

Reference = ABLIKIM 15B; PR D91 031101
Verifier code = BES3

PLEASE READ NOW

*PLEASE
REPLY
WITHIN
ONE WEEK*

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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CHARMED MESONS

($C = \pm 1$)

$$D^+ = c\bar{d}, D^0 = c\bar{u}, \bar{D}^0 = \bar{c}u, D^- = \bar{c}d, \text{ similarly for } D^{*'}\text{'s}$$

$D^*(2007)^0$

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

I, J, P need confirmation.

J consistent with 1, value 0 ruled out (NGUYEN 77).

NODE=MXXX035

NODE=MXXX035

NODE=M061

NODE=M061

NODE=M061225

NODE=M061R3
NODE=M061R3NODE=M061R2
NODE=M061R2NODE=M061R1
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NODE=M061R;LINKAGE=A

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REFID=43170
REFID=40579
REFID=40017
REFID=22880
REFID=22866
REFID=11434
REFID=11543

$D^*(2007)^0$ BRANCHING RATIOS

$\Gamma(D^0\pi^0)/\Gamma(D^0\gamma)$

Γ_1/Γ_2

VALUE EVTS

1.85±0.07 OUR AVERAGE

YOUR DATA	1.90±0.07±0.05	4.9k	ABLIKIM	15B	BES3	10.6 $e^+e^- \rightarrow$ hadrons
	1.74±0.02±0.13		AUBERT,BE	05G	BABR	10.6 $e^+e^- \rightarrow$ hadrons

$\Gamma(D^0\pi^0)/\Gamma_{\text{total}}$

Γ_1/Γ

VALUE EVTS

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

YOUR DATA	0.655±0.008±0.005	3.2k	⁵ ABLIKIM	15B	BES3	$e^+e^- \rightarrow$ hadrons
	0.635±0.003±0.017	69k	⁵ AUBERT,BE	05G	BABR	10.6 $e^+e^- \rightarrow$ hadrons
	0.596±0.035±0.028	858	⁶ ALBRECHT	95F	ARG	$e^+e^- \rightarrow$ hadrons
	0.636±0.023±0.033	1097	⁶ BUTLER	92	CLE2	$e^+e^- \rightarrow$ hadrons

$\Gamma(D^0\gamma)/\Gamma_{\text{total}}$

Γ_2/Γ

VALUE EVTS

0.381±0.029 OUR AVERAGE

0.404±0.035±0.028	456	⁶ ALBRECHT	95F	ARG	$e^+e^- \rightarrow$ hadrons
0.364±0.023±0.033	621	⁶ BUTLER	92	CLE2	$e^+e^- \rightarrow$ hadrons
0.37 ±0.08 ±0.08		ADLER	88D	MRK3	e^+e^-

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

YOUR DATA	0.345±0.008±0.005	1.8k	⁵ ABLIKIM	15B	BES3	$e^+e^- \rightarrow$ hadrons
	0.365±0.003±0.017	68k	⁵ AUBERT,BE	05G	BABR	10.6 $e^+e^- \rightarrow$ hadrons
	0.47 ±0.23		LOW	87	HRS	29 GeV e^+e^-
	0.53 ±0.13		BARTEL	85G	JADE	e^+e^- , hadrons
	0.47 ±0.12		COLES	82	MRK2	e^+e^-
	0.45 ±0.15		GOLDHABER	77	MRK1	e^+e^-

YOUR NOTE ⁵ Derived from the ratio $\Gamma(D^0\pi^0) / \Gamma(D^0\gamma)$ assuming that the branching fractions of $D^{*0} \rightarrow D^0\pi^0$ and $D^{*0} \rightarrow D^0\gamma$ decays sum to 100%

⁶ The BUTLER 92 and ALBRECHT 95F branching ratios are not independent, they have been constrained by the authors to sum to 100%.

$D^*(2007)^0$ REFERENCES

YOUR PAPER	ABLIKIM	15B	PR D91 031101	M. Ablikim <i>et al.</i>	(BES III Collab.)
	AUBERT,BE	05G	PR D72 091101	B. Aubert <i>et al.</i>	(BABAR Collab.)
	ALBRECHT	95F	ZPHY C66 63	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
	BUTLER	92	PRL 69 2041	F. Butler <i>et al.</i>	(CLEO Collab.)
	ADLER	88D	PL B208 152	J. Adler <i>et al.</i>	(Mark III Collab.)
	LOW	87	PL B183 232	E.H. Low <i>et al.</i>	(HRS Collab.)
	BARTEL	85G	PL 161B 197	W. Bartel <i>et al.</i>	(JADE Collab.)
	COLES	82	PR D26 2190	M.W. Coles <i>et al.</i>	(LBL, SLAC)
	GOLDHABER	77	PL 69B 503	G. Goldhaber <i>et al.</i>	(Mark I Collab.)
	NGUYEN	77	PRL 39 262	H.K. Nguyen <i>et al.</i>	(LBL, SLAC) J