



MAGIC

Major Atmospheric

Gamma Imaging

Cerenkov Telescopes

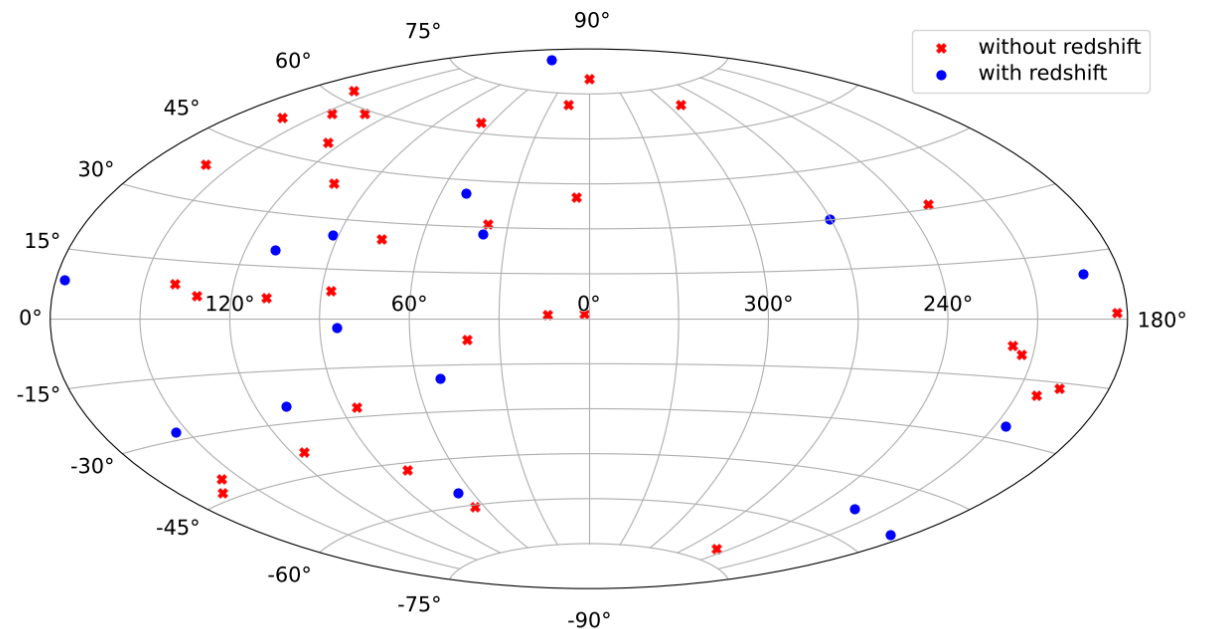
Upper limits on the very high energy emission from GRBs observed by MAGIC

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The sample

- ✧ All the GRB from 2013 to 2019 observed by MAGIC in Stereo Mode
- ✧ Upper limits calculated for all the GRBs without any (hint of) VHE emission
- ✧ Results on 41 GRBs reported in a forthcoming publication



The method

- ✧ ULs calculated with the method of Rolke et al. (2005) with a 95% Confidence Level and a total systematic uncertainty of 30%.
- ✧ Deabsorbed gamma-ray differential photon powerlaw spectrum ($\alpha=1.6$ or 2.2) \sim asymptotic behaviour expected in the SSC spectrum
- ✧ Two different models for the Extragalactic Background Light (EBL) Franceschini et al. (2018) (F18), and Gilmore et al. (2012) [9] (G12).
- ✧ Comparison between the estimated MAGIC ULs and the soft X-ray flux for a subsample of GRBs with good X-ray coverage contemporaneous to MAGIC

