Quark and Lepton Flavor Physics

Time: Fridays, 14:00 – 16:00
Venue: INF 227 SR 1.403

Lecturer: Ulrich Uwer
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Tutorials: Fridays, after the lecture
Active participation in discussing the exercises
Excercises available on Mondays

Easy examen (Leistungsnachweis) at the end of semester.

Homepage:
http://www.physi.uni-heidelberg.de/~uwer/lectures/Flavor/

Lecture Notes and Literature

Handwritten lecture notes together with additional material as well as reference to literature will be put on the web.

Additional Material:

Y. Grossmann, Introduction to Flavor Physics, arXiv:1006.3534

Y. Grossmann,
*www.lepp.cornell.edu/~pt267/files/notes/**Flavor**Notes.pdf*

P. Kooijman & N. Tuning,
*www.nikhef.nl/~h71/Lectures/2012/**cp**-080212.pdf*

M. S. Sozzi, Discrete Symmetries and CP Violation

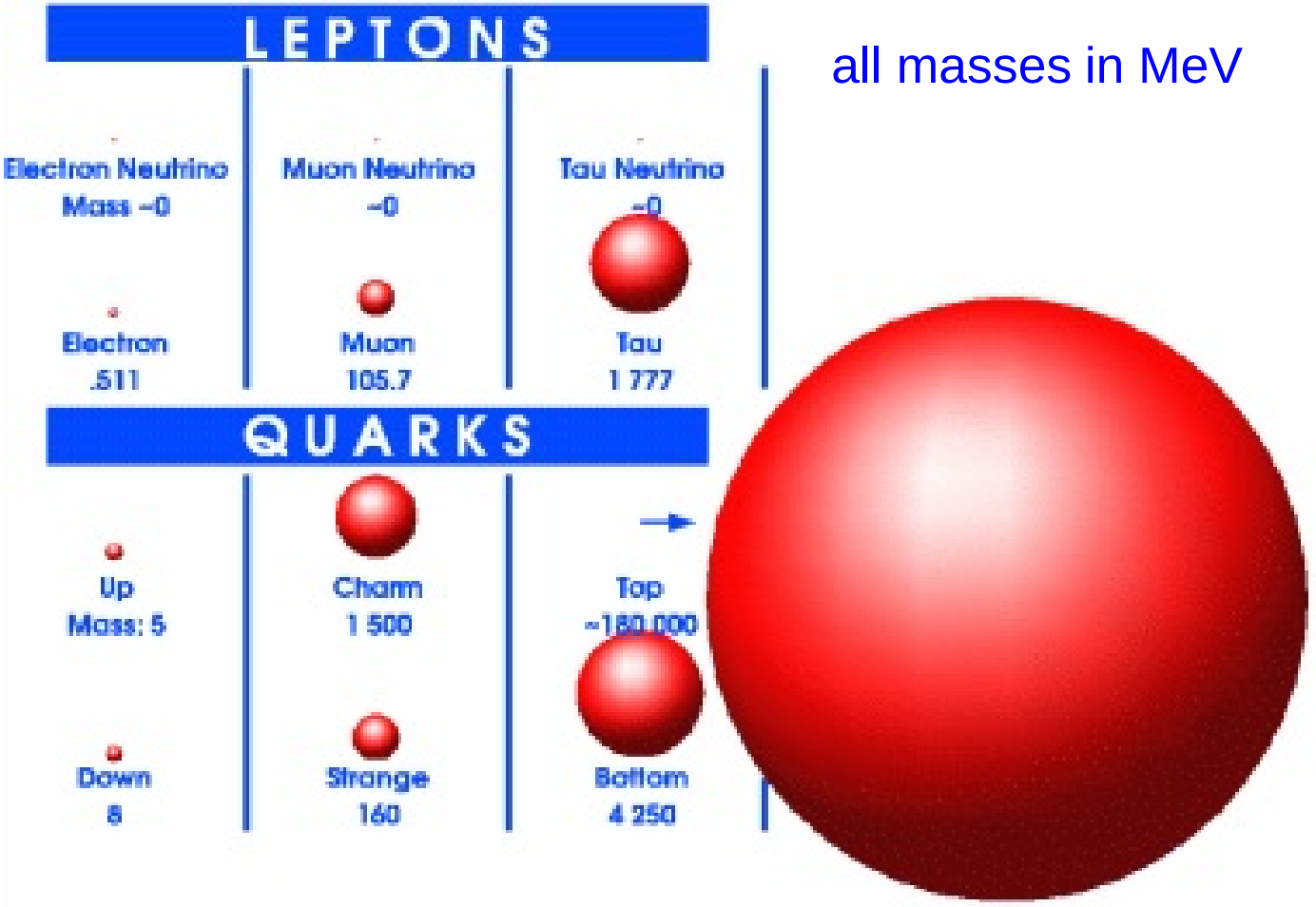
K. Zuber, Neutrino Physics, CRC Press

B. Kayser, Neutrino Physics, arXiv:hep-ph/0506165

Flavor Physics

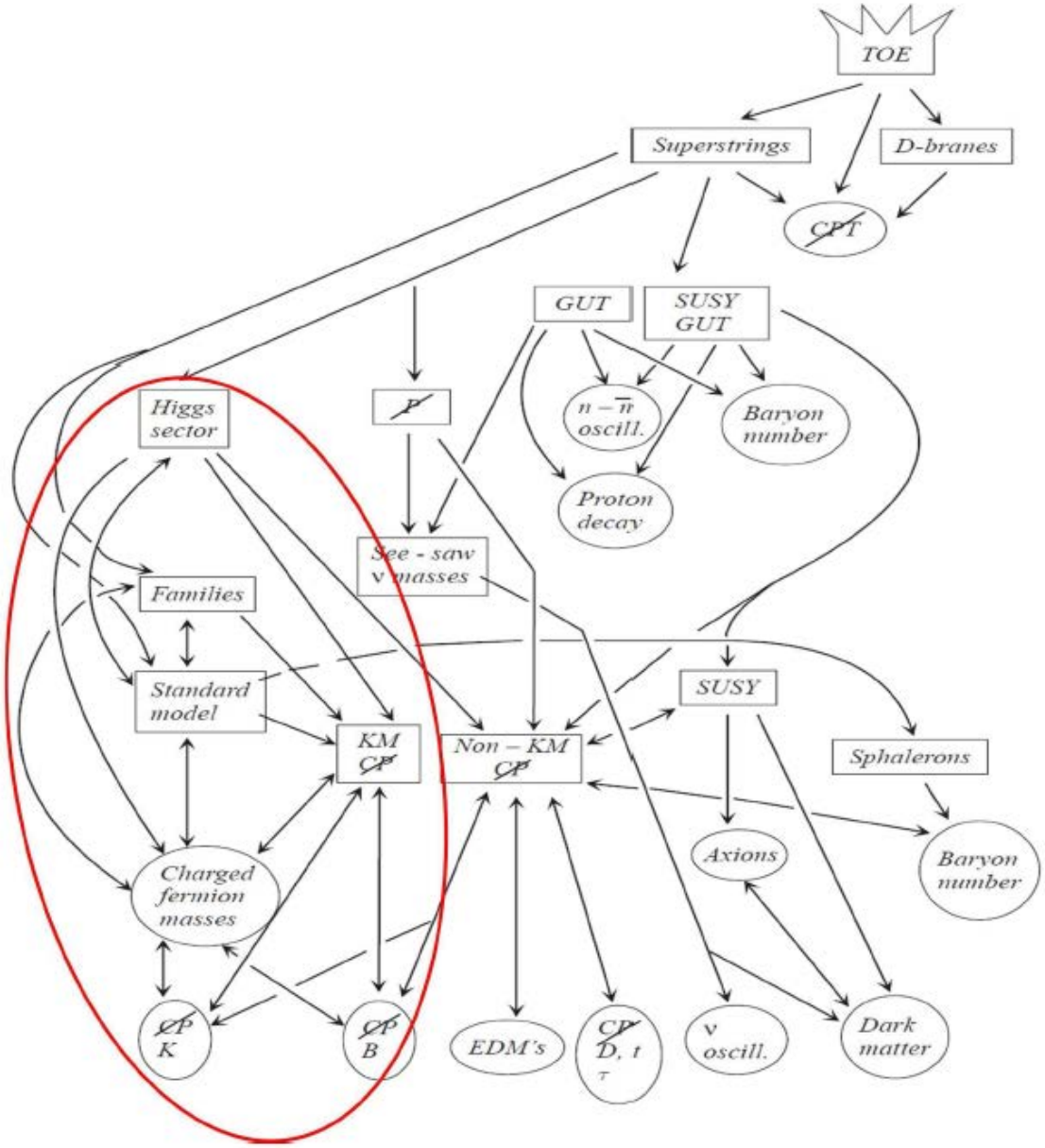
Fig. I.3

http://www.physics.mcmaster.ca/ElementaryParticle/



all masses in MeV

Flavor Physics



I.I. Bigi and A.I. Sanda, *CP Violation*. Cambridge University Press, Cambridge, (England), 2000.

Content

I. Flavor in the Standard Model

II. Quark flavor physics
1. CKM Matrix
2. Kaon physics
3. Physics of B and D mesons
4. (Top Quark physics)

III. Physics with leptons
1. Neutrinos physics
2. (Charged lepton flavor violation)