Chandra X-ray Center

AHELP for CIAO 3.4

xsnteea

Context: sherpa

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Synopsis

Pair plasma model. XSpec model.

Description

A nonthermal pair plasma model based on that of Lightman and Zdziarski (1987, ApJ 319, 643) from Magdziarz and Zdziarski. It includes angle–dependent reflection from Magdziarz and Zdziarski (1995, MNRAS 273, 837). The abundances are set up by the xspecabundan command.

xsnteea Parameters

Number	Name	Description
1	lnth	nonthermal electron compactness
2	lbb	blackbody compactness
3	frefl	scaling factor for reflection; 1 = isotropic source above disk
4	kTbb	blackbody temperature in eV
5	gmax	the maximum Lorentz factor
6	lth	thermal compactness; 0 = pure nonthermal plasma
7	taup	Thomson optical depth of ionization electrons (e.g. 0)
8	Ginj	electron injection index; 0 = monoenergetic injection
9	gmin	minimum Lorentz factor of the power law injection; not used for monoenergetic injection
10	g0	minimum Lorentz factor for nonthermal reprocessing; $1 < g0 <= gmin$
11	radius	radius in cm (for Coulomb/bremsstrahlung only)
12	pairesc	pair escape rate in c; $0 <= pairesc <= 1$, see Zdziarski 1985, ApJ, 289, 514
13	cosIncl	cosine of inclination angle
14	FeAbund	iron abundance relative to that defined by xspecabundan
15	Redshift	redshift, z
16	norm	photon flux of the direct component without reflection at 1 keV in the observer's frame.

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, 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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