

Status of the Yakutsk air shower array and future plans

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(Submitted: May 2021)

Abstract — The Yakutsk Extensive Air Shower Array has been continuously operating for more than 50 years (since 1970) and up until recently it has been one of world's largest ground-based instruments aimed at studying the properties of cosmic rays in the ultra-high energy domain. In this report we discuss results recently obtained at the array — on cosmic rays energy spectrum, mass composition and directional anisotropy — and how they fit into the world data. Special attention is paid to the measurements of muonic component of extensive air showers. Theoretical results of particle acceleration at shocks are also briefly reviewed. Future scientific and engineering plans on the array modernization are discussed.

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