

Study Groups

- Radiative Penguin Decays
 - $b \rightarrow s\gamma, b \rightarrow d\gamma$ inclusive and exclusive
 - LHCb, BaBar - Bechtle, Sciolla, Playfer, Belle - Hazumi, Iijima
 - Theory - Feldmann, Misiak, Gambino, Ball, Zwicky
- Electroweak Penguin Decays
 - $b \rightarrow sll$ inclusive and exclusive
 - LHCb - Koppenburg, ATLAS - Smizanska, Reznicek
 - BaBar - Berryhill, Playfer, Eigen, Belle - Iijima
 - Theory - Feldmann, Safir, (Greub, Hiller), Colangelo, Mannel, Khodjamirian, Ball, Zwicky
- Neutrino modes:
 - $b \rightarrow sv\nu, B \rightarrow \tau+\nu, D\tau+\nu$
 - BaBar - Robertson, Belle - Iijima
 - Theory - (Okada), Foster, Paradisi
- Very rare decays:
 - $B_{s,d} \rightarrow \mu+\mu-, \mu\mu\pi, \mu\mu\gamma, (\tau+\tau-)$
 - ATLAS - Smizanska, Nikitine, Sivoklokov, Eigen, Buanes, CMS - Speer, Langenegger, Starodumov, CDF- Herndon, DO - Ay, LHCb, BaBar - Robertson, BELLE - Hazumi
 - Theory - (Nierste, Dedes), Foster, Paradisi

Study Groups

- UT angles (from tree decays)
 - β or ϕ_1 : $B_d \rightarrow \psi K_S, \dots$
 - α or ϕ_2 : $B_d \rightarrow \rho\pi, \pi\pi, \rho\rho$
Belle - Hazumi, Babar - Bevan, Gritsan, Malcles, Pierini, Eigen
LHCb - Deschamps
 - γ or ϕ_3 : $B_{d,u} \rightarrow DK$ - Dalitz
 - $B_s \rightarrow D_s K, B_d \rightarrow \pi\pi/B_s \rightarrow KK$
 - Belle - Hazumi, Gershon, Babar - Bona, Cavoto
 - LHCb - Lazzeroni, Patel, CDF - Punzi
 - Theory: Vysotski, Fleischer, (Franco)
- B_s - B_s bar mixing
 - Mass difference Δm_s , weak phase ϕ_s , lifetime difference $\Delta\Gamma/\Gamma$
 - $B_s \rightarrow D_s\pi, B_s \rightarrow J/\psi\phi$
 - CDF - Kroll, Bedeschi, Oldeman, D0 - Ay, LHCb - Fernandez, CMS - Speer, Starodumov
 - Theory - (Lubicz, Lenz, Nierste)
- $b \rightarrow s$ and $b \rightarrow d$ hadronic transitions
 - $B_d \rightarrow \phi K_S, \eta' K_S, B_s \rightarrow \phi\phi, \dots B_d \rightarrow \pi\pi/B_s \rightarrow KK, B_d \rightarrow \rho\pi, \pi\pi, \rho\rho, \pi K$
 - Babar - Gritsan, Dujimic, Pierini, Belle - Hazumi, Gershon, LHCb
 - Theory - Ciuchini, (Beneke), Fleischer, Safir, Jaeger

Study Groups

- Kaon decays

- $K \rightarrow \pi \nu \nu$, $K_L \rightarrow \pi^0 \Pi$
- NA48/III - Ruggiero, JPARC - Komatsubara
- Theory - (Haisch, Cirigliano) Buras, (Isidori), Smith, Trine

- Charm decays

- D^0 - D^0 bar mixing,
- D rare decays
- CLEO-3 - Stone, Briere, BaBar - Cavoto, CDF - Campanelli, LHCb -
- Theory - (Bigi), Fajfer

Workshop Report

- **Timeline:**

- 2nd meeting (WGs): CERN Feb 6-8 2006
Discuss outline of report
- 3rd meeting (WGs): CERN, May 15-17 2006
Presentations from study groups and of other activities
- 4th meeting (WGs): CERN, sometime in September 2006
first draft of the report available
- Finalise report and deliver conclusions at the
final Plenary meeting: CERN, sometime in Dec 2006 / Jan 2007

- **Guidelines**

- None given
- Today: discuss first attempt for outline by convenors
- Estimated length: for workshop proceedings 100 to 300 pages
- For WG2 - 50 to 100 pages

Outline of Report

- Introduction
- High p_T vs quark and lepton flavour physics
 - Scope of different working groups

**Common
Sections**

- New Physics Scenarios
 - Overview
 - SUSY (MFV, non-MFV, Specific)
 - Non-SUSY
 - Model independent analyses
 - Methods and tools
- Hadronic Uncertainties
- New Physics in Benchmark Channels
 - Prospects for existing facilities, LHC, Super-B factories, Fixed Target
 - Radiative Penguin Decays
 - Electroweak Penguin Decays
 - Very rare Decays
 - ...
- Assessments
 - New Physics Patterns/correlations (between channels)
 - Connections to high p_T (WG1) and lepton (WG3) flavour physics
 - Discrimination between NP scenarios
- Conclusions

**WG2
Sections**

Outline of Report

- New Physics Scenarios
 - Convenors + volunteers
- Hadronic Uncertainties
 - Convenors + volunteers
- New Physics in Benchmark Modes
 - Content
 - Numbers
 - Figures
- Assessment and Conclusions
 - Convenors + volunteers

Back-up Slides
