

Abstract Submitted  
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**Characterization of the flow on the axis of two confined-opposed-jets**<sup>1</sup> JEAN-FRANCOIS KRAWCZYNSKI, LUMINITA DANAILA, BRUNO RE-NOU, CORIA — We document an experimental investigation of a confined-opposed-jets flow, which is the basic spatial periodic pattern of a confined chamber. The question of the nature of the velocity fluctuations which are discussed is addressed. It is shown that the characteristic instabilities of this complex flow, along with the local confinement effects, generate large-scale quasi-organized fluctuations which are superimposed to the random/turbulent fluctuations. Small-scale statistics, such as the kinetic energy dissipation rate, are discussed and estimates based on inertial or large-scales methods are proposed and compared to traditional small-scales estimates. A scale-by-scale energy budget equation, analogous to the famous Yaglom's equation for inhomogeneous and anisotropic turbulence is discussed and partially validated in this complex flow. It is shown that the energy transfer is mainly performed in planes perpendicular to the axisymmetry axis, whereas it is strongly inhibited over the axisymmetry direction.

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