

Poster 1

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General characteristics of a mixing zone development in a direct simulations of hydrodynamics instabilities with a random phase regular multimode perturbations

Nikolai Zmitrenko¹, Vladimir Tishkin¹, Vladislav Rozanov², Roman Stepanov², Mikhail Anuchin³ & Yury Yanilkin⁴

1. Institute of Mathematical Modelling of RAS,
Moscow, Russia
zmitrenko@imamod.ru

2. P.N. Lebedev Physical Institute of RAS,
Moscow, Russia
rozanov@sci.lebedev.ru

3. Russian Federal Nuclear Center – All-Russia Scientific Research Institute of Technical Physics,
Snezhinsk, Russia
m.g.anuchin@vniitf.ru

4. Russian Federal Nuclear Center – All-Russia Scientific Research Institute of Experimental Physics,
Sarov, Russia
yan@md08.vniief.ru

On the base of wide series of numerical simulations, fulfilled in the frame of ISTC project #1481, the detailed studies of mixing zone properties carried out. The general characteristics, such as a zone width, turbulent kinetic energy and mass of a heavy liquid in a zone, corresponding momentum and vorticity and so on, are analyzed. The simple relations between them are established. A particular attention is given to investigation of a dependence of such the characteristics on a random phase set in an initial perturbation. Such the analysis gives a base to develop a wavelet approach to predict zone width growth for the different situations.

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