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Minimal Parabolic Subgroups and Automorphism Groups of Schubert Varieties

Let G be a simple simply-laced algebraic group of adjoint type over the field $\mathbb{C}$ of complex numbers, B be a Borel subgroup of G containing a maximal torus T of G. In this article, we show that ω_α is a minuscule fundamental weight if and only if for any parabolic subgroup Q containing B properly, there is no Schubert variety $X_Q(w)$ in G/Q such that the minimal parabolic subgroup P_α of G is the connected component, containing the identity automorphism of the group of all algebraic automorphisms of $X_Q(w)$.

Keywords: Minuscule weights, co-minuscule roots, Schubert varieties, automorphism groups.

MSC: 14M15, 14M17.