1083-05-113   **Alex Engstrom**, **Patricia Hersh*** (`plhersh@ncsu.edu`) and **Bernd Sturmfels**. *Toric cubes.*

A toric cube is a subset of the standard cube defined by binomial inequalities. These basic semialgebraic sets are precisely the images of standard cubes under monomial maps. We study toric cubes from the perspective of topological combinatorics. Explicit decompositions as CW-complexes are constructed. Their open cells are interiors of toric cubes and their boundaries are subcomplexes. The motivating example of a toric cube is the edge-product space in phylogenetics, and our work generalizes results known for that space. (Received August 23, 2012)