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Yu Deng* (yudeng@math.princeton.edu). *Invariant measures for the Benjamin-Ono equation.*

We consider the periodic Benjamin-Ono equation. For each conserved quantity E_k with leading term $\|u\|_{\dot{H}^k}^2$, there is a formally invariant weighted Gaussian measure ν_k . We first prove the invariance of ν_k for $k = 1$ (i.e. the Gibbs measure), then discuss the case $k \in \{2, 3\}$. The latter is joint work with N. Tzvetkov and N. Visciglia. (Received September 17, 2013)