

Atomic multiplet spectrum of Ti^{3+}

- a) What is the configuration and ground state symmetry of Ti^{3+} ?
- b) Calculate the atomic multiplet spectrum of Ti^{3+} (ti3b).
- c) Set F_{pd} and G_{pd} to zero and repeat the calculation (ti3c).
- d) Set F_{pd} , G_{pd} and the 2p spin-orbit coupling to zero (ti3d).
- e) Set F_{dd} to zero and repeat the calculation (ti3e).
- f) Set the 2p spin-orbit parameters to zero (ti3e).
- g) Set the 3d spin-orbit coupling to zero (ti3g).