

pexrav: reflected powerlaw, neutral medium

Exponentially cut off power law spectrum reflected from neutral material (Magdziarz & Zdziarski 1995, MNRAS, 273, 837). The output spectrum is the sum of the cut-off power law and the reflection component. The reflection component alone can be obtained for $rel_{\text{refl}} < 0$. Then the actual reflection normalization is $|rel_{\text{refl}}|$. Note that you need to change then the limits of rel_{refl} excluding zero (as then the direct component appears). If $E_c = 0$ there is no cutoff in the power law. The metal and iron abundance are variable with respect to those defined by the command **abund**. The opacities are those set by the command **xsect**. As expected in AGNs, H and He are assumed to be fully ionized

The core of this model is a Greens' function integration with one numerical integral performed for each model energy. The numerical integration is done using an adaptive method which continues until a given estimated fractional precision is reached. The precision can be changed by setting IREFLECT_PRECISION eg xset IREFLECT_PRECISION 0.05. The default precision is 0.01 (ie 1%).

par1	Γ , first power law photon index, $N_E \propto E^{-\Gamma}$
par2	E_c , cutoff energy (keV) (if $E_c = 0$ there is no cutoff)
par3	rel_{refl} , reflection scaling factor (0, no reflected component < $rel_{\text{refl}} < 1$ for isotropic source above disk)
par4	redshift, z
par5	abundance of elements heavier than He relative to the solar abundances
par6	iron abundance relative to that defined by abund
par7	cosine of inclination angle
norm	photon flux at 1 keV ($\text{photons keV}^{-1}\text{cm}^{-2}\text{s}^{-1}$) of the cutoff broken power-law only (no reflection) in the observed frame.