1062-42-96   **Alexander Volberg** (`volberg@math.msu.edu`), Department of Mathematics, Michigan State University, East Lansing, MI 48824, and **Brett D. Wick*** (`wick@math.gatech.edu`), School of Mathematics, Georgia Institute of Technology, 686 Cherry Street, Atlanta, GA 30332-0160. *Bergman-type Singular Integral Operators and the characterization of Carleson measures for Besov–Sobolev spaces on the complex ball.*

The purposes of this talk are two fold. First, we extend the method of non-homogeneous harmonic analysis of Nazarov, Treil and Volberg to handle "Bergman–type" singular integral operators. The canonical example of such an operator is the Beurling transform on the unit disc. Second, we use the methods developed to settle the important open question about characterizing the Carleson measures for the Besov–Sobolev space of analytic functions B_2^σ on the complex ball of $\mathbb{C}^d$. In particular, we demonstrate that for any $\sigma > 0$, the Carleson measures for the space are characterized by a "T1 Condition". The method of proof of these results is an extension and another application of the work originated by Nazarov, Treil and the first author. (Received July 29, 2010)