1145-20-265 **Sarah Croome*** (scroome@math.kent.edu) and **Mark L. Lewis**. *Character codegrees of p-groups.* Preliminary report.

Let G be a p-group and let χ be an irreducible character of G. The codegree of χ is given by $|G : \ker(\chi)|/\chi(1)$. The set of codegrees of the irreducible characters of G is denoted $\operatorname{cod}(G)$. If $|\operatorname{cod}(G)| = 4$, then G has nilpotence class at most 4 whenever G either has coclass at most 3, largest character degree p^2, or $|G : G'| = p^2$. Similar conditions exist which guarantee the existence of p^2 as a codegree of G. If $|G| = p^{n+1}$ then $\operatorname{cod}(G)$ contains all powers of p up to p^n if and only if G satisfies one of three cases, including the case when G has maximal class and two character degrees. If G has maximal class and $|G|$ is large enough, then p^3 and p^4 are in $\operatorname{cod}(G)$. The codegrees of maximal class p-groups which are also metabelian or normally monomial are always consecutive powers of p. The question arises whether all maximal class p-groups have consecutive p-power codegrees. (Received August 27, 2018)