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**S. Allen Broughton\*** ([brought@rose-hulman.edu](mailto:brought@rose-hulman.edu)), Department of Mathematics, Rose-Hulman Institute of Technology, Terre Haute, IN 47803. *Symmetric surfaces with quasi-platonic  $PSL(2, q)$  action*. 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  $S \rightarrow S/G$  is branched over three points. The surface  $S$  is called symmetric if there is an anti-conformal involution  $\phi$  of  $S$ , called a symmetry. Equivalently,  $S$  has a defining equation with real coefficients, and so the mirror (fixed point subset) of  $\phi$  is a real curve. We are particularly interested in the case where  $G = PSL(2, q)$  and  $\phi$  normalizes the  $G$ -action. In this case  $S$ , typically carries a tiling by hyperbolic triangles and the group generated by the reflection in the sides of the triangles is  $G^* = \langle \phi \rangle \rtimes G$ . In this talk we describe the quasi-platonic actions of  $PSL(2, q)$  admitting a normalizing symmetry  $\phi$ . We address three questions about symmetries: The number of conjugacy classes of symmetries in  $G^*$ , the number of ovals in the mirror of a symmetry, and whether the mirror of the symmetry separates the surface. (Received May 29, 2015)