AHELP for CIAO 3.4   **xsmkcflow**   Context: sherpa

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Synopsis

Cooling flow model based on mekal. XSpec model.

Description

A cooling flow model after Mushotzky and Szymkowiak ("Cooling Flows in Clusters and Galaxies" ed. Fabian, 1988). This one uses the xsmekal model for the individual temperature components and differs from xscflow in setting the emissivity function to be the inverse of the cooling time. The switch parameter determines whether the xsmekal code will be run to calculate the model spectrum for each temperature, or whether the model spectrum will be interpolated from a pre−calculated table; the former is slower but more accurate.

The model assumes $H_0=50$ and $q_0=0$. The abundance ratios are set by the xspecabundan command.

Please note that there is no support in CIAO 3.2 for setting the cflow_version and cflow_ntemps variables of the model. The version used in Sherpa corresponds to cflow_version=2, and cflow_ntemps is fixed at 10. Prior to CIAO 3.2 the model used corresponded to cflow_version=1, and so contained an error in the calculation of the emission measure distribution at the ends of the temperature range.

xsmkcflow Parameters

Number	Name	Description
1	lowT	low temperature (keV)
2	highT	high temperature (keV)
3	Abund	abundance relative to Solar
4	Redshift	redshift, z
5	Switch	0 = calculate, 1 = interpolate
6	norm	mass accretion rate (solar mass/yr)

This information is taken from the XSpec User's Guide. Version 11.3.1 of the XSpec models is supplied with CIAO 3.2.

Bugs

For a list of known bugs and issues with the XSPEC models, please visit the XSPEC bugs page.

See Also

sherpa

atten, bbody, bbodyfreq, beta1d, beta2d, box1d, box2d, bpl1d, 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, sqrt, stephi1d, steplo1d, tan, tpsf, tpsf1d, usermodel, xs, xsabsori, xsacisabs, xsapec, xsbapec, xsbbody, xsbbodyrad, xsbexrav, xsbexriv, xsbknpower, xsbmc, xsbremss, xsbvapec, xsc6mekl, xsc6pmekl, xsc6pvmkl, xsc6vmekl, xscabs, xscemekl, xscevmkl, xscflow, xscompbb, xscompls, xscompst, xscomptt, xsconstant, xscutoffpl, xscyclabs, xsdisk, xsdiskbb, xsdiskline, xsdiskm, xsdisko, xsdiskpn, xsdust, xsedge, xsequil, xsexpabs, xsexpdec, xsexpfac, xsgabs, xsgaussian, xsgnei, xsgrad, xsgrbm, xshighecut, xshrefl, xslaor, xslorentz, xsmeka, xsmekal, xsnei, xsnotch, xsnpshock, xsnsa, xsnteea, xspcfabs, xspegpwrlw, xspexrav, xspexriv, 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

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usermodel

See Also