

SEMINARS SEMINAIRES

Wednesday 5 August

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Quark solitons as constituents of hadrons

by Yitzhak FRISHMAN (Weizmann Institute, Rehovot)

We exhibit static solutions of multi-flavour QCD in two dimensions that have the quantum numbers of baryons and

mesons, constructed out of quark and antiquark solitons. In isolation the latter solitons have infinite energy, corresponding to the presence of a string carrying the non-singlet colour flux off to spatial infinity. When N_c solitons of this type are combined, a static, finite-energy, colour singlet solution is formed, corresponding to a baryon. Similarly, static meson solutions are formed out of a soliton and an anti-soliton of different flavours. The stability of the mesons against annihilation is ensured by flavour conservation. The static solutions exist only when the fundamental fields of the bosonized Lagrangian belong to $U(N_c \times N_f)$ rather than to $SU(N_c) \times U(N_f)$. Discussion of flavour symmetry breaking requires a careful treatment of the normal ordering ambiguity. Our results can be viewed as a derivation of the constituent quark model in QCD₂, allowing a detailed study of constituent mass generation and of the heavy quark symmetry.

Symposium in Honour of Professor C.S. Wu's 80th Birthday

Tuesday 4 August 1992, Council Chamber, CERN

Programme

Master of Ceremonies: S.C.C. Ting

14:00–14:15	Welcome	Carlo Rubbia
14:15–14:45	Interacting Strongly with Weak Interactions	Martin Deutsch
14:45–15:30	CP Violation	Cecilia Jarlskog
15:30–16:00	<i>Coffee, tea</i>	
16:00–16:45	Atomic Parity Violation : a test of electroweak unification at low energies	Marie-Anne Bouchiat
16:45–17:15	Understanding SuperSymmetry	Luisa Cifarelli
17:15–17:45	Tests of Electroweak theory at LEP	Felicitas Pauss
17:45	Response	Chien-Shiung Wu

Organizing Committee

H. Schopper

Kai Siegbahn

S.C.C. Ting