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## Modification of Coulomb law and energy levels of the hydrogen atom in a superstrong magnetic field

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Superstrong magnetic fields modify the Coulomb potential of a proton and the energy spectrum of the hydrogen atom.

After getting an analytical formula for this potential in the direction of the magnetic field, we obtain, analytically too, the spectrum on which the lowest Landau level splits. Therein, electrons are non-relativistic.

For  $B > 10^{13}$ T ( $= 10^{17}$ G), we show that it is substantially modified by screening effects.

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