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13. ABSTRACT (Maximum 200 words) The projects on two-phase flows are on the direct simulation of the motion of particles in viscoelastic fluids. The second project is to study the problem of diffusion and fluid mechanics of binary mixtures of incompressible miscible liquids; when the density difference of the mixing liquids is taken into account the velocity field is not solenoidal and theory is not classical. The third problem is to study drop breakup of thickened liquids at high Mach numbers. We received additional funding for "Aerodynamic Dissemination" to build and instrument a Mach 6 shock tube to visualize and analyze the breakup of drops. This shock tube was built and partly instrumented and interim results have been obtained.			
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