

$\eta(2225)$

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

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 ± 25 ± 15		BAI	90B MRK3	$J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$
2214 ± 20 ± 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 ± 30 ⁺⁶⁰ ₋₄₀	196 ± 19	ABLIKIM	08I BES	$J/\psi \rightarrow \gamma K^+ K^- K_S^0 K_L^0$
150 ⁺³⁰⁰ ₋₆₀ ± 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	(BES III 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.)