ON THE BOREL CONJECTURE FOR ALEXANDROV 3–SPACES

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ABSTRACT. The Borel conjecture (BC) states that if two closed, aspherical n–manifolds are homotopy equivalent then they are homeomorphic. The validity of this conjecture for $n = 3$ follows from Perelman's resolution of the Geometrization Conjecture. Generalizations of the BC outside of the manifold category have been obtained, for example, for CAT(0)–spaces and certain classes of topological orbifolds. It is therefore natural to inquire whether the BC holds for the class of Alexandrov 3-spaces (with curvature bounded below). I will speak about progress in this direction which shows that two aspherical, irreducible Alexandrov 3-spaces which are sufficiently collapsed with respect to their diameters satisfy the BC. The results are joint with Noé Bárcenas.