1023-47-800 **Vadim Kostrykin**, **Konstantin A. Makarov** and **Anna Skripka***
(`skripkaa@math.missouri.edu`), Department of Mathematics, University of Missouri, 202
Mathematical Sciences Bldg, Columbia, MO 65211. *Spectral averaging in von Neumann
algebras.* Preliminary report.

The celebrated Lifshits-Krein spectral shift function (SSF) is of great importance in spectral perturbation theory. A real-analysis approach to the SSF led to a spectral averaging formula due to M. Sh. Birman and M. Z. Solomyak that has found a number of applications. The original proof of this formula was based on Stieltjes' double operator integration techniques. Later, other proofs and extended versions of the spectral averaging formula were obtained. However, the setting of the problem was always restricted to operators in (or affiliated with) a I_∞ factor. We obtain an analog of this formula in the case of a finite von Neumann algebra. (Received September 21, 2006)