1117-82-89 **Houssam Abdul-Rahman*** (houssam@uab.edu), UAB Department of Mathematics, Campbell Hall, 1300 University Boulevard, Birmingham, AL 35294-1170, and **Günter Stolz** (stolz@uab.edu), UAB Department of Mathematics, Campbell Hall, 1300 University Boulevard, Birmingham, AL 35294. *Entanglement Dynamics in the Disordered Quantum XY Chain.*

We consider the dynamics of the quantum XY chain in the presence of a transversal random magnetic field under the assumption of eigenfunction correlator localization of the corresponding effective single particle Hamiltonian. We show that, starting from a broad class of product initial states, bipartite entanglement remains bounded for all times. For the disordered XX chain we also derived bounds for the particle number transport. These results demonstrate the fact that the disordered XY chains are fully many-body localized. (Received January 04, 2016)