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Baoquan Yuan* (bqyuan@hpu.edu.cn), No. 2001 Century Avenue, Jiaozuo City, Henan 454000, and **Fengping Li**, No. 2001 Century Avenue, Jiaozuo City, Henan 454000. *Regularity criteria of axisymmetric solutions to the 3D magnetohydrodynamic equations.*

In this paper, we study the regularity criteria for axisymmetric weak solutions to the MHD equations in \mathbb{R}^3 . Let ω_θ , J_θ and u_θ be the azimuthal components of ω , J and u in the cylindrical coordinates, respectively, then the axisymmetric weak solution (u, b) is regular on $(0, T)$, if $(\omega_\theta, J_\theta) \in L^q(0, T; L^p)$ or $(\omega_\theta, \nabla(u_\theta e_\theta)) \in L^q(0, T; L^p)$ with $\frac{3}{p} + \frac{2}{q} \leq 2$, $\frac{3}{2} < p < \infty$. In the endpoint case, one need conditions $(\omega_\theta, J_\theta) \in L^1(0, T; \dot{B}_{\infty, \infty}^0)$ or $(\omega_\theta, \nabla(u_\theta e_\theta)) \in L^1(0, T; \dot{B}_{\infty, \infty}^0)$. (Received July 06, 2009)