

# Geoneutrino Physics in the JUNO Experiment

JUAN PEDRO OCHOA-RICOUX<sup>1</sup> AND VIRGINIA STRATI<sup>2</sup>

<sup>1</sup>University of California, Irvine

<sup>2</sup>INFN Sezione di Ferrara

Presenting Author: [strati@fe.infn.it](mailto:strati@fe.infn.it)

The Jiangmen Underground Neutrino Observatory (JUNO) is a multipurpose neutrino experiment under construction in China. The experiment will feature a 20 kton liquid scintillator detector with an energy resolution standard deviation of 3% at 1 MeV, which is unprecedented for a detector of this type. JUNO's primary goal is to study the oscillation of antineutrinos emitted by the nuclear reactors of the Yangjian and Taishan power plants, both of which are located at a baseline of 52.5 km. The experiment will also have world-leading sensitivity to geoneutrinos, which consist primarily of electron antineutrinos emitted from radioactive decays of uranium, thorium and potassium isotopes in the Earth. The measurement of the geoneutrino flux, which JUNO aims to complete with ~5% precision over 10 years, is an important tool in determining the radiogenic heating in the Earth's interior. This talk will provide an overview of the goals and status of the JUNO experiment with a focus on its geoneutrino measurement.