1035-05-405   **Raphael Yuster*** (`raphy@math.haifa.ac.il`), Department of Mathematics, University of Haifa, 31905 Haifa, Israel. *Rainbow decompositions.*

A *rainbow coloring* of a graph is a coloring of the edges with distinct colors. We prove the following extension of Wilson's Theorem. For every integer k there exists an $n_0 = n_0(k)$ so that for all $n > n_0$, if $n \bmod k(k-1) \in \{1, k\}$ then every properly edge-colored K_n contains $\binom{n}{2}/\binom{k}{2}$ pairwise edge-disjoint rainbow copies of K_k.

The proof uses, as a main ingredient, a double application of the probabilistic method. (Received September 06, 2007)