

Host and Companion Delineation in Celestial Systems

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Abstract: In the majority of transiting astrons such as KELT 17b around KELT-17, documentation accepted in online archives such as ArXiv still references the incorrect concepts concerning the perceived separation of planet and star. A reasonable correction for semantic purposes is provided, utilizing stellar metamorphosis.

In the recent paper, “KELT-17b: A Hot-Jupiter Transiting an A-Star in a Misaligned Orbit Detected with Doppler Tomography”, it is referenced on page 11, on table 7 that there are parameters for a “stellar” object and parameters for a “planet”. This is incorrect. They are both stars and/or planets (astrons) that are in different stages to their evolution according to stellar metamorphosis theory. The Hot-Jupiter is much more highly evolved than the A-type, young, big, hot astron it is orbiting. Since calling them both astrons does not delineate the two conceptually, it is suggested that they are sorted by the terms, host and companion, host being the larger of the two in terms of mass. So for instance if we have Earth and the Sun as a binary system, the Earth is the companion and the Sun is the host. Or, if we have Saturn as the host, then Titan is the companion. The connection is that the host has more mass than its companion and its companion directly orbits it. Titan cannot be the companion of the Sun, because it directly orbits Saturn, but Saturn is the Sun’s companion. Likewise, it can be scaled up. If a red dwarf orbits a host that is slightly bigger, then the host is the larger of the two. Hopefully this can clarify the celestial sciences considerably. The KELT-17 system is at least an eclipsing binary system. For all the other systems which have more than one object orbiting it, we can just add them. For the solar system, it is a novenary system with at least 8 astrons orbiting the Sun. This also means we go back to nine “planets” as planet and star are both synonymous now, the word astron encompasses them, excluding objects such as pulsars/quasars/galaxies.

1. Singuli – single “one each” (system not required)
2. Bini – binary “two each” (the smallest system)
3. Terni/trini – ternary/trinary system
4. Quaterni – quaternary system
5. Quini – quinary system
6. Seni – senary system
7. Septeni – septenary system
8. Octoni – octonary system
9. Noveni – novenary system
10. Deni – denary system
11. Undeni – undenary system
12. Duodeni – duodenary system
13. Terni/trini deni – ternidenary/tridenary system