1147-11-798 **Evan P. Dummit*** (evan.dummit@asu.edu), 901 S Palm Walk, Arizona State University, Tempe, AZ 85287, and **David S. Dummit** and **Hershy Kisilevsky**. *Unit Signatures in Real Cyclotomic Fields.*

For a positive integer m, with ζ_m denoting a primitive mth root of unity, each unit of the real cyclotomic field $K_m^+ = \mathbb{Q}(\zeta_m + \zeta_m^{-1}$ has an associated "signature" indicating the sign (positive or negative) of each of its $\varphi(m)/2$ real embeddings. The collection of such unit signatures is an elementary abelian 2-group whose rank measures how many different possible signs arise from units of K_m^+. I will discuss some recent results (joint with D. Dummit and H. Kisilevsky) on signatures of circular units in these fields: we show that the signature rank tends to infinity with m, and that the difference between the signature rank and its maximum possible value is bounded in certain vertical towers but (conditional on other results) can become arbitrarily large in general. (Received January 28, 2019)