

ON THE RELATION BETWEEN $XX^{[*]}$ AND $X^{[*]}X$ IN AN INDEFINITE INNER PRODUCT SPACE

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Abstract. The relations between the canonical forms for pairs $(XX^{[*]}, H)$ and $(X^{[*]}X, H)$, with nilpotent matrices $XX^{[*]}$ and $X^{[*]}X$, are studied. We show that for some specific cases which are obtained by imposing restrictions on $\text{rank } X$ or $\text{rank } X^{[*]}X$ or both, the relations between these canonical forms can be found.

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