

MODEL EQUATIONS AND FORMATION  
OF STRUCTURES IN MEDIA WITH MEMORY

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S u m m a r y

We propose new types of models of the appearance of small- and large-scale structures in media with memory, including a hyperbolic modification of the Navier–Stokes equations and a class of dynamical low-dimensional models with memory effects. On the basis of computer modeling, the formation of the small-scale structures and collapses and the appearance of new chaotic solutions are demonstrated. Possibilities of the application of some proposed models to the description of the burst-type processes and collapses on the Sun are discussed.