

Standard Model of Elementary Particles

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