1015-32-127   **Loredana Lanzani***, Department of Mathematical Sciences, Fayetteville, AR 72701, and **David E. Barrett**. *Cauhy Integrals in Several Complex Variables.* Preliminary report.

We briefly review the construction of Cauchy-Fantappie' kernels that are holomorphic in the parameter – these are the natural higher dimensional generalization of the familiar Cauchy kenrel for planar domains; however, in complex dimension 2 or higher, geometric obstructions ("pseudoconvexity") arise when requiring that the kernel be holomorphic in the parameter. We then focus on a model family of convex Reinhardt domains and investigate the main features of the associated Leray kernel. The latter is a special kind of Cauchy-Fantappie' kernel that appears to be amenable to investigation in the non-smooth domain setting. This work is joint with D. E. Barrett. (Received February 01, 2006)