Asymptotic properties of open fluid systems

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We consider a model of an open fluid system - the Navier-Stokes-Fourier system of pde's driven by the in-homogeneous boundary conditions. An avatar example is the Rayleigh-Benard problem. We discuss the existence of global in time solutions and its asymptotic properties. In particular asymptotic compactness and Levinson dissipativity. We also consider the singular limit for low Mach and Froude numbers.