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 $\omega_\alpha$ 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 $P_\alpha$ 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.