

1119-11-79

**Amanda Folsom** and **Paul Jenkins\*** (jenkins@math.byu.edu). *Zeros of modular forms of half integral weight.*

We study canonical bases for spaces of weakly holomorphic modular forms of level 4 and weights in  $\mathbb{Z} + \frac{1}{2}$  and show that almost all modular forms in these bases have the property that many of their zeros in a fundamental domain for  $\Gamma_0(4)$  lie on a lower boundary arc of the fundamental domain. Additionally, we show that at many places on this arc, the generating function for Hurwitz class numbers is equal to a particular mock modular Poincaré series, and show that for positive weights, a particular set of Fourier coefficients of cusp forms in this canonical basis cannot simultaneously vanish. (Received February 08, 2016)