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Baylor University, One Bear Place #97328, Waco, TX 76798-7328. *Comparison of Smallest
Eigenvalues.*

The theory of u_0 -positive operators with respect to a cone in a Banach space is applied to the linear differential equations $u^{(4)} + \lambda_1 p(x)u = 0$ and $u^{(4)} + \lambda_2 q(x)u = 0$, $0 \leq x \leq 1$, with each satisfying the boundary conditions $u(0) = u'(r) = u''(r) = u'''(1) = 0$, $0 < r < 1$. The existence of a smallest positive eigenvalue is established, and a comparison theorem for smallest positive eigenvalues is obtained. (Received September 09, 2010)