Reference = ABLIKIM 12N; PR D86 092009
Verifier code = BES3

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

Xiao-Rui Lyu

EMAIL: xiaorui@ucas.ac.cn

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
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Prospekt Lavrent'eva 11
RU-630090 Novosibirsk
Russian Federation

EMAIL: simon.eidelman@cern.ch

$c\overline{c}$ MESONS

NODE=MXXX025

NODE=M026

$\eta_c(1S)$

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

$\eta_c(1S)$ BRANCHING RATIOS

NODE=M026225

HADRONIC DECAYS

NODE=M026305

$\Gamma(K\overline{K}\eta)/\Gamma_{total}$ **Γ_{29}/Γ**

NODE=M026R15
NODE=M026R15

	VALUE (units 10^{-2})	CL%	EVTS		DOCUMENT ID		TECN	COMMENT	
YOUR DATA	**1.0 ±0.5 ±0.2**		7	[1,2]	ABLIKIM	12N	BES3	$\psi(2S) \to \pi^0\gamma\eta K^+K^-$	OCCUR=2
• • • We do not use the following data for averages, fits, limits, etc. • • •									
	<3.1	90		[3]	BALTRUSAIT...86		MRK3	$J/\psi \to \eta_c\gamma$	

YOUR NOTE [1] ABLIKIM 12N quotes $B(\psi(2S) \to \pi^0 h_c) \cdot B(h_c \to \gamma\eta_c) \cdot B(\eta_c \to K^+K^-\eta) = (2.11 \pm 1.01 \pm 0.32) \times 10^{-6}$ which we multiply by 2 to account for isospin symmetry. NODE=M026R15;LINKAGE=AK

YOUR NOTE [2] ABLIKIM 12N reports $[\Gamma(\eta_c(1S) \to K\overline{K}\eta)/\Gamma_{total}] \times [B(\psi(2S) \to \pi^0 h_c(1P))] \times [B(h_c(1P) \to \eta_c(1S)\gamma)] = (4.22 \pm 2.02 \pm 0.64) \times 10^{-6}$ which we divide by our best values $B(\psi(2S) \to \pi^0 h_c(1P)) = (8.6 \pm 1.3) \times 10^{-4}$, $B(h_c(1P) \to \eta_c(1S)\gamma) = (51 \pm 6) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best values. NODE=M026R15;LINKAGE=AM

[3] The quoted branching ratios use $B(J/\psi(1S) \to \gamma\eta_c(1S)) = 0.0127 \pm 0.0036$. NODE=M026R15;LINKAGE=E

$\eta_c(1S)$ REFERENCES

NODE=M026

YOUR PAPER ABLIKIM 12N PR D86 092009 M. Ablikim *et al.* (BES III Collab.) REFID=54741
BALTRUSAIT... 86 PR D33 629 R.M. Baltrusaitis *et al.* (Mark III Collab.) REFID=22009