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**Nathan Smale\*** ([smale@math.utah.edu](mailto:smale@math.utah.edu)), Department of Mathematics, University of Utah, Salt Lake City, UT 84112. *A Metric Hodge Theory for Alexandrov Spaces with Curvature Bounded Above.*

In previous work with L. Bartholdi, T. Schick and S. Smale, a Hodge theory for compact metric spaces with a probability measure, based on the Alexander-Spanier co-boundary operator was proposed. The corresponding cohomology quantifies topological structures that can be seen at a fixed scale. It was also shown that the theory holds for compact Riemannian manifolds. Here we will discuss a recent result that extends this to compact Alexandrov spaces with curvature bounded from above. (Received August 26, 2011)