

# Summer School on Particle Physics

Three Generations  
of Matter (Fermions)

|        | I                                   |  |  | II                              |  |  | III                            |  |  |
|--------|-------------------------------------|--|--|---------------------------------|--|--|--------------------------------|--|--|
| mass   | 2.4 MeV                             |  |  | 1.27 GeV                        |  |  | 171.2 GeV                      |  |  |
| charge | 2/3                                 |  |  | 2/3                             |  |  | 2/3                            |  |  |
| spin   | 1/2                                 |  |  | 1/2                             |  |  | 1/2                            |  |  |
| name   | u<br>up                             |  |  | c<br>charm                      |  |  | t<br>top                       |  |  |
|        | d<br>down                           |  |  | s<br>strange                    |  |  | b<br>bottom                    |  |  |
|        | ν <sub>e</sub><br>electron neutrino |  |  | ν <sub>μ</sub><br>muon neutrino |  |  | ν <sub>τ</sub><br>tau neutrino |  |  |
|        | e<br>electron                       |  |  | μ<br>muon                       |  |  | τ<br>tau                       |  |  |
|        |                                     |  |  |                                 |  |  | γ<br>photon                    |  |  |
|        |                                     |  |  |                                 |  |  | g<br>gluon                     |  |  |
|        |                                     |  |  |                                 |  |  | Z <sup>0</sup><br>weak boson   |  |  |
|        |                                     |  |  |                                 |  |  | W <sup>±</sup><br>weak boson   |  |  |

Bosons (Force)

Contribution ID: 11

Type: not specified

## Free time with a tutor - on demand