

$\eta_2(1870)$

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

OMITTED FROM SUMMARY TABLE

Needs confirmation.

 $\eta_2(1870)$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>
1842 ± 8 OUR AVERAGE					
1835 ± 12		BARBERIS	00B		450 $p p \rightarrow$ $p_f \eta \pi^+ \pi^- p_S$
1844 ± 13		BARBERIS	00C		450 $p p \rightarrow$ $p_f 4\pi p_S$
1840 ± 25		BARBERIS	97B	OMEG	450 $p p \rightarrow$ $p p 2(\pi^+ \pi^-)$
1875 ± 20 ± 35		ADOMEIT	96	CBAR 0	1.94 $\bar{p} p \rightarrow$ $\eta 3\pi^0$
1881 ± 32 ± 40	26	KARCH	92	CBAL	$e^+ e^- \rightarrow$ $e^+ e^- \eta \pi^0 \pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1860 ± 5 ± 15		ANISOVICH	00E	SPEC	1.94 $\bar{p} p \rightarrow$ $\eta 3\pi^0$
1840 ± 15		BAI	99	BES	$J/\psi \rightarrow$ $\gamma \eta \pi^+ \pi^-$

 $\eta_2(1870)$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>
225 ± 14 OUR AVERAGE					
235 ± 22		BARBERIS	00B		450 $p p \rightarrow$ $p_f \eta \pi^+ \pi^- p_S$
228 ± 23		BARBERIS	00C		450 $p p \rightarrow$ $p_f 4\pi p_S$
200 ± 40		BARBERIS	97B	OMEG	450 $p p \rightarrow$ $p p 2(\pi^+ \pi^-)$
200 ± 25 ± 45		ADOMEIT	96	CBAR 0	1.94 $\bar{p} p \rightarrow$ $\eta 3\pi^0$
221 ± 92 ± 44	26	KARCH	92	CBAL	$e^+ e^- \rightarrow$ $e^+ e^- \eta \pi^0 \pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
250 ± 25 ⁺⁵⁰ ₋₃₅		ANISOVICH	00E	SPEC	1.94 $\bar{p} p \rightarrow$ $\eta 3\pi^0$
170 ± 40		BAI	99	BES	$J/\psi \rightarrow$ $\gamma \eta \pi^+ \pi^-$

$\eta_2(1870)$ DECAY MODES

Mode
Γ_1 $\eta \pi \pi$
Γ_2 $a_2(1320) \pi$
Γ_3 $f_2(1270) \eta$
Γ_4 $a_0(980) \pi$

$\eta_2(1870)$ BRANCHING RATIOS

$\Gamma(a_2(1320)\pi)/\Gamma(f_2(1270)\eta)$				Γ_2/Γ_3
VALUE	DOCUMENT ID	TECN	CHG	COMMENT
6 ± 5 OUR AVERAGE Error includes scale factor of 2.3.				
20.4 ± 6.6	BARBERIS	00B		450 $p p \rightarrow$ $p_f \eta \pi^+ \pi^- p_S$
4.1 ± 2.3	ADOMEIT	96	CBAR 0	1.94 $\bar{p} p \rightarrow$ $\eta 3\pi^0$

$\Gamma(a_2(1320)\pi)/\Gamma(a_0(980)\pi)$				Γ_2/Γ_4
VALUE	DOCUMENT ID	COMMENT		
32.6 ± 12.6	BARBERIS	00B	450	$p p \rightarrow p_f \eta \pi^+ \pi^- p_S$

$\eta_2(1870)$ REFERENCES

ANISOVICH	00E	PL B477 19	A.V. Anisovich <i>et al.</i>	
BARBERIS	00B	PL B471 435	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BARBERIS	00C	PL B471 440	D. Barberis <i>et al.</i>	(WA 102 Collab.)
BAI	99	PL B446 356	J.Z. Bai <i>et al.</i>	(BES Collab.)
BARBERIS	97B	PL B413 217	D. Barberis <i>et al.</i>	(WA 102 Collab.)
ADOMEIT	96	ZPHY C71 227	J. Adomeit <i>et al.</i>	(Crystal Barrel Collab.)
KARCH	92	ZPHY C54 33	K. Karch <i>et al.</i>	(Crystal Ball Collab.)

OTHER RELATED PAPERS

KARCH	90	PL B249 353	K. Karch <i>et al.</i>	(Crystal Ball Collab.)
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