

**EARLY EXPERIMENTS ON QUANTUM REFLECTION OF HYDROGEN  
FROM LIQUID HELIUM**

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In 1993 we carried out a study of the sticking probability  $s(T)$  for cold hydrogen atoms on films of superfluid helium. For thick films we found that  $s(T)$  approaches zero as  $\sqrt{T}$ . For thin films we observed the effects of the underlying substrate. I will review the physical motivation for this study, the experimental method, and the agreement with specific theoretical models.