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Theory meets Experiment

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Dark Matter-Baryon Coincidence from Dark Grand Unification

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The comparable abundances of dark matter and baryons imply that the dark sector should be related to the QCD sector. In this talk, I will present a solution based on the unification of the dark and visible gauge groups. The unification guarantees common interactions and the unified gauge coupling at a high scale, which can explain the similar number densities and masses among the two sectors naturally. The idea is realized by unifying $Sp(4)_D$ dark color with $SU(3)_C$ color into $SU(7)$ and ultimately into $SU(9)$ dark grand unification.

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