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Progress of construction and calibration of main modules for the DUCK (Detector of Unusual casKades) system

The Astroparticle field is actively searching for the origin and the nature of the Ultra-high energy cosmic rays from deep within the Universe as they carry the information from those regions and might also hint on possible new physics. This talk reports on the overall design and the ongoing construction and calibration of DUCK (Detector system of Unusual Cosmic-ray casKades), a new cosmic-rays detector at the Clayton State University campus with ns-level detection resolution. The main scientific importance for the DUCK project will be to contribute to the approach of cosmic ray event analysis using the full waveform and detector response width, and to an independent verification of the detection of the 'unusual'cosmic ray events that were reported by the Horizon-T detector system that may be indicating direction towards the novel physics possibilities.

Collaboration(s)

DUCK

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