

Well-posedness and asymptotic regularity for the generalized MHD-Boussinesq equations

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Abstract

The generalized MHD-Boussinesq equations are studied in this paper. The well-posedness of the strong solutions for the generalized MHD-Boussinesq equations is proved. Asymptotic regularity for the generalized MHD-Boussinesq equations is proved in $H^{\frac{9}{2}} \times H^{\frac{9}{2}} \times H^{\frac{9}{2}}$. The higher regularity for the generalized MHD-Boussinesq equations is proved in $H^a \times H^a \times H^a$ for $a \geq \frac{9}{2}$.

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