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Charles R Johnson and **Sivaram K Narayan*** (sivaram.narayan@cmich.edu), Department of Mathematics, Central Michigan University, Mount Pleasant, MI 48859. *The Koteljanskii Inequalities for Mixed Matrices.*

Recently, a new class of matrices, called mixed matrices, that unifies the Z-matrices and symmetric matrices has been identified. They share the property that when the leading principal minors are positive, all principal minors are positive. It is natural to ask what other properties of M-matrices and positive definite matrices are enjoyed by mixed matrices as well. Here, we show that mixed P-matrices satisfy a broad family of determinantal inequalities, the Koteljanskii inequalities, previously known for those two classes. In the process, other properties of mixed matrices are developed, and consequences of the Koteljanskii inequalities are given. (Received September 16, 2013)