

# $f_2(2300)$

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

## $f_2(2300)$ MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>2297 ± 28</b>	<sup>1</sup> ETKIN	88 MPS	22 $\pi^- p \rightarrow \phi \phi n$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
2243 <sup>+</sup> <sub>-6</sub> 7 <sup>+</sup> <sub>-29</sub> 3	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 <sup>+</sup> <sub>-20</sub> 90	LINDENBAUM	84 RVUE	
2320 ± 40	ETKIN	82 MPS	22 $\pi^- p \rightarrow 2\phi n$

<sup>1</sup>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.

## $f_2(2300)$ WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>149 ± 41</b>	<sup>2</sup> ETKIN	88 MPS	22 $\pi^- p \rightarrow \phi \phi n$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
145 ± 12 <sup>+</sup> <sub>-34</sub> 27	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 $\pi^- p \rightarrow 2\phi n$

<sup>2</sup>Includes data of ETKIN 85.

## $f_2(2300)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\phi\phi$	seen
$\Gamma_2$ $K\bar{K}$	seen
$\Gamma_3$ $\gamma\gamma$	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	$\gamma\gamma \rightarrow K_S^0 K_S^0$
$44 \pm 6 \pm 12$	<sup>3</sup> ABE	04	BELL	$10.6 e^+ e^- \rightarrow e^+ e^- K^+ K^-$

<sup>3</sup> 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)