1083-13-194   **Hariharan Ananthnarayan** and **Ela Celikbas*** (`celikbase@missouri.edu`), 109A Math
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Zheng Yang. *Decomposing a Gorenstein Artin ring as a Connected Sum.* 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 August 27, 2012)