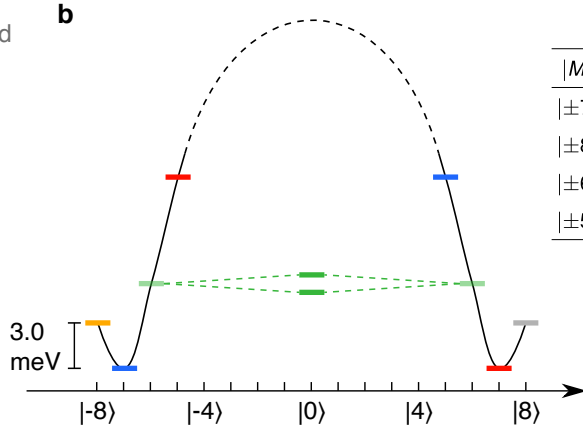
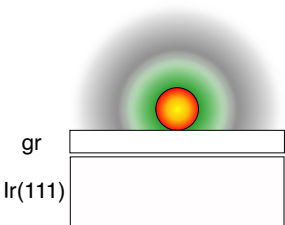


a 6s5d shell: non-polarized
4f shell: polarized

$$|M\rangle = |J_{4f}\rangle$$



c 6s5d shell: polarized
4f shell: polarized

$$|M\rangle = |m_i\rangle = |J_{4f}, S_{5d}, S_{6s}\rangle$$

