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Current and Future Measurements of Ultra-Heavy Galactic Cosmic Rays.

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There is strong evidence from recent experiments that suggest a source of galactic cosmic rays is in superbubble regions and that particles here are accelerated through the shocks from supernova explosions. Through further study of ultra-heavy cosmic-rays, those particles with a Z >26, we can verify and explore the particle source and acceleration process of cosmic-rays. Measuring these particles is a challenge due to their low flux and high interaction cross section, requiring extremely large detectors flown on balloons and in space. In this talk we will discuss how past and recent ultra-heavy cosmic ray measurements have shaped our understanding of the cosmic-ray source and acceleration process and what we hope to learn from future measurements. We will present results on the abundances of ultra-heavy cosmic rays in the charge range $26 \leq Z \leq 40$ from the SuperTIGER Antarctic balloon flight and compare these with previous results from ACE-CRIS and TIGER. We will also review the current status of active missions to measure ultra-heavy cosmic rays and discuss future possibilities.