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## TOTAL DECOMPOSITION AND BLOCK NUMERICAL RANGE

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ABSTRACT. Let  $\mathcal{H}$  be a separable Hilbert space and let  $\mathcal{A} \in \mathcal{B}(\mathcal{H})$ . In this note the notion of a total decomposition is introduced, and it is shown that sometimes the block numerical ranges corresponding to a total decomposition approximate  $\sigma(A)$ , sometimes not.

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