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Excited Single-Phase (Liquid) Jets

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The scalar maps show some phase-averaged quantities obtained by PIV in the developing region of a periodically triggered, axisymmetric liquid single-phase jet. Excitation frequencies are 1 Hz and 3 Hz, corresponding to Strouhal number $St = 0.3$ and 0.6 , respectively. Triggering of the jet shear layer leads to concentration of the shear layer vorticity in the coherent vortex rings which travel downstream at about half of the jet velocity.