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

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

OMITTED FROM SUMMARY TABLE

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

$\Delta(2350)$ BREIT-WIGNER MASS

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

$\Delta(2350)$ BREIT-WIGNER WIDTH

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

$\Delta(2350)$ POLE POSITION

REAL PART

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

−2×IMAGINARY PART

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

$\Delta(2350)$ ELASTIC POLE RESIDUE

MODULUS $|r|$

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

PHASE θ

VALUE (°)	*DOCUMENT ID*		*TECN*	*COMMENT*
−70±70	CUTKOSKY	80	IPWA	$\pi N \to \pi N$

Δ(2350) DECAY MODES

	Mode
Γ_1	$N\pi$
Γ_2	ΣK

Δ(2350) BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{total}$ Γ_1/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.020±0.003	MANLEY	92	IPWA	$\pi N \to \pi N$ & $N\pi\pi$
0.20 ±0.10	CUTKOSKY	80	IPWA	$\pi N \to \pi N$
0.04 ±0.02	HOEHLER	79	IPWA	$\pi N \to \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.07 ±0.14	VRANA	00	DPWA	Multichannel

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\pi \to \Delta(2350) \to \Sigma K$ $(\Gamma_1\Gamma_2)^{1/2}/\Gamma$

VALUE	DOCUMENT ID		TECN	COMMENT
<0.015	CANDLIN	84	DPWA	$\pi^+ p \to \Sigma^+ K^+$

Δ(2350) REFERENCES

ARNDT	06	PR C74 045205	R.A. Arndt *et al.*	(GWU)
VRANA	00	PRPL 328 181	T.P. Vrana, S.A. Dytman,, T.-S.H. Lee	(PITT+)
MANLEY	92	PR D45 4002	D.M. Manley, E.M. Saleski	(KENT) IJP
Also		PR D30 904	D.M. Manley *et al.*	(VPI)
CANDLIN	84	NP B238 477	D.J. Candlin *et al.*	(EDIN, RAL, LOWC)
CUTKOSKY	80	Toronto Conf. 19	R.E. Cutkosky *et al.*	(CMU, LBL) IJP
Also		PR D20 2839	R.E. Cutkosky *et al.*	(CMU, LBL)
HOEHLER	79	PDAT 12-1	G. Hohler *et al.*	(KARLT) IJP
Also		Toronto Conf. 3	R. Koch	(KARLT) IJP