



Contribution ID: 22

Type: **Talk** (20'+5')

### **Future Wide Field of View Experiments: from Gamma-Ray Astronomy to Cosmic Rays**

*Monday, 25 September 2017 16:40 (25 minutes)*

The riddle of the origin of Cosmic Rays is unsolved since more than one century. The identification of the galactic sources able to accelerate particles beyond PeV energies is certainly one of the main open problems of high energy astrophysics. High energy gamma ray (and neutrino) observations are an essential probe of CRs, if gamma rays (and neutrinos) are produced by CRs interacting close to their sources. The integrated study of charged CRs, gamma rays and neutrinos is one of the most important and exciting fields in the so-called 'multimessenger astronomy'. Open problems in cosmic ray physics push the construction of a new generation of EAS arrays to study, in the  $10^{11}$  –  $10^{18}$  eV energy range, photon- and charged-induced events at the same time. LHAASO is the most ambitious project for a new generation multi-component wide field-of-view experiment in the Northern hemisphere. A new EAS array in the Southern Hemisphere to study the 100 GeV  $\gamma$ -sky with high sensitivity and to monitor the Galactic Center should be a high priority. In this contribution the prospects of TeV gamma-ray observations with new ground-based wide field-of-view detectors are presented.

**Presenter:** DI SCIASCIO, Giuseppe (ROMA2)

**Session Classification:** Multimessenger physics & New physics at high-energy neutrino telescopes

**Track Classification:** Multimessenger physics