1162-65-117 **Hakima Bessaih***, Department of Mathematics & Statistics, Dept. 3036, 1000 E. University Ave., Laramie, WY 82071, and **Annie Millet**. *Numerical schemes for the 2d Stochastic Navier-Stokes equations.* Preliminary report.

We consider space-time discretization schemes for the 2d stochastic Navier-Stokes equations on the torus. We prove a mean square rate of convergence. This refines previous results established with a rate of convergence in probability only. Using exponential moment estimates of the solution of the Navier-Stokes equations and a convergence of a localized scheme, we can prove strong convergence of fully implicit and semi-implicit time Euler discretization and also a splitting scheme. We finite elements for the space discretization. (Received August 28, 2020)