1051-22-269 **Leticia I Barchini*** (leticia@math.okstate.edu), 403 Mathematical Sciences, Stillwater, OK 74078. *On the geometry of certain components of the Springer Fiber.* Preliminary report.

We assume that G is a complex classical group with real form G_o and fix a Cartan involution θ. The variety $\mathcal{B}$ of Borel subalgebras in $\mathfrak{g}$ is acted upon by G^θ with orbits $\{Z_i\}$. Let $\mu : T^*(\mathcal{B}) \to \mathcal{N}^*$ denote the moment map. The fiber, $\mu^{-1}(\xi)$, at a point $\xi \in \mathcal{N}^*$ is known as the Springer fiber.

For each Z_i, we write $T^*_{Z_i}(\mathcal{B}) \subset T^*(\mathcal{B})$ for the conormal bundle to Z_i. It is known that $\mu(\overline{T^*_{Z_i}(\mathcal{B})})$ is the closure of a nilpotent K-orbit, $\mathcal{O}$. When a K-orbit Z is associated to a nilpotent orbit $\mathcal{O}$, the intersection $\mu^{-1}(\xi) \cap T^*_Z(\mathcal{B})$ is dense in a unique irreducible component of the Springer fiber.

In this talk we discuss $\mu^{-1}(\xi) \cap T^*_Z(\mathcal{B})$ for a class or orbits Z. (Received August 26, 2009)