

Physics Colloquium

Monday December 5th 2005 4:15 PM
428 Pupin Hall
Dr Chris Dawson
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“CP violation and lattice QCD”

The violation of the combined symmetry of charge conjugation (C) and parity (P) was first observed in 1964 in the neutral Kaon system. Such violations are allowed by the Standard Model of Particle Physics, but not required, being controlled by a single parameter. To compare the Standard Model versus experiment - - and, perhaps, find evidence of new physics -- requires the ability to make quantitative predictions. This is particularly challenging in Quantum Chromodynamics -- the theory describing the strong force. The lattice formulation of Quantum Chromodynamics allows such calculations to be made. In this talk I will discuss both CP-violation in the Standard Model, and the lattice approach to QCD, concentrating on the calculation of the Kaon B-parameter, which parameterises CP-violation in the neutral Kaon system.



Host: Prof. Christ