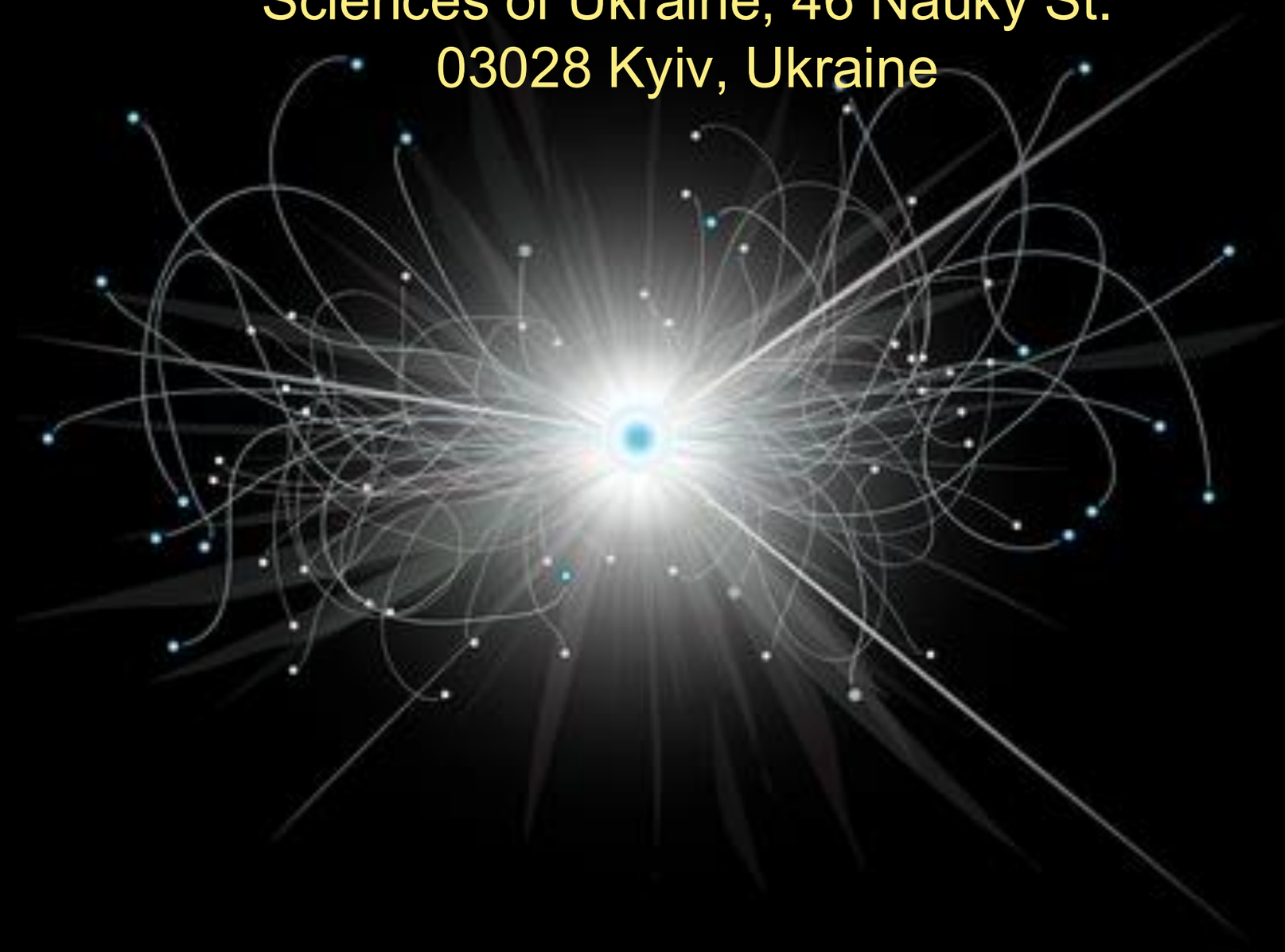
On the possible shock action of the Earth's core

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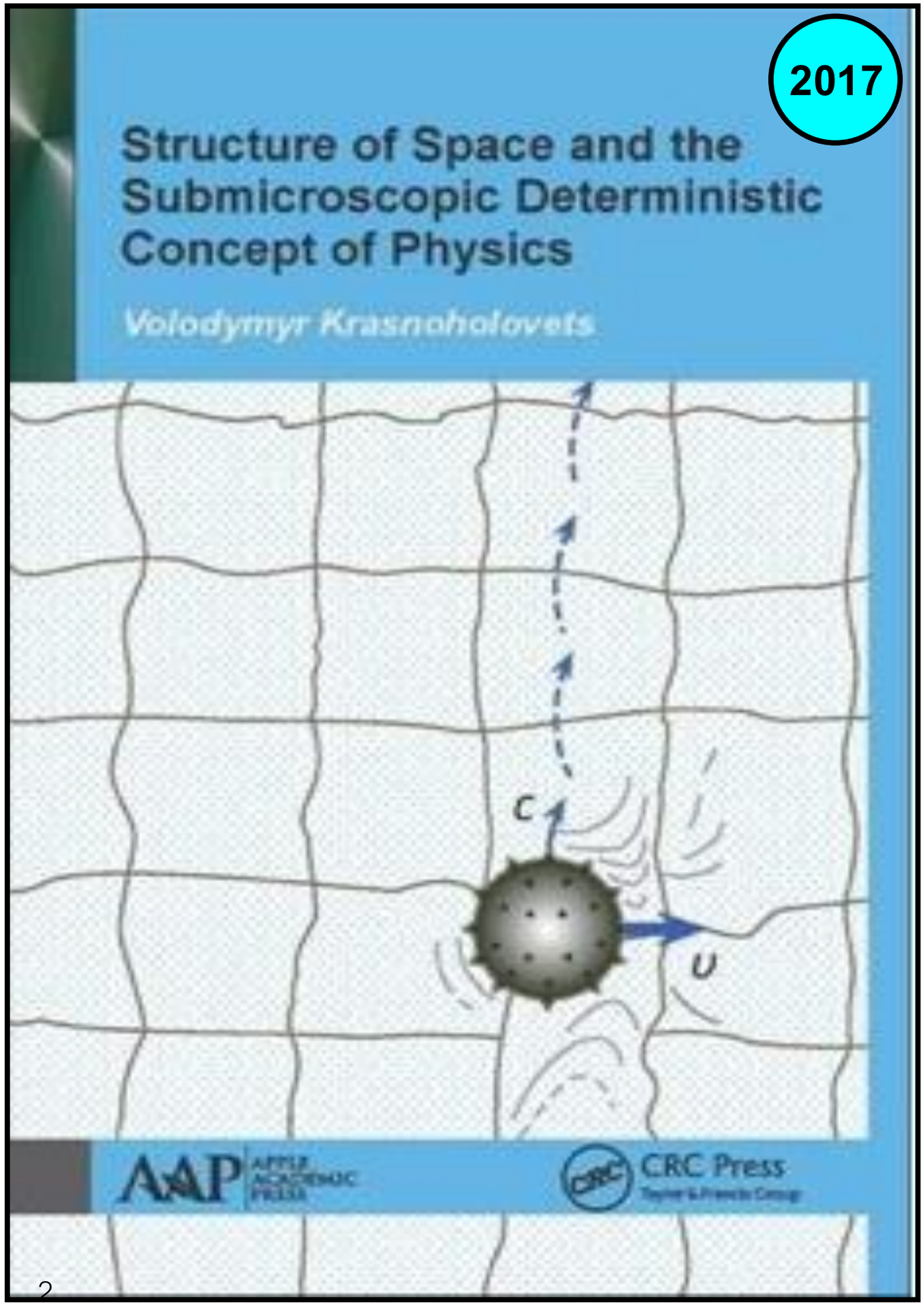


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The theory of space unambiguously answers such challenging issues as:

- What is mass?
- What is charge?
- What is a lepton?
- What is a quark?
- What is a neutrino?
- What are the nuclear forces?

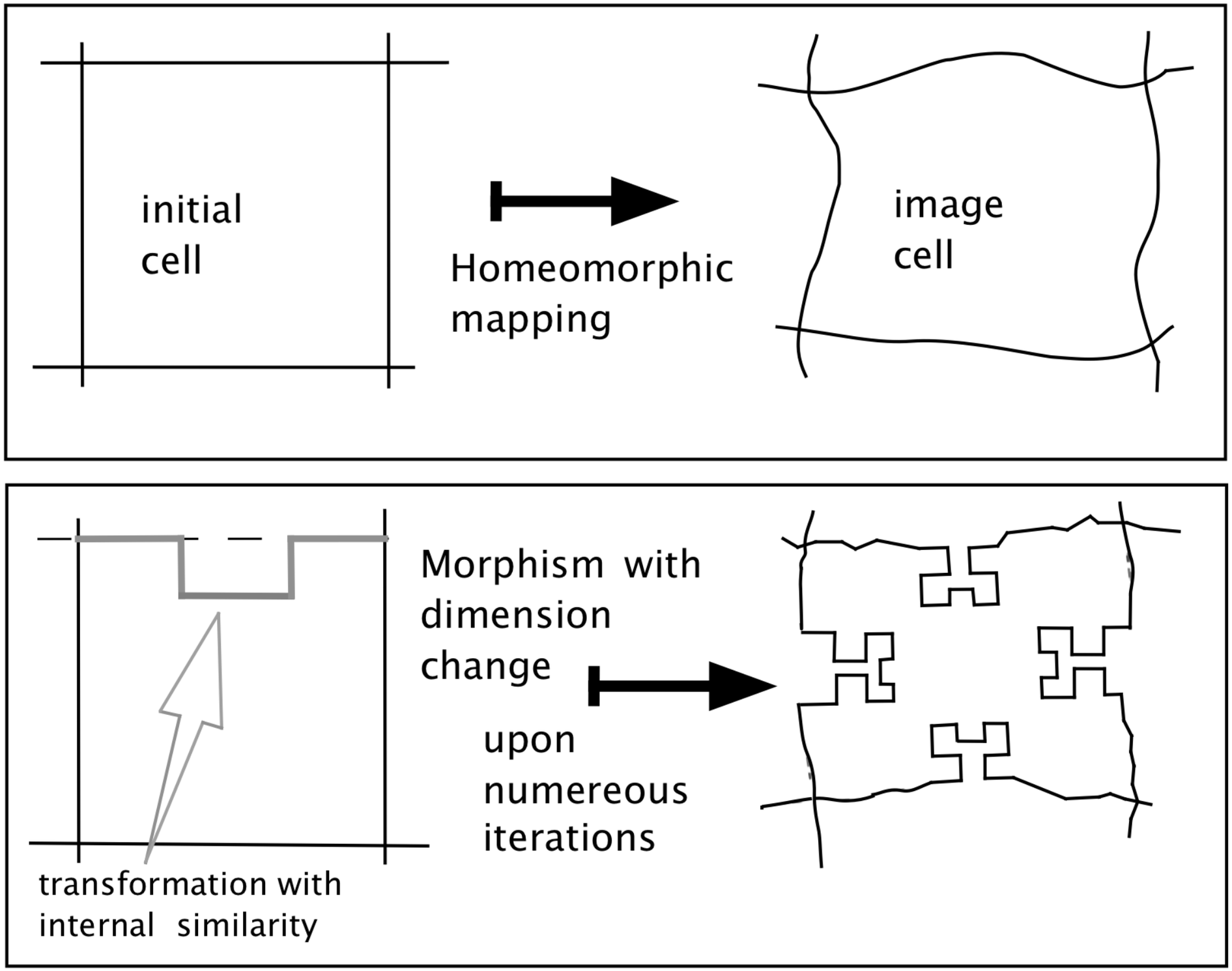
and so on.



What is space?

Mathematical point is nothing, it does not have any dimension. But in mathematics, a point can be developed into a ball, a topological ball that is an object without a determined shape. A set of tightly packed balls represents a mathematical lattice. Such a lattice was named by late French mathematician, Prof. Michel Bunias, a **tessellattice.** So, the tessellattice is the structure of real space and each cell can have the size equal to Planck's length ~10^{-35} m. Michel Bounias also proved that the tessellattice is a fractal lattice and this is a subtle structure of real physical space, which in the past was known as the **aether** among Europeans and Americans, and a **loka** in Vedic literature (the loka has the web structure and particles emerge from its cells).

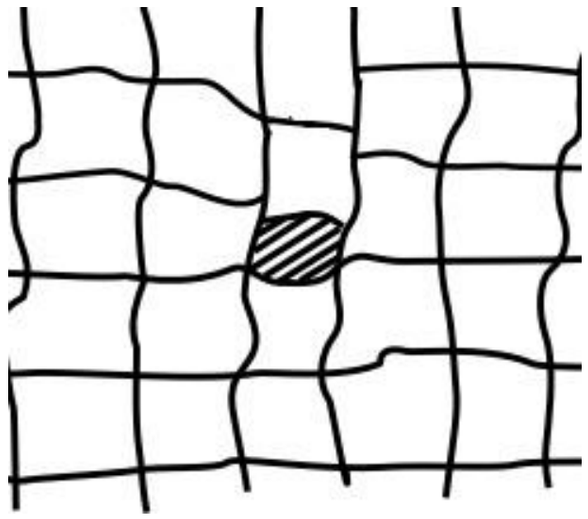
Fractality means that each cells can be contracted in line with the laws of fractal geometry:



The contraction of a cell occurs under a peculiar rule:
each new contraction repeats previous but on a smaller scale.

Space costrcucted of cells makes it possible to introduce the main physical notions: **mass** and **charge**

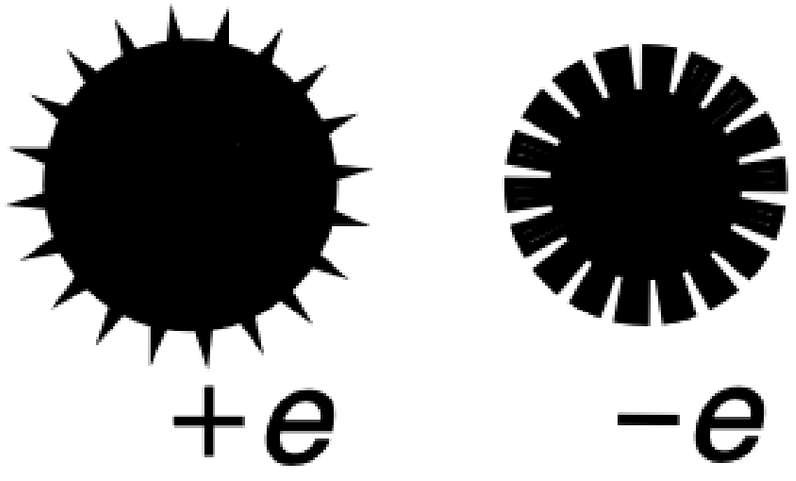
$$\textbf{Mass} = C \cdot \frac{V_0}{V_{\text{contracted}}}$$



mass is associated with
a decrease in volume of a cell

Charge appears as the quantum of the the surface fractal:

outward
(positive charge)



inward
(negative charge)

Therefore, two types of fundamental oscillations can occur in the tessellattice:

1) Volumetric oscillations, in which periodically initial compression of the cell changes to an expansion, that is, mass changes to a tension;

2) Surface oscillations, in which the ininitail charge state of the cell's surface perioducally transitions to a twisted state, that is, the electric charge changes to a magnetic monopole.

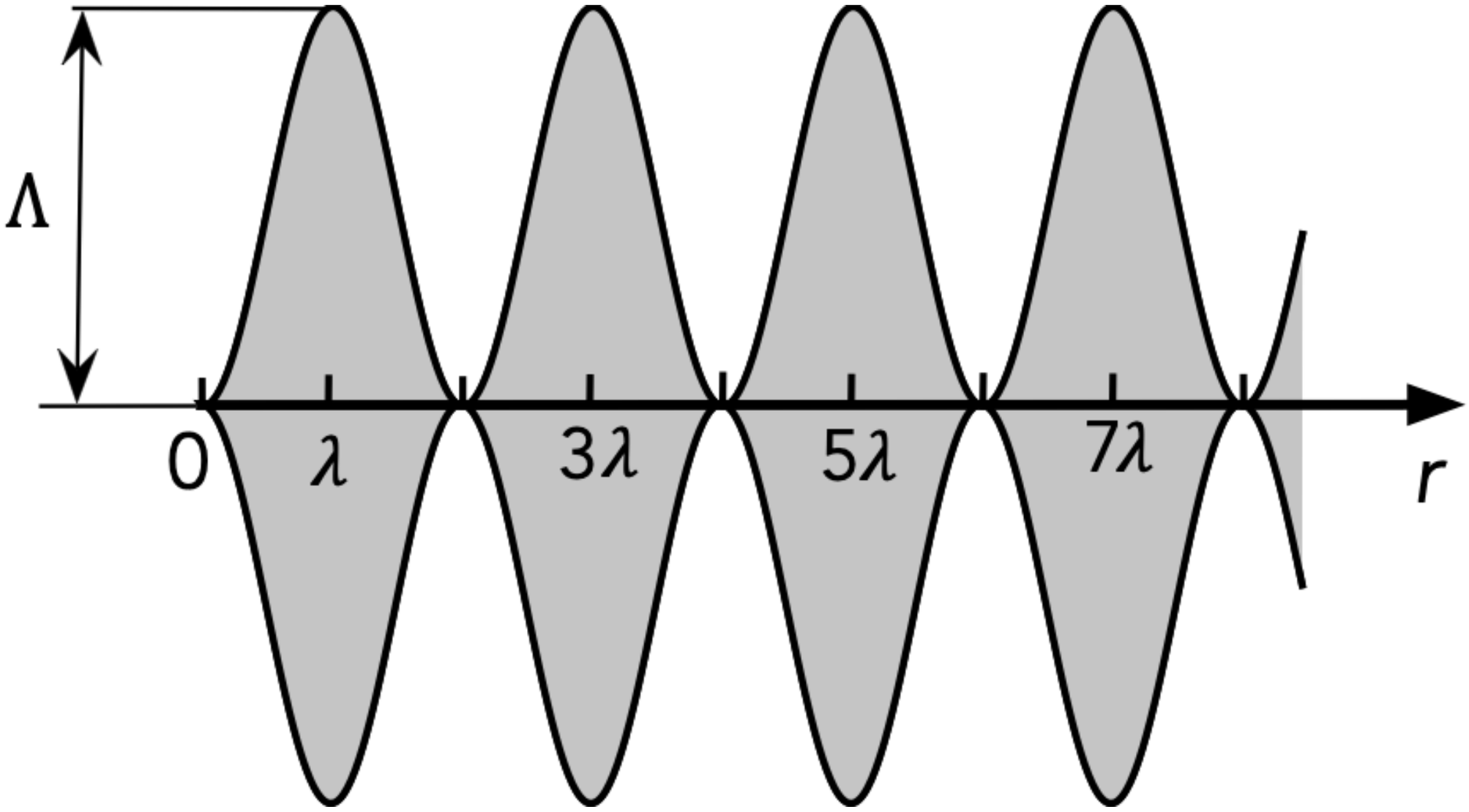
The first field we can reasonable call a ***massotension field*** and its carriers, quantum of the field, which carry fragments of mass, were called ***inertons.***

The second field is the ***eletromagntic field*** and its carriers, quantum of the field, which carry the electromagntic polarization are called ***photons.***

How the massotension wave is moving?

Its motion is governed by the equation of an **ordinary classical wave**.

Here is the massotension wave travelling through the tessellattice and the particle is in the center of this wave:

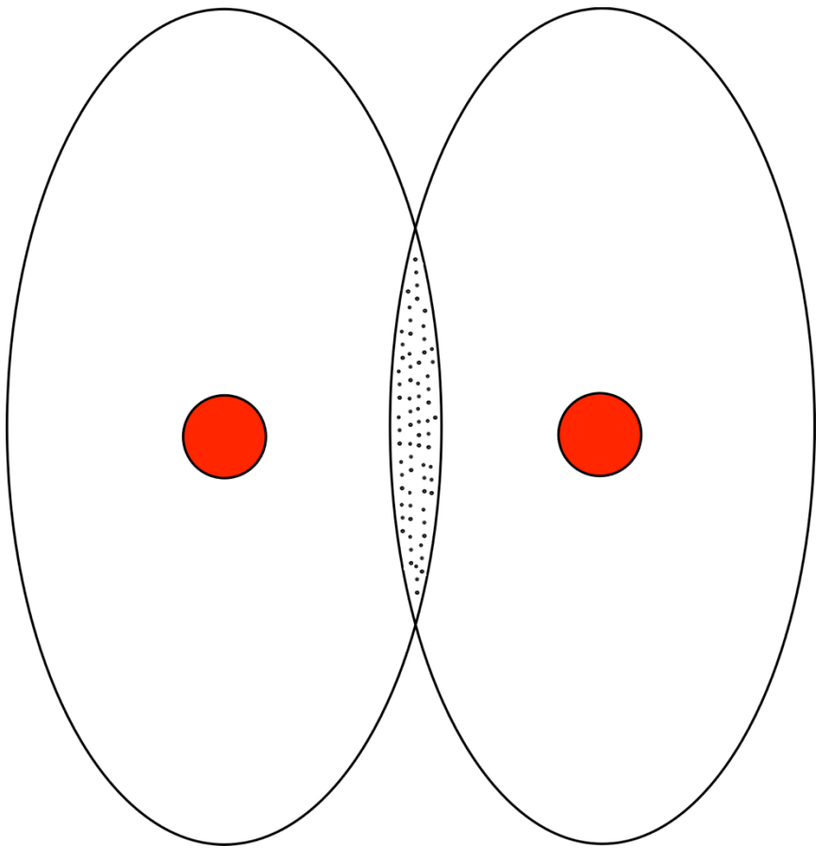


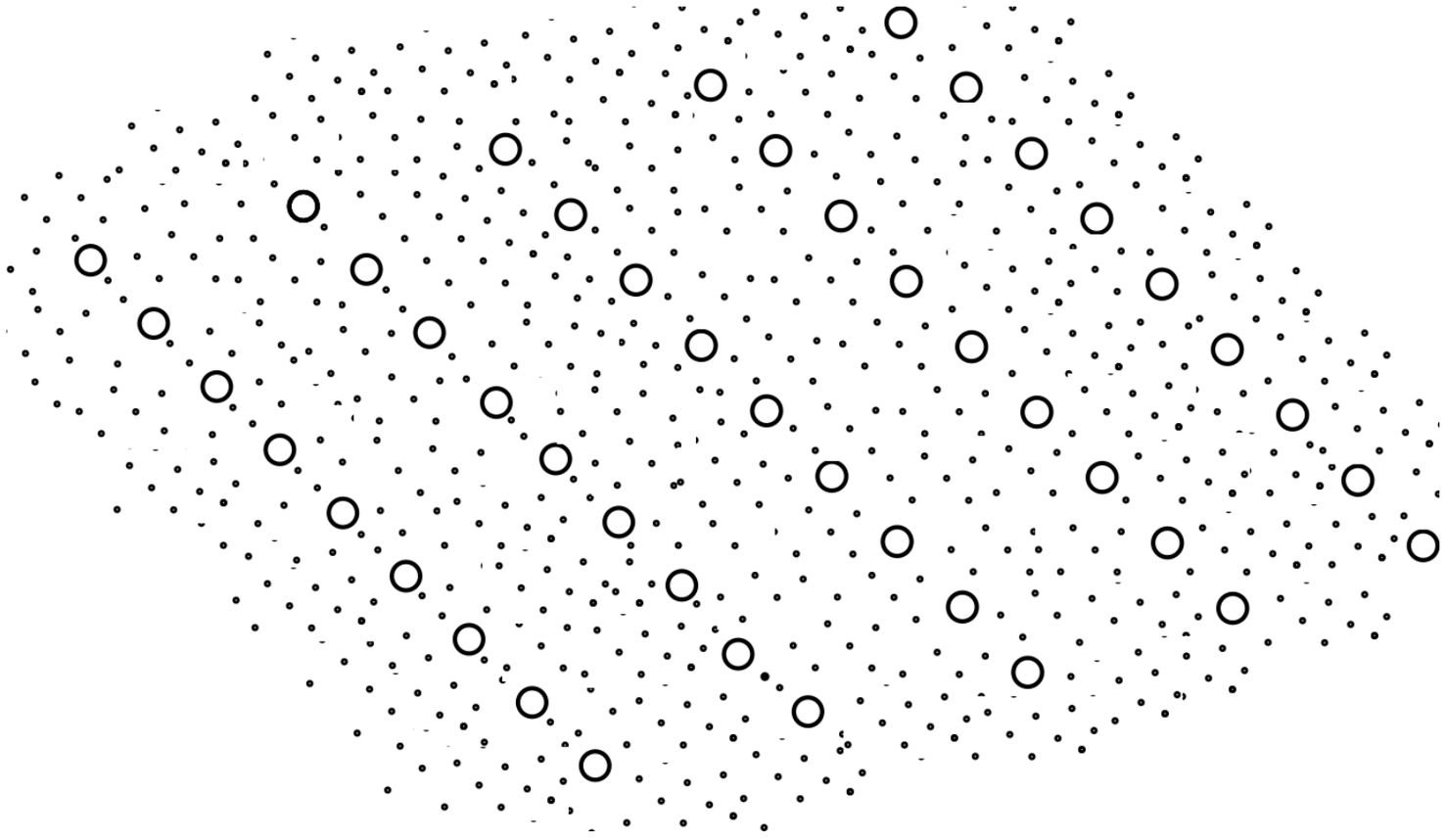
λ is the de Broglie wavelength,

Λ is the amplitude of the massotension wave-particle.

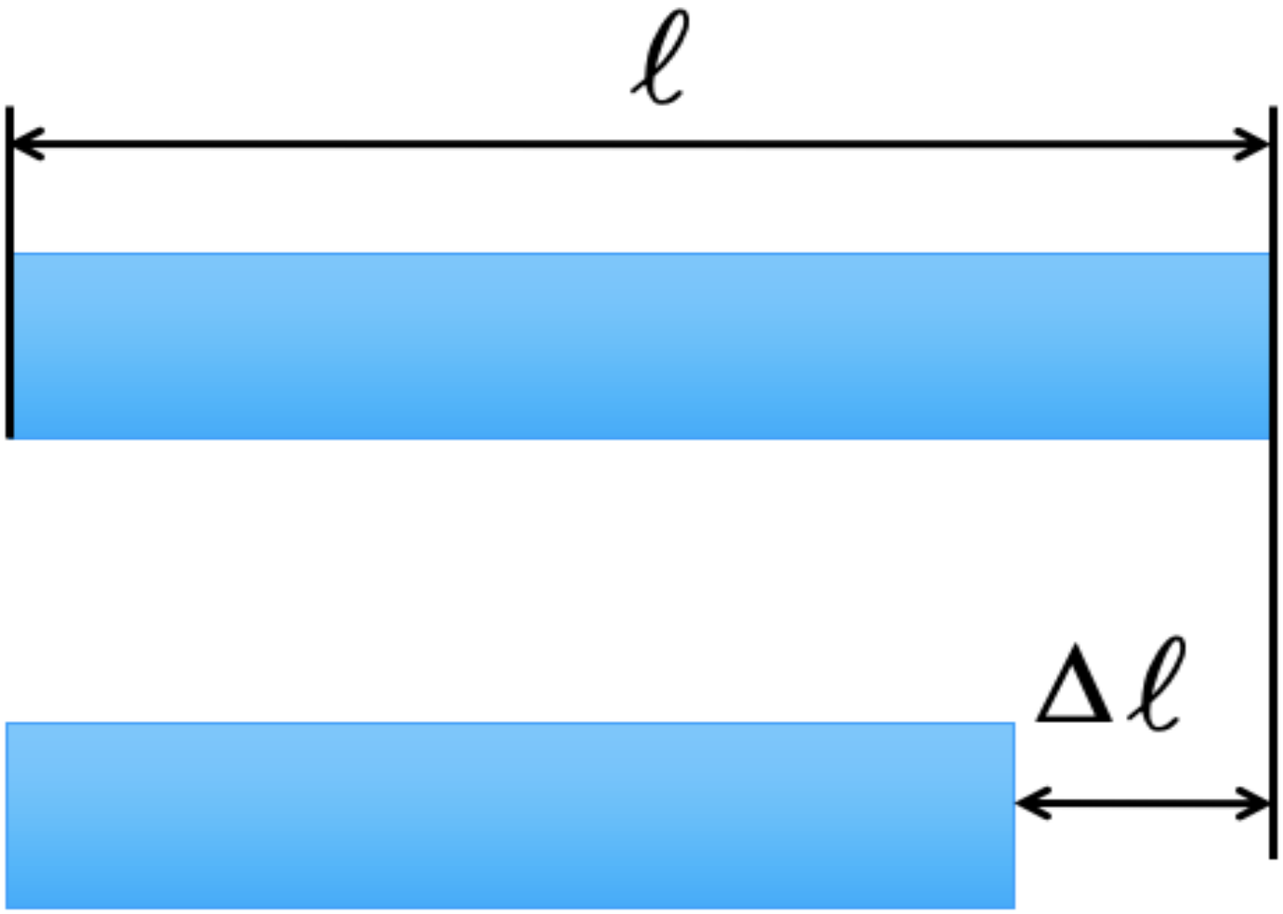
The submicroscopic concept uncovers peculiar properties of quantum systems especially the dynamics of particles

In a solid ψ-wave functions of entities overlap. This overlapping forms the whole cloud of inertons of the solid.





At the striction, the length ℓ of the solid is contracted on a value of $\Delta\ell$. This occurs with the speed that close to the velocity of light c . The ratio $\Delta\ell/\ell = 10^{-5}$.



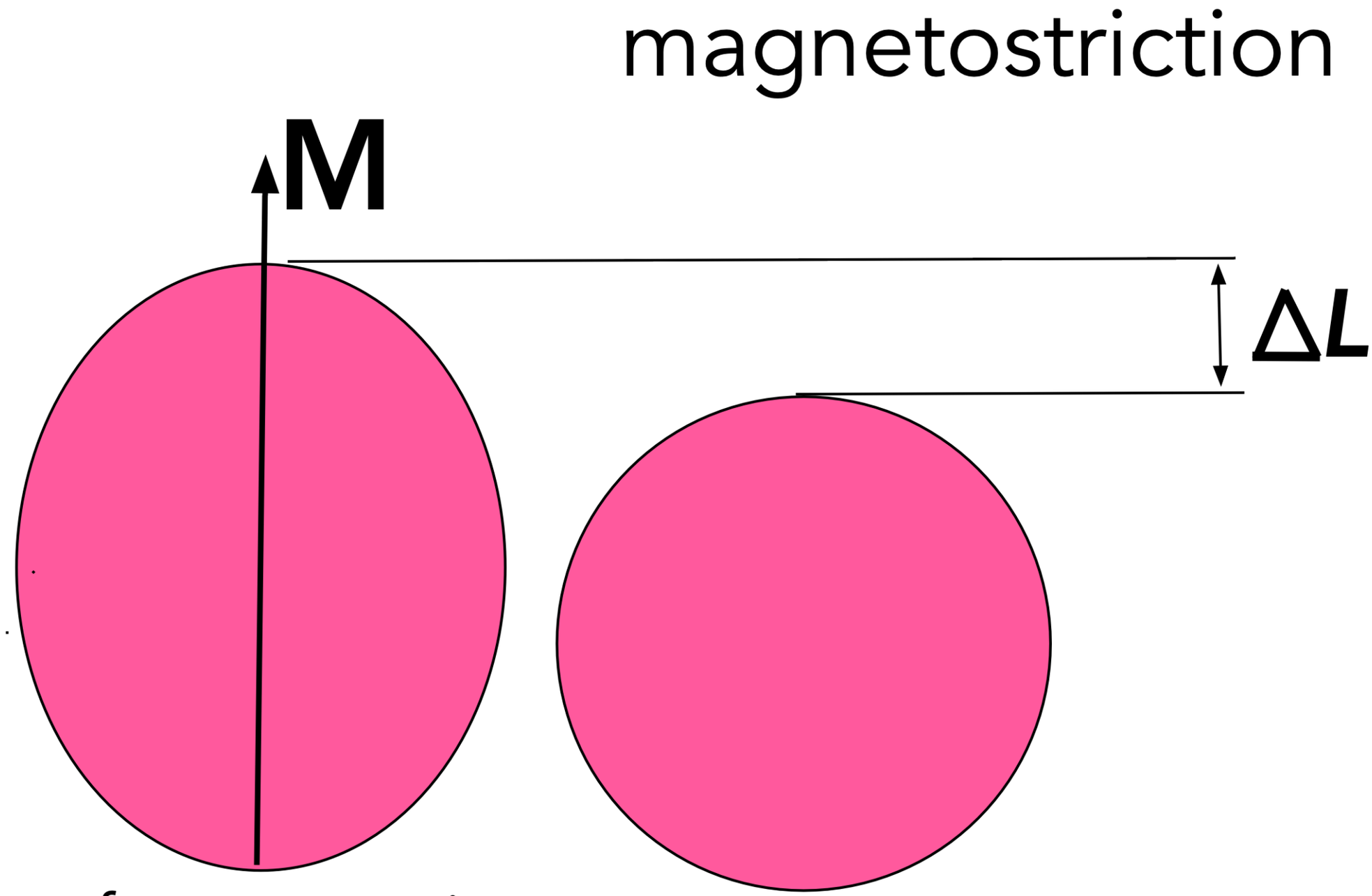
$\Delta\ell$ is irradiated as a flow of inertons

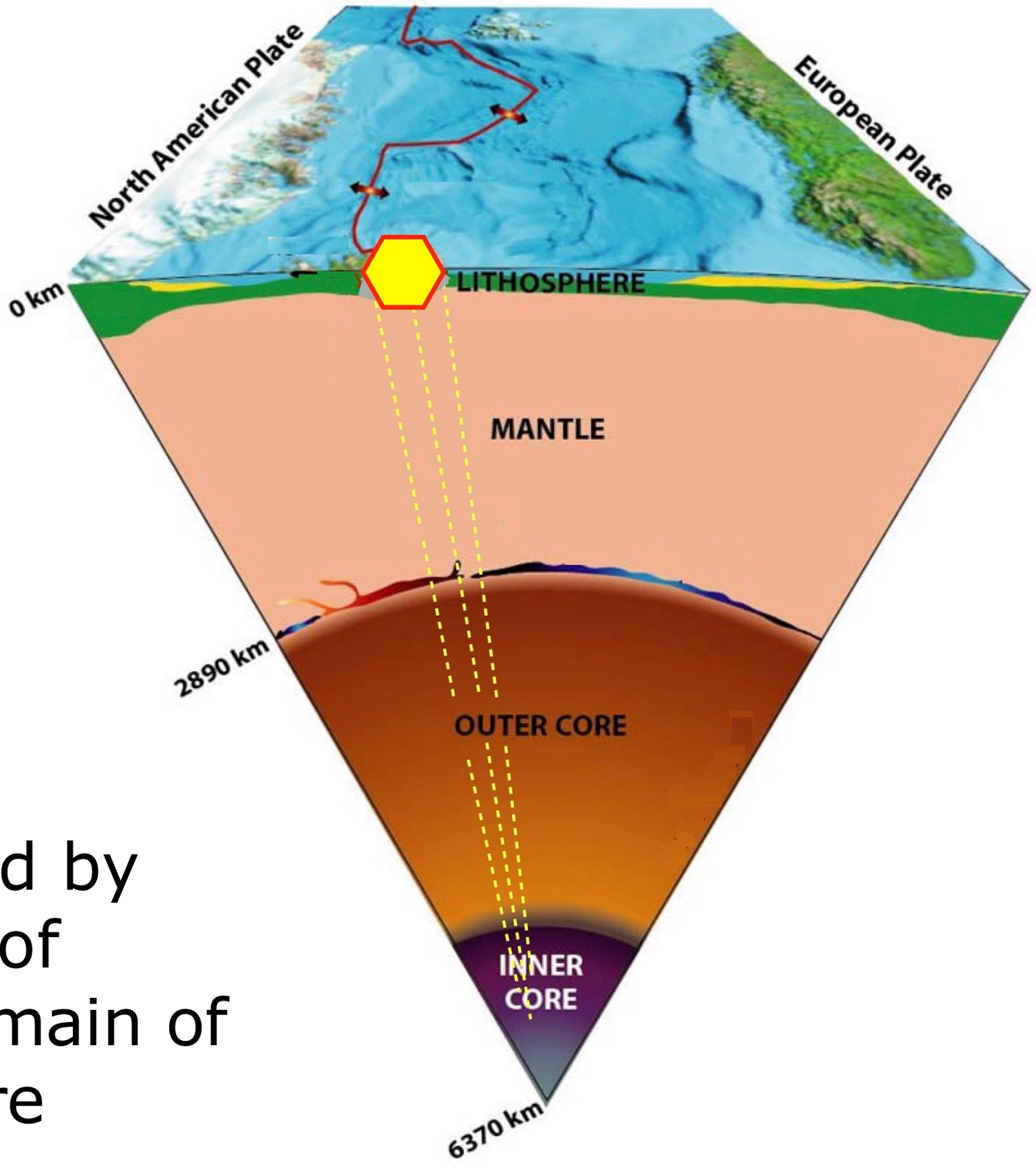
Cristian Teodorescu and collaborators (2021, 2022) shown that although the temperature in the Earth's core (roughly 5500 K) is close to the melting point of iron under the Earth's pressure of 360 GPa, it is nevertheless possible to reproduce ferromagnetism in the solid core, which he calls **re-entrant ferromagnetism** thermal lattice vibrations. By incorporating these perturbations directly into Fermi-Dirac statistics, the classic Stoner (1938) criterion is modified to define a new stability limit for spin-asymmetry.

At the Earth's surface to be $B_{\text{surf}} \approx 65$ μT, which is consistent with the measured value.

C. Teodorescu estimated the radius of the ferromagnetic domain to be ~ 200 km.

Ferromagentic domain in the solid core of the Earth





Shock wave generated by the magentostriction of the ferromagnetic domain of Earth’s inner solid core

$$N = \frac{m}{\text{molar mass of Fe}} \times N_A = 4.66 \times 10^{45}$$

$$E = \epsilon N = 2.563 \times 10^{-23}\ \text{J} \times \frac{\text{atoms}}{4.66\ 10^{45}} = \mathbf{1.194 \times 10^{23}\ J}$$

Shock energy: $$E_{\text{shock}} = G\frac{M\ \Delta m}{R + H}$$

Ejected mass: $$\boldsymbol{\Delta m} = \frac{E_{\text{shock}} \cdot R}{G \cdot M} \approx 1.6 \times 10^{15}\ \text{kg}$$

Ejected volume: $$\boldsymbol{V = \Delta m\ / \rho = 10^{12}\ m^3 = 1{,}000\ km^3}$$

(200 m in depth across a localized $50\ \text{km} \times 100\ \text{km}$)

Area covered with the ejected mass:

$$\mathbf{A} = (\mathbf{500\ km}) \times (\mathbf{200\ km})$$

$$\boldsymbol{h} = \mathbf{10\ m}$$

Ancient city of Laodicea (modern Turkey)



Anomalous 6-meter sediment backfill obscuring an ancient street.
The altitude is about 1000 m above sea level. No mountains around.
There was nowhere to start the mudflow, but it passed here.

Sardis, Turkey

These are not mountains;
it is all backfill from the very bottom.



Explorer Maksim Gaubets even has shown the locations of three semi-solid backfills and he claims that the first covered a developed proto-civilization approximately 12,000 years ago, the second blanket covered the ancient Greek civilization, and the third covered the Roman/Byzantine civilization.

Weaker emissions of terrestrial material occurred around 1816 and 1860.
Clay rained from the atmosphere for months.
This is evident from modern excavations of old buildings:







Where did clay come from in the atmosphere in the 19th century? Research indicates a wide range of Muscovian territories - from northwest of Moscow all the way to Siberia.









These holes closely resemble the geomorphology of explosive craters.

In 19th-century there appeared geomorphic crater fields around which surface-vitrified impactite pebbles are widely distributed. The pebbles exhibit a pristine, hyper-localized glassy surface layer measuring precisely $\delta \approx 0.2$ mm in thickness, while the inner lithic core remains entirely unaltered.

Tektites and fragments of impact glass demonstrate maximum preservation of soil structure and stratigraphic boundaries, which date their deposition to the late 18th and early 19th centuries.

Such pebbles were found at nuclear bomb test sites. To obtain such pebbles, the temperature should exceed 1500 ^{o}C and the instantaneous pressure > 2 Giga bar.

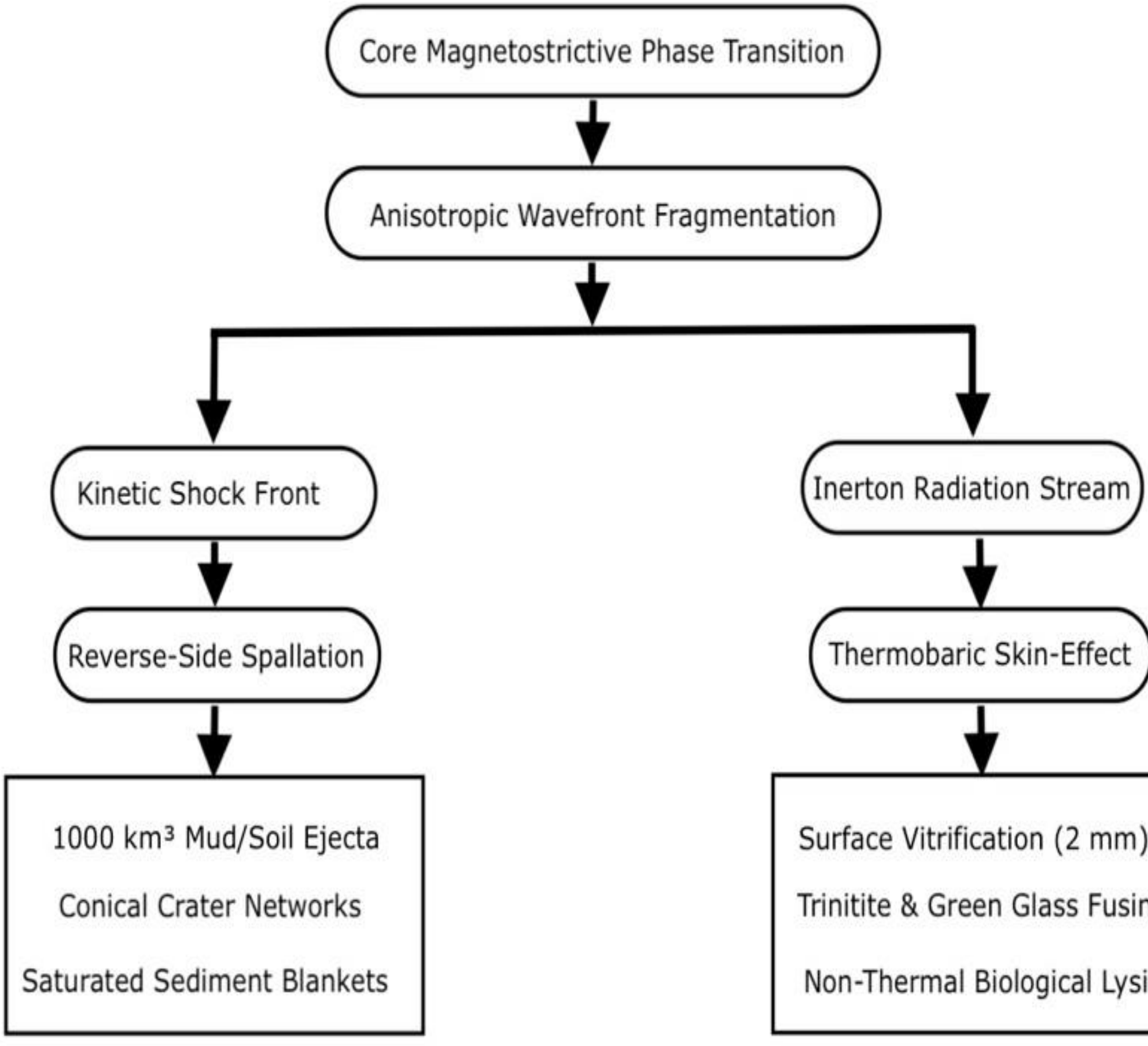
There are records in Sumerian tablets and ancient Indian texts that during cataclysms, people fell in the streets and became like clay, which indicates that people are being exposed to lethal doses of radiation, predominantly hard inerton field radiation.

All this fits into a single scheme:

{Core Magnetostriction: 10^{23} Joules}
$\Longrightarrow$ {Wavefront Fragmentation}
$\Longrightarrow$ {Localized Pulses: 10^{16} Joules (= 10 megaton of TNT)}

Shock waves trigger a classic mechanical phenomenon known as reverse-side spallation. When a compressive shock wave hits a free boundary, it reflects back as an intense tensile wave. If the tensile stress exceeds the structural yield strength of the rock or soil matrix, the material fractures instantly. The surface layer is violently torn out and ejected forward in a conical trajectory.

Thus Earth's core shock waves act through the dual mechanism accounts for the uniform patterns of destruction :

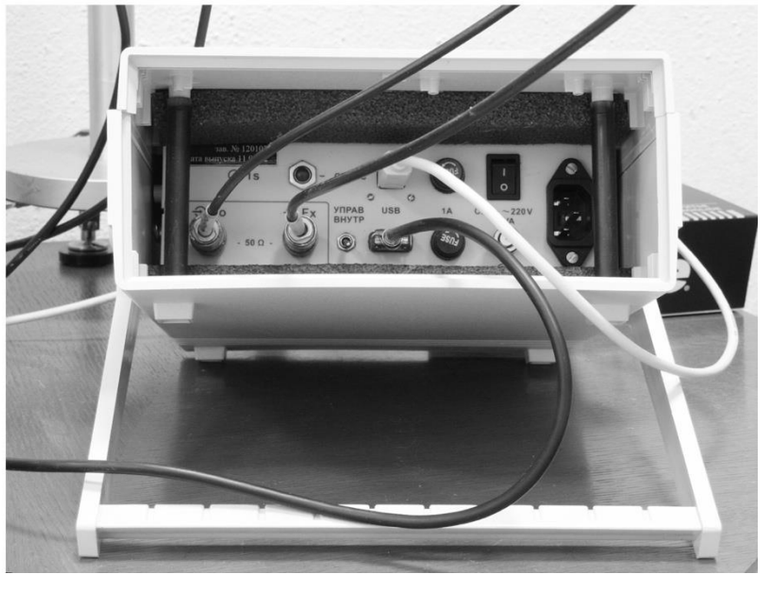

Core Magnetostrictive Phase Transition
Anisotropic Wavefront Fragmentation
Kinetic Shock Front
Reverse-Side Spallation
1000 km³ Mud/Soil Ejecta
Conical Crater Networks
Saturated Sediment Blankets
Inerton Radiation Stream
Thermobaric Skin-Effect
Surface Vitrification (2 mm)
Trinitite & Green Glass Fusing
Non-Thermal Biological Lysis

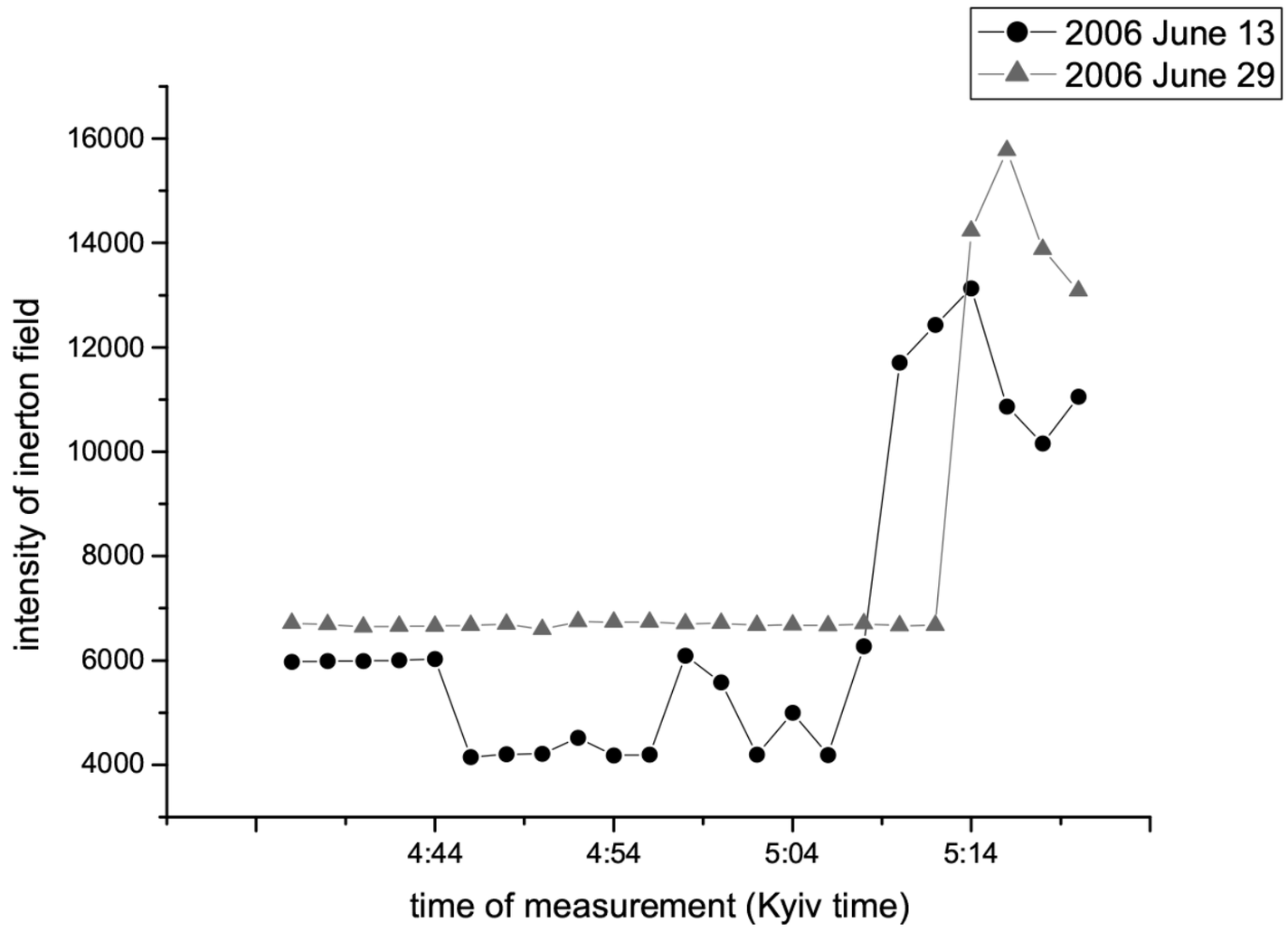
All underground movements in the crust and mantle must generate inerton signals and can be measured, as they can indicate the approach of earthquakes and volcanic eruptions.

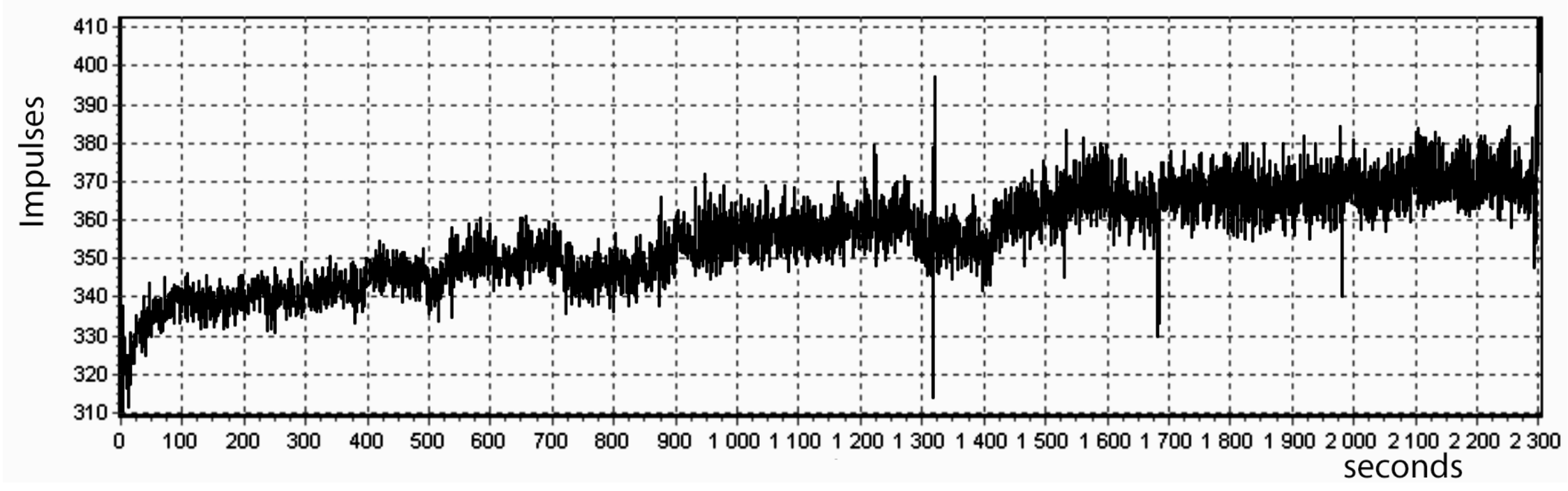
Two different devices that measure inerton signals:








2006 June 13
2006 June 29
intensity of inerton field
16000
14000
12000
10000
8000
6000
4000
4:44
4:54
5:04
5:14
time of measurement (Kyiv time)


Impulses
410
400
390
380
370
360
350
340
330
320
310
0 100 200 300 400 500 600 700 800 900 1 000 1 100 1 200 1 300 1 400 1 500 1 600 1 700 1 800 1 900 2 000 2 100 2 200 2 300
seconds

Mainstream geophysics and archaeology must implement devices that measure inerton signals and in particular inerton-gravitational tension sensors to map the ongoing, cyclical phase transitions of the internal planetary engines.

THANK YOU FOR YOUR ATTANTION