



Figure 5. A plot of the energy per nucleon range over which the ACE sensors will measure the elemental and isotopic composition of nuclei from He to Zn ($Z = 2$ to 30), with exploratory measurements extending to $Z = 40$ in some cases. In the top panel, boundaries for an rms mass resolution of ≤ 0.3 amu and ≤ 0.6 amu are indicated (note that many studies, e.g., $^{22}\text{Ne}/^{20}\text{Ne}$, do not require resolution of adjacent isotopes). A 400 km/sec solar wind velocity corresponds to $\sim 0.8 \times 10^{-3}$ MeV/nucleon. Note that the SWICS and SEPICA sensors will also measure ionic charge state composition over the energy and element ranges indicated above.