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Dung Trang Le and **Jose Seade*** (jseade@math.unam.mx), Instituto de Matemáticas, Laboratory of Cuernavaca, UNAM, 62191 Cuernavaca, Morelos, Mexico, and **Alberto Verjovsky**. *Orthogonal actions in complex projective spaces and an equivariant Arnold-Kuiper-Massey Theorem.*

This talk is about joint work with Lê Dũng Tráng and Alberto Verjovsky. We start by looking at the orbit decomposition of the usual action of $O(n, R)$ in the complex projective space P_C^n in order to describe the geometry and topology of the pair (P_C^n, Q) , where Q is a non-singular quadric. This is a cohomogeneity 1 isometric action. Then we use this information to prove an equivariant version of the theorem of Arnold, Kuiper and Massey, that P_C^2 modulo conjugation is the 4-sphere. Our proof is fairly elementary and is very similar to the proof given recently by Atiyah and Berndt, which generalizes to the fields of quaternions and the octonions. (Received February 23, 2004)