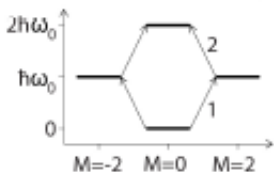


Spontaneous Symmetry Breaking

I

3D-space

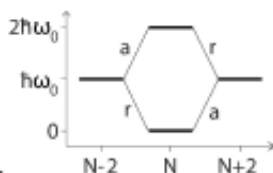


Dynamic

$$\omega_0 = \sqrt{C/D}$$

N

gauge space



Static

$C \rightarrow 0, D$ finite

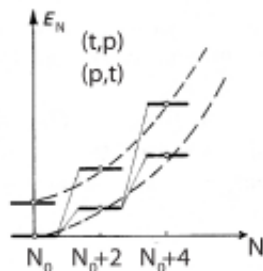
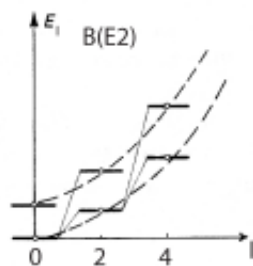
Goldstone mode: symmetry restoration

$$E_I = \frac{\hbar^2}{2I_{rot}} I(I+1) + \omega I$$

$$E_N = \frac{\hbar^2}{2I_{gauge}} N^2 + \lambda N$$

Euler angle

gauge angle



rotational band, **FMBS** fingerprint of deformation