

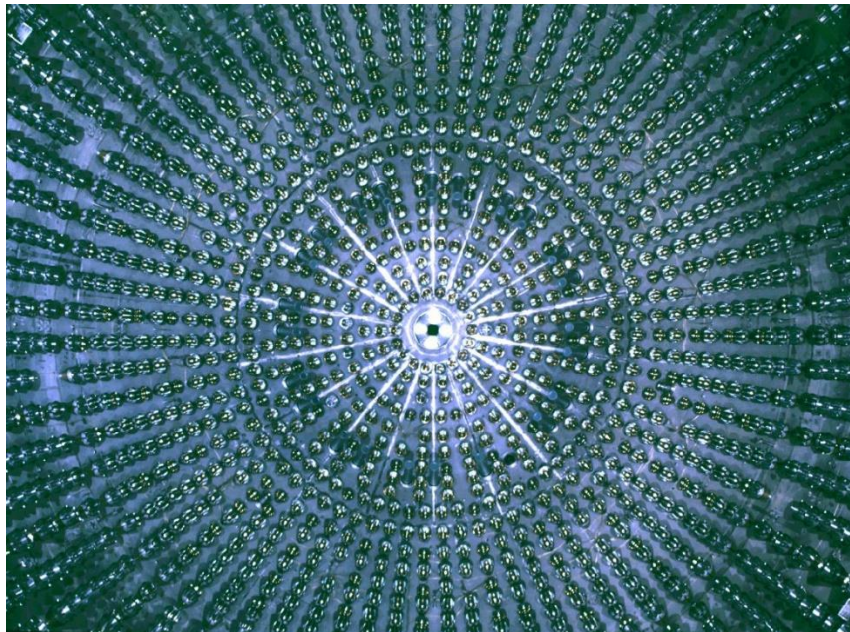
SEMINAR

Thursday, 12 December, 14:30

Department of Physics and Earth Sciences

Room C412

Solar neutrino spectroscopy with Borexino



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Borexino is a 280ton liquid scintillator detector placed at the Laboratori Nazionali del Gran Sasso in Italy. Since the start of its data taking in May 2007, it has provided several measurements of solar neutrinos, important for the understanding of our star, as well as of the neutrino properties. In particular, Borexino has performed the first spectroscopic measurements of the pp, ${}^7\text{Be}$, and pep solar neutrinos, the measurement of the ${}^8\text{B}$ neutrinos with the 3 MeV energy threshold and has provided the best current limits on the CNO solar neutrinos and on the effective neutrino magnetic moment. The seminar will describe the latest comprehensive measurement of the pp-chain solar neutrinos based on the Phase-2 data with significantly lowered radioactive background. The potential of Borexino to measure solar neutrinos from the CNO fusion cycle will be also discussed.