Lower bounds for interior nodal sets of Steklov eigenfunctions

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ABSTRACT. In this talk, I'm going to talk about my recent joint work with Christopher D. Sogge and Jiuyi Zhu. We study the interior nodal sets, Z_λ of Steklov eigenfunctions on smooth Riemannian manifolds $(\mathcal{N}^{n+1}, h)$ with boundary $(\mathcal{M}^n, g)$. We show that

$$H^n(Z_\lambda) \geq C\lambda^{\frac{1-n}{2}}$$

for some positive constant C depending only on the manifold. The proof is based on a Dong-type identity.

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