

**QUANTUM REFLECTION: CONCEPTS, VERIFICATION
AND APPLICATIONS**

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This talk reviews the topic of ultralow energy scattering from surfaces. Emphasis is placed on the many-body physics and on the role of long-range forces.

The early work on quantum reflection is discussed, with particular regard to the near-threshold behavior of the sticking coefficient and to the theoretical framework that led to the prediction of universal quantum reflection of hydrogen atoms from the surface of liquid helium, and to its subsequent experimental verification.