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Microgravity Sciences Onboard the International Space Station and Beyond - Part 1 (6)

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IVIDIL: DIFFUSION PHENOMENA UNDER CONTROL OF VIBRATIONS

**Abstract**

The experiment IVIDIL (Influence of Vibrations on Diffusion in Liquids) has been performed in 2009-2010 onboard the ISS, inside the SODI instrument mounted in the Glovebox at the ESA Columbus module. 55 experimental runs were carried out and each of them lasted 18 hours. Thermodiffusion process in the cells filled with binary mixtures was monitored by means of optical digital interferometry. In this paper we report results for the some objectives of the IVIDIL experiment. The attention is focused on reproducibility of the results, their accuracy and comparison with numerical simulations.