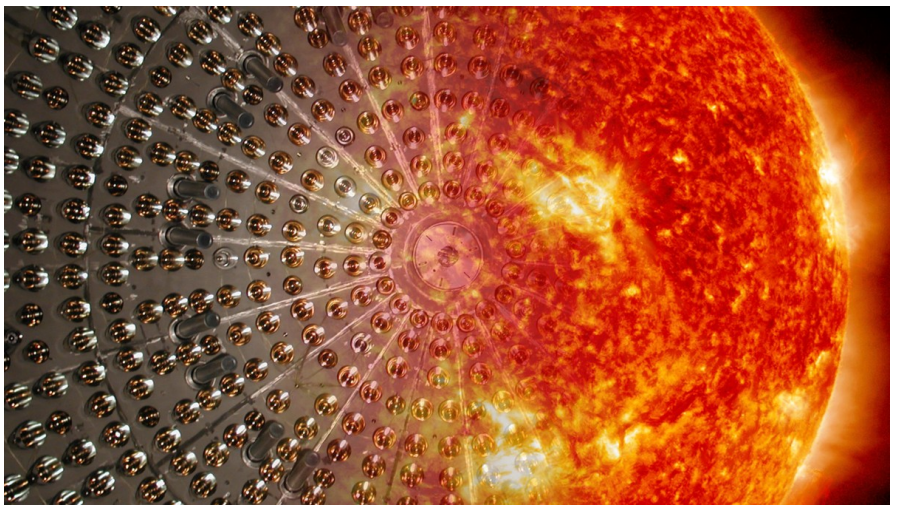
DESY
Physics Seminar

Detection of neutrinos from the primary proton-proton fusion process in the Sun with Borexino.

Daniel Bick (Univ. Hamburg)

Tuesday, 14 October 2014
16:45 h, Auditorium

In the core of our Sun, energy is released through fusion of hydrogen to helium. The primary reaction is the fusion of two protons accompanied by the emission of a low-energy neutrino. These so-called pp-neutrinos are the largest component of the solar neutrino flux, outnumbering those emitted in the subsequent reactions by far. Due to the low energy of the pp-neutrinos, they have not been observed directly until recently. Now the Borexino experiment has succeeded in the spectroscopic measurement of pp-neutrinos using 300 tons of liquid scintillator with an unprecedented radio-purity. With this observation, the flux of all neutrinos from the pp-chain has for the first time been observed in a single experiment.



Coffee, tea and cookies will be served at 16:30h.

After the seminar there is a chance for private discussions with the speaker over wine and pretzels.