1014-12-881 **David J Saltman*** (saltman@math.utexas.edu), The University of Texas at Austin, Department of Mathematics, 1 University Station C1200, Austin, TX 78712. *Division algebras over surfaces.* Preliminary report.

The subject of this talk is division algebras D/F over fields F where F is the function field of a surface S. More specifically, we are interested in such D/F where the degree, q, is prime. In the special case where S is a relative curve over the p adic integers, and $q \neq p$, we show such D are cyclic algebras. Our arguments are quite general in many places and so lead to a weaker result for general S. Namely, assuming q is prime to all residue characteristics and F contains a primitive q root of one, we show that for all such D there is a q degree cyclic Galois extension which splits all the ramification of D. From these and related considerations, we have been led to make two conjectures we will briefly discuss. First, suppose F is the field of fractions of a 2 dimensional regular local ring R and F^h is the field of fractions of the henselization of R. We conjecture that the Brauer group map $Br(F) \to Br(F^h)$ is onto. Second, leaving the restriction to surfaces, we conjecture for any D/F of prime degree q there is a degree q cyclic Galois extension splitting all the ramification of D. (Received September 26, 2005)