

A PORTable Multi-Purpose Application for the X-ray Background and AGN counts



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We present the β -version of a web-based interface to the AGN population synthesis model of the cosmic X-ray background (XRB) presented in Gilli, Comastri & Hasinger (2007, A&A, 463, 79). This tool can be used to compute the contribution to the XRB spectrum and the logN-logS in different X-ray bands of model AGN in any redshift, luminosity or N_{H} bin.

<http://www.bo.astro.it/~gilli/xrb.html>

<http://www.bo.astro.it/~gilli/counts.html>

FAQs:

- * What is the contribution of type 2 QSOs to the cosmic X-ray background?
- * How many Compton-thick AGN are expected in high energy ($E > 10$ keV) surveys?
- * What is the logN-logS of high-redshift AGN?
- * What are the predictions for a XEUS or a Simbol-X deep field?

POMPA COUNTS
Portable Multi Purpose Application for the AGN COUNTS X-ray Background

This calculator allows to estimate the logN-logS of different AGN populations in different X-ray bands. The output flux range and energy band, as well as the absorption, redshift and luminosity range of the input AGN can be specified in the form below. The output logN-logS is returned in ASCII format in units of S [erg/cm²/s] vs. $N(>S)$ [deg⁻²]. A flat Universe with cosmological constant is assumed: $\Omega_{\text{m}}=0.3, \Omega_{\text{Lambda}}=0.7, H_0=70$ km/s/Mpc.

Band: 0.5-2 keV

S_min: 1e-17 (minimum flux, in erg/cm²/s)

S_max: 1e-13 (maximum flux, in erg/cm²/s)

log_NH_min: 20 (log minimum column density in cm⁻²)

log_NH_max: 26 (log maximum column density in cm⁻²)

redshift_min: 3 (minimum redshift)

redshift_max: 10 (maximum redshift)

high-z_decline: YES (apply a decline to the high-z AGN XLF)

log_L_min: 42 (log minimum luminosity, 8.5-2 keV, in erg/s)

log_L_max: 48 (log maximum luminosity, 8.5-2 keV, in erg/s)

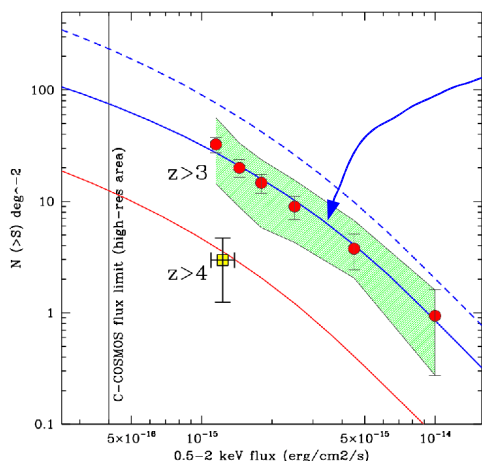
Press this button to continue: (Queries may take from a few seconds to a few minutes depending on the adopted cuts.)
To reset the form press this button:

A user friendly form can be filled with the desired settings, like energy band, flux, redshift, luminosity and absorption range. Two options for the evolution of high-z AGN can be also specified. On-line help is available.

The tool returns a simple ascii file, which can be cut and pasted locally.

```

Content-type: text/plain
compute: logN-logS
S
[erg/cm^2/s]
N(>S)
[deg^-2]
0.150E-16 0.600E+03
0.201E-16 0.309E+03
0.301E-16 0.202E+03
0.631E-16 0.266E+03
0.100E-15 0.184E+03
0.150E-15 0.148E+03
0.251E-15 0.109E+03
0.301E-15 0.995E+02
0.631E-15 0.525E+02
0.100E-14 0.325E+02
0.150E-14 0.191E+02
0.251E-14 0.109E+02
0.301E-14 0.519E+01
0.631E-14 0.223E+01
0.100E-13 0.879E+00
0.150E-13 0.224E+00
0.251E-13 0.123E+00
0.301E-13 0.401E-01
0.631E-13 0.172E-01
0.100E-12 0.646E-02
End
Press: BACK button to go back and continue
    
```



logN-logS of high-z AGN in the XMM-COSMOS field (Brusa et al 2008, submitted). All the plotted model curves can be computed with the present web tool.

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