1035-35-1012   **A Alexandrou Himonas*** (`himonas.1@nd.edu`), Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556. *Unique continuation for Camassa-Holm and Degasperis-Procesi equations.*

It is shown that a strong solution of the Camassa-Holm equation, initially decaying exponentially together with its spacial derivative, must be identically equal to zero if it also decays exponentially at a later time. In particular, a strong solution of the Cauchy problem with compact initial profile can not be compactly supported at any later time unless it is the zero solution. The same unique continuation properties are also true for the Degasperis-Procesi equation. This is joint work with Gerard Misiolek, Gustavo Ponce and Yong Zhou. (Received September 18, 2007)