Rayes M Ortiz-Albino* (reyes.ortiz@upr.edu), 1011 Sonsire Chalets, Mayaguez, PR 00682, and Carlos Molina. On the number of $\tau(n)$-factors. Preliminary report.

The notion of a $\tau$-factorization or $\tau$-products in the general theory of (nonatomic) factorization was defined in 2006. Since, several results have been done in general, but there is been a small interest study such type of factorization when considering the set of integers as the integral domain and $\tau$ as the equivalence relation modulo $n$. In this talk, we will present some preliminary results about the number of $\tau$-factors of a nonzero nonunit integer. As expected, when considering the equivalence relation modulo $n$ and $\phi(n) \geq 4$, the problems becomes more complicated. Hence we give a flavor of what to expect when the Euler number gets bigger. Also, as a consequences we could characterize some elements that are $\tau$-irreducible. (Received September 22, 2015)