

$f_2(2300)$

$$J^{PC} = 0^+(2^{++})$$

$f_2(2300)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2297±28	¹ ETKIN	88	MPS 22 $\pi^- p \rightarrow \phi\phi n$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
2243 ⁺⁷⁺³ ₋₆₋₂₉	² UEHARA	13	BELL $\gamma\gamma \rightarrow K_S^0 K_S^0$
2270±12	VLADIMIRSK...06	SPEC	40 $\pi^- p \rightarrow K_S^0 K_S^0 n$
2327±9±6	ABE	04	BELL 10.6 $e^+ e^- \rightarrow e^+ e^- K^+ K^-$
2231±10	BOOTH	86	OMEG 85 $\pi^- Be \rightarrow 2\phi Be$
2220 ⁺⁹⁰ ₋₂₀	LINDENBAUM 84	RVUE	
2320±40	ETKIN	82	MPS 22 $\pi^- p \rightarrow 2\phi n$

¹ Includes data of ETKIN 85. The percentage of the resonance going into $\phi\phi 2^{++} S_2$, D_2 , and D_0 is 6^{+15}_-5 , 25^{+18}_-14 , and 69^{+16}_-27 , respectively.

² Spin 2 preferred, tentatively assigned to $f_2(2300)$.

$f_2(2300)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
149±41	³ ETKIN	88	MPS 22 $\pi^- p \rightarrow \phi\phi n$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
145±12 ⁺²⁷ ₋₃₄	⁴ UEHARA	13	BELL $\gamma\gamma \rightarrow K_S^0 K_S^0$
90±29	VLADIMIRSK...06	SPEC	40 $\pi^- p \rightarrow K_S^0 K_S^0 n$
275±36±20	ABE	04	BELL 10.6 $e^+ e^- \rightarrow e^+ e^- K^+ K^-$
133±50	BOOTH	86	OMEG 85 $\pi^- Be \rightarrow 2\phi Be$
200±50	LINDENBAUM 84	RVUE	
220±70	ETKIN	82	MPS 22 $\pi^- p \rightarrow 2\phi n$

³ Includes data of ETKIN 85.

⁴ Spin 2 preferred, tentatively assigned to $f_2(2300)$.

$f_2(2300)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\phi\phi$	seen
Γ_2 $K\bar{K}$	seen
Γ_3 $\gamma\gamma$	seen

$f_2(2300) \Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(K\bar{K}) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ $\Gamma_2\Gamma_3/\Gamma$

VALUE (eV) DOCUMENT ID TECN COMMENT

• • • We do not use the following data for averages, fits, limits, etc. • • •

$3.2^{+0.5+1.3}_{-0.4-2.2}$	UEHARA	13	BELL	$\gamma\gamma \rightarrow K_S^0 K_S^0$
44 ±6 ±12	⁵ ABE	04	BELL	10.6 $e^+e^- \rightarrow e^+e^- K^+ K^-$

⁵ Assuming spin 2.

$f_2(2300)$ REFERENCES

UEHARA	13	PTEP 2013 123C01	S. Uehara <i>et al.</i>	(BELLE Collab.)
VLADIMIRSK...	06	PAN 69 493	V.V. Vladimirsky <i>et al.</i>	(ITEP, Moscow)
		Translated from YAF 69 515.		
ABE	04	EPJ C32 323	K. Abe <i>et al.</i>	(BELLE Collab.)
ETKIN	88	PL B201 568	A. Etkin <i>et al.</i>	(BNL, CUNY)
BOOTH	86	NP B273 677	P.S.L. Booth <i>et al.</i>	(LIVP, GLAS, CERN)
ETKIN	85	PL 165B 217	A. Etkin <i>et al.</i>	(BNL, CUNY)
LINDENBAUM	84	CNPP 13 285	S.J. Lindenbaum	(CUNY)
ETKIN	82	PRL 49 1620	A. Etkin <i>et al.</i>	(BNL, CUNY)