

# $f_2(1910)$

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

**OMITTED FROM SUMMARY TABLE**

We list here three different peaks with close masses and widths seen in the mass distributions of  $\omega\omega$ ,  $\eta\eta'$ , and  $K^+K^-$  final states. ALDE 91B argues that they are of different nature.

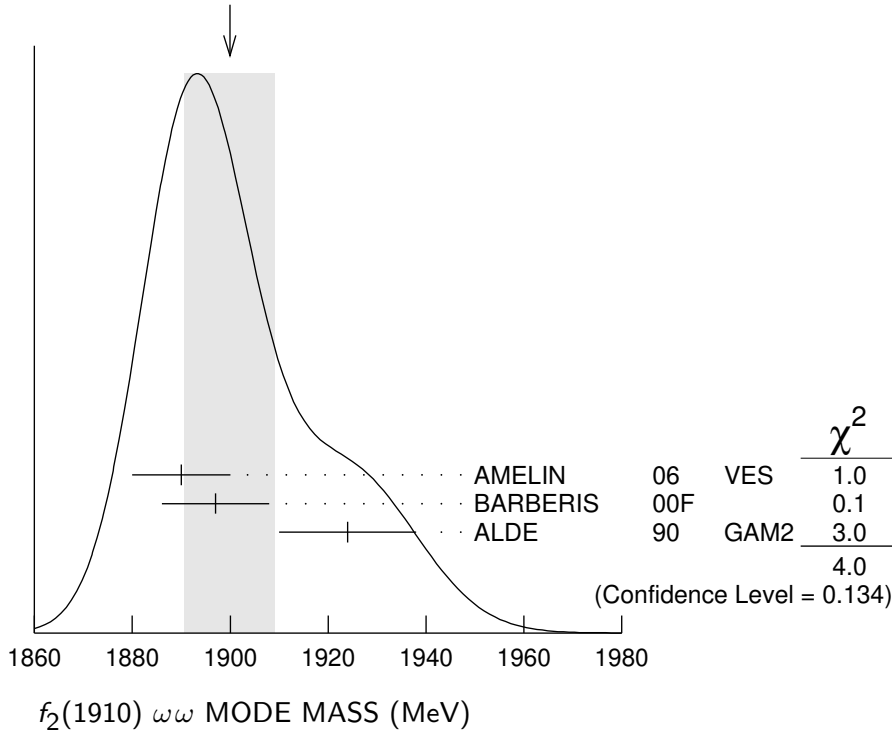
## $f_2(1910)$ MASS

### $f_2(1910)$ $\omega\omega$ MODE

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>1900 ± 9 OUR AVERAGE</b>	Error includes scale factor of 1.4. See the ideogram below.		
1890 ± 10	<sup>1</sup> AMELIN	06 VES	36 $\pi^- p \rightarrow \omega\omega n$
1897 ± 11	BARBERIS	00F	450 $pp \rightarrow p_f\omega\omega p_s$
1924 ± 14	ALDE	90 GAM2	38 $\pi^- p \rightarrow \omega\omega n$

<sup>1</sup>Supersedes BELADIDZE 92B.

WEIGHTED AVERAGE  
1900 ± 9 (Error scaled by 1.4)



### $f_2(1910)$ $\eta\eta'$ MODE

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>1934 ± 16</b>	<sup>1</sup> BARBERIS	00A	450 $pp \rightarrow p_f\eta\eta' p_s$

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

1934 ± 20	<sup>2</sup> ANISOVICH	00J	SPEC	
1911 ± 10	ALDE	91B	GAM2	38 $\pi^- p \rightarrow \eta \eta' n$

<sup>1</sup> Also compatible with  $J^{PC} = 1^-+$ .  
<sup>2</sup> Combined fit with  $\eta\eta$ ,  $\pi\pi$ , and  $\eta\pi\pi$ .

### $f_2(1910) K^+ K^-$ MODE

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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• • • We do not use the following data for averages, fits, limits, etc. • • •

1941 ± 18	<sup>1</sup> AMSLER	06	CBAR	1.64 $\bar{p} p \rightarrow K^+ K^- \pi^0$
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<sup>1</sup> Tentative, could be  $f_2(1950)$ .

## $f_2(1910)$ WIDTH

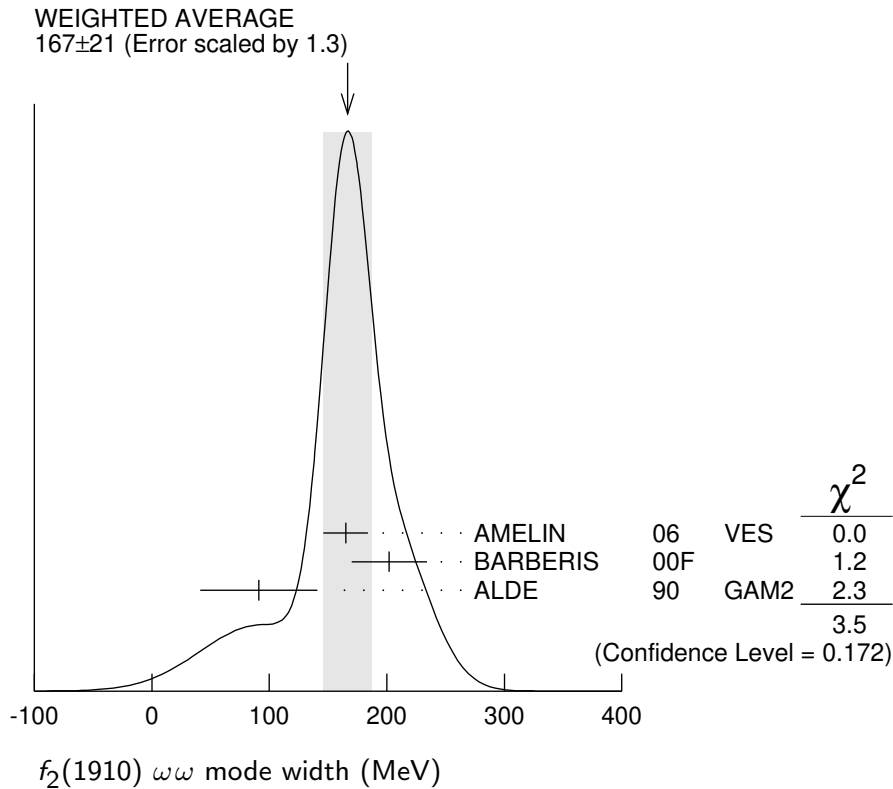
### $f_2(1910) \omega\omega$ MODE

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
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**167 ± 21 OUR AVERAGE** Error includes scale factor of 1.3. See the ideogram below.

165 ± 19	<sup>1</sup> AMELIN	06	VES	36 $\pi^- p \rightarrow \omega\omega n$
202 ± 32	BARBERIS	00F		450 $pp \rightarrow p_f \omega\omega p_s$
91 ± 50	ALDE	90	GAM2	38 $\pi^- p \rightarrow \omega\omega n$

<sup>1</sup> Supersedes BELADIDZE 92B.



### $f_2(1910) \eta\eta'$ MODE

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>141±41</b>	<sup>1</sup> BARBERIS	00A	450 $p p \rightarrow p_f \eta \eta' p_S$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
271±25	<sup>2</sup> ANISOVICH	00J	SPEC
90±35	ALDE	91B	GAM2 38 $\pi^- p \rightarrow \eta \eta' n$

<sup>1</sup> Also compatible with  $J^{PC}=1^-+$ .

<sup>2</sup> Combined fit with  $\eta\eta$ ,  $\pi\pi$ , and  $\eta\pi\pi$ .

### $f_2(1910) K^+ K^-$ MODE

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
120±40	AMSLER	06	CBAR 1.64 $\bar{p} p \rightarrow K^+ K^- \pi^0$

### $f_2(1910)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\pi^0 \pi^0$	
$\Gamma_2$ $K^+ K^-$	seen
$\Gamma_3$ $K_S^0 K_S^0$	
$\Gamma_4$ $\eta\eta$	seen
$\Gamma_5$ $\omega\omega$	seen
$\Gamma_6$ $\eta\eta'$	seen
$\Gamma_7$ $\eta'\eta'$	
$\Gamma_8$ $\rho\rho$	seen
$\Gamma_9$ $a_2(1320)\pi$	seen
$\Gamma_{10}$ $f_2(1270)\eta$	seen

### $f_2(1910)$ BRANCHING RATIOS

$\Gamma(K^+ K^-)/\Gamma_{\text{total}}$	$\Gamma_2/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
<b>seen</b>	<sup>1</sup> AMSLER	06	CBAR 1.64 $\bar{p} p \rightarrow K^+ K^- \pi^0$
<sup>1</sup> Tentative, could be $f_2(1950)$ .			

$\Gamma(\pi^0 \pi^0)/\Gamma(\eta\eta')$	$\Gamma_1/\Gamma_6$		
VALUE	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
<0.1	ALDE	89	GAM2 38 $\pi^- p \rightarrow \eta \eta' n$

$\Gamma(K_S^0 K_S^0)/\Gamma(\eta\eta')$	$\Gamma_3/\Gamma_6$			
VALUE	CL%	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.066	90	BALOSHIN	86	SPEC 40 $\pi p \rightarrow K_S^0 K_S^0 n$

$\Gamma(\eta\eta)/\Gamma(\eta\eta')$   $\Gamma_4/\Gamma_6$

VALUE CL% DOCUMENT ID TECN COMMENT

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

<0.05                      90                      ALDE                      91B                      GAM2                      38  $\pi^- p \rightarrow \eta\eta' n$

$\Gamma(\omega\omega)/\Gamma(\eta\eta')$   $\Gamma_5/\Gamma_6$

VALUE DOCUMENT ID COMMENT

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

$2.6 \pm 0.6$                       BARBERIS                      00F                      450  $pp \rightarrow p_f \omega \omega p_s$

$\Gamma(\eta'\eta')/\Gamma_{\text{total}}$   $\Gamma_7/\Gamma$

VALUE DOCUMENT ID TECN COMMENT

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

probably not seen                      BARBERIS                      00A                      450  $pp \rightarrow p_f \eta' \eta' p_s$

possibly seen                      BELADIDZE                      92D                      VES                      37  $\pi^- p \rightarrow \eta' \eta' n$

$\Gamma(\rho\rho)/\Gamma(\omega\omega)$   $\Gamma_8/\Gamma_5$

VALUE DOCUMENT ID COMMENT

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

$2.6 \pm 0.4$                       BARBERIS                      00F                      450  $pp \rightarrow p_f \omega \omega p_s$

$\Gamma(f_2(1270)\eta)/\Gamma(a_2(1320)\pi)$   $\Gamma_{10}/\Gamma_9$

VALUE DOCUMENT ID TECN COMMENT

**0.09 ± 0.05**                      <sup>1</sup> ANISOVICH                      11                      SPEC                      0.9–1.94  $p\bar{p}$

<sup>1</sup> Reanalysis of ADOMEIT 96 and ANISOVICH 00E.

**$f_2(1910)$  REFERENCES**

ANISOVICH	11	EPJ C71 1511	A.V. Anisovich <i>et al.</i>	(LOQM, RAL, PNPI)
AMELIN	06	PAN 69 690	D.V. Amelin <i>et al.</i>	(VES Collab.)
		Translated from YAF 69 715.		
AMSLER	06	PL B639 165	C. Amsler <i>et al.</i>	(Crystal Barrel Collab.)
ANISOVICH	00E	PL B477 19	A.V. Anisovich <i>et al.</i>	
ANISOVICH	00J	PL B491 47	A.V. Anisovich <i>et al.</i>	(RAL, LOQM, PNPI+)
BARBERIS	00A	PL B471 429	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BARBERIS	00F	PL B484 198	D. Barberis <i>et al.</i>	(WA 102 Collab.)
ADOMEIT	96	ZPHY C71 227	J. Adomeit <i>et al.</i>	(Crystal Barrel Collab.)
BELADIDZE	92B	ZPHY C54 367	G.M. Beladidze <i>et al.</i>	(VES Collab.)
BELADIDZE	92D	ZPHY C57 13	G.M. Beladidze <i>et al.</i>	(VES Collab.)
ALDE	91B	SJNP 54 455	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP+)
		Translated from YAF 54 751.		
Also		PL B276 375	D.M. Alde <i>et al.</i>	(BELG, SERP, KEK, LANL+)
ALDE	90	PL B241 600	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP+)
ALDE	89	PL B216 447	D.M. Alde <i>et al.</i>	(SERP, BELG, LANL, LAPP)
Also		SJNP 48 1035	D.M. Alde <i>et al.</i>	(BELG, SERP, LANL, LAPP)
		Translated from YAF 48 1724.		
BALOSHIN	86	SJNP 43 959	O.N. Baloshin <i>et al.</i>	(ITEP)
		Translated from YAF 43 1487.		