

Nonlinear Squeezed States and Multiplication Rule of Nonlinear Squeezing Operators Gained via Nonlinear Coherent State Representation and IWOP Technique

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Abstract: Using the nonlinear coherent state representation we derive nonlinear squeezed states and the multiplication rule of nonlinear squeezing operators. We find that the symplectic matrices multiplication rule in nonlinear coherent state projection operator representation maps into the multiplication rule of successive nonlinear squeezing operators. The technique of integral within an ordered product of operators plays an essential role in deriving the multiplication rule.

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Key words: nonlinear coherent state, nonlinear squeezed state, nonlinear squeezing operator, symplectic-transform

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