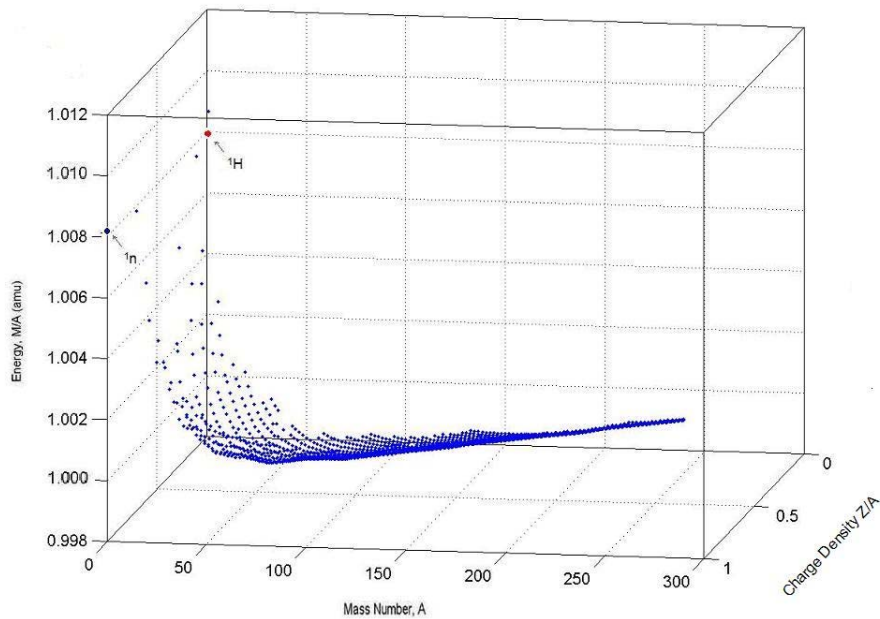


Nuclear Sources of Stellar Luminosity

What releases more energy than ${}^1\text{H} \rightarrow {}^4\text{He} \rightarrow {}^{56}\text{Fe}$?

This compares potential energy of the neutron (\bullet), proton (\circ) and all other 2,850 known nuclides. Among stable nuclides, ${}^{56}\text{Fe}$ has least and ${}^1\text{H}$ has greatest potential energy.



The data define mass parabolas at each value of $A > 1.0$. Each parabola intercepts the front plane at $Z/A = 0$ with $M/A > M_n$. This repulsive interaction of neutrons is the main source of solar energy.

