

The mass density of electrons and positrons in some models of superluminous supernovae

Tuesday, 11 October 2016 15:15 (30)

We derived a simple expression for total mass density of electrons and positrons in the region of equation-of-state parameters where electron-positron pairs are dominant by number (as compared with baryons). We estimated the total mass density of electrons and positrons in some models of superluminous supernovae developed by other authors. We found that at least in one model of pulsational pair instability supernova the mass density of electrons and positrons is comparable with the mass density of baryons. This fact can be used to assess the possibility of non-standard gravitational interaction of positrons with electrons and baryons.

Primary author(s) : Ms. DUNINA-BARKOVSKAYA, Natalia (Institute for Theoretical and Experimental Physics (FSBI SSC RF ITEP))

Presenter(s) : Ms. DUNINA-BARKOVSKAYA, Natalia (Institute for Theoretical and Experimental Physics (FSBI SSC RF ITEP))

Session Classification : Poster session - II

Track Classification : Nuclear physics and particle physics