

Δ(2390) F₃₇

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

OMITTED FROM SUMMARY TABLE

Δ(2390) BREIT-WIGNER MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
≈ 2390 OUR ESTIMATE			
2350 ± 100	CUTKOSKY	80 IPWA	π N → π N
2425 ± 60	HOEHLER	79 IPWA	π N → π N

Δ(2390) BREIT-WIGNER WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
300 ± 100	CUTKOSKY	80 IPWA	π N → π N
300 ± 80	HOEHLER	79 IPWA	π N → π N

Δ(2390) POLE POSITION

REAL PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2350 ± 100	CUTKOSKY	80 IPWA	π N → π N

− 2×IMAGINARY PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
260 ± 100	CUTKOSKY	80 IPWA	π N → π N

Δ(2390) ELASTIC POLE RESIDUE

MODULUS |r|

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
12 ± 6	CUTKOSKY	80 IPWA	π N → π N

PHASE θ

VALUE (°)	DOCUMENT ID	TECN	COMMENT
− 90 ± 60	CUTKOSKY	80 IPWA	π N → π N

Δ(2390) DECAY MODES

Mode
Γ ₁ Nπ
Γ ₂ Σ K

Δ(2390) BRANCHING RATIOS

Γ(Nπ)/Γ _{total}	DOCUMENT ID	TECN	COMMENT	Γ ₁ /Γ
0.08 ± 0.04	CUTKOSKY	80 IPWA	π N → π N	
0.07 ± 0.04	HOEHLER	79 IPWA	π N → π N	

$(\Gamma_i \Gamma_f)^{1/2} / \Gamma_{\text{total}}$ in $N\pi \rightarrow \Delta(2390) \rightarrow \Sigma K$	$(\Gamma_1 \Gamma_2)^{1/2} / \Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
<0.015	CANDLIN	84	DPWA $\pi^+ p \rightarrow \Sigma^+ K^+$

$\Delta(2390)$ REFERENCES

CANDLIN	84	NP B238 477	+Lowe, Peach, Scotland+	(EDIN, RAL, LOWC)
CUTKOSKY	80	Toronto Conf. 19	+Forsyth, Babcock, Kelly, Hendrick	(CMU, LBL) IJP
Also	79	PR D20 2839	Cutkosky, Forsyth, Hendrick, Kelly	(CMU, LBL)
HOEHLER	79	PDAT 12-1	+Kaiser, Koch, Pietarinen	(KARLT) IJP
Also	80	Toronto Conf. 3	Koch	(KARLT) IJP