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Cosmic Ray measurements in the region 1-100 TeV: combined proton and helium spectrum.

The ARGO-YBJ experiment, located in the Yangbajing Cosmic Ray observatory (4300 m a.s.l. Tibet, P.R. China), detects Extensive Air Showers in a wide energy range by means of a full-coverage detector which is in stable data taking since November 2007. In this work recent results about the measurement of the combined proton and helium spectrum in the energy range 5-200 TeV are presented. The ARGO-YBJ results are therefore the first indirect measurements at these energies with ground-based detectors. The measured spectrum can be compared to direct measurements in the same energy region. The data show a good agreement with recent direct measurement and suggest that the spectrum is harder than in the low energy region.

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