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INEQUALITIES ON 2×2 BLOCK ACCRETIVE MATRICES

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Abstract. A 2×2 block matrix $\begin{pmatrix} A & X \\ Y^* & B \end{pmatrix}$ is accretive partial transpose (APT) if both $\begin{pmatrix} A & X \\ Y^* & B \end{pmatrix}$ and $\begin{pmatrix} A & Y^* \\ X & B \end{pmatrix}$ are accretive. This article presents some inequalities related to this class of matrices. One of our results refines a recent inequality in [Oper. Matrices, 15 (2021) 581–587].

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