

MP 18: Alternative Ideas

Time: Thursday 16:30–17:10

Location: H-HS VII

MP 18.1 Thu 16:30 H-HS VII

The End of Space and Time and the 3-Sphere — ●ALEXANDER UNZICKER — Pestalozzi-Gymnasium München

It is argued that there are no true fundamental constants; rather their alleged existence points to an incomplete understanding of reality. Based on that premise, it turns out that space and time are unlikely to be appropriate concepts for a proper understanding of nature. Rather than a 3+1-dimensional spacetime, it is argued that the 3-dimensional unit sphere is a better candidate for a fundamental description of reality. In many aspects, its properties reflect phenomena commonly attributed to quantum mechanics.

MP 18.2 Thu 16:50 H-HS VII

Electromagnetic interactions as the source of all four known forces. — ●OSVALDO DOMANN — Stephanstr. 42, 85077 Manching, Germany

Different particle representations were already proposed in theoretical physics; as points, as vortex, as strings, as wave-packets, etc. The

present work is based on an approach where subatomic particles (SPs) are represented as focal points of rays of Fundamental Particles (FPs) that move from infinite to infinite. FPs store the energy of SPs as rotation defining angular momenta. Interactions between SPs are thus the product of the interactions of the angular momenta of their FPs. An important finding is that all four forces are due to electromagnetic interactions and are described by QED. No incompatibility between gravitation and QM exists, and no dark matter and dark energy is required. Another important finding of the approach is that the interaction between two charged SPs tend to zero for the distance between them tending to zero, which allows placing the zero of the potential energy at the distance zero. Atomic nuclei can thus be represented as swarms of electrons and positrons that neither attract nor repel each other. As atomic nuclei are composed of nucleons which are composed of quarks, the quarks can also be seen as swarms of electrons and positrons. As quantum-mechanics rely heavily on classical physics, all new findings of the latter have repercussions on the former. More at: www.odomann.com