

On the infinite-rotation limit of the stochastic primitive equations

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This talk will discuss a recent result for the stochastic primitive equation in the limit of infinite-rotation, namely, that the laws of the solutions to the stochastic primitive equation are asymptotically attracted to the unique invariant probability measure corresponding to its limit resonant system. This result is obtained by establishing an averaging principle that allows one to properly identify the covariance structure of the noise in the infinite-rotation regime and an asymptotic coupling technique to establish the existence of a spectral gap for the limit resonant system. This is joint work with Quyuan Lin (Clemson) and Rongchang Liu (U Arizona).

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