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Viability of a quintessence model with inverse power law potential as a dark energy candidate

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The physical explanation of the dark energy as the responsible agent of the currently accelerated expansion of the Universe remains as one of the most challenging questions of the modern physcis. Besides the standard scenario (in which it is caused by a cosmological constant) there are other proposals which range from the introduction of new more or less exotic components, to modifications to the general relativity theory. Among these proposals, some quintessence models posses the desirable feature of being free of fine-tuning problems showing a dynamical behaviour clearly discernible from the LCDM model. In this poster we present an inverse-power-law-potential quintessence model inspired by a dynamically condensed Affleck-Dine-Seiberg superpotential. We show the basic phenomelogy predicted by this model and give contrains for its parameters using CMB information -WMAP 9yr & Planck- as well as supernovae Ia and BAO recent observations.

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