1038-35-49 **Jun Chen*** (jchen@math.wisc.edu), 480 Lincoln Drive, Madison, WI 53706. *Subsonic Flows for Full Euler Equations in Half Plane.*

We study the subsonic flows governed by full Euler equations in the half plane bounded below by a piecewise smooth curve asymptotically approaching x1-axis. Nonconstant conditions in the far field are prescribed to ensure the real Euler flows. The Euler system is reduced to a single elliptic equation for the stream function. The existence, uniqueness and asymptotic behaviors of the solutions for the reduced equation are established by Schauder fixed point argument and some delicate estimates. The existence of subsonic flows for the original Euler system is proved based on the results for the reduced equation, and their asymptotic behaviors in the far field are also obtained. (Received January 18, 2008)