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## ANALYZING MYSTERIOUS TURBULENCE

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Turbulence is one of the most fascinating phenomena in nature existing from Ångström length-scales (quantized vortices in superfluid helium [La Mantia et al. 2016]) up to galactic scales [Vatistas 2010]. One of the main features of turbulence is the presence of interacting vortices of various strengths sizes and orientations. But the present description of turbulence is based on statistical analysis of velocities or pressures. The vortex filament method is used in numerical simulations of superfluid [Varga et al. 2017] or classical viscosity-damped [Marchevsky 2020] turbulent flows. We introduce the approach of individual vortices into experiments. We use the spatially resolved 2D velocity data obtained by using the experimental method Particle Image Velocimetry (PIV) to find the individual vortices in the turbulent field and then we analyze their properties statistically.

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