1038-55-303   **Tyler D Lawson*** (`tlawson@math.umn.edu`), Department of Mathematics, University of Minnesota, 206 Church Street S.E., Minneapolis, MN 55455, and **Mark Behrens**. *Elliptic cohomology and abelian surfaces.* Preliminary report.

This talk will describe continuing work to understand stable homotopy theory by methods involving moduli of abelian varieties, inspired by previous work on K-theory and elliptic cohomology. These theories exist at all levels of the "chromatic filtration," but initially bear little relation to the original objects of study. I will decribe how, at chromatic level 2, this theory based on abelian surfaces with complex multiplication actually exhibits strong connections with the theory of topological modular forms. (Received February 12, 2008)