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On the abundance of deuterium in celestial objects

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The deuterium hydrogen ratio (D/H) is the subject of conflicting ideas about the origin of water on the Earth. The present D/H ratio in the Earth oceans (≈1.5x10-4) is substantially lower than most, if not all potential cosmic sources. Furthermore, other celestial bodies, including interstellar space, display a fairly wide range of D/H ratios superseding the terrestrial one. Escape processes may in part explain higher D/H ratios on Mars and Venus, but cannot explain the Earth's low ratio compared to that of the potential sources (e.g. comets and meteors), unless a deuterium "removal" process can be inferred that reduces the D/H ratio. Alternatively, the D/H ratio in the Earth's ocean represents a time capsule of a yet to be identified cosmic source.
It is here hypothesized that the former is the cause, a "removal" of deuterium in matter (carbohydrates, water etc.) having high (pristine) D/H ratios. By "removal" is here meant an isotope transmutation, i.e. deuterium is transmuted to hydrogen plus a thermal neutron, a process requiring >2.25 MeV (≈3.6·10-13 J). However, once released a thermal neutron will eventually fuse with another heavier element by thermal neutron capture, a process that may lead to energy in excess of the spallation energy. The energy gain differs for different isotopes, but if exceeding unity it will induce more heat/power than the input power, maintaining power production over time. A gain less than unity will still result in deuterium removal, but also isotope transmutation, and/or element transmutation via $\beta\pm$ decay.
This report gives a theoretical background for the plasma forcing that can lead to thermal neutron spallation, a process that changes/decrease the D/H ratio in celestial objects. The applicability of the theory will be tested on celestial objects subjected to strong dynamic, and electromagnetic forcing, by the Sun or during the entry of high-speed objects into the Earth′s atmosphere.