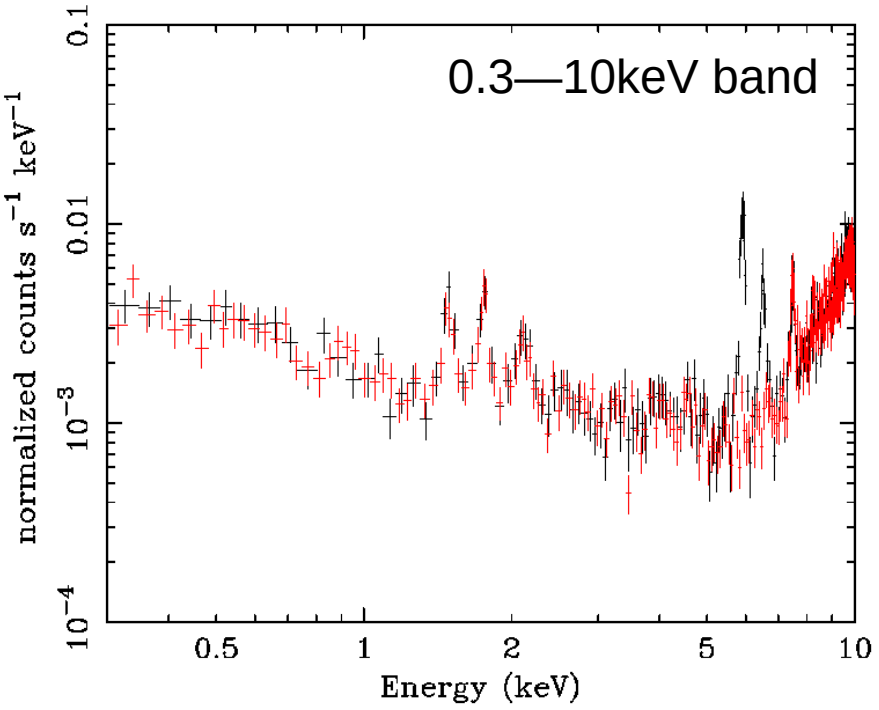
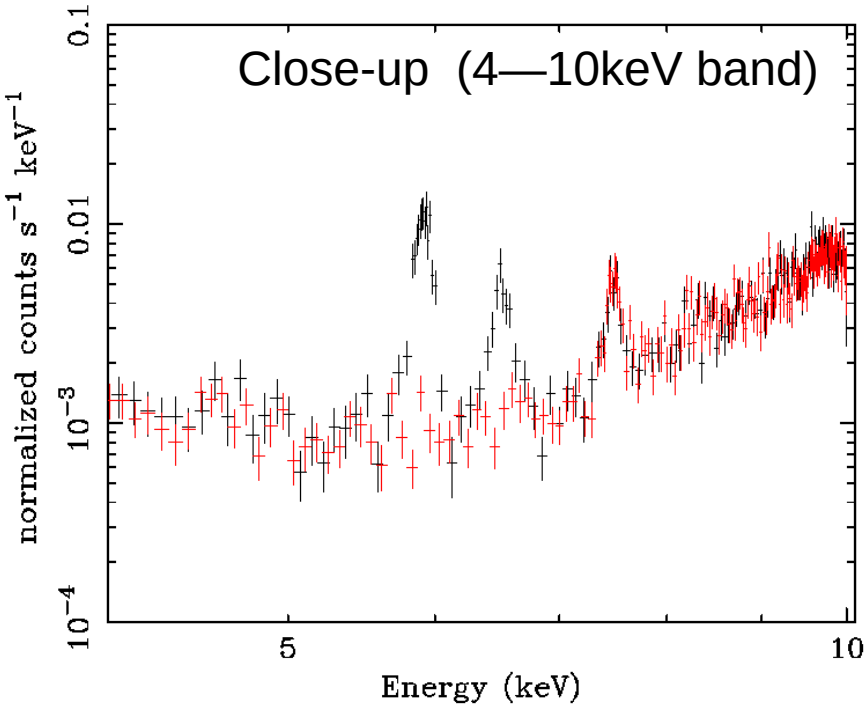
Problem in the XIS1 NXB database for the SCI-off observations ae_xi1_nxbsciof_20071226.fits

XIS team, Sep. 9, 2008

•A problem has been found in the latest NXB database of XIS1 for the SCI-off observations (ae_xi1_nxbsciof_20071226.fits); the database includes data before the XIS1 door opened. A calibration source (55Fe) is attached to the door, and the calibration source illuminated the whole imaging area. Consequently, the database includes the Mn K-alpha events everywhere in the XIS1 field of view.
•The XIS1 door opened on August 13, 2005. Thus the door events affect the XIS1 NXB estimation with xisnxbgen for data observed before August 13+150days (~January 11, 2006; see the fhelp document of xisnxbgen). For those data, xisnxbgen predicts a too strong Mn K alpha line, wherever you select a region (see figure).
•Only the XIS1 database includes the data from the door calibration source.
•The previous databases (ae_xi[0-3]_nxbsciof_20071122.fits) do not include the data from the door calibration source. Thus the XIS team recommends to use the previous database to estimate the XIS1 NXB for observations before Jan. 2006.

Black: ae_xi1_nxbsciof_20071226.fits
Red: ae_xi1_nxbsciof_20071122.fits





XIS1 NXB estimated with xisnxbgen; the NXB was estimated for data observed on Septemper 18, 2005, with a circular region with a radius of 160 pix centered on the XIS1 filed of view. Even if we select the central small region, we can see the strong Mn K alpha line when we use the latest NXB database (ae_xi1_nxbsciof_20071226.fits). There is no line if we use the previous database (ae_xi1_nxbsciof_20071122.fits).