$27CO^{5}$ **indicates a** $g_7/_2$ orbit instead of the expected f7/2.

In the next shell two exceptions to the assignment occur. *The spin* of 1/2 for Mo95 with 53 would be a violation, but. is experimentally doubtful. The magnetic moment of Eu^{153} indicates $f_5/_2$ instead of the predicted $d_5/_2$ **No** $h_{11}/_2$ levels appear. It seems that these levels are filled in pairs only which does not seem a serious drawback of the theory as this tendency already shows up at the filling of the $g_{9/2}$ levels. Otherwise, the agreement is satisfactory. The shell begins with 51Sb, which has two isotopes with $d_5/_2$ and $g_7/_2$ **levels** respectively, as it should. The Thallium isotopes with 81 **neutrons and a** spin of 1/2 indicate a crossing of the $h_{11}/_2$ and 3s **levels.** This is not surprising, since the energies of these levels are close together in the square well. The assignment demands that there be no spins of 9/2 in this shell, and none have been found. No f **or p levels** should occur and, except for Eu^{153}, there is no indication of are.

The spin and magnetic moment of 83k-, indicating an $h_9/_2$ **state**.. is a beautiful confirmation of the correct beginning of the next shell. Here information begins to be scarce. The spin and magnetic moment of $Pb2^{07}$ with 125 neutrons interpret as $p_{1/2}$. This is the expected end of the shell since 7i and 4p have practically the same energy in the square well model. No spins of 11;2 and no s, d or g orbits should occur in this shell and the data indicates none.

The prevalence of isomerism in certain regions of the isotope chart, noticed by both Feenberg and Nordheim, is readily understood by **this assignment.** Long-lived isomeric states will occur in regions where levels of very different spin lie close together. These regions lie toward the