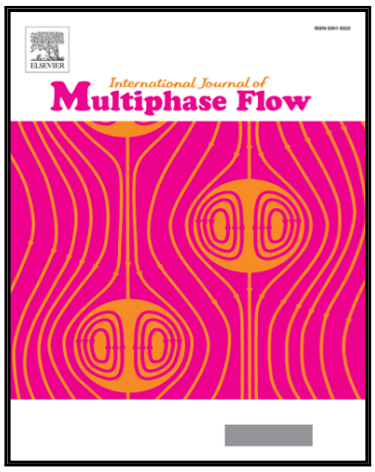

Local and global recurrences in dynamic gas-solid flows

T. Lichtenegger

PII: S0301-9322(18)30086-7
DOI: 10.1016/j.ijmultiphaseflow.2018.05.013
Reference: IJMF 2813

To appear in: *International Journal of Multiphase Flow*

Received date: 2 February 2018
Revised date: 14 May 2018
Accepted date: 19 May 2018

Please cite this article as: T. Lichtenegger, Local and global recurrences in dynamic gas-solid flows, *International Journal of Multiphase Flow* (2018), doi: 10.1016/j.ijmultiphaseflow.2018.05.013

Highlights

- Recurring patterns in a lab-scale, bubbling fluidized bed are investigated.
- Both locally and globally, low-dimensional dynamics is identified.
- The mean nearest-neighbor distance initially drops, but then almost saturates.
- The relative majority of states recurs fast, but new ones are constantly appearing.
- It is shown how to assess if further information can be obtained from simulations.