

# Summer School on Particle Physics

Three Generations of Matter (Fermions)					
	I		II		III
mass	2.4 MeV		1.27 GeV		171.2 GeV
charge	$\frac{2}{3}$		$\frac{2}{3}$		0
spin	$\frac{1}{2}$		$\frac{1}{2}$		$\frac{1}{2}$
name	u		c		t
	up		charm		top
Quarks	d		s		b
	down		strange		bottom
	4.8 MeV		128 MeV		4.2 GeV
	$-\frac{1}{3}$		$-\frac{1}{3}$		$-\frac{1}{3}$
Leptons	$\nu_e$		$\nu_\mu$		$\nu_\tau$
	electron neutrino		muon neutrino		tau neutrino
	0		0		0
	$\frac{1}{2}$		$\frac{1}{2}$		$\frac{1}{2}$
e		$\mu$		$\tau$	
electron		muon		tau	
0.511 MeV		105.7 MeV		1.777 GeV	
$-1$		$-1$		$-1$	
$\frac{1}{2}$		$\frac{1}{2}$		$\frac{1}{2}$	
Z		W		W	
weak force		weak force		weak force	
91.2 GeV		80.4 GeV		80.4 GeV	
0		1		1	
1		1		1	
Bosons (force)		Bosons (force)		Bosons (force)	

Contribution ID: 54

Type: not specified

## Gravitational waves

Thursday, 25 July 2019 10:30 (1 hour)

Presenter: Prof. COBAL, Marina