1025-35-267      **Alexey Cheskidov\*** (`acheskid@umich.edu`), Department of Mathematics, University of Michigan, 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109. *Inviscid dyadic model of turbulence: global attractor and Onsager's conjecture.*

We study dyadic (a.k.a. shell) equations modeling energy cascade in a turbulent flow. The viscous dyadic model has the same estimates for the inertial term as the 3D Navier-Stokes equations, and, consequently, the same question concerning the regularity of the solutions. We show a finite time blow-up for the dyadic models with hypodissipation. In addition, in the inviscid case we prove the existence of a global attractor, which is a result of a loss of regularity and an anomalous dissipation conjectured by Lars Onsager for the 3D Euler equations. (Received January 23, 2007)