

Production of RPP

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LBNL
October, 2008

Some 2008 RPP statistics

- **46 – Authors of Listings (Encoders/Overseers)**
- **134 – Authors of reviews (active authors)**
- **41 – General purpose reviews**
- **67 – Data driven reviews**

PDG 2008 publications

- RPP Book – 1,340 pages (9% increase)
- Data Booklet – 294 pages (change of format)
- Web edition
- pdgLive (K. Lugovsky, S. Lugovsky)
- Pocket Diary (G. Harper, E. Esman)

RPP Book sections increase

- **13% – Summaries**
- **8% – Reviews**
- **10% – Listings**
- **1,340 pages total (9% from 1,234 in 2006)**

Booklet format change

- (3 in) x (5 in) – old format
- (9 cm) x (15 cm) – new format

Length / width increase by 18%

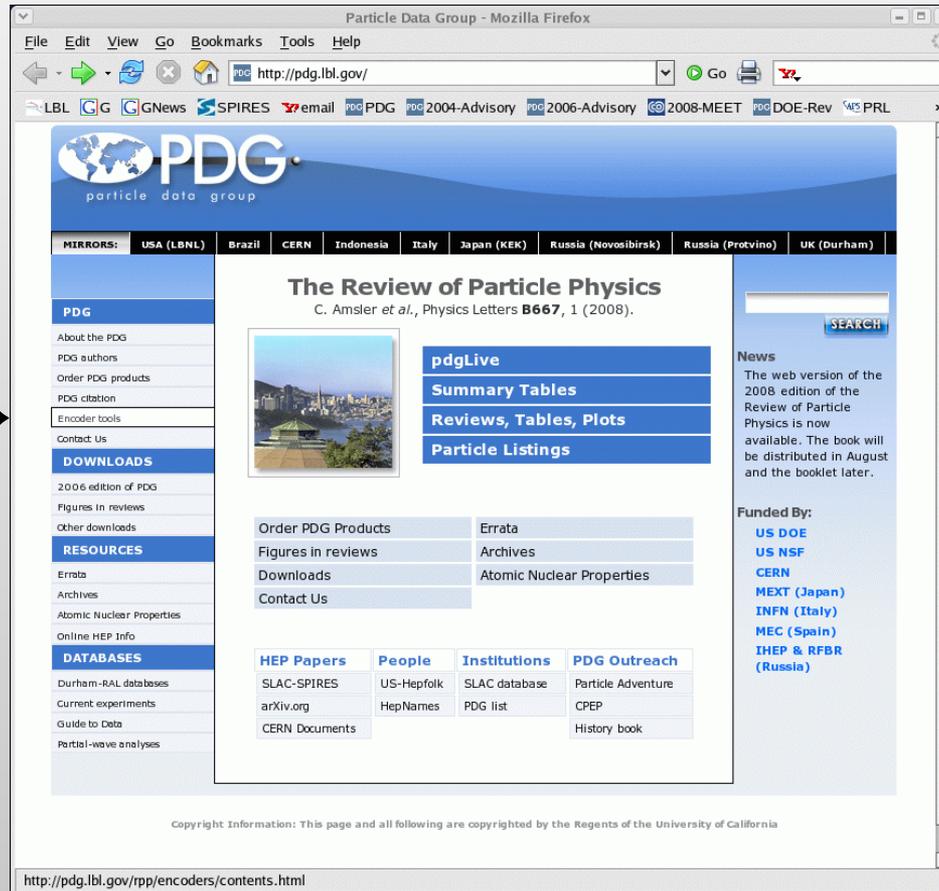
Print area increase by 25%
(spiral binding)

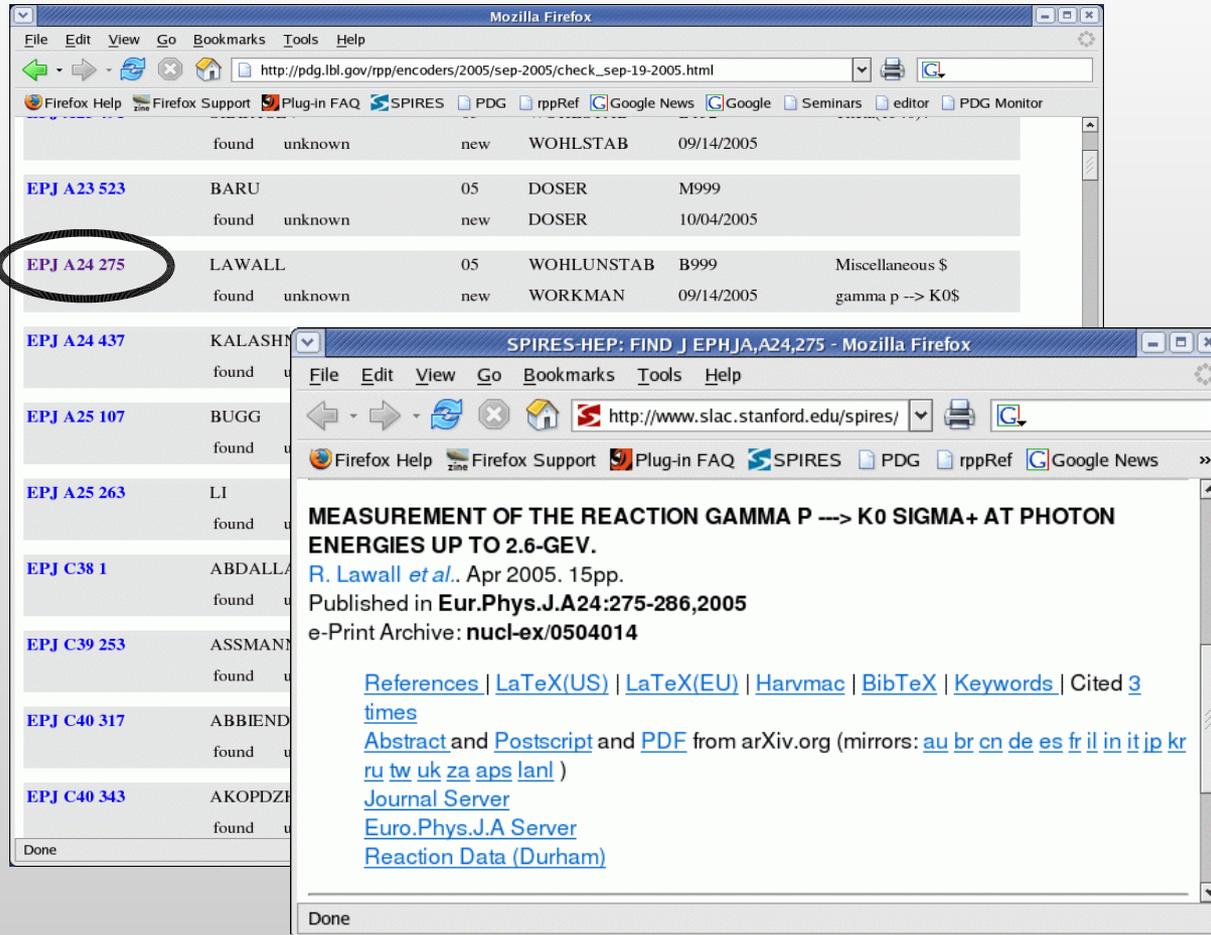
Major RPP production tasks

- Literature search
- Encodings
- Verifications
- Reviews
- Web/Book production
- Errata

Private RPP production area (Communication pages)

pdg.lbl.gov →
Encoder tools





The screenshot shows a search results page in Mozilla Firefox. The URL is http://pdg.lbl.gov/rpp/encoders/2005/sep-2005/check_sep-19-2005.html. The search results are as follows:

Entry	Author	Status	Year	Journal	Volume	Page	Notes
	WOHLSTAB	found	09/14/2005				
EPJ A23 523	BARU	found	10/04/2005	DOSER			
EPJ A24 275	LAWALL	found	09/14/2005	WOHLUNSTAB	B999		Miscellaneous \$ gamma p -> K0\$
EPJ A24 437	KALASHN	found					
EPJ A25 107	BUGG	found					
EPJ A25 263	LI	found					
EPJ C38 1	ABDALLA	found					
EPJ C39 253	ASSMANN	found					
EPJ C40 317	ABBIEND	found					
EPJ C40 343	AKOPDZ	found					

The second browser window shows the article page for <http://www.slac.stanford.edu/spires/>. The article title is **MEASUREMENT OF THE REACTION GAMMA P -> K0 SIGMA+ AT PHOTON ENERGIES UP TO 2.6-GEV.** by R. Lawall *et al.*, Apr 2005, 15pp. Published in **Eur.Phys.J.A24:275-286,2005**. e-Print Archive: [nucl-ex/0504014](http://arxiv.org/abs/nucl-ex/0504014).

Links provided in the article page include: [References](#), [LaTeX\(US\)](#), [LaTeX\(EU\)](#), [Harvmac](#), [BibTeX](#), [Keywords](#), [Cited 3 times](#), [Abstract](#) and [Postscript](#) and [PDF](#) from arXiv.org (mirrors: [au](#) [br](#) [cn](#) [de](#) [es](#) [fr](#) [il](#) [in](#) [it](#) [jp](#) [kr](#) [ru](#) [tw](#) [uk](#) [za](#) [aps](#) [lanl](#)), [Journal Server](#), [Euro.Phys.J.A Server](#), and [Reaction Data \(Durham\)](#).

Use journal version for encoding

- Posted
- Email requests to authors

Verifies, RPP 2008 edition

	Verifies	Papers
Barnett, Michael	verifies	papers
Beringer, Juerg	verifies	papers
Gurtu, Atul	verifies	papers
Groom, Don	verifies	papers
Hikasa, Ken-ichi	verifies	papers
Kolda, Chris	verifies	papers
Lin, Cheng-Ju	verifies	papers
Miquel, Ramon	verifies	papers
Moenig, Klaus	verifies	papers
Raffelt, Georg	verifies	papers
Termin, John	verifies	papers
Watari, Taizan	verifies	papers
Weiglein, Georg	verifies	papers
Weiglein, Georg (extra)	verifies	papers
Wohl, Charles	verifies	papers
Wohl, Charles (c, stab. baryons)	verifies	papers
Wohl, Charles (unstable)	verifies	papers
Wohl, Charles (D mesons)	verifies	papers
Yao, Weiming	verifies	papers
Yao, Weiming (extra)	verifies	papers
Meson Team	verifies	papers
Meson Team (extra)	verifies	papers

Verifications

for the Review of Particle Physics

Send comments to Georg Raffelt: raffelt@mppmu.mpg.de

ADELBERGER

PRL 97 021603 [HECKEL 06](#)
 PRL 98 131104 [ADELBERGER 07](#)

CANTATORE

PRL 96 110406 [ZAVATTINI 06](#)
 PR D96 03206 [ZAVATTINI 08](#)

CHOU

PRL 100 080402 [CHOU 08](#)

DERBIN

JETPL 85 12 [DERBIN 07](#)
 EPJ C54 61 [BELLINI 08](#)

LESSA

PR D75 094001 [LESSA 07](#)

MELCHIORRI

PR D76 041303R [MELCHIORRI 07A](#)

NAMBA

PL B645 398 [NAMBA 07](#)

NESVIZHEVS

PR D75 075006 [BAESSLER 07](#)

Follow-up to encourage response from authors



Name/Further Explanation	tar file	Comments
Accelerator Physics of Colliders	accel.tar	July 07, 2005
Big-Bang Cosmology	bigbang.tar	July 08, 2005
Big-Bang Nucleosynthesis	bigbangnuc.ta	
CKM quark-mixing matrix	kmmix.tar	
Cosmic Microwave Background	microwave.tar	
Cosmic Rays	cosmicray.tar	
Cosmological Parameters, The	hubble.tar	
CP violation	cpviol.tar	
Cross-section formulae for specific processes	crosssec.tar	
Dark matter	darkmat.tar	
Electroweak model and constraints on new physics	stanmodel.tar	

MiniReview

Name/Further Explanation	tar file	Comments
a_1(1260)	a11260.tar	
Anomalous W/Z quartic couplings	anwcouplings.tar	
Axions	axions.tar	
b-flavored Hadrons, Production and I	bflavoredhadrons.tar	
B0--B0bar Mixing	bbmix.tar	
Baryon Decay Parameters	bardecay.tar	
Baryon Magnetic Moments	magmom.tar	
Charged Kaon Mass	kmass.tar	
Charm Dalitz-Plot Analyses, Review of	charm_dalitz.tar	
Charmed Baryons	charmedbaryon.tar	
CPT Invariance Tests in Neutral Kaon Decay	cpt.tar	
CP Violation in K_L Decays	k0lcp.tar	
CP Violation in K_S -> 3pi	k0s3pi.tar	
D0--D0bar Mixing	dmix.tar	
Dalitz Plot Parameters for K -> 3pi Decays	dalitz.tar	
D_s+ Decay Constant	dsdecaycons.tar	
Dynamical Electroweak Symmetry Breaking (technicolor, etc.)	color.tar	
Electron, muon, and tau neutrino Listings	emutauneutrinos.tar	
eta(1405), eta(1475), f_1(1420), and f_1(1510)	eta1440.tar	

B0--B0bar Mixing

- Retrieve [bbmix.tar](#)
- `tar -xvf bbmix.tar`
- `cd bbmix`
- `tex bbmix_s042224.tex; tex bbmix_s042224.tex`
- `dvips -t letter bbmix_s042224.dvi -o bbmix_s042224.ps`
- Edit **bbmix_s042224.tex** to modify review content
- Figures, if any, are included in the `figures/` directory
- `mtxsis-rppmini.tex` file contains TeXsis and RPP macros

Baryon Decay Parameters

- Retrieve [bardecay.tar](#)
- `tar -xvf bardecay.tar`

Attention to index

Use posted tex source files for updates

PARTICLE LISTINGS UNDER REVISION (FOR ENCODERS) - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://pdg.lbl.gov/encoder_

GNews G Help Support FAQ SPIRES PDG PDG AGENDA PDG DB-06

PARTICLE LISTINGS UNDER REVISION

(FOR ENCODERS)

This WWW page is designed so that encoders can get current Listings of encoded particles with the 'NODES' on the right-hand side of the page. The list is presented in two versions -- the first is by Particle Code and the second is by Particle Name (grouped in RPP order). At the current time, no files for the Unstable Mesons are available.

Disclaimer

These sections are private PDG files. Please do not quote or refer to them. The authors reserve the right to radically alter these non-completed sections from minute to minute. They are certainly not error free.

[The List by Particle Code](#)

[Conservation Laws](#)

- [Gauge and Higgs Bosons](#) [Summary Table](#)
- [Leptons](#) [Summary Table](#)
- [Quarks](#) [Summary Table](#)
- [Light Unflavored Mesons](#) [Summary Table](#)
- [Strange Mesons](#) [Summary Table](#)
- [Charmed Mesons](#) [Summary Table](#)
- [Charmed Strange Mesons](#) [Summary Table](#)

Done

Citation: C. Amisier et al. (Particle Data Group), PL B667, 1 (2008) (URL: http://pdg.lbl.gov)

D[±] Listings

$I(J^P) = \frac{1}{2}(0^-)$

D[±] MASS

The fit includes D[±], D⁰, D_s[±], D[±]s, D[±]0, and D_s[±] mass and mass difference measurements.

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1869.62 ± 0.20 OUR FIT				Error includes scale factor of 1.1.
1869.5 ± 0.5 OUR AVERAGE				
1870.0 ± 0.5 ± 1.0	317	BARLAG	90C ACCM	π ⁻ Cl, 230 GeV
1869.4 ± 0.6		¹ TRILLING	81 RVUE	e ⁺ e ⁻ 3.77 GeV

••• We do not use the following data for averages, fits, limits, etc. •••

1875 ± 10				
1860 ± 16				
1863 ± 4				
1868.4 ± 0.5				
1874 ± 5				
1868.3 ± 0.9				
1874 ± 11				
1876 ± 15				

¹ PERUZZI absolute SI ψ(2S) mea PERUZZI

Summary Tables

Citation: C. Amisier et al. (Particle Data Group), PL B607, 1 (2008) (URL: http://pdg.lbl.gov)

CHARMED MESONS (C = ±1)

$D^+ = c\bar{d}, D^0 = c\bar{u}, \bar{D}^0 = \bar{c}u, D^- = \bar{c}d,$ similarly for D[±]s

$I(J^P) = \frac{1}{2}(0^-)$

Mass $m = 1869.62 \pm 0.20$ MeV ($S = 1.1$)
 Mean life $\tau = (1040 \pm 7) \times 10^{-15}$ s
 $c\tau = 311.8 \mu\text{m}$

Meas Listing

VALUE (10⁻¹⁵ s)

1040 ± 7	(C)
1039.4 ± 4.3	±
1033.6 ± 22.1	¹
1048 ± 15	±
1075 ± 40	±
1030 ± 80	±
1050 +77	-72
1050 ± 80	±
1090 ± 30	±

² BARLAG et al.

HTTP://PDG

c-quark decays

$\Gamma(c \rightarrow \ell^+ \text{anything}) / \Gamma(c \rightarrow \text{anything}) = 0.096 \pm 0.004$ [a]
 $\Gamma(c \rightarrow D^*(2010))$

CP-violation decay-rat

$A_{CP}(K_S^0 \pi^\pm) =$
 $A_{CP}(K^\mp 2\pi^\pm) =$
 $A_{CP}(K^\mp \pi^+ \pi^\pm) =$
 $A_{CP}(K_S^0 \pi^+ \pi^0) =$
 $A_{CP}(K_S^0 \pi^\pm \pi^\mp) =$
 $A_{CP}(K^\pm K^\mp) =$
 $A_{CP}(K^\pm K^\mp \pi^\pm) =$
 $A_{CP}(K^\pm K^\mp \pi^0) =$
 $A_{CP}(D\pi^\pm) =$
 $A_{CP}(\pi^+ \pi^- \pi^\pm) =$
 $A_{CP}(K_S^0 K^\pm \pi^\mp) =$

T-violation decay-rat

$A_T(K_S^0 K^\pm \pi^\mp \pi^\pm) =$

D⁺ → K^{*}(892)⁰ℓ⁺

$r_\nu = 1.62 \pm 0.0$
 $r_2 = 0.83 \pm 0.0$

Conservation Laws

Citation: C. Amisier et al. (Particle Data Group), PL B667, 1 (2008) (URL: http://pdg.lbl.gov)

CP VIOLATION OBSERVED

Re(ε) (1.596 ± 0.013) × 10⁻³

charge asymmetry in K_S⁰ decays

$A_L =$ weighted average of $A_L(\mu)$ and $A_L(e)$ (0.332 ± 0.006)%
 $A_L(\mu) = [\Gamma(\pi^+ \mu^+ \nu_\mu) - \Gamma(\pi^+ \mu^- \bar{\nu}_\mu)] / \text{sum}$ (0.304 ± 0.025)%
 $A_L(e) = [\Gamma(\pi^+ e^+ \nu_e) - \Gamma(\pi^+ e^- \bar{\nu}_e)] / \text{sum}$ (0.334 ± 0.007)%

parameters for K_L⁰ → 2π decay

$|\eta_{00}| = |A(K_L^0 \rightarrow 2\pi^0) / A(K_S^0 \rightarrow 2\pi^0)|$ (2.222 ± 0.012) × 10⁻³

$|\eta_{+-}| = |A(K_L^0 \rightarrow \pi^+ \pi^-) / A(K_S^0 \rightarrow \pi^+ \pi^-)|$ (2.233 ± 0.012) × 10⁻³

$|\epsilon| = (2|\eta_{+-}| + |\eta_{00}|) / 3$ (2.229 ± 0.012) × 10⁻³

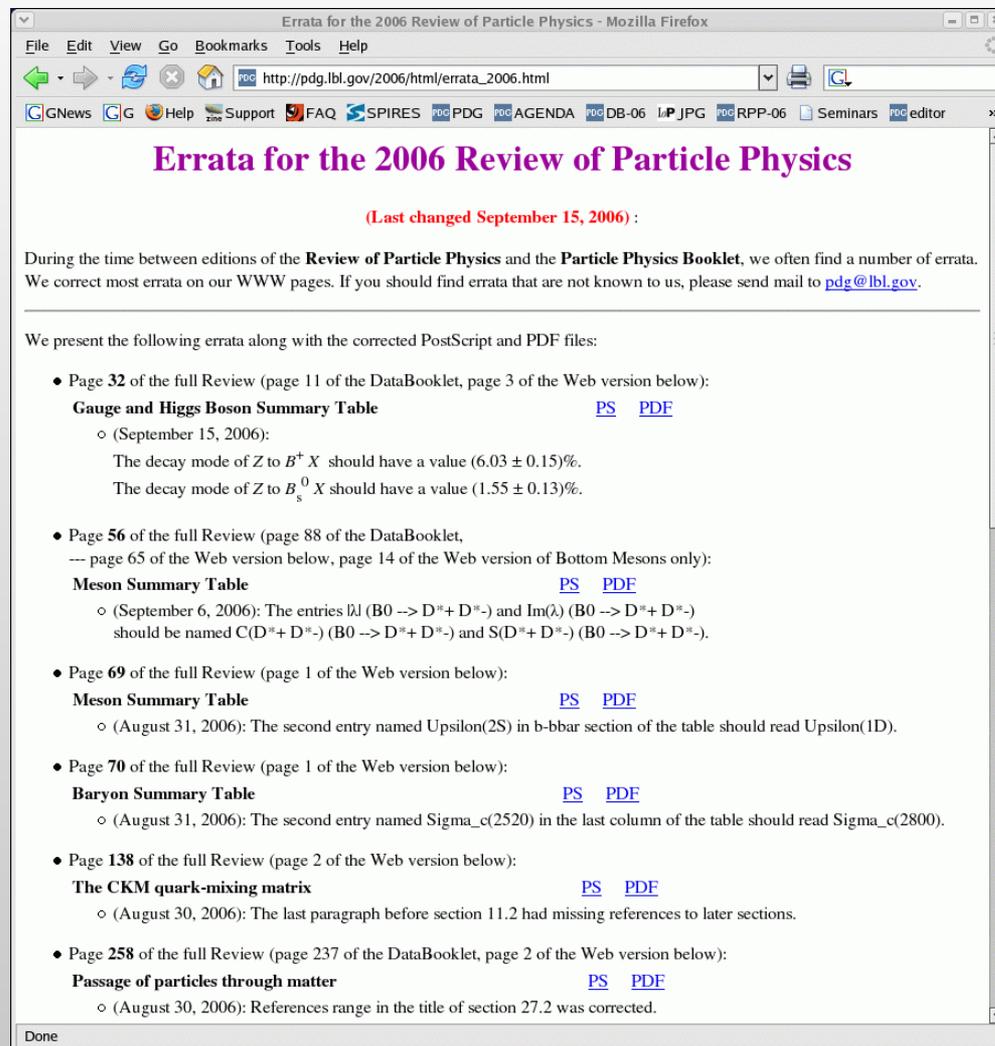
$|\eta_{00} / \eta_{+-}|$ [f] 0.9951 ± 0.0008 (S)

Re(ε'/ε) = (1 - |\eta_{00} / \eta_{+-}|) / 3 [f] (1.65 ± 0.26) × 10⁻²

Assuming CPT

Periodically available for verification

Report corrections to be posted as errata



Errata for the 2006 Review of Particle Physics - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://pdg.lbl.gov/2006/html/errata_2006.html

GNews G Help Support FAQ SPIRES PDG AGENDA DB-06 L.P.JPG RPP-06 Seminars editor

Errata for the 2006 Review of Particle Physics

(Last changed September 15, 2006) :

During the time between editions of the **Review of Particle Physics** and the **Particle Physics Booklet**, we often find a number of errata. We correct most errata on our WWW pages. If you should find errata that are not known to us, please send mail to pdg@lbl.gov.

We present the following errata along with the corrected PostScript and PDF files:

- Page 32 of the full Review (page 11 of the DataBooklet, page 3 of the Web version below):
Gauge and Higgs Boson Summary Table [PS](#) [PDF](#)
 ◦ (September 15, 2006):
 The decay mode of Z to $B^+ X$ should have a value $(6.03 \pm 0.15)\%$.
 The decay mode of Z to $B_s^0 X$ should have a value $(1.55 \pm 0.13)\%$.
- Page 56 of the full Review (page 88 of the DataBooklet, --- page 65 of the Web version below, page 14 of the Web version of Bottom Mesons only):
Meson Summary Table [PS](#) [PDF](#)
 ◦ (September 6, 2006): The entries $l\lambda$ ($B0 \rightarrow D^* + D^{*-}$) and $Im(\lambda)$ ($B0 \rightarrow D^* + D^{*-}$) should be named $C(D^* + D^{*-})$ ($B0 \rightarrow D^* + D^{*-}$) and $S(D^* + D^{*-})$ ($B0 \rightarrow D^* + D^{*-}$).
- Page 69 of the full Review (page 1 of the Web version below):
Meson Summary Table [PS](#) [PDF](#)
 ◦ (August 31, 2006): The second entry named Upsilon(2S) in b-bbar section of the table should read Upsilon(1D).
- Page 70 of the full Review (page 1 of the Web version below):
Baryon Summary Table [PS](#) [PDF](#)
 ◦ (August 31, 2006): The second entry named Sigma_c(2520) in the last column of the table should read Sigma_c(2800).
- Page 138 of the full Review (page 2 of the Web version below):
The CKM quark-mixing matrix [PS](#) [PDF](#)
 ◦ (August 30, 2006): The last paragraph before section 11.2 had missing references to later sections.
- Page 258 of the full Review (page 237 of the DataBooklet, page 2 of the Web version below):
Passage of particles through matter [PS](#) [PDF](#)
 ◦ (August 30, 2006): References range in the title of section 27.2 was corrected.

Done

- **br_ratio: 831 +-35 +-20, S041 1**

$\Gamma(\bar{D}^0 K^+)/\Gamma_{\text{total}}$				Γ_{35}/Γ	
VALUE (units 10^{-4})	DOCUMENT ID	TECN	COMMENT		ERROR=1;NODE=S041B31 NODE=S041B31
4.08 ± 0.24 OUR AVERAGE					
4.09 ± 0.20 ± 0.17	69 AUBERT	04N BABR	$e^+ e^- \rightarrow \Upsilon(4S)$		
4.9 $^{+0.8}_{-0.7}$ ± 0.2	70 BORNHEIM	03 CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$		
3.8 ± 0.4 ± 0.2	71,72 SWAIN	03 BELL	$e^+ e^- \rightarrow \Upsilon(4S)$		
• • • We do not use the following data for averages, fits, limits, etc. • • •					
4.6 ± 0.6 ± 0.2	71,73 ABE	03D BELL	Repl. by SWAIN 03		
4.19 ± 0.57 ± 0.40	74 ABE	01I BELL	Repl. by ABE 03D		SYCLP=A
2.92 ± 0.80 ± 0.28	75 ATHANAS	98 CLE2	Repl. by BORNHEIM 03		SYCLP=A
⁶⁹ AUBERT 04N reports $[B(B^+ \rightarrow \bar{D}^0 K^+) / B(B^+ \rightarrow \bar{D}^0 \pi^+)] = (831 \pm 35 \pm 20) \times 10^{-4}$. We multiply by our best value $B(B^+ \rightarrow \bar{D}^0 \pi^+) = (4.92 \pm 0.20) \times 10^{-3}$. Our first error is their experiment's error and our second error is the systematic error from using our best value.					NODE=S041B31;LINKAGE=AU

- **br_product**
- **br_rescale** (rescale product of branching fractions)
- **br_ratrescale** (rescale ratio of branching fractions)

To quote the current best value of the top quark mass use:

#best_value{Q007TP}

t

$$I(J^P) = 0(\frac{1}{2}^+)$$

Charge = $\frac{2}{3} e$ Top = +1

A REVIEW GOES HERE – Check our WWW List of Reviews

t-Quark Mass in $p\bar{p}$ Collisions

OUR EVALUATION of **171.2 ± 1.2 ± 1.8 GeV** (TEVEWWG 08A) is an average of top mass measurements from Tevatron Run-I (1992–1996) and Run-II (2001–present) that were published at the time of preparing this Review. This average was provided by the Tevatron Electroweak Working Group (TEVEWWG). It takes correlated uncertainties properly into account and has a χ^2 of 10.6 for 10 degrees of freedom. Including the most recent unpublished top mass measurements from Run-II, the TEVEWWG reports an average top mass of $172.6 \pm 0.8 \pm 1.1$ GeV (TEVEWWG 08). See the note "The Top Quark" in these Quark Particle Listings.

For earlier search limits see PDG 96, Physical Review **D54** 1 (1996). We no longer include a compilation of indirect top mass determinations from Standard Model Electroweak fits in the Listings (our last compilation can be found in the Listings of the 2007 partial update). For a discussion of current results see the reviews "The Top Quark" and "Electroweak Model and Constraints on New Physics."

VALUE (GeV)	DOCUMENT ID	TECN	COMMENT
171.2 ± 1.2 ± 1.8	OUR EVALUATION		See comments in the header above.
174.0 ± 2.2 ± 4.8	¹ AALTONEN	07D CDF	≥ 6 jets, vtx b-tag
170.8 ± 2.2 ± 1.4	^{2,3} AALTONEN	07I CDF	lepton + jets (b-tag)
176.2 ± 9.2 ± 3.9	⁴ ABAZOV	07W D0	dilepton (MWT)
179.5 ± 7.4 ± 5.6	⁴ ABAZOV	07W D0	dilepton (μ WT)
164.5 ± 3.9 ± 3.9	^{3,5} ABULENCIA	07D CDF	dilepton
180.7 ^{+15.5} _{-13.4} ± 8.6	⁶ ABULENCIA	07J CDF	lepton + jets
170.3 ^{+4.1} _{-4.5} ± 1.8	^{3,7} ABAZOV	06U D0	lepton + jets (b-tag)
180.1 ± 3.6 ± 3.9	^{8,9} ABAZOV	04G D0	lepton + jets
170.0 ± 2.0 ± 2.0	¹⁰ ABAZOV	04G D0	lepton + jets

NODE=Q007

NODE=Q007

NODE=Q007

NODE=Q007TP

NODE=Q007TP

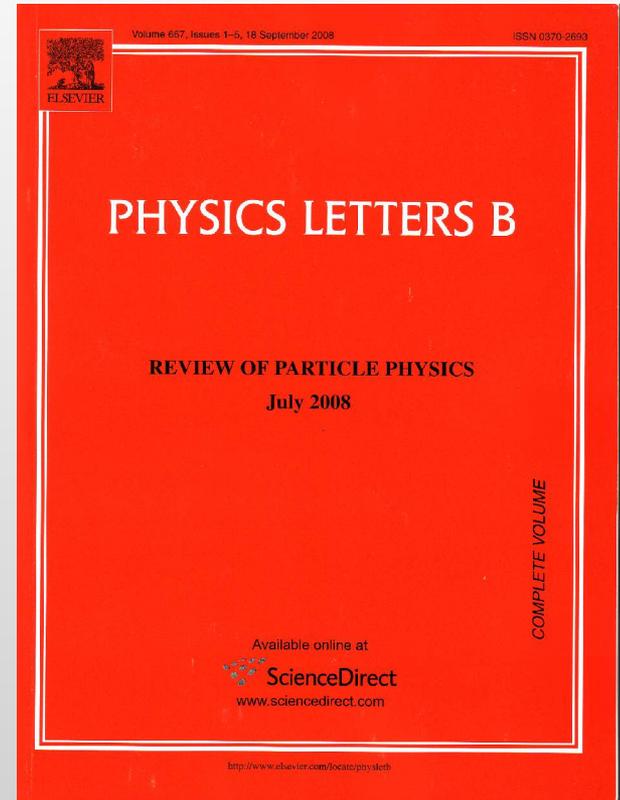
NODE=Q007TP

→ NOT CHECKED ←

OCCUR=2

Works also with decay modes, #best_value{Particle Designator}

- 645 new papers
- 2,778 new measurements
- 109 reviews



Thanks to all PDG authors