Contribution ID: **41** Type: **Oral**

Low-energy neutrino astronomy in LENA

Monday, September 9, 2013 3:00 PM (20 minutes)

LENA (Low Energy Neutrino Astronomy) is a proposed next-generation neutrino detector based on 50 kilotons of liquid scintillator. The low detection threshold, good energy resolution and excellent background rejection inherent to the liquid-scintillator detectors make LENA a versatile observatory for low-energy neutrinos from astrophysical and terrestrial sources. In the framework of the European LAGUNA-LBNO design study, LENA is also considered as far detector for a very-long baseline neutrino beam from CERN to Pyhäsalmi (Finland).

This contribution centers on the highlights of recent studies on LENA's broad research program in low-energy neutrino astrophysics, reaching from the potential for a flavor-resolved observation of the neutrino burst from a galactic Supernova to a precision search for non-standard-effects in the solar neutrino spectrum.

Primary author: WURM, Michael (University of Tubingen)

Presenter: WURM, Michael (University of Tubingen)

Session Classification: Low Energy Neutrinos I

Track Classification: Low-Energy Neutrinos (solar, reactor, supernova, and geo neutrinos and also nuclear astrophysics associated with these sources)