1025-32-78   **Ronald A. Walker*** (`walker@juniata.edu`), Brumbaugh Academic Center, Dept. of Mathematics, Juniata College, 1700 Moore Street, Huntingdon, PA 16652. *Meromorphic Whitney multifunction solutions to the sign-flipped Burgers equation with application to boundaries of analytic varieties.*

The Dolbeault Henkin characterization of boundaries of holomorphic 1-chains within $\mathbb{CP}^2$ is expressed in terms of the generic decomposability of a particular function $G_\gamma(\xi, \eta)$ into a signed sum of holomorphic solutions to the sign-flipped Burgers equation $f\frac{\partial f}{\partial \xi} = \frac{\partial f}{\partial \eta}$ modulo ξ-affine terms. The genericity restraint can be removed by using meromorphic Whitney multifunction solutions to $f\frac{\partial f}{\partial \xi} = \frac{\partial f}{\partial \eta}$ instead. Interestingly, the related partial differential equations possess a number of special properties. One result due to these properties is an explicitly checkable characterization of the sums of the above solutions modulo ξ-affine terms. (Received January 15, 2007)