1139-76-672 **Robin Ming Chen**, **Sam Walsh** and **Miles H. Wheeler*** (`miles.wheeler@univie.ac.at`).
Spatial asymptotics for solitary waves in deep water.

We consider the behavior near spatial infinity of a localized traveling wave on the surface of an infinitely deep fluid. In a variety of settings and under suitable decay assumptions, we show that the leading order term in these asymptotics is a dipole term. This has many implications for the wave, particularly in the simpler settings where the dipole moment in the expansion is given explicitly in terms of the kinetic energy. As an application, we provide detailed asymptotics for the waves with compactly supported vorticity constructed in [Shatah–Walsh–Zeng 2013]. (Received February 20, 2018)