N(1535) 1/2

$$I(J^P) = \frac{1}{2}(\frac{1}{2})$$
 Status: ***

Older and obsolete values are listed and referenced in the 2014 edition, Chinese Physics C38 070001 (2014).

N(1535) POLE POSITION

| REAL PART | | | | |
|---|--------------------|----------|-----------|-----------------------------------|
| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
| 1490 to 1530 (\approx 1510) OUR ESTI | MATE | | | |
| 1500± 4 | SOKHOYAN | 15A | DPWA | Multichannel |
| $1509 \pm 4 \pm 2$ | ¹ SVARC | 14 | L+P | $\pi N \rightarrow \pi N$ |
| 1502 | ARNDT | 06 | DPWA | $\pi N \rightarrow \pi N, \eta N$ |
| 1487 | HOEHLER | 93 | SPED | $\pi N \rightarrow \pi N$ |
| 1510 ± 50 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| \bullet \bullet We do not use the following | data for averages | s, fits, | limits, e | etc. • • • |
| 1490 | SHKLYAR | 13 | DPWA | Multichannel |
| 1501± 4 | ANISOVICH | 12A | DPWA | Multichannel |
| 1515 | SHRESTHA | 12A | DPWA | Multichannel |
| 1521 ± 14 | BATINIC | 10 | DPWA | $\pi N \rightarrow N\pi, N\eta$ |
| 1525 | VRANA | 00 | DPWA | Multichannel |

-2×IMAGINARY PART

| _, | | | | | | |
|--|----------------------------------|------------------|------------------------------|--|--|--|
| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT | | |
| 90 to 250 (\approx 170) OUR ESTIMATE 128 \pm 9 SOKHOYAN 15A DPWA Multichannel 118 \pm 9 \pm 2 1 SVARC 14 L+P π $N \to \pi$ N | | | | | | |
| 128± 9 | | 15A | DPWA | Multichannel | | |
| $118\pm \ 9\pm 2$ | ¹ SVARC | 14 | L+P | $\pi N \rightarrow \pi N$ | | |
| 95 | ARNDT | 06 | DPWA | $\pi N \rightarrow \pi N$, ηN | | |
| 260 ± 80 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ | | |
| • • We do not use the following data for averages, fits, limits, etc. • • | | | | | | |
| ◆ We do not use the following | data for averages | s, fits, | limits, e | etc. • • • | | |
| • • • We do not use the following 100 | data for averages | | | etc. • • • Multichannel | | |
| _ | _ | 13 | DPWA | | | |
| 100 | SHKLYAR | 13 12A | DPWA DPWA | Multichannel | | |
| 100 134±11 | SHKLYAR ANISOVICH | 13 12A 12A | DPWA DPWA DPWA | Multichannel Multichannel | | |
| 100 134±11 123 | SHKLYAR ANISOVICH SHRESTHA | 13 12A 12A | DPWA DPWA DPWA DPWA | Multichannel Multichannel Multichannel | | |

N(1535) ELASTIC POLE RESIDUE

MODULUS |r|

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|---|--------------------|----------|-----------|-----------------------------------|
| 50±20 OUR ESTIMATE | | | | |
| 29± 4 | SOKHOYAN | 15A | DPWA | Multichannel |
| $22\pm\ 2\pm0.4$ | ¹ SVARC | 14 | L+P | $\pi N \rightarrow \pi N$ |
| 16 | ARNDT | 06 | DPWA | $\pi N \rightarrow \pi N, \eta N$ |
| 120 ± 40 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| ullet $ullet$ We do not use the following | data for averages | s, fits, | limits, e | etc. • • • |
| 15 | SHKLYAR | 13 | DPWA | Multichannel |
| 31± 4 | ANISOVICH | 12A | DPWA | Multichannel |
| 68 | BATINIC | 10 | DPWA | $\pi N \rightarrow N\pi, N\eta$ |
| HTTP://PDG.LBL.GOV | Page 1 | | Creat | ed: 5/30/2017 17:20 |

PHASE θ

| VALUE (°) | DOCUMENT ID | | TECN | COMMENT |
|-----------------------------------|--------------------|----------|-----------|-----------------------------------|
| -15 ± 15 OUR ESTIMATE | | | | |
| -20 ± 10 | SOKHOYAN | 15A | DPWA | Multichannel |
| $-$ 5 \pm 5 \pm 3 | ¹ SVARC | 14 | L+P | $\pi N \rightarrow \pi N$ |
| -16 | ARNDT | 06 | DPWA | $\pi N \rightarrow \pi N, \eta N$ |
| $+15 \pm 45$ | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| • • • We do not use the following | g data for average | s, fits, | limits, e | etc. • • • |
| -51 | SHKLYAR | 13 | DPWA | Multichannel |
| $-29\pm$ 5 | ANISOVICH | 12A | DPWA | Multichannel |
| 12 | BATINIC | 10 | DPWA | $\pi N \rightarrow N \pi, N \eta$ |

N(1535) INELASTIC POLE RESIDUE

The "normalized residue" is the residue divided by $\Gamma_{pole}/2.$

Normalized residue in $N\pi \rightarrow N(1535) \rightarrow N\eta$

| MODULUS (%) | PHASE (°) | DOCUMENT ID | TECN | COMMENT |
|-------------|-----------|---------------|------|--------------|
| 43±3 | -76 ± 5 | ANISOVICH 12A | DPWA | Multichannel |

Normalized residue in $N\pi \to N(1535) \to \Delta\pi$, *D*-wave

| MODULUS (%) | PHASE (°) | DOCUMENT ID | TECN | COMMENT |
|----------------|--------------------------|-------------------------|------------|--------------|
| 11 ± 2 | 160 ± 20 | SOKHOYAN 15A | DPWA | Multichannel |
| • • • We do no | t use the following data | for averages, fits, lin | nits, etc. | • • • |
| 12±3 | 145 ± 17 | ANISOVICH 12A | DPWA | Multichannel |

Normalized residue in $N\pi \rightarrow N(1535) \rightarrow N\sigma$

| MODULUS | PHASE (°) | DOCUMENT ID | TECN | COMMENT |
|-------------|-----------|--------------|------|--------------|
| 0.16 + 0.07 | 25 ± 40 | SOKHOYAN 15A | DPWA | Multichannel |

Normalized residue in $N\pi \to N(1535) \to N(1440)\pi$

| MODULUS | PHASE (°) | DOCUMENT ID | TECN | COMMENT |
|-------------------|------------|--------------|------|--------------|
| $0.21\!\pm\!0.14$ | -45 ± 50 | SOKHOYAN 15A | DPWA | Multichannel |

N(1535) BREIT-WIGNER MASS

| DOCUMENT ID | | TECN | COMMENT |
|-------------------|--|---|--|
| IMATE | | | |
| SOKHOYAN | 15A | DPWA | Multichannel |
| SHKLYAR | 13 | DPWA | Multichannel |
| ARNDT | 06 | DPWA | $\pi N 	o \pi N, \eta N$ |
| CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| HOEHLER | 79 | IPWA | $\pi N \rightarrow \pi N$ |
| data for averages | s, fits, | limits, e | etc. • • • |
| ANISOVICH | 12A | DPWA | Multichannel |
| SHRESTHA | 12A | DPWA | Multichannel |
| BATINIC | 10 | DPWA | $\pi N \rightarrow N \pi, N \eta$ |
| ARNDT | 04 | DPWA | $\pi N \rightarrow \pi N$, ηN |
| PENNER | 0 2C | DPWA | Multichannel |
| | | | |
| | SOKHOYAN SHKLYAR ARNDT CUTKOSKY HOEHLER data for averages ANISOVICH SHRESTHA BATINIC ARNDT | SOKHOYAN 15A SHKLYAR 13 ARNDT 06 CUTKOSKY 80 HOEHLER 79 data for averages, fits, ANISOVICH 12A SHRESTHA 12A BATINIC 10 ARNDT 04 | SOKHOYAN 15A DPWA SHKLYAR 13 DPWA ARNDT 06 DPWA CUTKOSKY 80 IPWA HOEHLER 79 IPWA data for averages, fits, limits, e ANISOVICH 12A DPWA SHRESTHA 12A DPWA BATINIC 10 DPWA ARNDT 04 DPWA |

HTTP://PDG.LBL.GOV Page 2 Created: 5/30/2017 17:20

| 1530 | ± 10 | BAI | 01 B | BES | $J/\psi \rightarrow p\overline{p}\eta$ |
|------|----------|-----------|-------------|------|--|
| 1522 | ± 11 | THOMPSON | 01 | CLAS | $\gamma^* p \rightarrow p \eta$ |
| 1542 | ± 3 | VRANA | 00 | DPWA | Multichannel |
| 1532 | ± 5 | ARMSTRONG | 99 B | DPWA | $\gamma^* p \rightarrow p \eta$ |

N(1535) BREIT-WIGNER WIDTH

| VALUE (MeV) | DOCUMENT ID | | TECN | COMMENT |
|--------------------------------------|-------------------|-------------|-------------|--|
| 125 to 175 (≈ 150) OUR ESTIMA | TE | | | |
| 120 ±10 | SOKHOYAN | 15A | DPWA | Multichannel |
| 131 \pm 12 | SHKLYAR | 13 | DPWA | Multichannel |
| $188.4 \pm \ 3.8$ | ARNDT | 06 | DPWA | $\pi N \rightarrow \pi N$, ηN |
| 240 ± 80 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ |
| 120 ± 20 | HOEHLER | 79 | IPWA | $\pi N \rightarrow \pi N$ |
| • • • We do not use the following of | lata for averages | , fits, | limits, e | etc. • • • |
| 128 ± 14 | ANISOVICH | 12A | DPWA | Multichannel |
| 141 ± 4 | SHRESTHA | 12A | DPWA | Multichannel |
| 182 ± 25 | BATINIC | 10 | DPWA | $\pi N \rightarrow N \pi, N \eta$ |
| 129 ± 8 | PENNER | 02C | DPWA | Multichannel |
| 95 ± 25 | BAI | 01 B | BES | $J/\psi ightarrow ho \overline{ ho} \eta$ |
| 143 ± 18 | THOMPSON | 01 | CLAS | $\gamma^* p \rightarrow p \eta$ |
| 112 ± 19 | VRANA | 00 | DPWA | Multichannel |
| 154 ±20 | ARMSTRONG | 99 B | DPWA | $\gamma^* p \rightarrow p \eta$ |

N(1535) DECAY MODES

The following branching fractions are our estimates, not fits or averages.

| | Mode | Fraction (Γ_i/Γ) | |
|-----------------------|--|------------------------------|--|
| $\overline{\Gamma_1}$ | $N\pi$ | 35–55 % | |
| Γ_2 | $N\eta$ | 32-52 % | |
| Γ_3 | $N\pi\pi$ | 3–14 % | |
| Γ_4 | $\Delta(1232)\pi$ | | |
| Γ_5 | $arDelta(1232)\pi$, $	extit{D}	ext{-}$ wave | 1-4 % | |
| Γ_6 | $N\sigma$ | 2–10 % | |
| Γ_7 | $\mathcal{N}(1440)\pi$ | 5–12 % | |
| Γ ₈ | $p\gamma$, helicity $=1/2$ | 0.15-0.30 % | |
| Γ ₉ | $n\gamma$, helicity=1/2 | 0.01–0.25 % | |
| | | | |

N(1535) BRANCHING RATIOS

| $\Gamma(N\pi)/\Gamma_{total}$ | | | | Γ_1/Γ | • |
|-------------------------------|-------------|-----|-------|--------------------------------------|---|
| VALUE (%) | DOCUMENT ID | | TECN | COMMENT | |
| 52 ± 5 | SOKHOYAN | 15A | DPWA | Multichannel | |
| 35 ± 3 | SHKLYAR | 13 | DPWA | Multichannel | |
| 35.5 ± 0.2 | ARNDT | 06 | DPWA | $\pi N \rightarrow \pi N$, ηN | |
| 50 ±10 | CUTKOSKY | 80 | IPWA | $\pi N \rightarrow \pi N$ | |
| 38 ± 4 | HOEHLER | 79 | IPWA | $\pi N \rightarrow \pi N$ | |
| HTTP://PDG.LBL.GOV | Page 3 | | Creat | ed: 5/30/2017 17:20 |) |

| | ata for averages | , fits, | limits, e | tc. • • • |
|---|---|---|--|---|
| 54 ± 5 | ANISOVICH | 12A | DPWA | Multichannel |
| 37 ± 1 | SHRESTHA | | | Multichannel |
| 46 ± 7 | BATINIC | 10 | | $\pi N \rightarrow N \pi, N \eta$ |
| 36 ± 1 | PENNER | | | Multichannel |
| 35 ± 8 | VRANA | 00 | DPWA | Multichannel |
| $\Gamma(N\eta)/\Gamma_{\text{total}}$ | | | | Γ ₂ /Γ |
| VALUE (%) | DOCUMENT ID | | TECN | COMMENT |
| 42±10 OUR ESTIMATE | | | | |
| 58± 4 | SHKLYAR | 13 | | Multichannel |
| 33± 5 53± 1 | ANISOVICH PENNER | | | Multichannel Multichannel |
| 51± 5 | VRANA | 00 | | Multichannel |
| • • • We do not use the following d | | | | |
| 41± 2 | SHRESTHA | 12A | DPWA | Multichannel |
| 50± 7 | BATINIC | 10 | DPWA | $\pi N \rightarrow N \pi, N \eta$ |
| $\Gamma(N\eta)/\Gamma(N\pi)$ | | | | Γ_2/Γ_1 |
| VALUE | DOCUMENT ID | | TECN | COMMENT |
| ullet $ullet$ We do not use the following d | ata for averages | , fits, | limits, e | tc. • • • |
| $0.95\!\pm\!0.03$ | AZNAURYAN | 09 | CLAS | π , η electroproduction |
| $\Gamma(\Delta(1232)\pi$, <i>D</i> -wave $)/\Gamma_{total}$ | | | | Γ ₅ /Γ |
| VALUE (%) | DOCUMENT ID | | TECN | COMMENT |
| 2.5 ± 1.5 | SOKHOYAN | 15A | DPWA | NA L. |
| | | | | Multichannel |
| • • • We do not use the following d | ata for averages | , fits, | limits, e | |
| \bullet \bullet We do not use the following d 2.5 ± 1.5 | ata for averages ANISOVICH | | | |
| 2.5 ± 1.5 1.8 ± 0.8 | ANISOVICH SHRESTHA | 12A 12A | DPWA DPWA | tc. ● ● ● Multichannel Multichannel |
| 2.5 ± 1.5 | ANISOVICH | 12A | DPWA DPWA | tc. • • • Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 | ANISOVICH SHRESTHA | 12A 12A | DPWA DPWA | tc. ● ● ● Multichannel Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 | ANISOVICH SHRESTHA | 12A 12A | DPWA DPWA | tc. • • • Multichannel Multichannel Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ | ANISOVICH SHRESTHA VRANA | 12A 12A 00 | DPWA DPWA DPWA | tc. • • • Multichannel Multichannel Multichannel Г 6/Г |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ VALUE (%) | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN | 12A 12A 00 | DPWA DPWA DPWA | tc. • • • Multichannel Multichannel Multichannel Γ6/Γ COMMENT Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE (\%)}{6 \pm 4}$ | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN | 12A 12A 00 15A , fits, | DPWA DPWA DPWA TECN DPWA limits, e | tc. • • • Multichannel Multichannel Multichannel Γ6/Γ COMMENT Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{6 \pm 4}$ • • • We do not use the following d | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages | 12A 12A 00 15A , fits, | DPWA DPWA TECN DPWA limits, e | tc. • • • Multichannel Multichannel Multichannel Γ6/Γ <u>COMMENT</u> Multichannel tc. • • • |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{6 \pm 4}$ • • • We do not use the following d 1.5 ± 0.5 2 ± 1 | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA | 12A 12A 00 15A , fits, | DPWA DPWA TECN DPWA limits, e | tc. • • • Multichannel Multichannel Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{6 \pm 4}$ • • • We do not use the following down to the following dow | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA VRANA | 12A 12A 00 15A , fits, | DPWA DPWA TECN DPWA limits, e DPWA DPWA | tc. • • • Multichannel Multichannel Multichannel Γ6/Γ COMMENT Multichannel tc. • • Multichannel Multichannel Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{6 \pm 4}$ • • • We do not use the following do 1.5 ± 0.5 2 ± 1 $\Gamma(N(1440)\pi)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{VALUE\ (\%)}$ | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA VRANA | 12A 12A 00 15A , fits, 12A 00 | DPWA DPWA TECN DPWA limits, e DPWA DPWA | Multichannel Multichannel Multichannel F6/Γ COMMENT Multichannel tc. • • • Multichannel Multichannel Multichannel F7/Γ |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{6 \pm 4}$ • • • We do not use the following d 1.5 ± 0.5 2 ± 1 $\Gamma(N(1440)\pi)/\Gamma_{\text{total}}$ $\frac{VALUE\ (\%)}{12\pm 8}$ | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA VRANA DOCUMENT ID SOKHOYAN | 12A 12A 00 15A , fits, 12A 00 | DPWA DPWA TECN DPWA limits, e DPWA DPWA | Multichannel Multichannel Multichannel COMMENT Multichannel tc. • • • Multichannel Multichannel Multichannel Multichannel Multichannel |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE}{6} = 0$ 6 ± 4 • • • We do not use the following down to the following | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA VRANA DOCUMENT ID SOKHOYAN SOKHOYAN | 12A 12A 00 15A , fits, 12A 00 | DPWA DPWA TECN DPWA limits, e DPWA DPWA | tc. \bullet \bullet \bullet Multichannel Multichannel Multichannel COMMENT Multichannel tc. \bullet \bullet Multichannel Multichannel Multichannel $\sigma^- p \rightarrow n3\pi^0$ |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE(\%)}{6 \pm 4}$ • • • We do not use the following down of the following down | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA VRANA DOCUMENT ID SOKHOYAN STAROSTIN ata for averages | 12A 12A 00 15A , fits, 12A 00 15A 03 , fits, | DPWA DPWA TECN DPWA limits, e DPWA DPWA TECN DPWA LIMITS | Multichannel Multichannel Multichannel Multichannel COMMENT Multichannel tc. • • • Multichannel Multichannel Multichannel Γ_7/Γ COMMENT Multichannel $\pi^-p \rightarrow n3\pi^0$ tc. • • • |
| 2.5 ± 1.5 1.8 ± 0.8 1 ± 1 $\Gamma(N\sigma)/\Gamma_{\text{total}}$ $\frac{VALUE}{6} = 0$ 6 ± 4 • • • We do not use the following down to the following | ANISOVICH SHRESTHA VRANA DOCUMENT ID SOKHOYAN ata for averages SHRESTHA VRANA DOCUMENT ID SOKHOYAN SOKHOYAN | 12A 12A 00 15A , fits, 12A 00 15A 03 , fits, | DPWA DPWA TECN DPWA limits, e DPWA DPWA TECN DPWA DPWA | tc. \bullet \bullet \bullet Multichannel Multichannel Multichannel COMMENT Multichannel tc. \bullet \bullet Multichannel Multichannel Multichannel $\sigma^- p \rightarrow n3\pi^0$ |

Created: 5/30/2017 17:20

N(1535) PHOTON DECAY AMPLITUDES AT THE POLE

$N(1535) \rightarrow p\gamma$, helicity-1/2 amplitude A_{1/2}

| MODULUS ($GeV^{-1/2}$) | PHASE (°) | DOCUMENT ID | | TECN | COMMENT |
|--------------------------|-------------------|-------------|-----|------|--------------|
| $0.114\!\pm\!0.008$ | 10 ± 5 | SOKHOYAN | 15A | DPWA | Multichannel |
| 0.050 ± 0.004 | -14^{+12}_{-10} | ROENCHEN | 14 | DPWA | |

N(1535) BREIT-WIGNER PHOTON DECAY AMPLITUDES

$N(1535) \rightarrow p\gamma$, helicity-1/2 amplitude A_{1/2}

| $VALUE (GeV^{-1/2})$ | DOCUMENT ID | | TECN | COMMENT | | | |
|---|-------------------|-------------|-----------|---|--|--|--|
| +0.115±0.015 OUR ESTIMATE | | | | | | | |
| 0.101 ± 0.007 | SOKHOYAN | 15A | DPWA | Multichannel | | | |
| 0.128 ± 0.004 | WORKMAN | 12A | DPWA | $\gamma N \rightarrow N \pi$ | | | |
| 0.091 ± 0.002 | DUGGER | 07 | DPWA | $\gamma {\sf N} ightarrow \pi {\sf N}$ | | | |
| • • • We do not use the following of | lata for averages | s, fits, | limits, e | etc. • • • | | | |
| 0.091 ± 0.004 | SHKLYAR | 13 | DPWA | Multichannel | | | |
| $0.105\!\pm\!0.010$ | ANISOVICH | 12A | DPWA | Multichannel | | | |
| 0.059 ± 0.003 | SHRESTHA | 12A | DPWA | Multichannel | | | |
| 0.066 | DRECHSEL | 07 | DPWA | $\gamma N 	o \pi N$ | | | |
| 0.090 | PENNER | 02 D | DPWA | Multichannel | | | |
| $N(1535) \rightarrow n\gamma$, helicity-1/2 amplitude $A_{1/2}$ | | | | | | | |
| $VALUE (GeV^{-1/2})$ | DOCUMENT ID | | TECN | COMMENT | | | |
| -0.075±0.020 OUR ESTIMATE | | | | | | | |
| $-0.093\!\pm\!0.011$ | ANISOVICH | 13 B | DPWA | Multichannel | | | |
| -0.058 ± 0.006 | CHEN | 12A | DPWA | $\gamma {\sf N} ightarrow \pi {\sf N}$ | | | |
| ullet $ullet$ We do not use the following data for averages, fits, limits, etc. $ullet$ $ullet$ | | | | | | | |
| -0.049 ± 0.003 | SHRESTHA | 12A | DPWA | Multichannel | | | |

$N(1535) \rightarrow N\gamma$, ratio $A_{1/2}^{p}/A_{1/2}^{p}$

-0.051

-0.024

| $VALUE$ (GeV $^{-1/2}$) | DOCUMENT ID TECN |
|--------------------------|---|
| • • • We do not use the | following data for averages, fits, limits, etc. • • • |
| -0.84 ± 0.15 | MUKHOPAD 95B IPWA |

N(1535) FOOTNOTES

DRECHSEL

PENNER

07 DPWA $\gamma N \rightarrow \pi N$

02D DPWA Multichannel

 $^{^{1}\,\}mathrm{Fit}$ to the amplitudes of HOEHLER 79.

² This STAROSTIN 03 value is an estimate made using simplest assumptions.

N(1535) REFERENCES

For early references, see Physics Letters 111B 1 (1982).

| SOKHOYAN PDG ROENCHEN Also SVARC ANISOVICH | 15A 14 14 14 14 13B | EPJ A51 95 CP C38 070001 EPJ A50 101 EPJ A51 63 (errat.) PR C89 045205 EPJ A49 67 | V. Sokhoyan <i>et al.</i> K. Olive <i>et al.</i> D. Roenchen <i>et al.</i> D. Roenchen <i>et al.</i> A. Svarc <i>et al.</i> A.V. Anisovich <i>et al.</i> | (CBELSA/TAPS Collab.) (PDG Collab.) |
|---|------------------------------------|--|--|--|
| SHKLYAR | 135 | PR C87 015201 | V. Shklyar, H. Lenske, U. Mosel | (GIES) |
| ANISOVICH | 13 12A | EPJ A48 15 | A.V. Anisovich <i>et al.</i> | (BONN, PNPI) |
| CHEN | 12A | PR C86 015206 | | KE, GWU, MSST, ITEP+) |
| SHRESTHA | 12A | PR C86 055203 | M. Shrestha, D.M. Manley | (KSU) |
| WORKMAN | 12A | PR C86 015202 | R. Workman et al. | (GWU) |
| BATINIC | 10 | PR C82 038203 | M. Batinic <i>et al.</i> | (ZAGR) |
| AZNAURYAN | 09 | PR C80 055203 | I.G. Aznauryan <i>et al.</i> | (JLab CLAS Collab.) |
| DRECHSEL | 07 | EPJ A34 69 | D. Drechsel, S.S. Kamalov, L. Ti | |
| DUGGER | 07 | PR C76 025211 | M. Dugger et al. | (JLab CLAS Collab.) |
| ARNDT | 06 | PR C74 045205 | R.A. Arndt et al. | ` (GWU) |
| ARNDT | 04 | PR C69 035213 | R.A. Arndt et al. | (GWU, TRIU) |
| STAROSTIN | 03 | PR C67 068201 | A. Starostin et al. | (BNL Crystal Ball Collab.) |
| PENNER | 02C | PR C66 055211 | G. Penner, U. Mosel | (GIES) |
| PENNER | 02D | PR C66 055212 | G. Penner, U. Mosel | (GIES) |
| BAI | 01B | PL B510 75 | J.Z. Bai <i>et al.</i> | (BES Collab.) |
| THOMPSON | 01 | PRL 86 1702 | R. Thompson et al. | (JLab CLAS Collab.) |
| VRANA | 00 | PRPL 328 181 | T.P. Vrana, S.A. Dytman, TS.H | l. Lee (PITT, ANL) |
| ARMSTRONG | 99B | PR D60 052004 | C.S. Armstrong et al. | |
| MUKHOPAD | | PL B364 1 | N.C. Mukhopadhyay, J.F. Zhang, | M. Benmerrouche |
| HOEHLER | 93 | π N Newsletter 9 1 | G. Hohler | (KARL) |
| 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) IJP |
| HOEHLER | 79 | PDAT 12-1 | G. Hohler <i>et al.</i> | (KARLT) IJP |
| Also | | Toronto Conf. 3 | R. Koch | (KARLT) IJP |
| | | | | |

Created: 5/30/2017 17:20