

# Summer School on Particle Physics

Three Generations of Matter (Fermions)				
	I		III	
matter charges spin name	0.4 me <b>u</b> up	1.27 me <b>c</b> charm	171.2 me <b>t</b> top	0 <b>Y</b> photon
Quarks	4.8 me +2/3 <b>d</b> down	134 me +1/3 <b>s</b> strange	4.2 GeV -1/3 <b>b</b> bottom	0 <b>g</b> gluons
	0.22 me -1/3 <b>v<sub>e</sub></b> electron neutrino	0.17 MeV -1/2 <b>v<sub>μ</sub></b> muon neutrino	15.9 MeV -1/2 <b>v<sub>τ</sub></b> tau neutrino	0 <b>Z</b> weak boson
Leptons	0.511 MeV -1 <b>e</b> electron	105.7 MeV -1 <b>μ</b> muon	1.777 GeV -1 <b>τ</b> tau	80-90 GeV -1 <b>W</b> weak boson

Contribution ID: 28

Type: not specified

## Lab: detection of cosmic rays

Friday, 20 July 2018 14:00 (3 hours)

**Presenters:** Prof. SANTI, Lorenzo; Dr SOLDANI, Mattia