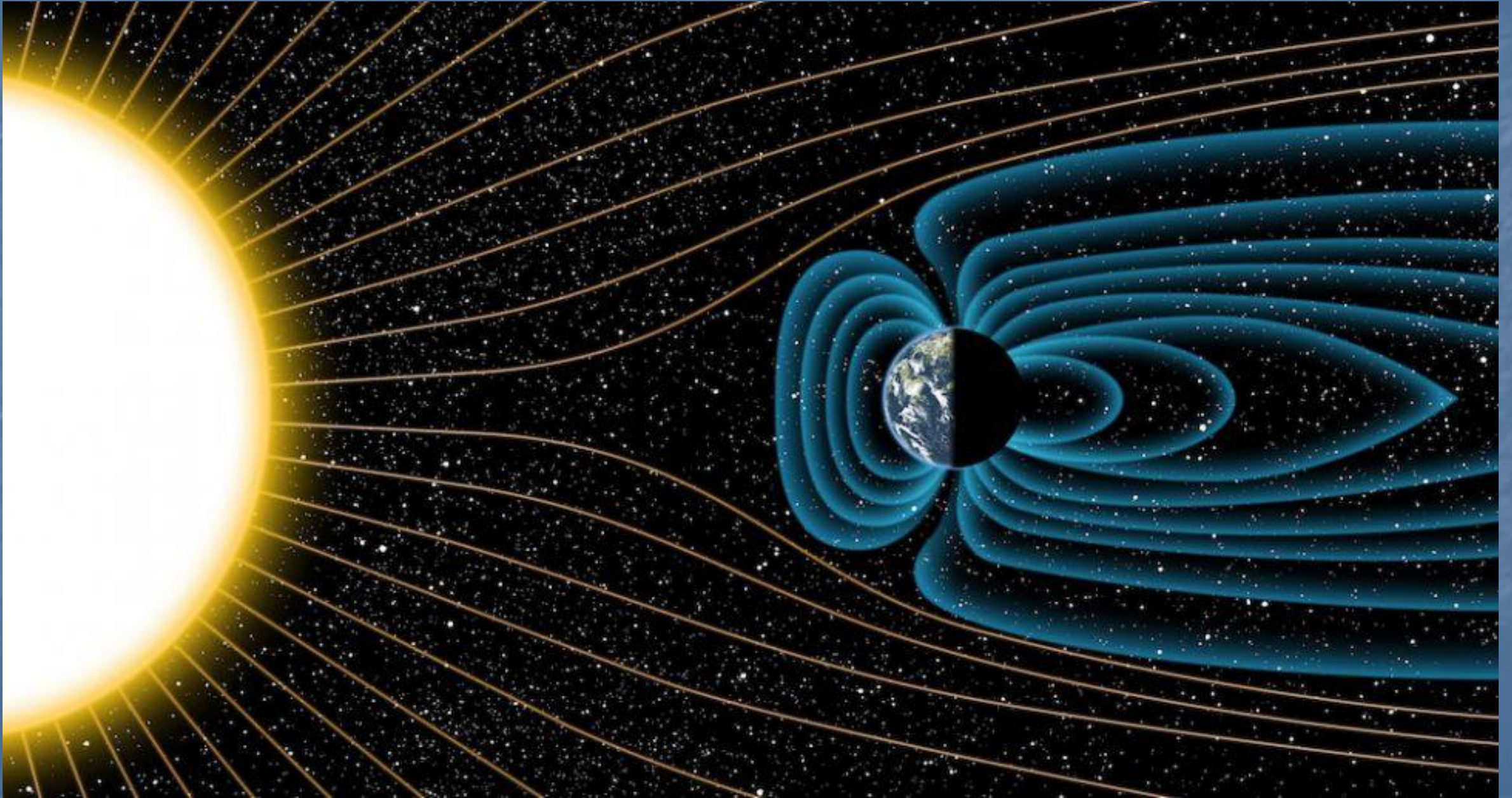


# The Effect of Electromagnetic Fields on Living Organisms.

All life on Earth exists within the constant and variable components of the Earth's electromagnetic magnetic field (EMF).

Thanks to the magnetic field, electrons and protons, which are harmful to life, circle around the Earth...

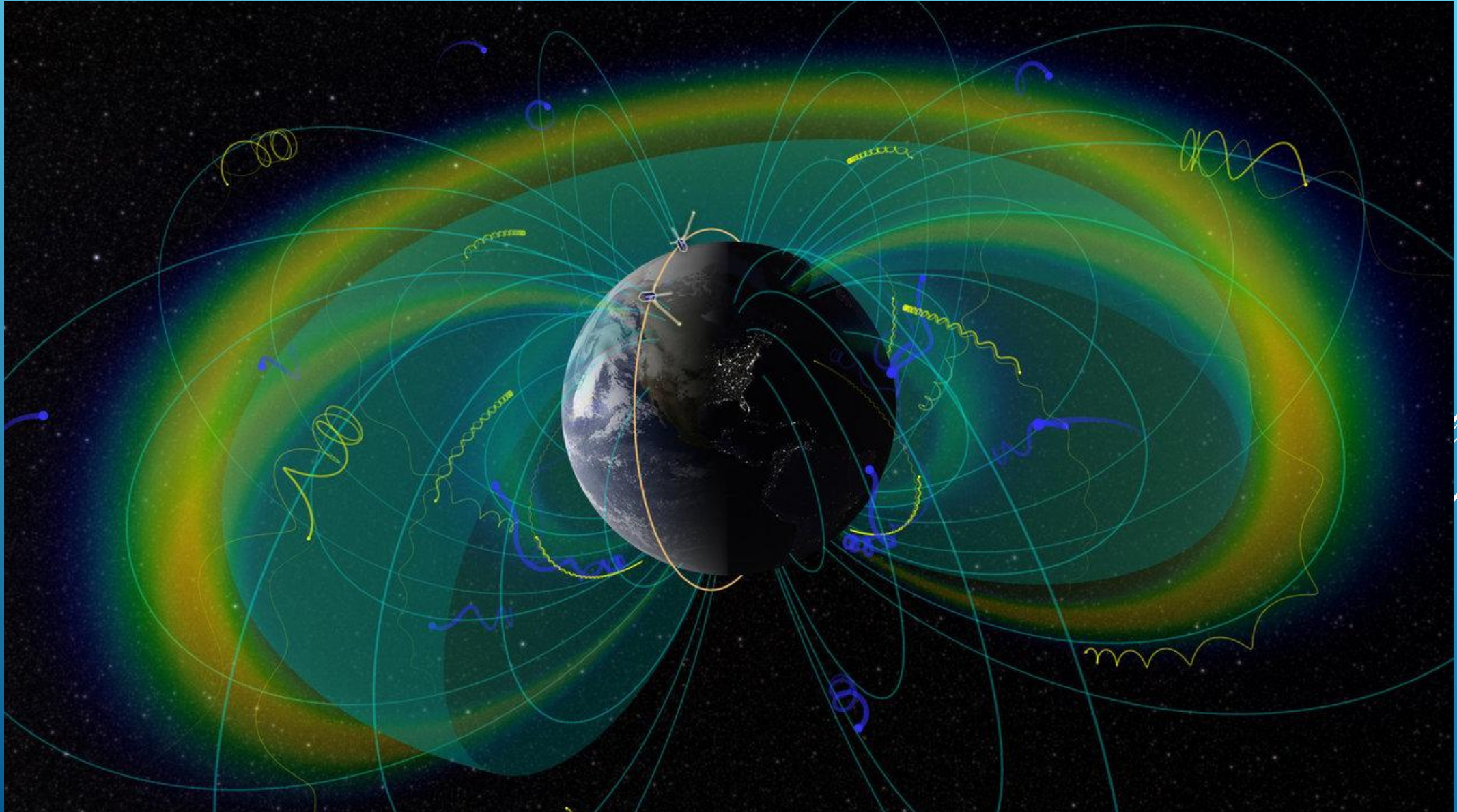


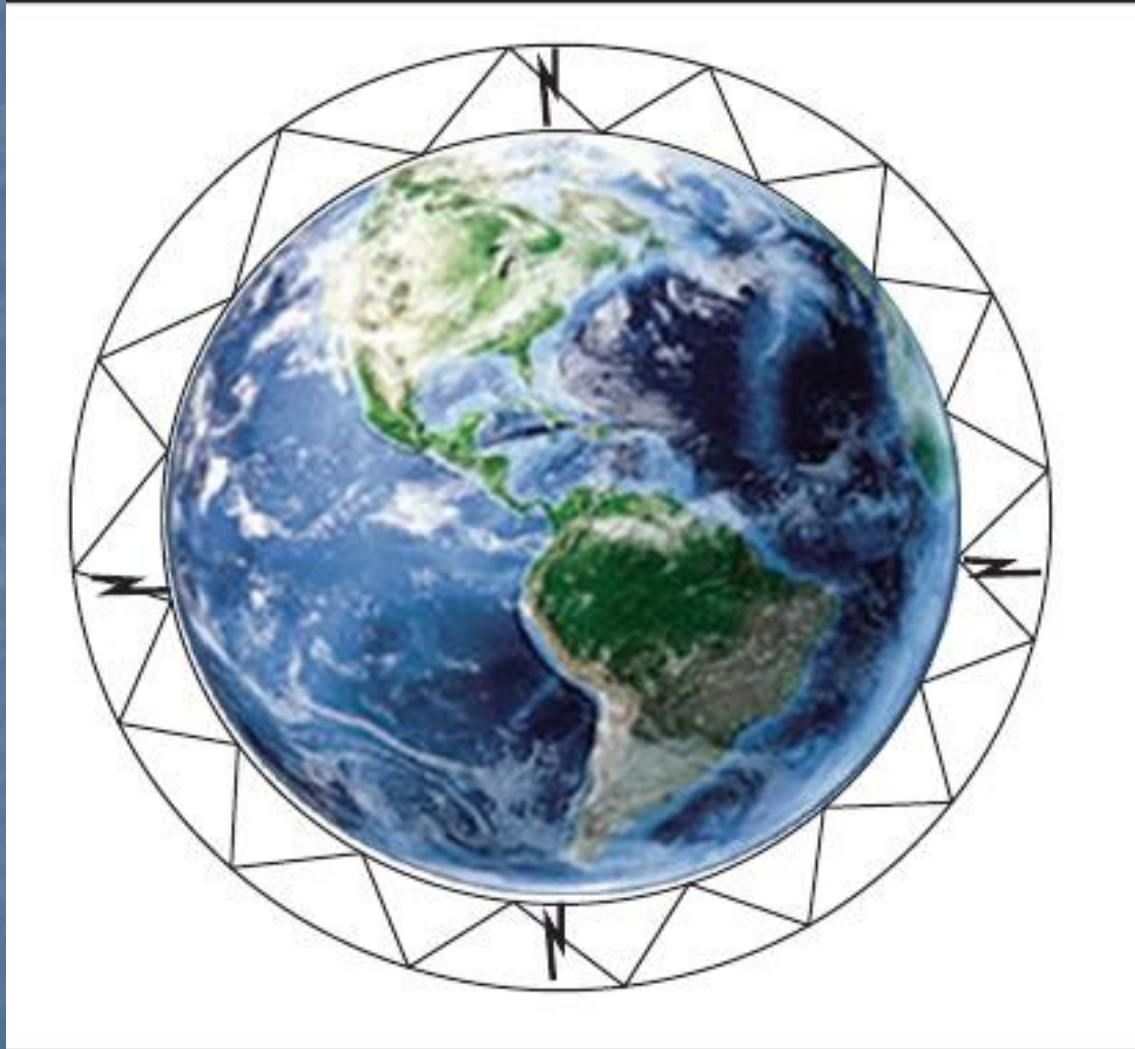
# The Earth's permanent magnetic field.

At the poles  $70 \mu\text{T}$ , at mid-latitudes  $50 \mu\text{T}$ , at the equator  $30 \mu\text{T}$



Variable EMFs arise from lightning discharges, magnetic storms, etc. The intensity of variable EMFs in a magnetically quiet environment is 30-50 nT, and during magnetic storms 300-1000 nT.

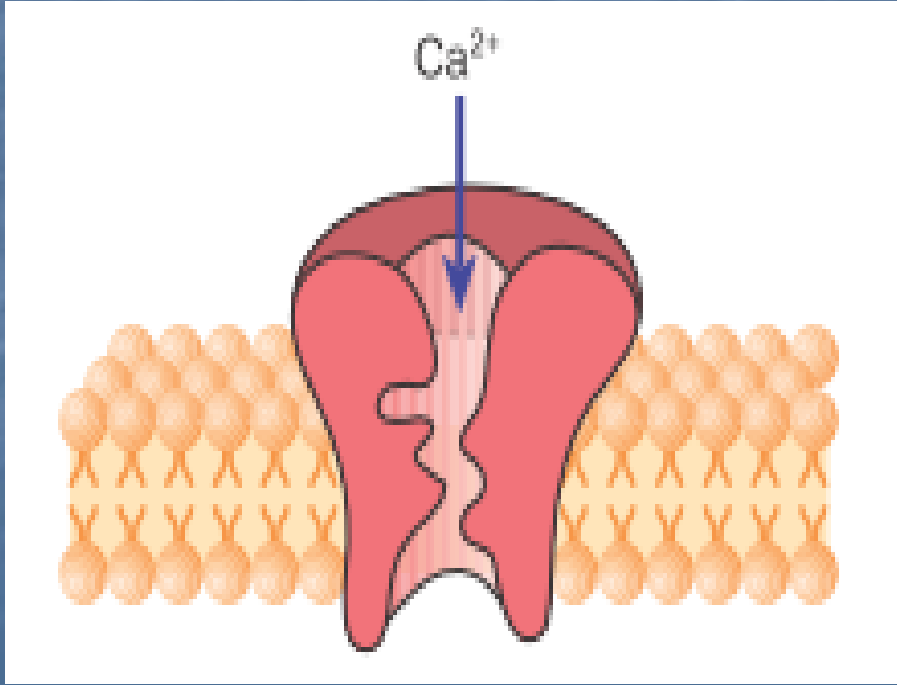
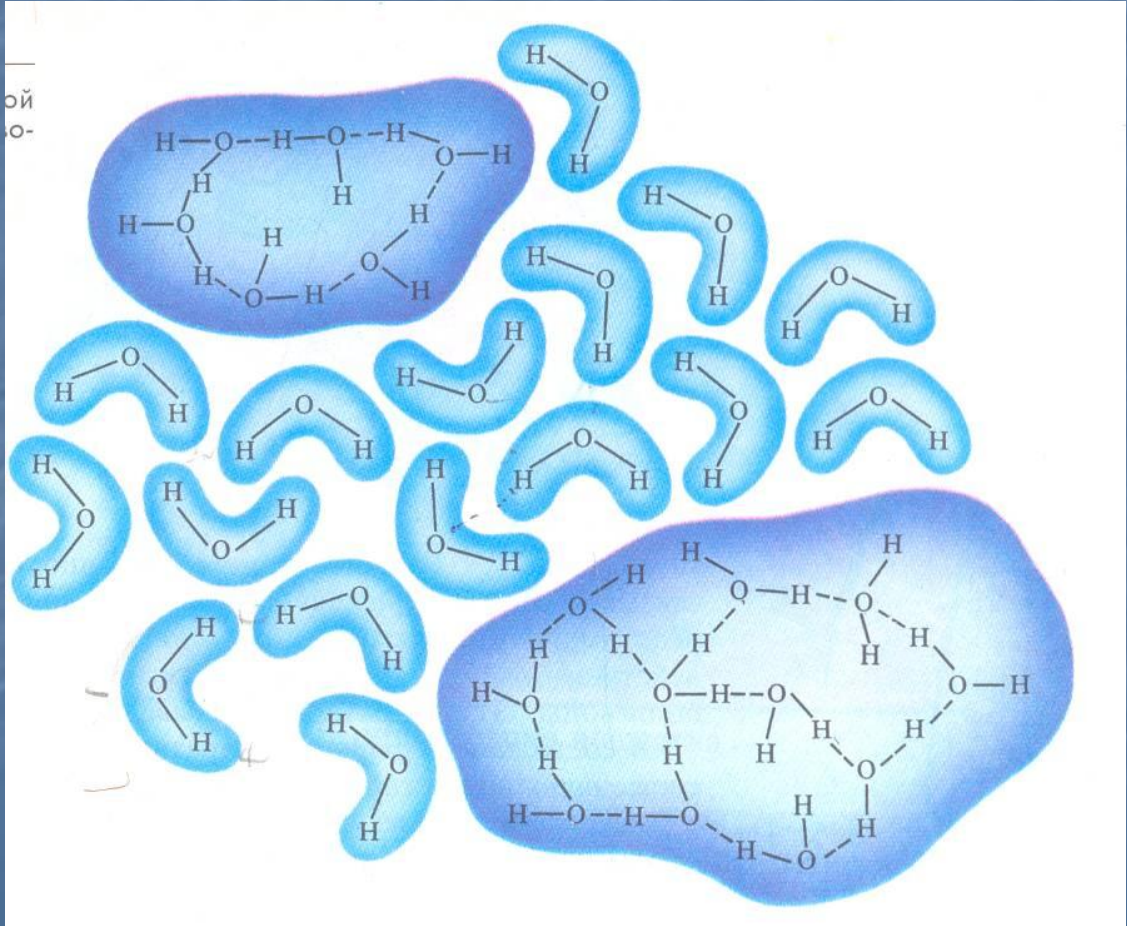




In tropical forests, lightning strikes occur at a frequency of approximately 100 per second. The electromagnetic wave from lightning travels around the Earth's 40,000 km perimeter in 0.8 seconds. This means that the waveguide between the Earth's surface and the ionosphere is tuned to a frequency of approximately 8 Hz.

**There are two main hypotheses regarding the effect of weak low-frequency EMFs on living organisms at the molecular level.**

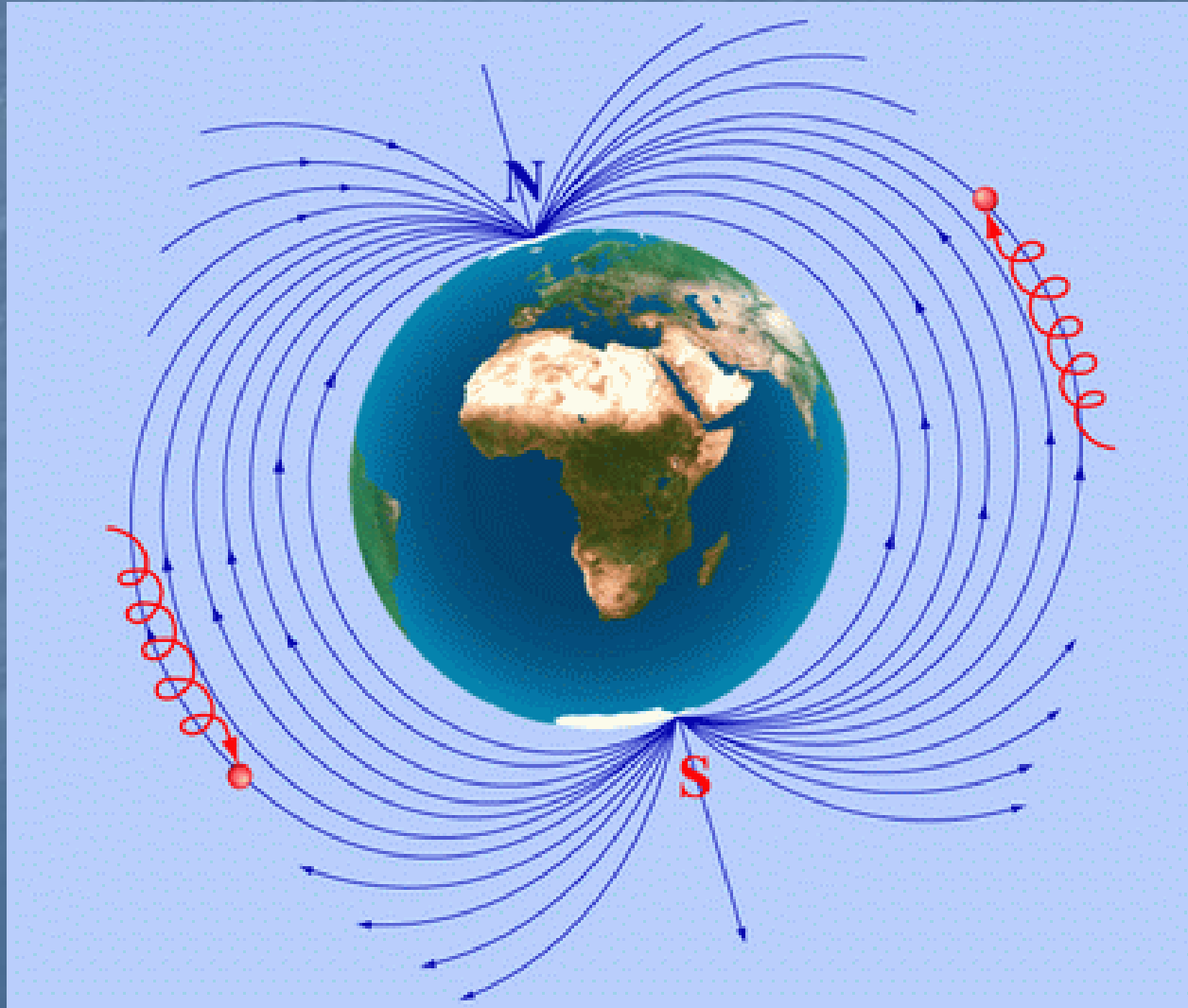
- 1. LF EMFs destroy water clusters and make water more liquid.**
- 2. LF EMFs cause the main biologically significant ions and molecules to vibrate, and due to the vibrations, the ions pass through ion channels, and the substrates in the active center of the enzyme find the “key-lock” position.**



# The mechanism of ion oscillations in the Earth's magnetic field.

Any charged particle moving in a constant magnetic field spirals at a frequency called the cyclotron frequency. It is directly proportional to the particle's charge and proportional to its mass.

$$\omega_c = \frac{qH}{mc}$$



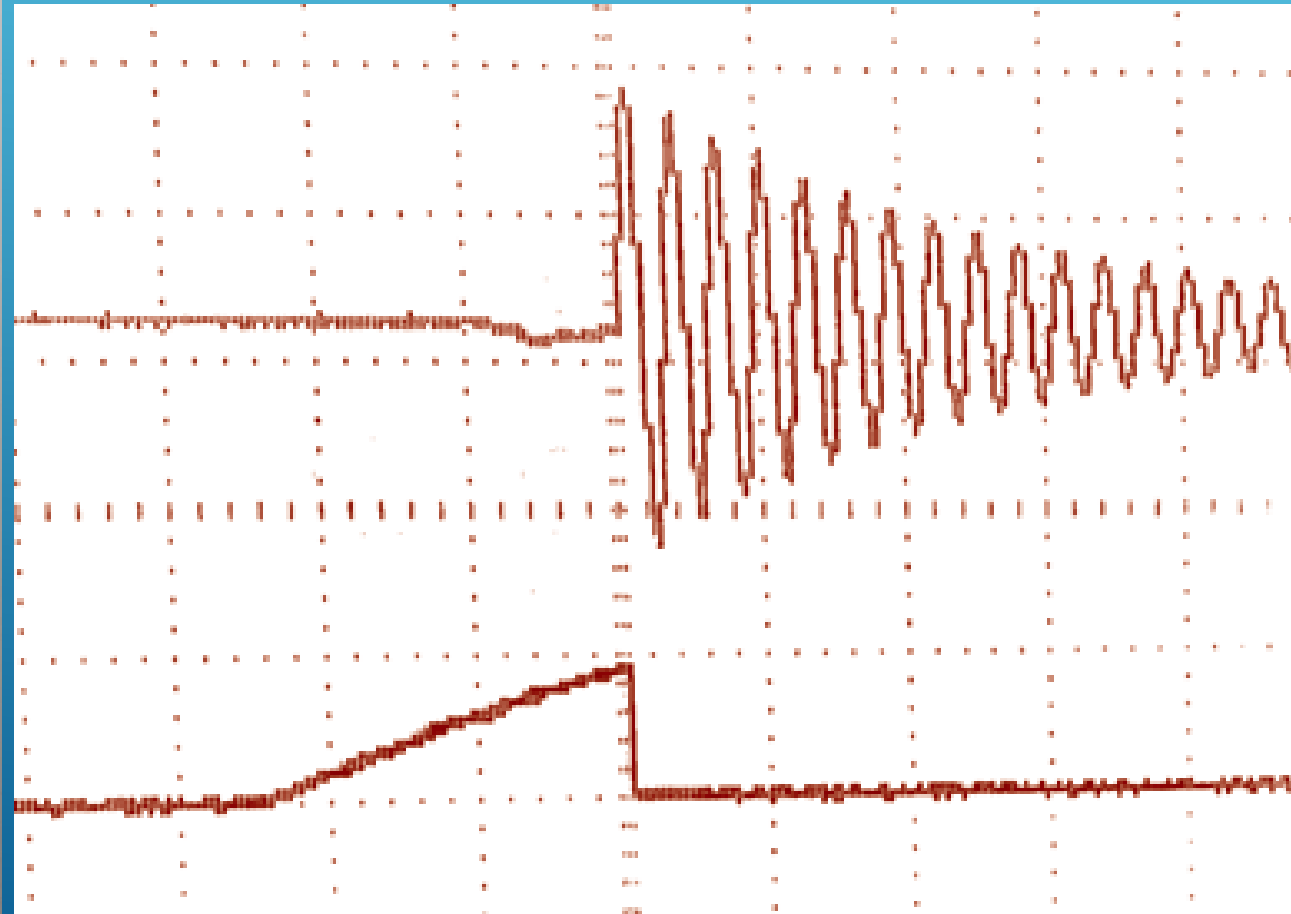
- The cyclotron frequencies of the main biologically significant ions in the hydration shell in the Earth's magnetic field lie in the range of 4–10 Hz. Therefore, frequencies around 8 Hz and multiples thereof (4, 16, 24, 32, etc.) (Schumann frequencies) resonantly amplify ion oscillations and thereby enhance biological activity.

Natural 8 Hz electromagnetic fields (EMFs) enable all fundamental biological processes. Artificial EMFs can further stimulate the activity of all plants and microorganisms. The question is how to apply this stimulation in practice to achieve economic benefits. Electromagnetic stimulation of seeds and vegetative plants is used in practice under certain conditions. Electromagnetic stimulation of bacteria is cost-effective in wastewater treatment, biogas (methane) production, and, in some cases, lactic acid and alcoholic fermentation, microbial oxidation of ore, and the extraction of gold, silver, copper, and other metals.

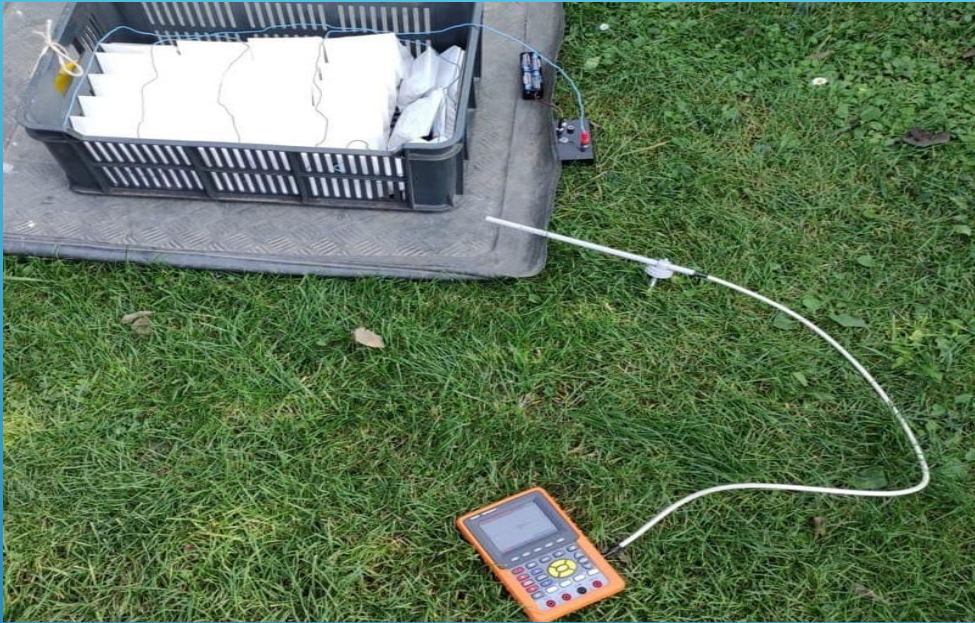
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In animals, the role of the master generator for synchronizing all processes is played by the heart and brain.

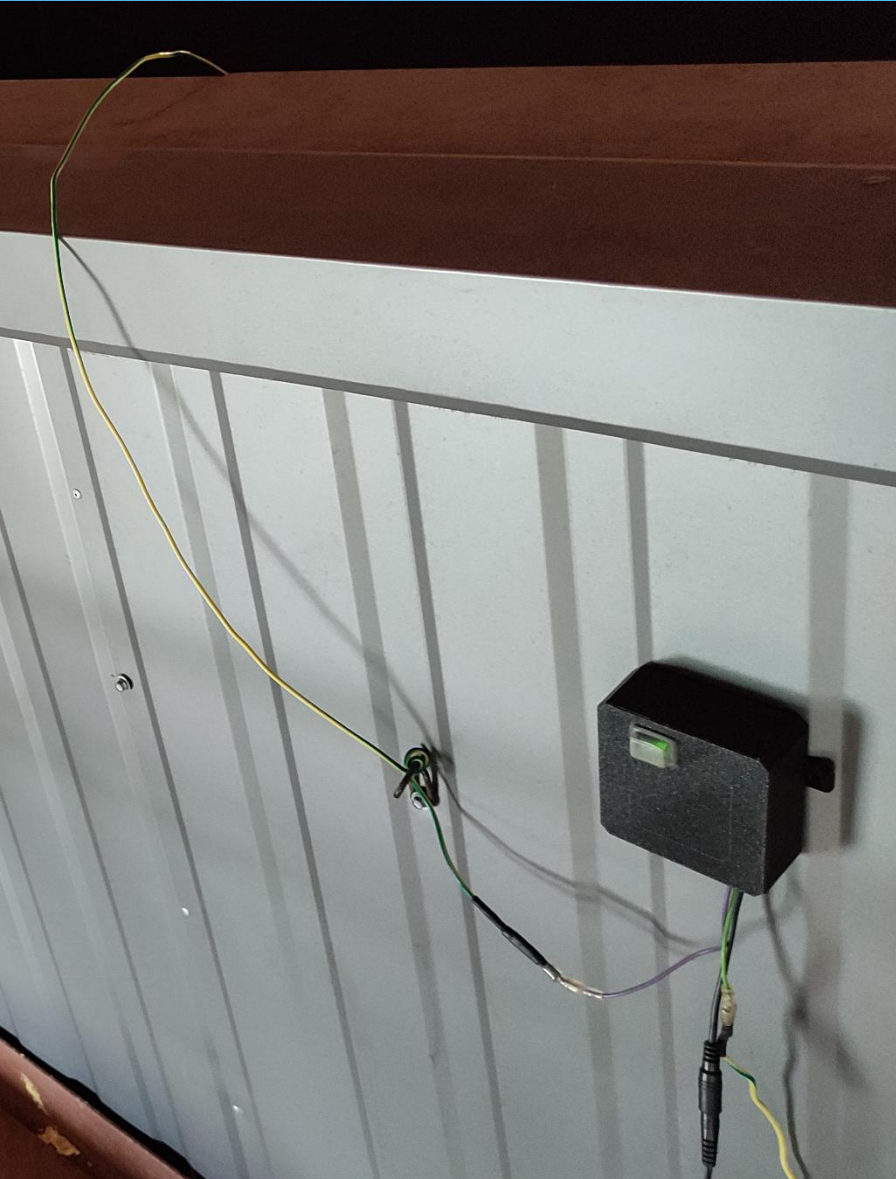
INTER TRADE PRAHA Ltd.(Prague, Czech Republic) has developed a series of pulse generators and ProEMgen technology for their use in plant growing, microbiological wastewater treatment, and various fermentation processes. This technology requires no modifications to the equipment design. The generator is located externally, and the antenna wire is immersed in the liquid.



# STIMULATION OF POPPY SEEDS BEFORE SOWING



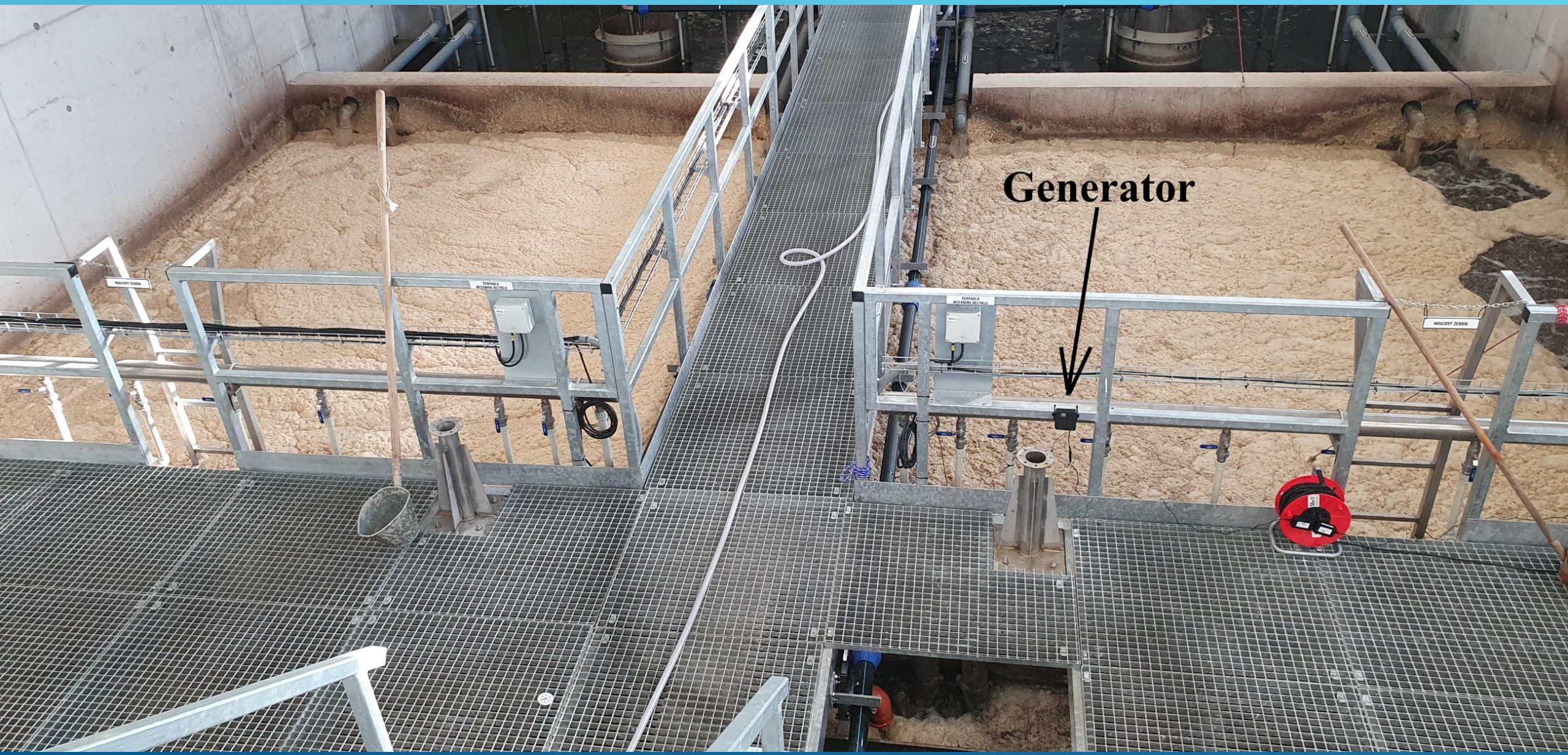
# STIMULATION OF BARLEY GERMINATION



# STIMULATION OF VINEYARD AND HOP PLANTATIONS



# STIMULATION OF WASTEWATER TREATMENT



**Generator**

# STIMULATION OF BEER FERMENTATION

