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# Why is "The Evolution of Stars" incorrect?

Updated and expanded

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**Русскй**
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„Stellar evolution starts with the gravitational collapse of a giant molecular cloud ." https://en.wikipedia.org/wiki/Stellar_evolution#Protostar

„Protostars with masses less than roughly 0.08 $M_\odot$ ($1.6\times10^{29}$ kg) never reach temperatures high enough for nuclear fusion of hydrogen to begin. These are known as brown dwarfs. The International Astronomical Union defines brown dwarfs as stars massive enough to fuse deuterium at some point in their lives (13 Jupiter masses ($M_J$), $2.5\times10^{28}$ kg, or 0.0125 $M_\odot$). https://en.wikipedia.org/wiki/Stellar_evolution#Brown_dwarfs_and_sub-stellar_objects

This quotation from Wikipedia may had been acceptable in the past, because readers were unable to check the real situation in data bases of stars and other objects inside the galaxy and beyond. These days, when there is a sufficient number of explored objects, exoplanets, brown dwarfs and other stars, galaxies and clusters of galaxies, it is not difficult to conclude that the old theories are completely wrong and badly conceived mind constructions.

In the next table I have given some examples of exoplanets that testify beyond any doubt against the old theories. The mass of Sun is 1/1047 of the Sun mass.

It can be seen from the table that the planets
Hottest Kepler-70b (7 143° K), PSR J1719-1438 b (5 375° K), KOI-55 C (6 319° K) are far

| | exoplanet | Maas of Jupiter | Temperature K | Semi major axis AU | Parent star spectral typ |
|---|---|---|---|---|---|
| 1. | Kepler-70b | 0.440 Earth | 7.662 | 0.006 | O (sdB) |
| 2. | WASP-33b | 4,59 Jupiter | ~2.900 | 0.02558 | A5 |
| 3. | WASP-121b | 1.183 J | 2.358 | 0.02544 | F6V |
| 4. | WASP-87b | 2.18 | 2.322 | 0.02946 | F5 |
| 5. | B Tauri FU | 15 | 2.375 | 700 | M7.25 (M9.25) |
| 6. | WASP-12b | 1.39 ± 0.04 | 2.525 | 0.02293 | G0 |
| 7. | HIP 78530 b | 24 | 2.800 ± 200 | 710 | B9V |
| 8. | Kepler-13b | 0,485 | 1.500 | 0.03423 | 8.500°K |
| 9. | DH Tauri b | 12 | 2.750 | 330 | M0.5V |
| 10. | PSR J1719-1438 b | 1.2 | 5.375 | 0.00442 | Pulsar |
| 11. | KOI-368.01 | 2.1 | 3.060 | 0.6 | F6 |
| 12. | KOI-55 C | 0,0014 | 6.807 | 0.0060 | B4 |
| 13. | CT Chamaeleontis b | 10,5-17 | 2.500 | 440,0 | K7 |
| 14. | HAT-P-7b | 1.741 | 2.730 (+150; -100) | 0.0379 | F6 |
| 15. | OGLE2-TR-L9 | 4.34 | 2.154.6 | 0.0308 | F3 |
| 16. | WASP-48 b | 0.98 | 2.030 | 0.03444 | 5.990°K |
| 17. | UScoCTIO 108 b | 14 | 2.350 | 670 | M7 |
| 18. | WASP-103 b | 1.49 | 2.508 | 0.01985 | F8V |
| 19. | Kepler-10 b | 0,010475 | 2.169 | 0.01684 | G |
| 20. | WASP-100b | 1.69 | 2.190 | 0.0457 | F2 |
| 21. | WASP-72b | 1.01 | 2.210 | 0.03655 | F7 |
| 22. | WASP-18 b | 1,165 (10.43) | 2.187,5 | 0.02047 | F6 |
| 23 | Oph 11 B | 21 | 2.478 | 243.0 | M9 |
| 24. | WASP-78 b | 1.16 | 2.006.7 | 0.0415 | F8 |
| 25 | KELT-7 b | 1.28 | 2.048 | 0.04415 | 6.789°K |
| 26 | WASP-111 b | 1.83 | 2.140 | 0.03914 | F5 |

beyond the temperatures for the M-type stars.

| | | | | |
|---|---|---|---|---|
| M typ star | 0.08–0.45 | ≤ 0.7 | 2,400–3,700 | M 76,45% |

From fast-and-slow-combustion.

The rest of the planets from the table, in the matter of temperatures, belong to M-type stars.
The temperature maximum of magma „(Ultramafic lavas such as komatiite) is 1 600°C (Basalt lava flow usually has the temperature of eruption between 1 100 and 1 250°C.) (Magma is a complex high-temperature fluid substance.)“.

The planets from the table have the temperatures significantly above the temperature maximums of magma, which, in other words, means that they are either melted liquid (fluidic) objects or stars.

If we follow the idea that the temperature of a planet is related to the small distance from the star that is supposed to be the source of temperature, then there is no explanation for HIP 78530 b (R/B 7.), which is 710 AU far from its main star, Jupiter Semi-major axis 5,20260 AU, Edgeworth–Kuiper belt at 30 AU to approximately 50 AU from the Sun (and like R/B 23; R/B 17; R/B 13; R/B 9; R/B 5). The majority of exoplanets from the table is at the distances from 0.02 do 0.05 AU from their main stars, however, to make a conclusion that the influence of a star's proximity is dominant for the temperature of a planet, without realizing they are at the same distance:

| Brown dwarf (& planets) | Mass of Jupiter | Temperature °K | Planets orbit AU |
|---|---|---|---|
| Wolf 1061b | ≥1.36 M⊕ | 210 | 0.035509 |
| TRAPPIST-1d | 0.41 ± 0.27 M⊕ | 288,15 | 0,021 |
| Gliese 3634 b, | 8,4 (+4,0; -1,5) M⊕ | 565,4 | 0,0287 |
| Kepler-45b | 0.5505 | 774 | 0,027 |
| HD 63454 b | 0,38 | 926,7 | 0,036 |
| HD 40307 b | 4 (+4,8; -3,3) | 804,5 | 0.0468 |
| HAT-P-20 b | 7.246 (± 0.187) | 888,3 | 0.0361 |
| WASP-10 b | 3,06 | 984,3 | 0,0371 |
| HATS-6 b | 0,319 | 712,8 | 0.03623 |
| Gliese 436 b | 22.2±1.0 M⊕ | 712 ±36 | 0.0291 |
| GJ 160.2 b | 0.032 | 100 | 0,053 |
| Gliese 1214 b | 6.55±0.98 M⊕ | 393–555 | 0.01488 |
| Etc. | | | |

could easily be wrong.

If we put into the formula the spectral class of a planet's main star:

| Brown dwarf (& plane | Mass of Jupiter | Temperature °K | Planets orbit AU | |
|---|---|---|---|---|
| WASP-11b/HAT-P-10(b) | 0.460 ± 0.028 | 800 | 0,0439 | K3V |
| HD 63454 b | 0.380 | 926,7 | 0,036 | K4V |
| HD 330075 b | 0,620 | 1.023 | 0,043 | G5 |
| HD 219134 (b) | 0.0149±0.0006 | 1.015 | 0.0388 | K3V |
| HD 102195 (b) | 0,450 | 963 | 0,049 | K0V |
| HD 40307( b) | 0,0120±0,0009 | 804,5 | 0,0468 | K2,5V |
| OGLE-TR-111(b) | 0,540 | 940 | 0,0470 | G |
| WASP-10(b) | 3,16 | 946,8 (1.119 +26; -28 | 0,371 | K5 |
| HD 215497 (b) | 0,020 | 984,3 | 0,047 | K3V |
| Gliese 3470 (b) | 0,043 | 604±98 | 0,031 | M1,5 |
| HAT-P-11b | 0,081 | 750 | 0,053 | K4 |
| HIP 14810 b | 3,88 | 690 | 0,0692 | G5V |
| HAT-P-18b | 0,196 | 841±15 | 0,0559 | K |
| Kepler-102b | 0,0013 | 792,0 | 0,055 | K3 |
| Kepler-114d | 0,022 | 549 | 0,052 | K5 |
| WASP-69b | 0,260 | 963±18 | 0,0452 | K5 |

We can add here PSR J1719-1438 b, which rotates around a pulsar (the temperature of which is unmeasurable to our instruments) at the distance of 0.004 AU and has a temperature of 5 348°K, and Hottest Kepler-70b, which rotates around its main star at the distance of 0.0076 AU and has the temperature of 6.807°K. Based on these two planets, it is obvious that the temperature of a main star has no dominant influence over the temperature of a planet.

Conclusion:

"Growth doesn't stop with atoms; on the contrary, joining goes on. Through joining, chemical reactions and combined, gas, dust, sand, the rocks named asteroids and comets, ... Then, when planets grow to the 10% of Sun's mass, they become stars, which can be really gigantic (super-giants). Millions of craters scattered around the objects of our Solar system are the evidence of objects' growth. Constant impacts of asteroids into our atmosphere and soil are the evidence of these processes being uninterrupted today, just the same as it used to be in any earlier period of the past. It is estimated that 4 000 – 100 000 tons of extraterrestrial material falls yearly to Earth." from „Universe and rotation/Processes in universe"

"It is enough to observe the mass of an object, its relation to other objects, the rotation of an object as well as the rotation of a central object, the composition of an object and the orbital distance to make a valid estimate for every object, without the need for nuclear fusions, fissions and matter combustion."

From „Weitter Duckss's Theory of the Universe“ and „The causal relation between a star and its temperature, gravity, radius and color"
31.03.2017. g.

| Brown dwarf (& planets) | Mass of Jupiter | Temperature °K | Planets orbit AU |
|---|---|---|---|
| **mass up to 15 Mass of Jupiter** | | | |
| WISE 1828 + 2650 | 3 – 6 or 0,5 - 20 | 250 - 400 | |
| WISE 0855−0714 | ~3-10 | 225-260 | |
| CFBDSIR 2149-0403 | 4-7 | ~700 | |
| PSO J318.5-22 | 6,5 | 1.160 | |
| 2MASS J11193254-1137466 (AB) | ~5-10 | 1.012 | 3,6±0,9 |
| GU Piscium b | 9-13 | 1.000 | 2.000 |
| WD 0806-661 | 6-9 | 300-345 | 2.500 |
| HD 106906 b | 11±2 | 1.800 | 120 |
| 1RXS 1609 b | 8 (14) | 1.800 | 330 |
| DT Virginis | 8.5 ± 2.5 | 695±60 | 1.168 |
| Cha 110913-773444 | 8 (+7; -3) | 1.300 -1.400 | |
| OTS 44 | 11,5 | 1.700 - 2.300 | |
| GQ Lupi b | 1 - 36 | 2650 ± 100 | 100 |
| ROXs 42Bb | 9 | 1.950 ± 100 | 157 |
| HD 44627 | 13 - 14 | 1.600 -2400 | 275 |
| VHS 1256-1257 b | 11,2 (+9,7; -1,8 | 880 | 102±9 |
| DH Tauri b | 12 | 2.750 | 330 |
| ULAS J003402.77-005206.7 | 5 - 20 | 560 - 600 | |
| 2M1207b | 4 (+6; -1) | 1.600±100 | 40 |
| 2M 044144 | 9.8±1.8 | 1.800 | 15 ± 0.6 |
| 2MASS J2126-8140 | 13,3 (± 1,7) | 1.800 | 6.900 |
| HR 8799 b | 5 (+2; -1) | 870 (+30; -70) | ~68 |
| HR 8799 c | 7 (+3; -2) | 1.090 (+10; -90) | ~38 |
| HR 8799 d | 7 (+3; -2) | 1.090 (+10; -90) | ~24 |
| HIP 65426 | 9,0 ±3,0 | 1450.0 (± 150.0) | 92 |
| **mass above 15 Mass of Jupiter** | | | |
| B Tauri FU | 15 | 2.375 | 700 |
| CFBDS J005910.90-011401.3 | 15 - 30 | 620 | |
| ULAS J133553.45+113005.2 | 15 _31 | 500 -550 | |
| ULAS J003402.77−005206.7 | 5 _ 20 | 550 - 600 | |
| UGPS 0722-05 | 10.7 ± 0.2—25.8 ± 0.9 | 502 ±10 – 539 ±12 | |
| GJ 229B | 21 – 52,4 | 950 | 0,97 (+0,12; -0,10) |
| 54 Piscium B | 50 | 810±50 | |
| WD 0137-349 | 0.053 ± 0.006 $M_\odot$ | 1.300 - 1400 | 0.65 $R_\odot$ (Binary orbit) |
| G 196-3B | 25 (+15; -10) | 1870 ± 100 | 285–640 |
| Oph 11 B | 21 | 2.487 | 243,0 |
| SCR 1845-6357 | 40 - 50 | 2.600 - 2700 | |
| Zeta Delphini B | 55 ± 10 | 1.550 (+250; -100) | 910 |

| | | | |
|---|---|---|---|
| 15 Sagittae B | 65 | 1.647,34 | 14 |
| Gliese 570 | ~50 | 750 - 800 | 1.500 |
| Epsilon Indi Ba and Bb | 40 – 60 (28±7) | 1.300-1400 (880-940) | 1.500 (between 2,1) |
| DEN 0255-4700 | 25 - 60 | ~1.300 | |
| Teide 1 | 57± 15 | 2.600±150 | |
| TVLM 513-46546 | 90 | 2.500 | |
| DENIS J081730.0-615520 | 15 | 950 | |

**Mass up to 15 MJ/(vs) Mass above 15 MJ**

| Brown dwarf (& planets) | Mass of Jupiter | Temperature °K | Planets orbit AU |
|---|---|---|---|
| ROXs 42Bb | 9 | 1.950 ± 100 | 157 |
| 54 Piscium B | 50 | 810±50 | |

| | | | |
|---|---|---|---|
| DH Tauri b | 12 | 2.750 | 330 |
| ULAS J133553.45+113005.2 | 15 _31 | 500 -550 | |

| | | | |
|---|---|---|---|
| OTS 44 | 11,5 | 1.700 - 2.300 | |
| Epsilon Indi Ba and Bb | 40 – 60 (28±7) | 1.300-1400 (880-940) | 1.500 (between 2,1) |

| | | | |
|---|---|---|---|
| 2MASS J2126-8140 | 13,3 (± 1,7) | 1.800 | 6.900 |
| Gliese 570 | ~50 | 750 - 800 | 1.500 |

Etc.



**Mass vs Mass**

| | | | |
|---|---|---|---|
| 2M 044144 | 9.8±1.8 | 1.800 | 15 ± 0.6 |
| DT Virginis | 8.5 ± 2.5 | 695±60 | 1.168 |

| | | | |
|---|---|---|---|
| Teide 1 | 57± 15 | 2.600±150 | |
| Epsilon Indi Ba and Bb | 40 – 60 (28±7) | 1.300-1400 (880-940) | 1.500 (between 2,1) |

| | | | |
|---|---|---|---|
| B Tauri FU | 15 | 2.375 | 700 |
| DENIS J081730.0-615520 | 15 | 950 | |

Etc.

Related article - Updated: Is there "fast and slow combustion" of stars?

The answer, why there are these differences, in my articles:

"Reassessment of the old but still employed theories of Universe through database checking",
The causal relation between a star and its temperature, gravity, radius and color &
Why there are differences in structure of the objects in our system?
2018.y.