ARGO-YBJ LEGACY TO NEXT GENERATION WIDE FIELD OF VIEW EXPERIMENTS

G. Di Sciascio
INFN – Roma Tor Vergata

The ARGO-YBJ experiment has been in stable data taking for more than 5 years at the YangBaJing Cosmic Ray Observatory (Tibet, P.R. China, 4300 m a.s.l., 606 g/cm^2). With a duty-cycle greater than 86% the detector collected about 5×10^{11} events in a wide energy range, from few hundreds GeV up to about 10 PeV. High altitude location and detector features make ARGO-YBJ capable of investigating a wide range of important issues in Cosmic Ray and Astroparticle Physics by imaging the front of atmospheric showers with unprecedented resolution and detail.

In this contribution the main physics results obtained by ARGO-YBJ in gamma-ray astronomy and in cosmic ray physics will be summarized.

The prospects of TeV gamma-ray observations with large-area/large FoV detectors will be presented and the possibilities of exploiting the Resistive Plate Chambers (RPC) in large-scale cosmic ray experiments discussed.