

N(~ 3000 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(~ 3000) BREIT-WIGNER MASS

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|--------------------|-------------|--|
| ≈ 3000 OUR ESTIMATE | | | |
| 2600 | KOCH | 80 | IPWA $\pi N \rightarrow \pi N D_{13}$ |
| 3100 | KOCH | 80 | IPWA $\pi N \rightarrow \pi N L_{1,15}$ wave |
| 3500 | KOCH | 80 | IPWA $\pi N \rightarrow \pi N M_{1,17}$ wave |
| 3500 to 4000 | KOCH | 80 | IPWA $\pi N \rightarrow \pi N N_{1,19}$ wave |
| 3500 ± 200 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N L_{1,15}$ wave |
| 3800 ± 200 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N M_{1,17}$ wave |
| 4100 ± 200 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N N_{1,19}$ wave |

N(~ 3000) BREIT-WIGNER WIDTH

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|--------------------|--------------------|-------------|--|
| 1300 ± 200 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N L_{1,15}$ wave |
| 1600 ± 200 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N M_{1,17}$ wave |
| 1900 ± 300 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N N_{1,19}$ wave |

N(~ 3000) DECAY MODES

| Mode |
|-----------------------|
| $\Gamma_1 \quad N\pi$ |

N(~ 3000) BRANCHING RATIOS

| $\Gamma(N\pi)/\Gamma_{\text{total}}$ | | | | Γ_1/Γ |
|--------------------------------------|--------------------|-------------|--|-------------------|
| <u>VALUE</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> | |
| 0.055 ± 0.02 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N L_{1,15}$ wave | |
| 0.040 ± 0.015 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N M_{1,17}$ wave | |
| 0.030 ± 0.015 | HENDRY | 78 | MPWA $\pi N \rightarrow \pi N N_{1,19}$ wave | |

***N*(~ 3000) REFERENCES**

| | | | | |
|--------|----|---------------|-----|----------------|
| KOCH | 80 | Toronto Conf. | 3 | (KARLT) IJP |
| HENDRY | 78 | PRL 41 | 222 | (IND, LBL) IJP |
| Also | 81 | ANP 136 | 1 | (IND) IJP |

Hendry
