

Smooth projective varieties with a torus action of complexity 1 and Picard number 2

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Abstract. We give an explicit description of all smooth varieties with a torus action of complexity one having Picard number at most two. As a consequence, we classify in every dimension the smooth (almost) Fano varieties with a torus action of complexity one having Picard number two. It turns out that all the Fano examples are obtained via an iterated generalized cone construction from a series of smooth varieties of dimension at most seven.

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