

Reflexivity defect of the kernel of an elementary operator

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(Joint work with J. Bračič)

For a given a complex Hilbert space $\mathcal{H}$ and a subspace $\mathcal{S} \subseteq \mathcal{B}(\mathcal{H})$, the reflexivity defect of $\mathcal{S}$ is defined by $\text{rd}(\mathcal{S}) = \dim(\text{Ref } \mathcal{S}/\mathcal{S})$, where $\text{Ref } \mathcal{S}$ denotes the reflexive cover of $\mathcal{S}$. Let $A, B, C, D \in (\mathcal{H})$. We study reflexivity defect and some other related properties of the kernel of the elementary operator defined by $\Delta(T) = ATB - CTD$.