

Δ(2300) H₃₉

$$I(J^P) = \frac{3}{2}(\frac{9}{2}^+) \text{ Status: } **$$

OMITTED FROM SUMMARY TABLE

Δ(2300) BREIT-WIGNER MASS

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|--------------------|-------------|---|
| ≈ 2300 OUR ESTIMATE | | | |
| 2204.5 ± 3.4 | CHEW | 80 | BPWA π ⁺ p → π ⁺ p |
| 2400 ± 125 | CUTKOSKY | 80 | IPWA πN → πN |
| 2217 ± 80 | HOEHLER | 79 | IPWA πN → πN |
| 2450 ± 100 | HENDRY | 78 | MPWA πN → πN |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | |
| 2400 | CANDLIN | 84 | DPWA π ⁺ p → Σ ⁺ K ⁺ |

Δ(2300) BREIT-WIGNER WIDTH

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|--------------------|-------------|---|
| 32.3 ± 1.0 | CHEW | 80 | BPWA π ⁺ p → π ⁺ p |
| 425 ± 150 | CUTKOSKY | 80 | IPWA πN → πN |
| 300 ± 100 | HOEHLER | 79 | IPWA πN → πN |
| 500 ± 200 | HENDRY | 78 | MPWA πN → πN |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | |
| 200 | CANDLIN | 84 | DPWA π ⁺ p → Σ ⁺ K ⁺ |

Δ(2300) POLE POSITION

REAL PART

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|--------------------|--------------------|-------------|----------------|
| 2370 ± 80 | CUTKOSKY | 80 | IPWA πN → πN |

− 2×IMAGINARY PART

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|--------------------|--------------------|-------------|----------------|
| 420 ± 160 | CUTKOSKY | 80 | IPWA πN → πN |

Δ(2300) ELASTIC POLE RESIDUE

MODULUS |r|

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|--------------------|--------------------|-------------|----------------|
| 10 ± 4 | CUTKOSKY | 80 | IPWA πN → πN |

PHASE θ

| <u>VALUE (°)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|------------------|--------------------|-------------|----------------|
| − 20 ± 30 | CUTKOSKY | 80 | IPWA πN → πN |

$\Delta(2300)$ DECAY MODES

| Mode |
|-----------------------|
| Γ_1 $N\pi$ |
| Γ_2 ΣK |

$\Delta(2300)$ BRANCHING RATIOS

| $\Gamma(N\pi)/\Gamma_{\text{total}}$ | DOCUMENT ID | TECN | COMMENT | Γ_1/Γ |
|--------------------------------------|-------------|------|------------------------------------|-------------------|
| 0.05 | CHEW | 80 | BPWA $\pi^+ p \rightarrow \pi^+ p$ | |
| 0.06 ± 0.02 | CUTKOSKY | 80 | IPWA $\pi N \rightarrow \pi N$ | |
| 0.03 ± 0.02 | HOEHLER | 79 | IPWA $\pi N \rightarrow \pi N$ | |
| 0.08 ± 0.02 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N$ | |

| $(\Gamma_i \Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow \Delta(2300) \rightarrow \Sigma K$ | DOCUMENT ID | TECN | COMMENT | $(\Gamma_1 \Gamma_2)^{1/2}/\Gamma$ |
|---|-------------|------|---|------------------------------------|
| -0.017 | CANDLIN | 84 | DPWA $\pi^+ p \rightarrow \Sigma^+ K^+$ | |

$\Delta(2300)$ REFERENCES

| | | | | |
|----------|----|-------------------|------------------------------------|-------------------|
| CANDLIN | 84 | NP B238 477 | +Lowe, Peach, Scotland+ | (EDIN, RAL, LOWC) |
| CHEW | 80 | Toronto Conf. 123 | | (LBL) IJP |
| 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 |
| HENDRY | 78 | PRL 41 222 | | (IND, LBL) IJP |
| Also | 81 | ANP 136 1 | Hendry | (IND) |