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## Brans-Dicke accelerated cosmologies with fermionic sources

In the framework of the Brans-Dicke scalar-tensor theory of gravitation, we investigate the role of a self-interacting fermionic field in an FLRW universe filled with dust and radiation constituents. This model is shown to present a variety of qualitative behaviors, depending on the numerical parameters chosen. In particular, we find that the fermionic field is capable of promoting a transition from an initially decelerated, radiation-dominated period to a later accelerated regime where the fermion prevails. The Brans-Dicke field is found to approach a constant value, and an intermediary matter-dominated era is observed. The dependence of the acceleration on the fermionic potential was also investigated. On a second numerical analysis, the possibility of a direct energy exchange between the constituents was considered, using the dynamical pressure approach. On this later formulation a three-era cosmological regime emerged.

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