
# Effect of Longitudinal Periodic Length on Chaotic Mixing in a Lid-Driven Cavity Flow System

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## Highlights:

- A new formula under the action–angle–angle framework was proposed to analyze frequency ratio distribution.
- Three-dimensional geometry patterns of high-period islands were constructed in the reconstructed phase space.
- Standard fourth-order Runge–Kutta schemes were used to develop the post-treatment codes to predict mixing.
- Mixing was sensitive to the chosen periodic lengths for large perturbation strength.