Contribution ID: 110 Type: not specified

Learning about radio at DESY: The first steps in a new radio antenna outreach project

Tuesday 9 September 2025 15:20 (20 minutes)

Radio antennas are crucial to our day-to-day life as they cover a wide range of tasks; from amateur communications to next-generation science experiments. Therefore, outreach projects explaining how antennas work provide an excellent entry point for students into many disciplines, including astroparticle physics. Throughout this project various antennas and software defined radios (SDRs) were tested to find the best candidate to use for such a project. Despite working in a relatively simple way, antennas are used at the Radio Neutrino Observatory Greenland (RNO-G) to detect radio emission from the interaction of ultra-high energy (UHE), astrophysical neutrinos in polar ice. Being able to show students how antennas work will help inspire the next generation of astroparticle physicists.

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