

On Fano and weak Fano regular semisimple Hessenberg varieties

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Regular Hessenberg varieties are a family of subvarieties of the full flag variety G/B . This family contains the full flag variety, Peterson variety and permutohedral variety. In this talk, we discuss the Fano and weak Fano regular semisimple Hessenberg varieties in type A. We give a sufficient and necessary condition, in terms of Hessenberg functions, for a regular semisimple Hessenberg variety to be Fano and weak Fano. This is joint work with Hiraku Abe and Naoki Fujita.