Results from the Cosmic Ray Energetics And Mass for the International Space Station (ISS-CREAM) experiment

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- The ISS-CREAM instrument successfully took high-energy cosmic-ray data for 539 days from 8/14/17 to 2/12/19.
- A proton spectrum is measured in the energy range 2.5 - 655 TeV.
  - A broken power law fit to 2.5 – 100 TeV data: $\gamma = 2.65 \pm 0.06$ and a break at ~9.94 $\pm$ 4.6 TeV with $\Delta\gamma = 0.26 \pm 0.1$.
  - At higher energies, the softening does not continue but the spectrum becomes harder again.
  - The deviation from a single power law near 10 TeV is consistent with the softening reported by CREAM-I &III, DAMPE, and NUCLEON, but ISS-CREAM extends measurements to higher energies than those prior measurements.
  - The spectral hardening at ~ 200 GV and softening ~ 10 TeV could indicate a transition from one type of source to another.
- Other nuclei analysis is in progress.
- Simultaneous measurements of elemental spectra of Z = 1 - 26 nuclei will be important for a coherent model development to understand cosmic ray origin, acceleration, and propagation.