1100-13-251 **Olgur Celikbas*** (`celikbaso@missouri.edu`), 323 Math Sciences Bldg., University of Missouri-Columbia, Columbia, MO 65211, and **Arash Sadeghi** and **Ryo Takahashi**. *On the depth formula.*

Let R be a local complete intersection ring and let M and N be nonzero finitely generated R-modules. Huneke and Wiegand proved that, if the pair (M, N) is Tor-independent, i.e., $\operatorname{Tor}_i^R(M, N) = 0$ for all $i \geq 1$, then the *depth formula* holds, i.e., $\operatorname{depth}(M) + \operatorname{depth}(N) = \operatorname{depth}(R) + \operatorname{depth}(M \otimes_R N)$. The depth formula, initially discovered by Auslander for modules of finite projective dimension, has been generalized in several directions and become central to the depth properties of tensor products.

It is not necessarily true that the depth formula implies Tor-independence, in general. In this talk we will discuss certain conditions that force the pair (M, N) to be Tor-independent when it satisfies the depth formula. The talk is based on a recent joint work with Arash Sadeghi and Ryo Takahashi. (Received February 09, 2014)