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Aaron Pollack* (apollack@ucsd.edu). *The next-to-minimal modular form on quaternionic E_8 .*

The group $E_{8,4}$ —also known as quaternionic E_8 —admits a very special class of automorphic functions, the so-called ”modular forms”. These special automorphic forms were singled out by Gross-Wallach and Gan-Gross-Savin. All of these ”modular forms” admit a semi-classical Fourier expansion and Fourier coefficients, similar to the robust Fourier expansion of Siegel modular forms. I will explain the construction of what is known as the next-to-minimal modular form on $E_{8,4}$, and a proof that it has rational Fourier coefficients. This uses key input from Gordan Savin. (Received January 16, 2021)