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Zachary Higgins* (zhiggins@ufl.edu). *Universal Cycles of k -Partitions of $[n]$* . Preliminary report.

We study universal cycles of the set $P_{n,k}$ of k -partitions of the set $[n]$ and prove that the transition digraph associated with $P_{n,k}$ is Eulerian. We use this result to prove that U-cycles of $P_{n,k}$ exist for all $n \geq 3$ when $k = 2$ and for odd n when $k = n - 1$. We also prove that U-cycles do not exist for n even when $k = n - 1$ or when $S(n - 2, k - 2)$ is odd ($3 \leq k < n - 1$). (Received September 16, 2014)