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ON A GROUP OF MIXED-TYPE REVERSE-ORDER LAWS FOR GENERALIZED INVERSES OF A TRIPLE MATRIX PRODUCT WITH APPLICATIONS*

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Abstract. Necessary and sufficient conditions are established for a group of mixed-type reverse-order laws for generalized inverses of a triple matrix product to hold. Some applications of the reverse-order laws to generalized inverses of the sum of two matrices are also given.

Key words. Elementary block matrix operations, $\{i, \ldots, j\}$-inverse of matrix, Matrix product, Moore-Penrose inverse, Range of matrix, Rank of matrix, Reverse-order law, Sum of matrices.

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