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**Christopher Brav\*** ([brav@math.toronto.edu](mailto:brav@math.toronto.edu)). *The projective McKay correspondence.*

Alexander Kirillov Jr. has described a McKay correspondence for finite subgroups of  $PSL_2(\mathbb{C})$  which associates to each ‘height’ function an affine Dynkin quiver, together with a derived equivalence between equivariant sheaves on  $\mathbb{P}^1$  and representations of this quiver. The equivalences for various height functions are related by reflection functors for quiver representations.

We develop an analogous story for the cotangent bundle of  $\mathbb{P}^1$ , in which each height function gives a derived equivalence between equivariant sheaves on the cotangent bundle and modules over the preprojective algebra of an affine Dynkin quiver. These various equivalences are related by the spherical twists of Seidel-Thomas, which take the place of the reflection functors for  $\mathbb{P}^1$ . (Received January 31, 2009)