

ON THE LOCATION OF THE LEAST POINT OF THE ESSENTIAL SPECTRUM

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A new criterion for the least point of the essential spectrum is given for a one term second order differential operator. This criterion is sharper than the Friedrich's criterion. Application is given to the singular eigenvalue problem associated with the buckling of a column under self-weight subjected to the constraint of fixed volume. Examples are given which illustrate the sharpness of the bounds for the least point of the essential spectrum.