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Pablo U Suarez* (psuarez@desu.edu), Delaware State University, 1200 N Dupont Hwy, Dover, DE 19709. *Effect of general conductivities in Magneto Rotational Instability*. Preliminary report.

In studying the Taylor Couette problem in the presence of a magnetic field many author's assume that the conductivities σ of the walls are either perfectly insulating $\sigma = 0$ or perfectly conducting $\sigma \rightarrow \infty$. In this work, we do not assume these ideal cases and study what happens to the stability of the fluid if the conductivity of the walls are allowed to vary. With "finite" conductivities an eigenvalue problem with the eigenvalue appearing in the boundary conditions is obtained. The resulting problem is solved numerically by using the Chebyshev Spectral Method together with an iterative scheme. (Received August 29, 2013)