

Einladung zum Physikalischen Kolloquium

24.11.2023 **Julien Lesgourgues RWTH Aachen**

»Neutrino mass bounds from cosmology: How strong? How robust?«

Einführung: Th. Schwetz-Mangold

Since neutrinos are known to be very light and elusive, they are often thought to play a very small part in the history of the universe. This is all but true. A numerous population of neutrinos, known as the Cosmic Neutrino Background, was produced in the early universe and has been staying around since then. Neutrinos are actually the second most numerous particles in the universe since billions of years, and they have been the second contributor to the total energy budget of the universe over most of the the first 50 000 years. These neutrinos are very difficult to measure directly, but we have several indirect (although very clear) indications of their presence. The strongest upper bounds on neutrino masses come from cosmological observations, but we will insist on their model-dependence and discuss their robustness, especially given some possible hints of tension among different types of recent cosmological data. We will close on neutrino mass detection prospects with the next generation of cosmological surveys.



Der Vortrag findet **am Freitag, den 24. November 2023 um 15:45 Uhr im Otto-Lehmann-Hörsaal**, Physik-Flachbau (Geb. 30.22), KIT-Campus Süd statt.