The Tom Bearden Website

Energy, Observations and Comments

A circular closed path in potential ϕ is given by A-B-C-B'-A.
Line integral from A around any closed path back to A is conservative.
Along path A-B-C, work W(1) may be extracted from rolling ball.
Along path C-B'-A, must do work W(2) on ball, where W(2) = -W(1).
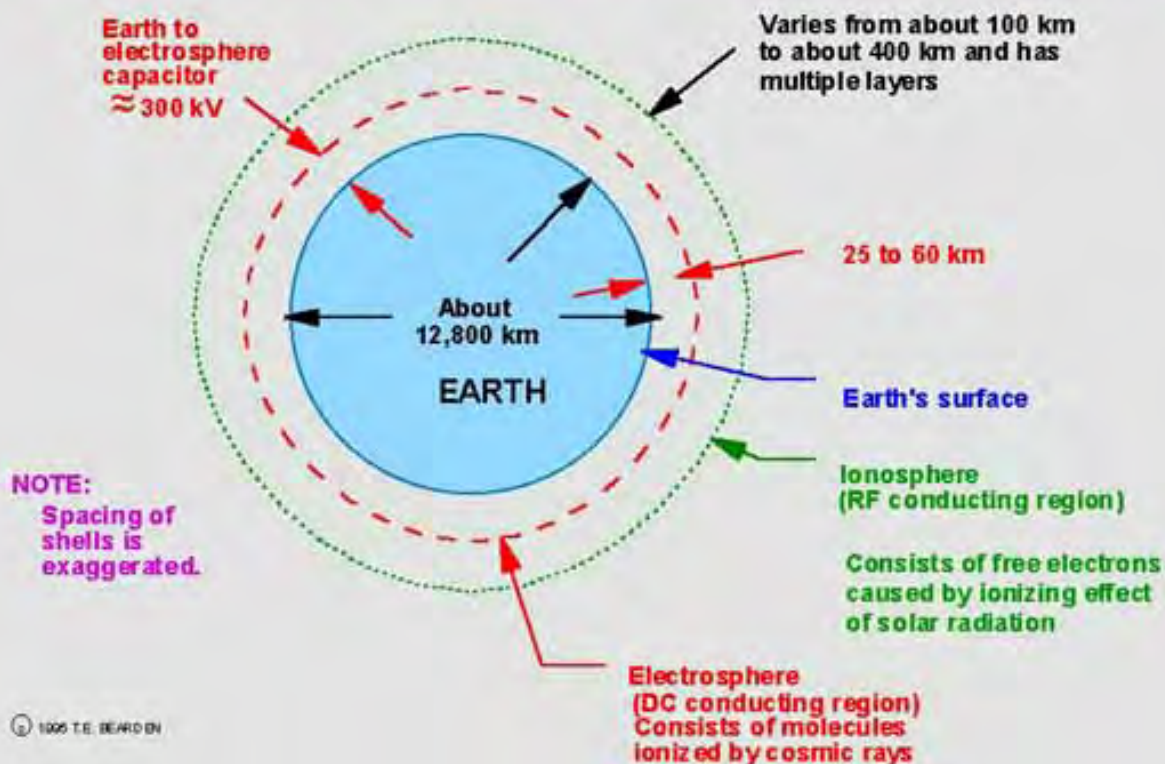
Energy

EARTH'S POYNTING ENERGY FLOW
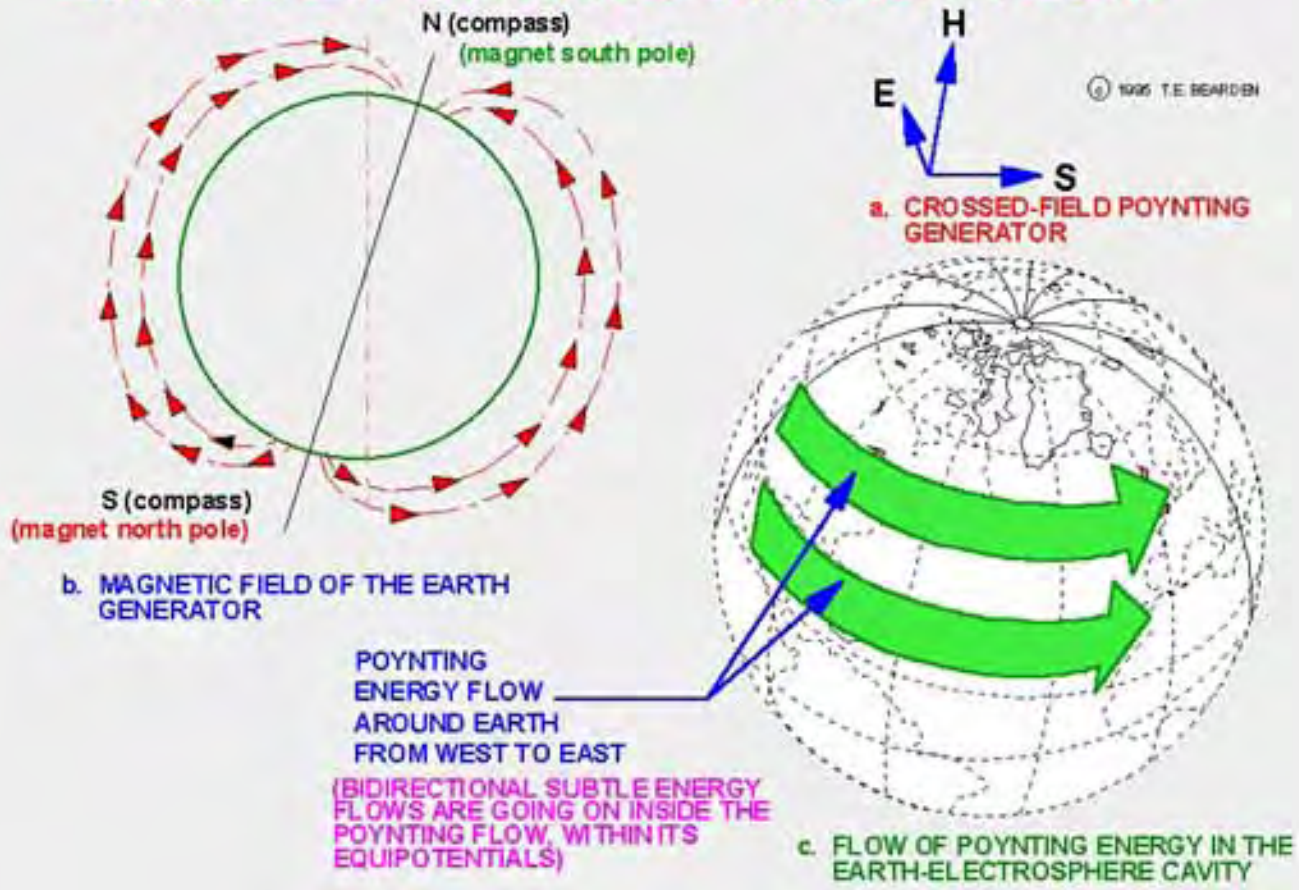
N (compass)
(magnet south pole)

H

E

S

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a. CROSSED-FIELD POYNTING GENERATOR

S (compass)
(magnet north pole)

b. MAGNETIC FIELD OF THE EARTH GENERATOR

POYNTING
ENERGY FLOW
AROUND EARTH
FROM WEST TO EAST

(BIDIRECTIONAL SUBTLE ENERGY FLOWS ARE GOING ON INSIDE THE POYNTING FLOW, WITHIN ITS EQUIPOTENTIALS)

c. FLOW OF POYNTING ENERGY IN THE EARTH-ELECTROSPHERE CAVITY
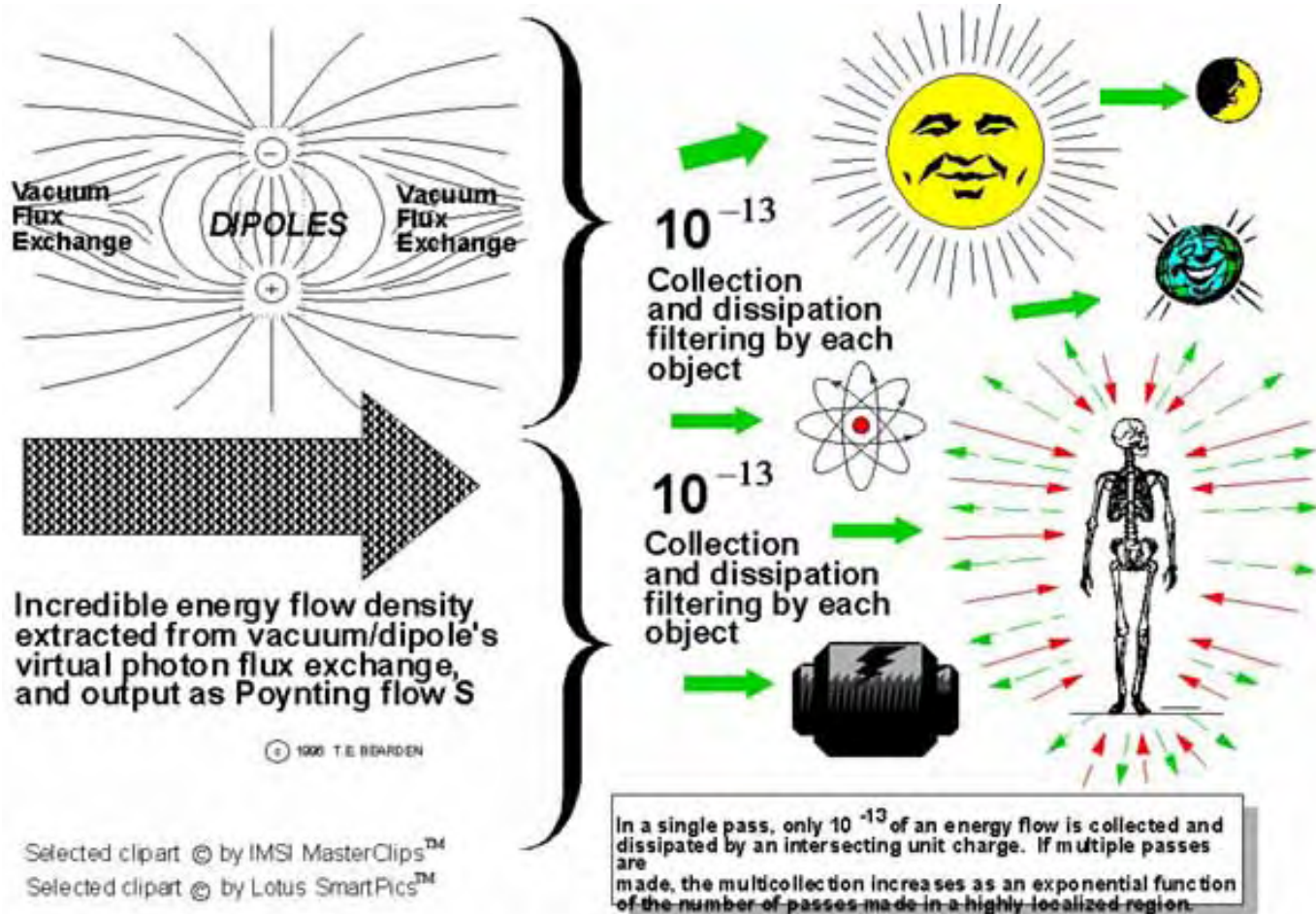
Figure 19. The world of physical matter exists behind a dramatic 10^{-13} filter in a fiery cauldron of fierce and primeval EM energy flow.

Electrostatic Fields of the Earth-Electrosphere Capacitor in Fair Weather and Thunderstorms
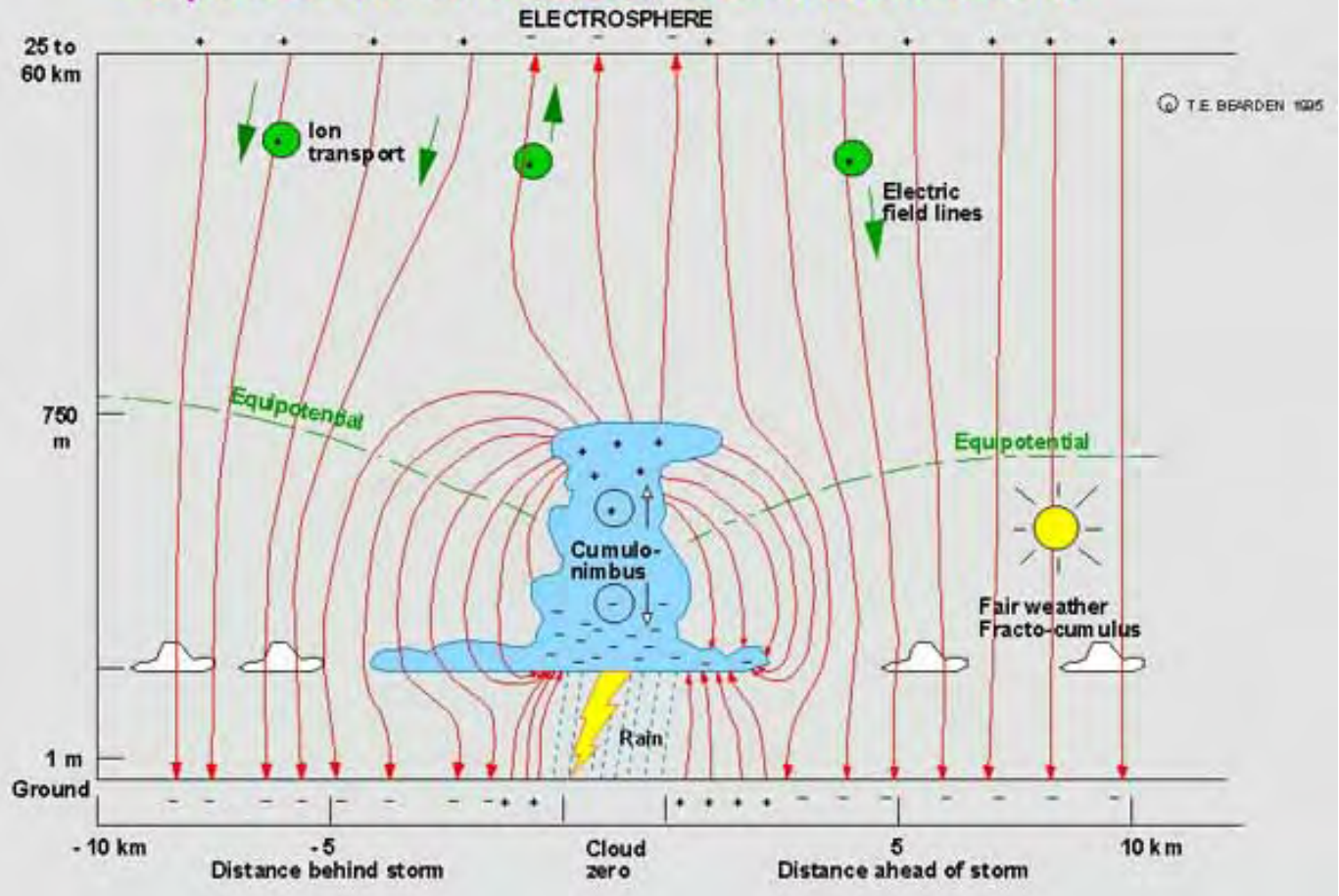
Flow of Current and Energy Into, Through, and Along a Conductor
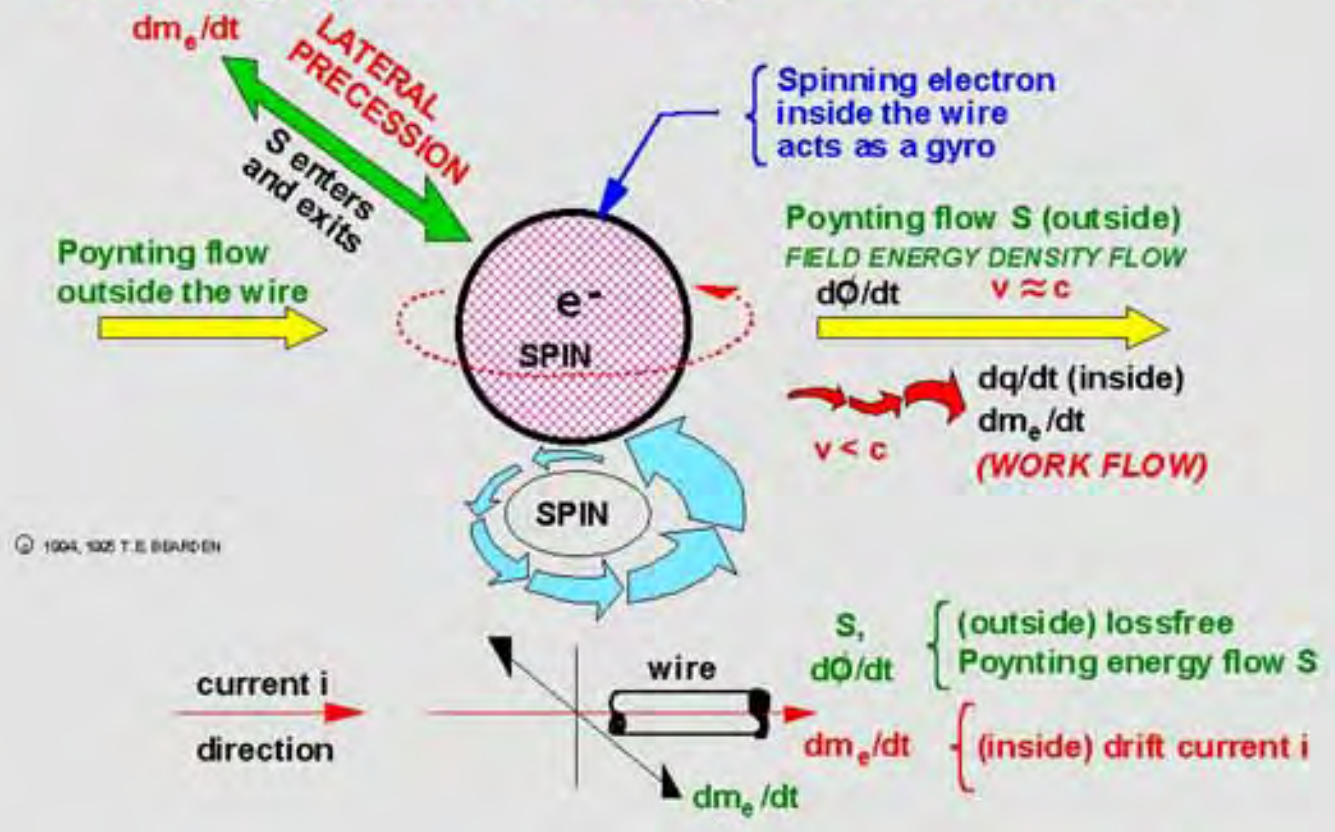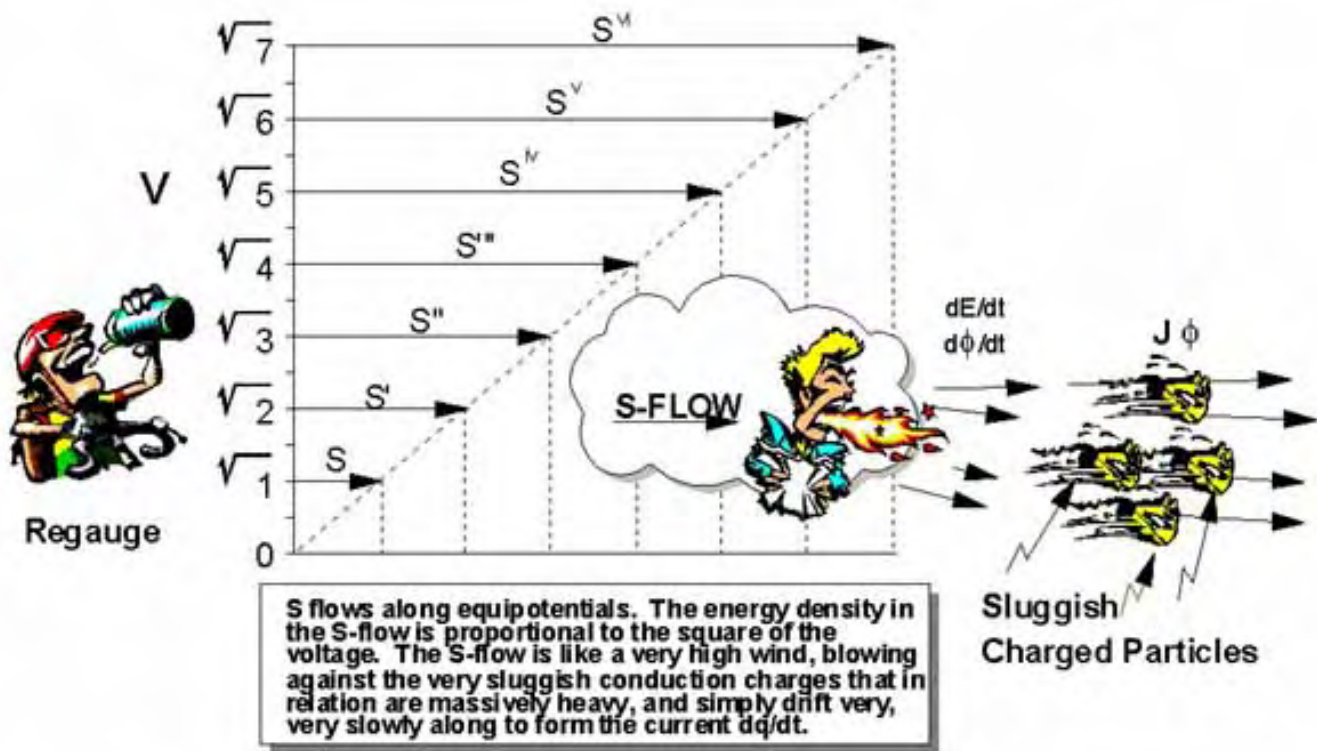
Figure 17. Energy "collected" on a charge depends upon the charge being
in a continuous Poynting S-flow. When S ceases, there is no
excess energy "collected" on the charge. Energy collection
never occurs in chunks, but is always a dynamic, ongoing process.
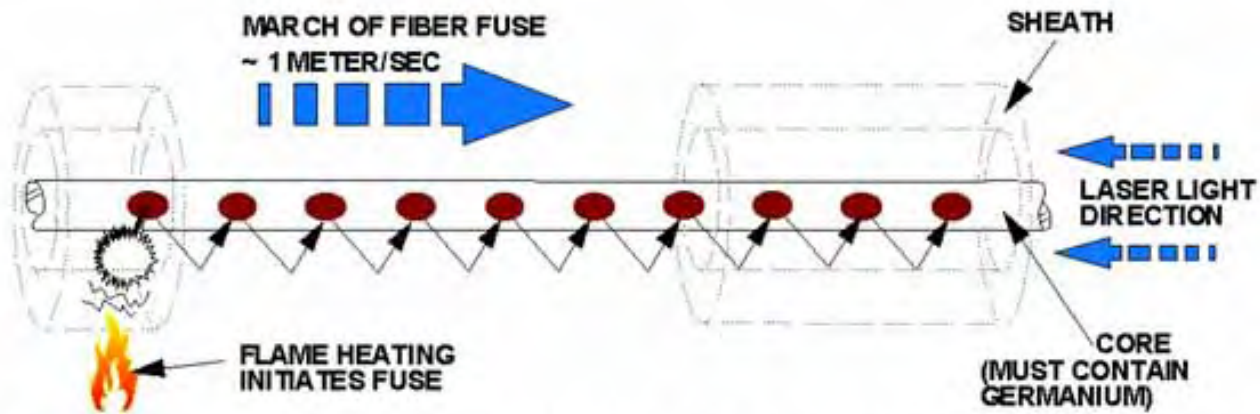
31A. Fiber fuse destroys core of fiber optics cable of indefinite length, pitting core with holes.
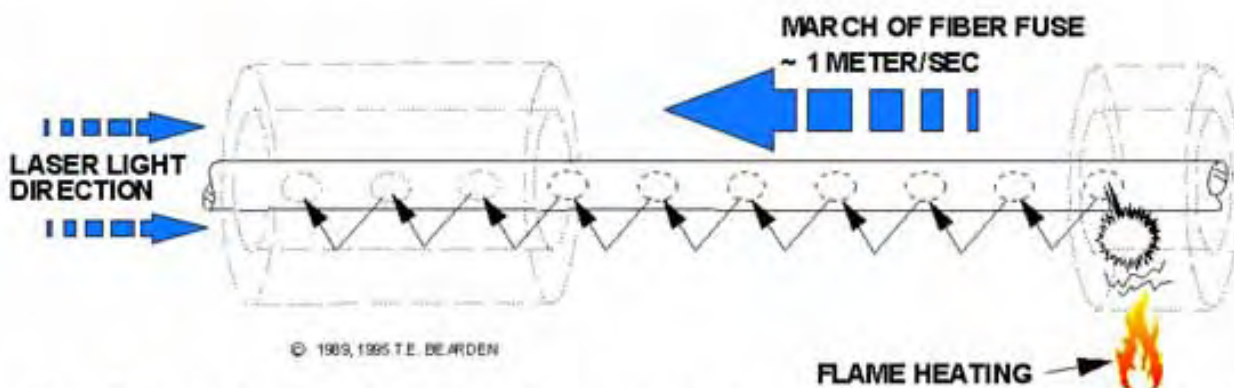
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31B. Reversed second fiber fuse often *restores* pitted core in cable, filling holes back up.

Figure 31. Fiber fuse effect and its strange anomalies.

Impact of Vacuum Engineering

- "If they [quantum fluctuations of vacuum] can be [tapped], the impact upon our civilization will be incalculable. Oil, coal, nuclear, hydropower, would become obsolete – and so would many of our worries about environmental pollution."

- "Don't sell your oil shares yet – but don't be surprised if the world again witnesses the four stages of response to any new and revolutionary development:
  - 1. It's crazy!
  - 2. It may be possible -- so what?
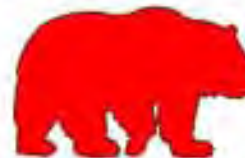 - 3. I said it was a good idea all along.
  - 4. I thought of it first."

  Arthur C. Clarke
  "Space Drive: A Fantasy That Could Become Reality"
  Nov./Dec. 1994

- *Comment*:
  - *Every dipole's broken symmetry in its energetic exchange with the vacuum already freely extracts vacuum energy.*
  - *In power sources, the dipole gates the extracted energy out as S = EXH, which flows almost entirely <u>outside</u> the conductors.*
  - The circuit interacts with, and uses, only about 10^{-13} of S. The electrodynamicists calculate only this small S-component.
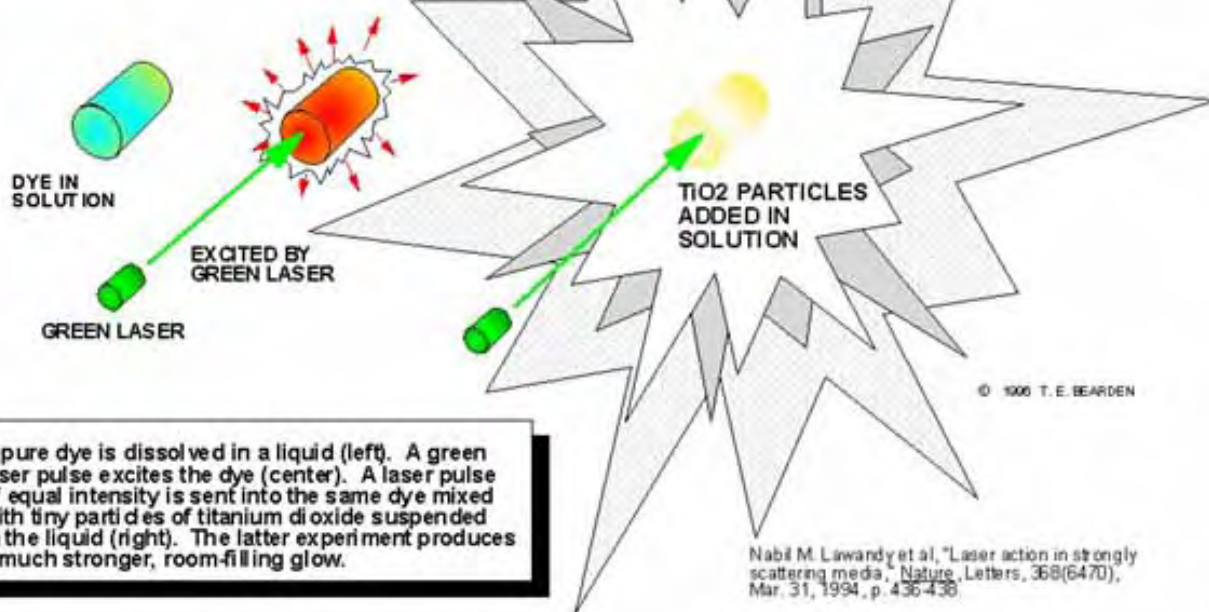
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Note: Example of anti-Stokes radiation, where medium emits excess radiation and energy. In this case, energy is replenished directly from vacuum's energetic interaction.

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DYE IN
SOLUTION

EXCITED BY
GREEN LASER

GREEN LASER

TiO2 PARTICLES
ADDED IN
SOLUTION

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A pure dye is dissolved in a liquid (left). A green laser pulse excites the dye (center). A laser pulse of equal intensity is sent into the same dye mixed with tiny particles of titanium dioxide suspended in the liquid (right). The latter experiment produces a much stronger, room-filling glow.

Nabil M. Lawandy et al, "Laser action in strongly scattering media," Nature, Letters, 368(6470), Mar. 31, 1994, p. 436-438.

Figure 28. Lawandy's experiment (Letokhov-Lawandy effect) with multipass, multicollection of energy. Formation of a quantum potential can also become involved. Retroreflection and self-targeting are key.
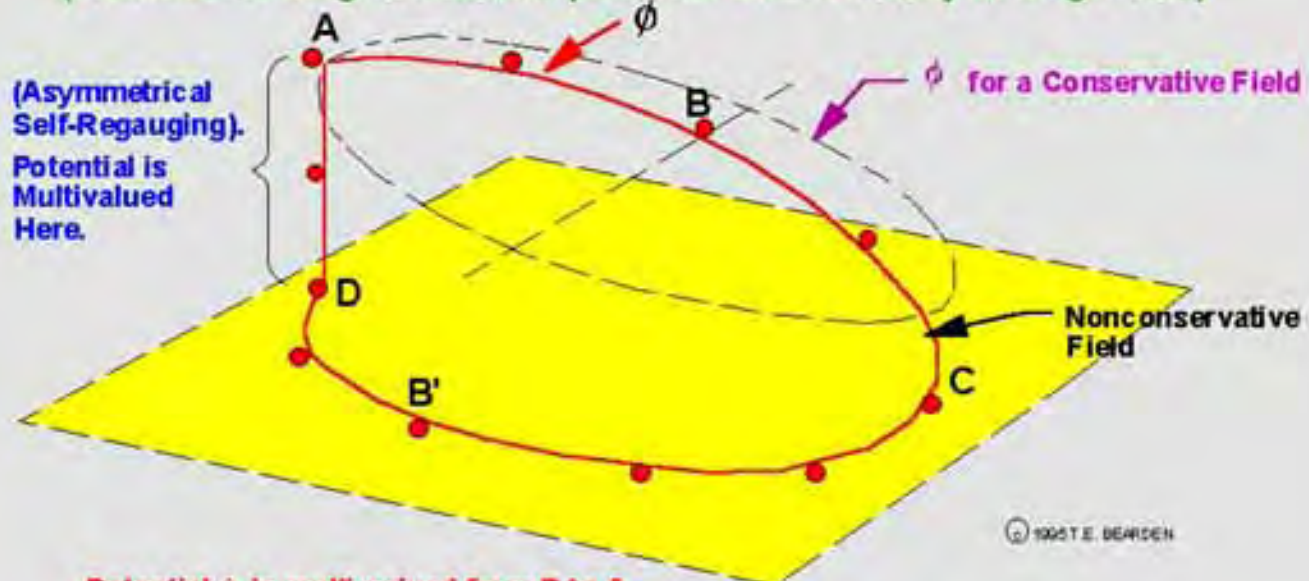
Field may be nonconservative for a multivalued potential

(Multivalued magnetic scalar potential arises readily in magnetics)

(Asymmetrical Self-Regauging).
Potential is Multivalued Here.

ϕ

ϕ for a Conservative Field

A

B

D

B'

C

Nonconservative Field

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Potential ϕ is multi-valued from D to A.

Line integral from A around this closed path back to A is nonconservative. Along entire path A-B-C-B'-D, work may be extracted.

No work is required to go from D to A. When ball arrives at D, it also arrives at A simultaneously. I.e., the potential "jumps" in magnitude.

We're running out of energy! We must redouble our efforts!

We have to keep polluting the Earth, if we are to have energy!

Actually, a *few* of our electrical systems already produce all the energy we could ever need! *Learn to collect it and use it!*

Selected clipart © by IMSI MasterClips™
Selected clipart © by Lotus SmartPics™

All our antibiotics are falling! Millions will die from the new age of pandemics and from terrorists' BW attacks!!

We have to relegate EM effects on biological systems to the trash heap. We can only try to find more drugs and antibiotics.

Actually, Priore already showed how to cure most dread diseases, by making and directing vacuum engines. Becker showed you it worked. *Develop it and use it!*
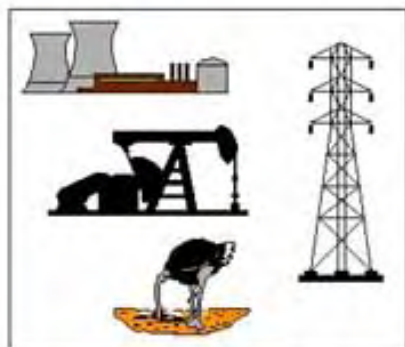
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Figure 33. The only problem is the ostrich problem.

We're running out of energy!
We must redouble our efforts!

We have to keep polluting the
Earth, if we are to have lots of
electrical energy!

Every dipole is a
universal free
energy generator

Actually, a single one of our large electrical
power systems already produces all the free
Poynting energy the world could ever need!
We just have to learn how to collect more
of it and use it without continually destroying
the source dipole!

Figure   . The only energy resource problem is the theoretical ostrich problem.
        We must become theoretical owls, rather than ostriches.

RUSSIAN "SWITCHED PARAMETERS" DEVICES: SELF-OSCILLATING ROTARY GENERATORS*

* **Excites oscillations without explicit sources of magnetic or electric forces (i.e., regauges)**
  - Periodic variation in system's parameters
  - Experimental and theoretical proof
  - Multiple successful systems made, tested
  - Papers published in Russian, French journals

* **As theory predicts, power continually increases unless load is adjusted to stabilize system**

* **Several large systems tested to self-destruction**

* **Several large stable systems built, tested**

* "On the parametric excitation of electric oscillations,"
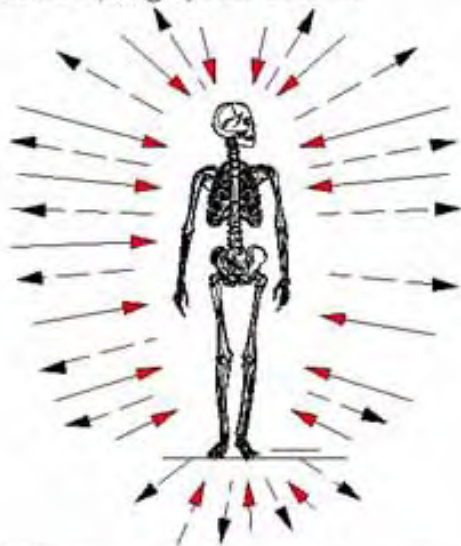L.I. Mandel'shtam and N.D. Papaleksi, Zh. Tek. Fiz. 4(1), 1934, p. 5-29.

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Selected clipart © by Lotus SmartPics™
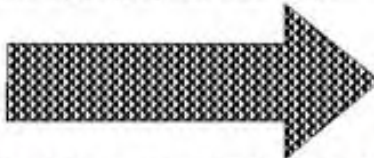
Selected clipart © by IMSI MasterClips™

Incredible energy flow density extracted by double surfaces from vacuum/dipoles' virtual photon flux exchange, and output as Poynting flow S

Energy equal to a million 1,000 megawatt power plants.

$\sim 10^{-13}$

$\sim 10^{-13}$

Collection and dissipation filtering by measuring instrument

About 100-200 watts actually collected and dissipated inside the body itself.

+ -

Dipoles at tiny double-surface interfaces may produce E-fields of intensity up to 10^9 volts per meter.

For rough estimate: Use 1 sq. meter effective area, and 1 million double-surfaces.
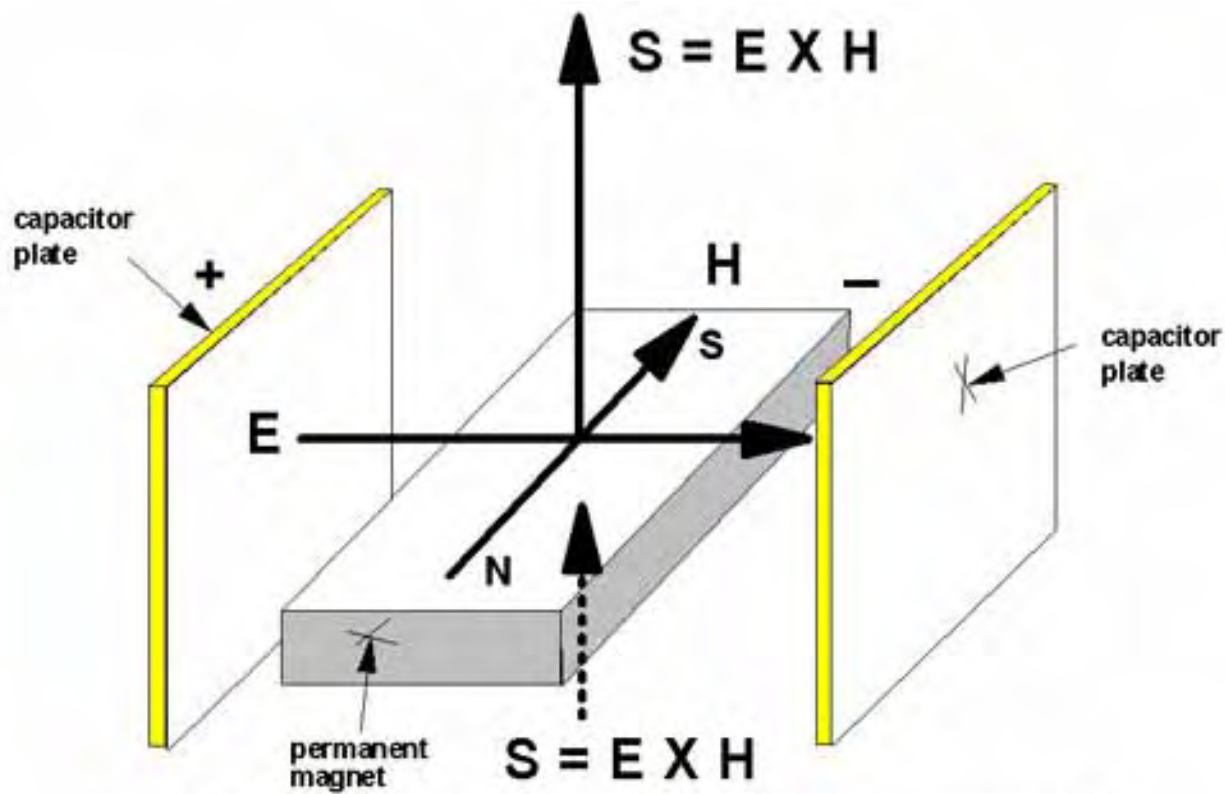
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Figure 20. One human body produces more energy flow than all the electrical power loads on earth dissipate. However, only 100-200 watts of its own energy output is collected and dissipated by the body.
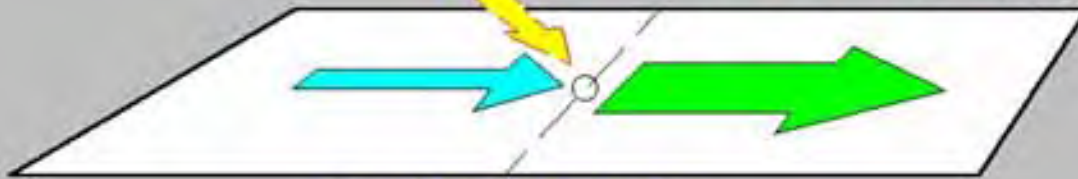
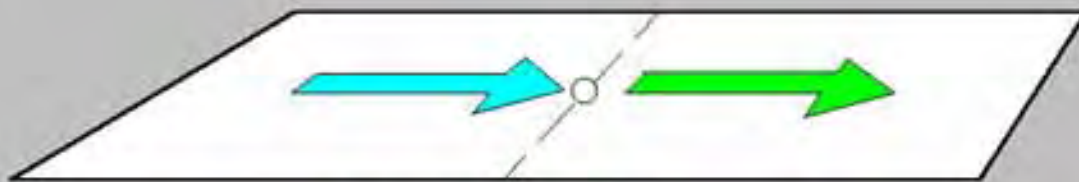Figure 18. A "static" Poynting S-flow free-energy generator.

Topology and Energy Conservation

Example: Conservation in 2D versus 3D topologies

3-D CONSERVATION
(2-D CONSERVATION VIOLATED)

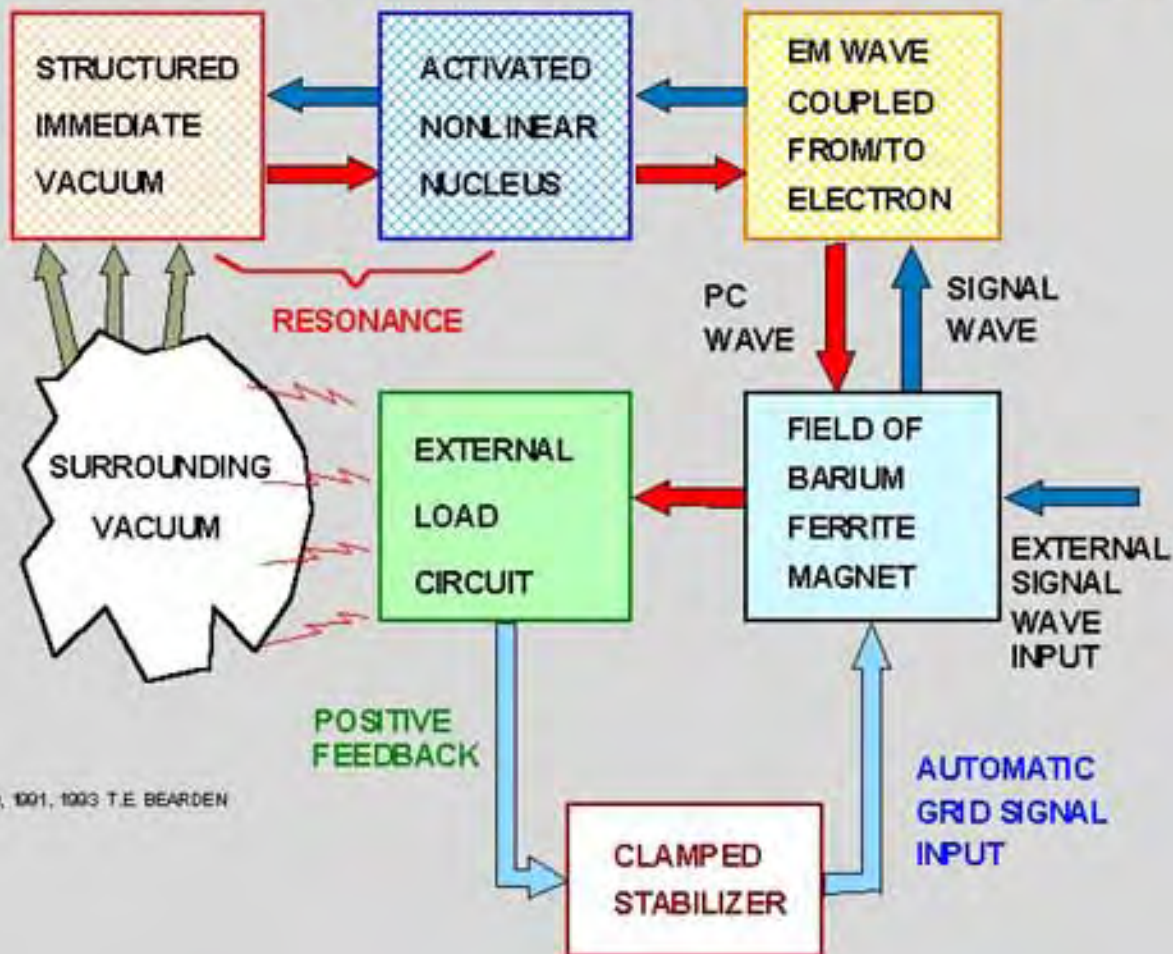© T.E. BEARDEN 1992, 1995

2-D CONSERVATION

Increasing the dynamic topology allows lower topology conservation laws to be violated. The lower topology system is now an open system and may seemingly act as a source or sink.

Block Diagram: Sweet's Vacuum Triode