

# Δ(2400) G<sub>39</sub>

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

OMITTED FROM SUMMARY TABLE

## Δ(2400) BREIT-WIGNER MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>≈ 2400 OUR ESTIMATE</b>			
2300 ± 100	CUTKOSKY	80	IPWA π N → π N
2468 ± 50	HOEHLER	79	IPWA π N → π N
2200 ± 100	HENDRY	78	MPWA π N → π N

## Δ(2400) BREIT-WIGNER WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
330 ± 100	CUTKOSKY	80	IPWA π N → π N
480 ± 100	HOEHLER	79	IPWA π N → π N
450 ± 200	HENDRY	78	MPWA π N → π N

## Δ(2400) POLE POSITION

### REAL PART

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2260 ± 60	CUTKOSKY	80	IPWA π N → π N

### −2×IMAGINARY PART

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
320 ± 160	CUTKOSKY	80	IPWA π N → π N

## Δ(2400) ELASTIC POLE RESIDUE

### MODULUS |r|

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
8 ± 4	CUTKOSKY	80	IPWA π N → π N

### PHASE θ

<u>VALUE (°)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
−25 ± 15	CUTKOSKY	80	IPWA π N → π N

## Δ(2400) DECAY MODES

Mode
Γ <sub>1</sub> N π
Γ <sub>2</sub> Σ K

## $\Delta(2400)$ BRANCHING RATIOS

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

## $\Delta(2400)$ REFERENCES

CANDLIN	84	NP B238 477	D.J. Candlin <i>et al.</i>	(EDIN, RAL, LOWC)
CUTKOSKY	80	Toronto Conf. 19	R.E. Cutkosky <i>et al.</i>	(CMU, LBL) IJP
Also	79	PR D20 2839	R.E. Cutkosky <i>et al.</i>	(CMU, LBL)
HOEHLER	79	PDAT 12-1	G. Hohler <i>et al.</i>	(KARLT) IJP
Also	80	Toronto Conf. 3	R. Koch	(KARLT) IJP
HENDRY	78	PRL 41 222	A.W. Hendry	(IND, LBL) IJP
Also	81	ANP 136 1	A.W. Hendry	(IND)