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Stability results on the inverse Steklov problem for Riemannian warped products

We consider the inverse Steklov problem on a class of Riemannian warped products which can be thought of as deformations of the closed ball in R^d . We first prove that the Steklov spectrum determines uniquely the warping function of the metric. Next, we show that the approximate knowledge of the Steklov spectrum -in a given technical sense- is enough to determine uniquely the warping function in a neighbourhood of the boundary. Finally, we provide stability estimates of log- type on the warping function. This is joint work with Thierry Daude (Cergy-Pontoise) and Francois Nicoleau (Nantes).