

# Hands on: QCD Jets

6<sup>th</sup> Lisbon mini-school

Particle and Astroparticle Physics

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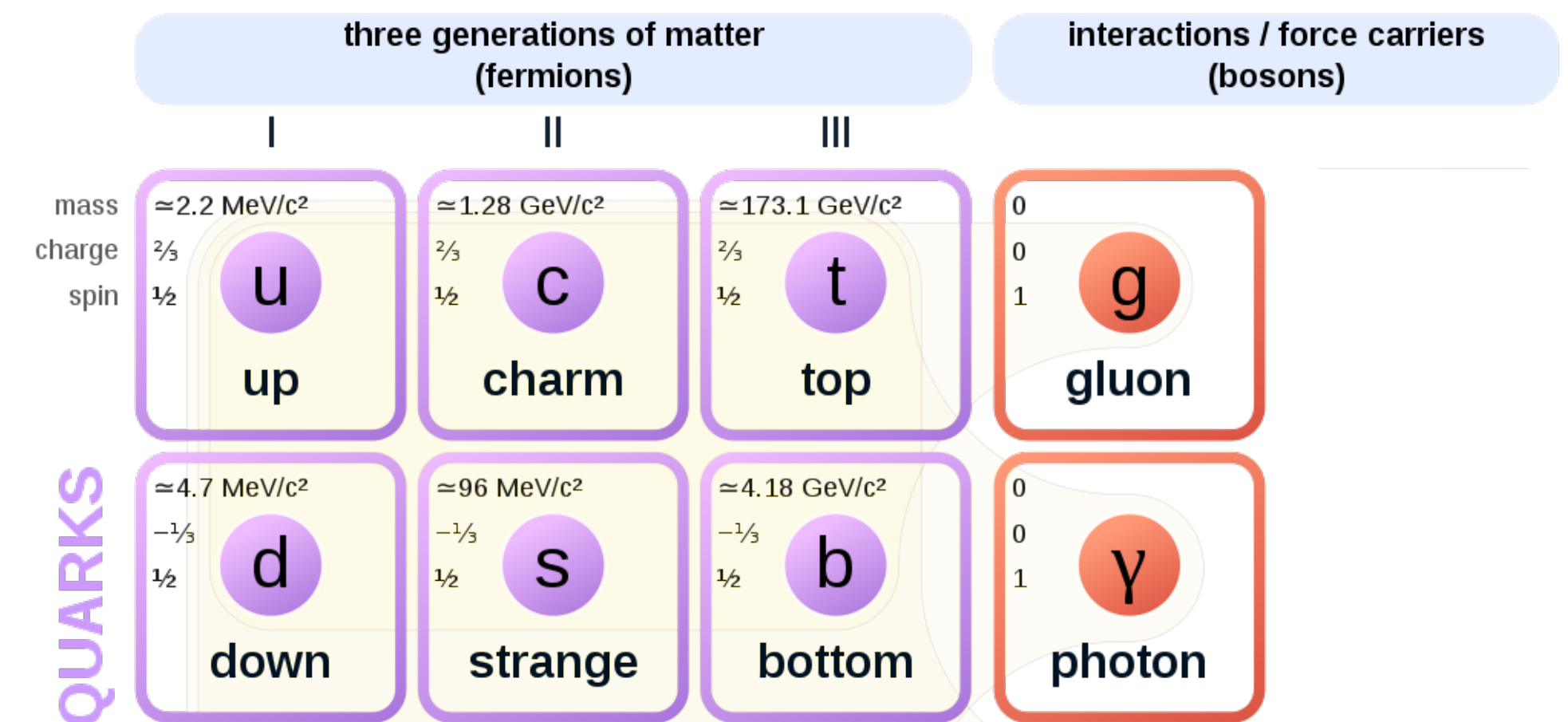
# Hands on: QCD Jets

- ◆ What is this hands-on about:
- ◆ Better understanding and visualisation of the Standard model sector:
- ◆ Quantum Chromodynamics (QCD)

- ◆ What I will do:

- ◆ Simple analytic exercises (first part) and a bit of coding (second part)
- ◆ Requirements: C/C++ and ROOT installed or Python interfaced with ROOT

## Standard Model of Elementary Particles





# Questions to be answered

- ◆ What exactly is a jet?
- ◆ Simple visualisation and analytic exercise to build a picture of a jet
- ◆ How can we reconstruct a jet?
- ◆ Attempt to reconstruct and visualize a jet
- ◆ What can we do with jets?
- ◆ Classification problem through multivariate algorithms (e.g: NN):  
Quark vs Gluon-initiated jets

