Boundary layer solution to systems of viscous conservation laws in half line

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We consider the large-time behavior of solutions to the symmetric hyperbolic-parabolic system in the half line. We show the existence and asymptotic stability of the stationary solution (boundary layer solution) under the smallness assumption on the initial perturbation and the strength of the stationary solution. The key to proof is to derive the uniform a priori estimates by using Matsumura–Nishida's energy method under the stability condition of Shizuta–Kawashima type.

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