

ON THE TRACE CHARACTERIZATION OF THE JOINT SPECTRAL RADIUS*

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Abstract. A characterization of the joint spectral radius, due to Chen and Zhou, relies on the limit superior of the k -th root of the dominant trace over products of matrices of length k . In this note, a sufficient condition is given such that the limit superior takes the form of a limit. This result is useful while estimating the joint spectral radius. Although it applies to a restricted class of matrices, it appears to be relevant to many realistic situations.

Key words. Joint spectral radius, Spectral radius, Trace, Primitivity, Nonnegative matrix.

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