Modeling a resistive wall mode control system of the bang-bang type

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Abstract. Feedback stabilization of the resistive wall mode is usually accomplished by using linear amplifiers. In this paper a study is made of a possibility of controlling resistive wall modes using switches instead of linear amplifiers, i.e., using bang-bang control. The motivation is that bang-bang control systems may be cheaper than conventional feedback systems. A distinct disadvantage of the bang-bang system is complexity due to its inherent nonlinearity. Further studies, particularly of engineering issues, are needed to determine the attractiveness of a bang-bang system.

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