1067-35-991 **Venky P Krishnan*** (venkyp.krishnan@gmail.com), University of Bridgeport, Department of Mathematics, 126 Park Avenue, Bridgeport, CT 06604, and **Eric Todd Quinto** (todd.quinto@tufts.edu), Tufts University, Department of Mathematics, 503 Boston Avenue, Medford, MA 02155. *Microlocal Aspects of Bistatic Synthetic Aperture Radar Imaging.*

In this article, we analyze the microlocal properties of the linearized forward scattering operator F and the reconstruction operator F^*F appearing in bistatic synthetic aperture radar imaging. In our model, the radar source and detector travel along a straight line at a fixed distance apart. We show that F is a Fourier integral operator (FIO), and we give the mapping properties of the projections from the canonical relation of F, showing that the right projection is a blow-down and the left projection is a fold. We then show that F^*F is a singular FIO belonging to the $I^{p,l}$ class with $p = 3$ and $l = 0$. (Received September 17, 2010)