

ABSTRACT:

A large class of partial differential equations in the modelling of ocean waves are due to Ostrovsky. We determine the invariance properties (through the Lie point symmetry generators) and construct classes of conservation laws for some of the models. In the latter case, the method involves finding the 'multipliers' associated with the conservation laws with a stronger emphasis on the 'higher-order' ones. The relationship between the symmetries and conservation laws is investigated by considering the invariance properties of the multipliers.