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Global Classical Solutions to the Equations of Two-Dimensional MHD Transverse Flow

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关键词 [MHD transverse flow](#) [global classical solution](#)

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Global Classical Solutions to the Equations of Two-Dimensional MHD Transverse Flow

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Abstract A new method for constructing the symmetric form for the hyperbolic systems is introduced. Then a new symmetric form of the equations of MHD transverse flow is constructed by adding an additional equation. With this new form, we obtain the local existence of smooth solution including the case that the initial density may tend to the vacuum state at infinity. Furthermore, the uniformly $\{a priori\}$ estimation for the classical solutions is established and the global smooth solutions for a kind of initial data are obtained.

Key words [MHD transverse flow](#) [global classical solution](#)

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