Screening Horndeski cosmologies

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We present a detailed analysis of the homogeneous and isotropic cosmologies in a particular Horndenski model with Galileon shift symmetry, containing also a Λ-term and a matter. A special attention is payed to the conditions for the absence of ghosts in the scalar and tensor sectors. It turns out that the theory admits a rich variety of solutions, some of which are ghost-free while the others show a ghost. Some of these solutions describe the standard late time cosmological dynamic dominated by the $ \Lambda$-term and matter,but at early times their contributions are totally screened and the universe expands with a constant Hubble rate determined by the value of the scalar kinetic coupling. For other solutions the Λ-term and matter are screened at all times, but there are nevertheless the early and late accelerating stages. Such solutions could describe the late time cosmic acceleration without invoking the cosmological constant problem. If the scalar kinetic coupling vanishes, then flat space also becomes a ghost-free solution, but it may acquire a ghost in more general versions of the theory.