

Stany związane operatorów nielokalnych

Tuesday, 14 November 2017 12:15 (60)

Solar neutrinos emitted by fusion reactions occurring in the Sun provide a unique and direct way to study the interior of our star. The 50-year-long experimental effort to study solar neutrinos has been extremely rewarding both in terms of solar physics, by confirming the Standard Solar Model (SSM) predictions, and in terms of particle physics, by giving a substantial contribution to the discovery of neutrino flavour oscillations. The Borexino liquid scintillator (LS) neutrino observatory is devoted to performing neutrino observations, and is optimized for measurements in the low energy (sub-MeV) region of the solar neutrino spectrum. Borexino has performed the first direct, high-precision, wide band solar neutrino spectroscopy of the solar neutrino spectra main components, including improving the knowledge of the CNO neutrino flux. In the presentation, the first simultaneous precision measurement of the interaction rates of solar neutrinos will be reported.

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