

The subsequent discussion is based on the above rules. They restrict greatly the choice of possible assignments, and the fact that it is possible to carry through the scheme on this basis gives strong support for its validity.

B. Discussion

The complete material on even A nuclei is collected in Table V, Section C. Here we discuss as in I the transitions which go to the ground state ordered according to type. They are given in Table IV. It is to be noted that the nucleon numbers refer to the odd-odd nucleons involved in these transitions, and that the assignments refer to the neutron and proton configurations in this same nucleus. The even-even nuclei are assumed throughout to have spin zero and even parity.

TABLE IV

CLASSIFICATION OF  $\beta$ -DECAYS TO  
GROUND STATE OF EVEN A NUCLEI ACCORDING TO CHANGES  
IN SPIN ( $\Delta I$ ) AND PARITY (NO, YES)

- Column 1: Initial isotope Z-Element-A.
- 2: Sign of emitted charge, and maximum energy in Mev.
  - 3: Initial and final nucleon number in this order.
  - 4: Assignment of orbitals to the proton and neutron groups in the odd-odd nucleus.
  - 5:  $\log ft$
  - 6:  $\log (W_0^2 - 1) ft$  for  $\Delta I = 2$ , yes.  $W_0$  energy of  $\beta$  transition in units  $mc^2$ .
  - 7: Observed spin of odd-odd nucleus.