MAS14-2014-020013

Abstract for an Invited Paper
for the MAS14 Meeting of
the American Physical Society

Origin of Galactic Cosmic Rays

JASON LINK, NASA Goddard Space Flight Center CRESST-USRA

Despite their discovery over 100 years ago, we are only recently beginning to understand and identify the cosmic sources of galactic cosmic rays. In this talk I will discuss what we know and what we hope to learn about the cosmic-ray source. I will focus in particular on efforts to measure cosmic rays with an atomic number Z>30. These ultra-heavy cosmic rays are only produced in supernova explosions as a result of neutron capture and provide an excellent indicator of the nature of the cosmic-ray source. I will present data from past balloon and satellite experiments as well as the recent SuperTIGER balloon experiment which flew over Antarctica for a record 55 day flight and discuss what the future holds for ultra-heavy galactic cosmic-ray measurements.