

Standard Model of Elementary Particles

three generations of matter (fermions)						
		I	II	III		
QUARKS	mass	$\approx 2.2 \text{ MeV/c}^2$	$\approx 1.28 \text{ GeV/c}^2$	$\approx 173.1 \text{ GeV/c}^2$	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
		u up	c charm	t top	g gluon	H Higgs
		$\approx 4.7 \text{ MeV/c}^2$	$\approx 96 \text{ MeV/c}^2$	$\approx 4.18 \text{ GeV/c}^2$	0	
		$-1/3$	$-1/3$	$-1/3$	0	
		$1/2$	$1/2$	$1/2$	1	
		d down	s strange	b bottom	γ photon	
LEPTONS		$\approx 0.511 \text{ MeV/c}^2$	$\approx 105.66 \text{ MeV/c}^2$	$\approx 1.7768 \text{ GeV/c}^2$	$\approx 91.19 \text{ GeV/c}^2$	
		-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	
					GAUGE BOSONS	SCALAR BOSONS