1038-35-11   **Igor Kukavica** and **Vlad Vicol*** (`vicol@usc.edu`), Deptartment of Mathematics, University of Southern California, 3620 South Vermont Ave., KAP 108, Los Angeles, CA 90089. *On local uniqueness of weak solutions to the Navier–Stokes system with BMO^{-1} initial datum.*

We address the problem of local uniqueness of weak solutions to the Navier-Stokes system, with the initial datum in a subspace of $BMO^{-1}(R^n)$. The existence and uniqueness of local mild, i.e. integral, solutions has been proven by Koch and Tataru [KT]. We present a necessary and sufficient condition for two weak solutions to evolve from the same initial datum, and for weak solutions to be mild. (Received November 28, 2007)