

The energy critical non-linear focusing wave equation

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Abstract

In joint work with Frank Merle we establish the so-called “ground-state” conjecture: for energy below the ground-state, there is global well-posedness and scattering in the energy space for the energy critical wave equation. Moreover, above this threshold, there is blow-up in finite time. The approach is a mixture of variational methods and elliptic techniques, with oscillatory integral techniques.