Star System Polymetamorphism

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Abstract: All star systems are polymetamorphic/polymetamorphous. This means they contain stars in various stages to their own metamorphosis. Stars of all kinds orbit each other. Since they are all in different stages to their own metamorphosis, they are poly (many) meta (after) morphous/morphic (having a specified shape or form). A short list of differences between stars in our system and others is provided. As well, a short example concerning planet formation coupled with the field of molecular dynamics is provided. It is clear, planet formation (stellar evolution) is the most complex process in the universe, and stellar metamorphosis is the theory we will use to explain it, because it is the only theory that combines all the sciences together into one.

The Solar system that we are familiar with is highly polymetamorphic, as it contains a very young, hot star we call the Sun, as well as two late stage brown dwarfs (Saturn/Jupiter), two pre-water worlds (Neptune/Uranus), a life hosting, very highly evolved star (Earth) and a multitude of dead stars (Mercury, Mars, Venus, etc.). It even contains stellar remnants that evolved too fast so that they could never host life, as well as impact remains of dead stars such as asteroids/comets and small moons. Just so we are clear, astronomers still teach their students that the Solar System is one system, even one object, "the solar system", which places importance on the Sun and the Sun alone, which is not a correct worldview. Students are taught that the various stars in our system that are in various stages of their own evolution all came from the Sun's leftover materials, which is impossible, since they are actually many millions of years (in some cases many tens of billions of years) older than the Sun. There is direct evidence of the polymetamorphism of the stars in the Solar System. Here is a small list that overviews their many differences, which is direct evidence that they are in different stages of evolution, and have different histories as evidenced by their physical appearances, magnetic field orientations, mass, densities, etc. They all have different:

1. Diameters

- 2. masses
- 3. level of core and mantle/crust formation
- 4. elemental ratio on the whole
- 5. types of atmospheres

6. sizes of iron cores

7. stages of life formation (some are sterile)

- 8. strength of radiance
- 9. heat production processes
- 10. types of chemical reactions

11. Types of chemical equilibriums among material present

12. Ages (some are billions of years old than others, like Mars being billions of years older than Jupiter, even though their ordering in the solar system gives rise to confusion in astronomy departments in Universities).

- 13. Orbital distances (or if they even orbit other objects at all)
- 14. types of hosts (all hosts are polymorphic themselves!)
- 15. rates of mass loss
- 16. orbital direction
- 17. rotational direction
- 18. orientation of magnetic fields
- 19. strengths of magnetic fields
- 20. impact histories (evidence of previous impacts on some, not on others)
- 21. different isotopic abundances of many elements
- 22. geological surface features (some don't have geological features yet)
- 23. densities
- 24. orbital inclinations
- 25. axial tilts
- 26. orbital velocities

27. albedos

- 28. strength of gravitational fields
- 29. temperature of atmospheres and inner regions
- 30. equatorial rotation velocities
- 31. moments of inertia
- 32. angular momentums
- 33. volumes
- 34. surface areas
- 35. oblateness (some are more round than others)
- 36. thickness of atmospheres
- 37. color changes
- 38. location of heat production
- 39. changes to gravitational potential energy near surface and in the interior
- 40. length of the specific object's stage of evolution
- 41. changes in atmospheric turbulence
- 42. rate of interstellar/intergalactic dust collection
- 43. ability to mix the dust into new chemical compounds
- 44. internal pressures
- 45. etc.

The evidence for stellar polymetamorphism is also supported by the thousands of "exoplanet" systems currently found by astronomers, as all the star systems show both direct

and indirect evidence of polymetamorphism, as outlined by the list above and by the General Theory of Stellar Metamorphosis. It is unfortunate though, as astronomers are still, in 2018, trying to explain away all these clear differences with the singular disk theory. How does a single disk make such different objects?

As the TESS (transiting exoplanet survey satellite) transmits information back to Earth, and the scientists see these objects indirectly due to them blocking out portions of the host star's light, it will be made clear that all star systems are polymetamorphic. No system is the same as another, because they are all composed of stars in various stages to their evolution. The polymetamorphic systems will not mimic the solar system, simply because they are not the solar system, which is a unique polymetamorphic system itself. Astronomers are trying to find solar system analogs, but this will turn up a dead end. They need to look at star systems as polymorphic.

They all have stars in different stages to their evolution, and we know this because they all have a multitude of different characteristics, just 44 alone in the above list! Not only is it a fruit salad, it is a fruit salad with different types of nuts, veggies and meats, and the tens of thousands of TESS transits of the young planets up to magnitude 18 are going to show this 100%. A small chart below shows all the targets for sector 7. It covers roughly ~20,000 targets.

Distribution of TESS target magnitudes in the four cameras



Credit: NASA

We live in a highly random place, a polymetamorphic star system, in a sea of polymetamorphic systems which do not currently conform to establishment's dogma, by any means. They still assume stars and planets are mutually exclusive objects, but they are not. They are all planets that are in one stage or another of their unique evolution from much hotter, bigger stages, to old dead remains that are destroyed guts and pieces called meteoroids and asteroids. Yet, even in the 21st century astronomers still call the young planets (stars) which causes ignorance. As well, they all have one thing that unites the celestial objects, they can (and do) form life given they evolve on slow enough timescales. This leads into one of the most fundamental principles of stellar evolution (planet formation), the physical and life science principle, or PLSP.

The Physical and Life Science Principle

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Abstract: A simple principle of stellar evolution/planet formation is presented in light of the general theory of stellar metamorphosis.

According to stellar metamorphosis stars cool and die to become rocky differentiated worlds many billions of years into their evolution, and they are called exoplanets/planets. As well, life itself is a by-product of a star's evolutionary processes. As they evolve all physical and life sciences can be applied to the processes concerning stellar evolution (which is planet formation).

"The processes concerning stellar evolution (planet formation) includes all physical and life sciences."

Any science can be applied to some aspect of stellar evolution.

This is important to learn, because not only does it show that any physical and life science can be applied to stellar evolution (planet formation), but that the list of above differences can be expanded infinitely. One could work on this theory his/her entire life, and not even scratch the surface, because working out this theory is working out nature itself. Let me give you an off the wall example. Molecular dynamics for instance. It is a huge field that involves vast computer processing power just to simulate the simplest of molecules, and because of their vast numbers, parameters and algorithms have to be constantly revised to adjust for errors as the dynamic simulations increase in number. Thankfully stellar metamorphosis can literally set the parameters for vast systems of molecules and their dynamic nature on the scale of stars themselves as they cool and shrink into what are called "planets". Three dimensional simulations can be done to model the interiors of stars as they evolve into differentiated structures that have layer upon layer of complex structures in crystalline forms known physically for example as pyroxene and olivine as well as widminstatten structures that compose iron/nickel alloys in the core of highly evolved stars and all the way to the macromolecules that form life itself.

Essentially unless astronomers come to terms with how complex planet formation really is, by reaching out to other fields of research provided by the PLS principle, then there is no way they will understand nature to its fullest. Let me explain even further. Below is an example algorithm for doing a simple analysis.



Simplified schematic of the molecular dynamics algorithm

Now, for the mathematician or computer programmer this is seemingly straightforward, yet there is an enormous set of issues as to why even algorithms can be troublesome to do any meaningful work. Let us go line by line in this above diagram.

1. Initial atoms. Okay. How many initial atoms are available in a single star when it is young? Maybe $10 * 10^{56}$? Lets see a computer do a simulation with that. Whew.

2. The velocities of all the atoms in a star? Are you kidding? Some travel hundreds of thousands of miles an hour, some just jiggle in place.

3. The forces involved? All forces. All. Gravitation, magnetism, light, electricity, friction, inertial, rotational, etc.

4. Boundary conditions? Those change as the star expands and contracts, and there are also boundaries that change their size internally. There are boundaries upon boundaries upon boundaries.

5. Temperature. The stars lose heat as they evolve, so that is constantly changing, as well as the layers of temperature change that reverse and invert as the star evolves.

6. Pressure control. Yep. Doing a single algorithm to do any of this has long been impossible. An army of algorithms probably wouldn't even do the trick. Funny, nature does it in reality, with zero effort.

7. Outputing physical qualities of interest? I'm pretty sure the calculation results would determine what is interesting, not the researcher or programmer.

8. Move time. Stars evolve on scales of billions of years, and even involve other stars changing all the above values themselves in sometimes minute or extreme values.

Does the reader understand now how complex of a problem we are dealing with here? Watching a tree grow as could a child is much, much different than explaining how the Krebs cycle works, or how DNA folds when the plant cells undergo mitosis. Planet formation (stellar evolution) is the most complex process in the universe. Just brushing it off as a phenomenon that involves only dust clumping in outer space in a disk is living in the dark ages. Set your ego on the shelf, step out of the cave and into the light.