1019-46-18 **Josefina Alvarez**, Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM 88003-8001, **Michael S. Eydenberg*** (`mseyden@nmt.edu`), Department of Mathematical Sciences, New Mexico State University, Las Cruces, NM 88003-8001, and **Hamed Obiedat**, Department of Mathematics, Alhashemite University, P.O. Box 150459, Zarqa, Jordan. *The Action of Operator Semigroups on the Topological Dual of the Beurling-Bjork Space.* Preliminary report.

We study the definition of the heat semigroup on the topological dual of the Beurling-Bjork space. This space allows for almost exponential growth, extending the notion of a tempered distribution. In particular, we describe the dual as a set of boundary values of solutions to the heat equation via the action of the heat semigroup associated with the Laplacian. We also consider extensions of this result to other operator semigroups. (Received August 15, 2006)