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Aseel Farhat*, 831 E 3rd St, Mathematics Department, Bloomington, IN 47405, and **Michael Jolly** and **Evelyn Lunasin**. *Bounds on energy and enstrophy for the 3D Navier-Stokes- α and Leray- α models.*

We construct semi-integral curves which bound the projections of the global attractors of the 3D NS- α and 3D Leray- α sub-grid scale turbulence models in the plane spanned by their energy and enstrophy. We note the dependence of these bounds on the filter width parameter α , and determine subregions where each quantity, energy and enstrophy, must decrease, while isolating one which is recurrent. (Received September 16, 2013)