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Super Chandrasekhar masses for magnetized WD?

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The problem of the maximum masses of magnetized White Dwarfs (WD) is revisited considering the impact of a strong magnetic field onto the structure equations. The magnetic field splits the pressure in parallel and perpendicular one. Firstly we will present stable solutions of TOV equations for the parallel pressures, and physical solutions vanish for the perpendicular pressure when $B > 10^{13}G$. This fact establishes an upper bound for a magnetic field and the stability of the configurations in the (quasi) spherical approximation. Our findings also indicate that it is not possible to obtain stable magnetized WD with super Chandrasekhar masses because the values of the magnetic
field needed for them are higher than this bound.
Secondly we show structure equations in a cylindrical metric which are appropriate for the anisotropies. The solutions of these equations confirm the same bound for $B \sim 10^{13}G$, since beyond this value no physical solutions are possible. Our tentative conclusion is that massive WD, with masses well beyond the Chandrasekhar limit do not constitute stable solutions and should not exist.

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