

# **$B$ -particle organization**

Many measurements of  $B$  decays involve admixtures of  $B$  hadrons. Previously we arbitrarily included such admixtures in the  $B^\pm$  section, but because of their importance we have created two new sections: “ $B^\pm/B^0$  Admixture” for  $\Upsilon(4S)$  results and “ $B^\pm/B^0/B_s^0/b$ -baryon Admixture” for results at higher energies. Most inclusive decay branching fractions and  $\chi_b$  at high energy are found in the Admixture sections.  $B^0\text{-}\bar{B}^0$  mixing data are found in the  $B^0$  section, while  $B_s^0\text{-}\bar{B}_s^0$  mixing data and  $B\text{-}\bar{B}$  mixing data for a  $B^0/B_s^0$  admixture are found in the  $B_s^0$  section.  $CP$ -violation data are found in the  $B^\pm$ ,  $B^0$ , and  $B^\pm/B^0$  Admixture sections.  $b$ -baryons are found near the end of the Baryon section. Recently, we also created a new section: “ $V_{cb}$  and  $V_{ub}$  CKM Matrix Elements.”

The organization of the  $B$  sections is now as follows, where bullets indicate particle sections and brackets indicate reviews.

[Production and Decay of  $b$ -flavored Hadrons]

[A Short Note on HFLAV Activities]

- $B^\pm$ 
  - mass, mean life
  - branching fractions
  - polarization in  $B^\pm$  decay
  - $CP$  violation
- $B^0$ 
  - mass, mean life
  - branching fractions
  - [Polarization in  $B$  decay]
  - polarization in  $B^0$  decay
  - [ $B\text{-}\bar{B}$  Mixing]
  - $B^0\text{-}\bar{B}^0$  mixing
  - $CP$  violation
- $B^\pm/B^0$  Admixture
  - branching fractions,  $CP$  violation
  - $CP$  violation
- $B^\pm/B^0/B_s^0/b$ -baryon Admixture
  - mean life
  - production fractions
  - branching fractions
  - $\chi_b$  at high energy
  - production fractions in hadronic  $Z$  decay
- $V_{cb}$  and  $V_{ub}$  CKM Matrix Elements
  - [Determination of  $V_{cb}$  and  $V_{ub}$ ]

- $B^*$ ,  $B_1(5721)$ ,  $B_J^*(5732)$ ,  $B_2^*(5747)$ ,  $B_J(5840)$ ,  $B_J(5970)$   
mass, width, branching fractions
- $B_s^0$   
mass, mean life  
branching fractions  
polarization in  $B_s^0$  decay  
 $B_s^0$ - $\bar{B}_s^0$  mixing
- $B_s^*$ ,  $B_{s1}(5830)^0$ ,  $B_{s2}^*(5840)^0$ ,  $B_{sJ}^*(5850)$ ,  $B_{sJ}(6063)^0$ ,  $B_{sJ}(6114)^0$   
mass, width, branching fractions
- $B_c^\pm$   
mass, mean life  
branching fractions
- $B_c(2S)^\pm$   
mass, branching fractions

At the end of Baryon Listings:

- $\Lambda_b$   
mass, mean life  
branching fractions
  - $\Lambda_b(5912)^0$ ,  $\Lambda_b(5920)^0$ ,  $\Lambda_b(6070)^0$ ,  $\Lambda_b(6146)^0$ ,  $\Lambda_b(6152)^0$   
mass, width, branching fractions
  - $\Sigma_b$   
mass, width, branching fractions
  - $\Sigma_b^*$ ,  $\Sigma_b(6097)^+$ ,  $\Sigma_b(6097)^-$   
mass, width, branching fractions
  - $\Xi_b^0$ ,  $\Xi_b^-$   
mass, mean life  
branching fractions,  $P$ ,  $CP$  violation
  - $\Xi_b'(5935)^-$ ,  $\Xi_b(5945)^0$ ,  $\Xi_b(5955)^-$ ,  $\Xi_b(6100)^-$ ,  $\Xi_b(6227)^-$ ,  
 $\Xi_b(6227)^0$ ,  $\Xi_b(6327)^0$ ,  $\Xi_b(6333)^0$   
mass, width, branching fractions
  - $\Omega_b^-$   
mass, mean life  
branching fractions
  - $\Omega_b(6316)^-$ ,  $\Omega_b(6330)^-$ ,  $\Omega_b(6340)^-$ ,  $\Omega_b(6350)^-$   
mass, width, branching fractions
  - $b$ -baryon Admixture  
mean life  
branching fractions
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