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**Tim E. Olson\*** (tolson2@cfl.rr.com), Department of Mathematics, University of Florida, 358 Little Hall, Gainesville, FL 32611-8105. *One Dimensional Approximation of the Transfer Function for an Absorbing Media*. Preliminary report.

We will begin with a very brief outline of the problem which occurs in many applied situations. We will then recast this problem as a simple compact operator. We will show that the one dimensional subspace, characterized by the dominant singular vectors for these classes of operators, provides extremely accurate approximations to entire operator. Finally, we will discuss current Air Force efforts based on these results as well as other applications (Received August 30, 2005)