

# N(1900) P<sub>13</sub>

$$I(J^P) = \frac{1}{2}(\frac{3}{2}^+) \text{ Status: } **$$

OMITTED FROM SUMMARY TABLE

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

## N(1900) BREIT-WIGNER MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>≈ 1900 OUR ESTIMATE</b>			
1879 ± 17	MANLEY	92	IPWA π N → π N & N π π
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
1951 ± 53	PENNER	02C	DPWA Multichannel

## N(1900) BREIT-WIGNER WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
498 ± 78	MANLEY	92	IPWA π N → π N & N π π
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
622 ± 42	PENNER	02C	DPWA Multichannel

## N(1900) DECAY MODES

Mode	Fraction (Γ <sub>i</sub> /Γ)
Γ <sub>1</sub> N π	
Γ <sub>2</sub> N π π	
Γ <sub>3</sub> N ρ, S=1/2, P-wave	
Γ <sub>4</sub> N η	(14 ± 5) %
Γ <sub>5</sub> N ω	(39 ± 9) %
Γ <sub>6</sub> Λ K	( 2.40 ± 0.30) %
Γ <sub>7</sub> Σ K	

## N(1900) BRANCHING RATIOS

<b>Γ(Nπ)/Γ<sub>total</sub></b>	<b>Γ<sub>1</sub>/Γ</b>
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
0.26 ± 0.06	MANLEY 92 IPWA π N → π N & N π π
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●	
0.16 ± 0.02	PENNER 02C DPWA Multichannel
 <b>Γ(Nη)/Γ<sub>total</sub></b>	 <b>Γ<sub>4</sub>/Γ</b>
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
<b>0.14 ± 0.05</b>	PENNER 02C DPWA Multichannel

$\Gamma(N\omega)/\Gamma_{\text{total}}$				$\Gamma_5/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT	
<b>0.39±0.09</b>	PENNER	02C	DPWA	Multichannel

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(1900) \rightarrow N\rho, S=1/2, P\text{-wave}$				$(\Gamma_1\Gamma_3)^{1/2}/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT	
-0.34±0.03	MANLEY	92	IPWA	$\pi N \rightarrow \pi N \ \& \ N\pi\pi$

$\Gamma(\Lambda K)/\Gamma_{\text{total}}$				$\Gamma_6/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT	
<b>0.024±0.003</b>	SHKLYAR	05	DPWA	Multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.001±0.001	PENNER	02C	DPWA	Multichannel

$\Gamma(\Sigma K)/\Gamma_{\text{total}}$				$\Gamma_7/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT	
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.01±0.01	PENNER	02C	DPWA	Multichannel

### N(1900) PHOTON DECAY AMPLITUDES

#### N(1900) → $\rho\gamma$ , helicity-1/2 amplitude $A_{1/2}$

VALUE (GeV <sup>-1/2</sup> )	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
-0.017	PENNER	02D	DPWA Multichannel

#### N(1900) → $\rho\gamma$ , helicity-3/2 amplitude $A_{3/2}$

VALUE (GeV <sup>-1/2</sup> )	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.031	PENNER	02D	DPWA Multichannel

#### N(1900) → $n\gamma$ , helicity-1/2 amplitude $A_{1/2}$

VALUE (GeV <sup>-1/2</sup> )	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
-0.016	PENNER	02D	DPWA Multichannel

#### N(1900) → $n\gamma$ , helicity-3/2 amplitude $A_{3/2}$

VALUE (GeV <sup>-1/2</sup> )	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
-0.002	PENNER	02D	DPWA Multichannel

### N(1900) REFERENCES

ARNDT	06	PR C74 045205	R.A. Arndt <i>et al.</i>	(GWU)
SHKLYAR	05	PR C72 015210	V. Shklyar, H. Lenske, U. Mosel	(GIES)
PENNER	02C	PR C66 055211	G. Penner, U. Mosel	(GIES)
PENNER	02D	PR C66 055212	G. Penner, U. Mosel	(GIES)
MANLEY	92	PR D45 4002	D.M. Manley, E.M. Saleski	(KENT)
Also		PR D30 904	D.M. Manley <i>et al.</i>	(VPI)