

Reference = ABLIKIM 15AD; PR D92 051101
Verifier code = BES3

PLEASE READ NOW



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

Xiao-Rui Lyu

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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,

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LIGHT UNFLAVORED MESONS

($S = C = B = 0$)

For $I = 1$ (π, b, ρ, a): $u\bar{d}, (u\bar{u}-d\bar{d})/\sqrt{2}, d\bar{u}$;
for $I = 0$ ($\eta, \eta', h, h', \omega, \phi, f, f'$): $c_1(u\bar{u} + d\bar{d}) + c_2(s\bar{s})$

$\eta'(958)$

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

NODE=MXXX005

NODE=MXXX005

NODE=M002

$\eta'(958)$ BRANCHING RATIOS

NODE=M002230

$\Gamma(\omega\gamma)/\Gamma_{\text{total}}$ Γ_4/Γ

NODE=M002R49
NODE=M002R49

	<u>VALUE (units 10^{-2})</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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YOUR DATA **2.55±0.03±0.16** 33.2k ¹ ABLIKIM 15AD BES3 $J/\psi \rightarrow \eta'\gamma$
 ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

2.34±0.30±0.04 70 ² PEDLAR 09 CLEO $J/\psi \rightarrow \gamma\eta'$

YOUR NOTE ¹ Using $B(J/\psi \rightarrow \eta'\gamma) = (5.15 \pm 0.16) \times 10^{-3}$ and $B(\omega \rightarrow \pi^+\pi^-\pi^0) = (89.2 \pm 0.7)\%$.
² Not independent of other η' branching fractions and ratios in PEDLAR 09.

NODE=M002R49;LINKAGE=A
NODE=M002R49;LINKAGE=PE

$\Gamma(\omega e^+ e^-)/\Gamma(\omega\gamma)$ Γ_5/Γ_4

NODE=M002R60
NODE=M002R60

	<u>VALUE (units 10^{-3})</u>		<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●

YOUR DATA 7.71±1.34±0.54 ¹ ABLIKIM 15AD BES3 $J/\psi \rightarrow \eta'\gamma$

YOUR NOTE ¹ Obtained from other ABLIKIM 15AD measurements with common systematics taken into account.

NODE=M002R60;LINKAGE=A

$\Gamma(\omega e^+ e^-)/\Gamma_{\text{total}}$ Γ_5/Γ

NODE=M002R59
NODE=M002R59

	<u>VALUE (units 10^{-4})</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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YOUR DATA **1.97±0.34±0.17** 66 ¹ ABLIKIM 15AD BES3 $J/\psi \rightarrow \eta'\gamma$

YOUR NOTE ¹ Using $B(J/\psi \rightarrow \eta'\gamma) = (5.15 \pm 0.16) \times 10^{-3}$ and $B(\omega \rightarrow \pi^+\pi^-\pi^0) = (89.2 \pm 0.7)\%$.

NODE=M002R59;LINKAGE=A

$\eta'(958)$ REFERENCES

NODE=M002

YOUR PAPER	ABLIKIM	15AD PR D92 051101	M. Ablikim <i>et al.</i>	(BES III Collab.)	REFID=56983
	PEDLAR	09 PR D79 111101	T.K. Pedlar <i>et al.</i>	(CLEO Collab.)	REFID=52998