Stellar Metamorphosis: The Simon Marius Rule of Brown Dwarf Companions

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Abstract: Every brown dwarf discovered to date has at least 4 large companions orbiting it as can be inferred from circumstantial and direct evidence afforded by the General Theory. These companions can be old moons, dead moons, ones with life like Earth, or less evolved than Earth. This rule is to give insight to how populated our galaxy is, and where attention should be given for astronomical observations.

According to the dogma, brown dwarfs are very young, and most do not have age's attached to them. The dogma's absence of understanding star evolution (planet formation) is okay though, because it has already been hypothesized that all brown dwarfs are at least 263 million years old, as well as other rules which govern their study.[1] This means brown dwarfs, regardless of how little press they get, are absolutely relevant to the understanding of 21st century astronomy. They fit the gap between red dwarfs and more evolved Jupiter sized objects.[2] Being that they fit the gap, and had much more massive gravitational fields as does the Sun, then they easily could have kept most of the objects they adopted over the years, per the adoption principle.[3]

Now, since Jupiter has at least 4 massive moons in orbit around it, and was a recent brown dwarf itself, as well as Saturn, we can easily hypothesize that brown dwarfs have at least that many currently orbiting each one. For each brown dwarf observed, picture in your mind at least 4 large objects orbiting it. This is similar to Simon Marius's discovery of the Moons of Jupiter, which were made independently of other scientists back in the early 1600's. Since he was never given credit for independently discovering them first (because he did not publish the findings quick enough), this rule is well suited to be named after him.

The Simon Marius rule means that all brown dwarfs have at least 4 large objects, moons, planets, however you want to word it, orbiting them. This is the prediction offered by stellar metamorphosis, and is currently far beyond the capacity of any space telescopes observational power. Maybe the James Webb Space Telescope can zoom into a random brown dwarf, and see that this understanding holds true.

Simon Marius, an Independent Discoverer of the Moons of Jupiter

Below is a screen shot of a paper taken from arxiv.[4]

Table 1. Sixteen Brown Dwarfs observed by *AKARI*

Object Name	Sp. Type	$T_{\rm eff}$[K]	Parallax(error)[mas]	Binary	References
2MASS J14392836+1929149	L1	2100	69.6(0.5)	No	1, a
2MASS J00361617+1821104	L4	2000	114.2(0.8)	No	2, a
2MASS J22244381–0158521	L4.5	1800	85.0(1.5)	No	1, b
GJ 1001B	L5	1800	76.9(4.0)	Yes	1, c
SDSS J144600.60+002452.0	L5	1800	45.5(3.3)	No	2, b
SDSS J053951.99–005902.0	L5	1800	76.1(2.2)	No	2, b
2MASS J15074769–1627386	L5	1800	136.4(0.6)	No	1, a
2MASS J08251968+2115521	L6	1500	95.6(1.8)	No	2, b
2MASS J16322911+1904407	L7.5	1500	63.6(3.3)	No	2, b
2MASS J15232263+3014562	L8	1600	57.3(3.3)	Yes	2, b
SDSS J083008.12+482847.4	L9	1600	76.4(3.4)	No	2, b
SDSS J125453.90–012247.4	T2	1400	75.7(2.9)	No	2, b
SIMP J013656.5+093347.3	T2.5	1400	**6.4(0.3)**	No	3, d
2MASS J05591914–1404488	T4.5	1200	95.5(1.4)	No	2, b
Gliese 570D	T8	700	169.3(1.7)	Yes	2, a
2MASS J04151954–0935066	T8	700	174.3(2.8)	No	3, b

Now, just imagine. Every single brown dwarf here, according to the Simon Marius rule, has at least 4 large companions orbiting it. They are 100% there, we just need telescopes and equipment advanced enough to resolve them. That is 16 *4 = 64 objects, all with the

possibility of life and fossils, a biologist and paleontologist's heaven! It would be even better to call all brown dwarfs, Moon Dwarfs, or Moon Stars because there are going to be so many discovered. This is opposed to the negative, passive aggressive naming of brown dwarfs as "failed stars". The only thing that has failed is 20th century astronomers who thought these things were/are flukes. They are natural, big, beautiful and totally needed to understand how stars evolve.

References

[1] http://vixra.org/pdf/1609.0242v1.pdf

[2] Abruzzo, Anthony J., Brown Dwarf Stars- The "Missing Link" https://www.gsjournal.net/Science-Journals/Research%20Papers/View/1163

[3] http://vixra.org/pdf/1603.0202v2.pdf Principle of Adoption and Rejection

[4] https://arxiv.org/pdf/1304.1259.pdf On the Radii of Brown Dwarfs Measured with AKARI Near-Infrared Spectroscopy