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 AHELP for CIAO 3.4

## xsbapec

Context: [sherpa](#)

*Jump to:* [Description](#) [Bugs](#) [See Also](#)

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## Synopsis

APEC thermal plasma model with velocity broadening as a free parameter. XSpec model.

## Description

A version of the xsapec model ("ahelp xsapec"). Thermal line broadening is automatically included.

### xsbapec Parameters

Number	Name	Description
1	kT	plasma temperature in keV
2	Abundanc	metal abundances (He fixed at cosmic). The elements included are C, N, O, Ne, Mg, Al, Si, S, Ar, Ca, Fe, Ni. Abundances are set by the xspecabundan command.
3	Redshift	redshift, z
4	Velocity	velocity broadening [km/s]
5	norm	$10^{-14} / (4 \pi (D_A * (1+z))^2) \text{ Int } n_e n_H dV$ , where $D_A$ is the angular size distance to the source (cm), $n_e$ is the electron density ( $\text{cm}^{-3}$ ), and $n_H$ is the hydrogen density ( $\text{cm}^{-3}$ )

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](#), [steph1d](#),

## Ahelp: xsbapec – CIAO 3.4

steplo1d, tan, tpsf, tpsf1d, usermodel, xs, xsabsori, xsacisabs, xsapec, xsbody, xsbodyrad, xsboxray, xsboxriv, xsbknpower, xsbsmc, xsbremss, xsbvapec, xsc6mekl, xsc6pmekl, xsc6pvmkl, xsc6vmekl, xscabs, xscemekl, xscvml, xscflow, xscmpbb, xscmpls, xscmpst, xscmpstt, xscconstant, xscutoffpl, xscyclabs, xsdisk, xsdiskbb, xsdiskline, xsdiskm, xsdisko, xsdiskpn, xsdust, xsedg, xsequil, xsexpabs, xsexpdec, xsexpfac, xsgabs, xsgaussian, xsgnei, xsgrad, xsgrbm, xshighecut, xshrefl, xslaor, xslorentz, xsmeka, xsmekal, xsmkcfow, xsnei, xsnotch, xsnpshock, xsnsa, xsnntea, xspcfabs, xspcpwrlw, xspexray, xspexriv, xspfabs, xsplabs, xsplcabs, xspesm, xspowerlaw, xspshock, xspwab, xsraymond, xsrdden, xrsedge, xrsfch, xrsedov, xrsmedg, xrspline, xrsrct, xrsrsc, xrsrsice, xrsstep, xrstabs, xrstgrain, xrstvarabs, xsvred, xsvapec, xsvabs, xsvbremss, xsvsequil, xsvnei, xsvmcfow, xsvmeka, xsvmekal, xsvnei, xsvnpshock, xsvphabs, xsvphock, xsvraymond, xsvsedov, xswabs, xswndabs, xsxion, xszbody, xszbremss, xszedge, xszgauss, xszhighcut, xszpcfabs, xszphabs, xszpowerlw, xsztbabs, xszvarabs, xszvfeabs, xszvphabs, xszwabs, xszwndabs

*slang*

usermodel

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URL:  
<http://cxc.harvard.edu/ciao3.4/xsbapec.html>  
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