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External Alert Response with IceCube MeV neutrino data

Thursday 31 August 2023 16:45 (15 minutes)

The IceCube Neutrino Observatory is uniquely sensitive to the MeV neutrinos emitted during a core-collapse supernova, with potential applications beyond supernovae. This talk will describe an analysis stream that can be used to respond to external alerts, such as those originating from the Ligo-Virgo-Kagra detector for gravitational waves. Additionally, we will demonstrate the versatility of this low-energy data stream by discussing the search of MeV neutrinos coincident with GRB 221009A, where neutrino emission can occur through a variety of mechanisms, such as core-collapse supernovae or neutrino-dominated accretion flows.

Submitted on behalf of a Collaboration?

Yes

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