



A sub microscopic description of the formation of crop circles



**Volodymyr Krasnoholovets &
Ivan Gandzha**

Indra Scientific, Brussels

<http://inerton.kiev.ua>

Pictures on fields



Mark Fussels

<http://www.cropcircleconnector.com/>

<http://cropcircleconnector.com/Sorensen/PeterSorensen99.html>

Australia



Switzerland (wikipedia)



Australia

PRS 2006



Western Europe





April 28-29, 2011 (Hoeven, Holland)
(7 of 9-circle formation)



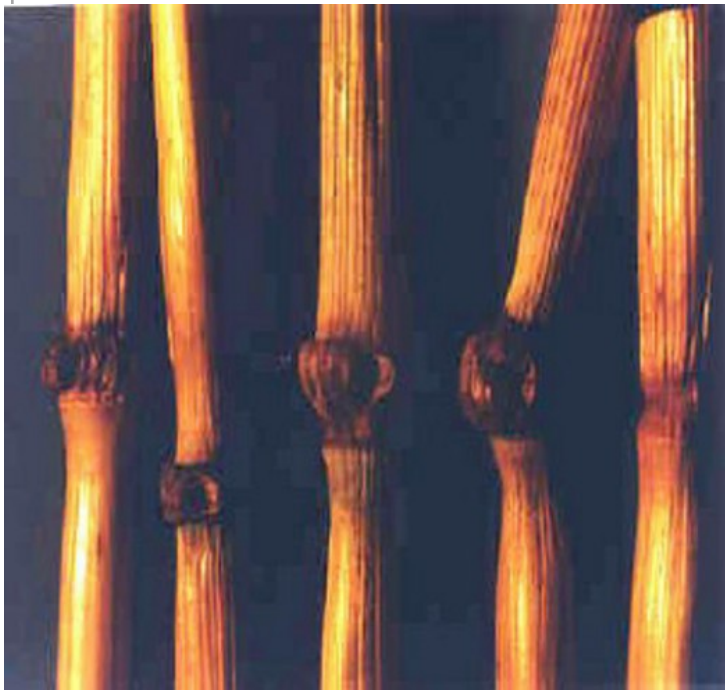
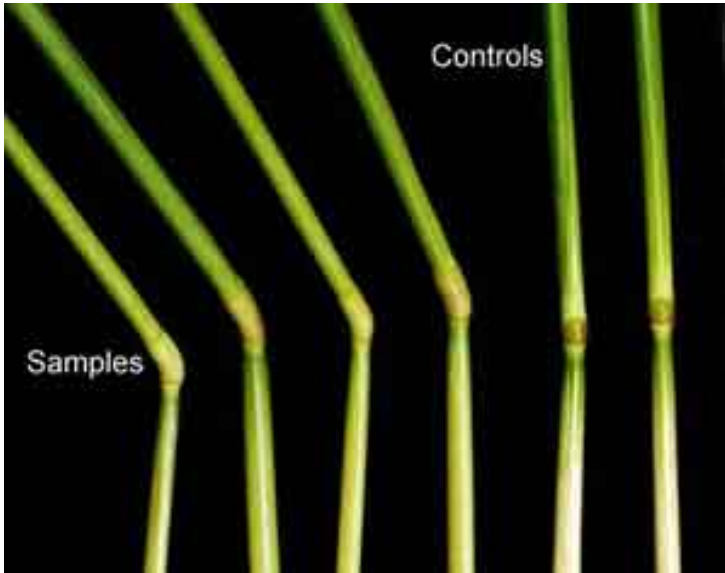
Mexico



W.C. Levensgood, J. Burke & N. P. Talbott

- In circles stalks are bent up to 90° without being broken and something softened the plant tissue at the moment of flattening. Something stretches stalks from the inside. Sometimes this effect is so powerful that the node looks as exploded from the inside out.
- The first hypothesis about a mechanism was atmospheric plasma vortices. However, later on it was recorded a sound radiation at 5.2 kHz ...

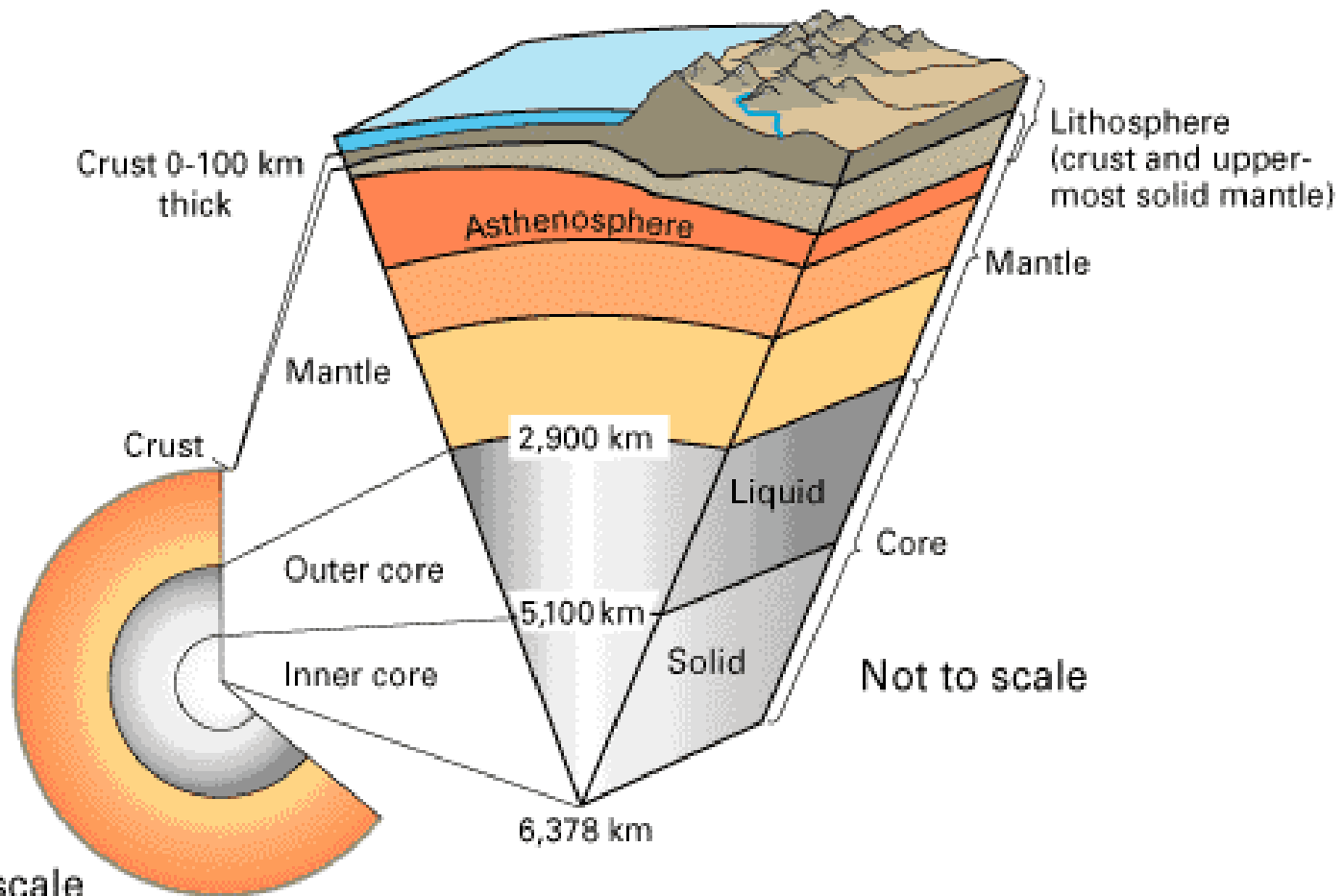
Photographs of Dr. W.C. Levengood



Bended grassy stalk



Structure of Earth



Modern geophysics studies: Magnetostriction of rocks in Crust and Mantle

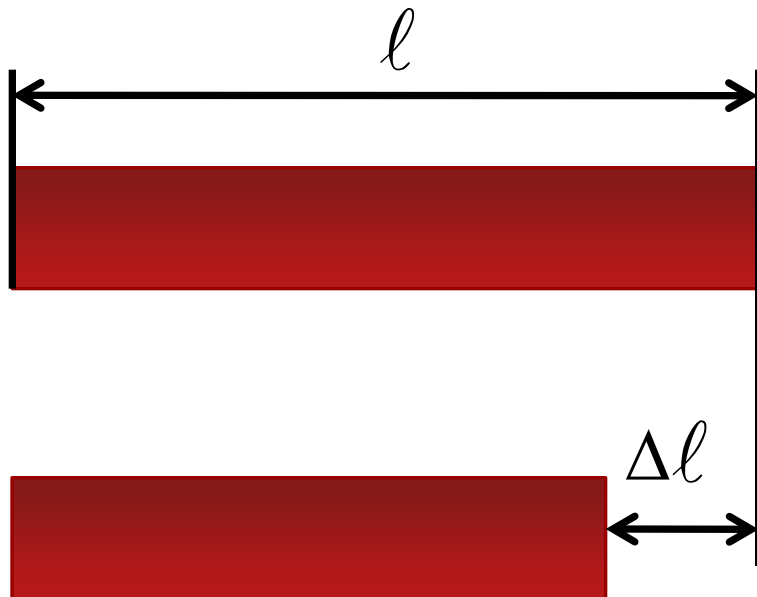
- Earthquake triggering due to magnetostriction of rocks in the crust. The magnetostriction in geo-physics is stipulated by mechanical deformations of magnetic minerals accompanied by changes of their remanent or induced magnetization.
- These deformations are specified by magnetostriction constants - proportional coefficients between magnetization changes and mechanical deformations.
- Magnetostriction constant of the crust is 10^{-5} ppm/nT, which is a little larger than for pure Fe.
- Effects connected to the magnetostriction of rocks in the crust can produce forces nearly 100 Pa/year; these small stress changes can trigger earthquakes.

Magnetostriction of magnetic materials generates flows of inertons

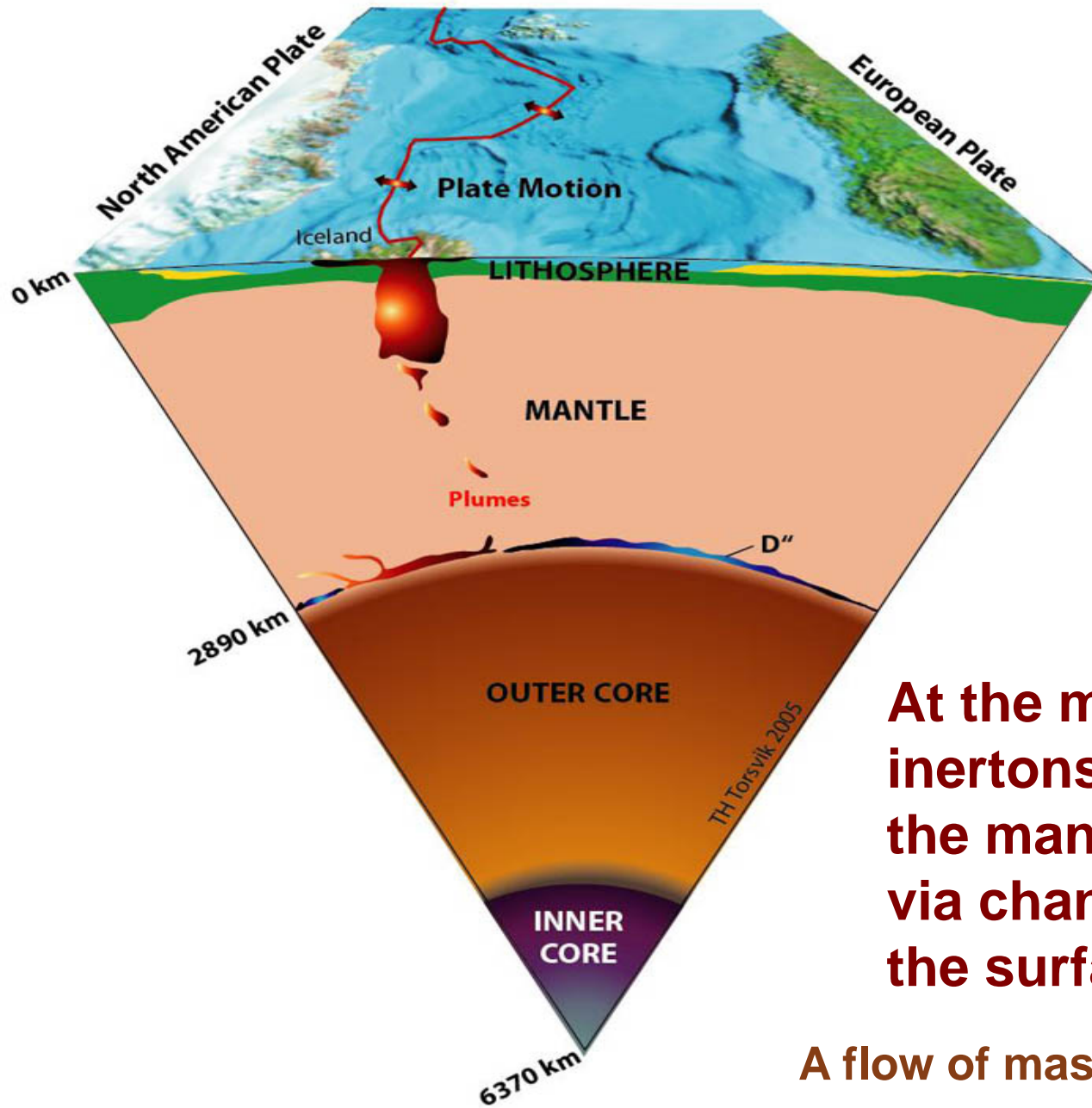
- From a sub microscopic point of view, the real physical space represents a tessellated lattice of primary elements of Nature (topological balls with a size $\sim 10^{-35}$ m). The theory of space was developed by Michel Bounias and V. Krasnoholovets.
- An elementary particle is a deformed ball in this tessellated lattice. A moving particle interacts with such a space, which generates excitations around the particle called ***inertons***.
- Each particle is characterised by the ψ -wave function. This ψ -wave function is associated with the cloud of inertons around the particle.

**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 Δl . This occurs with the speed that close to the velocity of light c . The ratio $\Delta l / l = 10^{-5}$.



Δl is irradiated as
a flow of inertons

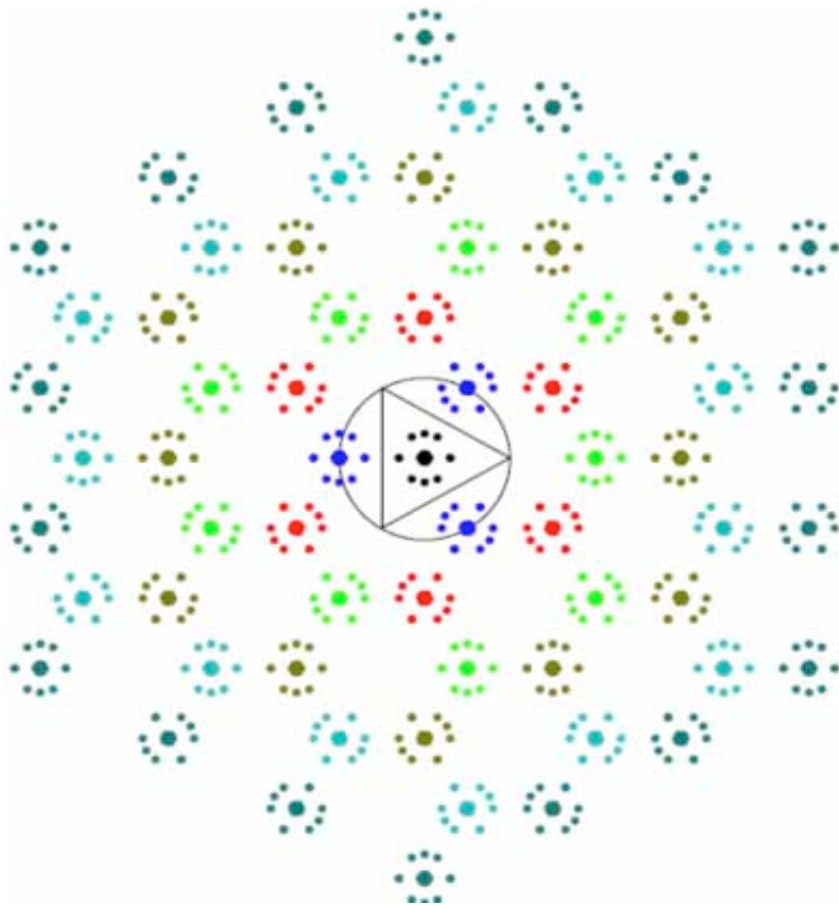


**Mantle-crust
channels**

**At the magnetostriction
inertons erupt from
the mantle and crust and
via channels reach
the surface of the Earth**

A flow of mass come to the surface ...

Kaleidoscope model



**Light going through
a mirror channel brings
bizzare pictures to the eyes**

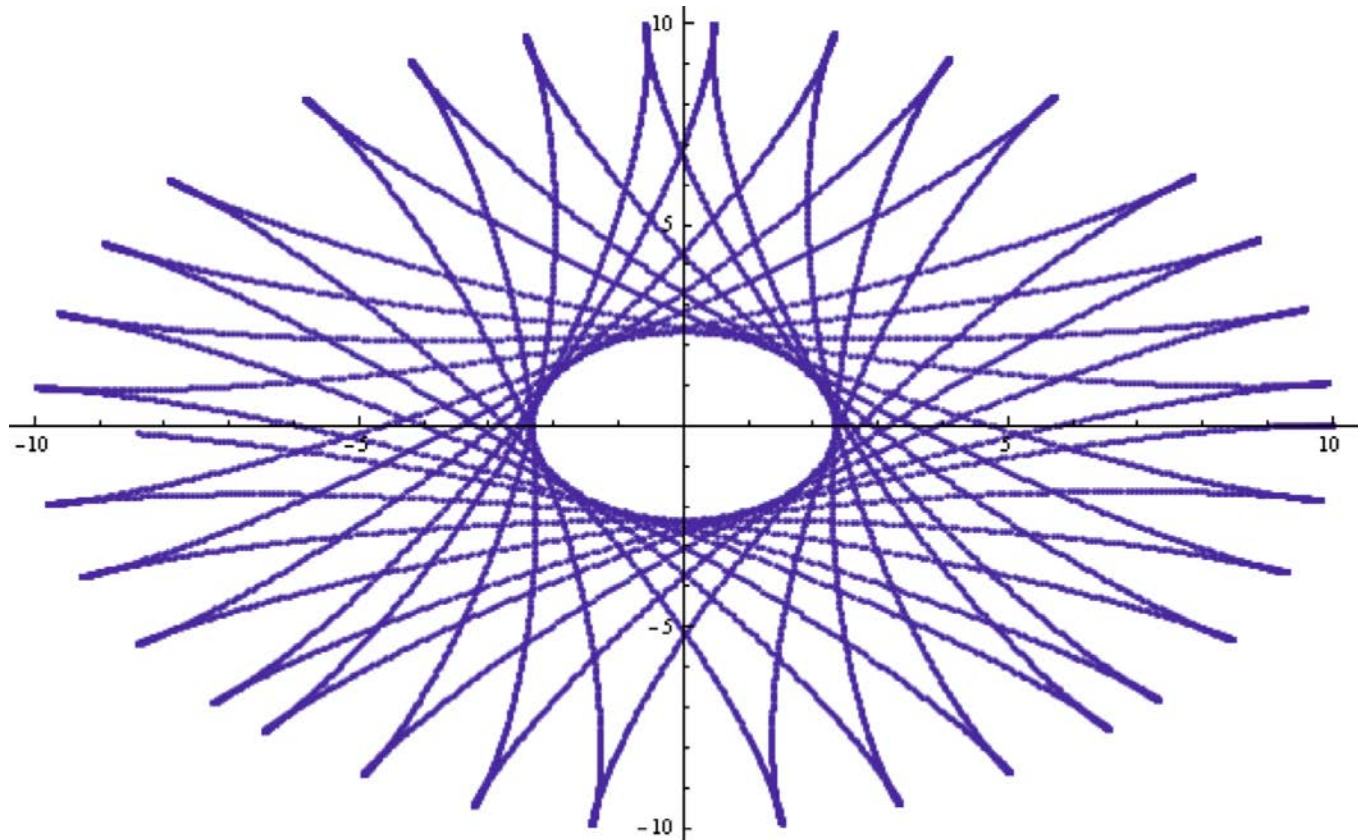
Motion of batches of inertons in the rotating central field

$$L = \frac{\mu}{2} (\dot{r}^2 + r^2 \dot{\varphi}^2) - U(r, \dot{\varphi}) \quad U(r, \dot{\varphi}) = \frac{\alpha}{2} r^2 + \frac{\beta}{2} r^2 \dot{\varphi}$$

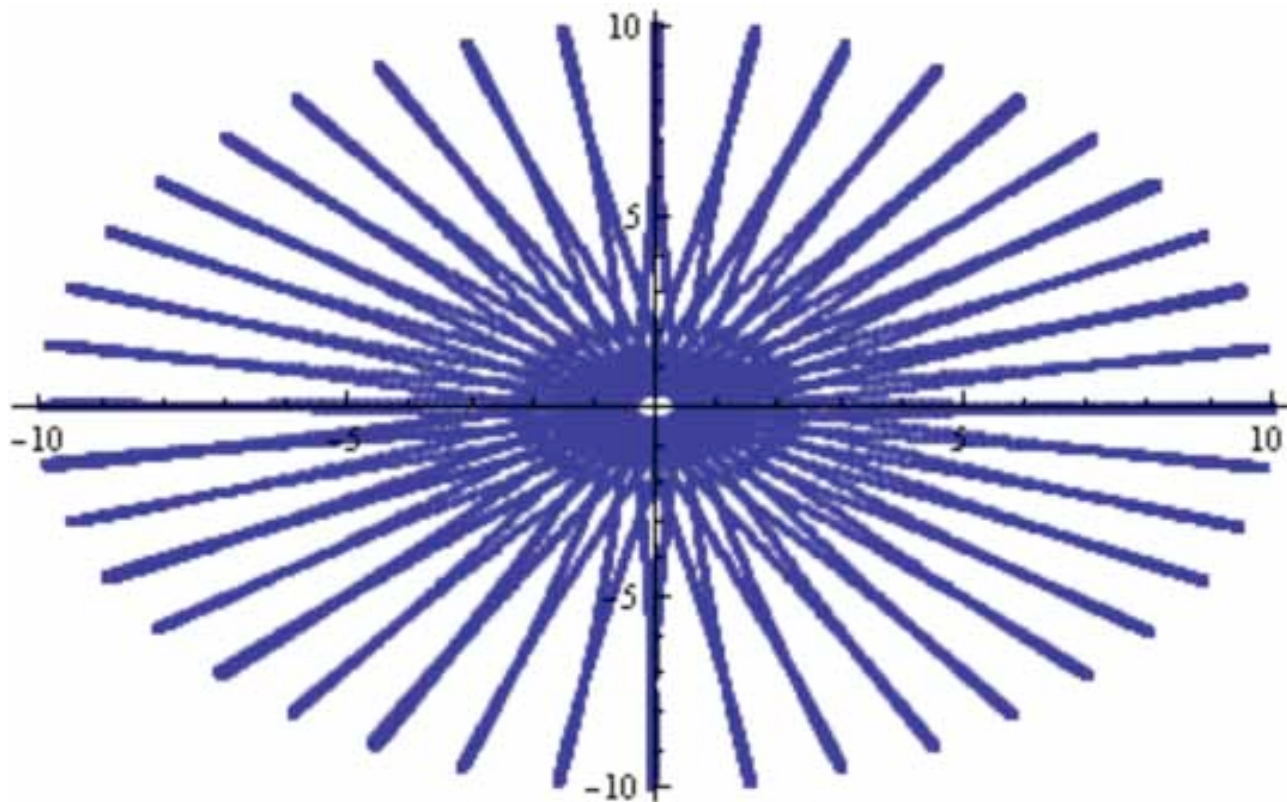
$$\ddot{r} - r \dot{\varphi}^2 + \frac{\alpha}{\mu} r + \frac{\beta}{\mu} r \dot{\varphi} = 0$$

$$r \ddot{\varphi} + 2\dot{r} \cdot \left(\dot{\varphi} - \frac{\beta}{2\mu} \right) = 0$$

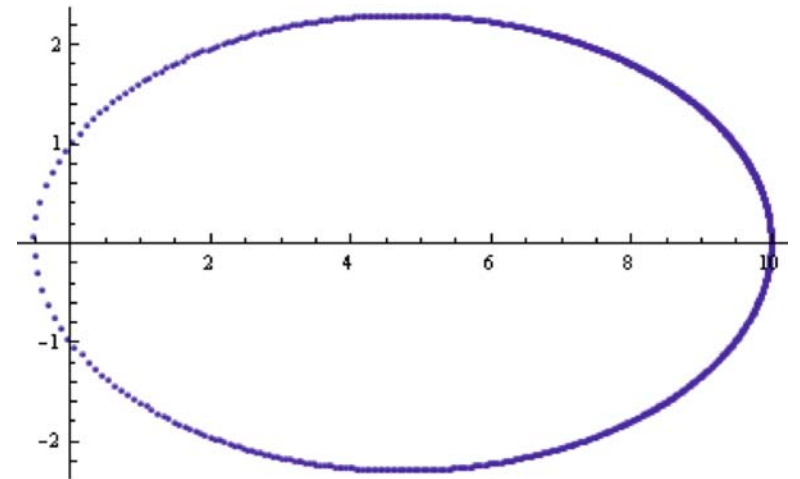
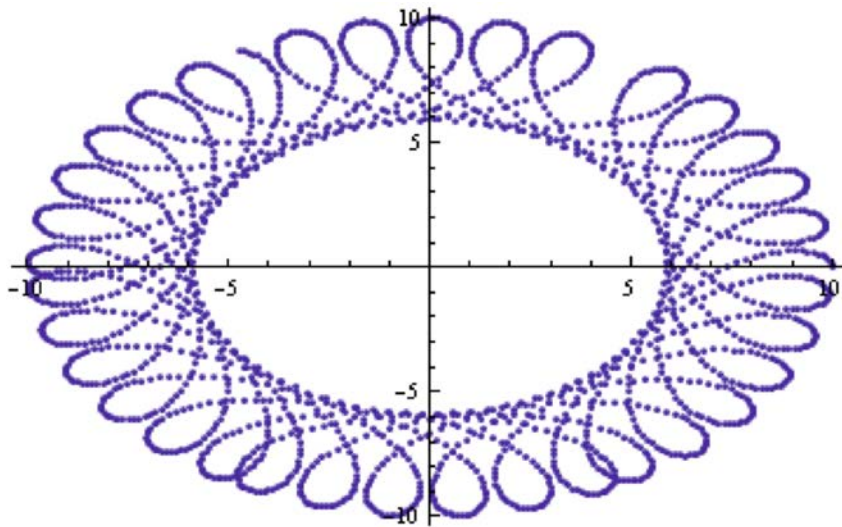
2-D trajectories of motion of batches of inertons



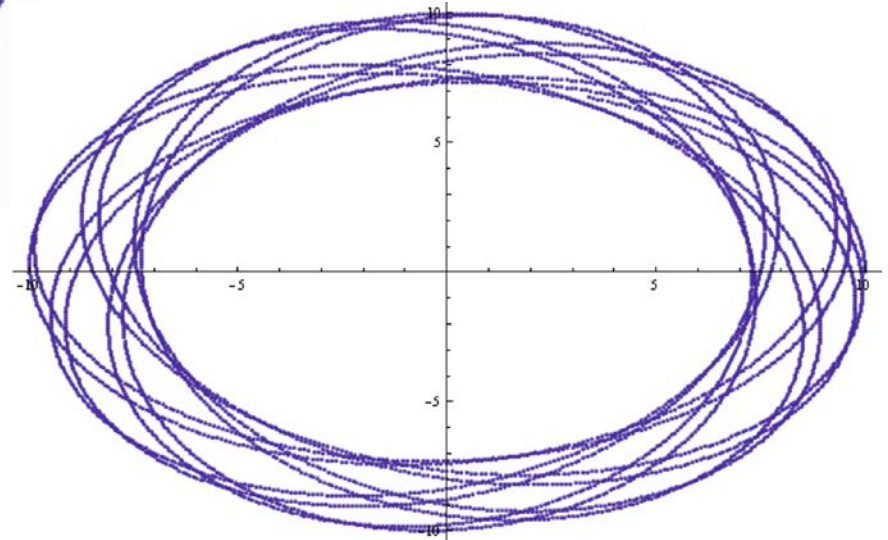
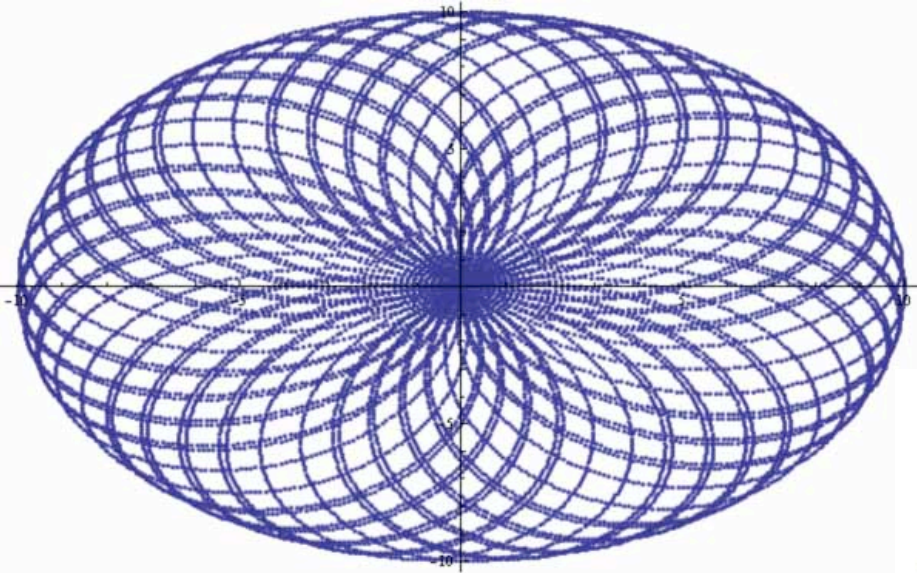
2-D trajectories of motion of batches of inertons – other parameters



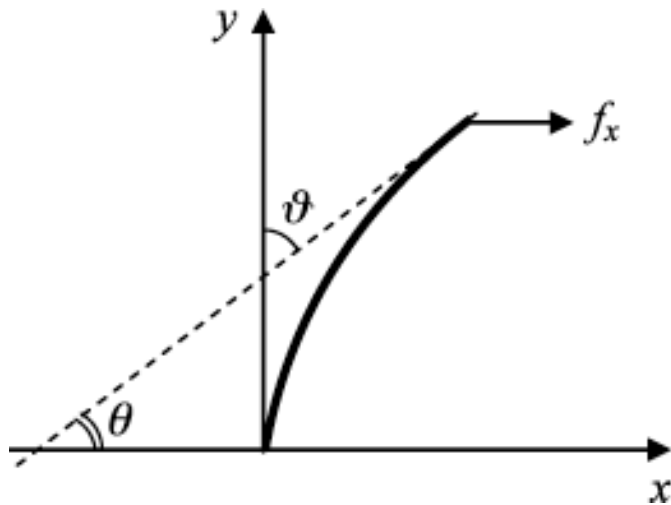
2-D trajectories of motion of batches of inertons – other parameters



2-D trajectories of motion of batches of inertons – other parameters



Elastic rod model



$$f_x \approx 3.41 \frac{IE}{l^2} \approx 0.16 \text{ N}$$

$$f_{\text{grav}} = mg = \rho Vg = \pi \rho R^2 l g \approx 0.033 \text{ N}$$

Estimation of the inerton force

- Let the mass of rocks $M \sim 10^7$ kg, the striction coefficient $C \sim 10^{-5}$, the frequency oscillations per second $N = 5$.
- Mass of all batches of inertons $\mu = M \cdot C \cdot N = 500$ kg.
- Let the total area of the land studied be 100 m^2 .
1000 stalks is growing per 1 m^2 . Then 10^5 stalks can grow in the area of 100 m^2 .
- Each stalk catches an additional mass $\mu_1 = \mu / 10^5 = 5$ g.
- $F_{\text{inert}} = \mu_1 a = 0.05 \text{ to } 0.075 \text{ N}$ where $a = 10 \text{ to } 15 \text{ m/s}^2$.
- $f_{\text{grav}} = 0.033 \text{ N}$

$$F_{\text{inert}} > f_{\text{grav}}$$