# Concepts for Antigravity

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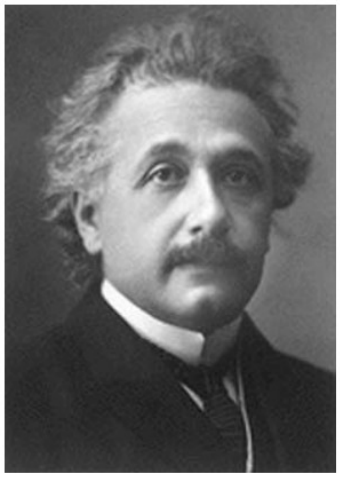
# Contents

- Unified field theory of Einstein-Cartan-Evans (ECE)
- Potentials and Aether
- Torsion and curvature
- Symmetrized field equations
- Intrinsic field structure
- Gravitational field
- Fields without force, Beltrami
- Methods for shielding of gravitation

# New natural philosophy

- Consistency of mathematical models with observation
- No extreme math
  - No advanced quantum theory (very difficult to understand)
- 4d spacetime like Einstein
- Spacetime curvature extended by torsion
  - Curvature: Riemann geometry, used by Einstein
  - Completed by Elie Cartan (1920ies)
  - Einstein-Cartan-Evans Theory (ECE, 2003): Curvature + TORSION
  - “Completion” of Einstein’s general relativity
  - Basis for new discoveries

# Einstein-Cartan-Evans Theory



Albert Einstein

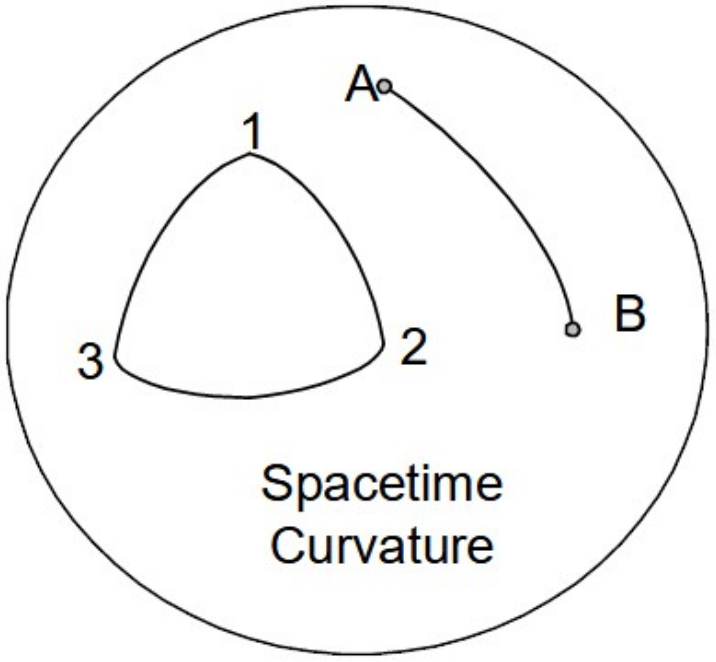
Elie Cartan

Myron W. Evans[1]

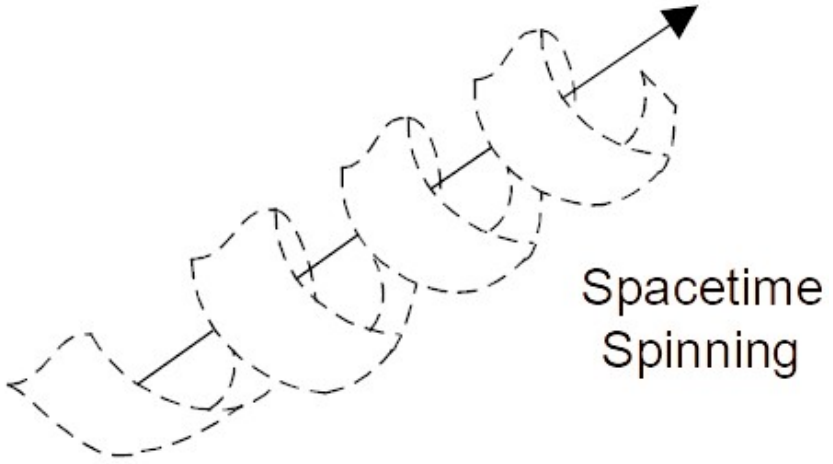
(geometrical model)

um (vacuum,

# ECE curvature and torsion




A) Curvature




B) Torsion

# Background “aether” (vacuum)

- Experimentally proven by Casimir effect
- ECE interpretation: geometry = spacetime structure = aether
- First ECE axiom: spacetime aether is identical with e-m potentials
- Second ECE axiom: All force fields follow from potentials of background aether

# Unification of 4 natural forces

- Electrodynamics: Maxwell’s equations follow from Cartan geometry (with torsion)
- Gravitation: same equations as for electrodynamics, with different constants
- The other 2 forces are derived from the standard model of elementary particles. ECE explanation:
  - Weak nuclear force: electromagnetic
  - Strong nuclear force: unification of quantum mechanics with general relativity (curved and twisted spacetime)
- → All forces unified

# Explanation of force fields

- What are physical force fields???
  - Standard physics: only EFFECTS of force fields are described
  - Their true nature is not known
- ECE explanation
  - Force fields are consequences of aether structures
  - For example: magnetic field **B** is a vortex structure of aether flow described by vector potential **A**:

$$\mathbf{B} = \nabla \times \mathbf{A}$$

  - Clear, simple explanation of classical equation

# Aether flow creates force fields

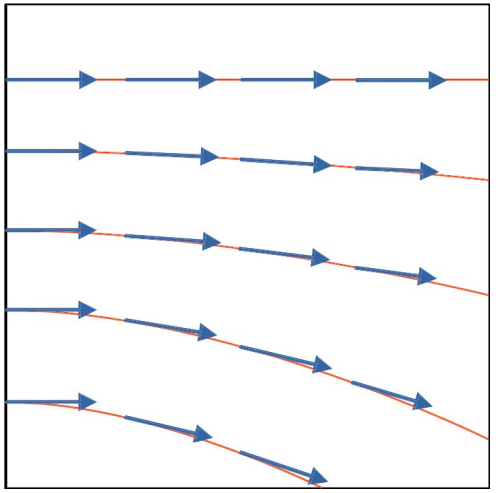
- Aether structures of electromagnetic fields **E**, **B**
  - Φ: skalar potential ~ aether pressure
  - **A**: vector potential ~ aether flow velocity

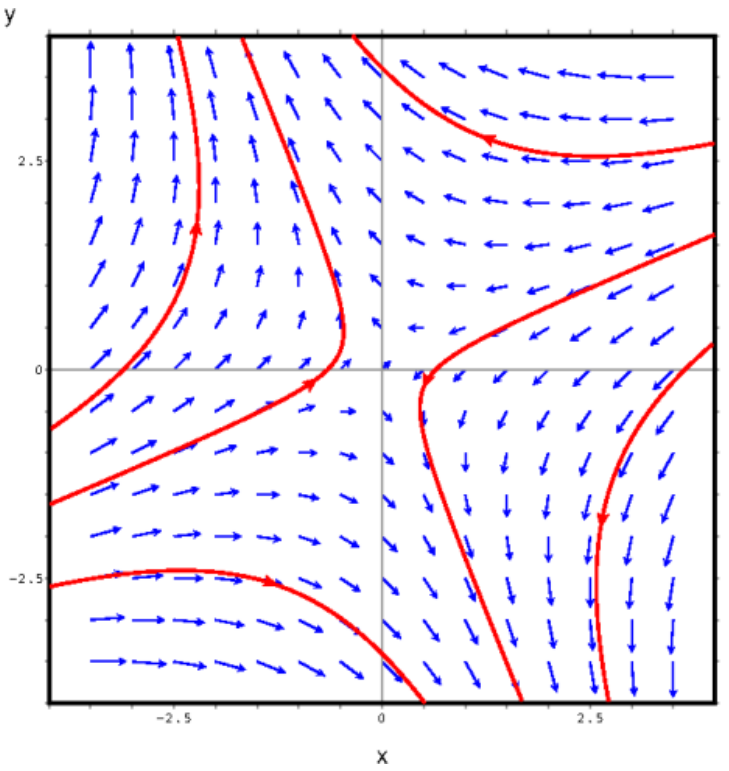
$$\mathbf{E} = -\nabla\phi - \frac{\partial \mathbf{A}}{\partial t},$$

$$\mathbf{B} = \nabla \times \mathbf{A}.$$

# Aether flows without force fields

- Example: laminar flow
  - No vortices, no divergence





# Citation from Shoulders

There appears to be an incredibly large number of useful phenomena yet to arise from using potential effects that are not immediately accessible to the force of E and B fields.
This phase determined, force-free world will certainly be another chapter somewhere in the future.

EV
A Tale of Discovery
Kenneth R. Shoulders

EV = Electromagnetic Vortex

# Additional properties of force fields due to spacetime torsion

- Spin connections describing torsional structure
  - scalar: $\omega_{0e}$, vector $\boldsymbol{\omega}_e$

$$\mathbf{E} = -\boldsymbol{\nabla}\phi - c\omega_{0e}\mathbf{A} + \boldsymbol{\omega}_e\phi$$

  - electrostatic case:
  - $$\mathbf{E} = -2c\omega_{0e}\mathbf{A},$$
  - → **E** is an aether flow

# Field equations of electromagnetism and gravitation

$$\nabla \cdot \mathbf{B} = 0,$$ Gauss law

$$\frac{\partial \mathbf{B}}{\partial t} + \nabla \times \mathbf{E} = \mathbf{0},$$ Faraday law

$$\nabla \cdot \mathbf{E} = \frac{\rho_e}{\epsilon_0},$$ Coulomb law

$$-\frac{1}{c^2}\frac{\partial \mathbf{E}}{\partial t} + \nabla \times \mathbf{B} = \mu_0 \mathbf{J},$$ Ampère-Maxwell law

Electrodynamics

$$\nabla \cdot \mathbf{\Omega} = 0,$$ Gauss law of dynamics

$$\frac{\partial \mathbf{\Omega}}{\partial t} + \nabla \times \mathbf{g} = \mathbf{0},$$ Gravitomagnetic law

$$\nabla \cdot \mathbf{g} = -4\pi G\, \rho_m,$$ Newton's law (Poisson equation)

$$-\frac{1}{c^2}\frac{\partial \mathbf{g}}{\partial t} + \nabla \times \mathbf{\Omega} = -\frac{4\pi G}{c^2}\mathbf{J}_m.$$ Ampère-Maxwell law of dynamics

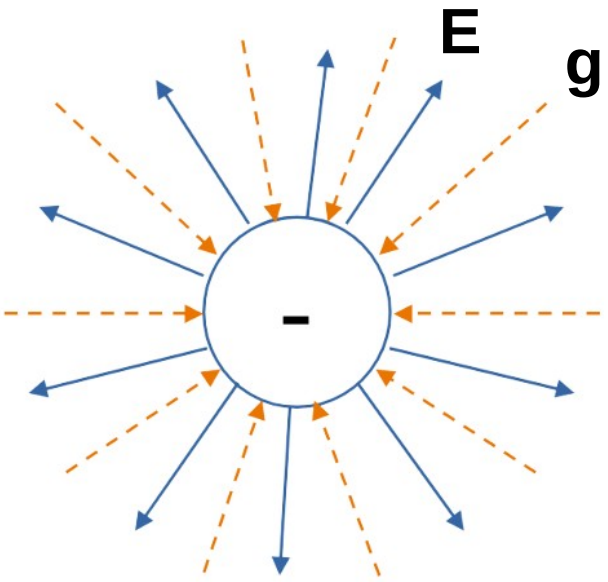
Gravitation

# Gravitation

- Geometric equations of electromagnetism and gravitation are the same
  - Gravitation is very weak compared to electromagnetism
  - There is a difference of 21 orders of magnitude between them
- Consequence: gravitation is electromagnetic

# Connection between electromagnetism and gravitation

- A Charge radiates aether away via **E** field
- There cannot arise an aether vacuum
- Radiated aether has to be refilled
- This is gravitational attraction **g**
- This explains that Coulomb and gravitational force are formally identical



# Result

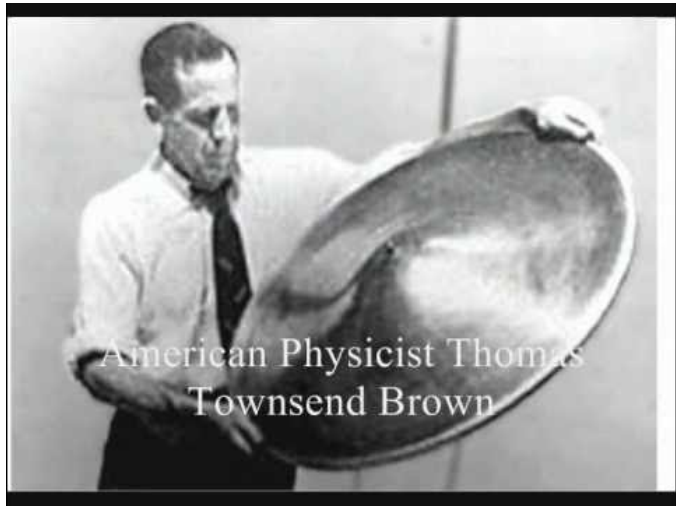
- Gravitation is a special form of electromagnetism
- Consequence:
  Gravitation should be influenceable by electromagnetism

# How to achieve antigravity?

1. Biefeld-Brown effect
2. Radar irradiation on matter
3. Counter-rotating magnetic fields
4. Shielding of gravitational radiation

# 1. Biefeld-Brown effect

- Thomas Townsend Brown 1920, Paul Alfred Biefeld
- Force on matter induced by a high-voltage electric field
- Asymmetric electrodes (capacitors)
  - Negative electrode larger than positive
  - Gives highest thrust



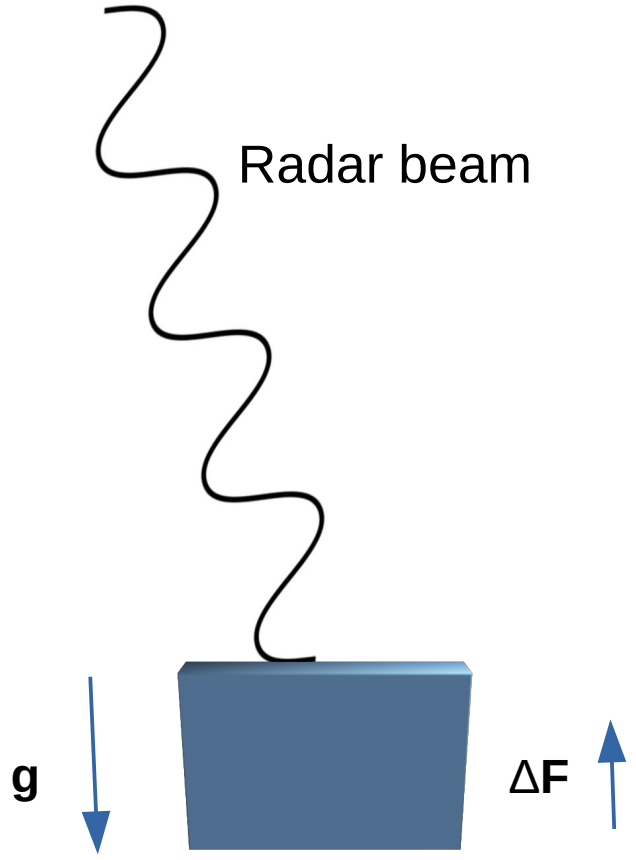
# Biefeld-Brown effect

- Not to be confused with ion wind effects (lifter)
- Obviously applied in avionic applications
- No true modificaton of gravity
  - E field exerts dynamic effect of mechanics (mechanical force)

Lifter

# 2. Radar radiation on matter

- Experiments in the 1950ies
  - Described in journals of avionics
- Irradiate matter with e-m waves
  - Wave length: 0.3 to 4.3 mm
  - Frequency range: 70 GHz – 1 THz
    - upper Radar range
    - see book of Cater
- Result: reduction of gravitational force
- No detailed info available anymore?



# 3. Counter-rotating magnetic fields

- Utilizing effects of extended electrodynamics
  - ECE theory with symmetric currents (electric and “cold current”)
- Faraday law:
  - Classical

$$\frac{\partial \mathbf{B}}{\partial t} + \boldsymbol{\nabla} \times \mathbf{E} = \mathbf{0}$$

- ECE with second type of current a la Tesla:
  - **V**: potential current density

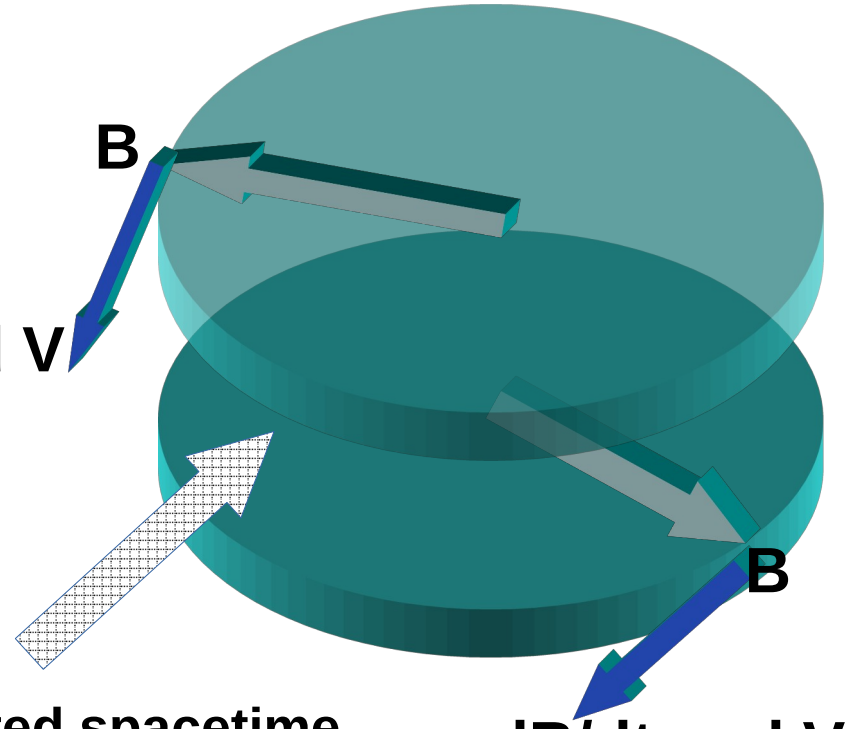
$$\frac{\partial \mathbf{B}}{\partial t} + \boldsymbol{\nabla} \times \mathbf{E} = \boxed{\mathbf{V}}$$

  - Neglecting the electric field:

$$\frac{\partial \mathbf{B}}{\partial t} = \boxed{\mathbf{V}}$$

# Two counter-rotating magnetic fields

**(see also patent appl. of Charles Kellum)**




**Volume of interaction**

**Compressed/distorted spacetime**
**(antigravity and other effects)**

# 4. Shielding of gravitational radiation

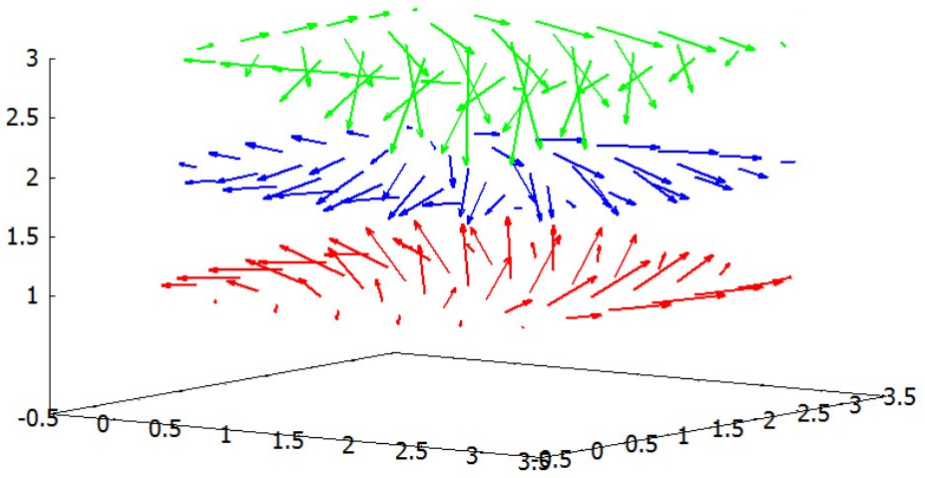
- Shielding should be possible by localized e-m fields of high intensity.
- Beltrami fields
  - Fields are parallel to their curl, not perpendicular

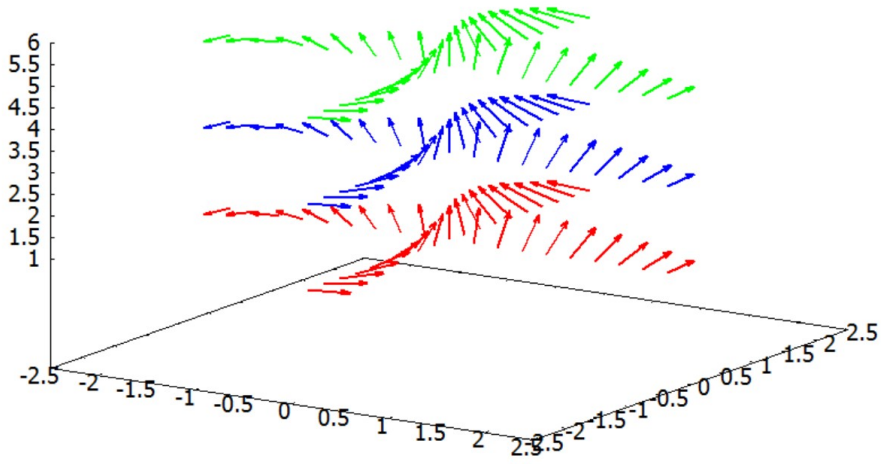
$$\nabla \times \mathbf{E} = \kappa \mathbf{E},$$
$$\nabla \times \mathbf{B} = \kappa \mathbf{B}.$$

  - Sometimes called “scalar fields” (unclear definition)

# Beltrami fields

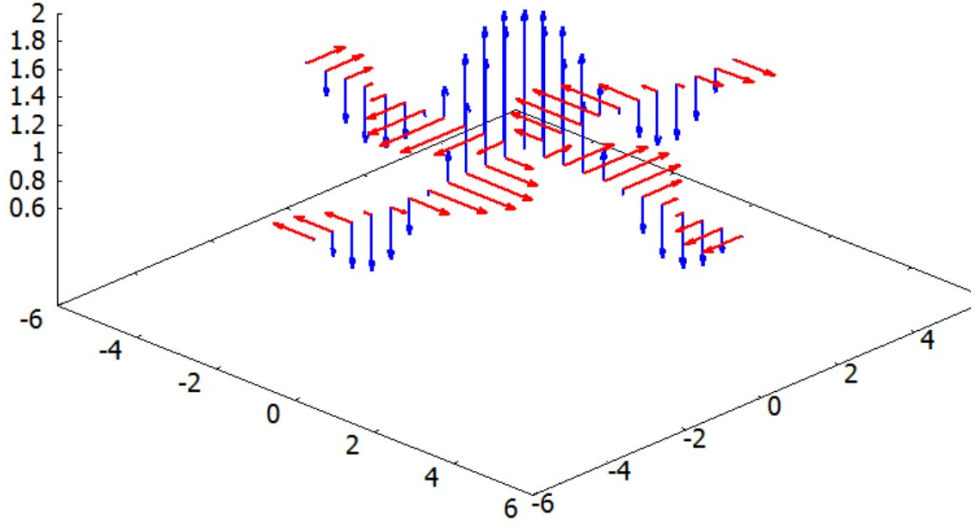
- Strongly varying in direction



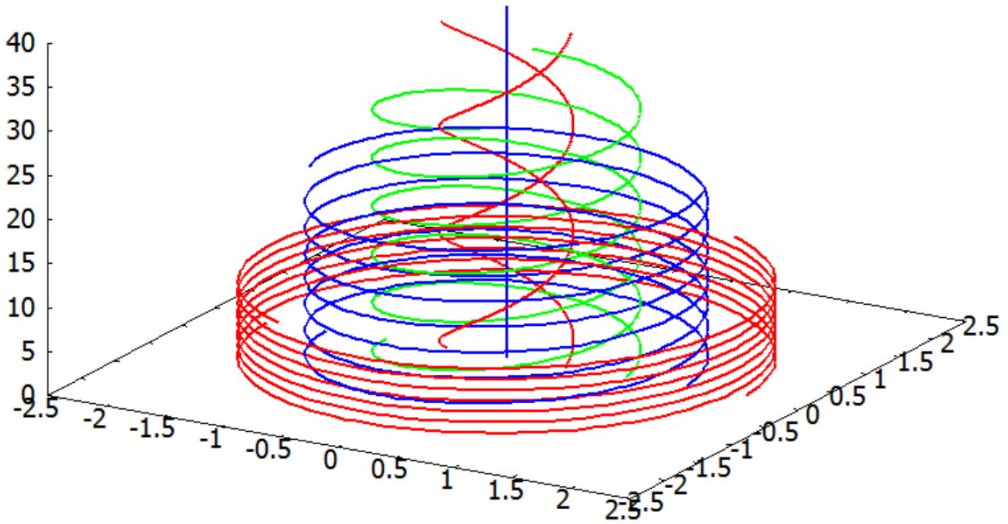




derived from Bessel functions

# Structures of Beltrami fields (Bessel functions)



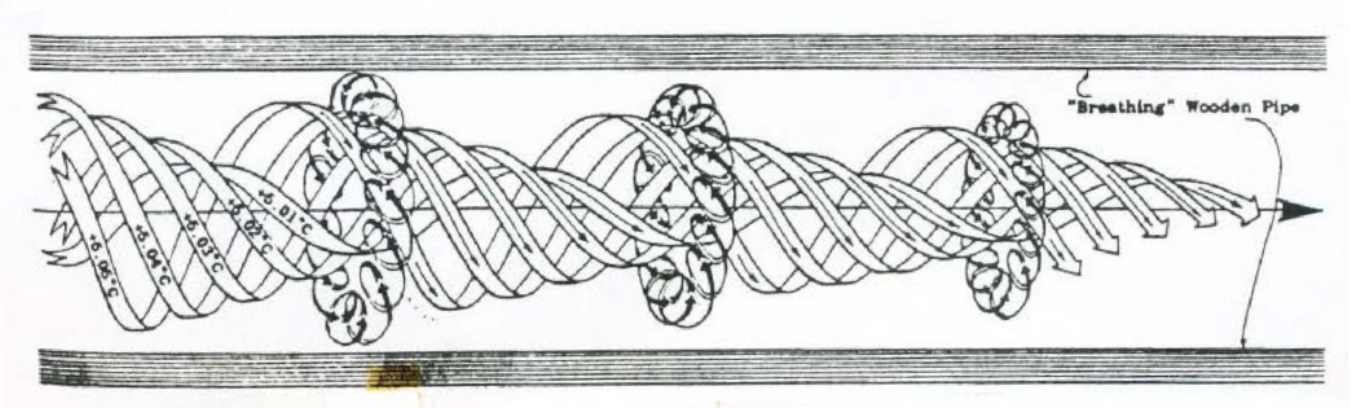

Decomposition into longitudinal and transversal components




Streamlines of field expansion

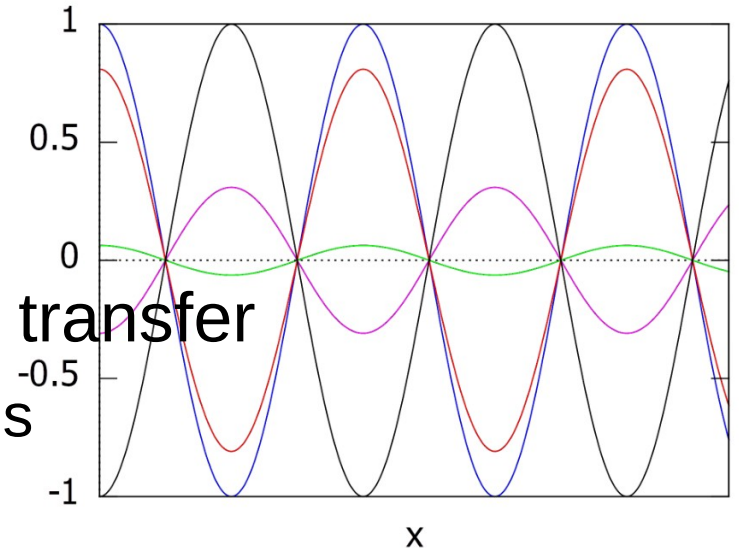
# Example

- Helical flow (Schauberger)
  - In pipes and rivers



# Properties of Beltrami fields

- All fields are parallel, divergence-free
  - **A** ∥ **E** ∥ **B** ∥ **J**
- Standing waves
- Time oscillations
- Suitable for simultaneous information transfer
  - No delay by expansion velocity of signals
  - Action at a distance
  - Replacement for “quantum entanglement” effects

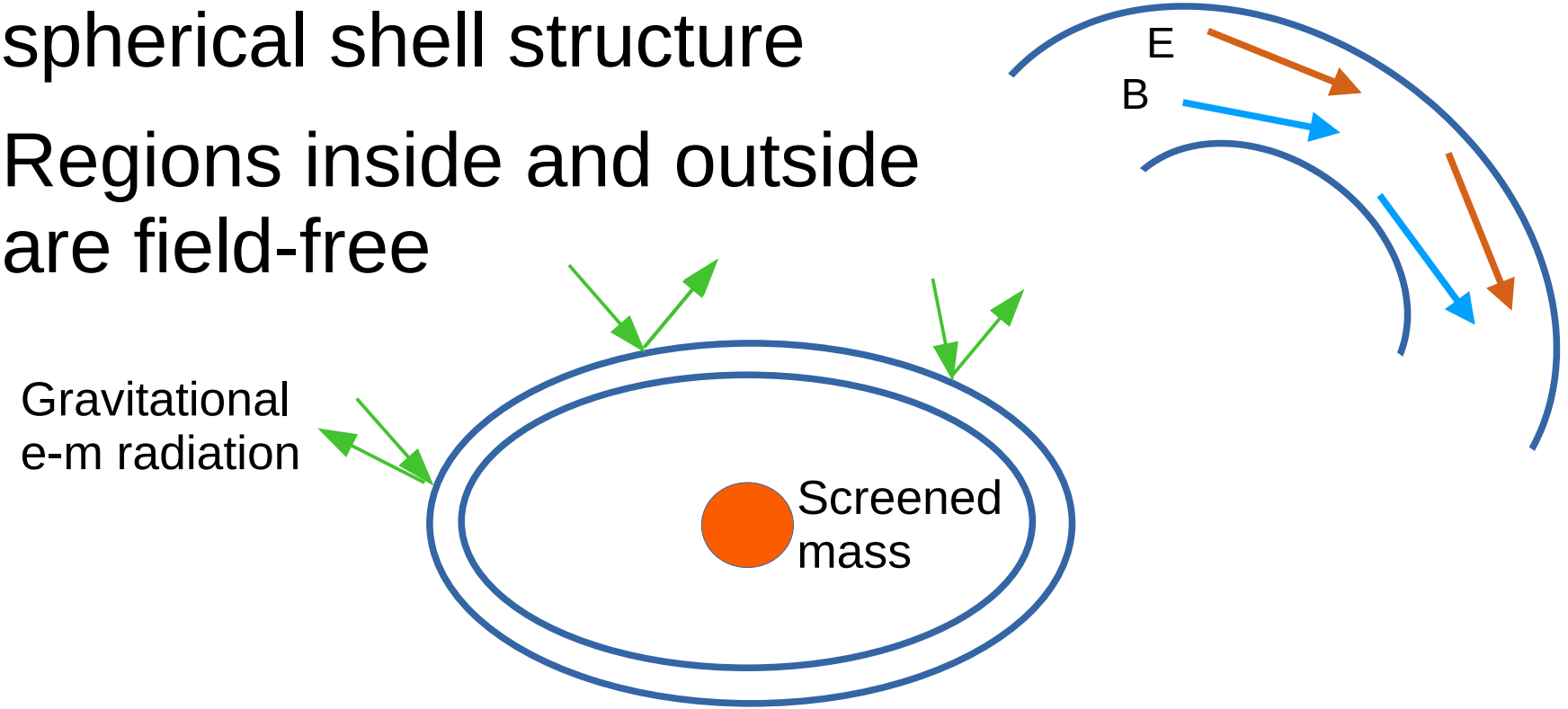


# Antigravity by Beltrami fields

- “Fields without forces”
  - Strongly localized fields
- Use for screening of local volume
  - Beltrami fields to be defined in surface regions

# Screening of local structures

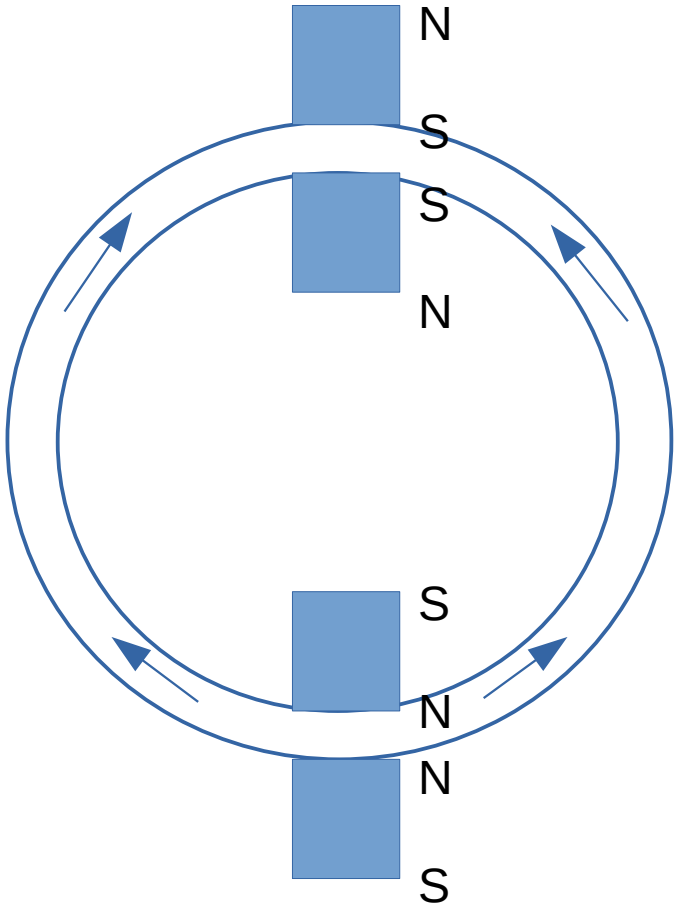
- Fields should have a spherical shell structure
- Regions inside and outside are field-free



# Realization of screening

- Task: compute Beltrami fields in surface structures
  - Simplest case: in a spherical shell
- See literature package
  - Essentially, wave equations have to be solved on the surfaces of rings, spheres or toroidal structures
  - Sometimes toroidal coordinates are considered
  - Support of mathematicians required

# Simple magnetic trial




Magn. conductor
(cylinder, sphere)

# Steps to be taken

- Investigate possibilities for creating force-free shielding fields
- Mathematical modeling of geometric structures
- Simulation of alternative structures
- Design of control circuits
- Electrical/mechanical design

# Methods used by Alexey Chekurkov

- Rotating magnetic fields 
- Electrostatic fields 
  - Biefeld-Brown effect?
- RF signals ?
  - via Tesla coil
- Ultrasound ?

# Summary

- Unified field theory introduced for describing all forces of nature
- Model/interpretation of aether structure introduced
- Intrinsic structure of fields explained
- Fields without forces described (Beltrami)
- Methods for shielding of gravitation suggested

# References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