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AND APPLICATIONS

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Title: The curvature of orbit spaces

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Abstract: Let a compact Lie group act by isometries on the unit sphere. The space of orbits X is an Alexandrov space of curvature at least 1 and diameter at most π with respect to the natural quotient metric. The following question of K. Grove has been investigated by several authors and remains widely open in general:

How small can the diameter of X be?

In this talk, we discuss the closely related problem:

How curved can X be?

(Joint work with A. Lytchak (Köln).)