

URL: http://cxc.harvard.edu/ciao3.4/atten.html Last modified: December 2006

AHELP for CIAO 3.4

atten

Context: sherpa

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### **Synopsis**

Attenuation by ISM. Integration OFF.

## Description

This model calculates the transmission of the interstellar medium using the description of the ISM absorption of Rumph, Bowyer, & Vennes 1994, AJ 107, 2108. It includes neutral He autoionization features. Between 1.2398 and 43.655 Angstroms (i.e. in the 0.28–10 keV range) the model also accounts for metals as described in Morrison & MacCammon 1983, ApJ 270, 119.

The code uses the best available photoionization cross-sections to date from the atomic data literature and combines them in an arbitrary mixture of the three ionic species: HI, HeI, and HeII.

The model assumes that the data are expressed in Angstroms.

This model provided courtesy of Pat Jelinsky.

#### **ATTEN Parameters**

Number	Name	Description
1	hcol	N(HI) column (atoms cm^-2)
2	heiRatio	N(HeI)/N(HI)
3	heiiRatio	N(HeII)/N(HI)

See "ahelp integrate" for further information about source model integration.

# Bugs

See the <u>Sherpa bug pages</u> online for an up–to–date listing of known bugs.

## See Also

sherpa

### Ahelp: atten - CIAO 3.4

bbody, bbodyfreq, beta1d, beta2d, box1d, box2d, bp11d, const1d, const2d, cos, delta1d, delta2d, dered, devaucouleurs, edge, erf, erfc, farf, farf2d, fpsf, fpsf1d, frmf, gauss1d, gauss2d, gridmodel, hubble, jdpileup, linebroad, lorentz1d, lorentz2d, models, nbeta, ngauss1d, poisson, polynom1d, polynom2d, powlaw1d, ptsrc1d, ptsrc2d, rsp, rsp2d, schechter, shexp, shexp10, shlog10, shloge, sin, sart, stephild, steplo1d, tan, tpsf, tpsf1d, usermodel, xs, xsabsori, xsacisabs, xsapec, xsbapec, xsbbody, xsbbodyrad, xsbexray, xsbexriy, xsbknpower, xsbmc, xsbremss, xsbvapec, xsc6mekl, xsc6pmekl, xsc6pvmkl, xsc6vmekl, xscabs, xscemekl, xscevmkl, xscflow, xscompbb, xscompls, xscompst, xscomptt, xsconstant, xscutoffpl, xscyclabs, xsdiskb, xsdiskbb, xsdiskline, xsdiskm, xsdisko, xsdiskpn, xsdust, xsedge, xsequil, xsexpabs, xsexpdec, xsexpfac, xsgabs, xsgaussian, xsgnei, xsgrad, xsgrbm, xshighecut, xshrefl, xslaor, xslorentz, xsmeka, xsmekal, xsmkcflow, xsnei, xsnotch, xsnpshock, xsnsa, xsnteea, xspcfabs, xspegpwrlw, xspexray, xspexriy, xsphabs, xsplabs, xsplcabs, xsposm, xspowerlaw, xspshock, xspwab, xsraymond, xsredden, xsredge, xsrefsch, xssedov, xssmedge, xsspline, xssrcut, xssresc, xssssice, xsstep, xstbabs, xstbgrain, xstbvarabs, xsuvred, xsvapec, xsvarabs, xsvbremss, xsvequil, xsvgnei, xsvmcflow, xsvmeka, xsvmekal, xsvnei, xsvnpshock, xsvphabs, xsvpshock, xsvraymond, xsvsedov, xswabs, xswndabs, xsxion, xszbbody, xszbremss, xszedge, xszgauss, xszhighect, xszpcfabs, xszphabs, xszpowerlw, xsztbabs, xszvarabs, xszvfeabs, xszvphabs, xszwabs, xszwndabs

slang

<u>usermodel</u>

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