$\eta_2(1645)$

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

OMITTED FROM SUMMARY TABLE

$\eta_2(1645)$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
1617± 5 OUR AVERAGE					
1613± 8	BARBERIS	00B			450 $pp \to p_f \eta \pi^+ \pi^- p_s$
1617± 8	BARBERIS	00C			450 $pp \to p_f 4\pi p_s$
1620±20	BARBERIS	97B	OMEG		450 $pp \to pp2(\pi^+ \pi^-)$
1645±14±15	ADOMEIT	96	CBAR	0	1.94 $\overline{p}p \to \eta 3\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1645± 6±20	ANISOVICH	00E	SPEC		1.94 $\overline{p}p \to \eta 3\pi^0$

$\eta_2(1645)$ WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
181±11 OUR AVERAGE					
185±17	BARBERIS	00B			450 $pp \to p_f \eta \pi^+ \pi^- p_s$
177±18	BARBERIS	00C			450 $pp \to p_f 4\pi p_s$
180±25	BARBERIS	97B	OMEG		450 $pp \to pp2(\pi^+ \pi^-)$
$180^{+40}_{-21}\pm25$	ADOMEIT	96	CBAR	0	1.94 $\overline{p}p \to \eta 3\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
200±25	ANISOVICH	00E	SPEC		1.94 $\overline{p}p \to \eta 3\pi^0$

$\eta_2(1645)$ DECAY MODES

	Mode
Γ_1	$a_2(1320)\pi$
Γ_2	$K\overline{K}\pi$
Γ_3	$K^*\overline{K}$
Γ_4	$\eta\pi^+\pi^-$
Γ_5	$a_0(980)\pi$
Γ_6	$f_2(1270)\eta$

$\eta_2(1645)$ BRANCHING RATIOS

$\Gamma(K\overline{K}\pi)/\Gamma(a_2(1320)\pi)$ — Γ_2/Γ_1

VALUE	DOCUMENT ID		TECN	COMMENT
0.07 ±0.03	[1] BARBERIS	97C	OMEG	450 $pp \to pp K\overline{K}\pi$

[1] Using $2(\pi^+\pi^-)$ data from BARBERIS 97B.

$\Gamma(a_2(1320)\pi)/\Gamma(a_0(980)\pi)$ — Γ_1/Γ_5

VALUE	DOCUMENT ID		COMMENT
13.0±2.7	BARBERIS	00B	450 $pp \to p_f \eta \pi^+ \pi^- p_s$

$\Gamma(f_2(1270)\eta)/\Gamma_{total}$ — Γ_6/Γ

VALUE	DOCUMENT ID		COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
not seen	BARBERIS	00B	450 $pp \to p_f \eta \pi^+ \pi^- p_s$

$\eta_2(1645)$ 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.)
BARBERIS	97B	PL B413 217	D. Barberis et al.	(WA 102 Collab.)
BARBERIS	97C	PL B413 225	D. Barberis et al.	(WA 102 Collab.)
ADOMEIT	96	ZPHY C71 227	J. Adomeit et al.	(Crystal Barrel Collab.)