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# Observational role of dark matter in f(R) models for structure formation

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The fixed points for the dynamical system in the phase space have been calculated with dark matter in the f(R) gravity models. The stability conditions of these fixed points are obtained in the ongoing accelerated phase of the universe, and the values Hubble parameter and Ricci scalar are obtained for various evolutionary stages of the universe. We present a range of some modifications of general relativistic action consistent with the lambda-CDM model. We elaborate upon the fact that the upcoming cosmological observations would further constrain the bounds on the possible forms of f(R) with greater precision that could in turn constrain the search for dark matter in colliders.

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