

$$\Delta(2350) D_{35}$$

$$I(J^P) = \frac{3}{2}(\frac{5}{2}^-) \text{ Status: } *$$

OMITTED FROM SUMMARY TABLE

$\Delta(2350)$ BREIT-WIGNER MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
≈ 2350 OUR ESTIMATE			
2171 ± 18	MANLEY	92	IPWA $\pi N \rightarrow \pi N \text{ \& } N \pi \pi$
2400 ± 125	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
2305 ± 26	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
2459 ± 100	VRANA	00	Multichannel

$\Delta(2350)$ BREIT-WIGNER WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
264 ± 51	MANLEY	92	IPWA $\pi N \rightarrow \pi N \text{ \& } N \pi \pi$
400 ± 150	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
300 ± 70	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
480 ± 360	VRANA	00	Multichannel

$\Delta(2350)$ POLE POSITION

REAL PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
2400 ± 125	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
2427	VRANA	00	Multichannel

–2×IMAGINARY PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
400 ± 150	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
458	VRANA	00	Multichannel

$\Delta(2350)$ ELASTIC POLE RESIDUE

MODULUS $|r|$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
15 ± 8	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

PHASE θ

VALUE (°)	DOCUMENT ID	TECN	COMMENT
-70 ± 70	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

$\Delta(2350)$ DECAY MODES

Mode	
Γ_1	$N\pi$
Γ_2	ΣK

$\Delta(2350)$ BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$				Γ_1/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.020 ± 0.003	MANLEY	92	IPWA	$\pi N \rightarrow \pi N \text{ \& } N\pi\pi$
0.20 ± 0.10	CUTKOSKY	80	IPWA	$\pi N \rightarrow \pi N$
0.04 ± 0.02	HOEHLER	79	IPWA	$\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.07 ± 0.14	VRANA	00	Multichannel	

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow \Delta(2350) \rightarrow \Sigma K$				$(\Gamma_1\Gamma_2)^{1/2}/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT	
<0.015	CANDLIN	84	DPWA	$\pi^+ p \rightarrow \Sigma^+ K^+$

$\Delta(2350)$ REFERENCES

VRANA	00	PRPL 328 181	T.P. Vrana, S.A. Dytman,, T.-S.H. Lee	
MANLEY	92	PR D45 4002	D.M. Manley, E.M. Saleski	(KENT) IJP
Also	84	PR D30 904	D.M. Manley <i>et al.</i>	(VPI)
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