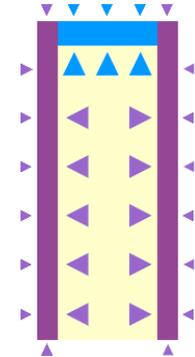


# A Three-Plate Casimir Experiment !!!

There is considerable research that suggests the possibility of a so-called Repulsive Casimir Effect in small rectangular cavities that are made of suitable materials! If this is true, then **each** of us can tap into the Ready-Made Energy Grid of the Electromagnetic Quantum Flux for power and propulsion, any time, any place, without ever having to pay *anyone anything at all !!!*

The cavity **Sides** are like the two plates of Casimir's original experimental proposal. I have merely added a **"third plate"** -----a cavity **Roof** that prevents the other two plates from moving together; now, the first two plates can **continuously** modify the Quantum Flux Composition between them! The surface of the **Ceiling** that lies **inside** the cavity experiences an enhanced quantum-flux radiation-pressure; but the outside surface of the Ceiling----the **Roof** experiences the weaker *ambient* flux that exists outside Cavity Flux Enhancement Zone. Therefore, there is a *continuous net radiation pressure acting toward the Cavity Roof!!! This net electromagnetic radiation-pressure will power all of our machines and propel all of our vehicles all of the time, everywhere, for free !!!*

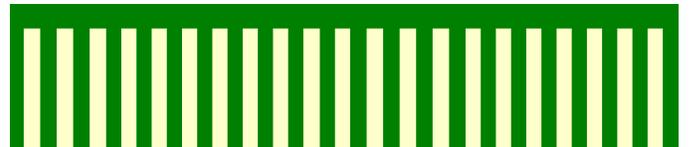
Cavity Walls	Z - P E C	Cavity Floor & Roof
<p>Purple Arrows represent the forces that are acting on the Cavity Walls. These Purple Arrows come in pairs that are equal in magnitude <u>and</u> opposite in direction!</p>  <p>All of <i>these</i> forces cancel out!</p>	<p>Zero-Point Energy Converter</p>  <p>US Patent Pending</p>	<p>Blue Arrows represent the forces that are acting on the <b>Ceiling</b> and <b>Roof</b> of the Cavity. These two Arrows are opposite in direction, but are <b>Not Equal</b> in magnitude !!!</p>  <p>These Forces do <b>NOT</b> cancel !</p>

The large upward-directed forces that are represented by the large blue arrows overcome the small downward directed forces that are represented by the small blue arrows. This causes an net upward directed force that is directed *toward* the cavity Ceiling!

## Total Floor Area Pressures of a Macroscopic Array Of Nanoscopic Holes or grooves

Wall Separations (nm)		Floor Pressures Pa (N/m <sup>2</sup> )	
0.5	2.08E+010	8	3.18E+005
1	1.30E+009	9	1.98E+005
2	8.14E+007	10	1.30E+005
3	1.61E+007	15	2.57E+004
4	5.09E+006	20	8.14E+003
5	2.08E+006	30	1.61E+003
6	1.00E+006	40	5.09E+002
7	5.42E+005	50	2.08E+002
60	1.00E+002	500	2.08E-002
70	5.42E+001	600	1.00E-002
80	3.18E+001	700	5.42E-003
90	1.98E+001	800	3.18E-003
100	1.30E+001	900	1.98E-003
200	8.14E-001	1000	1.30E-003
300	1.61E-001		
400	5.09E-002		

## A Macro-scopic Array of Nano-Scale Holes Or Grooves



A proof-of-concept array can be made using the *same* techniques, materials and equipment that are used in semiconductor manufacturing, along with a wide variety of *other* nanotechnologies.

Assuming that the  $k/d^4$  holds between 9 and 11 nm. We might very well achieve more than 60 k Pa. Obviously, if we can achieve even a *small* percentage of the *estimated* net force, then we will quickly solve all the energy and transportation problems Worldwide and *throughout the Solar System*.

Many people take one glance at Z-PEC and dismiss it as an impossible “self-moving” object; but this is **not** the case: If the *action* is the movement of Z-PEC in response to the force of the photons of the Quantum Flux hitting it harder in one direction than in another direction, then the *reaction* is found in the *momentum* of the *rebouncing* virtual photons! (Newton is happy!!!)

But isn't the Casimir Force an “Attraction” or “Repulsion” *between two separate objects*??? *Let's adopt some less-confusing terminology:*

I find that I confuse *myself* when I try to imagine *uncharged* plates *attracting* or *repelling* one-another. Even though I actually **know-better**, I **stop thinking in real terms of the radiation pressure of the Electromagnetic Quantum Flux acting on real objects**. That is, the picture in my head starts lying to me; it says that the two plates are exerting some sort of *mysterious* force on *each-other* when in fact, the **photon-flux** is exerting **separate** forces on **each** plate, **independently!**

If we look at each plate in isolation, nothing attractive or repulsive is happening *at all*; we simply have **positive** (“outward” directed) flux-pressure on *one* side of a given plate that is competing with the **negative** (“inward” directed) flux-pressure on the *other* side of the *same* plate. In my paradigm, the fact that there even **is** a second plate is relevant **only** from the stand point of calculating the flux-enhancement that occurs in the **space** that is located between the two plates!

The very *worst* artifact of assuming that the Casimir Effect consists of *two objects* exerting forces **on one-another** is *this*: We have thereby **already decided** that there **has** to be a **second** object for the **first** object to be *attracted to* or *repelled* from!!! We have *thereby* ruled out *any* possibility of a device such as Z-PEC II being entirely moved by the vacuum flux *without* the use of reaction mass or any other object to help form a Flux Modification Zone!

Some people imagine that the flux will still shoot along the interior length of the cavity and impact both sides of the cavity floor equally; however, they are forgetting that the property we call *wavelength* can just as aptly be called *wave-width*, as evidenced by *diffraction gratings!!! Therefore, the same wavelengths of Quantum-Flux Electromagnetic Radiation will be either enhanced or excluded from the cavity regardless of their orientation!!!*

*As a whole, Z-PEC will always be in thermodynamic equilibrium--- If needed, a Peltier Device (Electric Heat-Pump-in-a-chip!) can move heat in any desired direction---(Re-emitted or reflected photons will impart twice as much momentum as absorbed EMR!) Heat is not the only way the device expels energy that was acquired from the Vacuum: When Z-PEC performs work, that also dissipates thermodynamic energy---which re-assimilates into the Quantum Flux and closes the loop! In Space, we can use Solar Energy in Space to create the temperature gradient.*

Z-PEC conserves momentum!!! **IZ-PEC doesn't acquire any more momentum from the quantum flux than any other object**: ALL objects are kicked around, back and forth, first by one photon in one direction and then by another photon in yet **another** direction by another photon, in every direction all the time, anyway!!! Z-PEC is accelerated by the same amount of momentum as the first object, but more in one direction more than in the opposite direction!!! (This **same** exact thing happens with one of the plates in the classical Two-Plate experiment!)

As for Entropy, some years back, there was a **Nobel Prize** given for proving that *energetic-asymmetrical systems* can spontaneously give rise to order out of chaos. Each singular **Casimir Plate** is such an *asymmetric, energetic* system and so is Z-PEC!!!

The newest semiconductor fabs are currently upgrading to produce *circuits* with details as small as 34 nm. This same technology can be used to make holes or grooves that are “good enough” with wall-separations between 10 and 20 nm. There are also numerous *other* practical methods of fabricating arrays of nanoscopic holes.

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