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William McCallum^{*} (wmc@math.arizona.edu), Department of Mathematics, University of Arizona, Tucson, AZ 85721. The Cassels-Tate Pairing for Jacobians of Fermat Curves. Preliminary report.

In this talk we present some preliminary results on the Cassels-Tate pairing for the jacobian of a Fermat curve, arising out of recent work of Romyar Sharifi and the author on a cup product pairing in the cohomology of number fields, and work of Ben Levitt and the author on the Shafarevich-Tate group of the jacobian of a Fermat curve. (Received August 15, 2006)