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Benno Rumpf* (brumpf@mail.smu.edu), Southern Methodist University, Department of Mathematics, Dallas, TX 75275-0156. *An instability of wave turbulence causing the formation of radiating pulses.*

Wave turbulence can be unstable under long modulations via a mechanism that is reminiscent of a negative Landau-damping process. This can lead to a new mechanism for turbulent transport in systems which support radiating solitary wave packets. The direct energy cascade is provided by evolving pulses, whose widths and carrier wavelengths decrease. The inverse cascade is due to the excitation of radiation. I show how the stability of wave turbulence can be analyzed by deriving a Vlasov-type of envelope equation. I examine these mechanisms for the Majda-McLaughlin-Tabak model. (Received February 10, 2014)