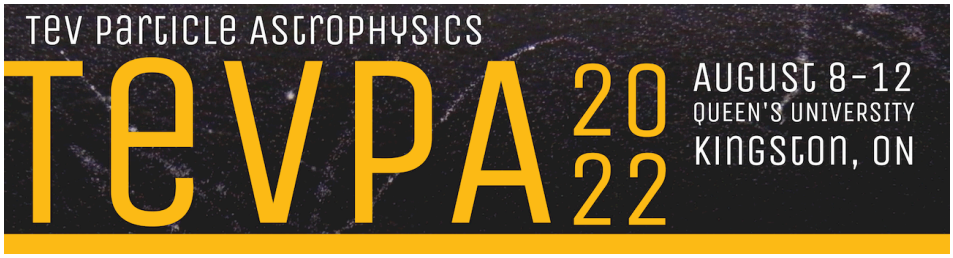

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TeV neutrinos from dense winds in Novae

Thursday 11 August 2022 16:10 (20 minutes)

We investigate the hypothesis that hadrons are accelerated as a result of the reconnection of the White Dwarf magnetic field during the initial dense and fast wind in Nova explosion. Hadrons are expected to interact efficiently with a dense matter of the wind producing neutrinos with TeV energies. We estimate the muon neutrino event rates in the IceCube telescope in the case of a few Novae. For isotropic emission of neutrinos, those event rates are unlikely to be detected with the present detector. However, in the case of anisotropic emission of neutrinos and for favourable location of the observer, some neutrino events might be detected not only from the class of Novae recently detected in the GeV gamma-rays by the Fermi-LAT telescope but also from novae not detected in gamma-rays.

Collaboration name

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