

1135-14-146

**Perry Robert Strahl\*** ([perrystrahl@gmail.com](mailto:perrystrahl@gmail.com)). *The Picard Group of Genus Zero Stable Quotients to Flag Varieties*. Preliminary report.

We compute the Picard group of the moduli space of genus zero stable quotients to projective space, Grassmannians, and any flag variety in the case of more than 2 markings. Furthermore, in the case of exactly 2 markings, we calculate the Picard group of the moduli space of genus zero stable quotients to projective space, Grassmannians, and to partial flag varieties where the ranks of the subspaces differ by more than 1. The first two moduli spaces mentioned are due to Alina Marian, Dragos Oprea, and Rahul Pandharipande. The latter is a generalization of this theory, originally due to Ionuț-Ciocan Fontanine, Bumsig Kim, and Daveshe Maulik. Projectivity of the coarse moduli space is proved first. The Picard rank is obtained using a torus action on the moduli space to perform tangent space calculations. When the number of markings is  $\geq 3$ , generators are determined by a geometric analysis of the interior of the moduli space. When the number of markings is 2, generators and relations are found by intersecting with curves. (Received August 03, 2017)