

# $f_0(2330)$

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

OMITTED FROM SUMMARY TABLE

## $f_0(2330)$ MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
$2312 \pm 7 \begin{smallmatrix} + \\ - \end{smallmatrix} \frac{7}{3}$	<sup>1</sup> ABLIKIM	22AS BES3	$J/\psi(1S) \rightarrow \gamma \eta \eta'$
$2312 \pm 2 \begin{smallmatrix} + \\ - \end{smallmatrix} \frac{10}{0}$	<sup>2</sup> ABLIKIM	22C BES3	$J/\psi \rightarrow \gamma \eta' \eta' \rightarrow 4/5 \gamma 2(\pi^+ \pi^-)$
$2419 \pm 64$	<sup>3</sup> RODAS	22 RVUE	$J/\psi(1S) \rightarrow \gamma (\pi \pi, K \bar{K})$
$2340 \pm 20$	SARANTSEV	21 RVUE	$J/\psi(1S) \rightarrow \gamma (\pi \pi, K \bar{K}, \eta \eta, \omega \phi)$
$2314 \pm 25$	<sup>4</sup> BUGG	04A RVUE	
$2337 \pm 14$	ANISOVICH	00J SPEC	$2.0 \bar{p} p \rightarrow \pi \pi, \eta \eta$
$\sim 2321$	HASAN	94 RVUE	$\bar{p} p \rightarrow \pi \pi$

- <sup>1</sup> From a Breit-Wigner fit involving 9 resonances and a resonating exotic  $\eta_1(1855) \rightarrow \eta \eta'$  P-wave.
- <sup>2</sup> From a partial wave analysis of the systems  $(\gamma X)$ , with  $X \rightarrow \eta' \eta'$ , and  $(\eta' X)$ , with  $X \rightarrow \gamma \eta'$  in the decay  $J/\psi \rightarrow \gamma \eta' \eta'$ . The intermediate resonance  $X$  is parametrized by a constant-width, relativistic Breit-Wigner.
- <sup>3</sup> T-matrix pole from coupled channel K-matrix fit to data on  $J/\psi \rightarrow \gamma \pi^0 \pi^0$  (ABLIKIM 15AE) and  $J/\psi \rightarrow \gamma K_S^0 K_S^0$  (ABLIKIM 18AA).
- <sup>4</sup> Partial wave analysis of the data on  $p \bar{p} \rightarrow \bar{\Lambda} \Lambda$  from BARNES 00.

## $f_0(2330)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
$65 \pm 10 \begin{smallmatrix} + \\ - \end{smallmatrix} \frac{3}{12}$	<sup>1</sup> ABLIKIM	22AS BES3	$J/\psi(1S) \rightarrow \gamma \eta \eta'$
$134 \pm 5 \begin{smallmatrix} + \\ - \end{smallmatrix} \frac{30}{9}$	<sup>2</sup> ABLIKIM	22C BES3	$J/\psi \rightarrow \gamma \eta' \eta' \rightarrow 4/5 \gamma 2(\pi^+ \pi^-)$
$274 \pm 94$	<sup>3</sup> RODAS	22 RVUE	$J/\psi(1S) \rightarrow \gamma (\pi \pi, K \bar{K})$
$165 \pm 25$	SARANTSEV	21 RVUE	$J/\psi(1S) \rightarrow \gamma (\pi \pi, K \bar{K}, \eta \eta, \omega \phi)$
$144 \pm 20$	<sup>4</sup> BUGG	04A RVUE	
$217 \pm 33$	ANISOVICH	00J SPEC	$2.0 \bar{p} p \rightarrow \pi \pi, \eta \eta$
$\sim 223$	HASAN	94 RVUE	$\bar{p} p \rightarrow \pi \pi$

- <sup>1</sup> From a Breit-Wigner fit involving 9 resonances and a resonating exotic  $\eta_1(1855) \rightarrow \eta \eta'$  P-wave.
- <sup>2</sup> From a partial wave analysis of the systems  $(\gamma X)$ , with  $X \rightarrow \eta' \eta'$ , and  $(\eta' X)$ , with  $X \rightarrow \gamma \eta'$  in the decay  $J/\psi \rightarrow \gamma \eta' \eta'$ . The intermediate resonance  $X$  is parametrized by a constant-width, relativistic Breit-Wigner.
- <sup>3</sup> T-matrix pole from coupled channel K-matrix fit to data on  $J/\psi \rightarrow \gamma \pi^0 \pi^0$  (ABLIKIM 15AE) and  $J/\psi \rightarrow \gamma K_S^0 K_S^0$  (ABLIKIM 18AA).
- <sup>4</sup> Partial wave analysis of the data on  $p \bar{p} \rightarrow \bar{\Lambda} \Lambda$  from BARNES 00.

## $f_0(2330)$ REFERENCES

ABLIKIM	22AS	PR D106 072012	M. Ablikim <i>et al.</i>	(BESIII Collab.)
Also		PR D107 079901 (errat.)	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	22C	PR D105 072002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
RODAS	22	EPJ C82 80	A. Rodas <i>et al.</i>	(JPAC Collab.)
SARANTSEV	21	PL B816 136227	A.V. Sarantsev <i>et al.</i>	(BONN, PNPI)
ABLIKIM	18AA	PR D98 072003	M. Ablikim <i>et al.</i>	(BESIII Collab.)
ABLIKIM	15AE	PR D92 052003	M. Ablikim <i>et al.</i>	(BESIII Collab.)
BUGG	04A	EPJ C36 161	D.V. Bugg	
ANISOVICH	00J	PL B491 47	A.V. Anisovich <i>et al.</i>	(RAL, LOQM, PNPI+)
BARNES	00	PR C62 055203	P.D. Barnes <i>et al.</i>	
HASAN	94	PL B334 215	A. Hasan, D.V. Bugg	(LOQM)

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