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Galactic Cosmic Ray Energy Spectra for Heavy Elements (Z<30) from ∼0.8 to ∼10GeV/nuc with the SuperTIGER Instrument T. J. BRANDT, NASA/GSFC, W. R. BINNS, Washington University, St. Louis, R. G. BOSE, P. F. DOWKONTT, Washington University, T. HAMS, NASA/GSFC & CRESST, M. H. ISRAEL, Washington University, A. W. LABRADOR, Caltech, J. T. LINK, NASA/GSFC & CRESST, R. A. MEWALDT, Caltech, J. W. MITCHELL, NASA/GSFC, R. P. MURPHY, B. F. RAUCH, Washington University, K. SAKAI, M. SASAKI, NASA/GSFC & CRESST, E. C. STONE, Caltech, C. J. WADDINGTON, U Minnesota, N.E. WALSH, J. E. WARD, M. E. WIEDENBECK, Washington University — SuperTIGER (Trans-Iron Galactic Element Recorder) is a large-area balloon-borne instrument built to measure the galactic cosmic ray (GCR) abundances of elements from Z=10 (Ne) through Z=56 (Ba) at energies from 0.8 to ∼10GeV/nuc. SuperTIGER flew for a record-breaking 55 days from Antarctica in 2012-13. We will report on the status of SuperTIGER energy calibration using the instrument's aerogel and acrylic Cherenkov detector signals and on instrumental and atmospheric corrections to obtain cosmic ray energy spectra for abundant elements (e.g. Z<30). The large area and long flight duration of SuperTIGER is particularly suited to looking for microquasar signatures via near monoenergetic peaks in heavy ions in the 3-10 GeV/nuc energy range. We will compare selected SuperTIGER spectra with those from ACE/CRIS and a solar-modulated GCR model during the time of the SuperTIGER flight to attempt to detect such near monoenergetic jets.

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