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Cosmology of g-essence RATBAY MYRZAKULOV, Eurasian National University, Astana — In the present talk we analyze g-essence models which were proposed recently as an alternative and as a generalization to scalar k-essence. We give several types of solutions of g- essence models. The obtained results show that the g-essence model can describe decelerated and accelerated expansion phases of the universe. We also study g-essence with Yukawa type interactions between a scalar field and a classical Dirac field. For the homogeneous, isotropic and flat Friedmann-Robertson-Walker universe filled with the such g-essence, some exact solutions are found. Moreover, we reconstruct the corresponding scalar and fermionic potentials. [Based on work with D. Singleton, O. Razina, K.Yerzhanov, I.Kulnazarov, P.Tsyba]

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