

Abstract Submitted
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Pre-classical solutions in Bianchi I loop quantum cosmology

DANIEL CARTIN, Naval Academy Preparatory School, GAURAV KHANNA, University of Massachusetts at Dartmouth — Loop quantum cosmology, the symmetry reduction of quantum geometry for the study of various cosmological situations, leads to a difference equation for its quantum evolution equation. To ensure that solutions of this equation act in the expected classical manner far from singularities, additional restrictions are imposed on the solution. Here we consider the range of solutions for the anisotropic Bianchi I model that meet these restrictions, and find that they are rather limited. The implications of these results for the full theory of quantum geometry will be discussed.

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