1114-20-266   **Alexandre Turull***, Department of Mathematics, University of Florida, Gainesville, FL 32611.
Strengthenings of the Dade Projective Conjecture for p-solvable groups. Preliminary report.

Dade's Projective Conjecture has been the object of intense study. While it is known to be true for all p-solvable groups by work of Robinson, it remains open in general. Strengthenings of the McKay Conjecture and the Alperin Weight Conjecture proposed by Isaacs and Navarro suggested a natural strengthening of the Dade Projective Conjecture. In a different direction, the Dade Projective Conjecture was also strengthened by Boltje. The resulting strengthened Dade Projective Conjectures were studied for p-solvable groups by Glesser. Turull proposed a different strengthening of the McKay Conjecture. In this talk, we adapt Turull's Conjecture to the point of view of Dade's Projective Conjecture, and to Boltje's Conjecture. We then discuss the proofs of the resulting conjectures (with all the above mentioned strengthenings) for all p-solvable finite groups. As a consequence, we obtain Uno's version of the Dade Projective Conjecture for all p-solvable finite groups. The proof develops a Clifford theory for alternating sums of numbers of characters which respects the rationality of the characters. (Received August 30, 2015)