# ADDENDUM：＂AN X－RAY SPECTRAL MODEL FOR CLUMPY TORI IN ACTIVE GALACTIC NUCLEI＂（2014，ApJ，787，52） 

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The model discussed in Liu \＆Li（2014）is available on NASA＇s HEASARC XSpec model site，https：／／heasarc．gsfc． nasa．gov／xanadu／xspec／models／Ctorus．html．

It is an X－ray spectral model for clumpy tori in active galactic nuclei，which is the output spectrum of a clumpy torus illuminated by the central active galactic nuclei．

The incident X－ray spectrum from the central active galactic nuclei is a power law．The half－opening angle of the torus（the envelope of clouds）is fixed at $60^{\circ}$ ．This model can be applied in $1.0-450 \mathrm{keV}$ and includes three parts，i．e．，transmitted
component（Ctorus＿T．fits），reflection component（Ctorus＿R．fits）， and fluorescent lines（Ctorus＿L．fits）．

Please see the explanation and usage of this model on the above webpage．The material was last updated in 2016 May．

## REFERENCE

Liu，Y．，\＆Li，X．2014，ApJ，787， 52

