Contribution ID: **629** Type: **Parallel**

On the Potential Galactic Origin of the Ultra-High-Energy Event KM3-230213A

This year, the KM3NeT observatory published the detection of the most energetic neutrino candidate ever observed, with an energy between 72 PeV and 2.6 EeV at the 90% confidence level. This extreme energy makes the observed neutrino event very likely being of cosmic origin and not produced within the Earth's atmosphere. However, the exact origin is unknown. In this talk, the possibility that the neutrino was produced within the Milky Way is discussed. Considering the low flux of the Galactic diffuse emission at these energies, the lack of a nearby potential Galactic particle accelerator aligned with the event's direction, and the theoretical challenges of accelerating particles to such high energies in Galactic systems, we conclude that an extragalactic origin of the event is more probable.

Secondary track

T03 - Neutrino Physics

Author: BREUHAUS, Mischa (CPPM)

Presenter: BREUHAUS, Mischa (CPPM)

Session Classification: T01

Track Classification: T01 - Astroparticles, Gravitation and Cosmology