

Collapsing and essential coverings

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In the present paper, we consider the family of all compact Alexandrov spaces with curvature bound below having a definite upper diameter bound of a fixed dimension. We introduce the notion of essential coverings by contractible metric balls, and provide a uniform bound on the numbers of contractible metric balls forming essential coverings of the spaces in the family. In particular, this gives another view for Gromov's Betti number theorem.

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