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Teresa Arias-Marco, Emily Dryden, Carolyn Gordon, Asma Hassannezhad, Allie Ray
and **Elizabeth Stanhope*** (stanhope@clark.edu). *Can we detect the geometry and topology of an orbisurface from its Steklov spectrum?*

Motivated by work of Girouard, Parnowski, Polterovich and Sher, we use the asymptotics of the Steklov spectrum of a 2-orbifold to study the geometry and topology of the orbifold. We show that the Steklov spectrum determines the topology of the boundary of the orbifold, as well as the geometry of the boundary up to an equivalence relation. We also construct examples of Steklov isospectral orbifolds that provide, for example, a 2-orbifold counterexample to a problem closely related to the inverse tomography problem. (Received February 03, 2018)