

Report - AE706 (Assignment 3)

Solving 1D Euler Equations

By - Harshvardhan Baldwa (170010035)

Plots:

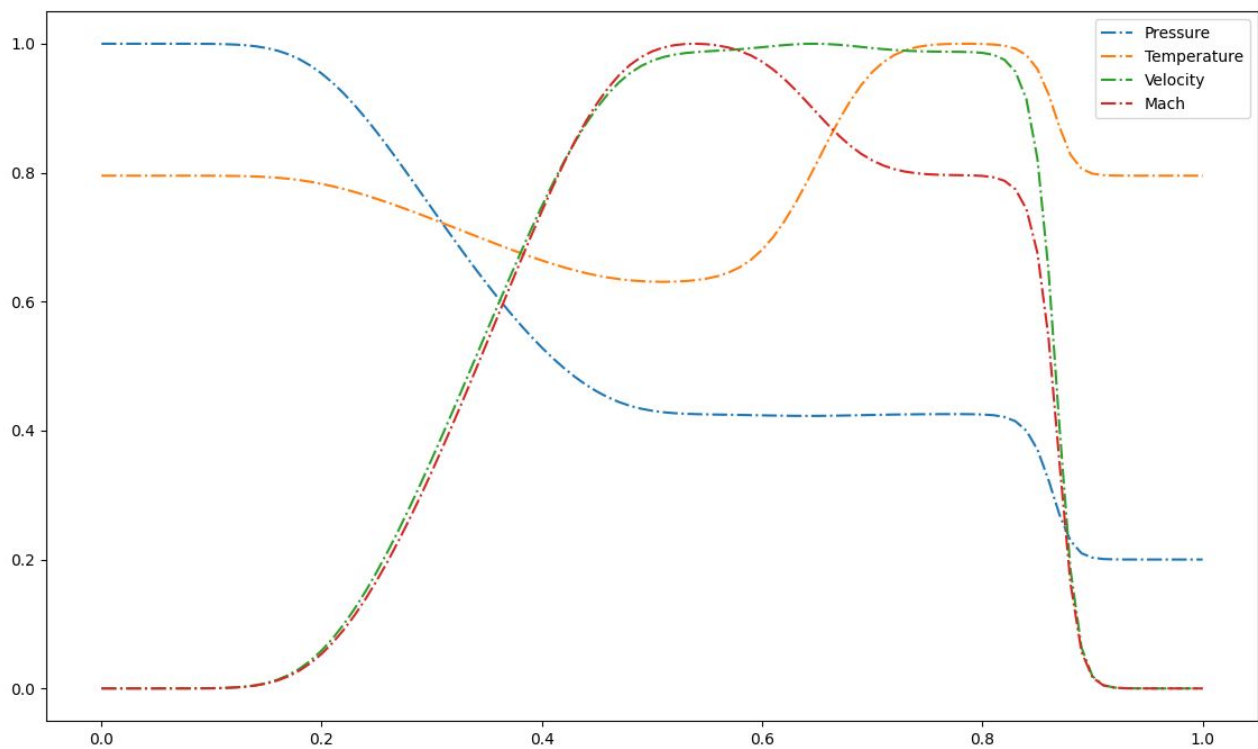


Figure-1. Solution using FVS method

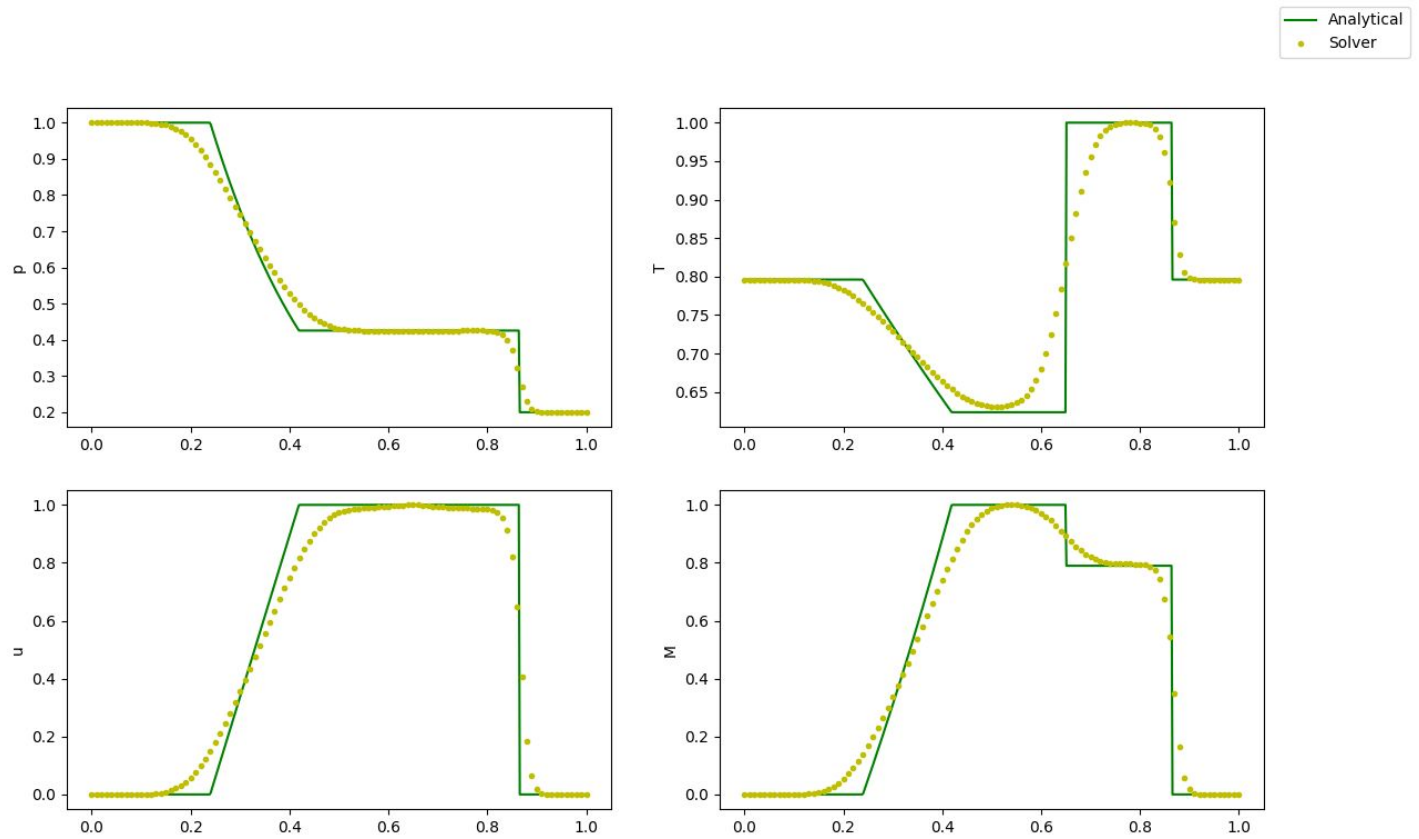


Figure-2. Comparison of FVS solution with the analytical solution

Comments:

The numerical results obtained are very close as to the real results. The algorithm was pretty straightforward. I have assumed that the F at the ghost particles is the same as that of the next neighbour. The analytical solution was obtained by finding the shock and expansion speed and strength and then computing required properties. That code has not been uploaded, this being an optional problem. Remaining code is in the `codes/` folder. And these plots are there in the `plots/` folder.