$\eta_2(1870)$

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

OMITTED FROM SUMMARY TABLE

Needs confirmation.

$\eta_2(1870)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	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	0	1.94 $\overline{p}p \to \eta 3\pi^0$
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		1.94 $\overline{p}p \to \eta 3\pi^0$
1840±15		BAI	99	BES		$J/\psi \to \gamma\eta\pi^+\pi^-$

$\eta_2(1870)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	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	0	1.94 $\overline{p}p \to \eta 3\pi^0$
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. • • •						
$250 \pm 25^{+50}_{-35}$		ANISOVICH	00E	SPEC		1.94 $\overline{p}p \to \eta 3\pi^0$
170±40		BAI	99	BES		$J/\psi \to \gamma\eta\pi^+\pi^-$

$\eta_2(1870)$ 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 $pp \to p_f \eta\pi^+\pi^- p_s$
4.1±2.3	ADOMEIT	96	CBAR	0	1.94 $\overline{p}p \to \eta 3\pi^0$

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

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

$\eta_2(1870)$ REFERENCES

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

OTHER RELATED PAPERS

KARCH	90	PL B249 353	K. Karch *et al.*	(Crystal Ball Collab.)