N(1880) 1/2⁺

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

OMITTED FROM SUMMARY TABLE

N(1880) POLE POSITION

R	FΔ		ΡΔ	RT
П	ᆮᄶ	_	ГМ	\mathbf{r}

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
1870 ± 40	SOKHOYAN	15A	DPWA	Multichannel
• • • We do not use the following of	data for averages	s, fits,	limits, e	tc. • • •
1870 ± 40	GUTZ	14	DPWA	Multichannel
1860 ± 35	ANISOVICH	12A	DPWA	Multichannel
1801	SHRESTHA	12A	DPWA	Multichannel
-2×IMAGINARY PART VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
220 ± 50	SOKHOYAN	15A	DPWA	Multichannel
• • • We do not use the following of	data for averages	s, fits,	limits, e	tc. • • •
220 ± 50	GUTZ	14	DPWA	Multichannel
250 ± 70	ANISOVICH	12A	DPWA	Multichannel
383	SHRESTHA	12A	DPWA	Multichannel

N(1880) ELASTIC POLE RESIDUE

DOCUMENT ID TECN COMMENT

MODULUS |r|

VALUE (MeV)

6±4 • • • We do not use the following of	SOKHOYAN data for averages	-		
6±4 6±4	GUTZ ANISOVICH	14 12A		Multichannel Multichannel
PHASE θ VALUE (°)	DOCUMENT ID		TECN	COMMENT
70±60 • • • We do not use the following of	SOKHOYAN data for averages			
70 ± 60	GUTZ	14	DPWA	Multichannel

N(1880) INELASTIC POLE RESIDUE

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

Normalized residue in $N\pi \rightarrow N(1880) \rightarrow N\eta$

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
$0.11 \!\pm\! 0.07$	-75 ± 55	ANISOVICH	12A	DPWA	Multichannel

Normalized residue in $N\pi \rightarrow N(1880) \rightarrow \Lambda K$

MODULUS	PHASE (°)	DOCUMENT ID	TECN	COMMENT
0.03 ± 0.02	40 ± 40	ANISOVICH 12A	DPWA	Multichannel

HTTP://PDG.LBL.GOV Page 1 Created: 5/30/2017 17:20

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.11 ± 0.06	95 ± 40	ANISOVICH			Multichannel
Normalized	residue in $N\pi$ $ ightarrow$	N(1880) → △	π, <i>P</i> -ν	wave	
MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.14 ± 0.08	-150 ± 55	SOKHOYAN	15A	DPWA	Multichannel
• • We do i	not use the following	g data for averages,	fits, lin	nits, etc.	• • •
0.20 ± 0.08	-150 ± 50	ANISOVICH	12A	DPWA	Multichannel
Normalized	residue in $N\pi$ $ ightarrow$	$N(1880) \rightarrow N(1880)$	(1535)	π	
MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.09 ± 0.05	130 ± 60	GUTZ	14	DPWA	Multichannel
Normalized	residue in $N\pi$ $ ightarrow$	$N(1880) \rightarrow N$	a ₀ (98	0)	
MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.04 ± 0.03	40 ± 65	GUTZ	14	DPWA	Multichannel
Normalized	residue in $N\pi$ $ ightarrow$	$N(1880) \rightarrow N$	σ		
MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.10 ± 0.05	-140 ± 55	SOKHOYAN	15A	DPWA	Multichannel
	N(188	0) BREIT-WIGNE	ER MA	ASS	
<i>VALUE</i> (MeV)		DOCUMENT ID	TE	ECN CC	DMMENT
1875±40	<u> </u>	SOKHOYAN 1	.5A D	PWA M	ultichannel
• • We do i	not use the following	g data for averages,	fits, lin	nits, etc.	• • •
1875±40		GUTZ 1	.4 D	PWA M	ultichannel
1870 ± 35		ANISOVICH 1	.2A D	PWA M	ultichannel
1900 ± 36		SHRESTHA 1	.2A D	PWA M	ultichannel
	N(1880) BREIT-WIGNE	R WI	OTH	
<i>VALUE</i> (MeV)		DOCUMENT ID	TE	ECN CC	DMMENT
230± 50		SOKHOYAN 1	.5A D	PWA M	ultichannel
	not use the following	g data for averages,	fits. lin	nits, etc.	• • •
• • • vve do i	TOT USE THE TOHOWING	5	,	,	
230± 50	Tot use the following				ultichannel

 $235\!\pm65$

 485 ± 142

ANISOVICH

SHRESTHA

12A DPWA Multichannel

12A DPWA Multichannel

Created: 5/30/2017 17:20

N(1880) DECAY MODES

	Mode	Fraction (Γ_i/Γ)
$\overline{\Gamma_1}$	$N\pi$	3–9 %
Γ_2	$N\eta$	5–55 %
Γ ₃	$N\omega$	
Γ_4	ΛK	1–3 %
Γ_5	ΣΚ	10–24 %
Γ_6	$N\pi\pi$	30–80 %
Γ_7	$\Delta(1232)\pi$	18–42 %
Γ ₈	$N\sigma$	10–40 %
Γ_9	$N(1535)\pi$	4–12 %
Γ_{10}	$Na_0(980)$	1–5 %
Γ_{11}	$p\gamma$, helicity=1/2	seen
Γ ₁₂	$n\gamma$, helicity=1/2	0.002-0.63 %

N(1880) BRANCHING RATIOS

$\Gamma(N\pi)/\Gamma_{\text{total}}$					Γ_1/Γ
VALUE (%)	DOCUMENT ID		TECN	COMMENT	
6±3	SOKHOYAN	15A	DPWA	Multichannel	
$\bullet~\bullet~$ We do not use the following	data for average	s, fits,	limits, e	etc. • • •	
6±3	GUTZ	14	DPWA	Multichannel	
5 ± 3	ANISOVICH	12A	DPWA	Multichannel	
15±5	SHRESTHA	12A	DPWA	Multichannel	
$\Gamma(N\eta)/\Gamma_{\text{total}}$					Γ_2/Γ
VALUE (%)	DOCUMENT ID		TECN	COMMENT	
$25 + 30 \\ -20$	ANISOVICH	12A	DPWA	Multichannel	
ullet $ullet$ We do not use the following	data for average	s, fits,	limits, e	etc. • • •	
16± 7	SHRESTHA	12A	DPWA	Multichannel	
$\Gamma(N\omega)/\Gamma_{\rm total}$					Г3/Г
VALUE (%)	DOCUMENT ID		TECN	COMMENT	
20 ± 8	DENISENKO	16	DPWA	Multichannel	
$\Gamma(\Lambda K)/\Gamma_{\text{total}}$					Γ_4/Γ
VALUE (%)	DOCUMENT ID		TECN	COMMENT	
$2\pm$ 1	ANISOVICH	12A	DPWA	Multichannel	
$\bullet~\bullet~$ We do not use the following	data for average	s, fits,	limits, e	etc. • • •	
$32\!\pm\!10$	SHRESTHA	12A	DPWA	Multichannel	
$\Gamma(\Sigma K)/\Gamma_{\text{total}}$					Γ_5/Γ
VALUE (%)	DOCUMENT ID		TECN	COMMENT	
17 ± 7	ANISOVICH	12A	DPWA	Multichannel	

Page 3

Created: 5/30/2017 17:20

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Γ(Δ(1232	$)\pi)/$	$\Gamma_{ m total}$					Γ_7/Γ
VALUE (%)	- , -		DOCUMENT ID		TECN	COMMENT	
$30\!\pm\!12$			SOKHOYAN	15A	DPWA	Multichannel	
• • • We d	o not	$use\ the\ following$	data for average	s, fits,	limits, e	etc. • •	
$29\!\pm\!12$			ANISOVICH	12A	DPWA	Multichannel	
< 2			SHRESTHA	12A	DPWA	Multichannel	
$\Gamma(N\sigma)/\Gamma_{\rm t}$	otal						Г ₈ /Г
VALUE (%)			DOCUMENT ID			COMMENT	
25±15			SOKHOYAN	_		Multichannel	
	o not	use the following					
8± 5			SHRESTHA	12A	DPWA	Multichannel	
Γ(N(1535		Γ _{total}					٦٩/٢
VALUE (%)			DOCUMENT ID			COMMENT	
8±4			GUTZ	14	DPWA	Multichannel	
Γ(<i>N</i> a ₀ (98	0))/	T _{total}	DOCUMENT ID		TECN	COMMENT	Γ ₁₀ /Γ
VALUE (%)			DOCUMENT ID		TECN	COMMENT	
3±2			GUTZ	14	DPWA	Multichannel	
	•	0) BREIT-WIG			CAY A	MPLITUDES	
VALUE (GeV		γ , helicity-1/2	DOCUMENT ID		TFCN	COMMENT	
		use the following					
0.021 ± 0.00			SHRESTHA				
N(1880) _	→ n	γ , helicity-1/2	amnlitude A.				
		/, noncity 1/1	•		TECN	COMMENT	
VALUE (GeV			DOCUMENT ID			COMMENT	
-0.060 ± 0.0		use the following	ANISOVICH				
		use the following					
0.014 ± 0.0	307		SHRESTHA	12A	DPWA	Multichannel	
		N(1880) REFERE	ENCE	S		
DENISENKO SOKHOYAN	16 15A	PL B755 97 EPJ A51 95	I. Denisenko <i>e</i> V. Sokhoyan <i>e</i>			(CBELSA/TAPS C	
GUTZ ANISOVICH	14 13B	EPJ A50 74 EPJ A49 67	E. Gutz <i>et al.</i> A.V. Anisovich	et al		(CBELSA/TAPS C	ollab.)
ANISOVICH ANISOVICH SHRESTHA	13B 12A 12A	EPJ A49 67 EPJ A48 15 PR C86 055203	A.V. Anisovich A.V. Anisovich M. Shrestha, [et al.	anley	(BONN,	PNPI) (KSU)

Created: 5/30/2017 17:20