

## **Seminarium Szkoły Doktorskiej NCBJ**

**Thursday, 27 April, 9:15  
room 207, Pasteura 7**

**<https://www.gotomeet.me/NCBJmeetings/phd-seminar>  
<https://events.ncbj.gov.pl/e/PhDSeminar2223>**

**Speaker:**

**Maitrayee Mandal (Szkoła Doktorska NCBJ)**

**Title:**

**Tau Neutrino Appearance in the Flux of Atmospheric Neutrinos**

**Abstract:**

The flux of atmospheric neutrinos comprises of muon and electron neutrinos. Below 10 GeV, we do not expect to see a significant number of tau neutrinos in the atmosphere, unless they appear from the oscillation of atmospheric muon neutrinos. The Super-Kamiokande experiment (Super-K) is a water Cherenkov detector in Japan. Super-K is capable of directly detecting these oscillated tau neutrinos - which would be an unambiguous confirmation of the phenomena of neutrino oscillations. The last study at Super-K, in 2018, excluded the hypothesis of no tau neutrino appearance at 4.6 sigma. This seminar presents the latest analysis on the subject.