1103-53-190 **Gregory D Laun*** (glaun@math.umd.edu). *Coxeter Extensions of Affine Deformations of the Two-Holed Cross Surface.*

The space of proper affine deformations of the two-holed cross surface have been classified by Charette, Drumm, and Goldman. Let $\Sigma$ be a two-holed cross-surface, or equivalently a one-holed Mobius band. Let $\pi$ denote $\pi_1(\Sigma)$, the fundamental group. Then $\pi$ is isomorphic to $\mathbb{F}_2$, the (nonabelian) free group on two generators. It is known that any irreducible representation $\phi : \mathbb{F}_2 \to \mathrm{SL}(2,\mathbb{C})$ embeds as an index-2 subgroup of a representation $\mathbb{Z}/2\mathbb{Z} * \mathbb{Z}/2\mathbb{Z} * \mathbb{Z}/2\mathbb{Z} \to \mathrm{PSL}(2,\mathbb{C})$. It is reasonable to ask therefore which affine deformations of $\phi$ also give rise to such "Coxeter extensions", which we here use to mean a *reflection group* that double-covers the image of the representation.

We discuss what is currently in the literature about reflection groups in connection with affine deformations, as well as results from work in progress. (Received August 19, 2014)