Stellar Metamorphosis: Oxygen

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Abstract: For this paper the term primordial oxygen is used to signify oxygen that has been present for almost the entirety of the star's evolution. The case stands, the oxygen found on the Earth is leftover oxygen from the Earth's much hotter, younger states of evolution. The vast majority of the oxygen on the Earth did not come from the Sun. It was always on the Earth as it evolved, long before the Sun even existed. All the elements are important for planetary evolution, and oxygen is a major one.

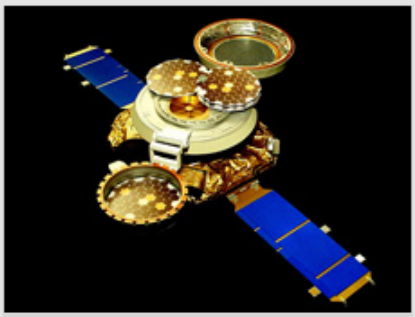
Oxygen having always been on the Earth when it was a much younger hotter star is important. We are breathing in and made of the same oxygen that has been on the Earth when it was a vastly younger, bigger and hotter star. It did not come from the Sun, Earth had a lot more itself, which was lost to mass loss of its own flaring during red dwarf stages and photoevaporation and ablation effects during its evolution, due to orbiting various hotter hosts, when Earth itself could have resembled a hot Jupiter. Earth's oxygen is not related to the Sun's oxygen, they are completely independent. Sure the iron in my bicycle is atomically similar to my friend's, but its not the same iron. The same with Earth, it always had its own iron, and for this paper oxygen. The isotopic signatures are completely different, as shown via the Genesis mission which collected solar wind.

NASA Mission Suggests Sun and Planets Constructed Differently **06.23.11**

PASADENA, Calif. - Researchers analyzing samples returned by NASA's 2004 Genesis mission have discovered that our sun and its inner planets may have formed differently than previously thought.

Data revealed differences between the sun and planets in oxygen and nitrogen, which are two of the most abundant elements in our solar system. Although the difference is slight, the implications could help determine how our solar system evolved.

"We found that Earth, the moon, as well as Martian and other meteorites which are samples of asteroids, have a lower concentration of the O-16 than does the sun," said Kevin McKeegan, a Genesis co-investigator from UCLA, and the lead author of one of two Science papers published this week. "The implication is that we did not form out of the same solar nebula materials that created the sun -- just how and why remains to be discovered."



Artist Rendering of the Genesis Spacecraft During Collection Phase of Mission

What is really cool is that the Genesis mission results were made public only 3 months before I personally made the discovery that Earth is an ancient star, so it is actually fitting for timing sake.

"The implication is that we did not form out of the same solar nebula materials that created the sun -- just how and why remains to be discovered." - Kevin McKeegan, UCLA

It is not only an implication, but it is expected and normal. Why? Because the Earth is its own independent star vastly older than the Sun. How? The Sun adopted the Earth far into the Earth's own evolutionary history, it is much younger than the Earth, about 100 times younger. The Earth isn't just some giant rock that clumped together from much smaller space rocks, pebbles and gas. It is the core remains of a many billion year old star that has gone though vast amounts of chemical evolution, dissipation and differentiation. Not only that, be we now have direct observational evidence of literally thousands of highly evolved stars, mislabeled "exoplanets", and even have a few other evolving objects inside our own solar system!

As the Sun gravitationally collapses (heads into its next cooler, less massive and less radiant stages of evolution) it will lose large amounts of its oxygen, but a lot will remain. That oxygen far into its future will get covalently bonded to the hydrogen in the atmosphere forming water, and various other compounds. We call those compounds minerals and rocks, and are essentially settled out of solution. In fact, since oxygen has a high electronegativity of 3.5, only beat out by fluorine, and is the third largest component of young stars like the Sun, we can guarantee a very large portion of dead stars will be composed of oxygen. The oxygen as a free radical will grab anything it can to get its outer shell full of electrons. This is a fact of chemistry. It is true even if there are very little surface volatiles, meaning no atmosphere (compounds that boil away easy). Earlier during the stars evolution it had its gravitational potential energy from gravitational collapse transform into heat energy. That heat energy in the interiors of cooling stars then could facilitate the reactions of oxygen with literally all naturally occurring elements in the periodic table, some more than others. We see direct observational evidence even in the sand on the beach, which is silicon dioxide (SiO2), in granite and even basalt which composes the ocean floor.

Dead stars like Mercury should have lots of oxygen in its rocks/minerals, trapped in crystalline form, meaning its "volatile" material is there, only combined in much more stable molecular compounds that are hard pressed to vaporize. Middle aged stars such as Jupiter and Saturn should also have lots of oxygen in their interiors, as they are cooling and differentiating their interiors. Neptune and Uranus which are even further along in their evolution, should have an even higher ratio of oxygen in their interiors than Jupiter and Saturn. They are moving into ocean world stages of evolution.

The huge diversity of oxygen containing compounds that exist on the Earth and other highly evolved stars can only be explained via

stellar metamorphosis. The sheer magnitude of the chemistry needed, in thousands of different molecular arrangements, to make such diversity of minerals using oxygen, can only happen inside of objects that allow the chemical reactions to occur. This meaning the evolving stars can trap the material to prevent it from escaping when undergoing reactions, the material can remain hot due to the thick atmosphere preventing too much heat loss, and is mixed in a fluid-like state which allows for maximum exposure to other elements under various pressure and temperature conditions far outside of STP (standard temperature and pressure). When a researcher grabs a rock off the ground, those chemical bonds were formed deep in the interior of an evolving star. It is a star rock, as opposed to rock star, which is what the Earth, Mercury, Venus and Mars are.

The researchers who claim that dust and gas just clumps together in outer space to from planets have to answer this question. Can the vast diversity of elements be combined chemically and in huge amounts in the vacuum of outer space to make minerals and rocks? The answer is no. You absolutely need a flask of stellar proportions to make such diverse chemical compounds, and in quantities present in the interior of the Earth. As well, you need a forming surface so that the material can settle out, deposit on the giant planetary substrate in the interior of the star, and give direction for the settling (the gravity). Basically the thick atmospheres of evolving stars as they cool act as both a type of solute and solvent, depending on what type of reaction you are recording. The total solution of an intermediate aged star such as Saturn is so vast, with so many reactions taking place, it is best that we do not use 1970's theory to try and explain it. It is best to look at the compounds already having been formed and reverse engineer those to simulate the conditions deep in its interior. The rocks and minerals that contain oxygen (as well as all naturally occurring elements) tell the story of the internal conditions present in evolving gas type stars.

In all, there are 3,695 valid species containing essential oxygen listed below. Source: https://www.mindat.org/element/Oxygen

Mineral Diversity of Oxygen	
1. Elements	1 valid mineral species
2. Sulfides And Sulfosalts	23 valid mineral species
3. Halides	117 valid mineral species
4. Oxides	596 valid mineral species
5. Carbonates	242 valid mineral species
6. Borates	150 valid mineral species
7. Sulfates	405 valid mineral species
8. Phosphates, Arsenates, Vanadates	862 valid mineral species
9. Silicates	1262 valid mineral species
10. Organic Compounds	37 valid mineral species
Total:	**3695 valid species containing essential Oxygen**

All of these minerals are created naturally under extreme heat and pressure inside stars as they evolve and form life. These minerals are being formed inside of gas giants, right now. Whether they are rained down as a thick gaseous mush similar to a emulsion, or deposited and slowly cool under extreme heats and pressures, it is happening. We have direct observational evidence of the interiors of gas giants, it is the very ground we walk on.