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Student difficulties in applying quantum mechanical principles to superpositions of stationary states¹ ANDREW D. CROUSE, PETER S. SHAFFER, LILLIAN C. MCDERMOTT, University of Washington — As part of an ongoing research and curriculum development effort, the Physics Education Group at the University of Washington is examining the learning and teaching of introductory quantum mechanics. Recent studies have focused on superpositions of stationary states. Student understanding has been probed in a variety of contexts including measurement, dynamics, and perturbation theory. Examples from our research will be used to illustrate some common problems students have in applying and interpreting basic quantum mechanical principles related to superposition.

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