

Search for High-Energy Neutrino Emission from Fast Radio Bursts

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Fast radio bursts (FRBs) are bright millisecond-duration radio transients with high dispersion measures, suggesting extragalactic origin. Since their first discovery in 2007, FRBs have been observed at more than a dozen unique locations, with one source producing many repeated bursts. This repeating burst is the only FRB to which the distance has been measured. Many emission models have been proposed for FRBs, most requiring compact objects with strong magnetic fields. These models are leptonic in nature, however, the environments described in such models could in principle feature significant hadronic processes instead. We present the first results of a recent search for high-energy neutrinos spatially and temporally coincident with FRBs in 6 years of IceCube data.

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