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This is work in progress with Yael Karshon.

We develop a localization formula in equivariant cohomology which generalizes both the classical Duistermaat-Heckman formula and the localization formula of Paradan and Woodward for the norm-square of the moment map. Applying a case of our formula to a toric variety, we recover the classical Brianchon-Gram decomposition of a polytope, thus answering a question posed by Shlomo Sternberg. (Received August 08, 2006)