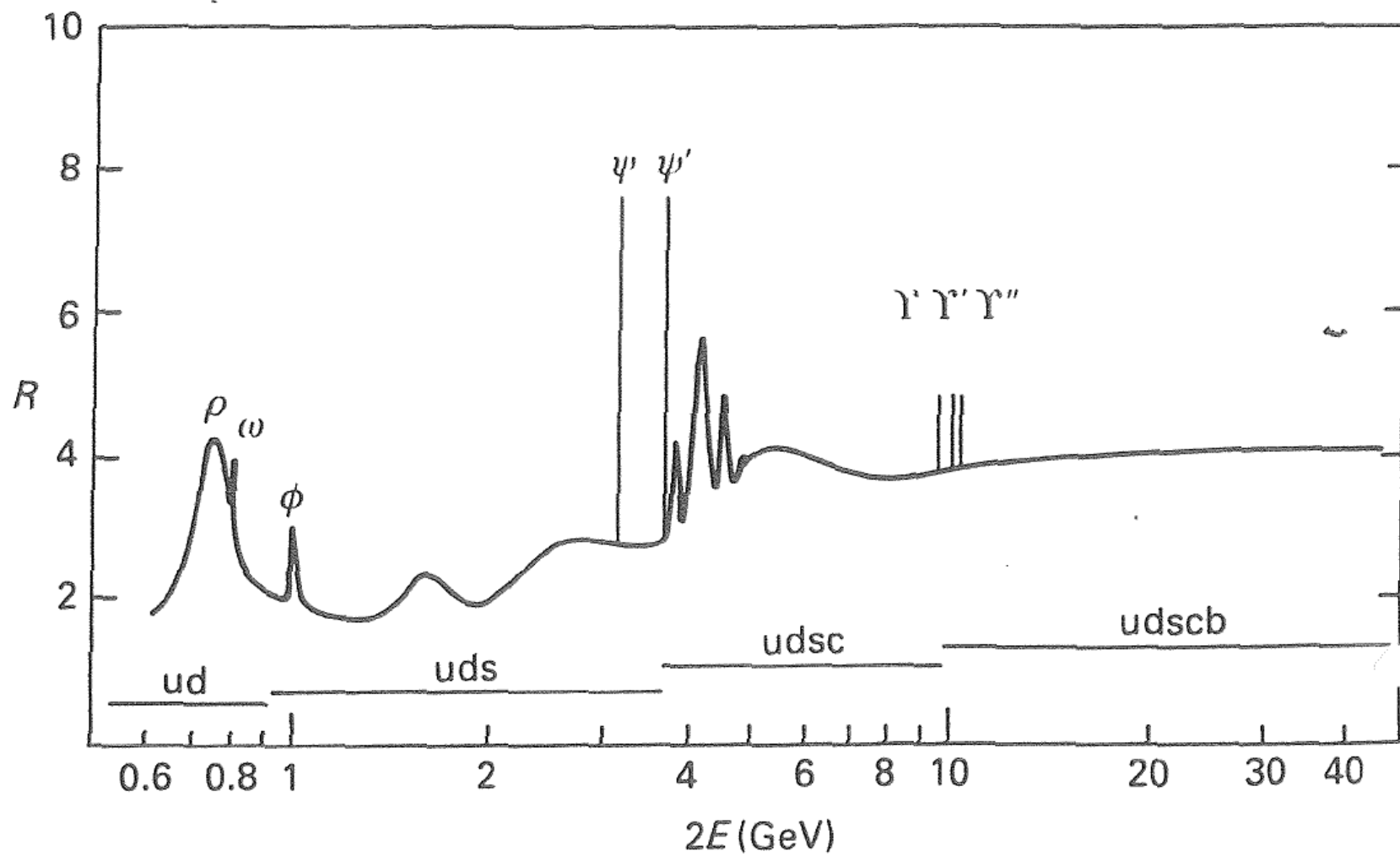




$$R = \frac{\text{cross-section for } e^+e^- \rightarrow \text{hadrons}}{\text{cross-section for } e^+e^- \rightarrow \mu^+\mu^-}$$

Fig. 3-3a

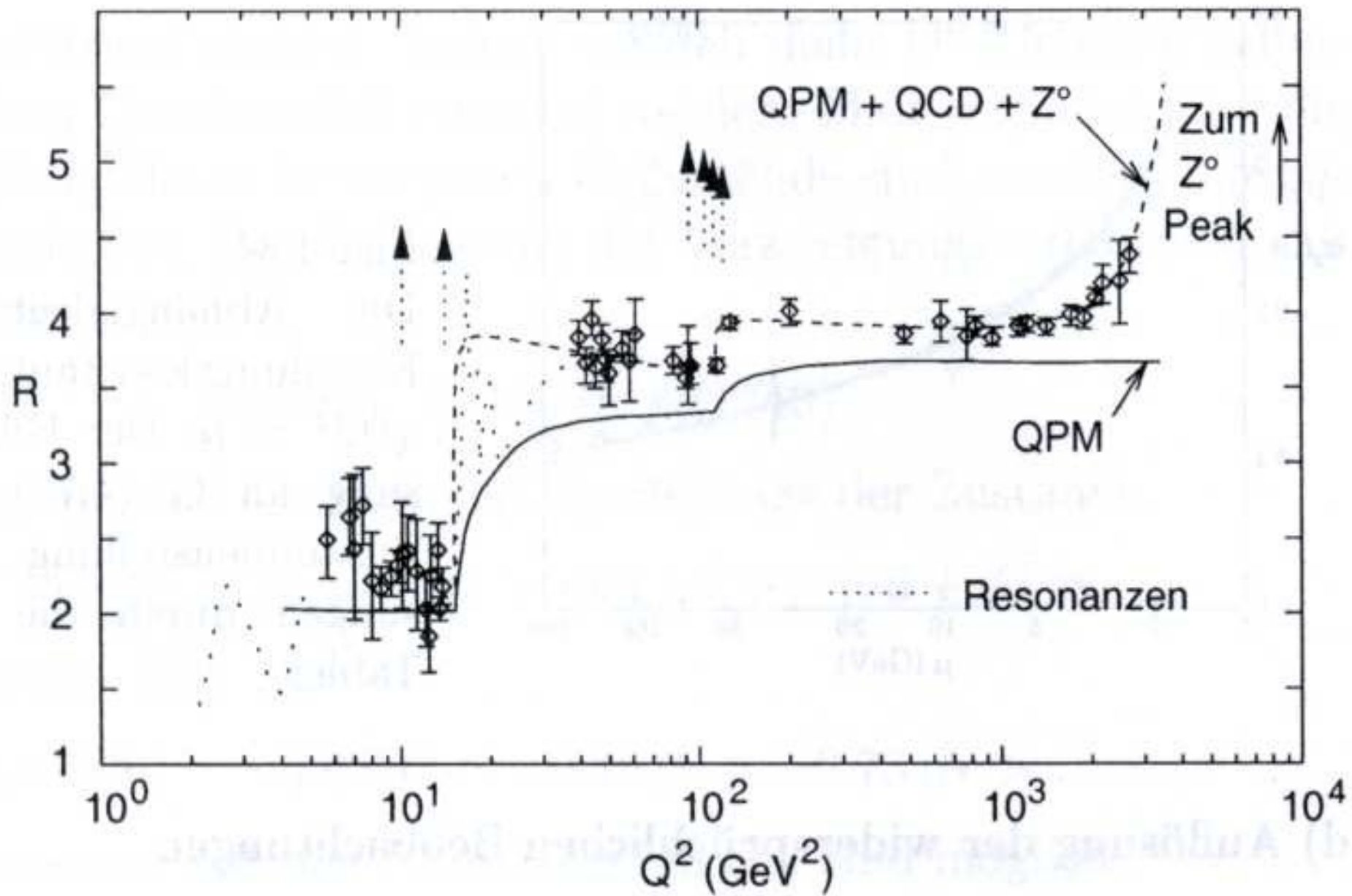
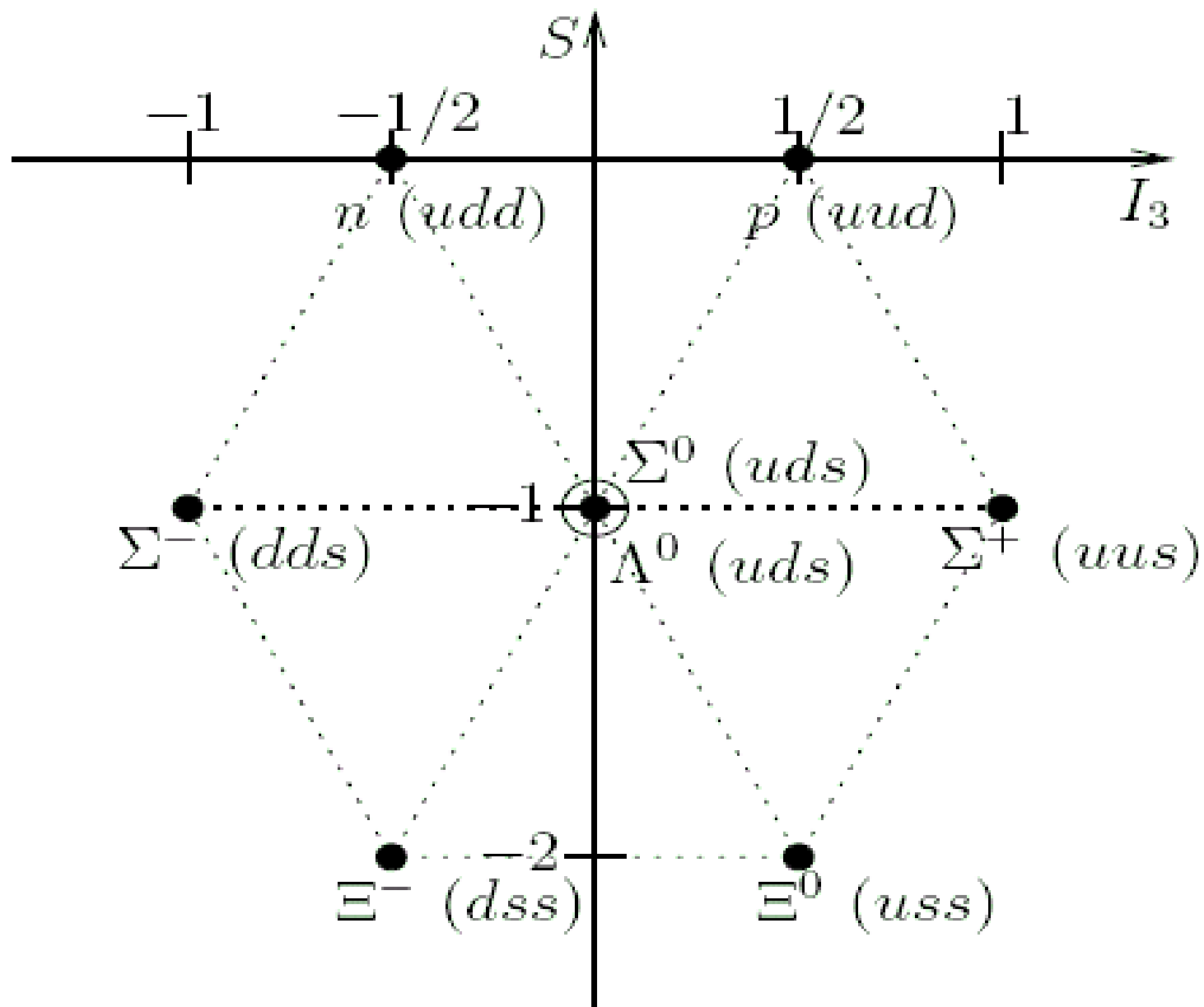


Fig. 3-3b



Das $\frac{1}{2}^+$ Baryon-Oktett

Fig. 3-4

das $J^{\pi} = 3/2^{+}$ Baryon-Dekuplett:

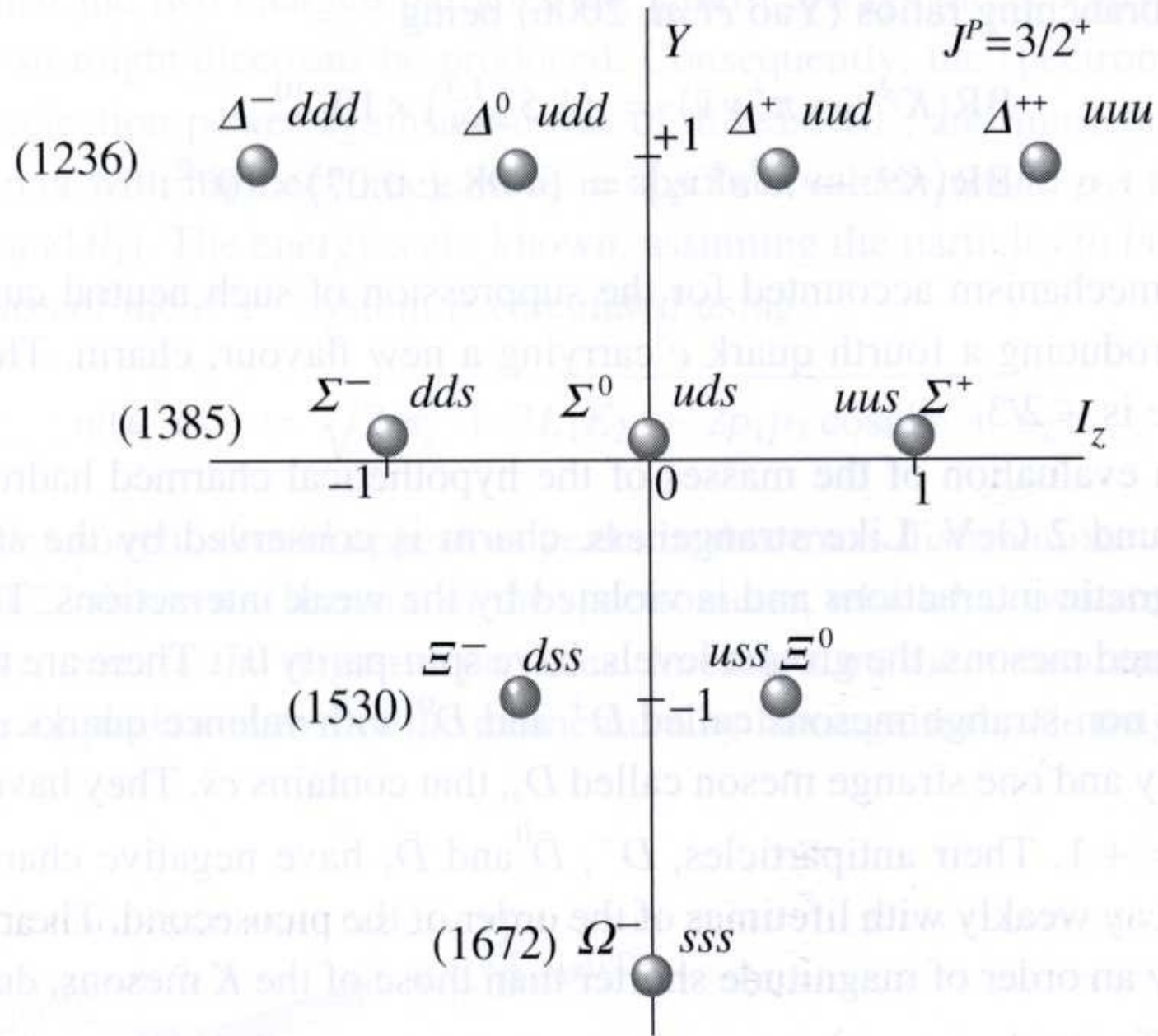


Fig. 3-5

Das Brookhaven Experiment zur Entdeckung des Charmquarks:

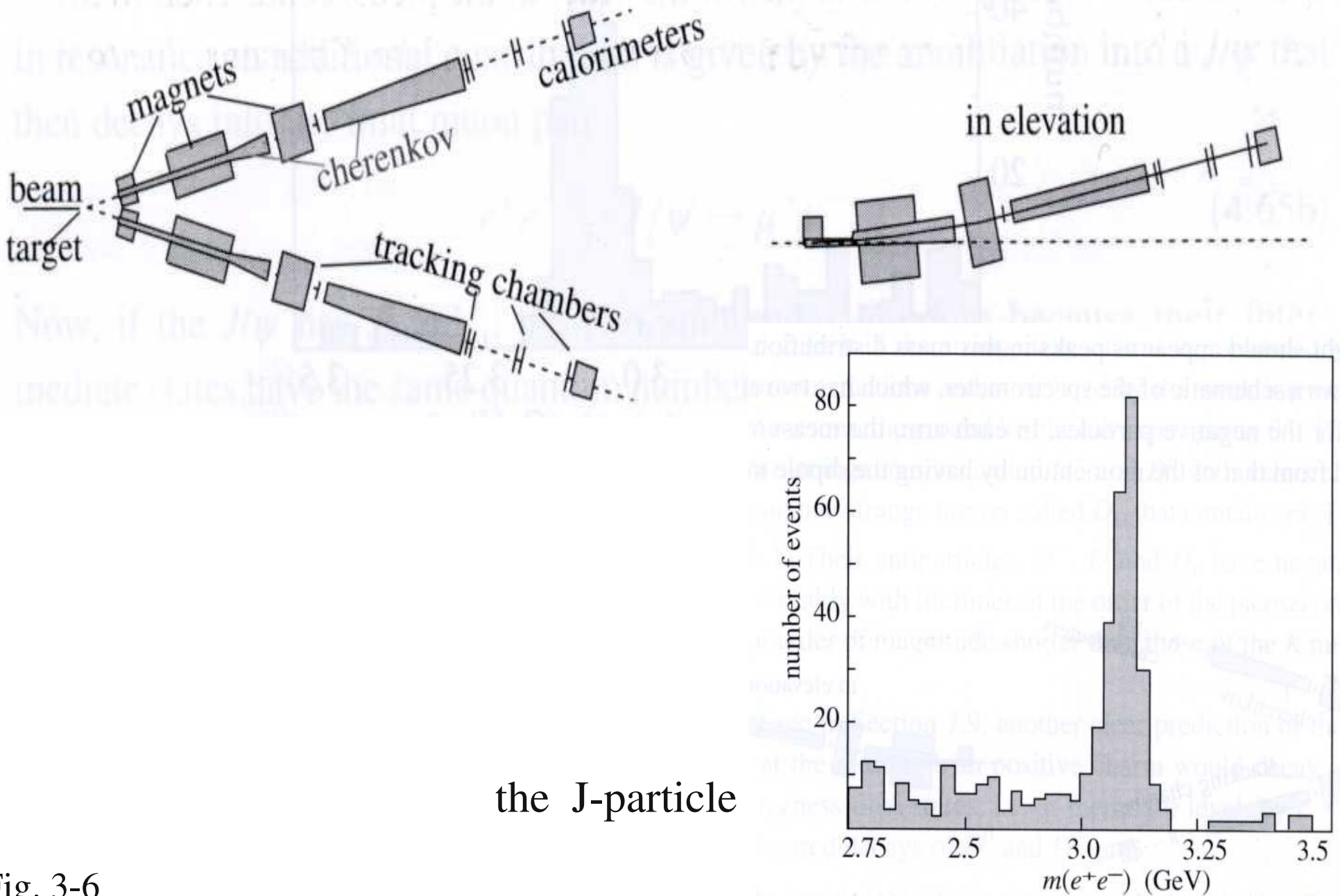
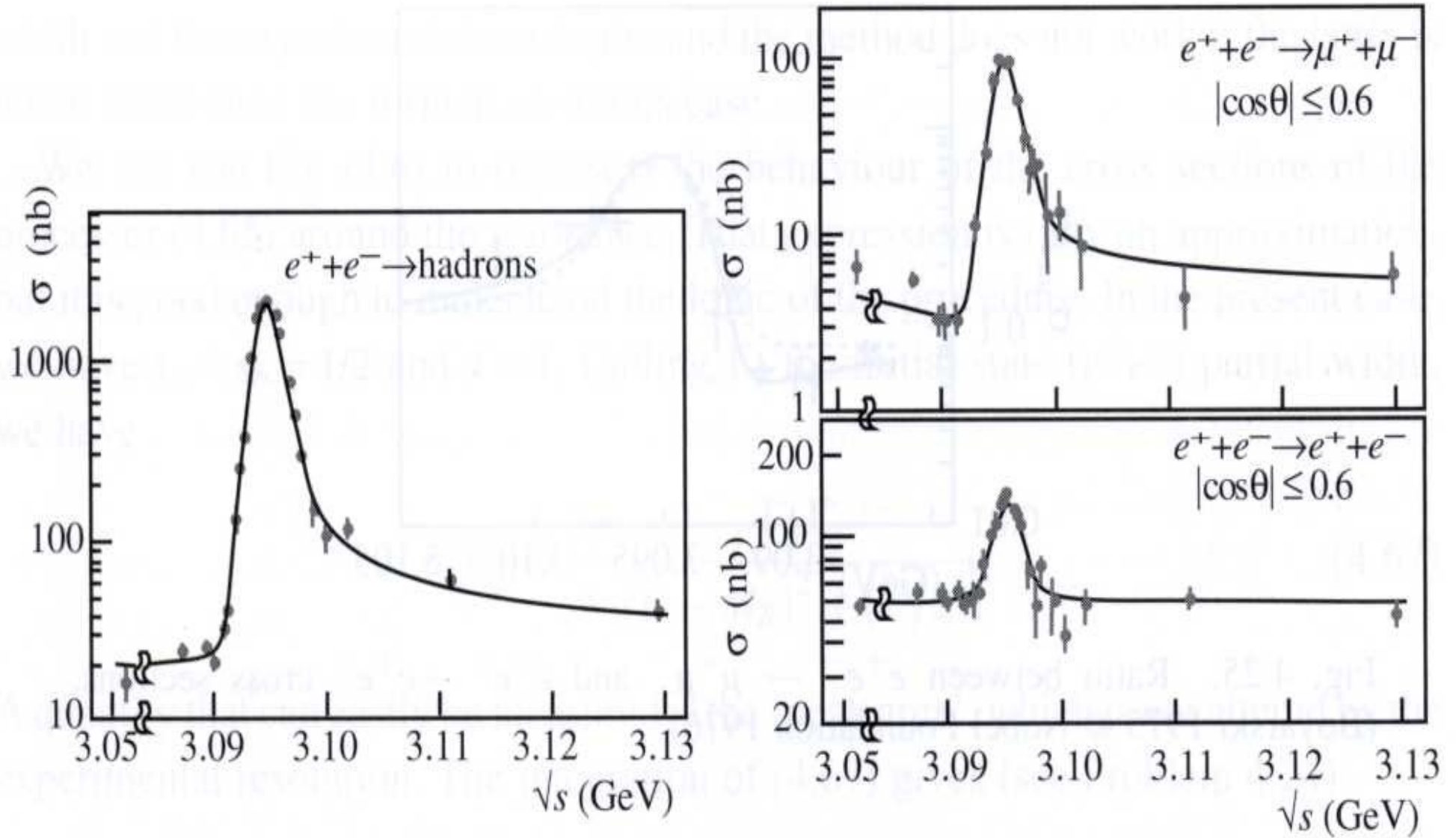


Fig. 3-6

Das Stanford Experiment zur Entdeckung des Charmquarks:



the ψ -particle in 3 different decay channels

- mass measured via beam energy

Fig. 3-7

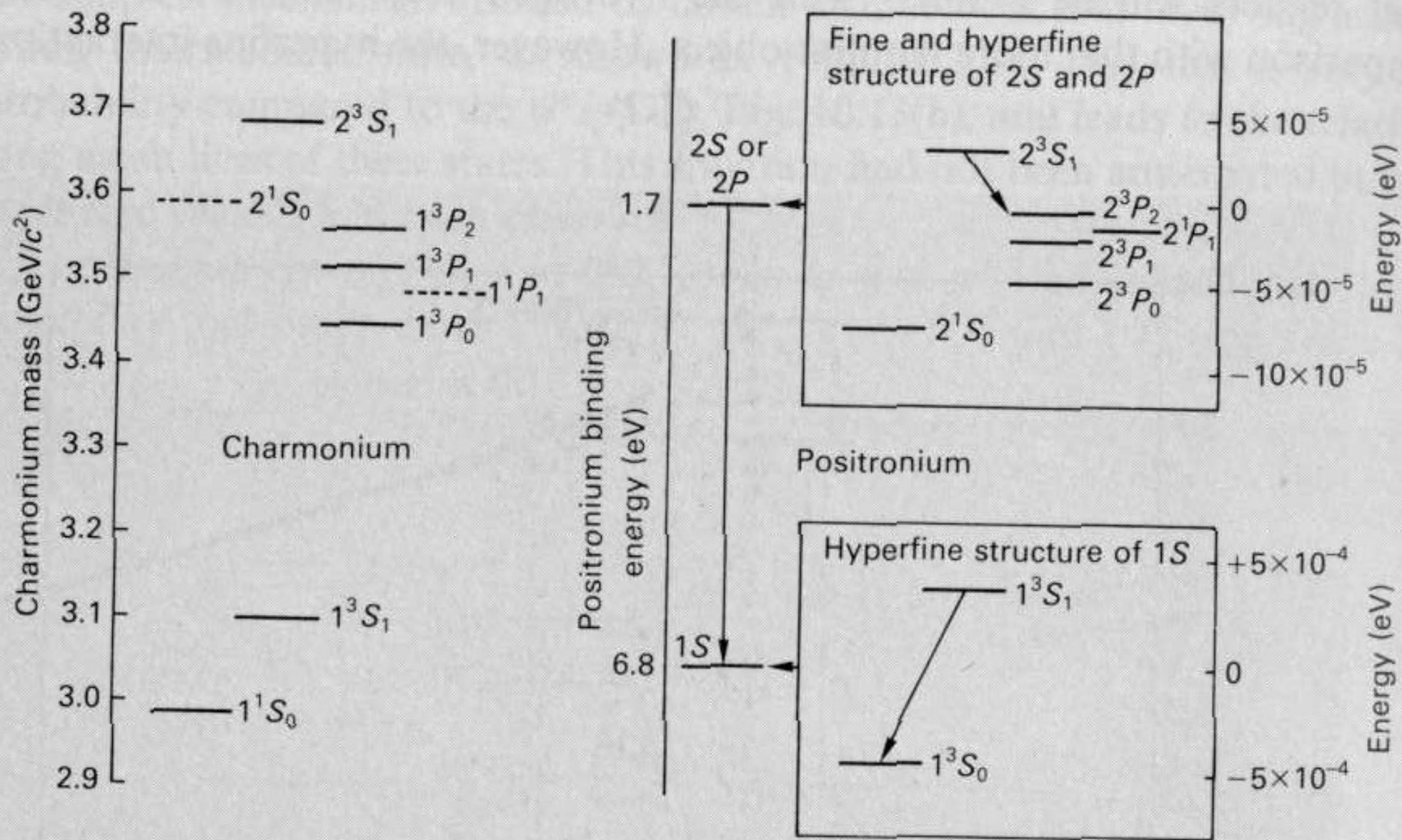
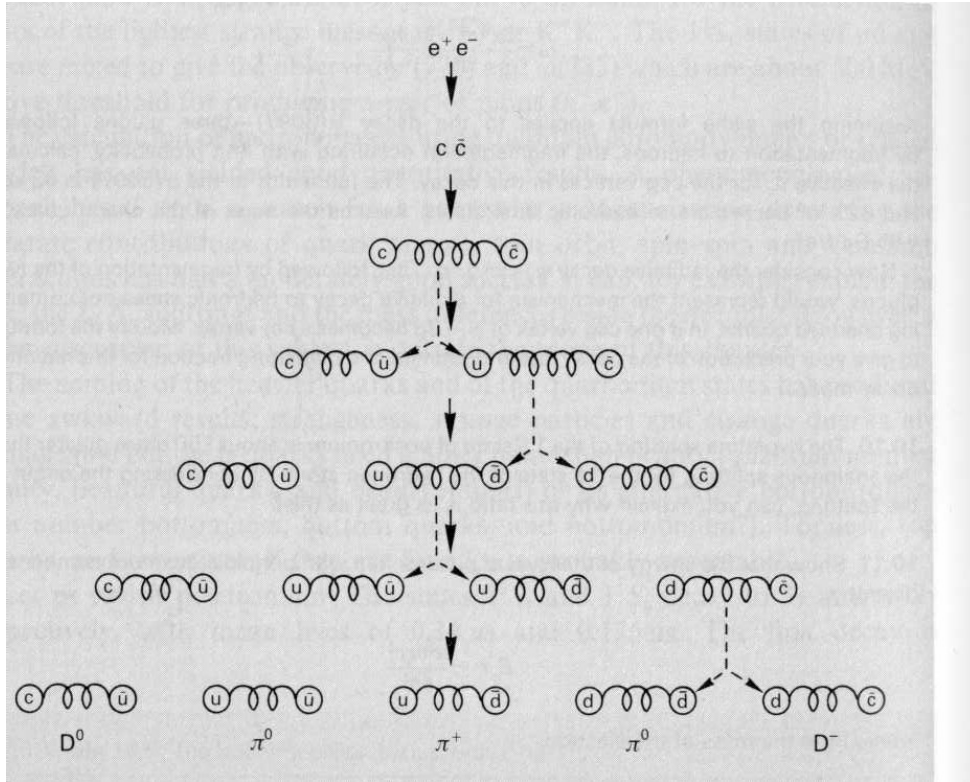


Fig. 3-8

Quarks materialisieren sich als Jets

Prinzip:



im Experiment:

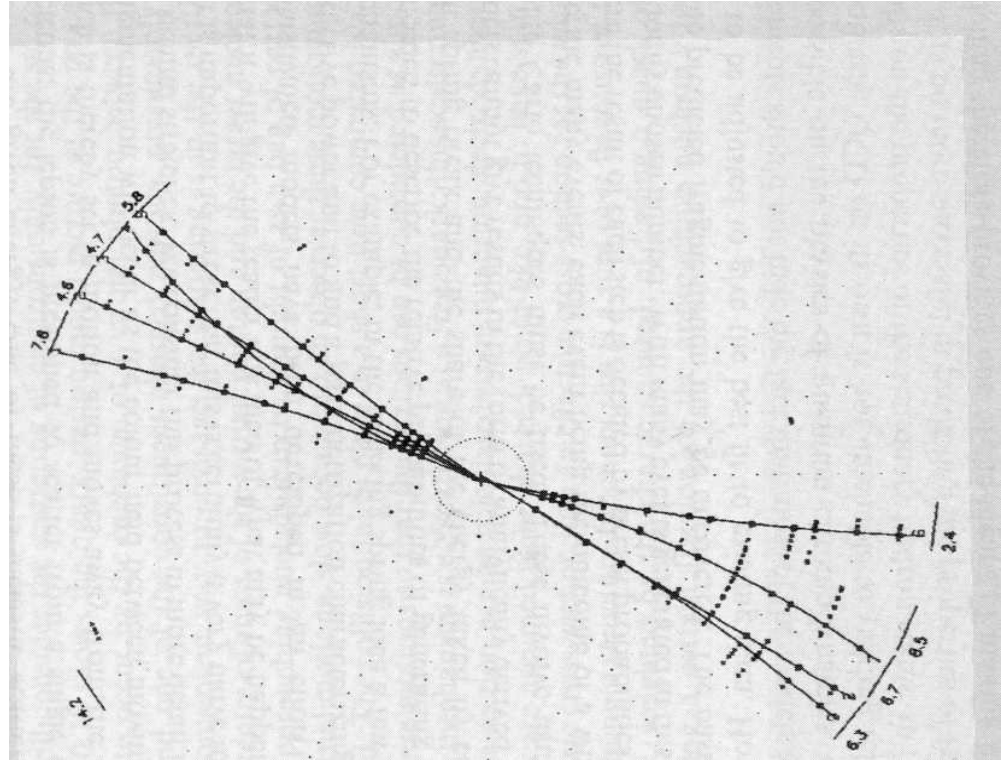


Fig. 3-9

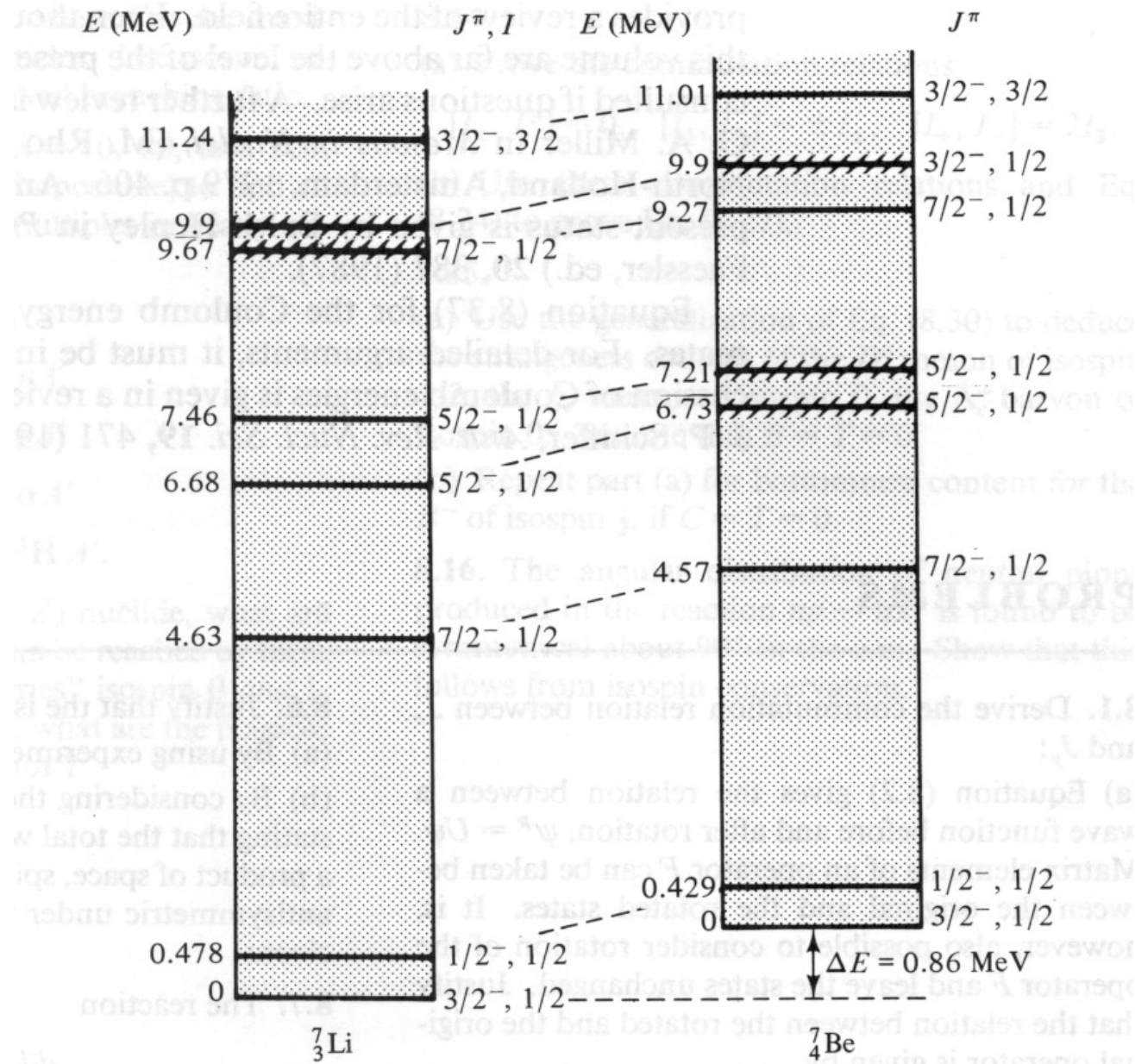


Fig. 8.6. Level structure in the two isobars ${}^7\text{Li}$ and ${}^7\text{Be}$. These two nuclides contain the same number of nucleons; apart from electromagnetic effect, their level schemes should be identical. J^π denotes spin and parity of a level, I its isospin. Parity will be discussed in Chapter 9. [For reference see F. Ajzenberg-Selove, *Nucl. Phys.* **A490**, 1 (1988).]

$$E_{IA}(Z+1) = E_{IA}(Z) + \Delta E_c - (m_n - m_H)c^2, \quad (10-8)$$

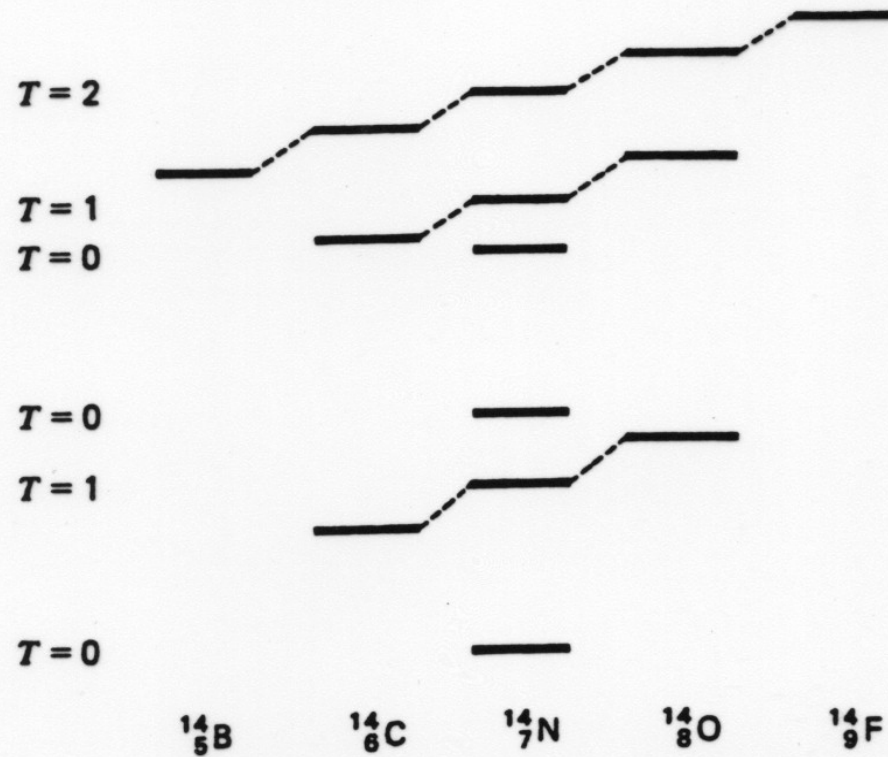


Fig. 10-2 Isobaric analog states in $A = 14$ nuclei. States are classified according to the T quantum numbers. [Adapted from *Concepts of Nuclear Physics* by B. L. Cohen. Copyright © 1971 by McGraw Hill, Inc. Used with the permission of McGraw Hill Book Company.]

$$T_{\min} = T_z =$$

$$T_{\max} =$$

2	1	0	1	2
7	7	7	7	7

Fig. 4-2