

A search for indirect cosmological evolution of dark matter

We propose a scenario of creation of dark matter from a decaying cosmological constant. Arc-like pattern found on the Cosmic Microwave Background Radiation (CMBR) were shown to result from the dark matter particles in the Q-phase of the interacting cosmological constant (ICC) model. In the present work, an investigation is made into how the corresponding decay of such dark matter particles might influence these signatures, in view of the recent data from PLANCK and the diffuse glow of the anomalous microwave radiation. We also discuss the constraints on such decay imposed by the interaction of the cosmological constant with the background. In this way, we believe that the CMBR pattern must be a highly significant tool to study the dark matter evolution indirectly. The predictions made in the ICC model can be verified in the concordance space of multiple observations.

Summary

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