

SUMMARY OF THE MOST SIGNIFICANT RESULTS
REPORTED IN THIS SESSION

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The most interesting although speculative result is the observation of a *4 standard deviation effect* at 5.3 GeV in the $\psi K^0 \pi^-$ and $\psi K^- \pi^+$ mass plots (SPS Exp. WA11) with a cross-section of 180 nb (assuming 1% branching ratio). This is a candidate bare b-state.

The next most significant experimental result is the observation of Λ_c^+ at the CERN Intersecting Storage Rings (ISR). This state was discovered at BNL by Samios et al. and has since been seen in several neutrino experiments. It was seen at the ISR by Lockman et al. about a year ago (reported at Budapest) but not in a convincing way. The analysis has now been improved, and the result shows a peak which is most clearly present in the summed $\Lambda(3\pi)^+$ and $K^- p \pi^+$ mass spectra. The signal has furthermore been seen in Exp. R606 (reported by F. Muller in this parallel session) in both $\Lambda 3\pi$ and $p K^- \pi^+$. The most convincing signal comes from the Split-Field Magnet (SFM) in $K^- p \pi^+$. The three observations together, all at the ISR, make this an outstanding result of the conference, although it is *not a new discovery*.

Very interesting contributions have been made by Brodsky and Berger on *higher-twist effects*. This, in my opinion, is going to strongly influence the phenomenological analysis in the future. One prediction, the dependence of α in $1 + \alpha \cos^2 \theta$ in $\pi p \rightarrow \mu \mu$ on $X(\mu\mu)$, has been verified by experiment (reported in Aubert's session by Pilcher).

Also figuring high on the list of new developments are data as well as models for understanding parton dynamics in all-hadronic reactions. The work of Gunion, Hwa, and others, and a number of experiments (Kp at 110 GeV, ϕ production, correlations at the ISR, etc.) are of interest, but not fully conclusive at this stage. One might say that the *Brodsky-Gunion counting rule is dead* but it is not clear with what to replace it.

List of papers prepared for this session

1. RECENT PHOTOPRODUCTION RESULTS FROM FERMILAB
S.D. Holmes
(Columbia Univ., NY).
2. DIFFRACTIVE PRODUCTION OF THE CHARMED BARYON Λ_c^+ AT THE CERN ISR
K.L. Giboni et al.,
Aachen-CERN-Harvard-Munich-Northwestern-Riverside Collaboration
(Presented by F. Muller, CERN)
3. CHARMED BARYON PRODUCTION AT THE CERN ISR
D. Drijard et al.,
ACCDHW Collaboration
(Presented by H. Frehse, Heidelberg)

4. ON THE PRODUCTION OF CHARMED MESONS IN HIGH-ENERGY PROTON-PROTON COLLISIONS (CERN/ISR)
A. Chilingarov et al.,
CERN-CEN Saclay-ETH Zurich Collaboration
(Presented by A. Clark, CERN)
5. EVIDENCE FOR Λ_C^+ IN INCLUSIVE $pp \rightarrow (\Lambda^0 \pi^+ \pi^+ \pi^-) + X$ AND $pp \rightarrow (K^- \pi^+ p) + X$ AT $\sqrt{s} = 53$ AND 62 GeV
W. Lockman et al.,
UCLA-Saclay Collaboration
(Presented by P. Schlein, UCLA)
6. FIRST OBSERVATION OF A COMPLETE DECAY OF A \bar{D}^0 PRODUCED IN A HIGH-ENERGY PHOTON INTERACTION IN EMULSIONS
(Presented by A. Conti, Florence)
7. UPS AND DOWNS IN THE SEARCH FOR BARYONIUM STATES
M.N. Kienzle-Focacci,
University of Geneva
8. RESULTS OF A BEAM-DUMP EXPERIMENT USING THE BEBC BUBBLE CHAMBER
(Presented by P. Schmid, CERN)
9. BEAM-DUMP EXPERIMENT W1
CDHS Collaboration
(Presented by S. Loucatos, CEN Saclay)
10. RESULTS FROM A BEAM-DUMP NEUTRINO RUN AT THE SPS
J.V. Allaby et al.,
CHARM Collaboration
(Presented by P. Monacelli, Rome)
11. DIMUON RESONANCE PRODUCTION FROM A 200 GeV TAGGED MESON BEAM
J. Bordier et al.,
CEN Saclay-CERN-Collège de France-Ecole Polytechnique-Orsay Collaboration
(Presented by P. Delpierre, Collège de France, Paris)
12. DIMUON CONTINUUM PRODUCED IN pp AT FNAL (E 288)
(Presented by W. Innes, SLAC)
13. EXCLUSIVE PROCESSES AT LARGE MOMENTUM TRANSFER IN QCD AND THE INCLUSIVE-EXCLUSIVE CONNECTION
S.J. Brodsky and G.P. Lepage
(Presented by S.J. Brodsky, SLAC)
14. UNIFIED QCD AND CIM APPROACH TO LARGE p_T AND LOW p_T INCLUSIVE REACTIONS
J.F. Gunion,
Univ. Calif., Davis

15. HADRONIZATION OF PARTONS IN THE RECOMBINATION MODEL
R.C. Hwa,
Univ. Oregon

16. INCLUSIVE ϕ -MESON PRODUCTION -- RELATION TO J/ψ AND T PRODUCTION
D.R.O. Morrison,
CERN

17. SUMMARY OF SOME RECENT CORRELATION EXPERIMENTS
R.C. Hwa,
Univ. Oregon

18. INCLUSIVE γ -PRODUCTION IN $p\bar{p}$ AT 0.76 GeV/c AND SEARCH FOR DIRECT γ -PRODUCTION
S. Banerjee et al.,
Tata Institute, Bombay
(Presented by S.N. Ganguli, Tata Inst., Bombay)

19. A MEASUREMENT OF PARTICLES PRODUCED AT LARGE p_T BY PIONS
(Presented by B. Pope, Univ. Princeton)

20. A SEMICLASSICAL MODEL FOR THE POLARIZATION OF INCLUSIVELY PRODUCED Λ^0 's
B. Andersson et al.
(Presented by G. Gustafson, Univ. Lund)

21. SOFT MULTIHADRON PRODUCTION FROM PARTONIC STRUCTURE AND FRAGMENTATION FUNCTIONS
A. Capella et al.
(Presented by A. Capella, Orsay)