1146-11-200　　　　**M. Ram Murty** and **Neha Prabhu*** (`neha.prabhu@queensu.ca`). *The error term in the Sato-Tate theorem of Birch.*

In 1968, Birch proved a vertical analogue of the Sato-Tate conjecture for elliptic curves. For p prime, he investigated the asymptotic behaviour of $a_E(p)$, the second order term in the expression for the number of points on E defined mod p, as p grows. An error term for this result was obtained by Banks and Shparlinski in 2009 using the work of Katz and Deligne. We show that this error term can also be obtained in an elementary fashion using ideas in Birch's paper. (Received January 22, 2019)