1051-13-114   **Christopher J. Hillar** (`chillar@msri.org`), Mathematical Sciences Research Institute, 17 Gauss Way, Berkeley, CA 94120, and **Abraham Martín del Campo*** (`asanchez@math.tamu.edu`), Texas A&M University, Department of Mathematics, 3368 TAMU, College Station, TX 77843-3368. *Finiteness theorems for chains of toric ideals.*

We consider a problem that arises in both chemistry and algebraic statistics, namely, describe the algebraic relations between (a possible infinite number of) experimental measurements. These are symmetric ideals associated in a particular way to a fixed polynomial. In the special case when this fixed polynomial is a monomial, the ideal is a toric ideal.

   We present a new finiteness result, which states that, up to symmetry, there are a finite number of generators for such toric ideals in possibly an infinite number of variables. This is a joint work with Chris Hillar. (Received August 20, 2009)

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