GENERAL RELATIVITY

Restmass

&

Fine-Structure

https://www.youtube.com/watch?v=K8aczMuaGpki

$E=m*c^2$

„You can not solve a problem by the same thinking it appears.“

Einstein

Content

- **Field Equation**
- Restmass
- Leptons

1983

1. **Derivation of Mass**

$$\frac{\partial^2}{\partial t^2} r(t) = -\frac{\kappa}{2} \cdot (\mathbf{m} \cdot c^2) / (4\pi \cdot r^2)$$

Not Schrödinger
Not Klein-Gorden
Not Dirac

1983-2000

1. **Pure Restmass** (TD+SR+GR)

$$\mathbf{m_{eff}} = \sqrt{\frac{1}{4\pi}\cdot\frac{h\cdot c}{G}\cdot 2\cdot\left[\frac{3}{\beta^2 g_{44} 4}\cdot(1-\gamma\ln\mathbf{3})^2\right]\cdot\frac{\mathbf{24}}{\mathbf{N}^2}}$$

1/**137**.031

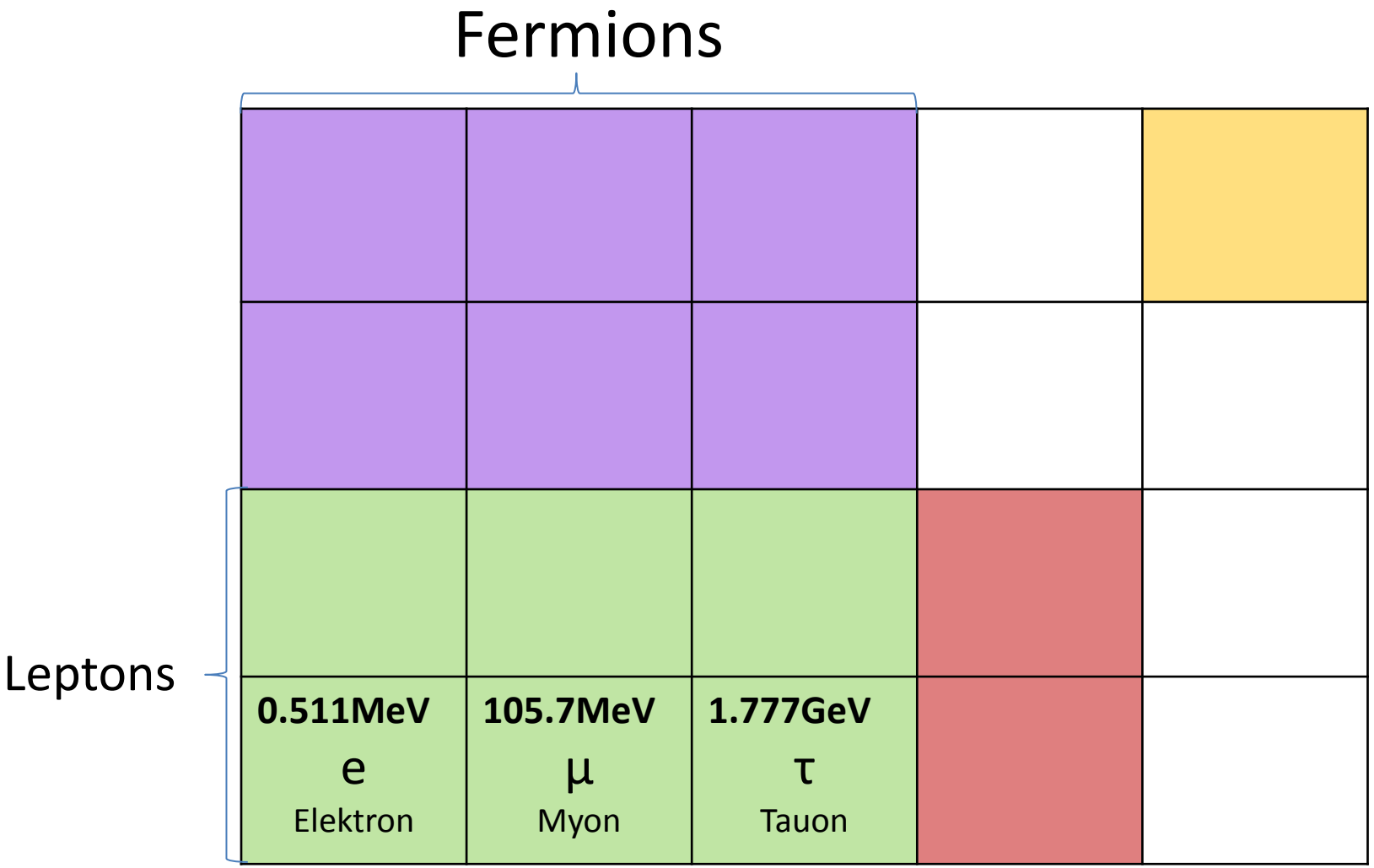
$E=m*c^2$

1. **Restmass** (TD+SR+GR)

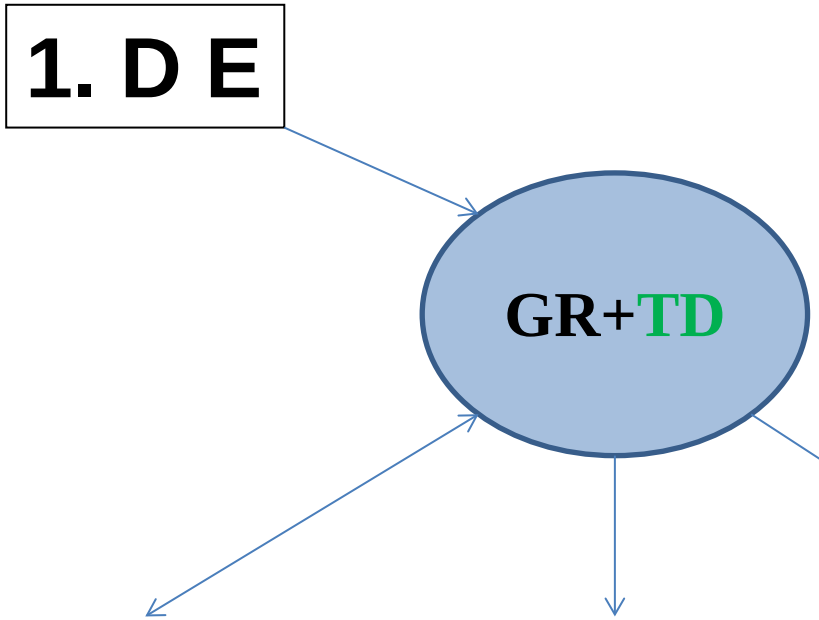
$$\mathbf{m} \propto \frac{\mathbf{1}}{\mathbf{N}}$$

$N=1,2,3,4,....10^{22}$

Why three Leptons?



1983



$$m_e \sim \frac{1}{\mathbf{N}_e} \qquad m_\mu \sim \frac{1}{\mathbf{N}_\mu} \qquad m_t \sim \frac{1}{\mathbf{N}_t}$$

m~1/N

„You can not solve a problem by the same thinking it appears.“

2017

$$\left(\frac{3}{\mathbf{N}e}\right) = \left(\frac{1}{\mathbf{N}}\right)\left(\frac{1}{\boldsymbol{N}}\right)\left(\frac{1}{\mathrm{N}}\right)$$

$$\left(\frac{4}{\mathbf{N}\mu}\right) = \left(\frac{1}{\mathbf{N}}\right)\left(\frac{1}{\mathrm{N}}\right)$$

$$\left(\frac{1}{\mathbf{N}t}\right) = \left(\frac{1}{\mathbf{N}}\right)\left(\frac{1}{\boldsymbol{N}}\right)$$

Mass-Invariance

$$(\boldsymbol{m}_{\mathbf{N}} \cdot c^2)^2 = {E_e}^2 - (c \cdot P)^2 + \left(\frac{n}{n_i} c \cdot P_e\right)^2 - \left(\frac{n}{n_i} E_e\right)^2$$

$$E_e = \frac{1}{\sqrt{1 - \left(\frac{v}{c}\right)^2}} \frac{1}{\sqrt{1 - \left(\frac{4}{5}\right)^2}} \cdot \boldsymbol{m}_{\mathbf{N}} \cdot c^2$$

$\gamma_v = 1$

$\gamma_i = 5/3 * 1/n = 1/N$

$13/5 * 1/n = 1/N$

$181/19 * 1/n = 1/N$

Invariance Applied

(2)*(3)***(5)*7***11*(13)*17*(19)*23*29*31*(37)*41*43*47*53*59*((61))**

	N	***N***	**N**
3	2^2*5^8*13^2*17^2*19*29*37*41***61***(**5/13*12/13*8/17*15/17*20/29*40/41**)	**7***13*(4/5*3/5*11/**61***35/37)	19***61**
4	2^2*5^8*13^2*17^2*19*29*37*41*61*(**5/13*12/13*8/17*15/17*20/29*40/41**)		19*61
1	2^2*5^8*13^2*17^2*19*29*37*41*61*(**5/13*12/13*8/17*15/17*20/29*40/41**)	**7***13*(4/5*3/5*11/61*35/37)	

N-Degeneration possible

2017

Ne = 0.**99987143***10^{22}

N_e/N_μ	=	3/4	***N***	206.7639<	206.76**82**
N_e/N_t	=	3	**N**	3477.000<	3477.**150**

Correlation Test

Gravitational Constant from Codata (2017):
$G=6.67408(31)*10^{-11} m^3/kgs^2$

$$G = \frac{24}{N^2} \cdot \left(\frac{\alpha/2}{Ry}\right)^2 \cdot \left(\frac{\alpha c}{2} \cdot \frac{\alpha c}{\pi} \cdot \frac{\alpha c}{h}\right) = 6{,}67432 * 10^{-11} \frac{m^3}{kg \cdot s^2}$$

due to $\mathbf{N_e}= 0.\mathbf{99987134}*10^{22}$ from Invariance applied and

Alpha=1/137.035999
h= 6.6260696*10-34Js
Ry=10973731.568539/m (into the mass-formula me)
c=299792458m/s

Summary

- Calculation of Restmass √ √ √
- Derivation of the FC √ √
- Why 3 leptons √

Appendix

Albert von Szent-Györgyi

*„Eine **Entdeckung** macht man, wenn man sieht, was jeder gesehen hat, und dabei denkt, was niemand gedacht hat.“*

Literature

- 1: A. Einstein: “Grundzüge der Relativitätstheorie” (Vieweg und Sohn, Braunschweig 1969) Page 79 Formula (90, non constant electron mass **m**(t) need to be included here).

- *Therefore Page 85 Formula 96a, and Page 88 Formula 90b require a new (internal) dynamic interpretation for: A non point like, free electrons “center of mass-point” is assumed at rest but not the rest is at rest, while including thermodynamic principles for the time dependent local “Riemann-Space-Structure”. Therefore the electron particle mass m(t) is behaving like a wave-particle due to five internal actions locally.*