Introductory remarks

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Heavy quark physics is an active part of the current research at HERA. With the projected luminosity of 250 $(pb)^{-1}$, many detailed aspects of charm physics (production and decay) will be studied. The aim of the HERA-B experiment is to measure CP violation in B decays and determine the CKM matrix elements essential for a quantitative test of the standard model. In addition, estimated charm hadron cross section at HERA-B will make it competitive with other concurrent facilities elsewhere. The anticipated high luminosity would allow both HERA-B and HERA(ep) to gain sensitivities in searches for new phenomena, such as mixing, CP violation and rare decays in the charm sector, which go significantly beyond those of the existing experiments. In addition, an increase in the proton beam energy will greatly help the B-physics programme of HERA-B.

The work done in the Heavy Quark Physics working group divided itself naturally into two distinct parts, namely production and decays of heavy quarks. Consequently, we summarize these parts separately in two summaries. These summaries and overview, together with the individual contributions, are listed below. In addition, a large number of invited talks was given during the workshop. They are discussed in the summaries. We would like to thank all the participants, in particular the speakers, who contributed to the proceedings.

- Heavy Flavour Production
  R. Eichler (ETH Zürich), S. Frixione (ETH Zürich)

- Heavy Flavour Decays - Introduction and Summary
  A. Ali (DESY), H. Schröder (DESY)

- Rare D Meson Decays at HERA
  C. Grab (ETH Zürich)

- $D^0 - \overline{D}^0$ mixing at the ep-collider HERA
  G. Tsipolitis (ETH Zürich)

- Deep-inelastic Production of Heavy Quarks
  E. Laenen (CERN) et. al.

- High p_T Charm Photoproduction
  G. Abbiendi (DESY), J.M. Butterworth (Imperial College), R. Graciani (Madrid)

- Prospects for heavy flavour photoproduction at HERA
  S. Frixione (ETH Zürich)

- Future Perspectives of Quarkonium Physics at HERA
  M. Cacciari (DESY), M.Krämer (DESY)

- CP Violation and Flavour Mixing in the Standard Model - 1996 Update
  A. Ali (DESY), D. London(Montreal)

- Rare B decays in the Standard Model
  A. Ali (DESY)

- The partial reconstruction of $B^0 \to \chi_{c1} K^0_S, B^0 \to \psi' K^0_S$ and $B^0 \to J/\psi K^{*0}$
  R. Misuk (ITEP Moscow)

- Pion tag of B meson flavour at HERA-B
  C.H.Shepherd-Themistocleous (DESY)

- Low p_t lepton tag at the HERA-B experiment
  R. Misuk (ITEP Moscow)

- Trigger for Radiative B Decays at the HERA-B experiment
  F. Saadi-Lüdemann (DESY)

- Accuracy of $B^0 - \overline{B}^0$ mixing and B^0 lifetime measurements at HERA-B
  P. Kreuzer (UCLA)

- On the Study of $B\overline{B}$ Correlations at HERA-B
  R. Rylko (Brunel)