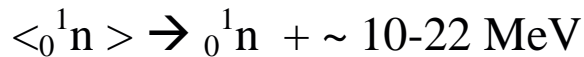


# Source of Solar Energy (SE)

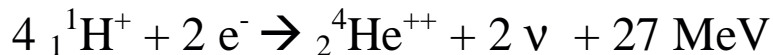
- Neutron emission from the solar core ( >57% SE)



- Neutron decay or capture ( <5% SE)



- Fusion and upward migration of  $\text{H}^+$  ( <38% SE)



- Escape of excess  $\text{H}^+$  in the solar wind (100% SW)

Each year  $3 \times 10^{43}$   $\text{H}^+$  depart in the solar wind

In the first reaction, neutron emission releases **1.1% - 2.4%** of the nuclear rest mass as energy. By comparison, hydrogen fusion releases a maximum of about **0.8%** of the rest mass as energy (0.7% if the end product is helium), and fission releases **0.1%** of the rest mass as energy [10].