1038-86-272   **Jeffrey J. Early*** (`jearly@coas.oregonstate.edu`), College of Oceanic and Atmospheric Sciences, Oregon State University, 104 COAS Administration Building, Corvallis, OR 97331-5503, and **Juha Pohjanpelto** and **Roger M. Samelson**. *Group foliation and the Korteweg-de Vries equation.*

The method of group foliation can be used to obtain solutions of a partial differential equation that are not invariant under the equation's symmetry group. The classical approach uses the differential invariants of the symmetry group to rewrite the equation on the orbit manifold of the symmetry group action, while a more modern approach does this by reducing an exterior differential system associated with the equations. Solutions to the the reduced equations on the quotient manifold are then used to reconstruct solutions to the original equations by use of the group action. We present an application of these techniques to the one-dimensional Korteweg-de Vries equation. (Received February 11, 2008)