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IIn supernovae as the sources of high energy neutrinos

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It is shown that astrophysical neutrinos observed by IceCube can be produced by protons accelrated at IIn supernova remnant shocks propagating in the dense circumstellar medium. The nonlinear diffusive shock acceleration model is used for description of particle acceleration. We calculate the neutrino flux produced by a single IIn supernova remnant and the neutrino background produced by all IIn supernovae in the Universe.

Collaboration

– not specified –

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