

# Hadron Multiplets

Cambridge HEP Graduate Lectures on Flavour Physics

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May 2025

A few of my github repositories for producing

- **Feynman diagrams** <https://github.com/matthewkenzie/feynmans>  
a wrapper for the L<sup>A</sup>T<sub>E</sub>X [axodraw](https://ctan.org/pkg/axodraw) package which will produce and then compile some ‘tex’ code
- **Hadron Isospin diagrams** <https://github.com/matthewkenzie/hadrons>  
makes use of [matplotlib](https://matplotlib.org/) to draw the diagrams (with many hacks)

## 1 Multiplets with just $(u, d, s)$

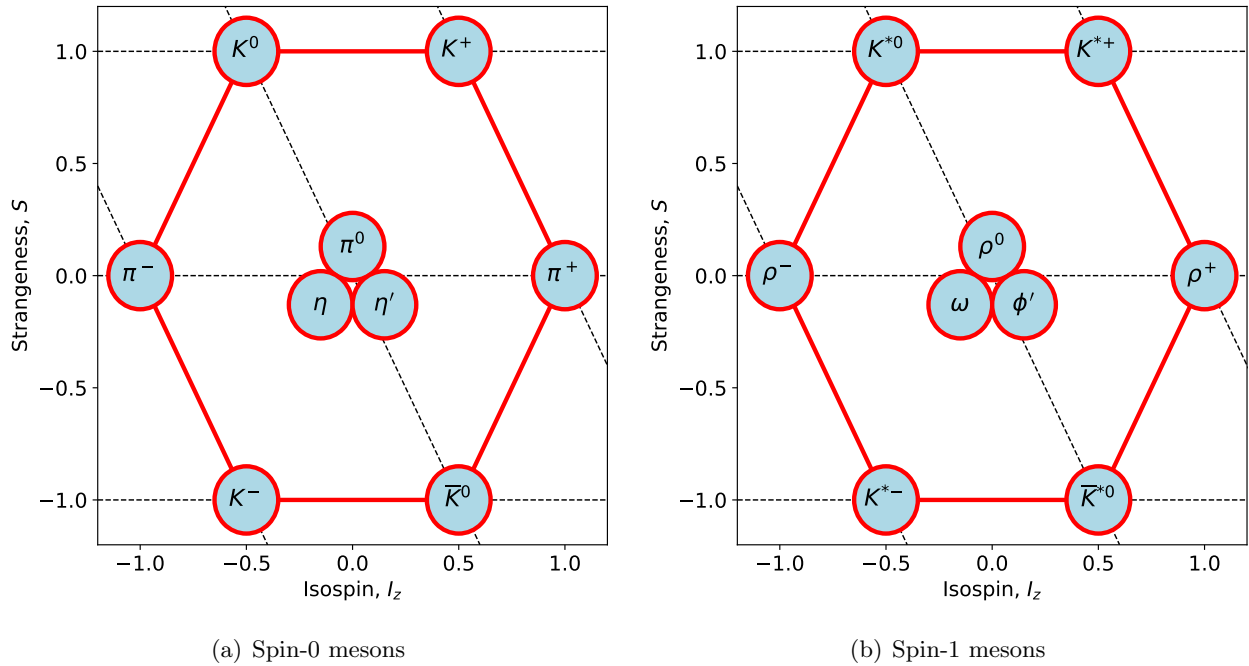
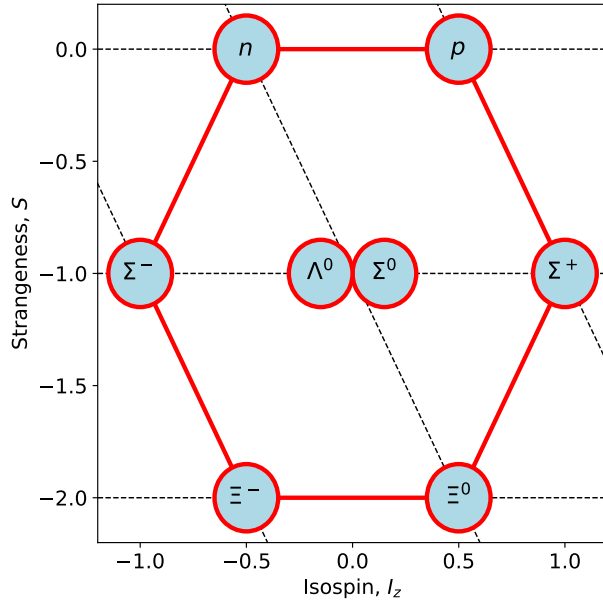
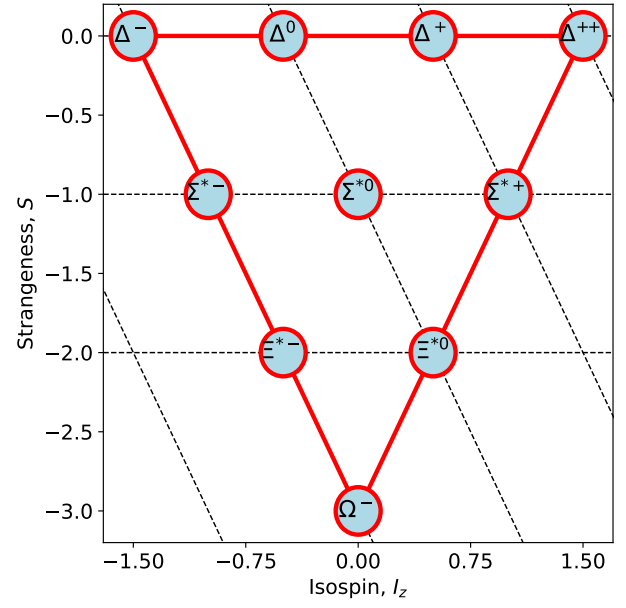


Figure 1:  $(u, d, s)$ -combination mesons



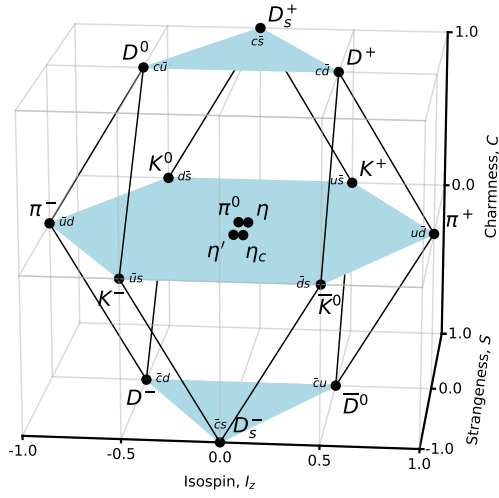
(a) Spin-1/2 baryons



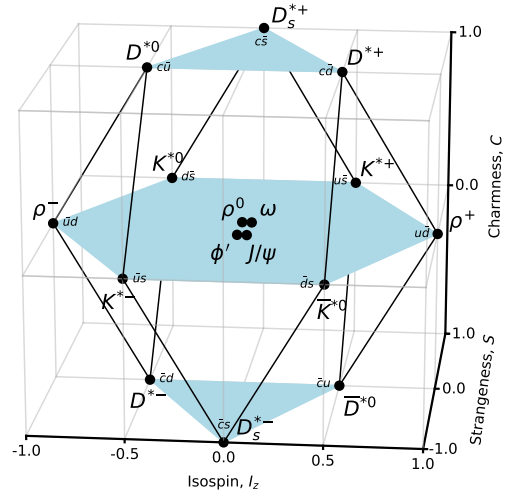
(b) Spin-3/2 baryons

Figure 2:  $(u, d, s)$ -combination baryons

## 2 Multiplets with $(u, d, s, c)$



(a) Spin-0 mesons



(b) Spin-1 mesons

Figure 3:  $(u, d, s, c)$ -combination mesons

