

$N(2200) D_{15}$

$$I(J^P) = \frac{1}{2}(\frac{5}{2}^-) \text{ Status: } **$$

OMITTED FROM SUMMARY TABLE

The mass is not well determined. A few early results have been omitted.

 $N(2200)$ BREIT-WIGNER MASS

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
≈ 2200 OUR ESTIMATE			
1900	BELL	83	DPWA $\pi^- p \rightarrow \Lambda K^0$
2180±80	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
1920	SAXON	80	DPWA $\pi^- p \rightarrow \Lambda K^0$
2228±30	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
2240±65	BATINIC	95	DPWA $\pi N \rightarrow N\pi, N\eta$

 $N(2200)$ BREIT-WIGNER WIDTH

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
130	BELL	83	DPWA $\pi^- p \rightarrow \Lambda K^0$
400±100	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
220	SAXON	80	DPWA $\pi^- p \rightarrow \Lambda K^0$
310± 50	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
761±139	BATINIC	95	DPWA $\pi N \rightarrow N\pi, N\eta$

 $N(2200)$ POLE POSITION**REAL PART**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
2100±60	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

−2×IMAGINARY PART

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
360±80	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

 $N(2200)$ ELASTIC POLE RESIDUE**MODULUS $|r|$**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
20±10	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

PHASE θ

<u>VALUE (°)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
−90±50	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

N(2200) DECAY MODES

Mode
Γ_1 $N\pi$
Γ_2 $N\eta$
Γ_3 ΛK

N(2200) BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$	Γ_1/Γ
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
0.10±0.03	CUTKOSKY 80 IPWA $\pi N \rightarrow \pi N$
0.07±0.02	HOEHLER 79 IPWA $\pi N \rightarrow \pi N$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●	
0.08±0.04	BATINIC 95 DPWA $\pi N \rightarrow N\pi, N\eta$

$\Gamma(N\eta)/\Gamma_{\text{total}}$	Γ_2/Γ
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●	
0.001±0.01	BATINIC 95 DPWA $\pi N \rightarrow N\pi, N\eta$

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(2200) \rightarrow N\eta$	$(\Gamma_1\Gamma_2)^{1/2}/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
0.066	BAKER 79 DPWA $\pi^- p \rightarrow n\eta$

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(2200) \rightarrow \Lambda K$	$(\Gamma_1\Gamma_3)^{1/2}/\Gamma$
<u>VALUE</u>	<u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>
−0.03	BELL 83 DPWA $\pi^- p \rightarrow \Lambda K^0$
−0.05	SAXON 80 DPWA $\pi^- p \rightarrow \Lambda K^0$

N(2200) REFERENCES

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>	
BELL	83	NP B222 389	K.W. Bell <i>et al.</i>	(RL) 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)
SAXON	80	NP B162 522	D.H. Saxon <i>et al.</i>	(RHEL, BRIS) IJP
BAKER	79	NP B156 93	R.D. Baker <i>et al.</i>	(RHEL) IJP
HOEHLER	79	PDAT 12-1	G. Hohler <i>et al.</i>	(KARLT) IJP
Also	80	Toronto Conf. 3	R. Koch	(KARLT) IJP