962-35-939 **Seth F. Oppenheimer*** (seth@math.msstate.edu), Department of Mathematics and Statistics, Mississippi State University, Drawer MA, Mississippi State, MS 39762, and **Mark S Riggs** (msr1@ra.msstate.edu), Department of Mathematics and Statistics, Mississippi State University, Drawer MA, Mississippi State, MS 39762. *Recovery of a boundary flux using far boundary data.* Preliminary report.

We will report on the early stages of our work on the following project. We consider a mold of a uniform material. It is idealized as one-dimensional and of length one. The left endpoint, x=0, will be in contact with cooling molten metal. The right endpoint, x=1, will be exposed to air at a constant temperature. Assuming we know the temperature and heat flux at the right endpoint, we wish to recover the heat flux at the left endpoint. This problem is a close relative of the sideways heat equation, and our goal is to develop techniques that are stable with respect to noisy data at the right endpoint. (Received September 29, 2000)