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Judson P. Stryker* (jay.stryker@gmail.com). *Positivity of Chern classes for Schubert varieties in low codimension.*

Few results are known on the positivity of Chern-Schwartz-MacPherson classes of singular varieties. Aluffi and Mihalcea conjectured that these classes are effective for Schubert varieties in Grassmannians, and B. Jones proved some cases of this conjecture. We examine this question by applying combinatorial methods to a formula by Aluffi and Mihalcea. This technique establishes positivity for some known cases very quickly, such as those considered by Jones, as well as establishing positivity for families of cases that were previously unknown. An unexpected connection between one family of cases and a steady state Fokker-Plank equation was also found. (Received September 22, 2010)