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He- ion can exist in a strong magnetic field JUAN CARLOS LOPEZ VIEYRA, ALEXANDER TURBINER, Institute for Nuclear Sciences, National Autonomous University of Mexico — It is shown that in a magnetic field $B > 10^8$G there exists the negative Helium ion He-. For magnetic field $10^8 < B < 3 \times 10^9$G the ground state is characterized by total spin $S = 1/2$ but for larger magnetic fields $B > 3 \times 10^9$G the ground state is characterized by total spin $S = 3/2$. The energy of photodetachment $\mathrm{He}^- \to \mathrm{He} + e$ at $B = 2.35 \times 10^9$G (1 a.u.) is equal to 9.5 eV and grows with magnetic field increase. It is assumed that this absorption feature has to be be visible in the spectra of magnetic dwarfs as well as in neutron stars.

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