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# Status of RNO-G: Radio Neutrino Detector Greenland

*Monday 21 August 2023 17:24 (18 minutes)*

Astrophysical hypotheses suggest the existence of neutrinos beyond the energy range currently reached by optical detectors (> 10 PeV). The observation of such particles by capturing the coher- ent emission of their interaction in ice, i.e. Askaryan radiation, is the aim of the Radio Neutrino Observatory in Greenland (RNO-G). Located at Summit Station, RNO-G represents the first neu- trino detector oriented towards the Northern sky, and it will play a role in the future shaping of the larger IceCube-Gen2 Radio Array. The first installed stations of RNO-G are currently active and collecting data, while the full array will reach completion within the next years. The plan includes a grid of 35 radio stations, each designed to be low powered and autonomous. Learning from previous radio detectors, each station includes both shallow antennas mainly for cosmic-ray iden- tification, and in-ice deep antennas with a phased array trigger for detection and reconstruction. We present the motivation, design and current status of the detector.

## Collaboration / Activity

RNO-G

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