



Münchner Physik- Kolloquium

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Complete solar neutrino spectroscopy with Borexino

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Monday, 3 May 2021, 17:15 h

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After more than 10 years of data taking the Borexino experiment accomplished the complete spectroscopy of all relevant solar neutrino branches, including those from the rare CNO-fusion processes. This measurements were made possible by achieving ultra-low levels of background radiation in the liquid scintillator detector of Borexino, which is located in the Gran-Sasso underground laboratory. In the talk I will describe the main features of the detector and techniques used to separate neutrino signals from background events. The implications of the results in the frame of neutrino oscillations and flavor conversion due to solar matter effects will be shown. Finally, I will discuss the impact of Borexino results on the question about the solar metallicity and complete with a short outlook about future prospects in this field.

