



PHYSIKALISCHES KOLLOQUIUM

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IM GROßEN HÖRSAAL

TESTING THE LIMITS OF QUANTUM MECHANICS
MOTIVATION, STATE OF PLAY, PROSPECTS

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$$H\Psi = E\Psi$$



Professor Leggett presents the motivation for experiments which attempt to generate and verify the existence of quantum superpositions of two or more states which are by some reasonable criterion "macroscopically" distinct, and he shows that various a priori objections to this program made in the literature are flawed. He reviews the extent to which such experiments currently exist in the areas of free-space molecular diffraction, magnetic biomolecules, quantum optics and Josephson devices, and sketches possible future lines of development of the program.