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On parameters of fractal distribution of relic wormholes

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Abstract.

We discuss the possibility that the topological structure of the Universe may possess fractal properties.

Relic wormholes and their fractal distribution are predicted in a natural way by lattice quantum gravity models.

This gives a new approach to some long-standing problems. Those are the nature of dark matter phenomena, the origin of Faber-Jackson and Tully-Fisher relations, and the observed deficit of baryons.

We consider open Friedman model and construct an exact fractal model by means of a factorization of the space over a discrete subgroup of the group of motion. We derive some basic features of the resulting fractal space and discus applications of machine learning methods for the verification of the fractal properties.

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Session Classification: Machine Learning in Astronomy: AGN, Transient Events, Cosmology and Others

Track Classification: Active Galactic Nuclei: Machine learning in astronomy: AGN, transient events, cosmology and others