

Automorphisms of some buildings that map no chamber to an opposite one

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In this talk, we characterize symplectic polarities as the only dualities of projective spaces that map no chamber to an opposite one. Also, we classify the collineations of generalized quadrangles which map no flag to an opposite one. Here, three infinite classes of examples occur and also three sporadic cases in small quadrangles. We also show that every collineation of any generalized $(2n+1)$ -gon maps some flag to an opposite one. Finally, we characterize the automorphisms of generalized $2n$ -gons that map no point to an opposite one.