

Ultra-high energy cosmic rays and neutrinos

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Abstract content

The sources of Ultra-high energy cosmic rays (UHECRs) whose energy can be as large as 10^{20} eV are still not confirmed, which is one of the most mysterious problems in Astrophysics today. I would summarize the history of searching for the sources of UHECRs and current status of their observations. I would like to show our theoretical study on the sources of UHECRs with a help of numerical simulations. I would like to present the future prospect of this field. Also, I would like to present that high-energy neutrinos, which are coming from the interactions of UHECRs with ambient matter/photons in the universe, can be good probes of the sources of UHECRs.

Summary

Primary author(s) : Prof. NAGATAKI, Shigehiro (Yukawa Institute for Theoretical Physics, Kyoto University)

Presenter(s) : Prof. NAGATAKI, Shigehiro (Yukawa Institute for Theoretical Physics, Kyoto University)

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