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

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

OMITTED FROM SUMMARY TABLE

## $\Delta(2350)$ MASS

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **≈ 2350 OUR ESTIMATE** | | | | |
| 2171± 18 | MANLEY | 92 | IPWA | $\pi N \rightarrow \pi N$ & $N\pi\pi$ |
| 2400±125 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| 2305± 26 | HOEHLER | 79 | IPWA | $\pi N \rightarrow \pi N$ |

## $\Delta(2350)$ WIDTH

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| 264± 51 | MANLEY | 92 | IPWA | $\pi N \rightarrow \pi N$ & $N\pi\pi$ |
| 400±150 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| 300± 70 | HOEHLER | 79 | IPWA | $\pi N \rightarrow \pi N$ |

## $\Delta(2350)$ POLE POSITION

### REAL PART

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| 2400±125 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |

### −2×IMAGINARY PART

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| 400±150 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |

## $\Delta(2350)$ ELASTIC POLE RESIDUE

### MODULUS $|r|$

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

### PHASE $\theta$

| VALUE (°) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| −70±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

### $\Gamma(N\pi)/\Gamma_{total}$ $\Gamma_1/\Gamma$

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| 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 | $\pi N \rightarrow \pi N$ |

### $(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ 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


| | | | | |
|---|---|---|---|---|
| MANLEY | 92 | PR D45 4002 | +Saleski | (KENT) IJP |
| Also | 84 | PR D30 904 | Manley, Arndt, Goradia, Teplitz | (VPI) |
| 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 |