1086-11-77 **Graeme Taylor*** (magdt@bristol.ac.uk) and **Gary Greaves**. *Lehmer's conjecture for Hermitian matrices over the Eisenstein and Gaussian integers.*

We solve Lehmer's problem for a class of polynomials arising from Hermitian matrices over the Eisenstein and Gaussian integers: any such polynomial has Mahler measure at least $\lambda_0 = 1.17628\ldots$. To do so, we classify (via graphs) all such matrices with Mahler measure at most 1.3. (Received July 07, 2012)