

X(3940)

$$I^G(J^{PC}) = ?^?(?^{??})$$

OMITTED FROM SUMMARY TABLE

Reported by ABE 07, observed in $e^+e^- \rightarrow J/\psi X$.**X(3940) MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$3942^{+7}_{-6} \pm 6$	52	PAKHLOV 08	BELL	$e^+e^- \rightarrow J/\psi X$
$3943 \pm 6 \pm 6$	25	¹ ABE 07	BELL	$e^+e^- \rightarrow J/\psi X$
3936 ± 14	266	² ABE 07	BELL	$e^+e^- \rightarrow J/\psi(c\bar{c})$

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

¹ From a fit to $D^{*+}D^-$ and $D^{*0}\bar{D}^0$ events.² From the inclusive fit. Not independent of the exclusive measurement by ABE 07.**X(3940) WIDTH**

VALUE (MeV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$37^{+26}_{-15} \pm 8$		52	PAKHLOV 08	BELL	$e^+e^- \rightarrow J/\psi X$
<52	90	25	ABE 07	BELL	$e^+e^- \rightarrow J/\psi X$

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

X(3940) DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $D\bar{D}^* + \text{c.c.}$	seen
Γ_2 $D\bar{D}$	not seen
Γ_3 $J/\psi\omega$	not seen

X(3940) BRANCHING RATIOS $\Gamma(D\bar{D}^* + \text{c.c.})/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
>0.45	90	25	^{3,4} ABE 07	BELL	$e^+e^- \rightarrow J/\psi X$

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

³ For X(3940) decaying to final states with more than two tracks.⁴ PAKHLOV 08 finds that the inclusive peak near 3940 MeV/c² may consist of several states.

$\Gamma(D\bar{D})/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE CL% DOCUMENT ID TECN COMMENT

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

<0.41 90 ^{5,6} ABE 07 BELL $e^+e^- \rightarrow J/\psi X$

⁵ For $X(3940)$ decaying to final states with more than two tracks.

⁶ PAKHLOV 08 finds that the inclusive peak near 3940 MeV/c² may consist of several states.

$\Gamma(J/\psi\omega)/\Gamma_{\text{total}}$ Γ_3/Γ

VALUE CL% DOCUMENT ID TECN COMMENT

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

<0.26 90 ^{7,8} ABE 07 BELL $e^+e^- \rightarrow J/\psi X$

⁷ For $X(3940)$ decaying to final states with more than two tracks.

⁸ PAKHLOV 08 finds that the inclusive peak near 3940 MeV/c² may consist of several states.

X(3940) REFERENCES

PAKHLOV	08	PRL 100 202001	P. Pakhlov <i>et al.</i>	(BELLE Collab.)
ABE	07	PRL 98 082001	K. Abe <i>et al.</i>	(BELLE Collab.)