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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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