Contribution ID : **853** Type : **Oral talk**

Status and future of neutrino astronomy and the Global Neutrino Network

Thursday, 8 October 2020 18:35 (15)

The discovery of cosmic neutrinos with IceCube has opened a new window on the universe. In 2013 the IceCube Collaboration has discovered a diffuse flux of cosmic neutrinos, and in 2017 evidence for a possible first point source of high-energy neutrinos. At the same time it is clear, that a global effort is necessary to resolve the high-energy neutrino sky in detail. IceCube is flanked by activities in the Mediterranean Sea and in Lake Baikal, where next generation experiments of similar power like IceCube are being constructed: KM3NeT and Baikal-GVD. At the South Pole an enlarged version of IceCube is going to be deployed from 2026 on. The three communities have joined their efforts in the Global Neutrino Network GNN, with the goal to resolve the high-energy neutrino sky and to investigate cosmic particle acceleration through multi-messenger observations. The talk summarizes the most important recent results and the common activities within GNN. Moreover it sketches the capabilities of the mentioned next-generation experiments and tries a look into the next decade.

Primary author(s) : Prof. SPIERING, Christian (MEPhI/DESY)

Presenter(s) : Prof. SPIERING, Christian (MEPhI/DESY)

Session Classification : Neutrino Physics

Track Classification : Neutrino physics