
Einladung zum
WIENER PHYSIKALISCHEN KOLLOQUIUM

Whose Knowledge?

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According to Rudolf Peierls, “the most fundamental statement of quantum mechanics is that the wavefunction, or, more generally the density matrix, represents our knowledge of the system we are trying to describe.” In answer to the question in my title, Peierls noted that observers with different knowledge could assign different density matrices to the same system, but he gave two simple conditions that states (in general mixed) assigned by different observers must satisfy. I shall give a counterexample to Peierls’ first condition, argue that his second, a trivial corollary of the first, remains true even in its absence, and then propose a necessary and sufficient condition for the mutual compatibility of a set of differing state assignments to one and the same physical system.

Montag, **22. Oktober 2001**, 17:30 Uhr
(ab 17:00 Uhr Kaffee)

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