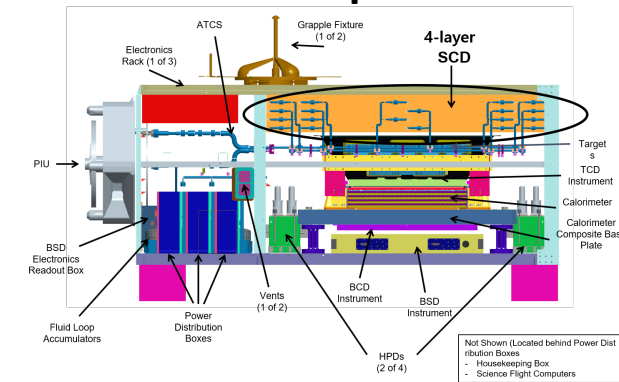


“Analysis Result of the High-Energy Cosmic-Ray Proton Spectrum from the ISS-CREAM Experiment”

G.H. Choi on behalf of the ISS-CREAM collaboration

1. ISS-CREAM experiment



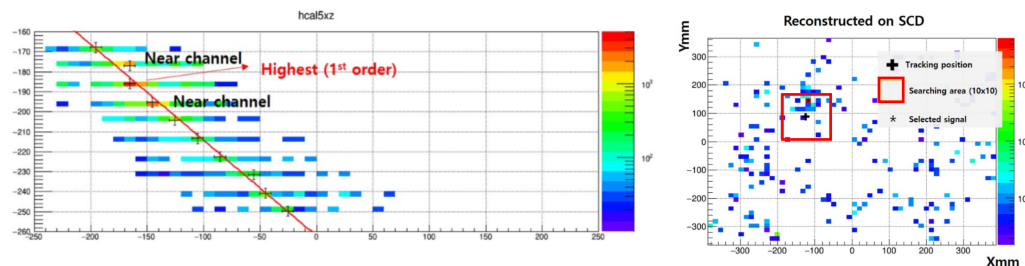
Design to direct measurement
high-energy cosmic rays

Direct measurement (TeV – PeV)

- Silicon Charge Detector (SCD) : Charge measurement, tracking
- C-Target & Calorimeter (CAL) : Energy measurement, tracking, trigger
- Top/Bottom Counting Detector (TCD & BCD) : e/p separation, trigger
- Boronated Scintillator Detector (BSD) : e/p separation by neutron detection

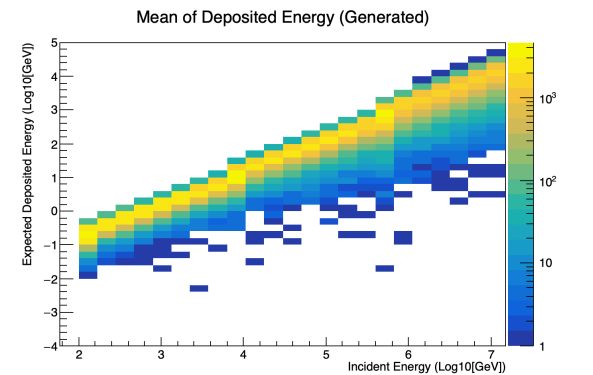
2. Analysis

2.1. Tracking & charge determination



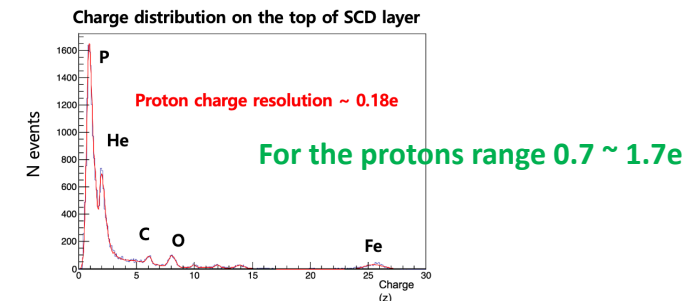
Tracking by CAL & charge determined by SCD

2.2. Spectral deconvolution



Correction for the small energy dependence
of the energy resolution due to shower leakage

2.3. Charge distribution & Absolute flux for protons



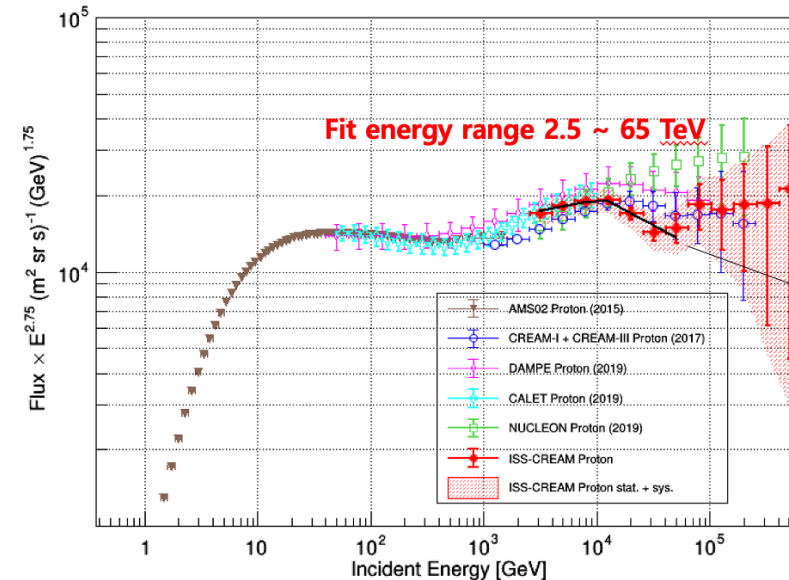
$$F = \frac{dN}{dE} \cdot \frac{(1 - \delta)}{GF \cdot \epsilon \cdot T}$$

Absolute flux equation

- ϵ : Efficiency
- GF : Geometry factor
- T : Live time
- δ : Misidentified charge by backscattered particles

3. Result

Compilation of the proton spectrum



Consistence result with prior
CREAM experiment

Observed spectrum softening ~ 10
TeV, It is consistence result as the
CREAM, DAMPE and NUCLEON

Values for the results are,

; index : $2.66 (\pm 0.03)$ with
 $\Delta\gamma = 0.33 (\pm 0.07)$ with spectral
break energy at ~ 11.9 TeV with
significance 4.62 sigma