

$\eta(2225)$

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

OMITTED FROM SUMMARY TABLE

Seen in $J/\psi \rightarrow \gamma\phi\phi$. Possibly seen in $B \rightarrow \phi\phi K$ by LEES 11A. **$\eta(2225)$ MASS**

| VALUE (MeV) | EVTS | DOCUMENT ID | TECN | COMMENT |
|--|--------------|----------------------|----------|---|
| 2221^{+13}_{-10} OUR AVERAGE | | | | |
| 2216^{+4+21}_{-5-11} | | ¹ ABLIKIM | 16N BES3 | $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$ |
| 2240^{+30+30}_{-20-20} | 196 ± 19 | ABLIKIM | 08I BES | $J/\psi \rightarrow \gamma K^+ K^- K_S^0 K_L^0$ |
| $2230 \pm 25 \pm 15$ | | BAI | 90B MRK3 | $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$ |
| $2214 \pm 20 \pm 13$ | | BAI | 90B MRK3 | $J/\psi \rightarrow \gamma K^+ K^- K_S^0 K_L^0$ |

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

~ 2220 BISELLO 86B DM2 $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$

¹From a partial wave analysis of $J/\psi \rightarrow \gamma\phi\phi$ that also finds significant signals for for $\eta(2100)$, 0^{-+} phase space, $f_0(2100)$, $f_2(2010)$, $f_2(2300)$, $f_2(2340)$, and a previously unseen 0^{-+} state $X(2500)$ ($M = 2470^{+15+101}_{-19-23}$ MeV, $\Gamma = 230^{+64+56}_{-35-33}$ MeV).

 $\eta(2225)$ WIDTH

| VALUE (MeV) | EVTS | DOCUMENT ID | TECN | COMMENT |
|---|--------------|----------------------|----------|---|
| 185^{+40}_{-20} OUR AVERAGE | | | | |
| 185^{+12+43}_{-14-17} | | ¹ ABLIKIM | 16N BES3 | $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$ |
| $190 \pm 30^{+60}_{-40}$ | 196 ± 19 | ABLIKIM | 08I BES | $J/\psi \rightarrow \gamma K^+ K^- K_S^0 K_L^0$ |
| $150^{+300}_{-60} \pm 60$ | | BAI | 90B MRK3 | $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$ |

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

~ 80 BISELLO 86B DM2 $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$

¹From a partial wave analysis of $J/\psi \rightarrow \gamma\phi\phi$ that also finds significant signals for for $\eta(2100)$, 0^{-+} phase space, $f_0(2100)$, $f_2(2010)$, $f_2(2300)$, $f_2(2340)$, and a previously unseen 0^{-+} state $X(2500)$ ($M = 2470^{+15+101}_{-19-23}$ MeV, $\Gamma = 230^{+64+56}_{-35-33}$ MeV).

 $\eta(2225)$ REFERENCES

| | | | | |
|---------|-----|---------------|--------------------------|--------------------|
| ABLIKIM | 16N | PR D93 112011 | M. Ablikim | (BESIII Collab.) |
| LEES | 11A | PR D84 012001 | J.P. Lees <i>et al.</i> | (BABAR Collab.) |
| ABLIKIM | 08I | PL B662 330 | M. Ablikim <i>et al.</i> | (BES Collab.) |
| BAI | 90B | PRL 65 1309 | Z. Bai <i>et al.</i> | (Mark III Collab.) |
| BISELLO | 86B | PL B179 294 | D. Bisello <i>et al.</i> | (DM2 Collab.) |