## Abstract Submitted for the HAW14 Meeting of The American Physical Society

Transition from  $\Lambda\Lambda$  to H-dibaryon in the imaginary time method ERI HIKOTA, MAKOTO OKA, Department of Physics, Tokyo Institute of Technology, YASURO FUNAKI, Nishina Center for Accelerator-Based Science, RIKEN, EMIKO HIYAMA, Department of Physics, Tokyo Institute of Technology and Nishina Center for Accelerator-Based Science, RIKEN — Transition rate of thermal  $\Lambda\Lambda$  to H-dibaryon is calculated by the use of imaginary time method. We consider the initial states,  $\Lambda\Lambda(L=1, S=1)$ , which mixes with  $N\Xi(L=1, S=0)$  and  $N \equiv (L = 1, S = 1)$ , and the final state, H-dibaryon (L = 0, S = 0). In imaginary time method, all initial (scattering) states are summed up and included in the transition operator, which is evaluated in the final state so that we use only the final state wave function. The algorithm of imaginary time method is as follows; firstly we prepare the final-state wave function at zero temperature. Next we evolve the wave function along imaginary time axis, and then we can evaluate the sum over the wave functions at finite temperature. Finally we take the overlap with the finalstate wave function again and get the transition rate. Results will be reported in the presentation.

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Date submitted: 30 Jun 2014

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