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Annalisa M Calini* (calinia@cofc.edu), Department of Mathematics, College of Charleston, 66 George St, Charleston, SC 29424, and **Stephane Lafortune** and **Brenton J Lemesurier**. *A Lyapunov functional for the Hasimoto filament*. Preliminary report.

We investigate the nonlinear stability of the one-soliton solution of the Vortex Filament Equation (VFE) without making recourse to its well-known correspondence with the Nonlinear Schrödinger equation. After formulating the VFE as a Hamiltonian system that is invariant under a group of symmetries on a suitable space of curves, we propose a Lyapunov functional for the Hasimoto filament and discuss its orbital stability. (Received August 29, 2016)