

$\Delta(2390) F_{37}$ 

$$I(J^P) = \frac{3}{2}(\frac{7}{2}^+) \text{ Status: } *$$

OMITTED FROM SUMMARY TABLE

The latest GWU analysis (ARNDT 06) finds no evidence for this resonance.

 **$\Delta(2390)$  BREIT-WIGNER MASS**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>\approx 2390</math> OUR ESTIMATE</b>			
2350 $\pm$ 100	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$
2425 $\pm$ 60	HOEHLER 79	IPWA	$\pi N \rightarrow \pi N$

 **$\Delta(2390)$  BREIT-WIGNER WIDTH**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
300 $\pm$ 100	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$
300 $\pm$ 80	HOEHLER 79	IPWA	$\pi N \rightarrow \pi N$

 **$\Delta(2390)$  POLE POSITION****REAL PART**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2350 $\pm$ 100	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$

**-2xIMAGINARY PART**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
260 $\pm$ 100	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$

 **$\Delta(2390)$  ELASTIC POLE RESIDUE****MODULUS  $|r|$** 

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
12 $\pm$ 6	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$

**PHASE  $\theta$** 

<u>VALUE (<math>^\circ</math>)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
-90 $\pm$ 60	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$

 **$\Delta(2390)$  DECAY MODES**

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

## $\Delta(2390)$ BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	$\Gamma_1/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	<u><math>(\Gamma_1\Gamma_2)^{1/2}/\Gamma</math></u>
0.08 ± 0.04	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$	
0.07 ± 0.04	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$	
$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow \Delta(2390) \rightarrow \Sigma K$				$(\Gamma_1\Gamma_2)^{1/2}/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	<u><math>(\Gamma_1\Gamma_2)^{1/2}/\Gamma</math></u>
<0.015	CANDLIN	84	DPWA $\pi^+ p \rightarrow \Sigma^+ K^+$	

## $\Delta(2390)$ REFERENCES

ARNDT	06	PR C74 045205	R.A. Arndt <i>et al.</i>	(GWU)
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		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		Toronto Conf. 3	R. Koch	(KARLT) IJP