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## **An explanation of endogenic activity of medium size satellites of Saturn**

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A parameterized theory of convection is developed for six Saturnian medium size icy satellites (MIS). The theory indicates that Enceladus could be in a specific ‘excited’, high temperature state while Mimas could be only in a ‘basic’ low temperature state. The theory indicates possibility of endogenic activity on Dione and exclude such possibility on Tethys. The theory could be also used for estimation of tidal heating and some material parameters of the MIS interiors.