

Standard Model of Elementary Particles

three generations of matter (fermions)						
	I	II	III			
mass	$\approx 2.4 \text{ MeV}/c^2$	$\approx 1.275 \text{ GeV}/c^2$	$\approx 172.44 \text{ GeV}/c^2$	0	$\approx 125.09 \text{ GeV}/c^2$	
charge	$2/3$	$2/3$	$2/3$	0	0	
spin	$1/2$	$1/2$	$1/2$	1	0	
QUARKS	u up	c charm	t top	g gluon	H Higgs	SCALAR BOSONS
	d down	s strange	b bottom	γ photon		
LEPTONS	$\approx 0.511 \text{ MeV}/c^2$	$\approx 105.67 \text{ MeV}/c^2$	$\approx 1.7768 \text{ GeV}/c^2$	$\approx 91.19 \text{ GeV}/c^2$		GAUGE BOSONS
	-1	-1	-1	0		
	$1/2$	$1/2$	$1/2$	1		
	e electron	μ muon	τ tau	Z Z boson		
	$< 2.2 \text{ eV}/c^2$	$< 1.7 \text{ MeV}/c^2$	$< 15.5 \text{ MeV}/c^2$	$\approx 80.39 \text{ GeV}/c^2$		
	0	0	0	± 1		
	$1/2$	$1/2$	$1/2$	1		
	ν_e electron neutrino	ν_μ muon neutrino	ν_τ tau neutrino	W W boson		