

$f_0(2100)$

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

OMITTED FROM SUMMARY TABLE

Needs confirmation.

 $f_0(2100)$ MASS

| VALUE (MeV) | EVTS | DOCUMENT ID | TECN | COMMENT |
|-------------------------------------------------------------------------------|------|------------------------|----------|----------------------------------------------------------------------------------------|
| 2086^{+20}_{-24} OUR AVERAGE | | | | |
| $2081 \pm 13^{+24}_{-36}$ | 5.5k | ¹ ABLIKIM | 13N BES3 | $e^+e^- \rightarrow J/\psi \rightarrow \gamma\eta\eta$ |
| 2090 ± 30 | | BAI | 00A BES | $J/\psi \rightarrow \gamma(\pi^+\pi^-\pi^+\pi^-)$ |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | | |
| $2090 \pm 10 \pm 6$ | 529 | ^{2,3} DOBBS | 15 | $J/\psi \rightarrow \gamma\pi^+\pi^-$ |
| $2099 \pm 17 \pm 8$ | 283 | ^{2,3} DOBBS | 15 | $\psi(2S) \rightarrow \gamma\pi^+\pi^-$ |
| 2105 ± 8 | 80k | ⁴ UMAN | 06 E835 | $5.2 \bar{p}p \rightarrow \eta\eta\pi^0$ |
| 2102 ± 13 | | ⁵ ANISOVICH | 00J SPEC | $2.0 \bar{p}p \rightarrow \eta\pi^0\pi^0, \pi^0\pi^0, \eta\eta, \eta\eta', \pi^+\pi^-$ |
| 2105 ± 10 | | ANISOVICH | 99K SPEC | $0.6-1.94 \bar{p}p \rightarrow \eta\eta, \eta\eta'$ |
| ~ 2104 | | BUGG | 95 | $J/\psi \rightarrow \gamma\pi^+\pi^-\pi^+\pi^-$ |
| ~ 2122 | | HASAN | 94 RVUE | $\bar{p}p \rightarrow \pi\pi$ |

¹ From partial wave analysis including all possible combinations of 0^{++} , 2^{++} , and 4^{++} resonances.² Using CLEO-c data but not authored by the CLEO Collaboration.³ From a fit to a Breit-Wigner line shape with fixed $\Gamma = 209$ MeV.⁴ Statistical error only.⁵ Includes the data of ANISOVICH 00B indicating to exotic decay pattern. **$f_0(2100)$ WIDTH**

| VALUE (MeV) | EVTS | DOCUMENT ID | TECN | COMMENT |
|-------------------------------------------------------------------------------|------|------------------------|----------|----------------------------------------------------------------------------------------|
| 284^{+60}_{-32} OUR AVERAGE | | | | |
| $273^{+27}_{-24}{}^{+70}_{-23}$ | 5.5k | ⁶ ABLIKIM | 13N BES3 | $e^+e^- \rightarrow J/\psi \rightarrow \gamma\eta\eta$ |
| 330 ± 100 | | BAI | 00A BES | $J/\psi \rightarrow \gamma(\pi^+\pi^-\pi^+\pi^-)$ |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | | |
| 236 ± 14 | 80k | ⁷ UMAN | 06 E835 | $5.2 \bar{p}p \rightarrow \eta\eta\pi^0$ |
| 211 ± 29 | | ⁸ ANISOVICH | 00J SPEC | $2.0 \bar{p}p \rightarrow \eta\pi^0\pi^0, \pi^0\pi^0, \eta\eta, \eta\eta', \pi^+\pi^-$ |
| 200 ± 25 | | ANISOVICH | 99K SPEC | $0.6-1.94 \bar{p}p \rightarrow \eta\eta, \eta\eta'$ |
| ~ 203 | | BUGG | 95 | $J/\psi \rightarrow \gamma\pi^+\pi^-\pi^+\pi^-$ |
| ~ 273 | | HASAN | 94 RVUE | $\bar{p}p \rightarrow \pi\pi$ |

⁶ From partial wave analysis including all possible combinations of 0^{++} , 2^{++} , and 4^{++} resonances.⁷ Statistical error only.⁸ Includes the data of ANISOVICH 00B indicating to exotic decay pattern.

$f_0(2100)$ REFERENCES

| | | | | |
|-----------|-----|---------------|------------------------------|--------------------|
| DOBBS | 15 | PR D91 052006 | S. Dobbs <i>et al.</i> | (NWES) |
| ABLIKIM | 13N | PR D87 092009 | Ablikim M. <i>et al.</i> | (BESIII Collab.) |
| UMAN | 06 | PR D73 052009 | I. Uman <i>et al.</i> | (FNAL E835) |
| ANISOVICH | 00B | NP A662 319 | A.V. Anisovich <i>et al.</i> | |
| ANISOVICH | 00J | PL B491 47 | A.V. Anisovich <i>et al.</i> | (RAL, LOQM, PNPI+) |
| BAI | 00A | PL B472 207 | J.Z. Bai <i>et al.</i> | (BES Collab.) |
| ANISOVICH | 99K | PL B468 309 | A.V. Anisovich <i>et al.</i> | |
| BUGG | 95 | PL B353 378 | D.V. Bugg <i>et al.</i> | (LOQM, PNPI, WASH) |
| HASAN | 94 | PL B334 215 | A. Hasan, D.V. Bugg | (LOQM) |
