1025-32-87   **Jennifer Halfpap*** (`halfpap@mso.umt.edu`), University of Montana, Department of Mathematical Sciences, 32 Campus Drive, Missoula, MT 59812. *The Szegö Kernel for Tubular Domains Near a Point of Infinite Type.* Preliminary report.

In joint work with Alexander Nagel and Stephen Wainger, we obtain estimates on the Szegö kernel for domains of the form $\{\,(z,w) \in \mathbb{C}^2 : \Im(w) = b(\Re(z))\,\}$ for $b \in C^\infty(\mathbb{R})$ even, convex, with b vanishing to infinite order at the origin. In particular, we consider $b(r) = \exp(-|r|^{-\alpha})$ and show through a complex function theory argumant that the Szegö kernel for such a domain has singularities off the diagonal for $\alpha \geq 1$. (Received January 16, 2007)