On the quasitoric bundles

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Looking back on the partial classification results of quasitoric manifolds, we notice that "bundle-type" ones are especially standing out. For example, in the classification of quasitoric manifolds with the second Betti number 2 [1], most of them are fiber bundles whose the base spaces and fibers are complex projective spaces.

In [2], I introduced a new notion called quasitoric bundle to give a precise definition of the term "bundle-type quasitoric manifold." In the more recent study of them, it is proved that the classifying space BT of a compact torus T works as the classifying space of quasitoric bundles in a certain sense. Moreover, there are some applications of this fact to the topological classification of bundle-type quasitoric manifolds.

References

[1] S. Choi, S. Park, and D. Y. Suh, *Topological classification of quasitoric manifolds with the second Betti number* 2, Pacific J. Math. 256(1) (2012), 19–49

[2] S. Hasui, *On the cohomology equivalences between bundle-type quasitoric manifolds over a cube*, Algebr. Geom. Topol. **17** (2017), 25–64.