1067-35-970   **Ryan Croke**, Department of Mathematics, Colorado State University, Fort Collins, CO 80523, **Matti J Lassas**, Department of Mathematics, University of Helsinki, Helsinki, Finland, **Jennifer L Mueller*** (`mueller@math.colostate.edu`), Department of Mathematics, Colorado State University, Fort Collins, CO 80523, **Samuli Siltanen**, Department of Mathematics, University of Helsinki, Helsinki, Finland, and **Andreas Stahel**, Bern University of Applied Sciences, Bern, Switzerland. *Numerical solution of the Novikov-Veselov equation.*

The solution of the Novikov-Veselov (NV) equation by the inverse scattering method is proved with the support of numerical evidence. The NV equation is a (2+1)-dimensional nonlinear evolution equation that generalizes the (1+1)-dimensional KdV equation. Evolutions of solutions in a certain class are computed numerically both by the inverse scattering method and a finite difference discretization of the Novikov-Veselov equation. New soliton solutions are presented, and a variety of computed evolutions are shown. (Received September 17, 2010)