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Index bounds for minimal hypersurfaces of the sphere. (English) [Zbl 1209.53052](#)
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Summary: We consider a compact, orientable minimal hypersurfaces of the unit sphere and prove a comparison theorem between the spectrum of the stability operator and that of the Laplacian on 1 - forms. As a corollary, we show that the index is bounded below by a linear function of the first Betti number; in particular, if the first Betti number is large, then the immersion is highly unstable.

MSC:

[53C42](#) Differential geometry of immersions (minimal, prescribed curvature, tight, etc.) [Cited in 19 Documents](#)
[58C40](#) Spectral theory; eigenvalue problems on manifolds

Keywords:

[stability operator](#); [Laplacian on 1-forms](#); [Betti number](#)

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