

# Tying Gravitational Work to Energy Transformations and Other Principles in the General Theory of Stellar Metamorphosis

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*Abstract: Gravitational work is defined as the star doing work on itself as it collapses into a "planet". This work translates to various energy transformations, due to Gravitational Potential energy being converted to kinetic energy and then to friction, heat and electrical energy and back to potential energy in different forms. Explanation is provided.*

Gravitational work as defined in the general theory is work done on a star due to it collapsing/crushing itself as it loses mass and energy, as gravitational collapse is a mass/energy loss phenomenon outlined in this paper: <http://vixra.org/pdf/1712.0371v1.pdf>

1. The star contracts and some material falls inwards faster than other material.
2. Inward falling of matter inside the star means the gravitational potential energy is being converted to kinetic energy (potential to kinetic energy).
3. The kinetic energy is converted to heat due to friction, and charge separation due to the clouds rubbing together transferring charge, and thus large amounts of electrical activity.
4. The electrical activity and heat fuel thermochemical and electrochemical reactions under various different pressures and temperatures. <http://vixra.org/pdf/1408.0157v1.pdf>
5. Thus the collapsing star does work on itself, forming chemicals in increasing complexity as the star ages and evolves, due to energy transformations on very large scales. Outline of chemical complexity principle: <http://vixra.org/pdf/1607.0467v1.pdf>
6. The direct evidence of this occurring is in rocks, minerals, all the naturally occurring fluids and gases and even life found on the Earth in various complexity, from repeating crystalline structures to incredibly complex lifeforms. <http://vixra.org/pdf/1606.0314v1.pdf>
7. The amount of energy provided by the star collapsing on itself will diminish as outlined in this paper: <http://vixra.org/pdf/1603.0203v1.pdf>
8. The mass of the star will also decrease, thus leading to a lessening of the amount of gravitational work that can be done on itself, slowing the rate of energy transformations and internal new chemical production (new rocks and minerals being formed less). Outline in this paper: <http://vixra.org/pdf/1601.0143v1.pdf>