

Abstract Submitted
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Latest developments on reactor antineutrino spectra and test of the reactor antineutrino anomaly with Nucifer THIERRY LASSERRE, CEA Saclay, CEA SACLAY TEAM — The detection of electron antineutrinos emitted in the decay chains of the fission products in nuclear reactors associated with accurate simulations provides an efficient tool to investigate the neutrino oscillation phenomenon. I will review the latest developments in the computation of reactor antineutrino spectra of the four main fissile isotopes, U235, U238, Pu239, and Pu241. I will discuss the recent observation of a spectral distortion at 4-6 MeV, not expected by the models. Then I will focus on experiments at short baselines, less than 100 meters, providing new results on the reactor antineutrino anomaly that could be interpreted as a hint for a new (sterile) neutrino state. I will then discuss the search for light sterile neutrino with the Nucifer detector being currently taking data at 7 m away from the Osiris research reactor at CEA-Saclay. Follow-up experiments in Europe will be discussed.

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