On the analyticity of dispersive-dissipative infinite dimensional dynamical systems

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We study the analyticity of solutions of dissipative-dispersive equations possessing global attractors. We utilize an analyticity criterion for spatially periodic functions, that involves the rate of growth of the L^2-norm of the n^{th} derivative, as n tends to infinity. This criterion provides analyticity of solutions in the case of the dispersively modified Kuramoto–Sivashinsky equation and a general class of semilinear evolutionary pseudo-differential equations with global attractors.