



UVIT safety check tools

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UVIT Bright Source Warning Tool

- Gives a list of all the bright visible stars in the field of a given target.
- Link: <https://uvit.iap.res.in/Software/bswt>

Home Science Instrument Calibration Observing Publications **Software** Downloads Intranet

Bright Source Warning Tool

v 2.0.0

Field Coordinates

Coordinate Type Equatorial (J2000)
 Galactic

Eq. Coordinates

Source Name

Primary Instrument

Programming: V. Smriti, N. Sindhu, Anand Maltrey, Yuvraj Harsha, Annapurni
Web Interface: Rekshesh Mohan

Software

- Obs Planning: VIS
- Obs Planning: UV
- Exposure Calculator
- Bright Source Warning Tool**
- BSWT Help
- Timestamp Conversion

Observing

- Preparations
- Proposal Submission
- Planning Tools
- Data Status
- Data Archive

Astrosat

- Astrosat Website (ISRO)
- Astrosat Website (IUCAA)
- Science Support
- Astrosat at ISSDC

Outreach

UVIT Bright Source Warning Tool

Home Science Instrument Calibration Observing Publications Software Downloads Intranet

Bright Source Warning Tool

v 2.0.0

Input Values

Src Coords (RA, Dec)	(19:58:21.67, 35:12:5.76) deg
Primary Instrument	UVIT

Output

RA:19:58:21.67 , DEC:35:12:5.76
ra and dec in decimal:RA-->299.590302 DEC-->35.201599

299.24817	35.13049	11.256	1.119
299.76657	35.20945	10.014	0.161
299.31058	35.10326	10.784	1.345
299.91739	35.21311	11.639	0.544
299.66202	35.23968	11.568	0.228
299.37253	35.06476	11.195	0.482
299.34702	35.03907	11.566	0.321
299.36551	35.46247	12.061	0.368
299.34555	34.93555	11.829	0.149
299.56479	34.87552	11.018	0.432
299.77750	34.94608	12.015	0.251
299.28195	35.11315	11.927	0.962
299.58847	35.29081	10.643	0.399
299.34161	35.41313	12.163	0.468
299.78775	35.03804	11.763	0.390
299.62601	35.10512	11.392	0.903
299.47623	34.97052	11.388	0.142
299.52621	35.37974	9.084	0.009
299.73602	35.36957	11.085	1.410
299.64911	35.52013	12.148	0.464
299.35852	35.18859	12.636	0.314
299.66580	34.99330	11.073	0.306
299.30551	35.03140	7.271	0.424
299.70609	35.35433	9.548	1.246
299.59033	35.20161	8.909	0.609
299.65372	34.95538	11.115	0.347
299.71518	35.49776	6.998	0.021
299.51785	35.47624	12.614	-0.216
299.45139	35.03563	9.928	0.218
299.64523	35.46391	12.464	0.133
299.89392	35.03115	11.253	0.419
299.31882	35.41859	11.668	1.131
299.47348	35.29892	11.962	0.363
299.59018	35.21607	10.033	0.519
299.72936	35.14202	11.324	0.678

Software

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- Obs Planning: UV
- Exposure Calculator
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Outreach

- Astrosat at ASI-POEC
- Picture of the Month
- Astrosat on Facebook

299.43646	35.20876	10.869	0.111
299.27997	35.17303	9.728	0.155
299.71710	35.10518	9.539	0.232
299.90871	35.21306	12.492	0.162
299.66150	35.06923	8.853	-0.034
299.44580	35.13369	11.279	0.434

Safe Count limit for FUV: 1500
Safe Count limit for NUV: 1500

FUVCaF2-1 : Field Is NOT SAFE For Observation ~ ~
FUVCaF2-1 : Field Is NOT SAFE For Observation ~ ~

FUVCaF2-2 : Field Is NOT SAFE For Observation ~ ~
FUVCaF2-2 : Field Is NOT SAFE For Observation ~ ~

FUVBaF2 : Field Is NOT SAFE For Observation ~ ~
FUVBaF2 : Field Is NOT SAFE For Observation ~ ~

FUVSapphire : Field Is NOT SAFE For Observation ~ ~
FUVSapphire : Field Is NOT SAFE For Observation ~ ~

FUVSIllica : Field Is SAFE For Observations, provided no GALEX Bright source
Total Counts: 2188.337128

NUVSIllica : Field Is NOT SAFE For Observation ~ ~
NUVSIllica : Field Is NOT SAFE For Observation ~ ~

NUVB4 : Field Is NOT SAFE For Observation ~ ~
NUVB4 : Field Is NOT SAFE For Observation ~ ~

NUVB13 : Field Is NOT SAFE For Observation ~ ~
NUVB13 : Field Is NOT SAFE For Observation ~ ~

NUVB15 : Field Is NOT SAFE For Observation ~ ~
NUVB15 : Field Is NOT SAFE For Observation ~ ~

NUVN2 : Field Is NOT SAFE For Observation ~ ~
NUVN2 : Field Is NOT SAFE For Observation ~ ~

SEARCHING FOR BRIGHT SOURCES in GALEX GR7

No GALEX FUV Bright stars in the field

No GALEX NUV Bright stars in the field

Download Output [TXT] [PDF]

Return to User Inputs

UVIT VIS/FUV/NUV Filter Checking Tool

- To Check whether a field can be safely observed with UVIT VIS/FUV/NUV filters.
- The VIS channel is primarily used for the spacecraft tracking.
- Output of VIS filter checking tools is mandatory for UVIT observations.
- Link to filter checking tools: <https://github.com/prajwel/canuvit#readme>
- >> pip install canuvit
- >> canuvit -h

UVIT VIS/FUV/NUV Filter Checking Tool

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- >> pip install canuvit
- >> canuvit -h

```
divyrawat@sysadmin-OptiPlex-5050:~$ canuvit -h
Usage: canuvit [OPTIONS]

Program to check if a given coordinate can be safely observed using UVIT.

Example usage:
canuvit -r "13:12:14" -d "-14:15:13"

Options:
  --all                Check safety for all filters. [default:
                       True]
  --vis               Check safety for only visible filters.
  --uv               Check safety for only UV filters.
  -r, --ra RA         Right ascension of the coordinate. Format:
                       hh:mm:ss[.ss] e.g. "00:54:53.45" [required]
  -d, --dec DEC      Declination of the coordinate. Format:
                       [-]dd:mm:ss[.ss] e.g. "-37:41:03.23".
                       [required]
  -i, --instrument [uvit|sxt|czti|laxpc]
                       Instrument to check for. [default: uvit]
  -v, --verbose       Increase output verbosity.
  --version           Show the version and exit.
  -h, --help         Show this message and exit.

divyrawat@sysadmin-OptiPlex-5050:~$
```

UVIT VIS/FUV/NUV Filter Checking Tool

- `>> canuvit -r "source_RA" -d "source_Dec"`
- "source_RA" is Right ascension of the coordinate in hh:mm:ss[.ss]
- "source_Dec" is Declination of the coordinate in [-]dd:mm:ss[.ss]

```
dtvyar@ravva-HP-Notebook:~$ canuvit -r "12:12:12" -d "12:12:12"
Payload: uvit, Coordinates: 12 12 12, 12 12 12

### VIS
ra_hms  dec_dms  mag    B-V    SpecType  VIS3  VIS2  VIS1  ND1  BK7
12:11:52.7568 +12:07:47.532 11.096 0.864 K1 1333.0 124.4 88.6 29.7 1624.9
12:12:22.944 +12:17:23.856 11.126 0.814 K0 1296.7 121.0 86.2 28.9 1580.6
12:11:35.016 +12:12:04.644 11.426 0.451 F5 1457.4 234.9 180.9 32.8 1915.2
12:11:01.656 +12:08:35.916 11.874 0.694 G5 754.3 89.1 69.2 16.8 950.9
12:11:11.5272 +12:03:14.04 12.177 0.322 F0 803.1 143.5 101.4 18.2 1061.7
12:12:05.5368 +12:19:09.768 12.268 0.787 K0 452.9 42.3 30.1 10.1 552.1

Safe filters: ['VIS3', 'VIS2', 'VIS1', 'ND1', 'BK7']

Downloading http://galax.stsci.edu/data/GR7/pipe/01-vsn/26011-G16_001011_GUVICS011/d/01-main/0007-img/07-try/G16_001011_GUVICS011-xd-mcat.fits.gz
|-----| 6.3M/6.3M (100.00%) 22s

FUV observations seem to be absent! Using M_fuv = M_nuv - 1.65.
Downloading http://galax.stsci.edu/data/GR7/pipe/01-vsn/26011-G16_001011_GUVICS011/d/01-main/0007-img/07-try/G16_001011_GUVICS011-nd-int.fits.gz
|-----| 16M/ 16M (100.00%) 41s

### NUV
sl_no  ra_hms  dec_dms  Mag  Mag_corrected  silica  b4  b13  b15  n2
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
1 12:12:32.3946 +12:07:27.4144 19.32 19.32 1.86 0.41 0.50 0.14 0.10
2 12:11:11.6503 +12:03:14.7794 16.25 16.25 31.75 6.99 8.57 2.35 1.75
3 12:12:41.0882 +12:14:58.2679 16.15 16.15 34.66 7.63 9.36 2.56 1.91
4 12:12:15.3493 +12:29:18.1277 19.50 19.50 1.59 0.35 0.43 0.12 0.09
5 12:11:35.0116 +12:12:04.7063 16.47 16.47 25.93 5.70 7.00 1.92 1.43

Safe filters in NUV: ['Silica', 'NUV-grating', 'NUV-B4', 'NUV-B13', 'NUV-B15', 'NUV-N2']
```

UVIT VIS/FUV/NUV Filter Checking Tool

- The UVIT ~20 arc-minute field of view can have potential bright objects that can trigger a BOD.
- Due to offsets relative to UVIT :(1) SXT : primary instrument search 25 arc min around TOI and (2) LAXPC: primary instrument search for 28 arc min around TOI.

```
dtvyar@ravva-HP-Notebook:~$ canuvt -r "12:12:12" -d "12:12:12"
Payload: uvit, Coordinates: 12 12 12, 12 12 12

### VIS
ra_hms  dec_dms  mag    B-V    SpecType    VIS3    VIS2    VIS1    ND1    BK7
12:11:52.7568 +12:07:47.532  11.096  0.864  K1    1333.0  124.4  88.6  29.7  1624.9
12:12:22.944  +12:17:23.856  11.126  0.814  K0    1296.7  121.0  86.2  28.9  1580.6
12:11:35.016  +12:12:04.644  11.426  0.451  F5    1457.4  234.9  180.9  32.8  1915.2
12:11:01.656  +12:08:35.916  11.874  0.694  G5    754.3  89.1  69.2  16.8  950.9
12:11:11.5272 +12:03:14.04  12.177  0.322  F0    803.1  143.5  101.4  18.2  1061.7
12:12:05.5368 +12:19:09.768  12.268  0.787  K0    452.9  42.3  30.1  10.1  552.1

Safe filters: ['VIS3', 'VIS2', 'VIS1', 'ND1', 'BK7']
Downloading http://galex.stsci.edu/data/GR7/pipe/01-vsn/26011-G16_001011_GUVICS011/d/01-main/0007-1mg/07-try/G16_001011_GUVICS011-xd-ncat.fits.gz
|=====| 6.3M/6.3M (100.00%) 22s

FUV observations seem to be absent! Using M_fuv = M_nuv - 1.65.
Downloading http://galex.stsci.edu/data/GR7/pipe/01-vsn/26011-G16_001011_GUVICS011/d/01-main/0007-1mg/07-try/G16_001011_GUVICS011-nd-int.fits.gz
|=====| 16M/16M (100.00%) 41s

### NUV
sl_no  ra_hms  dec_dms  Mag  Mag_corrected  silica  b4  b3  b15  n2
-----
1 12:12:32.3946 +12:07:27.4144 19.32 19.32 1.86 0.41 0.50 0.14 0.10
2 12:11:11.6503 +12:03:14.7794 16.25 16.25 31.75 6.99 8.57 2.35 1.75
3 12:12:41.0882 +12:14:58.2679 16.15 16.15 34.66 7.63 9.36 2.56 1.91
4 12:12:15.3493 +12:29:10.1277 19.50 19.50 1.59 0.35 0.43 0.12 0.09
5 12:11:35.0116 +12:12:04.7063 16.47 16.47 25.93 5.70 7.00 1.92 1.43

Safe filters in NUV: ['Silica', 'NUV-grating', 'NUV-B4', 'NUV-B13', 'NUV-B15', 'NUV-N2']
```

UVIT VIS/FUV/NUV Filter Checking Tool

- The filters for which the count rates are lesser than 1500 in both NUV and FUV are safe for observations.

```
### FUV
sl_no    ra_hms    dec_dms    Mag    Mag_corrected    caf2    baf2    sapphire    silica
-----
 1 12:12:32.3946 +12:07:27.4144 19.32      17.67    1.65    1.40      1.04    0.36
 2 12:11:11.6503 +12:03:14.7794 16.25      14.60    28.17    23.94     17.75    6.20
 3 12:12:41.0882 +12:14:58.2679 16.15      14.50    30.75    26.14     19.37    6.76
 4 12:12:15.3493 +12:29:18.1277 19.50      17.85    1.41    1.20      0.89    0.31
 5 12:11:35.0116 +12:12:04.7063 16.47      14.82    23.00    19.55     14.49    5.06

Safe filters in FUV: ['CaF2', 'FUV-grating', 'BaF2', 'Sapphire', 'Silica']
divyar@ravva-HP-Notebook:~$
divyar@ravva-HP-Notebook:~$ canuvit -r "19:15:11.6" -d "10:56:44" -i sxt
Payload: sxt, Coordinates: 19 15 11.6, 10 56 44

### VIS
ra_hms    dec_dms    mag    B-V    SpecType    VIS3    VIS2    VIS1    ND1    BK7
-----
19:16:46.296 +10:58:45.984 8.2    -0.16    B5    49400.0  16200.0  11000.0  1179.0  76200.0
19:16:46.428 +10:58:46.74 8.259  0.197    A7    34700.0  6816.4  3733.0  793.6  45000.0
19:14:02.4984 +10:38:44.988 8.3    -0.01    A0    40700.0  10500.0  4130.9  950.0  53800.0
19:14:02.6232 +10:38:44.592 8.342  0.296    A9    29700.0  5666.7  3636.5  676.0  39200.0
19:16:21.1008 +11:05:34.296 9.312  0.44    F5    10200.0  1646.2  1267.7  230.2  13400.0
19:15:08.1456 +10:34:31.476 9.355  0.524    F8    8744.7  1230.7  987.3  195.9  11300.0
19:16:00.924 +10:37:12.576 9.382  0.343    F1    10500.0  1882.5  1330.7  239.0  13900.0

Safe filters: ['ND1']

WARNING! there exists 2.0 pair of bright stars which are closer than
10.0 arcseconds!

0 GaIex tiles found. GaIex observations around
the given target is not available. Using TD1
catalogue to estimate UVIT count rates.

The galactic latitude is between -30 to 30.
Your field cannot be checked using TD1 catalogue!

divyar@ravva-HP-Notebook:~$
```


Special cases UVIT FUV/NUV Filter Checking Tool

- Special cases were discussed in last year webinar by Jayashree and Shah Alam.
- Link: <http://astrosat-ssc.iucaa.in/workshops>



UVIT Exposure Time Calculator

- Link: <https://uvit.iap.res.in/Software/etc>
- Input: source type, magnitude/flux density, source coordinate
- Output: S/N, exposure time

Astrosat UVIT

Home Science Instrument Calibration Observing Publications Software Downloads Intranet

Exposure Time Calculator v 2.0.0

Source

Star Black Body Galaxy AGN Power Law Flat Spectrum User Defined

Spectral Type: A 1 V

Magnitude: 15.0 Band: V

Flux Density: 3.5e-15 Ergs/s/cm²/Å

At wavelength: 3300.0 Å

Eq. Coordinates: 11 00 00.0, -16 00 00.0

Galactic Extinction

E(B-V) R_v: 3.1

N_H E(B - V): 0.0

Distance A_v

Background

Dark counts: 25

Output

Signal-to-Noise Ratio Exposure Time required FOR Signal-to-Noise Ratio: 5.0

Submit Reset

Software

- Obs Planning: VIS
- Obs Planning: UV
- Exposure Calculator
 - ETC Help
 - Bright Source Warning Tool
 - Timestamp Conversion

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- Picture of the Month
- Astrosat on Facebook

UVIT Exposure Time Calculator

Source

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Spectral Type A ▾ 1 ▾ V ▾

Magnitude 15.0 V ▾ Band

Flux Density 3.5e-15 Ergs/s/cm²/Å ▾
At wavelength 3300.0 Å

Star

Black Body

- Allowed Range: 0.0K to 10⁸K

Source

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Temperature 6000.0 K

Magnitude 15.0 V ▾ Band

Flux Density 3.5e-15 Ergs/s/cm²/Å ▾
At wavelength 3300.0 Å

- Temperature of a blackbody decides the shape of its spectrum.

UVIT Exposure Time Calculator

Source

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Type

Redshift

Magnitude Band

Flux Density

At wavelength A

Galaxy

AGN

- Types of template spectra: Liner, Seyfert 1, Seyfert 2, and QSO.

Source

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Type

Redshift

Magnitude Band

Flux Density

At wavelength A

UVIT Exposure Time Calculator

Power Law

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Index

Redshift

Magnitude V Band

Flux Density Ergs/s/cm^2/A

At wavelength A

Eq. Coordinates

Flat Spectrum

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Magnitude V Band

Flux Density Ergs/s/cm^2/A

At wavelength A

Eq. Coordinates

- $S_{\lambda} \propto \lambda^{\alpha}$
- Allowed range of α is -5 to 5

Source

Spectrum Upload No file chosen

Redshift Normalize

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

user-defined

UVIT Exposure Time Calculator

user-defined

Source

Star Spectrum Upload No file chosen

Black Body Redshift: Normalize

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Ascii file format

```
# My source's spectrum
#
# Wavelength      Flux density
# (angstroms)    (ergs/s/cm^2/Å)
1370.10144043    3.97418026e-09
1441.79272461    5.91593765e-09
1502.95971680    9.01411200e-09
1569.54650879    1.03960225e-08
1642.30700684    1.38279651e-08
1722.14147949    1.42179048e-08
1810.13403320    1.73137944e-08
```

UVIT Exposure Time Calculator

- Source Coordinate Format: (RA, decl) = "hh mm ss.ss, +/-dd mm ss.ss"
- Galactic Extinction parameter is calculated using relations:

$$E(B-V) = R_V = A_V / (E(B-V))$$

$$E(B-V) = A_B - A_V$$

- N_{\square} input units are 10^{21} cm^{-2}
- Allowed range of N_{\square} 0.00001 to 10000

Eq. Coordinates		11 00 00.00, -16 00 00.0	
Galactic Extinction			
E(B-V)	<input checked="" type="radio"/>	R_V	3.1
N_H	<input type="radio"/>	E(B - V)	0.0
Distance	<input type="radio"/>		
A_V	<input type="radio"/>		
Background			
Dark counts	25		

UVIT Exposure Time Calculator

- Background Counts: The normal value ~ 25 counts per second which is detector noise,
- Proposer can provide larger one wants to consider other external contribution.

Parameter: Output

- Signal to noise ratio or
- Exposure time

Eq. Coordinates		11 00 00.00, -16 00 00.0	
Galactic Extinction			
E(B-V)	<input checked="" type="radio"/>	R_V	3.1
N_H	<input type="radio"/>	E(B - V)	0.0
Distance	<input type="radio"/>		
A_V	<input type="radio"/>		
Background			
Dark counts	25		

UVIT Exposure Time Calculator

Input for Galaxy M33

Source

Star

Black Body

Galaxy

AGN

Power Law

Flat Spectrum

User Defined

Type

Redshift

Magnitude Band

Flux Density Ergs/s/cm²/Å

At wavelength Å

Eq. Coordinates

Galactic Extinction

E(B-V) R_V

N_H

Distance $E(B - V)$

A_V

Background

Dark counts

Output

Signal-to-Noise Ratio

Exposure Time required **FOR** Signal-to-Noise Ratio

Output

Galactic Latitude: 39 deg. (Lower limit is 30 deg.)

Filter	Source count rate (s ⁻¹)	Exposure Time (s)
FUV CaF2-1	356.9	0.07
FUV BaF2	303.5	0.08
FUV Sapphire	239.2	0.10
FUV Silica	97.82	0.26
FUV CaF2-2	314.9	0.08
NUV Silica	3751.9	less than 0.035
NUV B15	78.33	0.32
NUV B13	1174.0	less than 0.035
NUV B4	1473.2	less than 0.035
NUV N2	335.5	0.07
VIS 3	2.69 x 10 ⁺⁰⁴ Too Bright!	less than 0.035
VIS 2	8113.3	less than 0.035
VIS 1	7022.0	less than 0.035
VIS ND1	623.3	0.04
VIS BK-7	4.30 x 10 ⁺⁰⁴ Too Bright!	less than 0.035

Note: Source Count Rate is over the instrument PSF, 1.8"

[Download Output](#) [TXT]

AstroSat WebPIMMS

- This tool is useful to get an approximate value of count rate with AstroSat instruments SXT, LAXPC, CZTI and SSM.
- One should have prior knowledge of some parameters with other instruments like XMM-Newton, RXTE, etc.
- Link: http://astrosat-ssc.iucaa.in:8080/WebPIMMS_ASTRO/index.jsp

AstroSat WebPIMMS

The screenshot shows a web browser window with the URL `astroat-ssc.iucaa.in:8080/webPIMMS_ASTRO/index.jsp`. The page has a teal header with the text "WebPIMMS for ASTROSAT" and a navigation menu with links for "Home", "Help", "About", and "Contact". The main content area is white and features the title "Exposure Time Calculator for ASTROSAT" in a large, bold font. Below the title, it reads "A Mission Count Rate Simulator" and "Based on PIMMS 4.7d". A horizontal line separates the title from the text "ETC for CZTI, LAXPC, SSM, SXT". At the bottom of the page, a teal footer contains the copyright notice: "COPYRIGHT (C) 2010 - 2016 SPACE ASTRONOMY GROUP, ISRO SATELLITE CENTRE. ALL RIGHTS RESERVED."

WebPIMMS for ASTROSAT

[Home](#) [Help](#) [About](#) [Contact](#)

Exposure Time Calculator for ASTROSAT

A Mission Count Rate Simulator
Based on PIMMS 4.7d

ETC for CZTI, LAXPC, SSM, SXT

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AstroSat WebPIMMS

WebPIMMS for ASTROSAT

Home Help About Contact

WebPIMMS for ASTROSAT

A Mission Count Rate Simulator
Based on PIMMS 4.7d

From: Input Energy Range: Units keV Angstroms

To: Output Energy Range: Units keV Angstroms

Source: Flux /
Count Rate
(ergs/cm²/s OR counts/s) Redshift:

Galactic nH (cm⁻²): Intrinsic nH (cm⁻²):

Model

Power Law
 Black Body
 Therm. Bremss.
 APEC

Parameters

Photon Index:

Temperature kT: keV

Temperature kT: keV

Solar Abundance Ratio:

LogT | keV:

Note:
* - If 'Flux/Unabsorbed flux' option is selected in the 'From' box, a range should be entered in the 'Input Energy Range' box. eq. 3-6

From: CHANDRA/HRC-S Count Rate

To:

- SWIFT/XRT/PC Count Rate
- SWIFT/XRT/WT Count Rate
- SWIFT/XRT/PD Count Rate
- SWIFT/UVOT/UVW2 Count Rate
- SWIFT/UVOT/UVW1 Count Rate
- SWIFT/UVOT/UVM2 Count Rate
- SWIFT/UVOT/U Count Rate
- SWIFT/UVOT/B Count Rate
- SWIFT/UVOT/V Count Rate
- SWIFT/UVOT/UGRISM Count Rate
- SWIFT/UVOT/VGRISM Count Rate
- SWIFT/UVOT/WHITE Count Rate
- XMM/MOS Thin Count Rate 15 region
- XMM/MOS Med Count Rate 15 region
- XMM/MOS Thick Count Rate 15 region
- XMM/PN Thin Count Rate 15 region**
- XMM/PN Med Count Rate 15 region
- XMM/PN Thick Count Rate 15 region
- XMM/RGS1 Count Rate
- XMM/RGS2 Count Rate

Input Energy Range: default

Units keV Angstroms

Output Energy Range: default

Units keV Angstroms

Redshift : 0

Intrinsic
nH (cm-2) 0

Parameters

Photon Index :

Temperature kT : keV

Temperature kT : keV

Solar Abundance Ratio : 0.2

LogT | keV : 5.60 | 0.0343

AstroSat WebPIMMS

WebPIMMS for ASTROSAT

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WebPIMMS for ASTROSAT

A Mission Count Rate Simulator

Based on PIMMS 4.7d

From: Input Energy Range: Units keV Angstroms

To: Output Energy Range: Units keV Angstroms

Source:

Flux \int
Count Rate (ergs/cm²/s OR counts/s) Redshift

Galactic nH (cm⁻²): Intrinsic nH (cm⁻²):

Model

Power Law

Black Body

Therm. Brems.

APEC

Parameters

Photon Index :

Temperature kT :
keV

Temperature kT :
keV

Solar Abundance Ratio :

LogT | keV : |

ESTIMATE

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WebPIMMS for ASTROSAT

A Mission Count Rate Simulator

Based on PIMMS 4.7d

From: Input Energy Range: Units keV Angstroms

To: Output Energy Range: Units keV Angstroms

Source: Flux / Count Rate (ergs/cm²/s OR counts/s) Redshift:

Galactic nH (cm⁻²): Intrinsic nH (cm⁻²):

Model

- Power Law
- Black Body
- Therm. Brems.
- APEC

Parameters

Photon Index:

Temperature kT:

Temperature kT:

Solar Abundance Ratio:

LogT | keV:

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Web PIMMS for ASTROSAT - Result

INPUTS:

From : xmm pn thin
Instrument : astrosat laxpc
Input Energy : 4.0-10.0 keV
Output Energy : 3.0-80.0 keV
Source : Count Rate : 50 counts/s
Galactic nH : 0.47e22 cm⁻²
Redshift : 0
Intrinsic nH : 0 cm⁻²
Model : Power Law
Photon Index : 1.5

OUTPUTS:

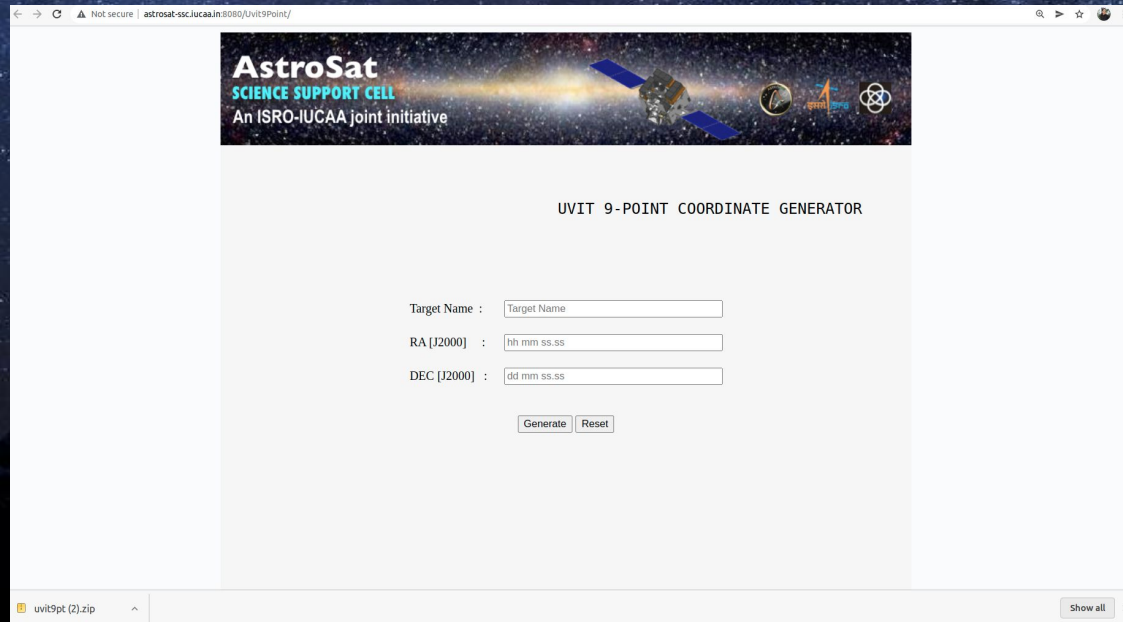
* For power law model with photon index = 1.5000; NH = 4.700E+21 and 5.000E+01 cps in XMM PN THIN (4.000- 10.000keV)
%% Pile-up corrected PATTERN=0-4 rate in 5 arcmin region assumed (Internal model normalization = 1.895E-01)
* PIMMS predicts 2.581E+02 cps with ASTROSAT LAXPC20 (3.000- 80.000keV)
PIMMS >

[Download the above output as a PDF file](#)

[Back](#)

UVIT 9-point coordinate generator


- Check for bright sources that may be harmful to the UVIT.
- It scans 9-point around a desired target.
- Link: <http://astrosat-ssc.iucaa.in:8080/Uvit9Point/>



The screenshot shows a web browser window with the URL `astrosat-ssc.iucaa.in:8080/Uvit9Point/`. The page features a header banner for "AstroSat SCIENCE SUPPORT CELL" with the text "An ISRO-IUCAA joint initiative" and an image of the satellite. Below the banner, the title "UVIT 9-POINT COORDINATE GENERATOR" is centered. The main content area contains three input fields: "Target Name" with a text box, "RA [J2000]" with a text box containing "hh mm ss.ss", and "DEC [J2000]" with a text box containing "dd mm ss.ss". At the bottom of the form are two buttons: "Generate" and "Reset". A file download notification for "uvit9pt (2).zip" is visible at the bottom left of the browser window.

UVIT 9-point coordinate generator

9Point/



AstroSat
SCIENCE SUPPORT CELL
An ISRO-IUCAA joint initiative

The banner features the AstroSat satellite in space, with logos for ISRO, IUCAA, and the Science Support Cell.

UVIT 9-POINT COORDINATE GENERATOR

Target Name :

RA [J2000] :

DEC [J2000] :

```
GRS1915+105_1 19 15 11.60 +10 56 44.00
GRS1915+105_2 19 14 44.72 +10 50 07.93
GRS1915+105_3 19 15 38.49 +10 56 43.93
GRS1915+105_4 19 14 44.71 +10 56 43.93
GRS1915+105_5 19 15 38.50 +11 03 19.93
GRS1915+105_6 19 14 44.70 +11 03 19.93
GRS1915+105_7 19 15 11.60 +10 50 08.00
GRS1915+105_8 19 15 11.60 +11 03 20.00
GRS1915+105_9 19 15 38.48 +10 50 07.93
```

[Download File](#)

UVIT 9-point coordinate generator script

- >> unzip uvit9pt.zip
- >> python uvit9pt.py
- Input: Target_name, RA, and Dec of source
- Output: Text file with name 'Target_name_9pt.txt'

```
divyarawat@sysadmin-OptiPlex-5050:~/UVIT_bright_source_warning_tool$ unzip uvit9pt.zip
Archive:  uvit9pt.zip
  creating:  uvit9pt/
  inflating: uvit9pt/README.uvit9pt
  creating:  __MACOSX/
  creating:  __MACOSX/uvit9pt/
  inflating: __MACOSX/uvit9pt/._README.uvit9pt
  inflating: uvit9pt/uvit9pt.py
divyarawat@sysadmin-OptiPlex-5050:~/UVIT_bright_source_warning_tool$ python2 uvit9pt/uvit9pt.py
Target Name:  GRS1915+105
RA [J2000] (hh mm ss.ss): 19 15 11.6
Dec [J2000] (+dd mm ss.ss): 10 56 44
Nine-point targets written in the file GRS1915+105_9pt.txt
divyarawat@sysadmin-OptiPlex-5050:~/UVIT_bright_source_warning_tool$ cat GRS1915+105_9pt.txt
GRS1915+105_1  19 15 11.60  +10 56 44.00
GRS1915+105_2  19 14 44.72  +10 50 07.93
GRS1915+105_3  19 15 38.49  +10 56 43.93
GRS1915+105_4  19 14 44.71  +10 56 43.93
GRS1915+105_5  19 15 38.50  +11 03 19.93
GRS1915+105_6  19 14 44.70  +11 03 19.93
GRS1915+105_7  19 15 11.60  +10 50 08.00
GRS1915+105_8  19 15 11.60  +11 03 20.00
GRS1915+105_9  19 15 38.48  +10 50 07.93
divyarawat@sysadmin-OptiPlex-5050:~/UVIT_brightdiyarawat@sysadmin-OptiPlex-5050:~/UVIT_brightdiyarawat@sysadmin-0
```

A night sky with the Milky Way galaxy visible, set against a dark background. The foreground shows the silhouette of a mountain range. The text "THANK YOU" is centered in the sky.

THANK YOU