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Richard B Melrose (rbm@math.mit.edu), MIT, 77 Massachusetts avenue, Cambridge, MA 02139, and **Frederic Rochon*** (rochon@math.mit.edu), MIT, 77 Massachusetts avenue, Cambridge, MA 02139. *Periodicity of the determinant line bundle.*

We will describe how Bott periodicity arises when one considers determinant line bundles. This will involve various types of pseudodifferential operators and one of the key step in the construction is to introduce an adiabatic limit. If time permits, we will show how this can be used to give a geometric proof of the cobordism of the determinant line bundle. (Received July 18, 2005)