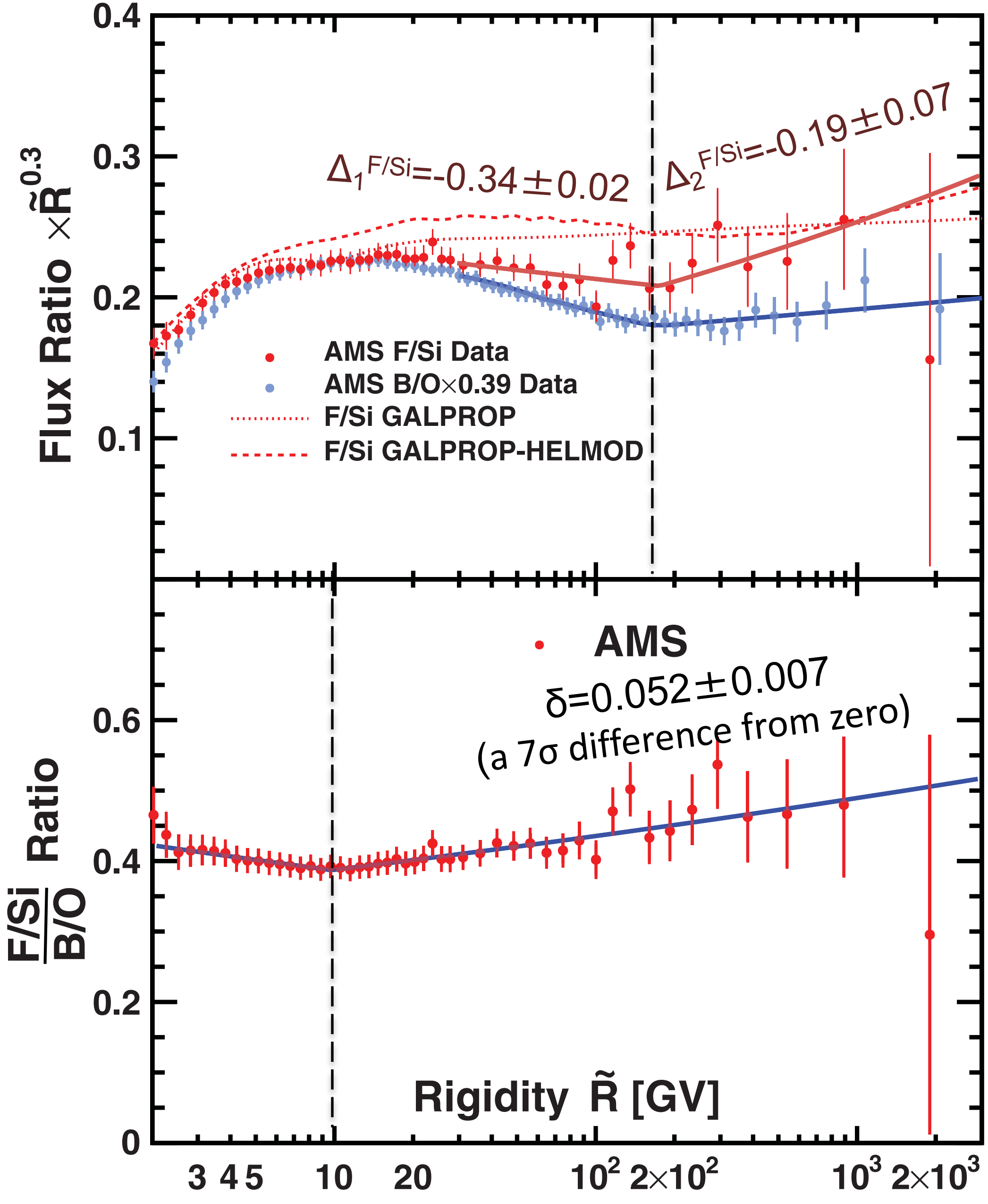
Heavier F/Si Flux Ratio compared with lighter B/O Flux Ratio



The F/Si flux ratio was fitted to:

$$\begin{cases} C(R/175\ \text{GV})^{\Delta_1}, & R \le 175\ \text{GV}, \\ C(R/175\ \text{GV})^{\Delta_2}, & R > 175\ \text{GV}. \end{cases}$$

Above 175 GV, the F/Si ratio exhibits a hardening ($\Delta_2^{F/Si} - \Delta_1^{F/Si}$) of 0.15±0.07 compatible with the AMS result on the hardening of the Li/C, Be/C, B/C, Li/O, Be/O, and B/O flux ratios.

The (F/Si)/(B/O) ratio was fitted to:

$$\frac{F/Si}{B/O} = \begin{cases} k(R/R_0)^{\delta_l}, & R \le R_0, \\ k(R/R_0)^{\delta}, & R > R_0. \end{cases}$$

Above 10 GV, the (F/Si)/(B/O) ratio can be described by a single power law with δ=0.052±0.007, revealing that the propagation properties of heavy cosmic rays, from F to Si, are different from those of light cosmic rays, from He to O.