The Principles of Volume and Surface Area in Stellar Metamorphosis

Jeffrey J. Wolynski Jeffrey.wolynski@yahoo.com June 25, 2016 Cocoa, FL 32922

Abstract: It is reasoned that stars' volume and surface area increase during stellar birthing then decrease during stellar evolution according to stellar metamorphosis, so two principles are provided to further clarify stellar evolution/planet formation.

When a star is born its surface area and volume increase significantly from the initial supernova to stable white dwarf, to giant blue star. As the star evolves from giant blue star to smaller and cooler star, its surface area and volume decrease significantly. So the principle is as follows.

"Stars expand greatly during stellar birth increasing both volume and surface area, and as they evolve from their most expansive state their volume and surface area decrease significantly."

This means:

1. High mass stars (follows from the principle of mass loss, stars lose mass as they evolve) which have small surface areas and volumes are still expanding outwards, this includes all white dwarfs

2. White dwarfs are not the ending stage of a star's evolution, they are actually very young, hot stars.

3. If a star is expanding then it is very young, and if it is contracting then it is evolving and much older.

4. Stars do not die by expansion, they die by contraction, as gravitation does not allow for stars to fall apart.

5. Stars are not born by contraction, they are born by expansion processes (they start with small surface areas and volumes then expand greatly)

6. Supernovas are not old exploded stars, the old stars are much less massive, have very small surface areas and volumes in comparison to younger stars and have stable rocky/metal interiors.

7. supernovas are new stars

7. the mechanisms behind stellar birth are not understood, but are most likely involve forces more powerful than gravitation, because when the star is born it expands against the force of gravitation