

$\Delta(2350) D_{35}$ 

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

OMITTED FROM SUMMARY TABLE

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

 **$\Delta(2350)$  BREIT-WIGNER MASS**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>\approx 2350</math> OUR ESTIMATE</b>			
2171 $\pm$ 18	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$
2400 $\pm$ 125	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
2305 $\pm$ 26	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
2459 $\pm$ 100	VRANA	00	DPWA Multichannel

 **$\Delta(2350)$  BREIT-WIGNER WIDTH**

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

 **$\Delta(2350)$  POLE POSITION****REAL PART**

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

 **$-2 \times$ IMAGINARY PART**

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

 **$\Delta(2350)$  ELASTIC POLE RESIDUE****MODULUS  $|r|$** 

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
15 $\pm$ 8	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>
$-70 \pm 70$	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

## $\Delta(2350)$ DECAY MODES

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

## $\Delta(2350)$ BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
0.020 ± 0.003	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$	
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	DPWA    Multichannel	

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

## $\Delta(2350)$ REFERENCES

ARNDT	06	PR C74 045205	R.A. Arndt <i>et al.</i>	(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 <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		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