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Time evolution of multiphoton added-then-subtracted coherent states in thermal channel

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Highlights:

1. The density operator and the normalization factor of multiphoton added –then –subtracted coherent states are presented.
2. The time evolution of normally ordered density operator, Wigner function, and tomogram function in thermal channel are derived analytically and the decoherence effect is analyzed in detail.
3. The decoherence process and several novel evolution phenomenon of the resulting states evolving in thermal channel are clearly unveiled numerically.

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