

$\eta(2225)$ 

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

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
<b>2221<sup>+13</sup><sub>-10</sub> OUR AVERAGE</b>				
2216 <sup>+4+21</sup> <sub>-5-11</sub>		<sup>1</sup> ABLIKIM	16N BES3	$J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$
2240 <sup>+30+30</sup> <sub>-20-20</sub>	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  $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$ 

<sup>1</sup>From 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
<b>185<sup>+40</sup><sub>-20</sub> OUR AVERAGE</b>				
185 <sup>+12+43</sup> <sub>-14-17</sub>		<sup>1</sup> ABLIKIM	16N BES3	$J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$
190 ± 30 <sup>+60</sup> <sub>-40</sub>	196 ± 19	ABLIKIM	08I BES	$J/\psi \rightarrow \gamma K^+ K^- K_S^0 K_L^0$
150 <sup>+300</sup> <sub>-60</sub> ± 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  $J/\psi \rightarrow \gamma K^+ K^- K^+ K^-$ 

<sup>1</sup>From 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.)