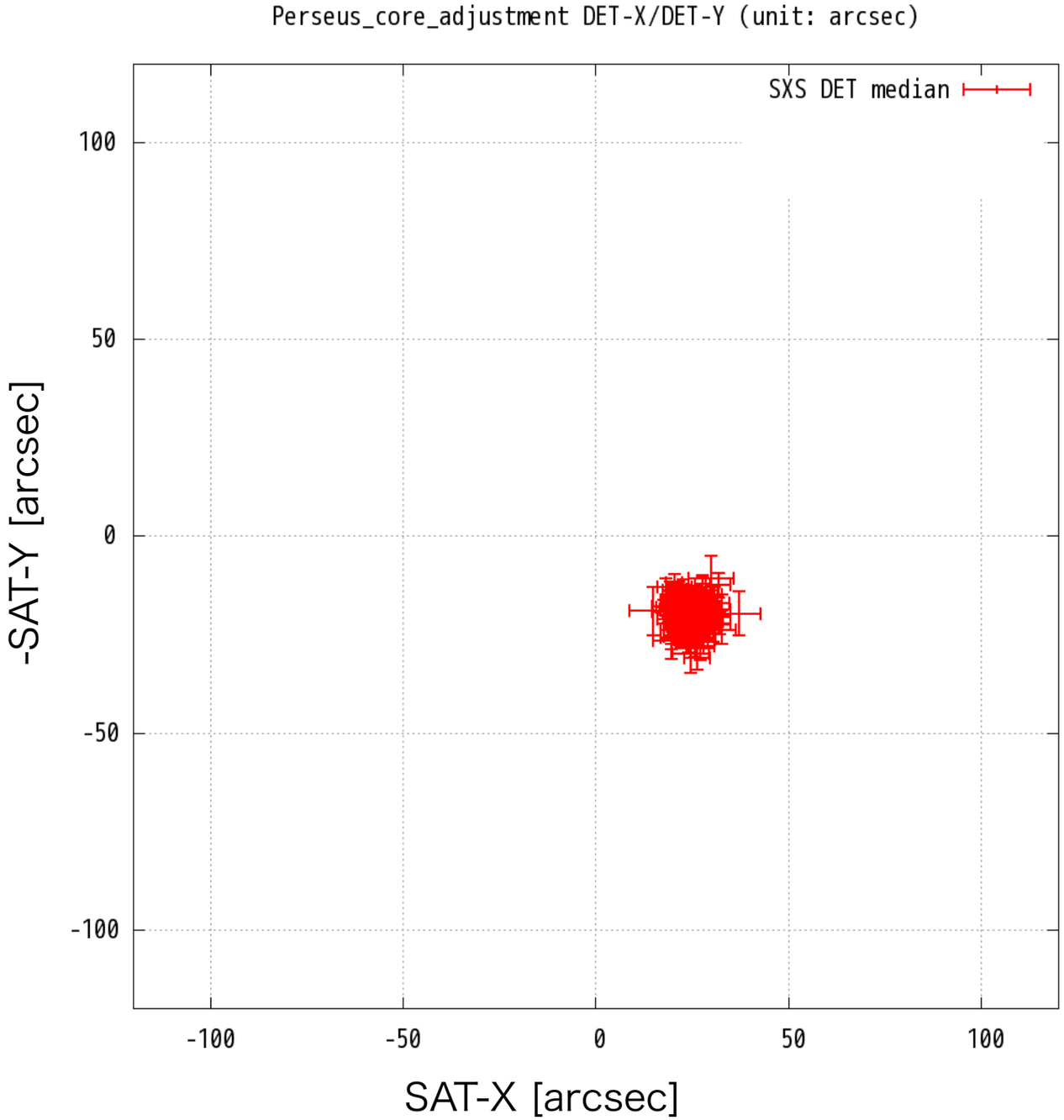


SKY



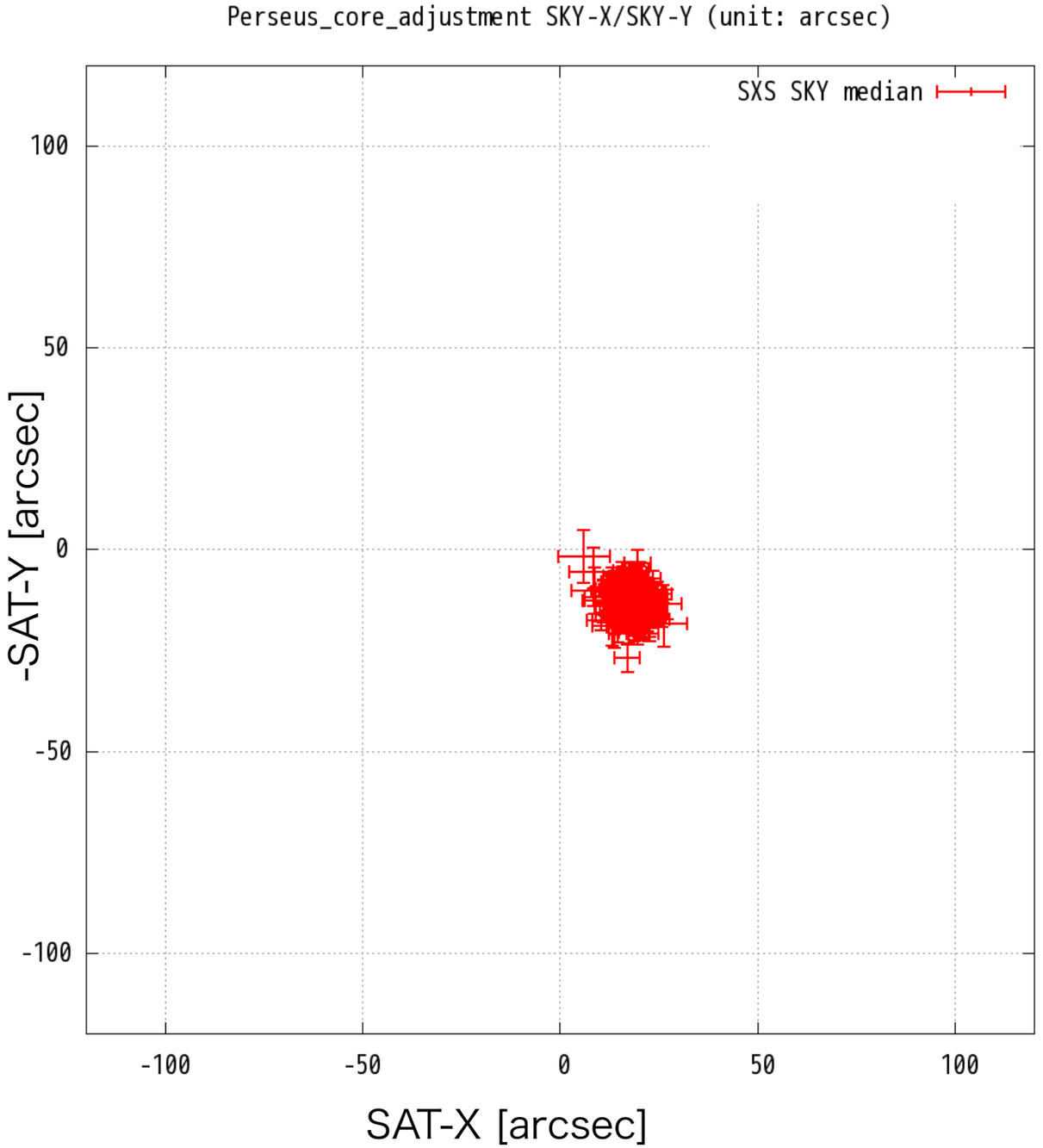
Perseus_core_adjustment (STT-CTL)
seq: 100040020

DET



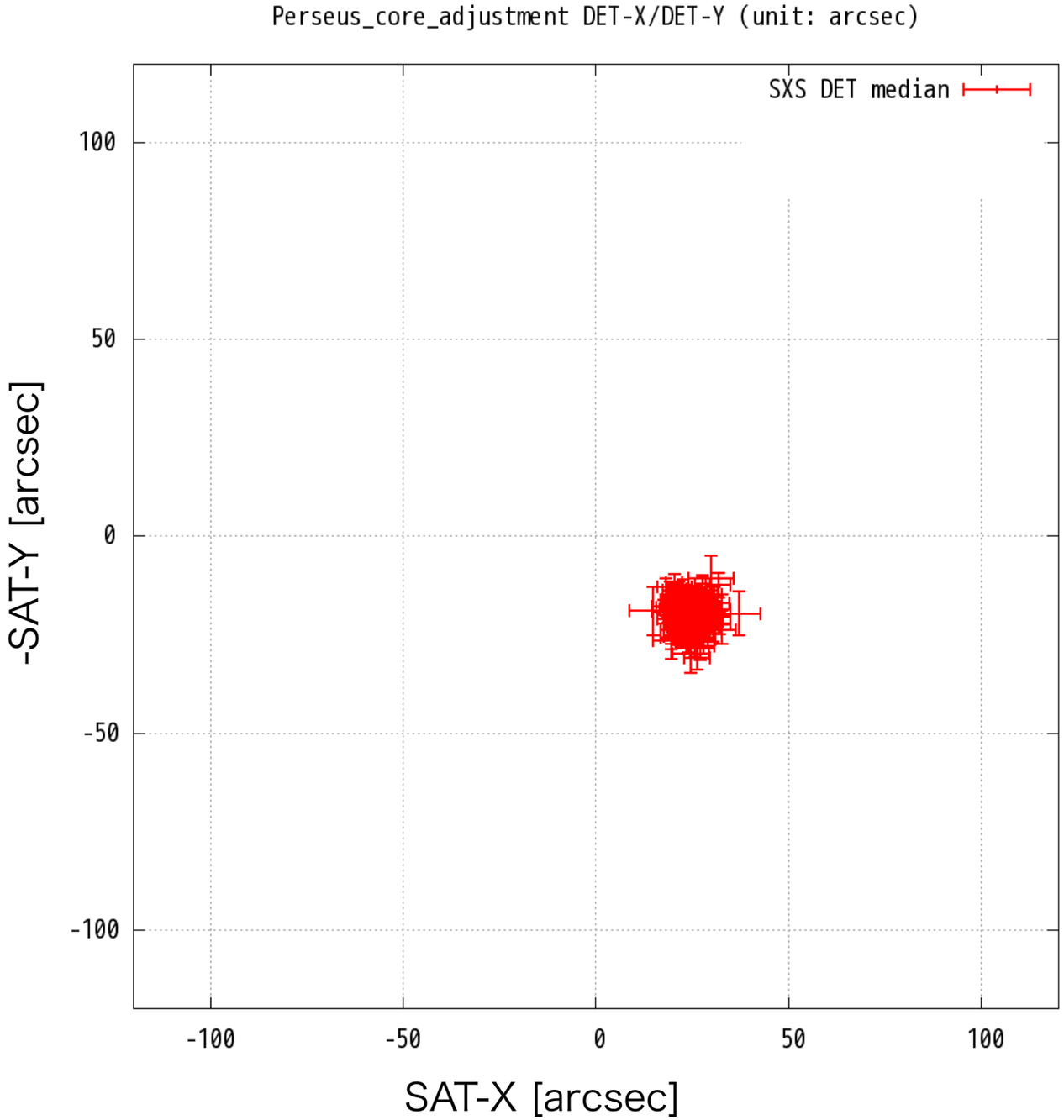
SKY

9/E ATT



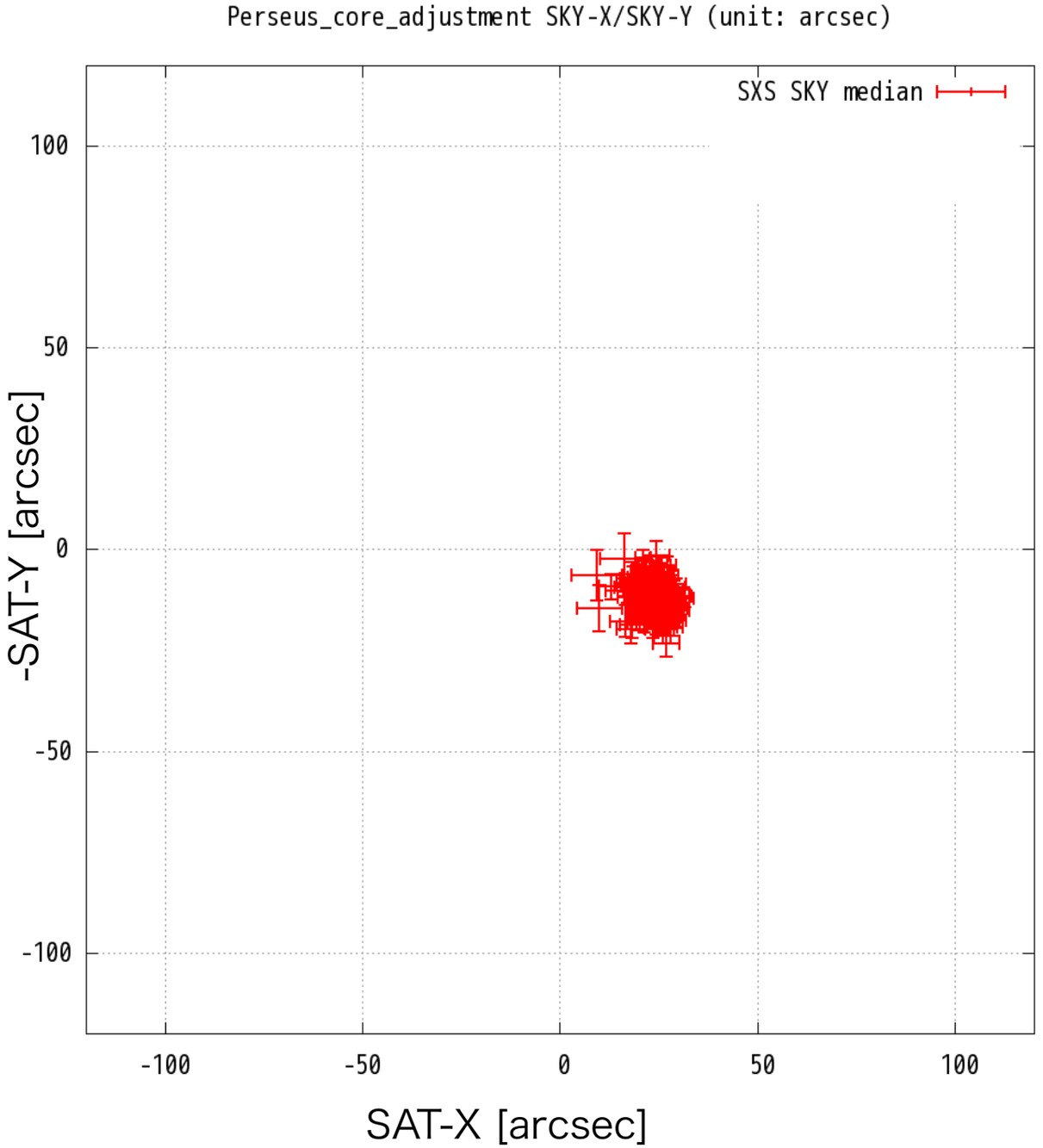
Perseus_core_adjustment (STT-CTL)
seq: 100040020

DET



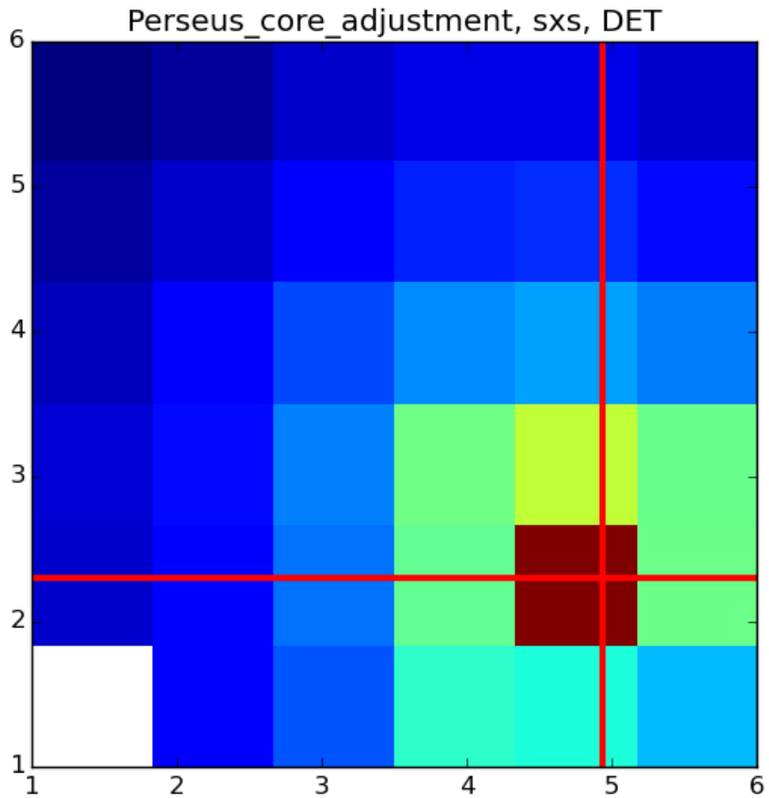
SKY

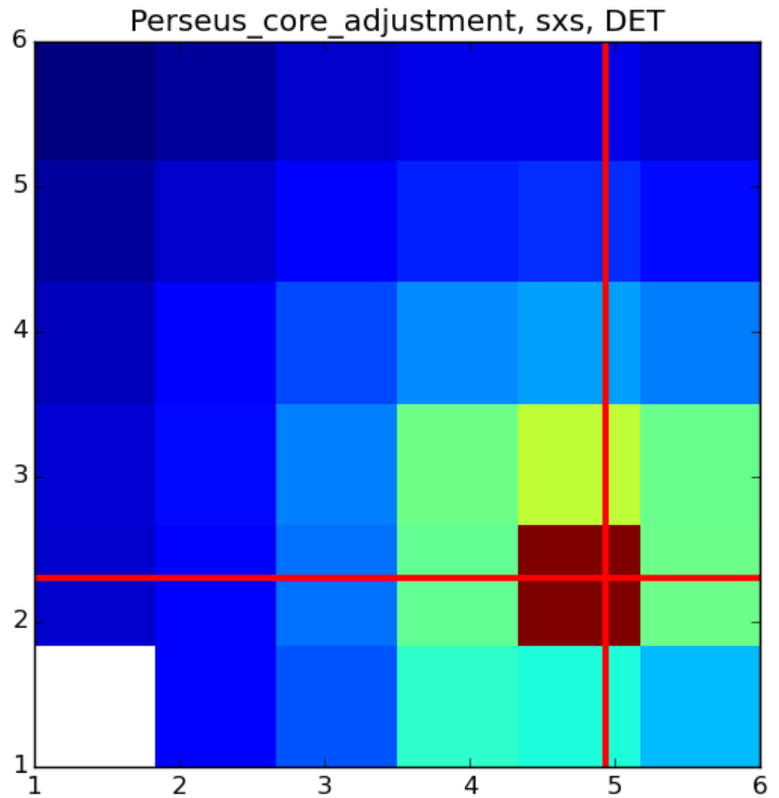
12/E ATT



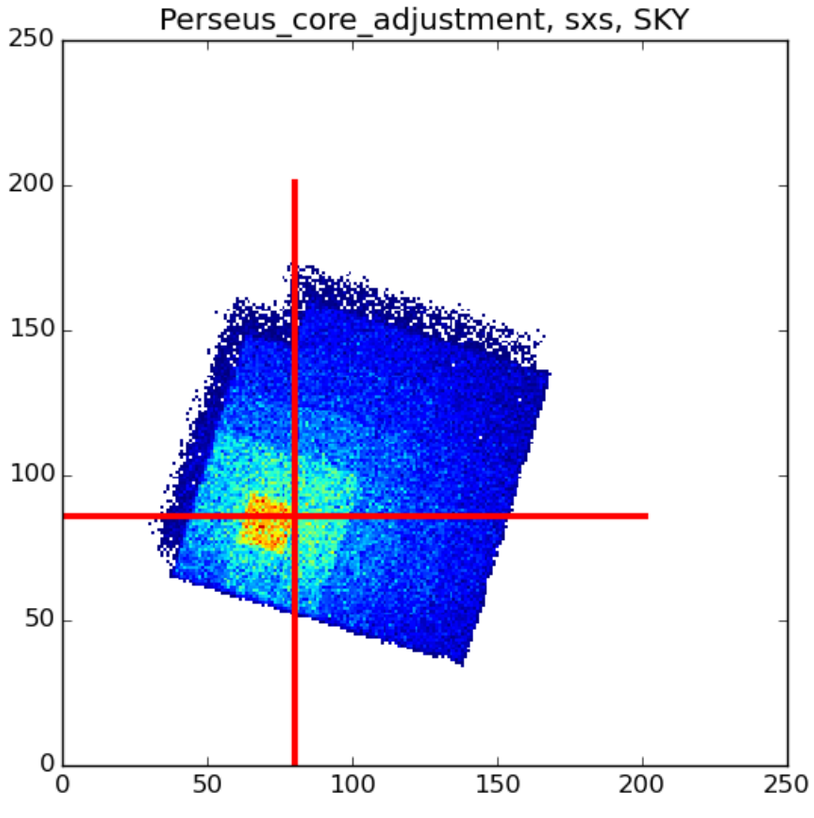
Perseus_core_adjustment
(STT-ALL)
seq: 100040020

+ 2d lorentz center
+ simbad center
(12/E only)

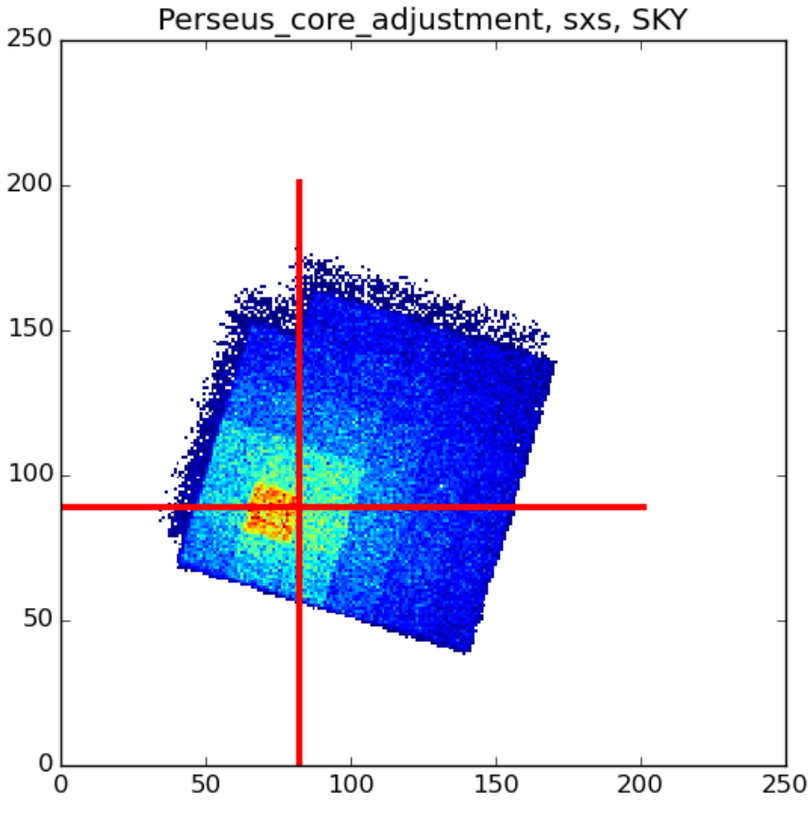




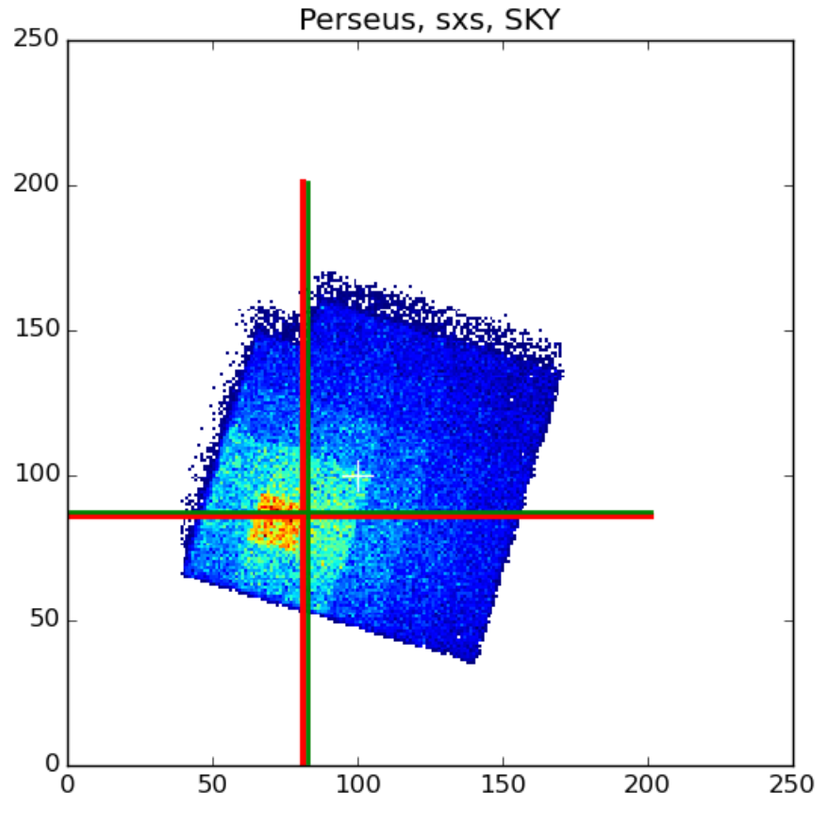
8/1 ATT



9/E ATT



12/E ATT



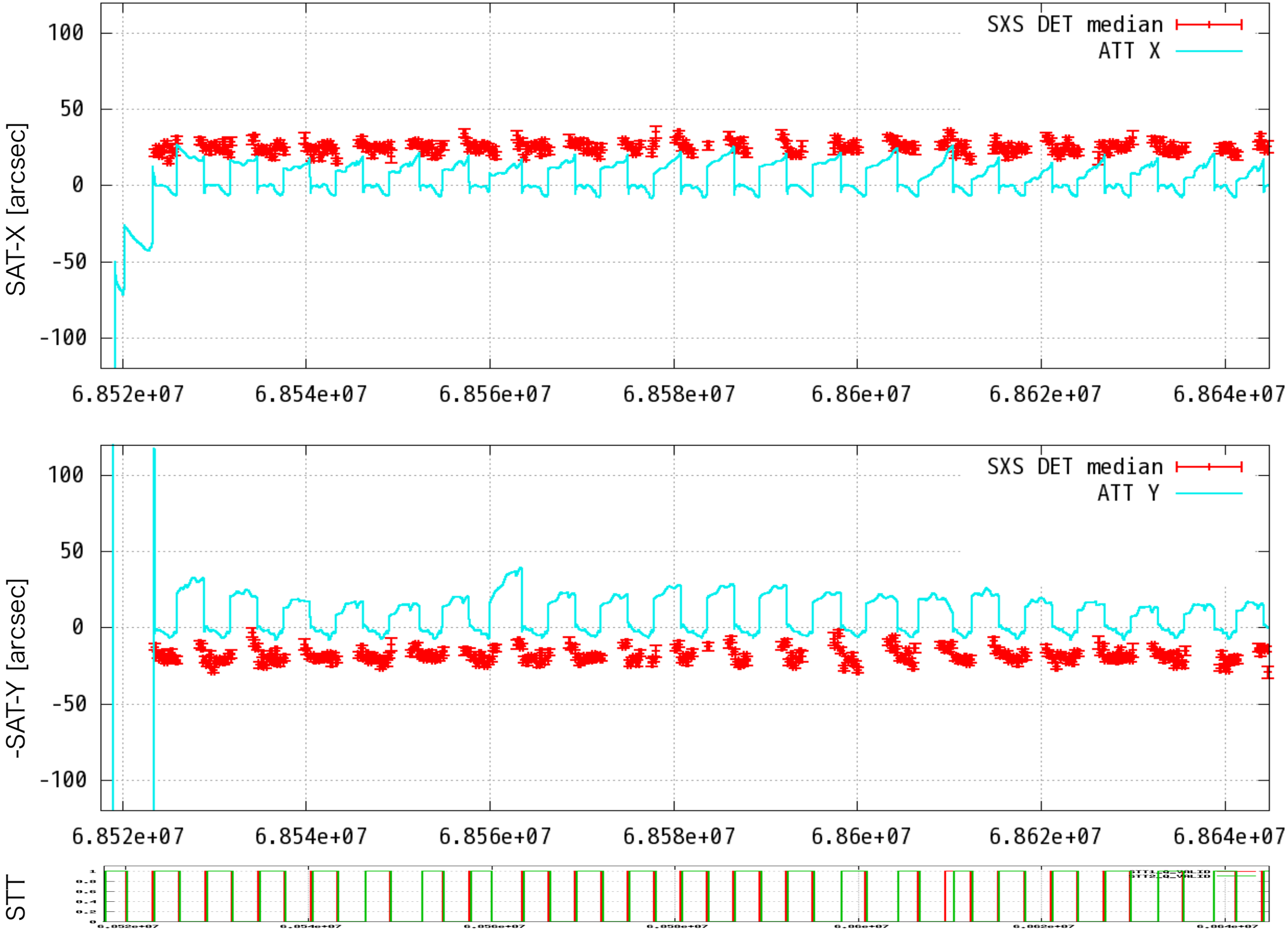
Perseus

100040030, 40, 50

100040030

Perseus DET-X/DET-Y (unit: arcsec)

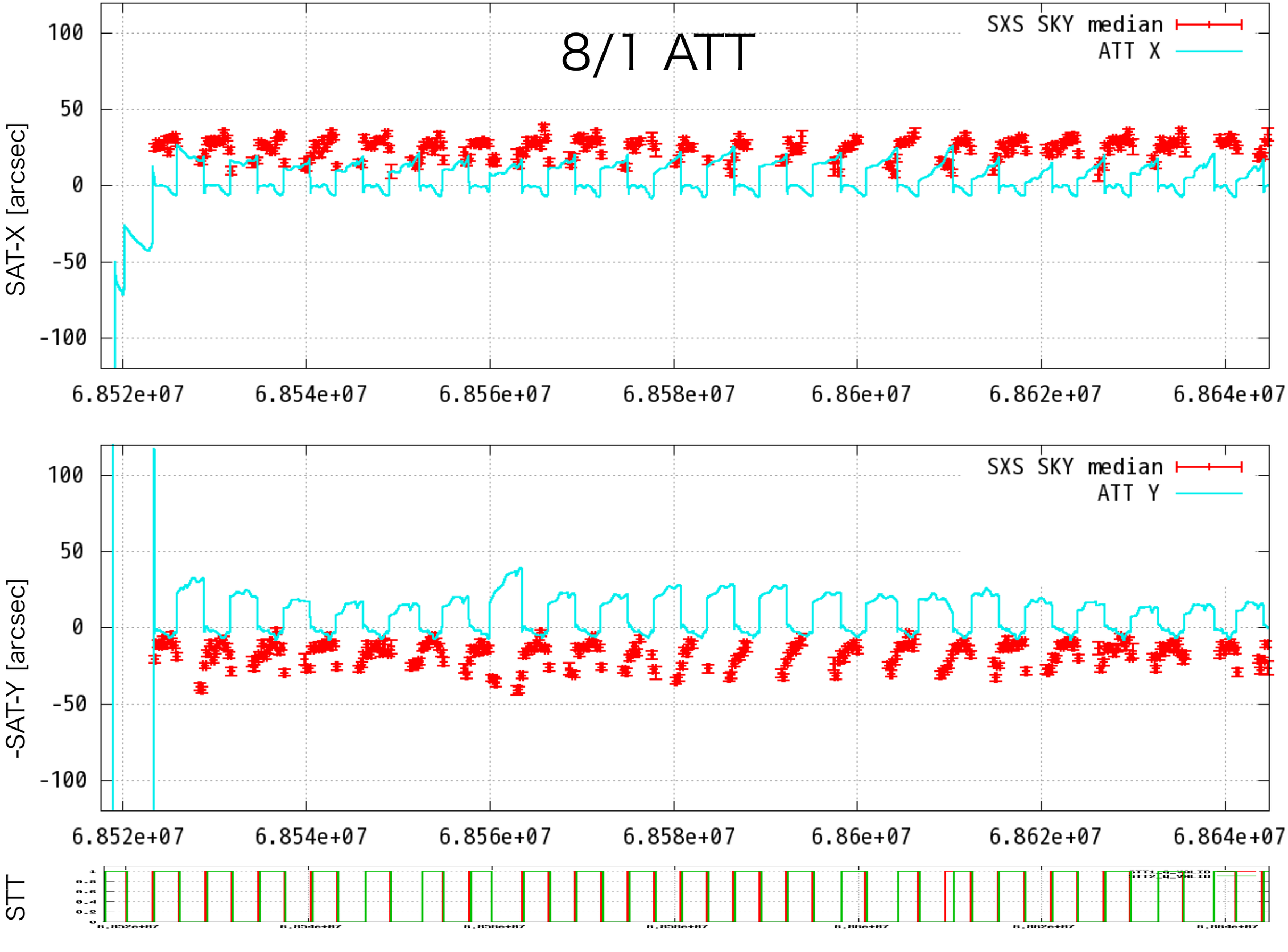
STT-ALL



100040030

Perseus SKY-X/SKY-Y (unit: arcsec)

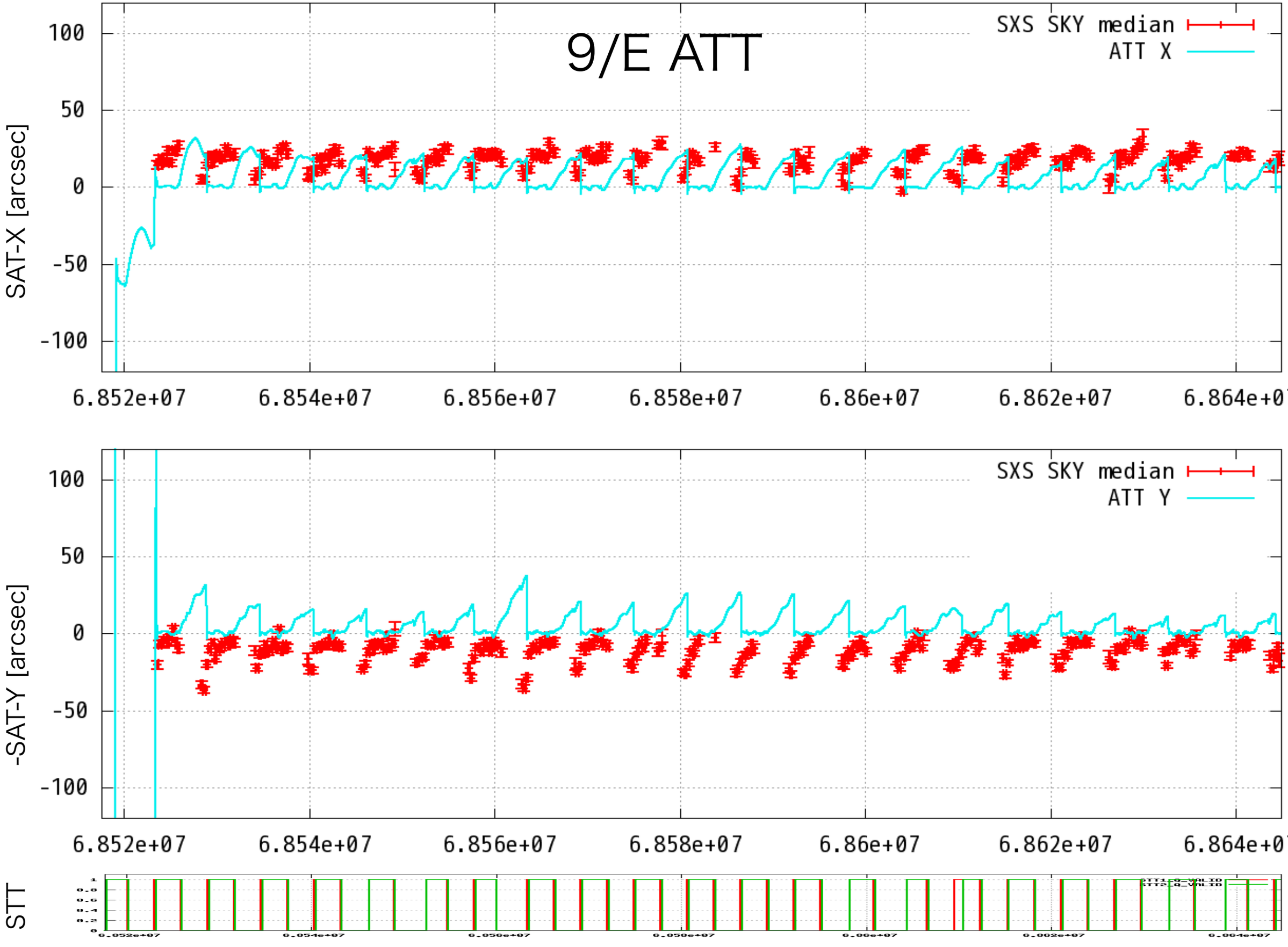
STT-ALL



100040030

Perseus SKY-X/SKY-Y (unit: arcsec)

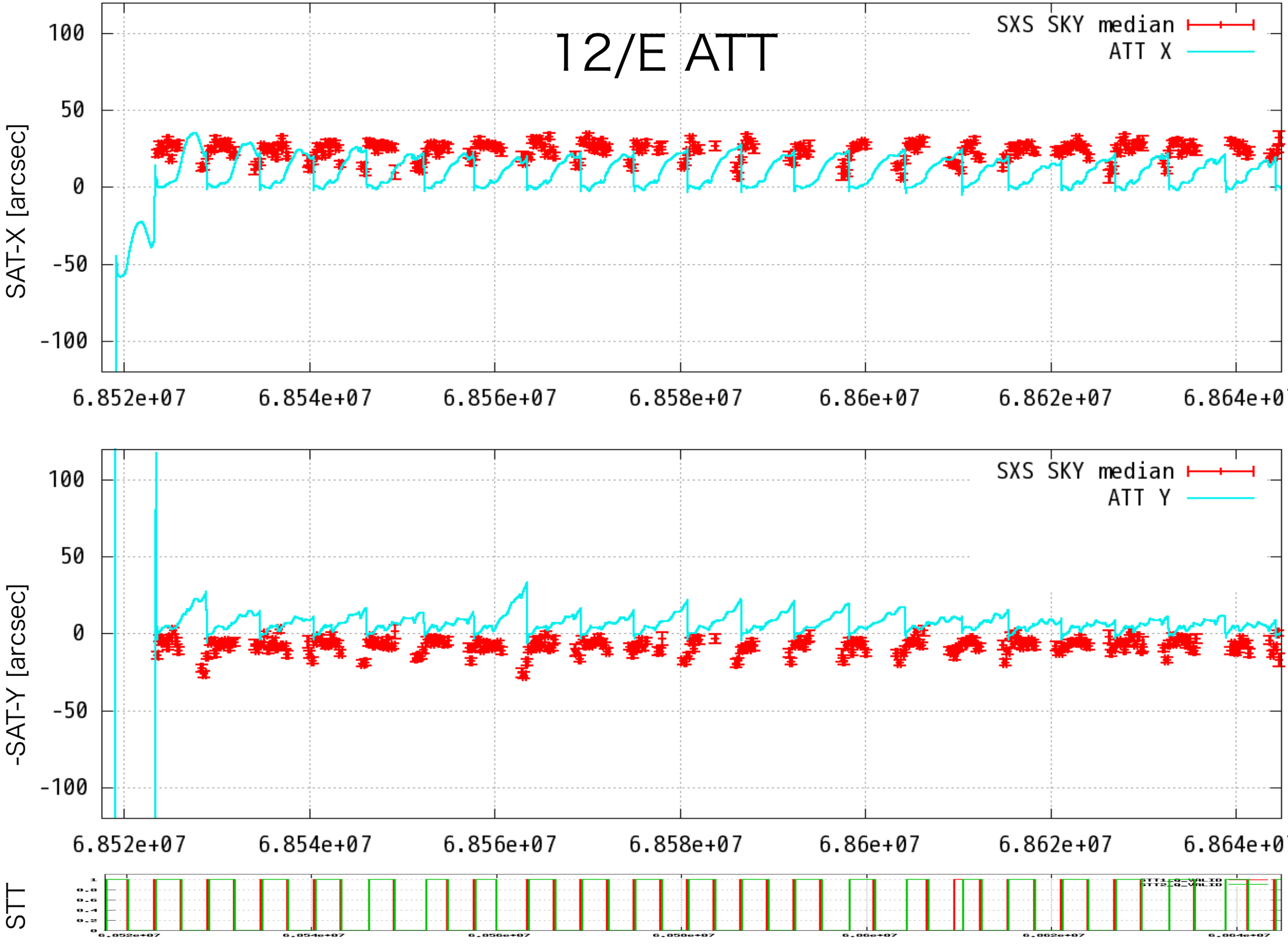
STT-ALL



100040030

Perseus SKY-X/SKY-Y (unit: arcsec)

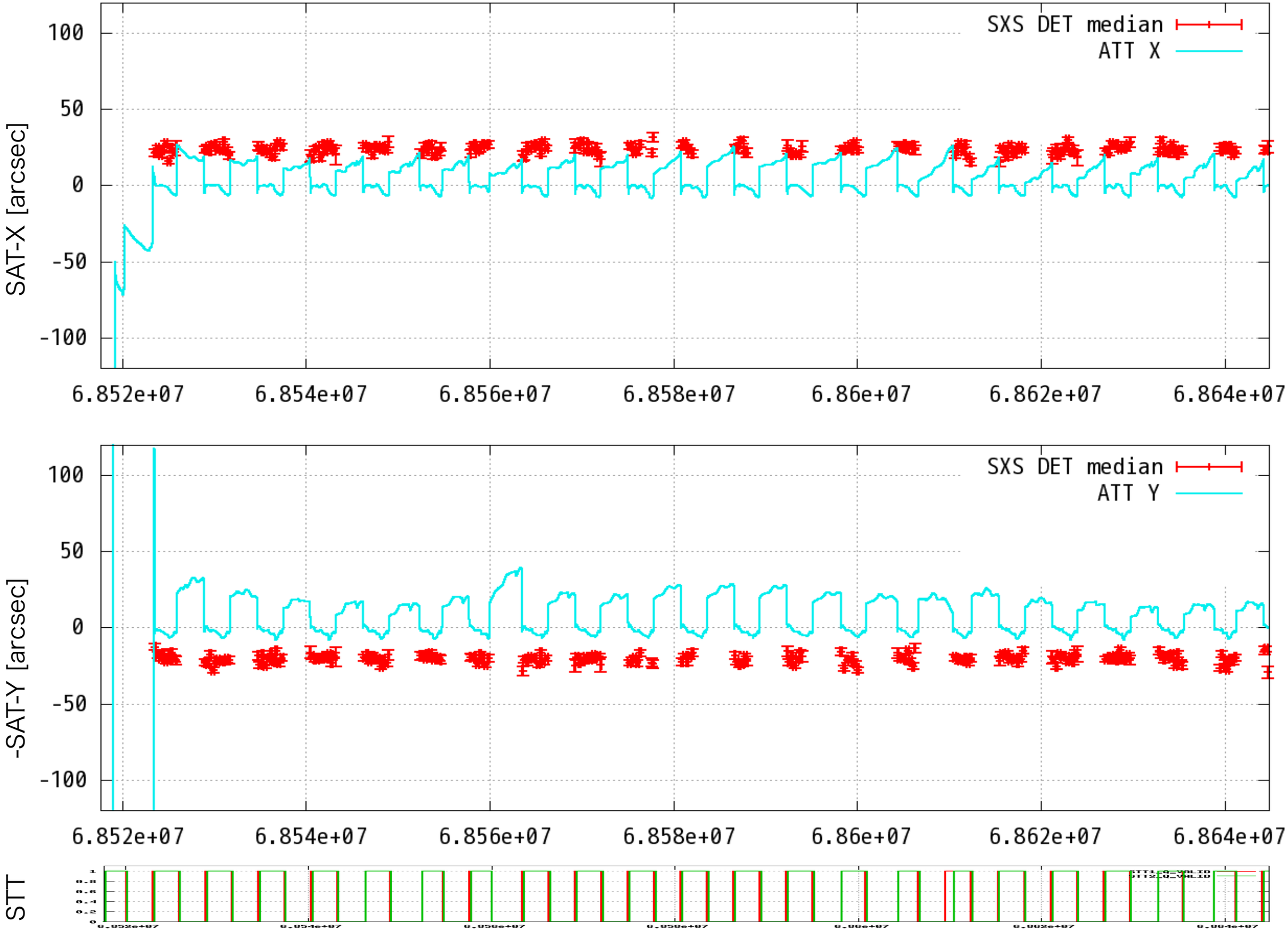
STT-ALL



100040030

STT-CTL

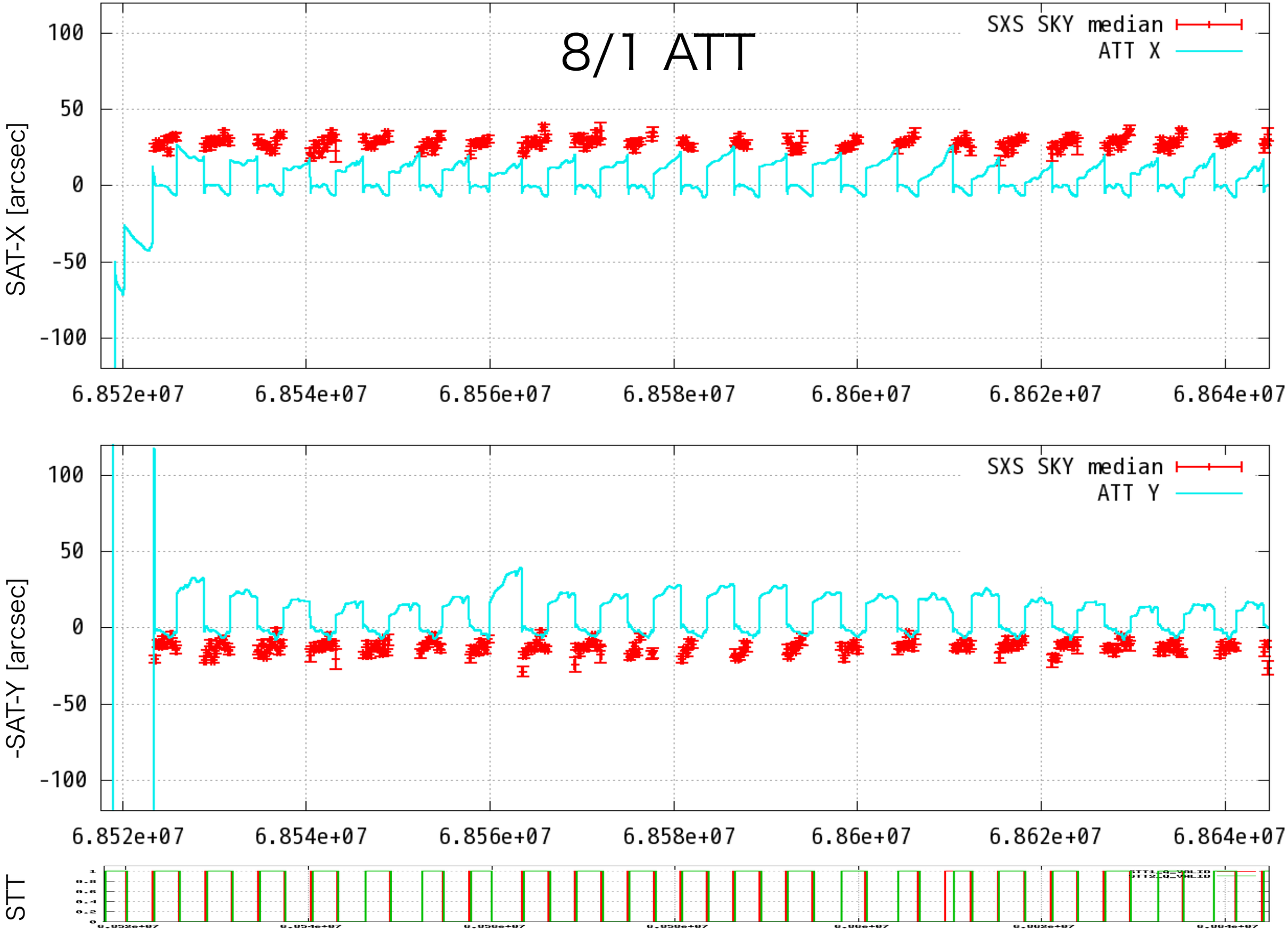
Perseus DET-X/DET-Y (unit: arcsec)



100040030

Perseus SKY-X/SKY-Y (unit: arcsec)

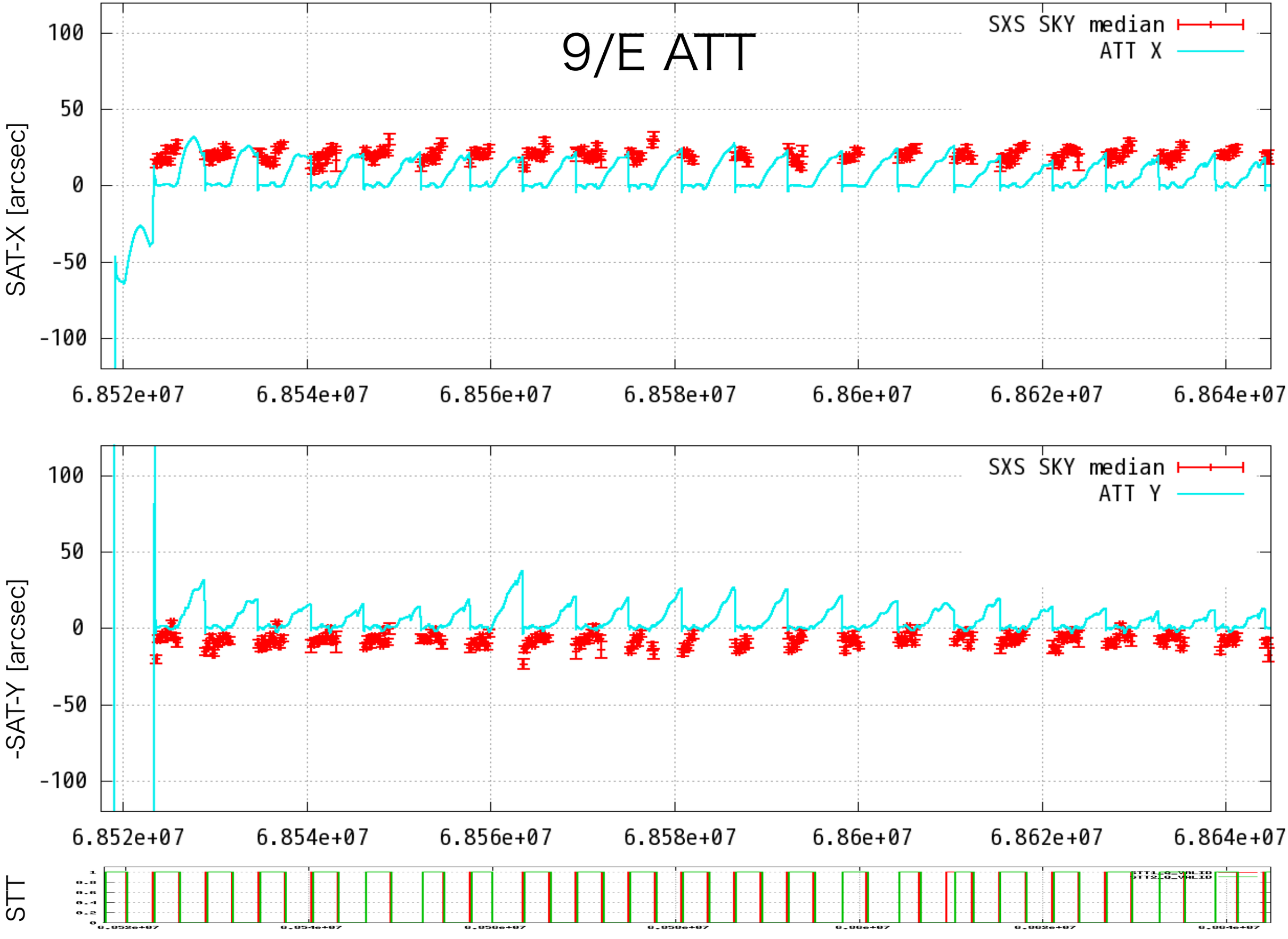
STT-CTL



100040030

Perseus SKY-X/SKY-Y (unit: arcsec)

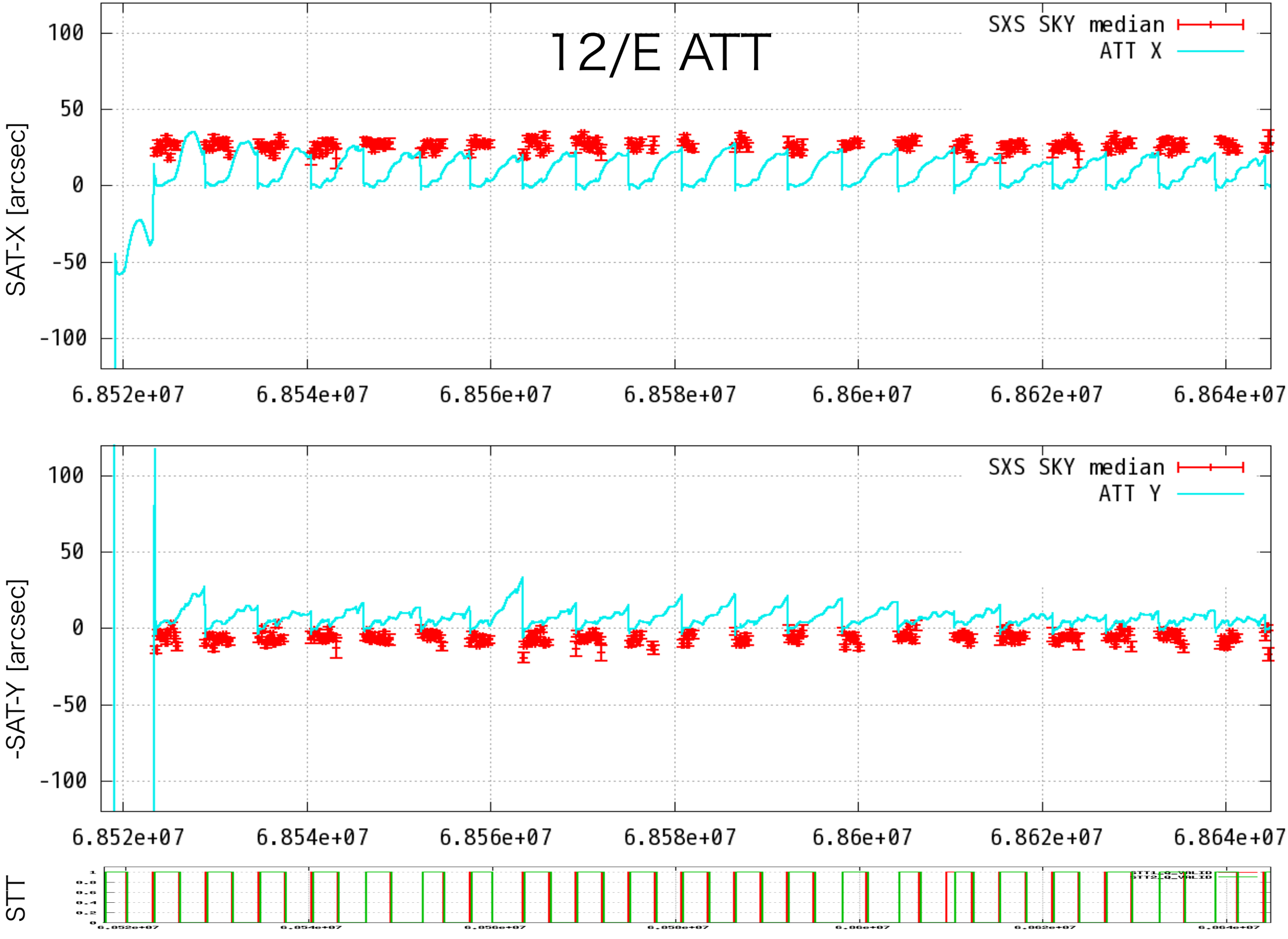
STT-CTL



100040030

Perseus SKY-X/SKY-Y (unit: arcsec)

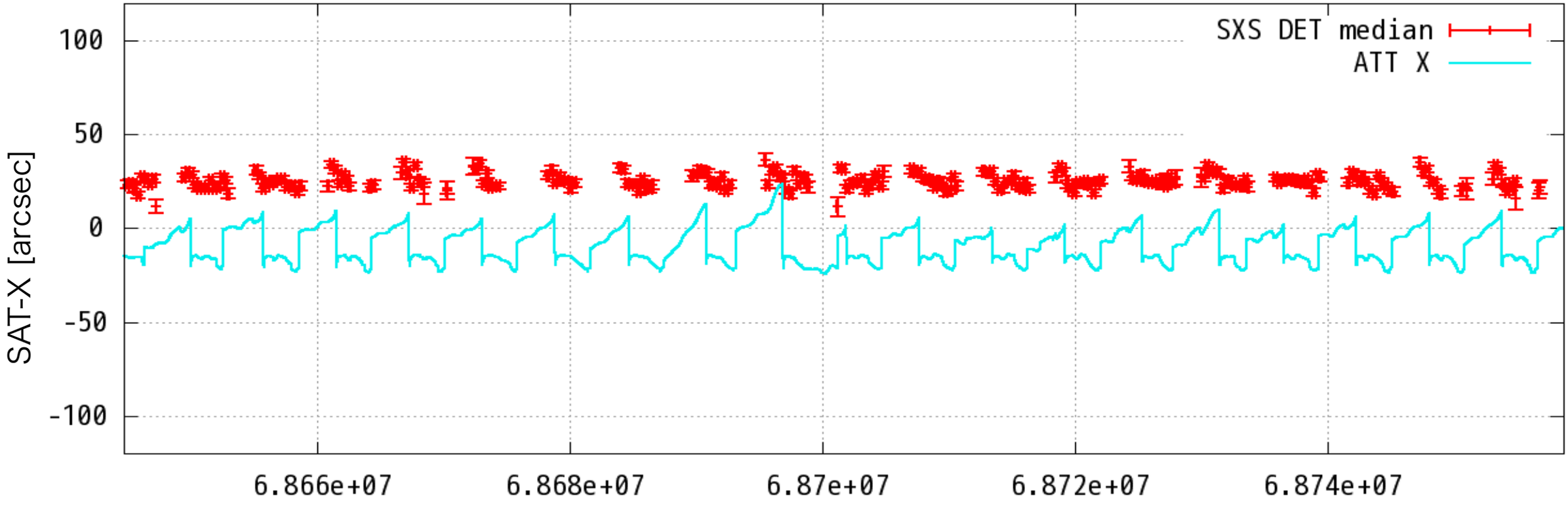
STT-CTL

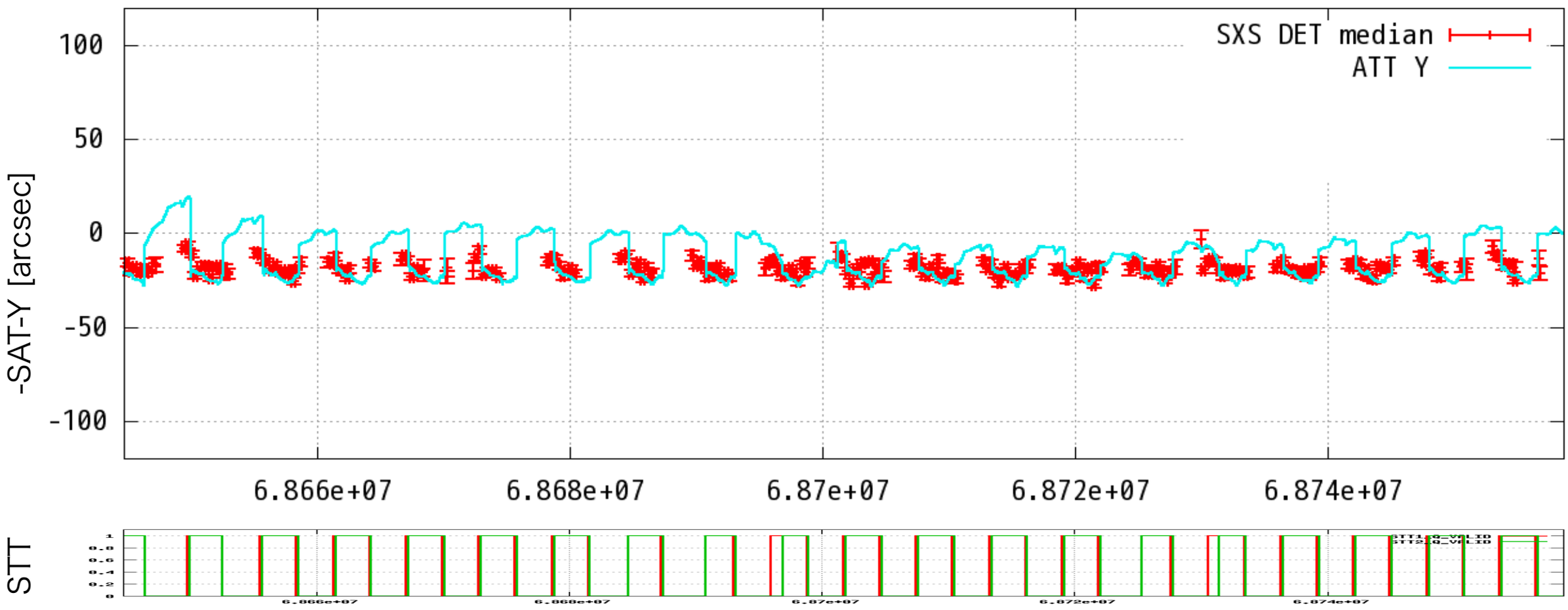


100040040

Perseus DET-X/DET-Y (unit: arcsec)

STT-ALL

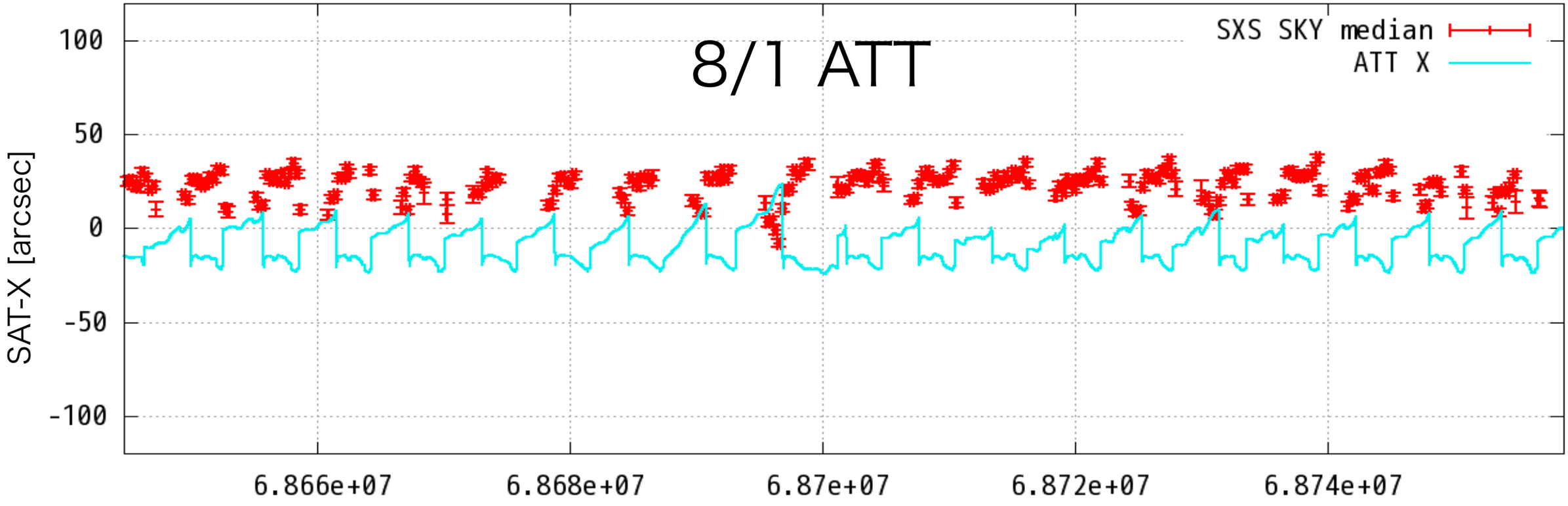


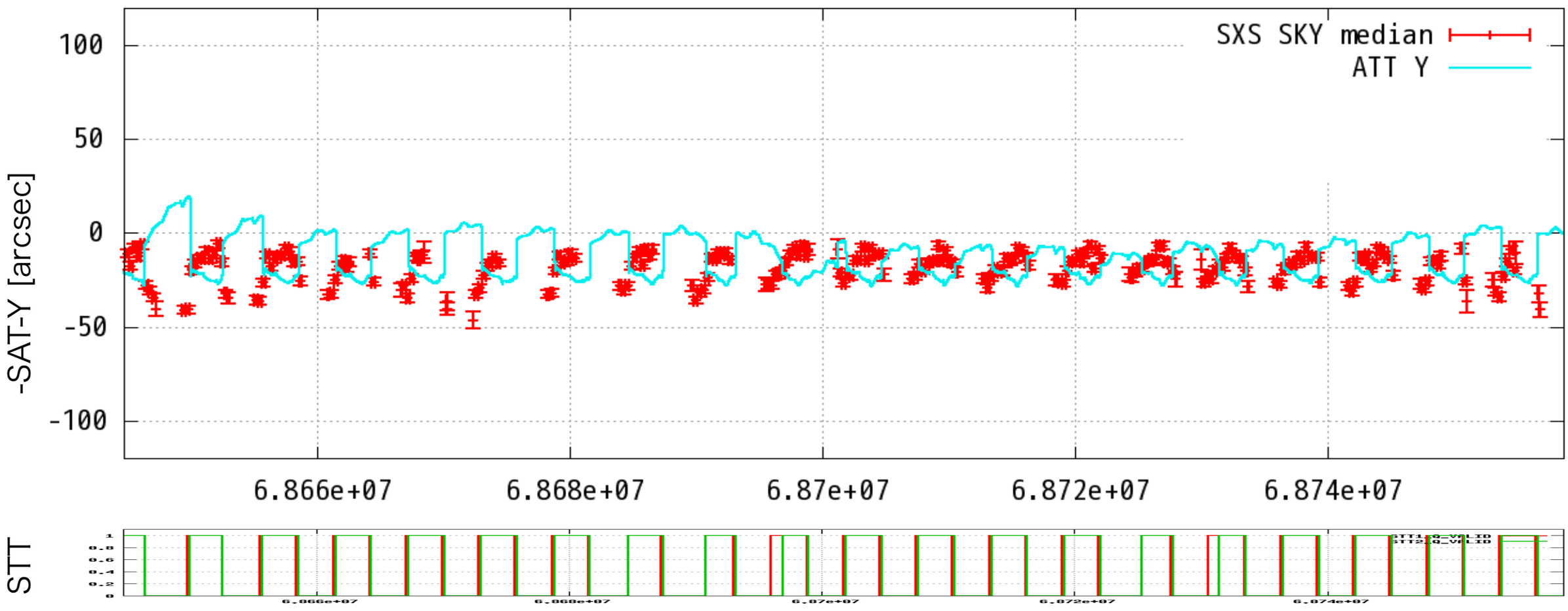


100040040

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-ALL

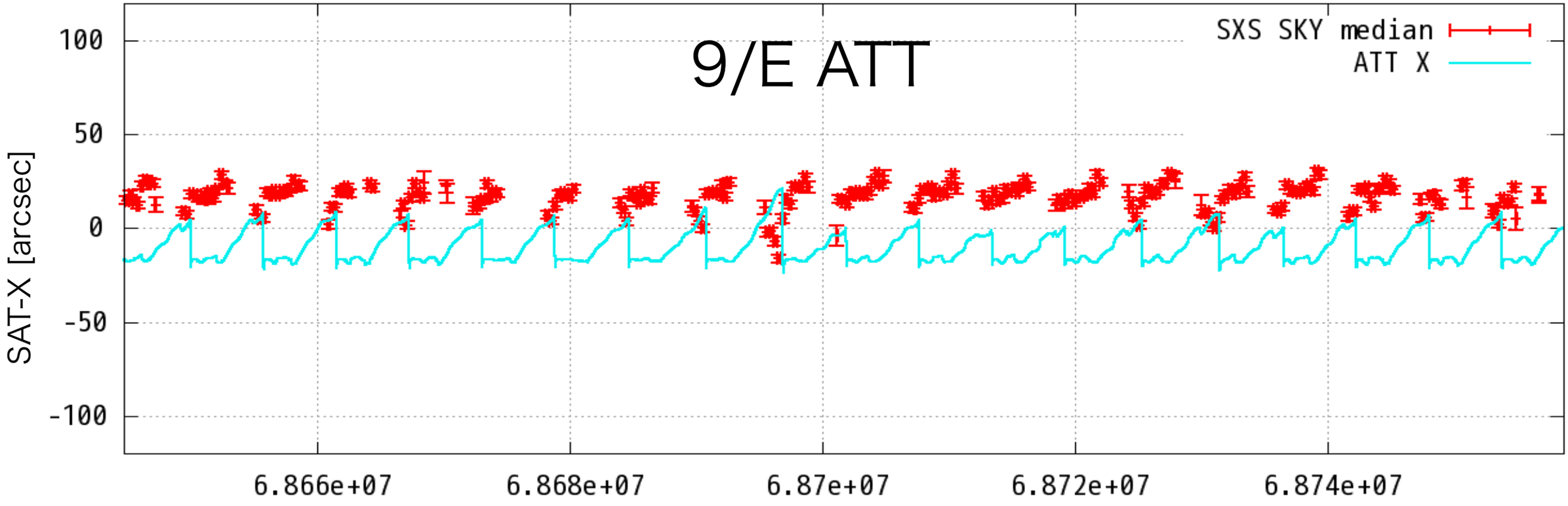


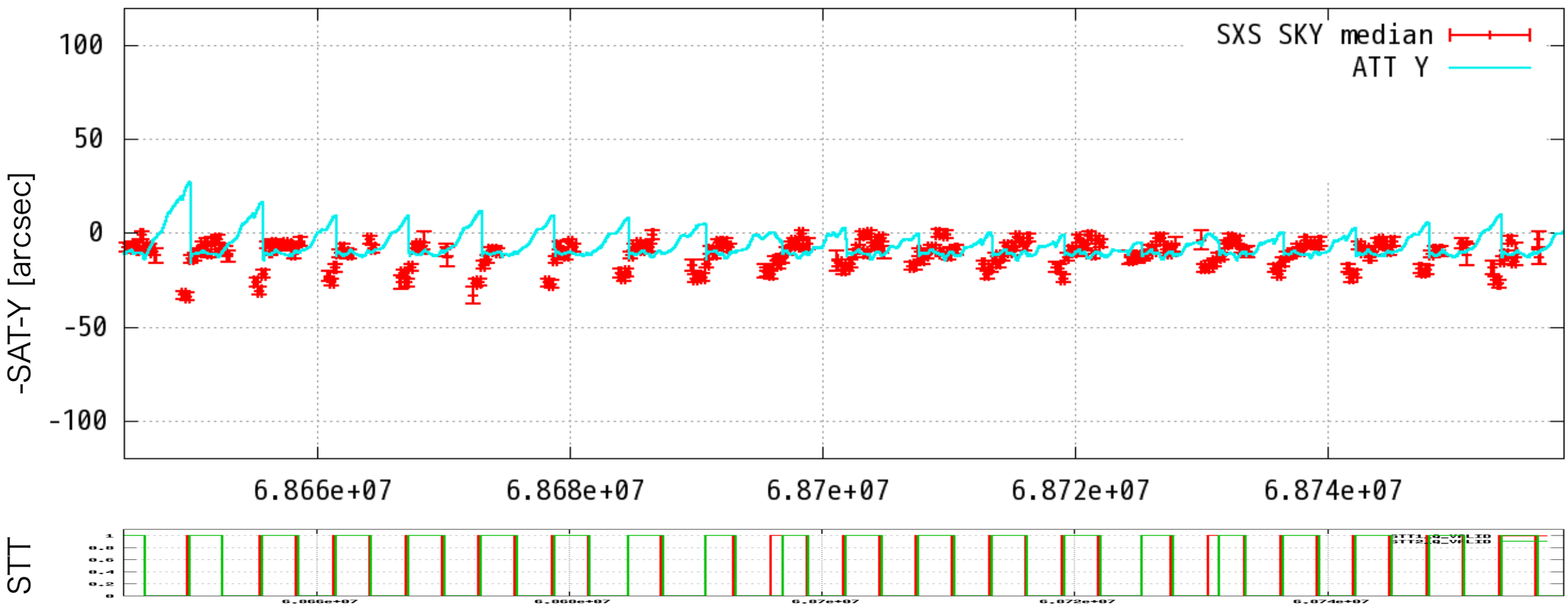


100040040

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-ALL

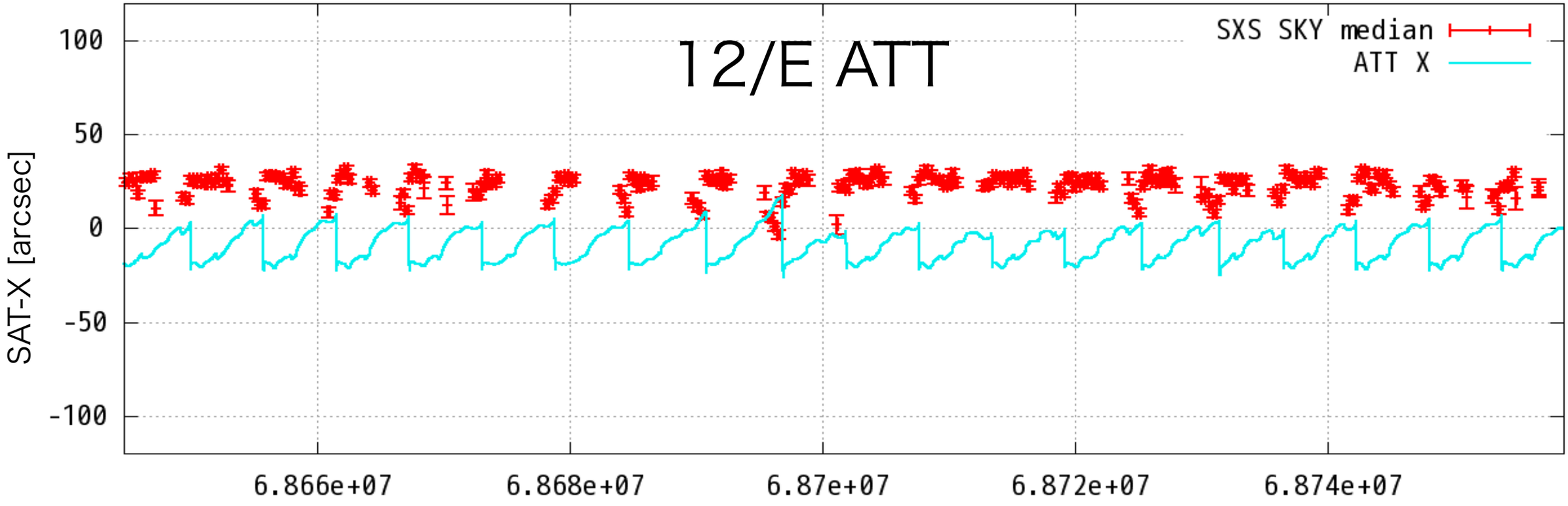


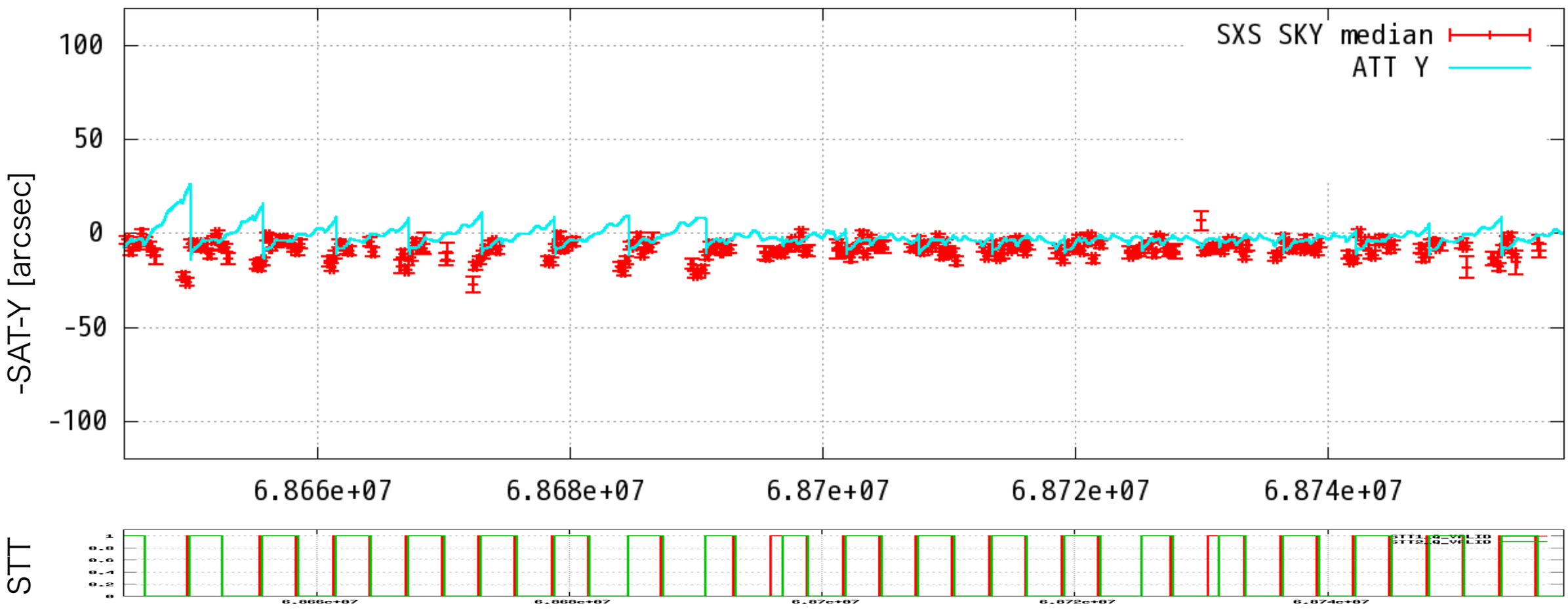


100040040

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-ALL

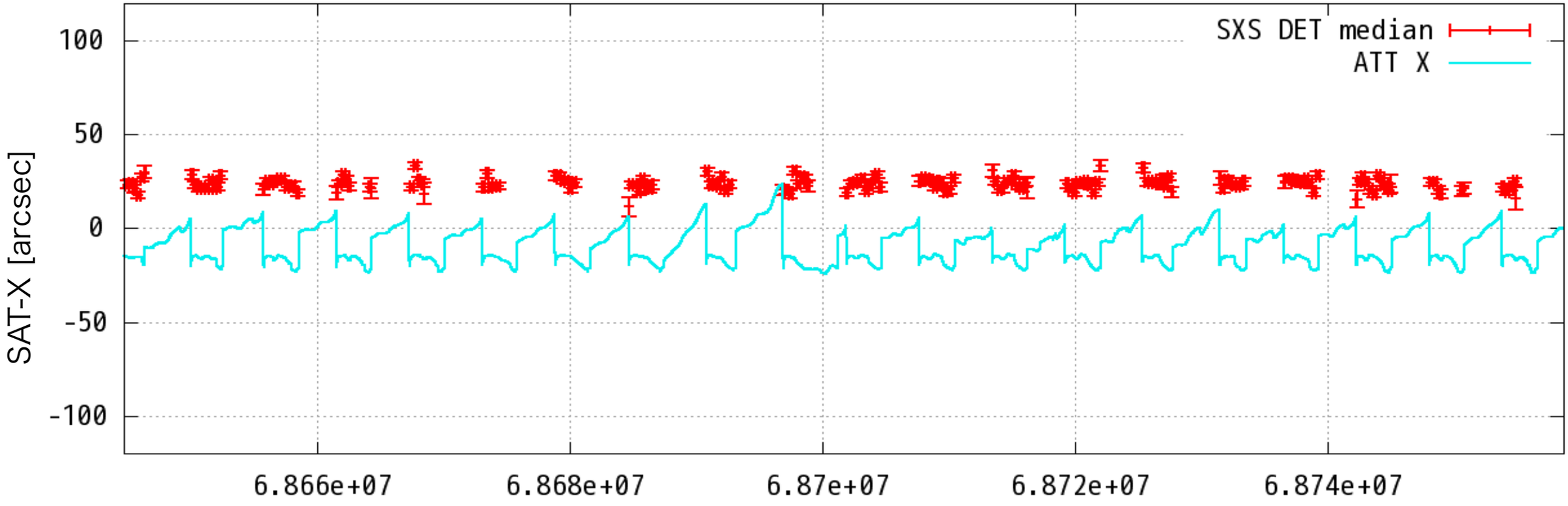


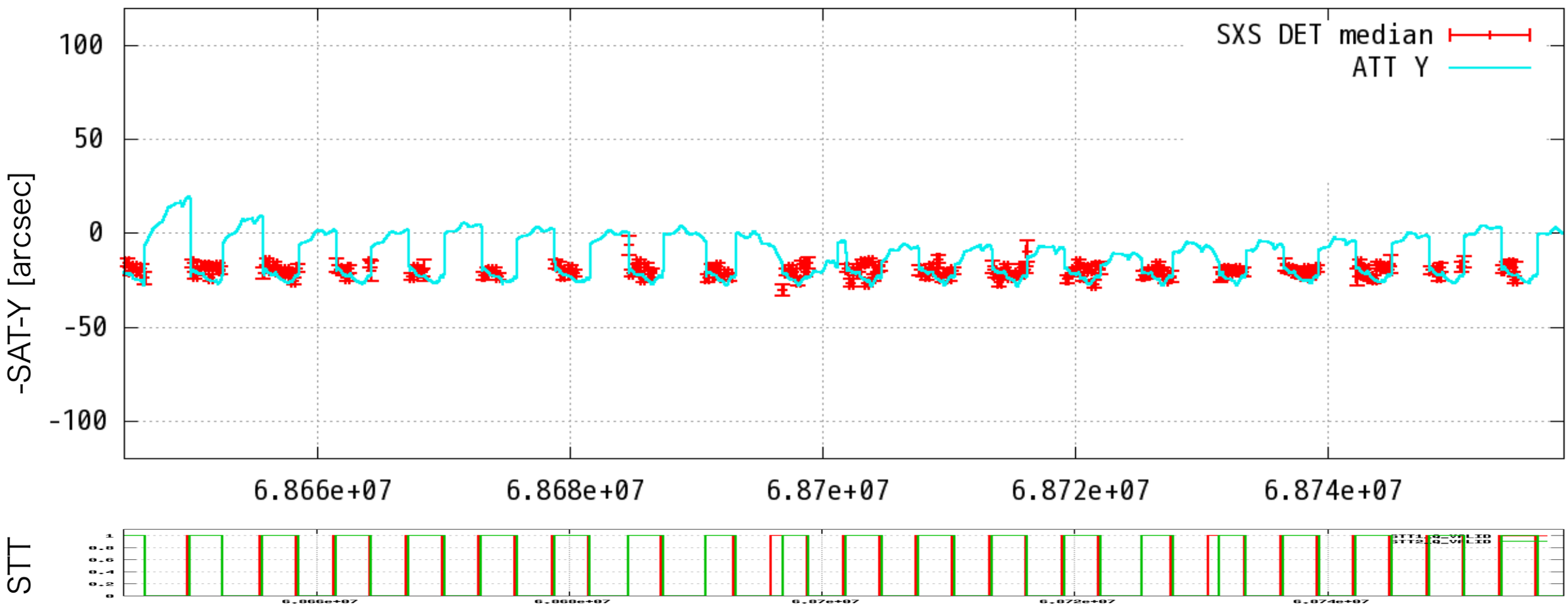


100040040

STT-CTL

Perseus DET-X/DET-Y (unit: arcsec)

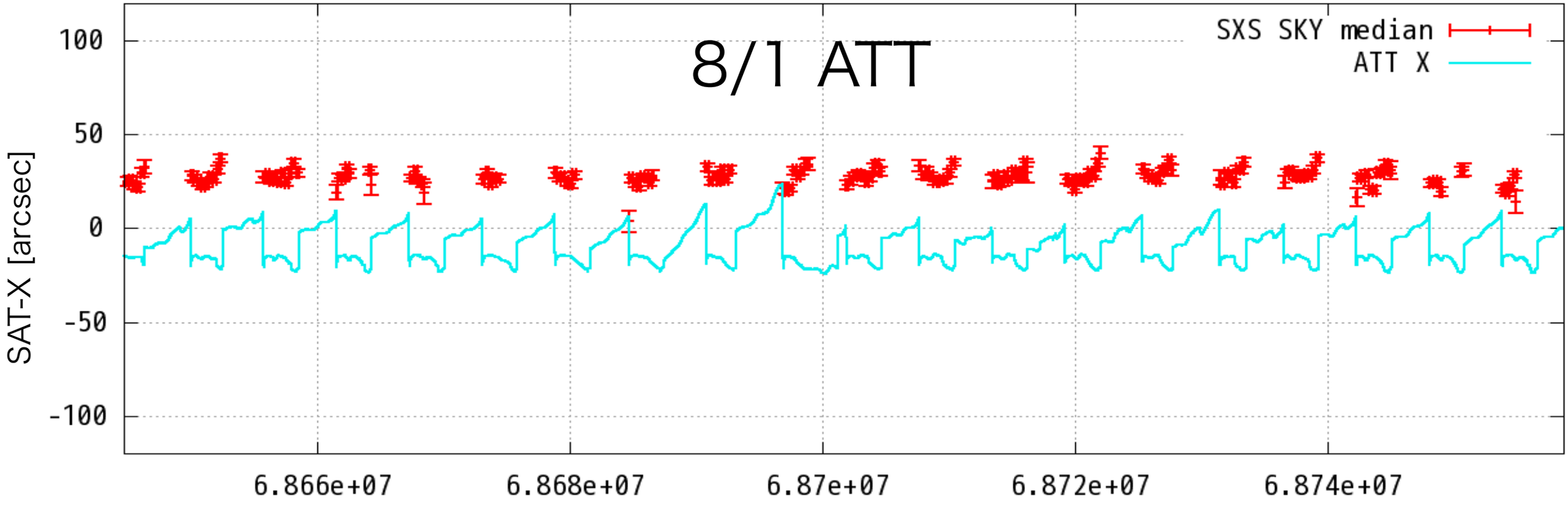


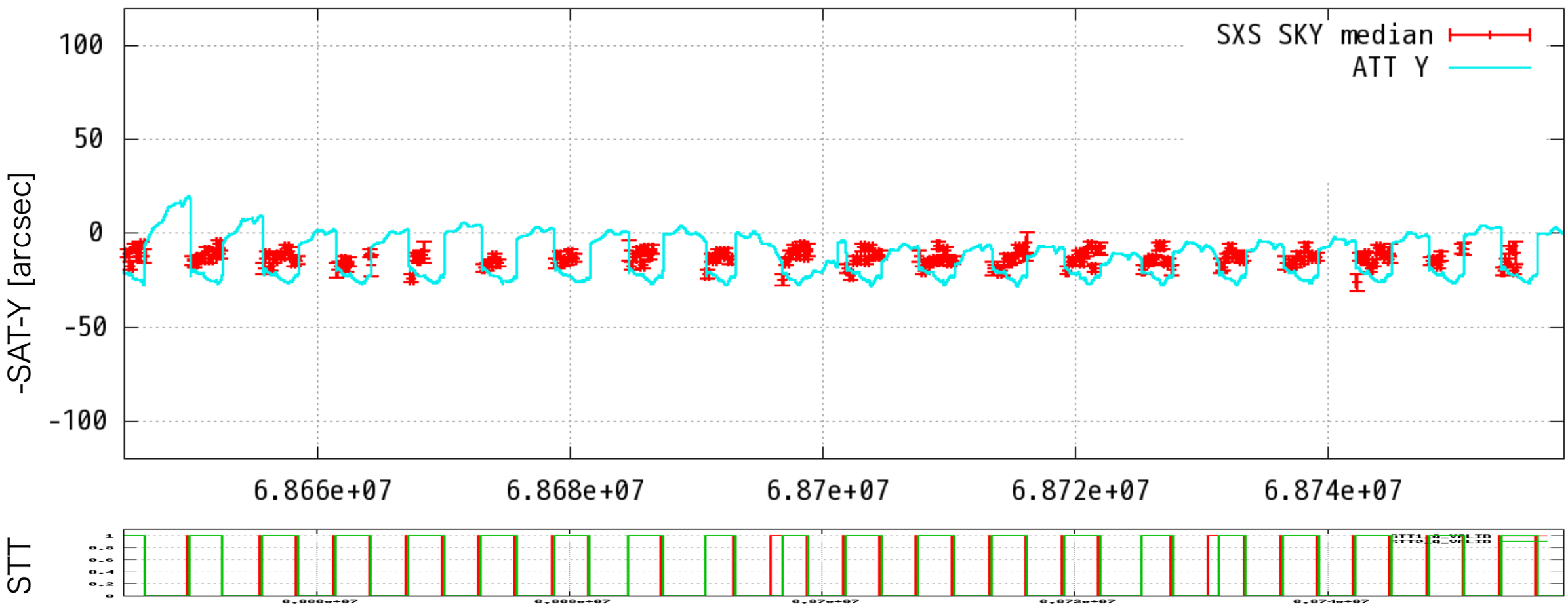


100040040

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-CTL

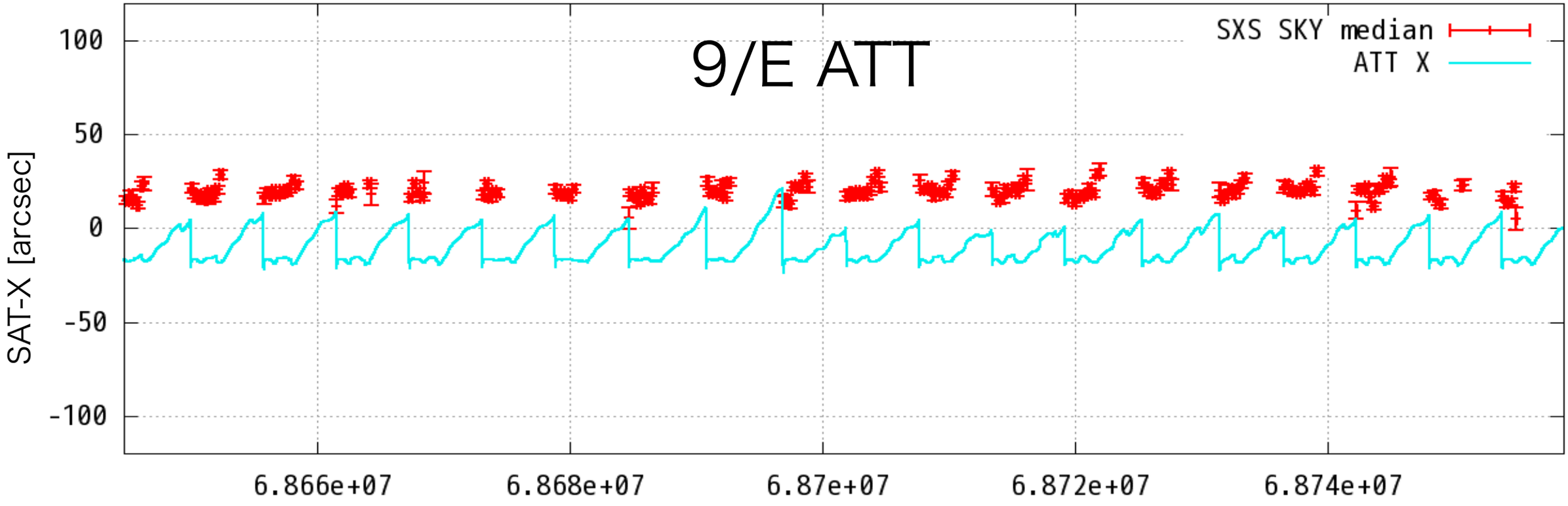


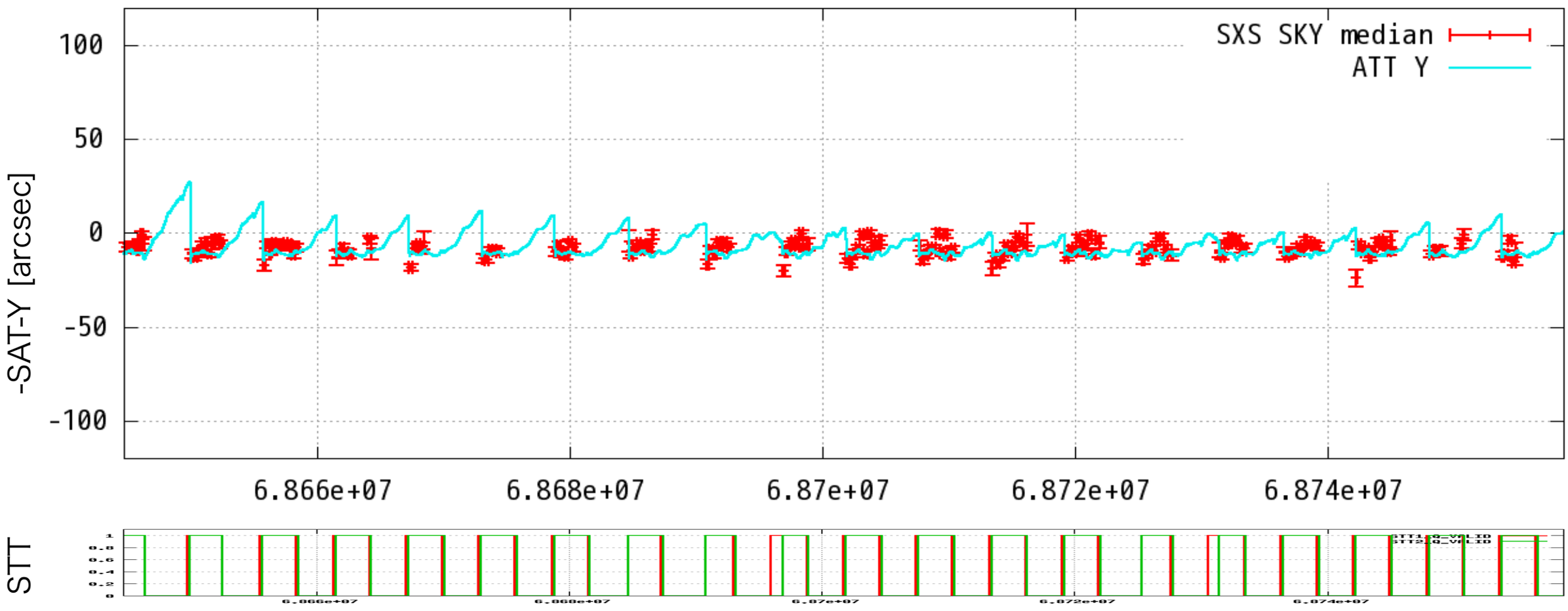


100040040

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-CTL

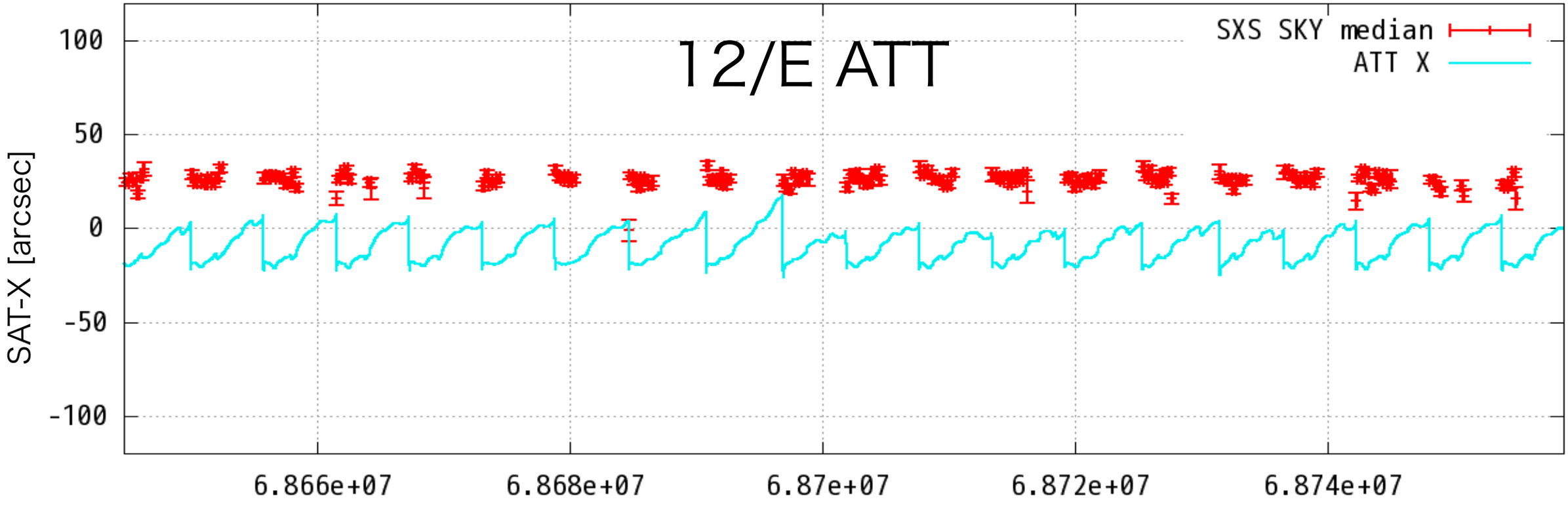


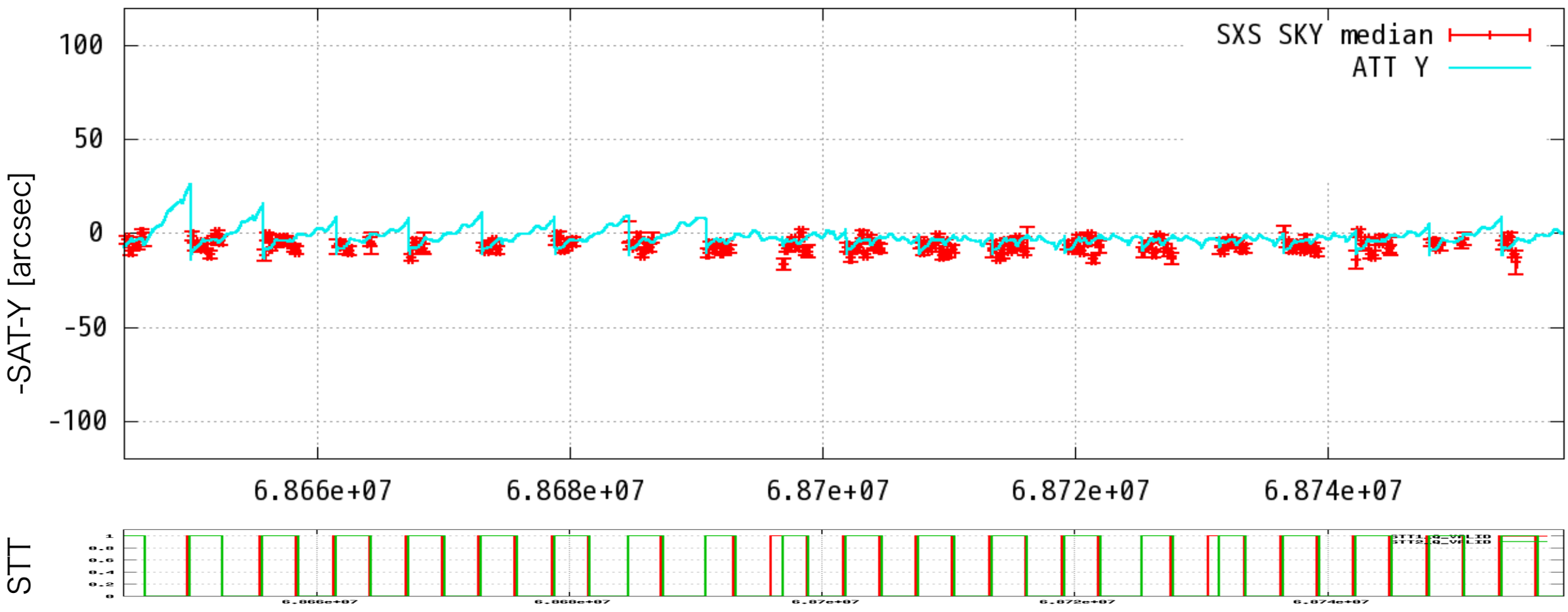


100040040

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-CTL

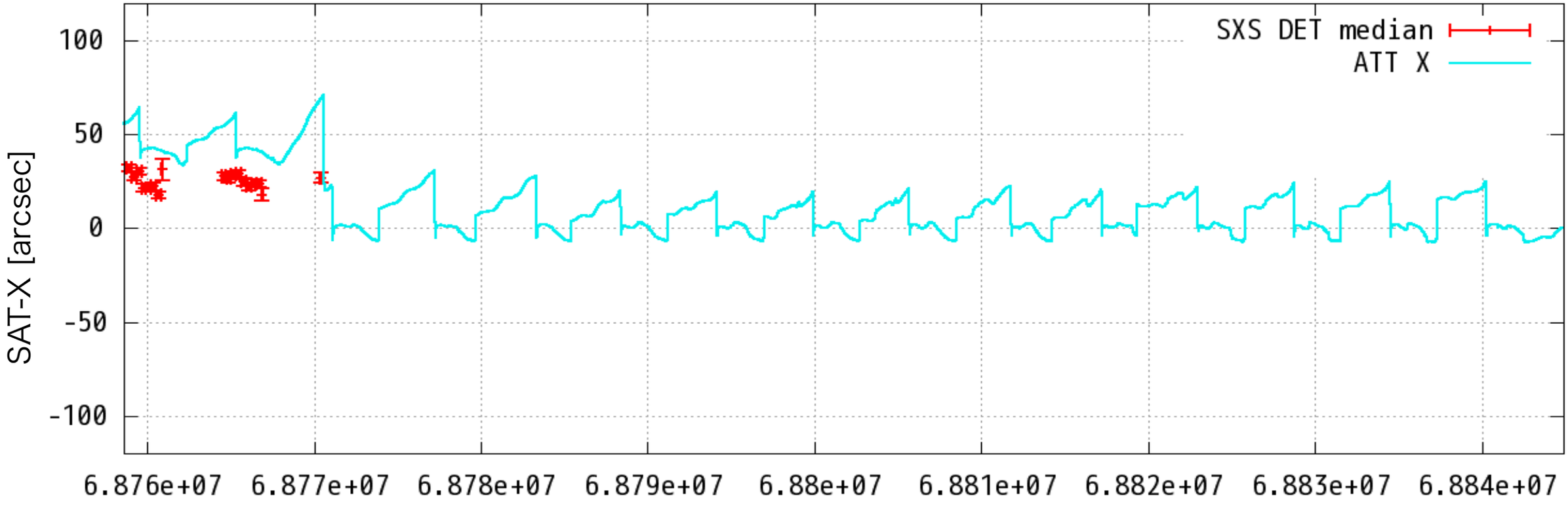


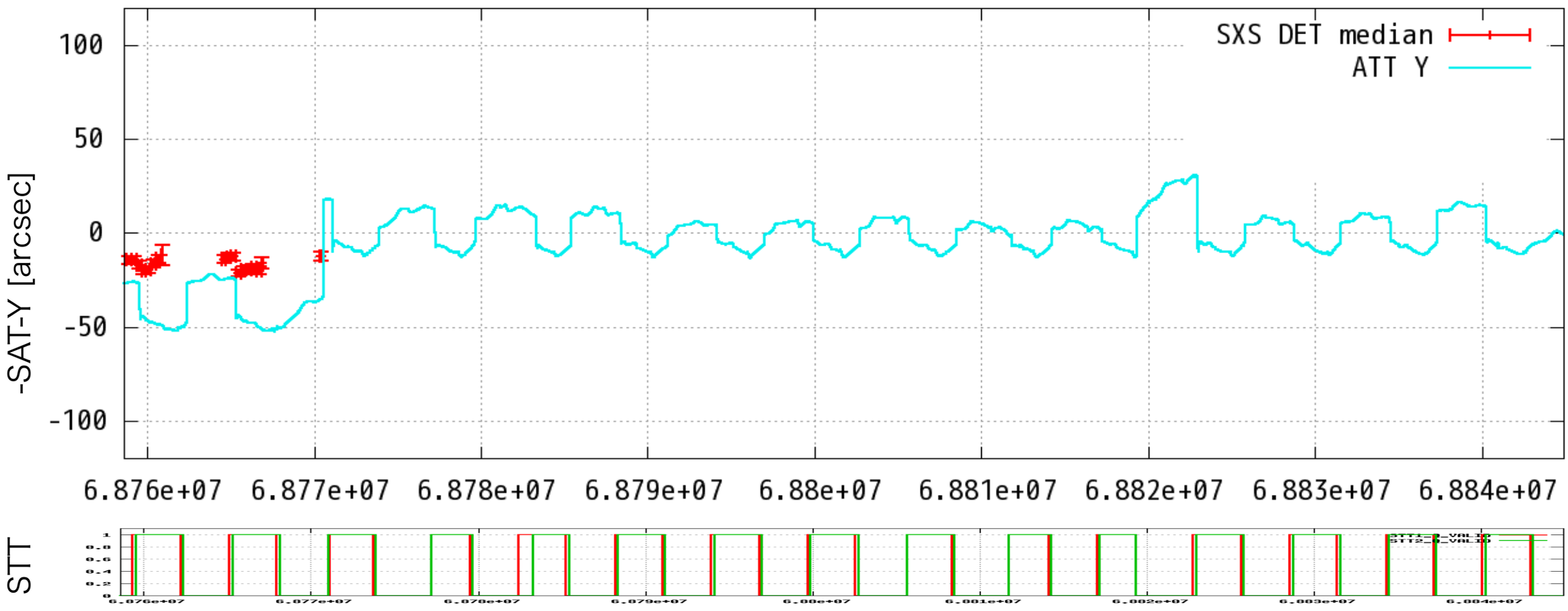


100040050

Perseus DET-X/DET-Y (unit: arcsec)

STT-ALL

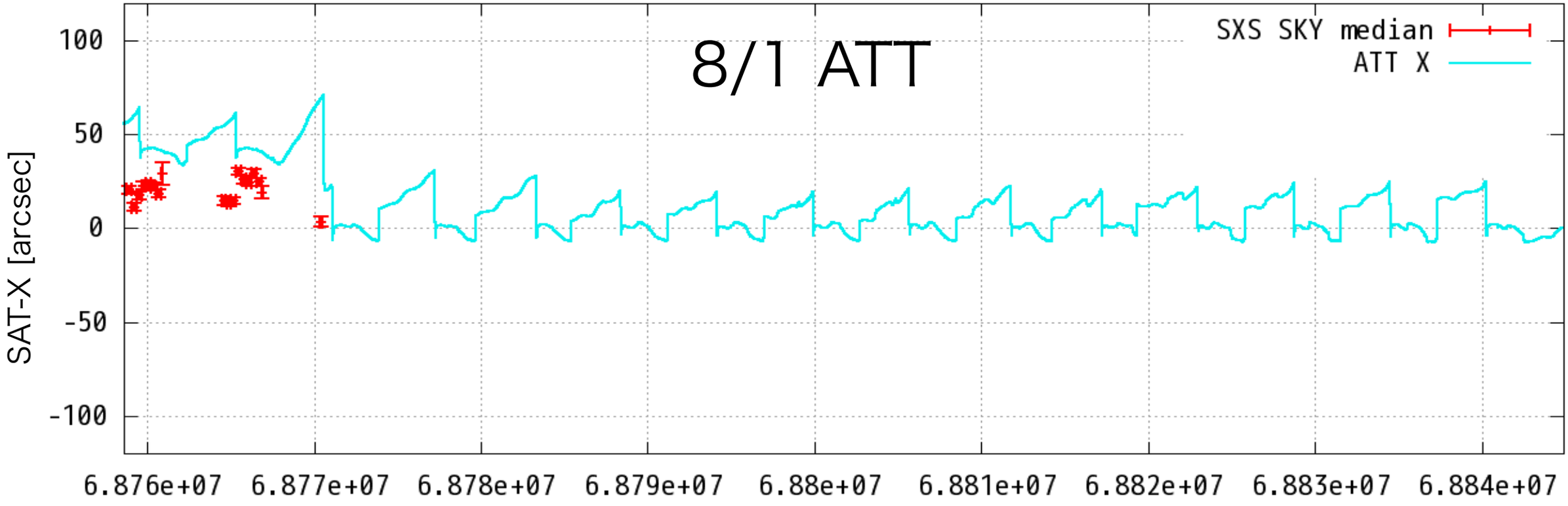


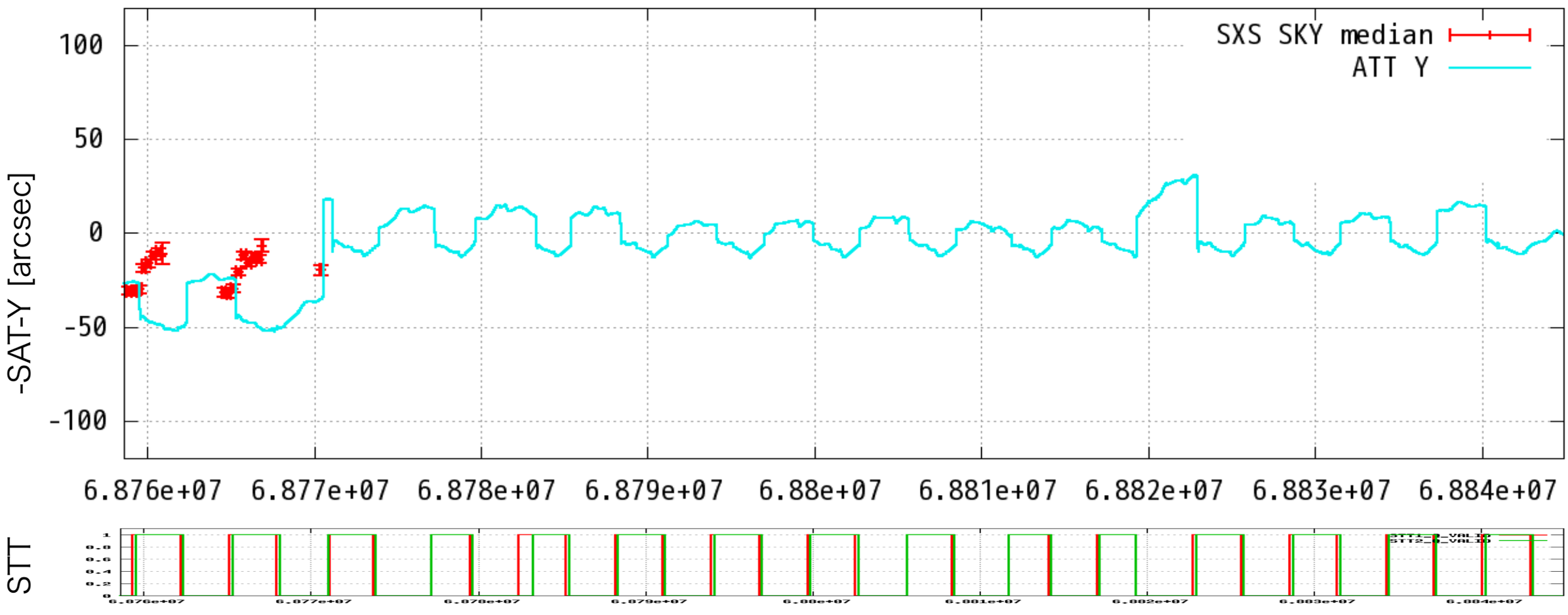


100040050

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-ALL

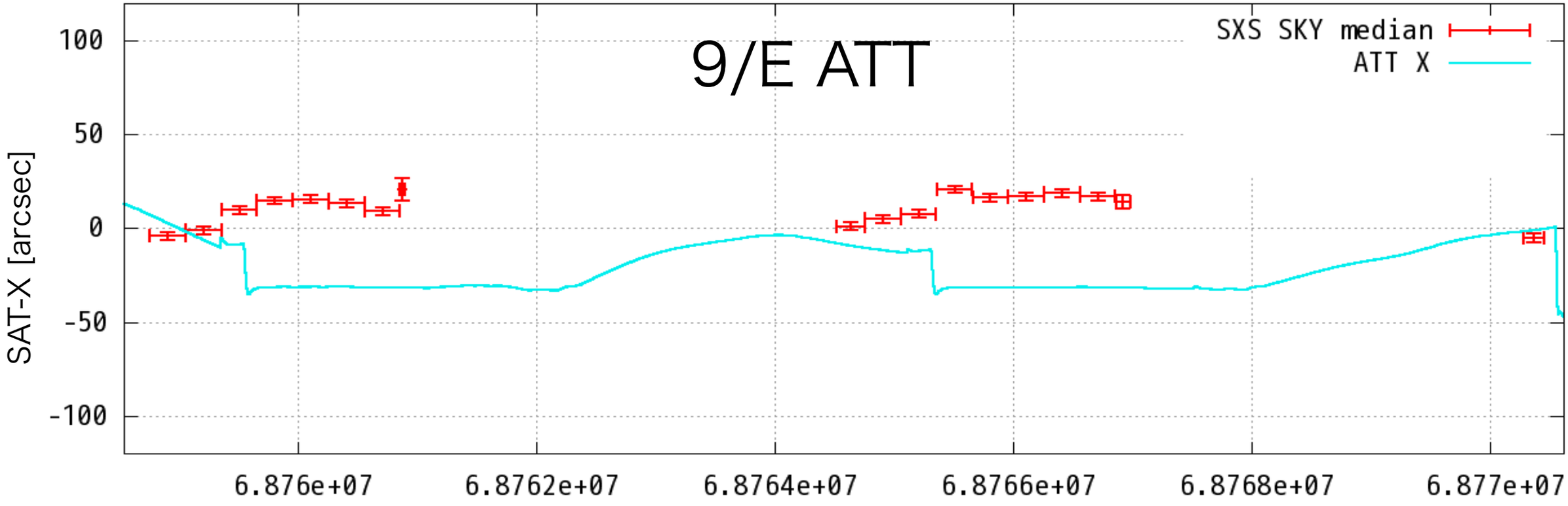


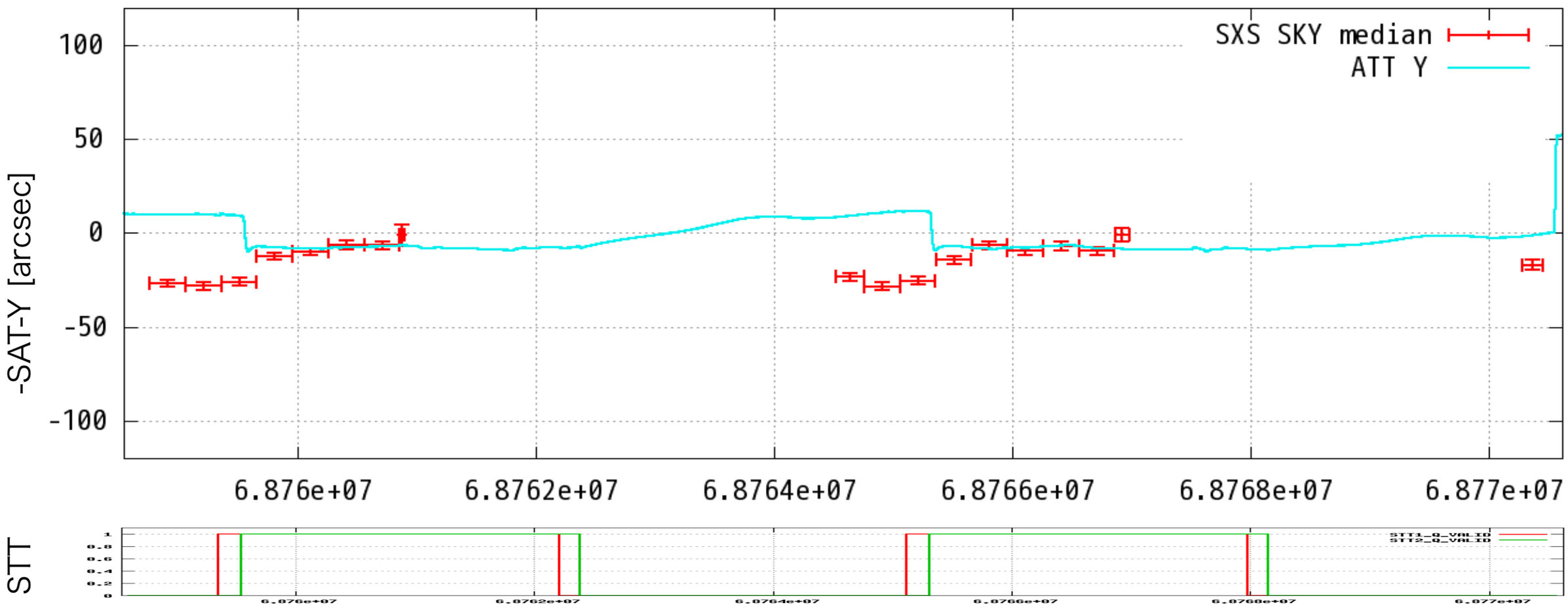


100040050

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-ALL

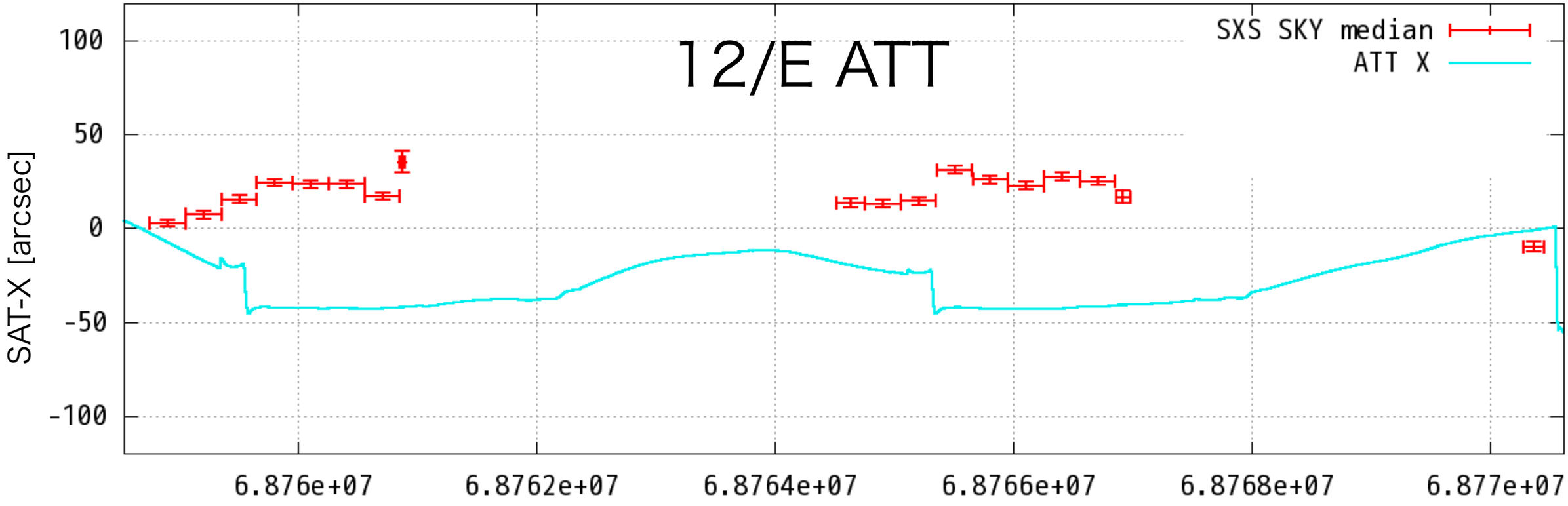


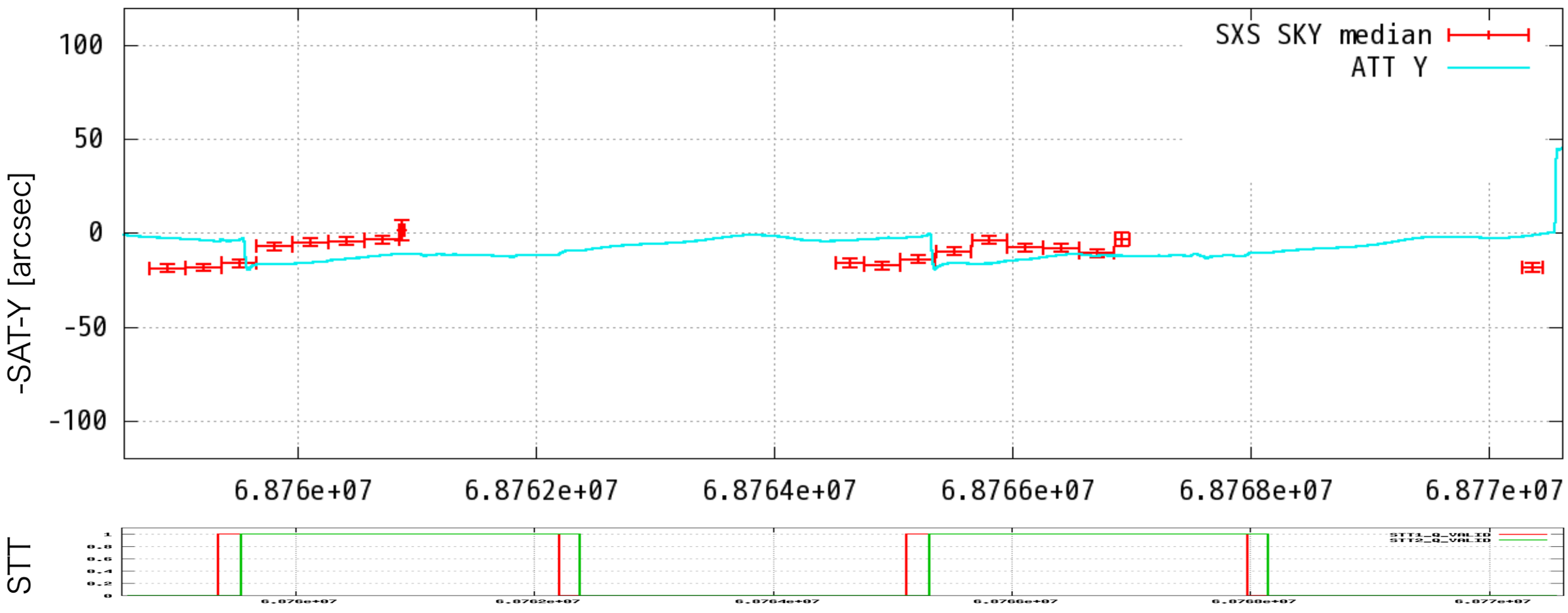


100040050

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-ALL

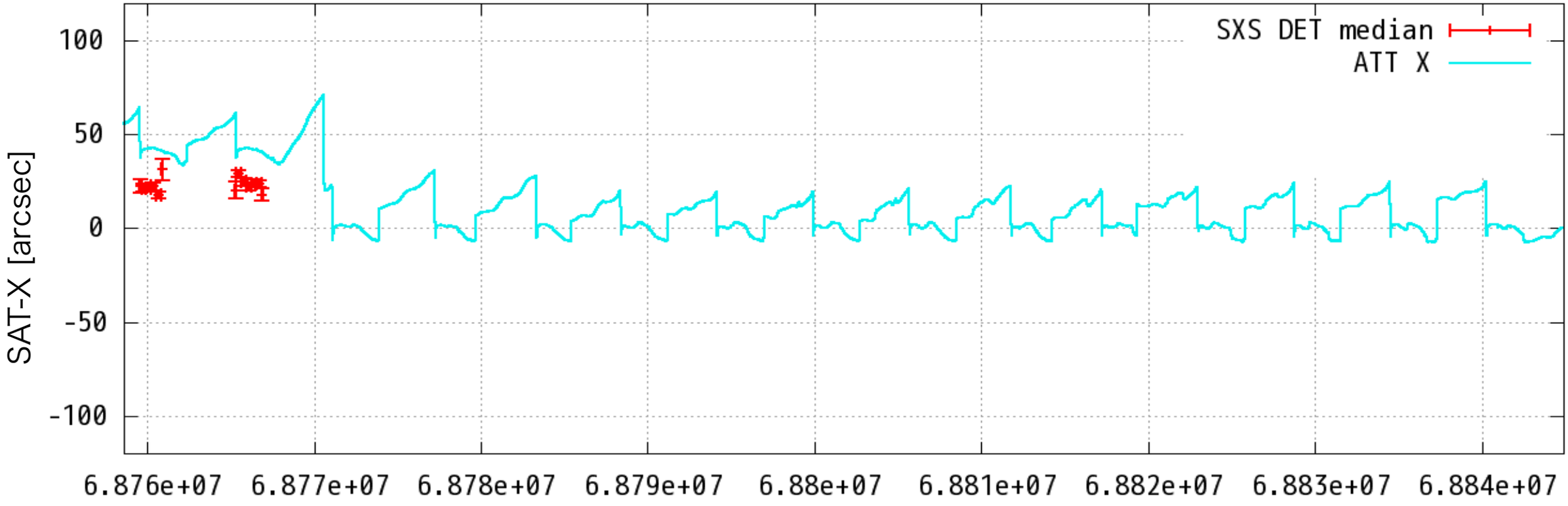


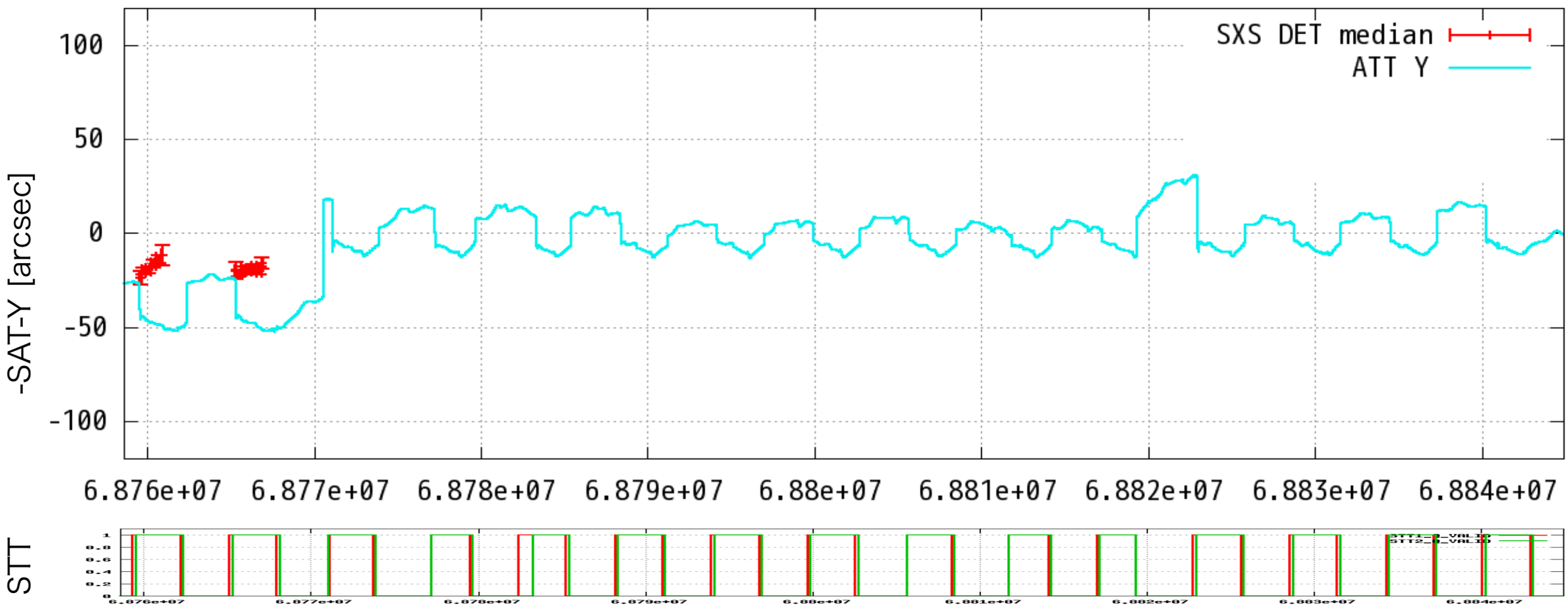


100040050

STT-CTL

Perseus DET-X/DET-Y (unit: arcsec)

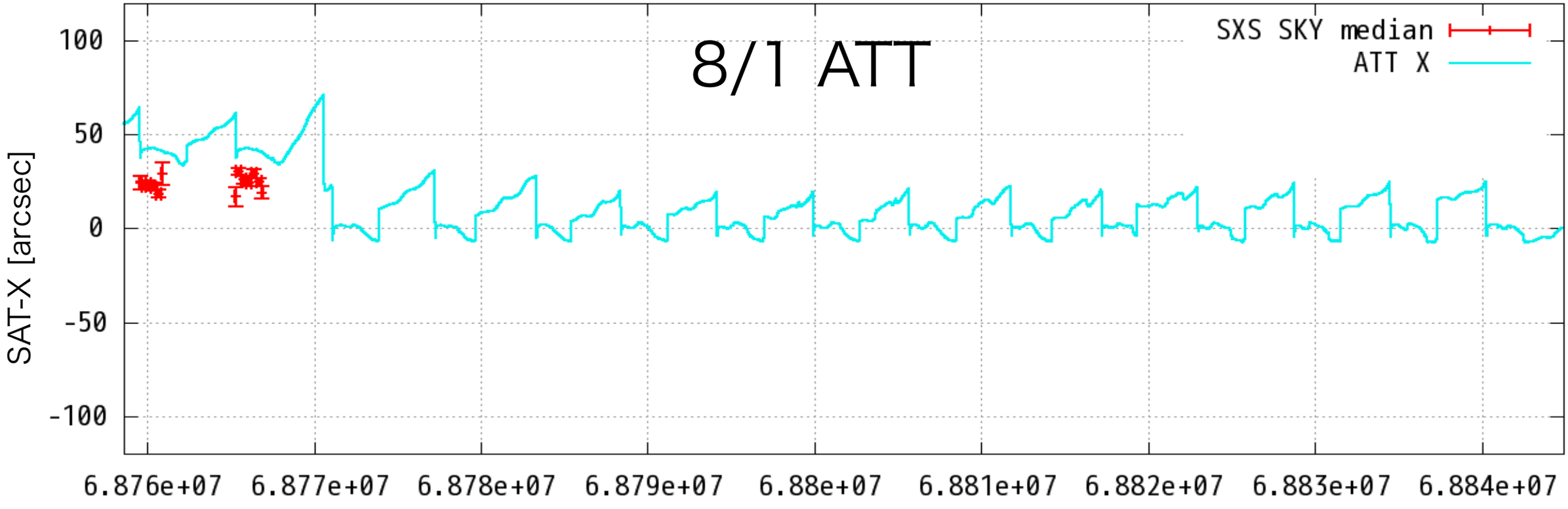


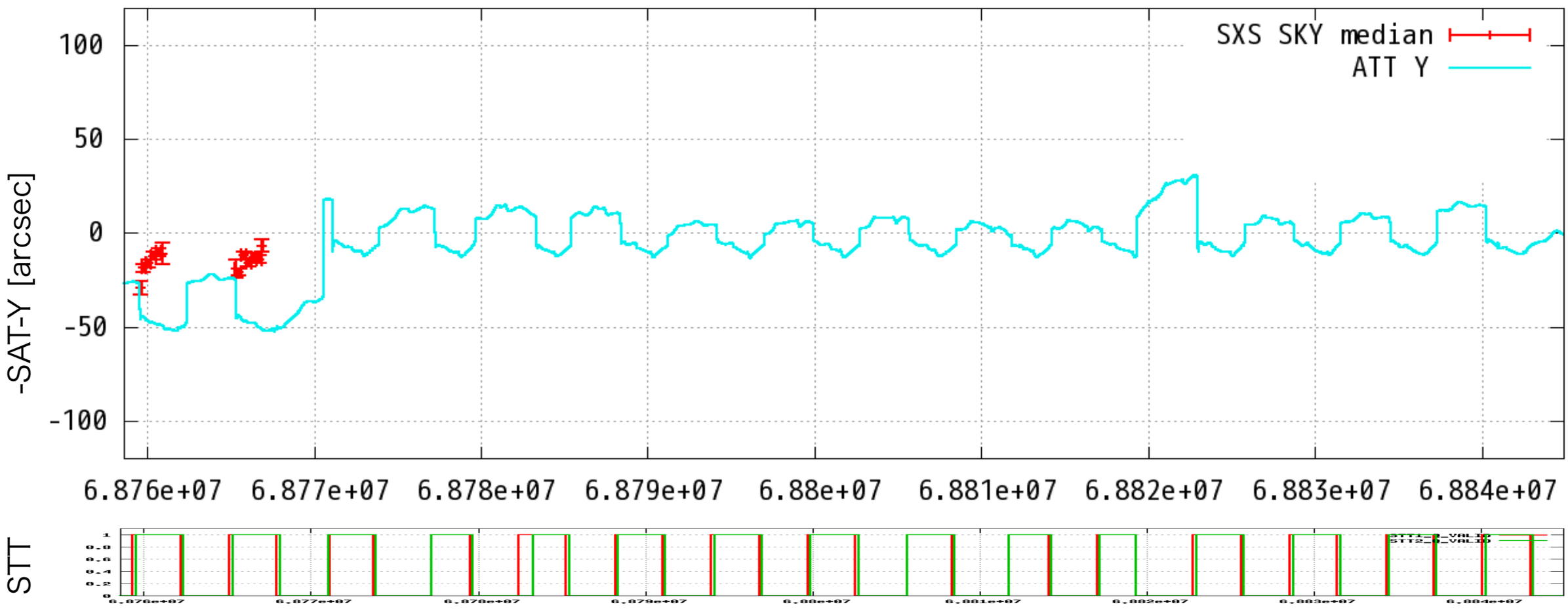


100040050

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-CTL

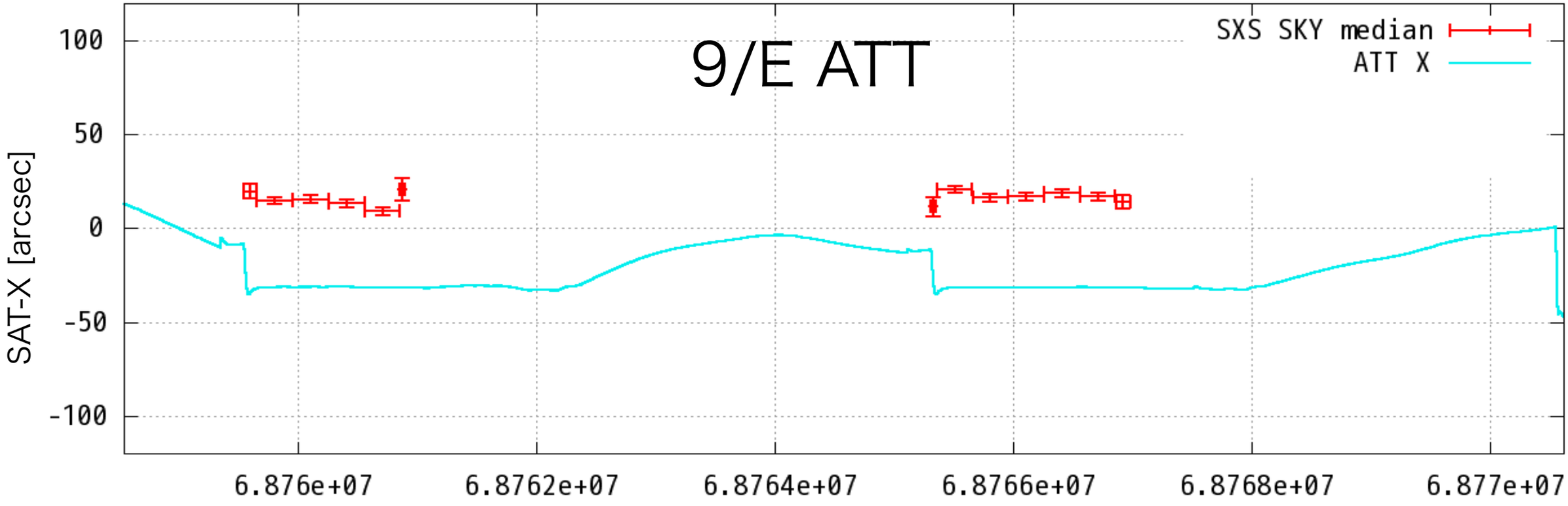


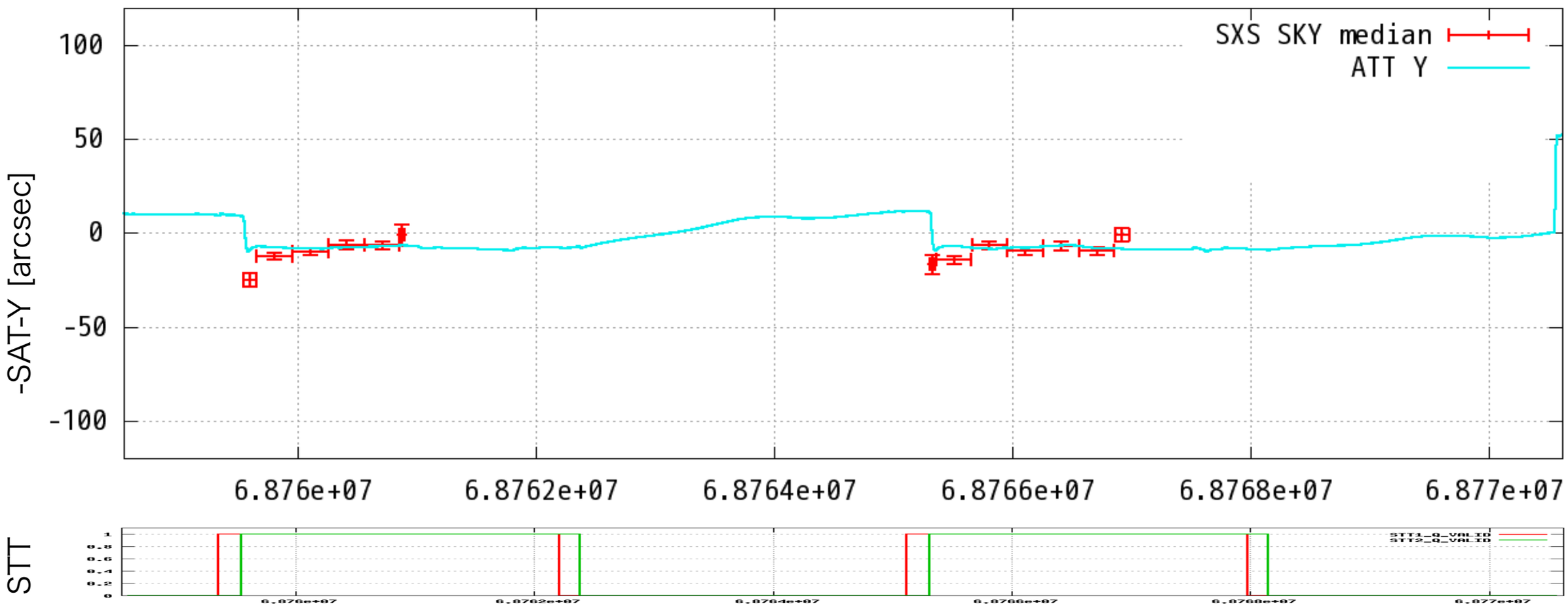


100040050

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-CTL

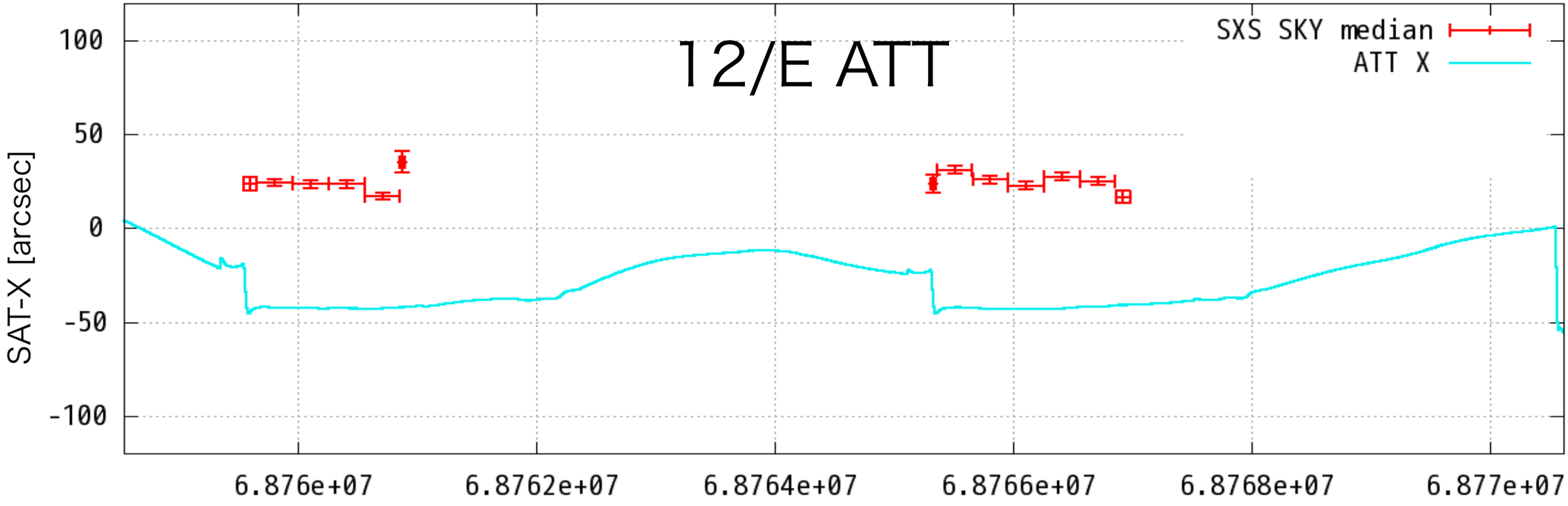


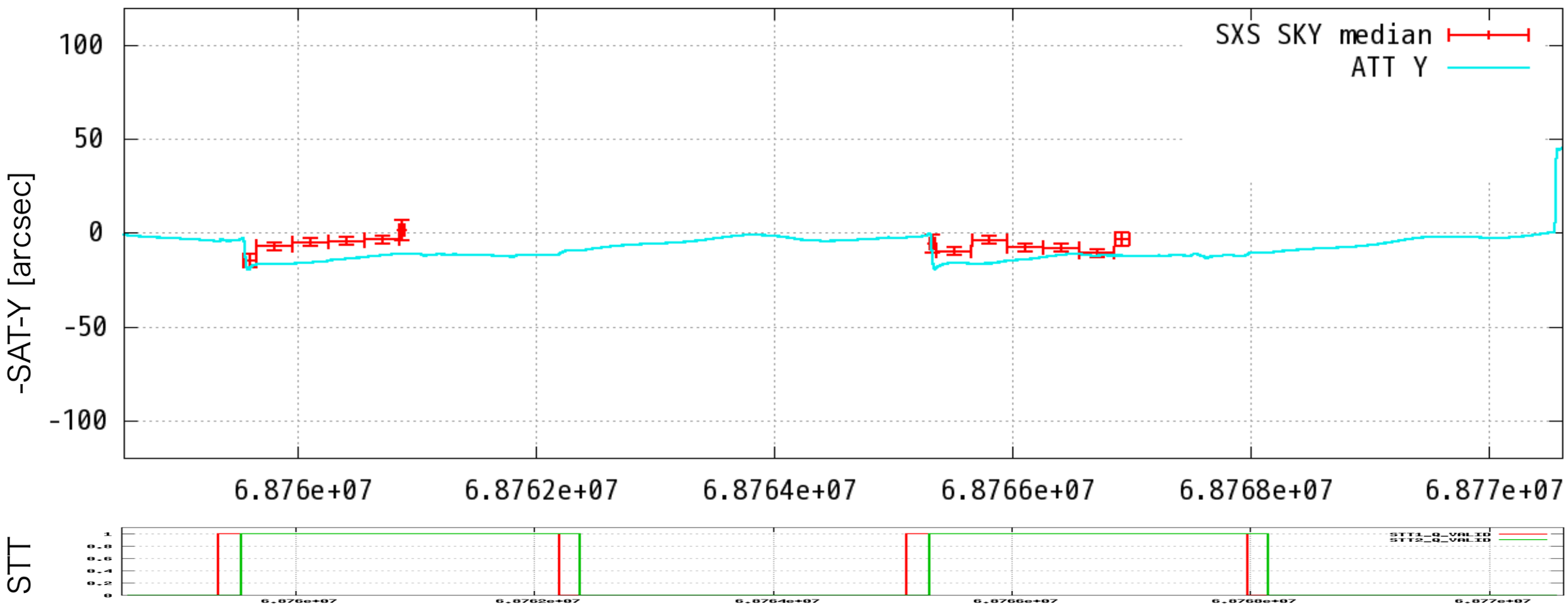


100040050

Perseus SKY-X/SKY-Y (unit: arcsec)

STT-CTL

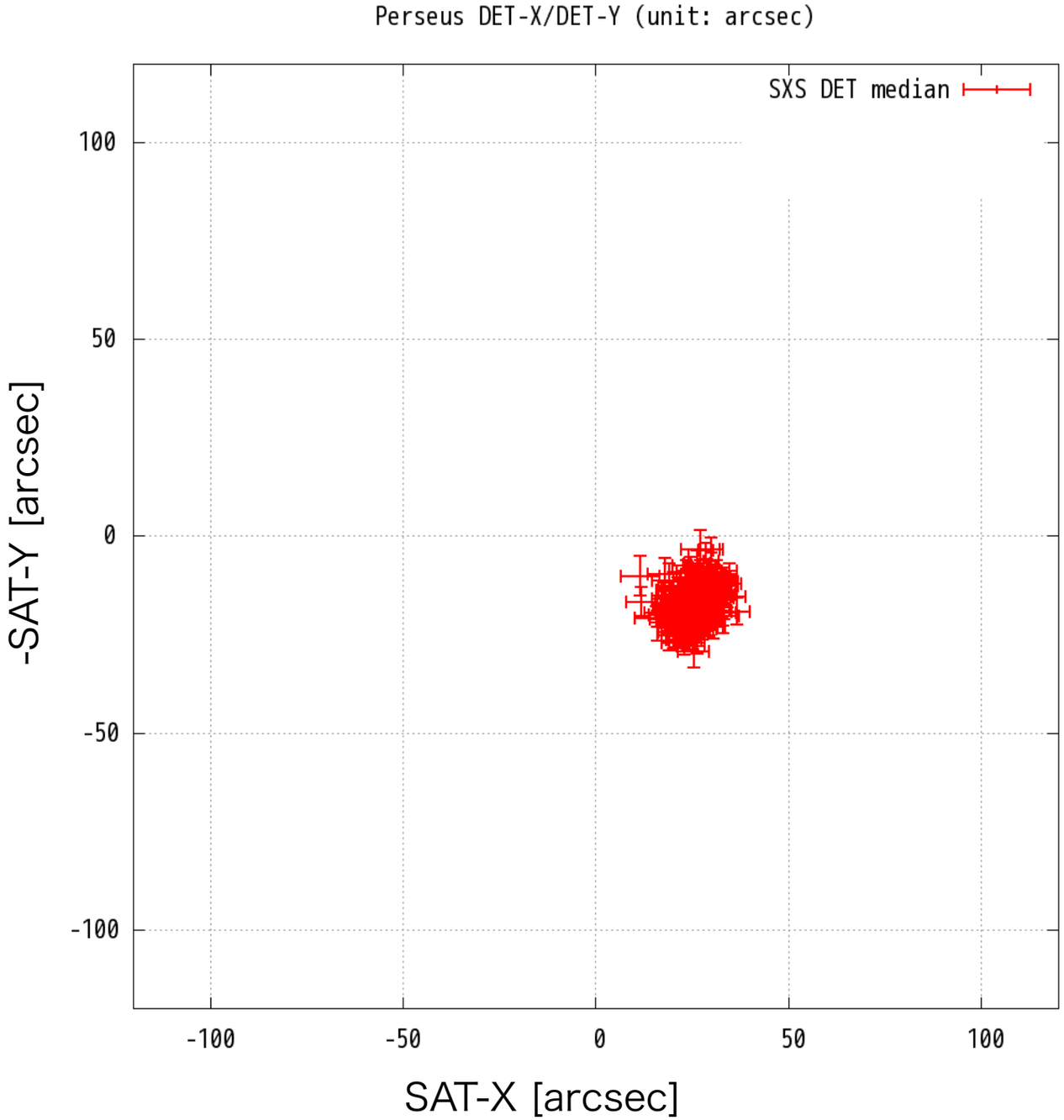




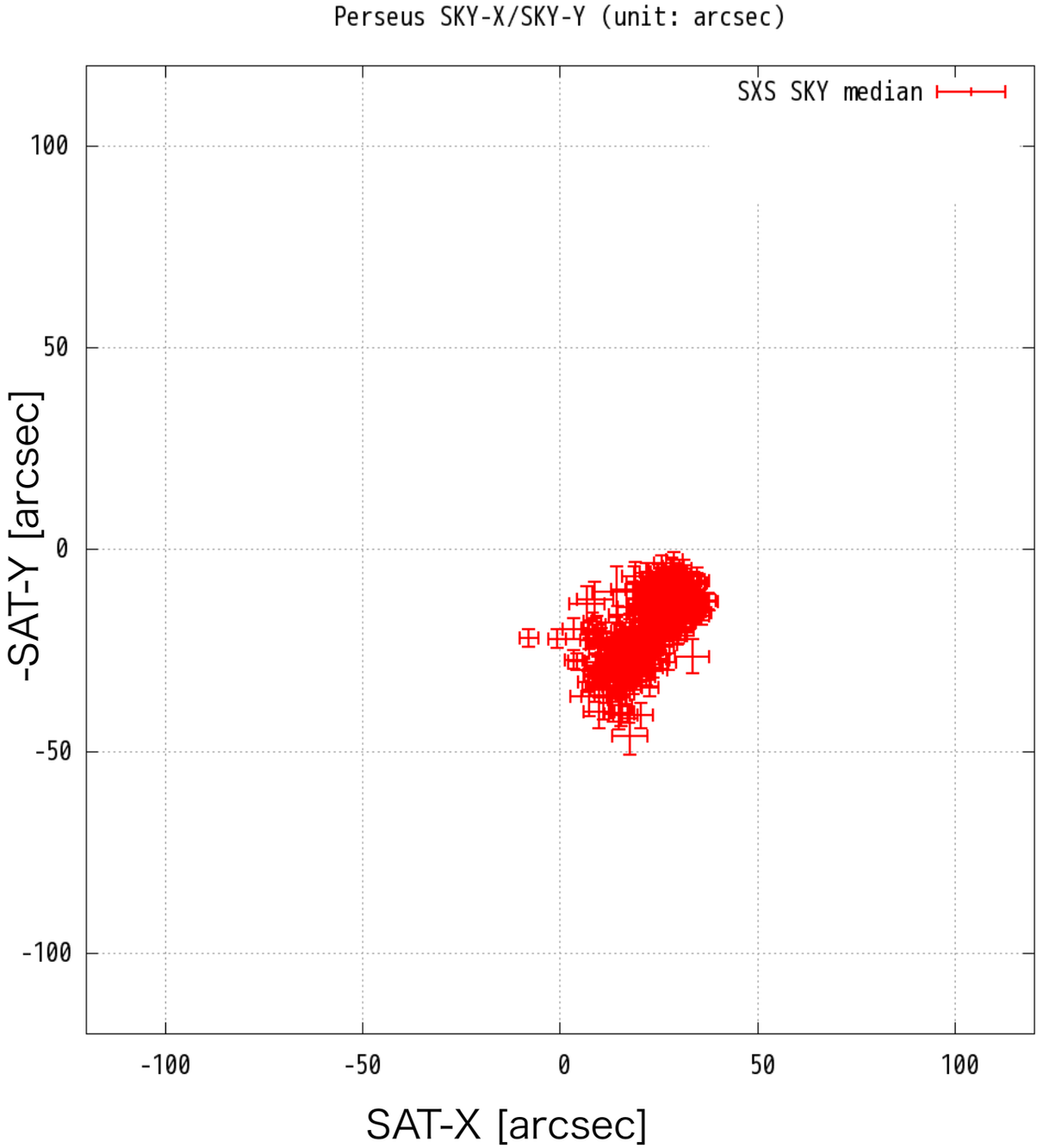
Perseus (STT-ALL)
seq: 100040030, 40, 50

8/1 ATT

DET

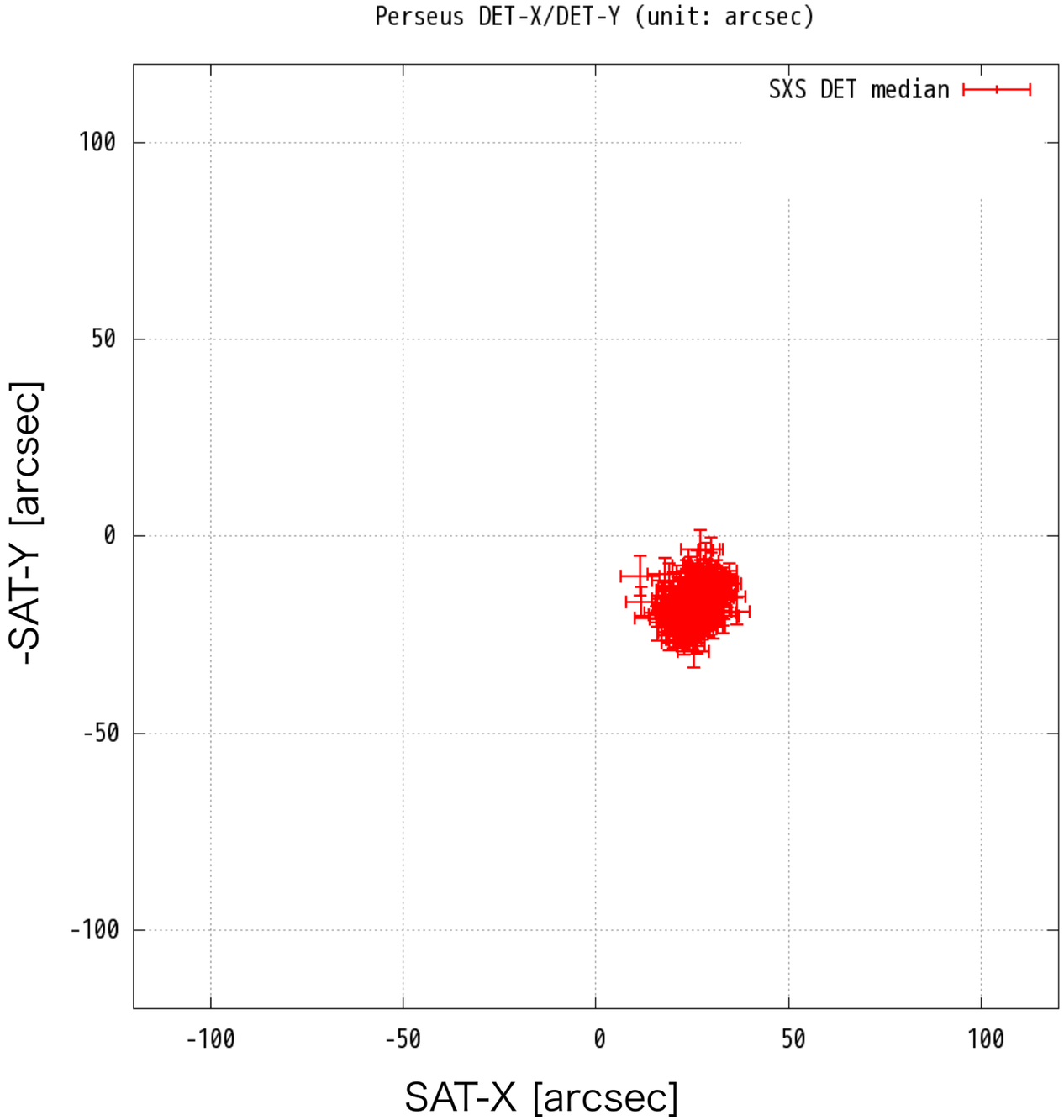


SKY



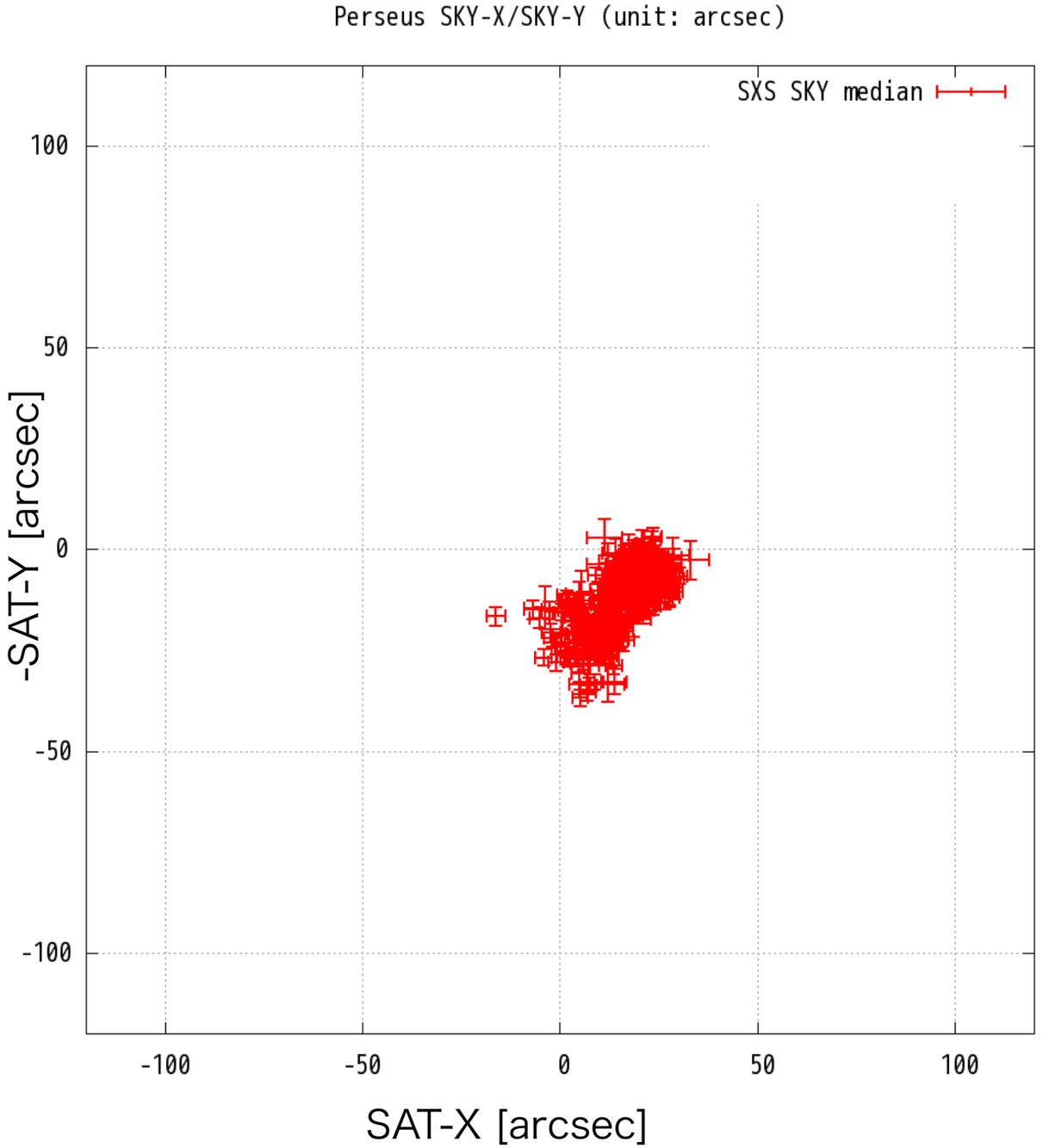
Perseus (STT-ALL)
seq: 100040030, 40, 50

DET



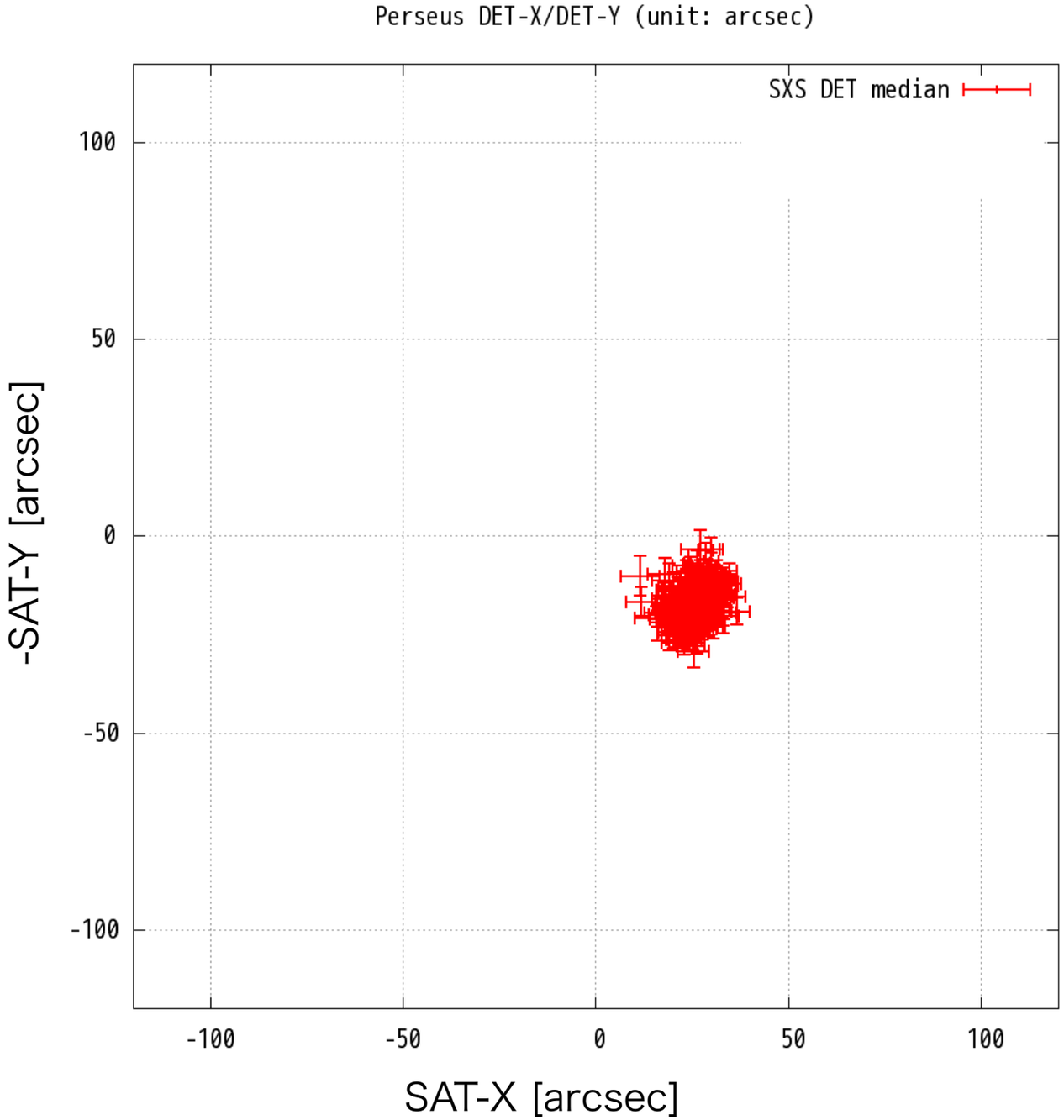
SKY

9/E ATT

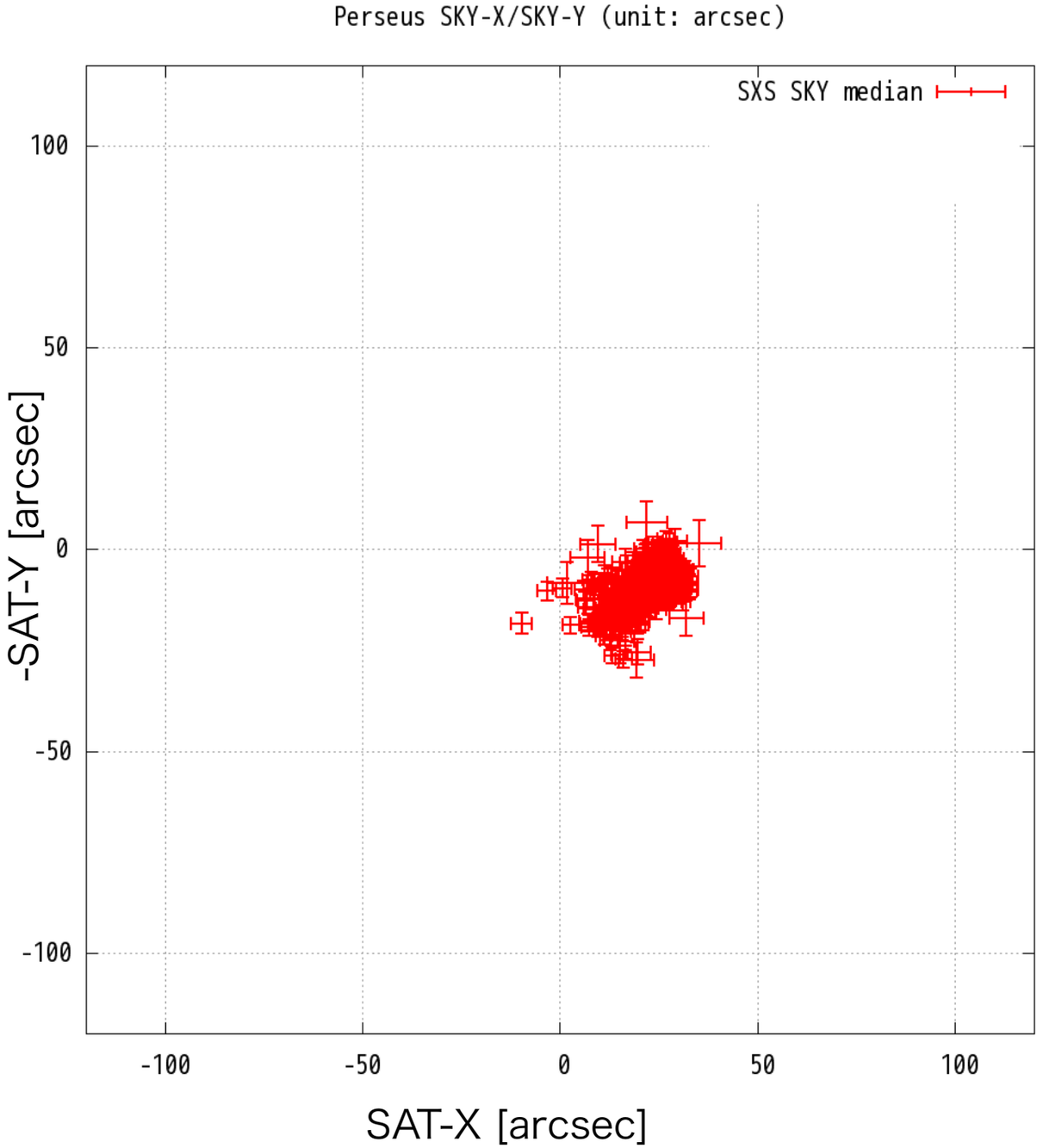


Perseus (STT-ALL)
seq: 100040030, 40, 50

DET



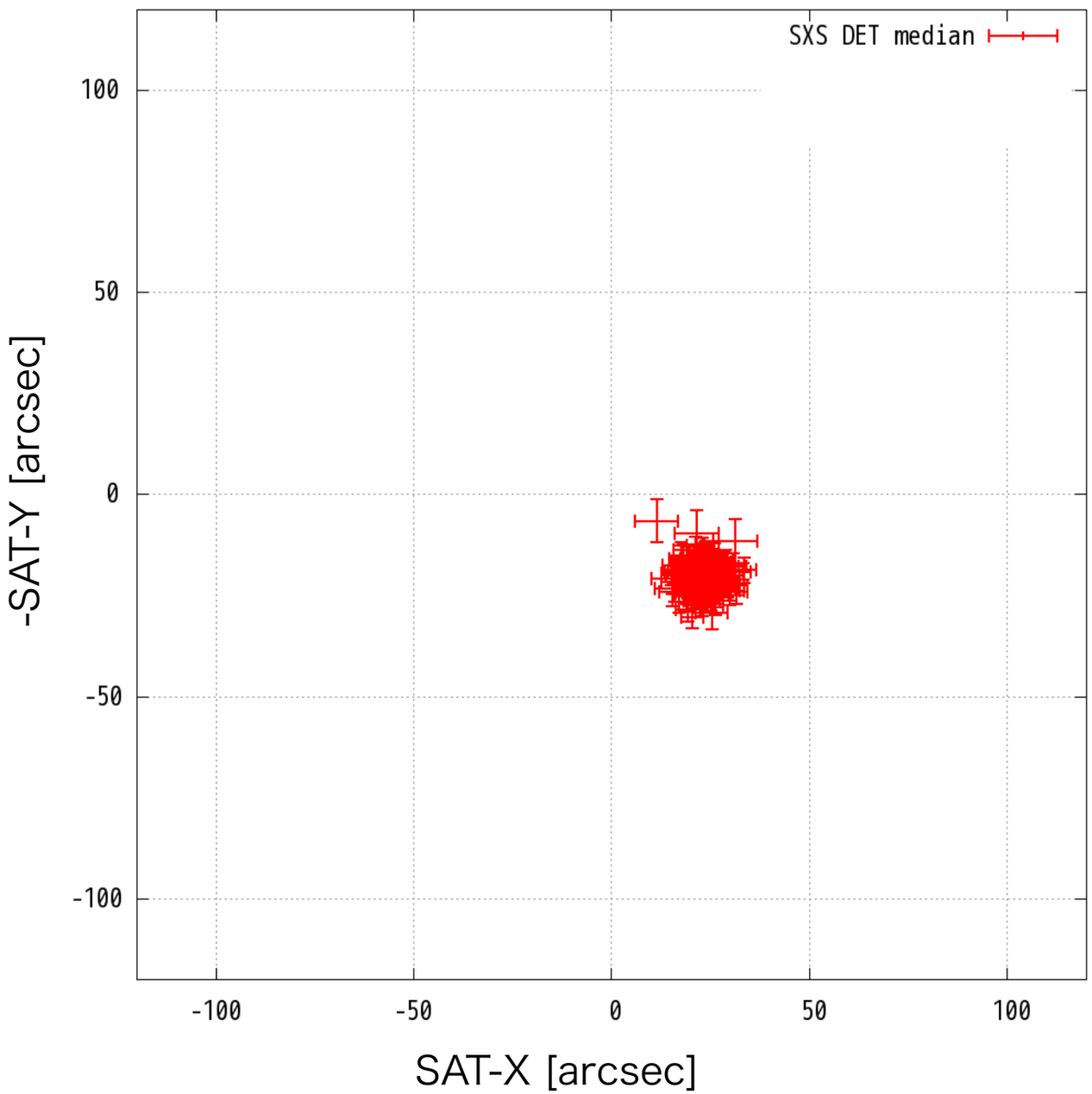
SKY 12/E ATT



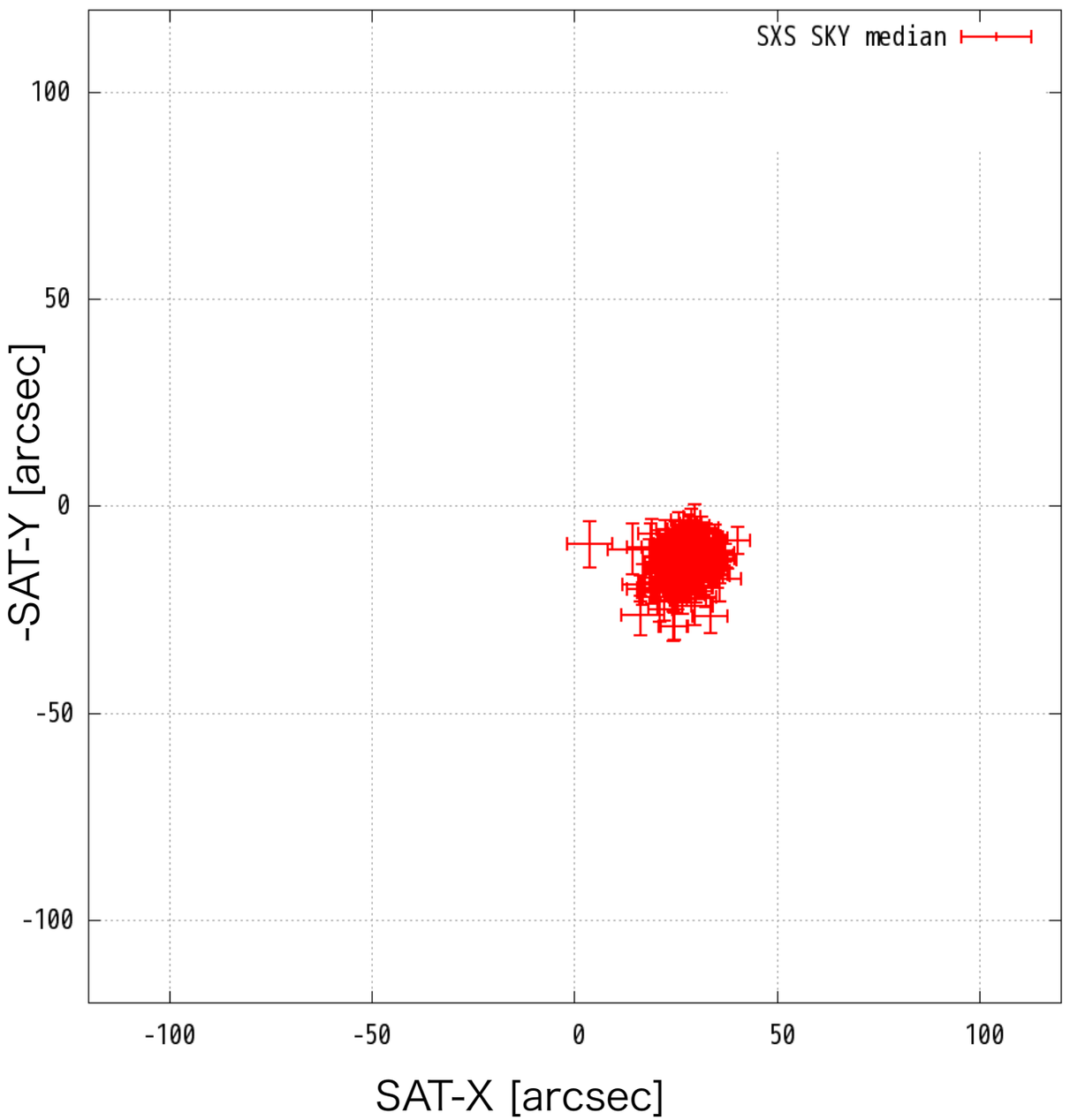
Perseus (STT-CTL)
seq: 100040030, 40, 50

8/1 ATT

DET

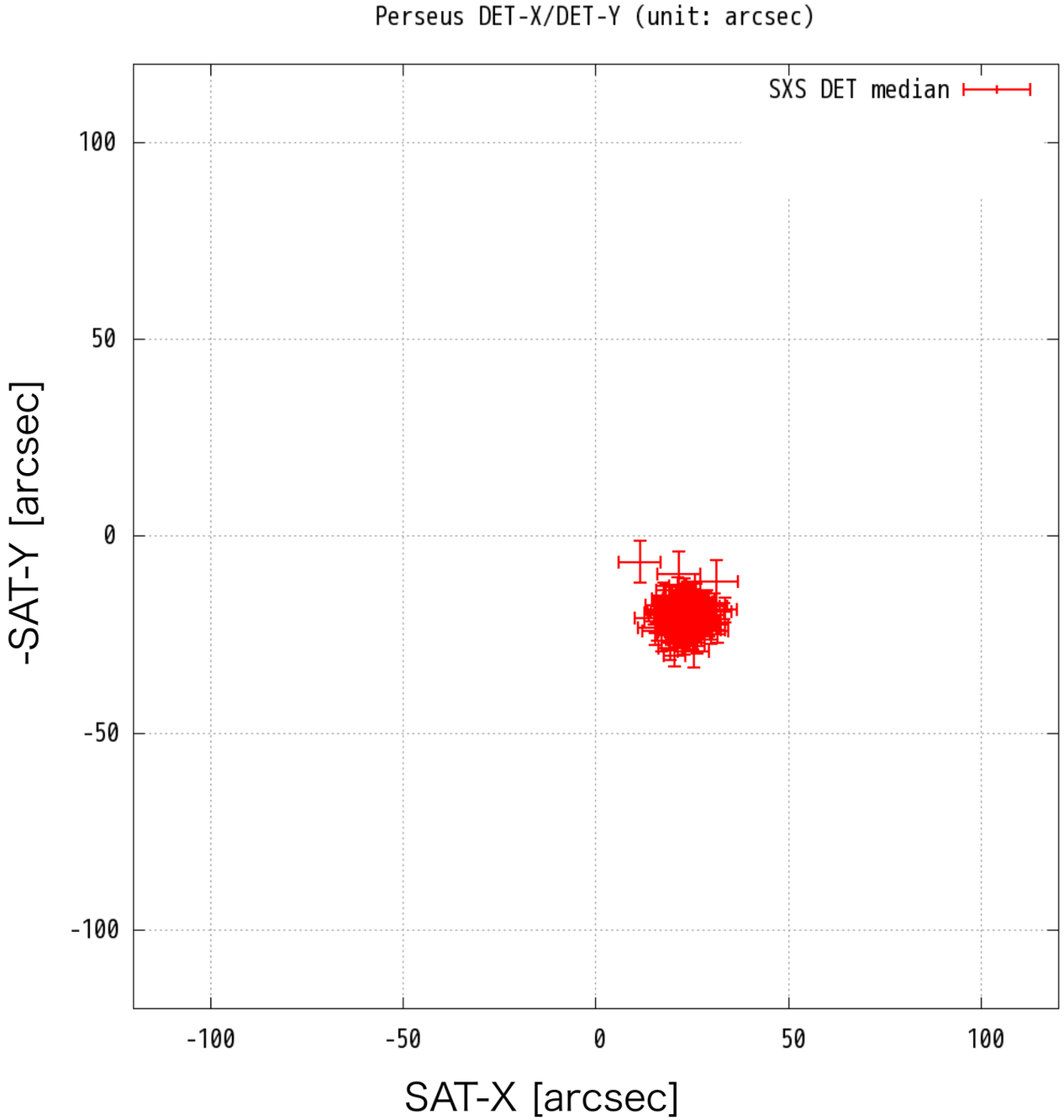


SKY



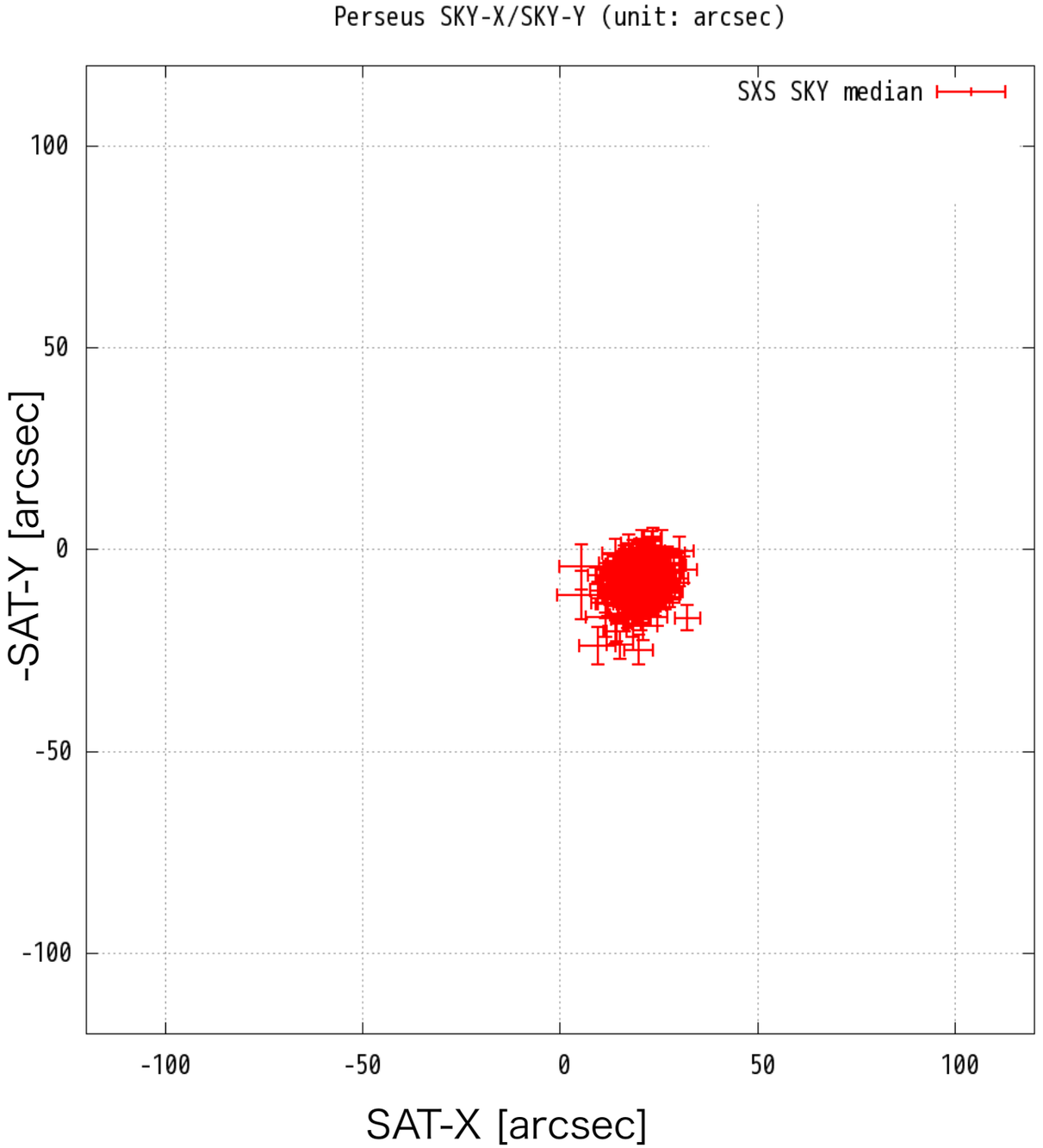
Perseus (STT-CTL)
seq: 100040030, 40, 50

DET



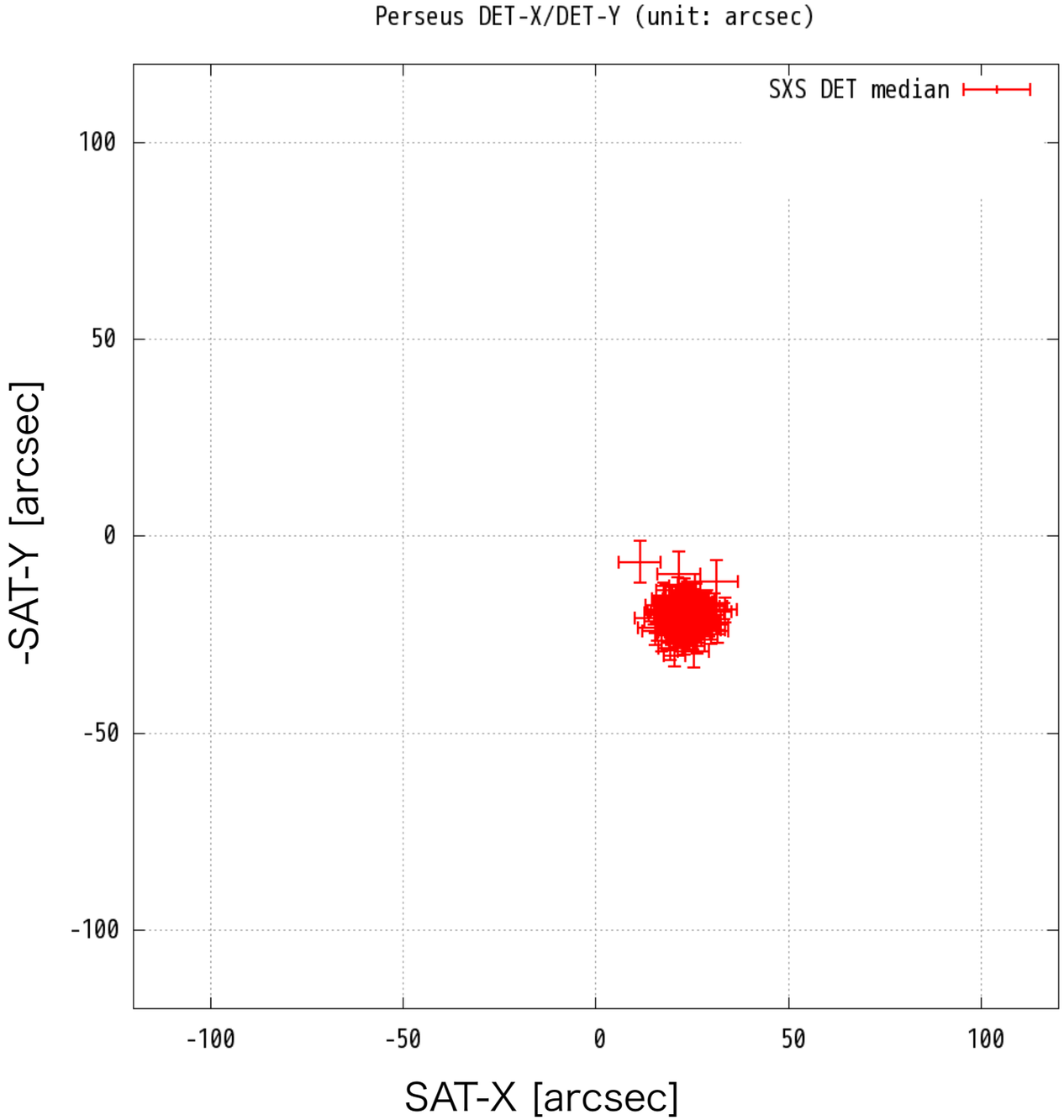
SKY

9/E ATT

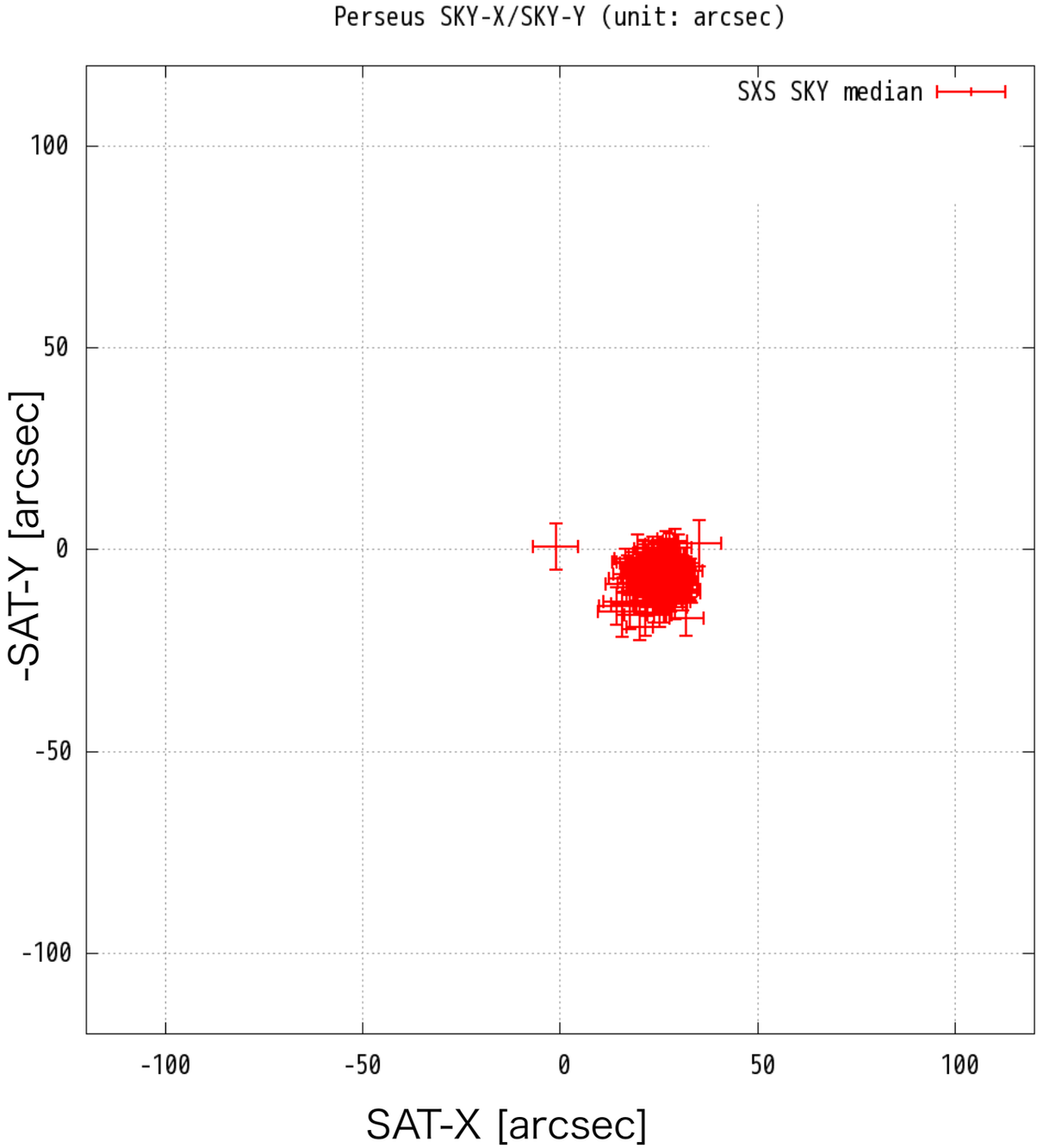


Perseus (STT-CTL)
seq: 100040030, 40, 50

DET

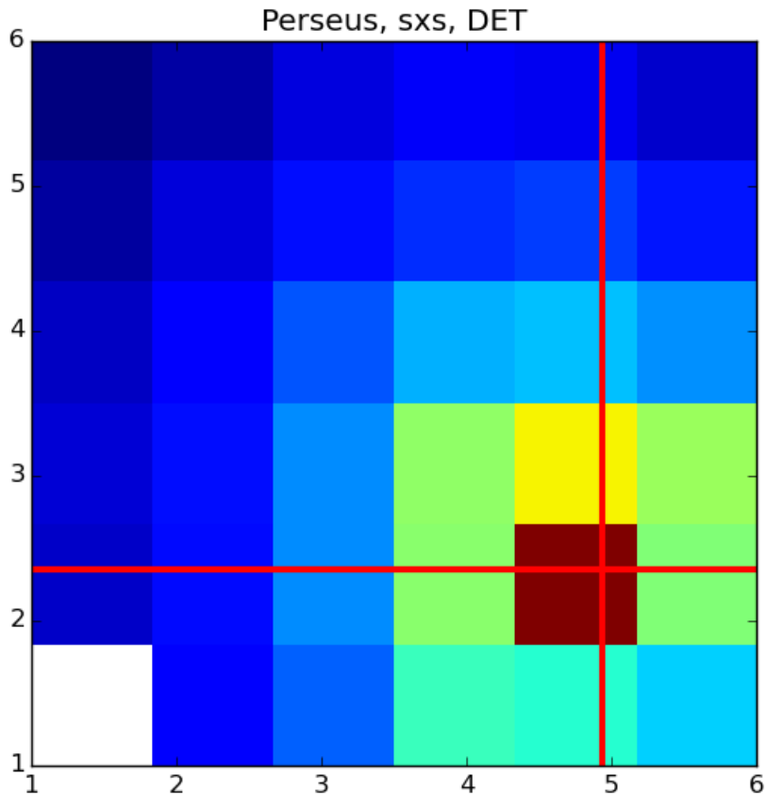


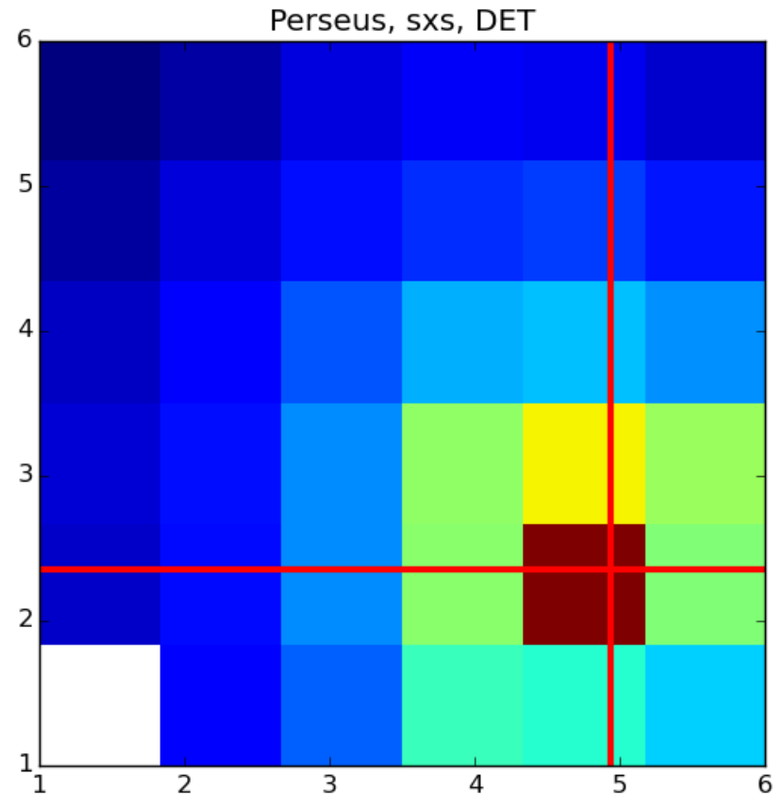
SKY 12/E ATT



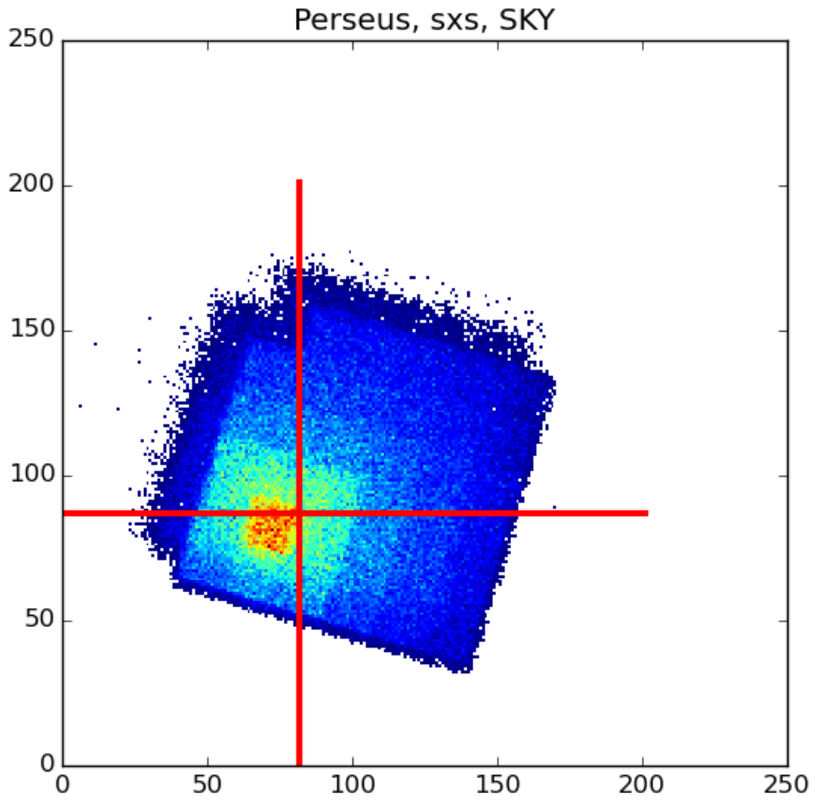
Perseus
(STT-ALL)
seq: 100040030, 40, 50

+ 2d lorentz center
+ simbad center
(12/E only)

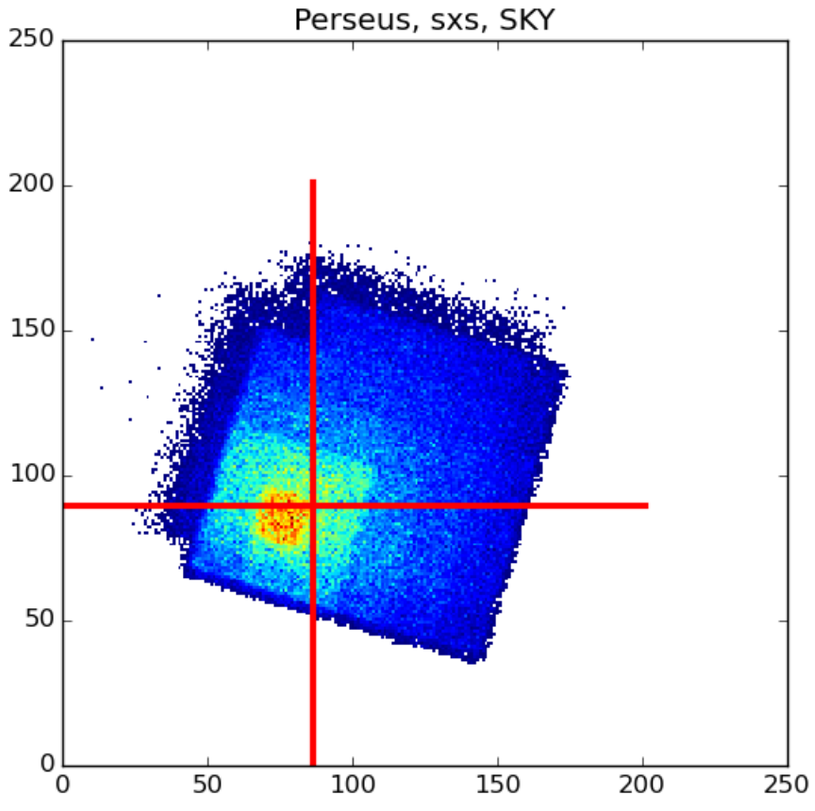




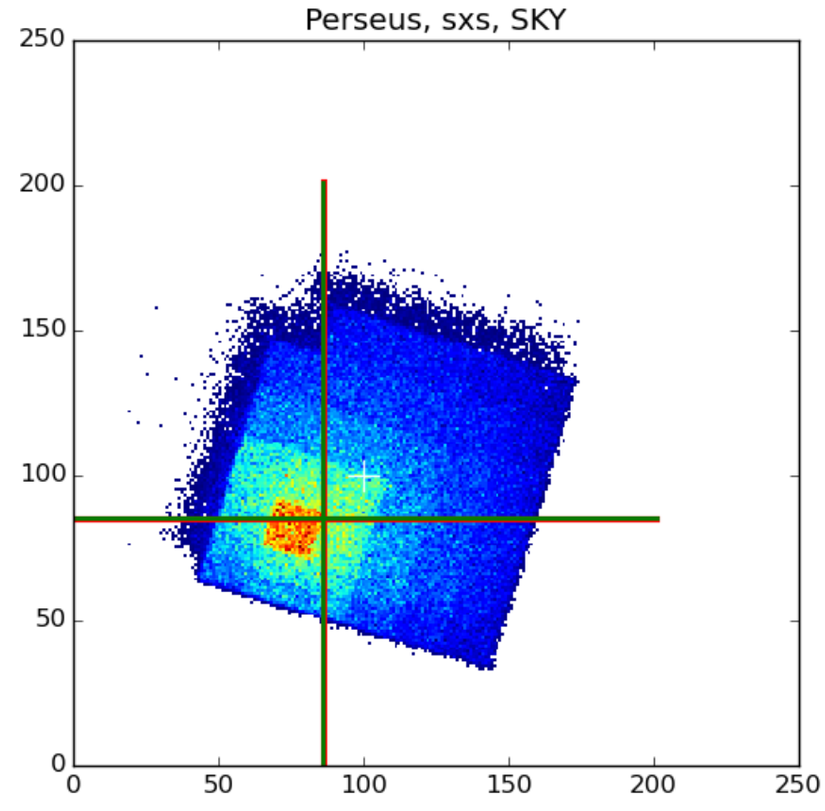
8/1 ATT



9/E ATT



12/E ATT



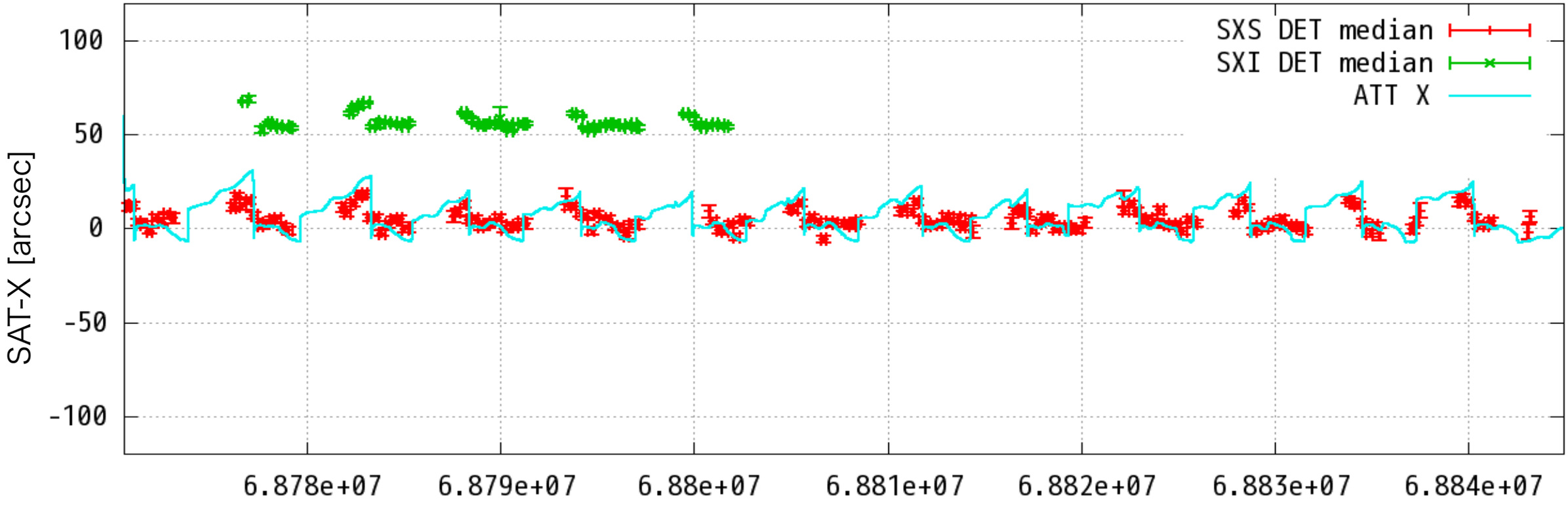
Perseus_adjustment

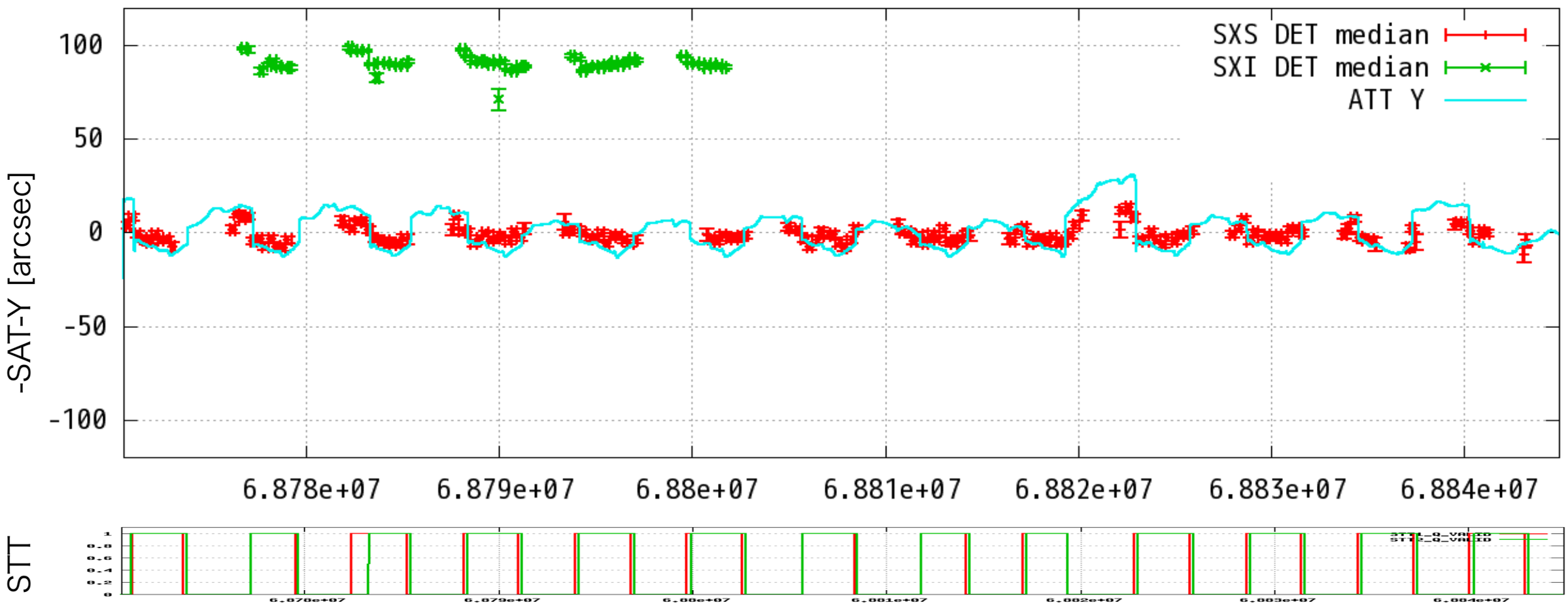
100040060

100040060

Perseus_adjustment DET-X/DET-Y (unit: arcsec)

STT-ALL

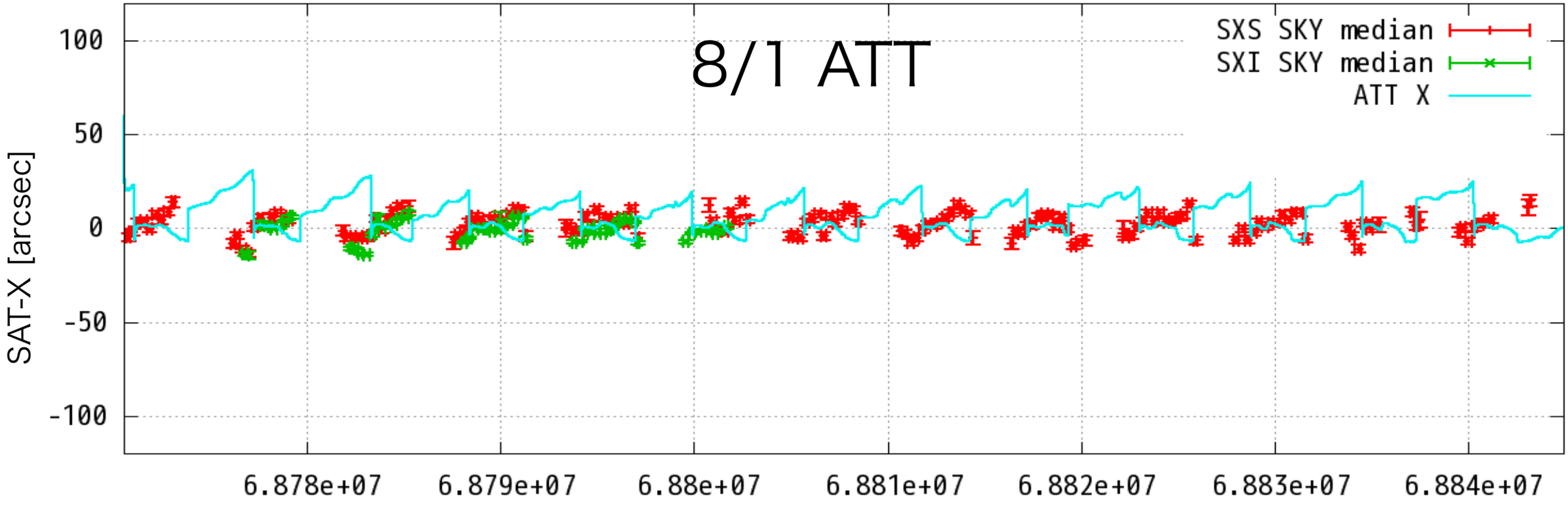


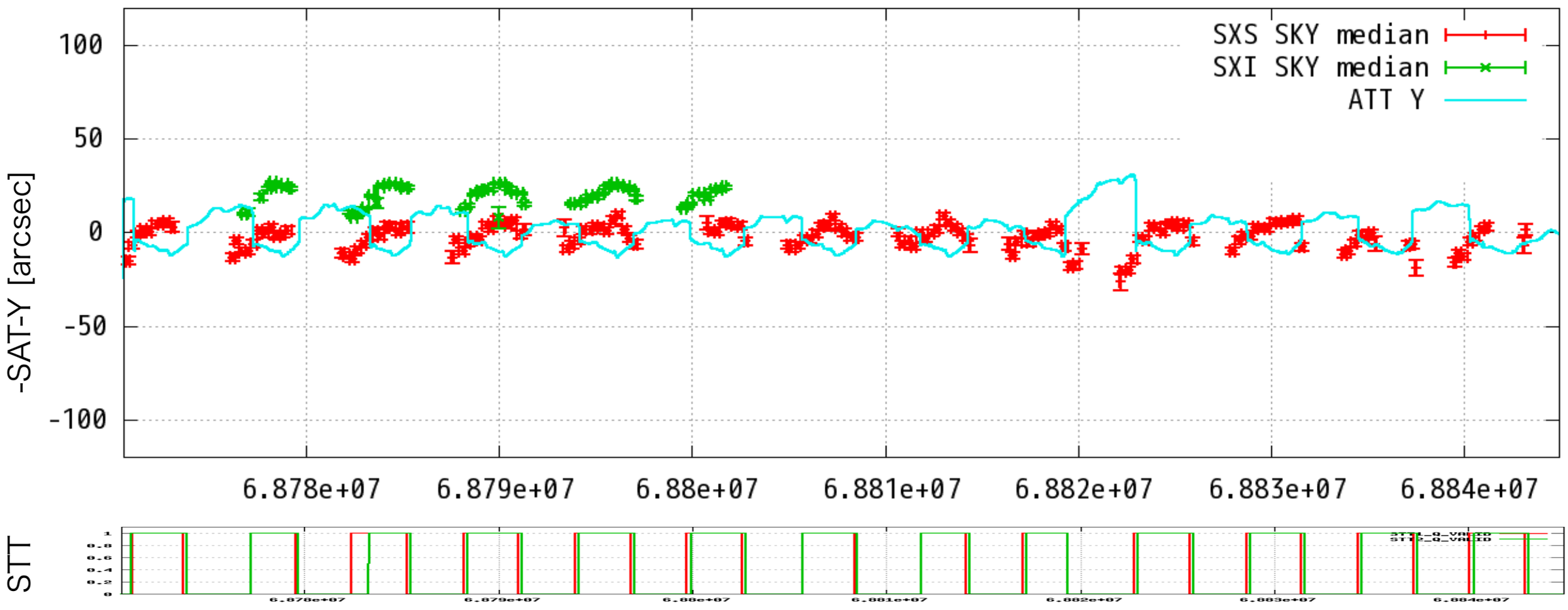


100040060

Perseus_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-ALL

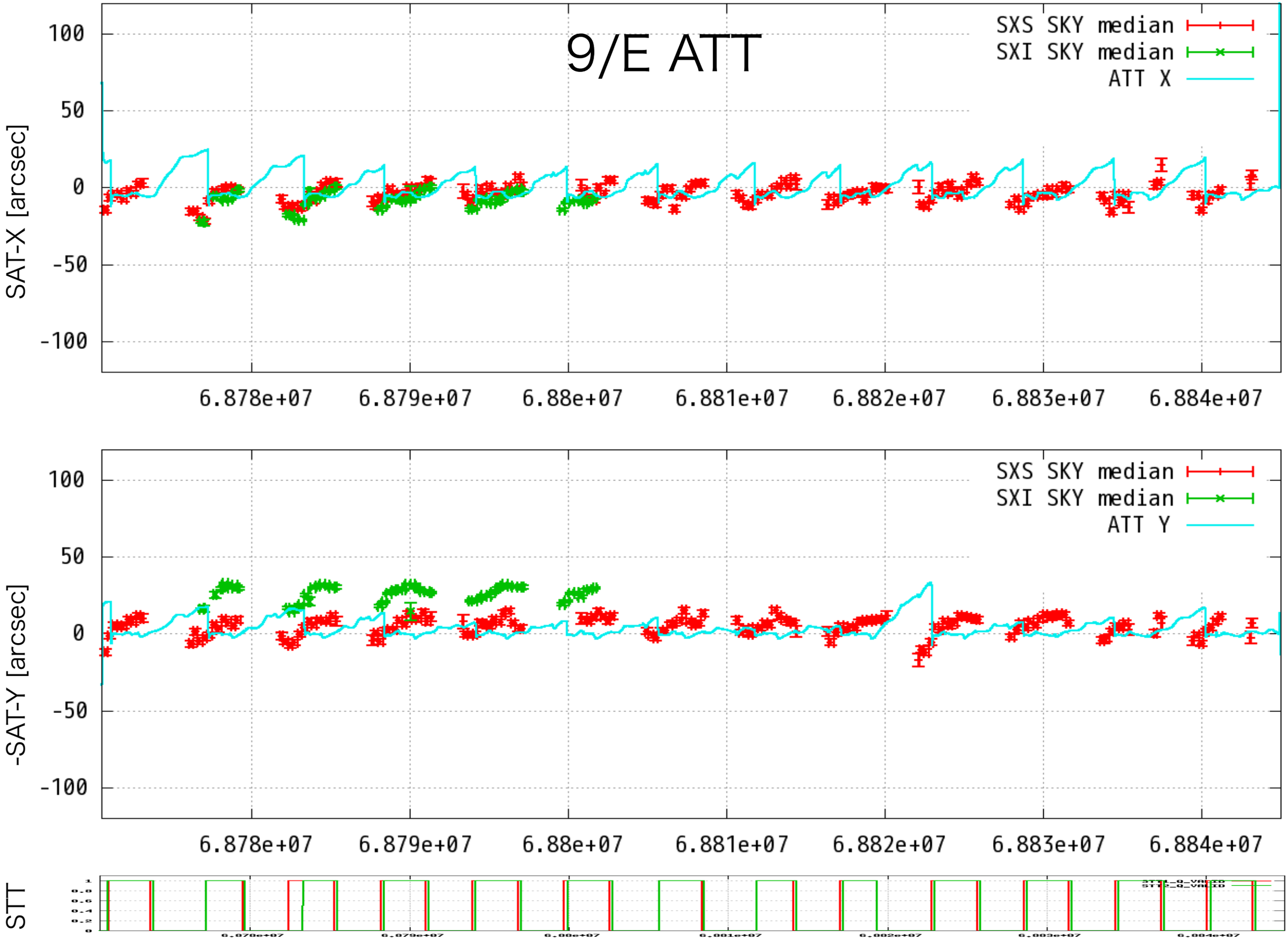




100040060

Perseus_adjustment SKY-X/SKY-Y (unit: arcsec)

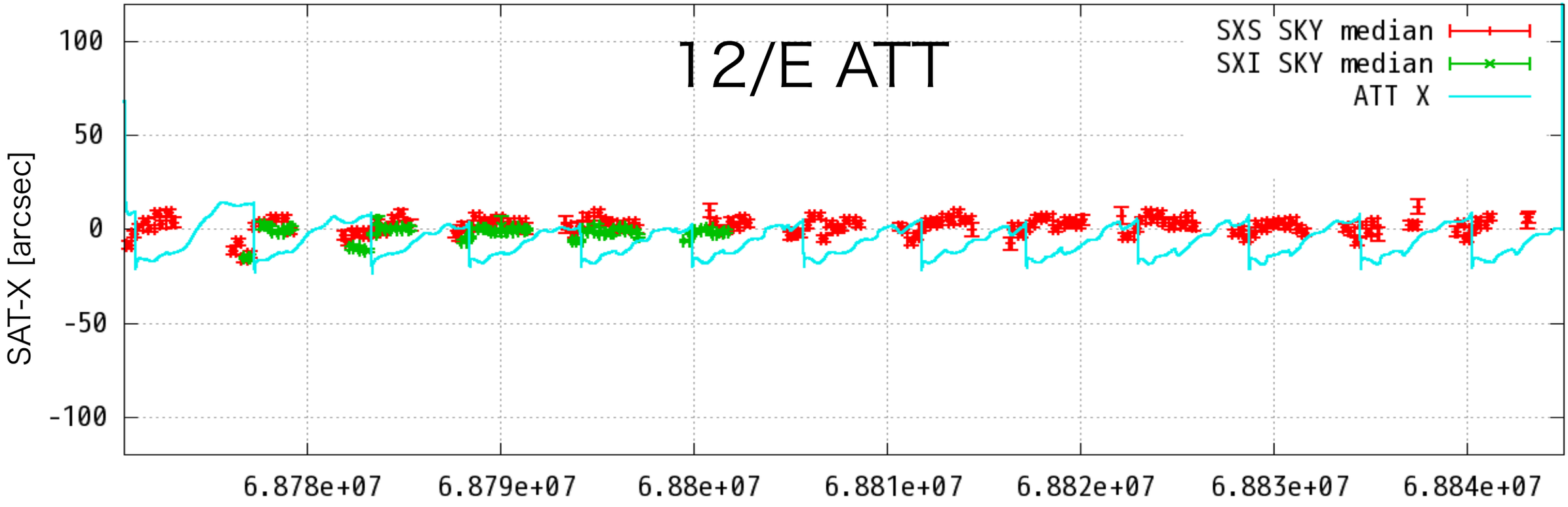
STT-ALL

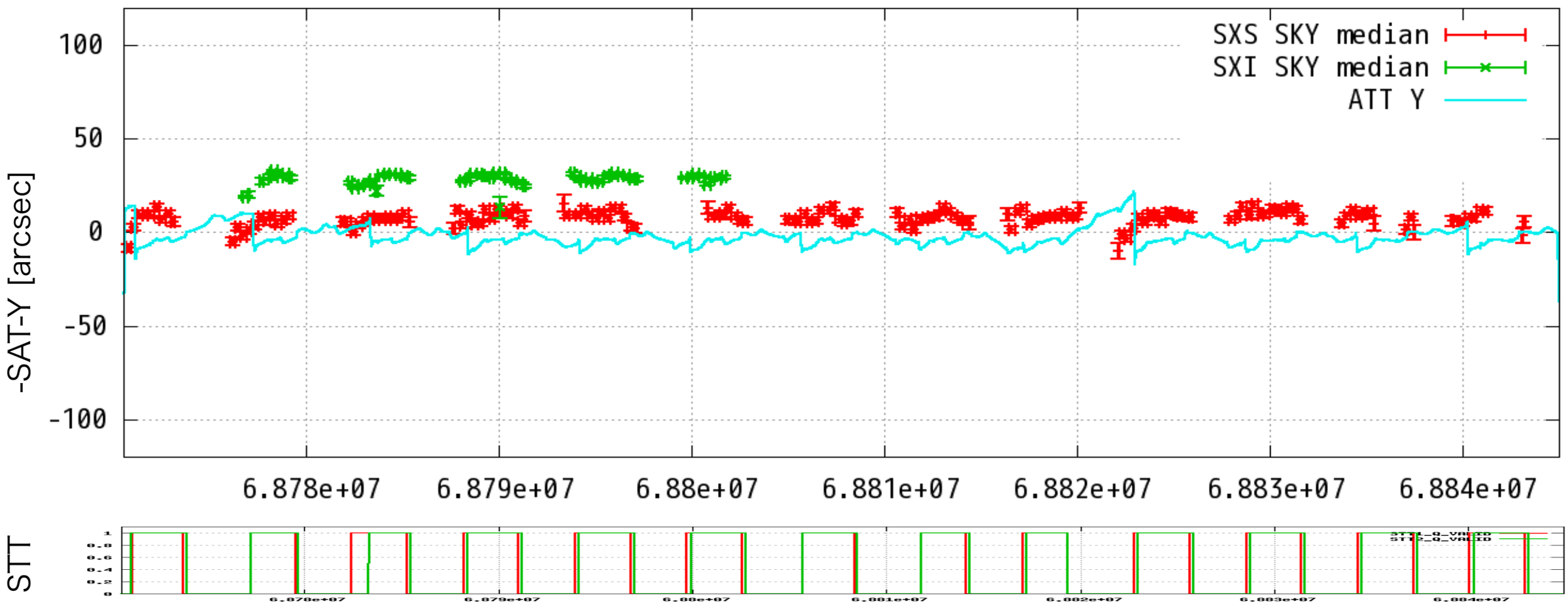


100040060

Perseus_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-ALL

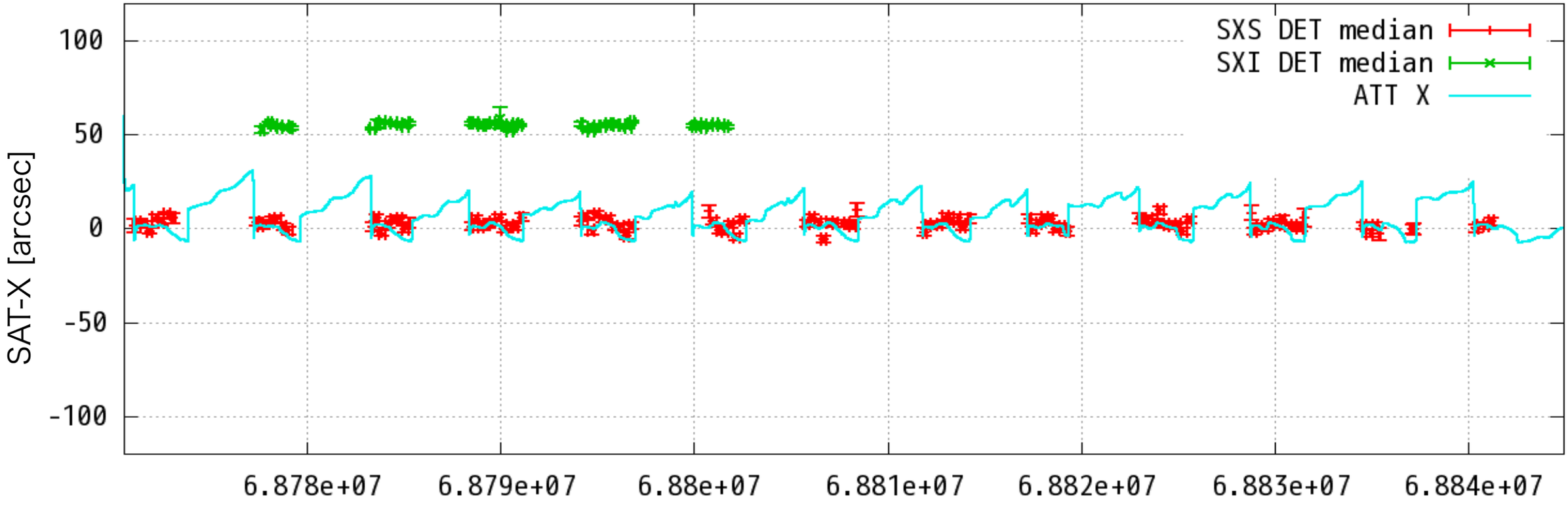


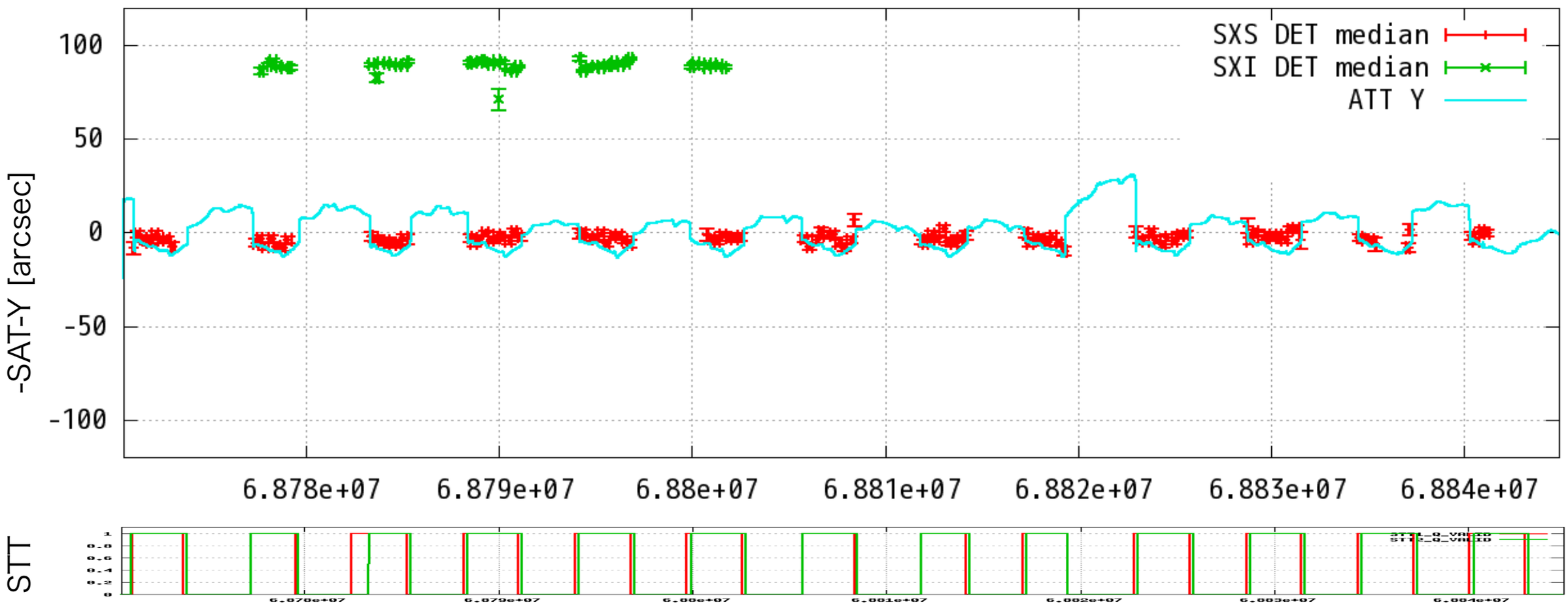


100040060

Perseus_adjustment DET-X/DET-Y (unit: arcsec)

STT-CTL

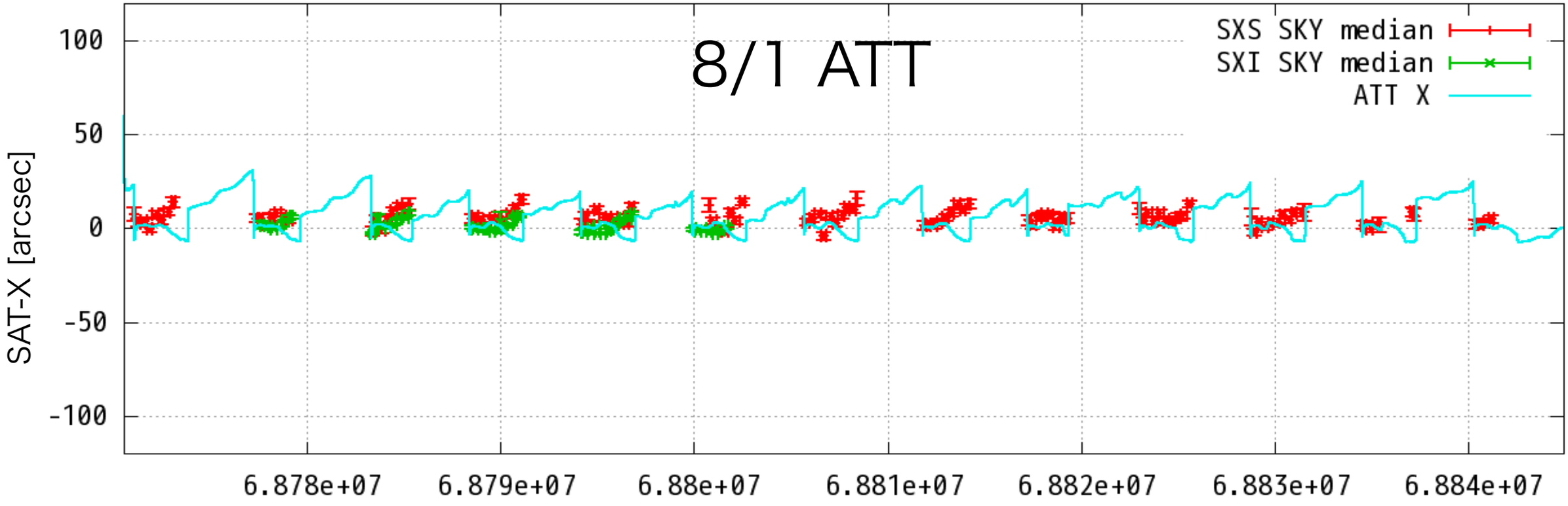


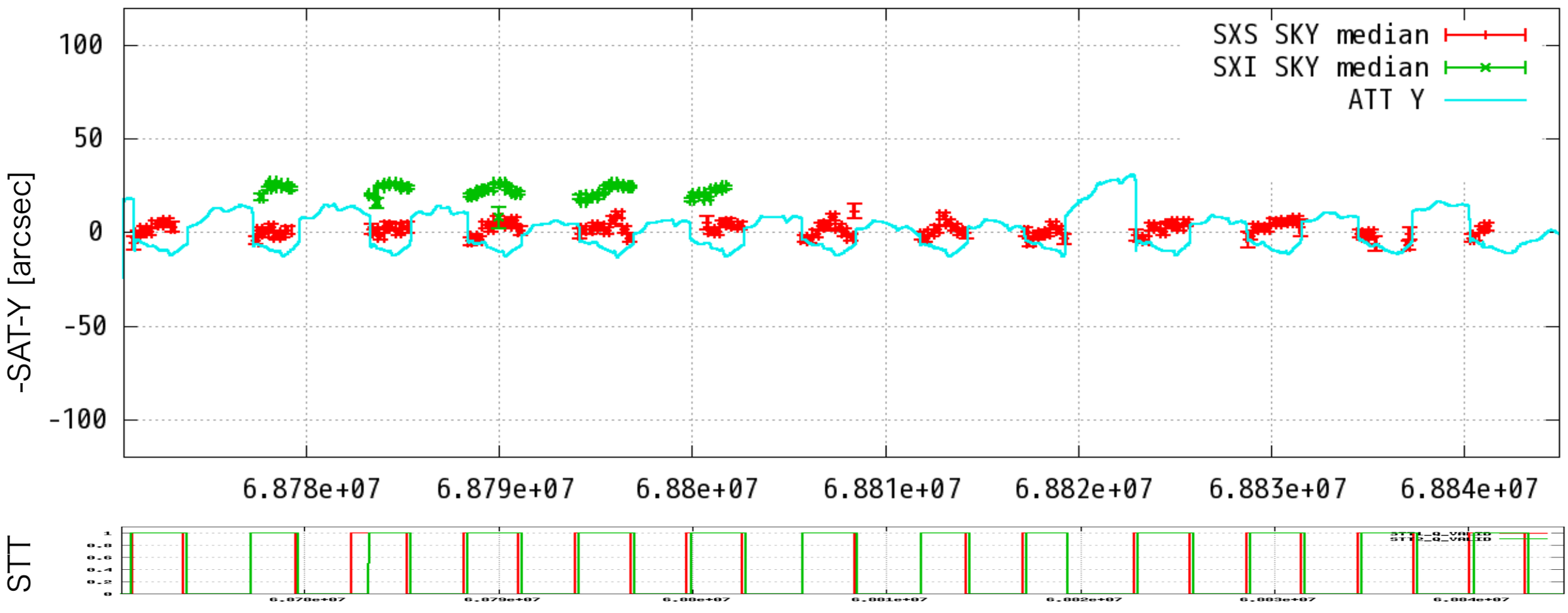


100040060

Perseus_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-CTL

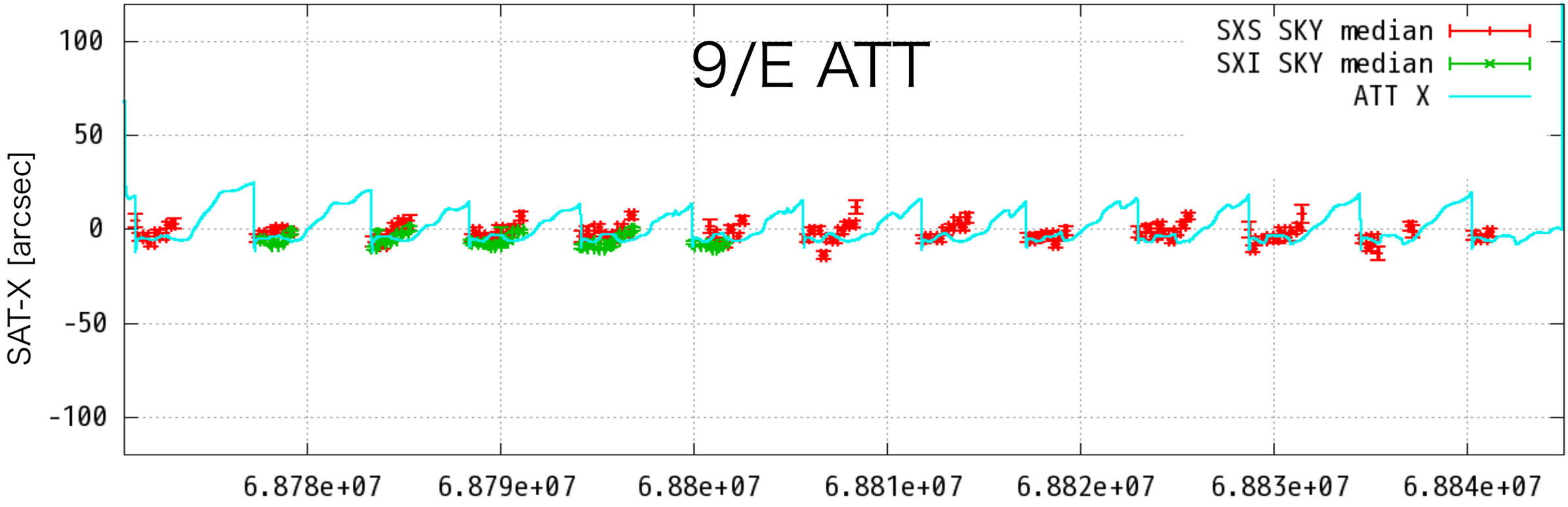


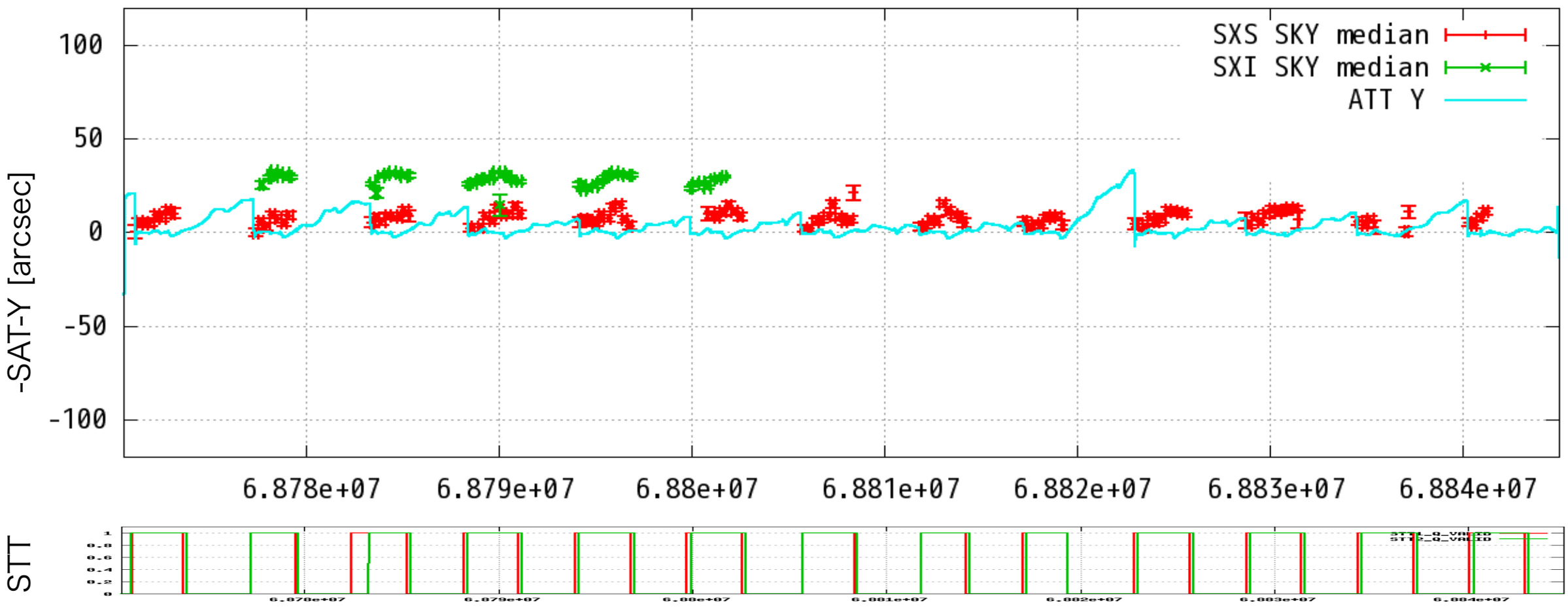


100040060

Perseus_adjustment SKY-X/SKY-Y (unit: arcsec)

STT-CTL

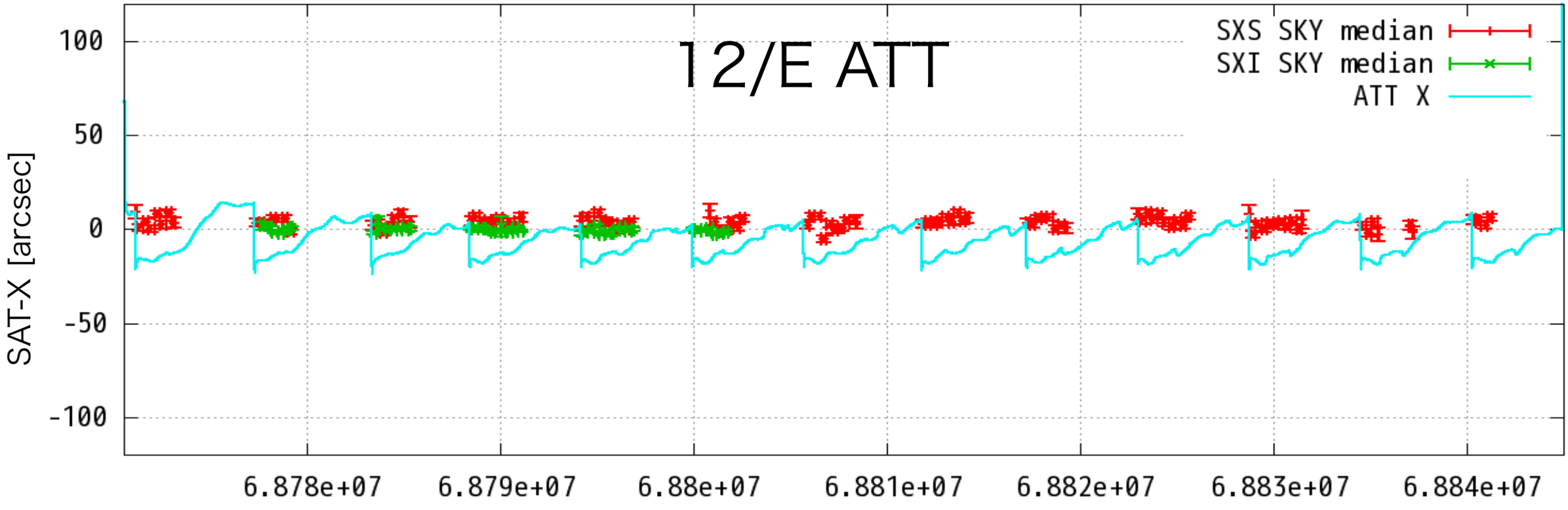


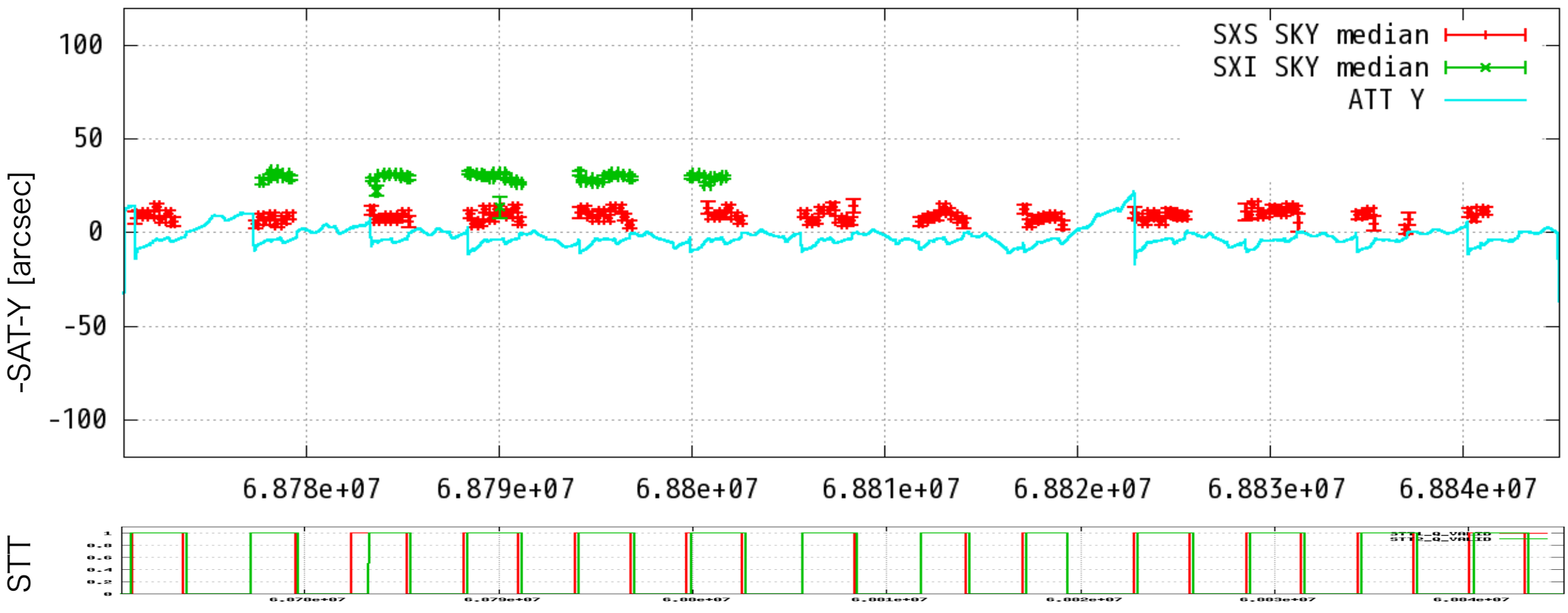


100040060

Perseus_adjustment SKY-X/SKY-Y (unit: arcsec)

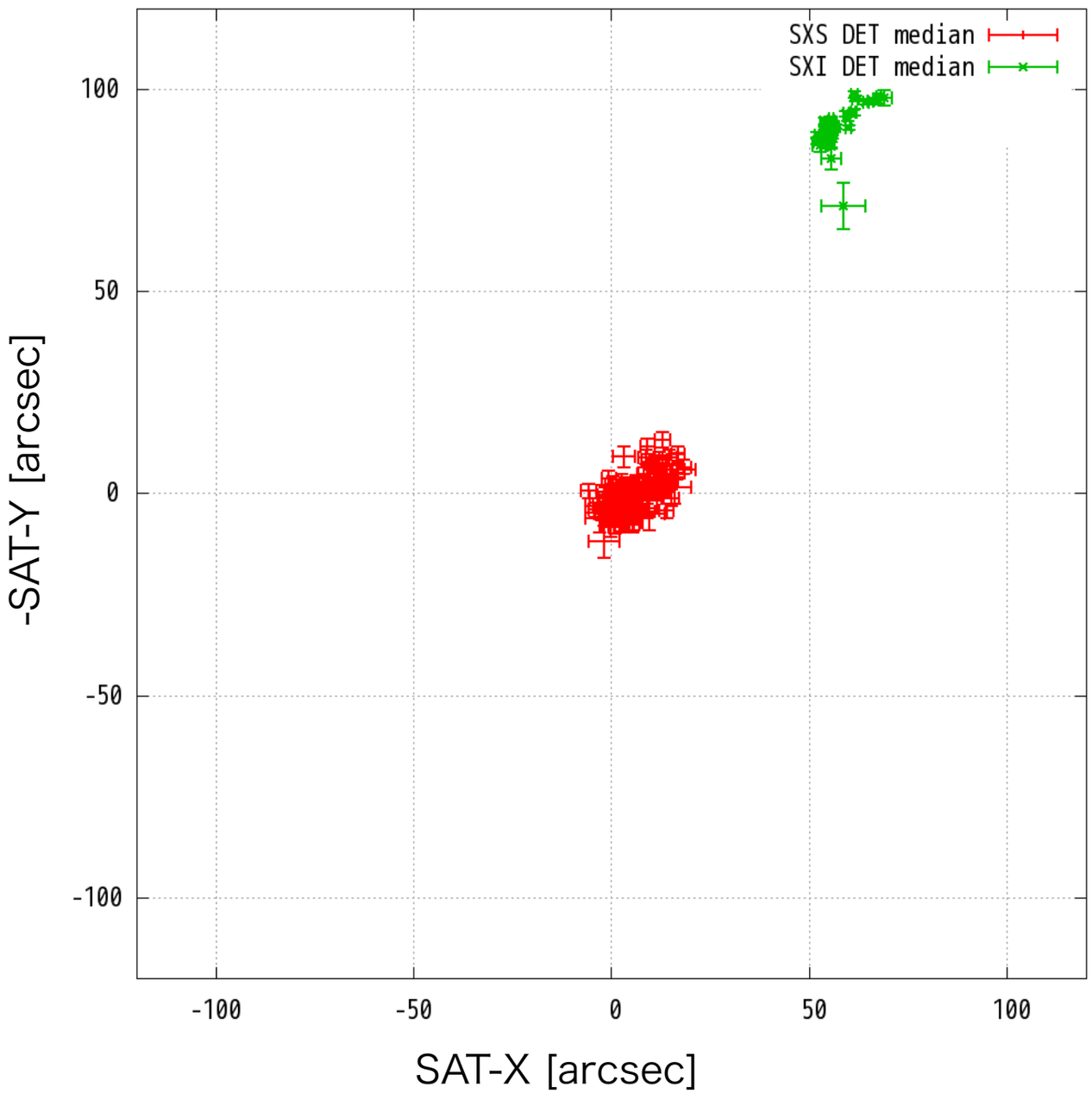
STT-CTL





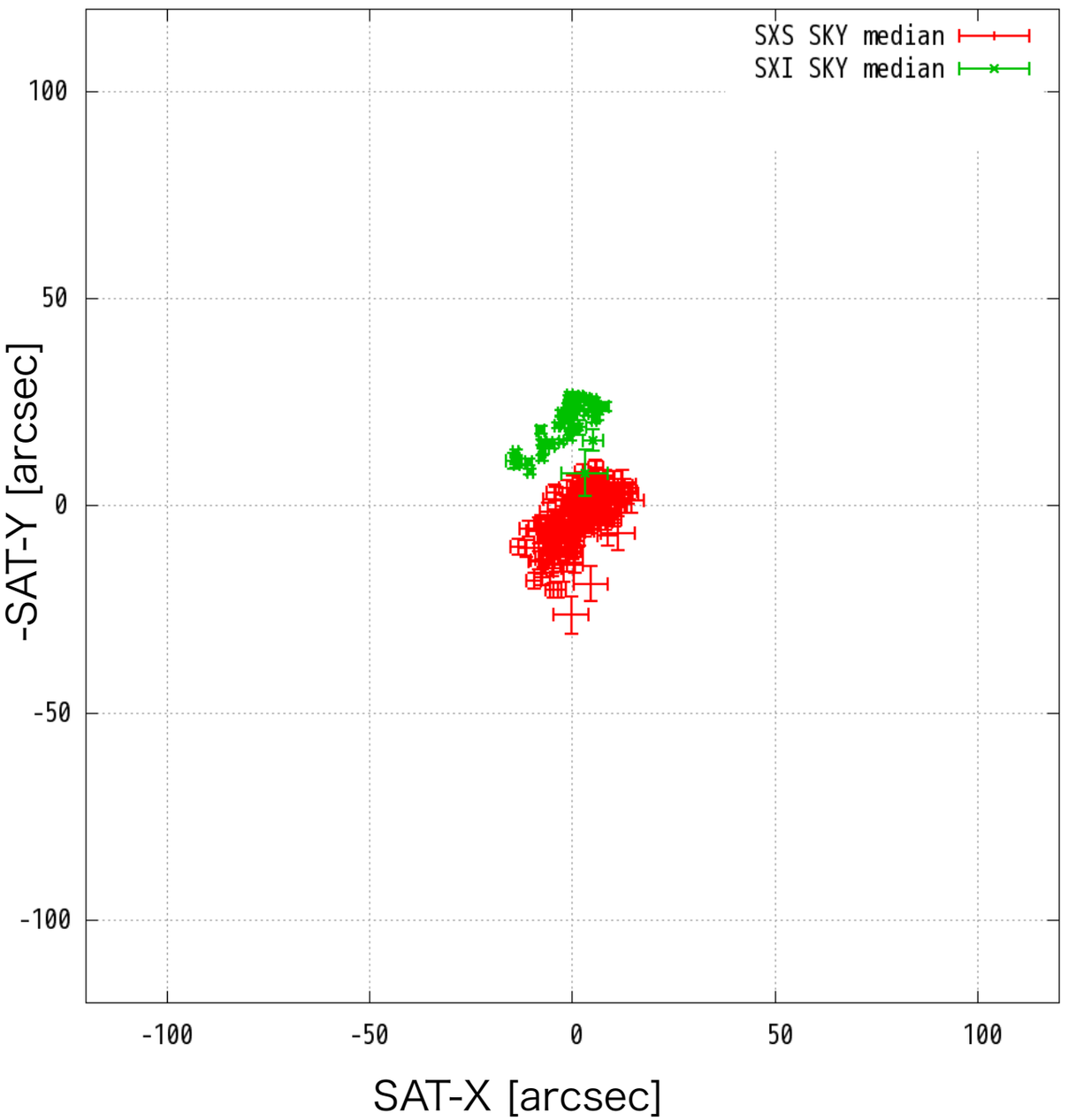
Perseus_adjustment (STT-ALL)
seq: 100040060

DET



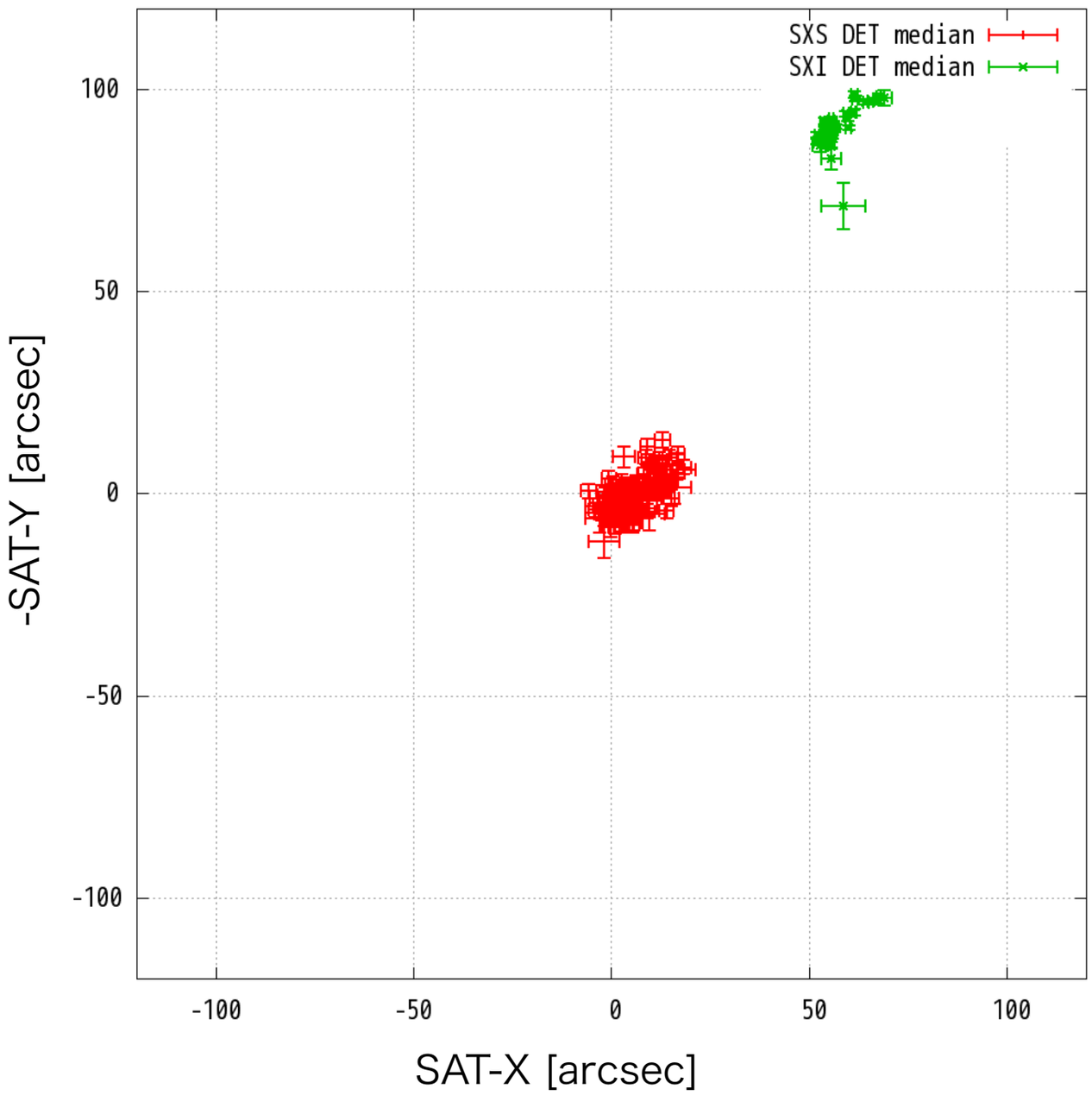
SKY

8/1 ATT



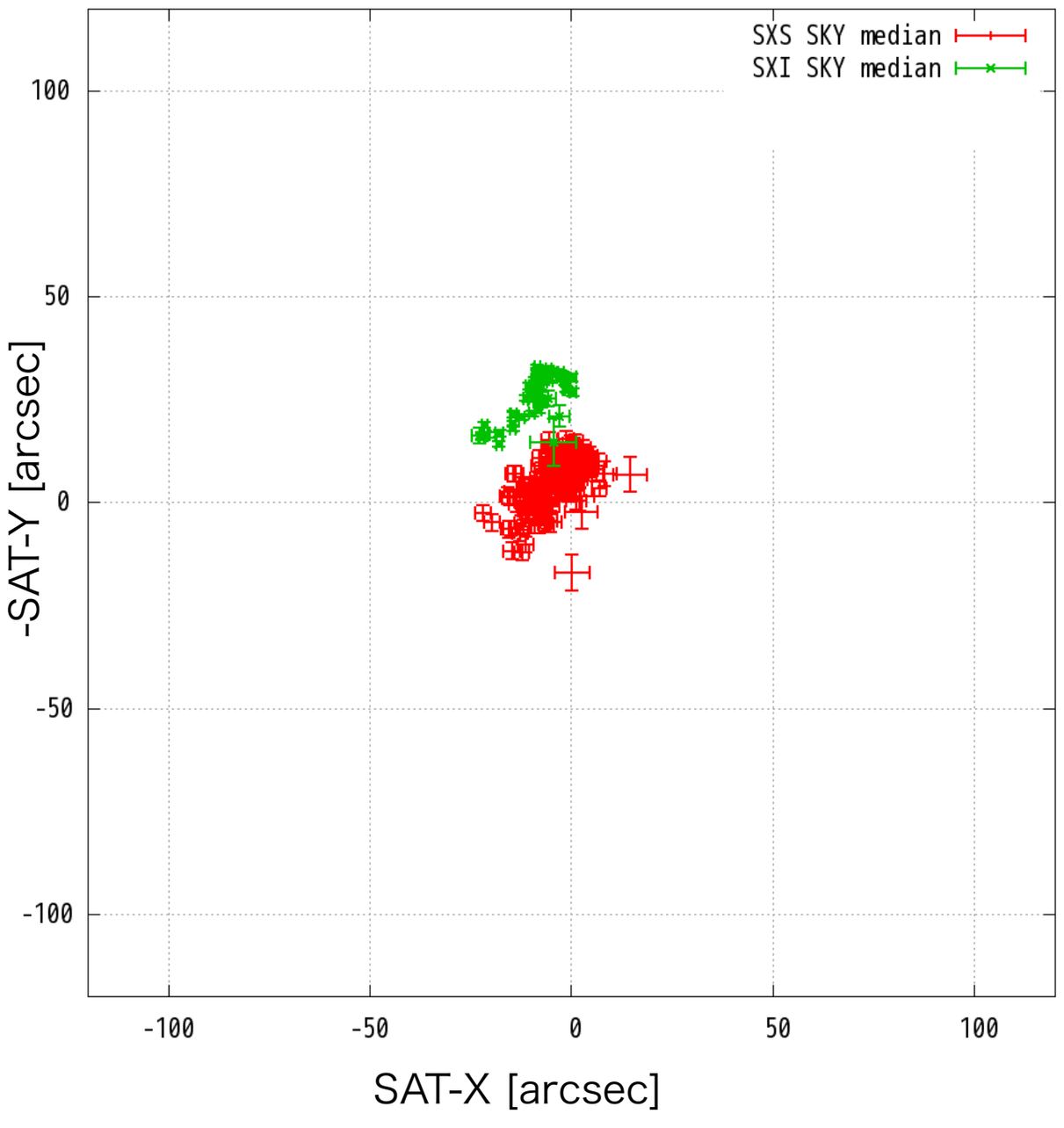
Perseus_adjustment (STT-ALL)
seq: 100040060

DET



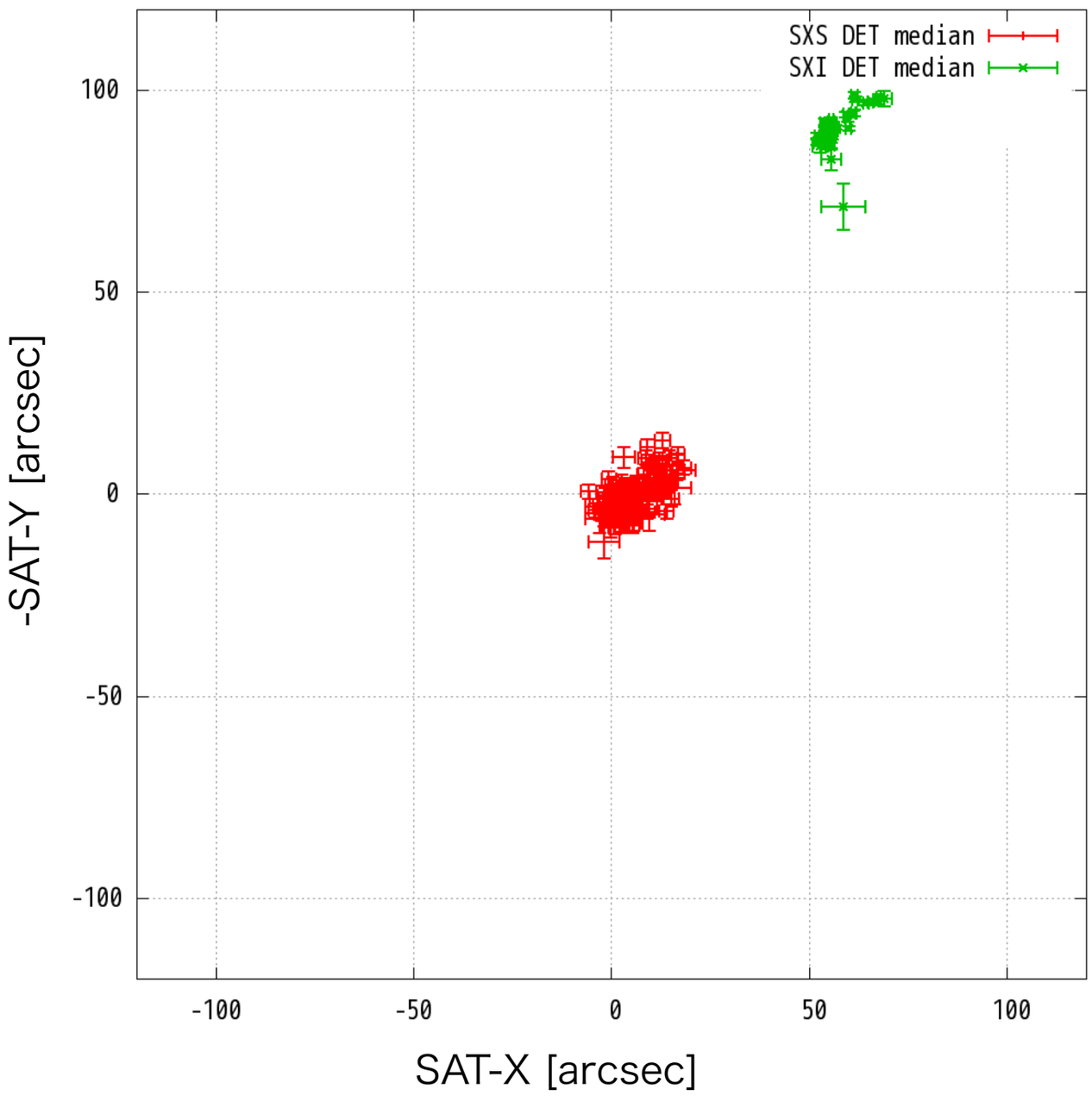
SKY

9/E ATT



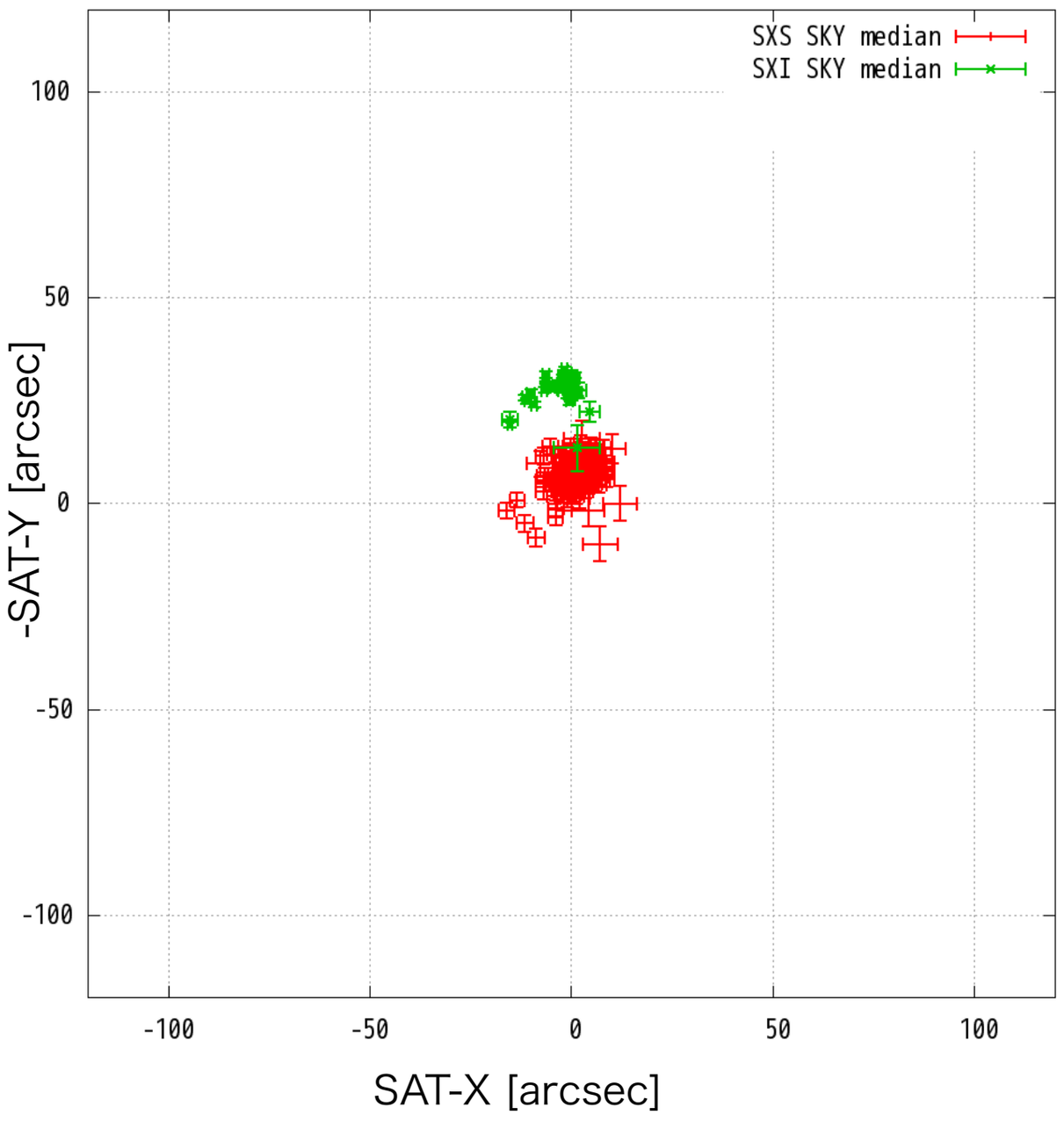
Perseus_adjustment (STT-ALL)
seq: 100040060

DET



SKY

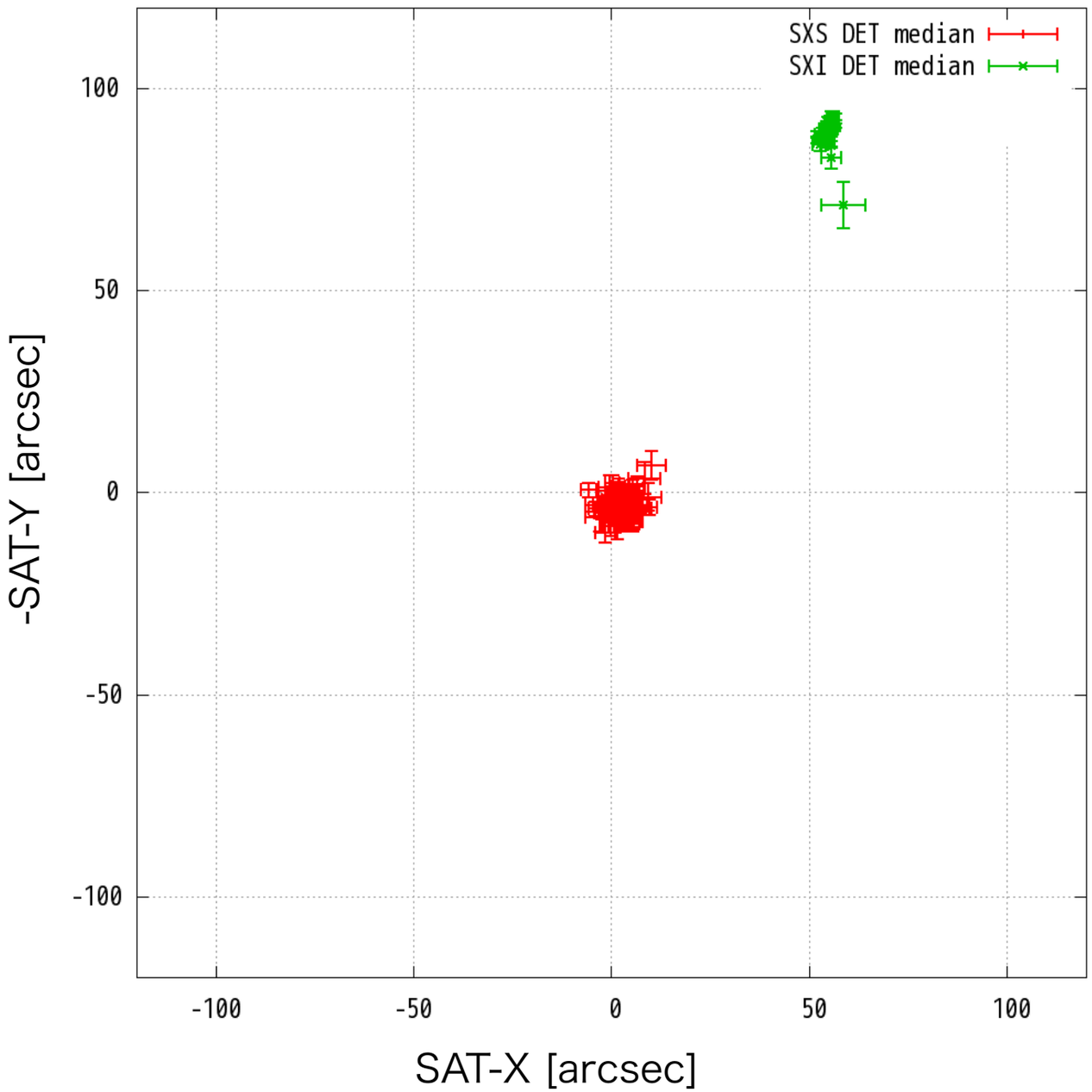
12/E ATT



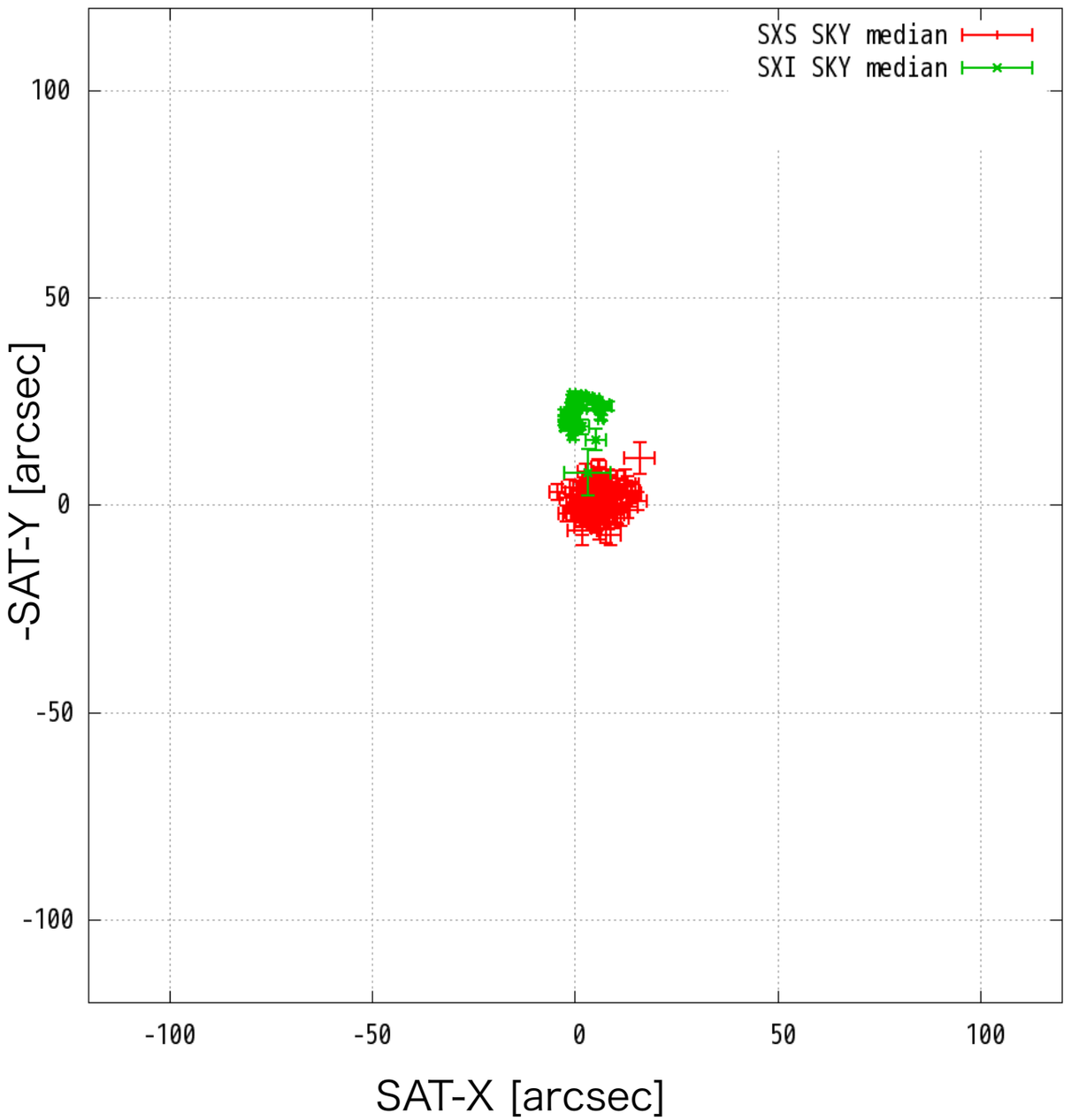
Perseus_adjustment (STT-CTL)
seq: 100040060

8/1 ATT

DET

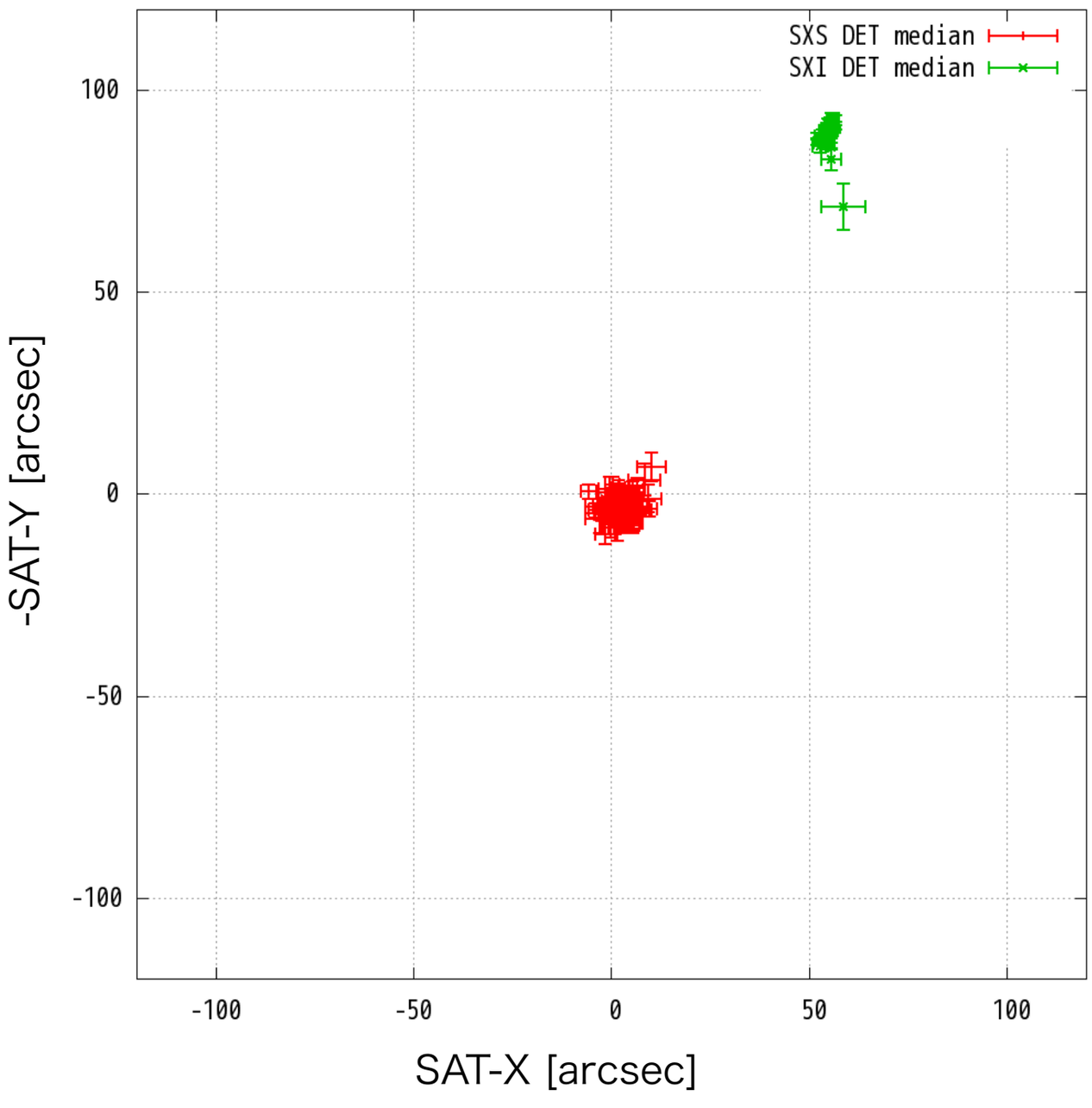


SKY



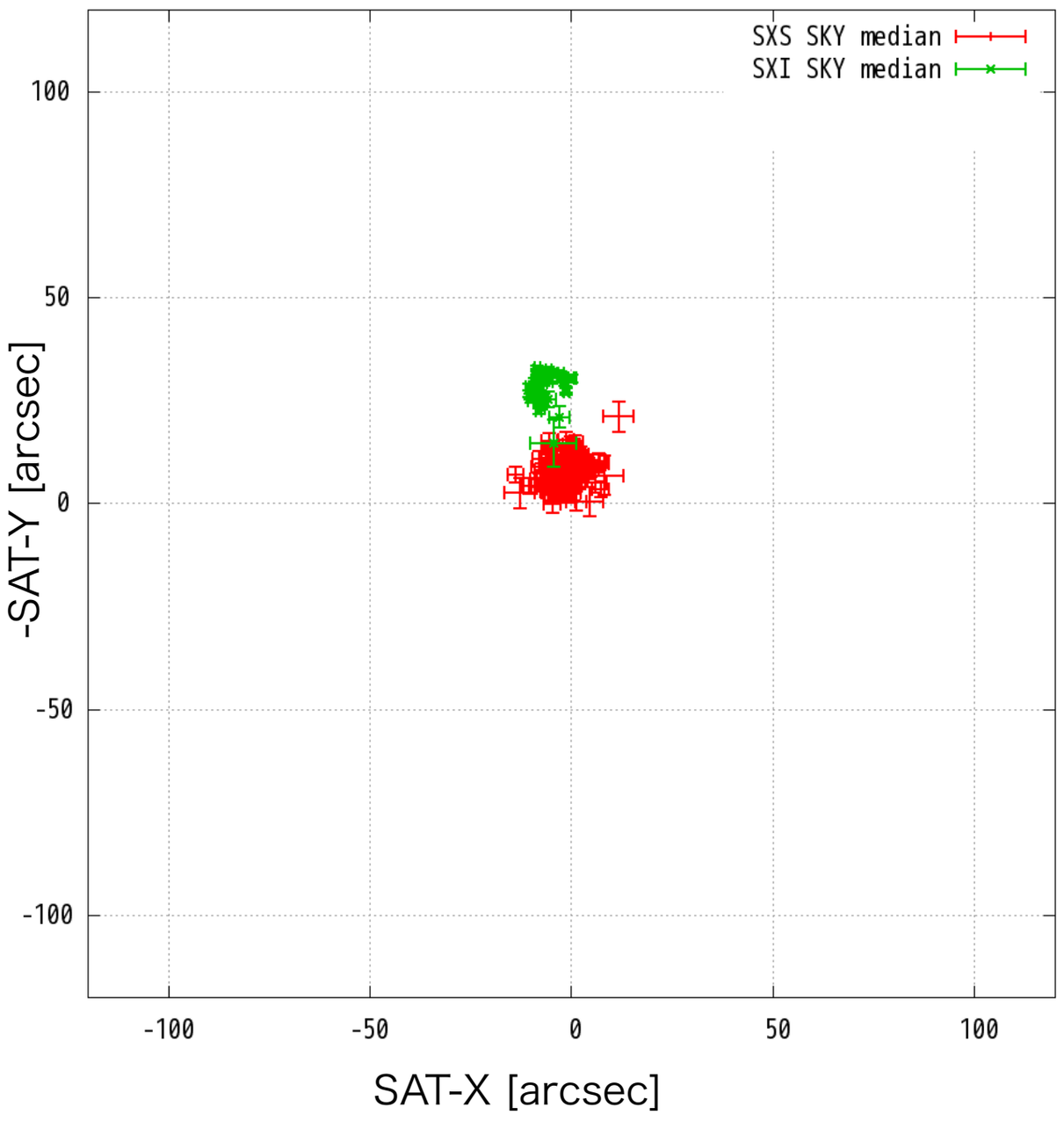
Perseus_adjustment (STT-CTL)
seq: 100040060

DET



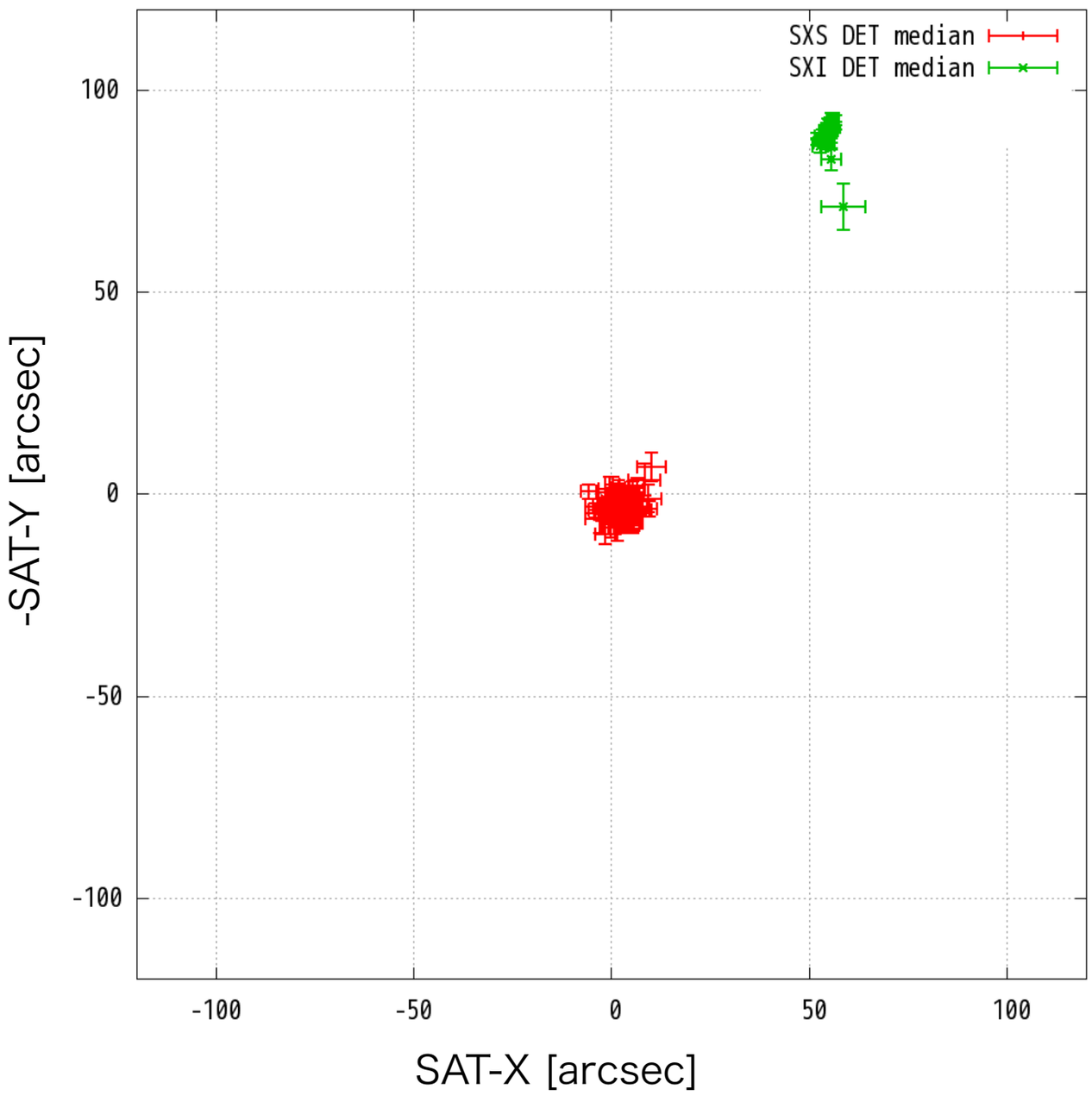
SKY

9/E ATT



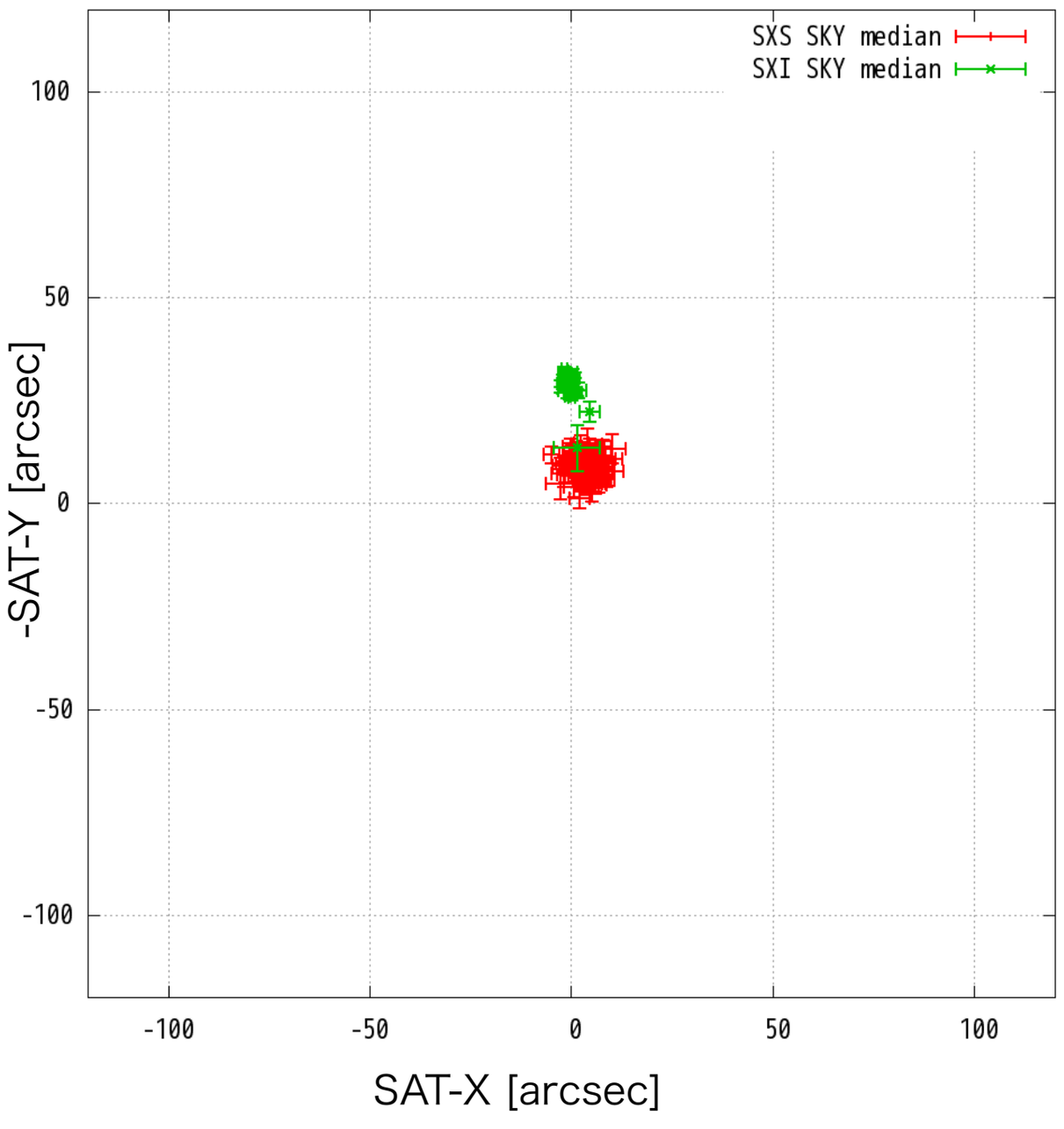
Perseus_adjustment (STT-CTL)
seq: 100040060

DET



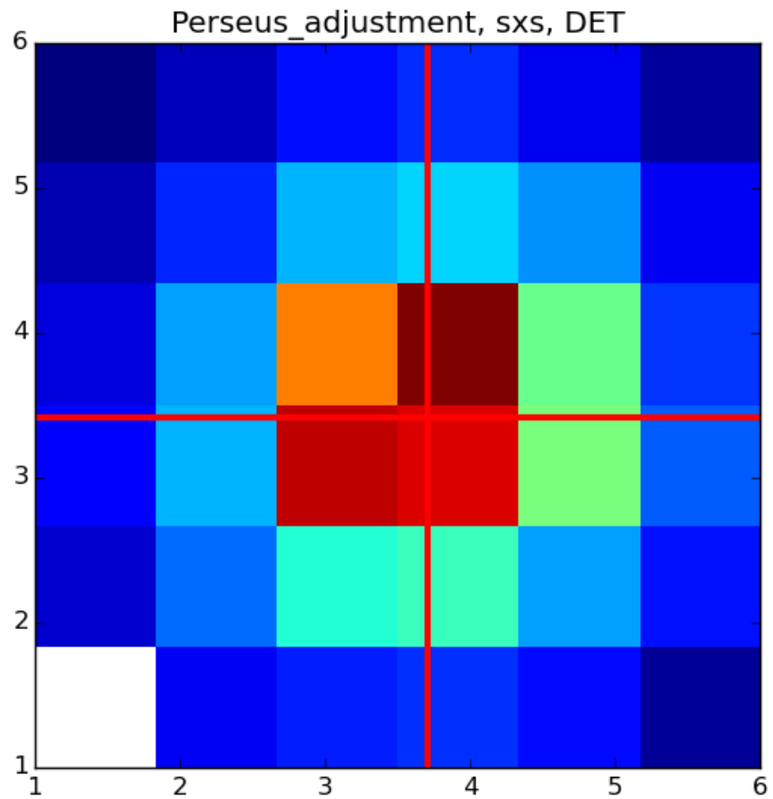
SKY

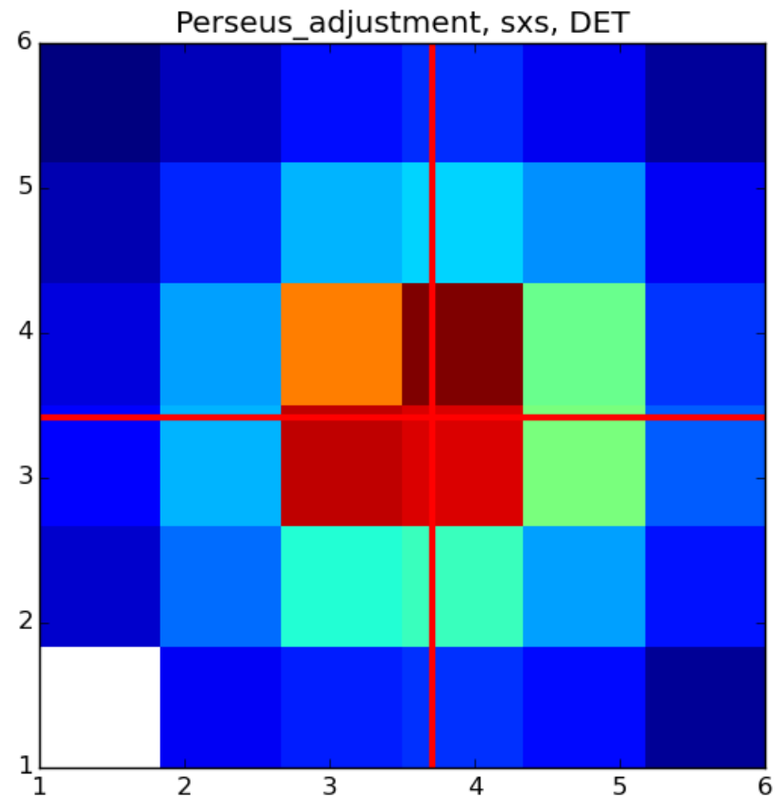
12/E ATT



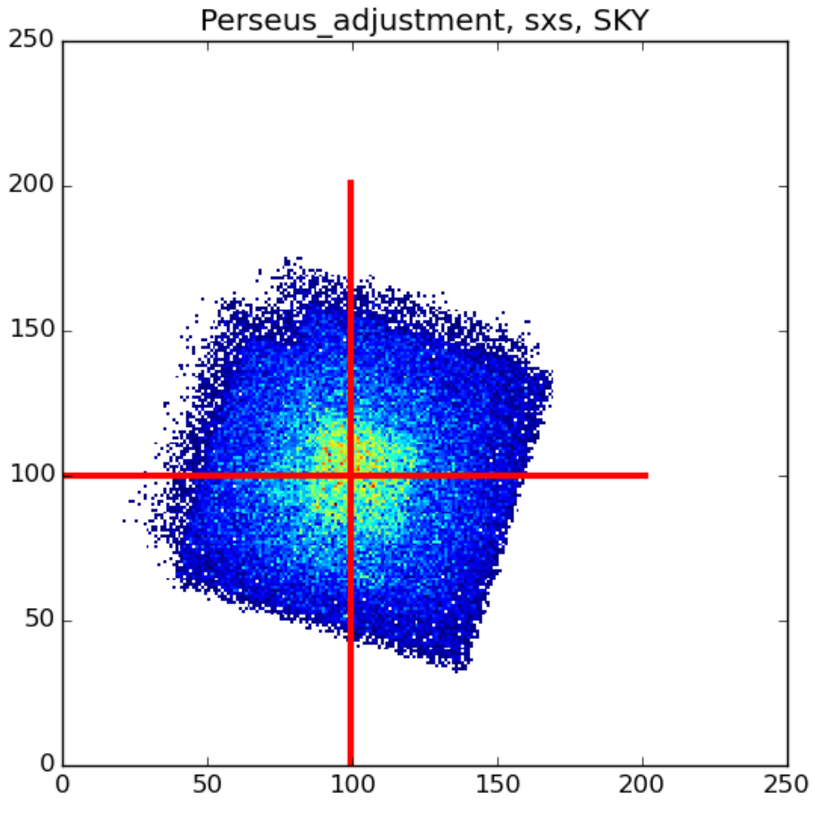
Perseus_adjustment
(STT-ALL)
seq: 100040060

+ 2d lorentz center
+ simbad center
(12/E only)

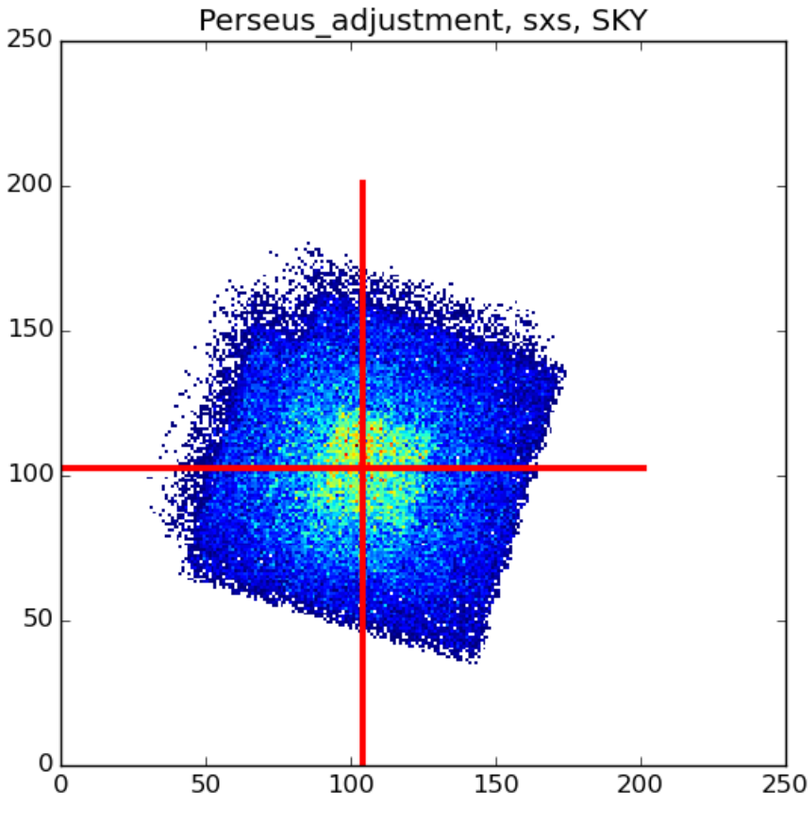




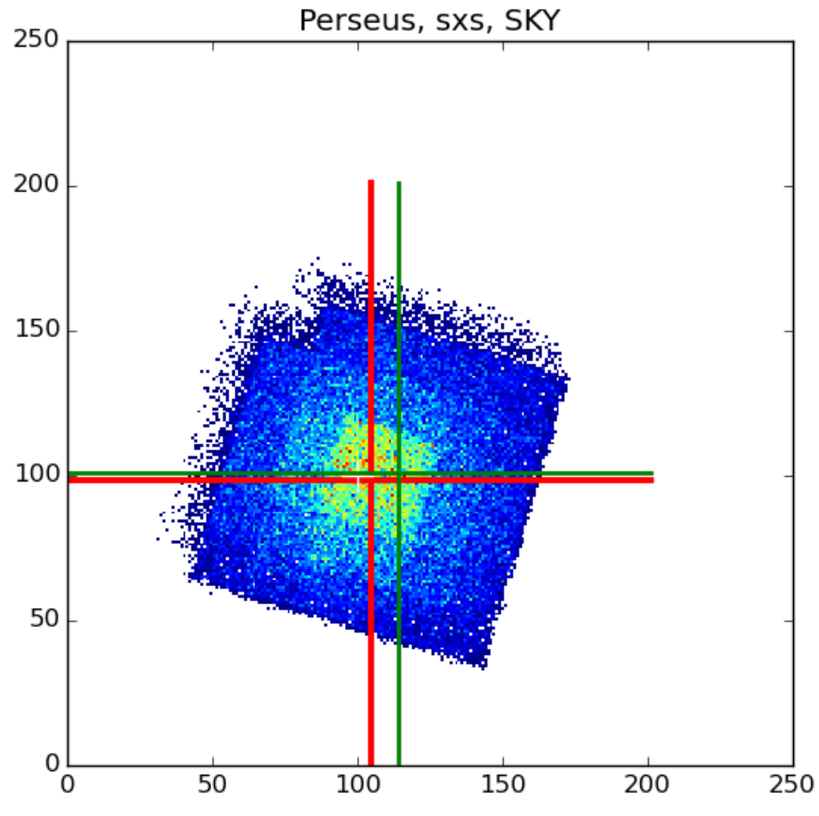
8/1 ATT



9/E ATT



12/E ATT



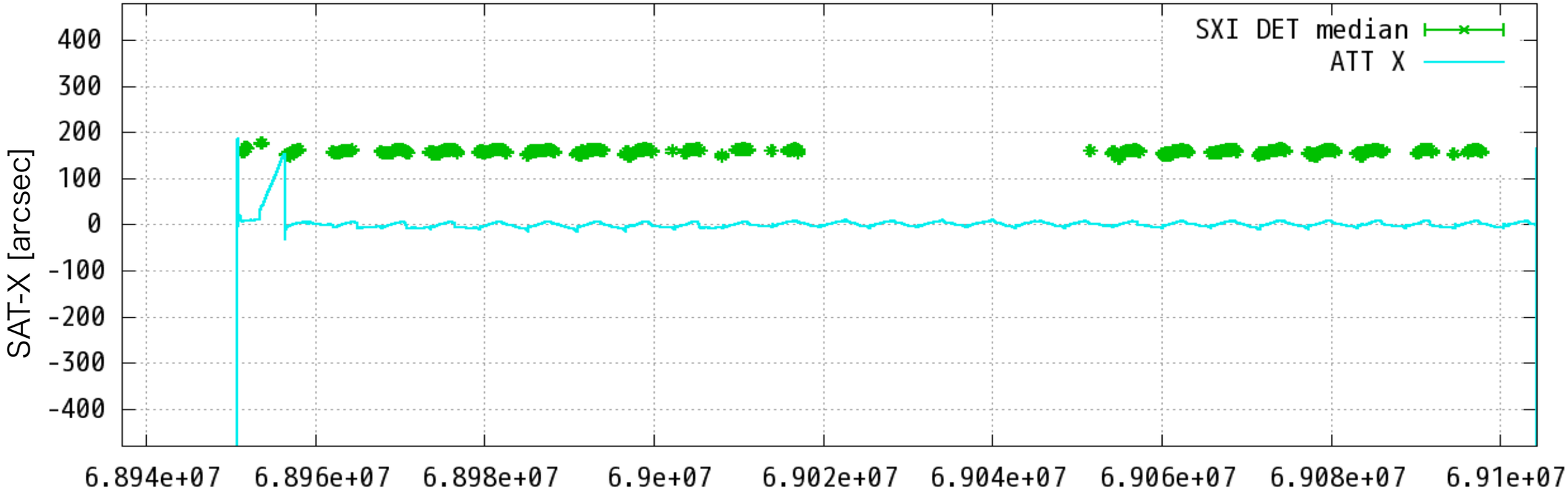
N132D

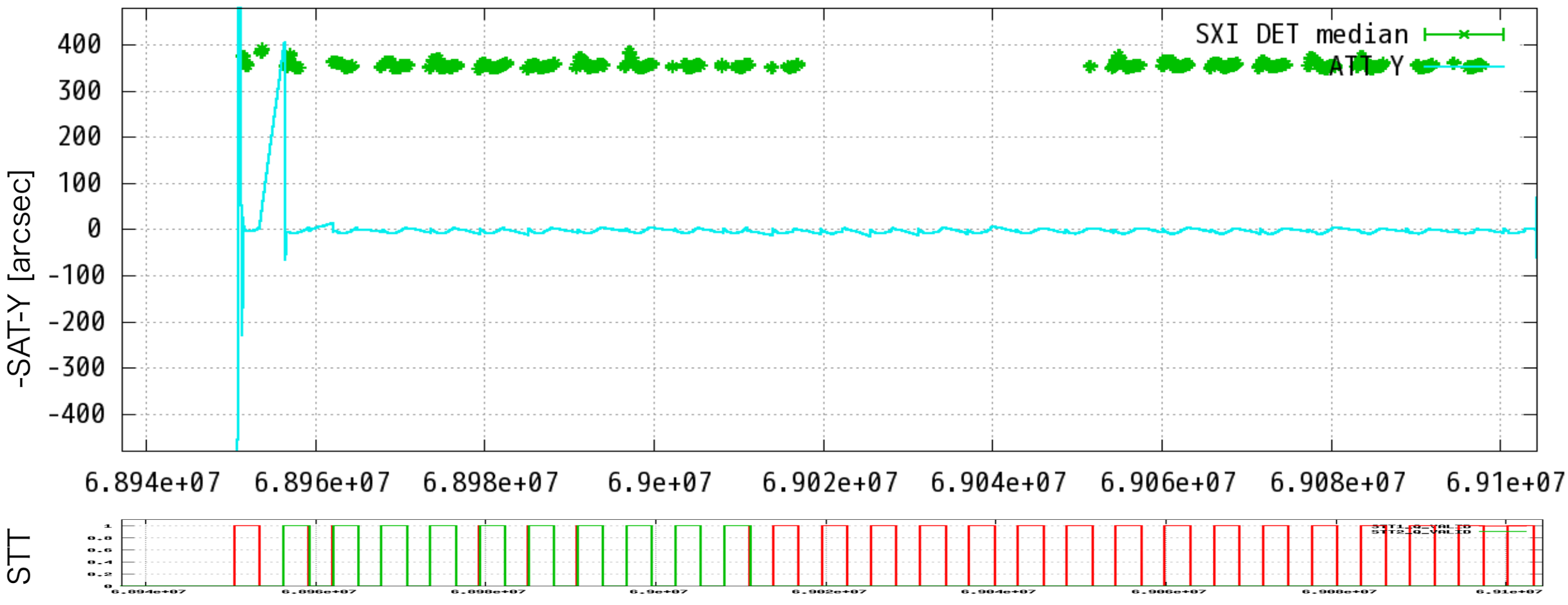
100041020

100041020

N132D DET-X/DET-Y (unit: arcsec)

STT-ALL

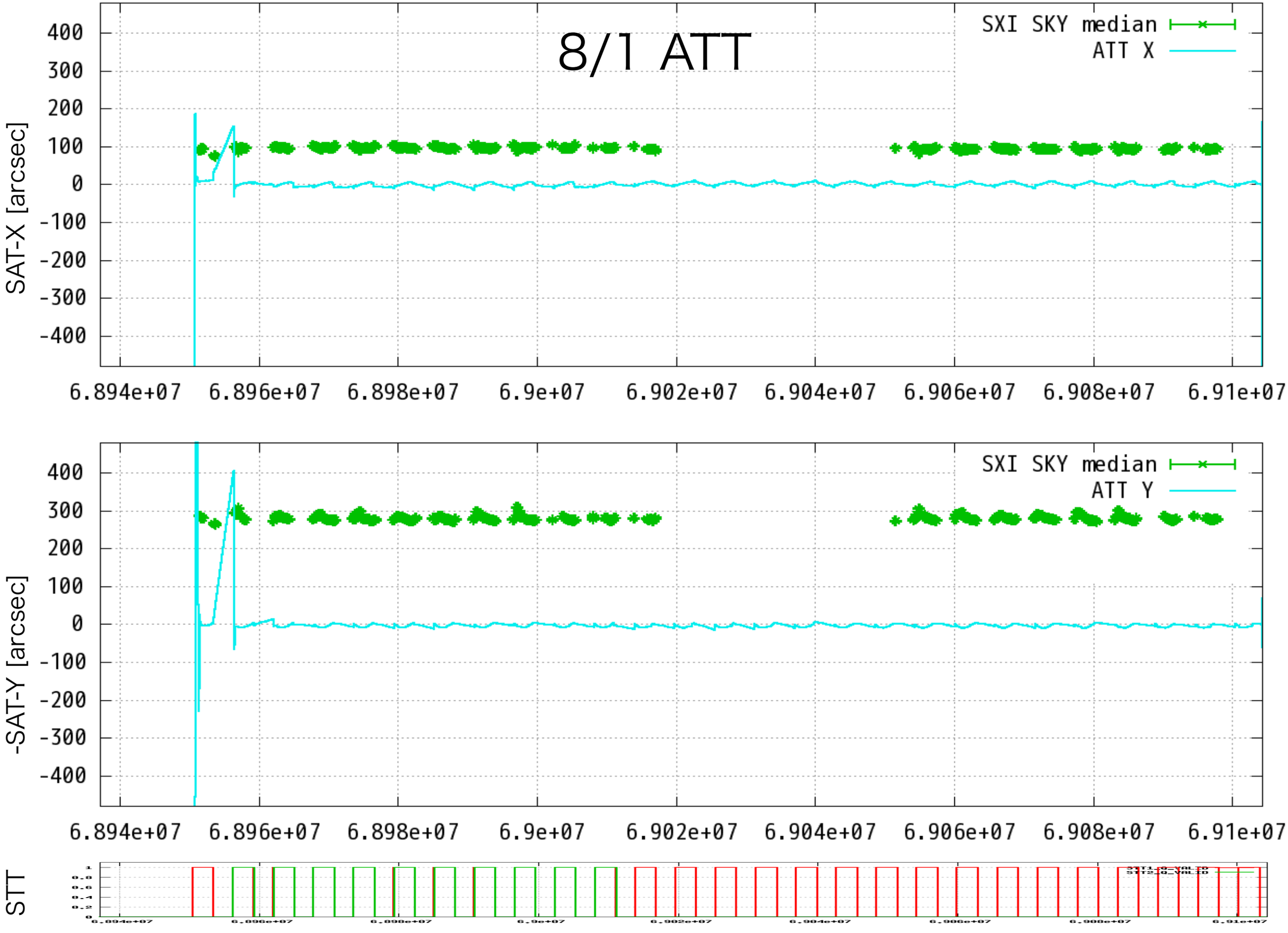




100041020

N132D SKY-X/SKY-Y (unit: arcsec)

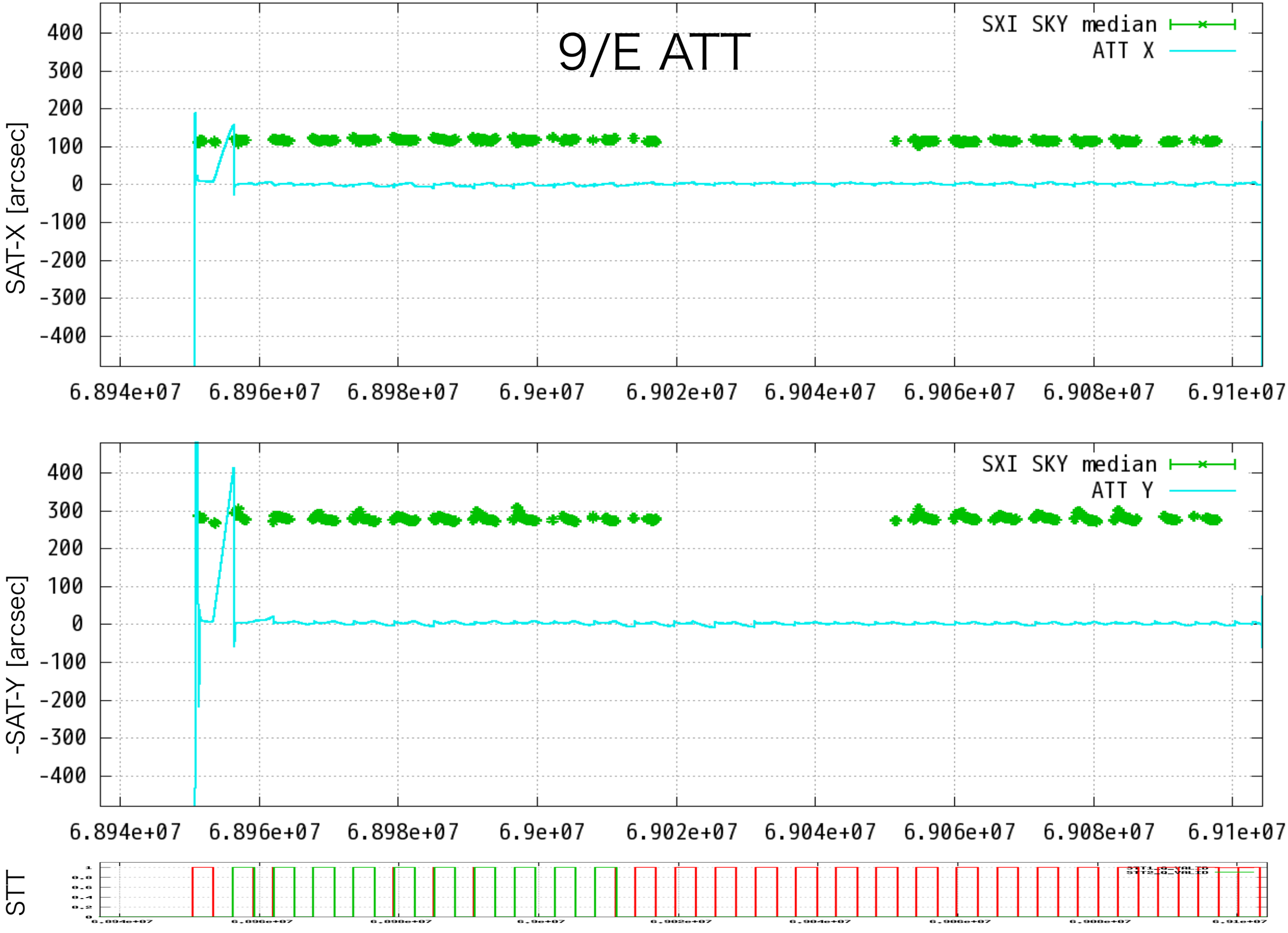
STT-ALL



100041020

N132D SKY-X/SKY-Y (unit: arcsec)

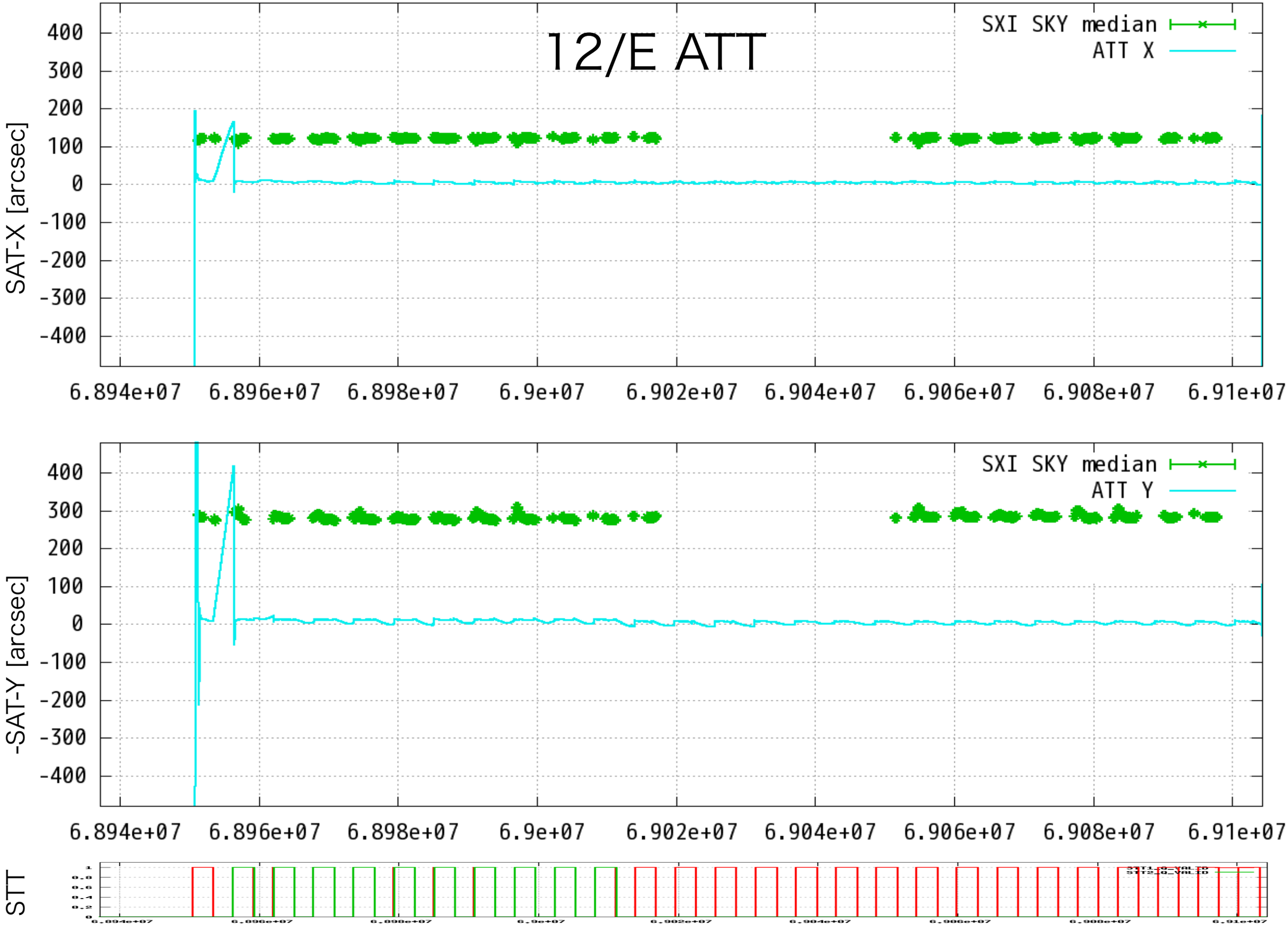
STT-ALL



100041020

N132D SKY-X/SKY-Y (unit: arcsec)

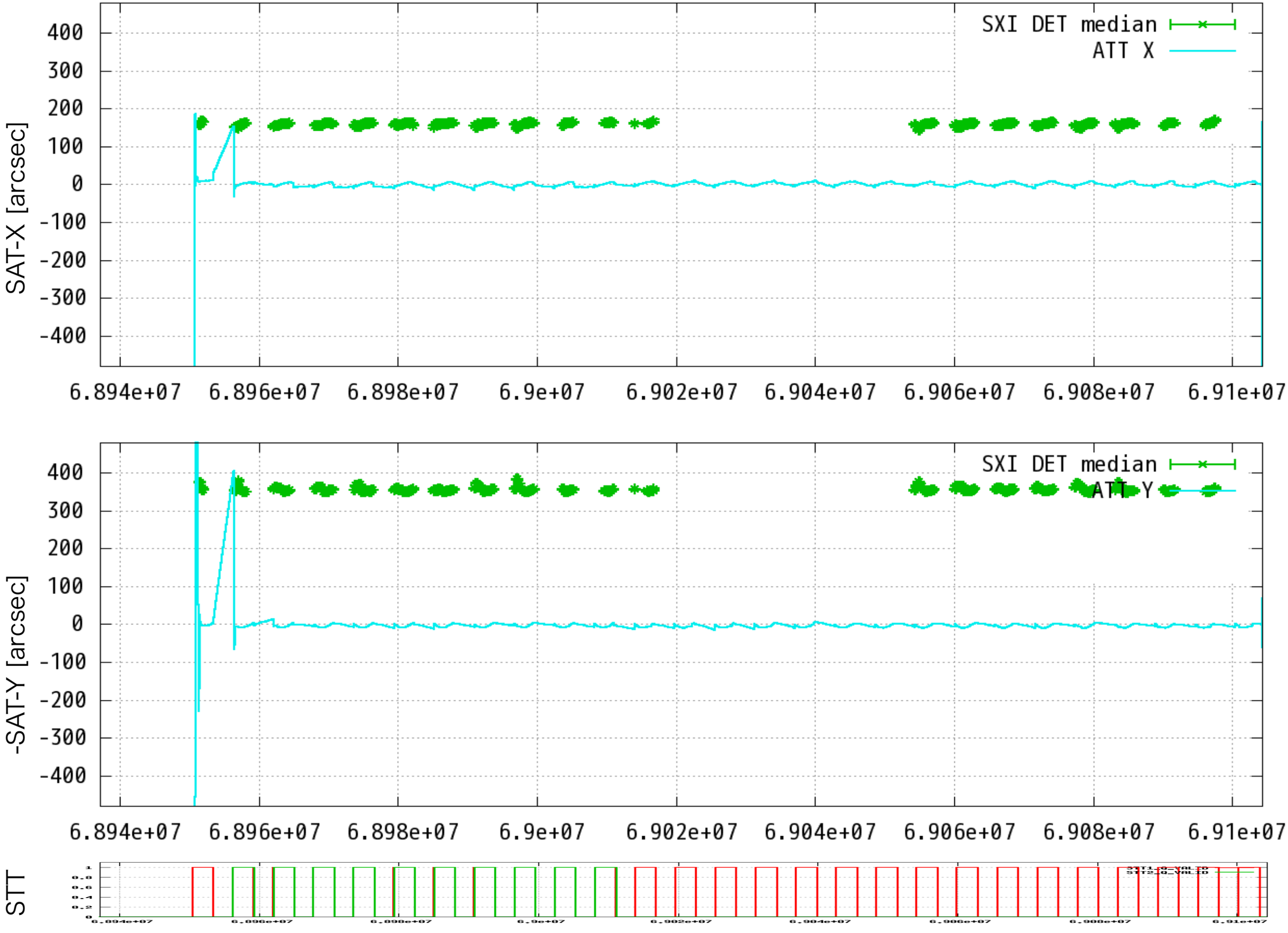
STT-ALL



100041020

N132D DET-X/DET-Y (unit: arcsec)

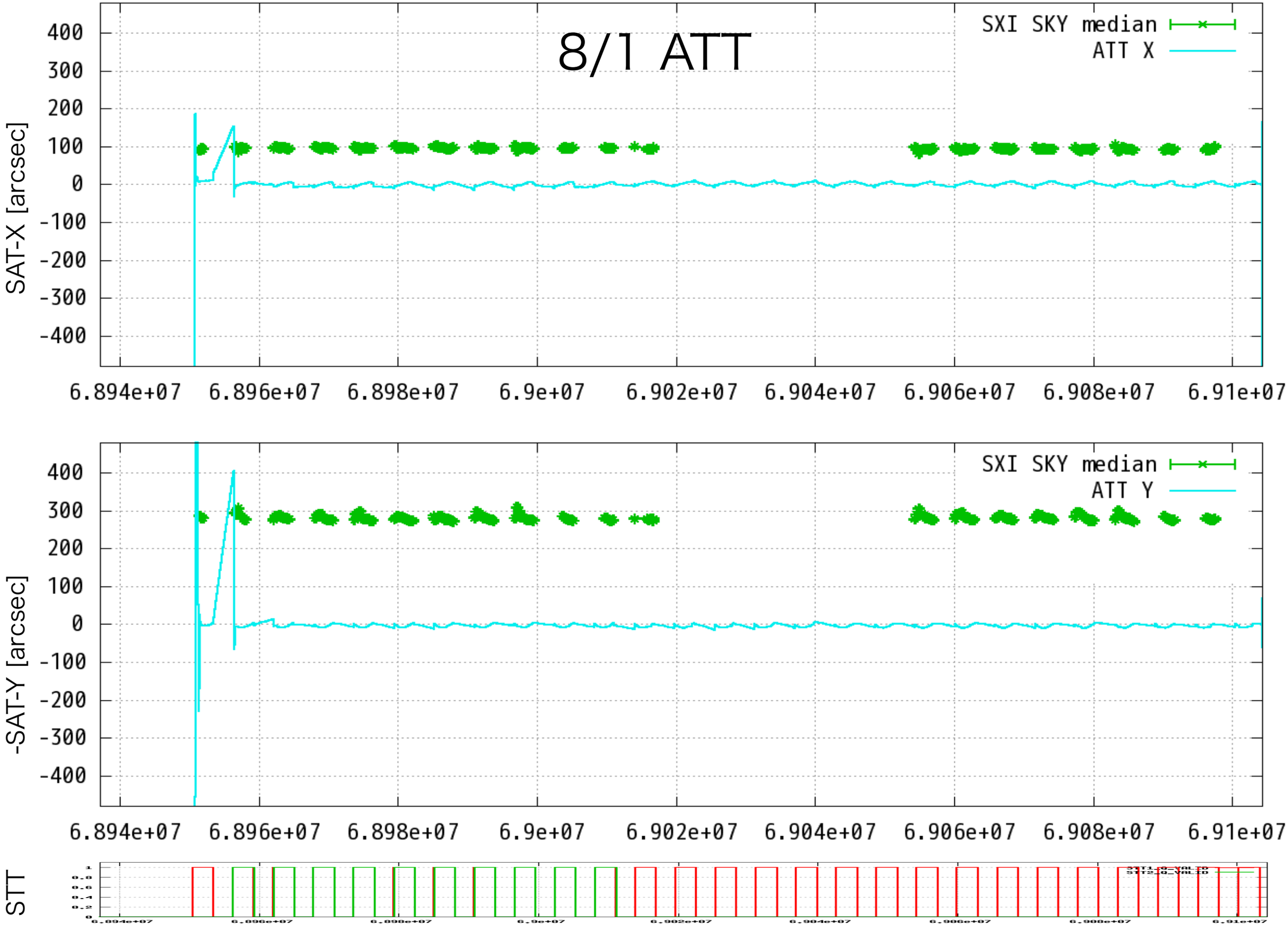
STT-CTL



100041020

N132D SKY-X/SKY-Y (unit: arcsec)

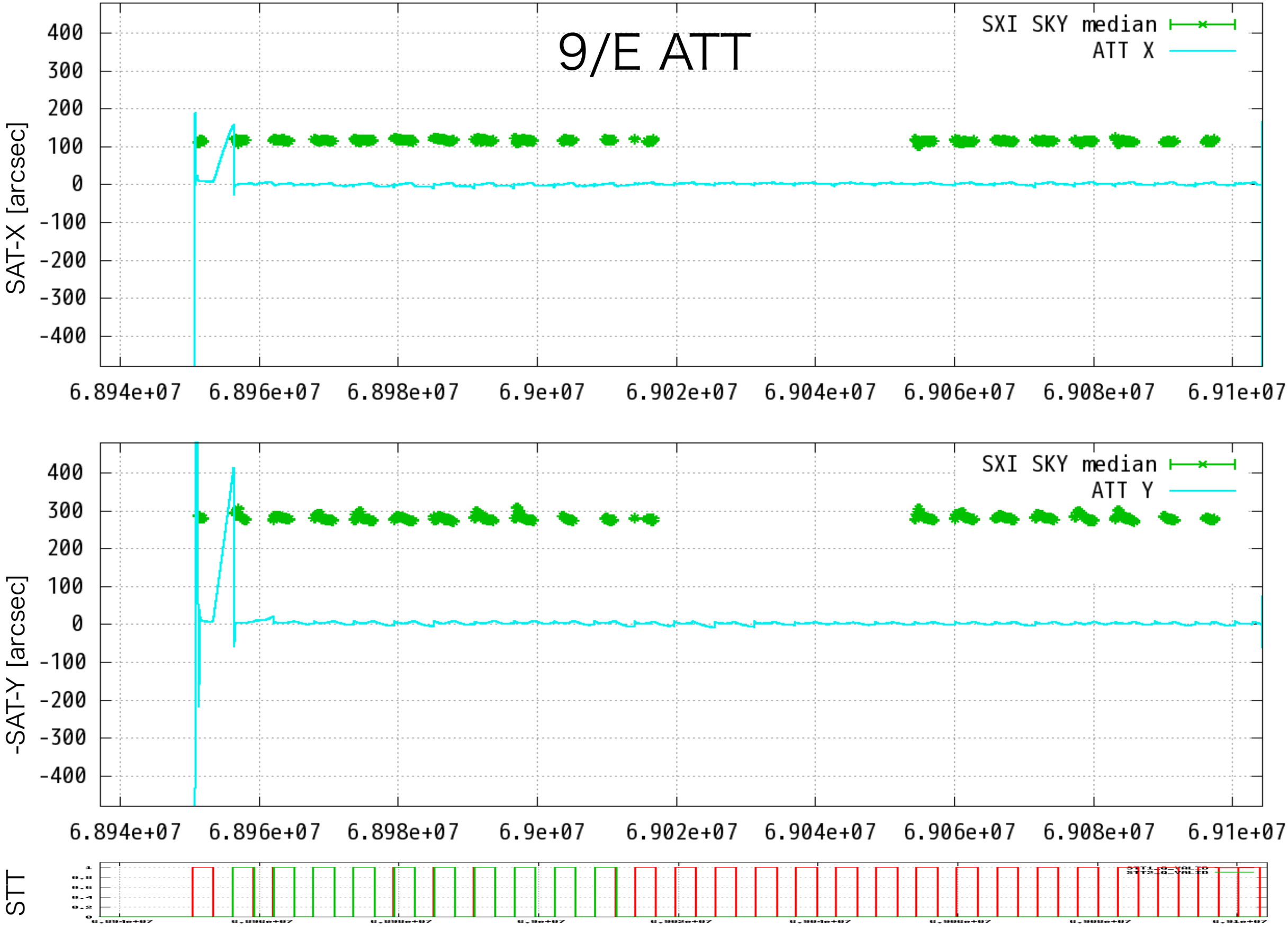
STT-CTL



100041020

N132D SKY-X/SKY-Y (unit: arcsec)

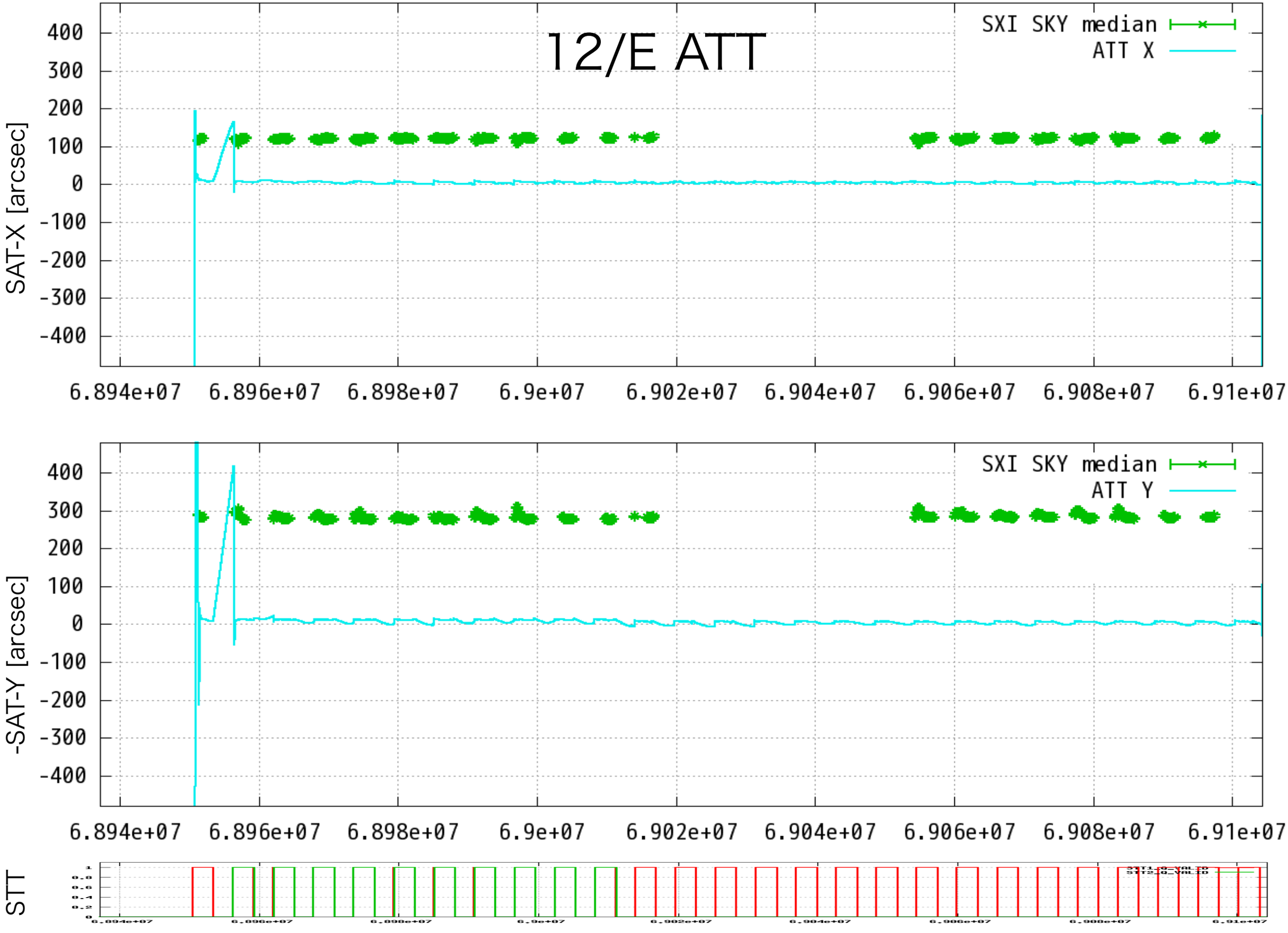
STT-CTL



100041020

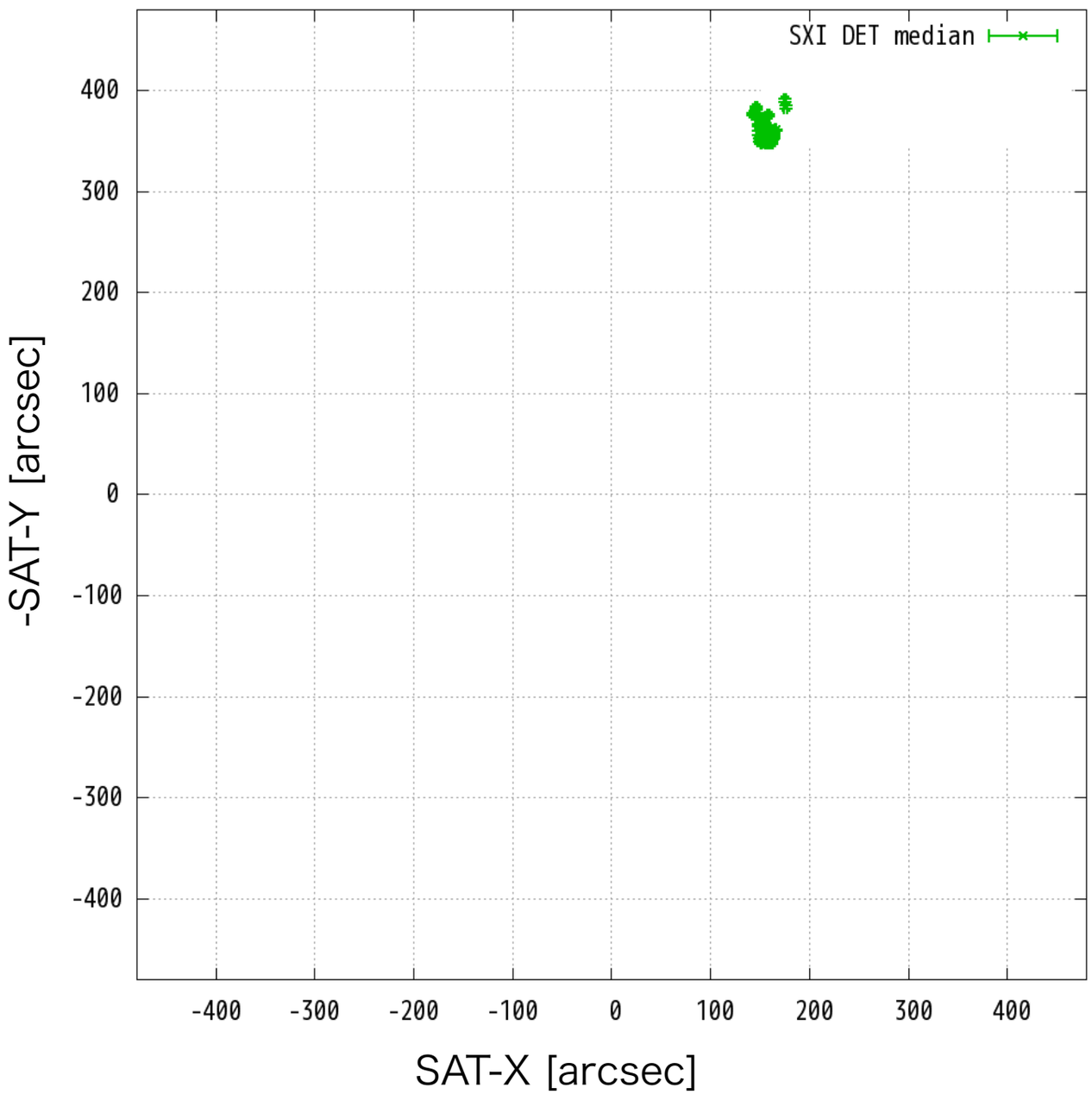
N132D SKY-X/SKY-Y (unit: arcsec)

STT-CTL



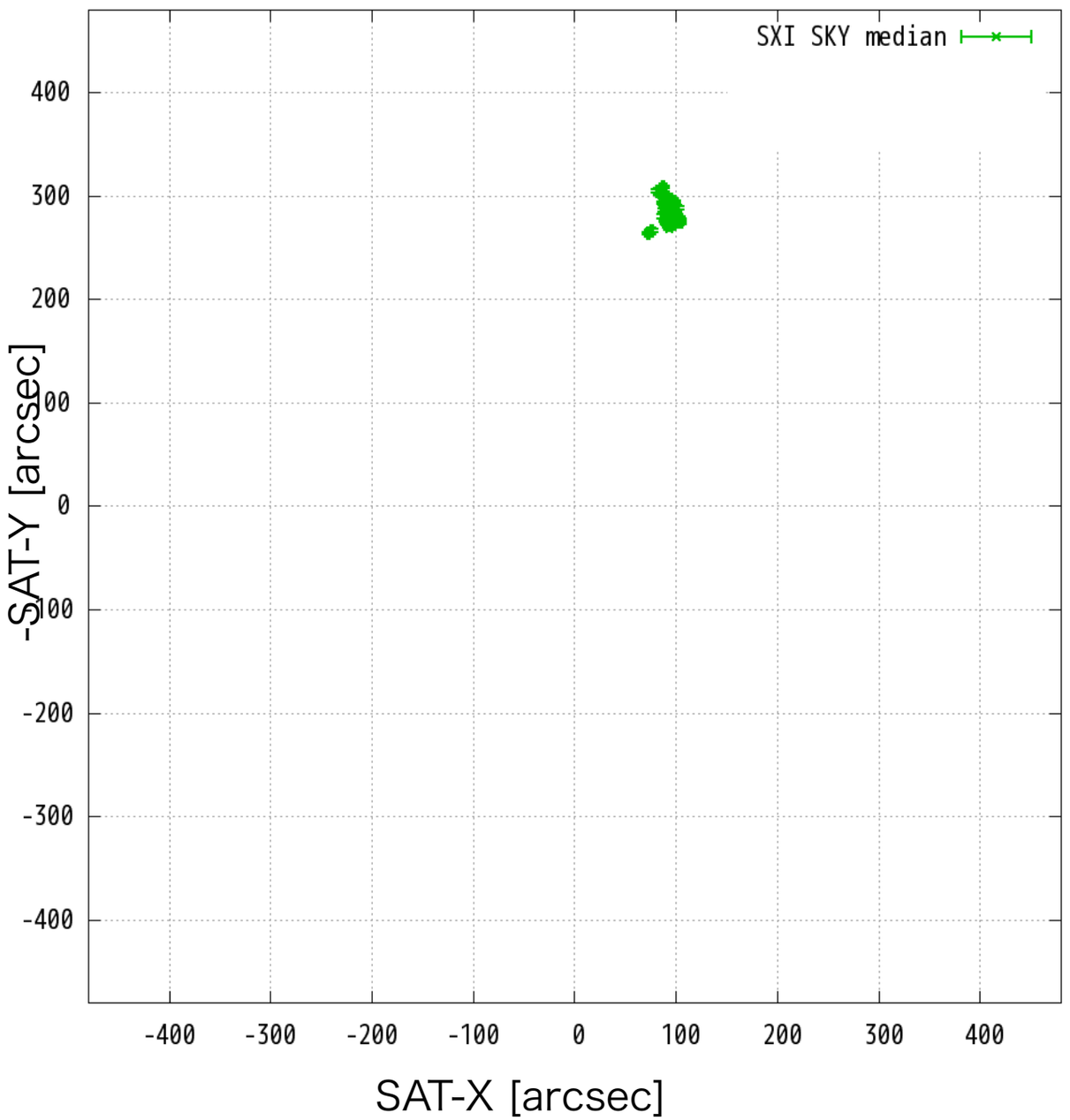
N132D (STT-ALL)
seq: 100041020

DET



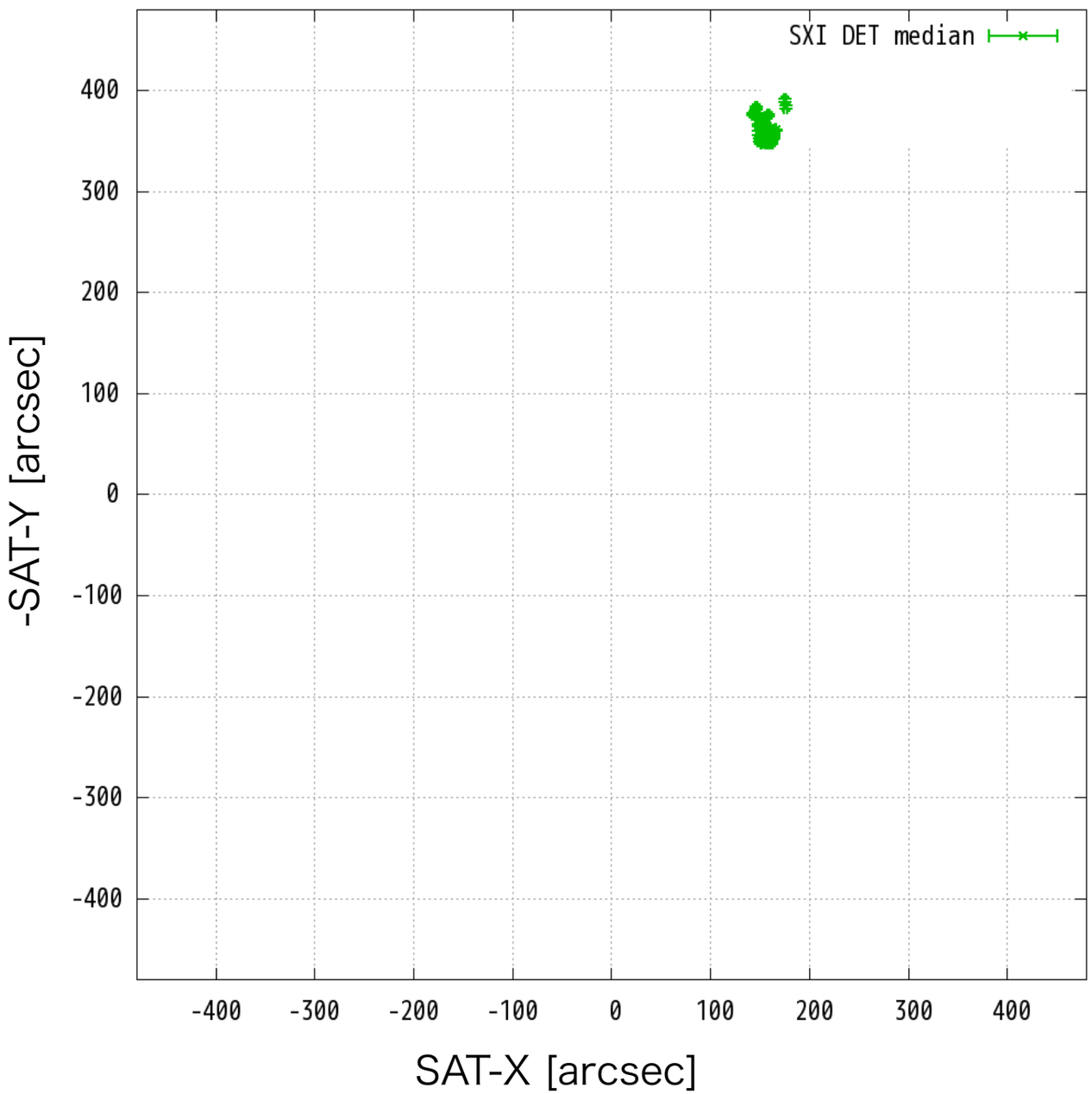
SKY

8/1 ATT



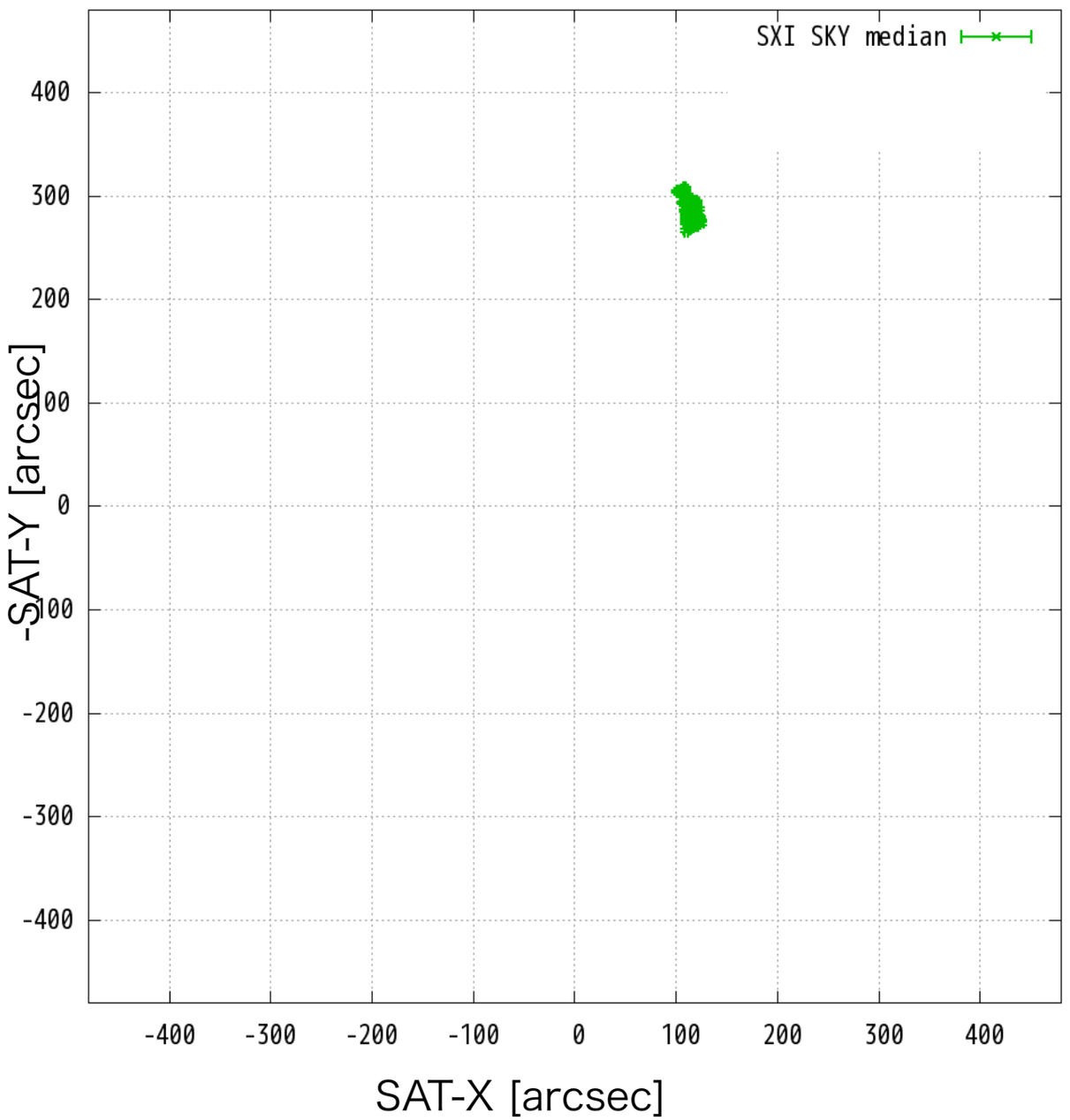
N132D (STT-ALL)
seq: 100041020

DET



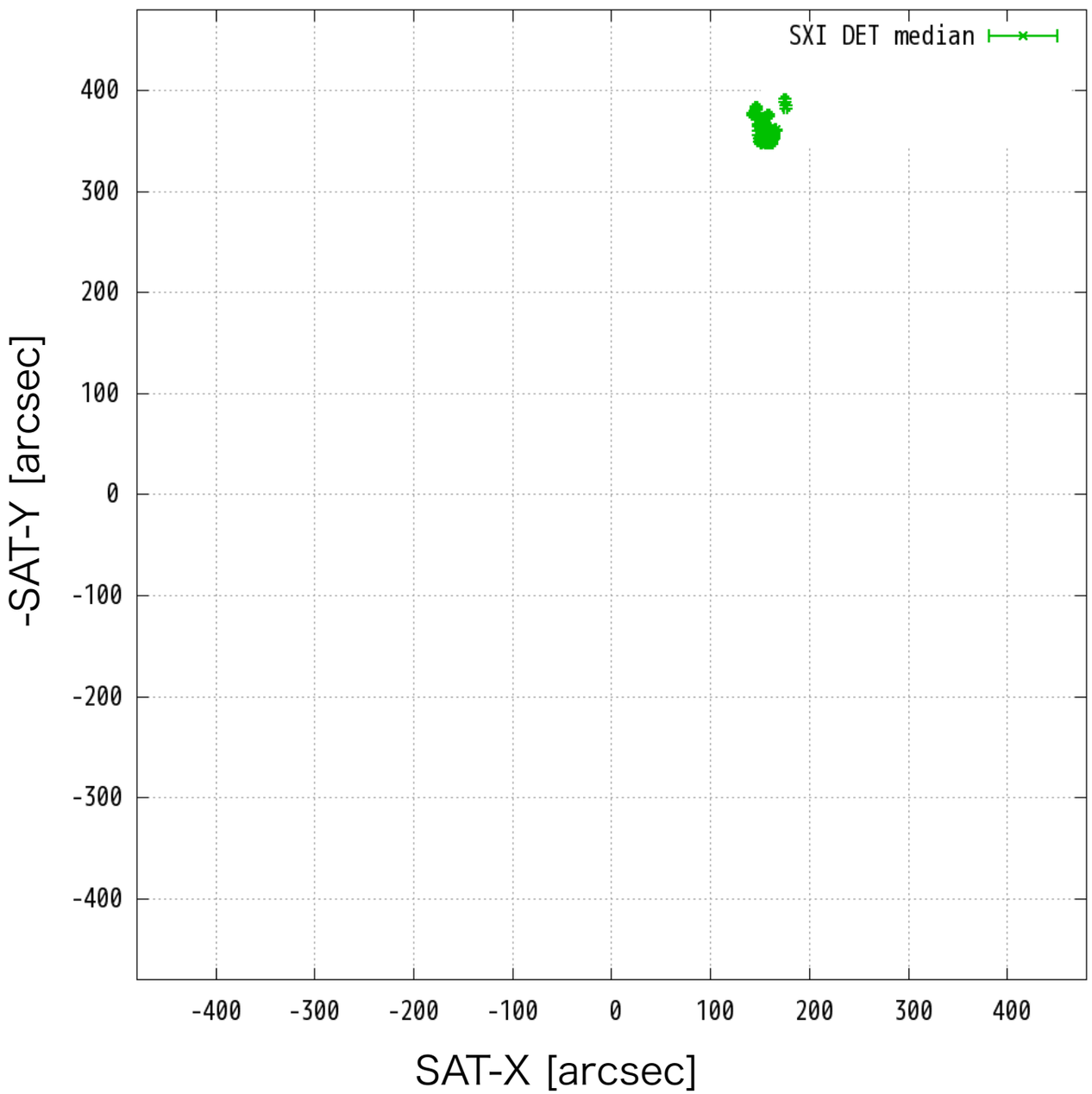
SKY

9/E ATT



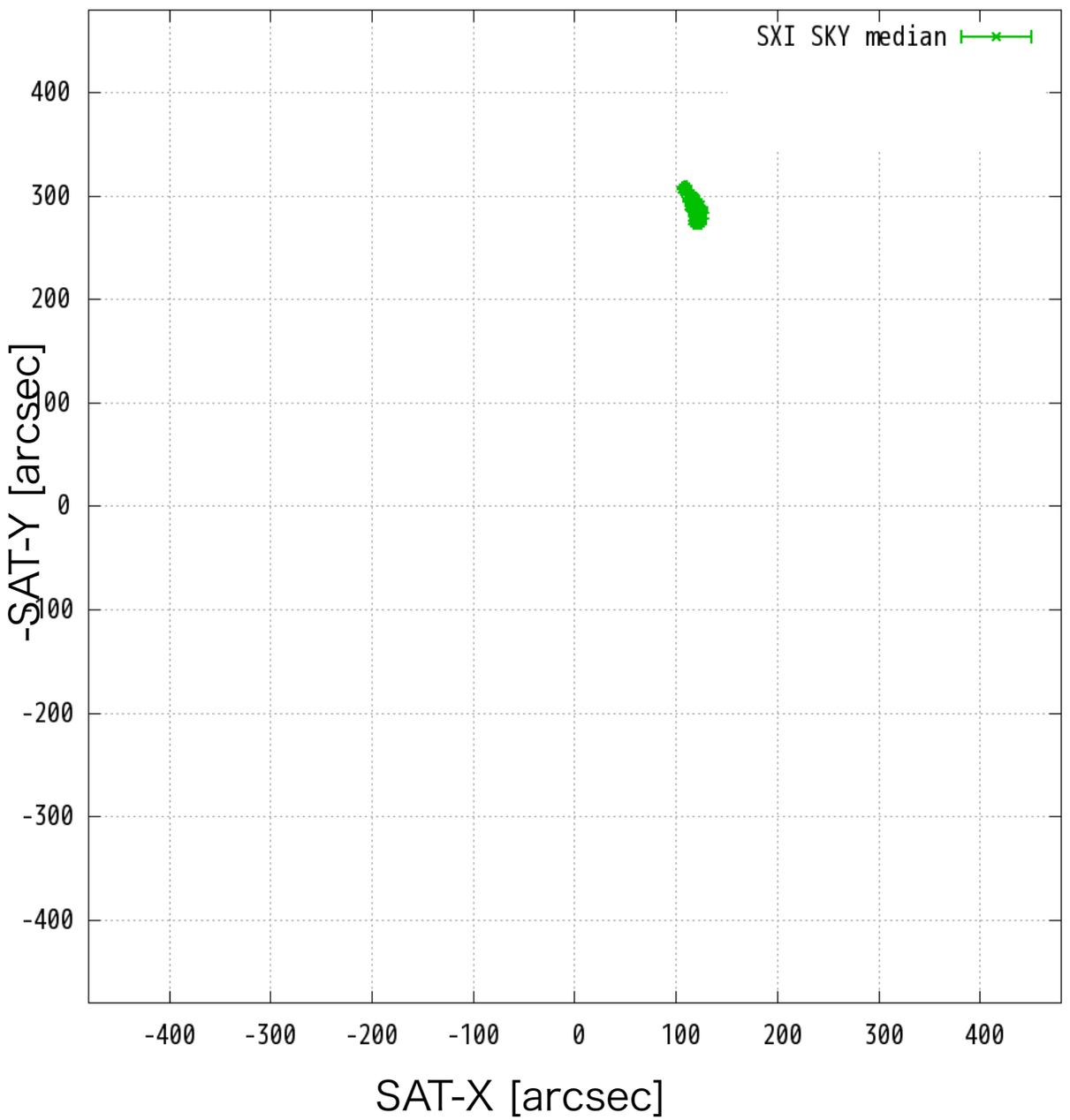
N132D (STT-ALL)
seq: 100041020

DET



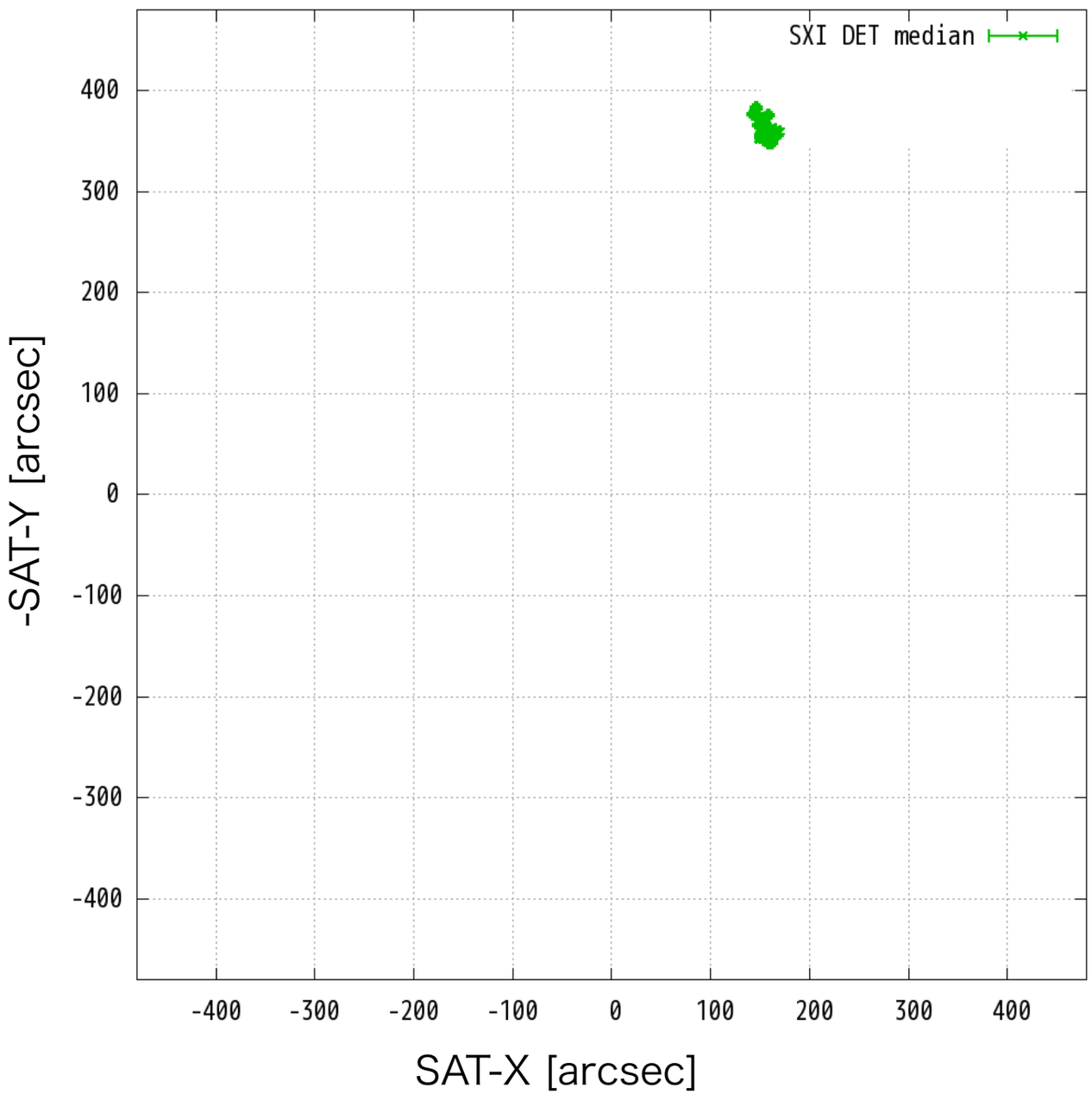
SKY

12/E ATT



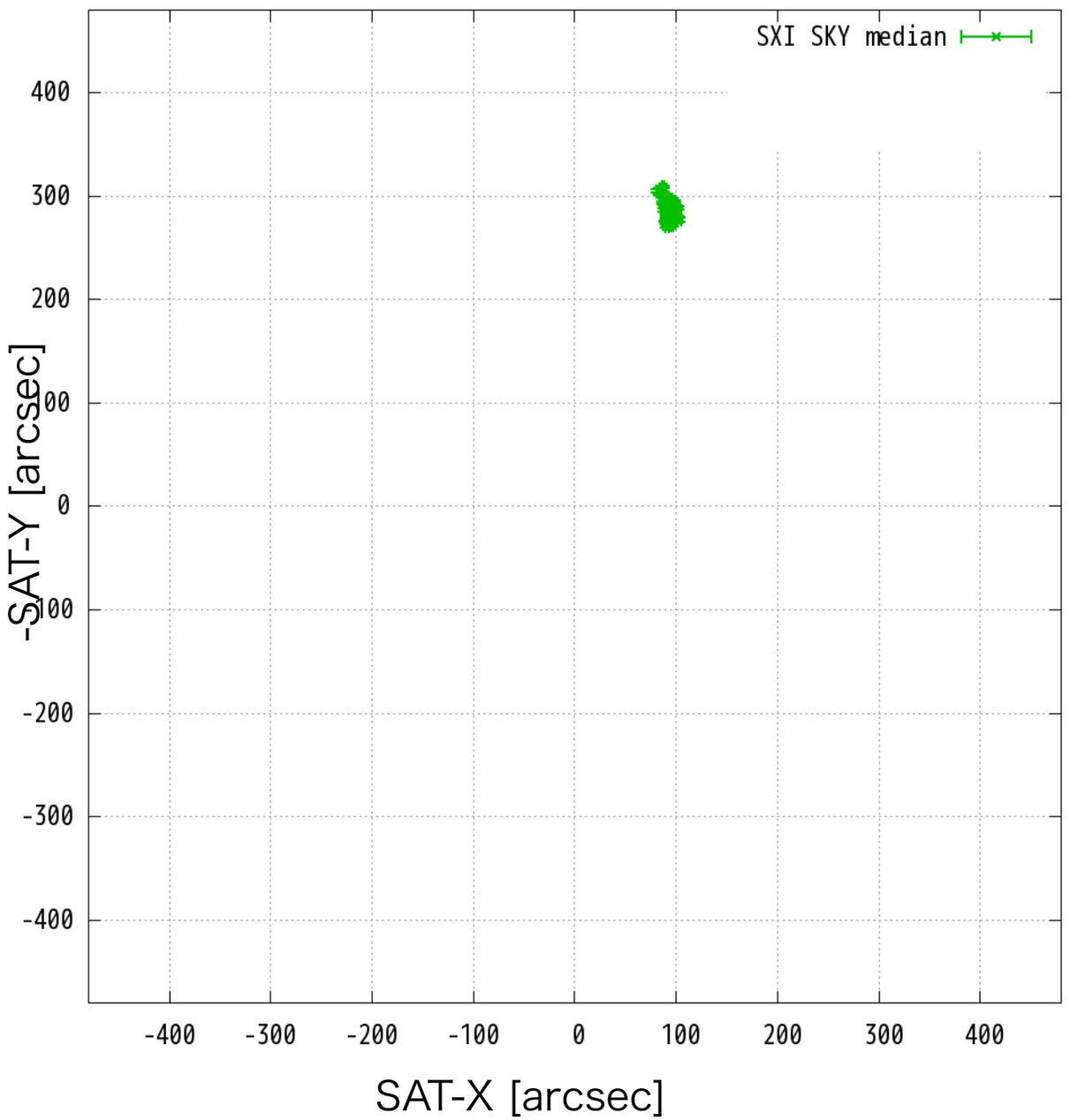
N132D (STT-CTL)
seq: 100041020

DET



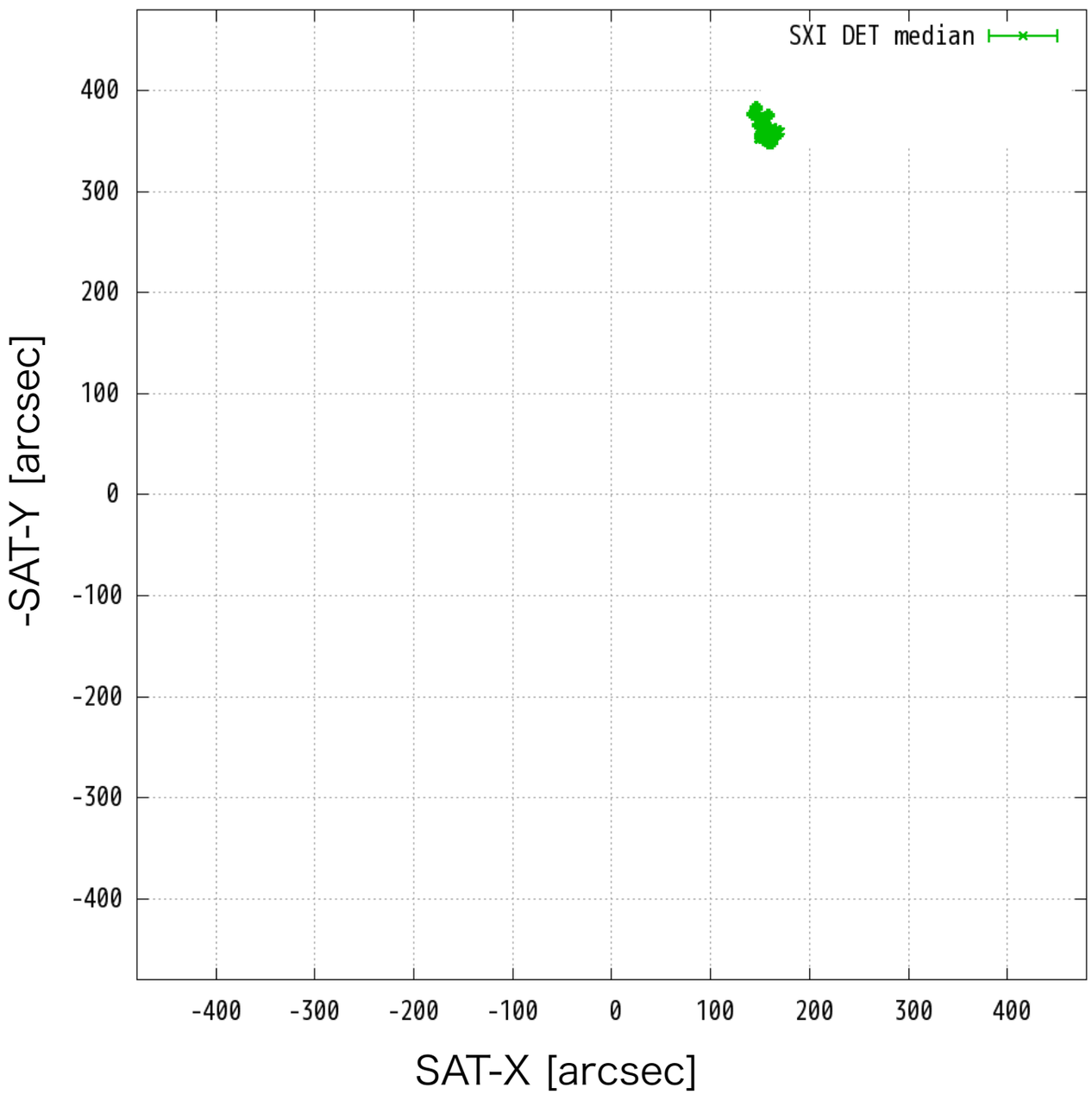
SKY

8/1 ATT



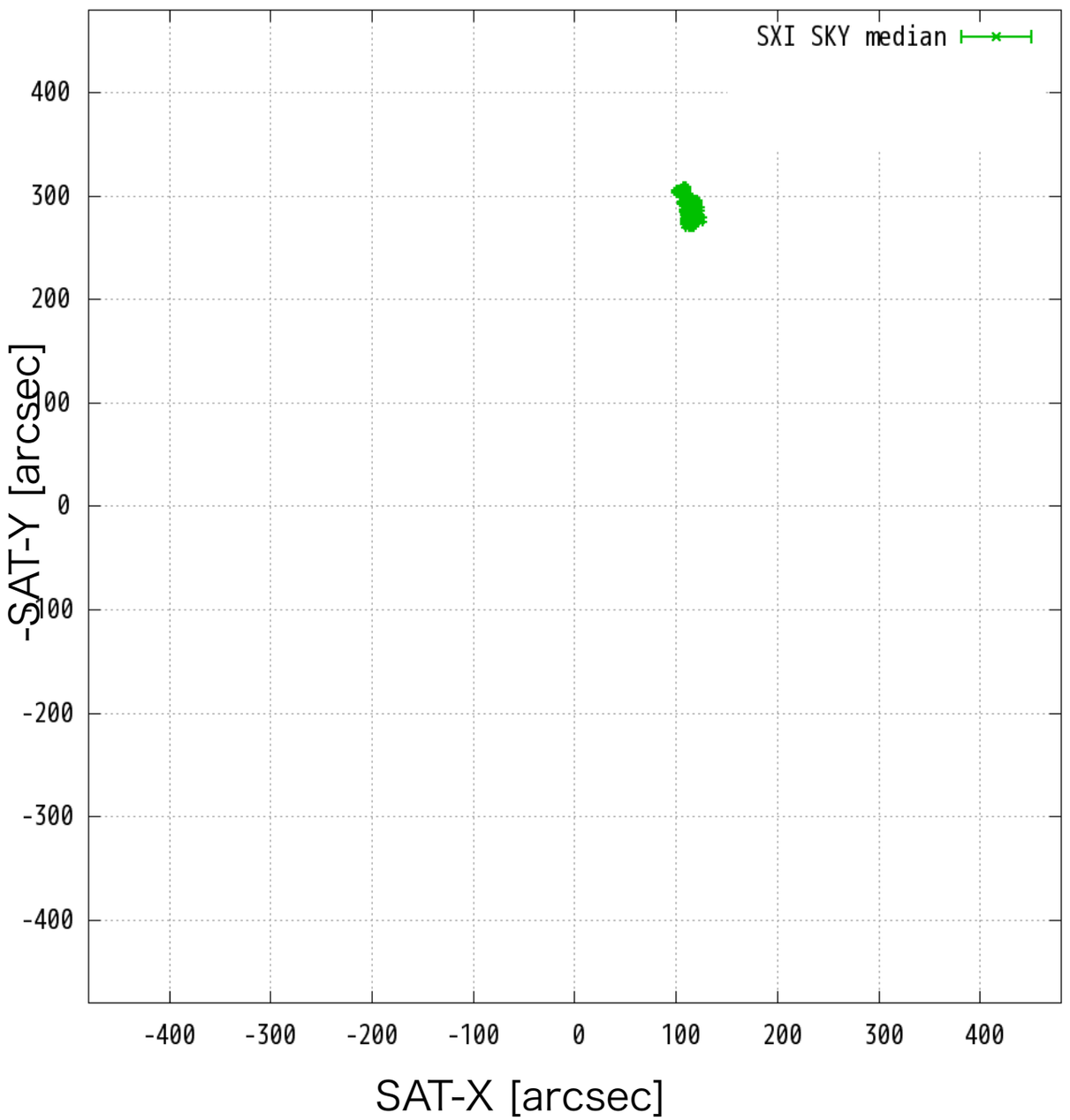
N132D (STT-CTL)
seq: 100041020

DET



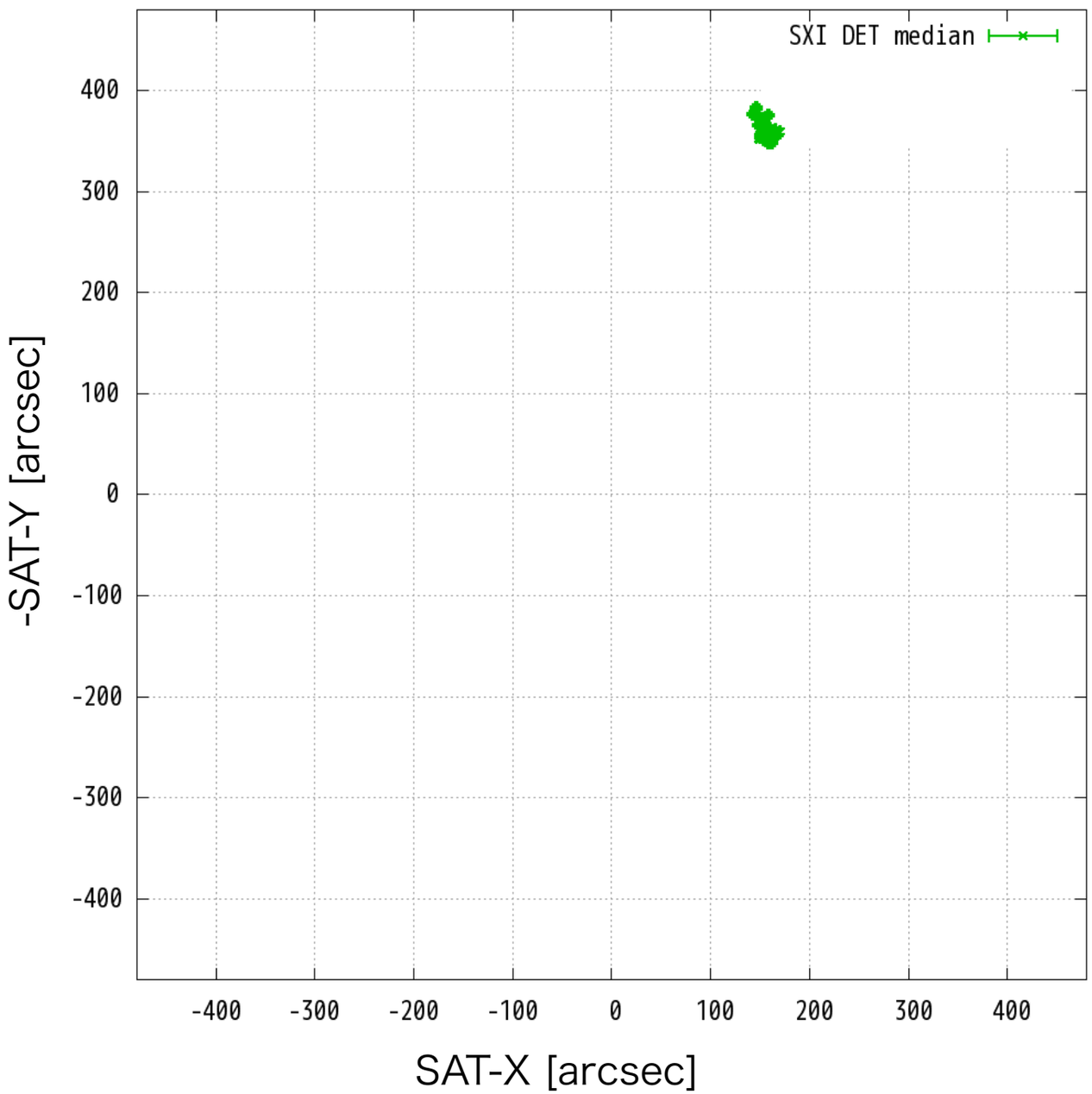
SKY

9/E ATT



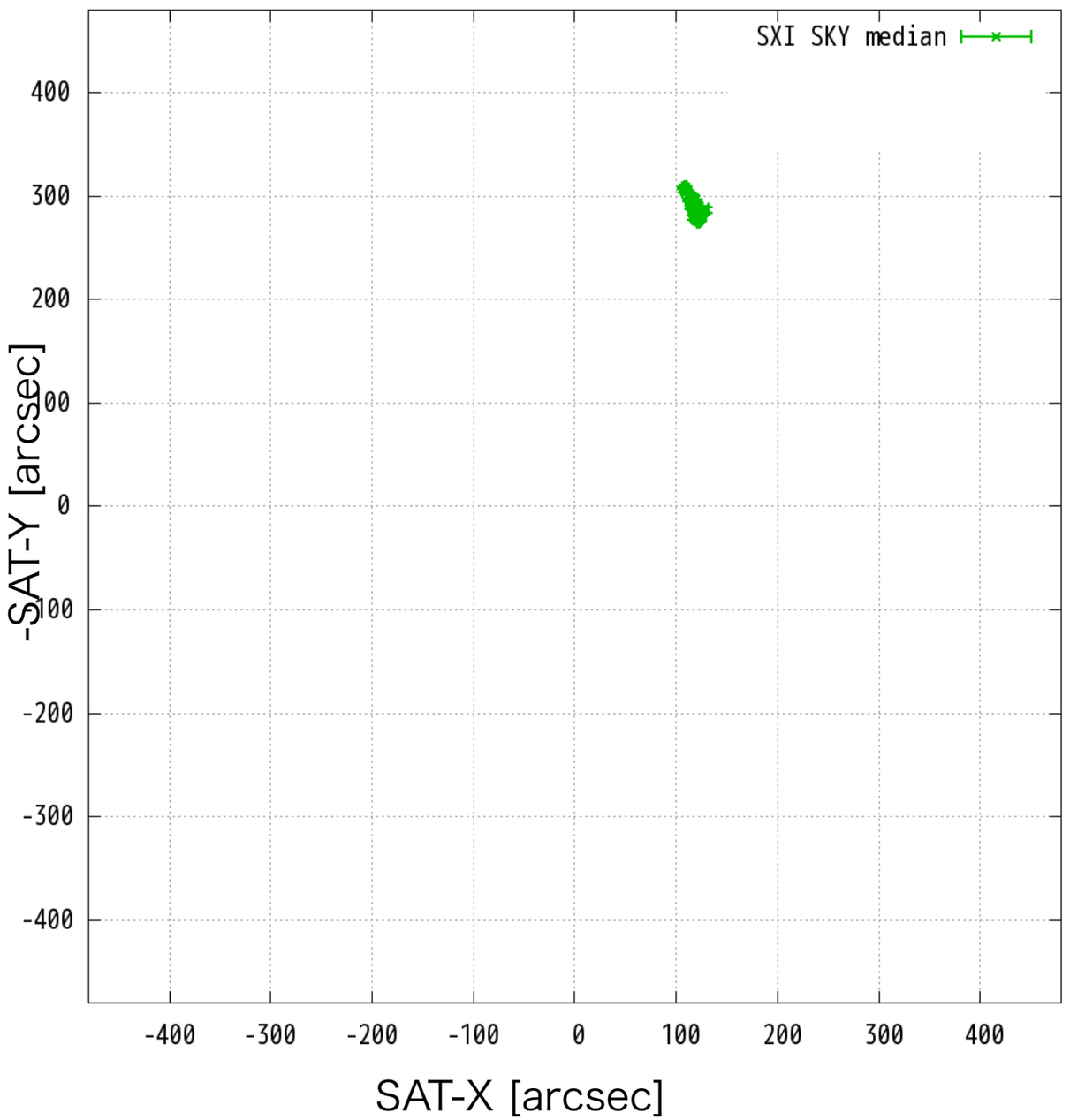
N132D (STT-CTL)
seq: 100041020

DET



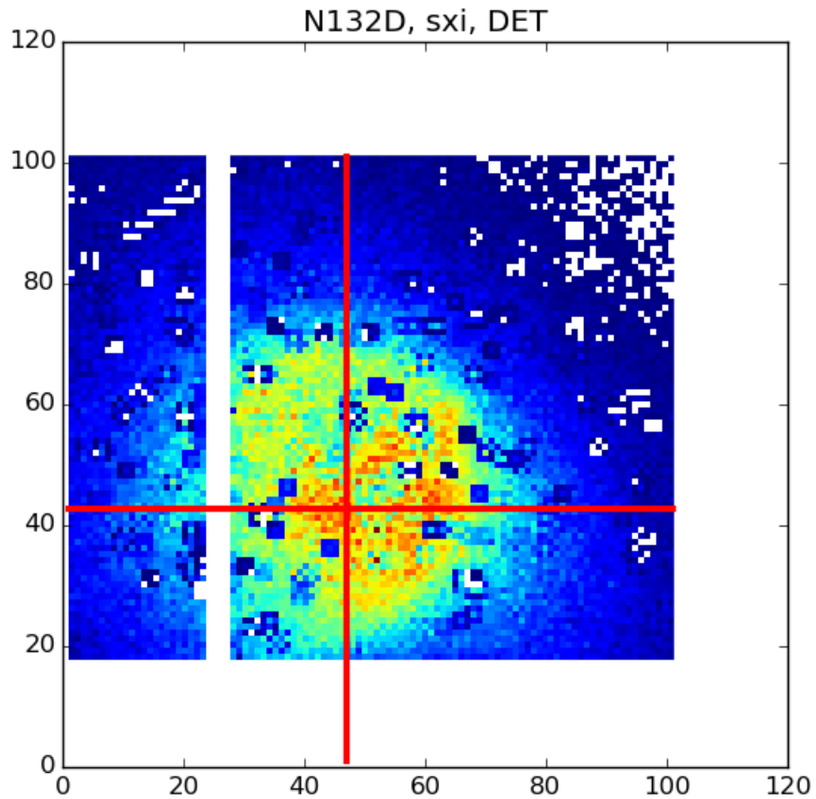
SKY

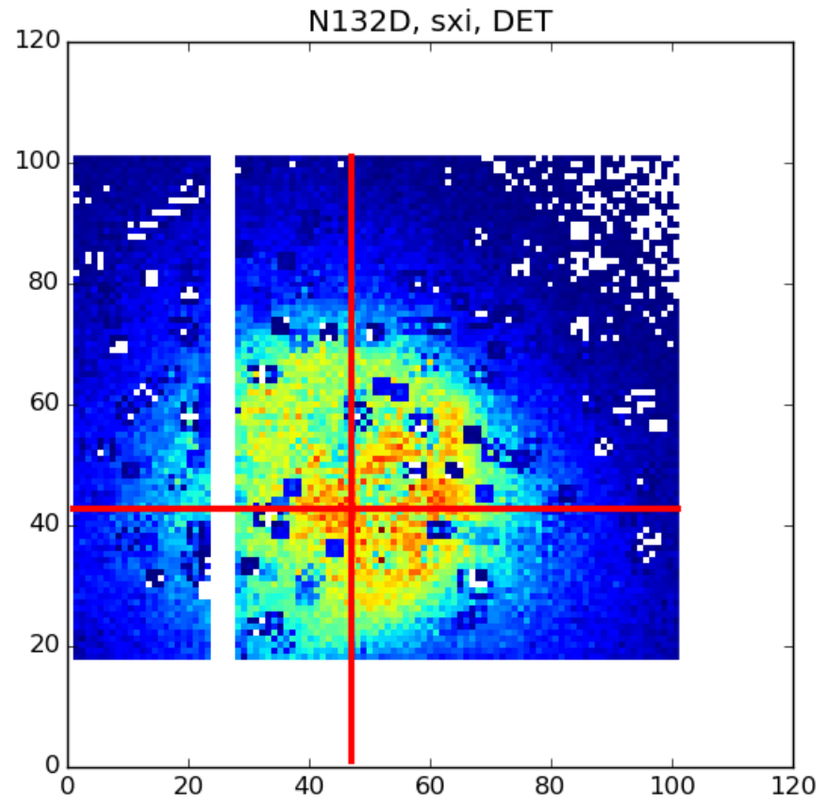
12/E ATT



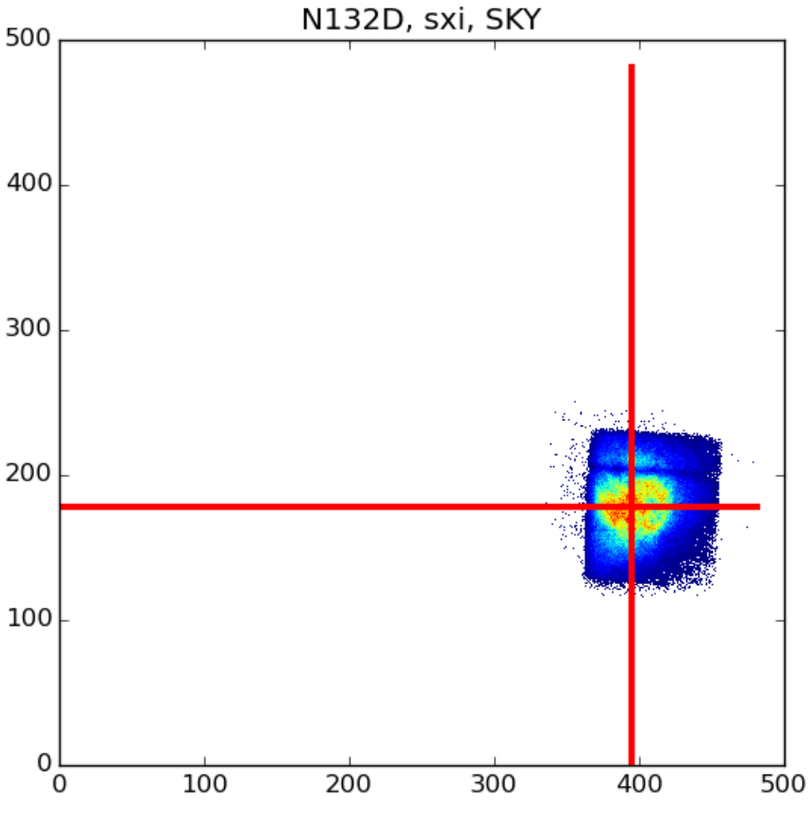
N132D
(STT-ALL)
seq: 100041020

+ 2d lorentz center
+ simbad center
(12/E only)

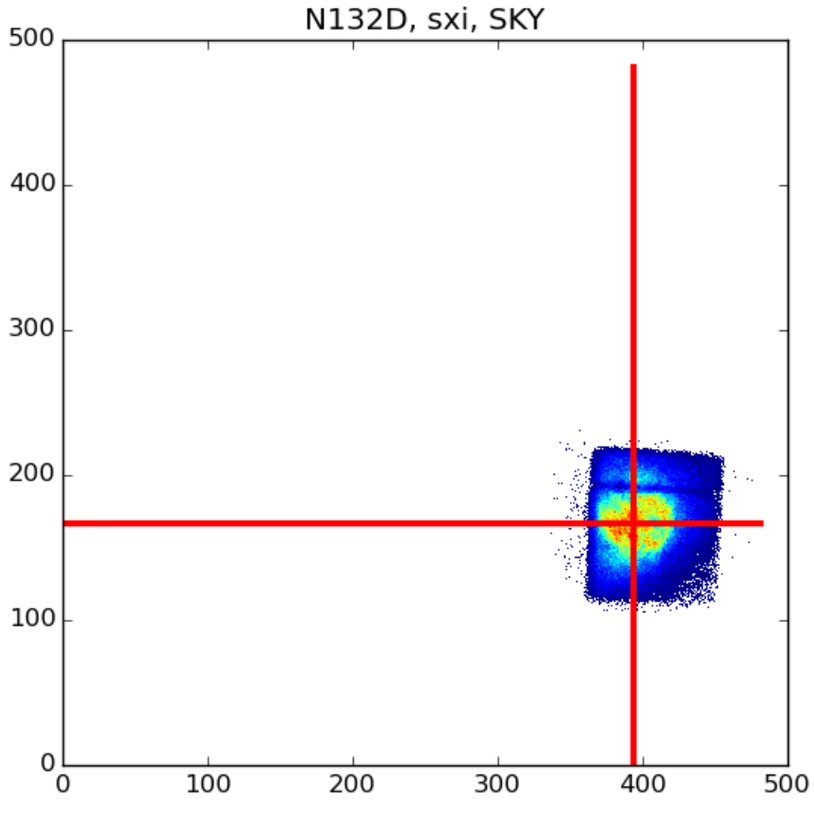




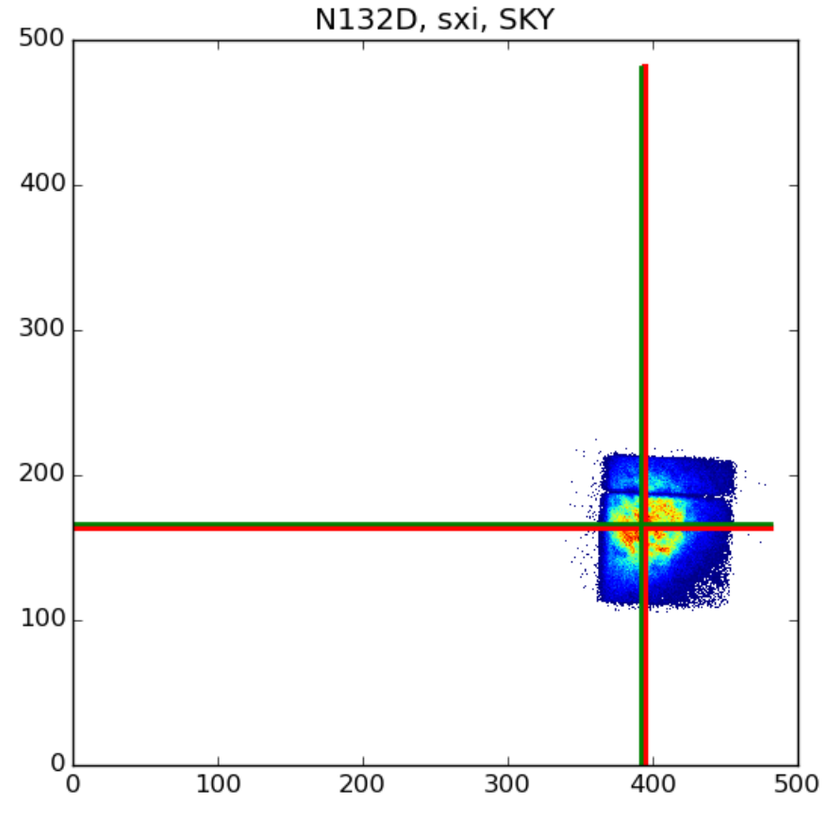
8/1 ATT



9/E ATT



12/E ATT



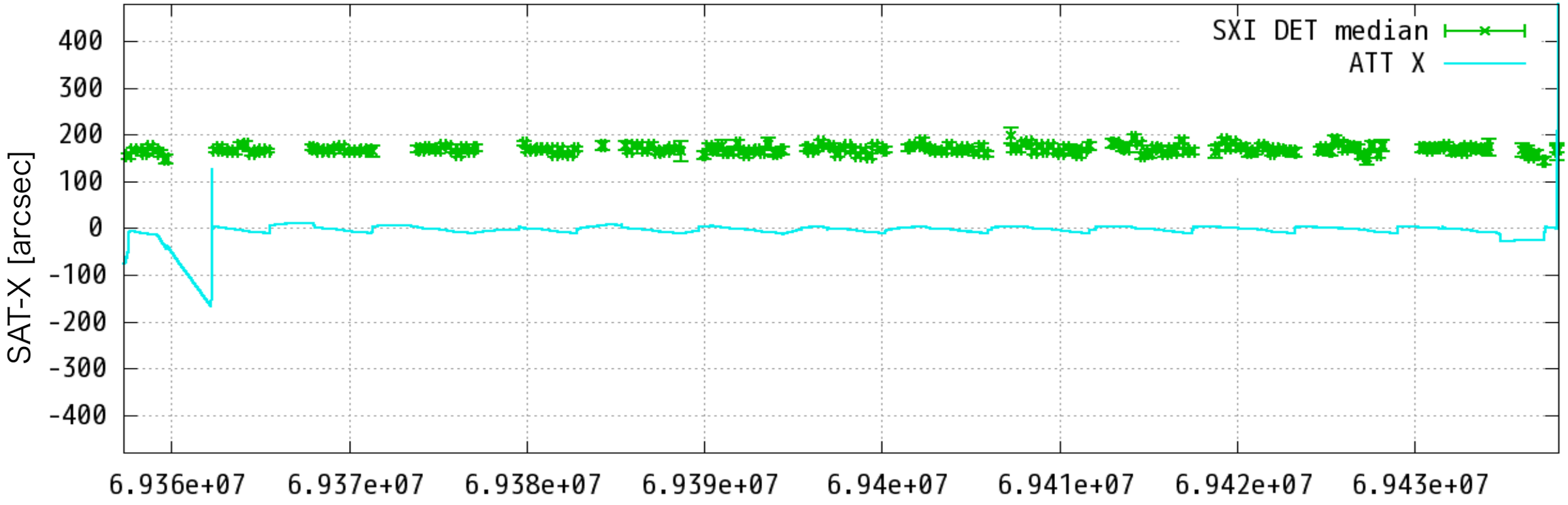
IGR_J16318-4848

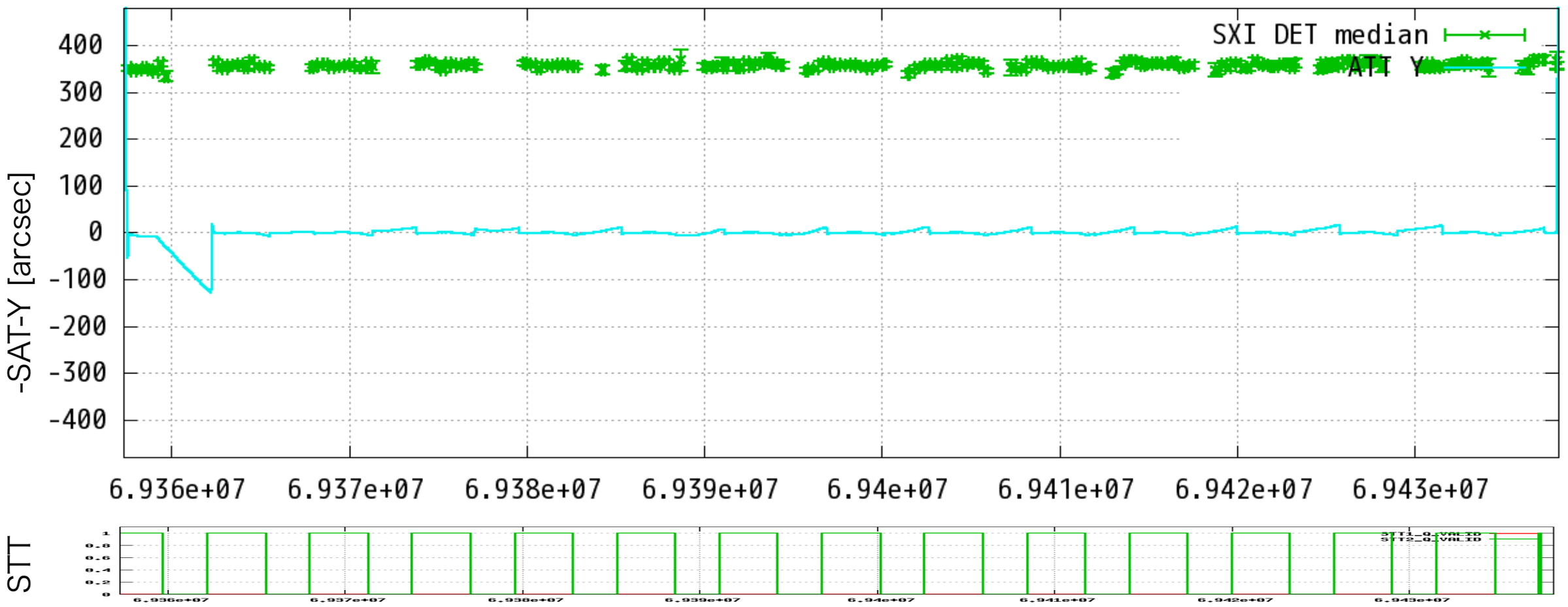
100042040

100042040

IGR_J16318-4848 DET-X/DET-Y (unit: arcsec)

STT-ALL

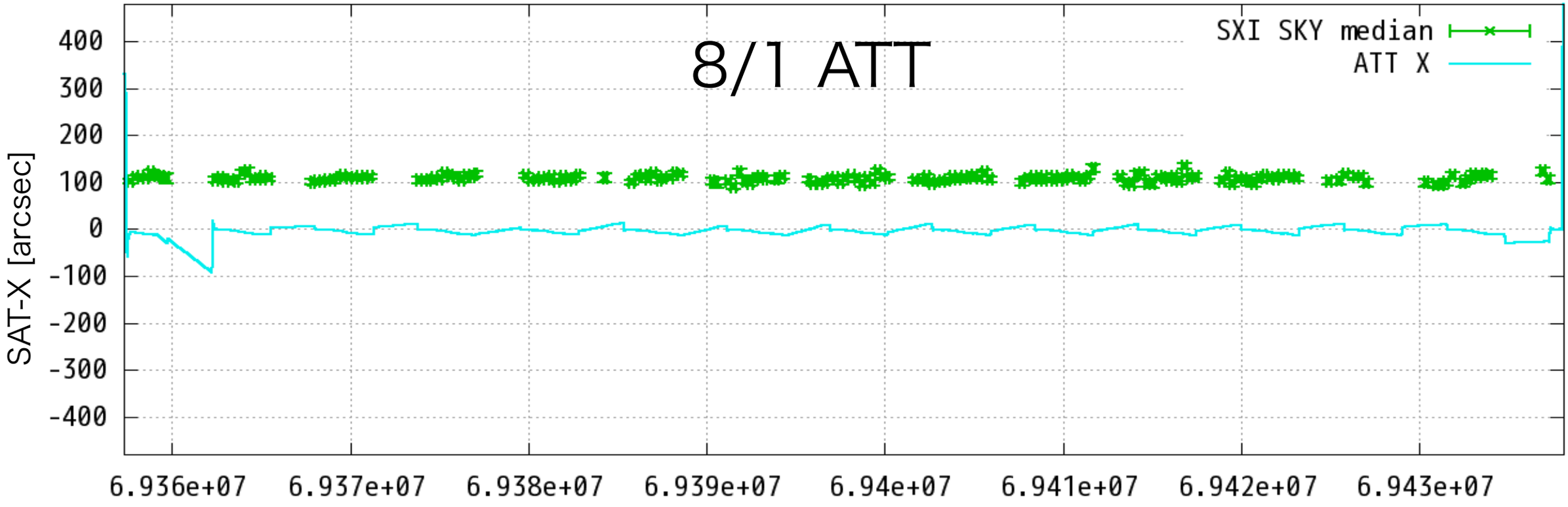


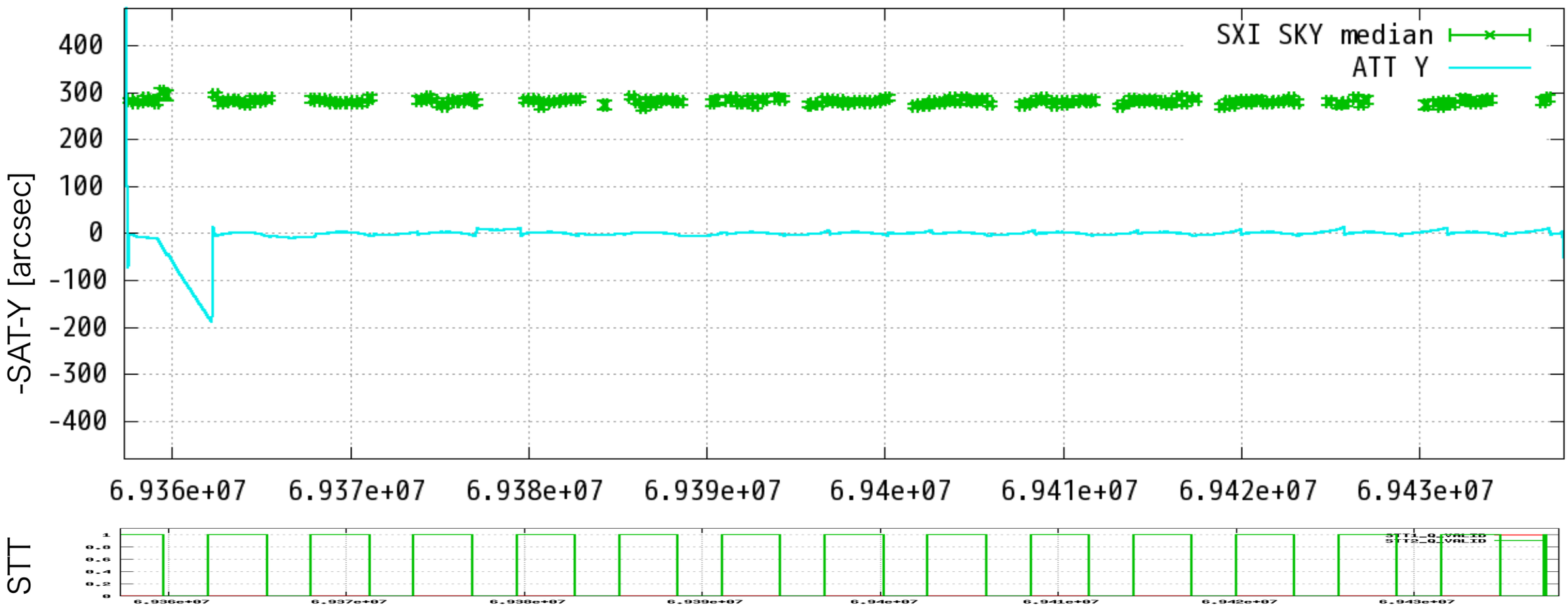


100042040

IGR_J16318-4848 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

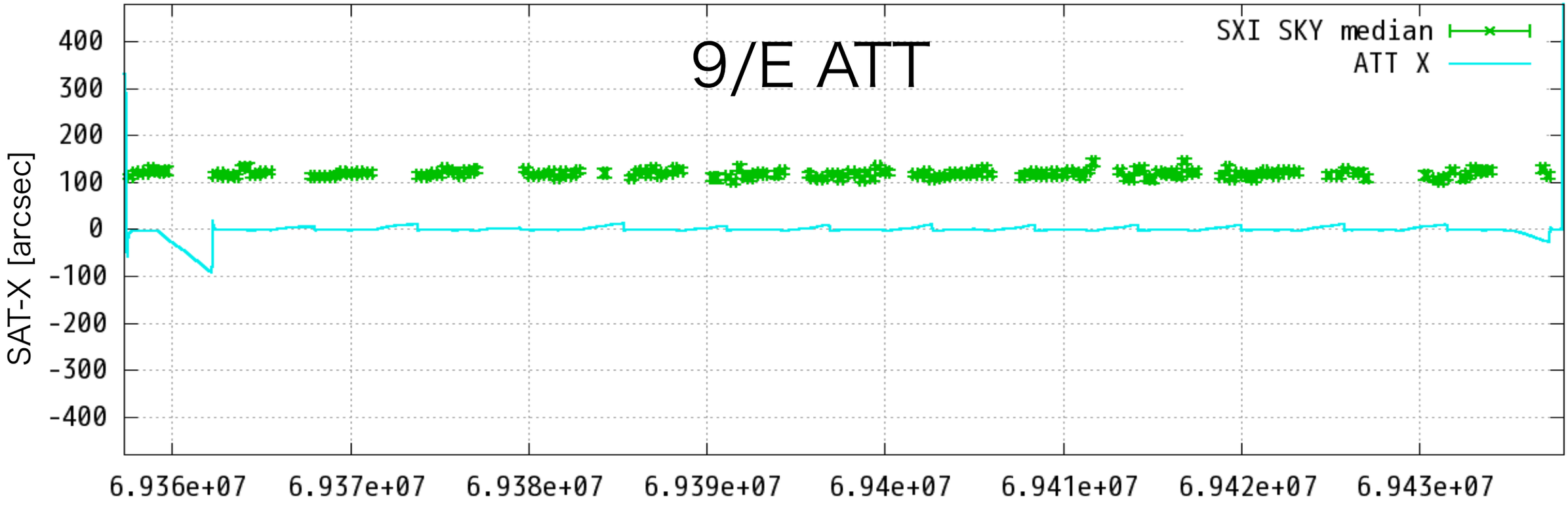


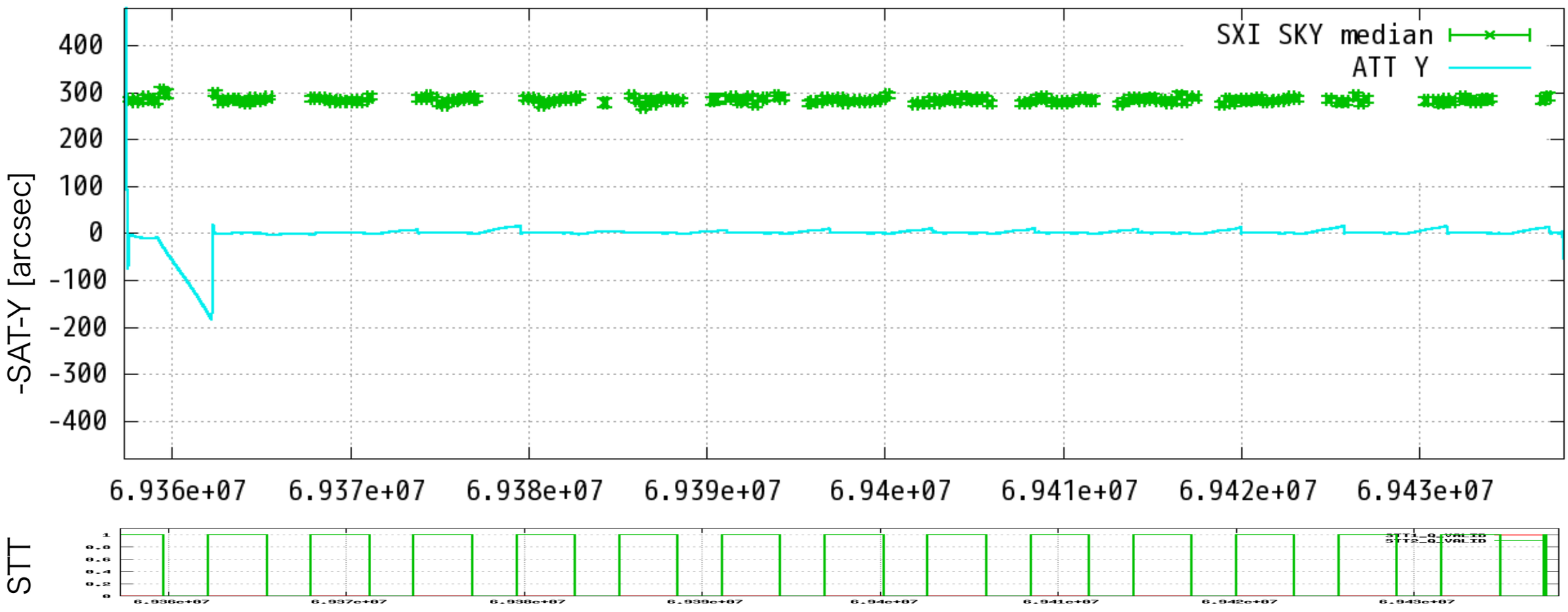


100042040

IGR_J16318-4848 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

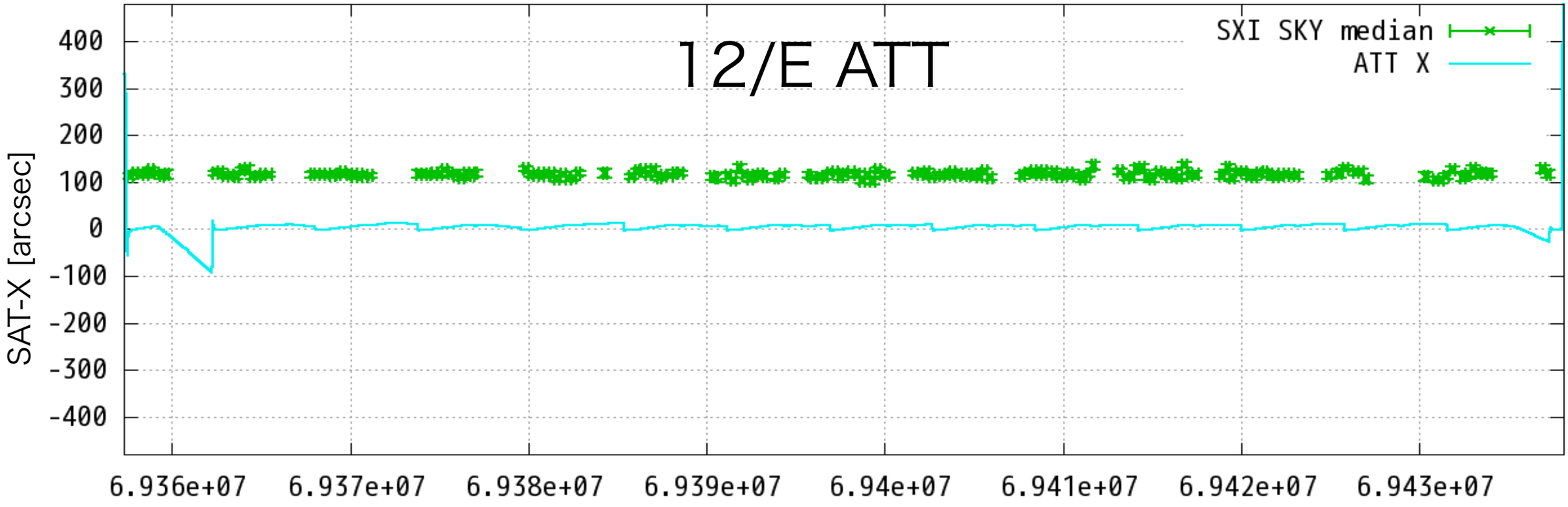


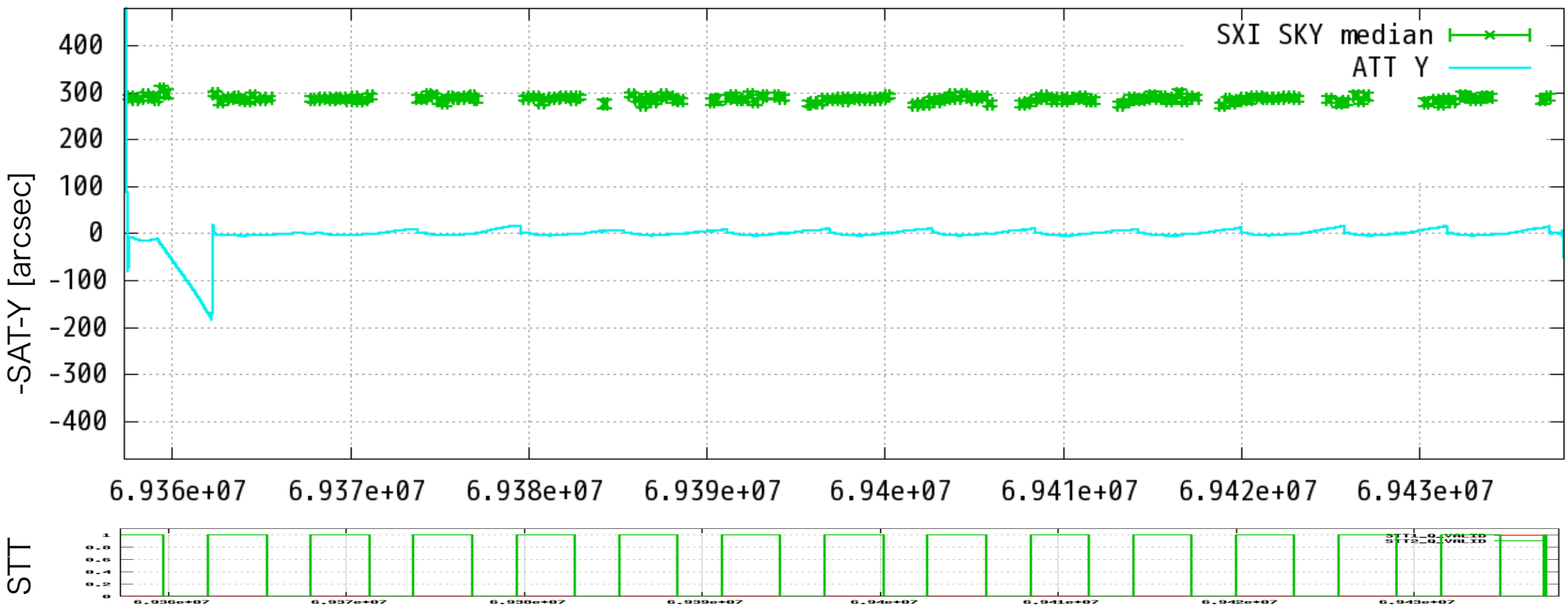


100042040

IGR_J16318-4848 SKY-X/SKY-Y (unit: arcsec)

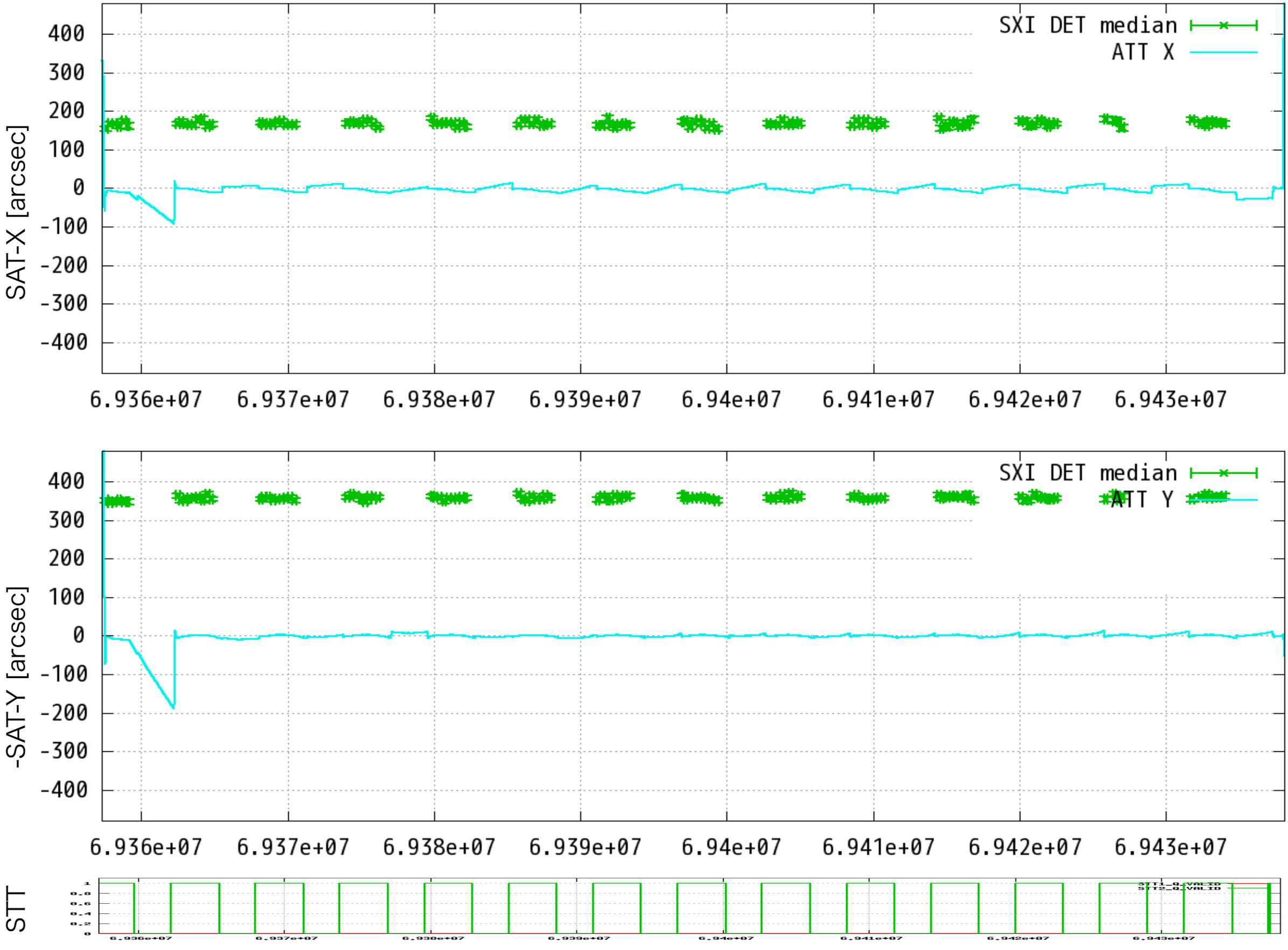
STT-ALL





100042040

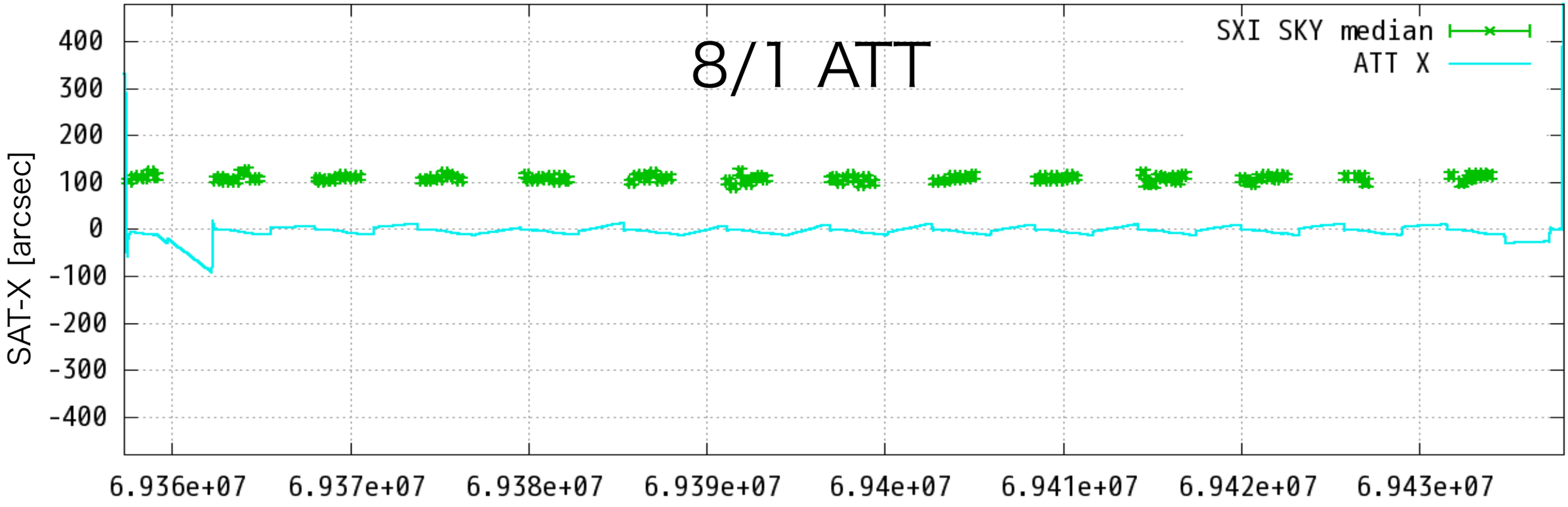
STT-CTL

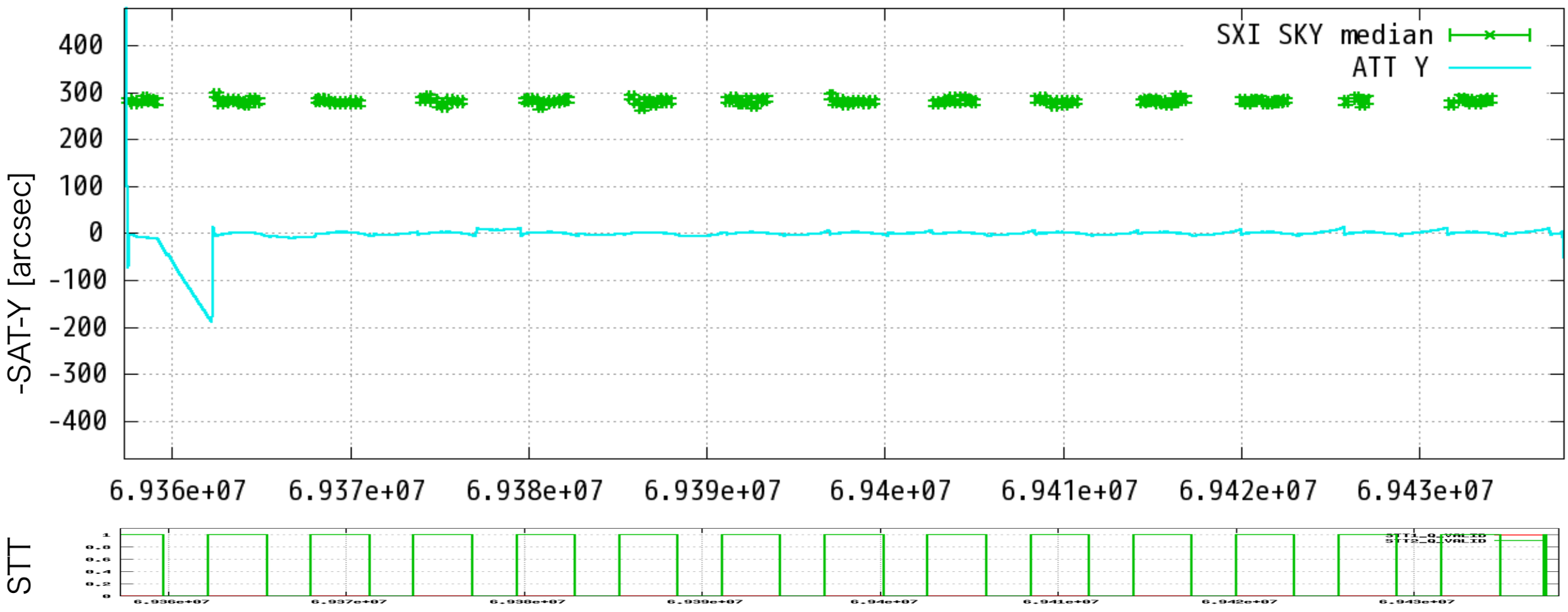


100042040

IGR_J16318-4848 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

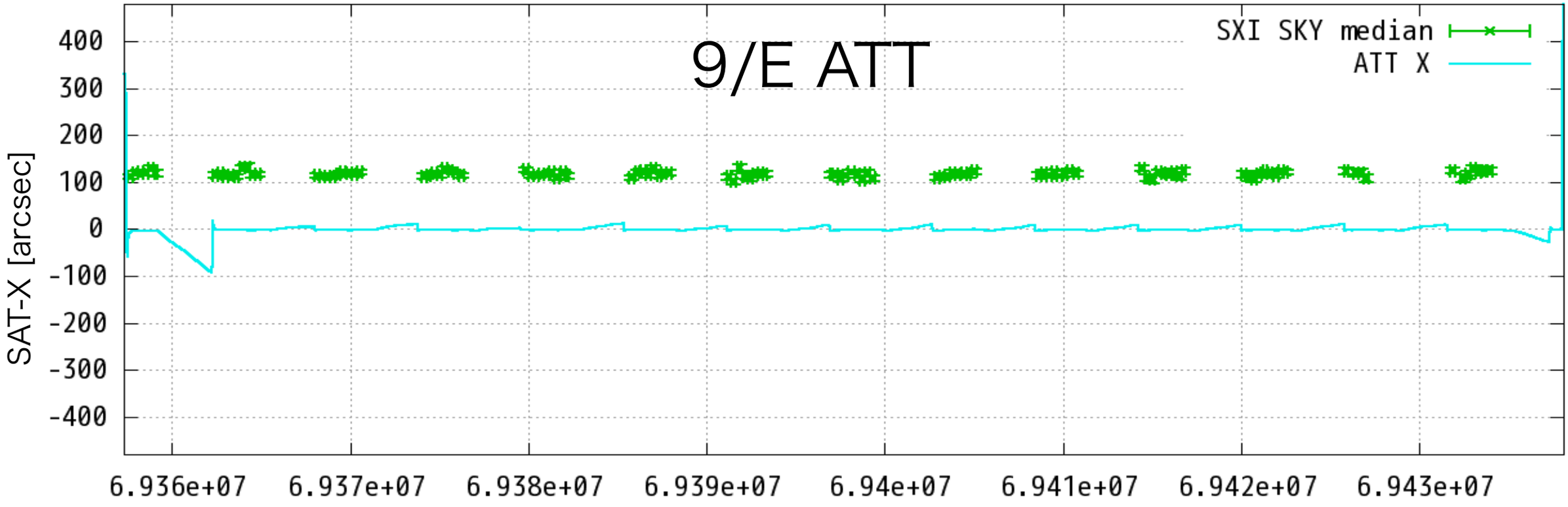


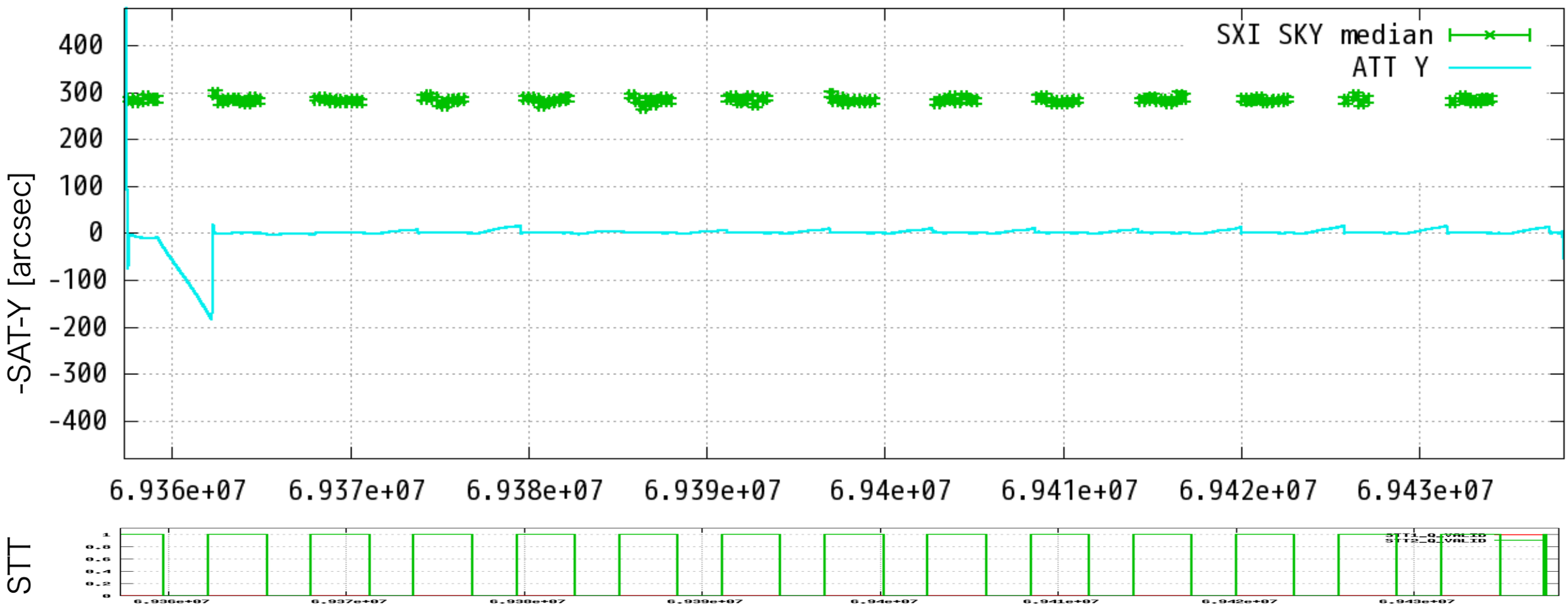


100042040

IGR_J16318-4848 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

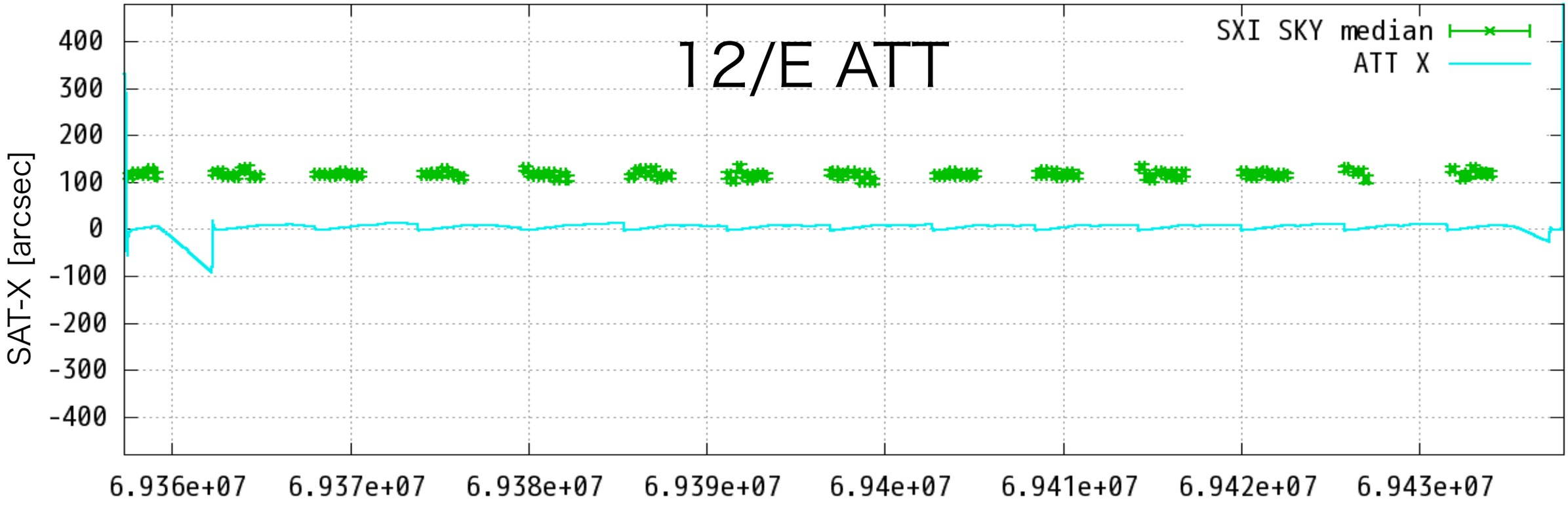


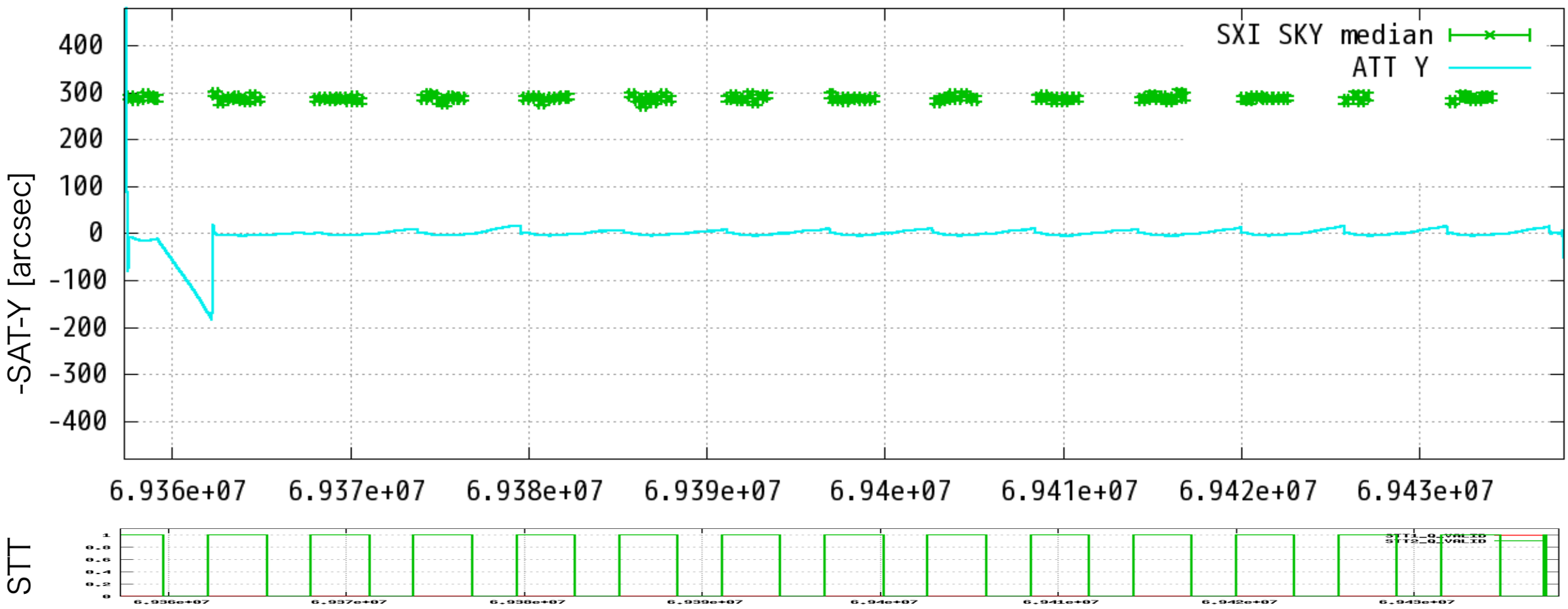


100042040

IGR_J16318-4848 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

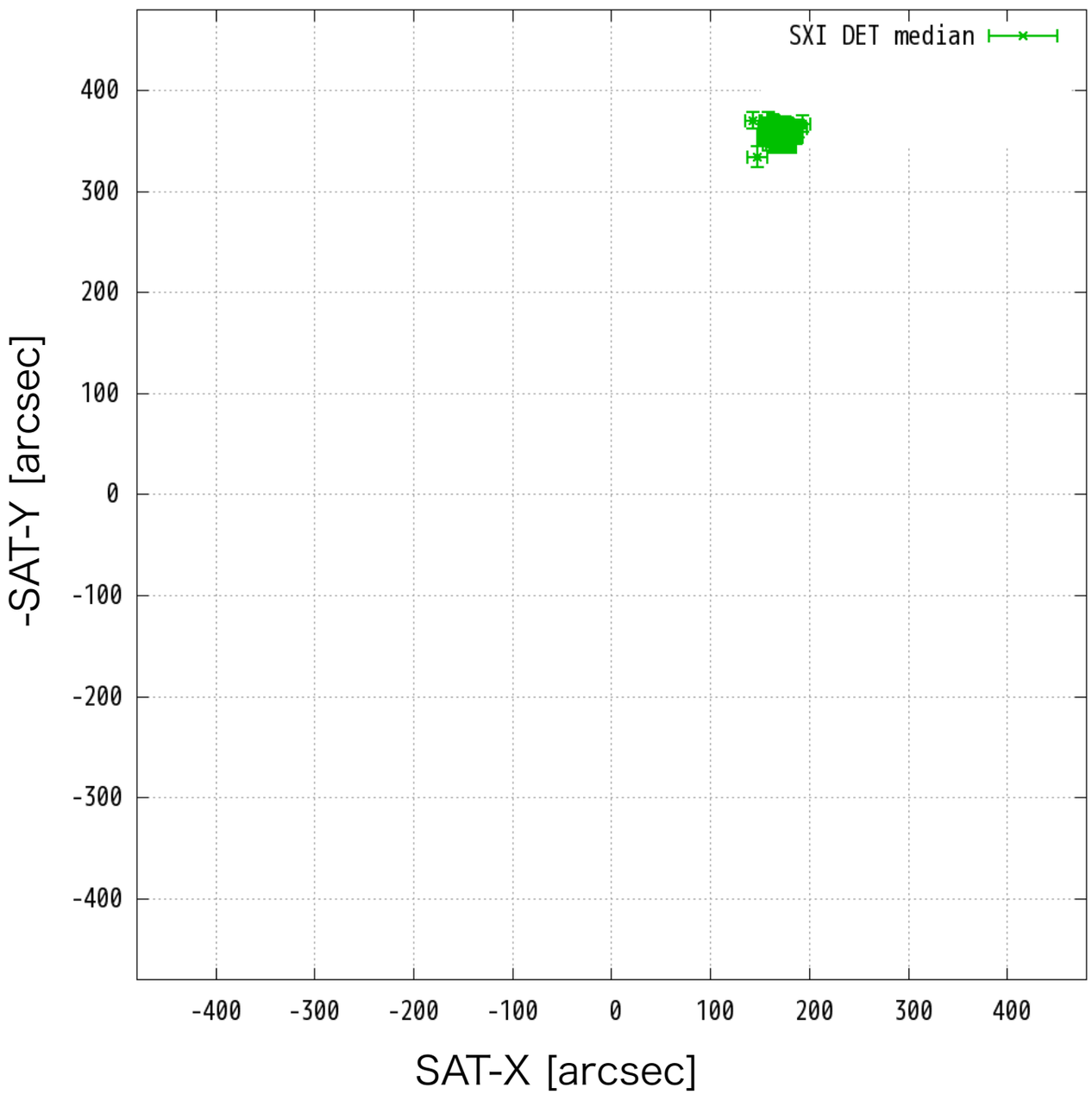




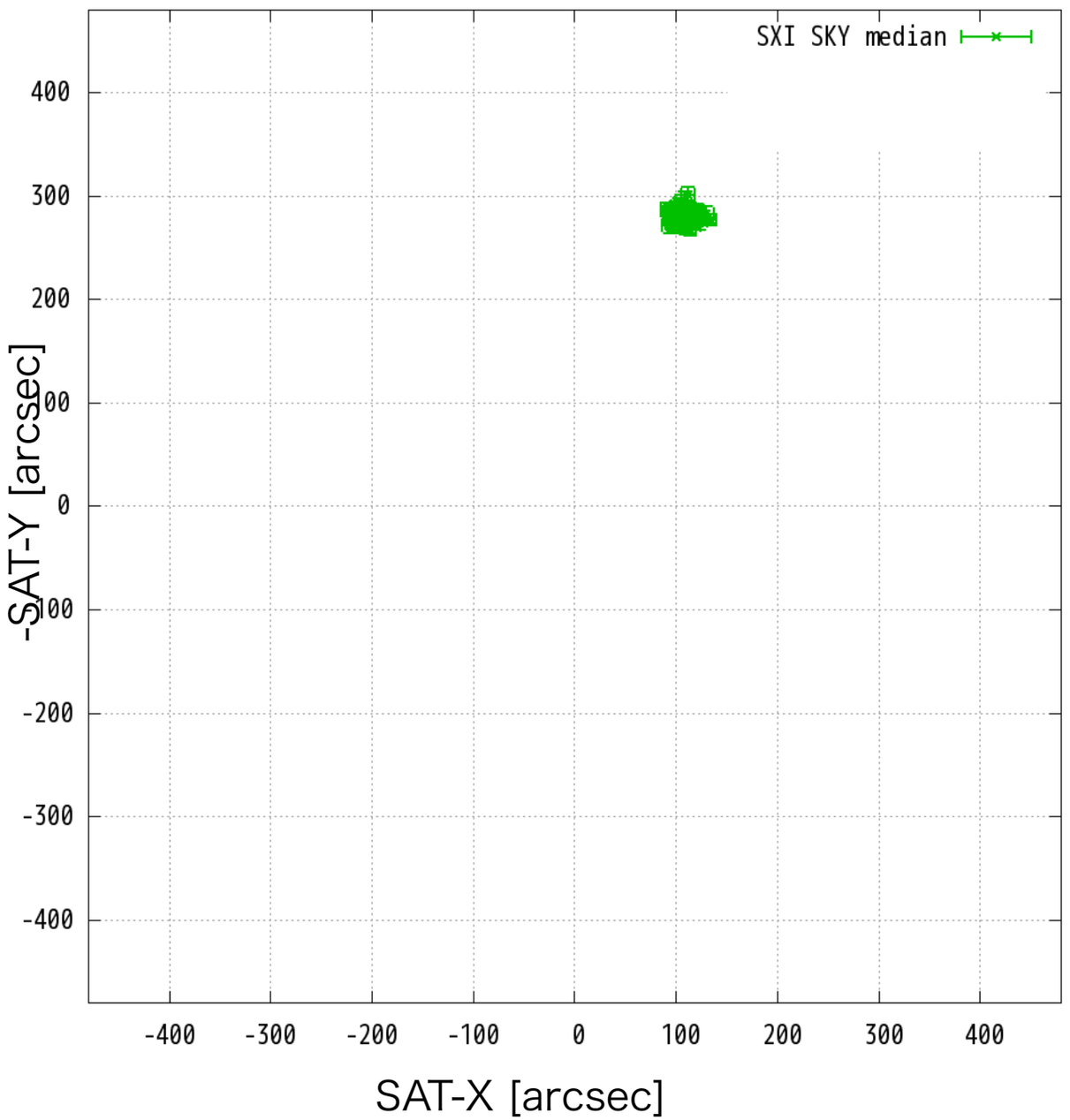
IRG_J (STT-ALL)
seq: 100042040

8/1 ATT

DET

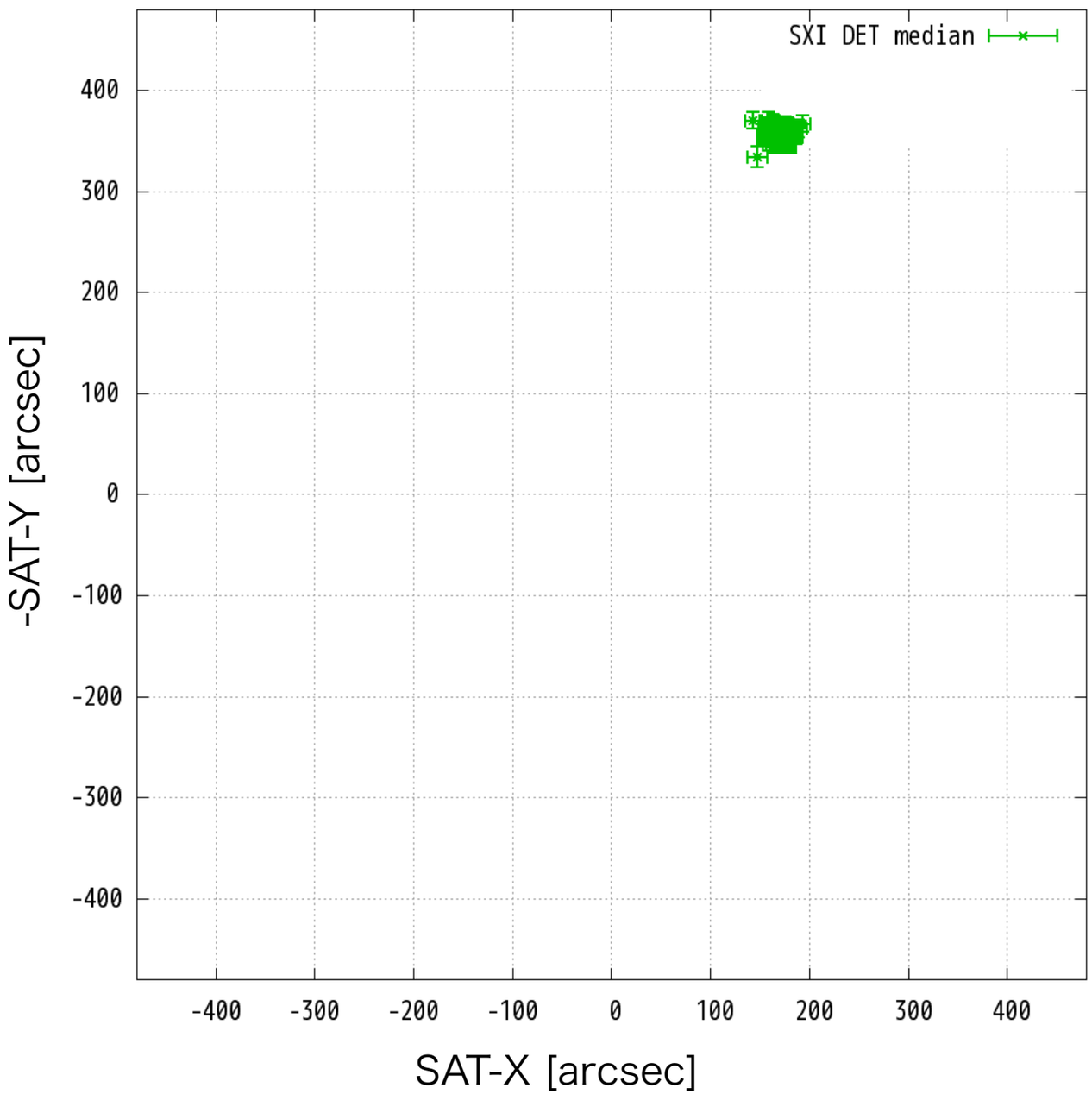


SKY

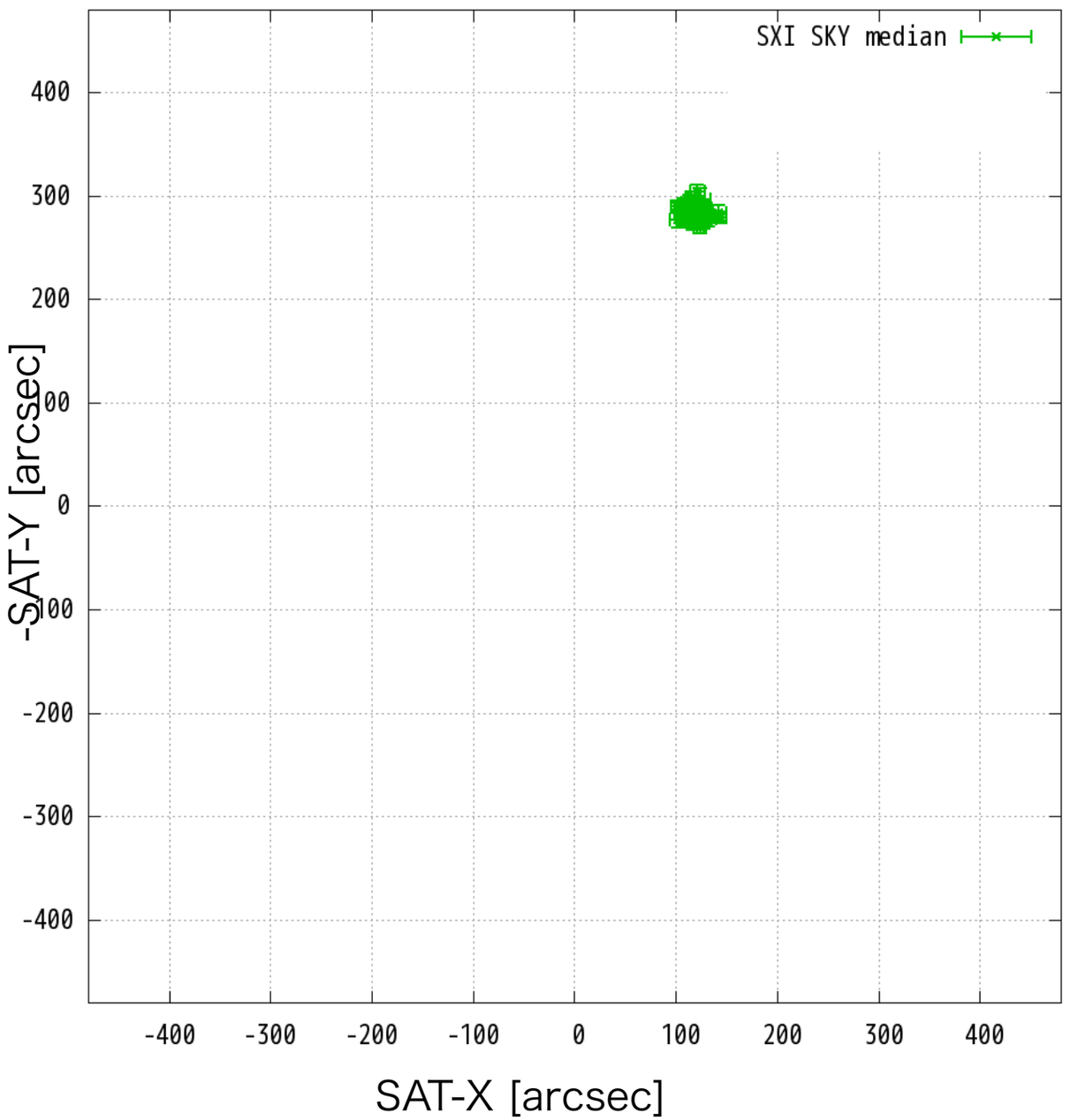


IRG_J (STT-ALL)
seq: 100042040

DET

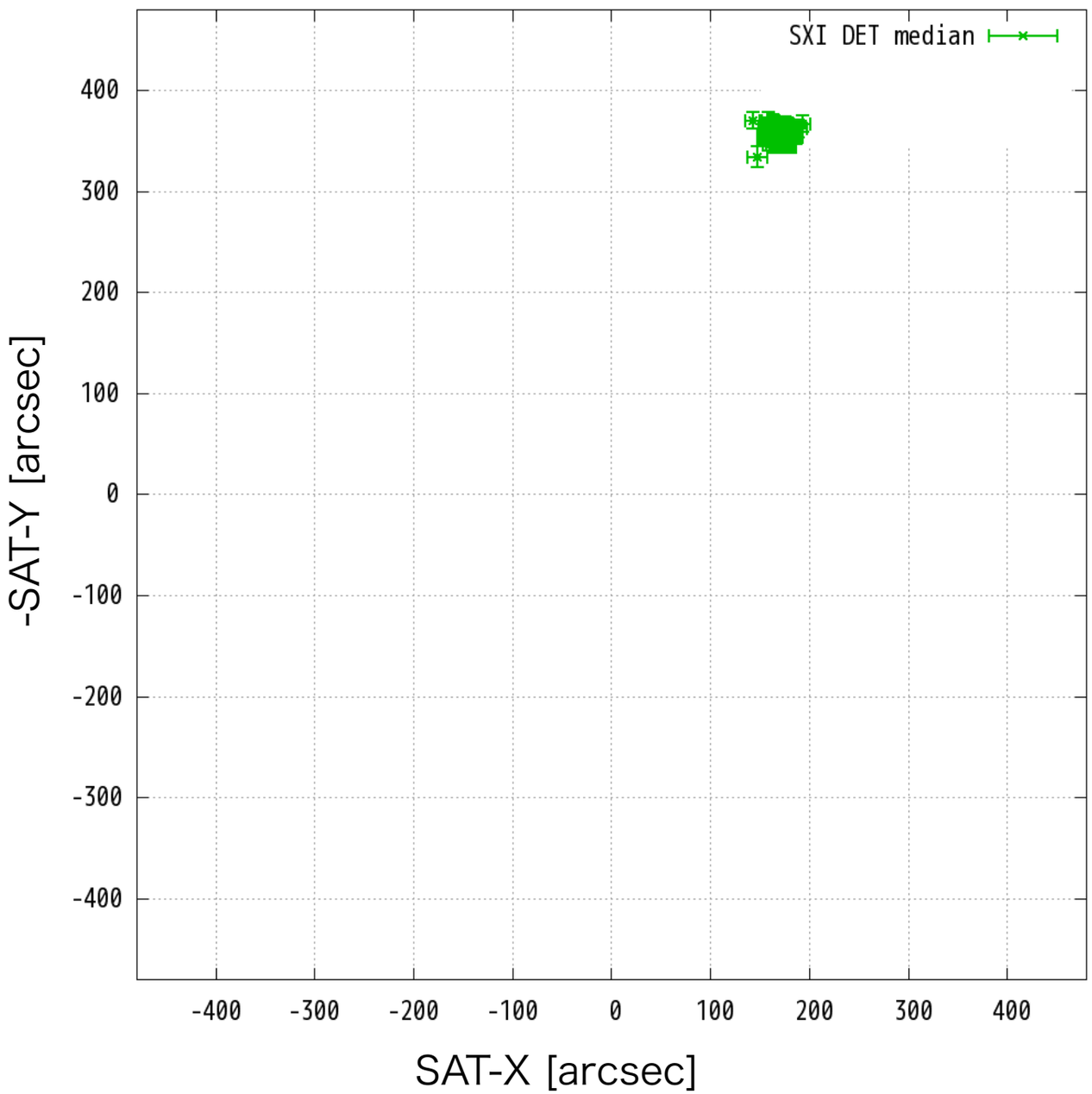


SKY 9/E ATT



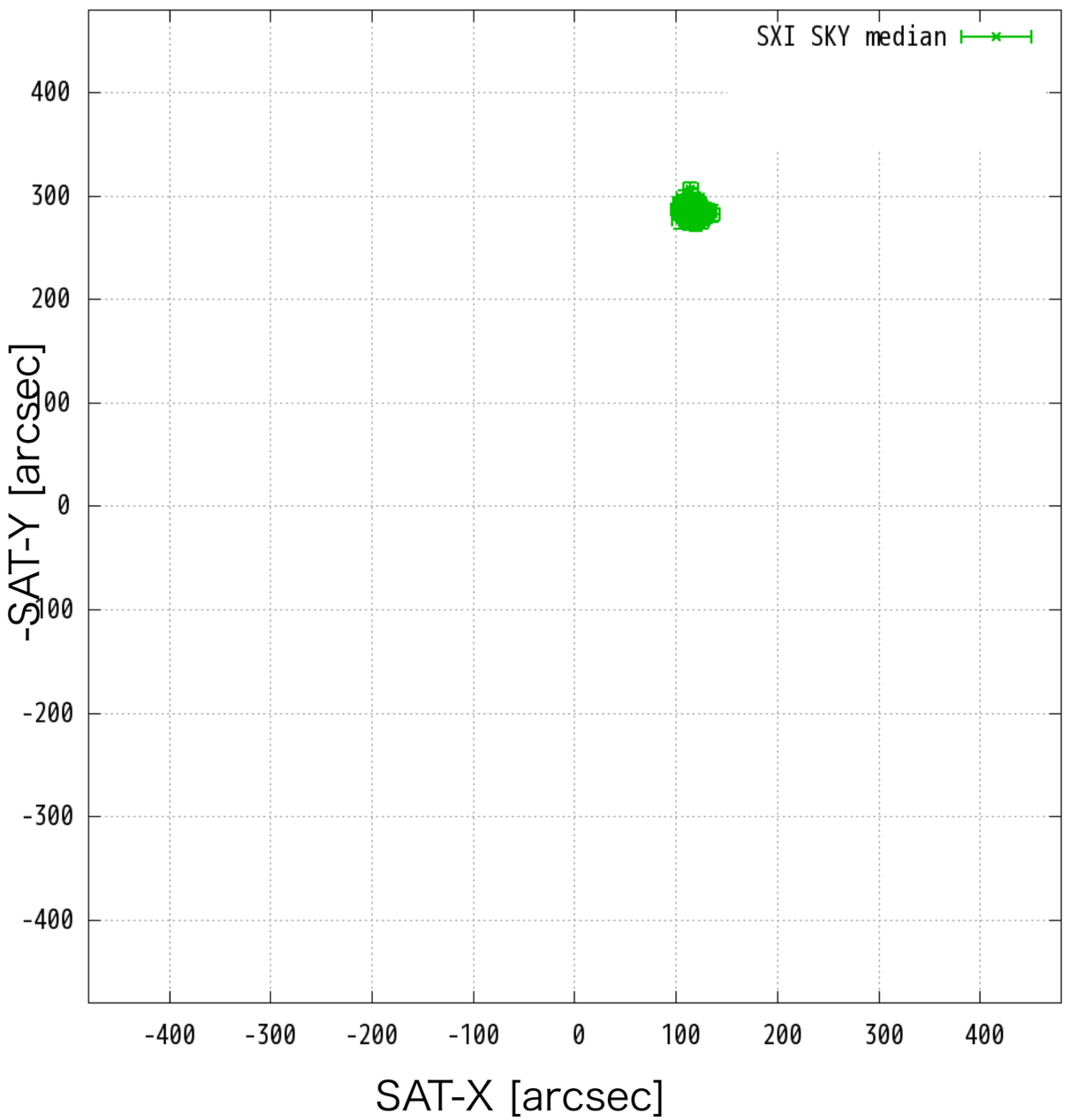
IRG_J (STT-ALL)
seq: 100042040

DET



SKY

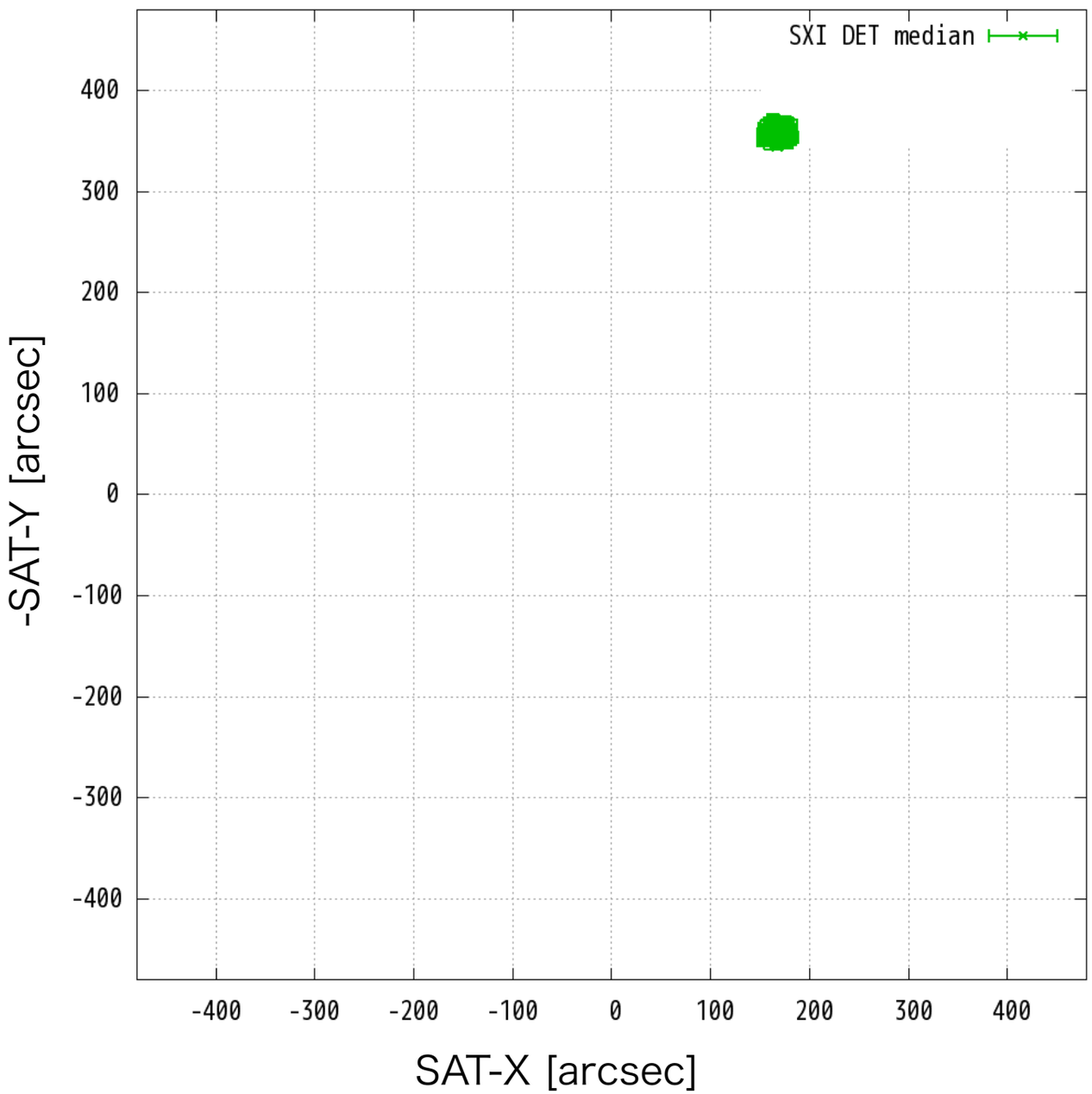
12/E ATT



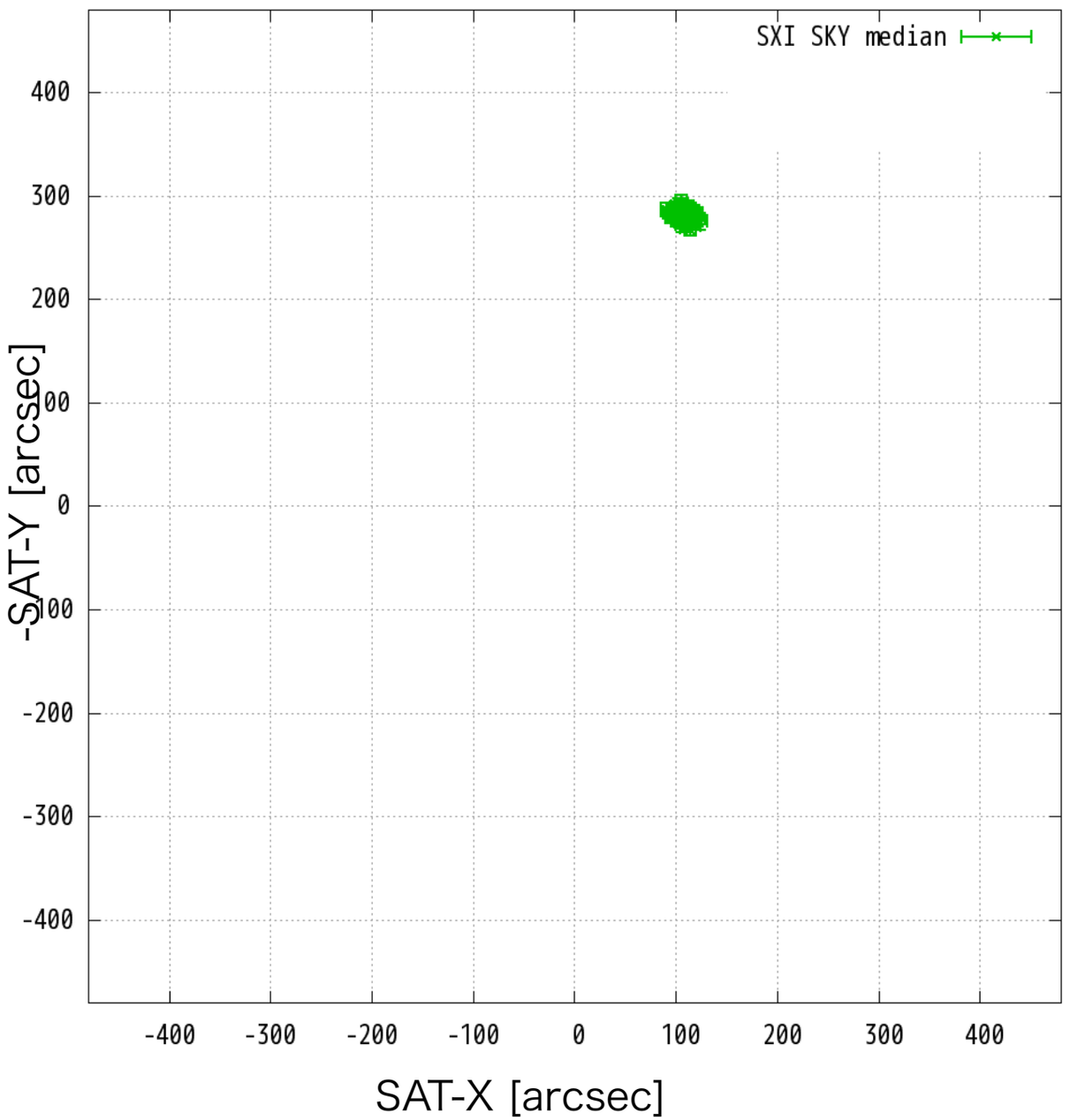
IRG_J (STT-CTL)
seq: 100042040

8/1 ATT

DET

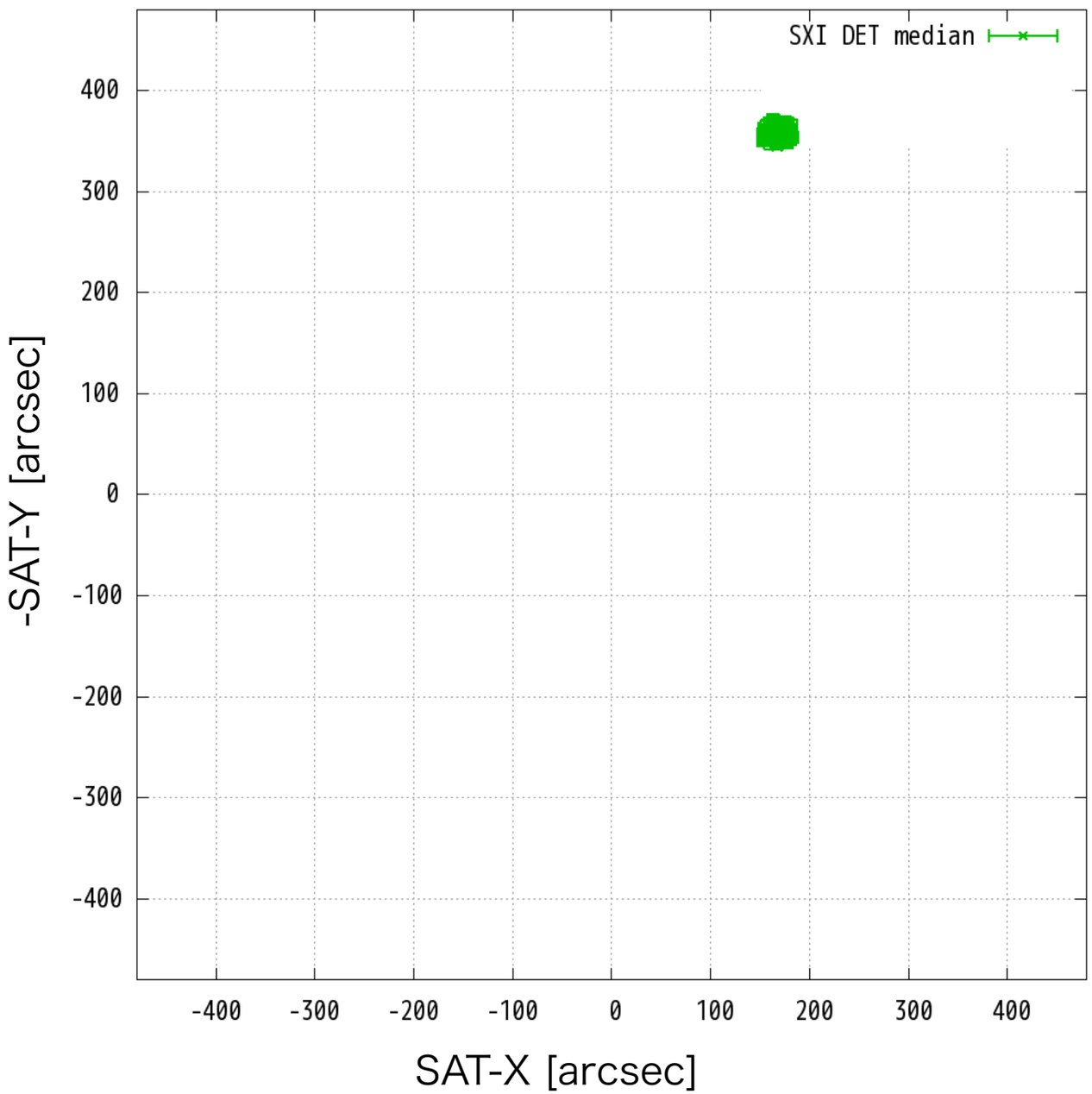


SKY

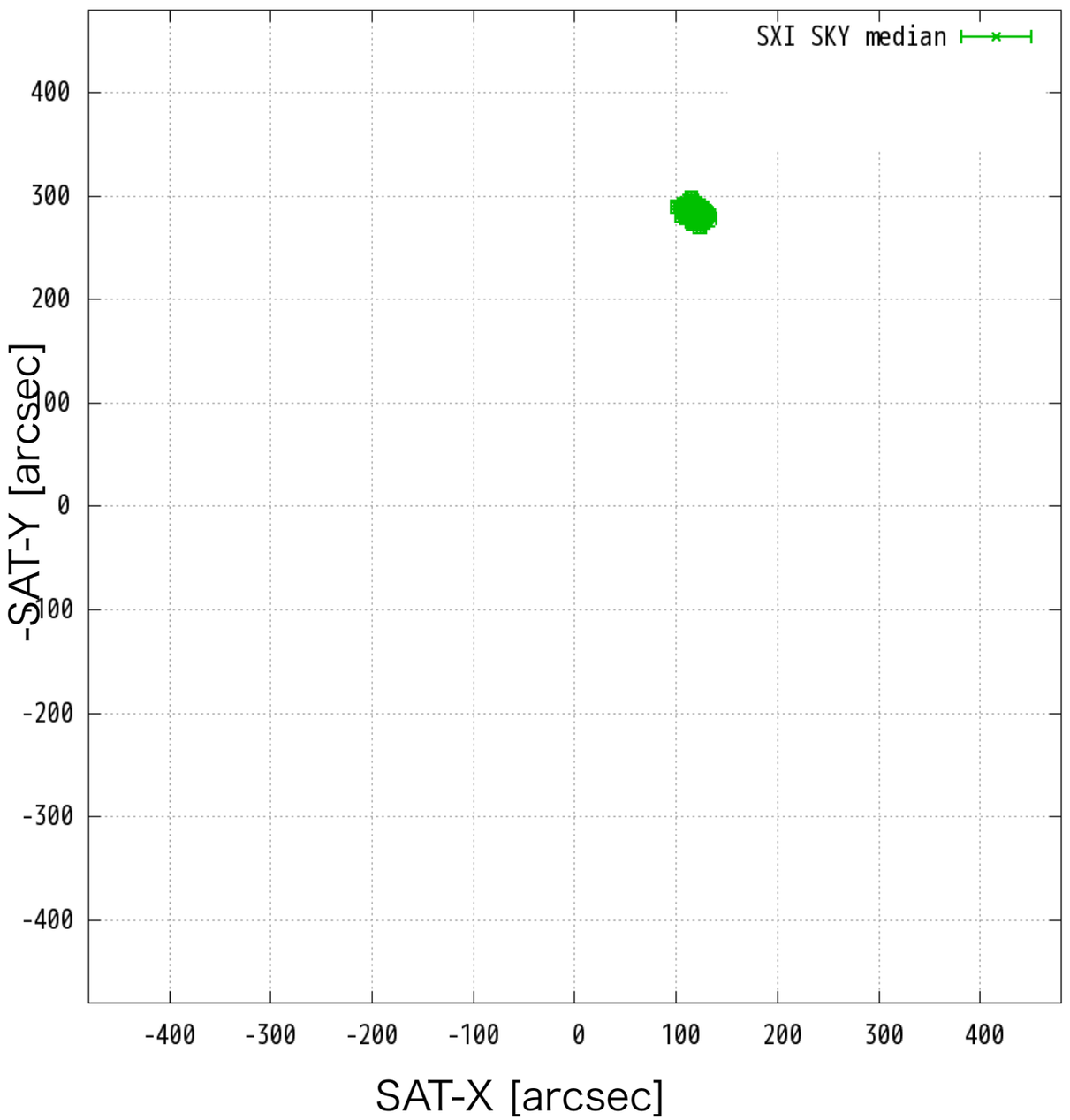


IRG_J (STT-CTL)
seq: 100042040

DET

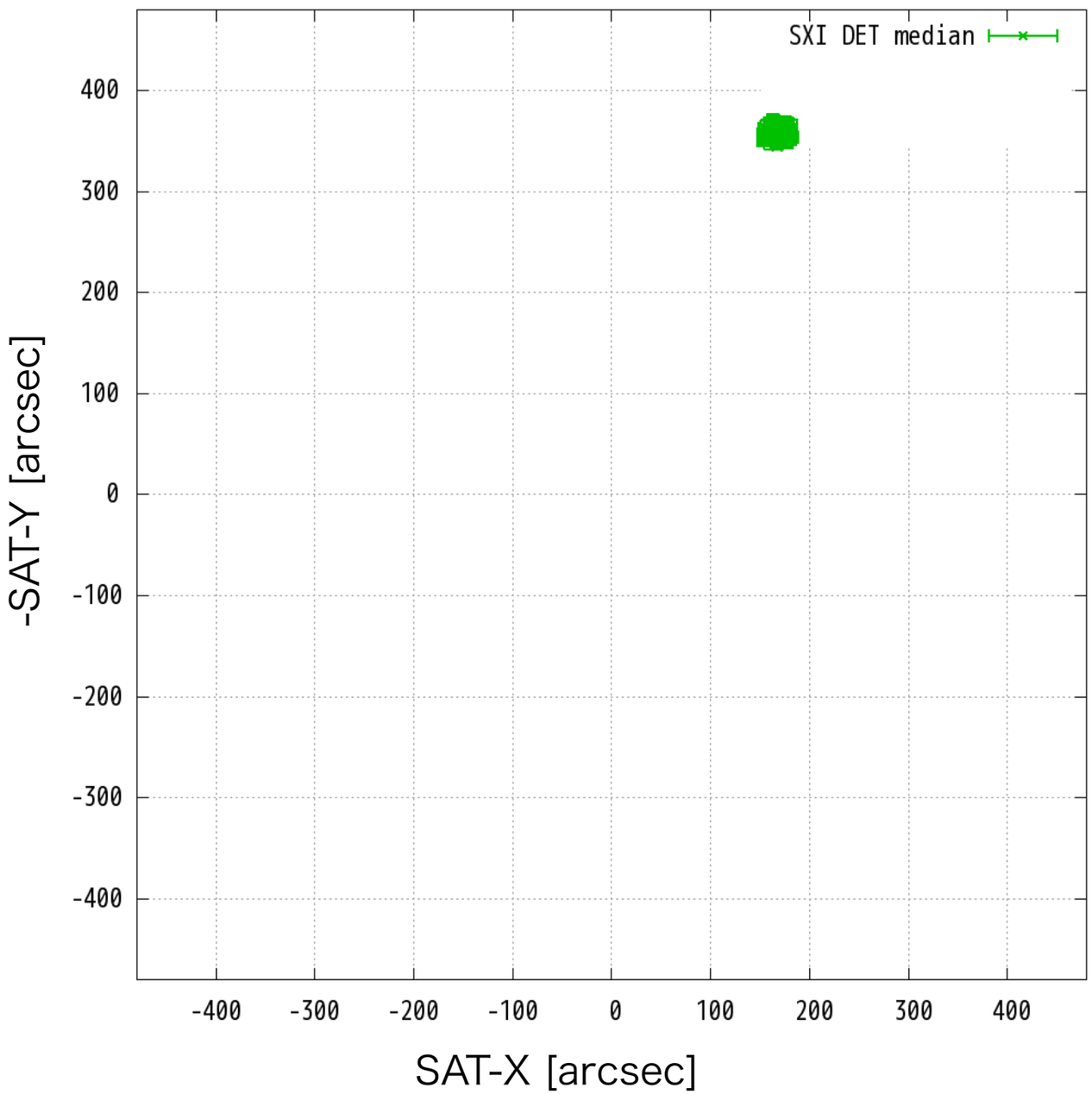


SKY 9/E ATT



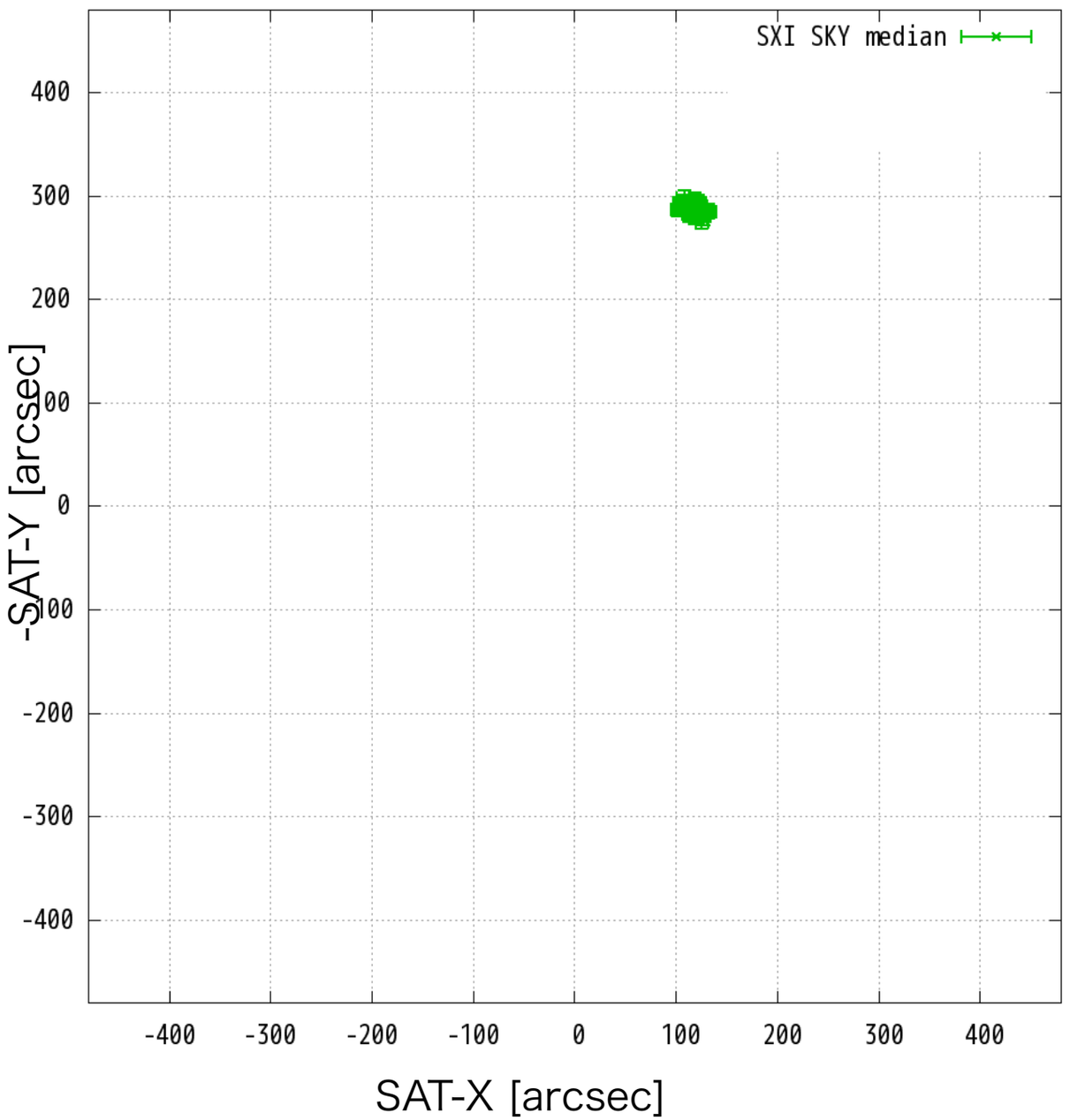
IRG_J (STT-CTL)
seq: 100042040

DET



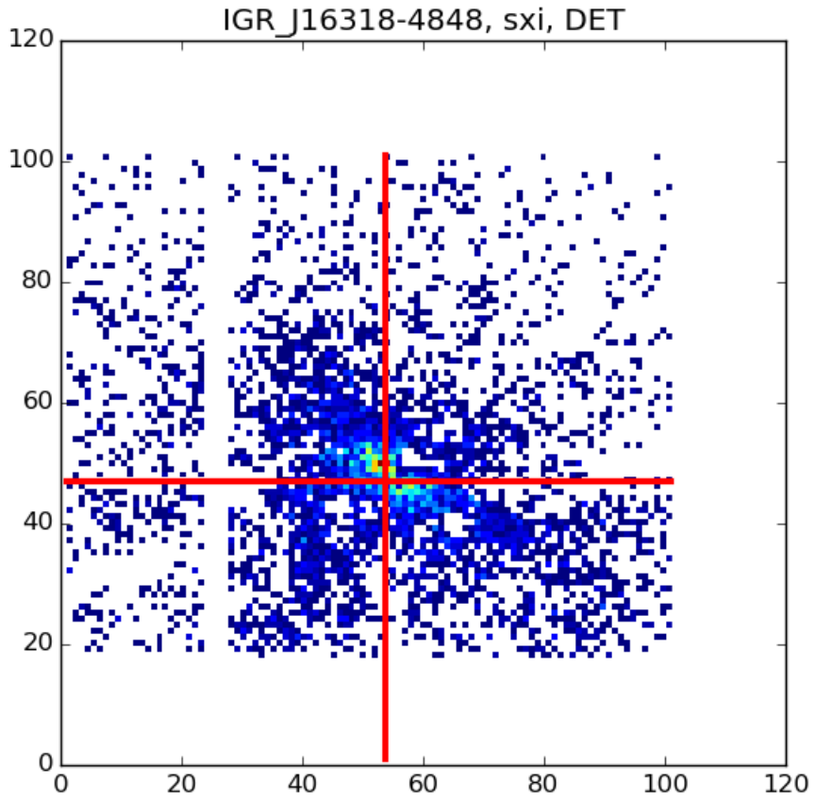
SKY

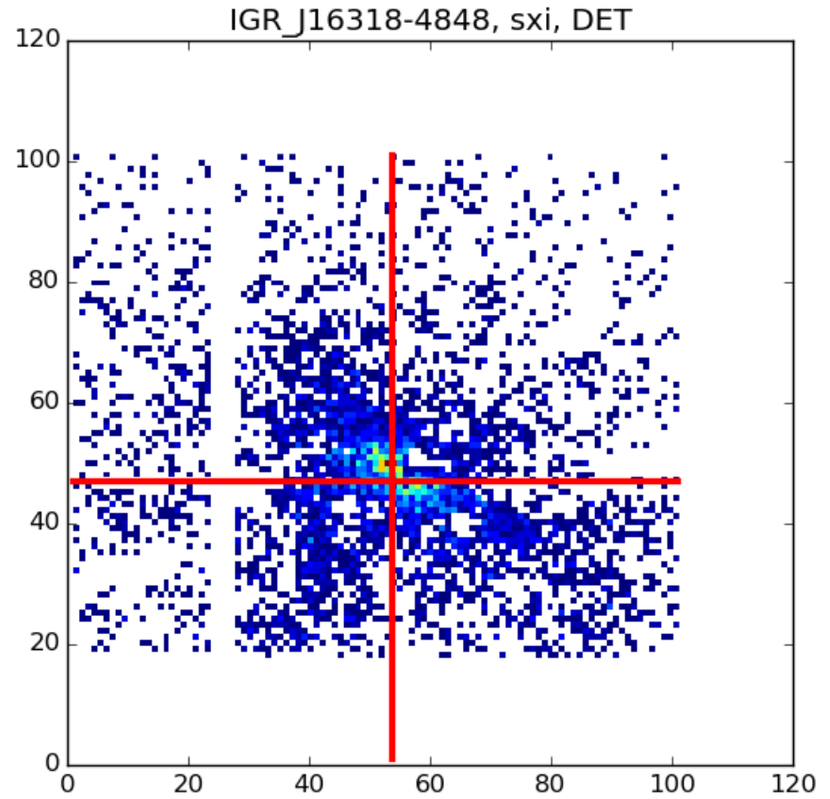
12/E ATT



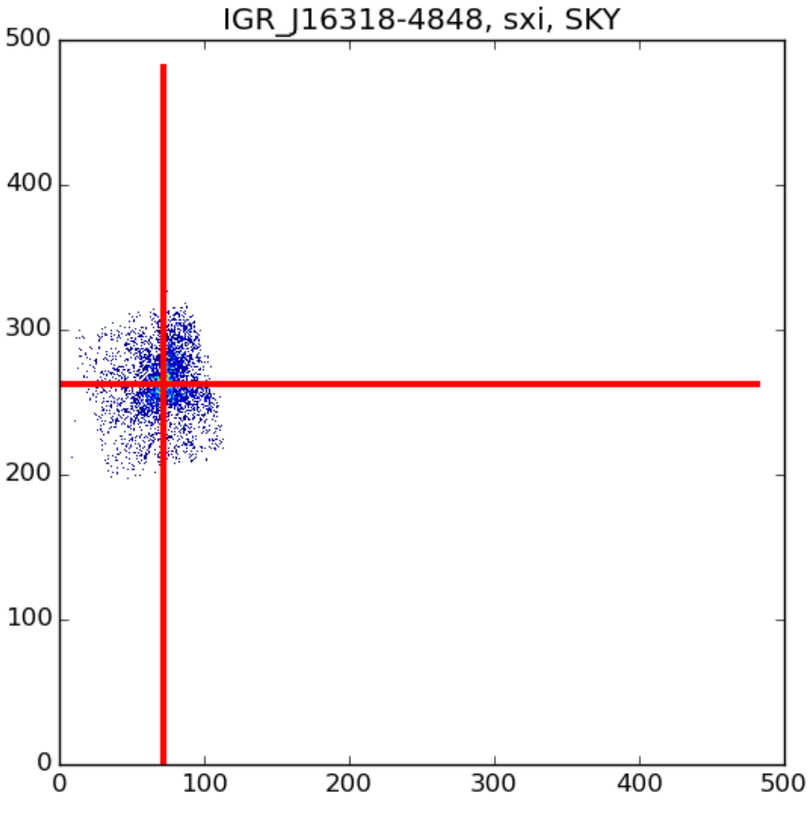
IGR_J
(STT-ALL)
seq: 100042040

+ 2d lorentz center
+ simbad center
(12/E only)

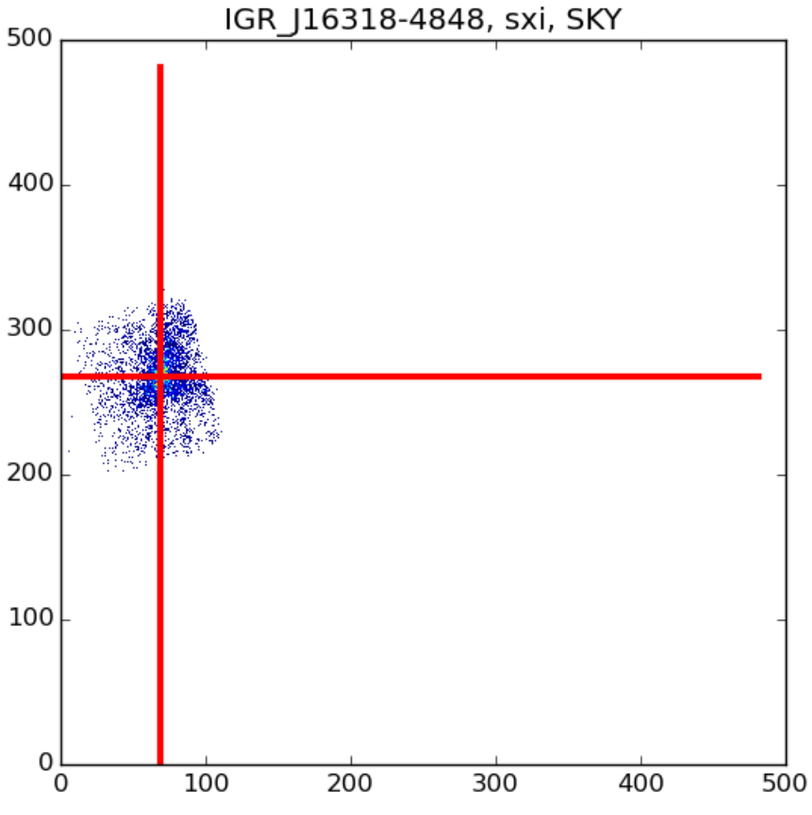




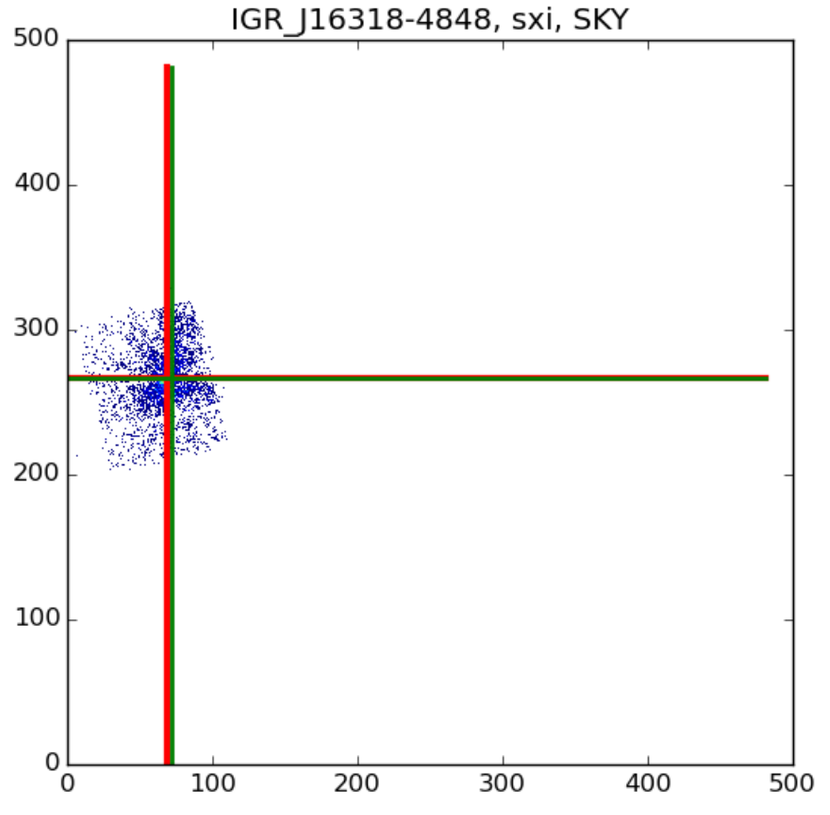
8/1 ATT



9/E ATT



12/E ATT

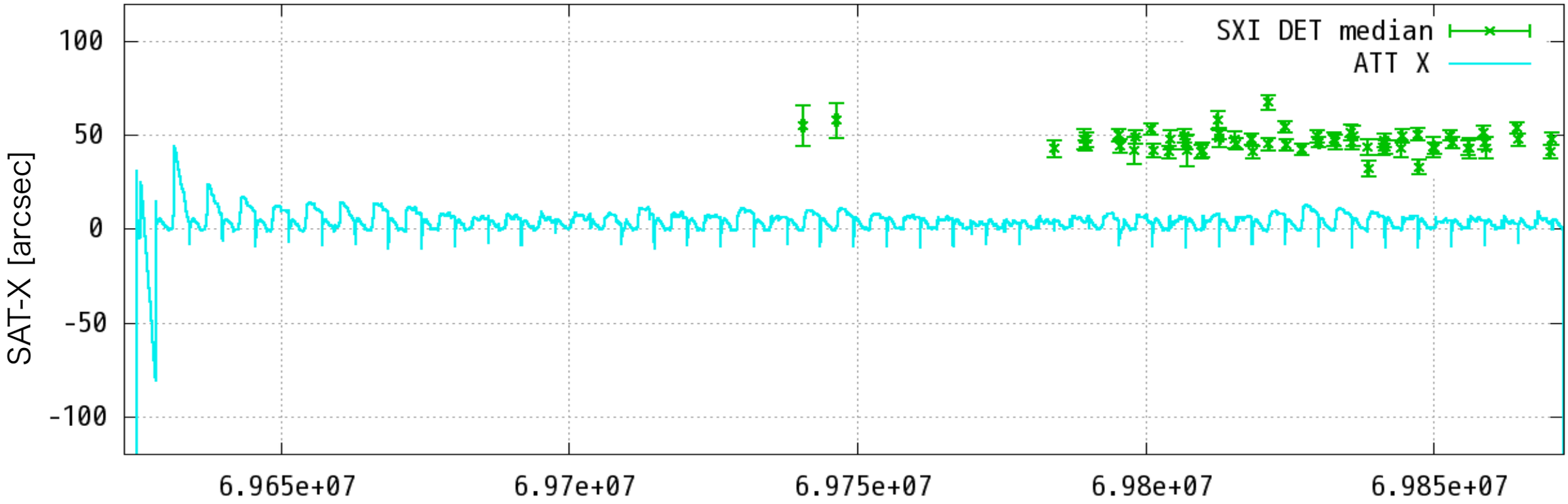


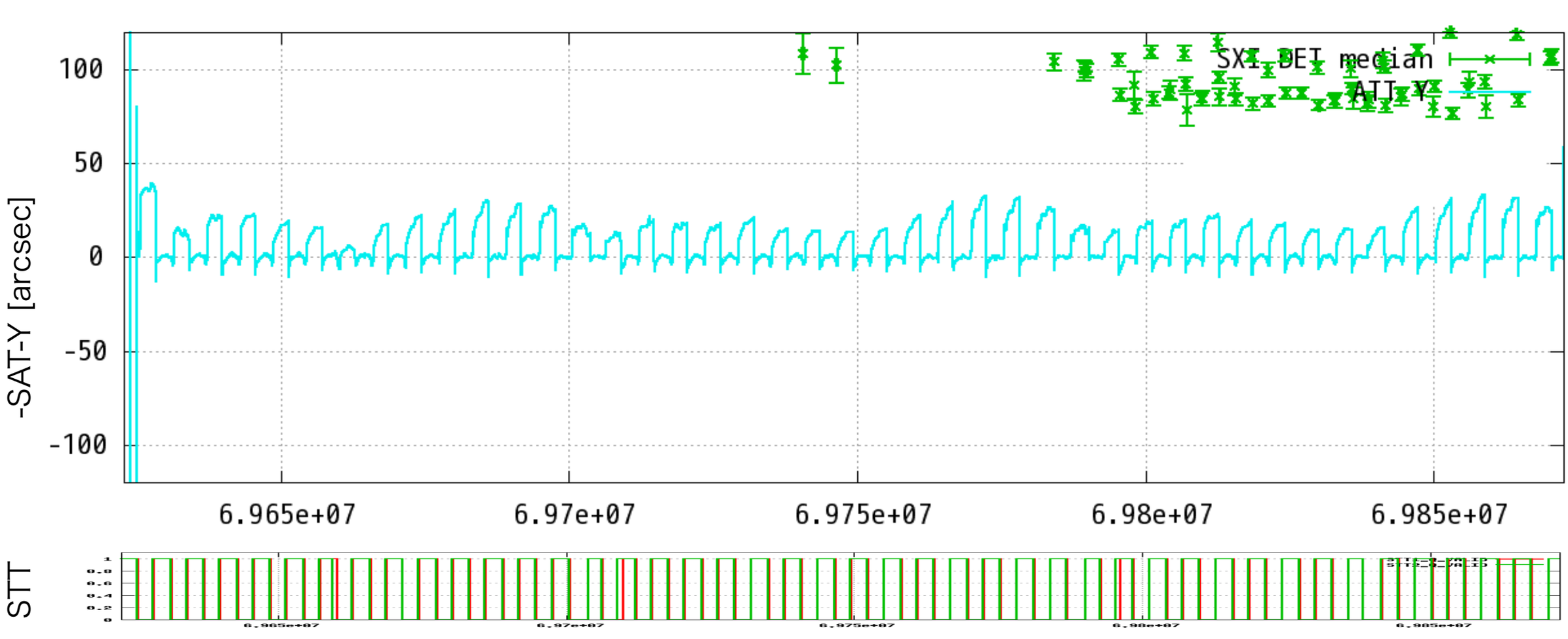
RXJ1856.5-3754

100043010, 20, 30, 40

100043010, 20, 30, 40

STT-ALL

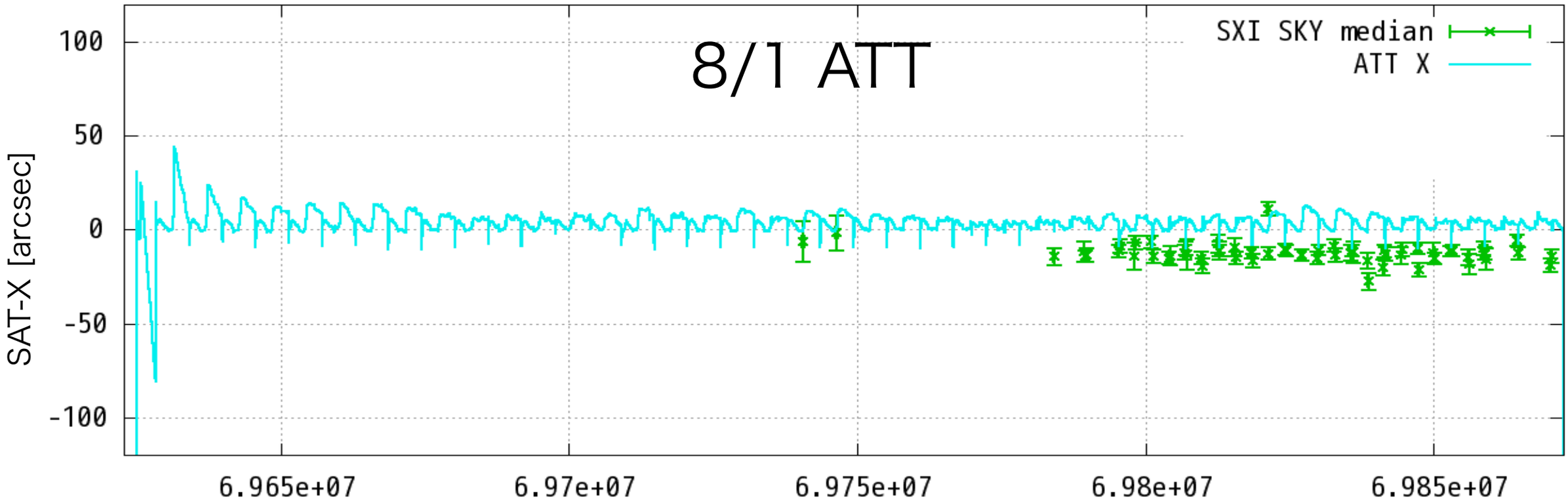


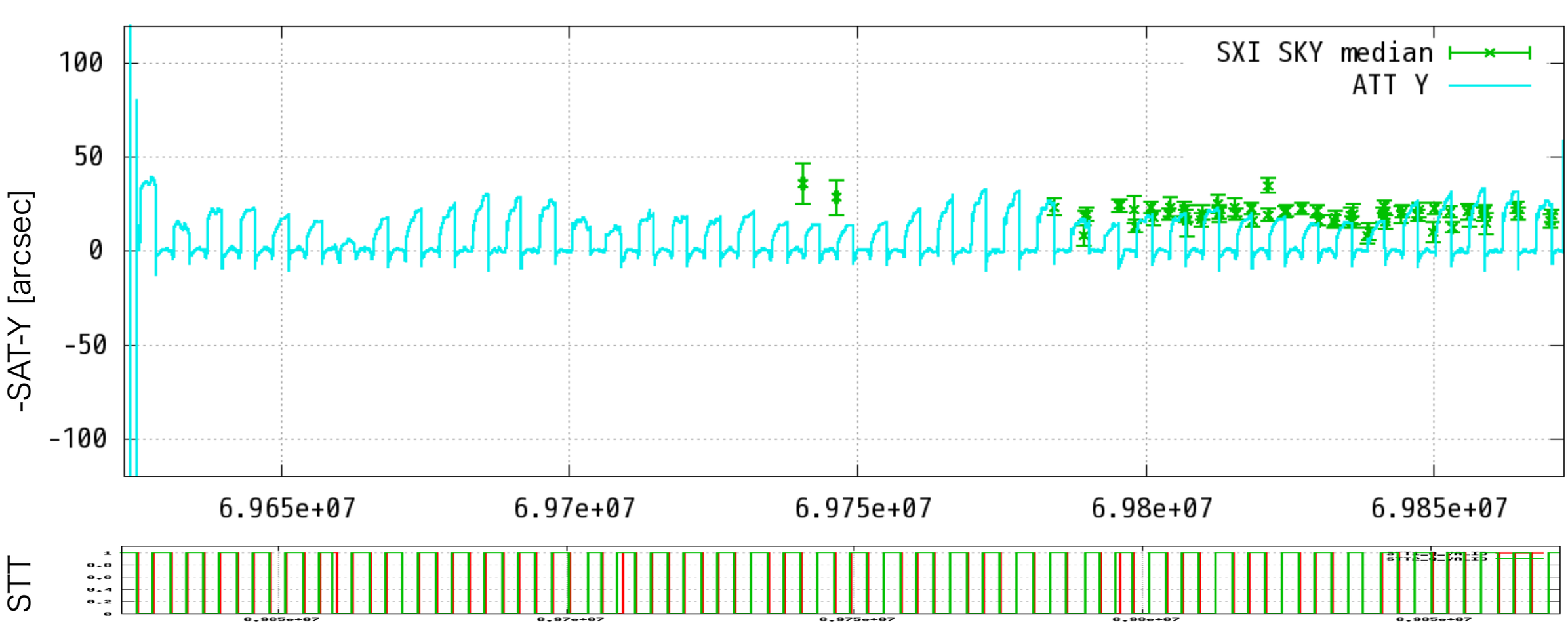


100043010, 20, 30, 40

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

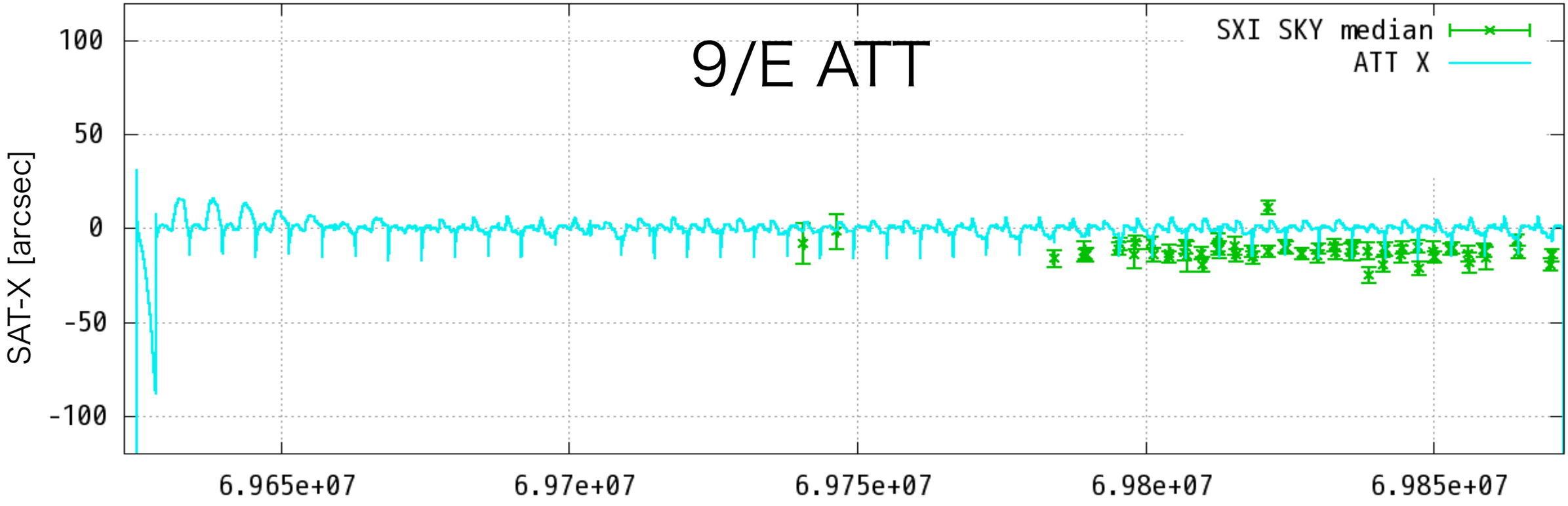


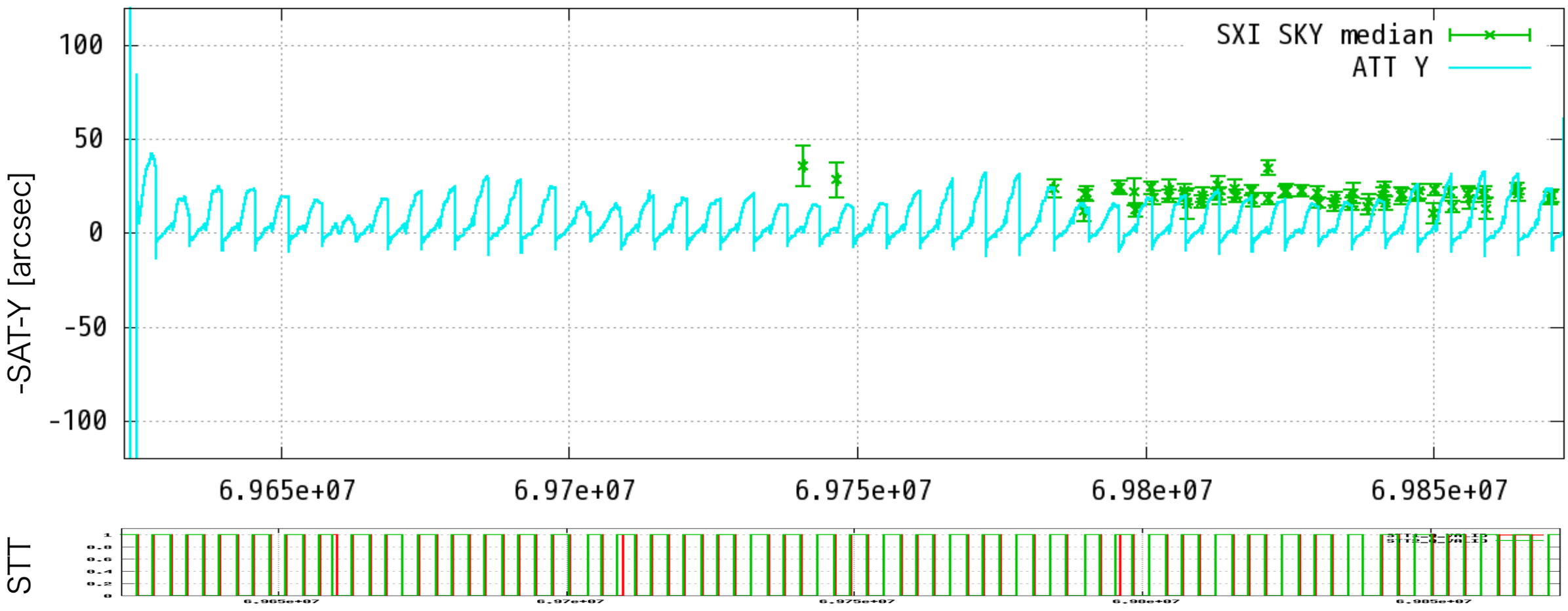


100043010, 20, 30, 40

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

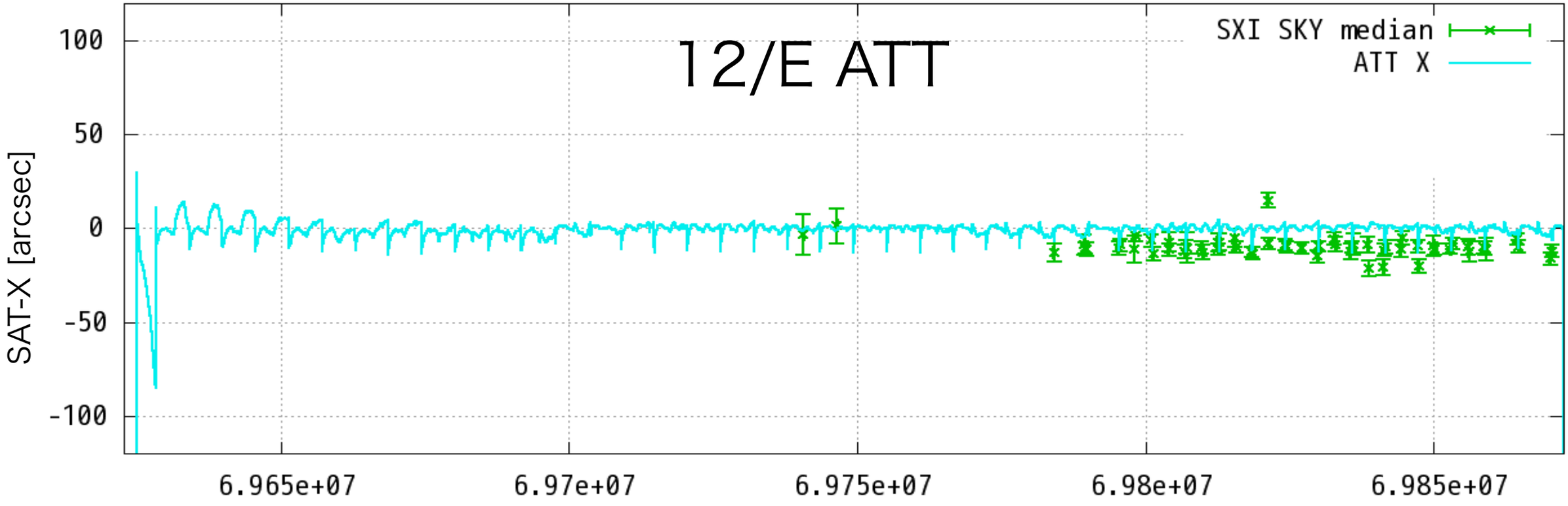


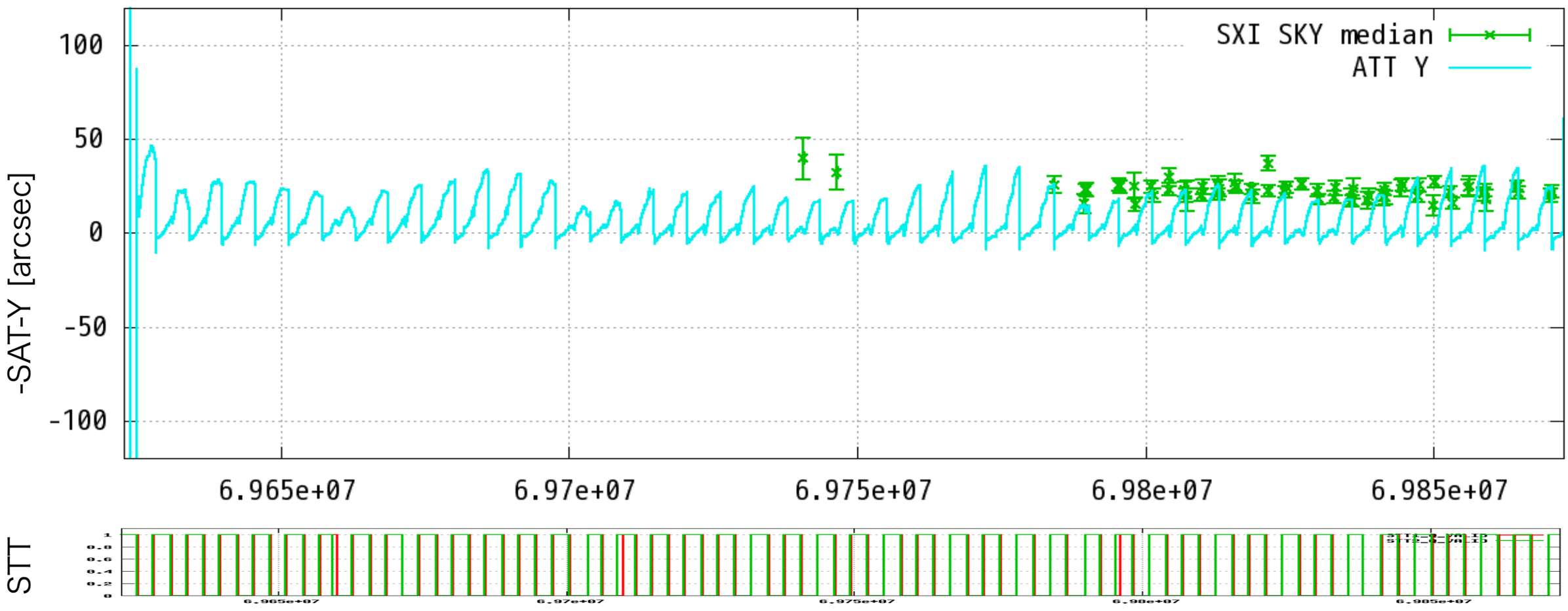


100043010, 20, 30, 40

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

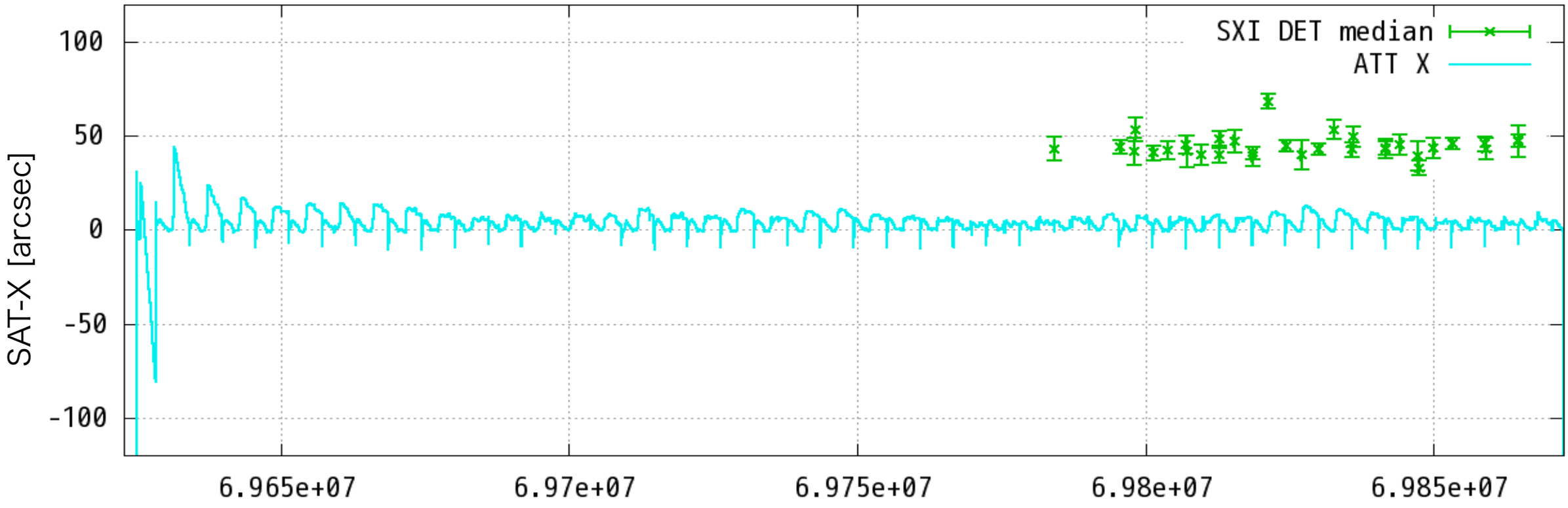
STT-ALL

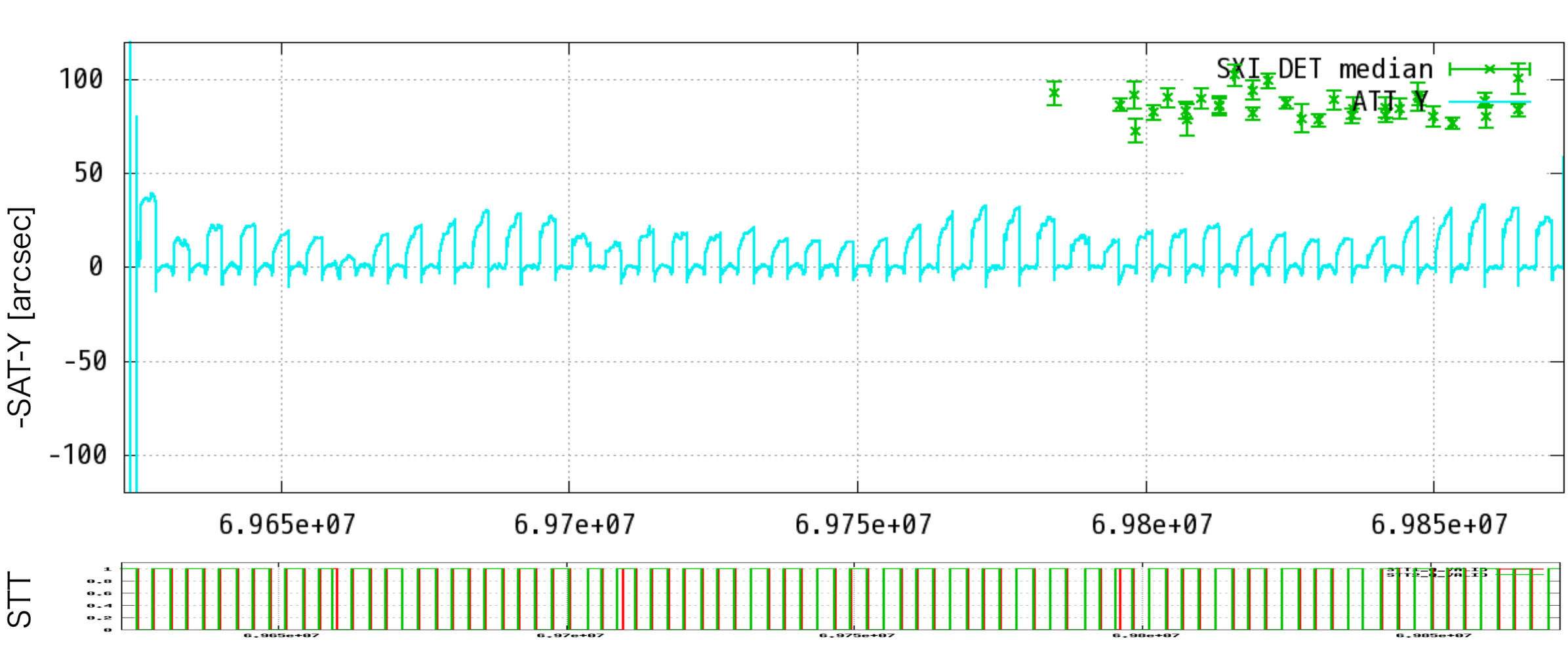




100043010, 20, 30, 40

STT-CTL



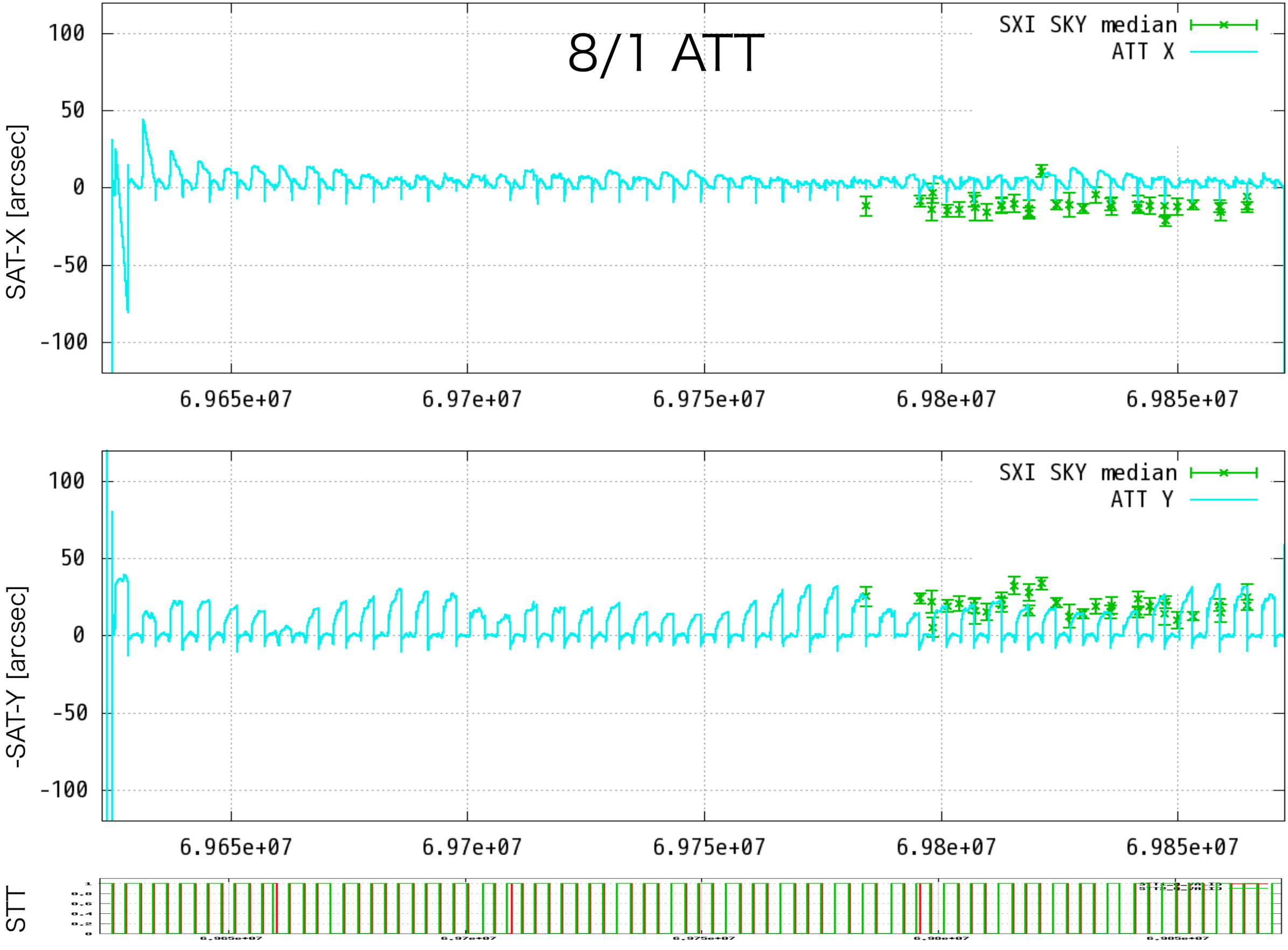


100043010, 20, 30, 40

RX J1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

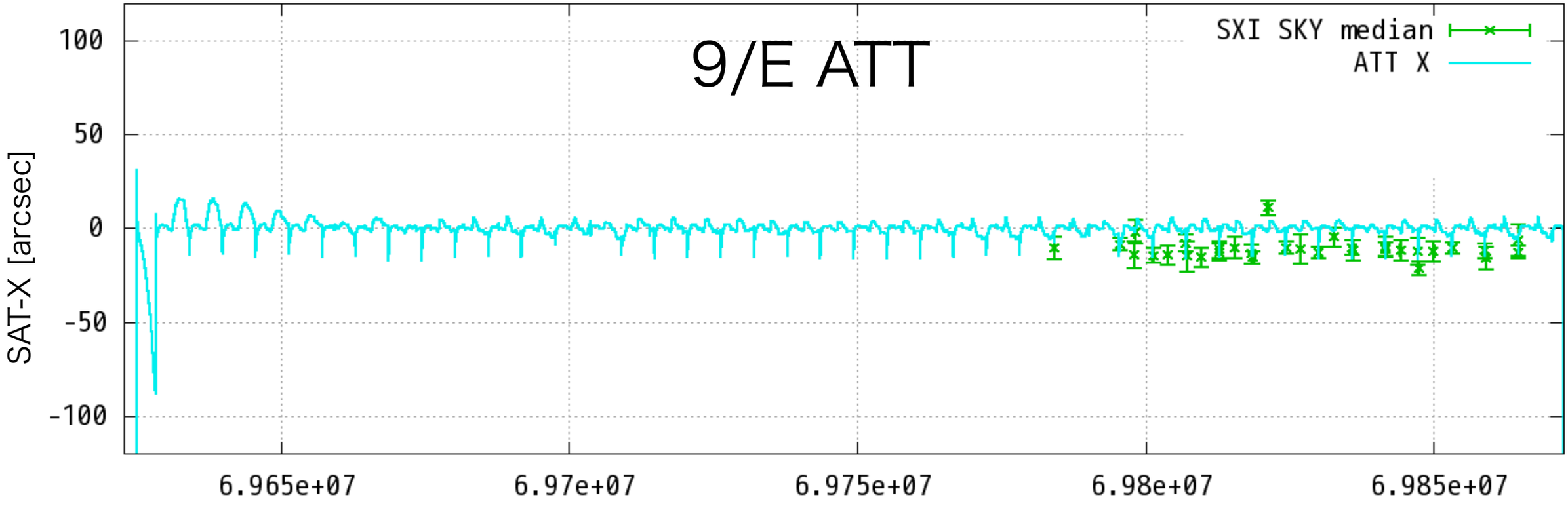
8/1 ATT

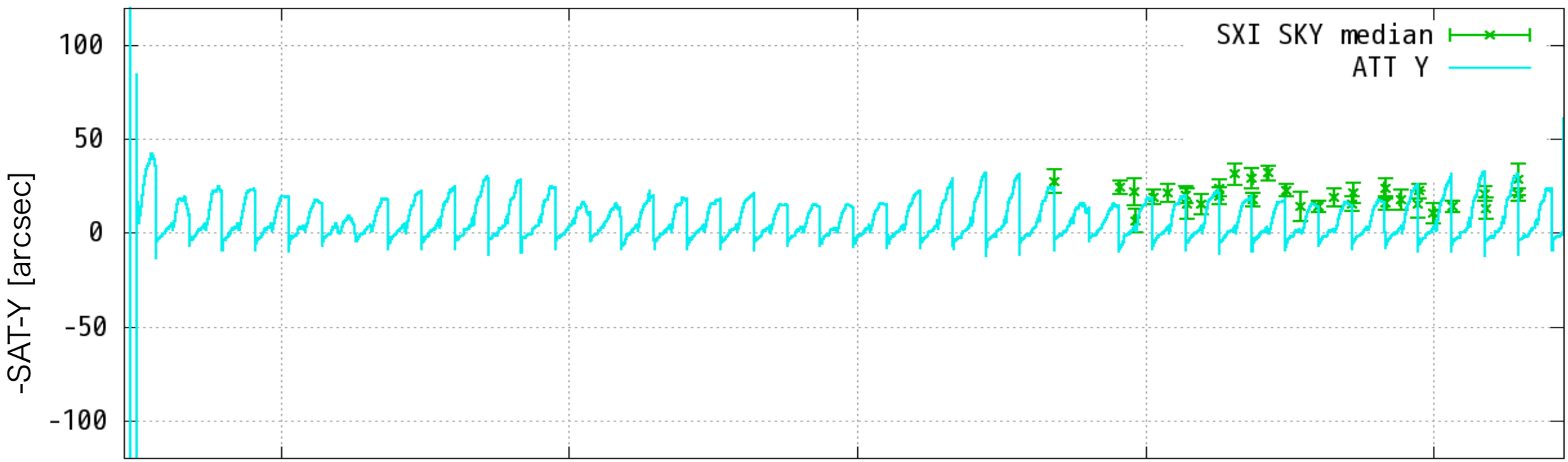


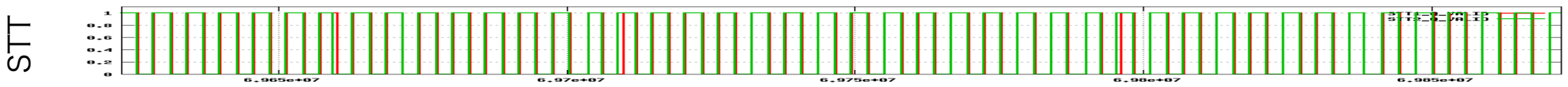
100043010, 20, 30, 40

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

STT-CTL







100043010, 20, 30, 40

STT-CTL

RX J1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

12/E ATT

SXI SKY median
ATT X

SAT-X [arcsec]

100
50
0
-50
-100

6.965e+07
6.97e+07
6.975e+07
6.98e+07
6.985e+07

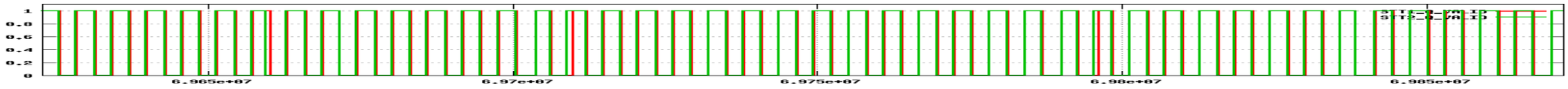
SXI SKY median
ATT Y

-SAT-Y [arcsec]

100
50
0
-50
-100

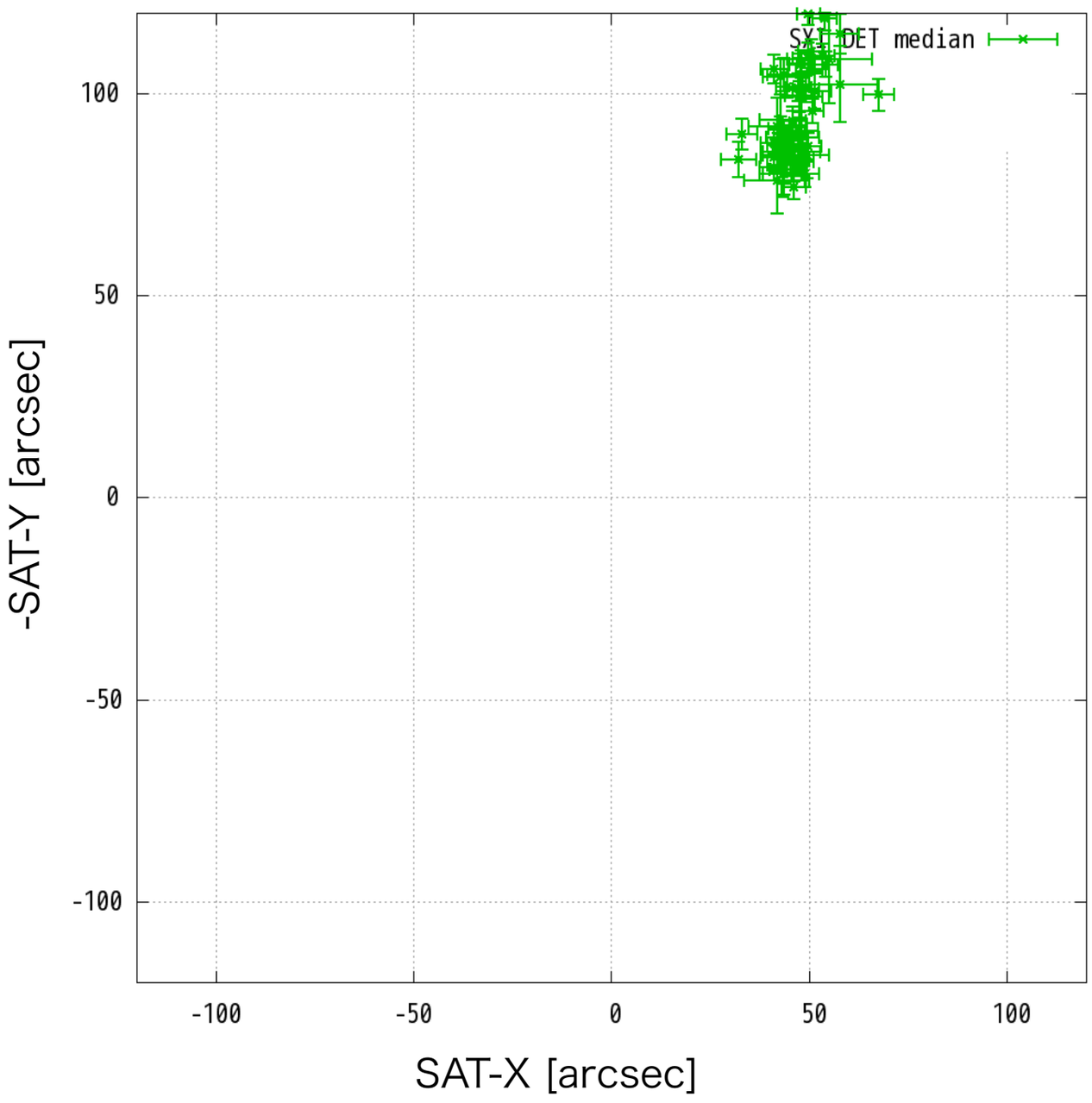
6.965e+07
6.97e+07
6.975e+07
6.98e+07
6.985e+07

STT

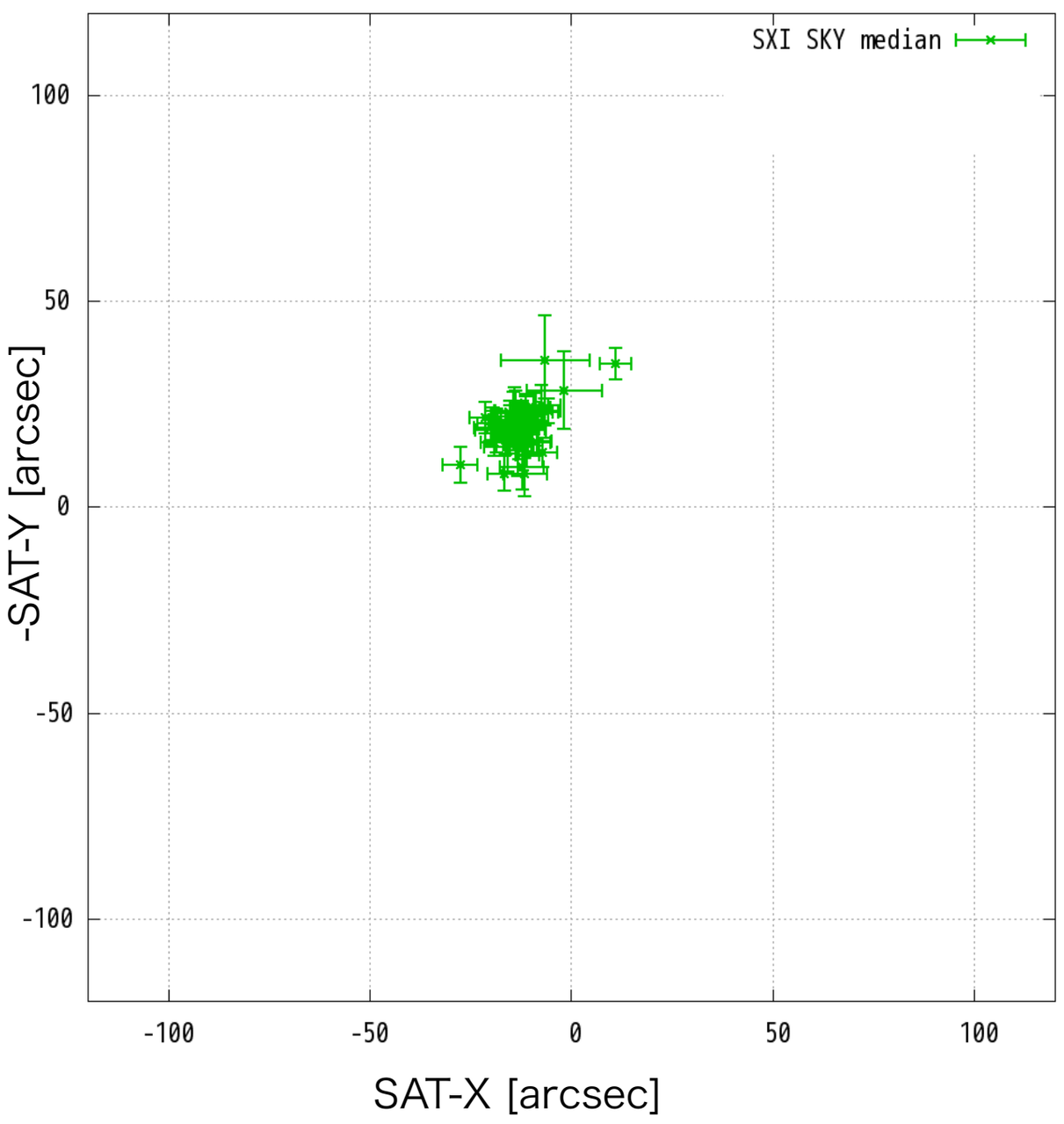


RXJ (STT-ALL)
seq: 100043010, 20, 30, 40

DET

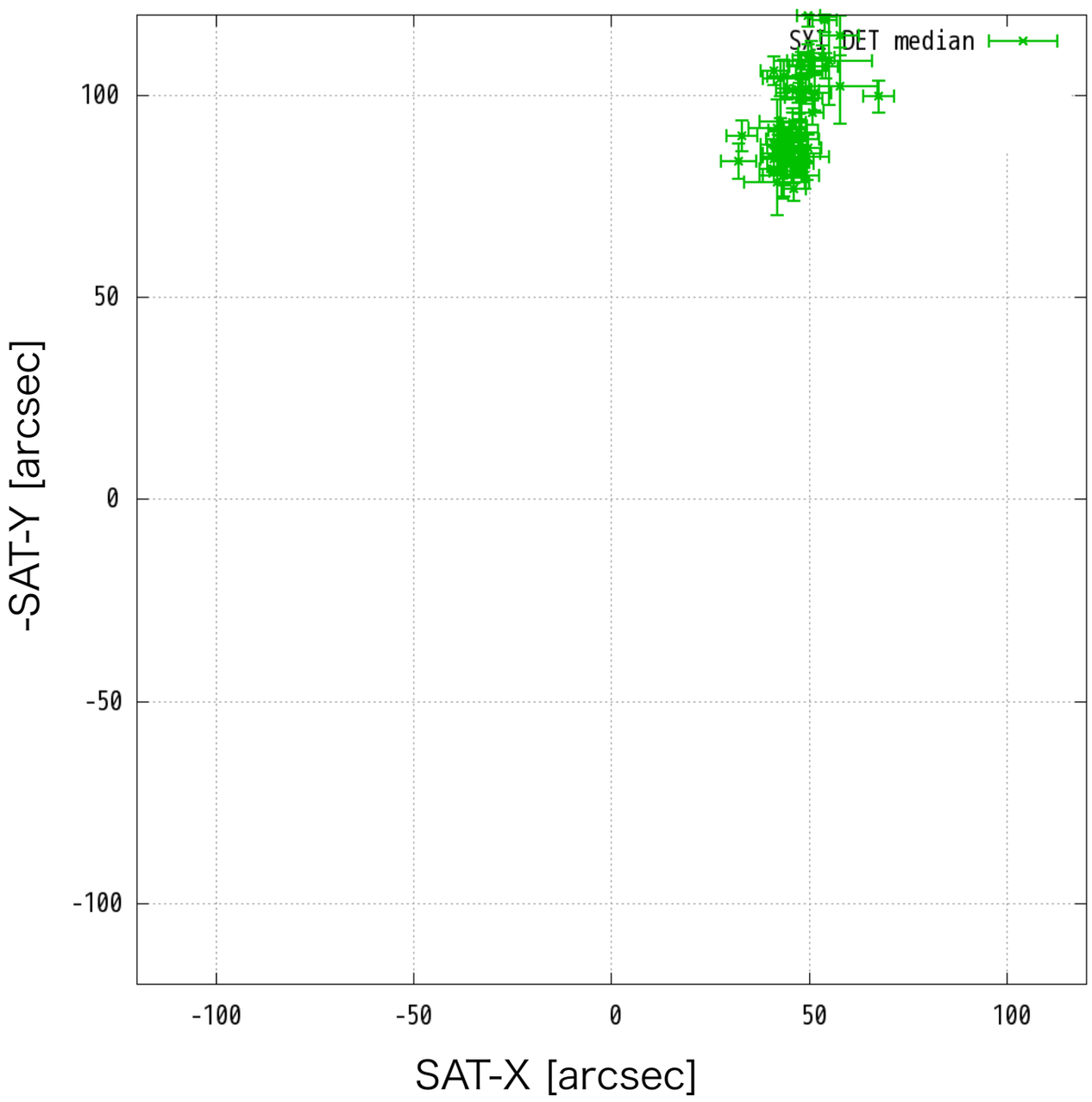


SKY 8/1 ATT

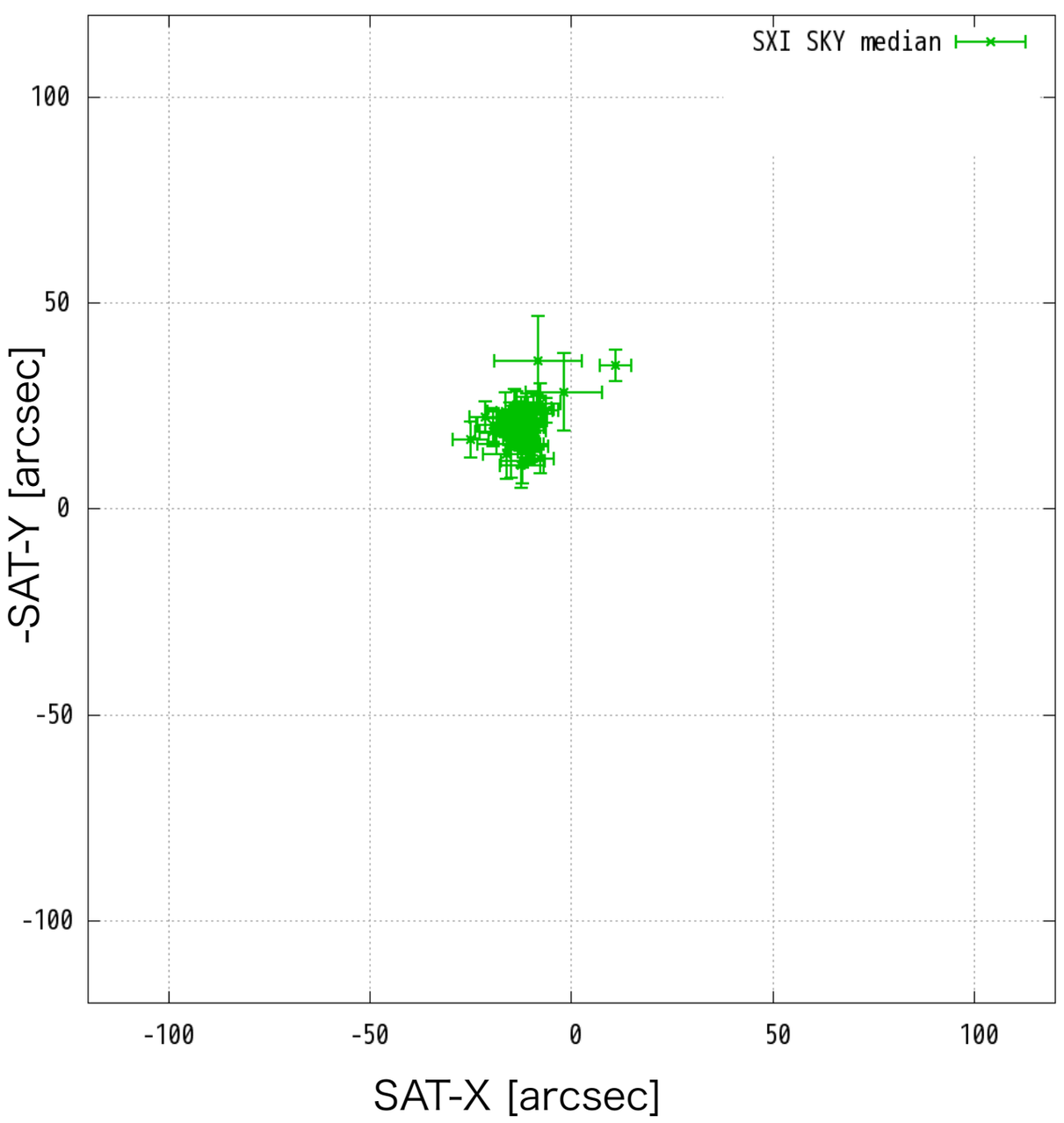


RXJ (STT-ALL)
seq: 100043010, 20, 30, 40

DET

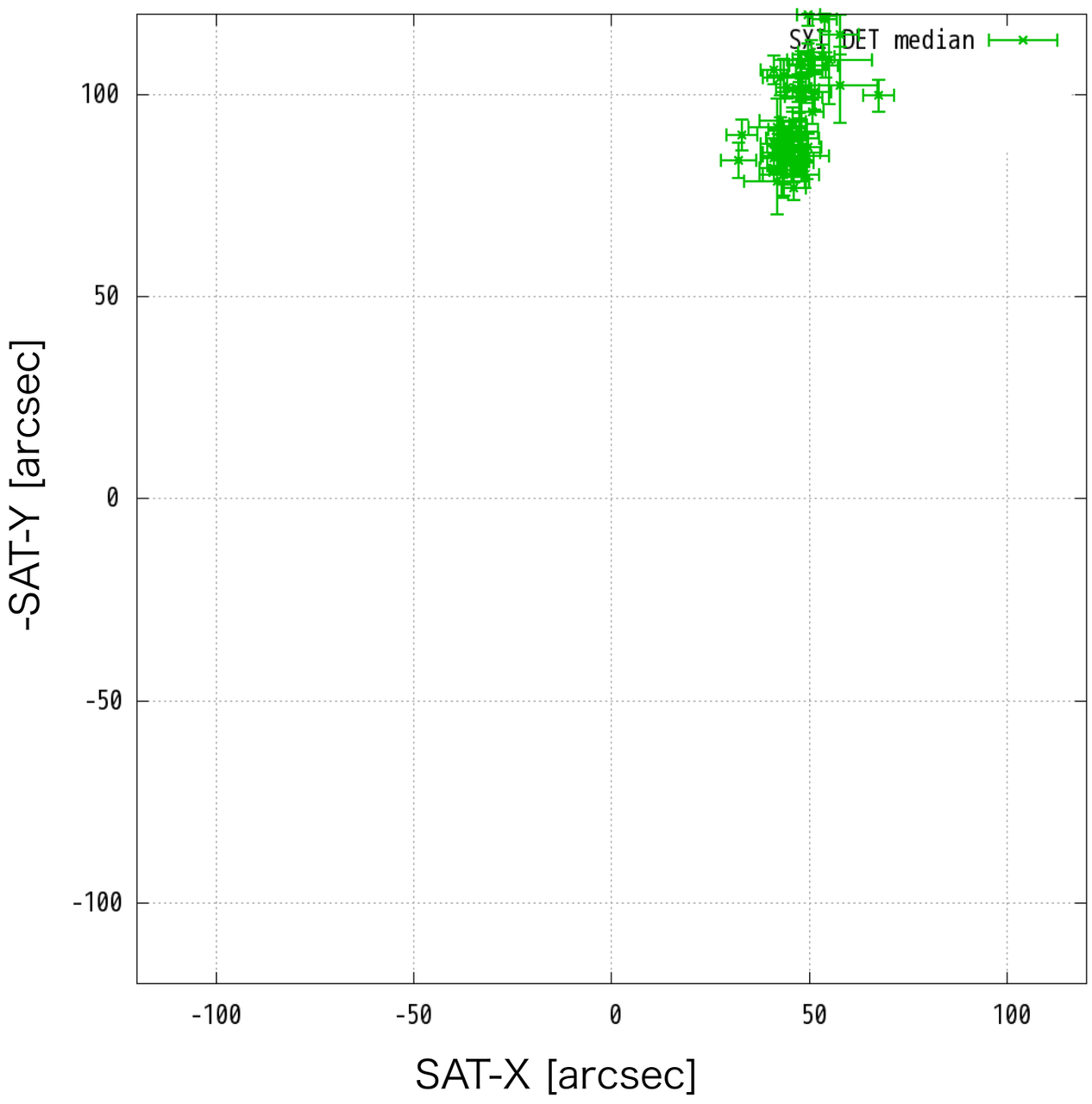


SKY 9/E ATT

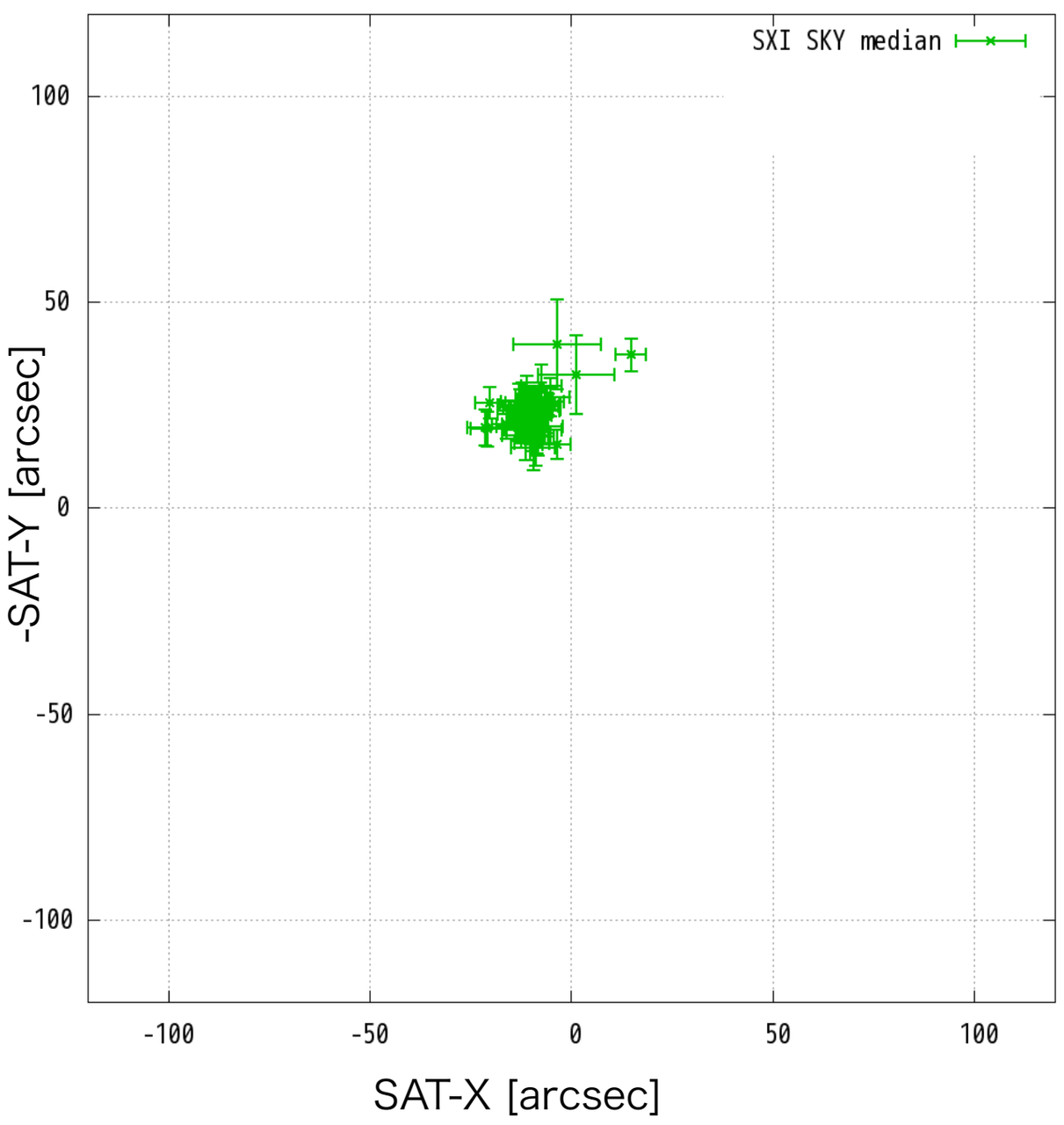


RXJ (STT-ALL)
seq: 100043010, 20, 30, 40

DET



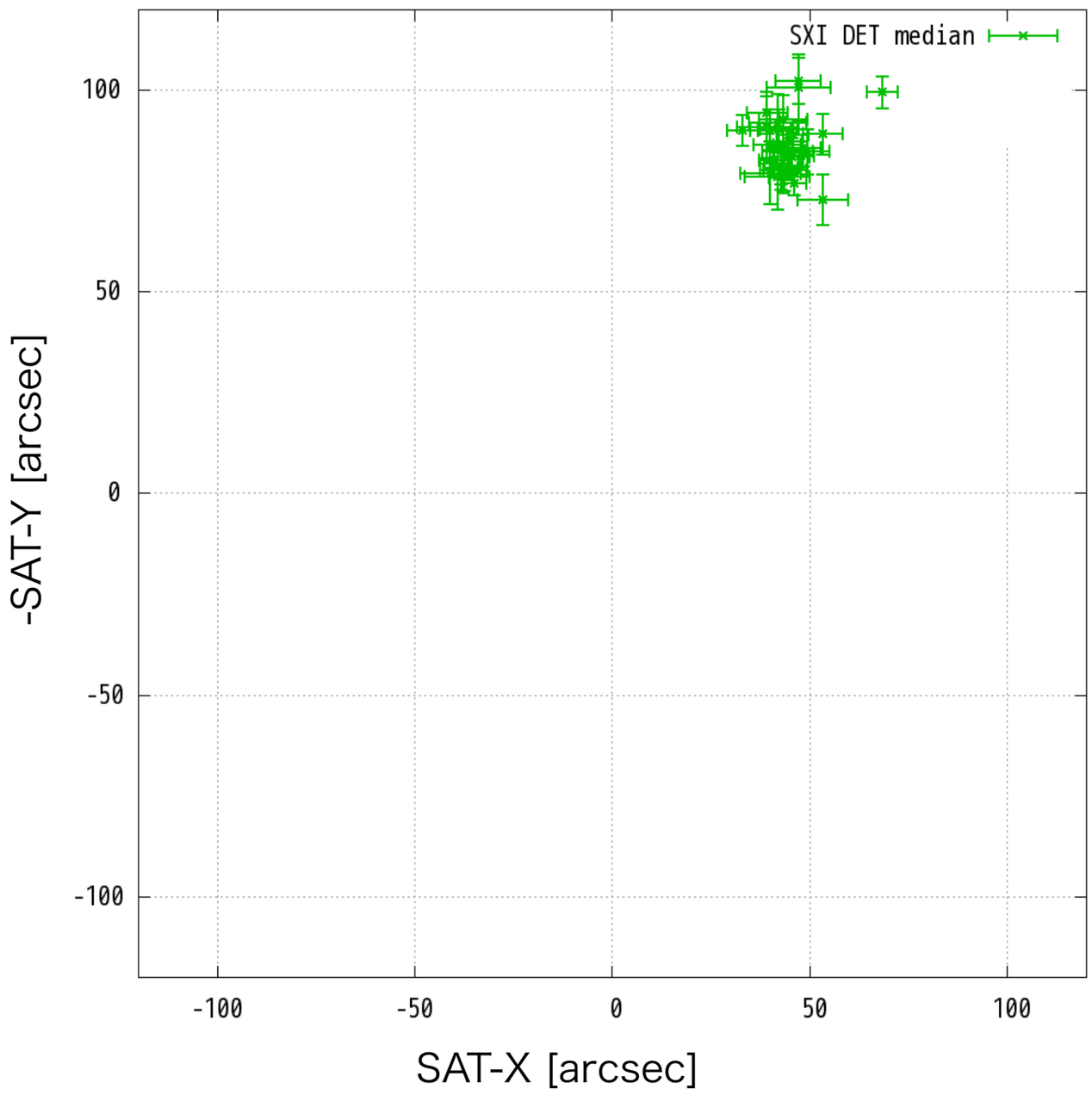
SKY 12/E ATT



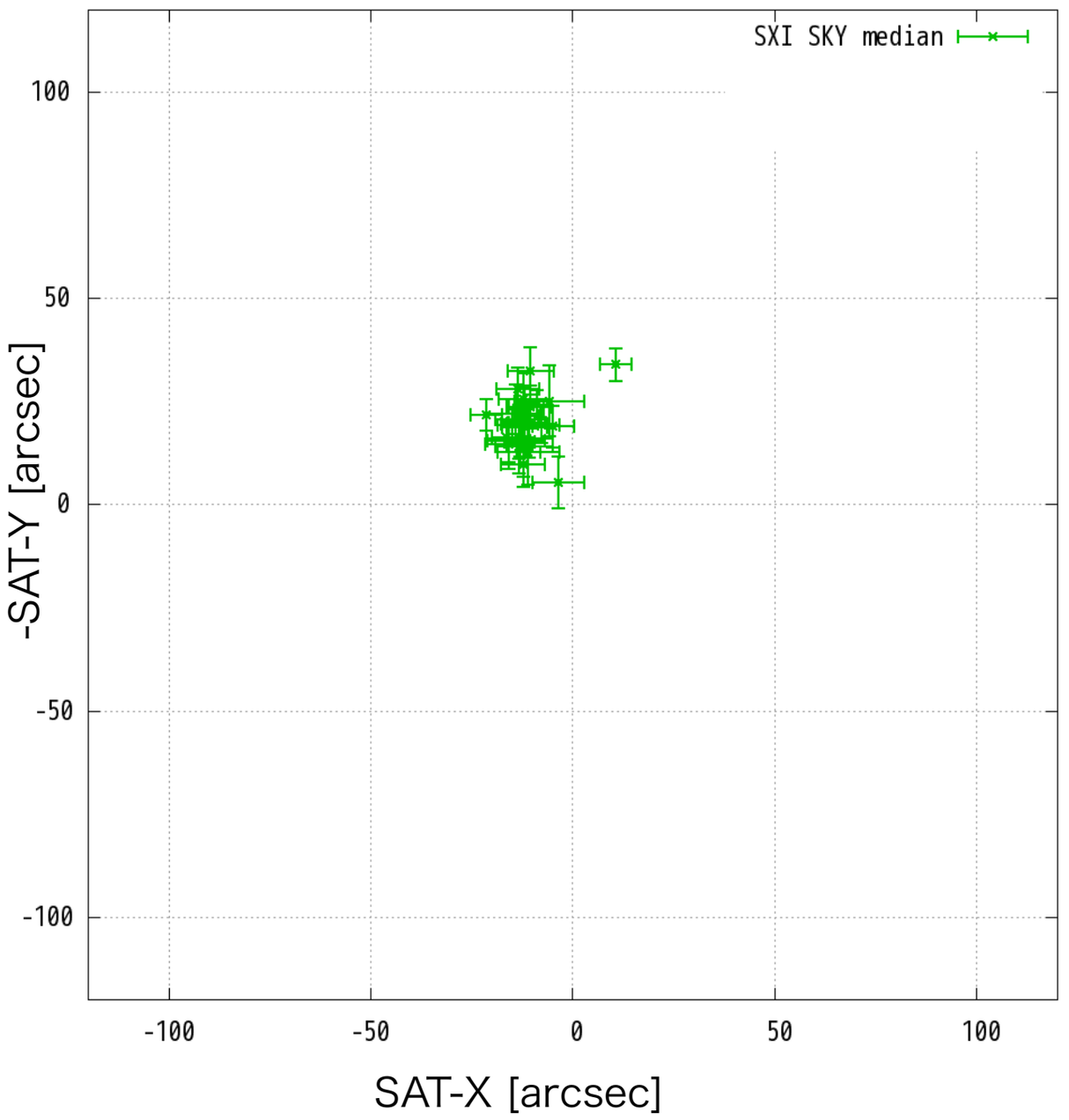
RXJ (STT-CTL)
seq: 100043010, 20, 30, 40

8/1 ATT

DET

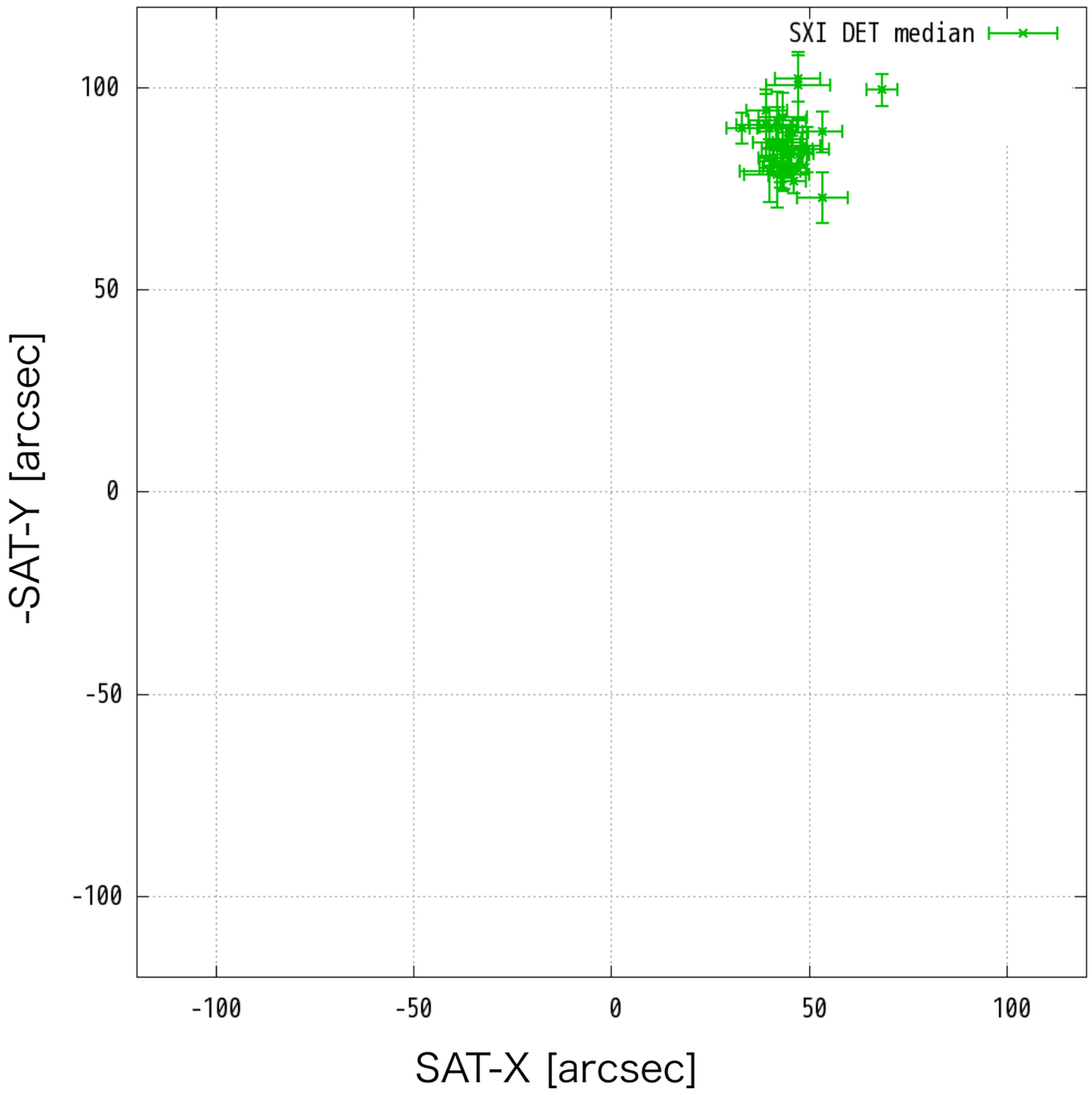


SKY

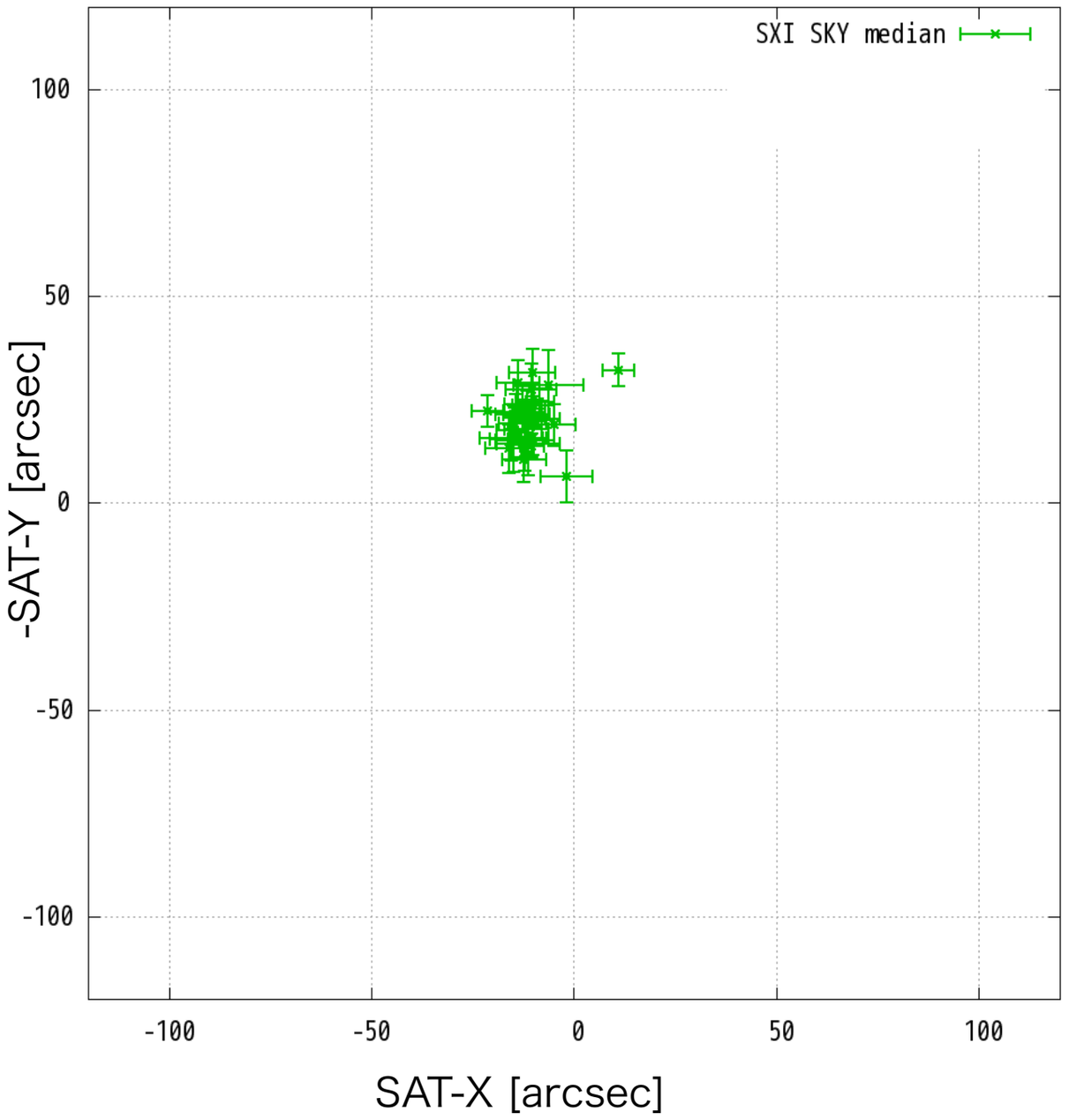


RXJ (STT-CTL)
seq: 100043010, 20, 30, 40

DET

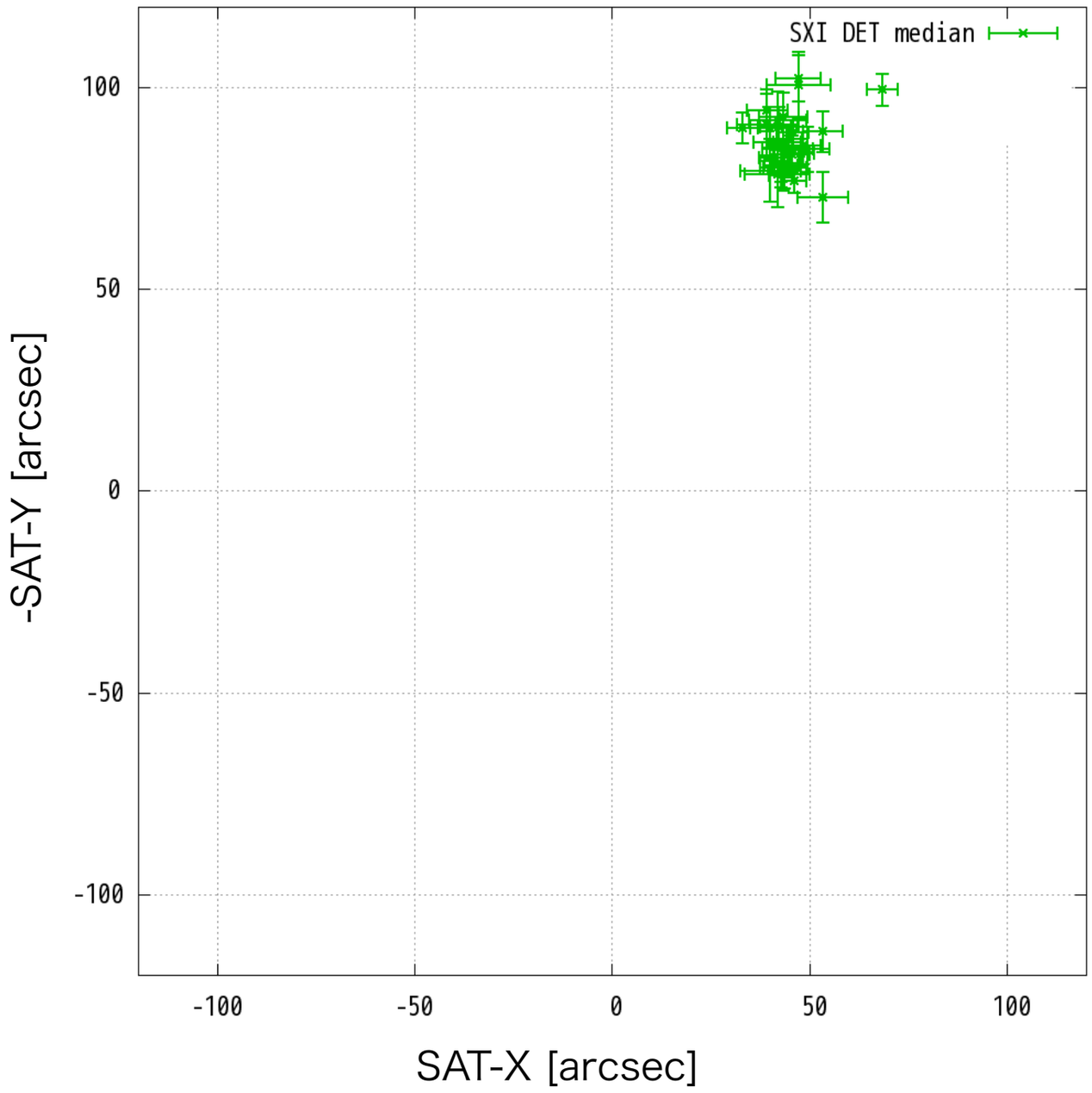


SKY 9/E ATT

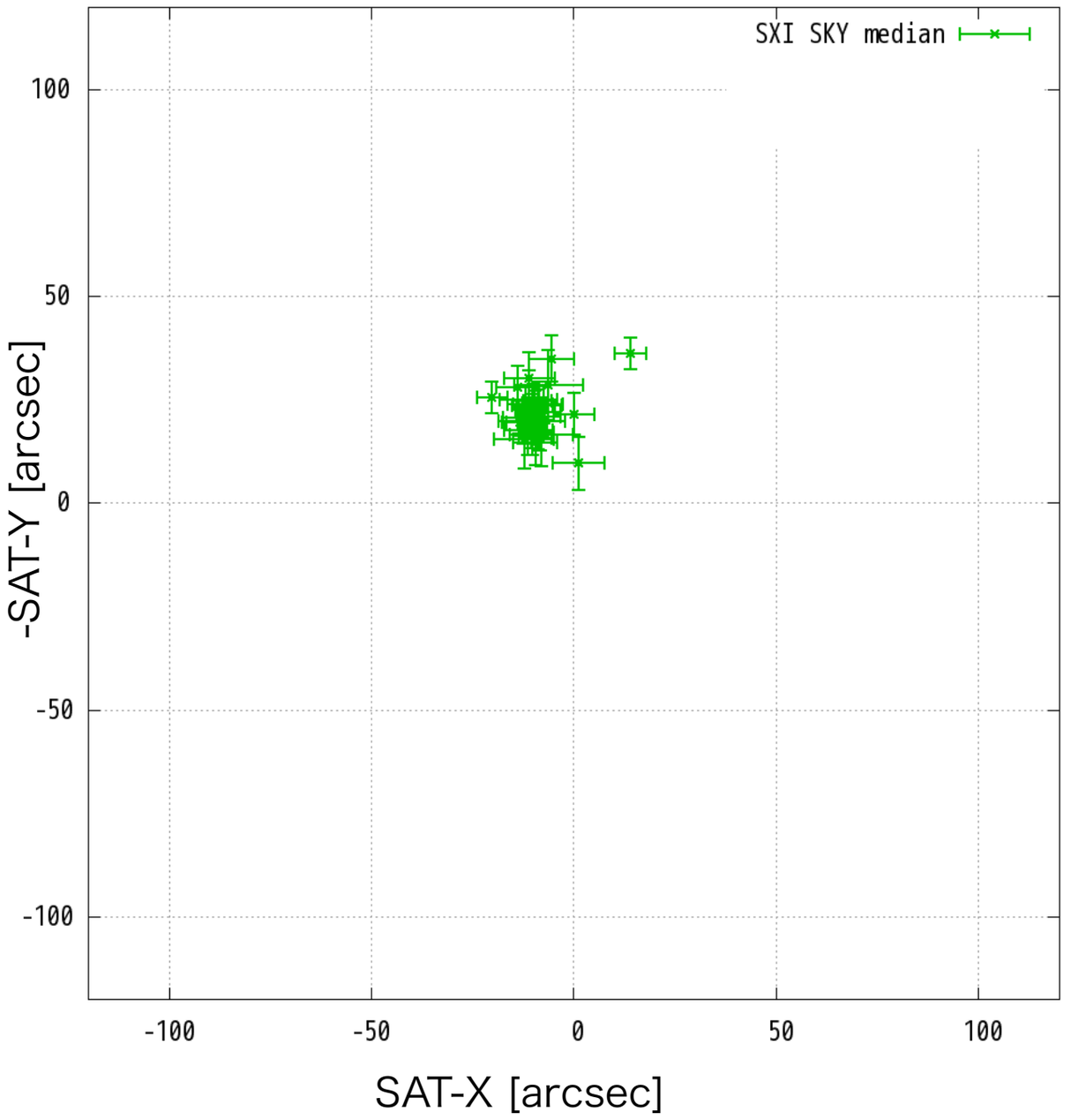


RXJ (STT-CTL)
seq: 100043010, 20, 30, 40

DET

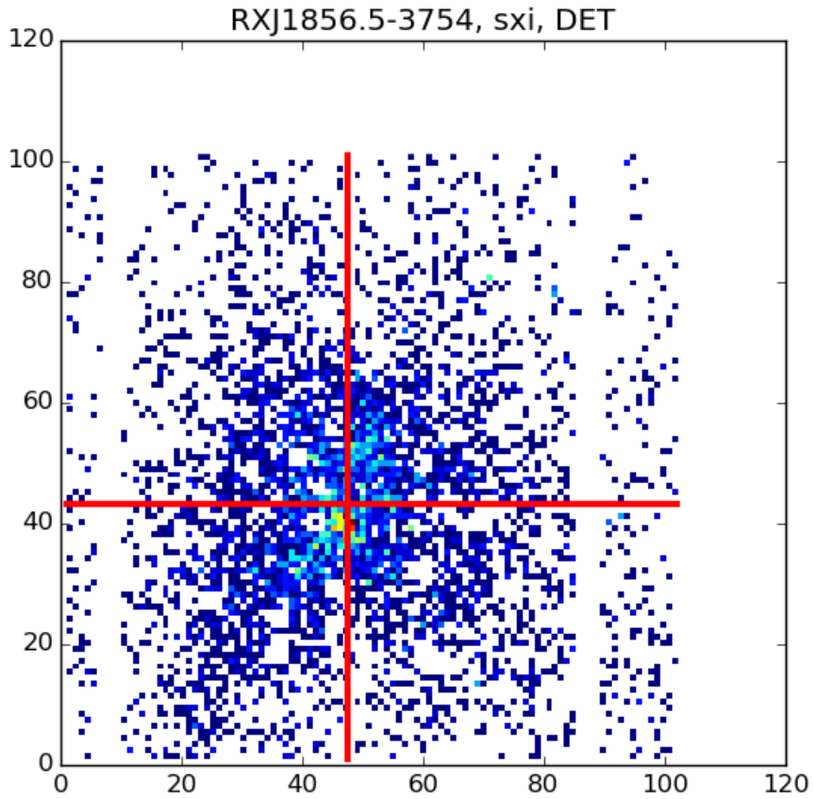


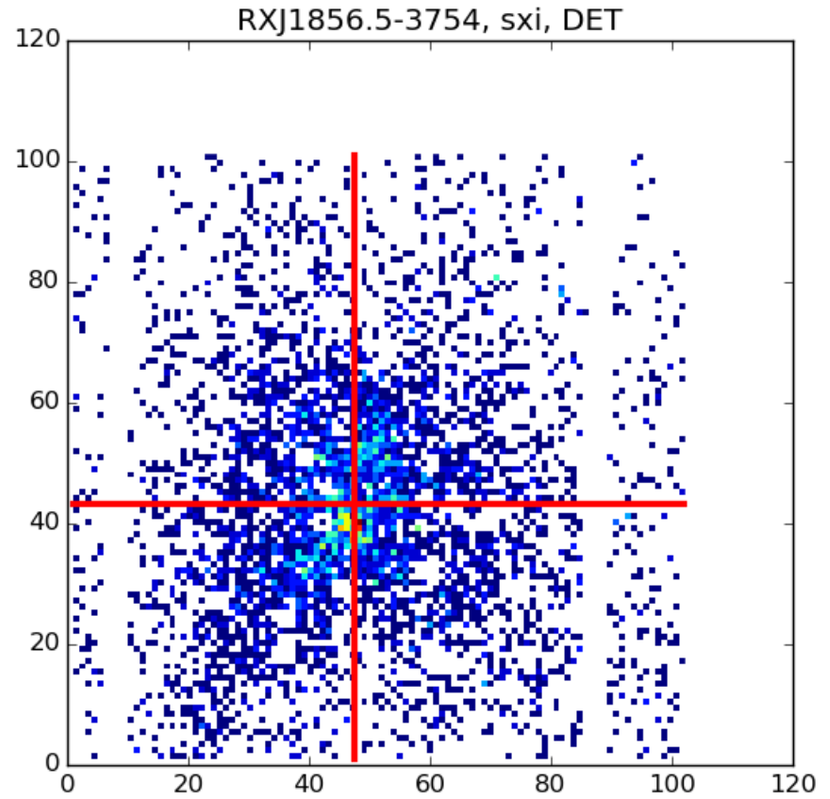
SKY 12/E ATT



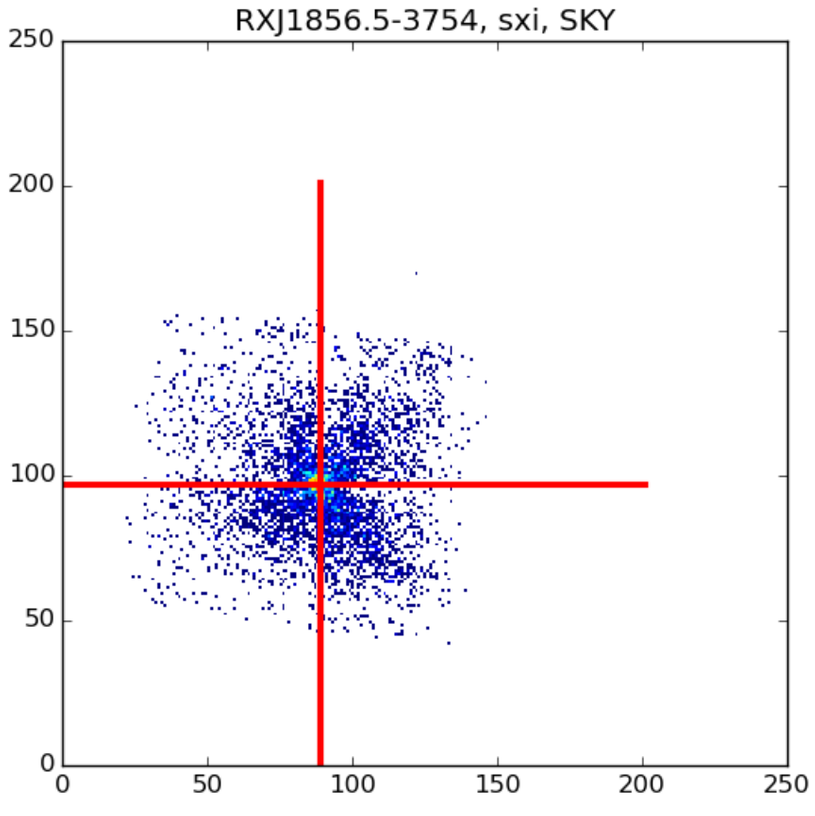
RXJ
(STT-ALL)
seq: 100043010,20,30,40

+ 2d lorentz center
+ simbad center
(12/E only)

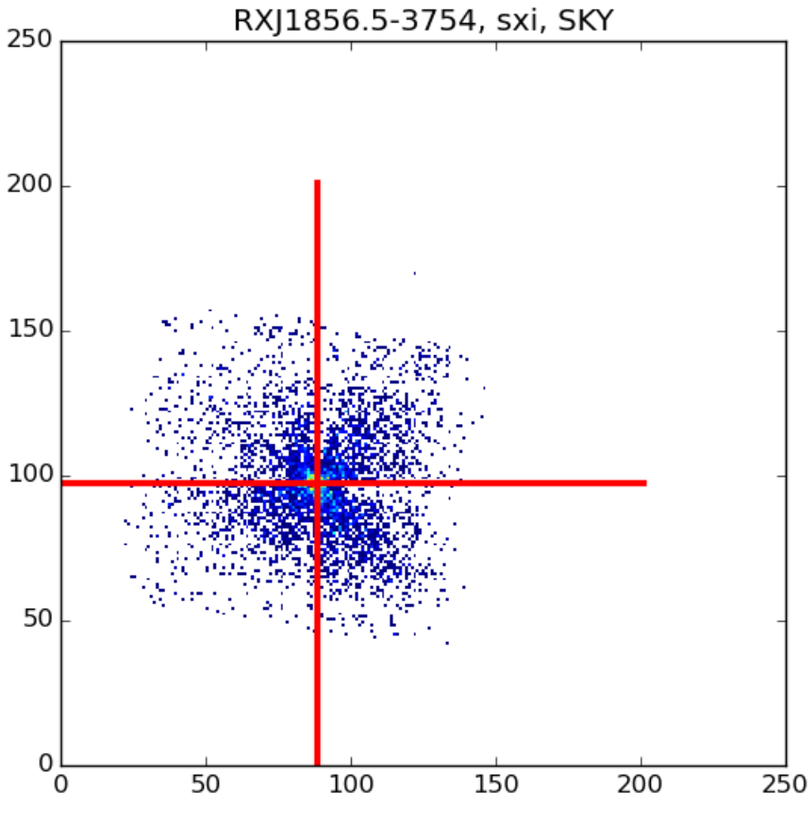




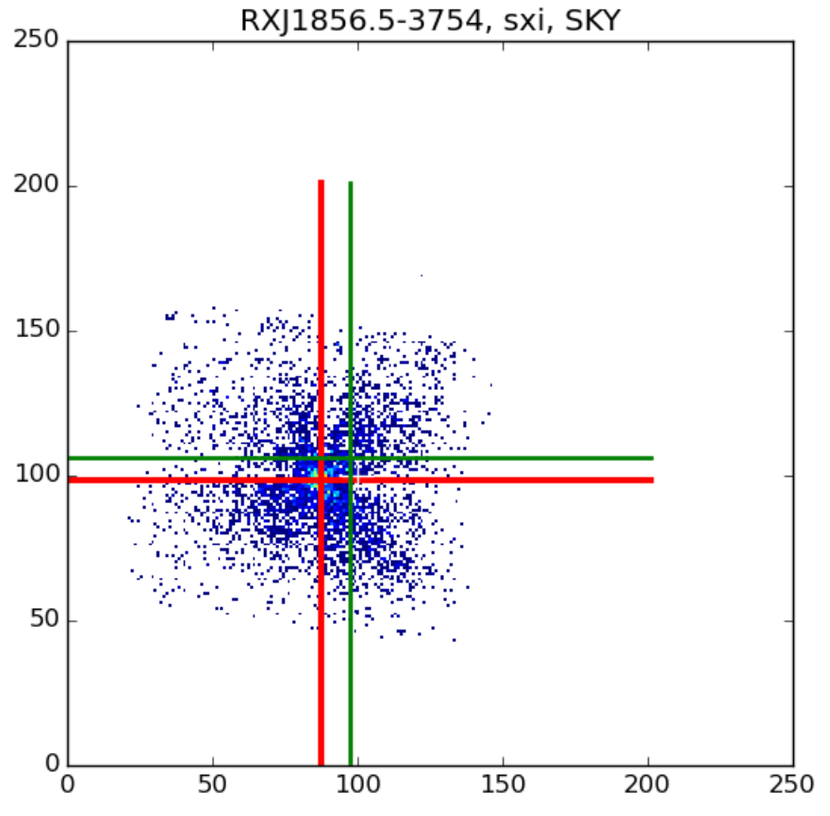
8/1 ATT



9/E ATT



12/E ATT



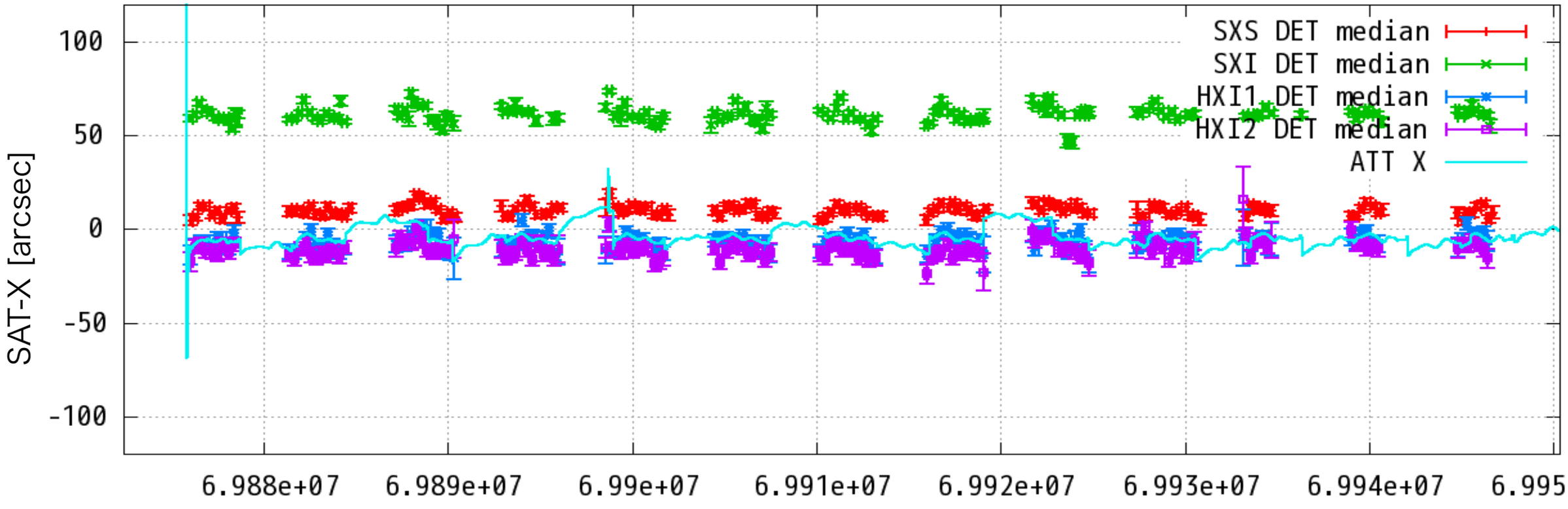
G21.5-0.9

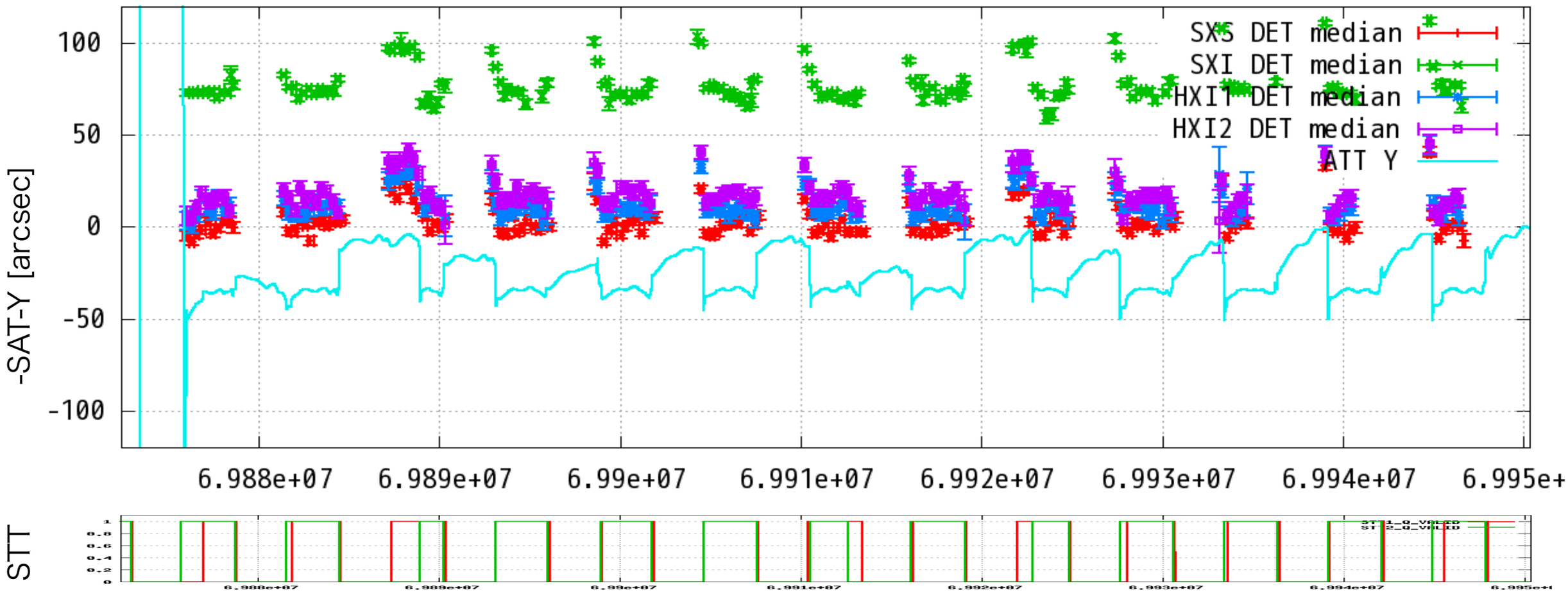
100050010, 20, 30, 40

100050010

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-ALL



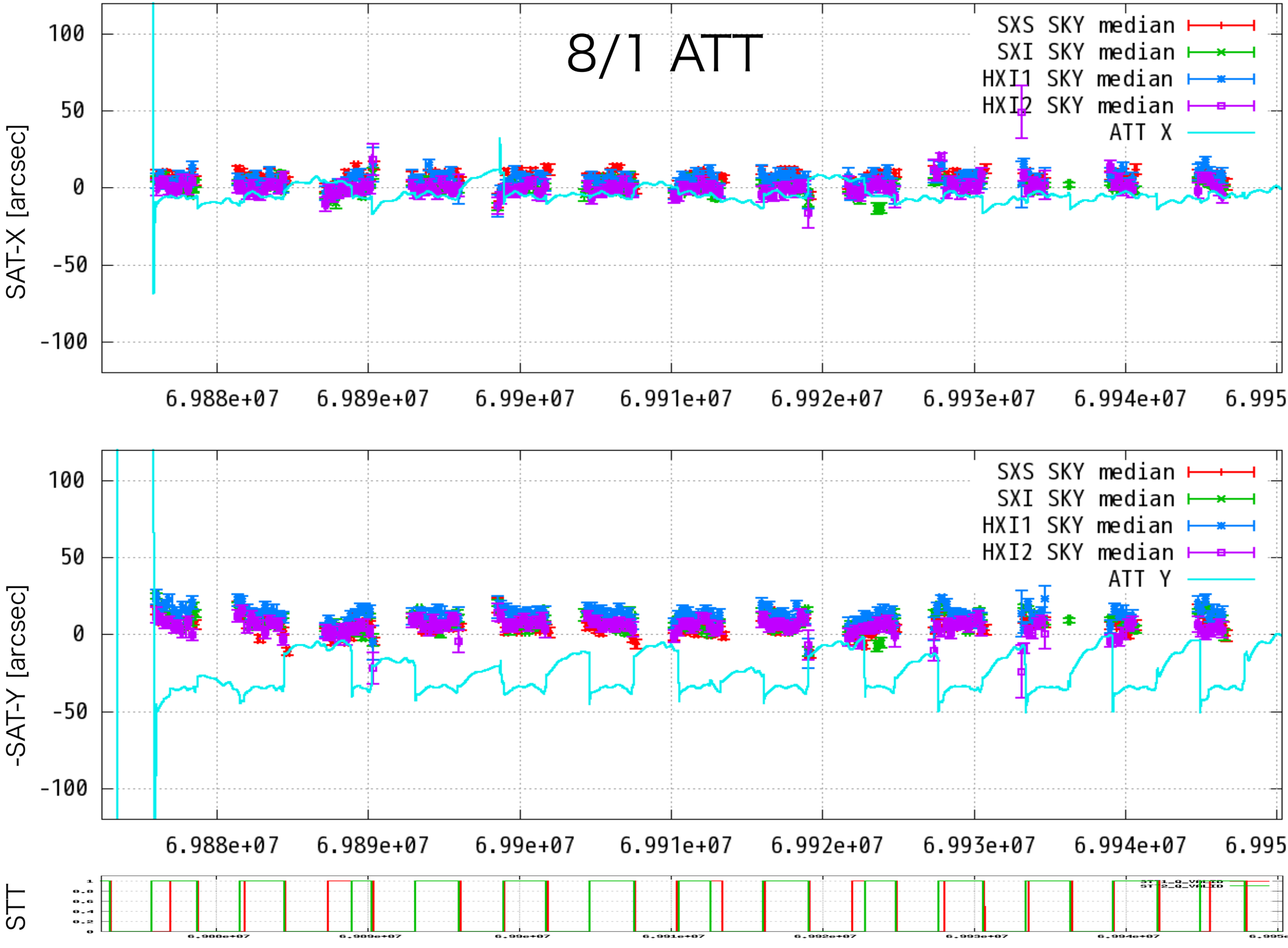


100050010

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

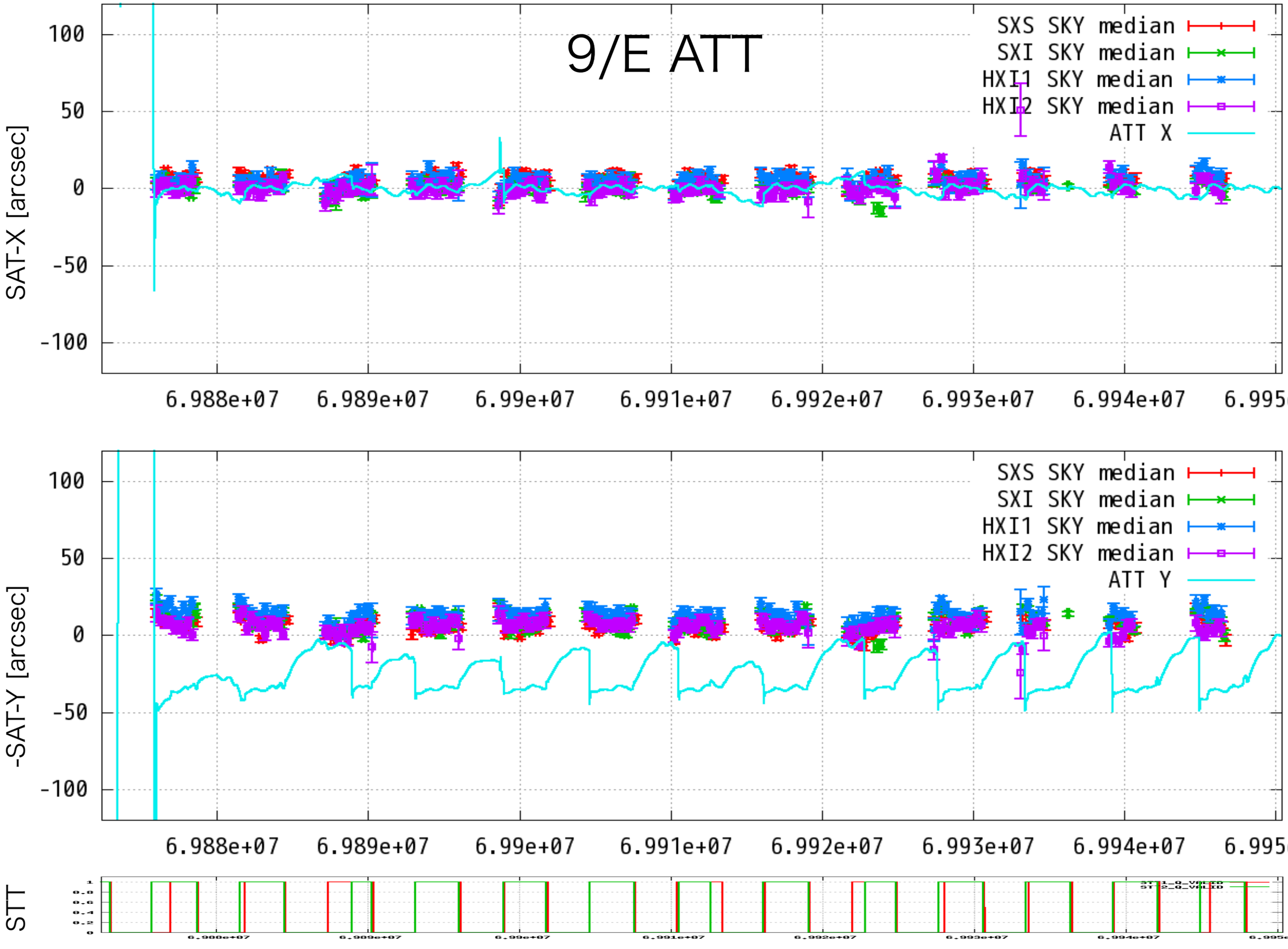
8/1 ATT



100050010

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

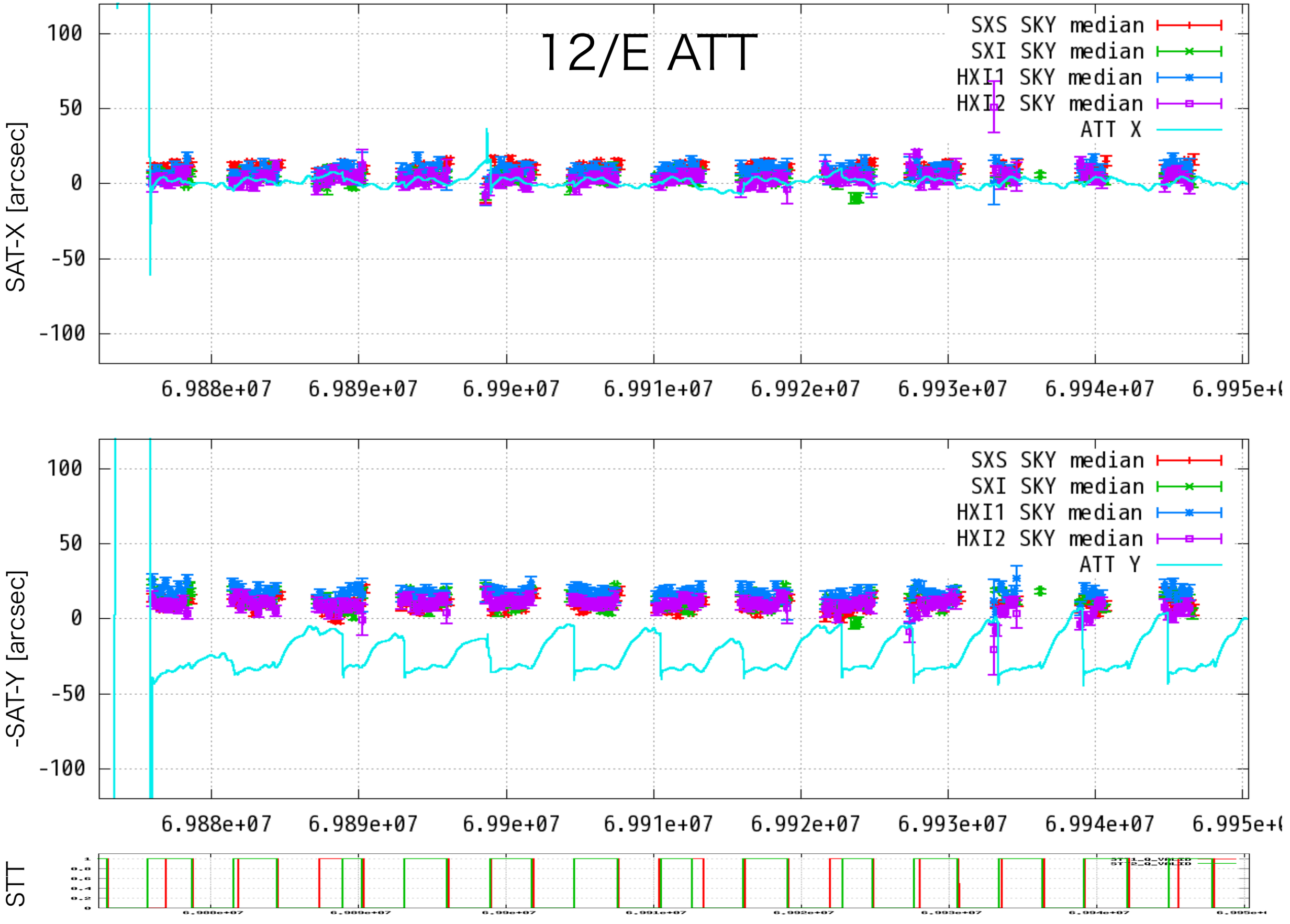
STT-ALL



100050010

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

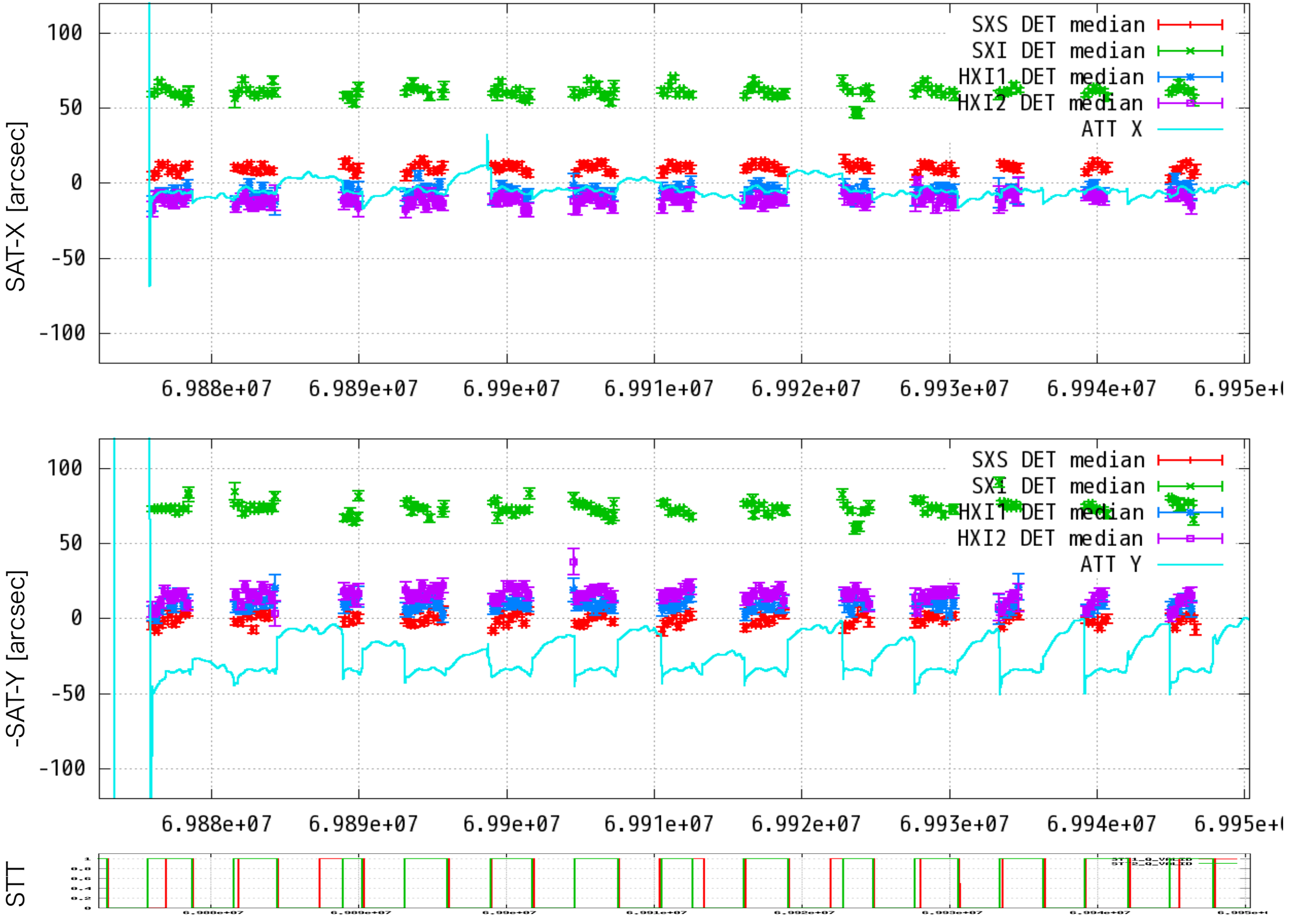
STT-ALL



100050010

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-CTL

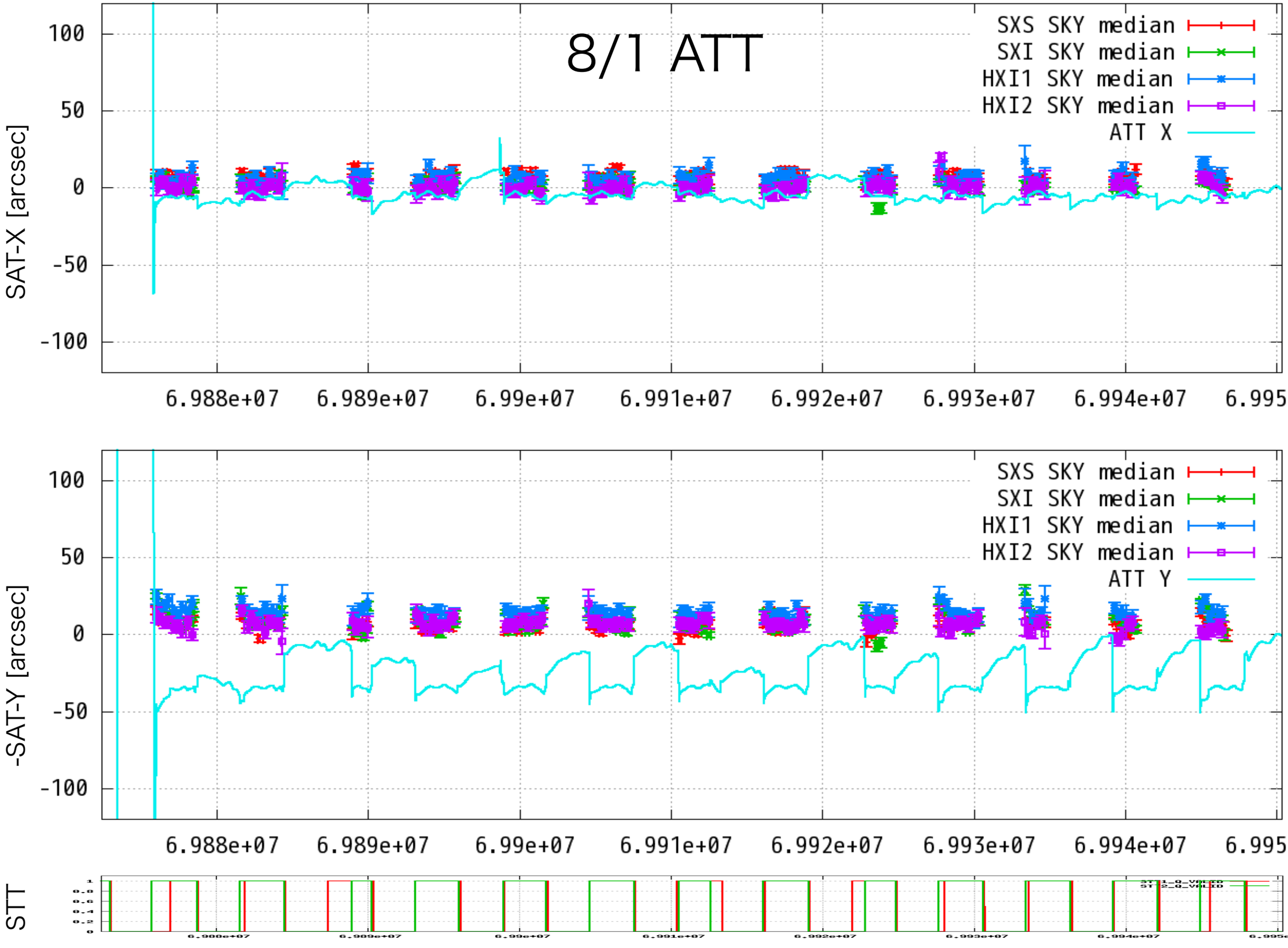


100050010

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

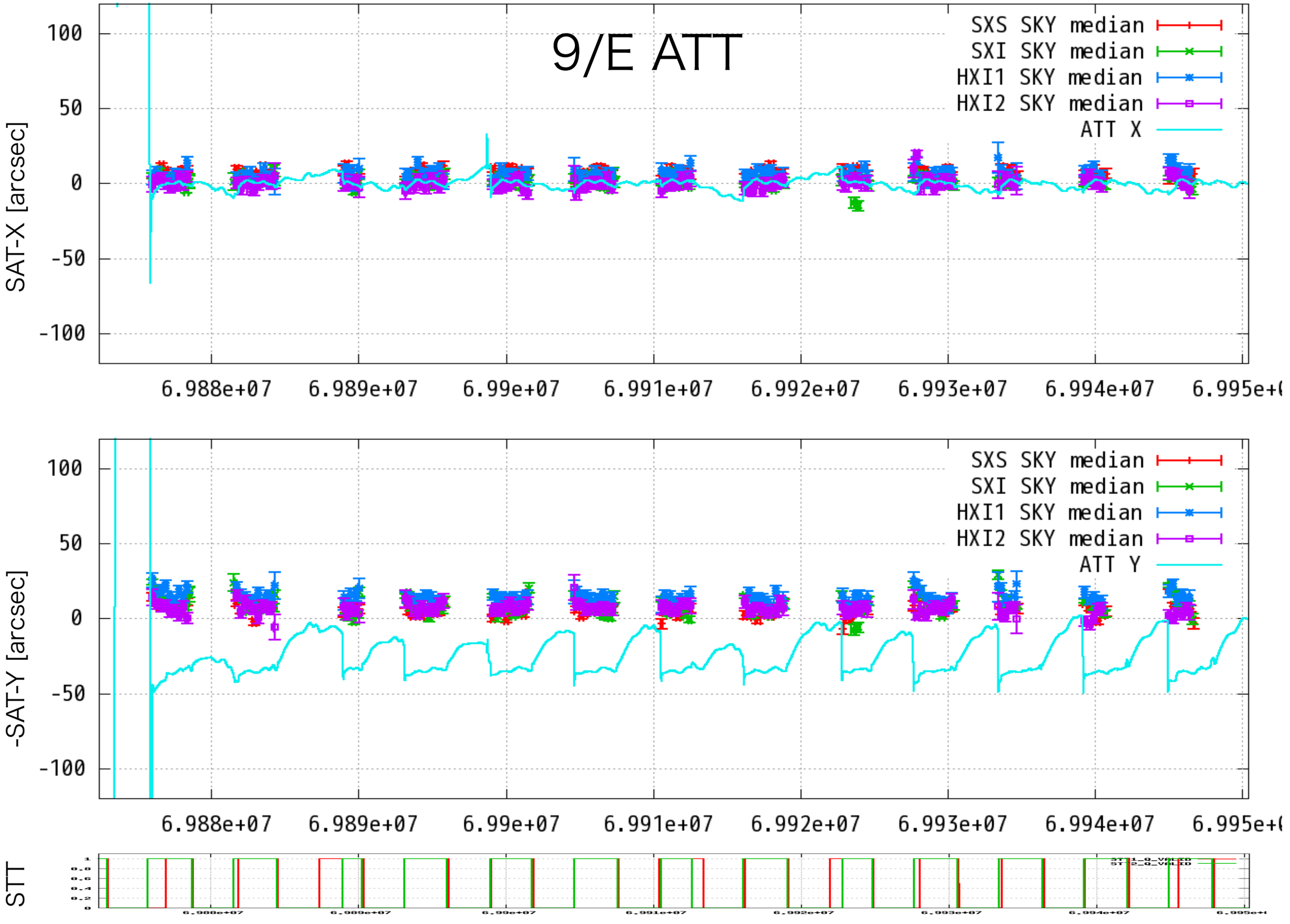
8/1 ATT



100050010

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

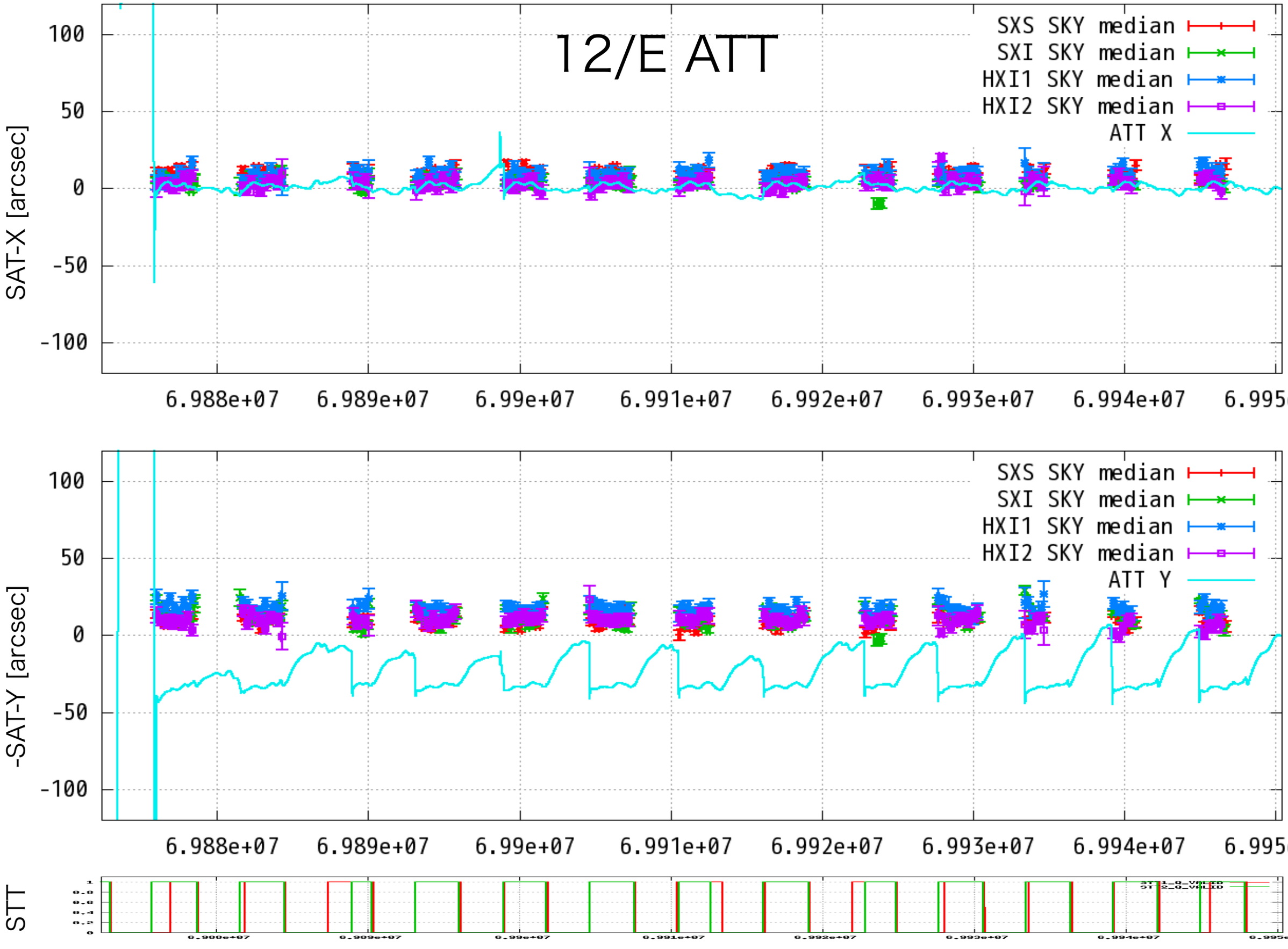
STT-CTL



100050010

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

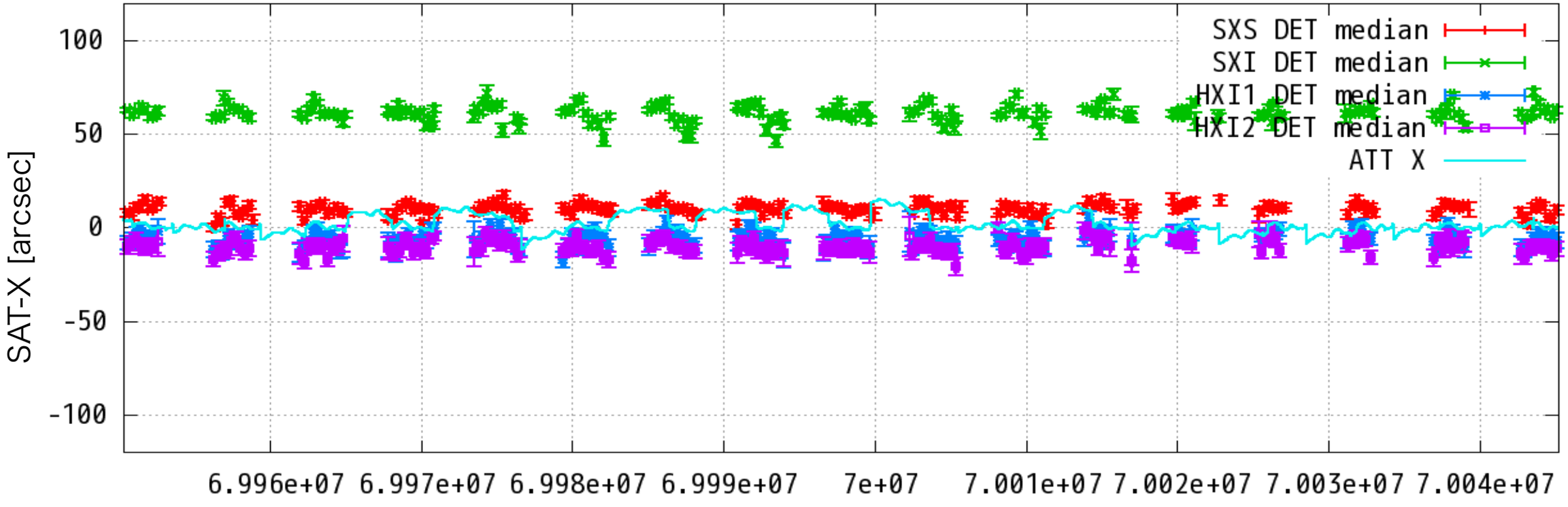
STT-CTL

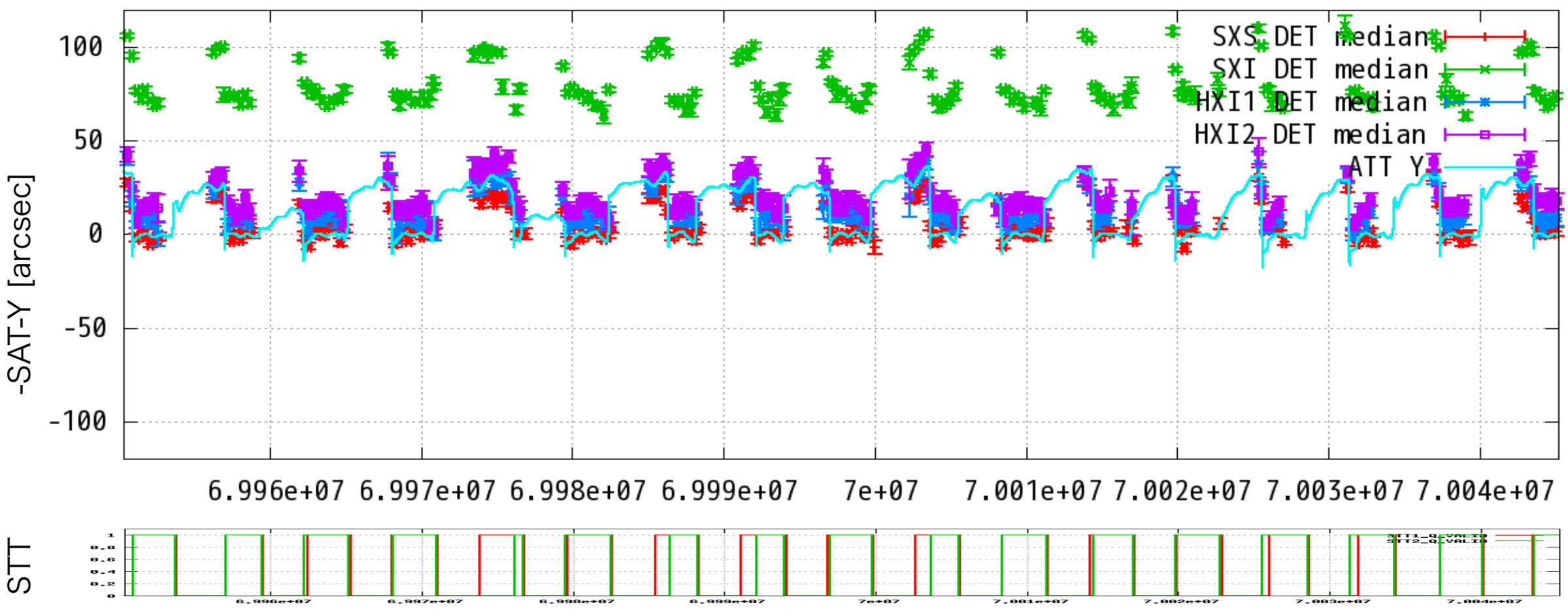


100050020

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-ALL

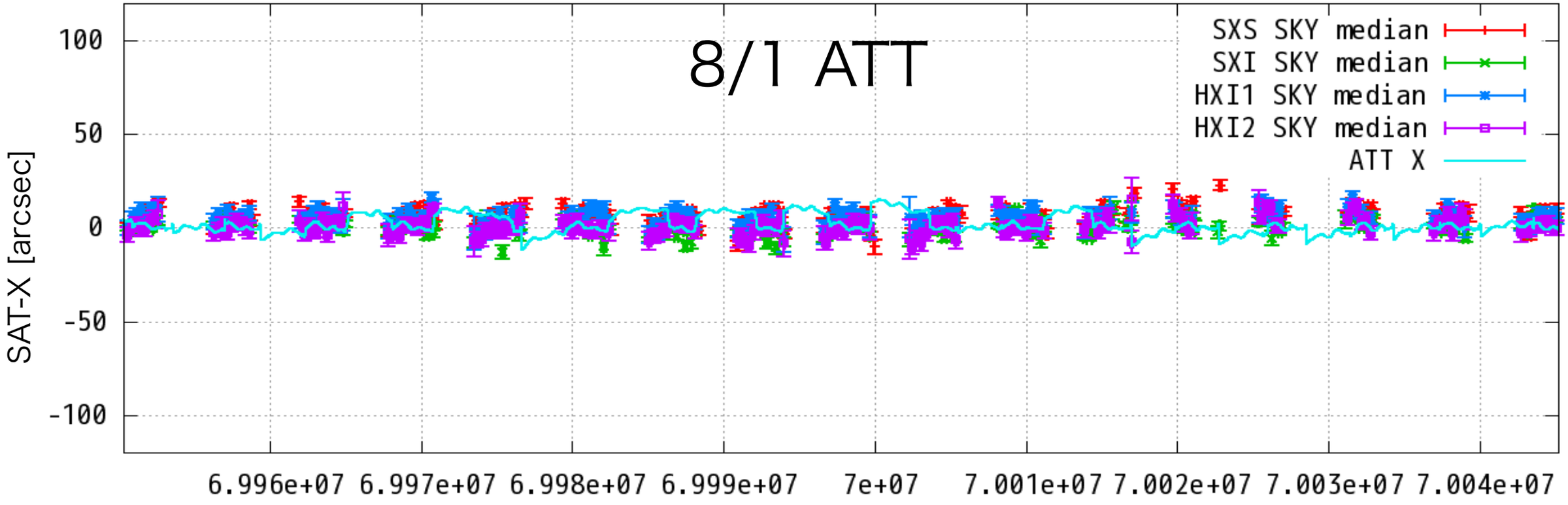


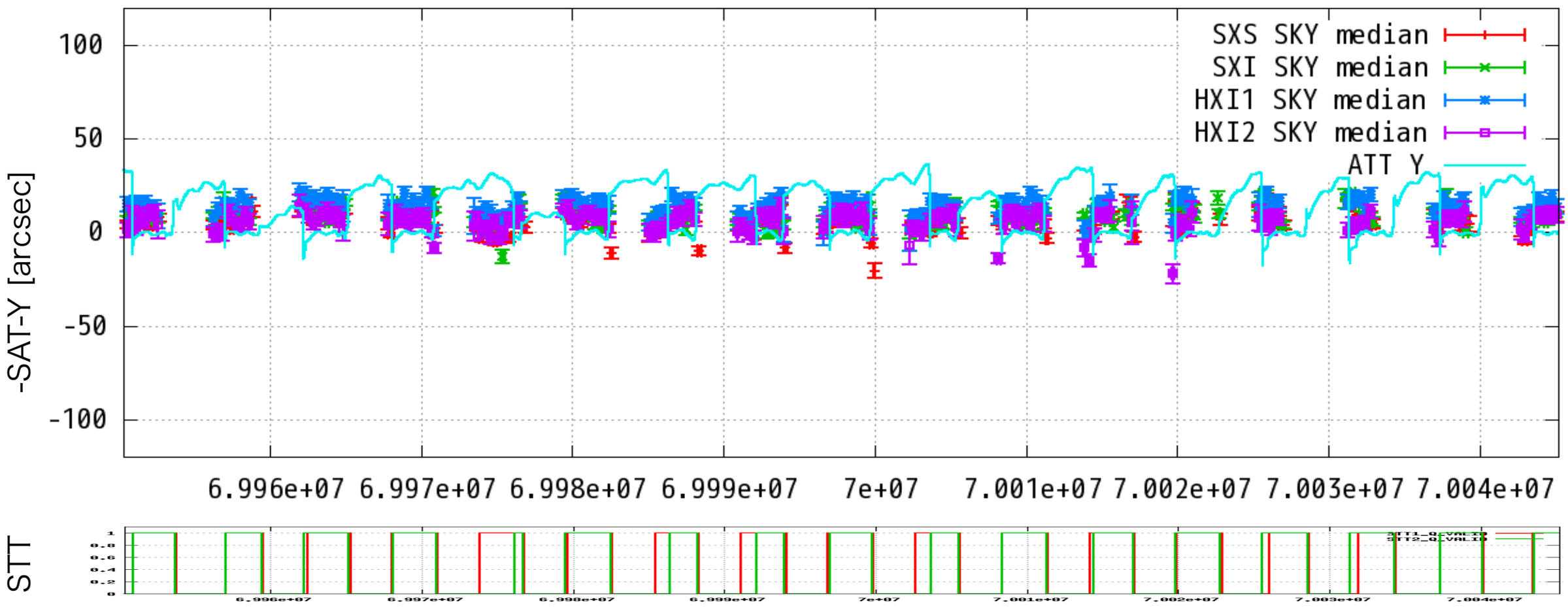


100050020

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

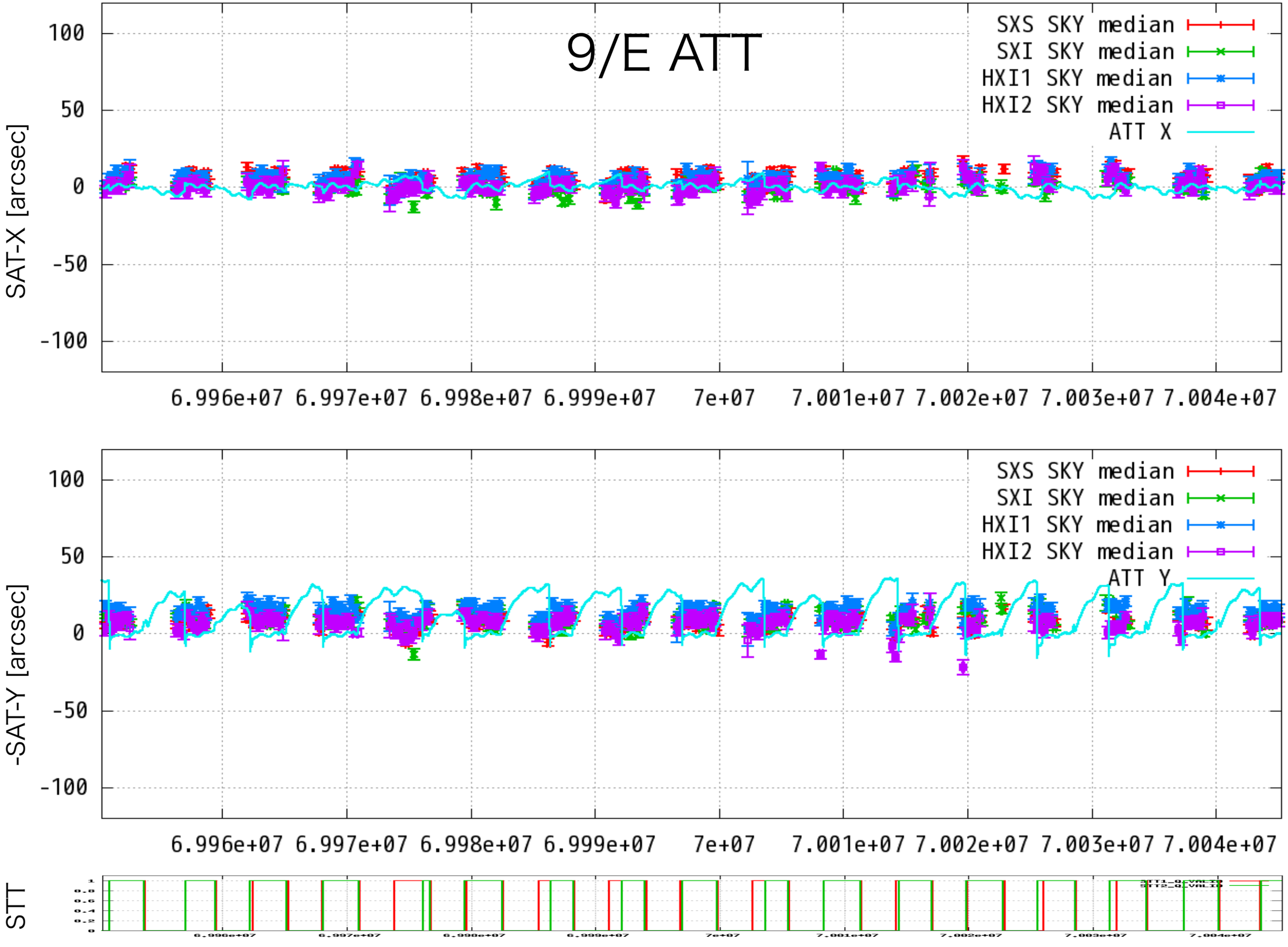




100050020

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

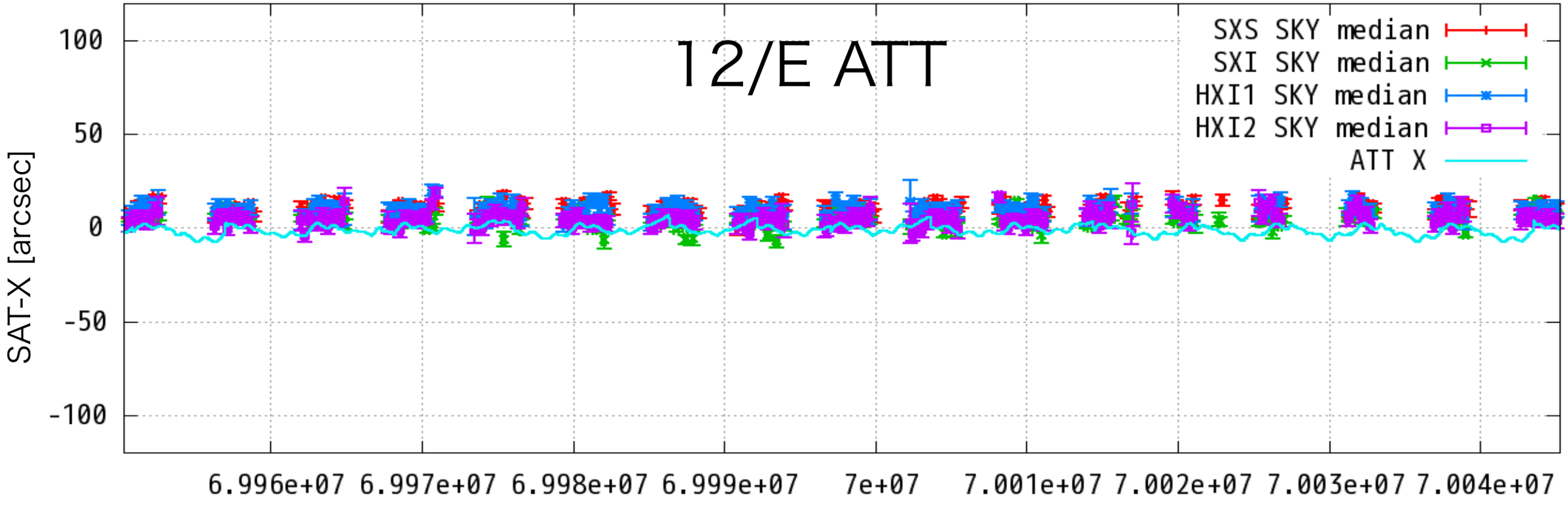
STT-ALL

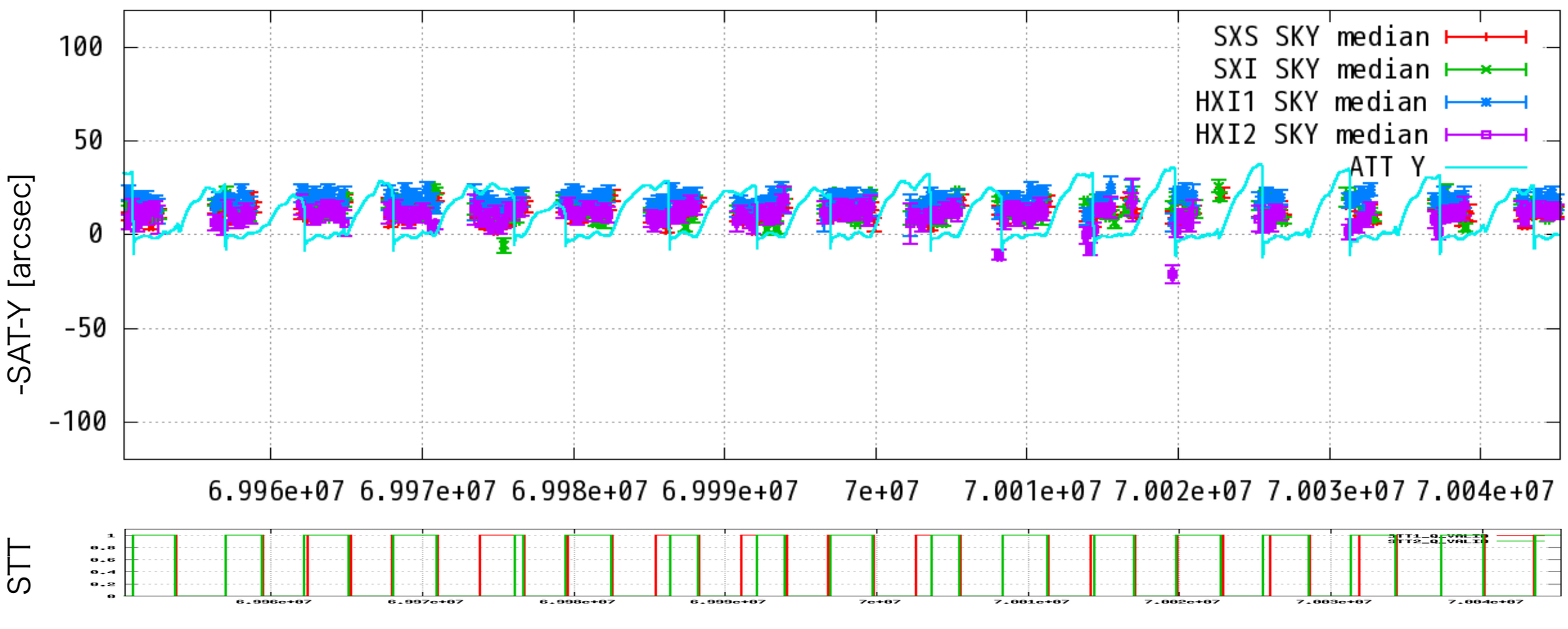


100050020

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

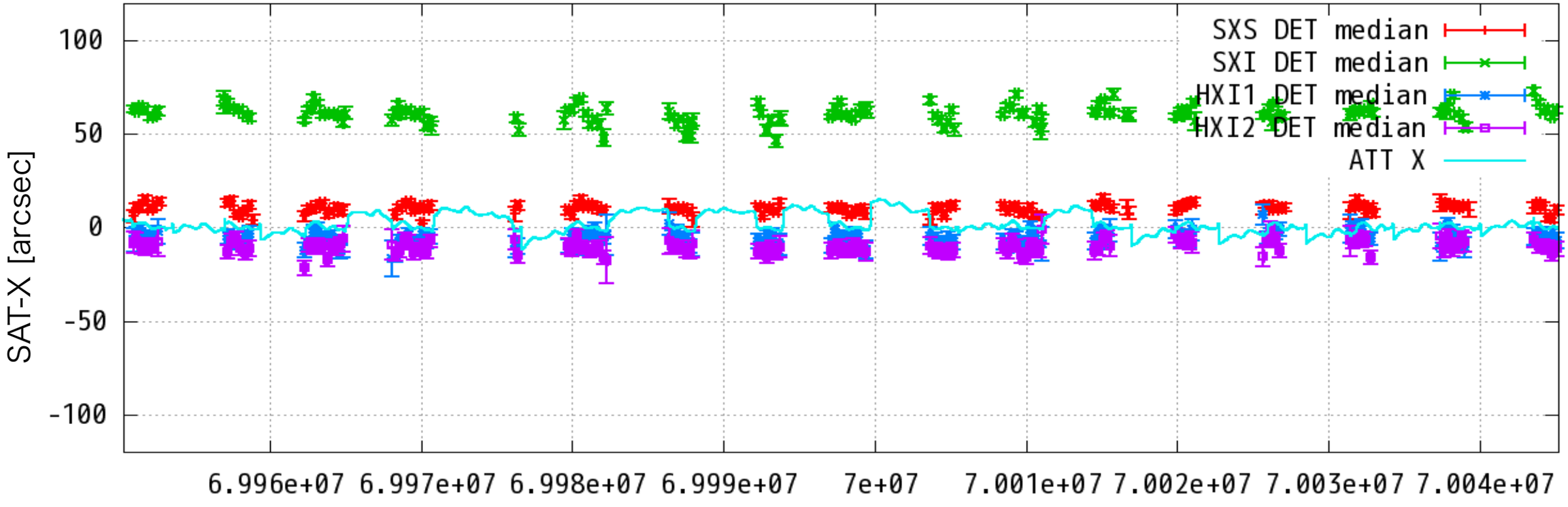


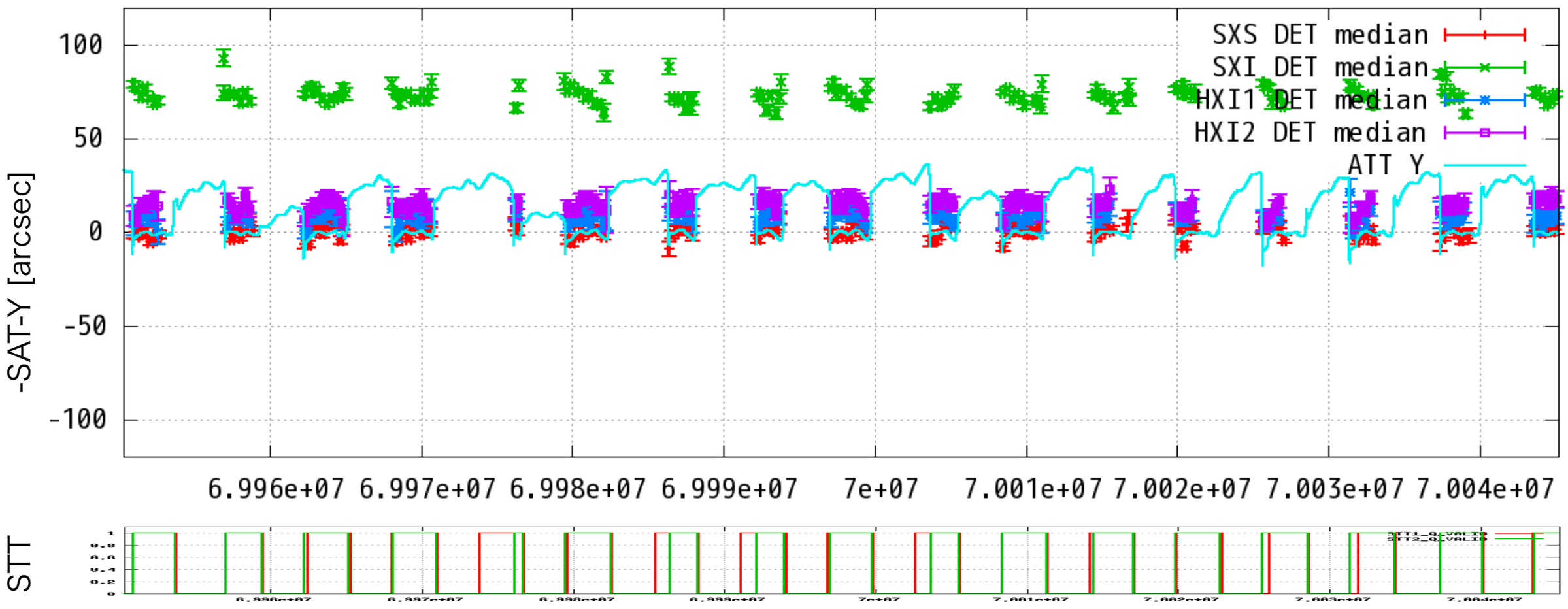


100050020

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-CTL

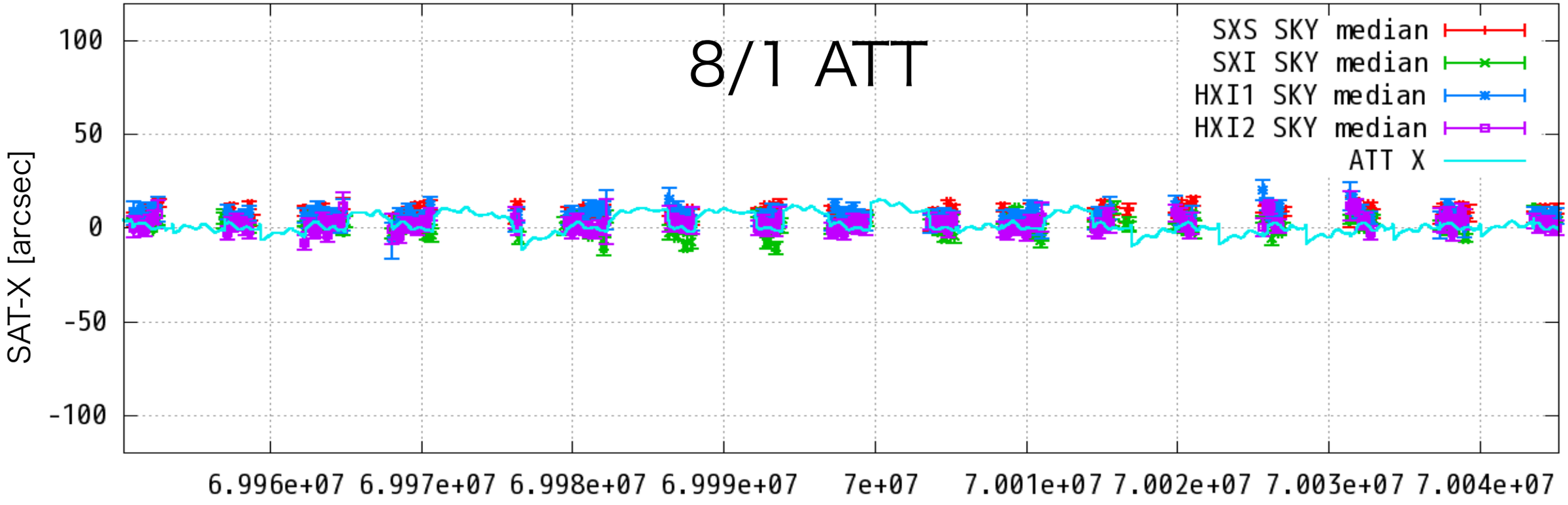


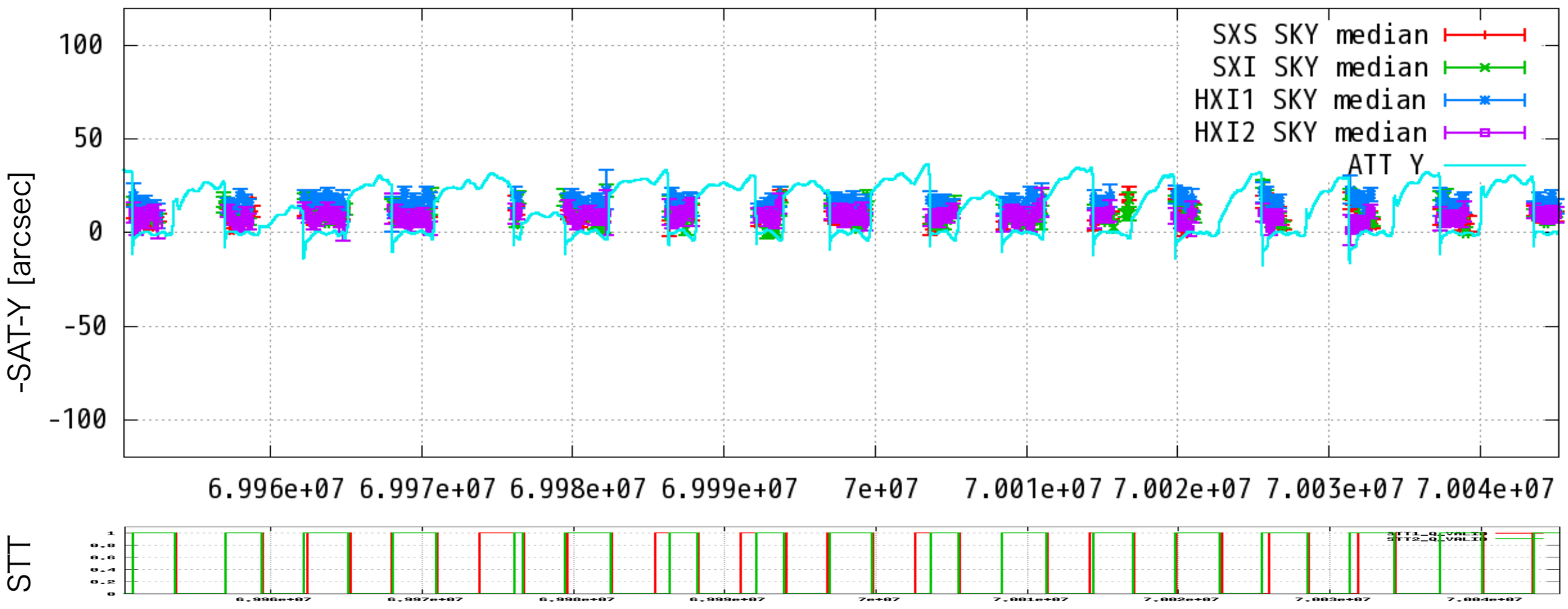


100050020

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

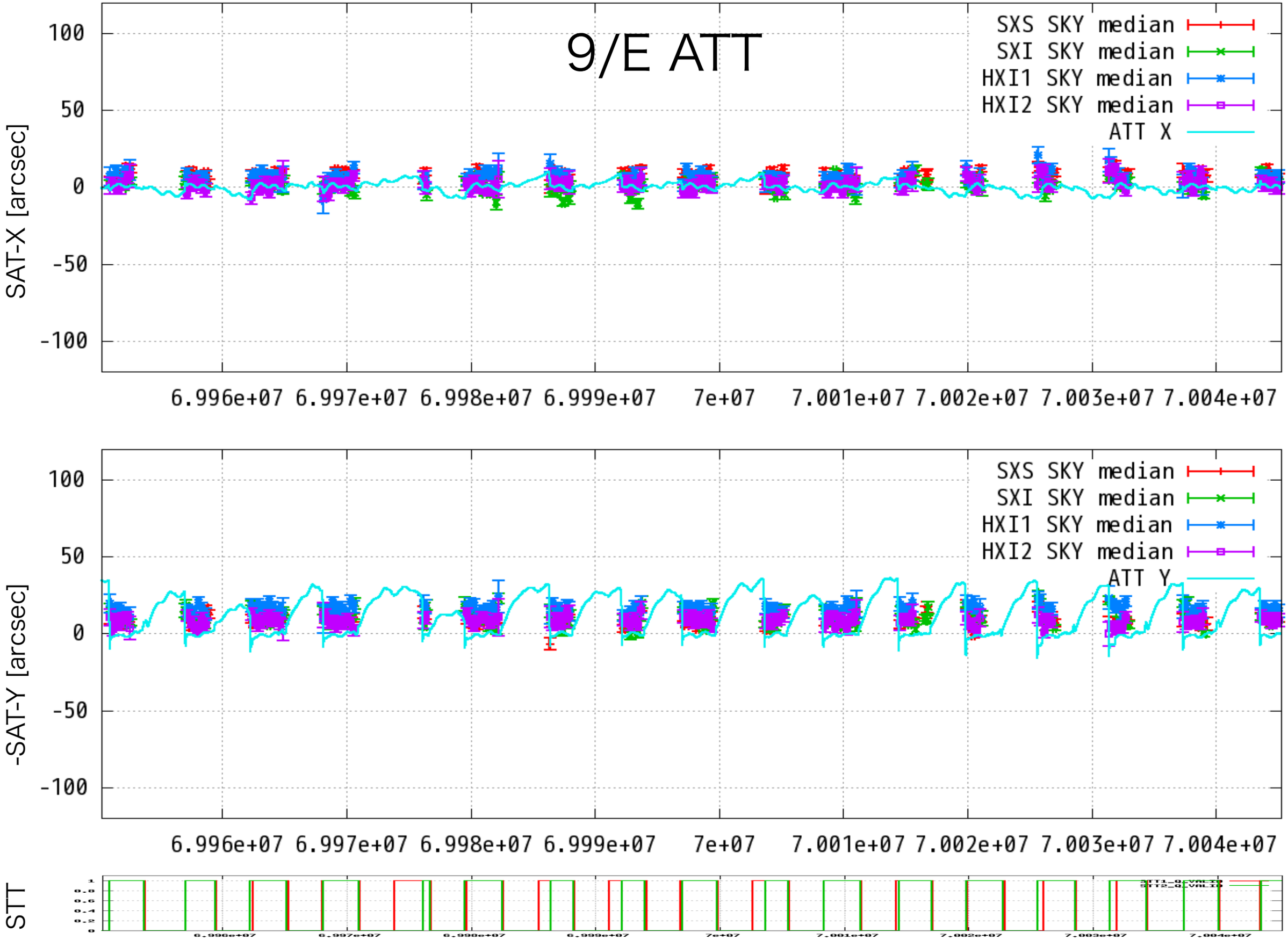




100050020

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

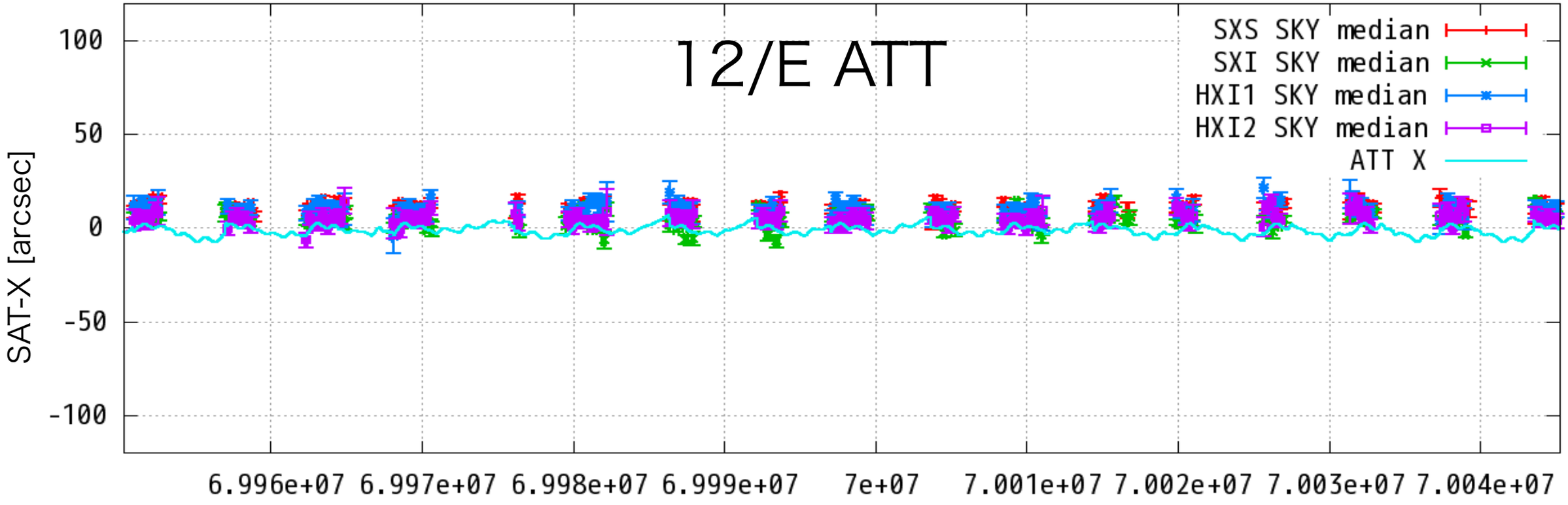
STT-CTL

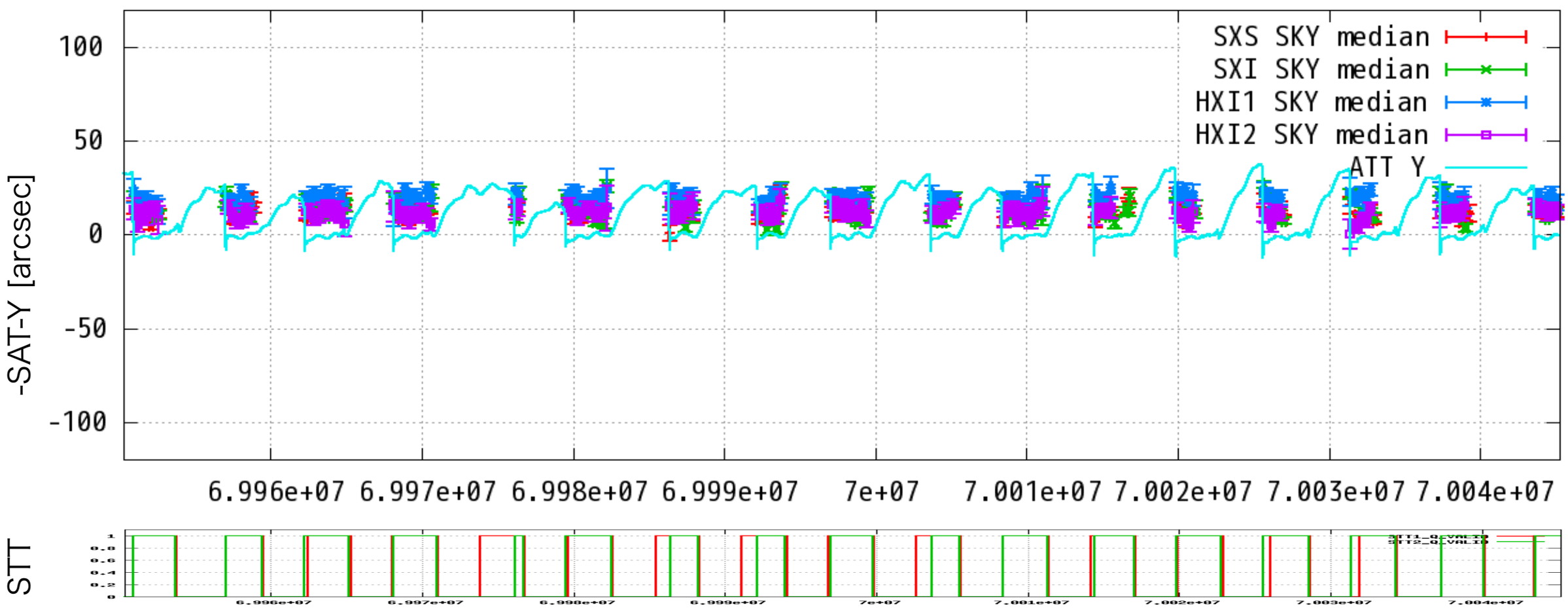


100050020

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

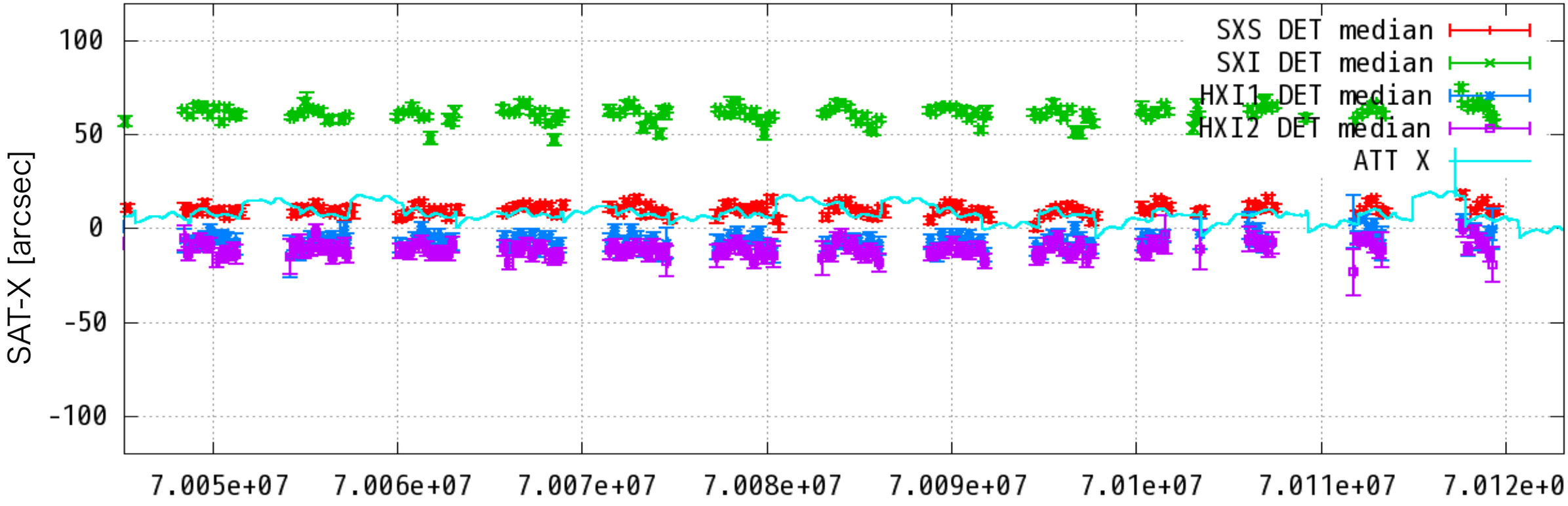


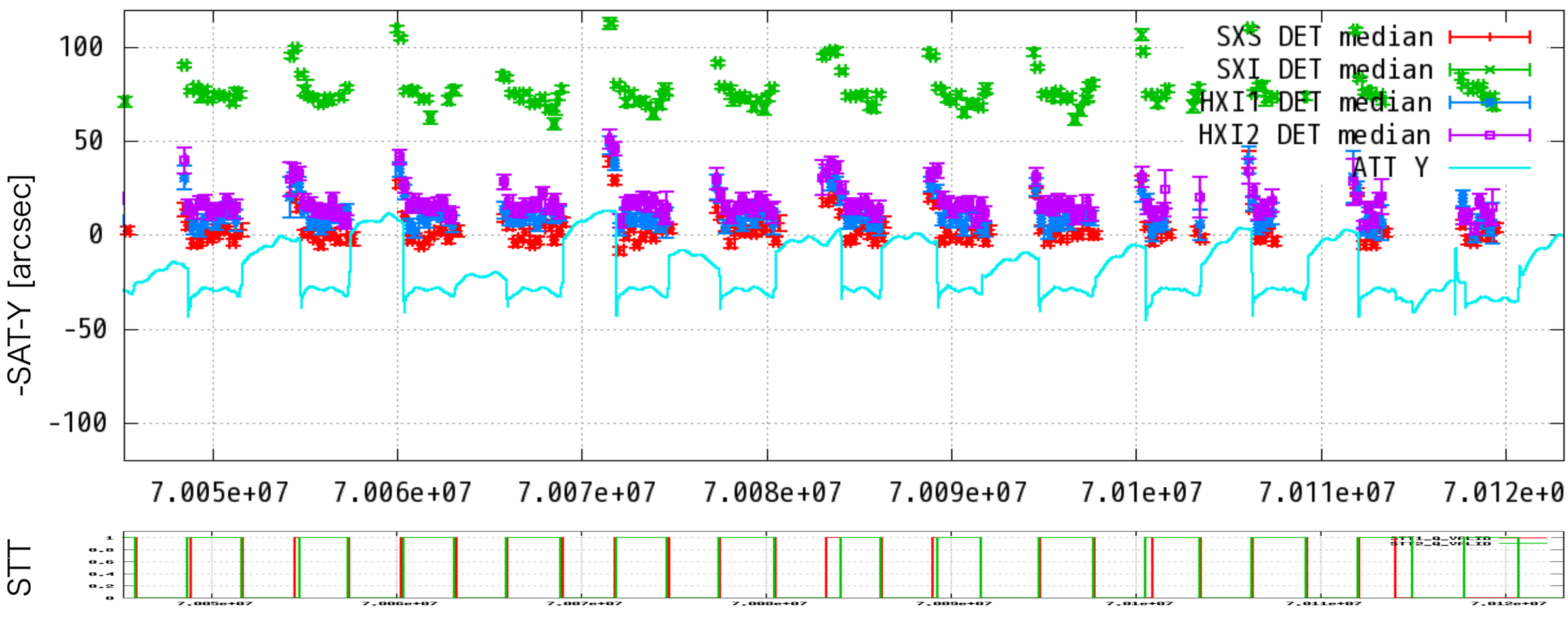


100050030

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-ALL

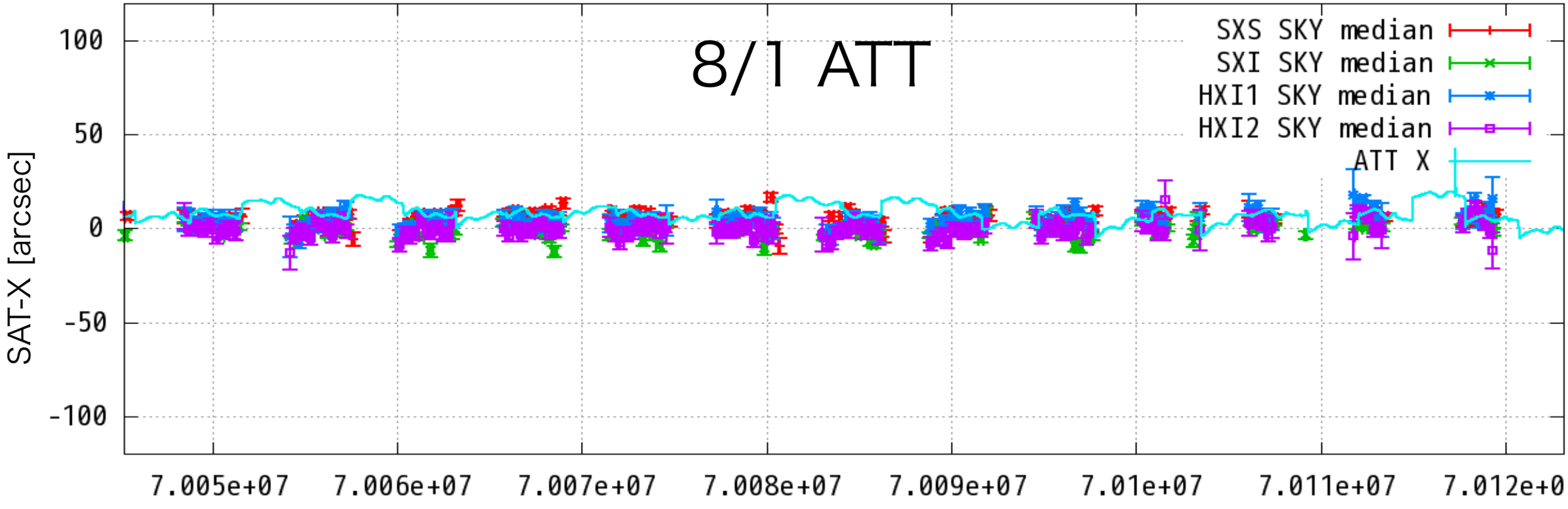


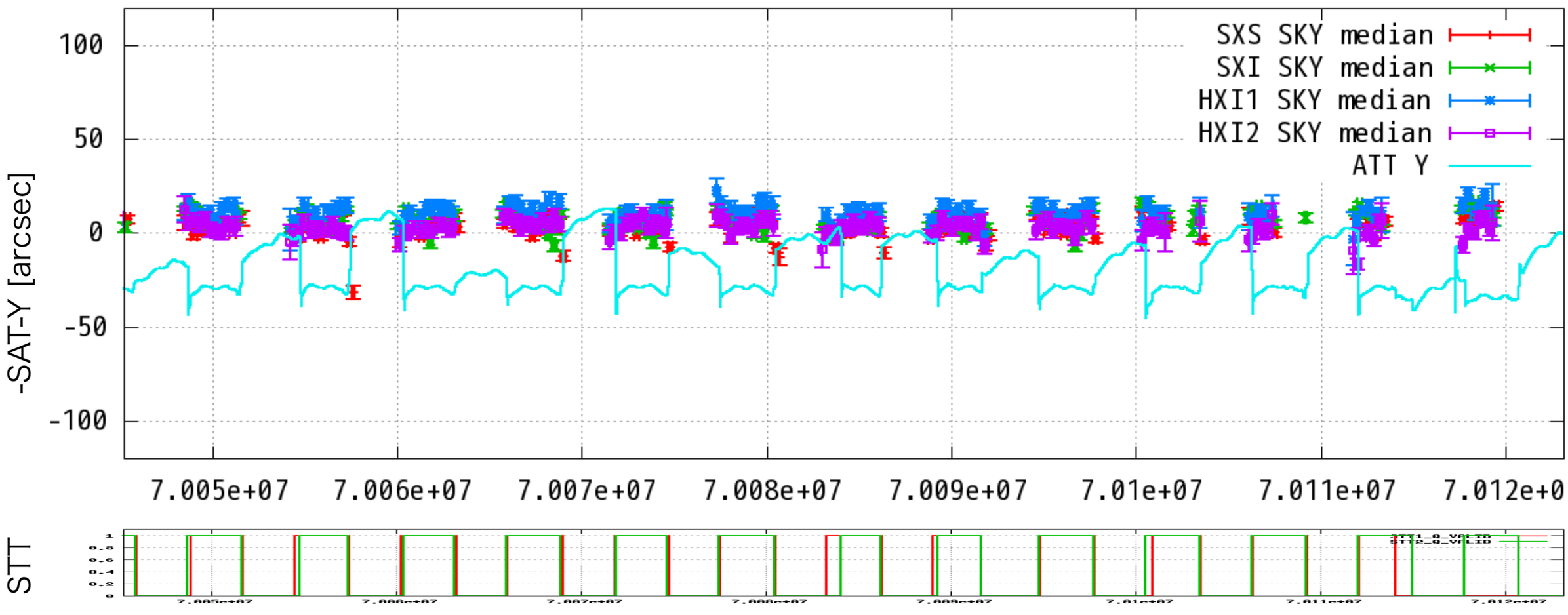


100050030

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

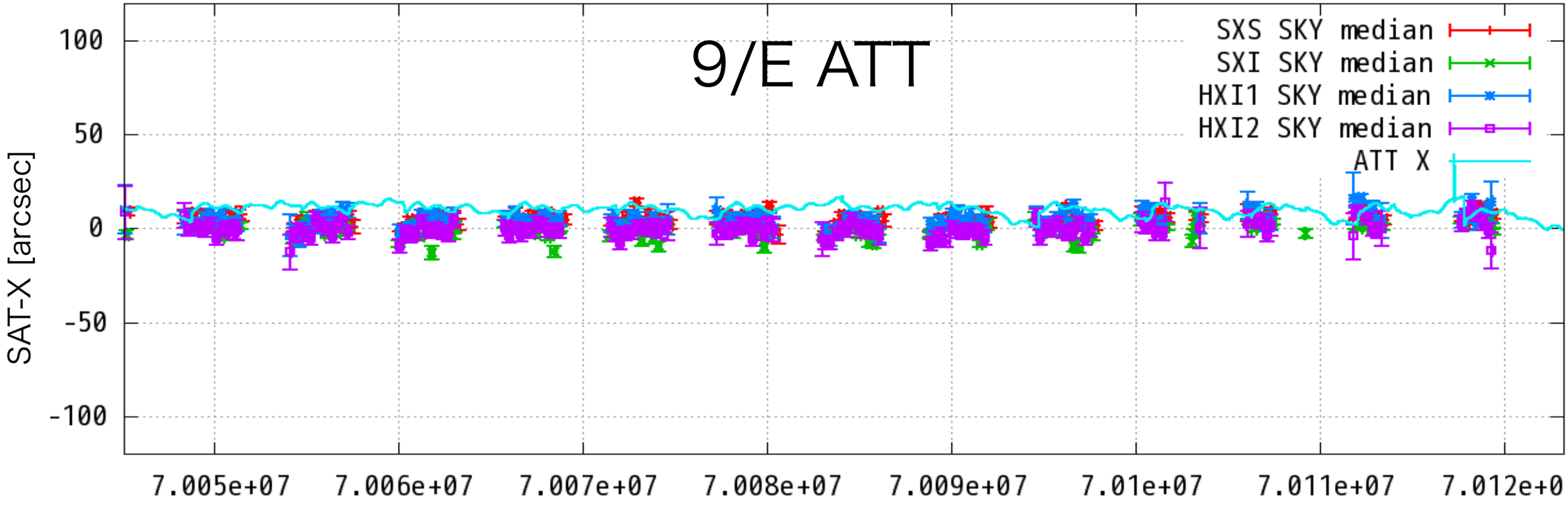


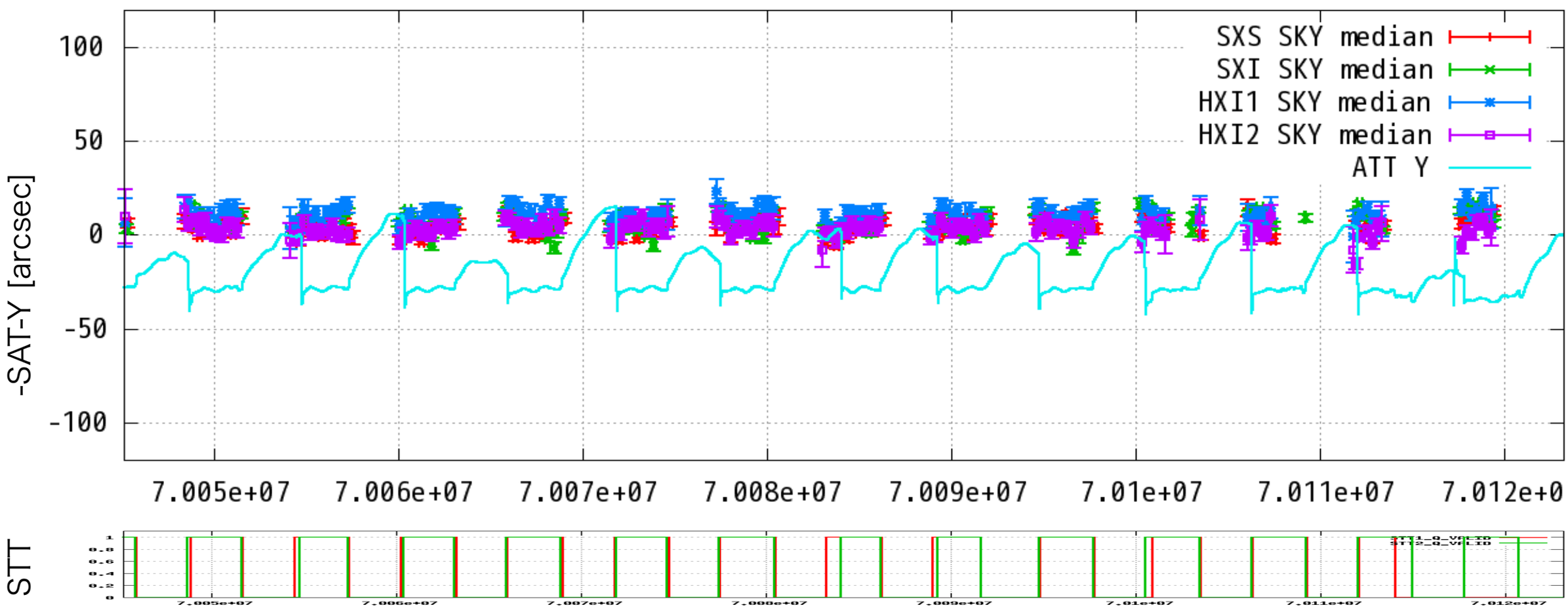


100050030

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

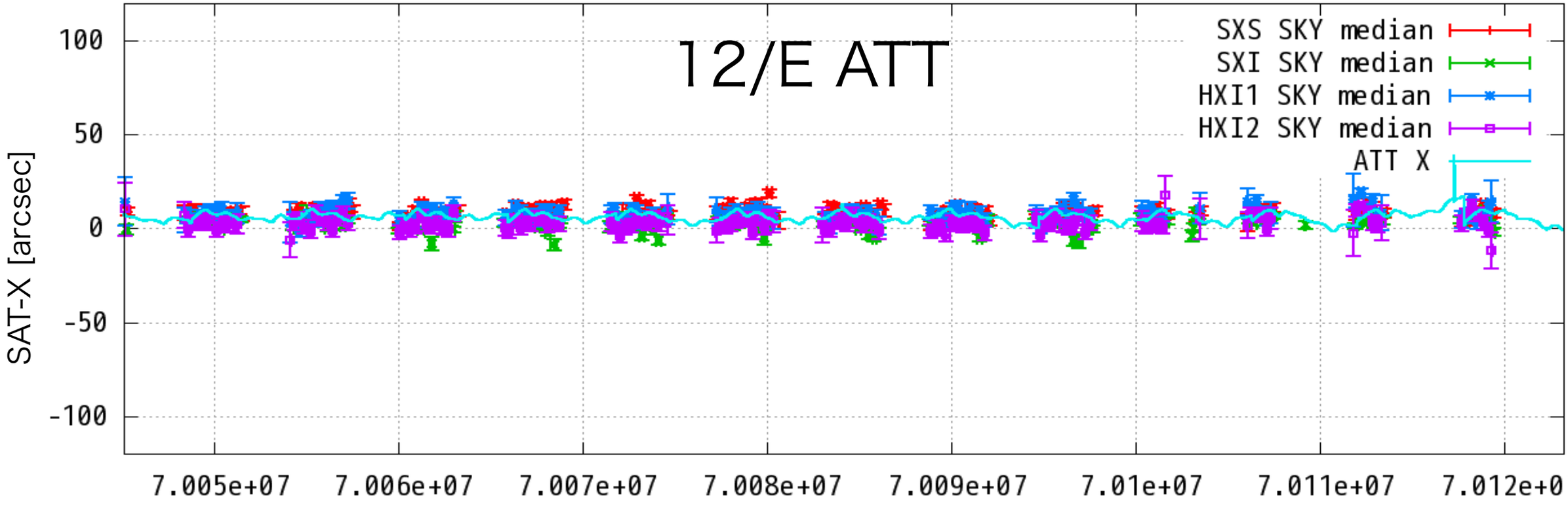


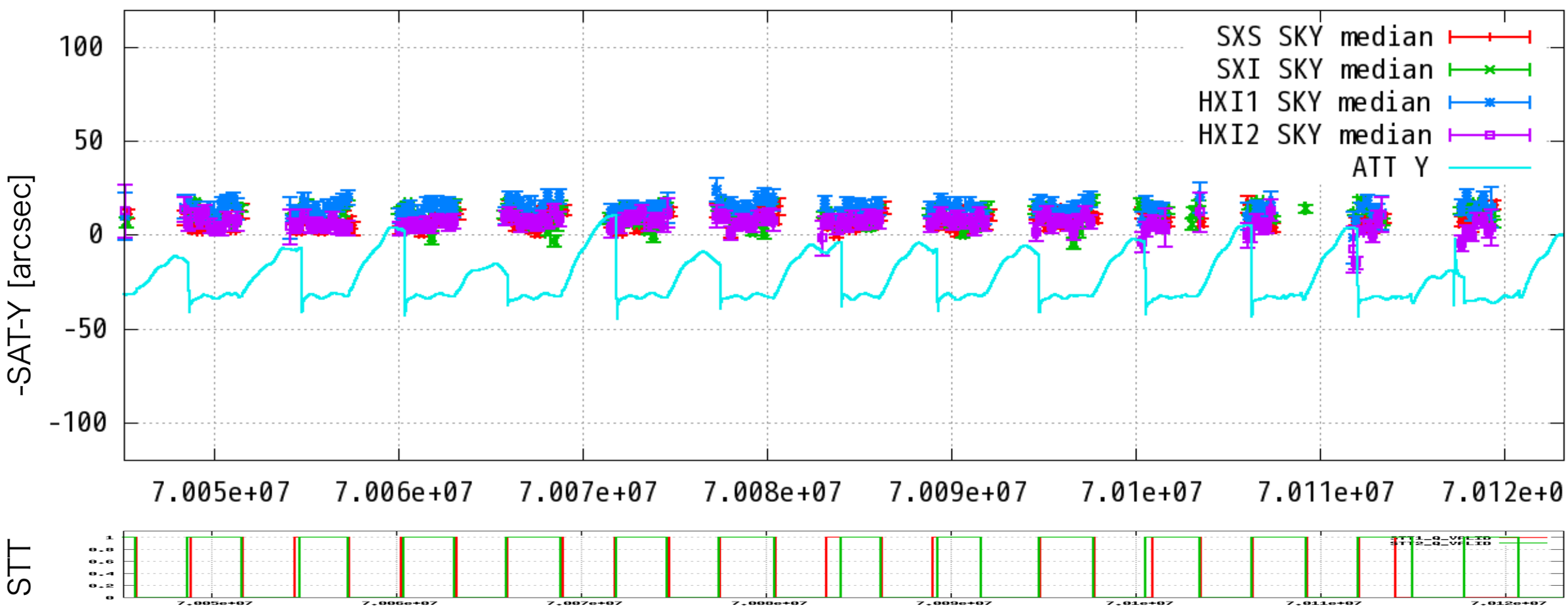


100050030

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

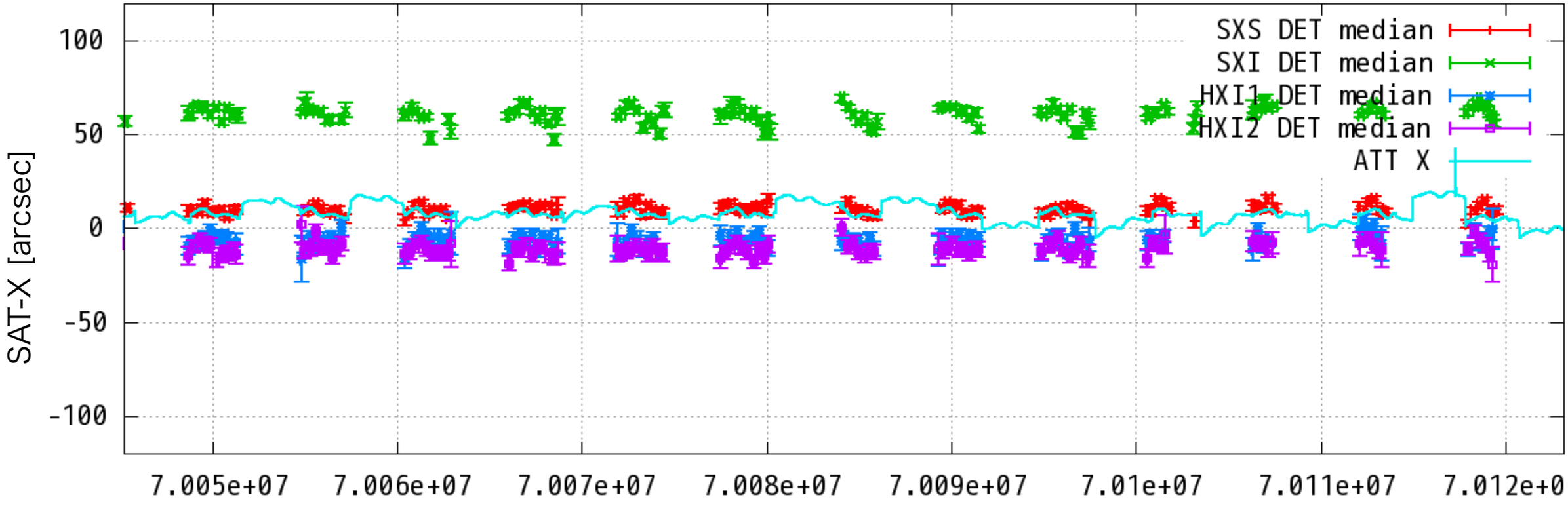


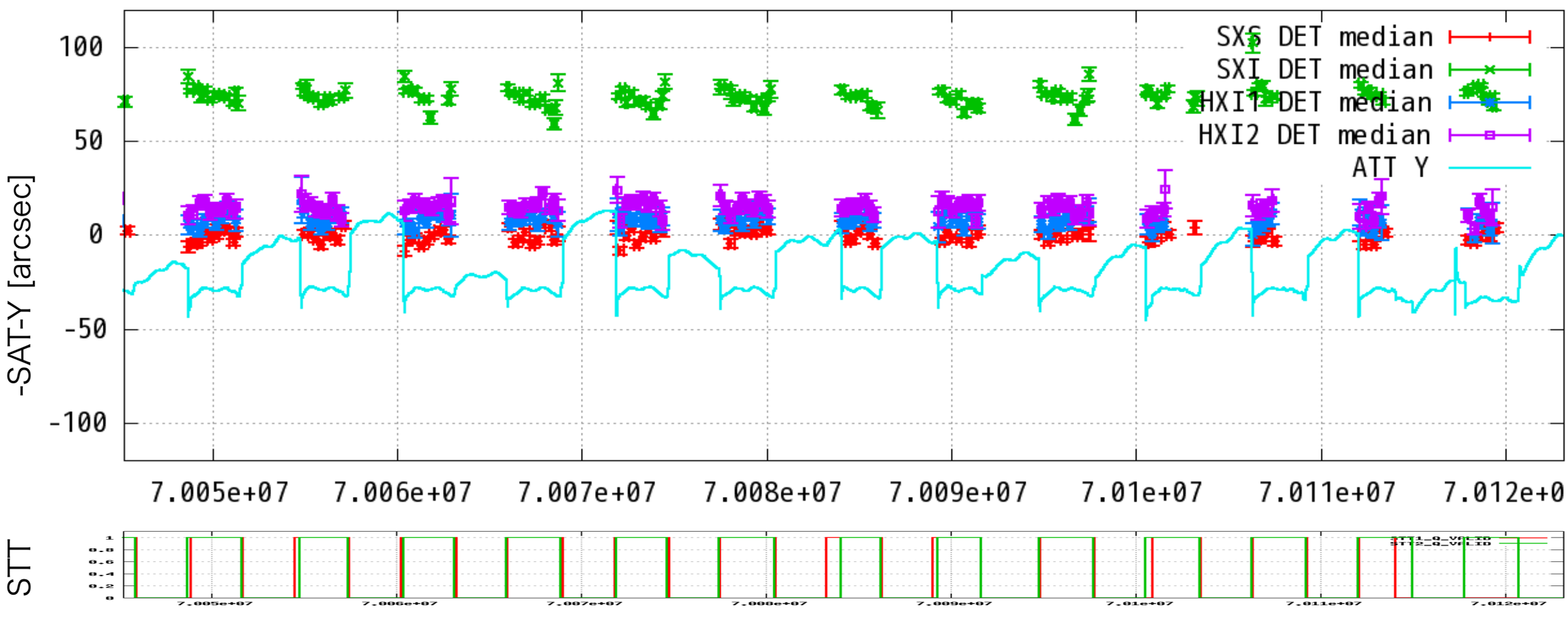


100050030

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-CTL

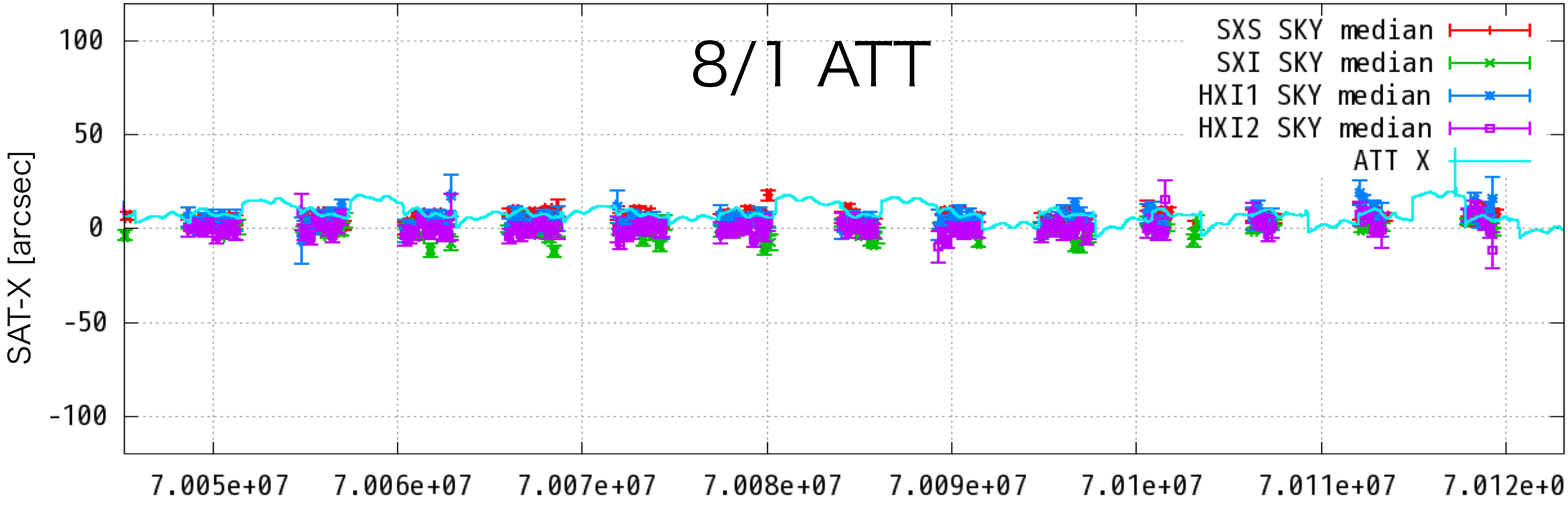


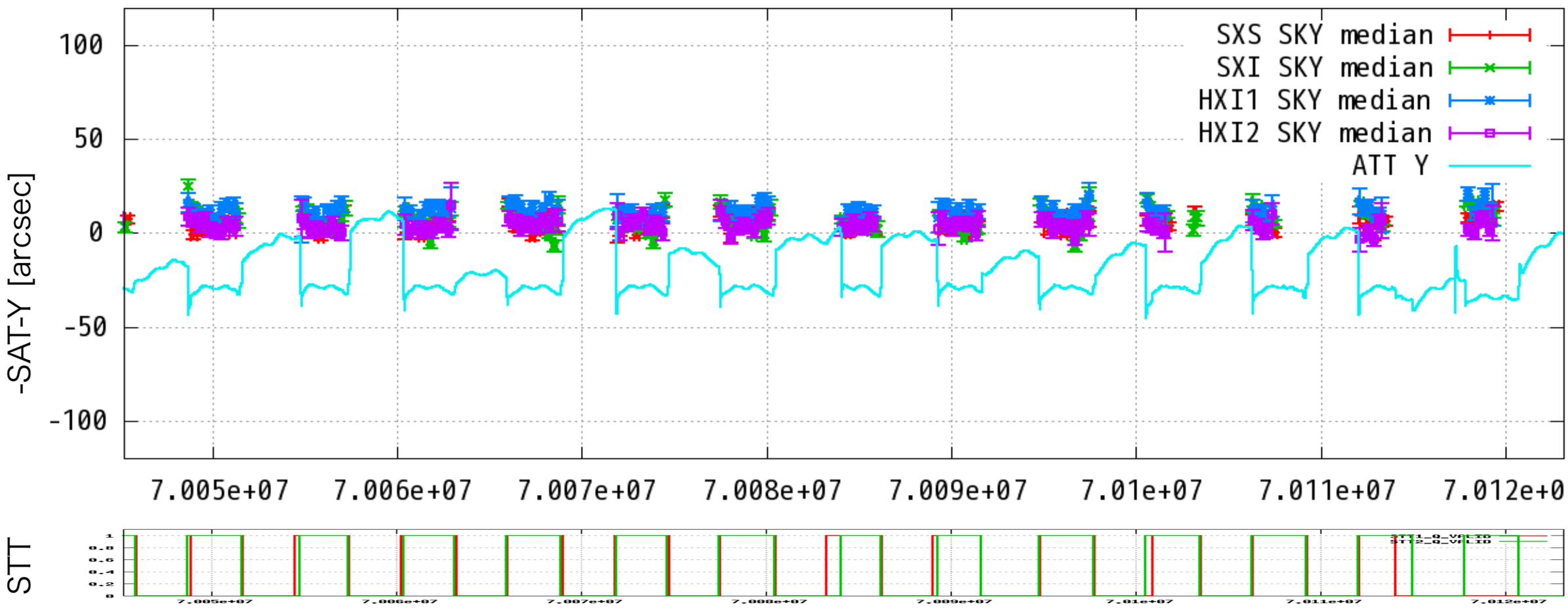


100050030

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

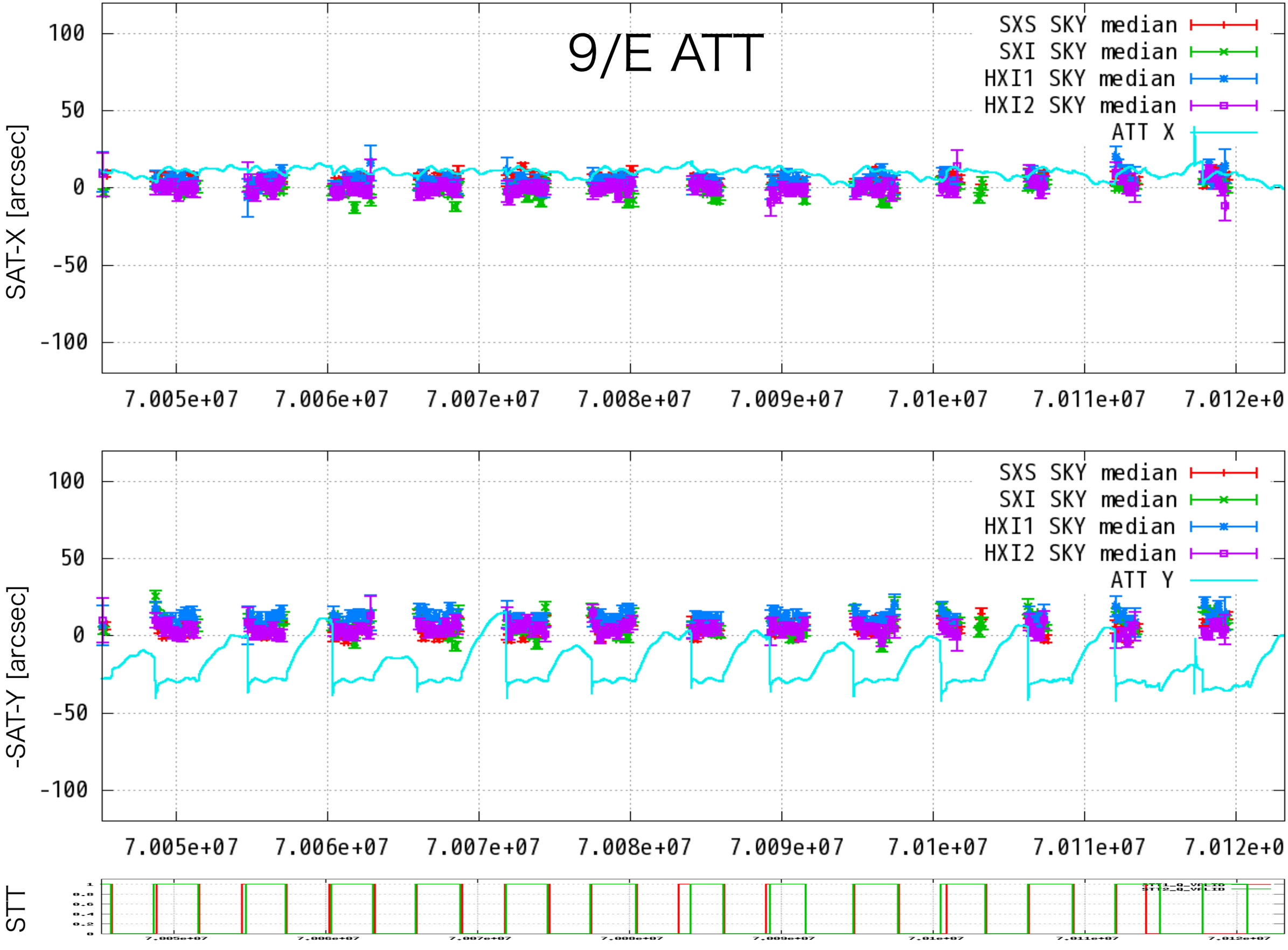




100050030

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

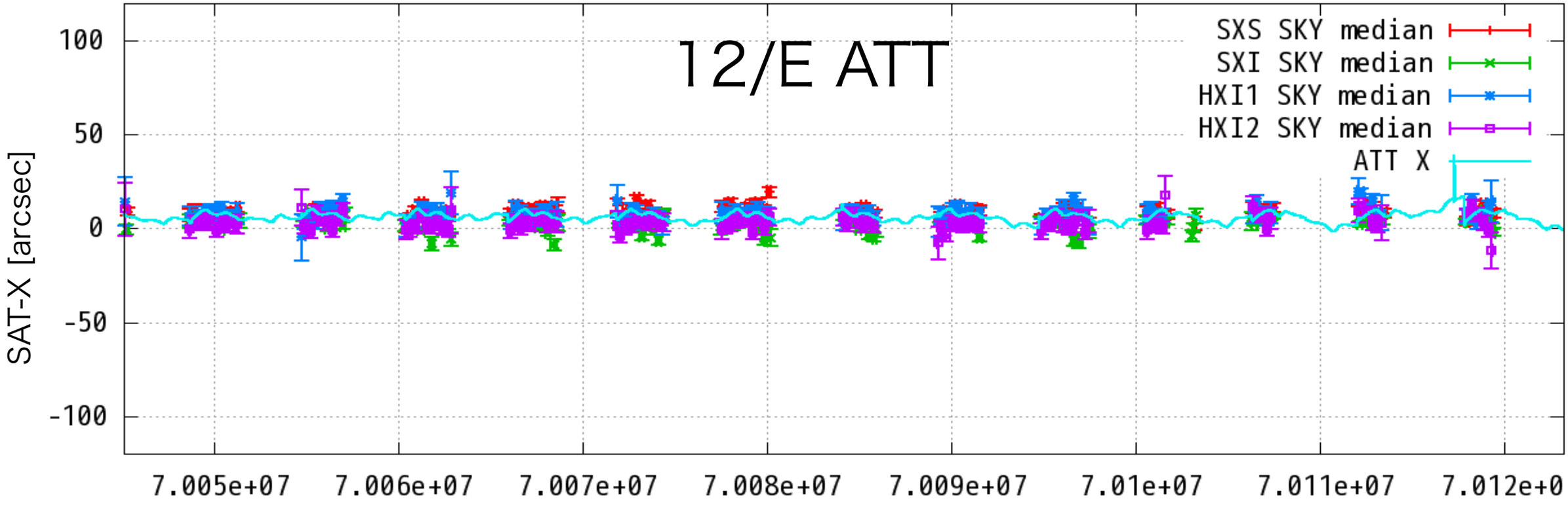
STT-CTL

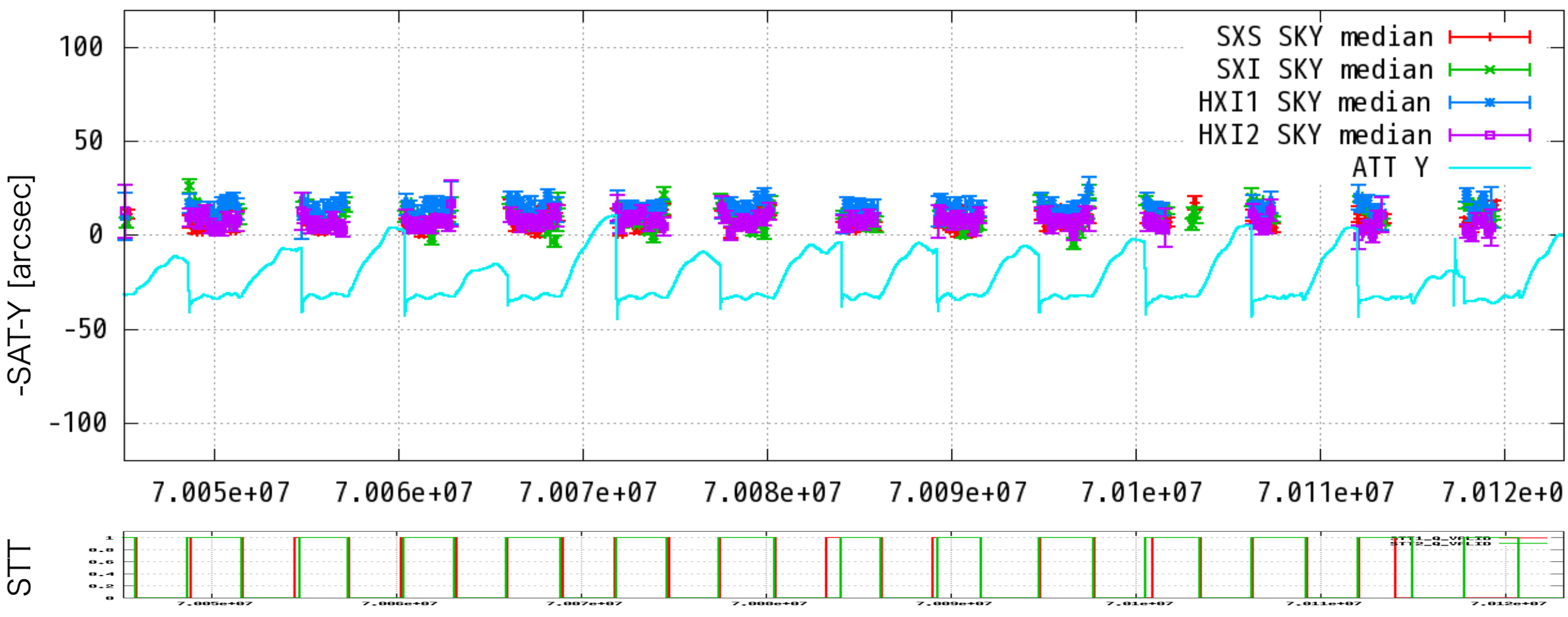


100050030

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

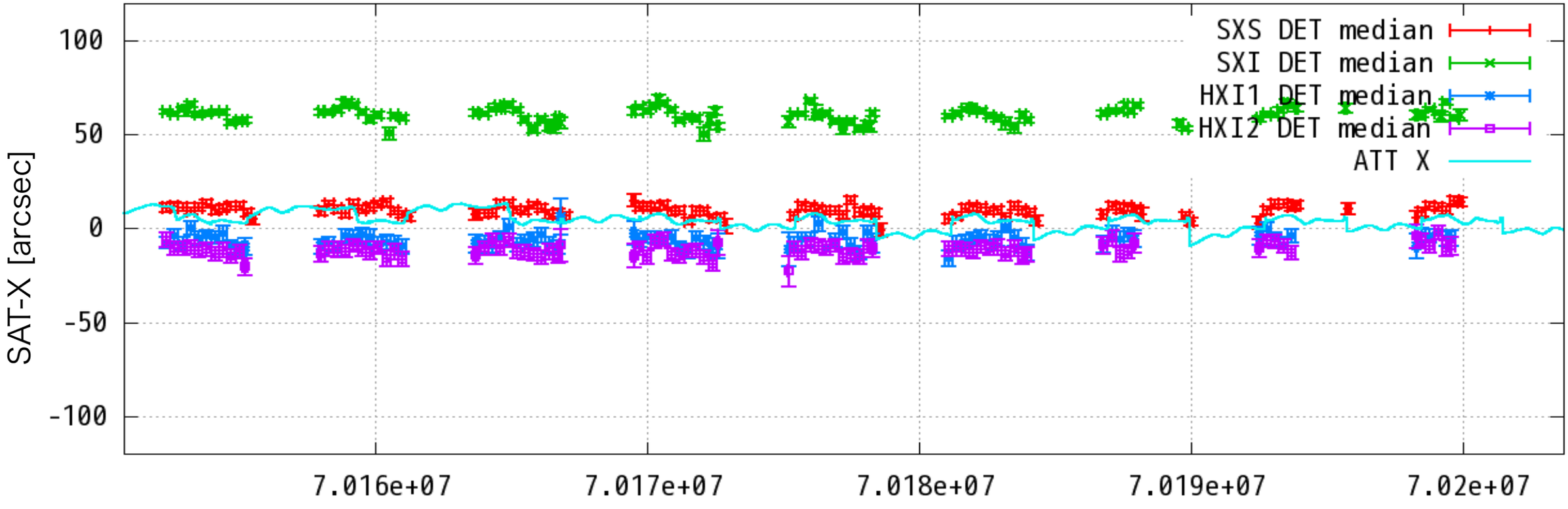


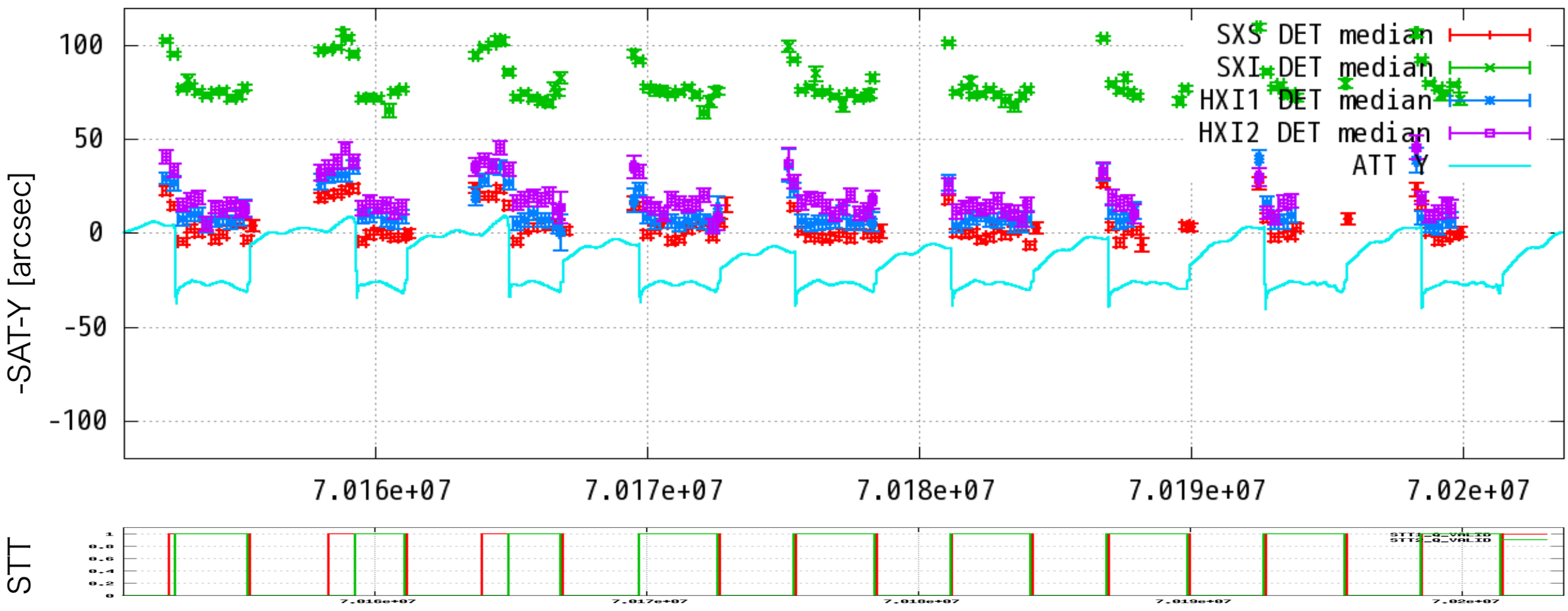


100050040

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-ALL

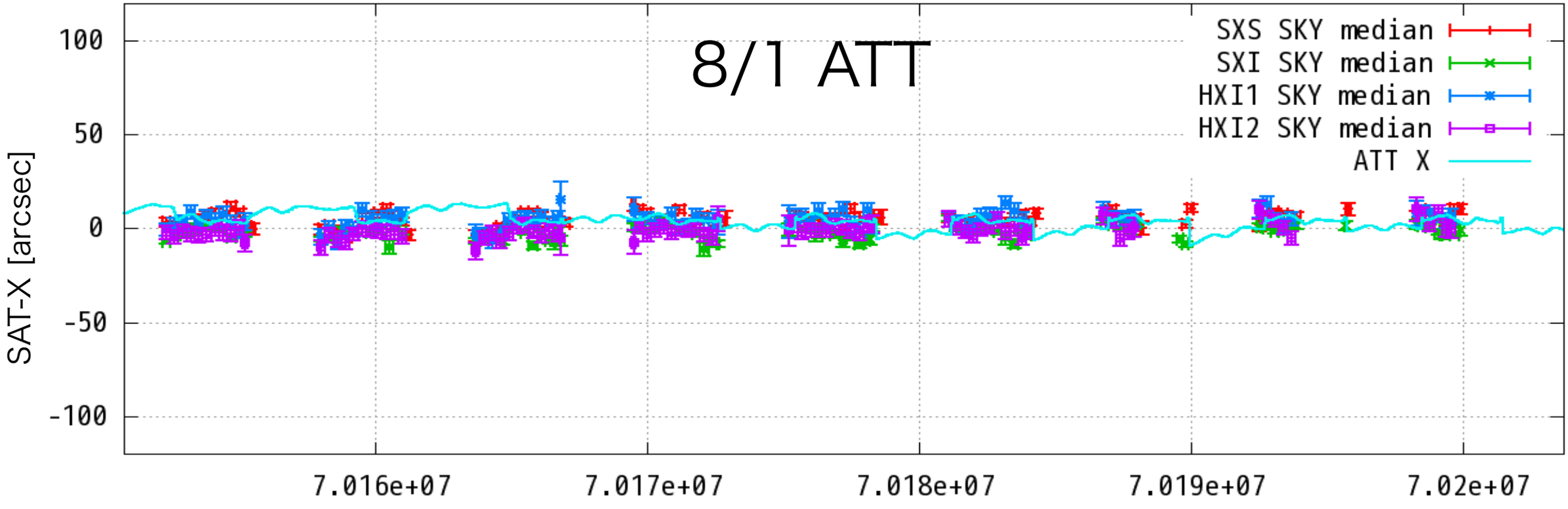


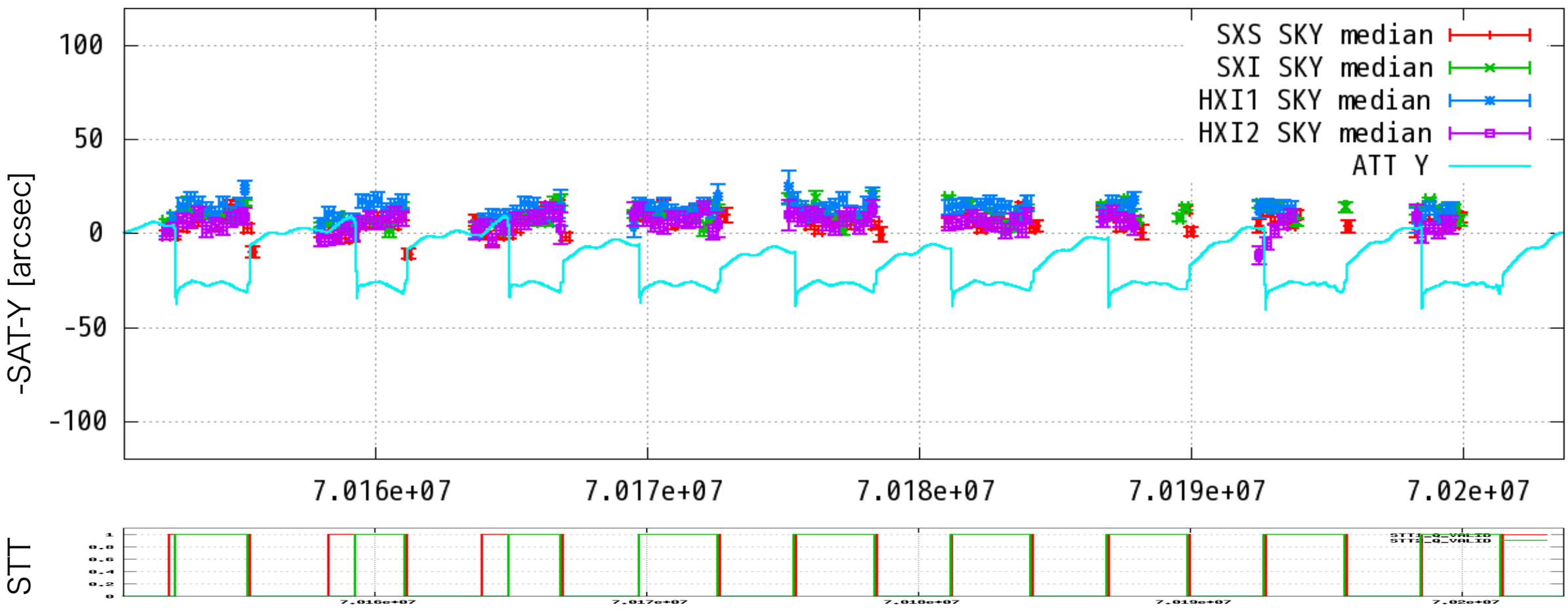


100050040

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

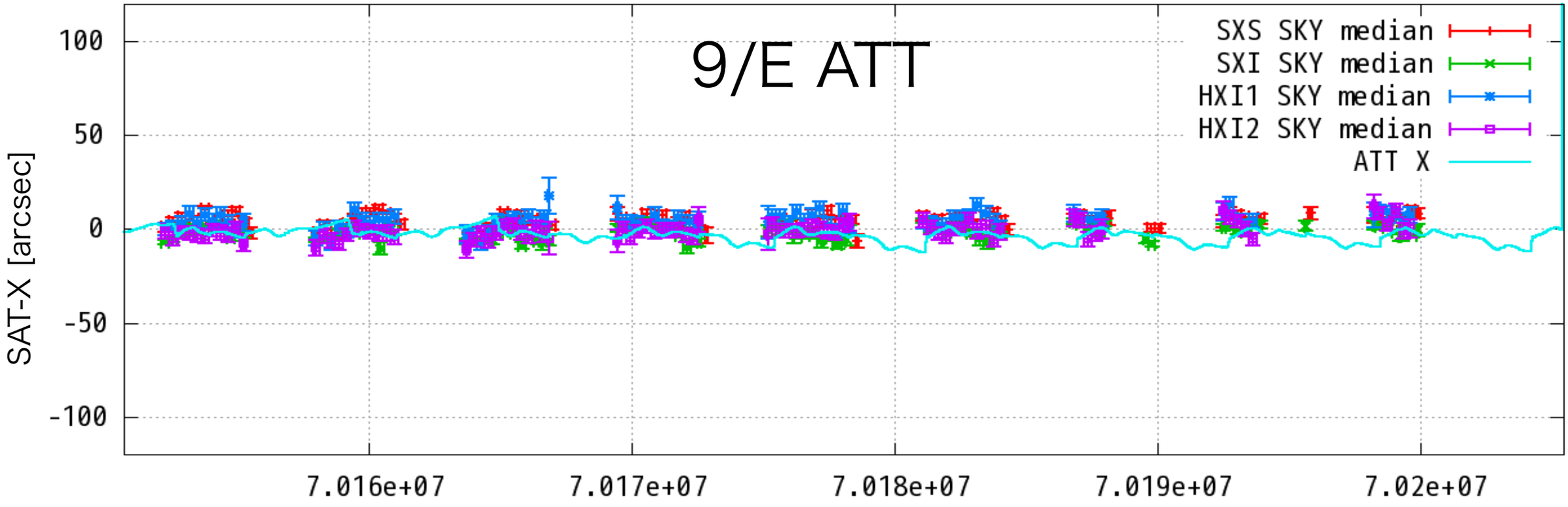


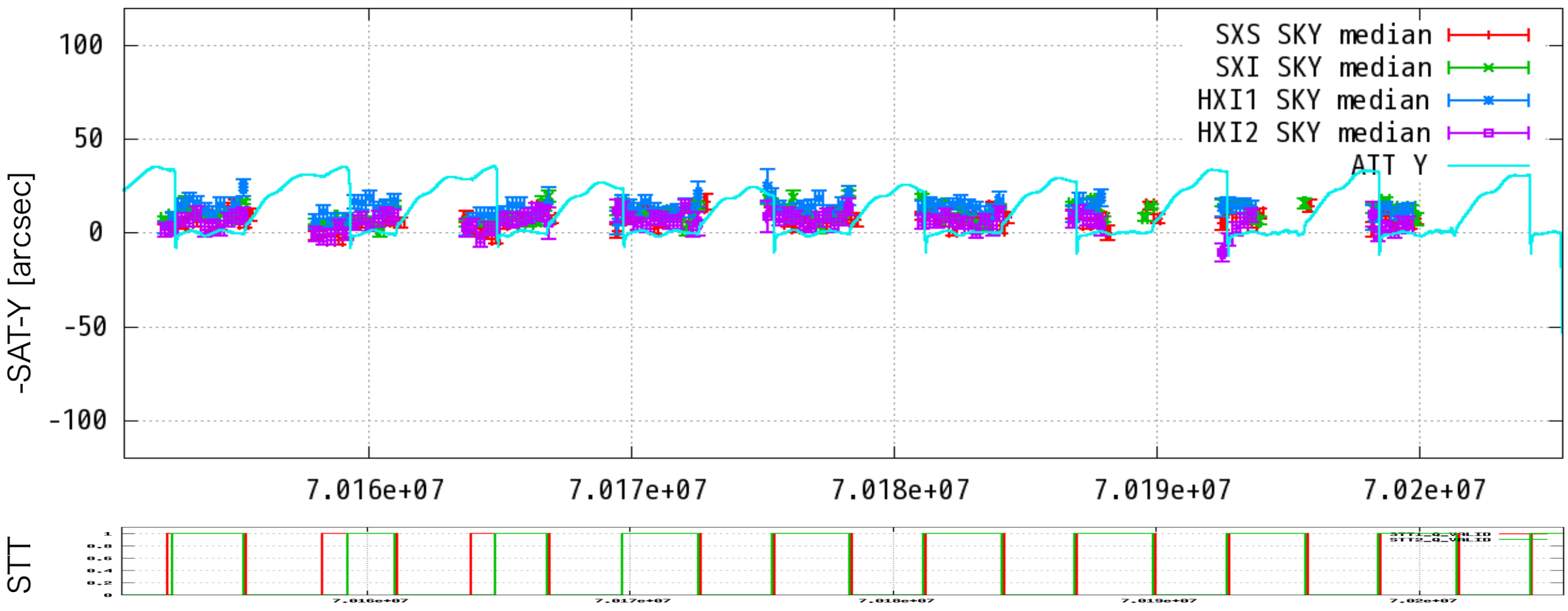


100050040

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

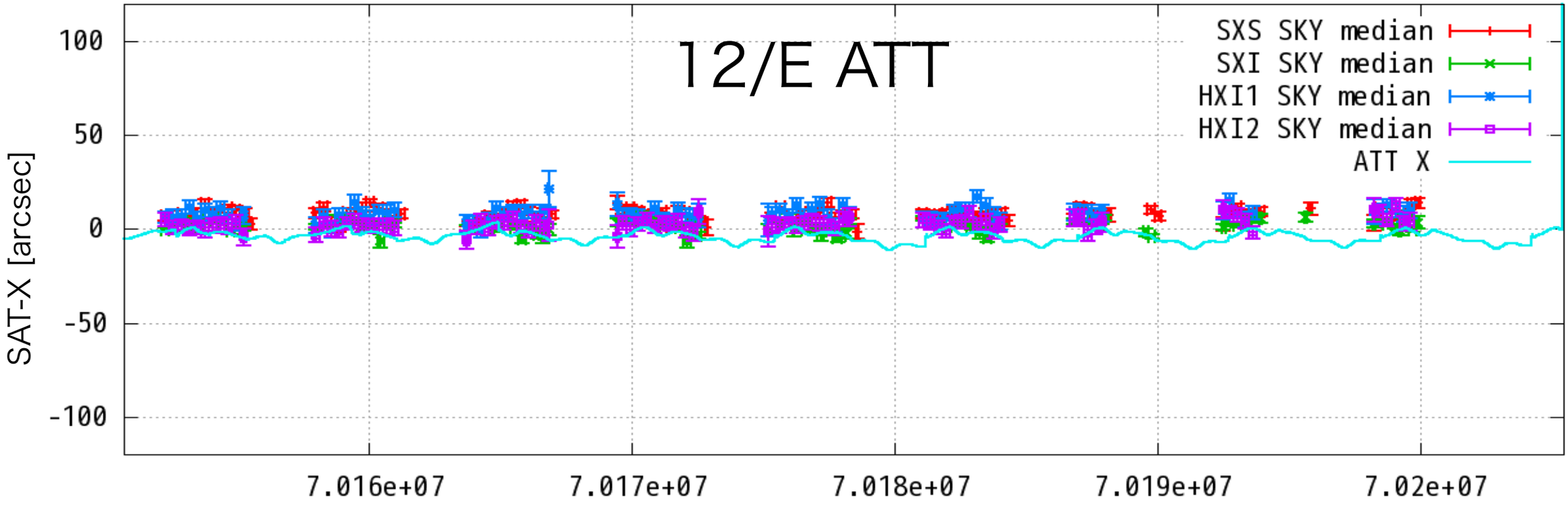


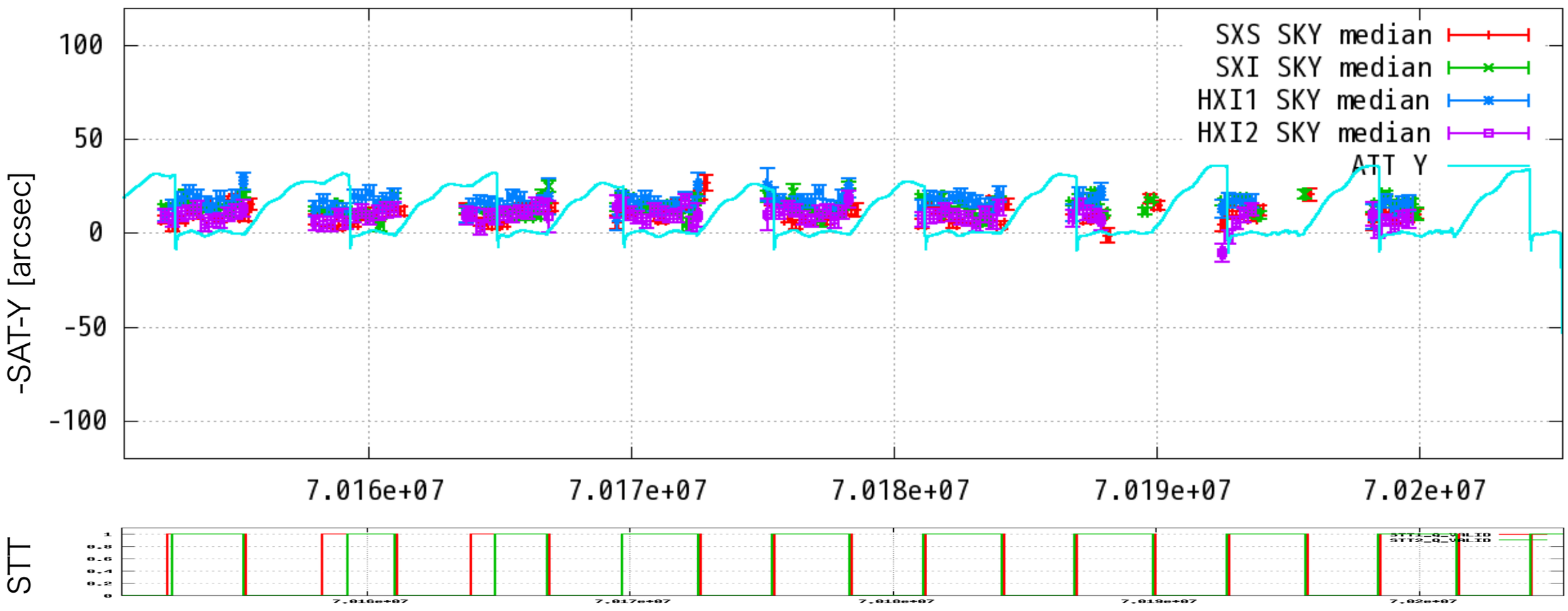


100050040

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

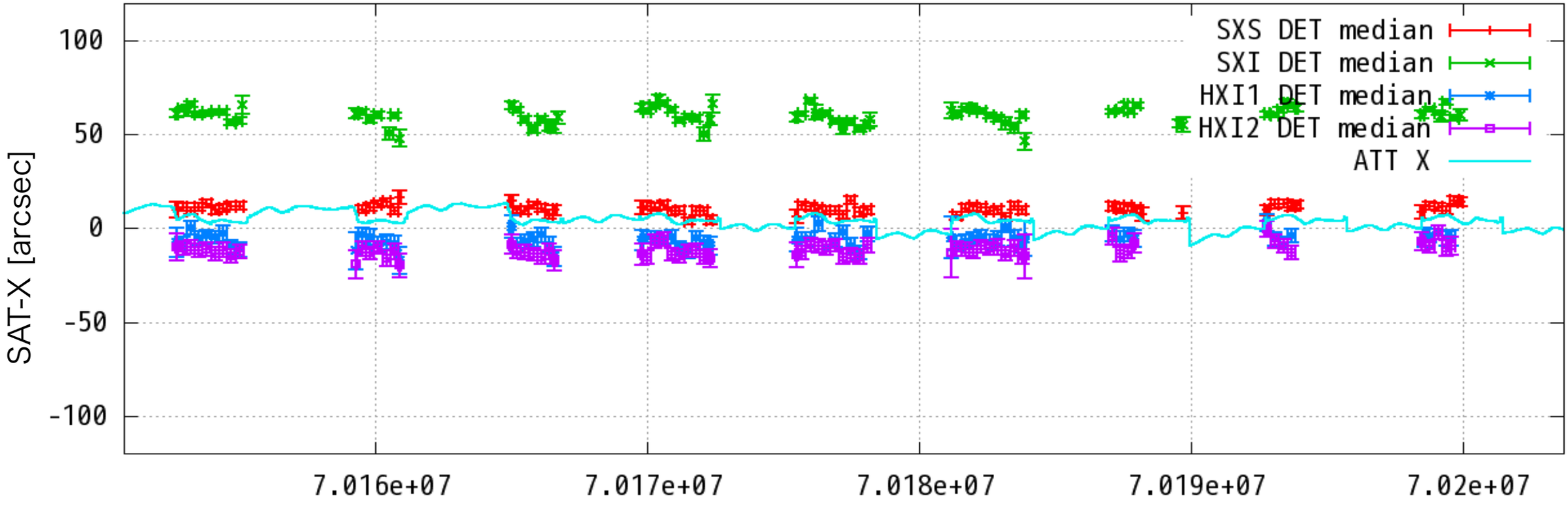


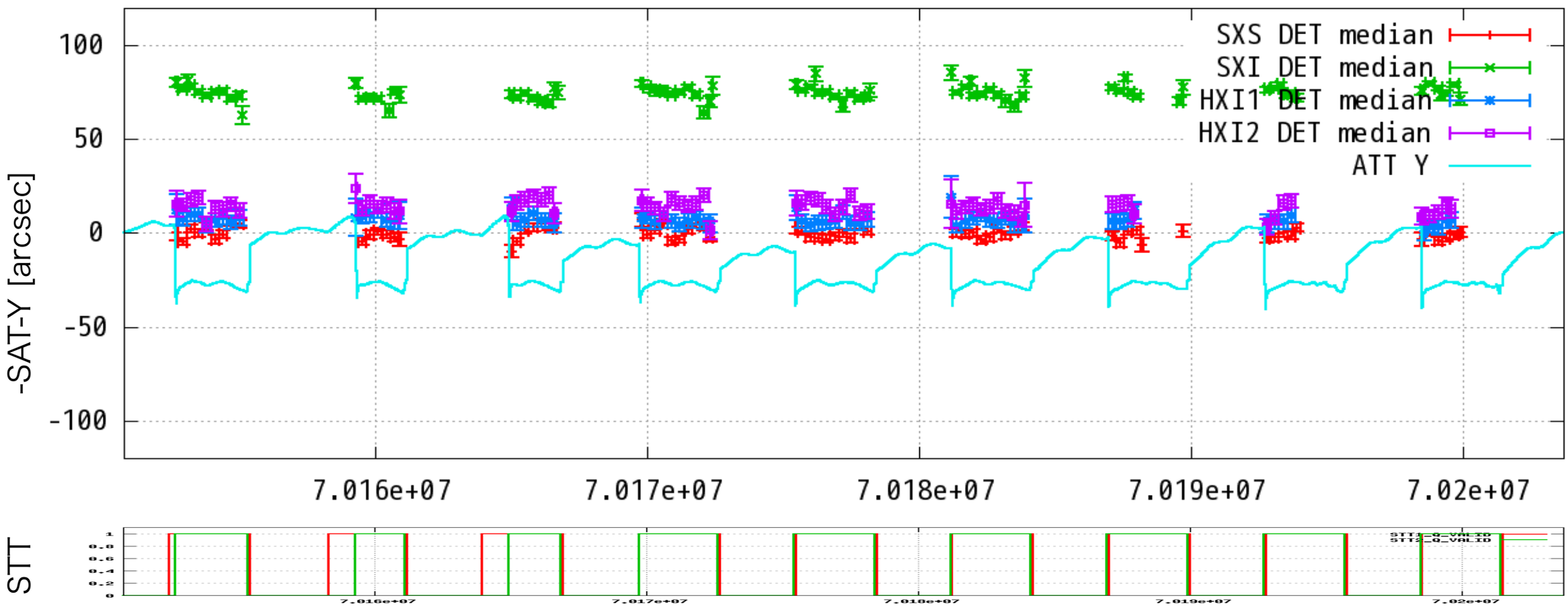


100050040

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-CTL

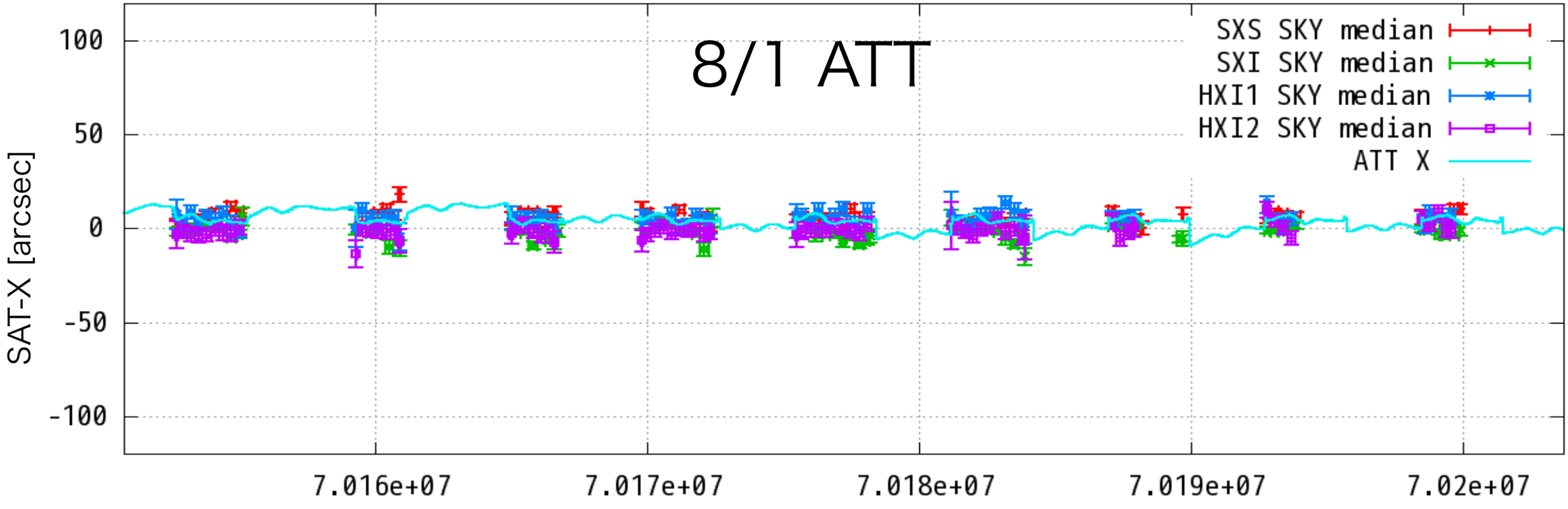


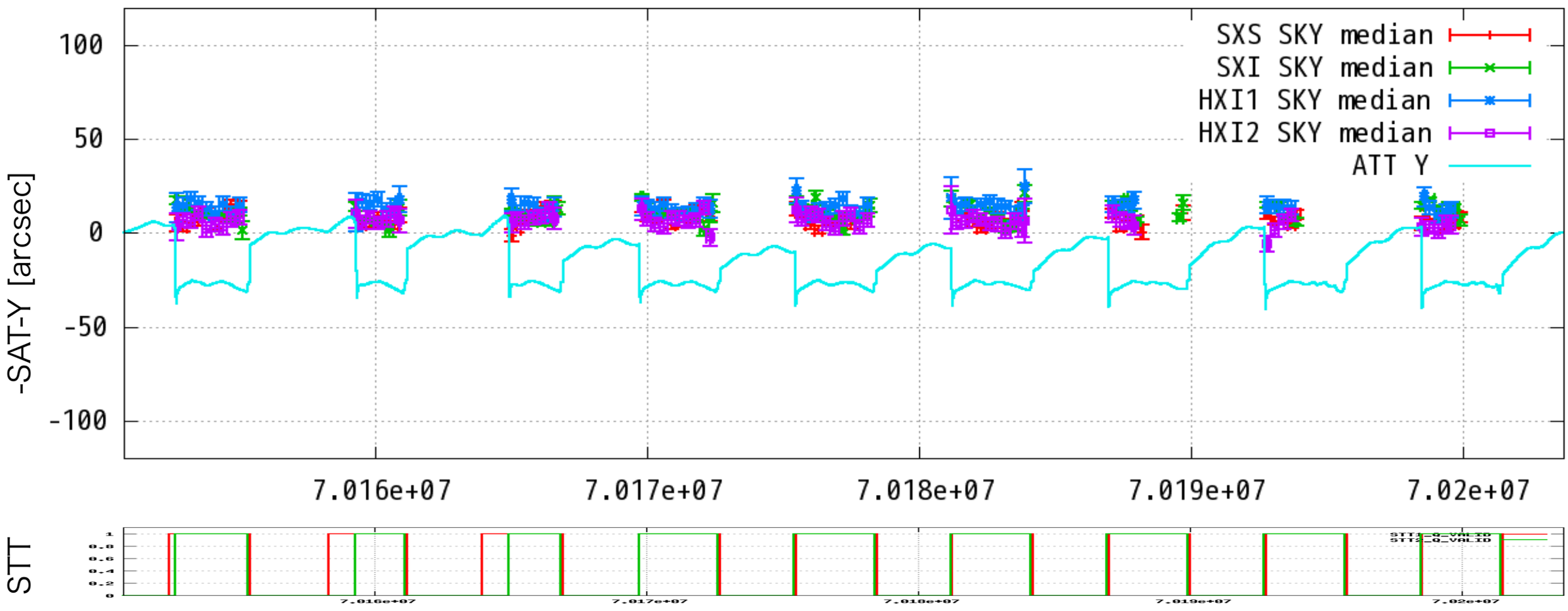


100050040

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

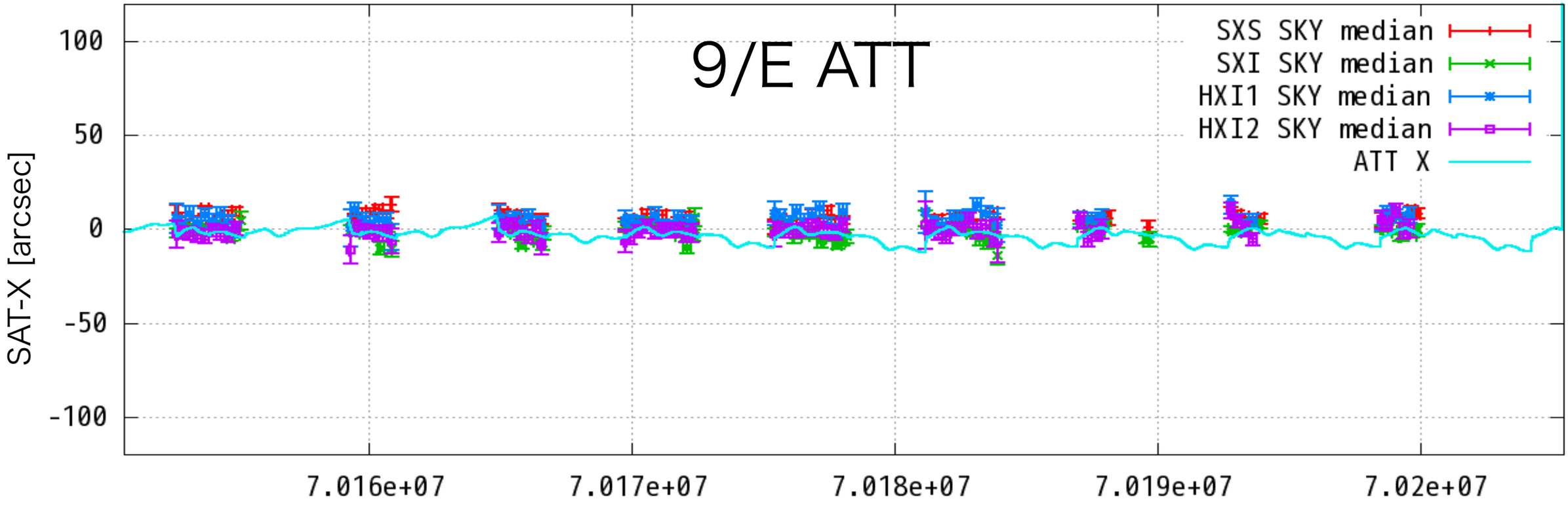


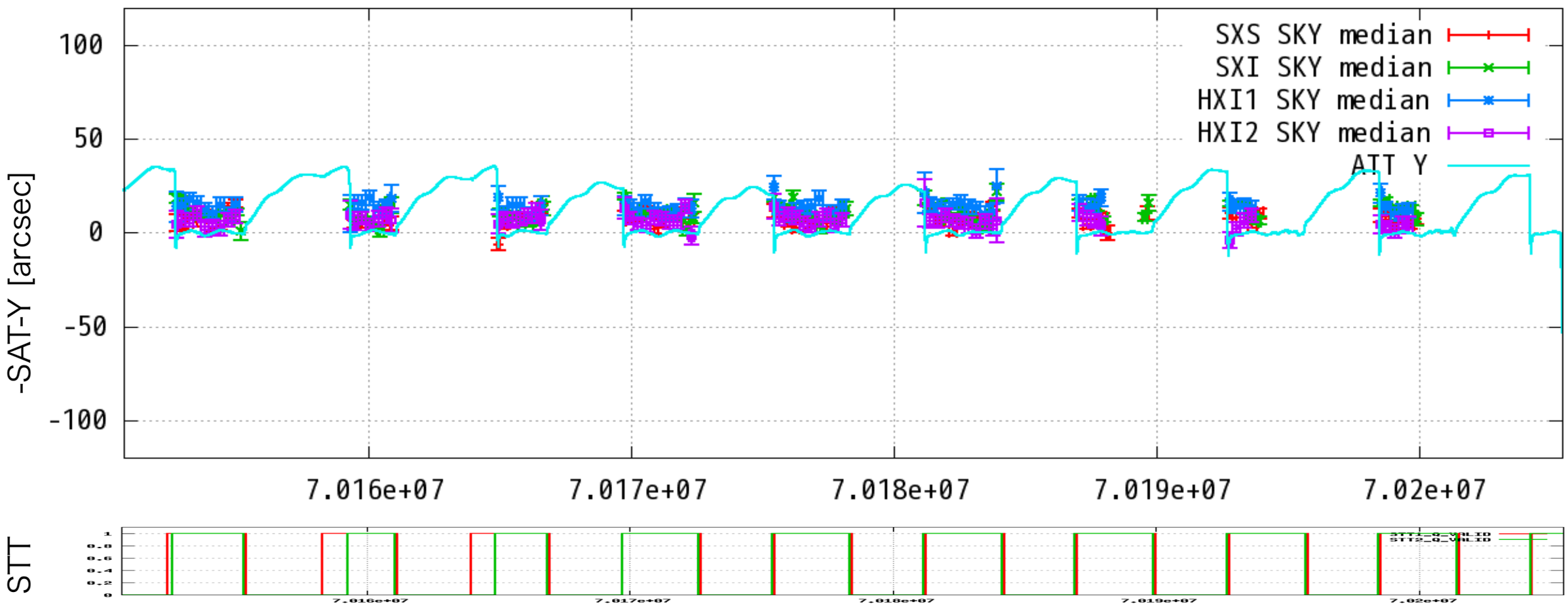


100050040

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

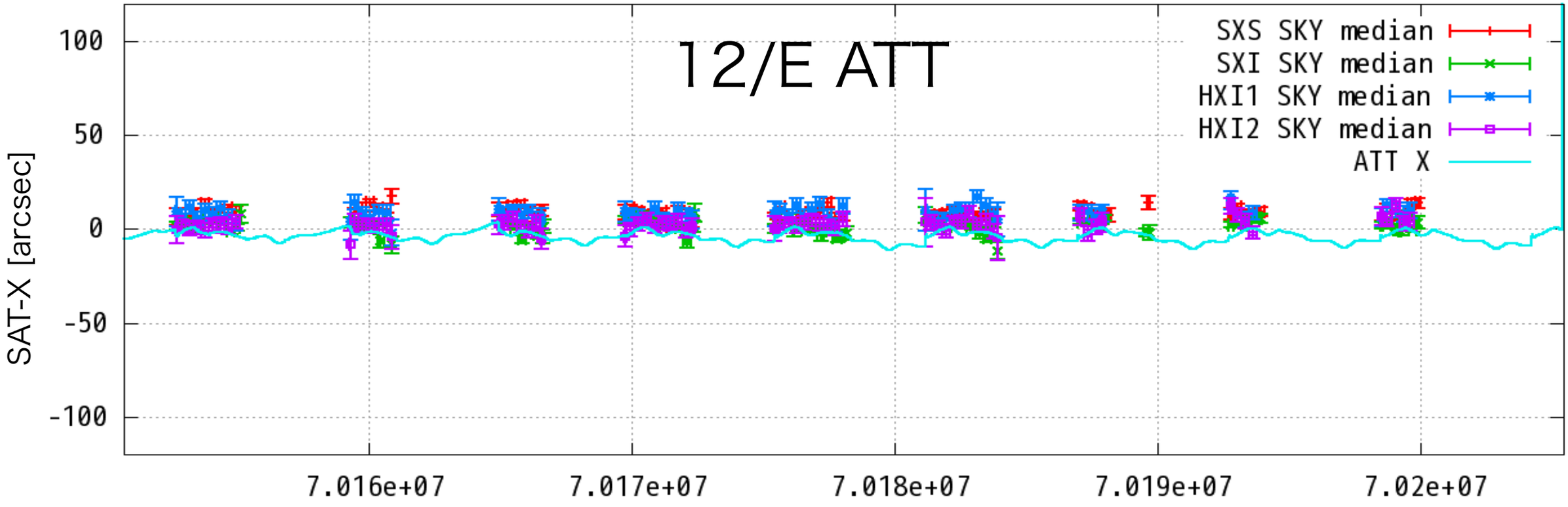


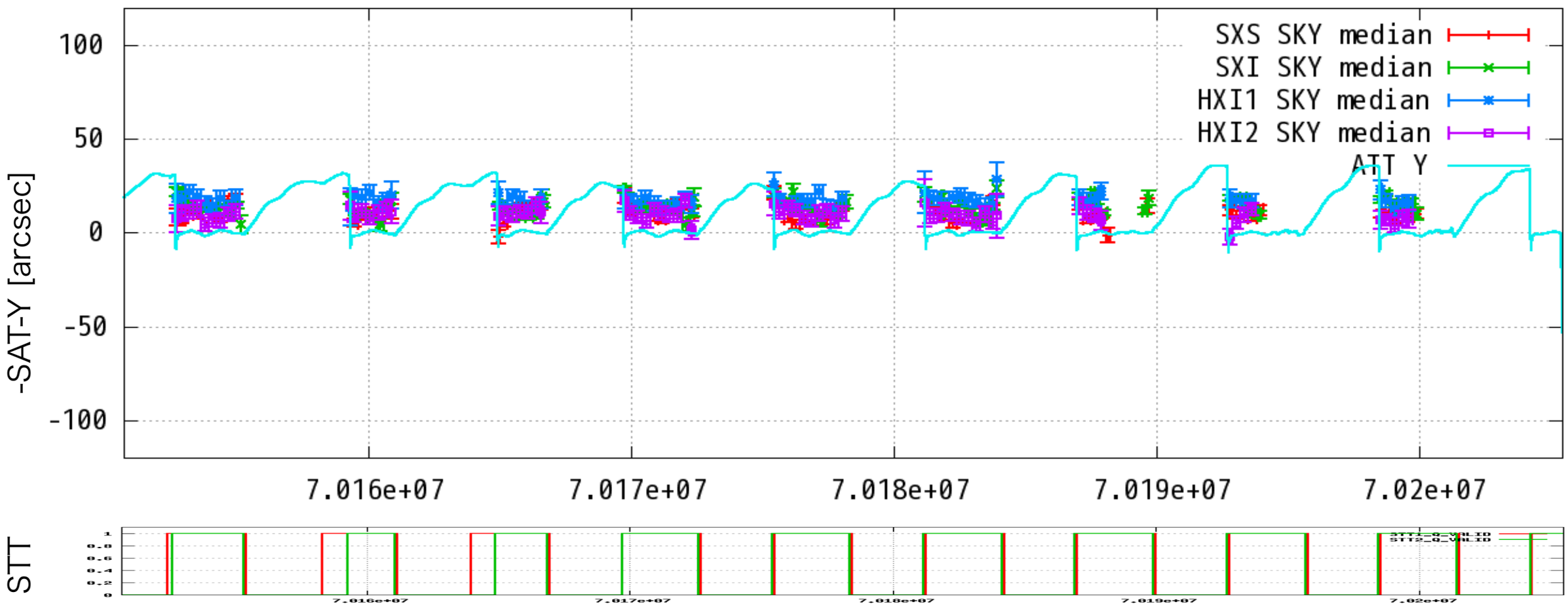


100050040

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL

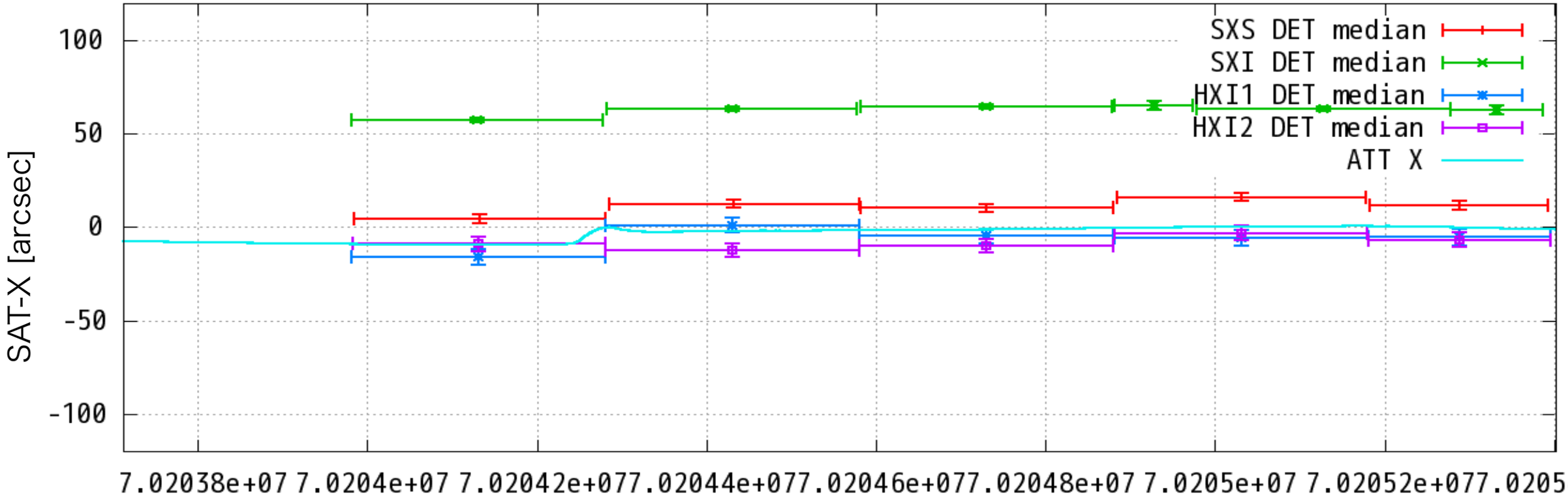


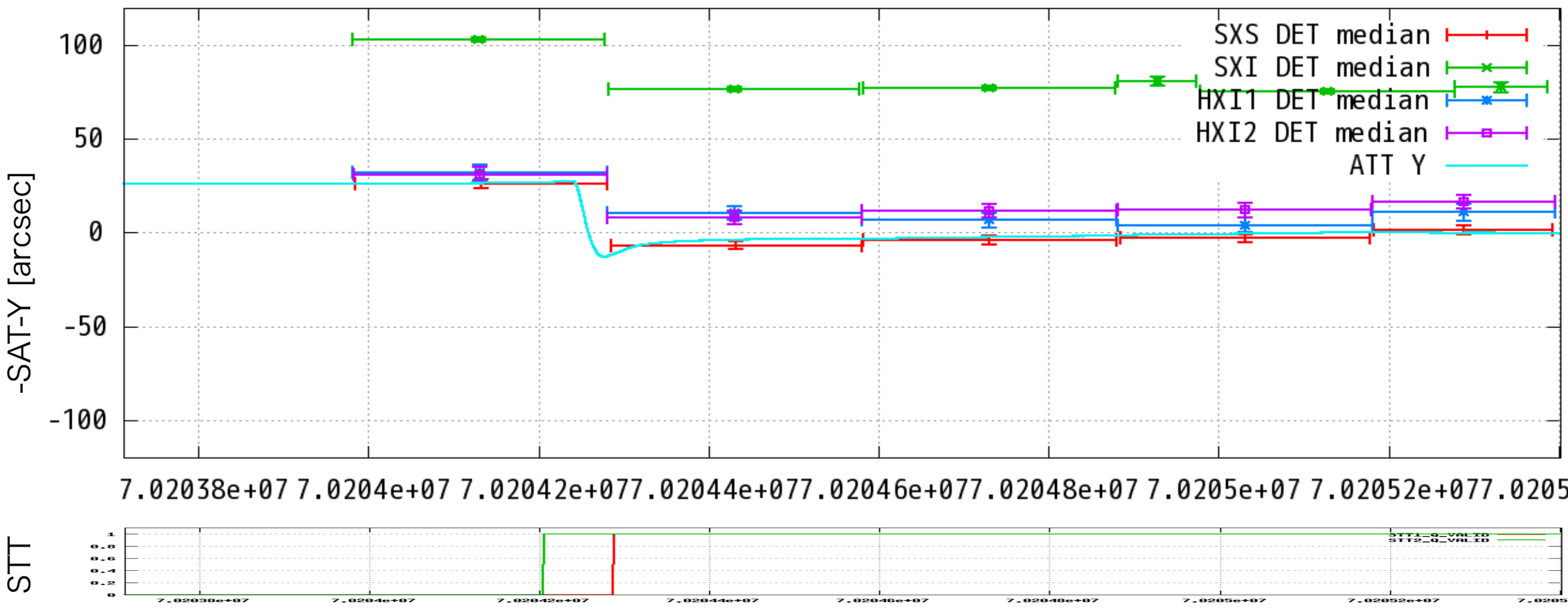


100050050

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-ALL

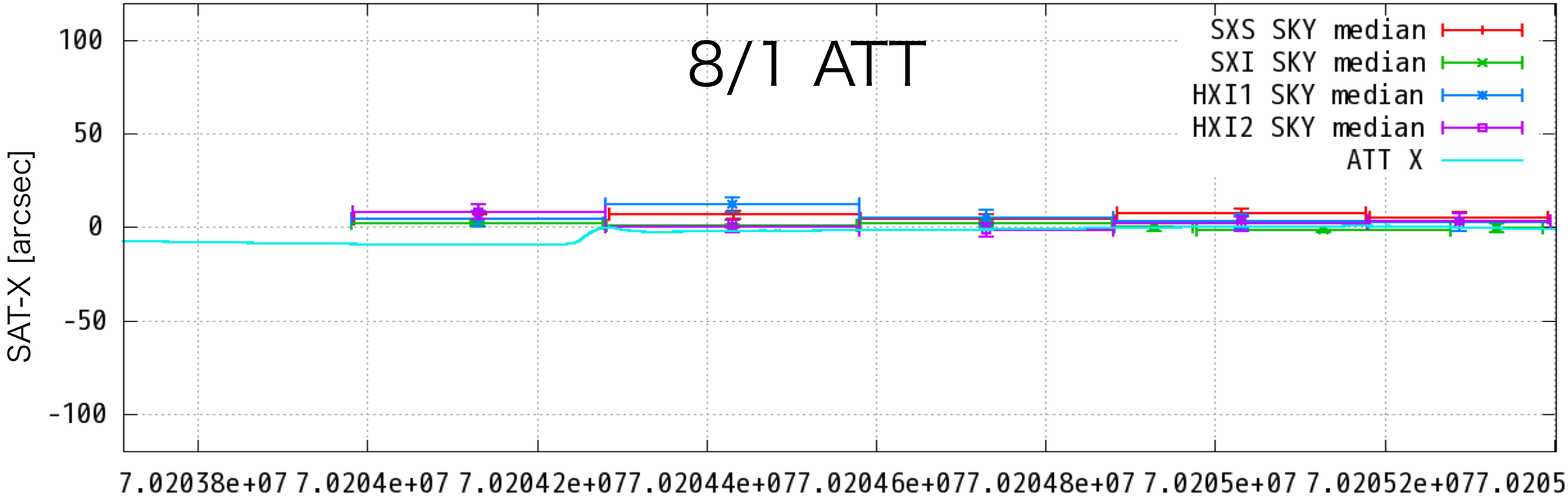


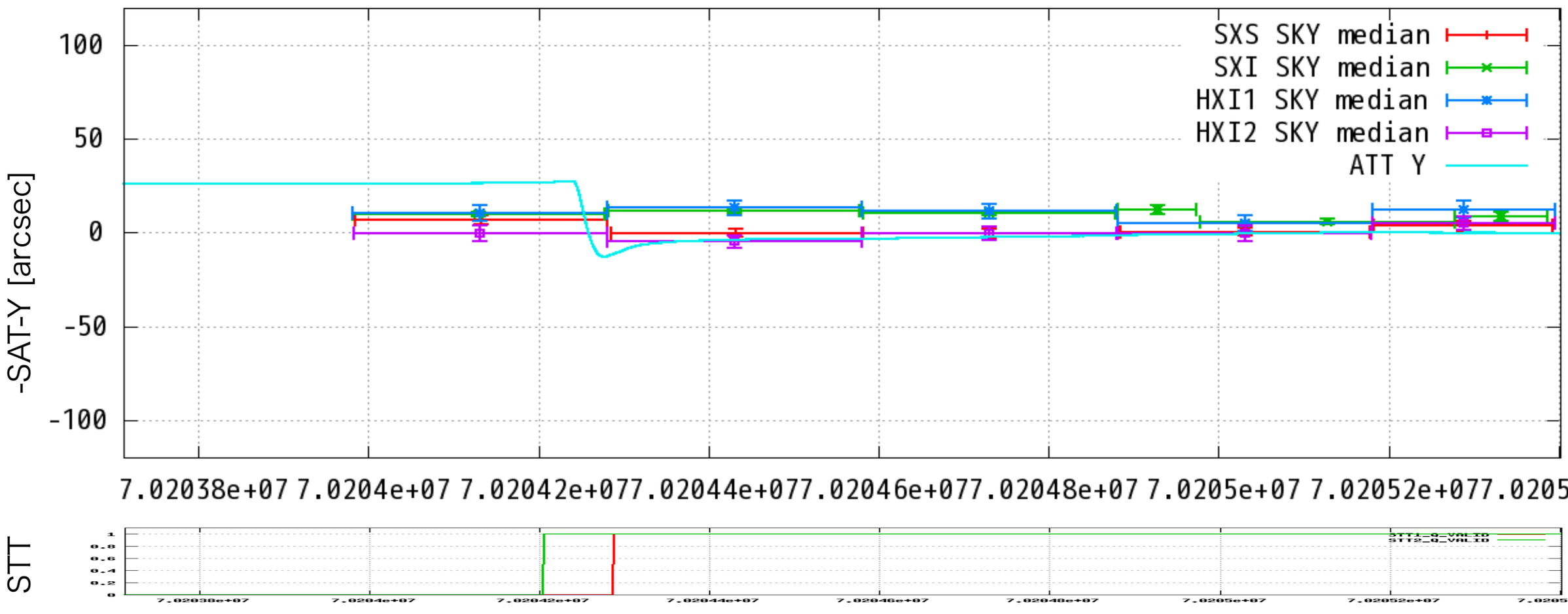


100050050

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL

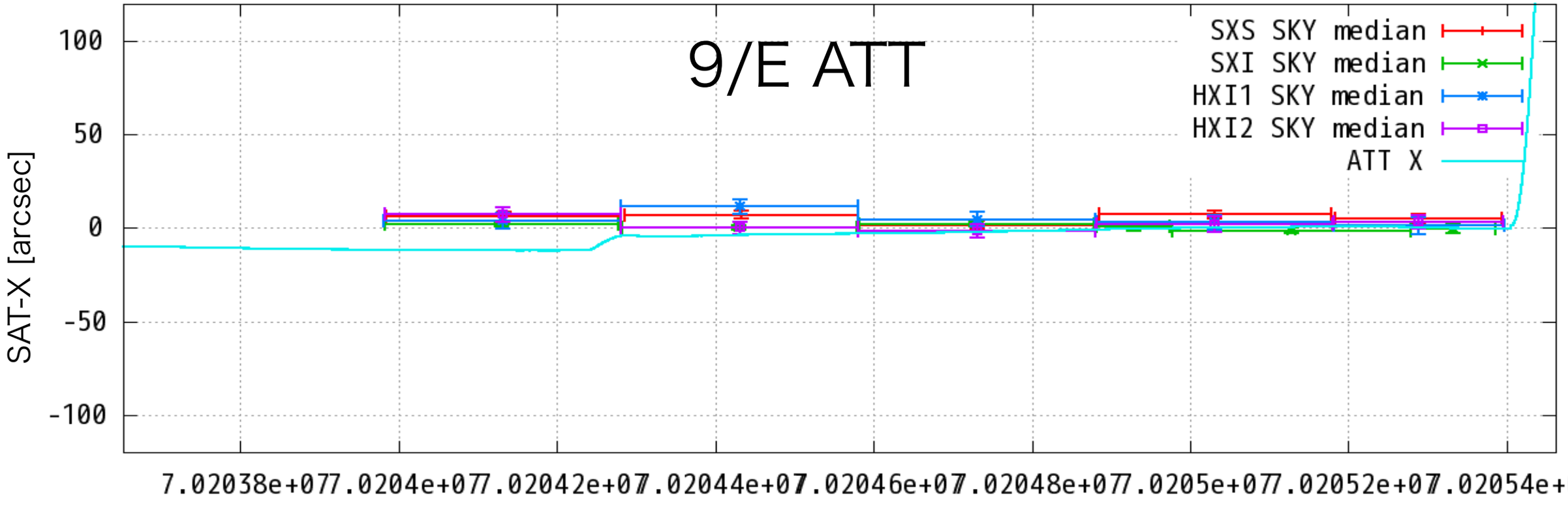


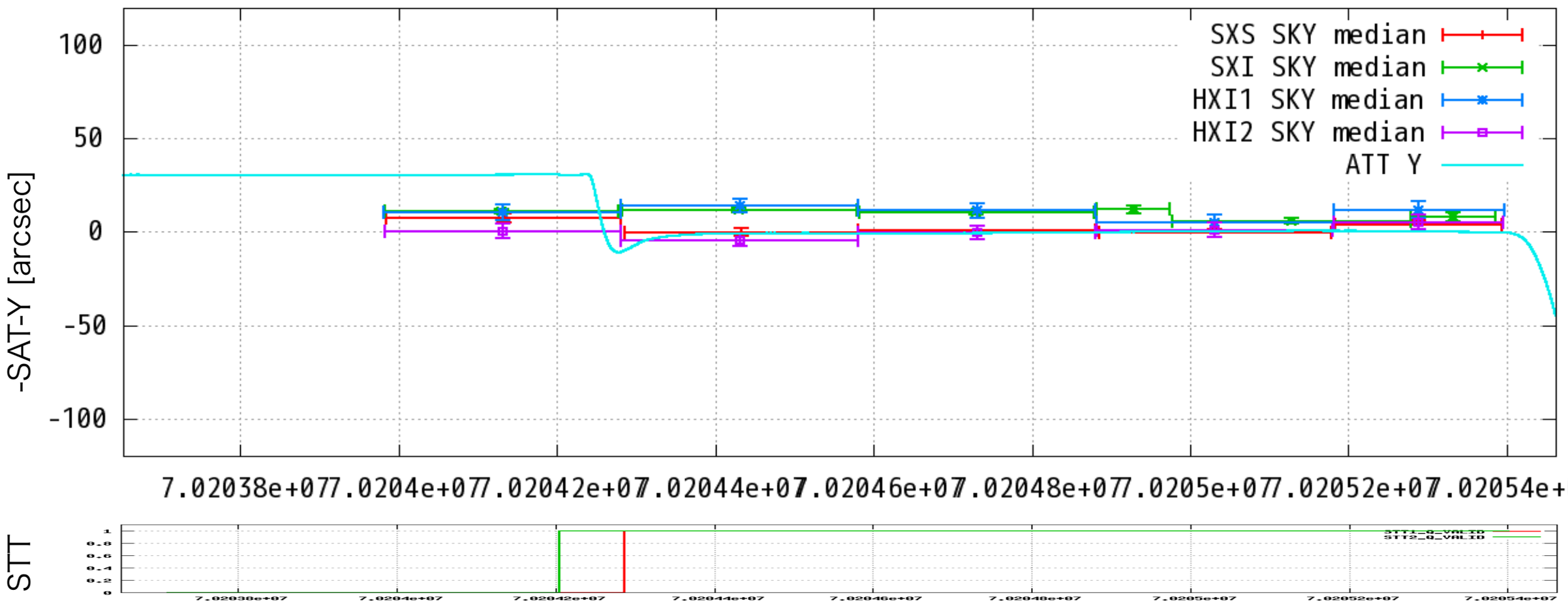


100050050

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-ALL





100050050

STT-ALL

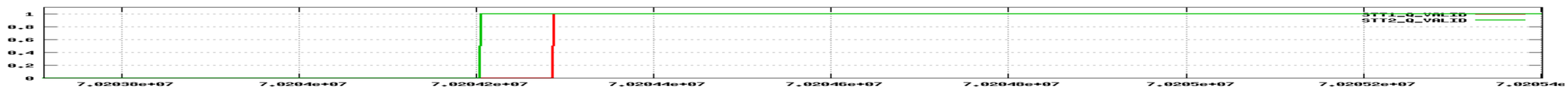
12/E ATT

nothing

SAT-X [arcsec]

-SAT-Y [arcsec]

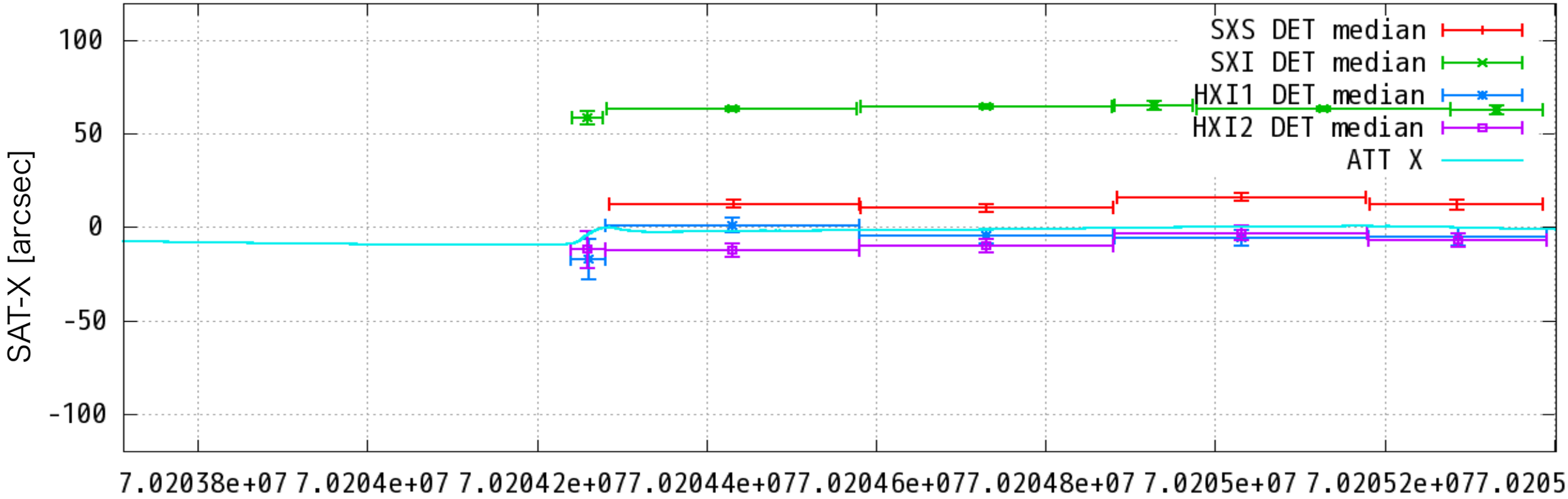
STT

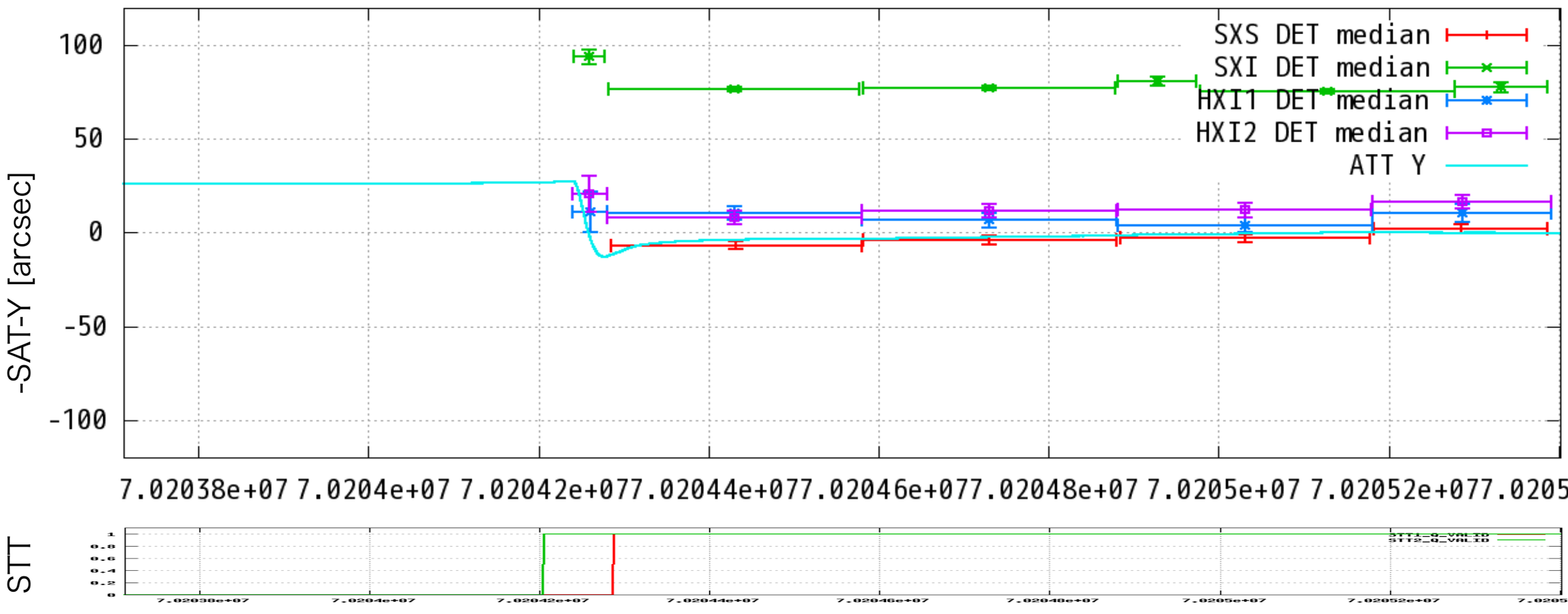


100050050

G21.5-0.9 DET-X/DET-Y (unit: arcsec)

STT-CTL

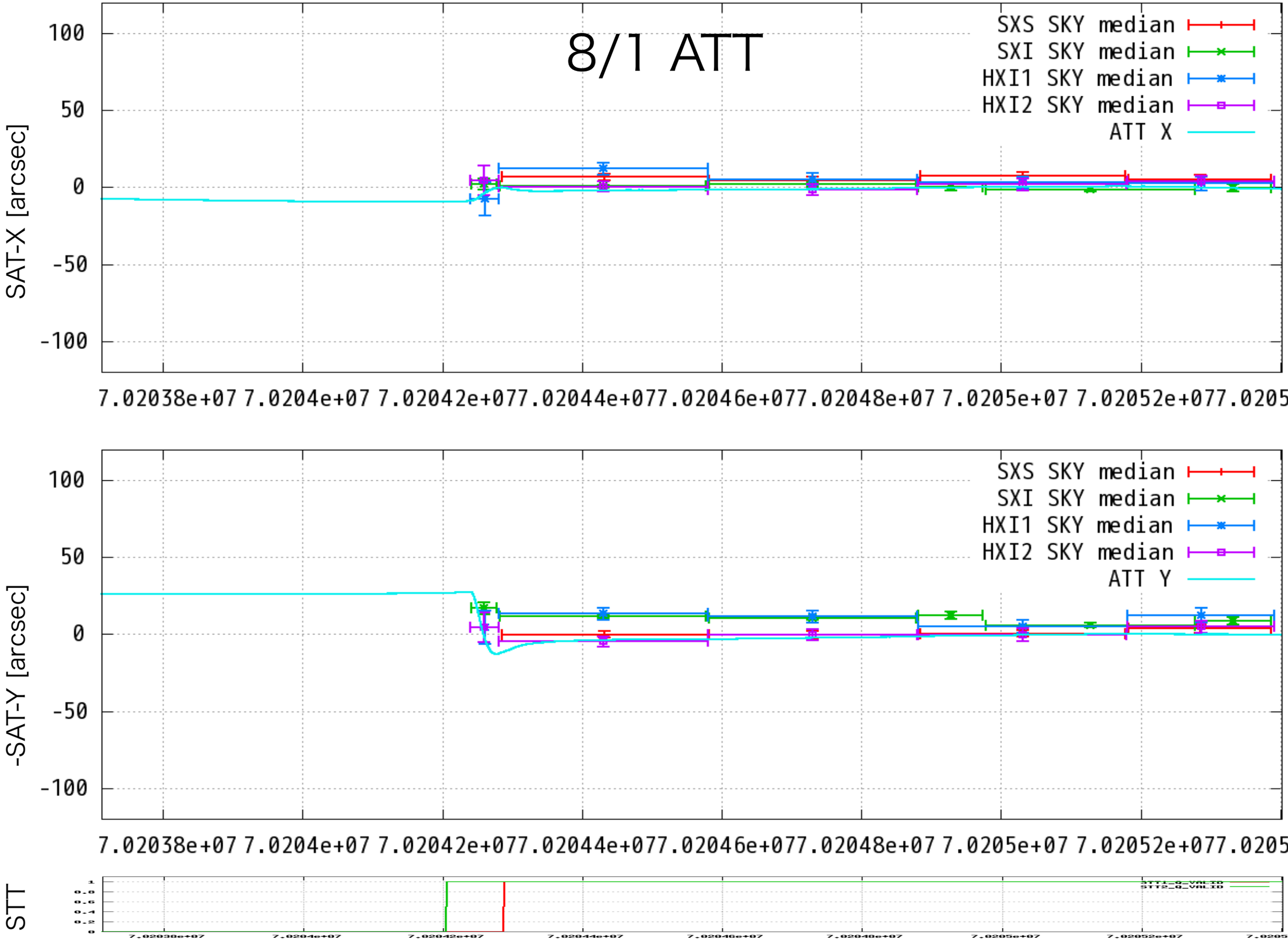




100050050

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

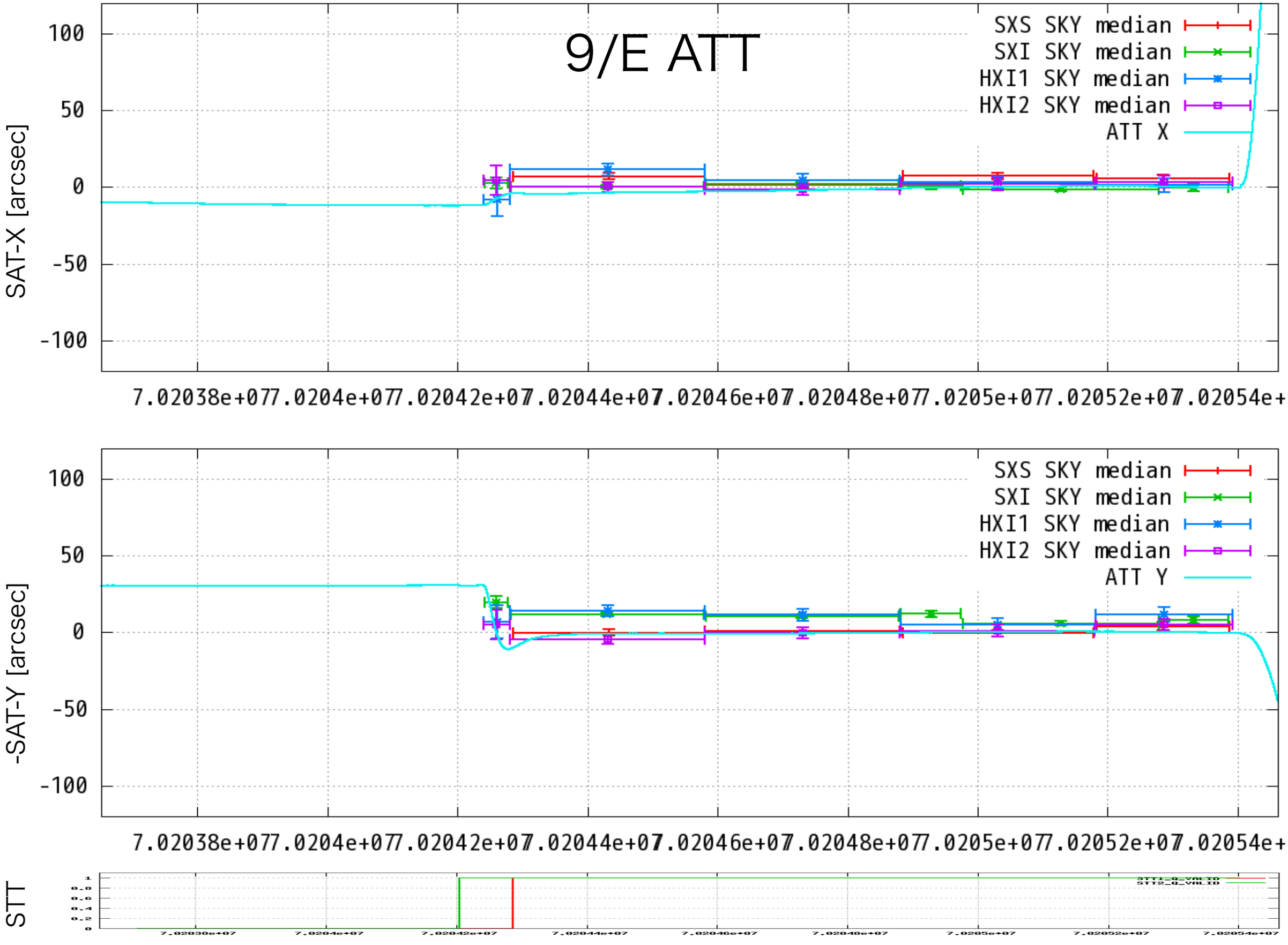
STT-CTL



100050050

G21.5-0.9 SKY-X/SKY-Y (unit: arcsec)

STT-CTL



100050050

STT-CTL

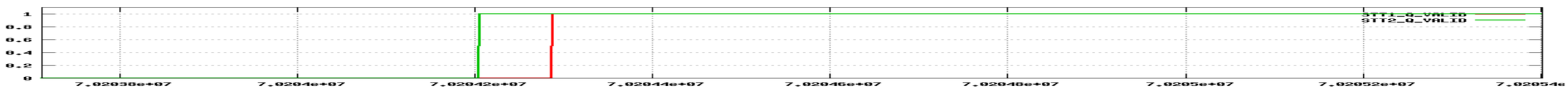
12/E ATT

nothing

SAT-X [arcsec]

-SAT-Y [arcsec]

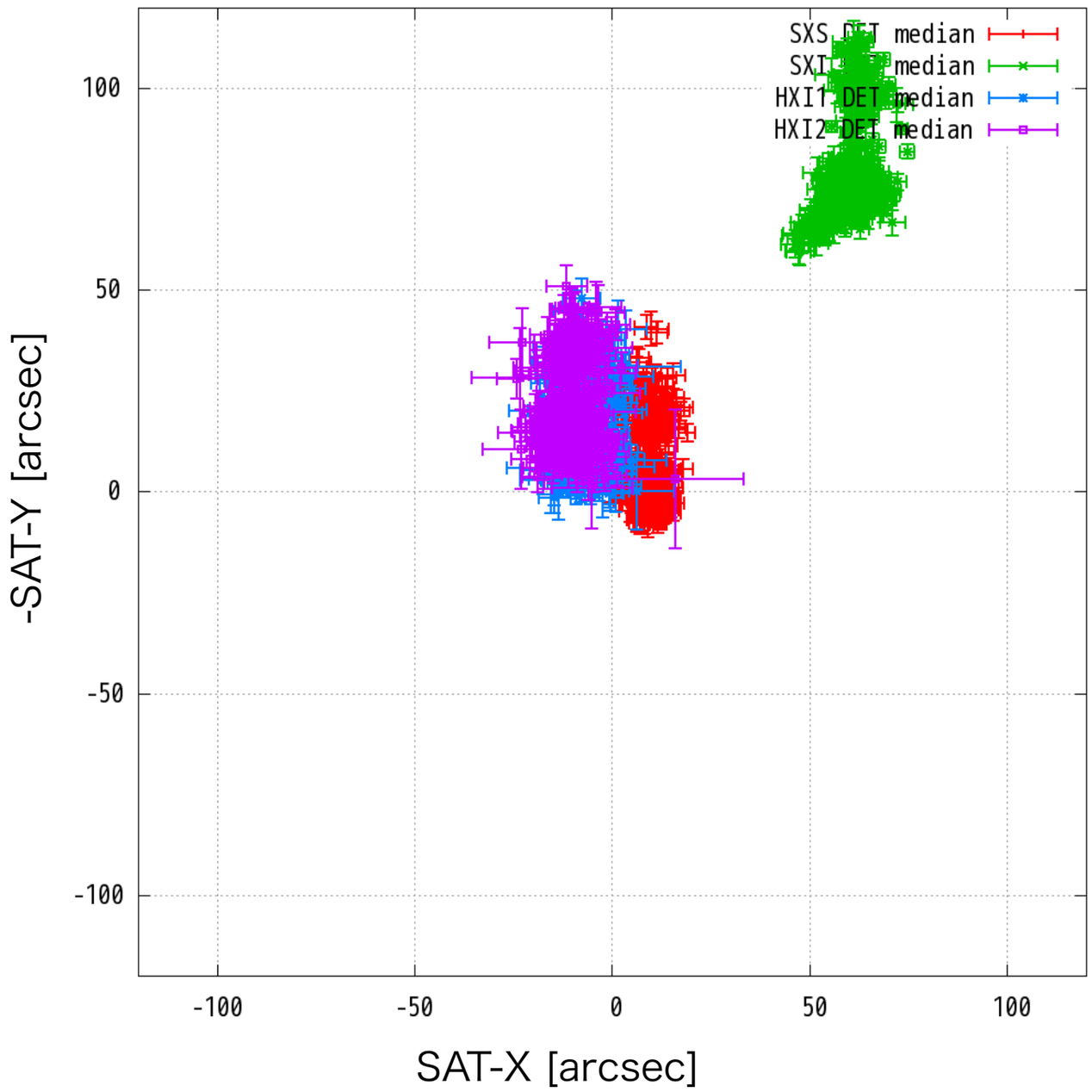
STT



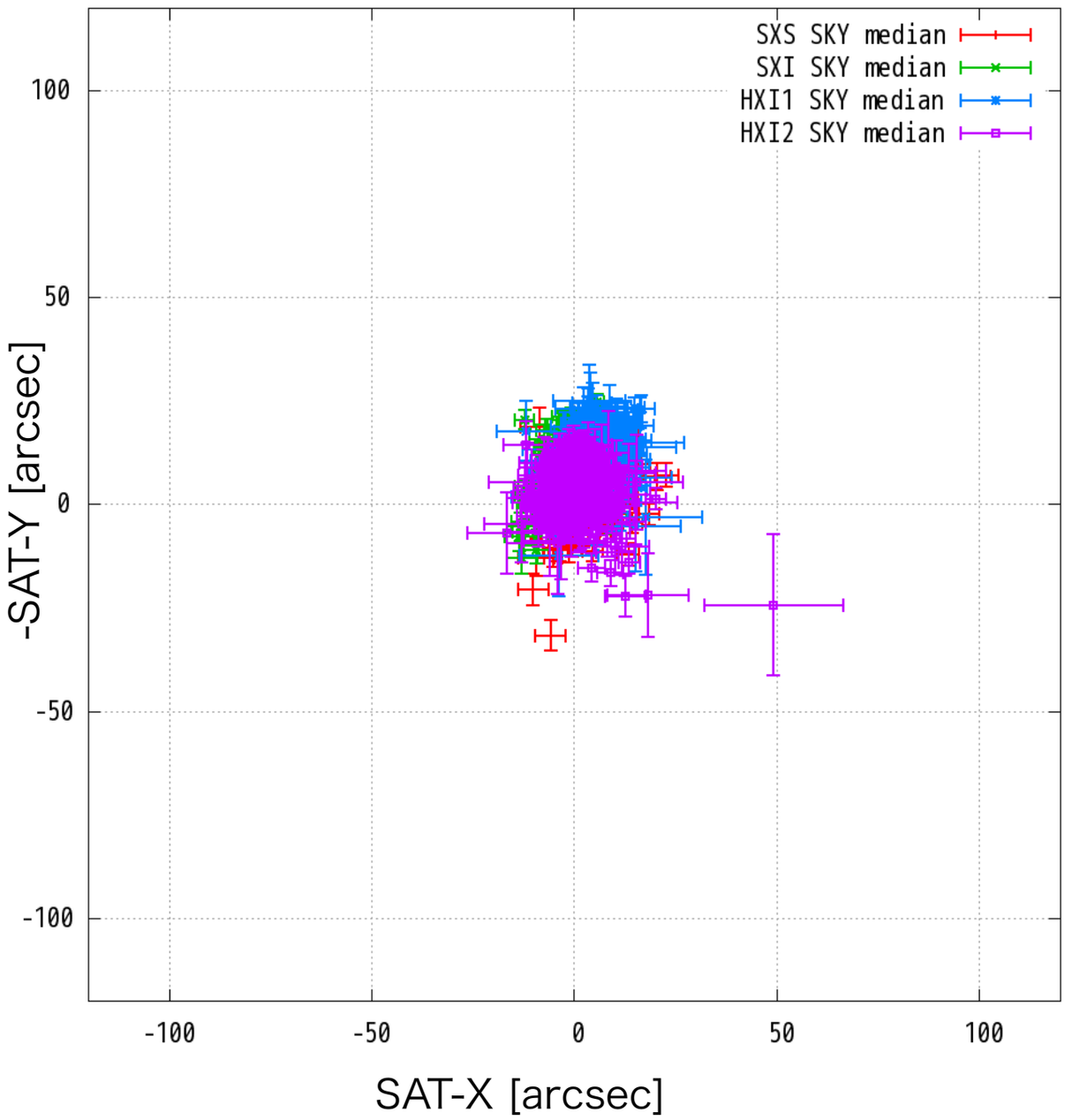
G21.5-0.9 (STT-ALL)
seq: 100050010, 20, 30, 40, 50

8/1 ATT

DET

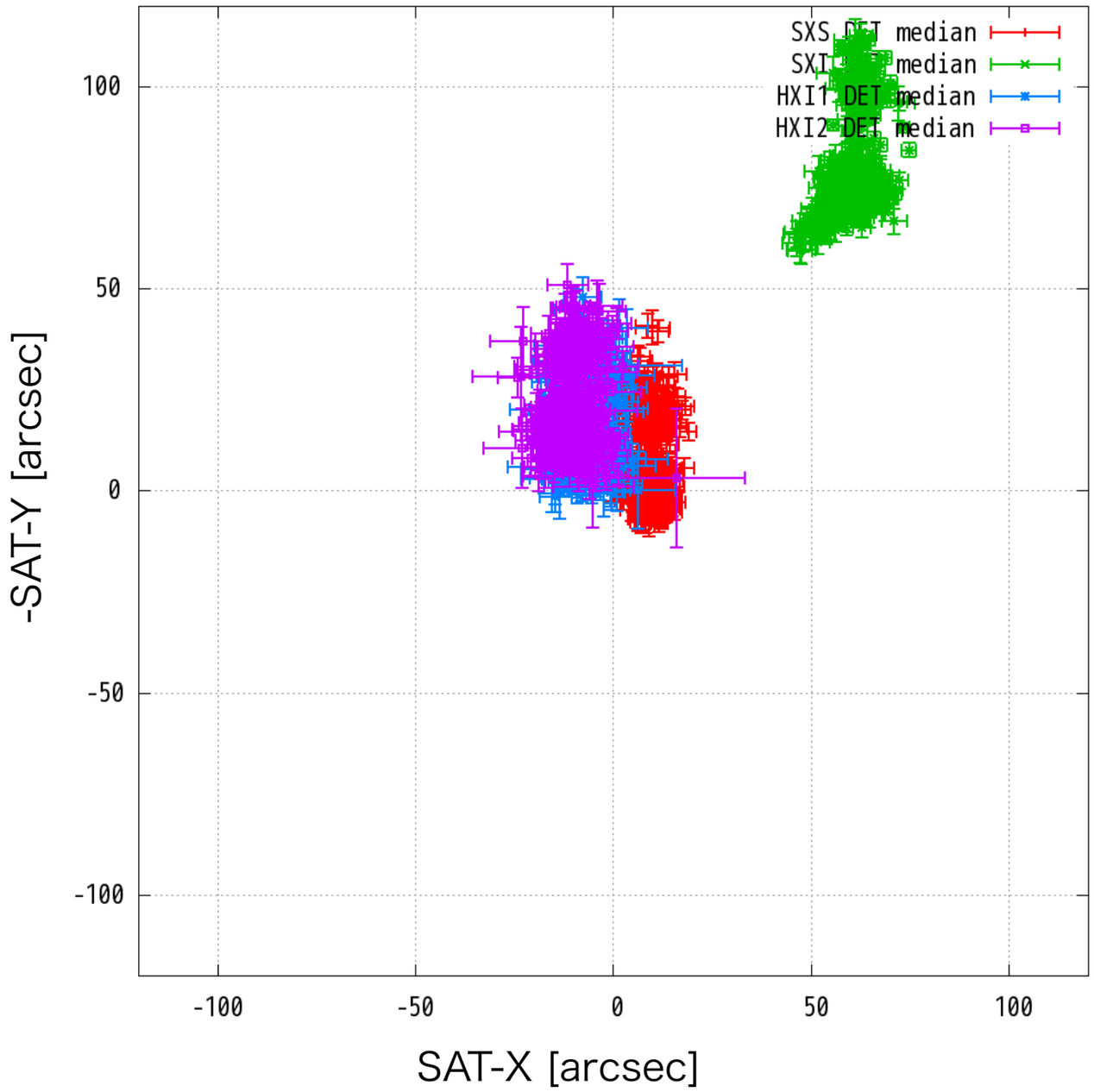


SKY

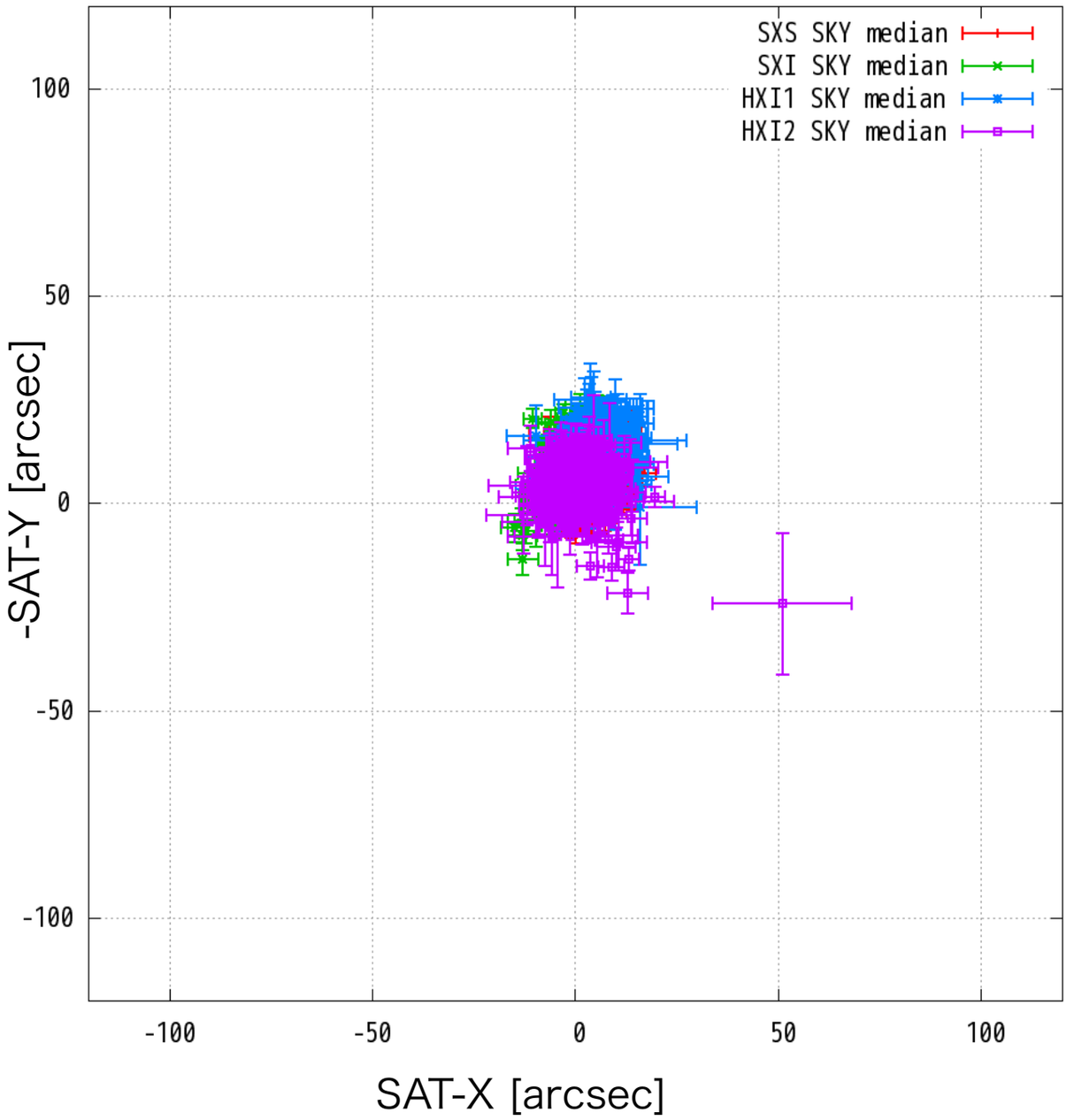


G21.5-0.9 (STT-ALL)
seq: 100050010, 20, 30, 40, 50

DET

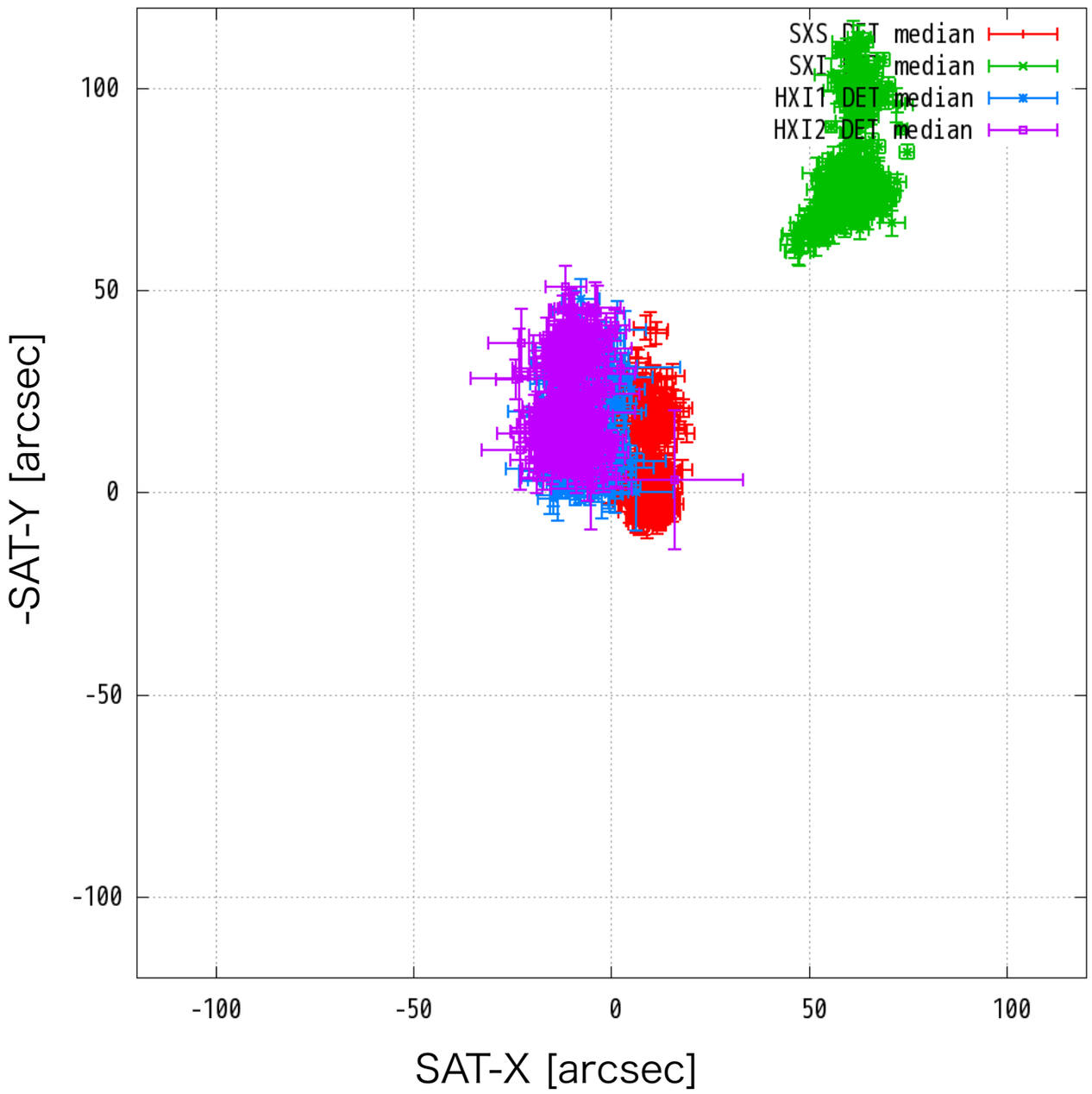


SKY 9/E ATT

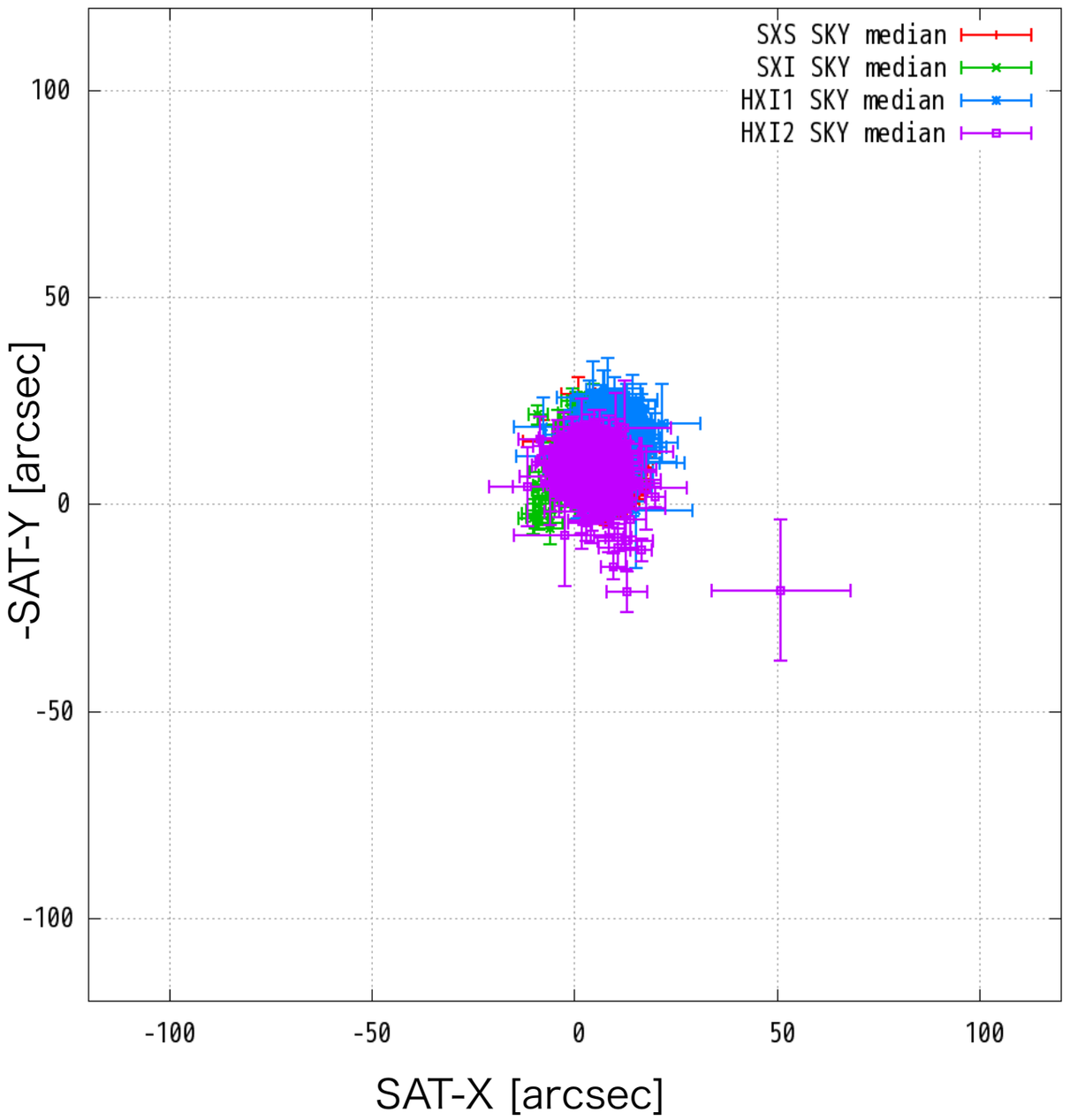


G21.5-0.9 (STT-ALL)
seq: 100050010, 20, 30, 40, 50

DET



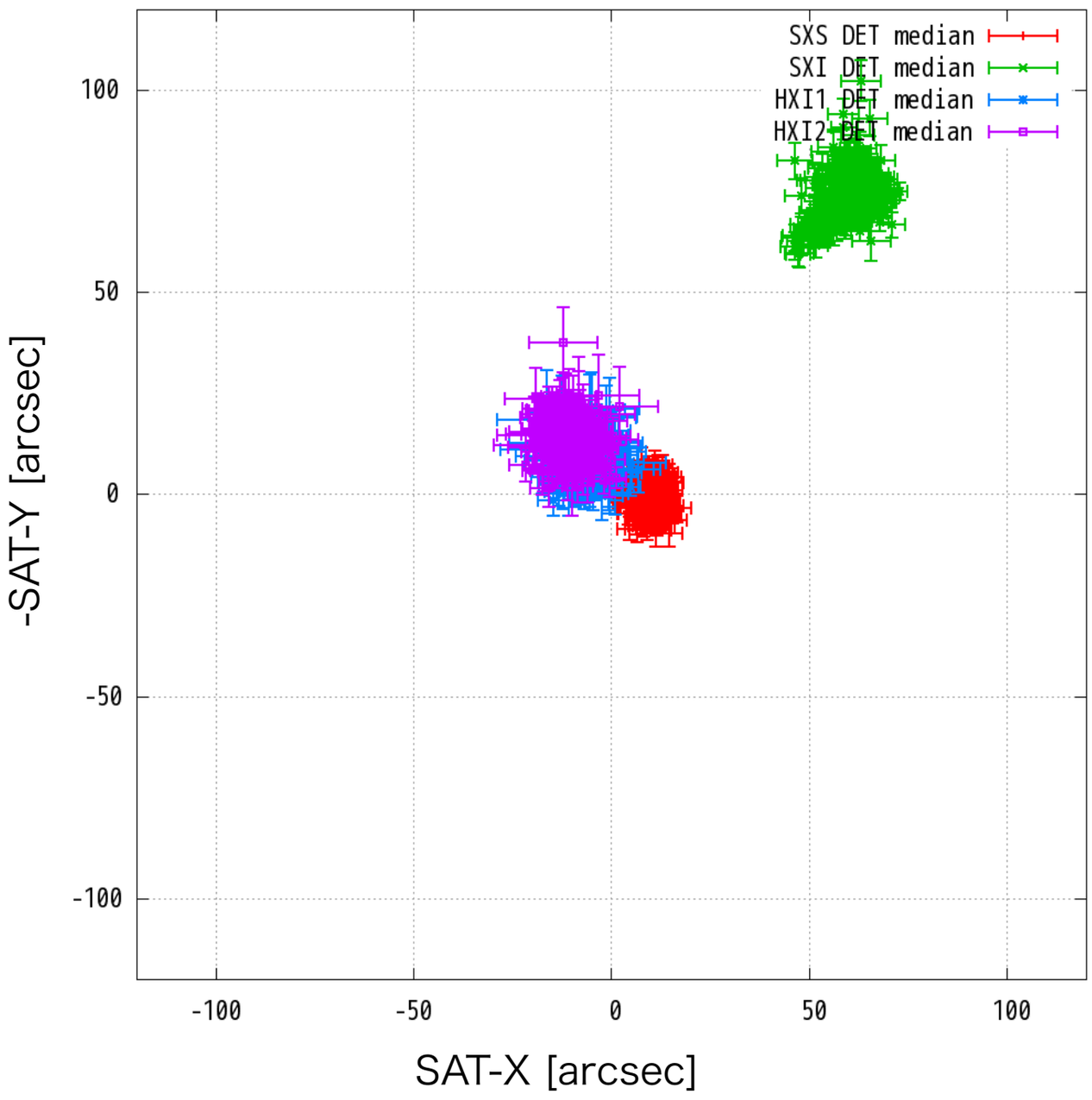
SKY 12/E ATT



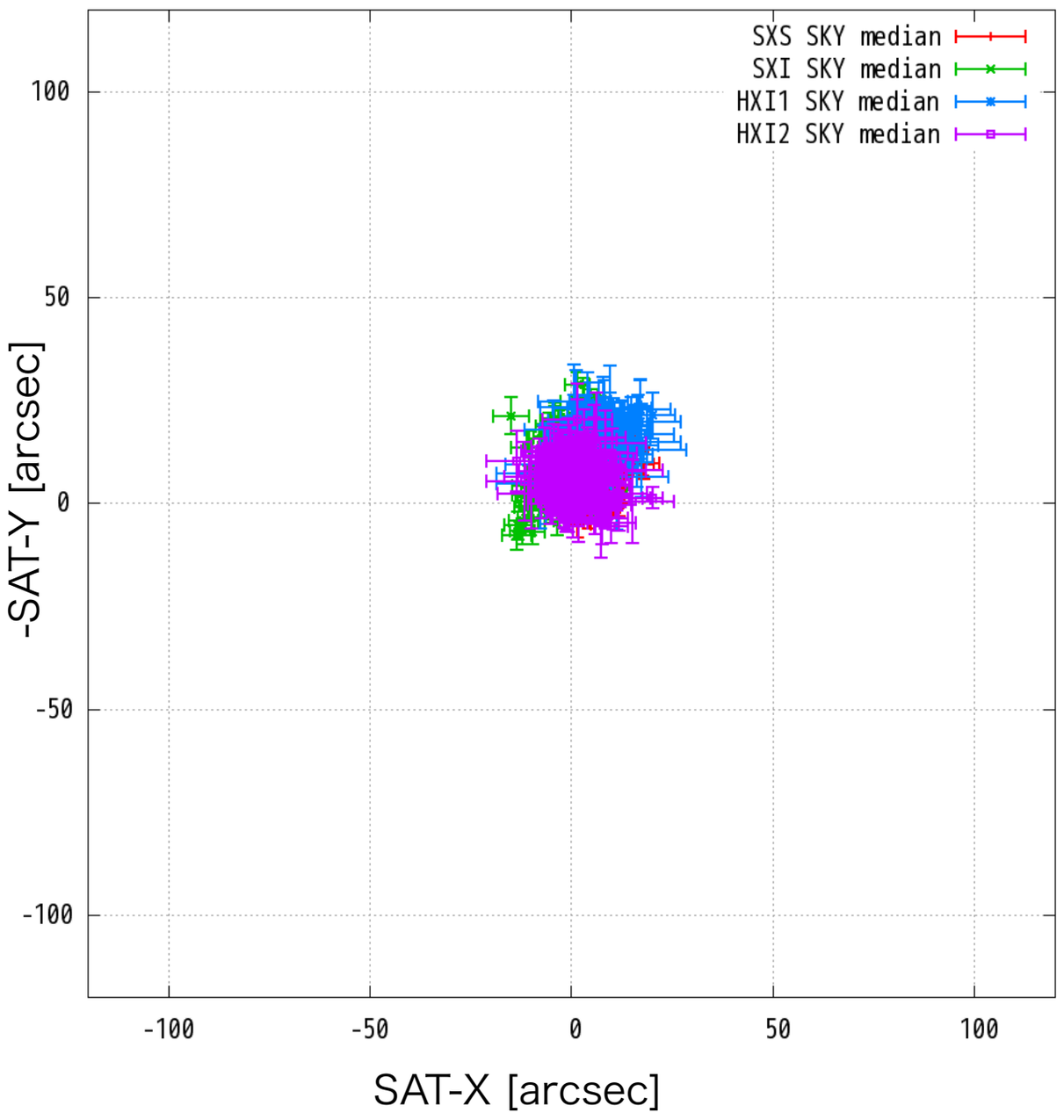
G21.5-0.9 (STT-CTL)
seq: 100050010, 20, 30, 40, 50

8/1 ATT

DET

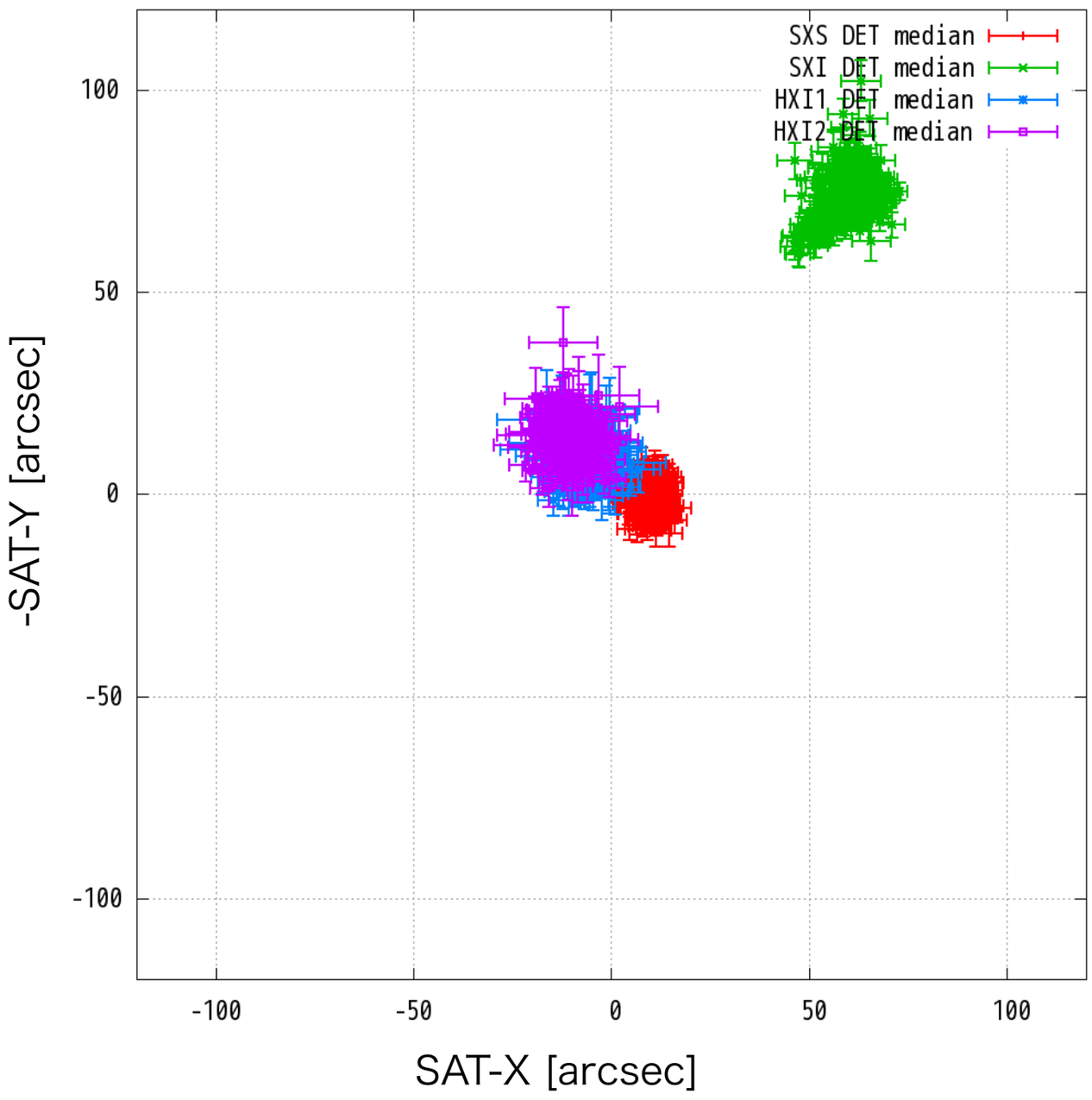


SKY



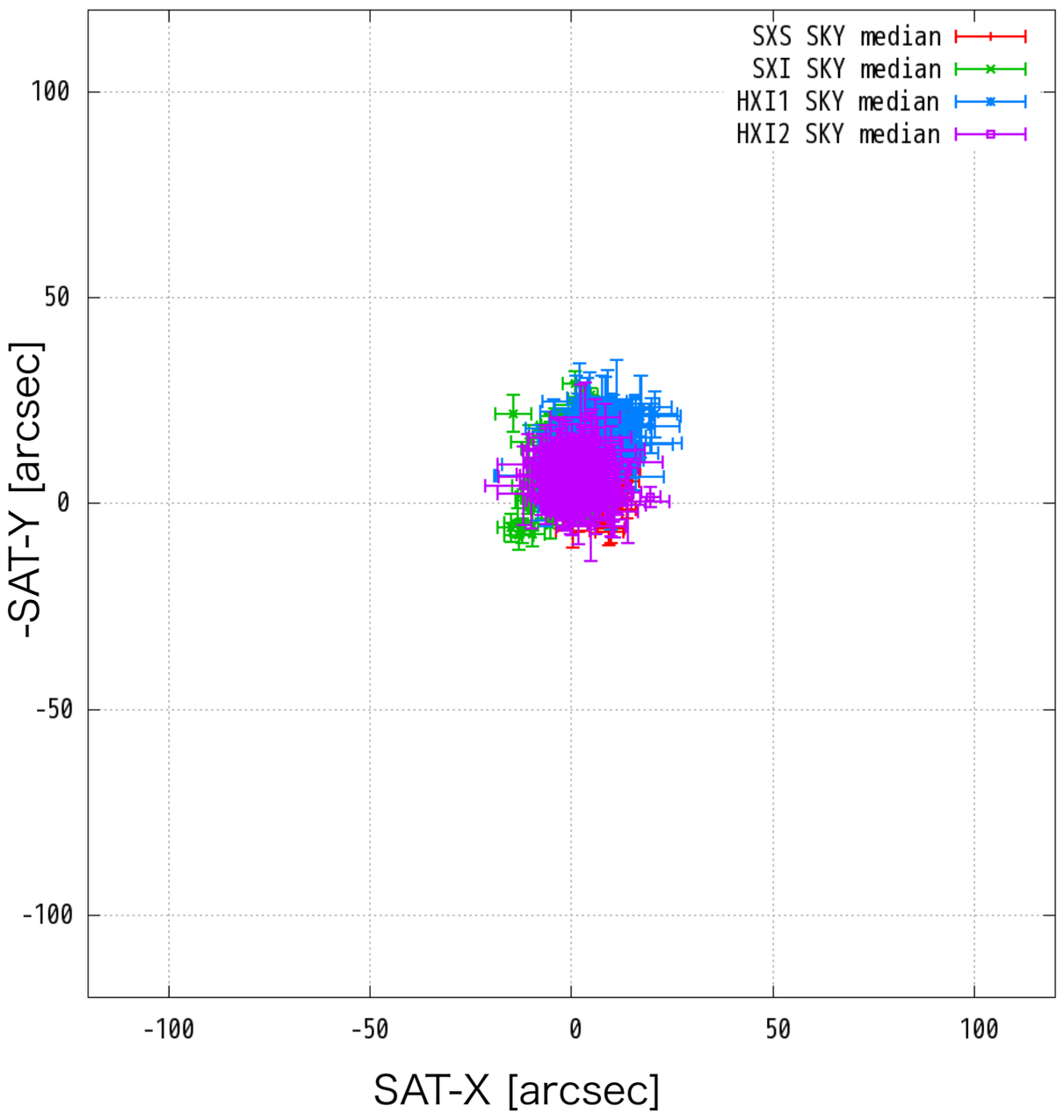
G21.5-0.9 (STT-CTL)
seq: 100050010, 20, 30, 40, 50

DET



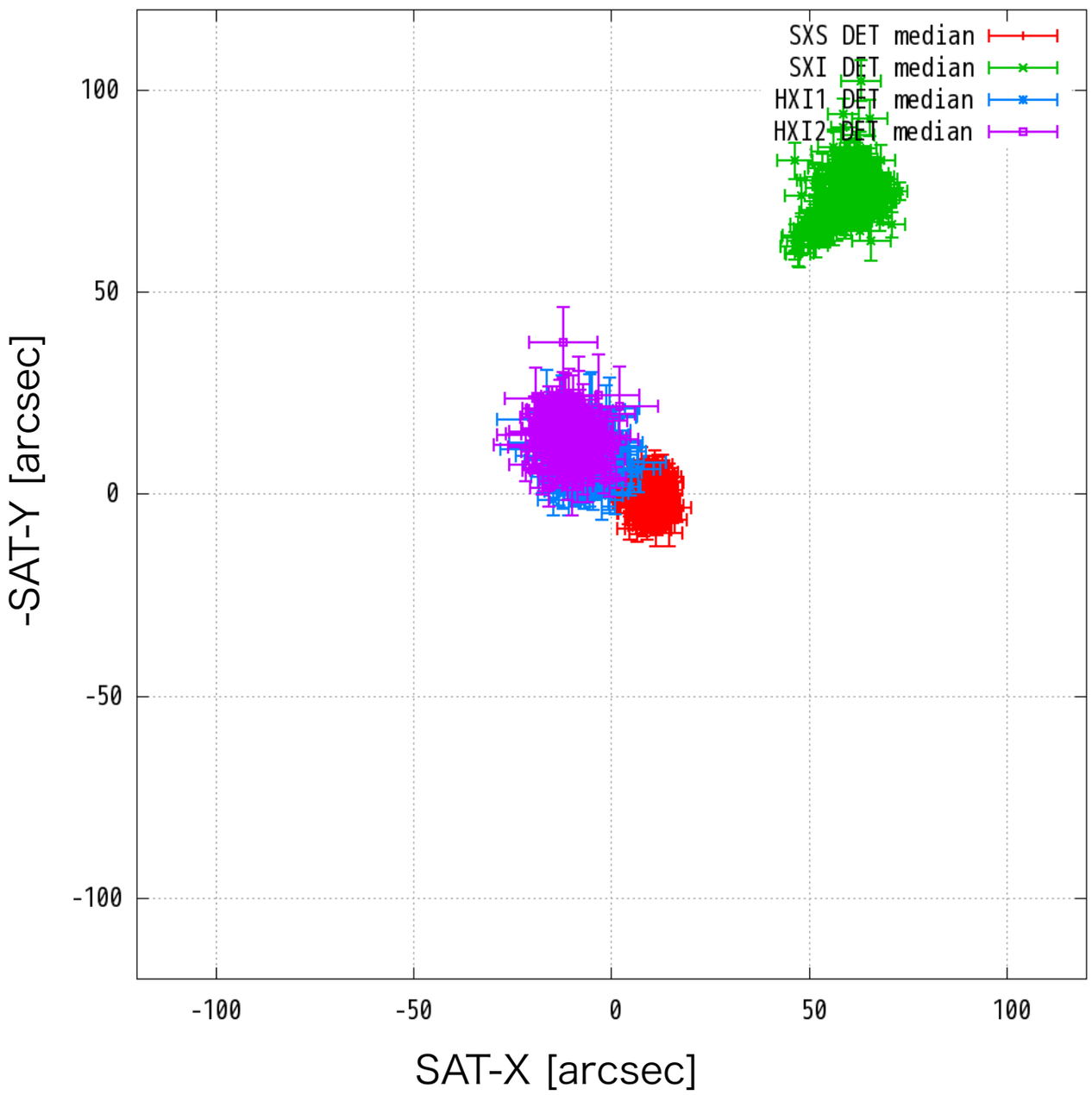
SKY

9/E ATT

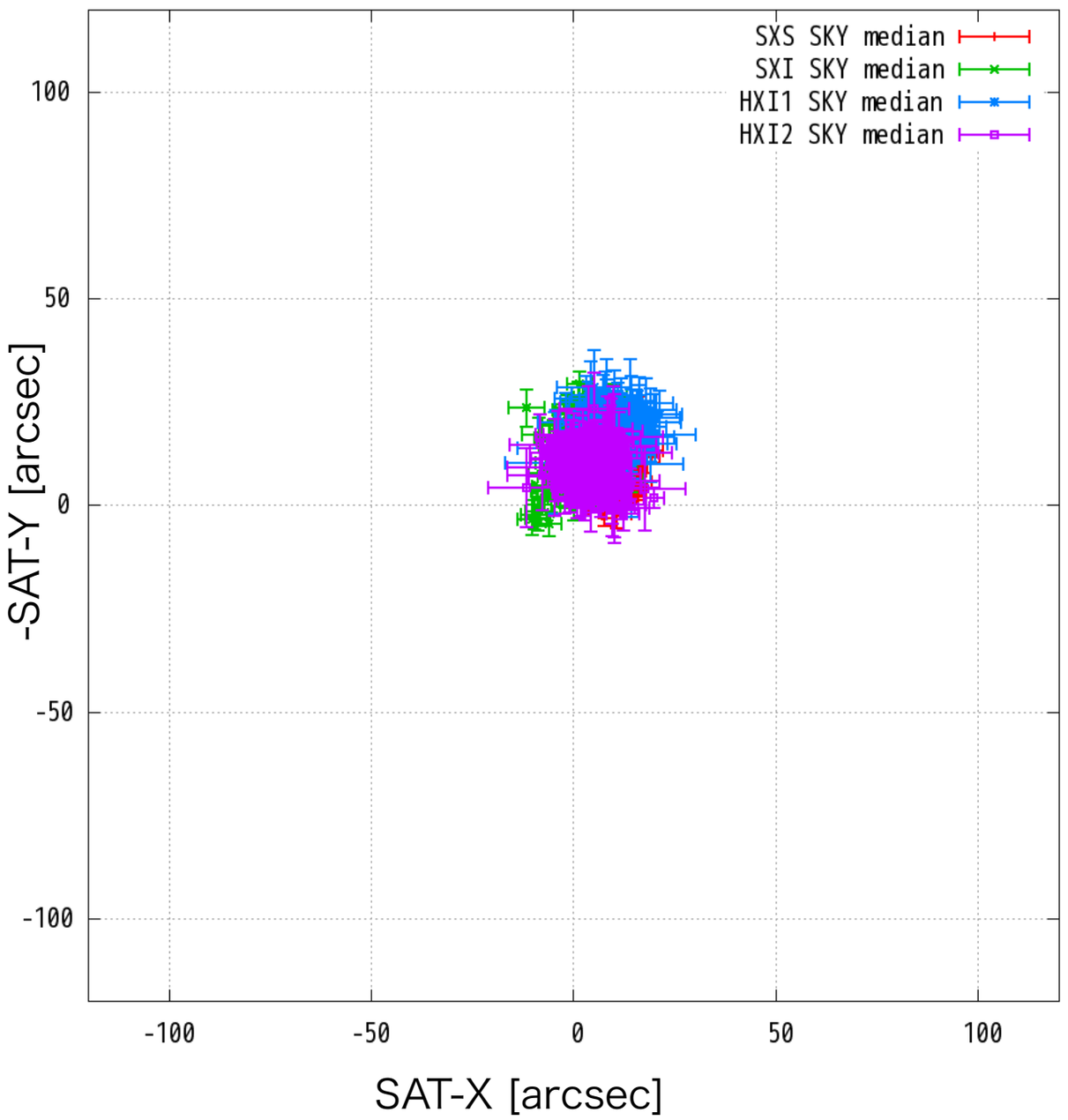


G21.5-0.9 (STT-CTL)
seq: 100050010, 20, 30, 40, 50

DET

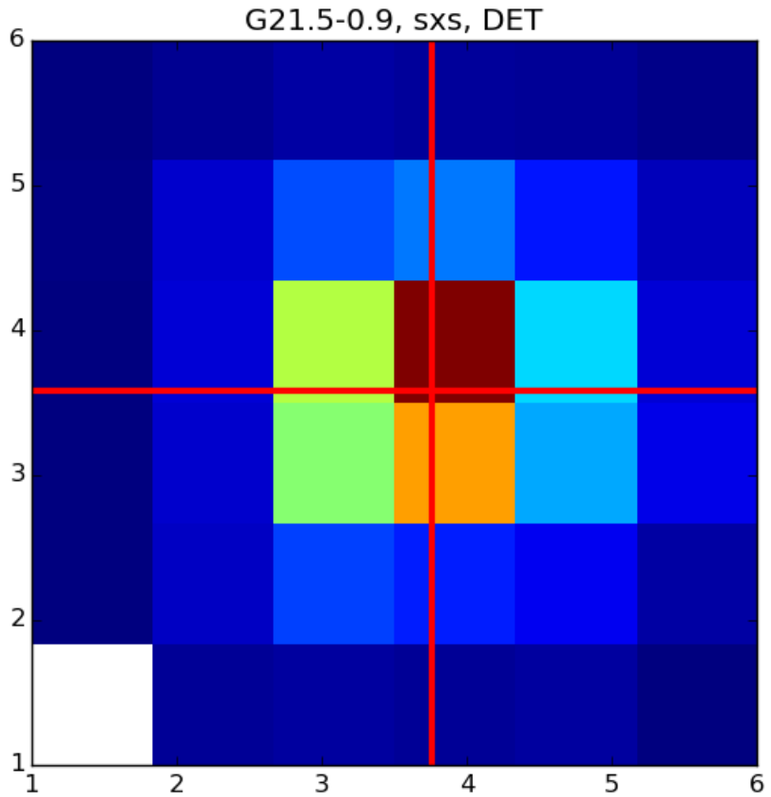


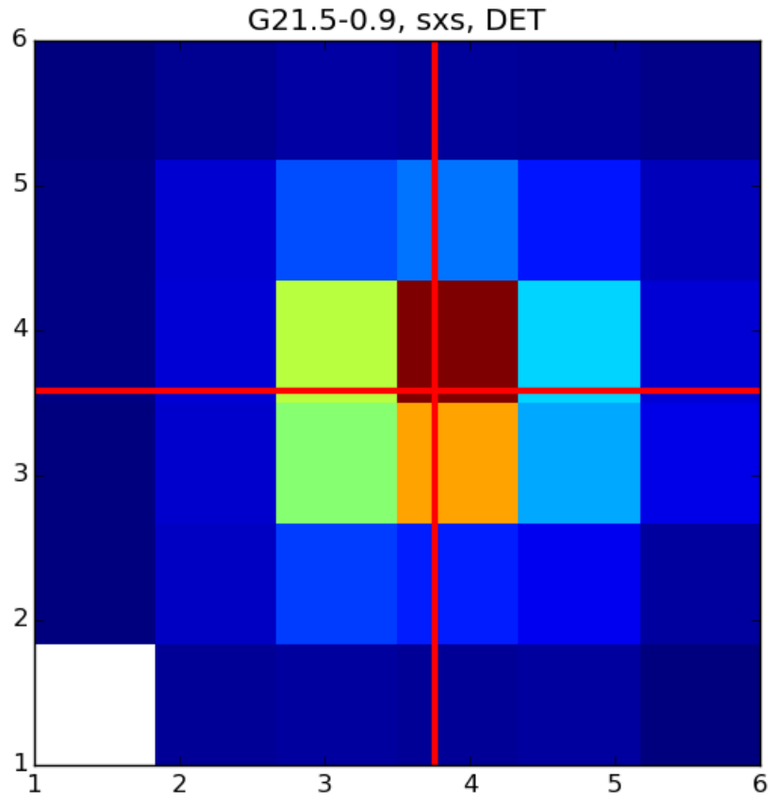
SKY 12/E ATT



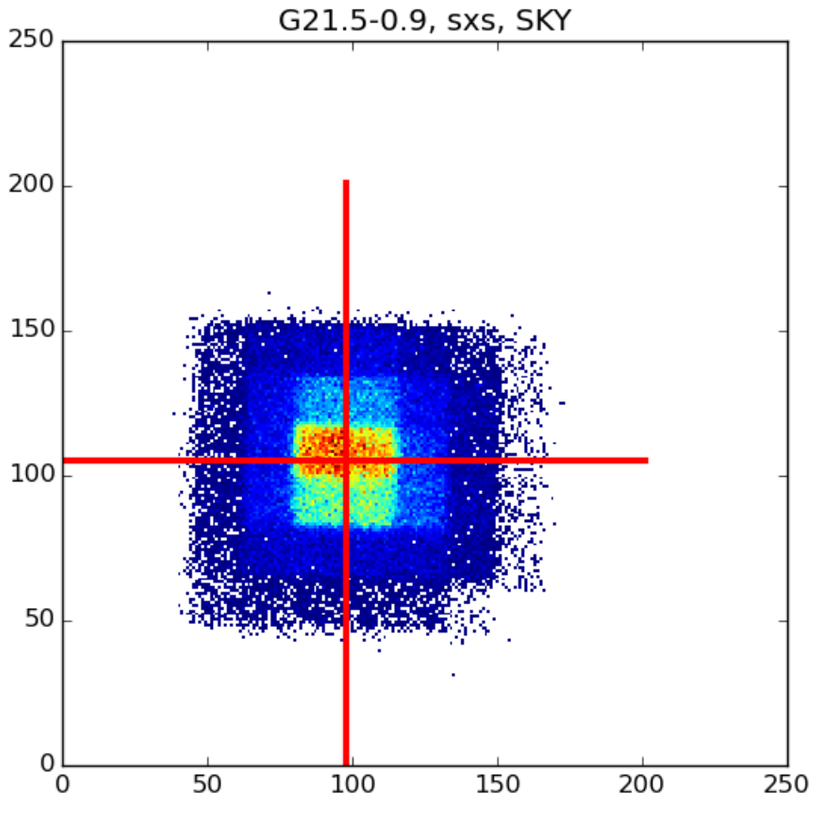
G21.5-0.9
(STT-ALL)
seq: 10005010,20,30,40,50

+ 2d lorentz center
+ simbad center
(12/E only)

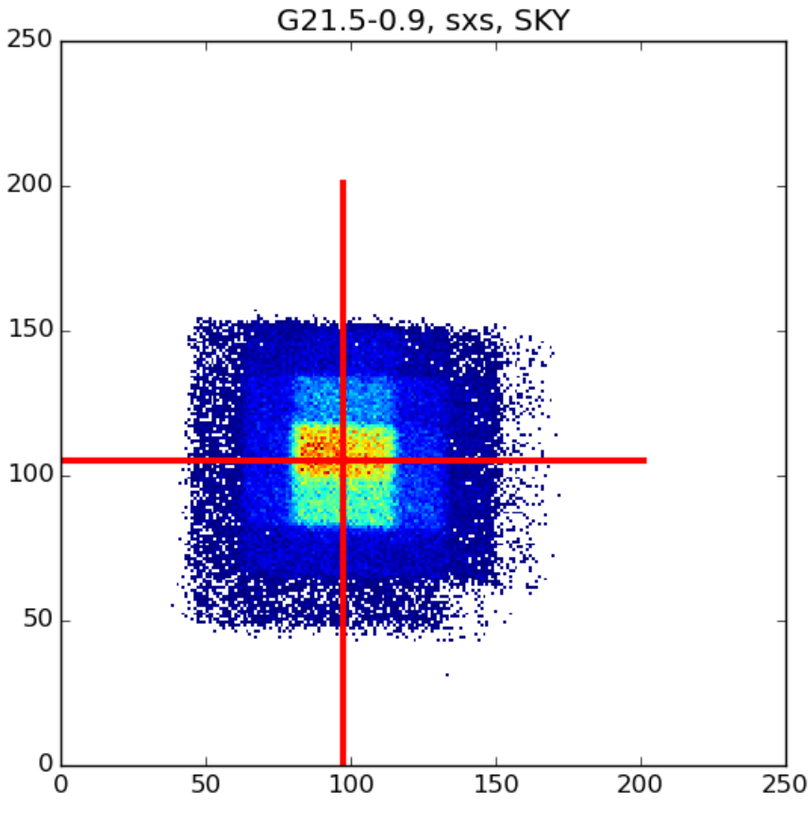




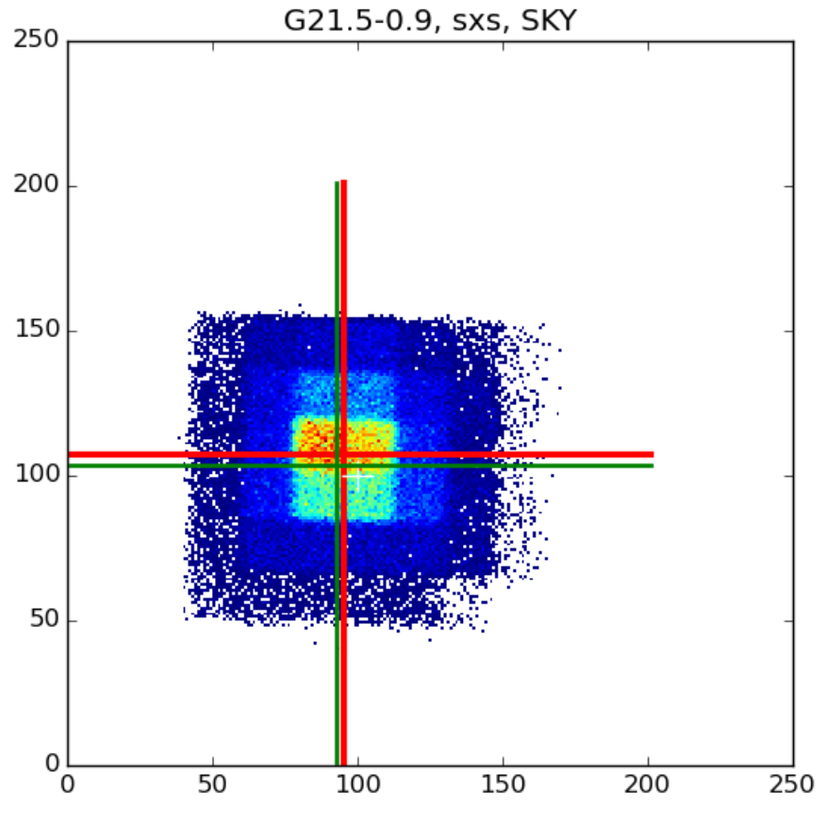
8/1 ATT



9/E ATT



12/E ATT



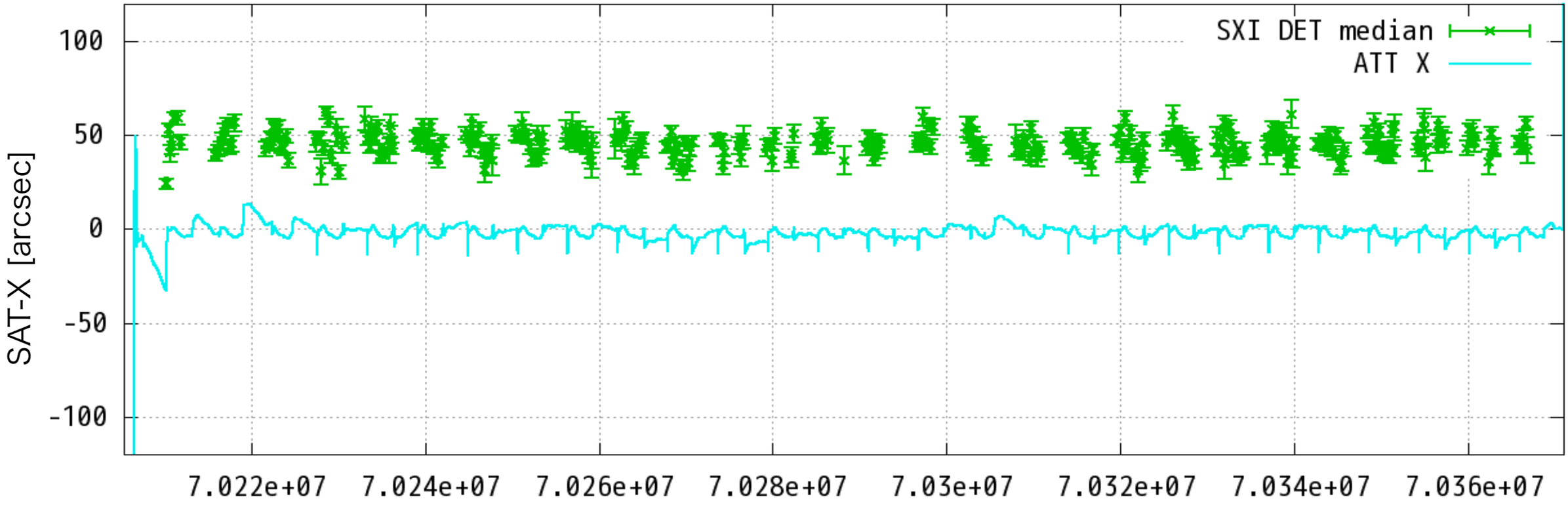
RXJ1856.5-3754

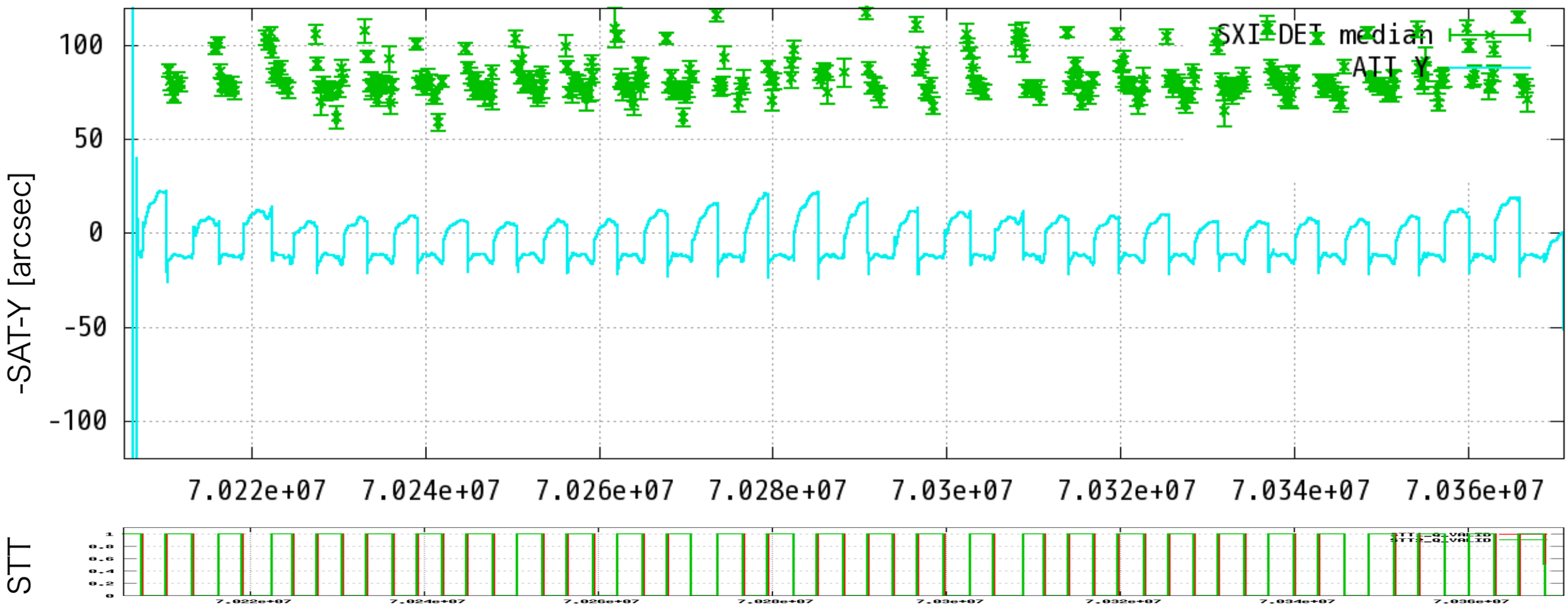
100043050, 60

100043050, 60

RXJ1856.5-3754 DET-X/DET-Y (unit: arcsec)

STT-ALL

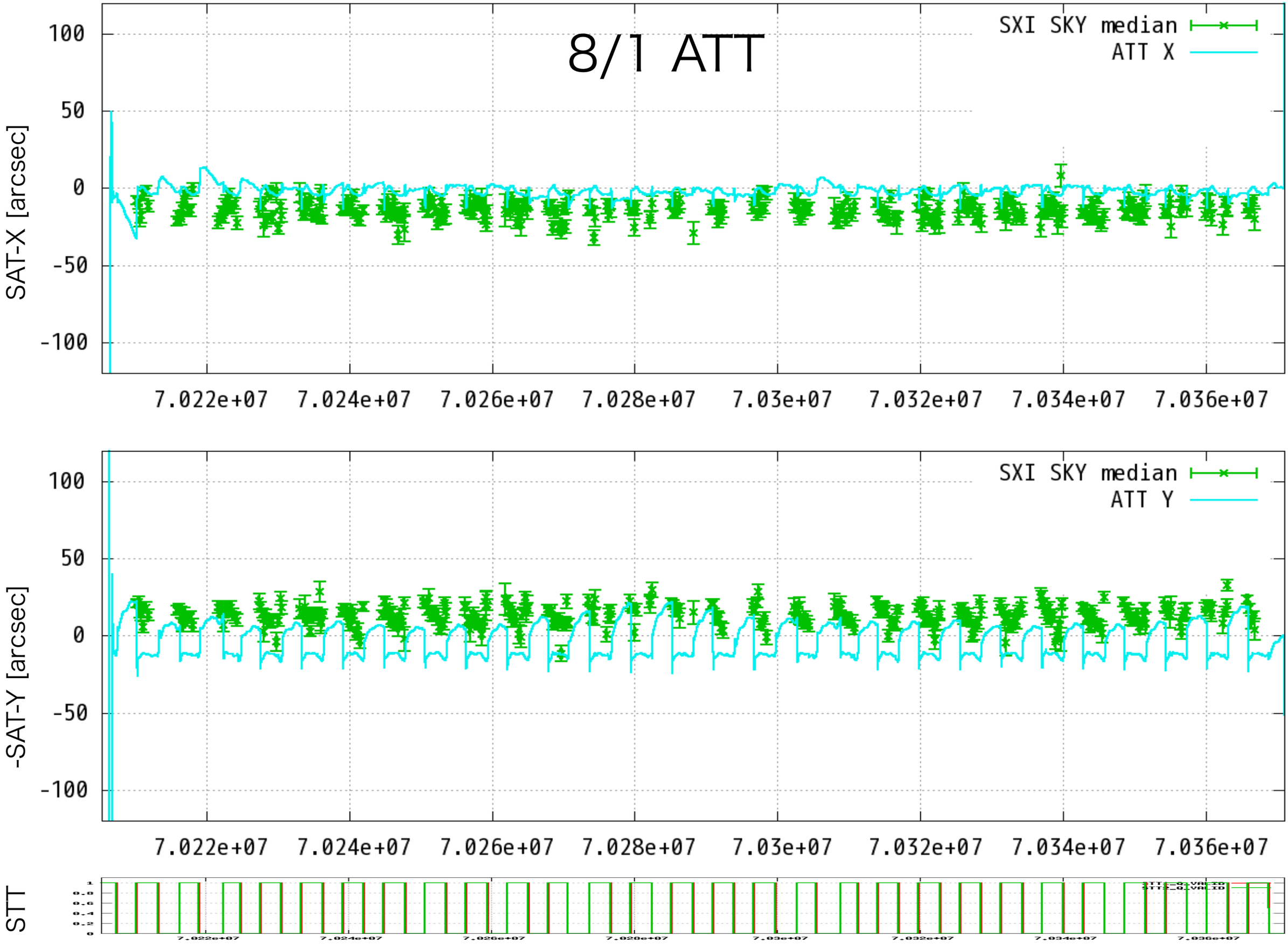




100043050, 60

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

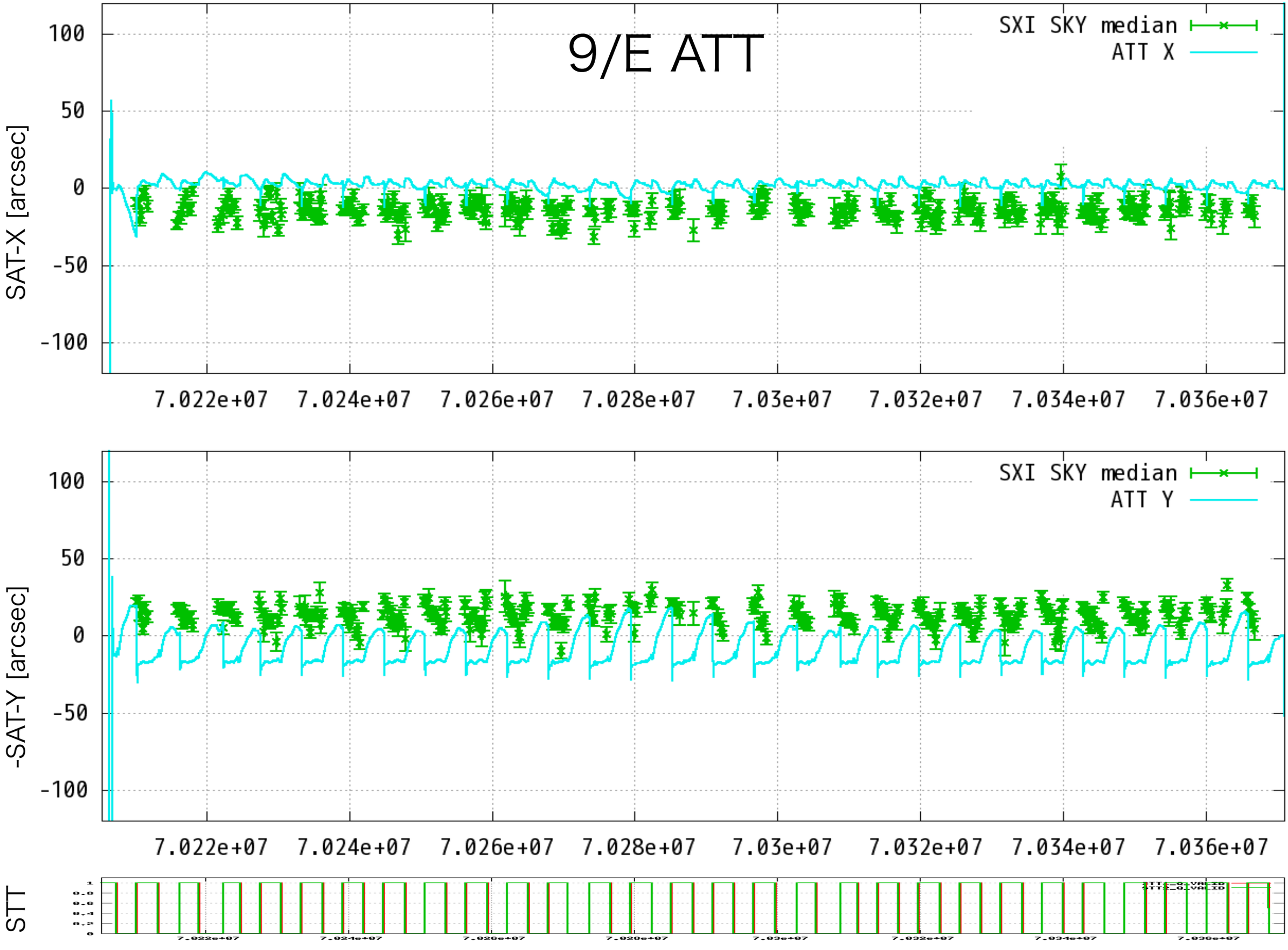
STT-ALL



100043050, 60

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

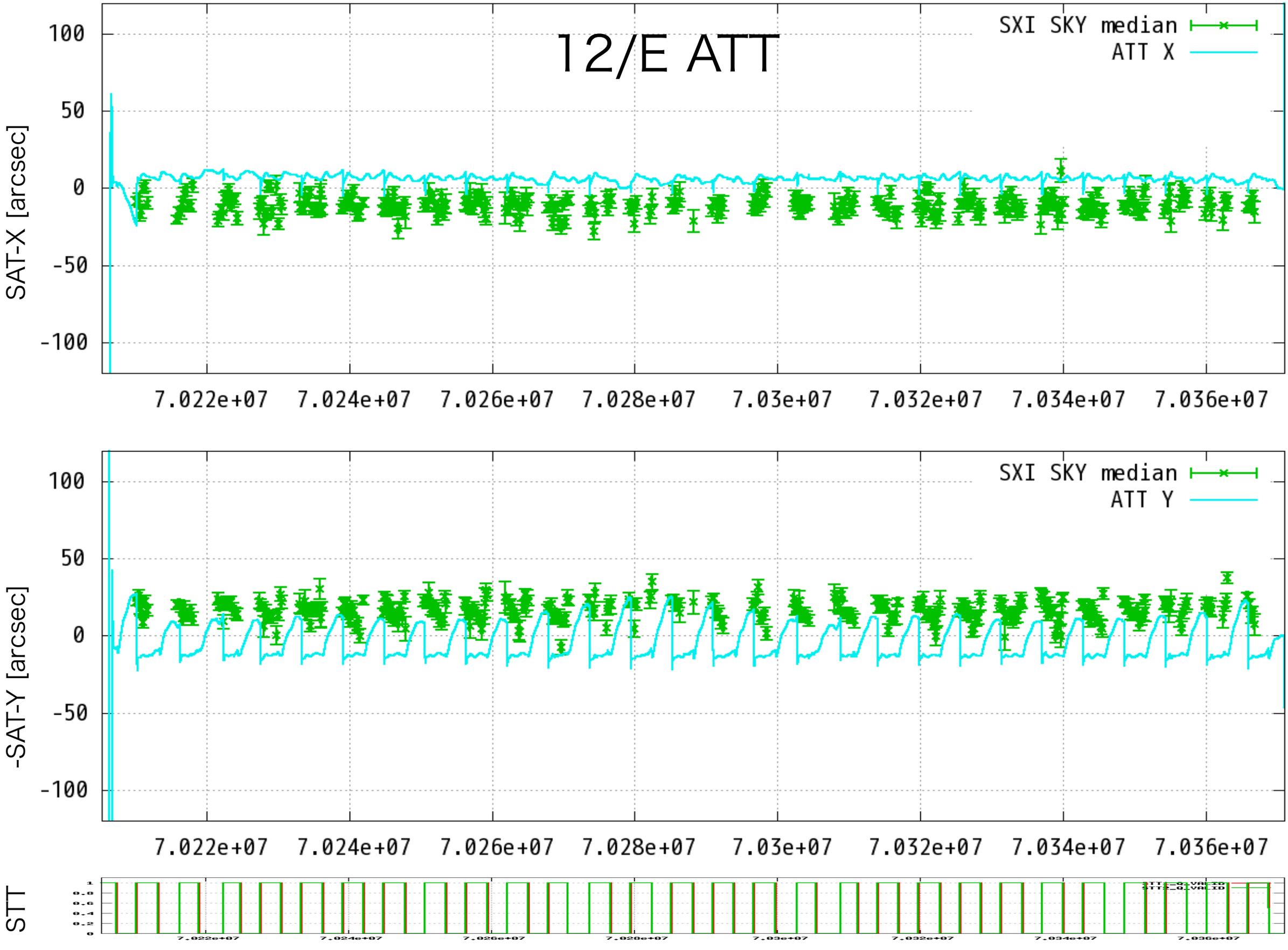
STT-ALL



100043050, 60

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

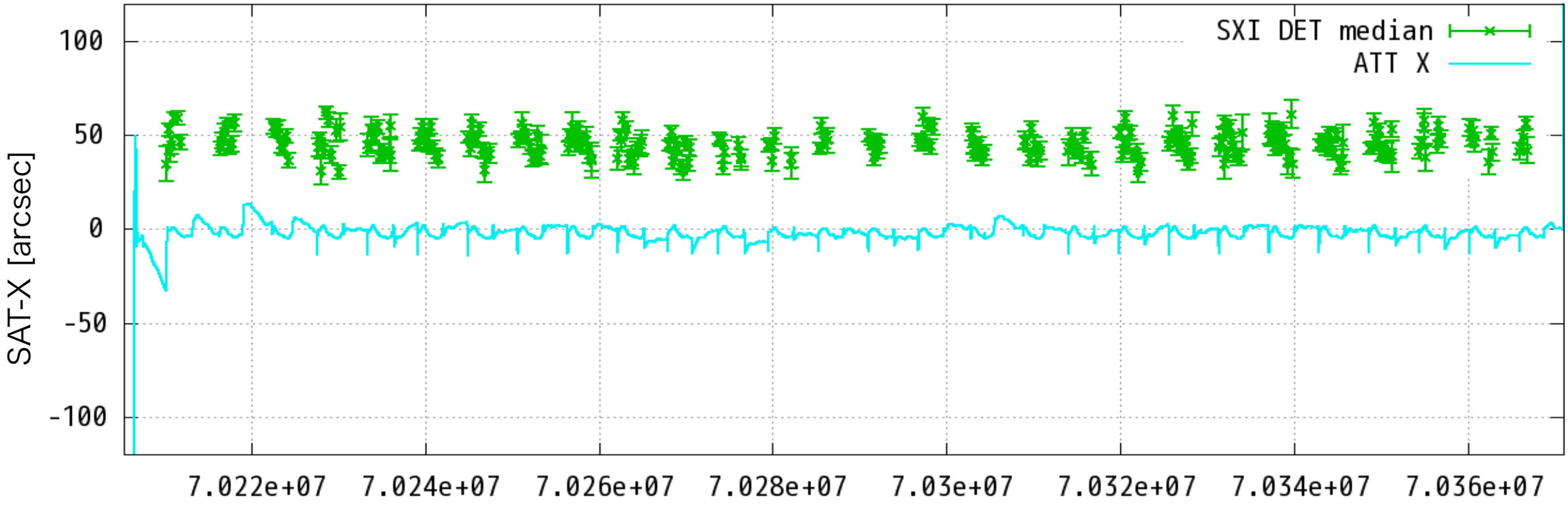
STT-ALL

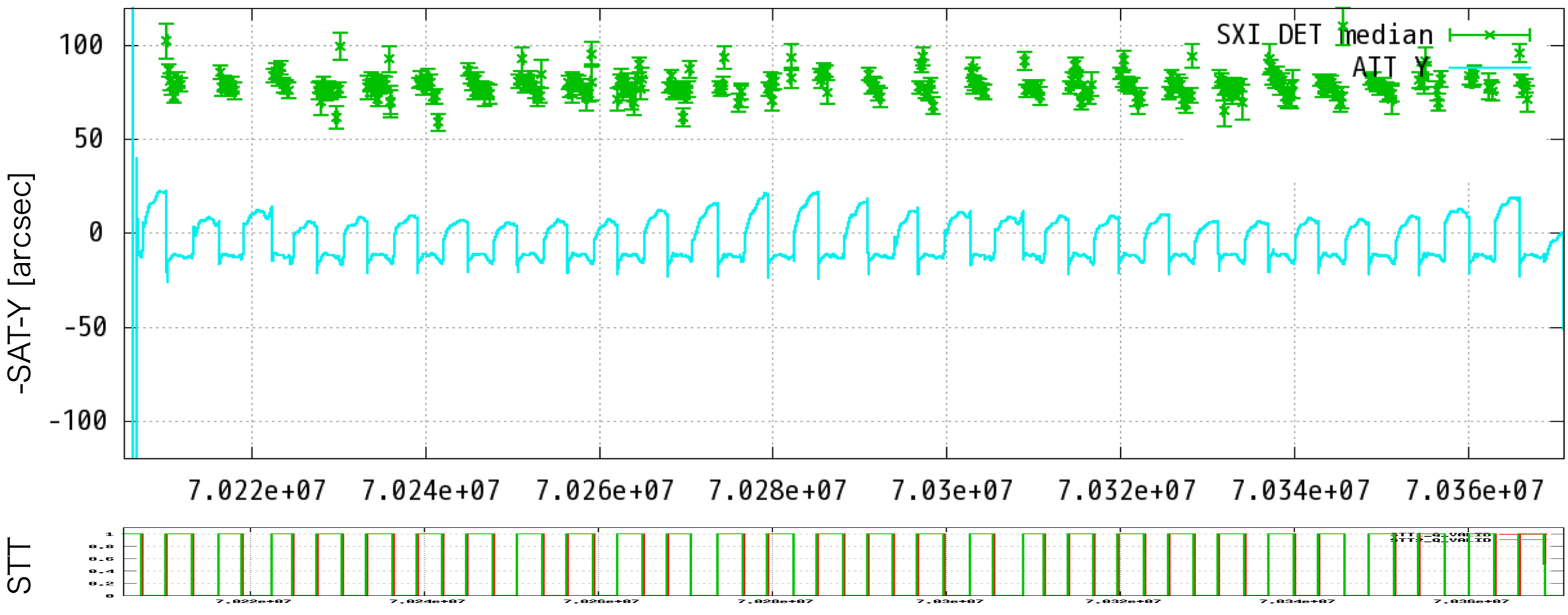


100043050, 60

RXJ1856.5-3754 DET-X/DET-Y (unit: arcsec)

STT-CTL

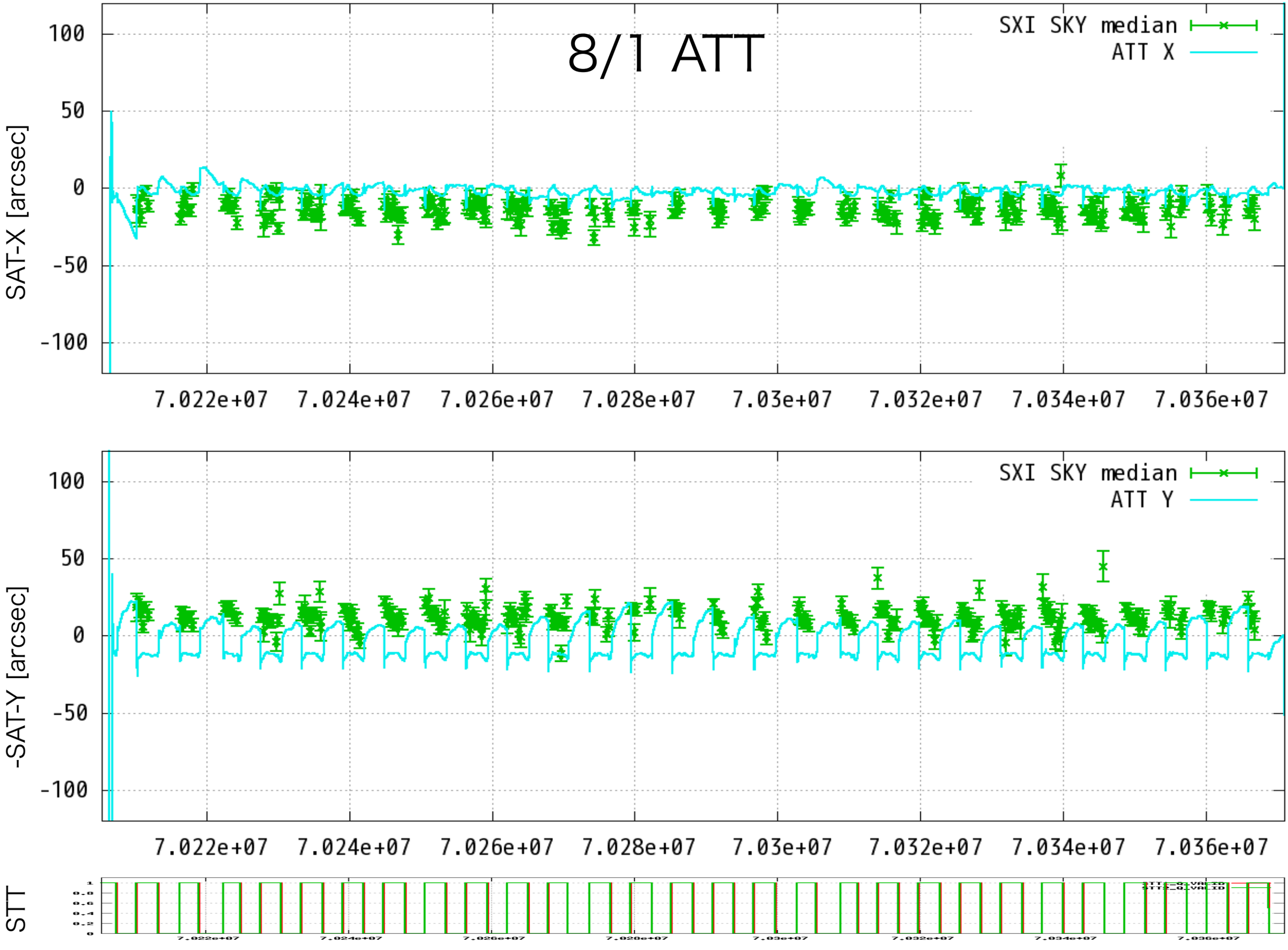




100043050, 60

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

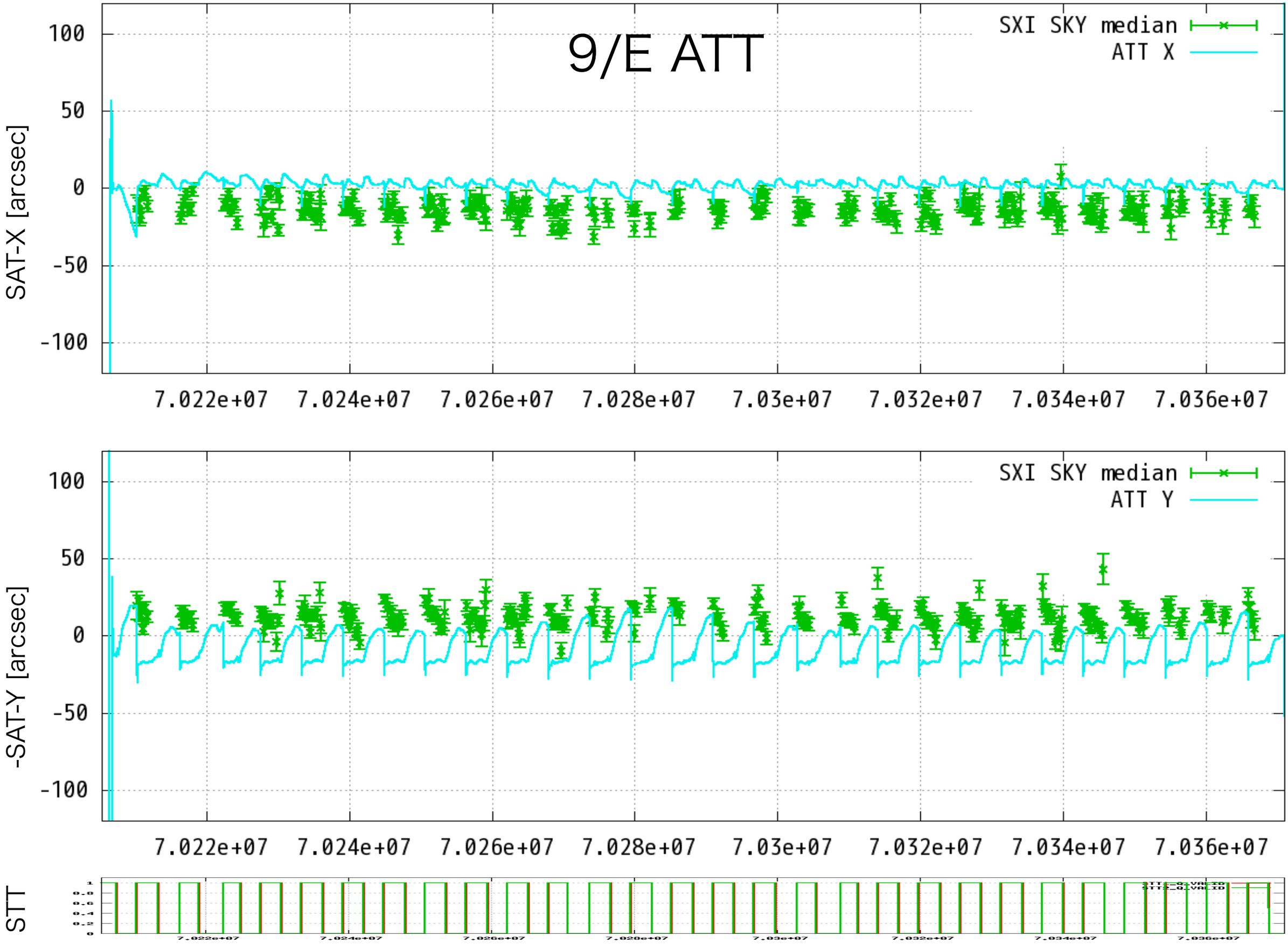
STT-CTL



100043050, 60

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

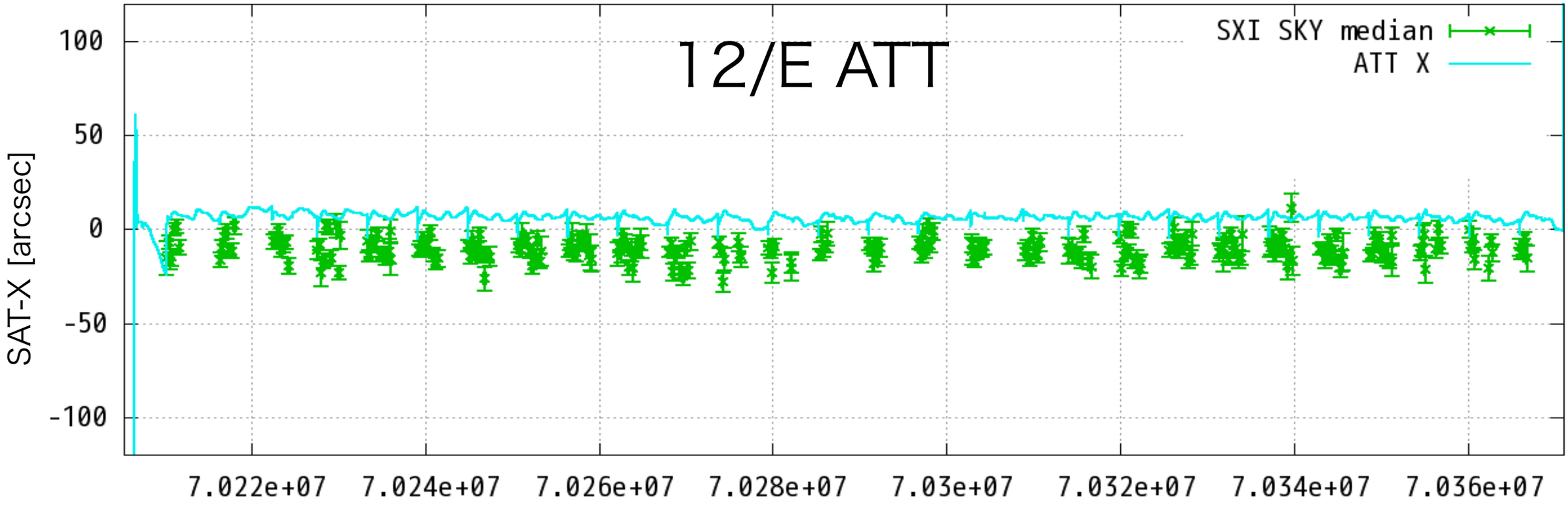
STT-CTL

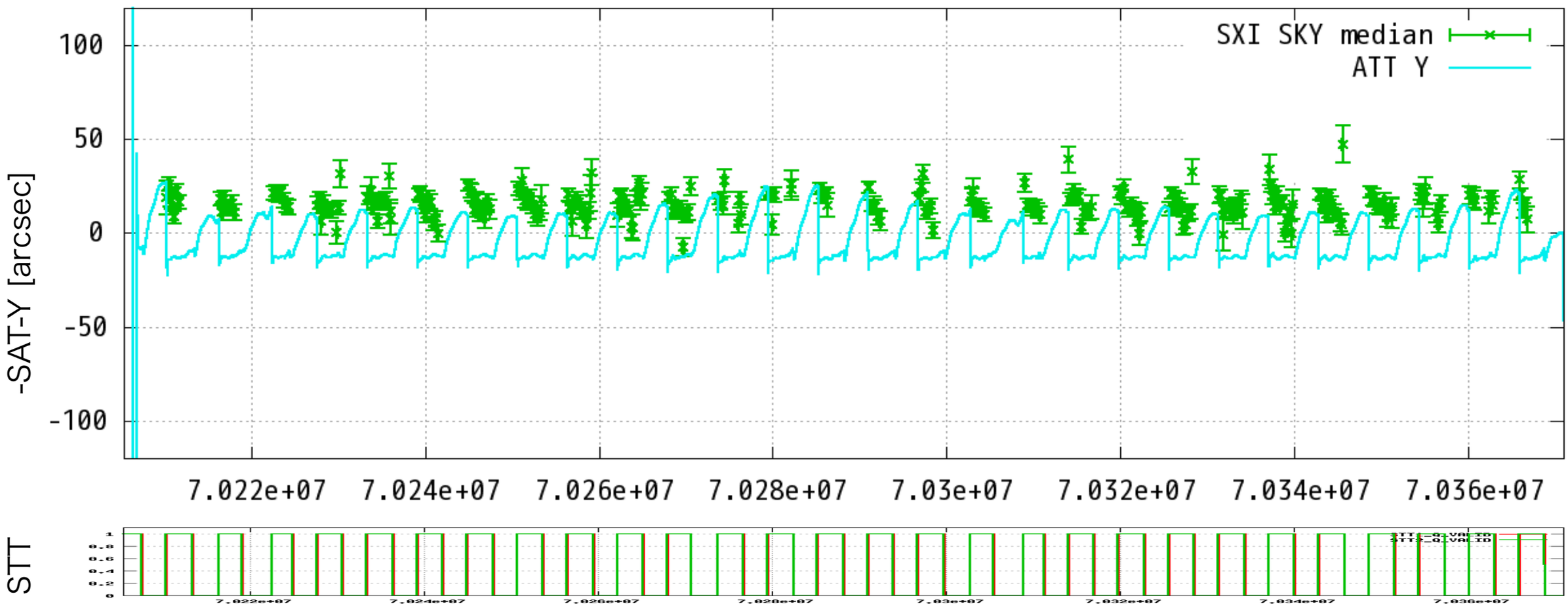


100043050, 60

RXJ1856.5-3754 SKY-X/SKY-Y (unit: arcsec)

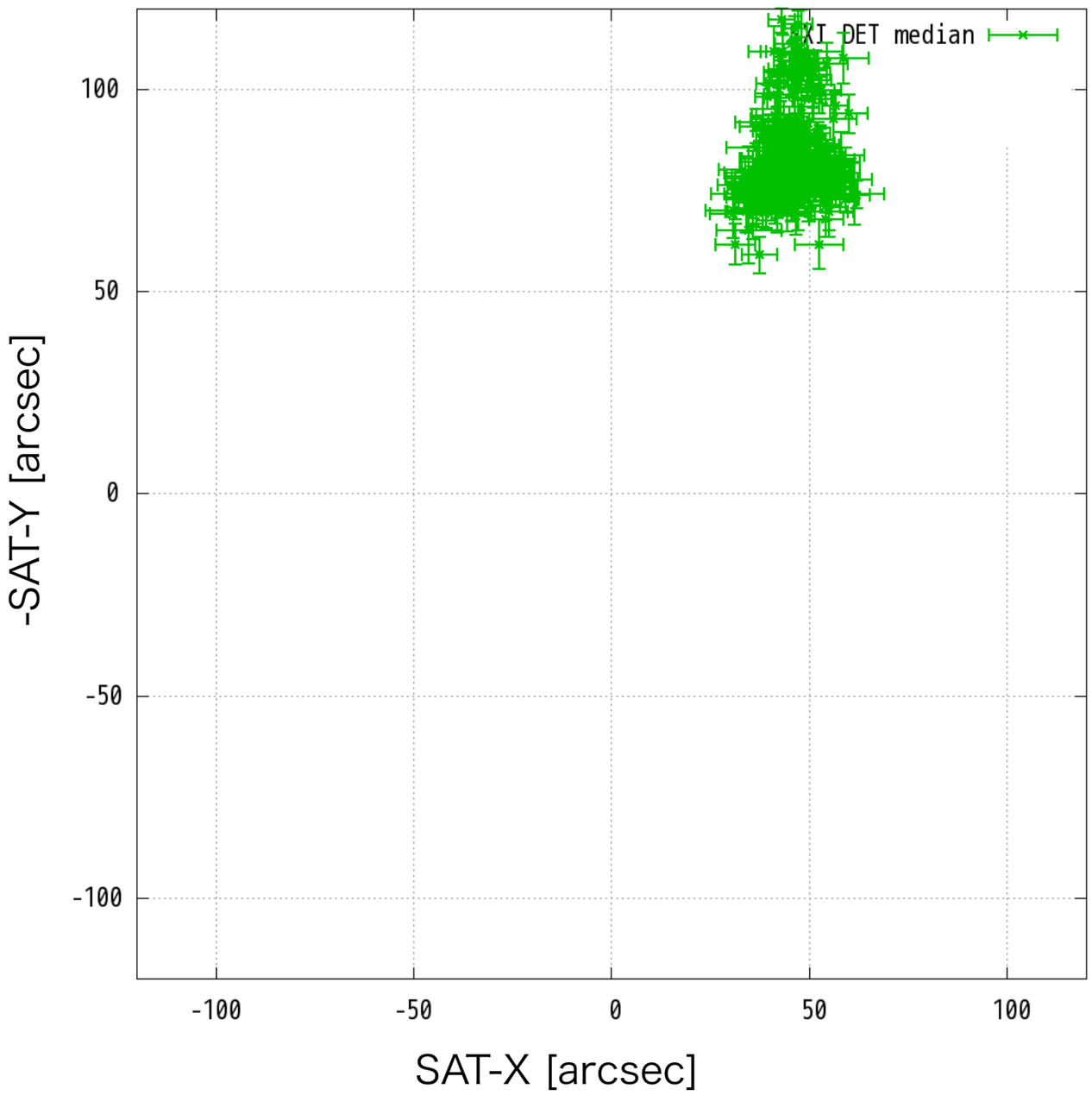
STT-CTL





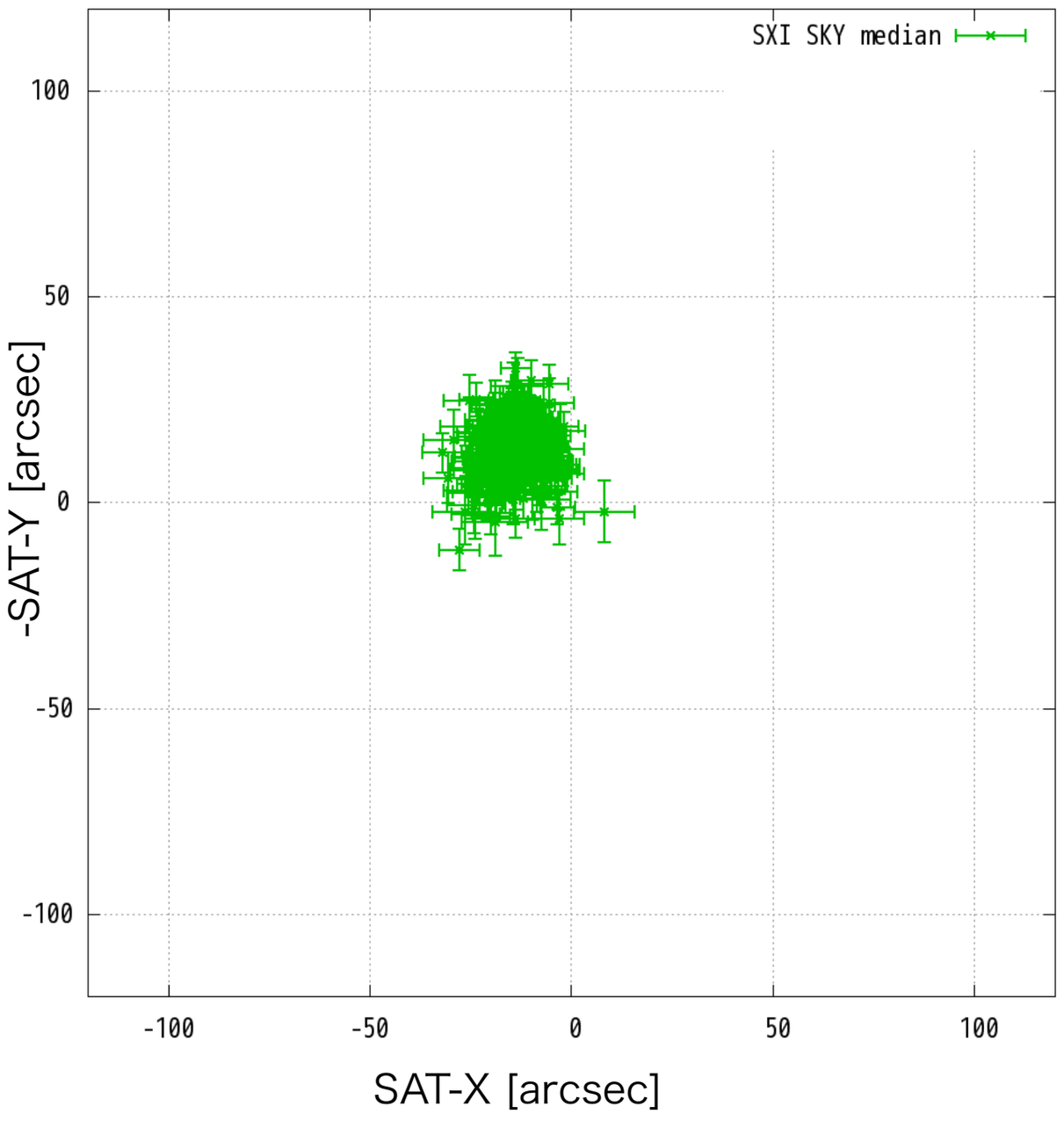
RXJ (STT-ALL)
seq: 100043050, 60

DET



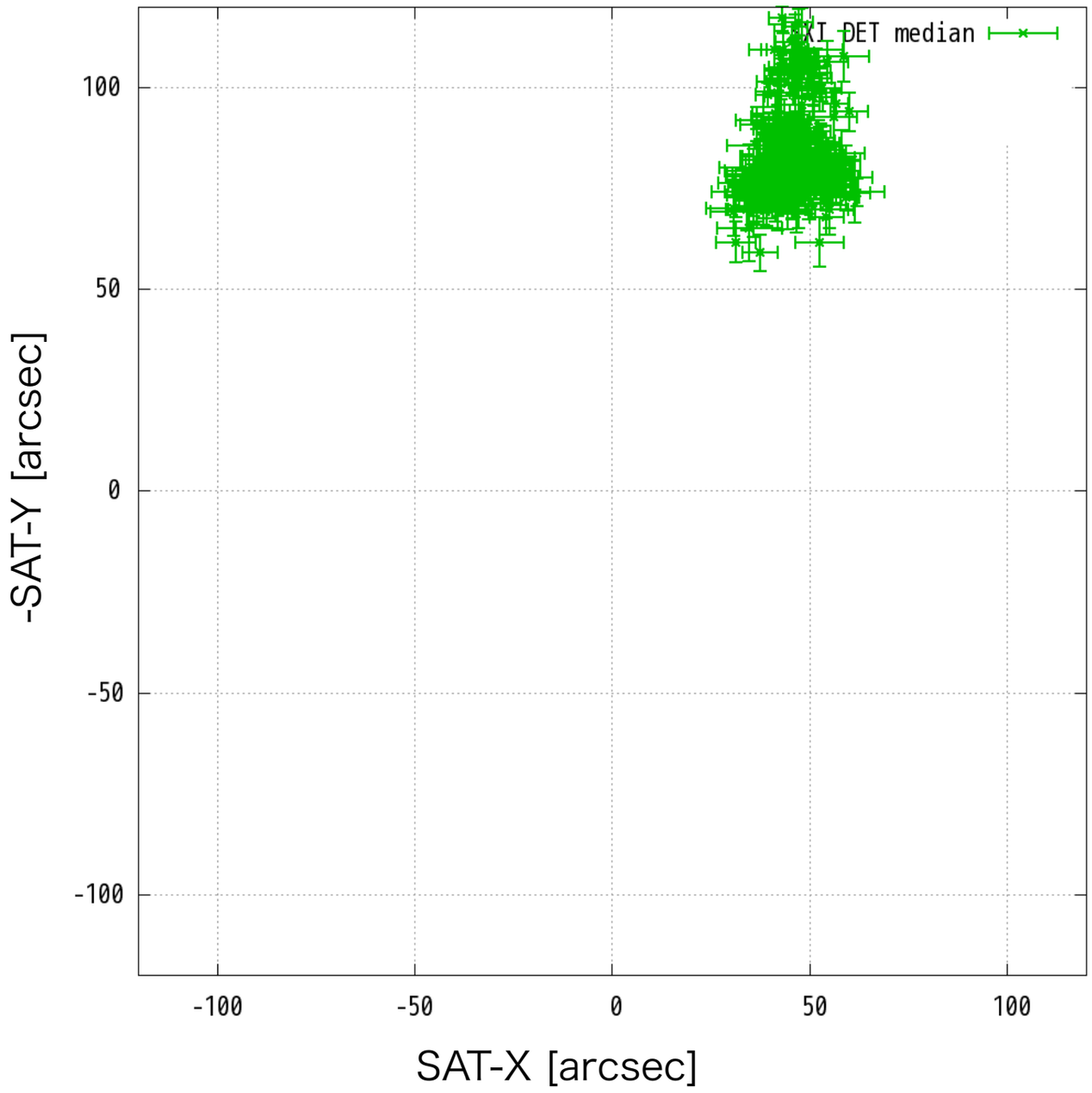
SKY

8/1 ATT

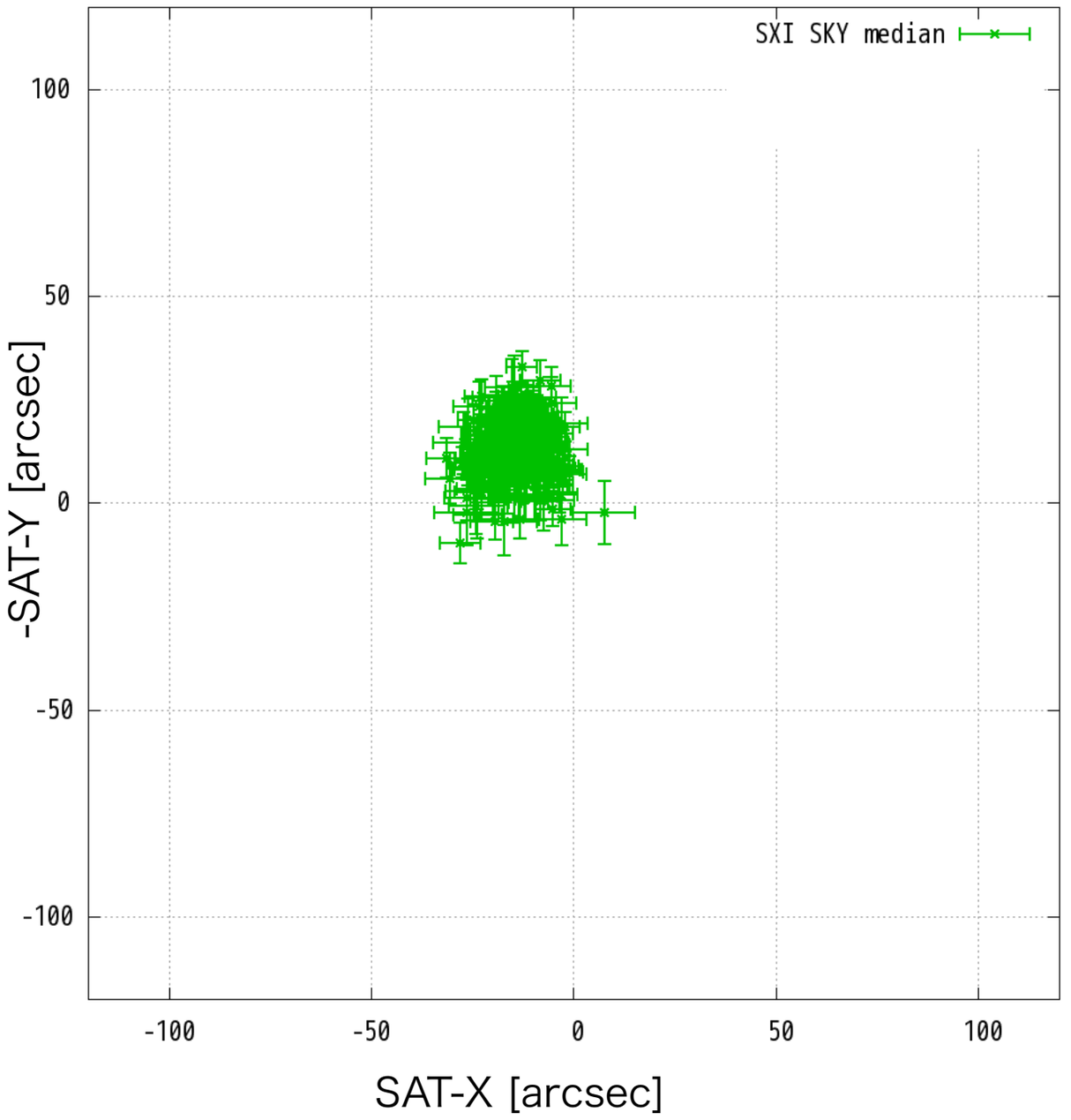


RXJ (STT-ALL)
seq: 100043050, 60

DET

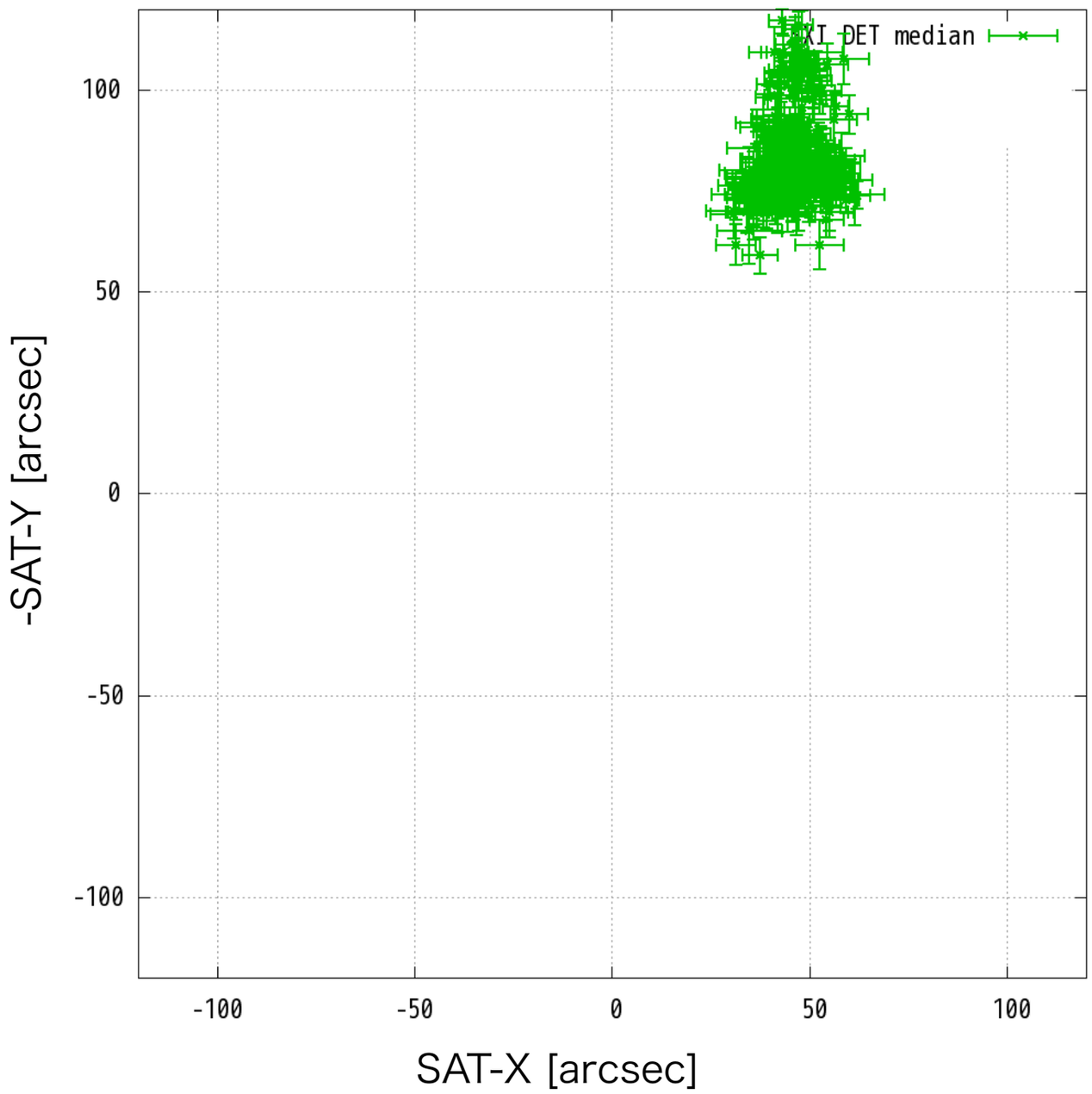


SKY 9/E ATT



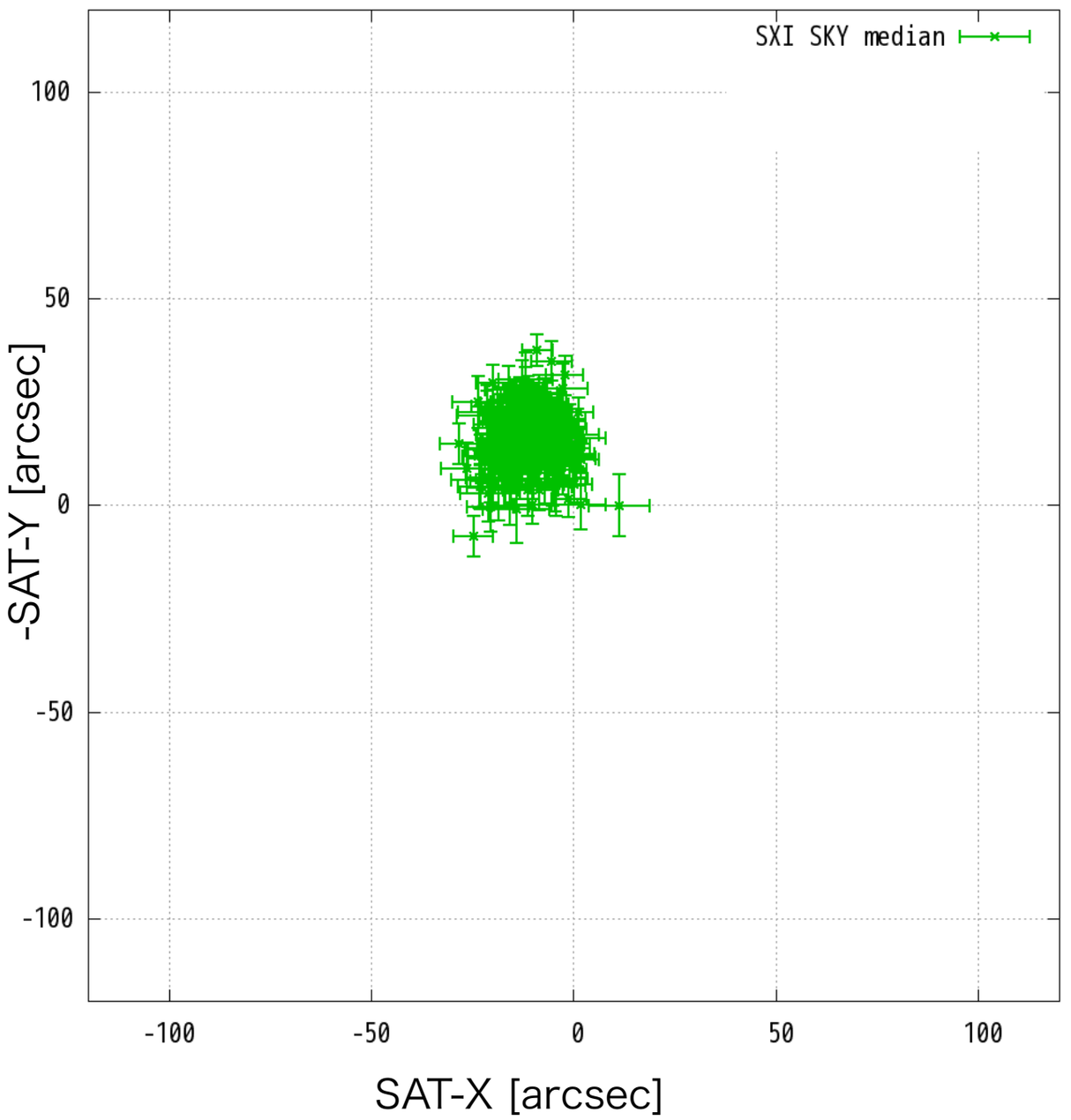
RXJ (STT-ALL)
seq: 100043050, 60

DET



SKY

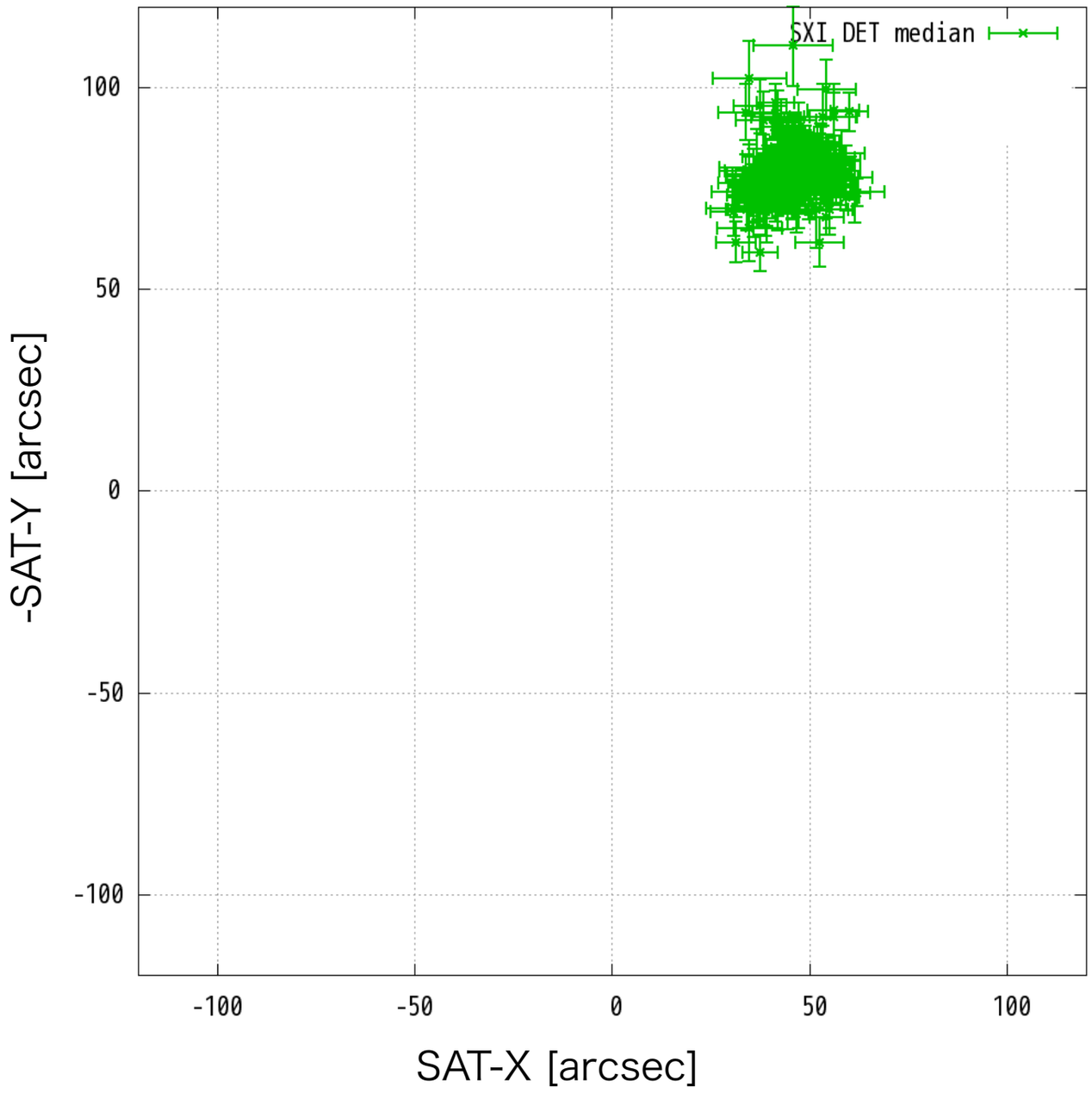
12/E ATT



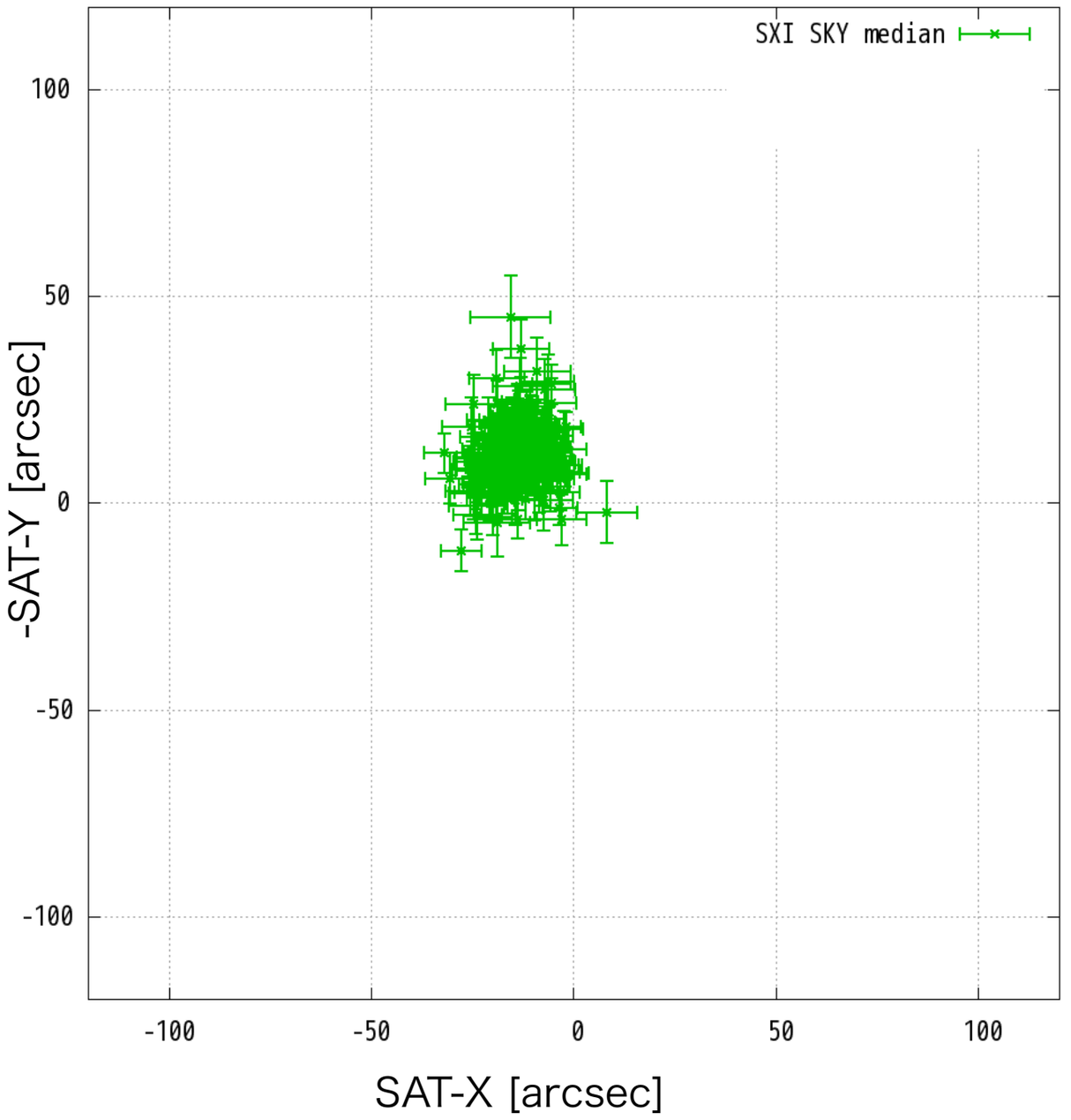
RXJ (STT-CTL)
seq: 100043050, 60

8/1 ATT

DET

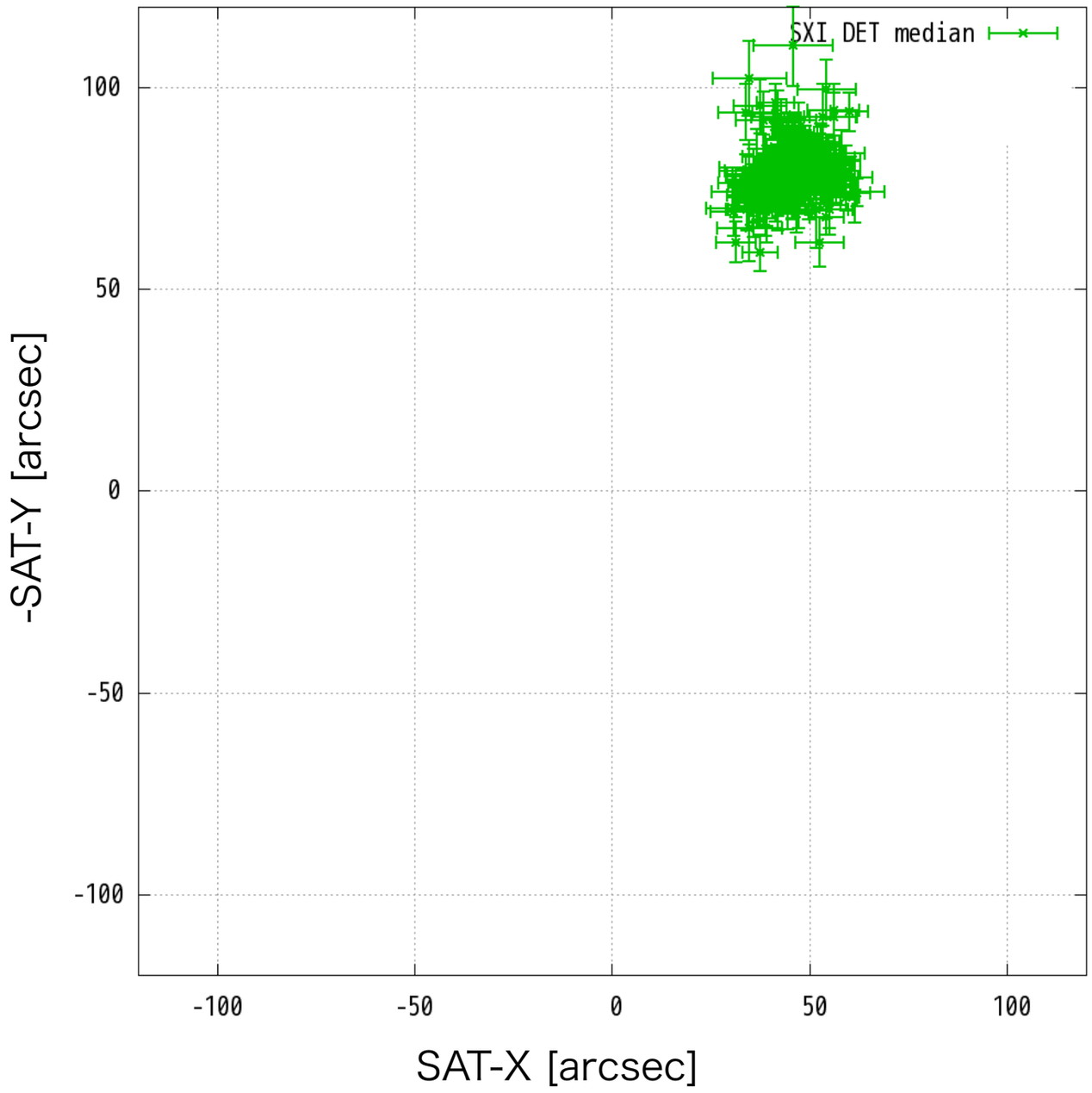


SKY

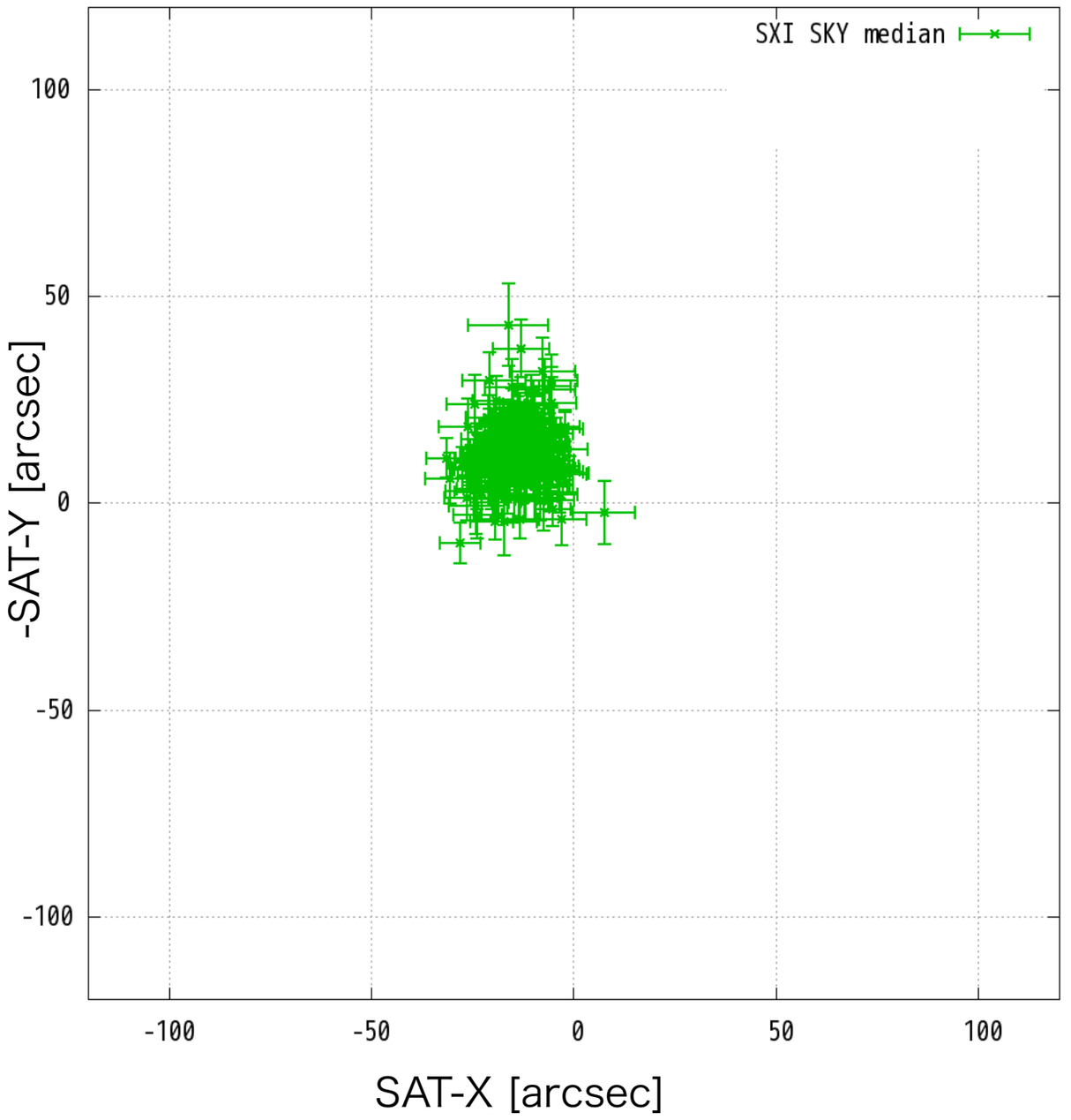


RXJ (STT-CTL)
seq: 100043050, 60

DET

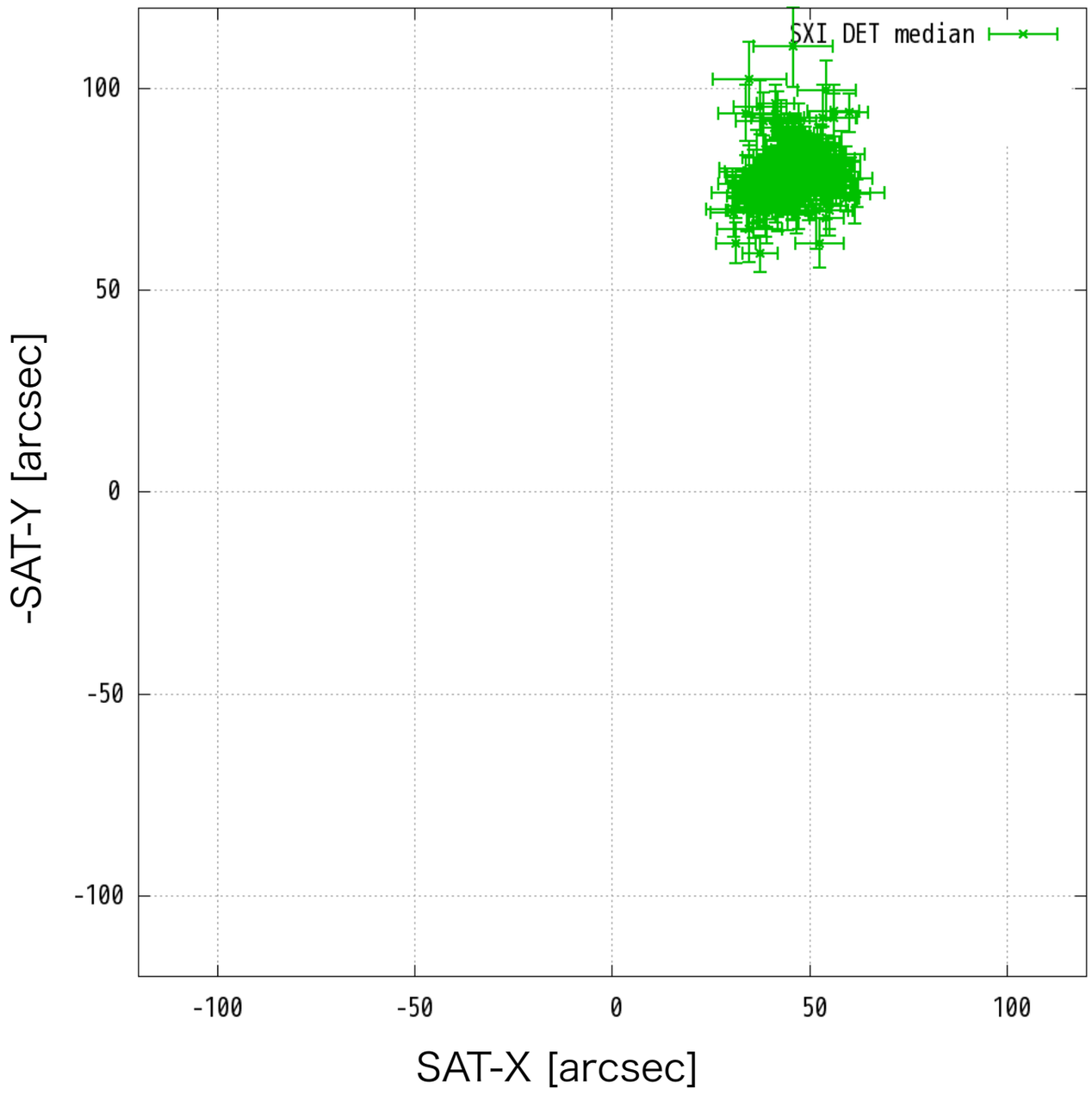


SKY 9/E ATT



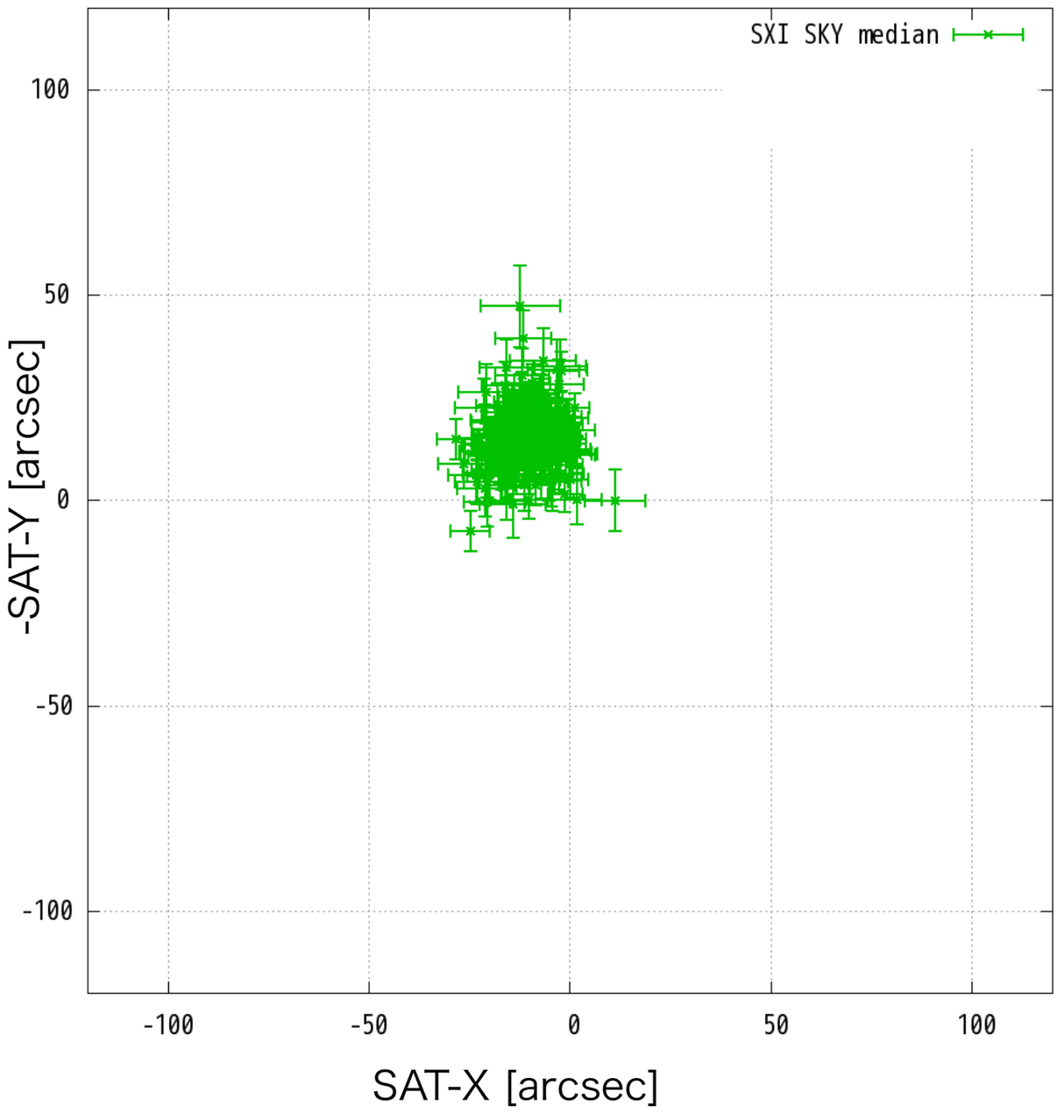
RXJ (STT-CTL)
seq: 100043050, 60

DET



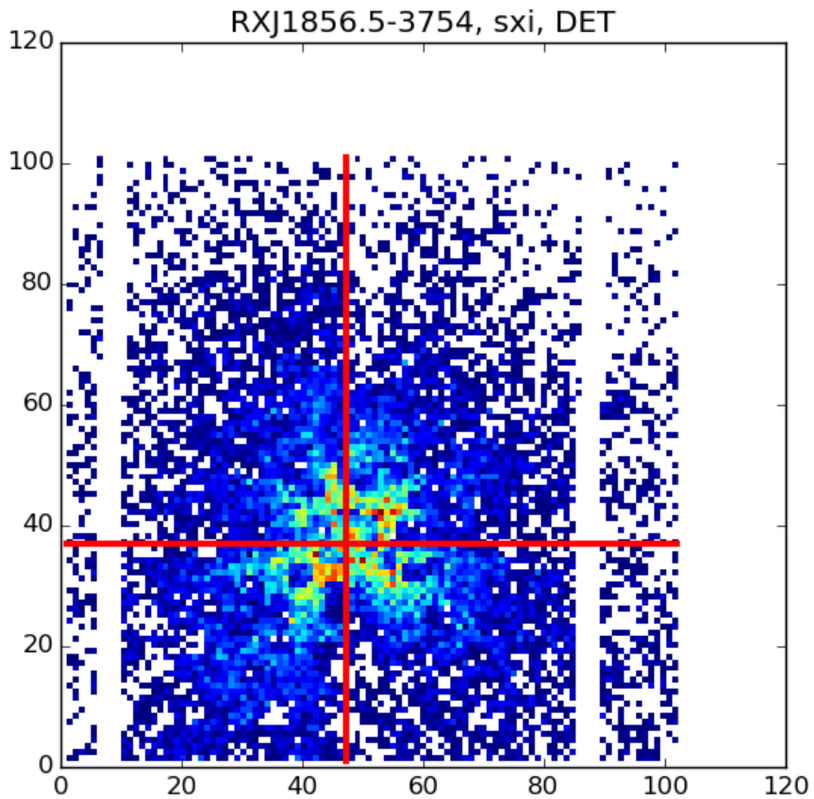
SKY

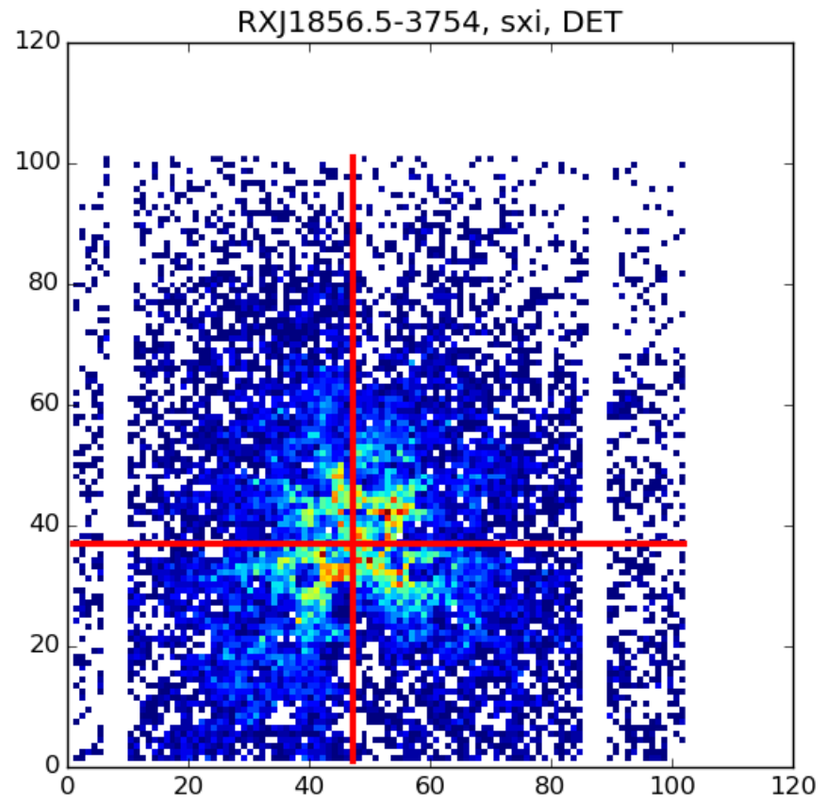
12/E ATT



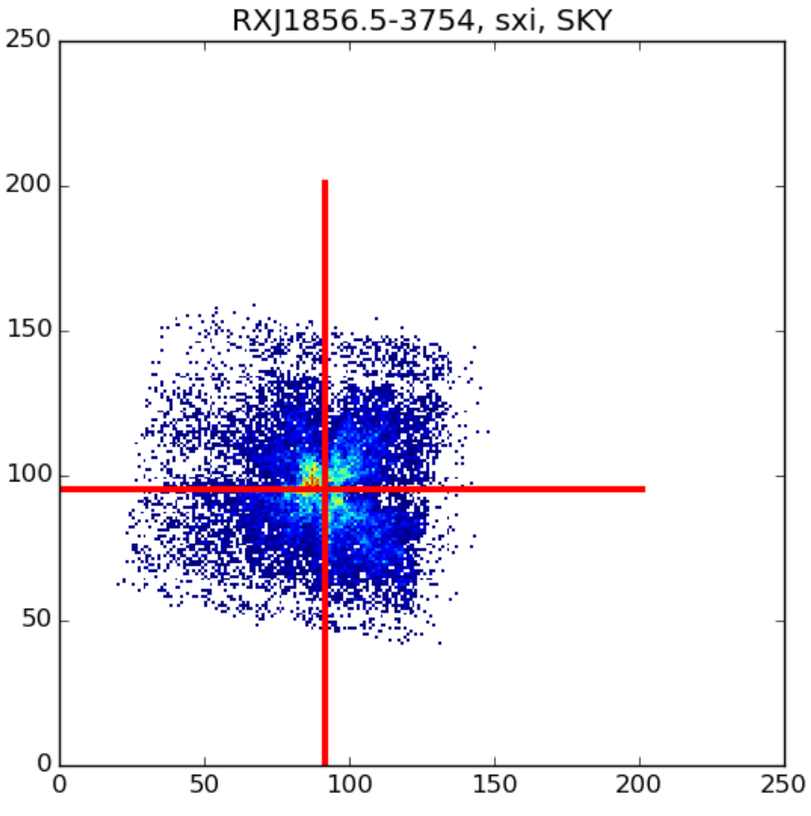
RXJ
(STT-ALL)
seq: 100043050, 60

+ 2d lorentz center
+ simbad center
(12/E only)

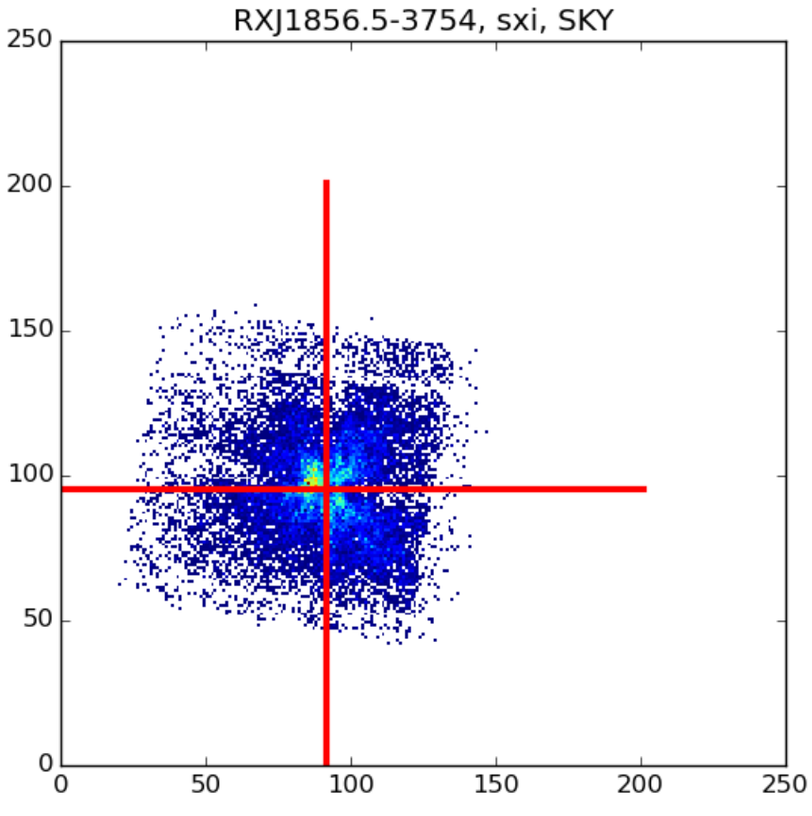




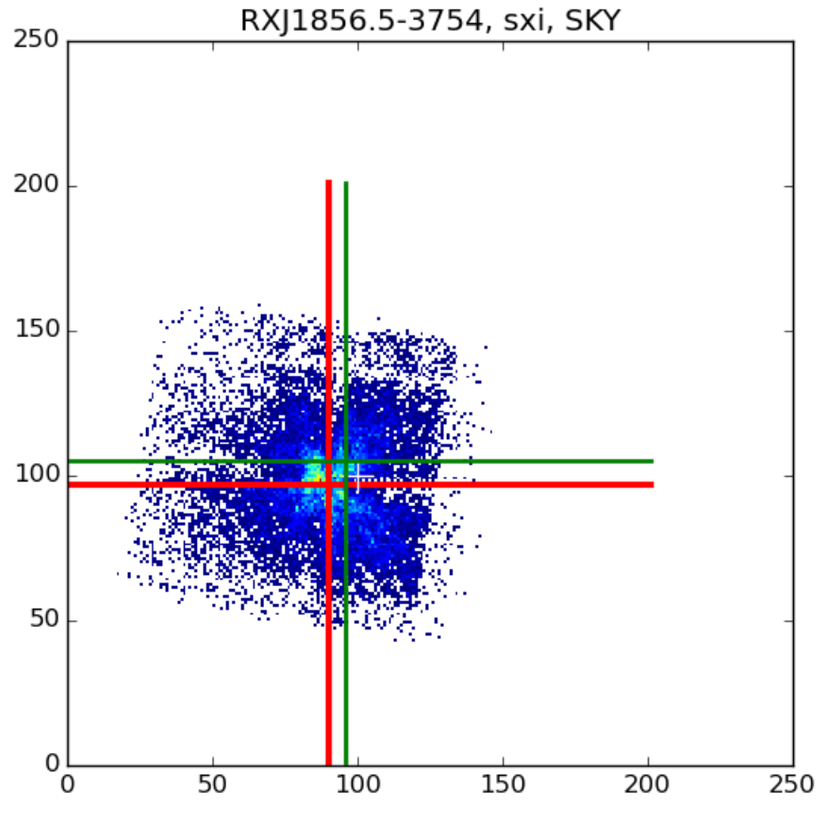
8/1 ATT



9/E ATT



12/E ATT



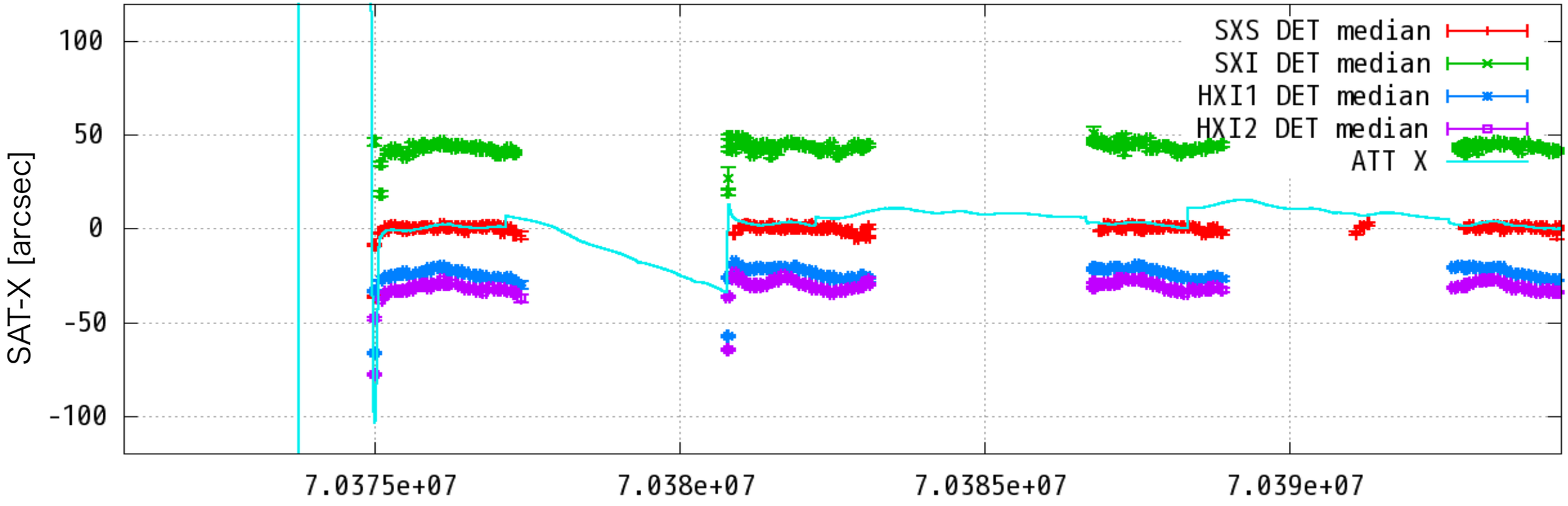
Crab

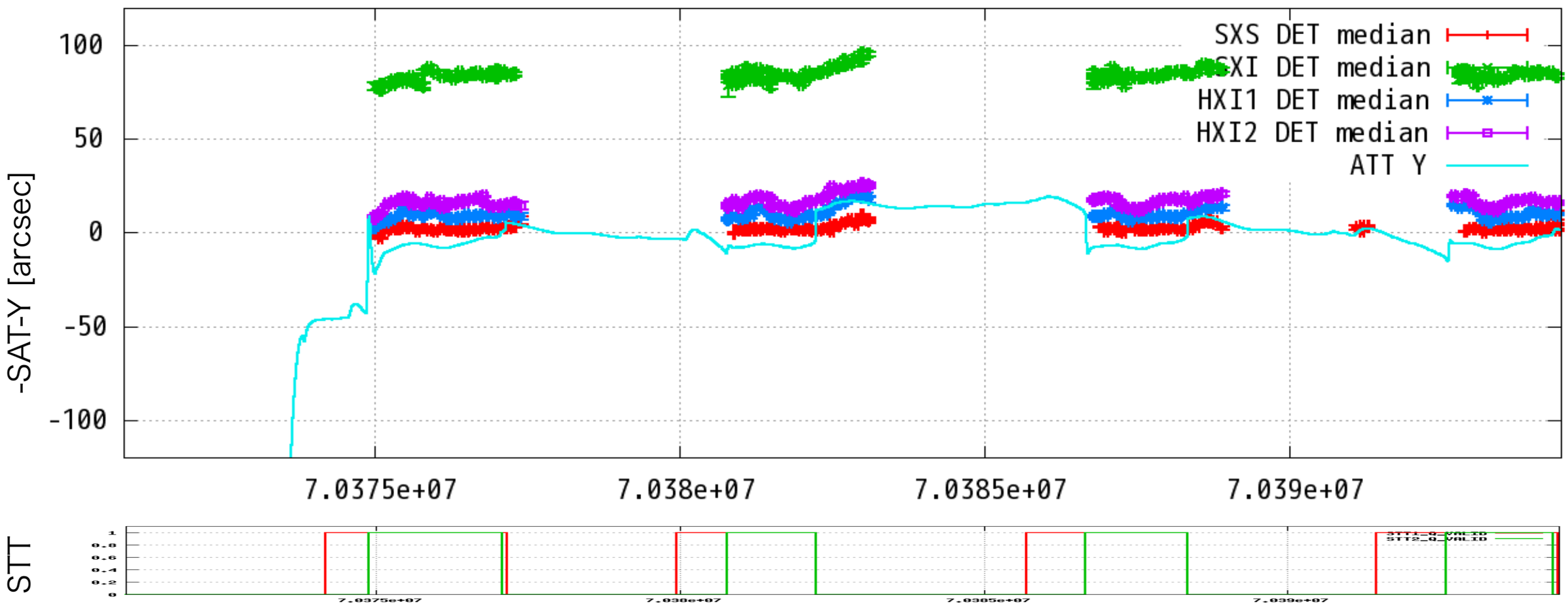
100044010

100044010

Crab DET-X/DET-Y (unit: arcsec)

STT-ALL

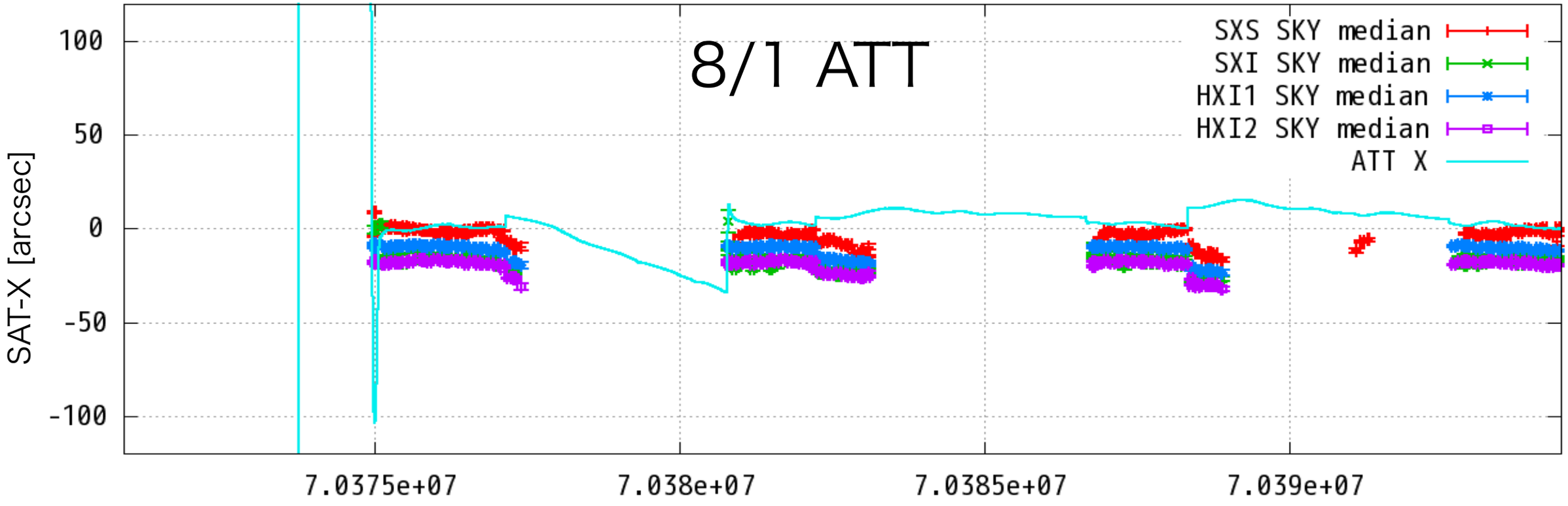


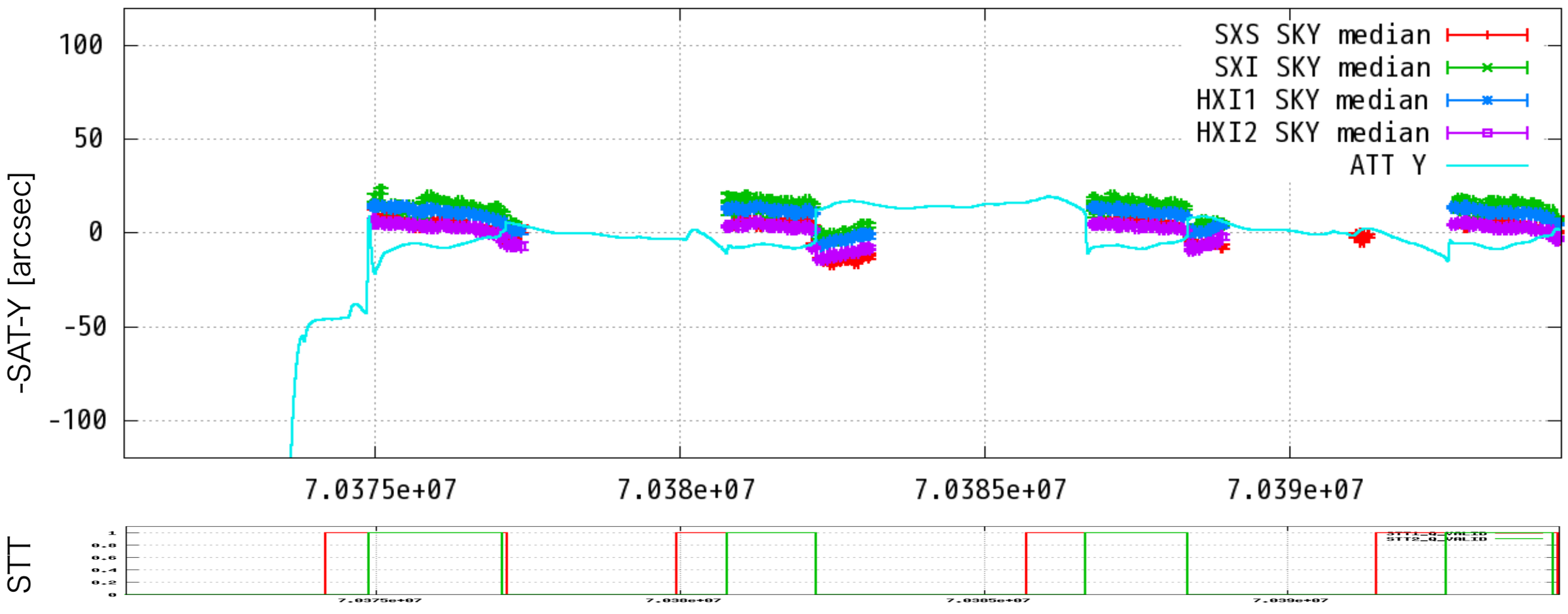


100044010

Crab SKY-X/SKY-Y (unit: arcsec)

STT-ALL

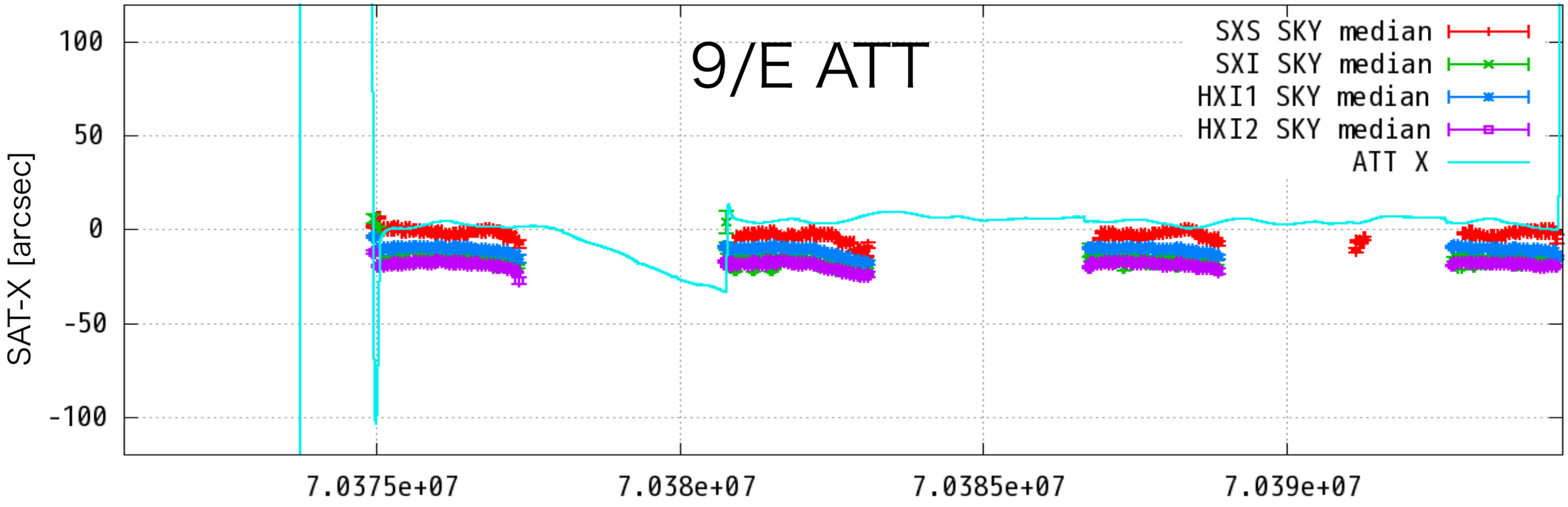


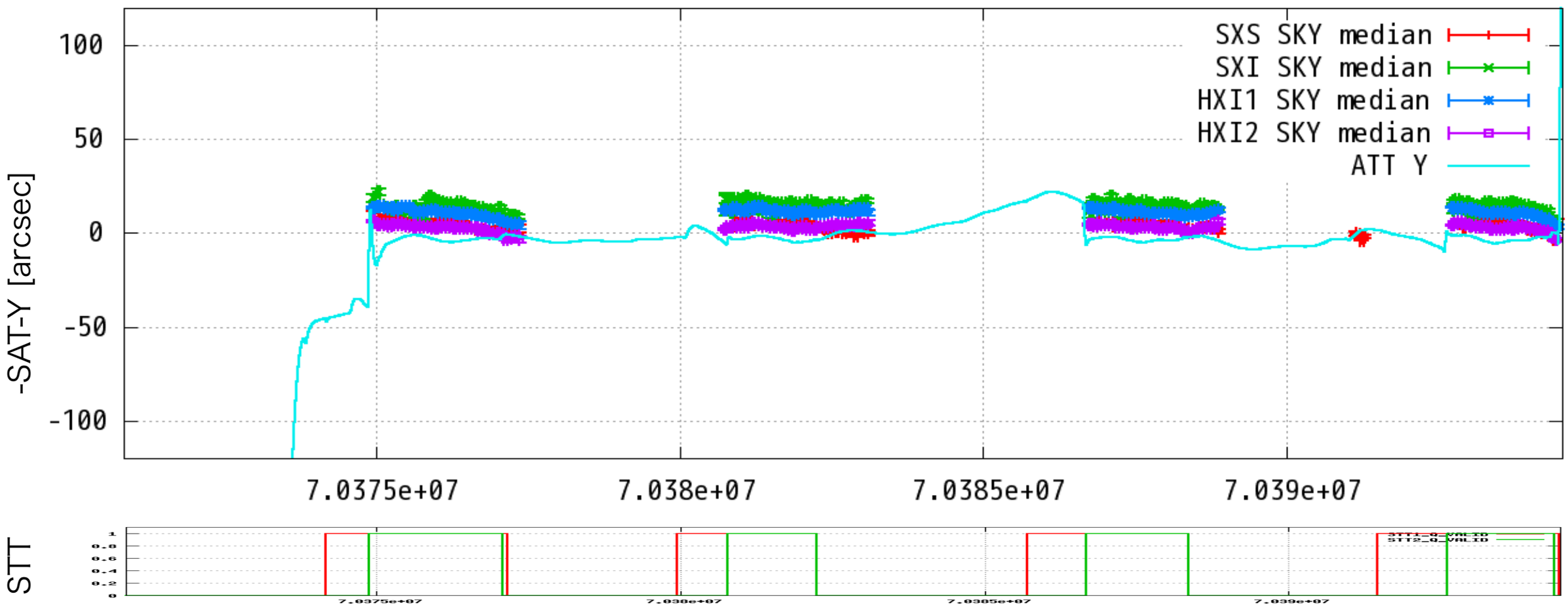


100044010

Crab SKY-X/SKY-Y (unit: arcsec)

STT-ALL

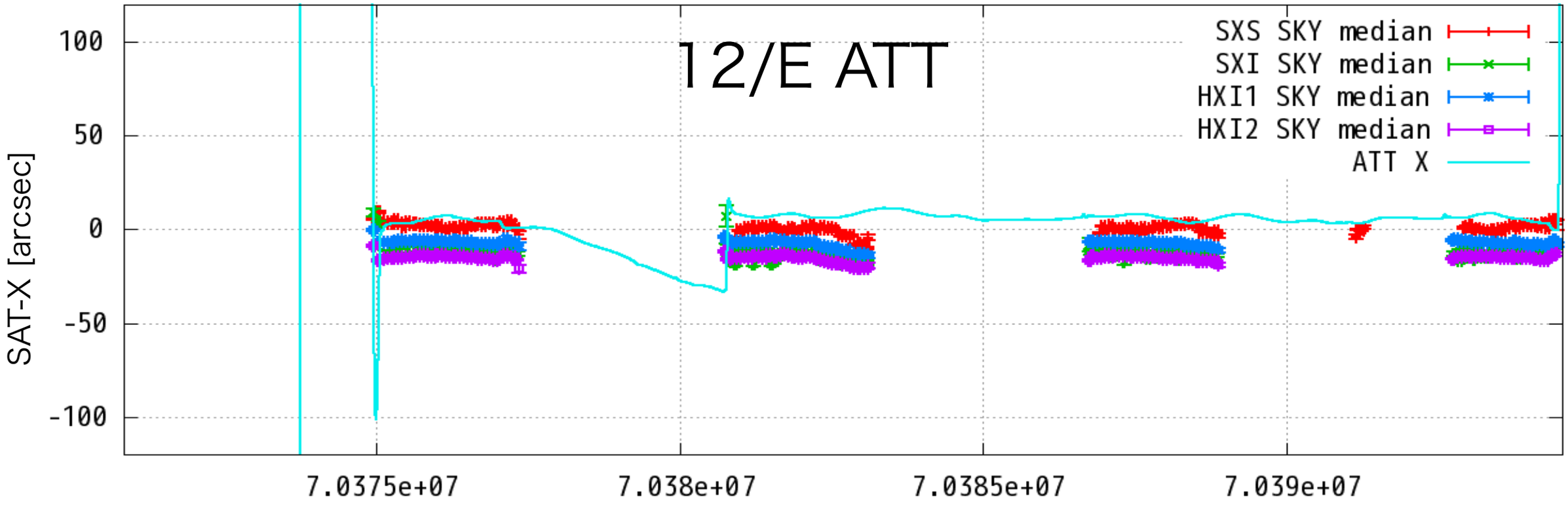


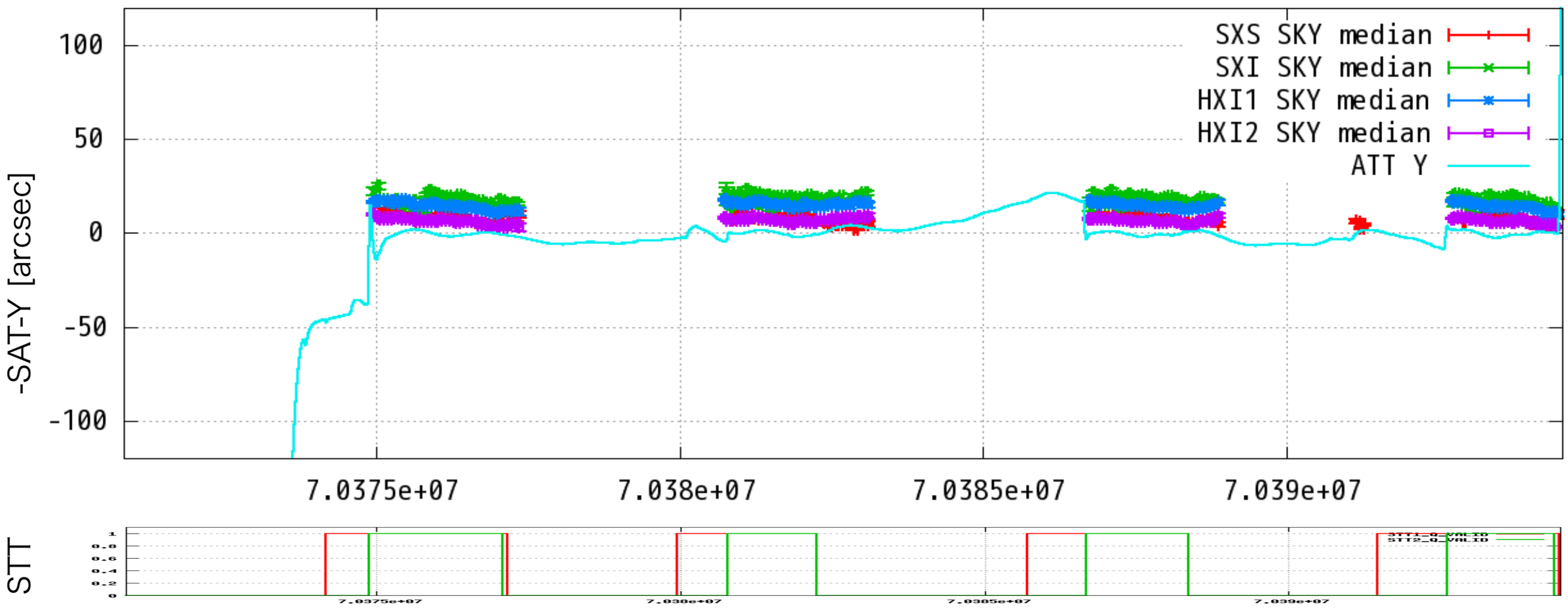


100044010

Crab SKY-X/SKY-Y (unit: arcsec)

STT-ALL

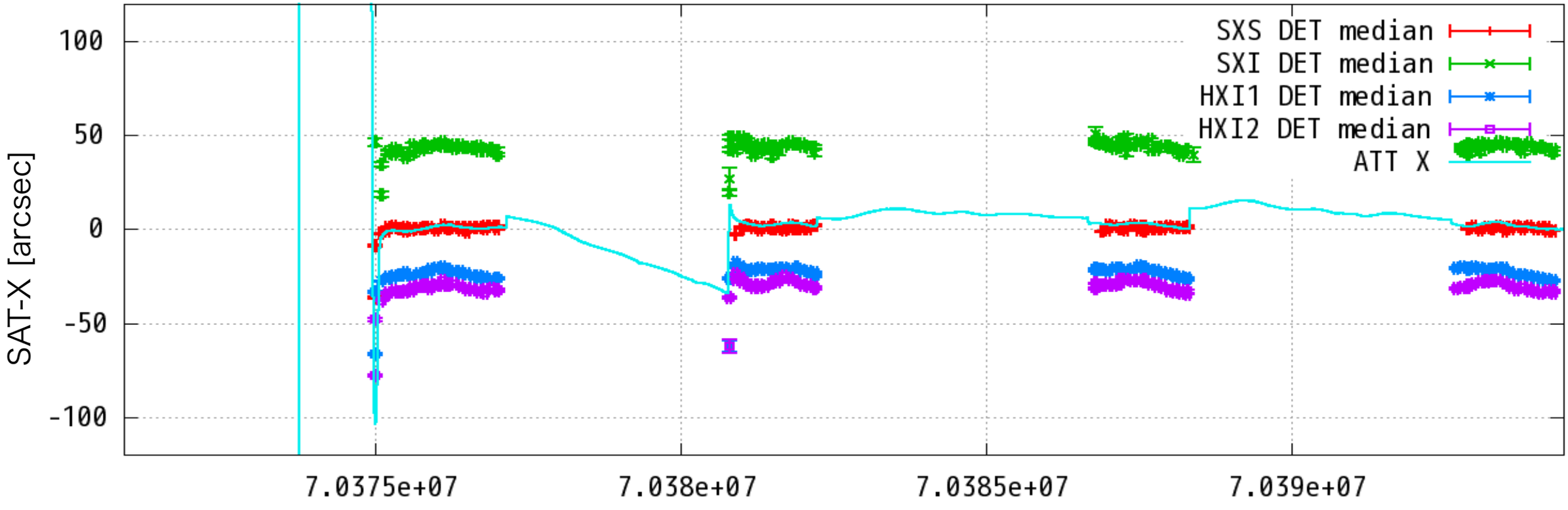


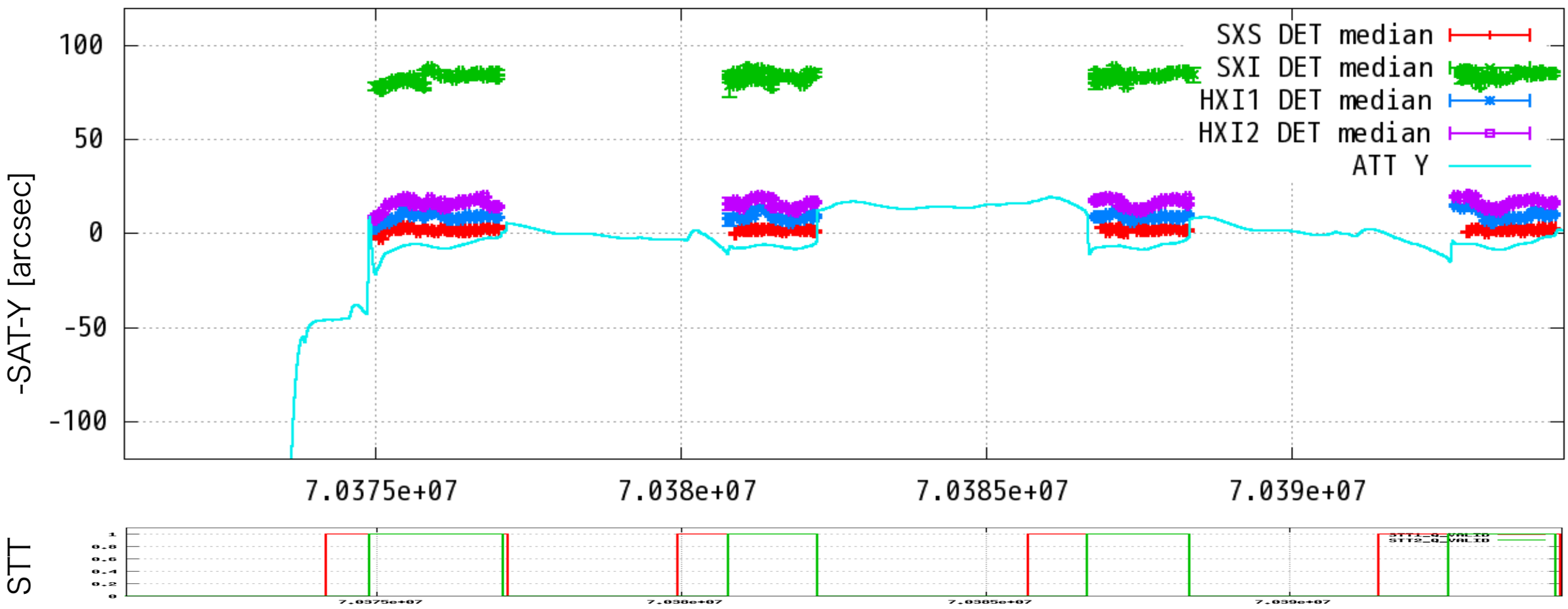


100044010

Crab DET-X/DET-Y (unit: arcsec)

STT-CTL

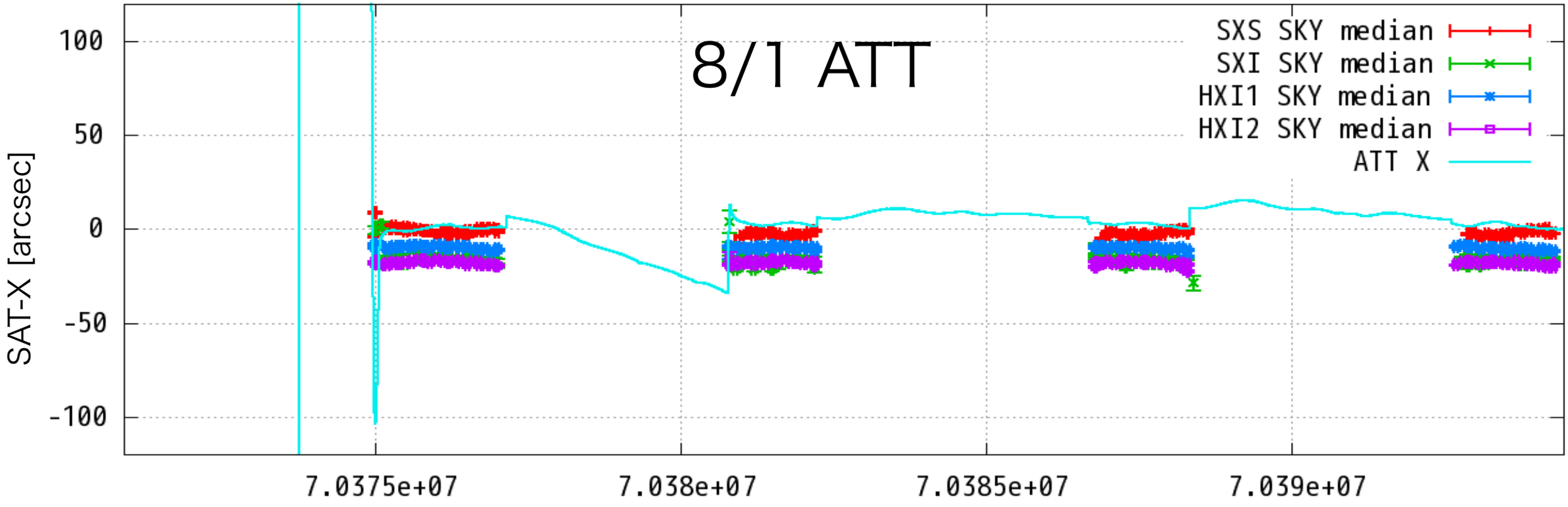


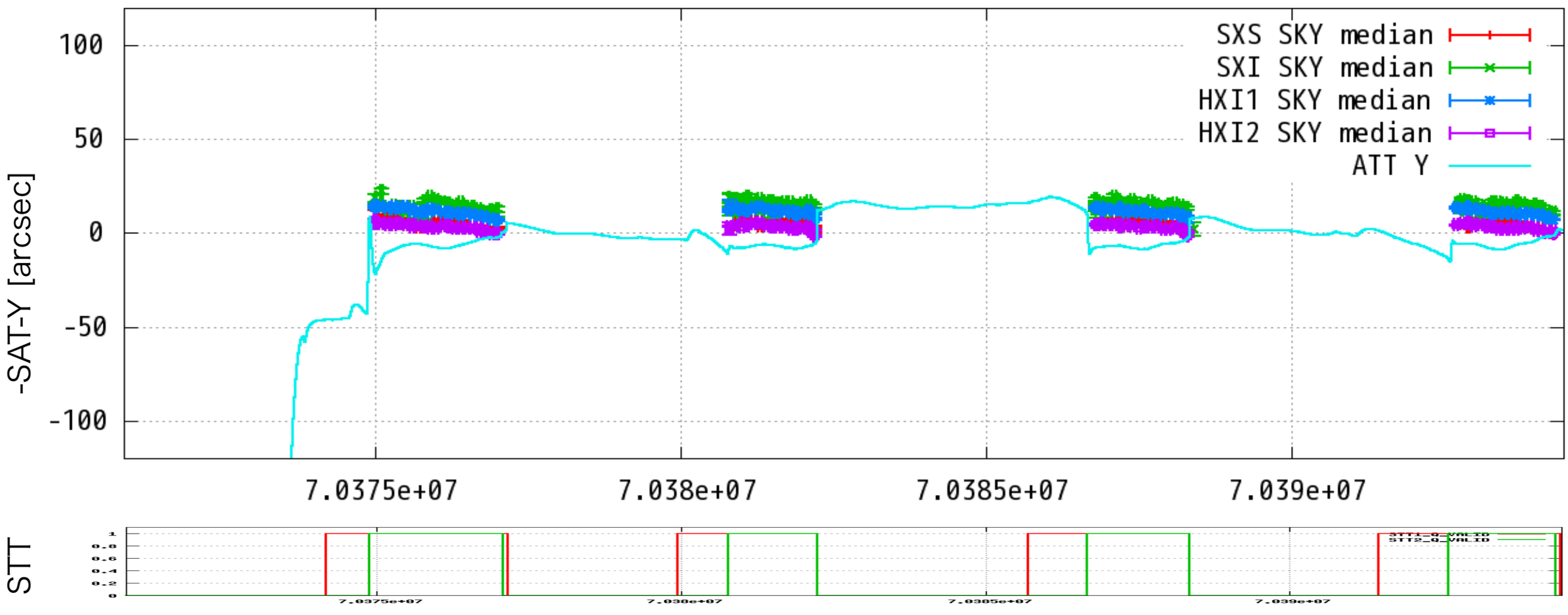


100044010

Crab SKY-X/SKY-Y (unit: arcsec)

STT-CTL

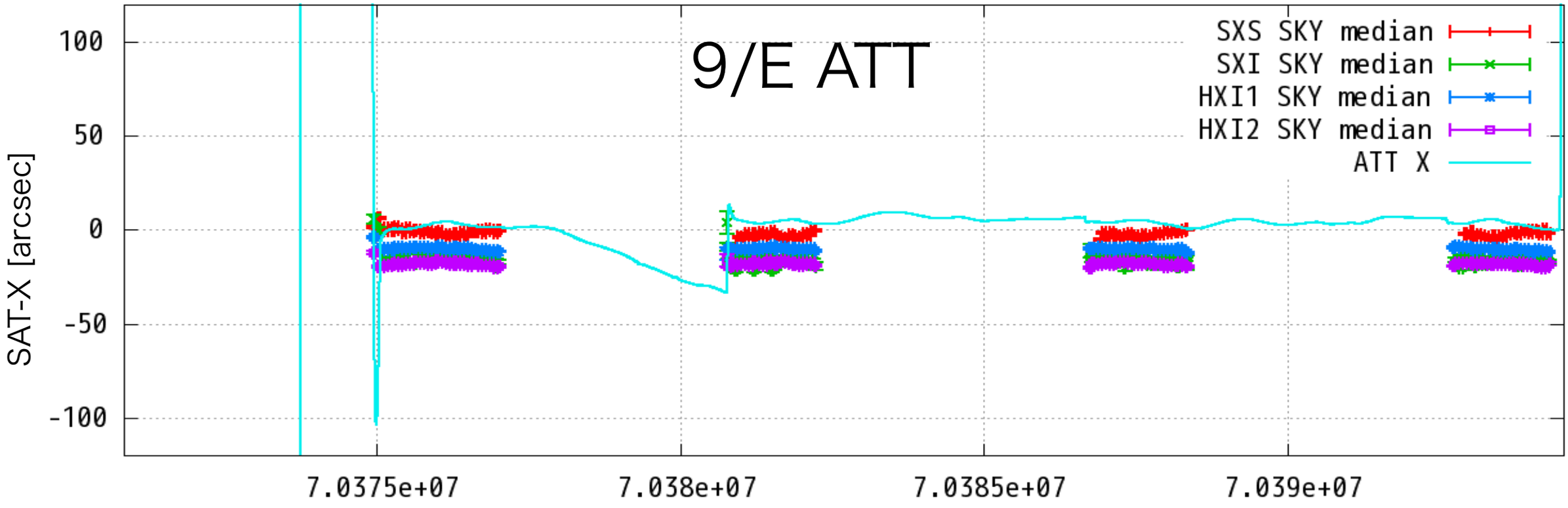


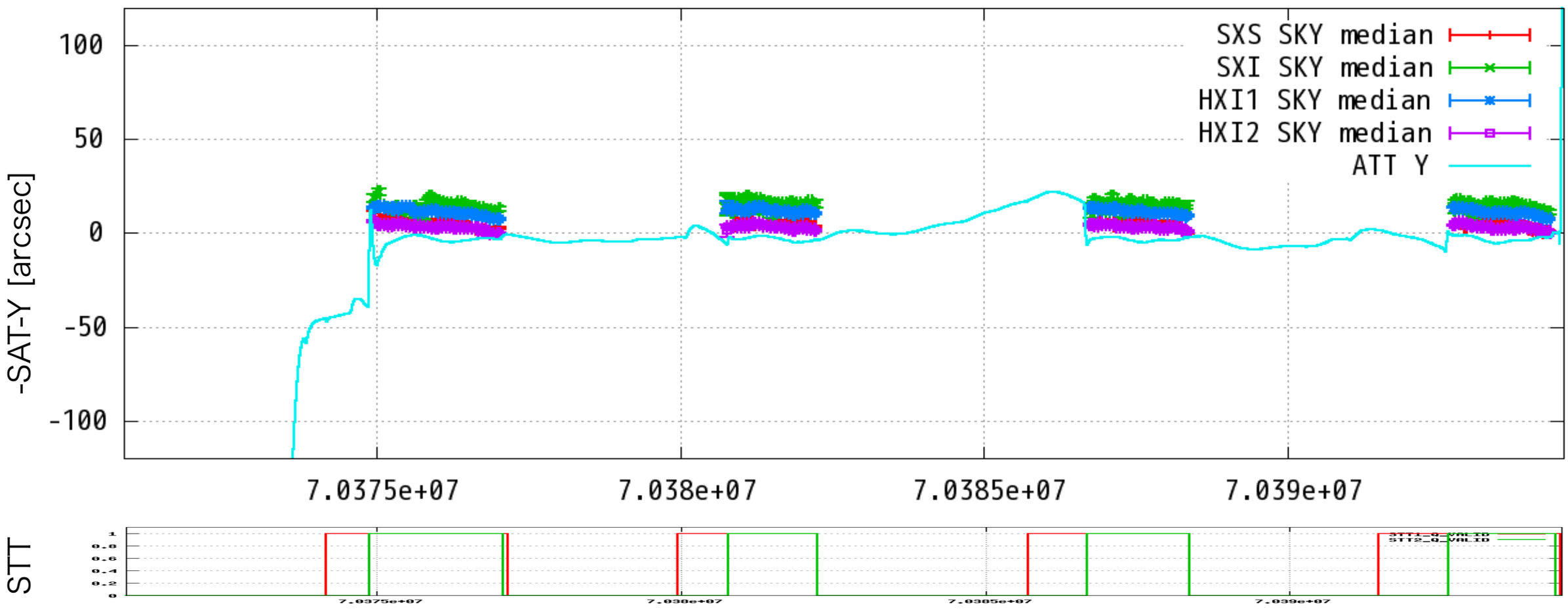


100044010

Crab SKY-X/SKY-Y (unit: arcsec)

STT-CTL

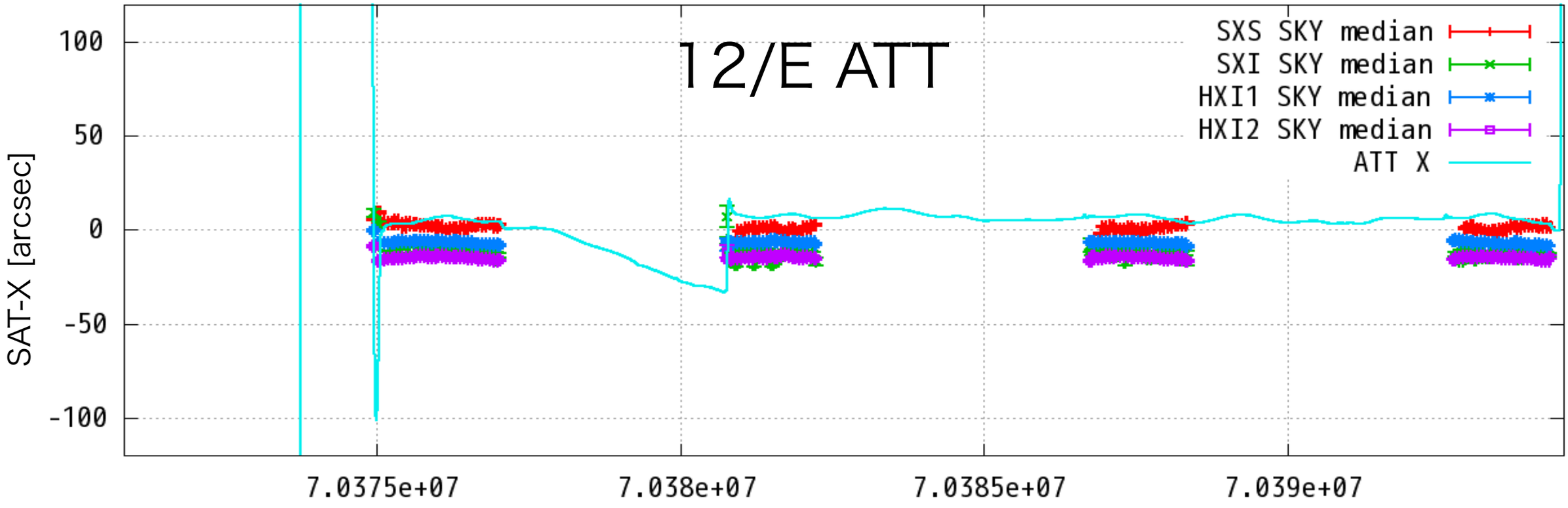


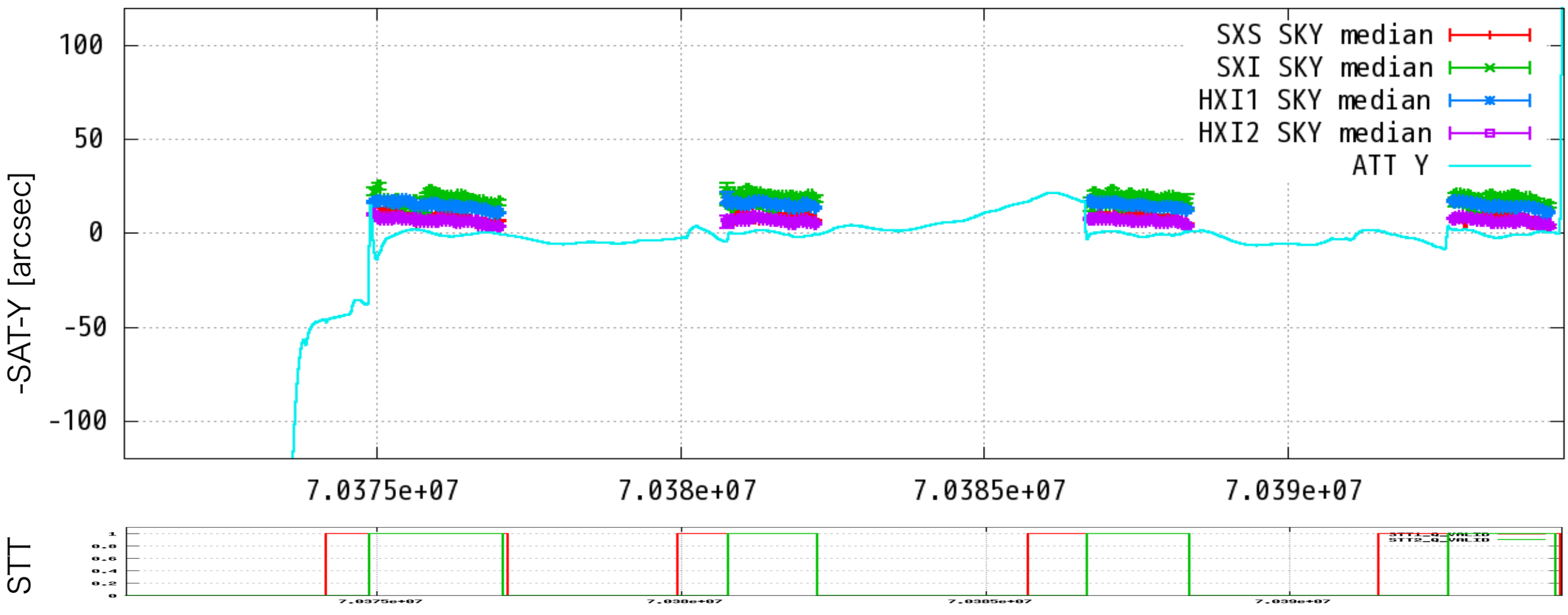


100044010

Crab SKY-X/SKY-Y (unit: arcsec)

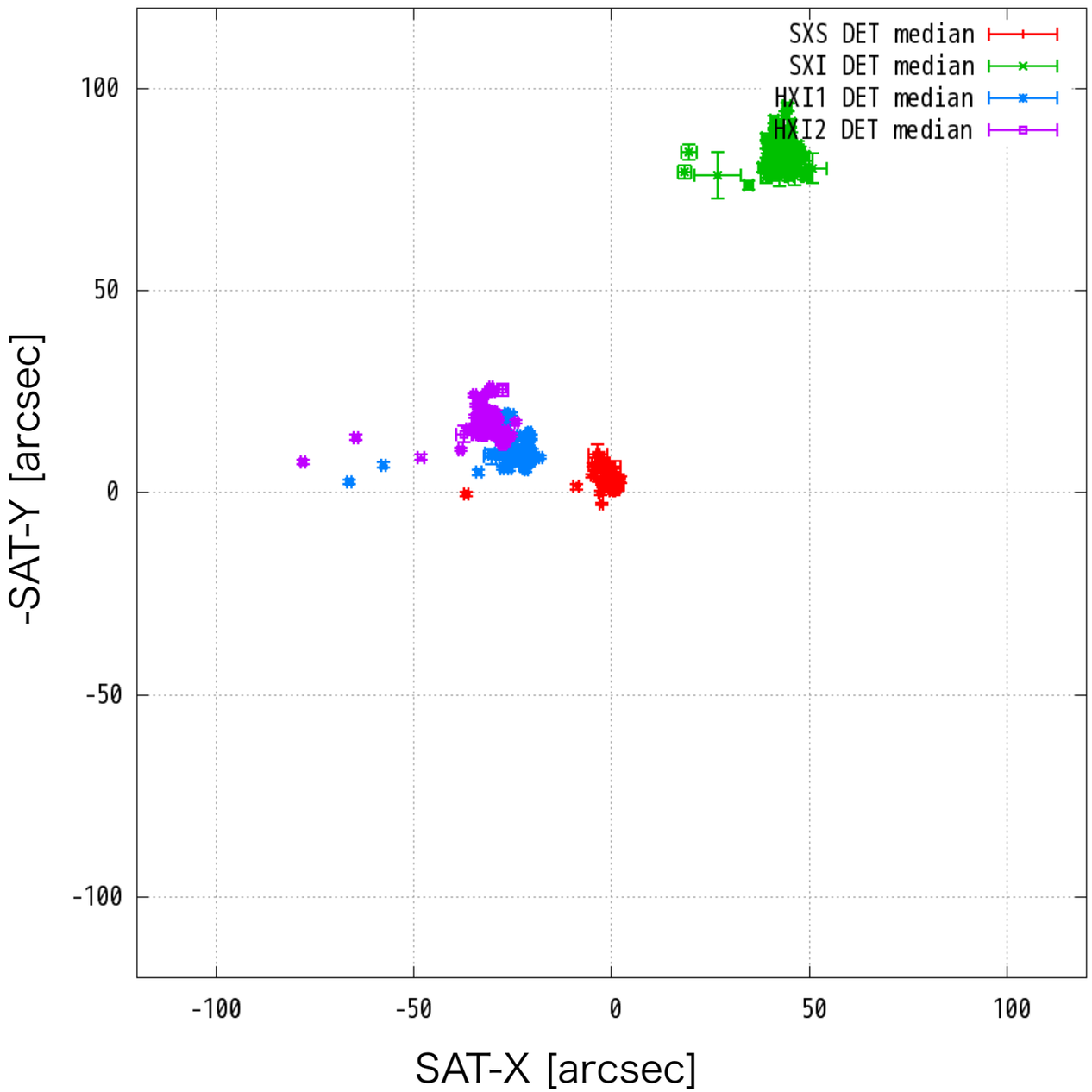
STT-CTL





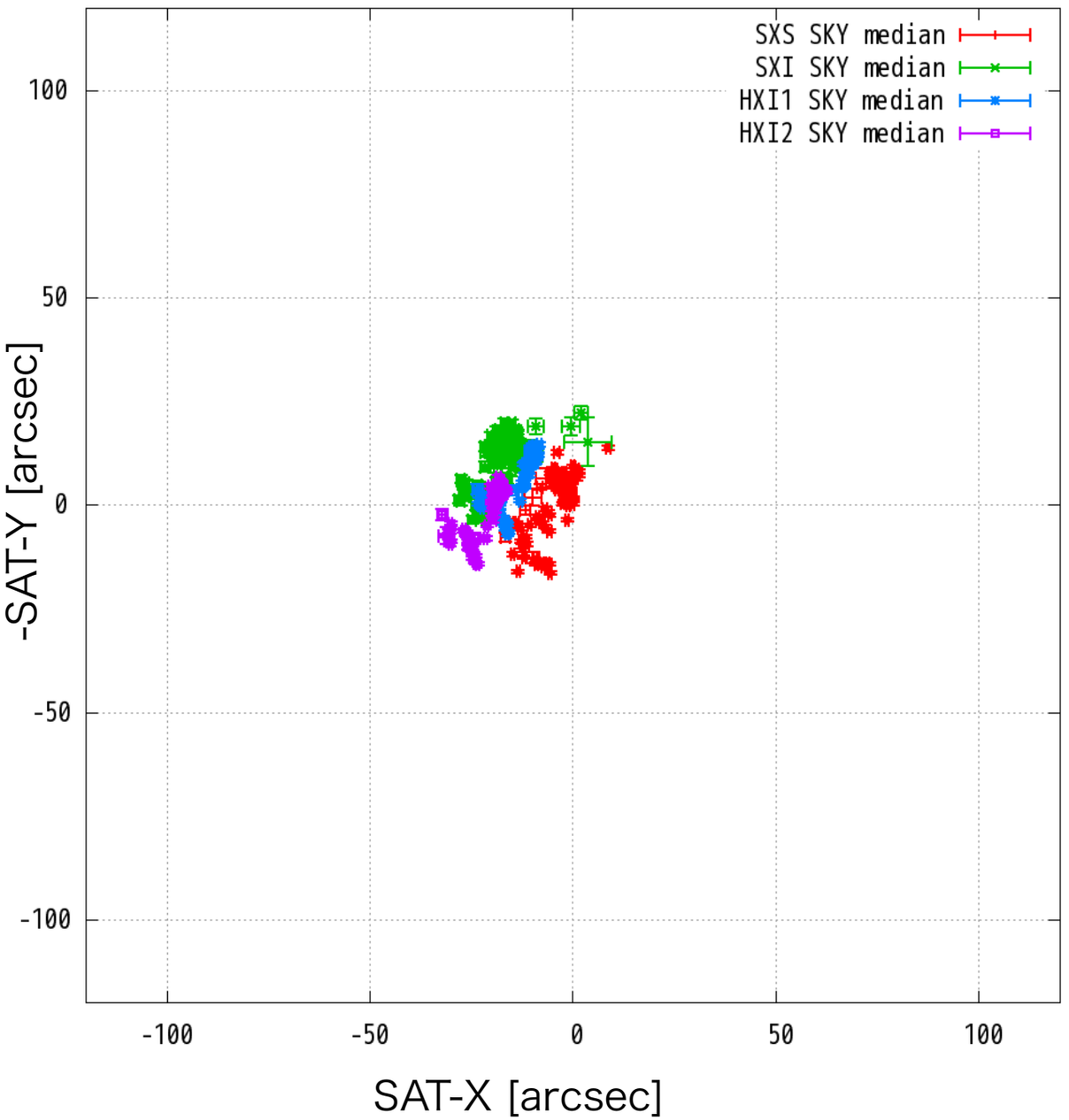
Crab (STT-ALL)
seq: 100044010

DET



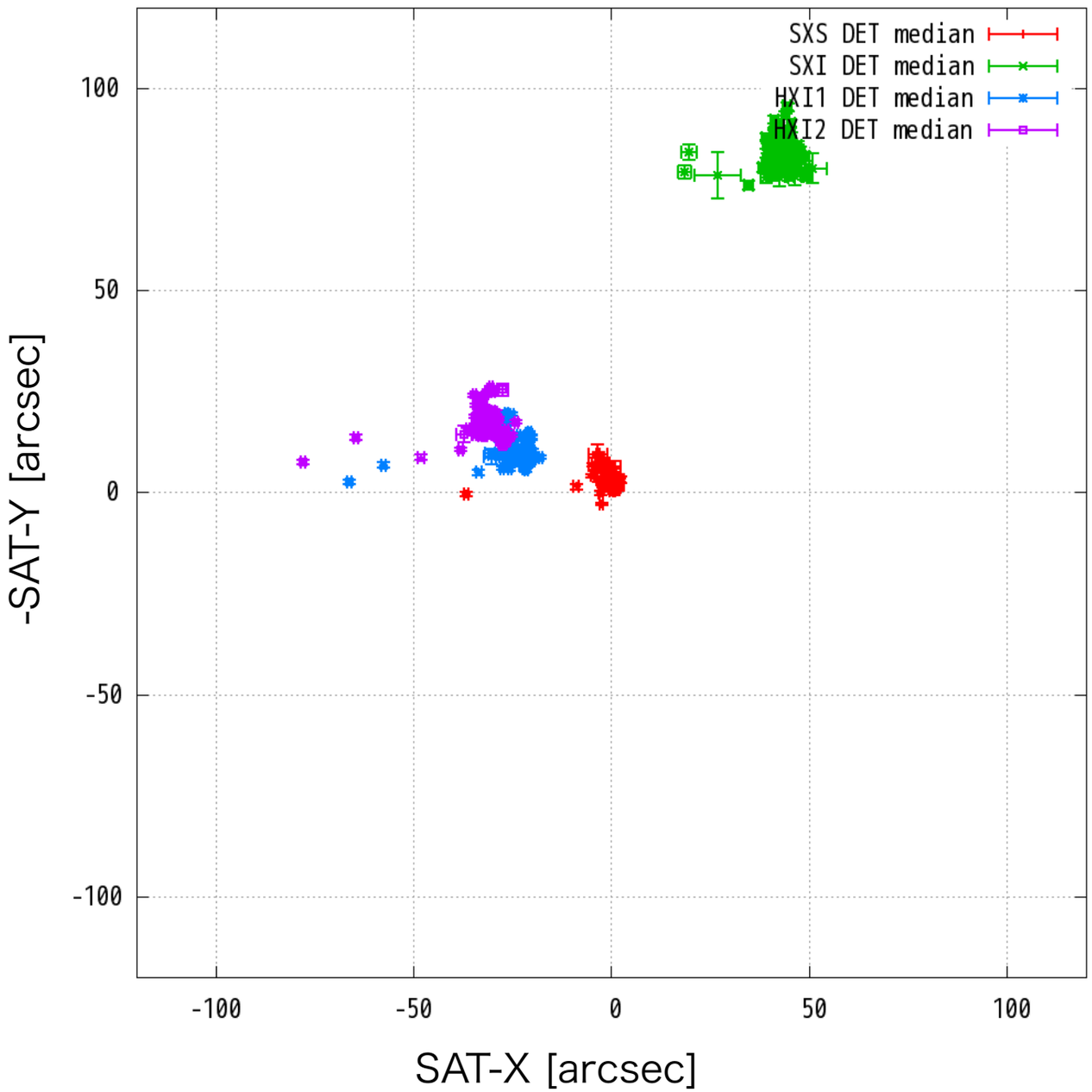
SKY

8/1 ATT



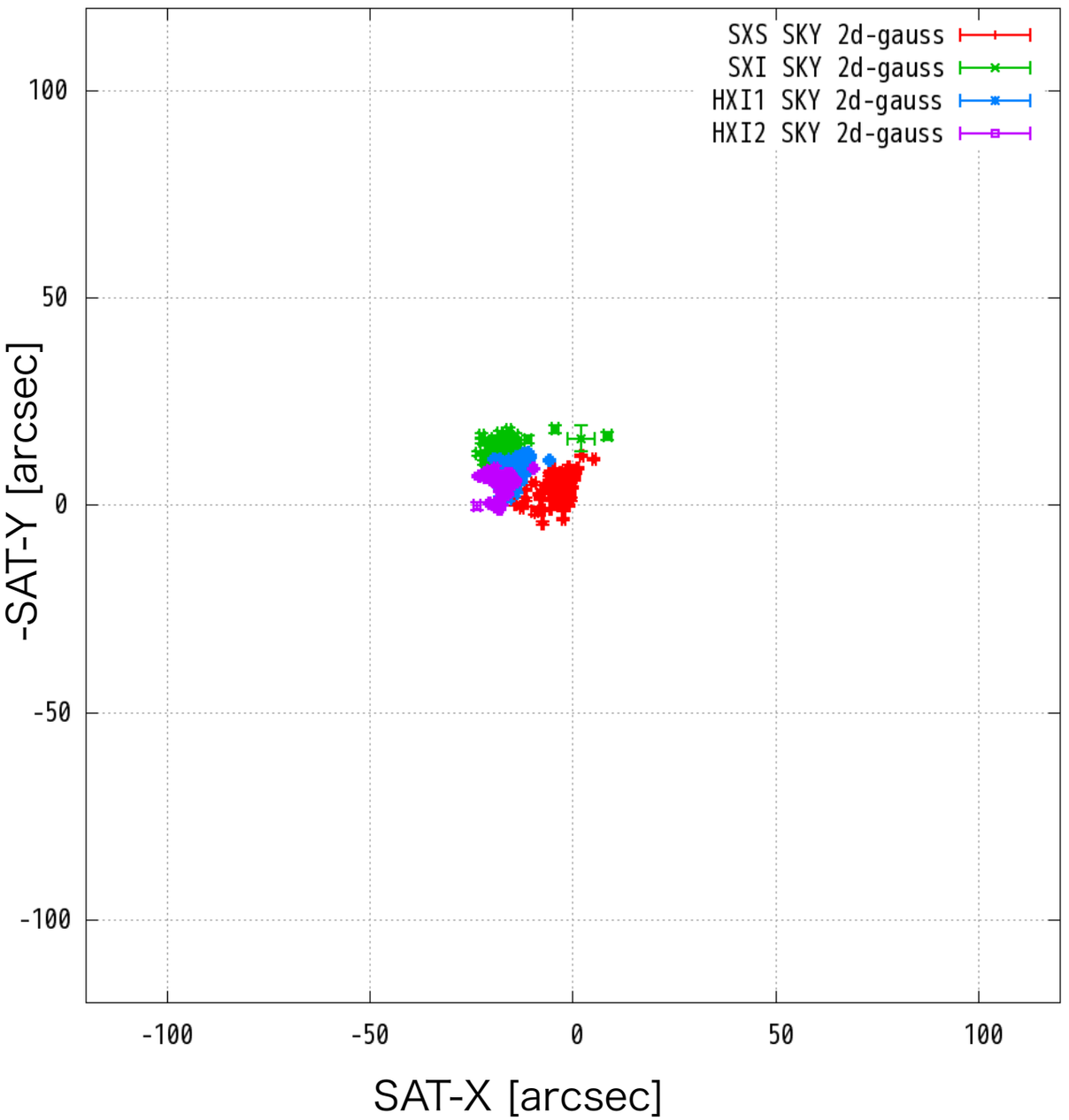
Crab (STT-ALL)
seq: 100044010

DET



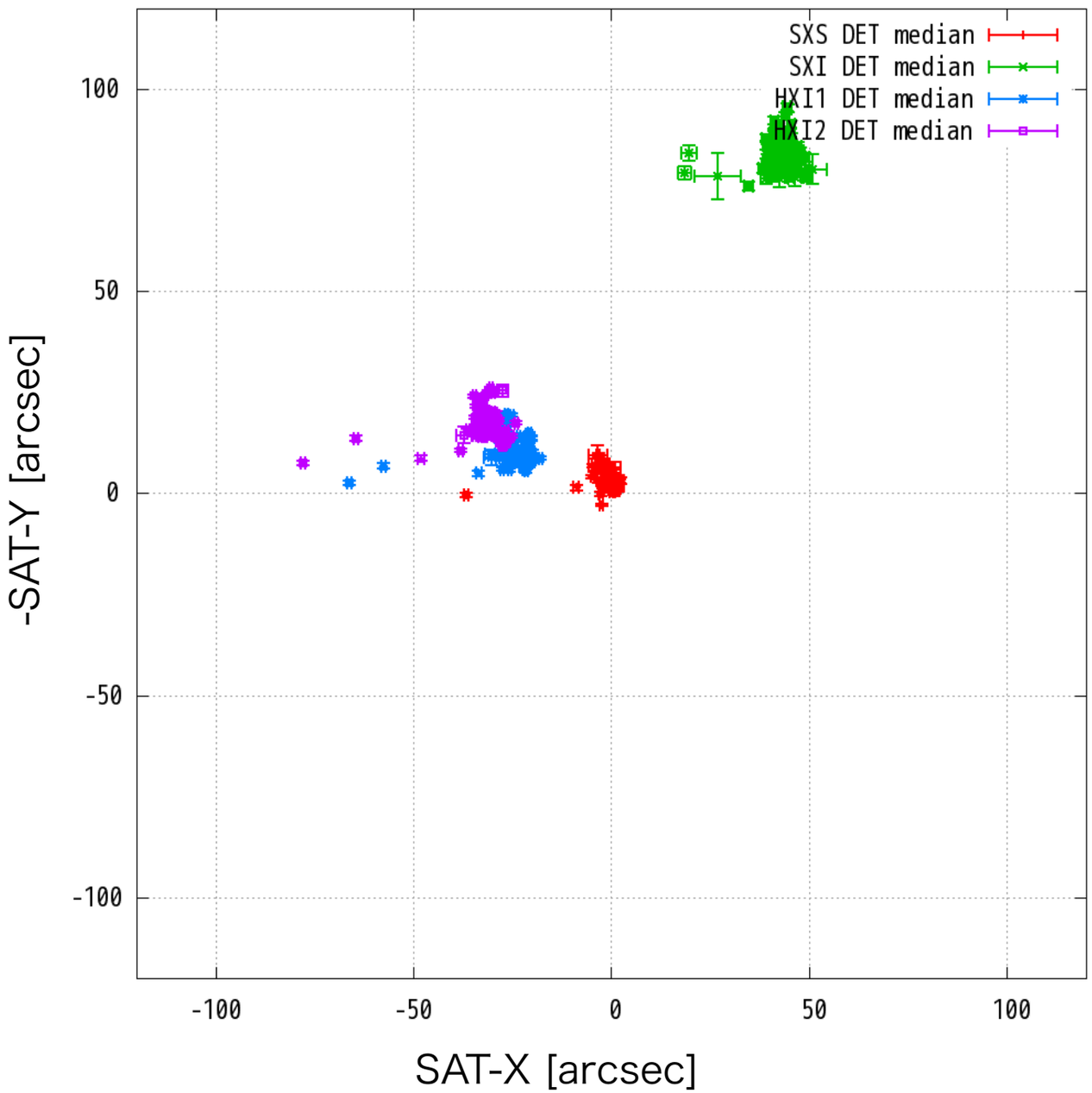
SKY

9/E ATT



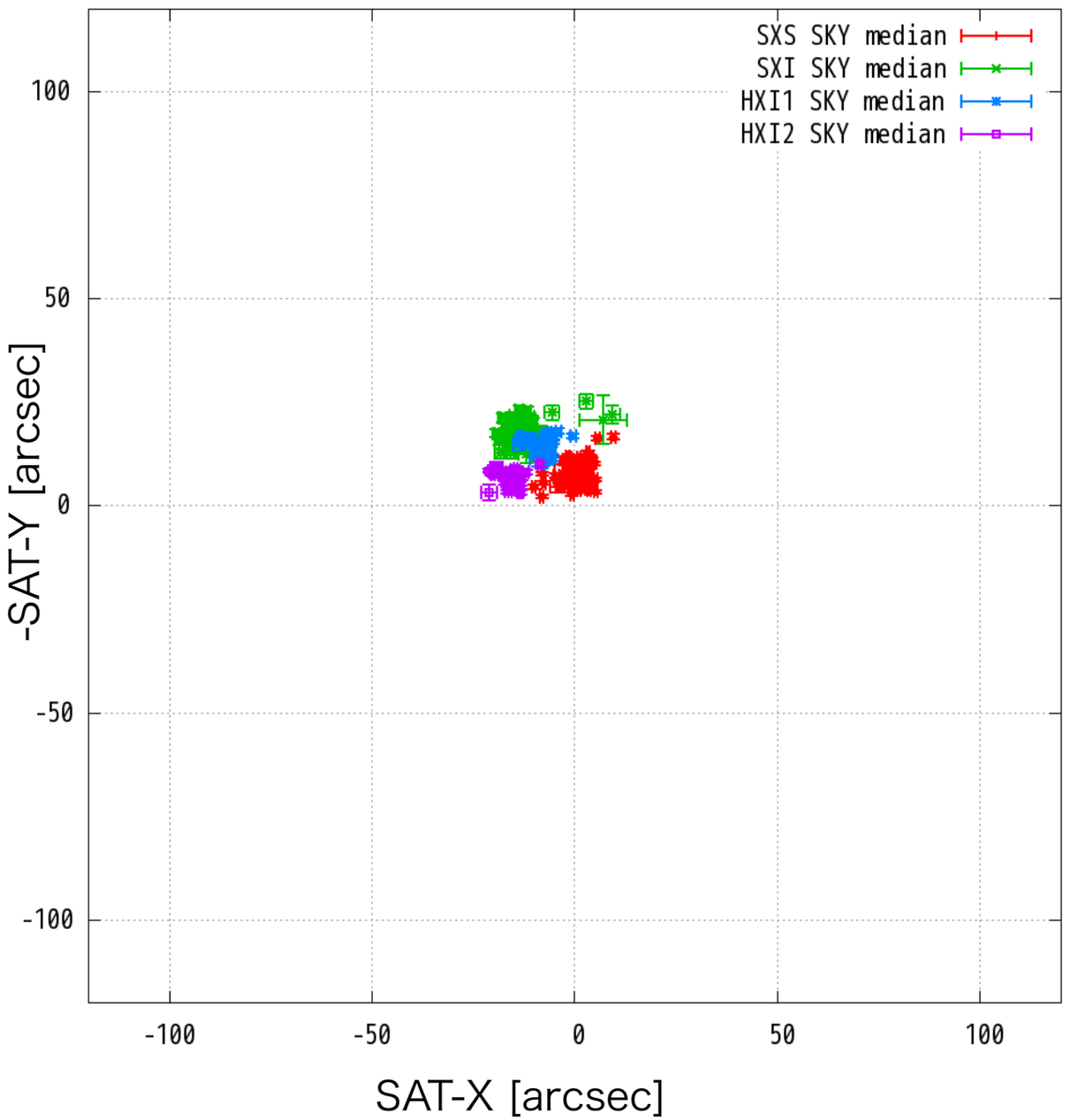
Crab (STT-ALL)
seq: 100044010

DET



SKY

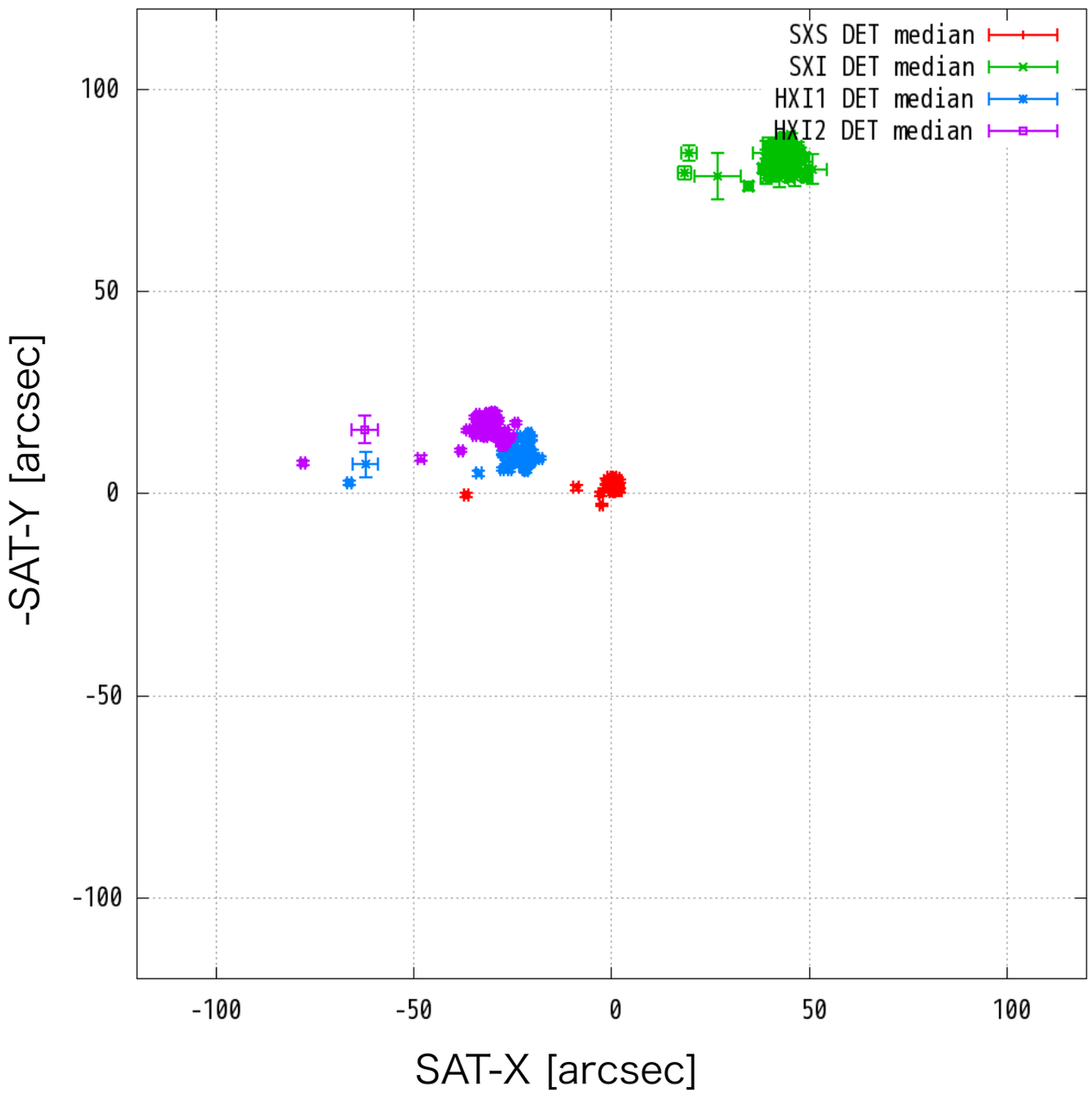
12/E ATT



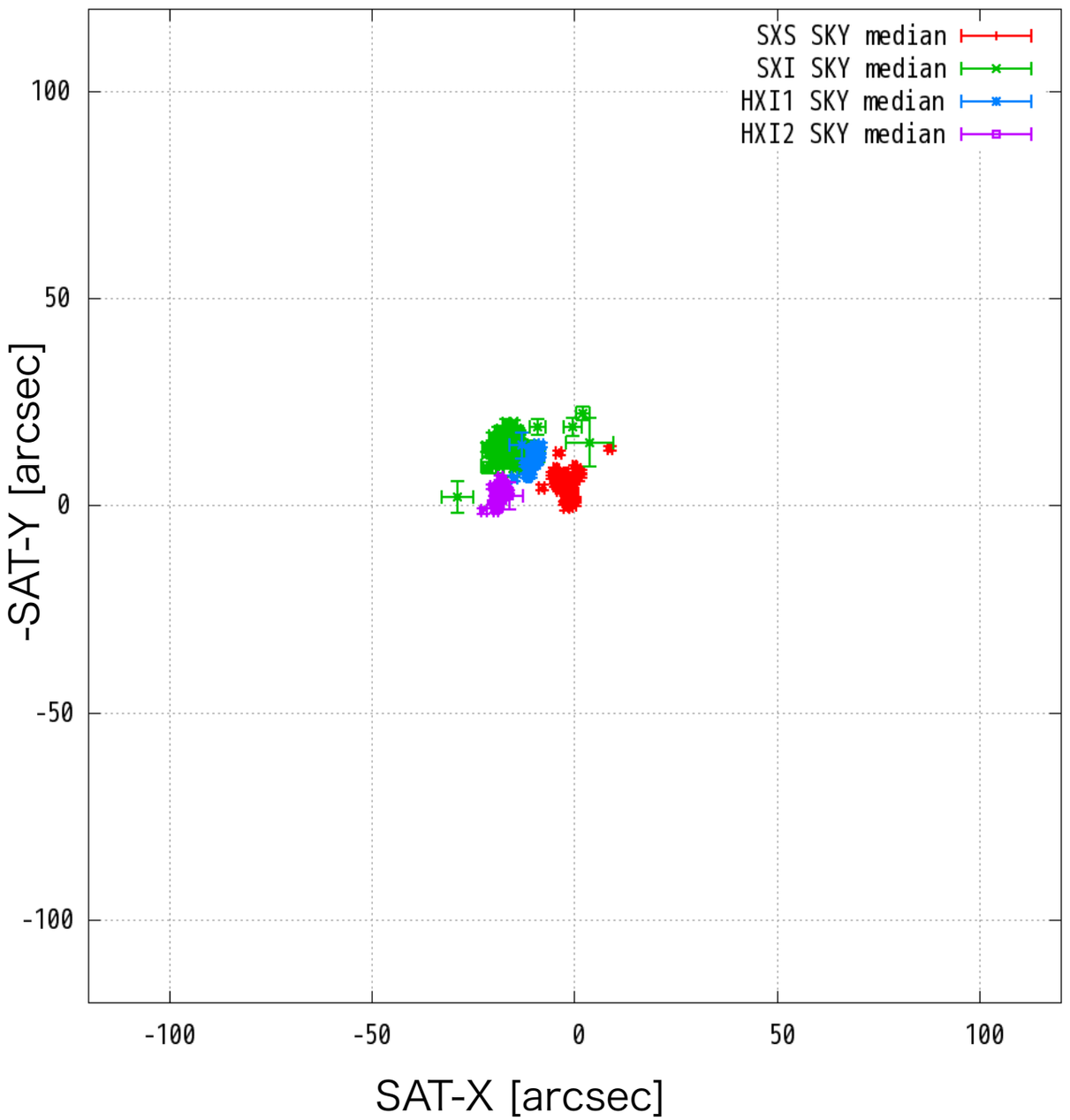
Crab (STT-CTL)
seq: 100044010

8/1 ATT

DET

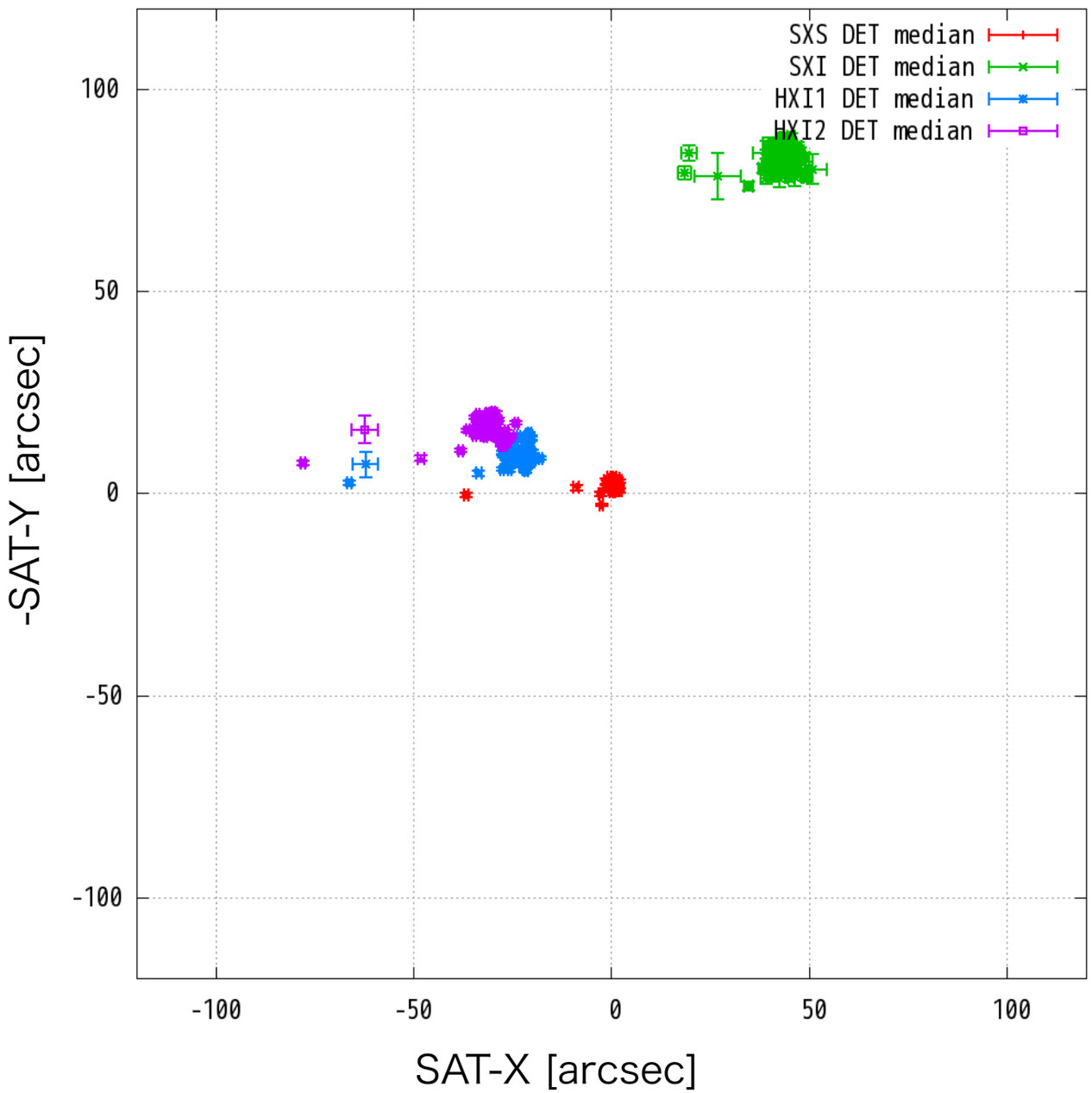


SKY



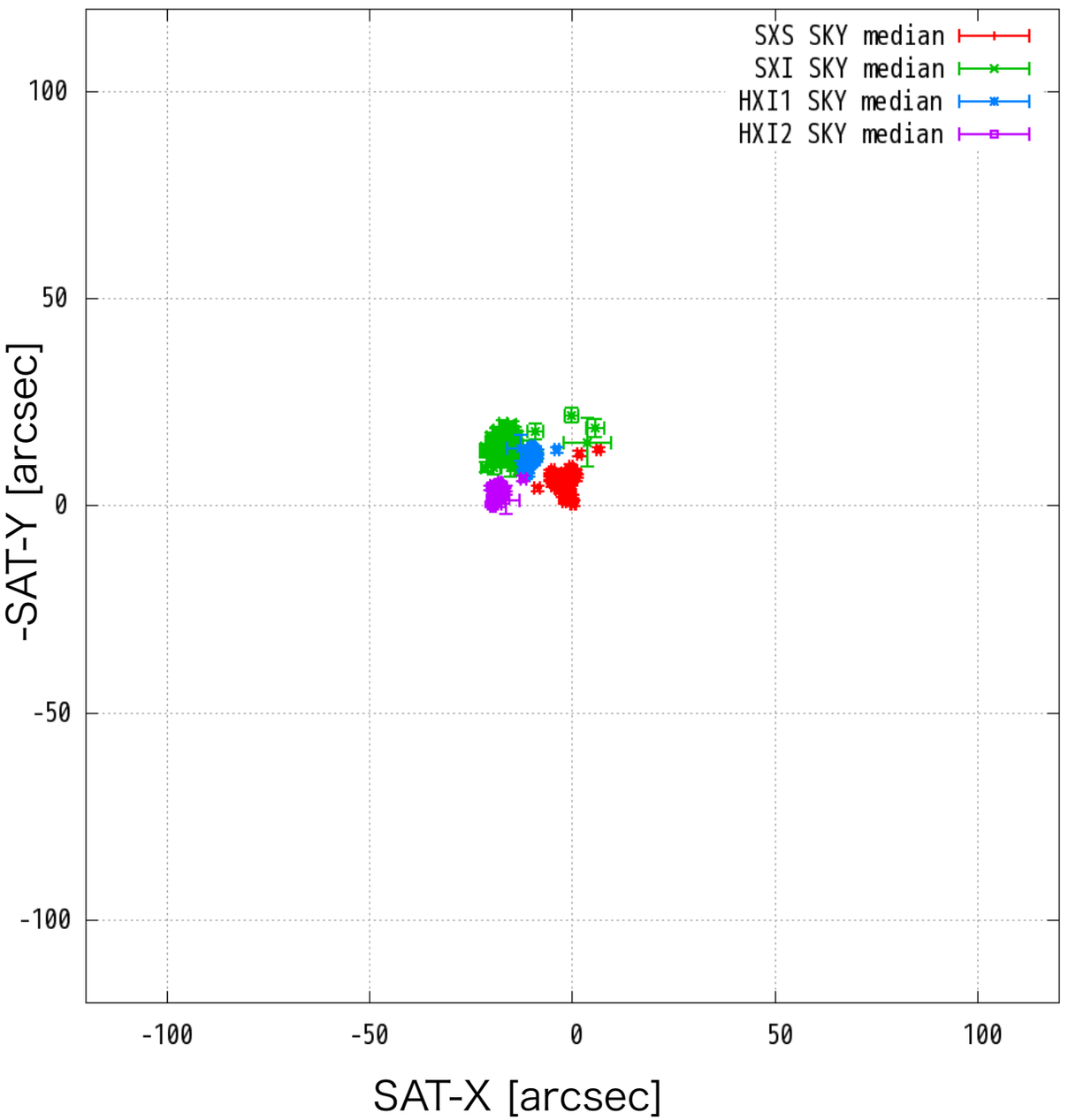
Crab (STT-CTL)
seq: 100044010

DET



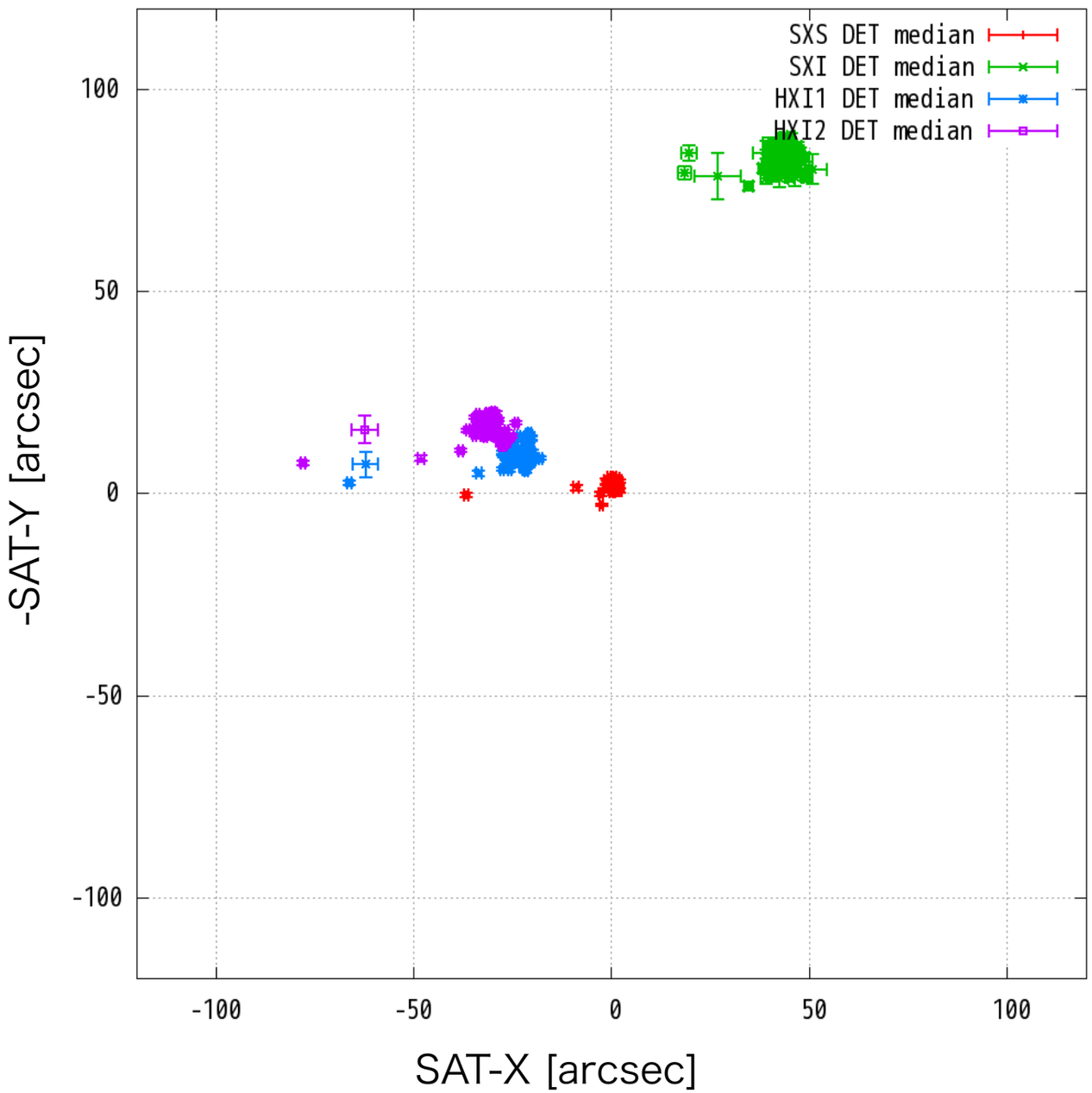
SKY

9/E ATT



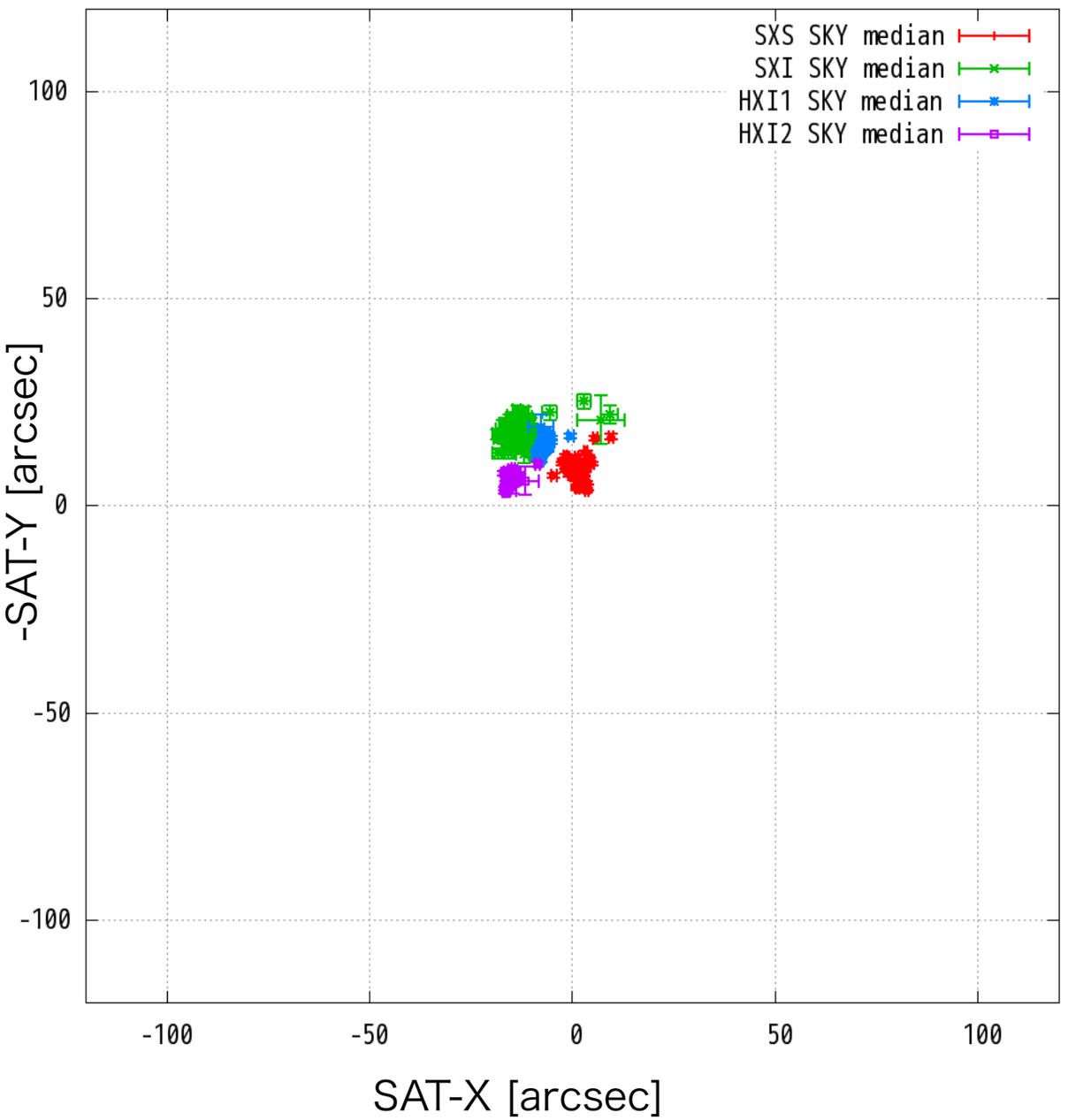
Crab (STT-CTL)
seq: 100044010

DET



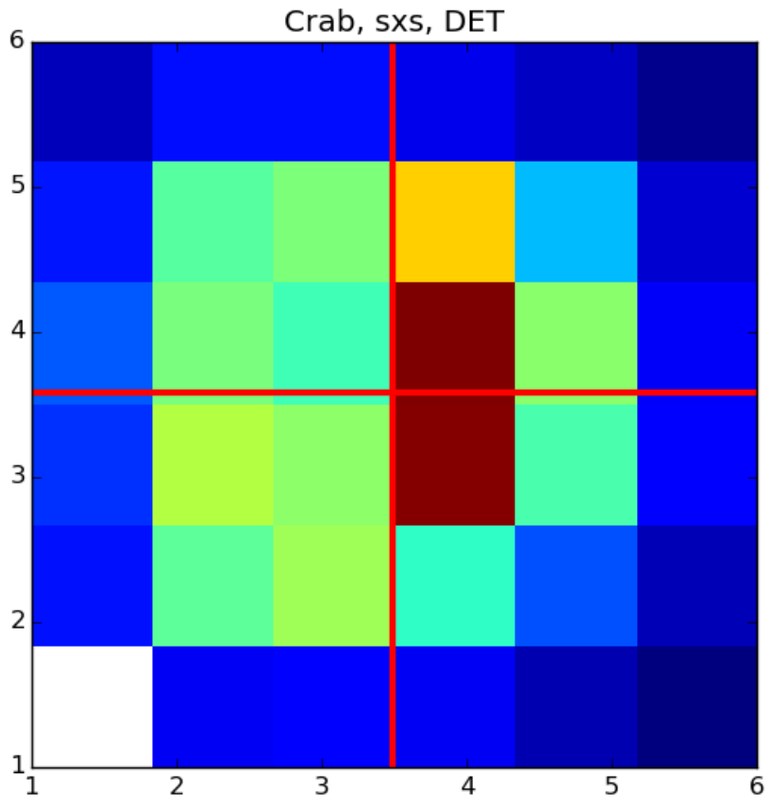
SKY

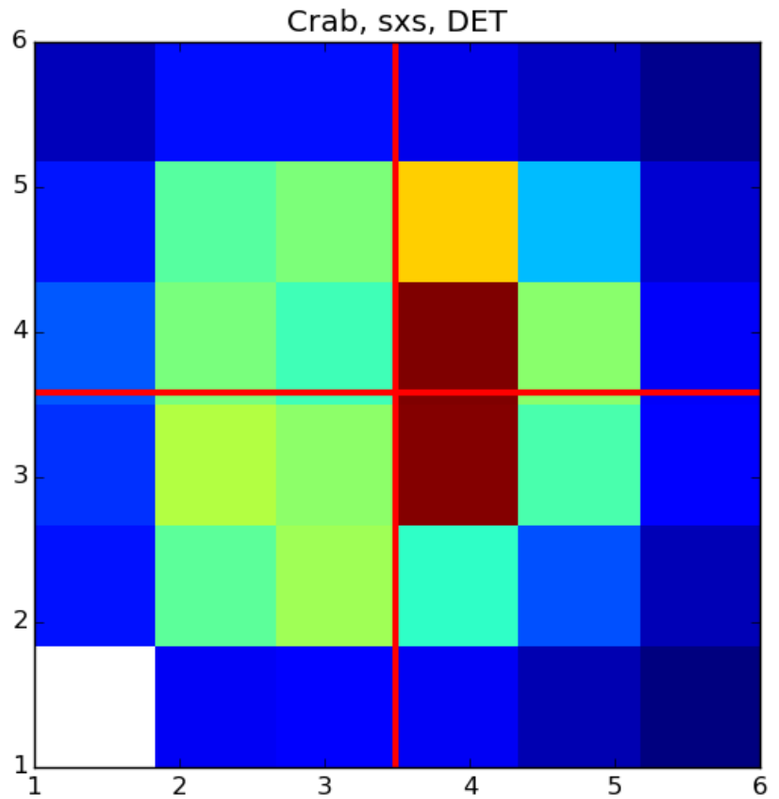
12/E ATT



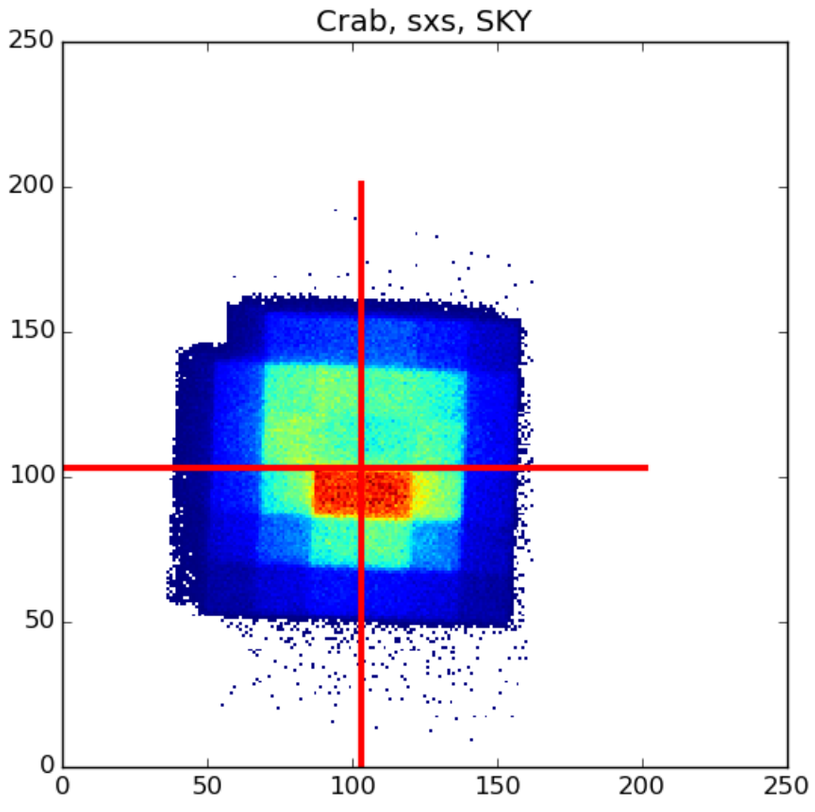
Crab
(STT-ALL)
seq: 100044010

+ 2d lorentz center
+ simbad center
(12/E only)

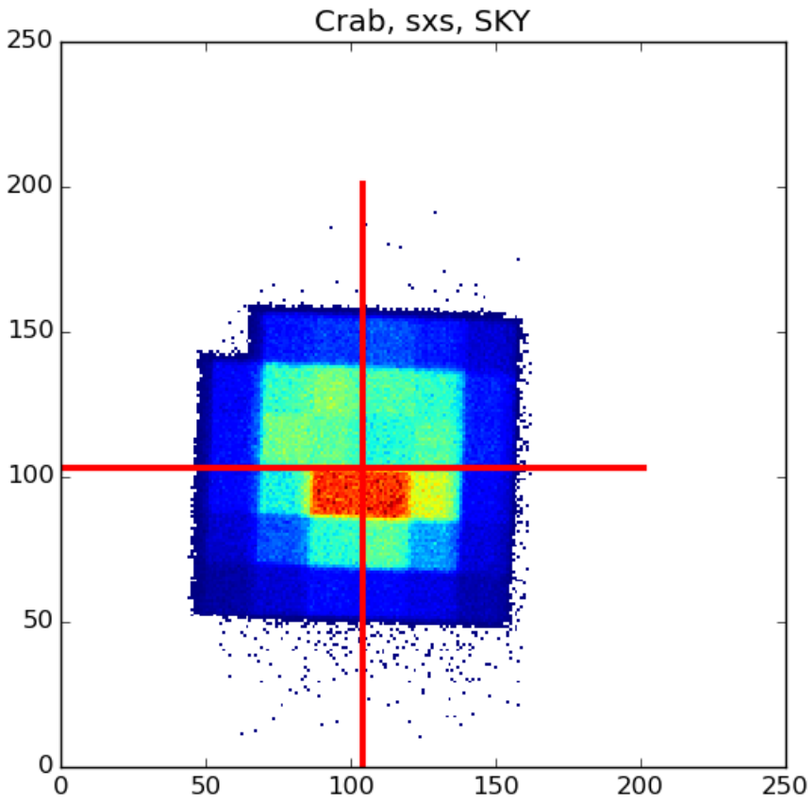




8/1 ATT



9/E ATT



12/E ATT