1046-05-737   **Zachary Bradshaw*** (`bradshawz@vcu.edu`), 1718 Hanover Ave, Richmond, VA 23220. *Minimum cycle bases of direct products of complete graphs.*

We determine minimum cycle bases of the direct product of the complete graphs K_n and K_2. The problem has previously been solved for $K_m \times K_n$ when $m, n > 2$. We discuss two approaches characterizing these bases. One approach is tailored to the case of $K_n \times K_2$ and gives insight into the cycle space of this class of graphs. Based on the cycles seen in this solution, we illustrate the solution to the more general problem concerning $G \times K_2$ with G an arbitrary connected graph. (Received September 10, 2008)