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Hydrodynamics and acoustics of a drop impact

Flow patterns and sounds produced by collisions of clean, coloured and loaded by particles water drops with thick layer of water were studied by photo-, video and audio instruments. Conditions of secondary droplets collision with the submerging drop were defined. Linear and mesh filament structures produced by colored drop on the surface of targeted fluid were registered and analyzed. Fine structure of contact and basic sound pulses was measured and analyzed together with registered flow patterns. Role of fast atomic-molecular and slow mechanical energy transfer processes in the impact event is discussed.

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