Reference = DOBBS 14; PL B739 90
Verifier code = SETH

Normally we send all verifications for one experiment to one person, usually the spokesperson or data-analysis co-ordinator, who then distributes them to the appropriate people. Please tell us if we should send the verifications for your experiment to someone else.

PLEASE READ NOW

PLEASE REPLY WITHIN ONE WEEK

Kamal K Seth

EMAIL: kseth@northwestern.edu

July 21, 2016

Dear Colleague,

(1) Please check the results of your experiment carefully. They are marked.

(2) Please reply within one week.

(3) Please reply even if everything is correct.

(4) IMPORTANT!! Please tell WHICH papers you are verifying. We have lots of requests out.

(5) Feel free to make comments on our treatment of any of the results (not just yours) you see.

Thank you for helping us make the Review accurate and useful.

Sincerely,

Simon Eidelman
BINP, Budker Inst. of Nuclear Physics
Prospekt Lavrent'eva 11
RU-630090 Novosibirsk
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EMAIL: simon.eidelman@cern.ch

$c\bar{c}$ MESONS

NODE=MXXX025

NODE=M071

$\psi(2S)$

$I^G(J^{PC}) = 0^-(1^{--})$

See the Review on "$\psi(2S)$ and χ_c branching ratios" before the $\chi_{c0}(1P)$ Listings.

NODE=M071

$\psi(2S)$ BRANCHING RATIOS

NODE=M071235

HADRONIC DECAYS

NODE=M071310

$\Gamma(p\bar{p})/\Gamma_{total}$ **Γ_{19}/Γ**

NODE=M071R25
NODE=M071R25

	VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
	3.00±0.13 OUR AVERAGE		Error includes scale factor of 1.1.			
YOUR DATA	3.08±0.05±0.18	4.5k	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to p\bar{p}$
	3.36±0.09±0.25	1.6k	ABLIKIM	07C	BES	$e^+e^- \to \psi(2S) \to p\bar{p}$
	2.87±0.12±0.15	557	PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to p\bar{p}$
	1.4 ±0.8	4	BRANDELIK	79C	DASP	$e^+e^- \to \psi(2S) \to p\bar{p}$
	2.3 ±0.7		FELDMAN	77	MRK1	$e^+e^- \to \psi(2S) \to p\bar{p}$

YOUR NOTE [1] Using CLEO-c data but not authored by the CLEO Collaboration. NODE=M071R25;LINKAGE=A

$\Gamma(\Lambda\bar{\Lambda})/\Gamma_{total}$ **Γ_{26}/Γ**

NODE=M071R28
NODE=M071R28

	VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
	3.57±0.18 OUR AVERAGE						
YOUR DATA	3.75±0.09±0.23		1.9k	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to$ hadrons
	3.39±0.20±0.32		337	ABLIKIM	07C	BES	$e^+e^- \to \psi(2S) \to$ hadrons
	6.4 ±1.8 ±0.1			[2] AUBERT	07BD	BABR	10.6 $e^+e^- \to \Lambda\bar{\Lambda}\gamma$
	3.28±0.23±0.25		208	PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to$ hadrons
	• • • We do not use the following data for averages, fits, limits, etc. • • •						
	1.81±0.20±0.27		80	[3] BAI	01	BES	$e^+e^- \to \psi(2S) \to$ hadrons
	< 4	90		FELDMAN	77	MRK1	$e^+e^- \to \psi(2S) \to$ hadrons

YOUR NOTE [1] Using CLEO-c data but not authored by the CLEO Collaboration. NODE=M071R28;LINKAGE=A

[2] AUBERT 07BD reports $[\Gamma(\psi(2S) \to \Lambda\bar{\Lambda})/\Gamma_{total}] \times [\Gamma(\psi(2S) \to e^+e^-)] = (15 \pm 4 \pm 1) \times 10^{-4}$ keV which we divide by our best value $\Gamma(\psi(2S) \to e^+e^-) = 2.34 \pm 0.04$ keV. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=M071R28;LINKAGE=AU

[3] Estimated using B($\psi(2S) \to J/\psi\pi^+\pi^-$)= 0.310 ± 0.028. NODE=M071R28;LINKAGE=PP

$\Gamma(\Sigma^+\bar{\Sigma}^-)/\Gamma_{total}$ **Γ_{30}/Γ**

NODE=M071R47
NODE=M071R47

	VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
	2.51±0.21 OUR AVERAGE					
YOUR DATA	2.51±0.15±0.16	281	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to$ hadrons
	2.57±0.44±0.68	35	PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to$ hadrons

YOUR NOTE [1] Using CLEO-c data but not authored by the CLEO Collaboration. NODE=M071R47;LINKAGE=A

$\Gamma(\Sigma^0\bar{\Sigma}^0)/\Gamma_{total}$ **Γ_{31}/Γ**

NODE=M071R51
NODE=M071R51

	VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
	2.32±0.16 OUR AVERAGE					
YOUR DATA	2.25±0.11±0.16	439	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to$ hadrons
	2.35±0.36±0.32	59	ABLIKIM	07C	BES	$e^+e^- \to \psi(2S) \to$ hadrons
	2.63±0.35±0.21	58	PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to$ hadrons
	• • • We do not use the following data for averages, fits, limits, etc. • • •					
	1.2 ±0.4 ±0.4	8	[2] BAI	01	BES	$e^+e^- \to \psi(2S) \to$ hadrons

YOUR NOTE [1] Using CLEO-c data but not authored by the CLEO Collaboration. NODE=M071R51;LINKAGE=A

[2] Estimated using B($\psi(2S) \to J/\psi\pi^+\pi^-$)= 0.310 ± 0.028. NODE=M071R51;LINKAGE=PP

$\Gamma(\Xi^-\overline{\Xi}^+)/\Gamma_{\text{total}}$ Γ_{33}/Γ

NODE=M071R29
NODE=M071R29

VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
2.64±0.18 OUR AVERAGE						
YOUR DATA 2.66±0.12±0.20		548	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to$ hadrons
3.03±0.40±0.32		67	ABLIKIM	07C	BES	$e^+e^- \to \psi(2S) \to$ hadrons
2.38±0.30±0.21		63	PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •						
0.94±0.27±0.15		12	[2] BAI	01	BES	$e^+e^- \to \psi(2S) \to$ hadrons
<2	90		FELDMAN	77	MRK1	$e^+e^- \to \psi(2S) \to$ hadrons

YOUR NOTE
[1] Using CLEO-c data but not authored by the CLEO Collaboration.
[2] Estimated using $B(\psi(2S) \to J/\psi\pi^+\pi^-) = 0.310 \pm 0.028$.

NODE=M071R29;LINKAGE=A
NODE=M071R29;LINKAGE=PP

$\Gamma(\Xi^0\overline{\Xi}^0)/\Gamma_{\text{total}}$ Γ_{34}/Γ

NODE=M071R48
NODE=M071R48

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
2.07±0.23 OUR AVERAGE					
YOUR DATA 2.02±0.19±0.15	112	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to$ hadrons
2.75±0.64±0.61	19	PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to$ hadrons

YOUR NOTE
[1] Using CLEO-c data but not authored by the CLEO Collaboration.

NODE=M071R48;LINKAGE=A

$\Gamma(\Omega^-\overline{\Omega}^+)/\Gamma_{\text{total}}$ Γ_{40}/Γ

NODE=M071R54
NODE=M071R54

VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
YOUR DATA **0.47±0.09±0.05**		27	[1] DOBBS	14		$e^+e^- \to \psi(2S) \to$ hadrons
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<1.5	90		ABLIKIM	12Q	BES2	$e^+e^- \to \psi(2S) \to$ hadrons
<1.6	90		PEDLAR	05	CLEO	$e^+e^- \to \psi(2S) \to$ hadrons
<0.73	90		[2] BAI	01	BES	$e^+e^- \to \psi(2S) \to$ hadrons

YOUR NOTE
[1] Using CLEO-c data but not authored by the CLEO Collaboration.
[2] Estimated using $B(\psi(2S) \to J/\psi\pi^+\pi^-) = 0.310 \pm 0.028$.

NODE=M071R54;LINKAGE=A
NODE=M071R54;LINKAGE=PP

$\psi(2S)$ REFERENCES

NODE=M071

YOUR PAPER

DOBBS	14	PL B739 90	S. Dobbs *et al.*	(NWES, WAYN)
ABLIKIM	12Q	CPC 36 1040	M. Ablikim *et al.*	(BES II Collab.)
ABLIKIM	07C	PL B648 149	M. Ablikim *et al.*	(BES Collab.)
AUBERT	07BD	PR D76 092006	B. Aubert *et al.*	(BABAR Collab.)
PEDLAR	05	PR D72 051108	T.K. Pedlar *et al.*	(CLEO Collab.)
BAI	01	PR D63 032002	J.Z. Bai *et al.*	(BES Collab.)
BRANDELIK	79C	ZPHY C1 233	R. Brandelik *et al.*	(DASP Collab.)
FELDMAN	77	PRPL 33C 285	G.J. Feldman, M.L. Perl	(LBL, SLAC)

REFID=56333
REFID=54864
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