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## Dynamics of one-dimensional Bose liquids in Y-junction and its related system: Andreev-like reflection and absence of the Aharonov-Bohm effect

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Recently, guiding of atoms in a low-dimensionally magnetic trap has been actively studied. It provides an opportunity to study quantum dynamics of many particles in real time. I will present the study on dynamics of one dimensional Bose liquids of interacting ultracold atoms in the Y-shaped potential when each branch is filled with atoms. The excitation packet incident on a single Y-junction should experience a negative density reflection analogous to the Andreev reflection at normal-superconductor interfaces, although the present system does not contain fermions. In addition, I will also present the dynamics in the ring type interferometer which consists of two symmetric Y-junction. In that system, we find that the transport is completely insensitive to the (effective) flux contained in the ring, in contrast to the Aharonov-Bohm effect of a single particle in the same geometry.