1078-11-211 **Shichun Yang**, **Bo He** and **Alain Togbe*** (atogbe@pnc.edu), 1401 S. U.S. 421, Westville, IN 46391. *Diophantine equations with products of consecutive values of a quadratic polynomial.*

Let a, b, c, d be given nonnegative integers with $a, d \geq 1$. We consider the Diophantine equation

$$\prod_{k=1}^{n}(ak^2 + bk + c) = dy^l, \quad \gcd(a, b, c) = 1,\ l \geq 2,$$

where $ax^2 + bx + c$ is an irreducible quadratic polynomial. We will show how one can obtain a computable sharp upper bound to n. Using this bound, we entirely prove some conjectures set by Amdeberhan, Medina and Moll in 2008. Moreover, we will the solutions of other related equations. This is a joint work with B. He and S. Yang. (Received December 08, 2011)