

# Experimentalphysik VI

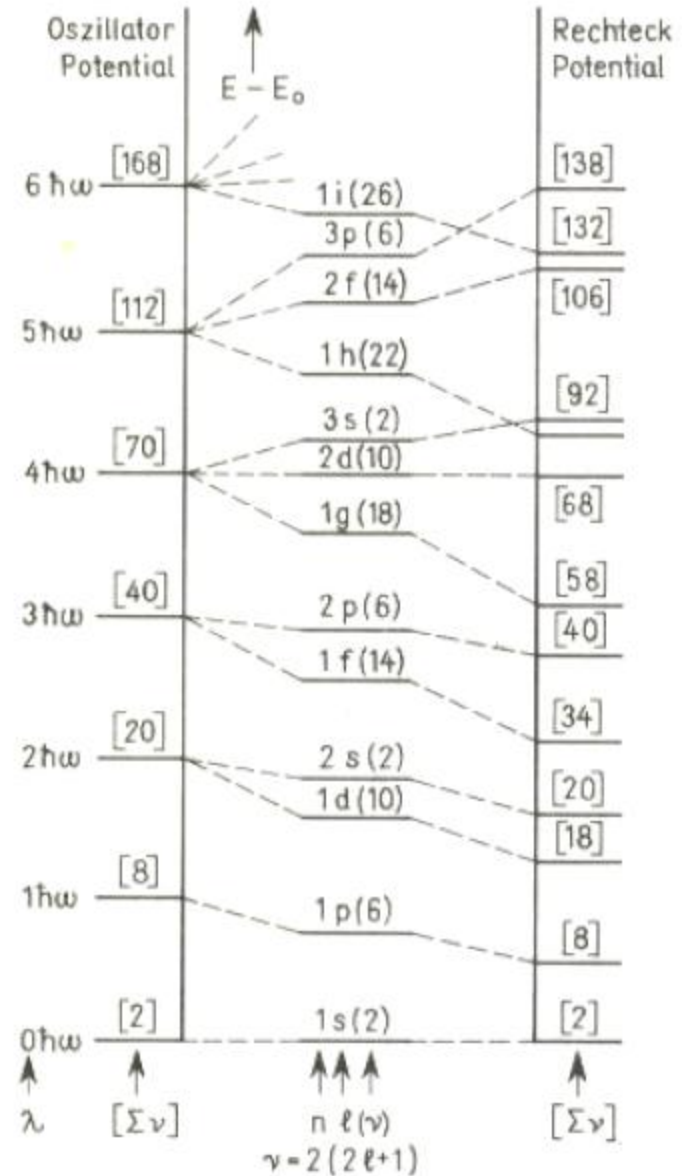
## Kern- und Teilchenphysik

Prof. Markus Schumacher

ALU Freiburg, Sommersemester 2010

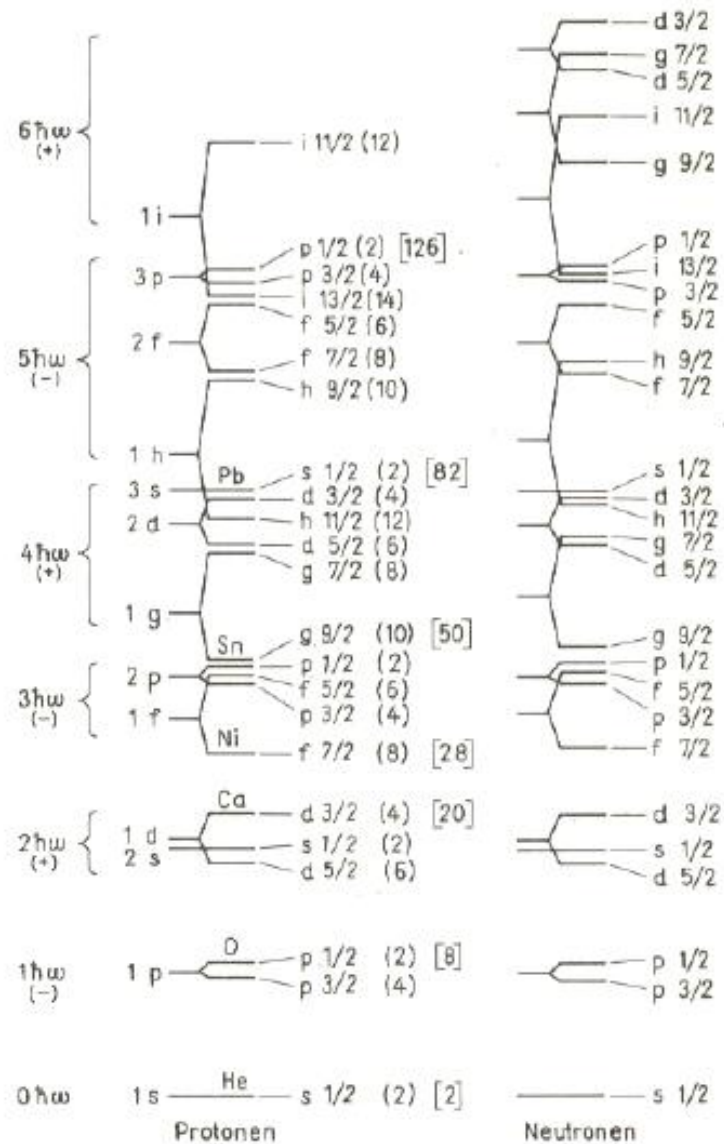
### Kapitel 4: Kernmodelle

# Potentiale und Energieniveaus



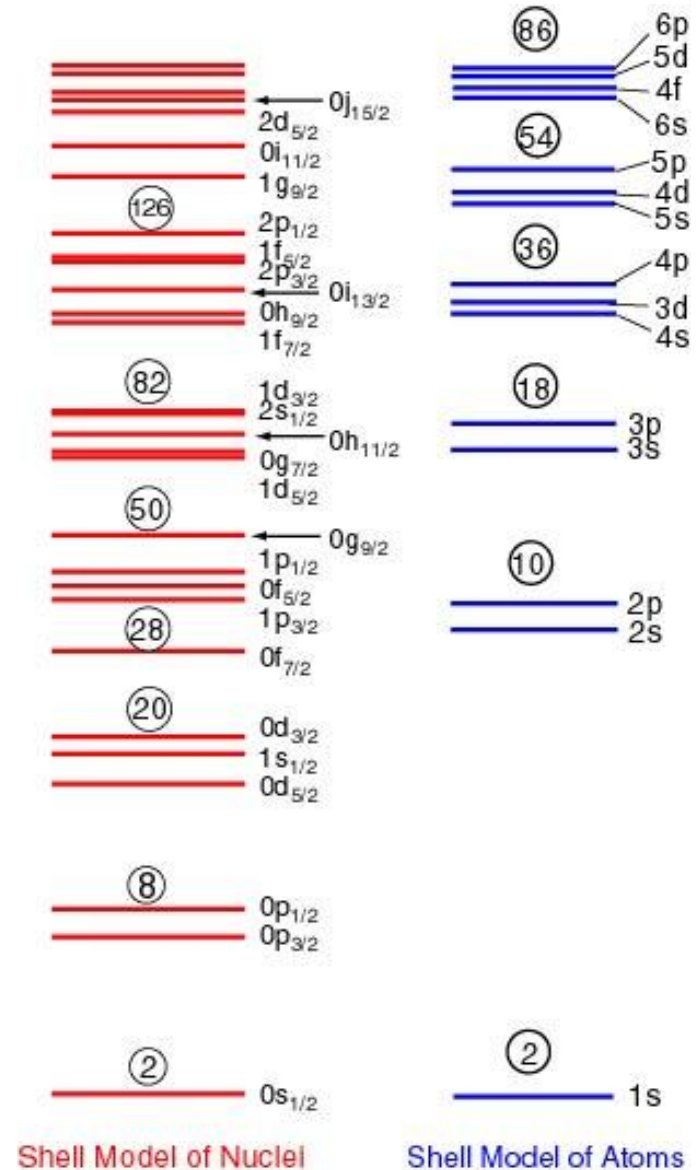
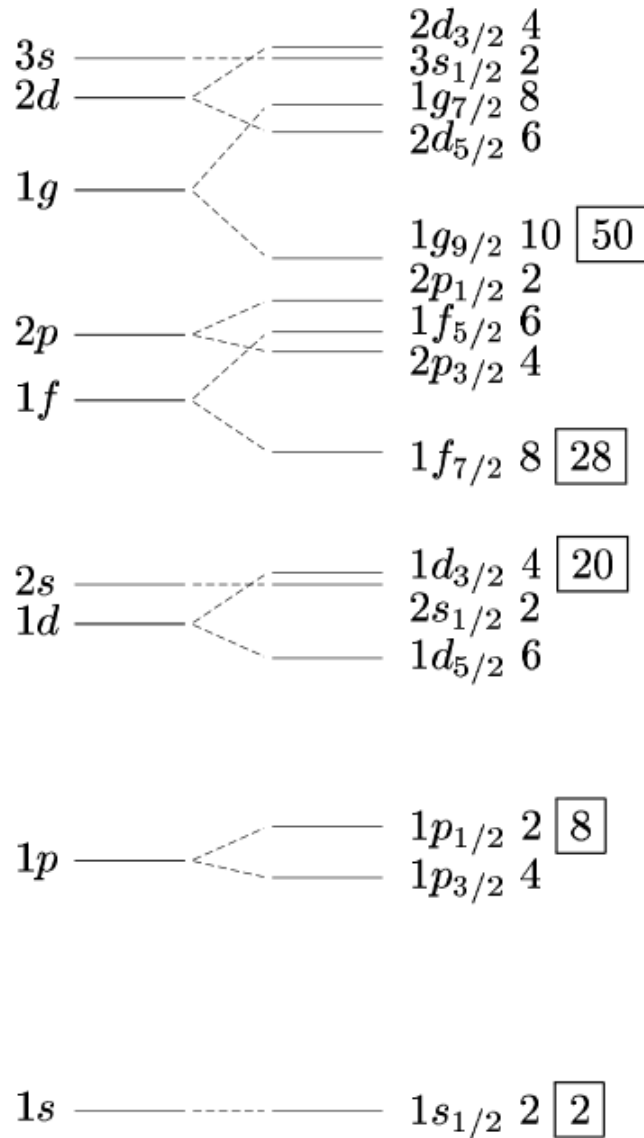
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# Wood-Saxon-Spektrum mit Spin-Bahn-Kopplung



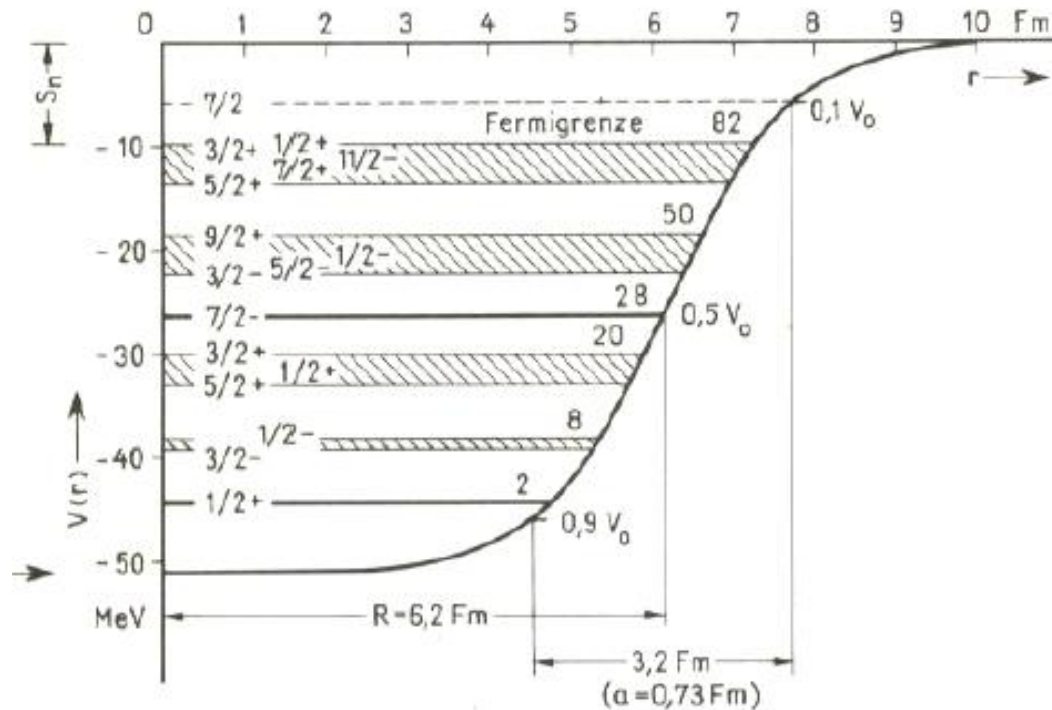
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# Kern- und Atomspektren: magische Zahlen



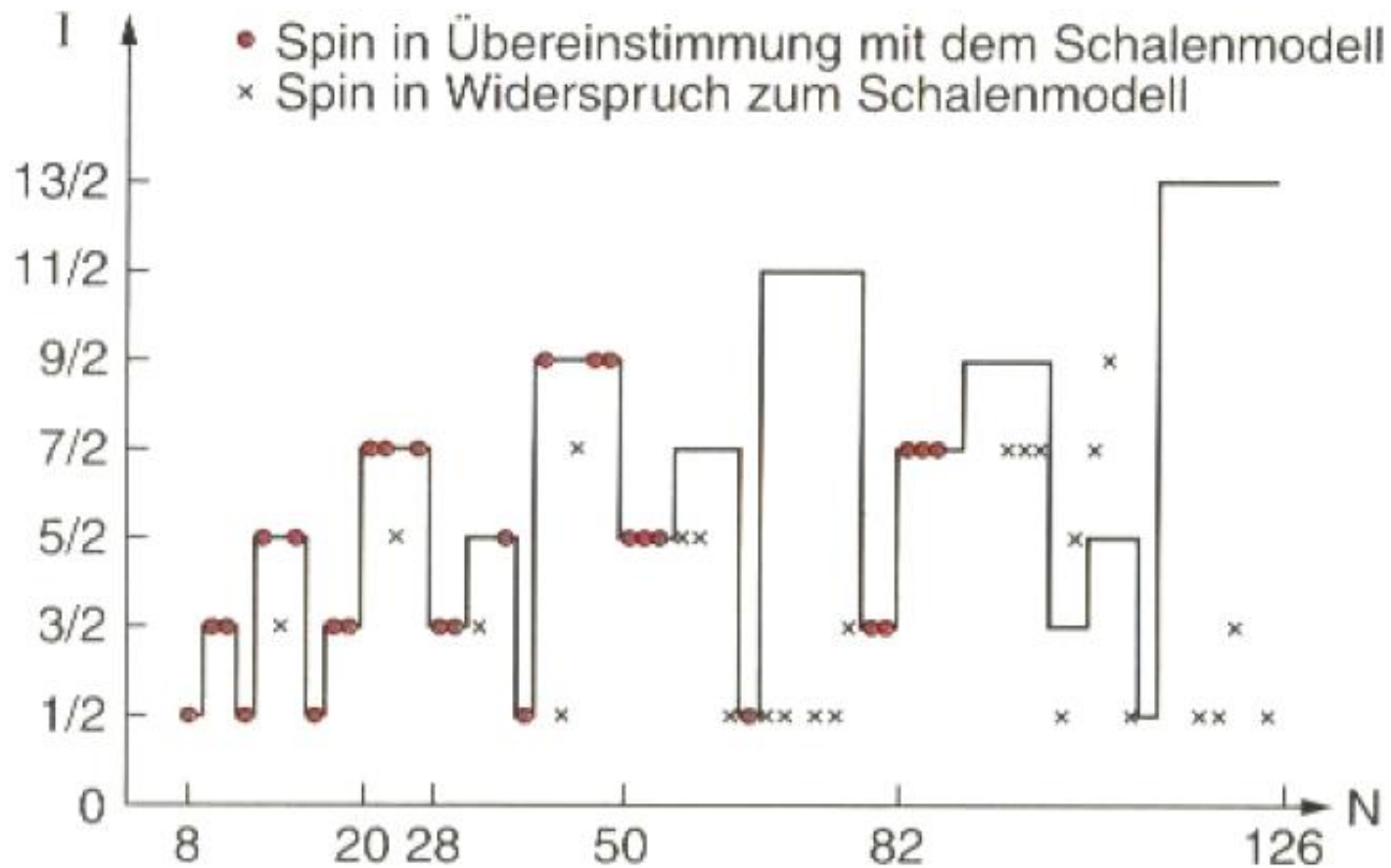
# Auffüllen der Schalen

$n\ell j$	1 s 1/2	1 p 3/2	1 p 1/2	1 d 5/2	2 s 1/2	1 d 3/2	1 f 7/2
$\nu = 2j + 1$	2	4	2	6	2	4	8
$\Sigma \nu$	2	6	8	14	16	20	28
	${}^4_2\text{He}_2$		${}^{16}_8\text{O}_8$			${}^{40}_{20}\text{Ca}_{20}$	${}^{48}_{20}\text{Ca}_{28} ({}^{56}_{28}\text{Ni}_{28})$

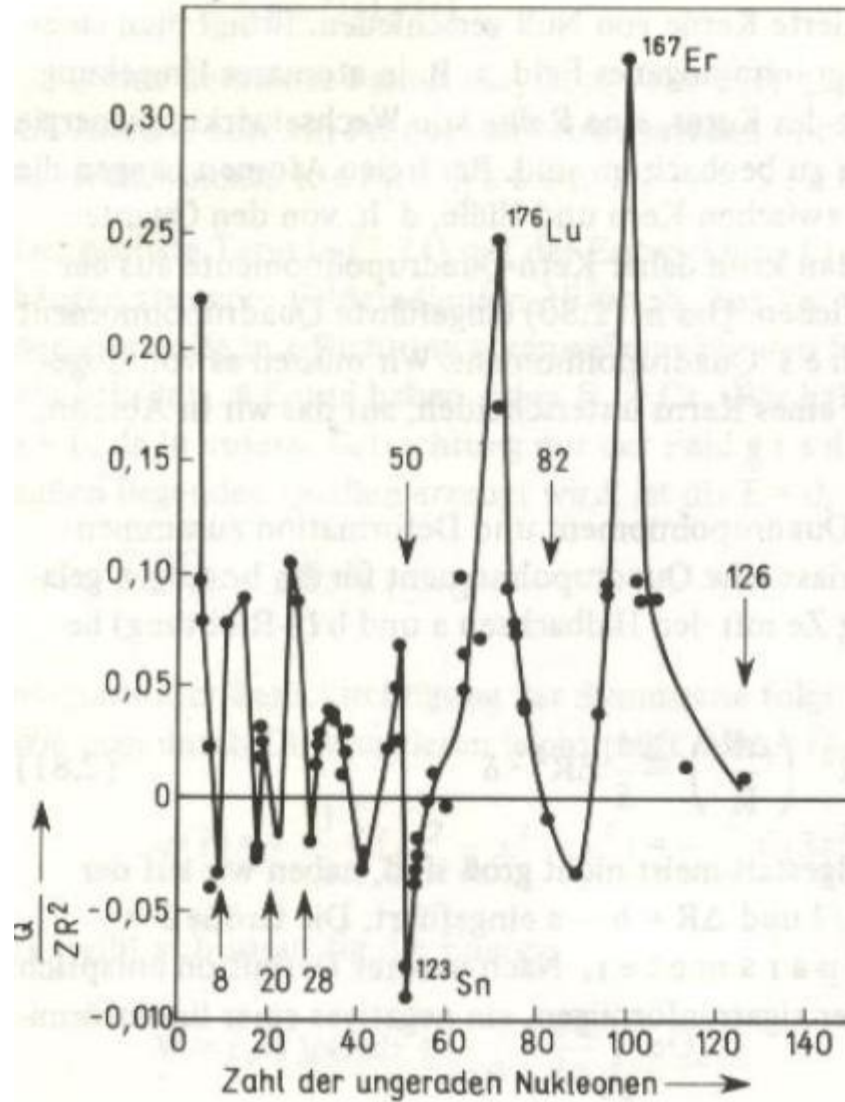


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# Vorhersage von Spins



# Quadrupolmomente



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