# $f_0(2200)$

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

OMITTED FROM SUMMARY TABLE

Seen in $K^0_S K^0_S$ (AUGUSTIN 88), $K^+K^-$ (ABLIKIM 05Q) and $\eta\eta$ (BINON 05) system. Not seen in $\Upsilon(1S)$ radiative decays (BARU 89).

## $f_0(2200)$ MASS

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **2187±14 OUR AVERAGE** | | | | | |
| $2170 \pm 20^{+10}_{-15}$ | | ABLIKIM | 05Q | BES2 | $\psi(2S) \to \gamma\pi^+\pi^- K^+K^-$ |
| 2197±17 | | [1] AUGUSTIN | 88 | DM2 | $J/\psi \to \gamma K^0_S K^0_S$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 2200±25 | | SARANTSEV | 21 | RVUE | $J/\psi(1S) \to \gamma$ ($\pi\pi$, $K\overline{K}$, $\eta\eta$, $\omega\phi$) |
| 2206±12± 8 | 381 | [2,3] DOBBS | 15 | | $J/\psi \to \gamma K^+K^-$ |
| 2188±17±16 | 203 | [2,3] DOBBS | 15 | | $\psi(2S) \to \gamma K^+K^-$ |
| 2210±50 | | [4] BINON | 05 | GAMS | 33 $\pi^- p \to \eta\eta n$ |
| ~ 2122 | | HASAN | 94 | RVUE | $\overline{p}p \to \pi\pi$ |
| ~ 2321 | | HASAN | 94 | RVUE | $\overline{p}p \to \pi\pi$ |

[1] Cannot determine spin to be 0.
[2] Using CLEO-c data but not authored by the CLEO Collaboration.
[3] From a fit to a Breit-Wigner line shape with fixed $\Gamma = 238$ MeV.
[4] First solution, PWA is ambiguous.

## $f_0(2200)$ WIDTH

| *VALUE* (MeV) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| **207±40 OUR AVERAGE** | | | | |
| $220 \pm 60^{+40}_{-45}$ | ABLIKIM | 05Q | BES2 | $\psi(2S) \to \gamma\pi^+\pi^- K^+K^-$ |
| 201±51 | [5] AUGUSTIN | 88 | DM2 | $J/\psi \to \gamma K^0_S K^0_S$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| 150±30 | SARANTSEV | 21 | RVUE | $J/\psi(1S) \to \gamma$ ($\pi\pi$, $K\overline{K}$, $\eta\eta$, $\omega\phi$) |
| 380±90 | [6] BINON | 05 | GAMS | 33 $\pi^- p \to \eta\eta n$ |
| ~ 273 | HASAN | 94 | RVUE | $\overline{p}p \to \pi\pi$ |
| ~ 223 | HASAN | 94 | RVUE | $\overline{p}p \to \pi\pi$ |

[5] Cannot determine spin to be 0.
[6] First solution, PWA is ambiguous.

## $f_0(2200)$ REFERENCES


| | | | | |
|---|---|---|---|---|
| SARANTSEV | 21 | PL B816 136227 | A.V. Sarantsev *et al.* | (BONN, PNPI) |
| DOBBS | 15 | PR D91 052006 | S. Dobbs *et al.* | (NWES) |
| ABLIKIM | 05Q | PR D72 092002 | M. Ablikim *et al.* | (BES Collab.) |
| BINON | 05 | PAN 68 960 | F. Binon *et al.* | |
| | | Translated from YAF 68 998. | | |

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|---|---|---|---|---|
| HASAN | 94 | PL B334 215 | A. Hasan, D.V. Bugg | (LOQM) |
| BARU | 89 | ZPHY C42 505 | S.E. Baru *et al.* | (NOVO) |
| AUGUSTIN | 88 | PRL 60 2238 | J.E. Augustin *et al.* | (DM2 Collab.) |