

cflux: calculate flux

A convolution model to calculate the flux of other model components. For example :

suppose the model is :

$$\text{phabs}*(\text{pow} + \text{gauss})$$

then

$$\text{cflux}*\text{phabs}*(\text{pow} + \text{gauss})$$

with the normalization of the power-law model fixed to a non-zero value gives the flux and error on the entire model.

$$\text{phabs}*\text{cflux}*(\text{pow} + \text{gauss})$$

again with the normalization of the power-law fixed to a non-zero value gives the unabsorbed flux and error. Finally,

$$\text{phabs}*(\text{pow} + \text{cflux}*\text{gauss})$$

with the normalization of the gaussian fixed to a non-zero value gives the flux and error on the gaussian component. It is important to ensure that the energy range over which the model is calculated (which is determined by the response matrix in use) covers the energy range for which the flux is calculated. If the model to which the cflux is applied integrates to zero then a divide-by-zero error will occur resulting in NaN values for the fit statistic.

Parameters are :

par1= Emin Minimum energy over which flux is calculated.

par2= Emax Maximum energy over which flux is calculated.

par3=lg10Flux log (base 10) flux in erg/cm²/s

