



















# Standard Model of Elementary Particles

Fermions				Bosons			
	1st generation	2nd generation	3rd generation	Gauge bosons	Scalar bosons	Tensor bosons	
QUARKS	<div>mass charge spin</div> <div><div>2.2 MeV/c<sup>2</sup> 2/3 1/2</div><div></div><div>up</div></div>	<div>1.28 GeV/c<sup>2</sup> 2/3 1/2</div> <div></div> <div>charm</div>	<div>173.1 GeV/c<sup>2</sup> 2/3 1/2</div> <div></div> <div>top</div>	<div>strong nuclear force (color)</div> <div><div>0 0 1</div><div></div><div>gluon</div></div>	<div>electromagnetic force (charge)</div> <div><div>0 0 0</div><div></div><div>higgs</div></div>	<div>gravitational force (mass)</div> <div><div>0 0 2</div><div></div><div>graviton*</div></div>	
	<div>4.7 MeV/c<sup>2</sup> -1/3 1/2</div> <div></div> <div>down</div>	<div>96 MeV/c<sup>2</sup> -1/3 1/2</div> <div></div> <div>strange</div>	<div>4.18 GeV/c<sup>2</sup> -1/3 1/2</div> <div></div> <div>bottom</div>				<div>0 0 1</div> <div></div> <div>photon</div>
	<div>2.2 MeV/c<sup>2</sup> 2/3 1/2</div> <div></div> <div>electron</div>	<div>1.28 GeV/c<sup>2</sup> 2/3 1/2</div> <div></div> <div>muon</div>	<div>173.1 GeV/c<sup>2</sup> 2/3 1/2</div> <div></div> <div>tau</div>				
LEPTONS	<div>4.7 MeV/c<sup>2</sup> -1/3 1/2</div> <div></div> <div>electron neutrino</div>	<div>96 MeV/c<sup>2</sup> -1/3 1/2</div> <div></div> <div>muon neutrino</div>	<div>4.18 GeV/c<sup>2</sup> -1/3 1/2</div> <div></div> <div>tau neutrino</div>	<div>80.39 MeV/c<sup>2</sup> ±1 1</div> <div></div> <div>W boson</div>	<div>91.19 GeV/c<sup>2</sup> 0 1</div> <div></div> <div>Z boson</div>		
					<div>weak nuclear force (weak isospin)</div>		

\*hypothetical

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