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Jose Luis Gonzalez* (jgonza@umich.edu), Department of Mathematics, University of Michigan, Ann Arbor, MI 48109. *Cox rings and pseudoeffective cones of projectivized toric vector bundles.*

Projectivized toric vector bundles are a large class of rational varieties that share some of the pleasant properties of toric varieties and other Mori dream spaces. Hering, Mustața and Payne proved that the Mori cones of these varieties are polyhedral and asked whether their Cox rings are indeed finitely generated. In this talk we give a complete answer to this question. There are now several proofs of a positive answer in the rank two case [Knop, Hausen-Süß, Gonzalez]. For any rank greater than two we present projectivized toric vector bundles for which the Cox ring and the pseudoeffective cones can be identified with those of the projective space blown up at a finite set of points of our choice [Gonzalez-Hering-Payne-Süß]. This yields many new examples of Mori dream spaces, as well as examples of projectivized toric vector bundles where the pseudoeffective cone is not polyhedral and the Cox ring is not finitely generated. (Received July 28, 2010)