

$\Delta(2390) 7/2^+$ $I(J^P) = \frac{3}{2}(\frac{7}{2}^+)$ 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>
≈ 2390 OUR ESTIMATE			
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>
2223 \pm 15 \pm 19	¹ SVARC 14	MLS	$\pi N \rightarrow \pi N$
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>
431 \pm 26 \pm 7	¹ SVARC 14	MLS	$\pi N \rightarrow \pi N$
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>
26 \pm 2 \pm 1	¹ SVARC 14	MLS	$\pi N \rightarrow \pi N$
12 \pm 6	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$

PHASE θ

<u>VALUE ($^\circ$)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
-160 \pm 5 \pm 11	¹ SVARC 14	MLS	$\pi N \rightarrow \pi N$
- 90 \pm 60	CUTKOSKY 80	IPWA	$\pi N \rightarrow \pi N$

 $\Delta(2390)$ DECAY MODES

Mode
Γ_1 $N\pi$
Γ_2 ΣK

$\Delta(2390)$ BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$				Γ_1/Γ
<u>VALUE (%)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
8 ± 4	CUTKOSKY	80	IPWA	$\pi N \rightarrow \pi N$
7 ± 4	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>	
< 0.015	CANDLIN	84	DPWA	$\pi^+ p \rightarrow \Sigma^+ K^+$

$\Delta(2390)$ FOOTNOTES

¹ Fit to the amplitudes of HOEHLER 79.

$\Delta(2390)$ REFERENCES

SVARC	14	PR C89 045205	A. Svarc <i>et al.</i>	
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