1145-11-2154 **Özlem Ejder*** (ejder@math.colostate.edu), Department of Mathematics, Louis R. Weber Building, 841 Oval Drive, Fort Collins, CO 80523. *Modular Symbols for Fermat Curves.*

Let F_n denote the Fermat curve given by $x^n + y^n = z^n$ and let μ_n denote the Galois module of nth roots of unity. It is known that the integral homology group $H_1(F_n, \mathbb{Z})$ is a cyclic $\mathbb{Z}[\mu_n \times \mu_n]$ module. In this talk, we will see that this result can also be described using modular symbols and the modular description of Fermat curves. We will also talk about how these computations can be used in understanding the action of the Galois group of $\mathbb{Q}(\zeta_n)$ on the certain homology groups of F_n. (Received September 24, 2018)