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Lidiane Santos Monteiro Lima* (lidynet@hotmail.com) and **Lucas Catão de Freitas Ferreira** (lcff@ime.unicamp.br). *Self-similar solutions for active scalar equations with higher-order couplings in Fourier-Besov spaces.*

In this work we study a family of dissipative active scalar equation with velocity fields coupled via higher-order multiplier operators. We consider critical and sub-critical values for the fractional diffusion and prove global well-posedness of solutions with small initial data belonging to Fourier-Besov spaces which contain homogeneous and singular functions. Indexes of spaces are chosen to allow existence of self-similar solutions depending on the homogeneity of initial data and velocity-coupling operators. (Received May 13, 2013)