

$$\Delta(2400) \ 9/2^-$$

$$I(J^P) = \frac{3}{2}(\frac{9}{2}^-) \text{ Status: } **$$

OMITTED FROM SUMMARY TABLE

$\Delta(2400)$ BREIT-WIGNER MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
≈ 2400 OUR ESTIMATE			
2643 \pm 141	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
2300 \pm 100	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
2468 \pm 50	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
2200 \pm 100	HENDRY	78	MPWA $\pi N \rightarrow \pi N$

$\Delta(2400)$ BREIT-WIGNER WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
895 \pm 432	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
330 \pm 100	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
480 \pm 100	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
450 \pm 200	HENDRY	78	MPWA $\pi N \rightarrow \pi N$

$\Delta(2400)$ POLE POSITION

REAL PART

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
1983	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
2260 \pm 60	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

– 2 \times IMAGINARY PART

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
878	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
320 \pm 160	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

$\Delta(2400)$ ELASTIC POLE RESIDUE

MODULUS $|r|$

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
24	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
8 \pm 4	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

PHASE θ

<u>VALUE ($^\circ$)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
– 139	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
– 25 \pm 15	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

$\Delta(2400)$ DECAY MODES

Mode
Γ_1 $N\pi$
Γ_2 ΣK

$\Delta(2400)$ BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$	Γ_1/Γ
VALUE (%)	DOCUMENT ID TECN COMMENT
6.4 ± 2.2	ARNDT 06 DPWA $\pi N \rightarrow \pi N, \eta N$
5 ± 2	CUTKOSKY 80 IPWA $\pi N \rightarrow \pi N$
6 ± 3	HOEHLER 79 IPWA $\pi N \rightarrow \pi N$
10 ± 3	HENDRY 78 MPWA $\pi N \rightarrow \pi N$

$(\Gamma_i \Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow \Delta(2400) \rightarrow \Sigma K$	$(\Gamma_1 \Gamma_2)^{1/2}/\Gamma$
VALUE	DOCUMENT ID TECN COMMENT
< 0.015	CANDLIN 84 DPWA $\pi^+ p \rightarrow \Sigma^+ K^+$

$\Delta(2400)$ REFERENCES

ARNDT	06	PR C74 045205	R.A. Arndt <i>et al.</i>	
CANDLIN	84	NP B238 477	D.J. Candlin <i>et al.</i>	(GWU)
CUTKOSKY	80	Toronto Conf. 19	R.E. Cutkosky <i>et al.</i>	(EDIN, RAL, LOWC)
Also		PR D20 2839	R.E. Cutkosky <i>et al.</i>	(CMU, LBL) IJP
HOEHLER	79	PDAT 12-1	G. Hohler <i>et al.</i>	(CMU, LBL)
Also		Toronto Conf. 3	R. Koch	(KARLT) IJP
HENDRY	78	PRL 41 222	A.W. Hendry	(KARLT) IJP
Also		ANP 136 1	A.W. Hendry	(IND, LBL) IJP
				(IND)