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Abstract for an Invited Paper
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Extreme Particle Astrophysics

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This presentation will go through a whirlwind tour of a variety of projects to detect energetic cosmic-ray nuclei, electrons and antimatter particles arriving at Earth from still poorly understood sources within the Milky Way Galaxy and beyond. These projects involve large and complex instruments deployed underground, on the ground surface, or flown on high-altitude balloons or in space on satellites or the space station. They take place all over the world, including Argentina, Antarctica, and the International Space Station. The energetic particles detected at Earth give us glimpses of the most extreme and energetic environments in Nature. We will review the techniques and science of this endeavor, which has been a century in the making but is now yielding fresh insights and high accuracy measurements with large instruments exposed for long periods of time.