$N(\sim 3000 \text{ Region})$ Partial-Wave Analyses

OMITTED FROM SUMMARY TABLE

We list here miscellaneous high-mass candidates for isospin-1/2 resonances found in partial-wave analyses.

Our 1982 edition had an N(3245), an N(3690), and an N(3755), each a narrow peak seen in a production experiment. Since nothing has been heard from them since the 1960's, we declare them to be dead. There was also an N(3030), deduced from total cross-section and 180° elastic cross-section measurements; it is the KOCH 80 $L_{1.15}$ state below.

$N(\sim 3000)$ BREIT-WIGNER MASS

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
≈ 3000 OUR ESTIMATE				
2600	KOCH	80	IPWA	$\pi N \rightarrow \pi N D_{13}$
3100	KOCH	80	IPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~ extsf{L}_{1,15} ~ extsf{wave}$
3500	KOCH	80	IPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~M_{1,17} ext{ wave}$
3500 to 4000	KOCH	80	IPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~ extsf{N}_{1,19} ~ extsf{wave}$
3500 ± 200	HENDRY	78	MPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~ extsf{L}_{1,15} ~ extsf{wave}$
3800 ± 200	HENDRY	78	MPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~M_{1,17}^{'}$ wave
4100 ± 200	HENDRY	78	MPWA	$\pi{\it N} ightarrow \pi{\it N}{\it N}_{1,19}$ wave

N(∼ 3000) BREIT-WIGNER WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
1300 ± 200	HENDRY	78	MPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~ extsf{L}_{1,15} ~ extsf{wave}$
1600 ± 200	HENDRY	78	MPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~M_{1,17}^{'}$ wave
1900 ± 300	HENDRY	78	MPWA	$\pi{\it N} ightarrow \pi{\it N}{\it N}_{1,19}$ wave

$N(\sim 3000)$ DECAY MODES

Mode

 $\Gamma_1 N \pi$

$N(\sim 3000)$ BRANCHING RATIOS

$I(N\pi)/I_{total}$				I ₁ /I	
VALUE (%)	DOCUMENT ID		TECN	COMMENT	
6 ±2	HENDRY	78	MPWA	$\pi {\it N} ightarrow \pi {\it N} {\it L}_{1,15}$ wave	
4.0 ± 1.5	HENDRY	78	MPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~M_{1.17}^{'}$ wave	
3.0 ± 1.5	HENDRY	78	MPWA	$\pi extsf{N} ightarrow ~\pi extsf{N} ~ extsf{N}_{1,19} ~ extsf{wave}$	

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$N(\sim 3000)$ REFERENCES

 KOCH
 80
 Toronto Conf. 3
 R. Koch
 (KARLT) IJP

 HENDRY
 78
 PRL 41 222
 A.W. Hendry
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 Also
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