Ionized Absorbers/Emitters and Time-Evolving Photoionization Models for "Sherpa"

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Abstract

We will present the "Sherpa" version of our resonant absorption and gas emission (*absemi*), plus time-evolving photoionization (*timephot*) models. Resonant absorption plus gas emission models can be used to fit X-ray high resolution spectra of ionized absorbers/emitters.

These models depend on a number of parameters: (a) the equivalent hydrogen column density; (b) the element-by-element metallicity; (c) the covering factors (both radiative and geometric); (d) the equilibrium ionization parameter (or temperature, for thermal models); (e) the mean dispersion velocity; (f) the orbital velocity; (g) the bulk velocity; and (h) the source redshift.

Time-evolving photoionization models, can be used to fit time-resolved absorption parameters - equivalent widths or optical depths - of given ionic transitions. These models depend upon two parameters: (a) the electron density in the absorber; and (b) a parameter measuring the departure from equilibrium at a given point (usually the first point) of the given lightcurve.

CATEGORY: ACTIVE GALAXIES AND QUASARS