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Canada. *On the two-fluid model*. Preliminary report.

Consider a full ionized plasma consisting of two species of particles, i.e. ions and electrons. For plasma, in general collisions of ions and electrons are infrequent. However, the magnetic field makes them move together so that the plasma behaves like fluid. In this talk, we study a two-fluid model of charged incompressible fluids. After we review the well-posedness of the Cauchy problem, we study the stability and the rate of decay of small solutions. This is a joint work with T. Ghoul and S. Shen (Received February 07, 2017)