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Invariant Hilbert schemes

Let \mathbb{X} be an affine toric variety under an algebraic torus \mathbb{T} and let $T \subset \mathbb{T}$ be a subtorus. The general T -orbit closures and their limits are parameterized by the main component H_0 of the toric Hilbert scheme (whose existence follows from work of M. Haiman and T. Sturmfels [3]). Further, the quotient \mathbb{T}/T acts on H_0 with an open orbit. We describe the fan of this toric variety [2].

We shall also give some examples of construction of the invariant Hilbert scheme [1], which is a generalization of a toric Hilbert scheme on the case of a reductive group action.

REFERENCES

- [1] V. ALEXEEV AND M. BRION, *Moduli of affine schemes with reductive group action*, J. Algebraic Geom. **14** (2005), no. 1, 83-117.
- [2] O. CHUVASHOVA, *The main component of the Hilbert scheme*, arxiv: math.AG/0603703
- [3] M. HAIMAN AND B. STURMFELS, *Multigraded Hilbert schemes*, J. Algebraic Geom. **13** (2004), 725–769.