

## GR 21: Poster

Zeit: Montag bis Freitag ganztags

Raum: JUR K

GR 21.1 Mo-Fr 0:00 JUR K

**Special Relativity Derived from the Structure of Matter** —  
•ALBRECHT GIESE — Taxusweg 15, 22605 Hamburg

When Einstein developed Special Relativity, he got caught in a trap. He assumed that the 1-way speed of light is always a constant. - This was a rash conclusion from the Michelson-Morley experiment, which is logically in no way compelling. - From that point on, there was no way out of an unnecessary complex theory based on weird assumptions about space-time.

In using the other way:

- We replace the dilation of time by the inevitable slow down of the basic oscillations within elementary particles at motion (de Broglie/Dirac/Schrödinger)

- We replace the contraction of space by a contraction of fields (Heaviside/Lorentz) with similar results of physical measurements

- We will then conclude that the apparent constancy of the speed of light 'c' is a pure measurement effect following from both above-mentioned facts.

This approach avoids all of the logical conflicts and paradoxes which accompany the assumptions of Einstein about space and time, and yet it achieves similar results for special relativity.

And this approach is also an appropriate basis for developing a successful and easily understandable General Relativity.

For further information: [www.ag-physics.org](http://www.ag-physics.org)

GR 21.2 Mo-Fr 0:00 JUR K

**Is the Speed of Light 'c' a True Constant?** — •ALBRECHT GIESE  
— Taxusweg 15, 22605 Hamburg

Einstein has - in his structure-based theory of relativity - stated that the speed of light 'c' is a true constant under all circumstances. He has concluded this from the Michelson-Morley experiment, not realizing that this experiment only demonstrates the 2-way speed of light.

Philosopher Hans Reichenbach, a prominent supporter of Einstein, has pointed out that Einstein's conclusion is logically not compelling. The 1-way speed of light is not proven to be constant, and relativity can be explained in different ways.

The poster presentation will point out that:

1. The apparent constancy of 'c' is a measuring effect caused by the contraction of rods and the slow down of clocks, which both can be physically explained

2. The curvature of space-time in a gravitational field can be replaced by the slow down of 'c' in the field and the resulting refraction of light-like objects

3. The change of 'c' during the development of the universe is a physically better replacement for the so called 'inflation'. Furthermore it avoids the necessity of a 'dark energy'. Additionally it allows for an adapting change of basic physical parameters and in this way makes the landscape of  $10^{100}$  universes superfluous.

For further information: [www.ag-physics.org/relat](http://www.ag-physics.org/relat) and [/gravity](http://www.ag-physics.org/gravity)