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## Searching for solar hep neutrino interactions with Borexino

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Hep neutrinos from the Sun produced in the reaction  ${}^3\text{He} + p \rightarrow {}^4\text{He} + e^+ + \nu_e$ . According to Standard Solar Model (SSM) these neutrinos have the highest possible energies ( $E < 18.8$  MeV) and the lowest flux ( $\sim 10^3 \text{ cm}^{-2} \text{ s}^{-1}$ ). In Borexino the study of hep neutrinos is possible through the neutrino-electron elastic scattering and by means of neutral current reaction with carbon  ${}^{12}\text{C}(\nu_e, e^-){}^{12}\text{C}^*$ . An upper limit on the integral total flux of hep neutrinos of  $1.8 \cdot 10^5 \text{ cm}^{-2} \text{ s}^{-1}$  has been derived at the 90% C.L.

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