BLOCK NORMAL MATRICES AND GERSHGORIN-TYPE DISCS

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Abstract. The block analogues of the theorems on inclusion regions for the eigenvalues of normal matrices are given. By an inclusion region for a given matrix $A$ we mean a region of the complex plane that contains at least one of the eigenvalues of $A$. Some nonsingularity results for partitioned matrices are also presented.

Key words. Normal matrices, Block matrices, Eigenvalues, Gershgorin’s discs, Nonsingular matrices, Hermitian positive definite matrices, Strong square-sum criterion.

AMS subject classifications. 15A12, 15A18.

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