1109-16-103 **David J Saltman*** (saltman@idaccr.org), 805 Bunn Dr, Princeton, NJ 08540. *Division algebras and separable subfields.* Preliminary report.

If D/F is a division algebra (finite dimensional) and K/F is a Galois maximal subfield then this forces D/F to be a crossed product, which is a strong constraint on the algebra structure of D. Generic separable K/F have Galois group the symmetric group S_n (i.e. the Galois group of its Galois closure) but one can ask whether there are algebraic consequences of D/F having maximal K/F where the Galois group of K/F is smaller than S_n (but bigger than order n). With the machinery we develop we answer questions about the asymptotic behavior of $(KaK)^m$ and characterize when aK consists entirely of n power central elements. This is joint work with Eli Matzri, Louis Rowen, and Uzi Vishne. (Received January 26, 2015)