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Denis R. Hirschfeldt* (drh@math.uchicago.edu), Department of Mathematics, University of Chicago, 5734 S. University Ave., Chicago, IL 60637. *Subclasses of the K -trivial sets*. Preliminary report.

There has been great recent interest in the study of sets that are “randomness-theoretically weak”. In particular, the class of K -trivial sets has emerged as an important object in the study of relative algorithmic randomness, including its applications to computability theory. There is an ongoing research effort to both obtain new characterizations of K -triviality and search for other similar natural classes of sets. In particular, recent work has brought into light several natural subclasses of the class of K -trivial sets, but it is still an open question whether any of these is a proper subclass. I will describe some of these classes, and discuss recent results that motivate their definitions. (Received August 31, 2006)