Amanda Folsom, Sharon Garthwaite, Soon-Yi Kang, Holly Swisher and Stephanie Treneer\* (stephanie.treneer@wwu.edu). \textit{Quantum mock modular forms arising from eta-theta functions.}

We investigate mock modular forms whose shadows are theta functions that are also eta-quotients (hereafter called eta-theta functions). Recently Lemke Oliver classified all weight $1/2$ and $3/2$ eta-theta functions. Using the methods from Zwegers thesis, we catalog mock modular forms whose shadows are one of the six weight $3/2$ eta-theta functions and which are further related to weight $1/2$ eta-theta functions. We then prove quantum modularity properties for one canonical choice of mock modular form corresponding to each of the six shadows. (Received September 21, 2015)