1042-57-98   **Peter D Horn*** (`phorn@rice.edu`), Mathematics Department – MS 136, Rice University, P.O. Box 1892, Houston, TX 77251-1892. *Higher-order genera of knots.*

T. Cochran, K. Orr, and P. Teichner have introduced two filtrations of the knot concordance group. The Grope filtration (the more geometric of the two) is our object of study. For knots lying in certain levels of the Grope filtration, we define the higher-order genera, which are higher-order analogues to slice genus. We find lower bounds for these numerical invariants, prove they are independent of slice genus, and discuss why they give a refinement of the Grope filtration. (Received August 13, 2008)