

$f_0(2330)$

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

OMITTED FROM SUMMARY TABLE

 $f_0(2330)$ MASS

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

¹ From a Breit-Wigner fit involving 9 resonances and a resonating exotic $\eta_1(1855) \rightarrow \eta \eta'$ *P*-wave.

² From a partial wave analysis of the systems (γX) , 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.

³ 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).

⁴ Partial wave analysis of the data on $p \bar{p} \rightarrow \bar{\Lambda} \Lambda$ from BARNES 00.

 $f_0(2330)$ WIDTH

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

¹ From a Breit-Wigner fit involving 9 resonances and a resonating exotic $\eta_1(1855) \rightarrow \eta \eta'$ *P*-wave.

² From a partial wave analysis of the systems (γX) , 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.

³ 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).

⁴ 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)
