## 1135-20-666 Martino Garonzi and Luise-Charlotte Kappe\*, menger@math.binghamton.edu, and Eric Swartz. On covering numbers of groups.

A set of proper subgroups is a cover for a group if its union is the whole group. The minimal number of subgroups needed to cover a group is called its covering number. No group is the union of two proper subgroups. Tomkinson showed that the covering number of a solvable group has the form prime-power-plus-one and for each such integer there exists a solvable group having this integer as a covering number. In addition he showed that 7 is not a covering number. So far it has been shown that the integers < 27, which are not covering numbers, are 2,7,11,19,21,22 and 25. We extend this list by determining all integers < 129 which are covering numbers. (Received September 12, 2017)