1070-70-295 Gregory R. Buck* (gbuck@anselm.edu). An Equation of Motion for Filaments.

Filaments are ubiquitous – they appear on every scale studied by science. We present here an equation for the self induced motion for an attracting or repelling filament or filamentary distribution of matter. Applications include celestial distributions such as spiral arms of galaxies, as well as charged strings, and perhaps biofilaments such as DNA. (Received February 14, 2011)