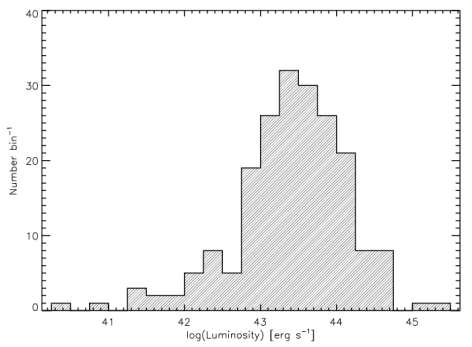


# THREE YEARS BAT SURVEY: INSIGHT IN THE WORLD OF LOCAL ABSORBED AGN



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We selected 199 nearby **Seyfert galaxies** from the three years BAT survey (March '05 - March '08). Caveats:

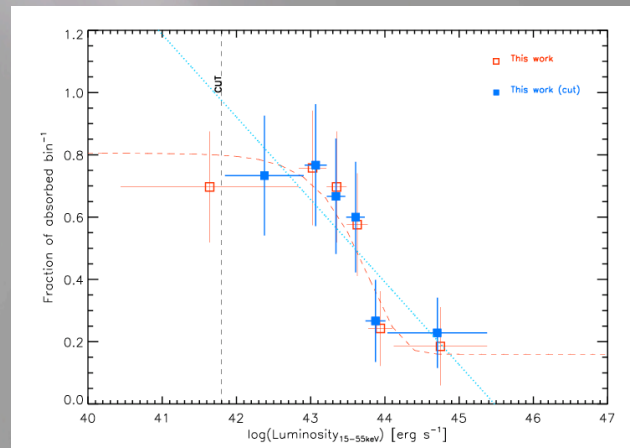
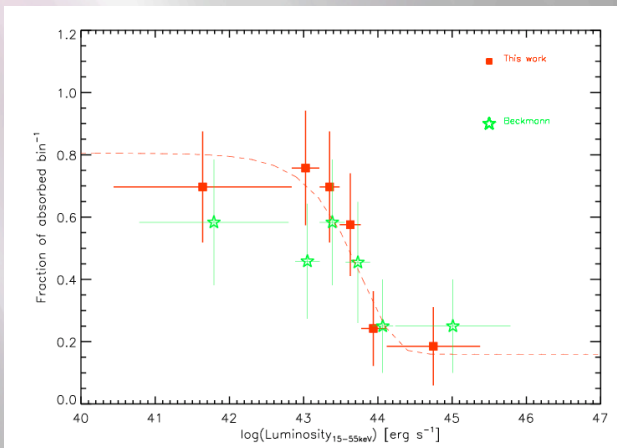
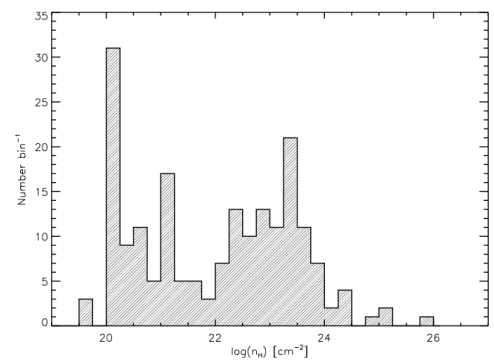
- (1) Galactic latitude  $|b| > 15$  deg
- (2) Signal-to-noise  $S/N > 5 \sigma$
- (3) redshift  $z < 0.3$

*Swift*/BAT spectra were extracted in the 15-195 keV energy range. They are corrected for vignetting, corrected for background contamination, and weight-averaged over exposure (Ajello et al. 2008). Fluxes and Luminosities are calculated in the 15-55 keV energy range.

We show the  $n_H$  distribution (*right fig.*) for 192 sources (102 taken from the literature, e.g. Tueller 2008, 90 done by us). ToO were granted for the remaining 7 sources.

We use *XMM-Newton* and *Swift*/XRT follow ups to jointly fit the spectra from 0.3 keV to 195 keV.

We found 10 objects with column density  $\geq 10^{24} \text{ cm}^{-2}$ .



We present (*left*) the anticorrelation between the fraction of the absorbed ( $n_H \geq 10^{22} \text{ cm}^{-2}$ ) sources versus Luminosity in the 15-55 keV energy range. For comparison ISGRI non-Blazar, local sources are shown (adapted from Beckmann et al. 2009). The dashed line represents a fit with a smoothly jointed step-function (Gilli et al. 2007). If a cut at a minimum  $L$  is introduced (*right*), the relation is likely (>2) linear.