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*Smooth components of Springer fibers.*

We study components of Springer fibers for  $GL(n)$  associated to closed  $GL(p) \times GL(q)$ -orbits on the flag variety. Building on work of Barchini and Zierau, we show that these components have the structure of iterated fiber bundles, and hence are smooth; moreover, the components are invariant under the maximal torus of  $GL(n)$ . This allows us to obtain some multiplicity formulas related to associated cycles for discrete series representations. (Received February 09, 2009)