Ergodic theory for energetically open fluid systems

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We consider global in time (weak) solutions for the complete Navier-Stokes-Fourier system describing the motion of a compressible, viscous and heat conducting fluid driven by inhomogeneous boundary conditions. We show that any globally bounded trajectory generates a stationary statistical solution. Then the Birkhoff-Khinchin theorem can be applied to show the validity of the (weak) ergodic hypothesis on the associated omega-limit set.