

$|V_{ub}|$ and $|V_{cb}|$

Section Editors

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Papers

BaBar

Published

- 1) $D^* \rightarrow \ell \nu$ untagged, PRD77, 032002 (2008)
- 2) $D^* \rightarrow 0 \ell \nu$ untagged, PRL100, 231803 (2008)
- 3) $DX \rightarrow \ell \nu$ global fit, PRD79, 012002 (2009)
- 4) $D \rightarrow \ell \nu$ hadronic tag, PRL104, 011802 (2010)
- 5) $X \rightarrow \ell \nu$ moments, PRD81, 032003 (2010)
- 6) $b \rightarrow u$ endpoint, PRD73, 012006 (2006), PRL95, 111801 (2005)
- 7) $b \rightarrow u$ hadr. tag, PRL100, 171802 (2008)
- 8) $P \rightarrow \ell \nu$ sl. tag, PRL101, 081801 (2008)
- 9) $P \rightarrow \ell \nu$ hadr. tag, PRL97, 211801 (2006)
- 10) $P \rightarrow \ell \nu$ untagged, PRL98, 091801 (2007)

Additional papers anticipated to be published in time to be included in the book:

- 1) $P \rightarrow \rho/\eta \ell \nu$ arXiv:1005.3288, submitted to PRD

Summary of papers (BaBar+Belle):

- 1) PRL: 9
- 2) PRD: 6
- 3) PLB: 3

Belle

Published

- 1) $D \rightarrow \ell \nu$ untagged, PLB526, 258 (2002)
- 2) MX moments, PRD75, 032005 (2007)
- 3) EI moments, PRD75, 032001 (2007)
- 4) $b \rightarrow u$ annealing, PRL92, 101801 (2004)
- 5) $b \rightarrow u$ endpoint, PLB621, 28 (2005)
- 6) $b \rightarrow u$ multivar., PRL104, 021801 (2010)
- 7) $P \rightarrow \ell \nu$ sl. tag, PLB648, 139 (2007)

Additional papers anticipated to be published in time to be included in the book:

- 1) $D^* \rightarrow \ell \nu$ untagged, to be submitted to PRD
- 2) $P \rightarrow \ell \nu$ untagged, to be submitted to PRD-RC

Section layout

$|V_{ub}|$ and $|V_{cb}|$

Exclusive decays $B \rightarrow D(*)\ell\nu$

Theory

Measurements

Extraction of $|V_{cb}|$ and the decay form factors

Inclusive CKM-favored B decays

Theory

Moment measurements

Global fits for $|V_{cb}|$ and m_b

Exclusive sl. B decays to light mesons

Theory

Measurements of decays BRs and q^2 distributions

Determination of $|V_{ub}|$

Inclusive CKM-suppressed B decays

Theoretical overview

m_b determinations

Measurements

Determination of $|V_{ub}|$

Planned tables and figures:

? (minimum: one table/subsection)

Approximate expected pages:

?

In Phys.Rept. 494, 197 (2010),
we had 50 pages.

Inter-correlation

$|V_{ub}|$ and $|V_{cb}|$

Inclusive CKM-favored
B decays
Global fits

related to

Radiative and
EW penguin
decays

Foreseen resolution:
cross-referencing

$|V_{ub}|$ and $|V_{cb}|$

Exclusive sl. B decays to
light mesons
mb determinations

related to

Radiative and
EW penguin
decays

Foreseen resolution:
cross-referencing

Contributors

Confirmed (beside section editors)

BaBar: None so far

Belle: None so far

Un-confirmed

BaBar: None so far

Belle: None so far

But probably we are enough people (6 section editors)

Comments

I have two more comments:

- $D^{**}\text{Inu}$ is the largest systematic uncertainty for most $|V_{cb}|$ and $|V_{ub}|$ measurements and I think the experimental/theoretical status should be reviewed somewhere in the book. I couldn't find it in the table of contents – if it's not there, it should go to the $|V_{cb}|$ and $|V_{ub}|$ section
- At the moment, $|V_{ub}|$ exclusive comes mainly from pilnu . Therefore, most of the reviews focus on pilnu . Shall we have more room for $\rho/\omega/\eta/\eta'\text{Inu}$ even if this is not so relevant now for the determination of $|V_{ub}|$?