Stellar Metamorphosis: Using the Deuterium to Hydrogen Ratio to Determine the Ages of Hydrous Rocks and Hydrocarbons

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Abstract: In stellar metamorphosis the D/H ratio can be used to determine the formation ages of rocks, minerals and hydrocarbons that contain hydrogen. Explanation is provided of how this can be done and why it is important.

In the general theory, the most pristine D/H ratios available are from the solar wind, with values of 1D/10,000,000H, as those ratios are measured coming from the youngest star in our system, and a very young star in of itself according to the general theory. What sets the middle range of the D/H ratios is what the Earth provides of 1D/6,250H, and a very high ratio is what Venus provides of nearly 1/40 in its upper atmosphere. Being that the Earth is in total 4.5 billion years old, we can then set the age of the Sun as about 2.8 million years old. Astronomers will find it disagreeable that the Sun could actually be that young, but they have been known to be very, very wrong before as they used to believe Earth was the center of the Solar System. To date they still believe stars are something mutually exclusive of "planet", not realizing they are actually the same objects. So, it is only natural to have the Sun as an extremely young, homogenous star without a nuclear core, because it is very young and couldn’t have even formed one, and the Earth as a couple billion year old star at the end of its evolution. As well for the sake of this paper, it is more reasonable to notice the trend that D/H ratios take as stars cool and die. The D/H ratios rise due to whole body mass dependent fractionation of the lightest element, the youngest stars will have the lowest D/H ratios like the Sun, and the oldest, dead of the dead stars will have much higher D/H ratios as is the case of the stellar remnant Venus.

The reason why the D/H ratios can be used for the star in any stage, is because all stars start off with lots of hydrogen, and little deuterium. As they age and cool, according to the principle of both mass loss and the principle of atmospheric thinning, the H will escape easier, increasing the ratio of D/H. It is not an exact analogy, but it is like starting with a fizzy coke to drink at a restaurant. The coke when it is first carbonated has lots of CO2. If you let it sit there and don't drink it, the carbonation escapes and it eventually goes flatter and flatter. So if you want to tell if a coke is older and has been sitting on the table for a while, you see if it still has carbonation. All cokes start with carbonation when they are served, yet the carbonation diffuses back into the atmosphere. With stars it’s a tad bit different.

With stars, their hydrogen escapes in larger amounts the younger they are. Though, not all of it escapes as we know from measuring the acetylene, methane, water and hydroxide, which all contain hydrogen and deuterium. Over many millions of years, the hydrogen and deuterium that does not escape is combined with carbon and oxygen and various other elements in its atmosphere and interior. The hydrogen and deuterium that does not escape, depending on the ratio it exists in the atmosphere, will combine to make molecules and compounds. This means that the first compounds a star makes that contain hydrogen/deuterium should have the closest to the pristine values when it was a younger star. As the star cools and dies, the D/H ratios of the rocks, minerals and hydrocarbons that form as it evolves and either trap the D and H or make it apart of its crystalline structure, increase. What I mean is that the rocks/minerals and hydrocarbons found can have their ages determined by working backwards. If the hydrocarbons mined contain ratios of 1D/10,000H, then those hydrocarbons formed when the Earth was 2.81 billion years old. If they contain 1D/100,000H then they formed when the Earth was 281 million years old. If their ratio is slightly lower than mean ocean water, then they formed slightly before the ocean water formed. What this means is that we can give an age to rocks/minerals, oil and any compound on the Earth by just measuring it against the Earth's total age, as long as they have deuterium and hydrogen.

This understanding is very, very different than the interpretation offered by the dogma. To them, planets do not evolve, the D/H ratios they have now were the D/H ratios they formed with, and will continue to have indefinitely. Unfortunately this removes our ability to use the D/H data in a way that can bring understanding. The dogmatists have to work inside of a paradigm, where all the solar system bodies are all ~4.5 billion years old, regardless if they are obviously different ages, as is currently being determined by their atmospheric loss of larger percentages of H to D. If we learn to look past the dogma, we can see the universe is much richer with possibility, and we can even use D/H ratios to determine much more than I can even imagine. For instance, we can determine when specific rock formations occurred in the interior of the gas giant, to then determine why they appear layered in specific fashions, without radiometric dating. We can even check radiometric-dating's accuracy!!