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High Energy Neutrinos from Charm in Astrophysical Sources INA

SARCEVIC, University of Arizona — We show that charm production enhances a flux of very high energy neutrinos from astrophysical sources with jets driven by central engines, such as gamma ray bursts or supernovae with jets. The neutrino flux from semi-leptonic decays of charmed mesons is subject to much less hadronic and radiative cooling than the conventional flux from pion and kaon decays and therefore has a dominant contribution at higher energies, of relevance to future ultrahigh energy neutrino experiments.

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