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**Hyun Jin Son\*** (hyunson@auburn.edu), Auburn University, Department of Mathematics and Statistics, 221 Parker Hall, Auburn, AL 36849. *Optimal Control of vertical transmitted vector-borne disease: Treatment and Prevention*. Preliminary report.

The paper considers a deterministic model for a vertical transmitted vector-borne disease. We look at time dependent prevention and treatment efforts where optimal theory is applied. Using analytical and numerical techniques, we can see that there are cost effective control efforts for treatment for hosts and prevention of host-vector contacts. (Received September 26, 2017)