II. MOLECULAR COLLISIONS*

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RESEARCH OBJECTIVES

We are concerned primarily with molecular collision processes at thermal energies, which are studied mainly in molecular beam scattering experiments. Some areas in which work is being done are the following.

1. Study of long-lived complexes formed in a single binary collision.

2. Study of the effect of rotational or vibrational excitation on one-step chemical reactions in crossed beams.

3. Molecular beam studies of the reactive, elastic, and inelastic scattering of electronically excited atoms.

4. Investigation of the He-H_2 anisotropic intermolecular potential, both theoretically and in total scattering cross-section measurements.

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