Referee's report on the thesis "FEEDBACK CONTROL OF MAGNETOHYDRODYNAMIC FLOW USING DATA-DRIVEN METHODS" by Adam Uchytil.

Igor Mezić, University of California, Santa Barbara.

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This masters' thesis integrates experimental techniques in PIV, numerical simulation, surrogate data driven DL and Koopman control models with MPC to provide real-time, data-driven feedback control of magnetohydrodynamic flows. The understanding of separate components of the problem is deep, the literature is well considered, and the integration is thorough.

I have several comments that could potentially improve the work, detailed in the annotated pdf that I will send separately, as Dropbox transfer. However, these are mainly for the future work, with the exception of the typos and some suggestions on language structure.

Proposed grade: A-Excellent.

Congratulations to the candidate and the advisors for this excellent contribution.

Sincerely,

Igor Mezić