

Short review of RFNC-VNIITF experimental studies of gravitational turbulent mixing

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The complex including four facilities was designed at RFNC-VNIITF for experimental investigation of gravitational turbulent mixing. The paper briefly reviews experiments performed at these facilities. At present, experimentation is focused on the internal structure of gravitational turbulent mixing zones induced by the Richtmyer-Meshkov and Rayleigh-Taylor instability. The developed investigation techniques allow determination of the heterogeneity coefficient, spectral distribution of density fluctuation, and matter velocity distribution. So, integral, averaged, and local characteristics of turbulent mixing are measured for each instability type.