



LABORATORY FOR ELEMENTARY-PARTICLE  
PHYSICS (LEPP)

# Theory Seminar



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## Dark Quarkonium Formation in the Early Universe

Dark matter charged under a hidden nonabelian gauge group generically undergoes a confining phase transition in the early universe. Depending on the matter content in the model, this transition can produce a variety of colour singlet states in the confined phase, and these can undergo a second stage of annihilation. It has previously been claimed that this second-stage cross section is geometric. We examine this claim by calculating the cross section using two different methods

**Wednesday, Feb. 21, 2018**  
**2:00pm**  
**401 Physical Sciences Building**