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James P Kelliher* (kelliher@math.ucr.edu), Dept. of Mathematics, Surge 202, Riverside, CA 92506. *On the behavior of bounded vorticity, bounded velocity solutions to the 2D Euler equations.* Preliminary report.

I will present recent work characterizing all possible weak solutions to the 2D Euler equations in the full plane or the exterior of a single obstacle having bounded velocity and bounded vorticity. The class of all such solutions generalizes the solutions obtained originally by Phillippe Serfati in 1995 for the full plane, which have sublinear growth of the pressure at infinity. For more general solutions a condition at infinity, in terms of the velocity or the pressure, holds weakly, and the circulation about the obstacle can vary for an exterior domain (if the pressure is not required to be single-valued). These results build on those of joint work with Ambrose, Lopes Filho, and Nussenzveig Lopes. (Received September 09, 2013)