

1128-11-292

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(stephanie.treeneer@wwu.edu), Department of Mathematics, Western Washington University, 516 High Street, Bellingham, WA 98225-9063. *Quantum mock modular forms arising from eta-theta functions.*

We consider mock modular forms whose shadows are both theta functions and eta-quotients (hereafter called eta-theta functions). Using Lemke Oliver's classification of all eta-theta functions, and methods of Zwegers, we construct mock modular forms from the eta-theta functions with even character, whose shadows are one of the six eta-theta functions with odd character. We then prove quantum modularity properties for one canonical choice of mock modular form corresponding to each of the six shadows. (Received February 28, 2017)