URL: http://cxc.harvard.edu/ciao3.4/xsvmcflow.html
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AHELP for CIAO 3.4

xsvmcflow

Context: sherpa

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Synopsis

Cooling flow model based on vmekal. XSpec model.

Description

A cooling flow model after Mushotzky and Szymkowiak ("Cooling Flows in Clusters and Galaxies" ed. Fabian, 1988). This one uses the xsvmekal model for the individual temperature components, but is otherwise identical to xsmkcflow. The abundances are relative to the Solar abundances set by the xspecabundan command. The switch parameter determines whether the xsvmekal 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.

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.

xsvmcflow Parameters

Number	Name	Description
1	lowT	low temperature (keV)
2	highT	high temperature (keV)
3−16	(element)	abundances for He, C, N, O, Ne, Na, Mg, Al, Si, S, Ar, Ca, Fe, Ni with respect to Solar. Abundances are set by the xspecabundan command.
17	redshift	redshift, z
18	Switch	0 = calculate, 1 = interpolate
19	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, xsmkcflow, 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, 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

usermodel

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