$\Delta(1750)\ P_{31}$

$I(J^P) = \frac{3}{2}(\frac{1}{2}^+)$ Status: $*$

OMITTED FROM SUMMARY TABLE

Δ(1750) BREIT-WIGNER MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
≈ 1750 OUR ESTIMATE				
1744 ±36	MANLEY	92	IPWA	$\pi N \to \pi N$ & $N\pi\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1715.2±21.0	[1] CHEW	80	BPWA	$\pi^+ p \to \pi^+ p$
1778.4± 9.0	[1] CHEW	80	BPWA	$\pi^+ p \to \pi^+ p$

Δ(1750) BREIT-WIGNER WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
300 ±120	MANLEY	92	IPWA	$\pi N \to \pi N$ & $N\pi\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
93.3± 55.0	[1] CHEW	80	BPWA	$\pi^+ p \to \pi^+ p$
23.0± 29.0	[1] CHEW	80	BPWA	$\pi^+ p \to \pi^+ p$

Δ(1750) DECAY MODES

	Mode
Γ_1	$N\pi$
Γ_2	$N\pi\pi$
Γ_3	$N(1440)\pi$

$\Gamma(N\pi)/\Gamma_{total}$ — Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.08±0.03	MANLEY	92	IPWA	$\pi N \to \pi N$ & $N\pi\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.18	[1] CHEW	80	BPWA	$\pi^+ p \to \pi^+ p$
0.20	[1] CHEW	80	BPWA	$\pi^+ p \to \pi^+ p$

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\pi \to \Delta(1700) \to N(1440)\pi$ — $(\Gamma_1\Gamma_3)^{1/2}/\Gamma$

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
+0.15±0.03	MANLEY	92	IPWA	$\pi N \to \pi N$ & $N\pi\pi$

Δ(1750) FOOTNOTES

[1] CHEW 80 reports four resonances in the P_{31} wave — see also the Δ(1910). Problems with this analysis are discussed in section 2.1.11 of HOEHLER 83.

$\Delta(1750)$ REFERENCES

MANLEY	92	PR D45 4002	+Saleski	(KENT)
Also	84	PR D30 904	Manley, Arndt, Goradia, Teplitz	(VPI)
HOEHLER	83	Landolt-Boernstein 1/9B2		(KARLT)
CHEW	80	Toronto Conf. 123		(LBL)