Stellar Metamorphosis: XO-3b, the Eccentric Star

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Abstract: ***As it is commonly known, the frequently observed star XO-3b, demonstrates an eccentric, yet to be explained, orbit. The following is an attempt to clarify the possible roots of this phenomenon from an entirely new perspective: Stellar metamorphosis.***

Without doubt, most readers of this paper are familiar with the peculiarities of XO-3b. Because of these peculiarities, I'll refer to XO-3b as 'Oddball'. As is known, Oddball orbits in a highly eccentric orbit around its host star. Its orbital eccentricity is measured to be .288, and, therefore, considered 'highly' eccentric. As we all know, a level of eccentricity measured as 1 corresponds to a perfect circle while an eccentricity level of .5 outlines much more of an egg shape orbit. A star showing an eccentricity level of .288, however, would signify that it was orbiting around its host star in a totally squashed fashion. Until today, no explanation other than the proto-planetary disk model has, for a level of eccentricity of this kind, been forthcoming. Since Oddball is a 'real star' and has a truly unusual orbit around its host, we can conclude that the conventional proto-planetary disk model explanation is suspect of being, at the very least, questionable. Indeed, such an explanation was first found debatable when Edwin Hubble looked at nebulae and realised that they were ***not solar systems forming at all, but rather entire galaxies in the process of materialisation***. Although Hubble's realization that the proto-planetary explanation was unsustainable, his observation has been glossed over for over 100 years. Today, however, an explanation for such phenomenon is now available.

According to the theory of stellar metamorphosis, the reason why stars like Oddball have eccentric orbits is because when stars age, they lose their ability to sustain their stable trajectories. This, because they lose mass to radiation, solar flaring and having their atmospheres ripped away as well as experiencing impact events. As a consequence, these stars take up orbits around newer younger hotter stars. Eventually such orbits become less eccentric and, over many millions of years, stabilize presenting more circular orbits. With this understanding in tact, Oddball should be understood as having formed in a completely different region of outer space, then adopted just as all stars are as they age, shrink, solidify, then neutralize as they subsequently wander

about our galaxy. If we look at some of the older stars in our own solar system such as Jupiter and Earth, we can see that they are on an ecliptic plane and have mostly circular orbits, but as seen in the case of Pluto, its orbit is more eccentric. This is so because Pluto is one of the last members to be added to our current solar system. In this way we can actually tell how long a host star has adopted its members by examining the eccentricity of the orbits they have. More squashed orbits equal new or disintegrating solar systems, while more circular orbits equal stable systems.

The debate, at the present time among astrophysicists, consists of whether or not Oddball is a planet or a brown dwarf. It is the opinion of this writer that any astrophysicist that keeps in mind the common sense factors and forces of nature should immediately understand that such considerations may well be incorrect. This is so because brown dwarfs are in the intermediate stages of a star's evolution while "planets" are in intermediate stages of a stars evolution. In short, both of these phenomenon are, in reality, due to the 'same' evolutionary process. The planet is the ancient star, and the star is the young planet.