

## Cox rings of toric bundles

Section rings of arbitrary line bundles on toric varieties are polytopal semigroup rings and thus always finitely generated. A related question is whether the section ring of the Serre line bundle on the projectivization of a toric vector bundle is always finitely generated. It turns out that this is not the case. We show this by finding toric vector bundles whose Cox ring is a polynomial ring over the Cox ring of the blow up of points in projective space. The latter is well known not to be finitely generated in general. This is joint work with José González, Sam Payne and Hendrik Süß.