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**Honglu Fan\*** ([fan@math.utah.edu](mailto:fan@math.utah.edu)), 1613 Lone Peak Drive, Holladay, UT 84117. *Chern classes and Gromov-Witten invariants of projective bundles.*

Given the cohomology ring of the base, one can determine the cohomology ring of a projective bundle by its Chern classes. In the past decades, the quantum cohomology ring has arisen as a deformation of the cohomology ring that also contains enumerative information about rational curves. It's natural to ask the following question: Given the quantum cohomology of the base, how much do Chern classes determine the one of a projective bundle? Under a torus action, a parallel statement in equivariant theories can be tested by Atiyah-Bott localization theory, which reduces the problem to sums over decorated graphs that has a combinatorial feature. I would like to survey what is known, and talk about a work in progress in an attempt to prove that the genus-0 equivariant Gromov-Witten theory (thus its quantum cohomology) of a projective bundle is uniquely determined by the equivariant Chern classes, if the base is a GKM manifold. (Received February 07, 2016)