Spinning Stars and Life in Stellar Metamorphosis

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Abstract: It is hypothesized that all stars need to spin with significant axial angular momentum to create life (begin the process of evolution from simple compounds and native elements. A star that does not have significant axial angular momentum cannot create it. A few reasons are provided. It is a given that the mystery to why planets spin is solved. It is because they are older stars that have cooled and lost their mass (morphed) from earlier stages. Now what needs to be explained is why stars spin when they are born. The youngest stars probably spin with the most axial angular momentum, but that is for a later discussion.

All stars need to spin with significant axial angular momentum to create life. Here are some reasons:

- 1. The Earth has a significant amount of axial angular momentum and is the only object that is observed to date to host it. If Earth had less axial angular momentum than Venus, Mars or Mercury and also hosted life, then this would be wrong.
- 2. Earth had far more axial angular momentum than it does now, per stellar metamorphosis, so life creation in its simplest forms occurred much earlier.
- 3. A spinning object allows for the atmosphere to exchange air globally, because of the transmittance of heat across the entire surface and internally due to differences in materials' moment of inertia.
- 4. Heat is essential to creating life, as all life has lots of molecular motion. Youthful stars have the most molecular motion, and as they cool, gravitationally collapse, lose mass and morph, that molecular motion slows down. This is essential and directly evidenced by our core body temperatures being ~98 degrees F, and we are organisms Earth created over hundreds of millions of years. Young stars have temperatures into the thousands of degrees F. They are too hot and young.
- 5. More molecular motion means more opportunity for molecules to become more complex as they combine. More molecular motion, more opportunity to become more complex. This is outlined in the chemical complexity principle of stellar metamorphosis found here: https://vixra.org/pdf/1607.0467v1.pdf
- 6. An object that becomes tidally locked, meaning its pre-tidal locking axial angular momentum is mostly removed, will lose the opportunity to create life if it does not already host it.

- 7. If the star already hosts life, then tidal locking will end it, and the star will get sterilized. This happens because the star will experience strong tidal interactions which will slow it down in response to getting adopted by a much larger host.
- 8. An environment that provides oscillation is preferable to one that does not with reference to forming a vast array of different chemicals. It gives the chemistry occurring inside the star and on its surface lots of changing conditions. Static environments are deadly, environments that do not have heat/cool cycles, rain/dry cycles, tide cycles, day/night cycles, do not give any impetus for changing and adaption, which is the basis for evolution, constant change and adaptation to environment.
- 9. Environmental pressure to change and adapt is most effective on an object that is spinning rather than mostly static like Venus (which had life in the past, but became self-sterilized due to ocean evaporation and large loss of axial angular momentum).
- 10. The objects that have the most axial angular momentum tend to be the youngest, while the oldest and dead stars and stellar guts have the least. A new gyrochronology is provided here, but does need to be development more both physically and mathematically. The essence of it is that old dead stars both lose their life and ability to form life if they lose their axial angular momentum. Gyrochronology: https://vixra.org/pdf/1906.0146v3.pdf

(Side note, it is also noticed that NASA documents state they understand why planets spin, but they don't have a physical mechanism, they just say they spin because of a protoplanetary disk conserving angular momentum. It does not explain why there is a pattern inside of the stars as they evolve as is explained in stellar metamorphosis, it does not explain why Mercury and Venus barely spin at all, it does not explain why the Sun has so much axial angular momentum, it does not explain why Mars and Earth spin at the same rate, but at much different axial angular momentums, etc. Their explanation essentially does not exist. Their explanation is that they understand that the planets spin like tops, because angular momentum is conserved, so something else had to impart angular momentum, but what that "something else" is, is a fictitious disk that somehow made gargantuan gas giants and Earth sized objects spin. The "something else" they are looking for is time, it takes time for a star to lose its axial angular momentum and become Earth-like, as is covered by the general theory.) https://vixra.org/pdf/1711.0206v5.pdf

This paper is dedicated to my grandfather, William Joseph Wolynski, he was a gantry crane operator at a Baltimore shipyard long before I was born. He passed away before I got to meet him. He helped build ships, which is fitting. I would have loved to do the same.