

Abstract Submitted
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Search for Neutrino Emission from Fast Radio Bursts with IceCube¹ DONGLIAN XU, JUSTIN VANDENBROUCKE, SAMUEL FAHEY, ALI KHEIRANDISH, Univ of Wisconsin, Madison, ICECUBE COLLABORATION — Fast radio bursts (FRBs) typically last a few milliseconds, and are thought to be of extragalactic origin due to their large dispersion measures. Since the discovery of FRBs in 2007 by the Parkes radio telescope, a multitude of radio telescopes have observed a total of 30 FRBs to date. Though there are various emerging models to explain such phenomena, the physics origin of FRBs is still a mystery. It is predicted that soft gamma-ray repeater (SGR) hyperflares could produce non-thermal millisecond radio outbursts from the relativistic magnetized explosions in the magnetospheres. With the volatility of strong magnetic fields, SGRs are also expected to be cosmic ray accelerators, which could produce TeV photons and neutrinos under the hadronic processes. We will present recent searches for coincident neutrinos with FRBs from IceCube.

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