

14. April 2023

## Einladung zum Physikalischen Kolloquium

30.06.2023 **Anna Nelles, DESY und Universität Erlangen**  
**»Building radio detectors to search for astrophysical neutrinos«**  
*Einführung: K. Valerius*

The cosmos manages to accelerate particles to energies that are unattainable for man-made accelerators, ultra-high energy cosmic rays. The sources in which this happens have been elusive. The arrival directions of these cosmic rays do not point back to their sources, due to their bent trajectories in (extra-)galactic magnetic fields. Their neutral counterpart, the neutrinos, do reveal the sources, however, they require massive volumes to be detected - in particular, at energies of EeV which correspond to the highest energy cosmic rays. This talk

will introduce you to the Radio Neutrino Observatory in Greenland (RNO-G), the world's largest neutrino detector, currently under construction. We will walk through science case, experimental challenges, and first data. With being a mid-scale experiment, RNO-G is also a stepping stone towards IceCube-Gen2, which will build on the successful first detection of the astrophysical neutrino flux by IceCube.



Der Vortrag findet **am Freitag, den 30. Juni 2023 um 15:45 Uhr im Otto-Lehmann-Hörsaal**, Physik-Flachbau (Geb. 30.22), KIT-Campus Süd statt.