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Sara Faridi* (faridi@dal.ca), Mathematics Department, Dalhousie University, Halifax, NS B3H 3J5, Canada, and **Riccardo Biagioli** and **Mercedes Helena Rosas**. *On conjugacy classes of nilpotent matrices*. Preliminary report.

We discuss ideals associated to the closure of conjugacy classes of nilpotent matrices. These ideals are indexed by partitions of the size of the matrix. We then restrict to the intersection of the conjugacy class with diagonal matrices, and use a well-known generating set by Tanisaki to produce a new generating set for these ideals. Our generating set is much smaller, and in the case of hook partitions is minimal. In particular, for hooks, we are able to compute the minimal free resolution of these ideals. (Received March 04, 2006)