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Frank Sottile* (sottile@math.tamu.edu), Department of Mathematics, Mailstop 3368, Texas A&M University, College Station, TX 77840-3368. *Experimentation at the frontier of reality in Schubert calculus*. Preliminary report.

The story of the deeply surprising proof and consequences of the recent theorem of Mukhin, Tarasov, and Varchenko (née the Shapiro Conjecture) will be the subject of an address in this year's AMS Current Events Bulletin. The interest in that conjecture was due in no small part to massive computation evidence that was amassed in its study, as the conjecture was originally considered too strong to possibly be true.

This talk will be concerned with the gathering of evidence for some extensions of the Shapiro conjecture. In particular, I will explain how our research team at Texas A&M University is organizing and controlling a computational experiment involving hundreds of computers and hundreds of Gigahertz-years of computation in the pursuit of evidence for one generalization which we call the secant conjecture. (Received September 08, 2008)