1056-20-1247 **Luise-Charlotte Kappe*** (`menger@math.binghamton.edu`), Department of Mathematical Sciences, PO Box 6000, Binghamton, NY 13902-6000, **Marcin Mazur**, NY, and **Gabriela Mendoza** and **Michael B Ward**. *On simple minimal non-p-closed and non-p-exponent closed groups.*

Let p be a prime. A group is called p-closed if it has a normal Sylow p-subgroup and it is called p-exponent closed if the elements of order dividing p form a subgroup. Let E be a group theoretic property. We say a group is a minimal non-E-group, if it is not an E-group but its proper subgroups and homomorphic images are. We explore minimal non-E-groups in the case $E = p$-closed and $E = p$-exponent closed and investigate their connections. Those classes contain only solvable and simple groups. In this talk we focus on simple groups. The solvable groups will be discussed in another talk at these meetings. Using the classification of finite simple groups, simple minimal non-p-closed groups can be determined for $p < 11$. In these cases, any minimal non-p-closed group is also minimal non-p-exponent closed. It is an open question wether this is true in general for simple groups and arbitrary p. In general we can say that both kinds of groups have cyclic Sylow p-subgroups. (Received September 21, 2009)