1038-60-92   **Boris P Belinskiy** and **Peter Caithamer*** (`pcaitham@iun.edu`). *Existence criteria for solutions of linear stochastic differential equations with skew-symmetric differential operator and additive fractional Brownian noise.*

We consider a Hilbert-valued linear stochastic differential equation driven by fractional Gaussian noise. We give criteria for weak and strong solutions to exist in terms of the differential operator, which we assume to be skew-symmetric, and the covariance operator of the noise. We consider a class of PDE as examples. We show that the energy of these systems is finite if and only if a weak solution to the associated ODE exists. We also relate these conditions to conditions obtained by previous authors. (Received January 30, 2008)