



ID de Contribution: 13

Type: **Oral presentation**

The Giant Radio Array for Neutrino Detection

mardi 9 février 2021 14:15 (15 minutes)

The Giant Radio Array for Neutrino Detection (GRAND) is a project dedicated to the radio detection of ultra-high energy cosmic rays, gamma rays and neutrinos. It aims at deploying a radio array of 200 000 antennas over 200 000 km² in mountainous regions with 20 subarrays of 10 000 antennas in several favorable locations around the world. The objective is to detect inclined ($\theta > 65^\circ$) particle showers with $E > 10^{17}$ eV induced by the interaction of ultra-high energy astroparticles with the atmosphere or underground via their radio-emission in the 50-200 MHz range. Its expected sensitivity of $\sim 10^{-10}$ GeVcm⁻²s⁻¹sr⁻¹ above $5 \cdot 10^{17}$ eV combined with its sub-degree angular resolution, should allow unveiling the uncharted territory of ultra-high energy neutrinos, secondary particles guaranteed to exist by the detection of ultra-high energy cosmic rays. In this talk, I will present the science case of GRAND and will particularly focus on GRANDProto300, a pathfinder of 300 antennas to be deployed in 2021 that will allow to test the detection principle of the GRAND experiment.

Field

Not in the above

Day constraints

Preferentially on tuesday or wednesday if possible.

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Classification de Session: Talk

Classification de thématique: Astrophysics