1125-45-1901 **Minh-Binh Tran***, University of Wisconsin, Madison, WI 53706. *Quantum kinetic problems.*

After the production of the first BECs, there has been an explosion of research on the kinetic theory associated to BECs. Later, Gardinier, Zoller and collaborators derived a Master Quantum Kinetic Equation for BECs and introduced the terminology "Quantum Kinetic Theory". In 2012, Reichl and collaborators made a breakthrough in discovering a new collision operator, which had been missing in the previous works. The talk is devoted to our results in collaboration with: Reichl on the derivation of quantum Boltzmann equations; Alonso and Gamba on the existence, uniqueness and propagation of moments for the quantum Boltzmann equation at very low temperature regime; and Escobedo on the convergence to equilibrium. (Received September 19, 2016)