GLOBAL EXISTENCE OF CRITICAL QUASI-GEOSTROPHIC EQUATION IN CRITICAL SPACE

SABER BEN ABDALLAH

Abstract. we show the global existence for quasi-geostrophic equations if $\|\widehat{\theta^0}\|_{L^1}$ is small enough; among others we prove the analyticity of such a solution. If in addition the initial condition verifies $|D|^\sigma\theta^0 \in L^1(\mathbb{R}^2)$ with $\sigma > -1$, then the solution remains regular. Fourier analysis and standard techniques are used.

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Department of Mathematics, Faculty of Science of Gabès, Research Laboratory Mathematics and Applications LR17ES11; Tunisia

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