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**Thomas Kragh\*** (tkragh@math.mit.edu). *Fibrancy of Symplectic Homology in Cotangent Bundles.*

Let  $M$  be any exact sub-Liouville domain of a cotangent bundle  $T^*N$ . In this talk I will describe how the symplectic homology of  $M$  in a sense is "fibrant" over the base  $N$ , and how this implies that there is a Serre type spectral sequence with product converging to the symplectic homology ring of  $M$ . In particular this implies that for a closed exact Lagrangian in  $T^*N$  this spectral sequence converges to the loop space homology of  $L$  equipped with the Chas-Sullivan string product. This puts restrictions on  $L$  and in fact proves that up to a finite covering space lift of  $N$  the map  $L \rightarrow T^*N \rightarrow N$  is a homology equivalence. (Received June 22, 2011)