

Abstract Submitted  
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**Hydrodynamic Decay of Decorated Quantum Vortex Rings<sup>1</sup>**

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— The decay of quantum vortex rings in HeII, visualized with the help of solid hydrogen particles trapped in their cores, has been a problematic issue within the two-fluid model of superfluidity: the large drag exerted on the vortex rings by the flow of normal fluid past the hydrogen particles would ultimately lead to decay times that mismatch the ones observed in the laboratory. We discuss a phenomenological solution of this puzzle, which is based on the fact that the vortex ring energy loss is accounted for not only by mutual friction, but also by the viscous dissipation and sweeping of the flow structures produced from the vortex ring backreaction on the normal component of the surrounding superfluid.

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