

states of 83 to 125 neutrons should again be odd. This alternating behavior excludes, in general, the occurrence of allowed transitions when the odd proton and neutron involved in it belong to different shells.

TABLE I. NUCLEAR ORBITALS AS FUNCTIONS OF N AND Z

N or Z	Orbital	N	Orbital	Z	Orbital
3, 5	p _{3/2}	51-55	d _{5/2} (g _{7/2})	51, 53	g _{7/2} , d _{5/2}
7	p _{1/2}	57-61	(d _{5/2} , g _{7/2} , s _{1/2})	55, 57	g _{7/2} (d _{5/2})
9	s _{1/2}	63-75	s _{1/2} (d _{3/2} , g _{7/2})	59	d _{5/2}
11	d _{3/2} (d _{5/2})	77-81	d _{3/2}	61	(d _{5/2})
13	d _{5/2}	83-99	(f _{7/2} , h _{9/2})	63	d _{5/2}
15	s _{1/2}	101	p _{1/2}	65	d _{3/2}
17, 19	d _{3/2}	103	f _{5/2}	67	g _{7/2}
21, 23	f _{7/2}	105, 107	p _{1/2} , p _{3/2} (f _{5/2} , h _{9/2})	69	s _{1/2} (d _{5/2})
25	F _{5/2} (f _{7/2})	109, 111	(p _{1/2} , p _{3/2} , h _{9/2})	71, 73	g _{7/2}
27	f _{7/2}	113, 115	p _{1/2} (p _{3/2})	75	d _{5/2}
29, 31	p _{3/2}	117, 119	p _{1/2}	77, 79	d _{3/2}
33, 35	p _{3/2} (f _{5/2})	121	p _{3/2}	81	s _{1/2}
37	p _{3/2} , f _{5/2}	123	(p _{3/2} , f _{5/2})	83	h _{9/2}
39	p _{1/2}	125	p _{1/2}		
41, 43	g _{9/2} (p _{1/2})	127, 129	(g _{9/2} , d _{5/2})		
45	(g _{9/2} , p _{1/2})				
47	g _{9/2} , p _{1/2}				
49	g _{9/2} (p _{1/2})				

C. INTERPRETATION

The entire material on β -decay data for odd A nuclei is given in Table III, Section D. It contains all isotopes (except the mirror nuclei) for which we