Abstract Submitted
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Elemental Abundances of Ultra-Heavy Nuclei Measured by SuperTIGER: Preliminary Results[1] R.P. MURPHY, W.R. BINNS, R.G. BOSE, P.F. DOWKONTT, M.H. ISRAEL, B.F. RAUCH, J.E. WARD, Washington University in St. Louis, T.J. BRANDT, G.A. DE NOLFO, T. HAMS, J.T. LINK, J.W. MITCHELL, K. SAKAI, M. SASAKI, NASA/Goddard Space Flight Center, A.W. LABRADOR, R.A. MEWALDT, E.C. STONE, California Institute of Technology, C.J. WADDINGTON, University of Minnesota, M.E. WIEDENBECK, Jet Propulsion Laboratory — The SuperTIGER (Trans-Iron Galactic Element Recorder) experiment was launched on a long-duration balloon flight from Williams Field, Antarctica, on December 8, 2012 and flew for a total of 55 days at a mean atmospheric depth of 4.4 g/cm^2. The instrument is designed to measure the abundances of galactic cosmic rays in the charge (Z) range from $10 \leq Z \leq 40$ with high statistical precision and excellent charge resolution, with exploratory measurements into the $40 < Z \leq 60$ range. The instrument, the methods of charge identification that are employed, and the SuperTIGER balloon flight will be described. The data that will be presented contain more than 600 events with charge $30 < Z \leq 40$, $\sim$ 4.5x that collected by the two TIGER flights combined. The charge resolution obtained for iron is <0.18 cu. We will discuss the OB association model for the origin of galactic cosmic rays and show how SuperTIGER measurements will be used as a stringent test of this model.

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