

# Ultracool Dwarf Stars vs. Red Dwarfs vs. Brown Dwarfs, OGLE-2016-BLG-1195L in Stellar Metamorphosis

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*Abstract: A strange phenomenon of language has appeared concerning the naming of host stars of new systems. For some reason scientists have abandoned their distinction of red dwarf/brown dwarf in favor of "ultra cool dwarf star". It should be made aware for the public that this signals a crack in the foundation of accepted astrophysical interpretations and theories. Explanation is provided.*

Establishment science has a clear distinction between brown and red dwarf. The threshold is .08 solar masses. Below .08 solar masses a star is not a red dwarf, but a brown dwarf. Unfortunately there are new objects discovered that have evolved stars in orbit around them, in systems, and these host stars have masses that straddle the .08 solar mass distinction. Defining the host star by its mass is therefore a problem. How do they define a star that has a mass of .078 +/- .008 solar masses? Instead of highlighting this discrepancy, they have chosen to avoid all argument and call the objects "ultracool dwarf" stars. This is a huge problem as one of the very foundations of science is to clearly define the objects you are referencing. Without clear definitions the theories, models and ideas presented will be thrown into the murky swamp of jumbled misunderstanding.

As well, it should be known that brown dwarfs are young in establishment theory, and red dwarfs are really old, so they have to be careful what to call them. If they call the object a brown dwarf, then the orbiting objects are therefore really young, and if the object is a red dwarf then the orbiting objects are really old. This means, by default, that if a red dwarf loses mass past the .08 solar mass threshold and becomes .079 solar masses then it instantly becomes really young, a brown dwarf, by definition. This is an obvious serious flaw in theory. That would be like saying if a 1000 year old tree loses a branch, it immediately becomes a few decades old. It should be no wonder why they are avoiding using the term red dwarf/brown dwarf. Their theories of stellar evolution do not make any sense. They have classified stars based on mass! Classifying stars based on mass when they lose mass as they evolve is similar to classifying a single tree as different species as it grows!

So that they can move on past this unspoken issue, not mentioned at all in the paper, "An Earth-mass Planet in a 1 au Orbit around an Ultracool Dwarf", <https://doi.org/10.3847/2041-8213/aa6d09>, they have named red dwarfs and brown dwarfs as "ultracool dwarfs". It is predicted that since this is a very well understood problem based on the

false theories of core accretion and disk instability, that mainstream scientists will continue to call these objects “ultracool dwarfs” without ever addressing the issues above. So that the reader will get their monies worth, a graph is presented to show what happens to red dwarfs as they cool and lose mass. They become brown dwarfs. As a matter of fact, “ultracool dwarf” is a term that can be used to classify all stars that no longer shine, including the one we are standing on. It makes things easier for the scientists so that they do not have to address the elephant in the room. Stellar evolution is planet formation. Stars are young, hot planets. Whichever way you word it does not matter, so long as it is made clear that they were NEVER mutually exclusive objects.

As the reader can see, brown dwarfs are not very young, and red dwarfs are not very old, they are actually right next to each other evolutionarily speaking. As well, OGLE-2016-BLG-1195Lb (the evolved star called “exoplanet”) sits directly in the middle of ocean world/Earth on the graph. This means since it does not receive the needed heat, that it is an icy ball, a snowball Earth, with water oceans underneath the frozen crust.

