

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 |
|------------------------|------|---------------------|------|---------------------------------------|
| $3942_{-6}^{+7} \pm 6$ | 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 |
|------------------------|-----|------|-------------|------|-------------------------------|
| $37_{-15}^{+26} \pm 8$ | | 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 | ^{1,2} ABE 07 | BELL | $e^+e^- \rightarrow J/\psi X$ |

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

¹ For X(3940) decaying to final states with more than two tracks.² 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 1,2 ABE 07 BELLE $e^+e^- \rightarrow J/\psi X$

¹ For $X(3940)$ decaying to final states with more than two tracks.

² 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 1,2 ABE 07 BELLE $e^+e^- \rightarrow J/\psi X$

¹ For $X(3940)$ decaying to final states with more than two tracks.

² 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.) |