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Dissipative evolution of two-mode Bose–Einstein condensate in the presence of nonlinear interactions: Heisenberg operator approach

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***Highlights (for review)**

- Qualitative dissipative dynamical evolution of an atomic two-mode BEC was studied.
- In the population imbalance macroscopic quantum self-trapping effect is observed.
- Two types of collapse-revival phenomena are observed in the dynamics of system.
- Collapse-revivals can be managed via controlling the regime of interaction.

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