

1116-VC-478 **Nicholas C. Jacob*** (njacob@ecok.edu). *Reynolds' Space Average.*

A velocity, $u(x, t)$, solving incompressible Navier-Stokes cannot be the full velocity at x and t due to dissipation. Reynolds claims $u(x, t)$ is a space average. Taking the limit of Hamiltonian equations of motion with assumptions on standard physical quantities leads to a measure. This measure and disintegration will be used to construct an abstract Reynolds' average which is indeed a space average in the natural sense providing a further justification for space averages. (Received September 03, 2015)