1116-14-1481 **S. Allen Broughton*** (brought@rose-hulman.edu), Department of Mathematics, Rose-Hulman Institute of Technology, 5500 Wabash Avenue, Terre Haute, IN 47803. *Quasi-platonic actions of some simple groups on Riemann surfaces and their dessins d'enfant.* Preliminary report.

A quasi-platonic action of the group G on the Riemann surface S is a conformal action of G on S such that S/G is a sphere and the projection $S \to S/G$ is branched over $\{0, 1, \infty\}$. The action is induced by a triple of $(a, b, c) \in G^3$, generating G, with $abc = 1$. The quasi-platonic action induces a regular dessin d'enfant on S, and S is defined over a number field. The absolute Galois group $\mathrm{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ acts on dessins, hence quasi-platonic actions, by acting on the coefficients of a defining equation of S. The action of $\psi \in \mathrm{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ on triples is $(a, b, c) \to (ua^t u^{-1}, vb^t v^{-1}, wc^t w^{-1})$, for some $(u, v, w) \in G^3$, according to the branch cycle argument. The integer t is characterized by the action of ψ on cyclotomic subfields of $\overline{\mathbb{Q}}$, and (u, v, w) is determined by the action of ψ away from cyclotomic subfields. In this talk we discuss the action of the absolute Galois group on quasi-platonic actions on some simple groups. In particular, we show that the Galois action on quasi-platonic actions of $PSL_2(q)$ depends only the action on cyclotomic subfields. (Received September 20, 2015)