1053-58-25   **F. Daniel Cibotaru*** (`dcibotar@nd.edu`), 1512 Rosemary Lane, Apt D, South Bend, IN 46637.
The odd Chern Character and localization formulae. Preliminary report.

We describe geometric representatives for the generators of the cohomology ring of a model of the classifying space for the odd K-theory functor, K^{-1}. The class corresponding to the degree one generator is closely related to the spectral flow of a 1-parameter family of self-adjoint, Fredholm operators. We use intersection theory to derive localization formulae that express the cohomological index of higher dimensional families of such operators as the Poincare duals of explicit 0-cycles in the parameter space. (Received June 22, 2009)