1042-52-195   **David V Feldman*** (`David.Feldman@unh.edu`), Department of Mathematics, Durham, NH 03824, and **Daniel Klain** (`Daniel_Klain@uml.edu`), Department of Mathematical Science, Lowell, MA 01854. *Convex bodies with prescribed cross-sections-up-to-homothety.* Preliminary report.

A convex body and a direction determine, by taking orthogonal cross-sections, in particular, a linearly-ordered family of codimension-one convex-bodies-up-to-homothety. We characterize such families as arise in said fashion. Our characterization then allows the construction of convex bodies with approximately universal cross-sections (up to homothety) in a dense set of directions. (Received August 18, 2008)