1172-53-62   **Dimiter Vassilev** (`vassilev@unm.edu`), Department of Mathematics and Statistics, MSC01 1115, The University of New Mexico, Albuquerque, NM 87106, and **Abdelrahman Mohamed*** (`mohameda@unm.edu`), Department of Mathematics and Statistics, MSC01 1115, The University of New Mexico, Albuquerque, NM 87106. *The Obata first eigenvalue theorems on a seven dimensional quaternionic contact manifold.*

We show that a compact quaternionic contact manifold of dimension seven that satisfies a Lichnerowicz-type lower Ricci bound, and has the P-function of any eigenfunction of the sub-Laplacian non-negative, achieves its smallest possible eigenvalue only if the structure is qc-Einstein. In particular, under the stated conditions, the lowest eigenvalue is achieved if and only if the manifold is qc-equivalent to the standard 3-Sasakian sphere. (Received August 16, 2021)