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Hariharan Ananthnarayan and **Ela Celikbas*** (celikbase@missouri.edu), 109A Math Sciences Bldg, Mathematics Department, University of Missouri, Columbia, MO 65203, and **Zheng Yang**. *Decomposing Gorenstein rings as Connected Sums*. Preliminary report.

For Gorenstein Artin k -algebras R and S where k is a field, the connected sum, $R\#_k S$, is a quotient of the classical fiber product $R \times_k S$. We show that certain Gorenstein local k -algebras decompose as connected sums. We generalize structure theorems given by Sally, Elias and Rossi that show two types of Gorenstein local k -algebras are connected sums. (Received November 19, 2012)