

THE EIGENVALUE DISTRIBUTION OF BLOCK DIAGONALLY DOMINANT MATRICES AND BLOCK H -MATRICES*

CHENG-YI ZHANG[†], SHUANGHUA LUO[‡], AIQUN HUANG[§], AND JUNXIANG LU[¶]

Abstract. The paper studies the eigenvalue distribution of some special matrices, including block diagonally dominant matrices and block H -matrices. A well-known theorem of Taussky on the eigenvalue distribution is extended to such matrices. Conditions on a block matrix are also given so that it has certain numbers of eigenvalues with positive and negative real parts.

Key words. Eigenvalues, Block diagonally dominant, Block H -matrix, Non-Hermitian positive (negative) definite.

AMS subject classifications. 15A15, 15F10.

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[†]Department of Mathematics of School of Science, Xi'an Polytechnic University, Xi'an, Shaanxi 710048, P.R. China; Corresponding author (chengyizhang@yahoo.com.cn or zhangchengyi_2004@163.com).

[‡]Department of Mathematics of School of Science, Xi'an Polytechnic University, Xi'an, Shaanxi 710048, P.R. China (iwantflyluo@163.com).

[§]Department of Mathematics of School of Science, Xi'an Jiaotong University, Xi'an, Shaanxi 710049, P.R. China.

[¶]Department of Mathematics of School of Science, Xi'an Polytechnic University, Xi'an, Shaanxi 710048, P.R. China (jun-xianglu@163.com). The work of this author was Supported by Natural Science Basic Research Project in Shaanxi Province: 2010JQ1016.