

# $\Delta(2400) G_{39}$

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

OMITTED FROM SUMMARY TABLE

## $\Delta(2400)$ BREIT-WIGNER MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>\approx 2400</math> OUR ESTIMATE</b>			
2643 ± 141	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
2300 ± 100	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
2468 ± 50	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
2200 ± 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 ± 432	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
330 ± 100	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
480 ± 100	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
450 ± 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 ± 60	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

### − 2×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 ± 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 ± 4	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

### PHASE $\theta$

<u>VALUE (°)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
− 139	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
− 25 ± 15	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

## $\Delta(2400)$ DECAY MODES

Mode
$\Gamma_1$ $N\pi$
$\Gamma_2$ $\Sigma K$

## $\Delta(2400)$ BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$
VALUE	DOCUMENT ID    TECN    COMMENT
0.064 ± 0.022	ARNDT    06    DPWA $\pi N \rightarrow \pi N, \eta N$
0.05 ± 0.02	CUTKOSKY    80    IPWA $\pi N \rightarrow \pi N$
0.06 ± 0.03	HOEHLER    79    IPWA $\pi N \rightarrow \pi N$
0.10 ± 0.03	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)