

Quasi-Hermitian operators in quantum mechanics

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In quantum mechanics, observable quantities are usually described by Hermitian operators. However, it is also possible to use non-Hermitian operators if these operators are the so-called quasi-Hermitian operators because these operators are Hermitian in a Hilbert space with scalar product modified using the so-called metric operator. We introduce the formalism and illustrate it on a simple example of a quasi-Hermitian operator. We show different metric operators associated with this operator and to it similar Hermitian operators.