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Shengli Kong* (skong@math.uci.edu), 103 Multipurpose Science & Technology Bldg, University of California, Irvine, Irvine, CA 92697-3875. *Spectrum of the Laplacian on Quaternionic Kähler Manifolds.*

Let M^{4n} be a complete quaternionic Kähler manifold with scalar curvature bounded below by $-16n(n+2)$. We get a sharp estimate for the first eigenvalue $\lambda_1(M)$ of the Laplacian which is $\lambda_1(M) \leq (2n+1)^2$. If the equality holds, M must have only one end. While in the case if $\lambda_1(M) \geq \frac{8(n+2)}{3}$, then we prove that M must have only one end with infinite volume.

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