1125-53-1577   **Yiannis Loizides*** (`yiannis.loizides@mail.utoronto.ca`) and **Eckhard Meinrenken**.
Norm-square localization for Hamiltonian LG-spaces. Preliminary report.

Let G be a compact, connected, simply connected Lie group, and let LG denote the loop group. There is a one-one correspondence between proper Hamiltonian LG-spaces and compact *quasi*-Hamiltonian G-spaces. One of the authors ([M]) has proposed a definition for the quantization of a quasi-Hamiltonian G-space as an element in the twisted K-homology of G (the latter is related to the ring of positive energy representations of LG via the Freed-Hopkins-Teleman theorem). We prove a 'norm-square localization' formula for the quantization of a quasi-Hamiltonian G-space, with terms indexed by the components of the critical set of the norm-square of the moment map of the corresponding Hamiltonian LG-space. An important application is to give a new proof of the quantization-commutes-with-reduction theorem for quasi-Hamiltonian spaces. (Received September 18, 2016)