1078-53-21 Mohammed Abouzaid, Clay Mathematics Institute and MIT, Cambridge, MA, Denis Auroux\* (auroux@math.berkeley.edu), Department of Mathematics, UC Berkeley, 970 Evans Hall, Berkeley, CA 94720-3840, and Ludmil Katzarkov, Dept. of Mathematics, University of Miami, Coral Gables, FL. Lagrangian fibrations on blowups of toric varieties and mirror symmetry for hypersurfaces. Preliminary report.

This talk will focus on mirror symmetry for blowups of toric varieties from the perspective of the Strominger-Yau-Zaslow conjecture. Namely, we consider a certain Lagrangian torus fibration on the blowup of a toric variety along a codimension 2 subvariety contained in a toric hypersurface. This allows us to construct the SYZ mirror and its instanton corrections, and to provide an explicit description of the mirror Landau-Ginzburg model (up to higher order corrections). In this manner one can geometrically construct mirrors of essentially arbitrary hypersurfaces in toric varieties. We will focus on simple examples in low dimensions to explain the general construction. (Received October 13, 2011)