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MINIMAL GERSCHGORIN SETS FOR PARTITIONED MATRICES III. SHARPNESS OF BOUNDARIES AND MONOTONICITY AS A FUNCTION OF THE PARTITION*

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Dedicated to Olga Taussky and John Todd, on the occasion of their important birthdays in 1996, for their inspiring work in matrix theory and numerical analysis.

Abstract. Making use, from the preceding paper, of the affirmative solution of the Spectral Conjecture, it is shown here that the general boundaries, of the minimal Gerschgorin sets for partitioned matrices, are sharp, and that monotonicity of these minimal Gerschgorin sets, as a function of the partitionings, is obtained. These results extend and sharpen an earlier paper from 1970 on this topic.

Key words. minimal Gerschgorin sets, partitioned matrices, monotonicity.

AMS subject classification. 15A18.

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