1136-20-576 **Stephen Trefethen*** (sjtrefethen@wm.edu). *Finite Groups with Cyclotomic Fields of Values.*
Let G be a finite group. The field of values of G is the extension of $\mathbb{Q}$ defined by $\mathbb{Q}(G) := \mathbb{Q}(\{\chi(g)|g \in G, \chi \in \mathrm{Irr}(G)\})$, where $\mathrm{Irr}(G)$ is the set of complex irreducible characters of G. We say that G has a cyclotomic field of values if $\mathbb{Q}(G) \subseteq \mathbb{Q}(\zeta_p)$ for some prime p, where ζ_p is a primitive p-th root of unity. Joan Tent has classified the possible cyclic composition factors of solvable groups with cyclotomic fields of values. In this talk, we discuss the possible non-abelian composition factors of non-solvable groups with cyclotomic fields of values. (Received January 22, 2018)