1047-35-59   **David Hoff*** (`hoff@indiana.edu`), Department of Mathematics-Rawles Hall, Indiana University, Bloomington, IN 47405, and **Misha Perepelitsa**. *Instantaneous boundary-tangency of singularity curves in compressible fluid flow.*

We show that, for a model system of compressible fluid flow in the upper half space of the plane, curves which intersect the boundary and across which the initial density is discontinuous become tangent to the boundary instantaneously in time. This result is closely related to the instantaneous formation of cusps in two-dimensional incompressible vortex patches. (Received January 07, 2009)