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Steven P. Diaz (spdiaz@syr.edu) and Mark Kleiner* (mkleiner@syr.edu), Department of Mathematics, Syracuse University, Syracuse, NY 13244-1150. Almost split morphisms, preprojective algebras, and multiplication maps of maximal rank. Preliminary report.

We show that the multiplication maps in the preprojective algebra satisfy a maximal rank property that is similar to the maximal rank property proven by Hochster and Laksov for the multiplication maps in the commutative polynomial ring. The result follows from a more general theorem about maximal rank properties of almost split morphisms and uses a grading of the preprojective algebra previously introduced by the second-named author. (Received September 19, 2005)