

Dimensions once more

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Abstract: It has been stated that nucleons and crystals exist in at least 8 dimensions.

The principal numbers of dimensions are 88 and 104.

The shape of the space-time in a concrete quantum state decides whether the electron takes energy from the field ($m_{eff} > 0$) or it gives it back ($m_{eff} < 0$).

Similarly, the shape of the space-time in a certain quantum state connected with the Dirac sea of particles decides whether $m_0 \in R$ or $m_0 \in C$.

Complex mass particles in quark-gluon soup or even in nuclei may exist, what means practically that not only every crystal but also every atom and nucleon with the gluon-quark soup inside exists in at least 8 dimensions.

The fundamental number of dimensions of the Universe is not $4 \times 11 = 44$ but $8 \times 11 = 88$, because for any $v > c$ the superdimension of the space-time must be 8-dimensional.

But the number $4 \times 26 = 104$ stays without changes, because the numbers 4 and 26 are not mutually prime (they have the common divisor 2).