

Quantum Turbulence in Super Fluids

Itamar Procaccia

The Barbara and Morris L. Levinson
Professorial Chair in Chemical Physics
The Weizmann Institute of Science, Israel

Abstract: A short review of the present state of research on quantum turbulence will be presented, with a stress on the main dissipative mechanism at low temperatures. These are quantum vortex re-connections and Kelvin waves on the vortices. The energy spectrum of Kelvin waves will be derived and discussed. The main problems of future research will be presented.