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Dynamics of the two process model of human sleep regulation MAX KENNGOTT, CAVENDISH MCKAY, Marietta College — We examine the dynamics of the two process model of human sleep regulation. In this model, sleep propensity is governed by the interaction between a periodic threshold (process C) and a saturating growth/decay (process S). We find that the parameter space of this model admits sleep cycles with a wide variety of characteristics, many of which are not observed in normal human sleepers. We also examine the effects of phase dependent feedback on this model.

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