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Generalized λ-Newton Inequalities Revisited

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Abstract: We present in this work a new and shorter proof of the generalized λ-Newton inequalities for elementary symmetric functions defined on a self-conjugate set which lies essentially in the open right half-plane. We also point out some interesting consequences of the generalized λ-Newton inequalities. In particular, we establish an improved complex version of the arithmetic mean-geometric mean inequality along with the corresponding determinant-trace inequality for positive stable matrices.

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