



Poster session 2 – Tuesday 5 July

P2.020 **Very High Energy Neutrinos from nearby long GRB afterglows**

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Gamma Ray Bursts (GRBs) are one of the most probable sources of Ultra High Energy Cosmic Rays (UHECRs), gamma rays and neutrinos. During the after glow phase these particles can be produced as a result of acceleration and interaction there in, for long burst GRBs. We have modeled afterglow spectra and light curves from synchrotron cooling of accelerated electrons. We have fitted data of 17 long GRBs detected within the redshift 0.5 in case of the GRB blastwave evolving in a wind and constant density interstellar medium. The afterglow photons can interact with the shock accelerated protons to produce very high energy neutrinos. We have calculated the neutrino flux for photo-pion interactions for all these GRBs. As IceCube have been detecting very high energy neutrinos for the last four years and a larger future extension called Gen 2 is planned, this calculation will help in understanding more about GRB neutrino production.