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**PIV in the two phases of hydrodynamic cavitation in a venturi type section** SYLVIE FUZIER, SÉBASTIEN COUDERT, OLIVIER COUTIER DELGOSHA, Laboratoire de Mécanique de Lille — The presence of cavitation can affect the performance of turbomachinery. Attached sheet cavities on the blades induce modifications of flow dynamics and turbulence properties. This phenomenon is studied here in a configuration of 2D flow in a venturi type section. Images of the bubbles as well as of the light emitted by fluorescent particles placed in the liquid are recorded simultaneously. Velocities of the bubbles and of the liquid phase are obtained by PIV. The slip velocity is analyzed function of the number of cavitation and other physical parameters. Different levels of turbulence are correlated with different bubble structures in the diphasic cavity.

Sylvie Fuzier  
Laboratoire de Mécanique de Lille

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