

$N(2100) P_{11}$

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

OMITTED FROM SUMMARY TABLE

 $N(2100)$ BREIT-WIGNER MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
≈ 2100 OUR ESTIMATE			
1885 ± 30	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$
2125 ± 75	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
2050 ± 20	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
$1986 \pm 26^{+10}_{-30}$	PLOETZKE	98	SPEC $\gamma p \rightarrow p\eta'(958)$
2203 ± 70	BATINIC	95	DPWA $\pi N \rightarrow N\pi, N\eta$

 $N(2100)$ BREIT-WIGNER WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
113 ± 44	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$
260 ± 100	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
200 ± 30	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
$296 \pm 100^{+60}_{-10}$	PLOETZKE	98	SPEC $\gamma p \rightarrow p\eta'(958)$
418 ± 171	BATINIC	95	DPWA $\pi N \rightarrow N\pi, N\eta$

 $N(2100)$ POLE POSITION**REAL PART**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2120 ± 40	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
not seen	ARNDT	91	DPWA $\pi N \rightarrow \pi N$ Soln SM90

-2×IMAGINARY PART

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
240 ± 80	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
not seen	ARNDT	91	DPWA $\pi N \rightarrow \pi N$ Soln SM90

 $N(2100)$ ELASTIC POLE RESIDUE**MODULUS $|r|$**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
14 ± 7	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

PHASE θ

VALUE (°)	DOCUMENT ID	TECN	COMMENT
35 ± 25	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

N(2100) DECAY MODES

Mode
Γ_1 $N\pi$
Γ_2 $N\eta$
Γ_3 $N\pi\pi$
Γ_4 $\Delta(1232)\pi$, P-wave

N(2100) BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
0.15 ± 0.06	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$
0.12 ± 0.03	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
0.10 ± 0.04	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$

• • • We do not use the following data for averages, fits, limits, etc. • • •

0.11 ± 0.07	BATINIC	95	DPWA $\pi N \rightarrow N\pi, N\eta$
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$\Gamma(N\eta)/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE	DOCUMENT ID	TECN	COMMENT
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• • • We do not use the following data for averages, fits, limits, etc. • • •

0.86 ± 0.07	BATINIC	95	DPWA $\pi N \rightarrow N\pi, N\eta$
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$(\Gamma_i \Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(2100) \rightarrow \Delta(1232)\pi$, P-wave $(\Gamma_1 \Gamma_4)^{1/2}/\Gamma$

VALUE	DOCUMENT ID	TECN	COMMENT
-0.19 ± 0.08	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$

N(2100) REFERENCES

PLOETZKE	98	PL B444 555	R. Ploetzke <i>et al.</i>	(Bonn SAPHIR Collab.)
BATINIC	95	PR C51 2310	M. Batinic <i>et al.</i>	(BOSK, UCLA)
Also	98	PR C57 1004 (erratum)	M. Batinic <i>et al.</i>	
MANLEY	92	PR D45 4002	D.M. Manley, E.M. Saleski	(KENT) IJP
Also	84	PR D30 904	D.M. Manley <i>et al.</i>	(VPI)
ARNDT	91	PR D43 2131	R.A. Arndt <i>et al.</i>	(VPI, TELE) IJP
CUTKOSKY	80	Toronto Conf. 19	R.E. Cutkosky <i>et al.</i>	(CMU, LBL) IJP
Also	79	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	80	Toronto Conf. 3	R. Koch	(KARLT) IJP