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Gradient estimates for spectral clusters and Carleson measures on compact manifolds with boundary.

On a compact Riemannian manifold (M, g) with boundary, we first study some Bernstein type inequality on the subspace of $L^2(M)$ generated by eigenfunctions of eigenvalues less than $L(> 1)$ associated to the Dirichlet (Neumann) Laplace–Beltrami operator on M . On these spaces we give a characterization of the Carleson measures and the Logvinenko–Sereda sets for Dirichlet (or Neumann) Laplacian on M , which generalized the corresponding results of J. Ortega-Cerda and B. Pridhnani on a compact boundaryless manifold (Forum Math. 25 (2013), DOI 10.1515 / FORM.2011.110).