

The Purposes of the Standard Solar Model versus the Purposes of Stellar Metamorphosis

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

Abstract: The purposes of the Standard Solar Model are compared to the purposes of Stellar Metamorphosis. An explanation is provided.

The SSM serves two purposes:

- it provides estimates for the helium abundance and mixing length parameter by forcing the stellar model to have the correct luminosity and radius at the Sun's age,
- it provides a way to evaluate more complex models with additional physics, such as rotation, magnetic fields and diffusion or improvements to the treatment of convection, such as modelling turbulence, and convective overshooting.

Like the Standard Model of particle physics and the standard cosmology model the SSM changes over time in response to relevant new theoretical or experimental physics discoveries.

Stellar Metamorphosis serves a single purpose:

- it provides an accurate description and explanation of the processes involved in stellar evolution and planet formation (the star is the young planet, they are both astrons).

Unlike the standard model of particles physics and the standard cosmology model, stellar metamorphosis (SM) main postulate does not need to be changed as it is a basic discovery of nature. Stars cool and die over billions of years forming what humans call “planets/exoplanets”, which exchange orbits with each other forming solar systems. Working out the details of how the Earth came to be (what happens to stars) can now be carried out, as we have a firm foundation of knowledge to work with.