

Elektron Neutrino "Restmass-Pattern" from Experiment?

Data	Authors	$M_\nu$ -bound	$m_{\nu e}$	$N_{\nu e}$
2dFGRS (P01)	Elgaroy et al. 02	1.8 eV	1.82 eV	$\frac{1}{2} \cdot \frac{3}{2} \cdot \frac{3}{2} \cdot \frac{5}{2} \cdot 10^{27}$
CMB+2dFGRS(C05)	Sanchez et al. 05	1.2 eV	1.21 eV	$\frac{1}{2} \cdot \frac{3}{2} \cdot \frac{3}{2} \cdot \frac{3}{2} \cdot \frac{5}{2} \cdot 10^{27}$
CMB+LSS+SNIa+BAO	Goobar et al. 06	0.62 eV	0.61 eV	$\frac{3}{2} \cdot \frac{3}{2} \cdot \frac{3}{2} \cdot \frac{5}{2} \cdot 10^{27}$
WMAP (3 year) alone	Fukugita et al. 06	2.0 eV	2.04 eV	$\frac{5}{2} \cdot 10^{27}$
CMB+LSS+SN+	Spergel et al. 06	0.68 eV	0.68 eV	$3 \cdot \frac{5}{2} \cdot 10^{27}$
CMB+LSS+SNIa+BAO+Ly $\alpha$	Seljak et al. 06	0.17 eV	0.17 eV	$4 \cdot 3 \cdot \frac{5}{2} \cdot 10^{27}$

Assume:

- Non-point-like restmass ( $m_e+m_{\nu e}$ ) and (vector) velocity  $\mathbf{u}$  decays into
  - Electron restmass ( $m_e \sim 1/N$ , see our theory) accompanied by its (vector) velocity ( $\mathbf{v}_e$ )
  - restmass pattern ( $m_{\nu e} \sim 1/N_{\nu e}$ , see our theory) and its (vector) velocities ( $\mathbf{v}_n$ ) of "different" Electron- Neutrinos with individual discrete restmass approximated by the experimental energy bounds  $M_\nu$ .
- Momentum Conservation:  $M \cdot \mathbf{u} = m_e \cdot \mathbf{v}_e + m_{\nu e} \cdot \mathbf{v}_n$ .
- Excess-Energy-Conservation  $E_0 = 18575 \text{ eV} = \frac{1}{2} m_e \cdot (\mathbf{v}_e - \mathbf{u})^2 + \frac{1}{2} m_{\nu e} \cdot (\mathbf{v}_n - \mathbf{u})^2$

Conclusion from our theory:

- as far as relativistic effects can be neglected -

$$18575 \text{ eV} = \left( 1 + \frac{N_{\nu e}}{10^{22}} \right) \cdot U_{>exp} \cdot e$$

Different experimental voltage-level  $U_{>exp}$  due to upper limits do already exist?  
Elektron Neutrino Restmass-Pattern predicted and compared with the experimental results.

### 1/ $N_{\nu e}$ -Pattern from Theory

