1142-76-191   **Michael S. Jolly*** (`msjolly@indiana.edu`). *Bounds on the attractor for the 2D Rayleigh-Bénard problem.* Preliminary report.

We find regions that bound the global attractor of the Rayleigh-Bénard problem in the EZ-plane, where E is a sum of squared L^2 norms of velocity and temperature and Z is a similar sum, but for gradient norms. This is done for both no-slip and free-slip boundary conditions, with modest improvement for the overall gradient norm bounds on the global attractor. We then find invariant regions in the 3-space spanned by enstrophy, palinstrophy and the gradient norm of temperature in the free-slip case. (Received September 03, 2018)

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