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Sean D Lawton* (slawton@math.ksu.edu), Kansas State University, Mathematics Department,
125 Cardell Hall, Manhattan, KS. *Symmetry in $SL(3, \mathbb{C})$ -Character Varieties.*

The representations from a free group into $SL(3, \mathbb{C})$ are an affine variety \mathfrak{R} . The affine group $SL(3, \mathbb{C})$ acts rationally on the coordinate ring of \mathfrak{R} by conjugation. It is known that the ring of invariants of this action is generated by traces of words in generic matrices. We describe minimal generators, and a maximal algebraically independent subset which exhibits surprising symmetry induced by the outer automorphisms of the free group. (Received August 02, 2006)