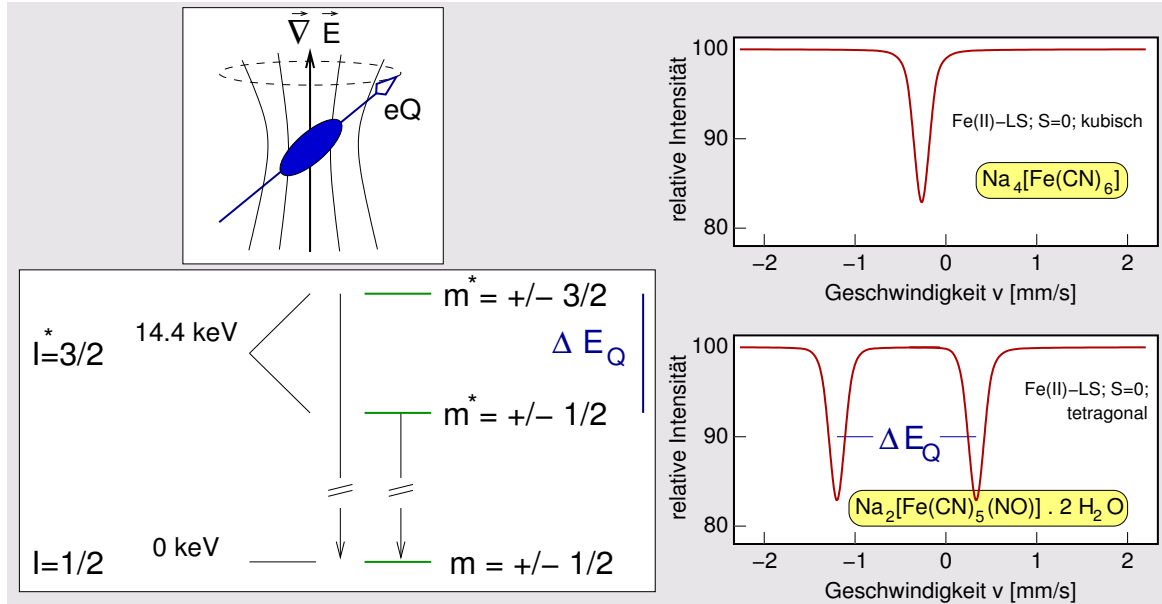


### 5.3. Quadrupolaufspaltung (elektrische Quadrupol-WW)

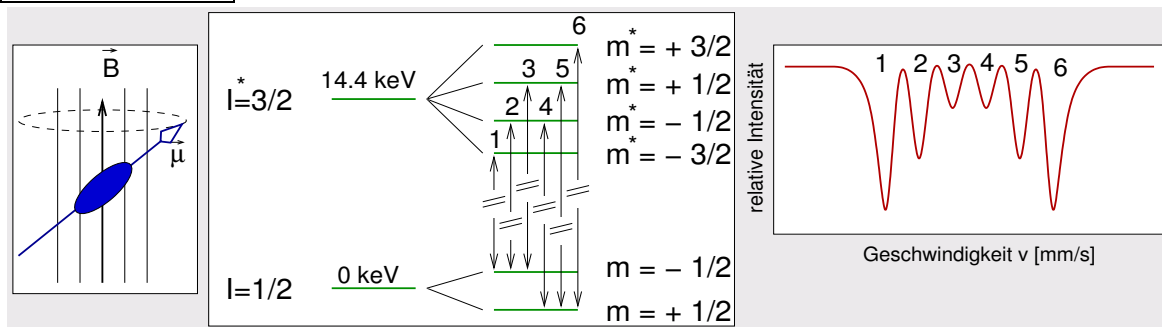
$$E_Q(m) = \frac{eQV_{zz}}{4I(2I-1)} [3m^2 - I(I+1)]$$



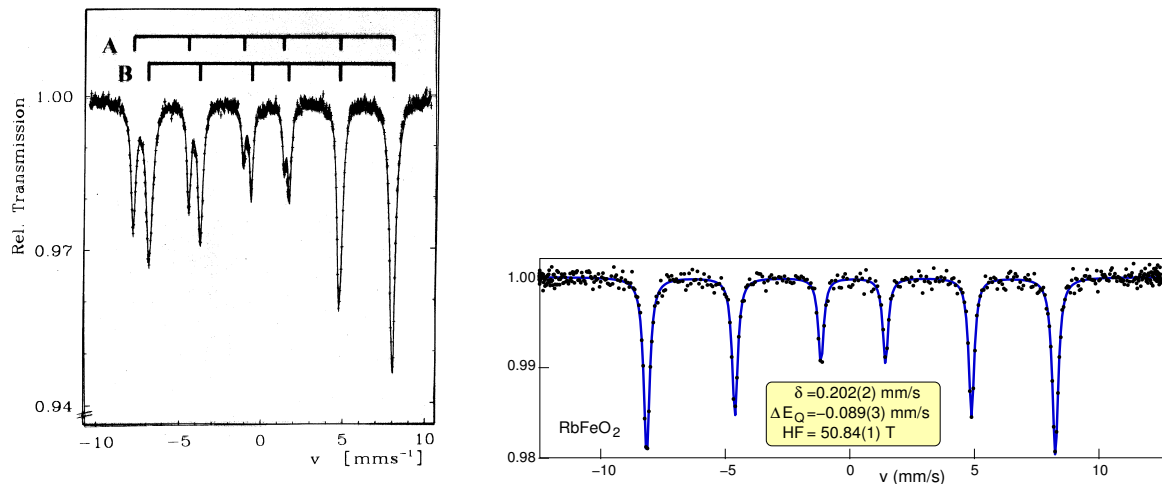
$^{57}\text{Fe}$ -Mössbauer-Spektren mit/ohne elektrischer Quadrupol-Aufspaltung

### 5.4. Magnetische Hyperfeinaufspaltung

$$E(m_I) = -m_I \mu_B B$$



Magnetische Hyperfeinaufspaltung durch interne Magnetfelder



$^{57}\text{Fe}$ -Mössbauer-Spektrum von Magnetit  $\text{Fe}_3\text{O}_4$  (Spinell)

$^{57}\text{Fe}$ -Mössbauer-Spektrum von  $\text{RbFeO}_2$  (gestopfter Cristobalit-Typ)