

1052-53-346

**Augustin Banyaga\*** ([banyaga@math.psu.edu](mailto:banyaga@math.psu.edu)), Augustin Banyaga, Department of Mathematics, McAllister Bldg, 303, University Park, PA 16802. *A Hofer-like topology and the group of strong symplectic homeomorphisms*. Preliminary report.

We define a natural (Hofer-like) topology on the space of symplectic isotopies of a closed symplectic manifold, which generalizes the hamiltonian topology of Oh-Muller on the space of hamiltonian isotopies. This induces a topology on the identity component in the group of symplectic diffeomorphisms which is a metric topology, coming from a Hofer-like metric. We use this topology to define the group of strong symplectic homeomorphisms, generalizing the group Ham of symplectic homeomorphisms of Oh-Muller. (Received September 01, 2009)