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Raluca Felea* (rxfsma@rit.edu), Rochester Institute of Technology, Rochester, NY , and **Todd Quinto** (Todd.Quinto@tufts.edu), Tufts University, Medford, MA. *Microlocal properties for the slant-hole SPECT operator.*

We analyze the model operator in the slant-hole SPECT (Single Photon Emission Computed Tomography) problems which is a particular case of a Fourier integral operator with fold/ blowdown singularities. To reconstruct an image one uses the backprojection operator which in general adds singularities. Using microlocal results, we construct a differential operator which makes the added singularities less strong than the singularities we want to image. (Received September 02, 2010)