NODE=M101

$\eta_2(1870)$

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

$\eta_2(1870)$ MASS

NODE=M101M

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
1842± 8 OUR AVERAGE					
1835±12		BARBERIS	00B		450 $pp \to p_f \eta\pi^+\pi^- p_s$
1844±13		BARBERIS	00C		450 $pp \to p_f 4\pi p_s$
1840±25		BARBERIS	97B	OMEG	450 $pp \to pp2(\pi^+\pi^-)$
1875±20±35		ADOMEIT	96	CBAR	1.94 $\bar{p}p \to \eta 3\pi^0$
1881±32±40	26	KARCH	92	CBAL	$e^+e^- \to e^+e^-\eta\pi^0\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1860± 5±15		ANISOVICH	00E	SPEC	0.9–1.94 $\bar{p}p \to \eta 3\pi^0$
1840±15		BAI	99	BES	$J/\psi \to \gamma\eta\pi^+\pi^-$

NODE=M101M

$\eta_2(1870)$ WIDTH

NODE=M101W

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
225±14 OUR AVERAGE					
235±22		BARBERIS	00B		450 $pp \to p_f \eta\pi^+\pi^- p_s$
228±23		BARBERIS	00C		450 $pp \to p_f 4\pi p_s$
200±40		BARBERIS	97B	OMEG	450 $pp \to pp2(\pi^+\pi^-)$
200±25±45		ADOMEIT	96	CBAR	1.94 $\bar{p}p \to \eta 3\pi^0$
221±92±44	26	KARCH	92	CBAL	$e^+e^- \to e^+e^-\eta\pi^0\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$250\pm25^{+50}_{-35}$		ANISOVICH	00E	SPEC	0.9–1.94 $\bar{p}p \to \eta 3\pi^0$
170±40		BAI	99	BES	$J/\psi \to \gamma\eta\pi^+\pi^-$

NODE=M101W

$\eta_2(1870)$ DECAY MODES

NODE=M101225;NODE=M101

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$\eta\pi\pi$	seen	DESIG=1;OUR EVAL;→ UNCHECKED ←
Γ_2	$a_2(1320)\pi$	seen	DESIG=4;OUR EVAL;→ UNCHECKED ←
Γ_3	$f_2(1270)\eta$	seen	DESIG=8;OUR EVAL;→ UNCHECKED ←
Γ_4	$a_0(980)\pi$	seen	DESIG=2;OUR EVAL;→ UNCHECKED ←
Γ_5	$\gamma\gamma$	seen	DESIG=9

$\eta_2(1870)$ BRANCHING RATIOS

NODE=M101230

$\Gamma(a_2(1320)\pi)/\Gamma(f_2(1270)\eta)$ Γ_2/Γ_3

NODE=M101R2

VALUE	DOCUMENT ID		TECN	COMMENT
1.7 ±0.4 OUR AVERAGE				
1.60±0.40	[1] ANISOVICH	11	SPEC	0.9–1.94 $p\bar{p}$
20.4 ±6.6	BARBERIS	00B		450 $pp \to p_f \eta\pi^+\pi^- p_s$
4.1 ±2.3	ADOMEIT	96	CBAR	1.94 $\bar{p}p \to \eta 3\pi^0$

[1] Reanalysis of ADOMEIT 96 and ANISOVICH 00E.

NODE=M101R2;LINKAGE=AN

$\Gamma(a_2(1320)\pi)/\Gamma(a_0(980)\pi)$ Γ_2/Γ_4

NODE=M101R4

VALUE	DOCUMENT ID		COMMENT
32.6±12.6	BARBERIS	00B	450 $pp \to p_f \eta\pi^+\pi^- p_s$

$\Gamma(a_0(980)\pi)/\Gamma(f_2(1270)\eta)$ Γ_4/Γ_3

NODE=M101R01

VALUE	DOCUMENT ID		TECN	COMMENT
0.48±0.45	[1] ANISOVICH	11	SPEC	0.9–1.94 $p\bar{p}$

[1] Reanalysis of ADOMEIT 96 and ANISOVICH 00E.

NODE=M101R01;LINKAGE=AN

$\Gamma(\gamma\gamma)/\Gamma_{\text{total}}$ Γ_5/Γ

NODE=M101R02

VALUE	DOCUMENT ID		TECN	COMMENT
seen	KARCH	92	CBAL	$e^+e^- \to e^+e^-\eta\pi^0\pi^0$

$\eta_2(1870)$ REFERENCES

NODE=M101

ANISOVICH	11	EPJ C71 1511	A.V. Anisovich *et al.*	(LOQM, RAL, PNPI)	REFID=53631
ANISOVICH	00E	PL B477 19	A.V. Anisovich *et al.*		REFID=47945
BARBERIS	00B	PL B471 435	D. Barberis *et al.*	(WA 102 Collab.)	REFID=47958
BARBERIS	00C	PL B471 440	D. Barberis *et al.*	(WA 102 Collab.)	REFID=47959
BAI	99	PL B446 356	J.Z. Bai *et al.*	(BES Collab.)	REFID=46606
BARBERIS	97B	PL B413 217	D. Barberis *et al.*	(WA 102 Collab.)	REFID=45758
ADOMEIT	96	ZPHY C71 227	J. Adomeit *et al.*	(Crystal Barrel Collab.)	REFID=45202
KARCH	92	ZPHY C54 33	K. Karch *et al.*	(Crystal Ball Collab.)	REFID=42170