

1138-05-164      **Neil Epstein\***, George Mason University, Fairfax, VA 22030. *Partial matroids*. Preliminary report.

As a development from previous joint work with Joseph Brennan on “generic matroids”, a new combinatorial structure is here introduced that is somewhat more restrictive than the traditional matroid structure, called the *partial matroid*. Many restrictions of a partial matroid are actual matroids (and indeed some of these restrictions will be part of the axiomatization), but the axioms for the overall structure are weaker. Examples include ordinary matroids, graded Noether normalizations of a finitely generated algebra over a field, and minimal reductions of an ideal in a local Noetherian ring. Axiom systems in terms of e.g. independent sets, bases, closure, and flats, as well as cryptomorphisms between them, will be exhibited. (Received February 08, 2018)