



*created on October 10th, 2001 - JLN Labs - Last update January 27, 2010*

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**🇫🇷 [Cliquez ici pour le Projet Lifter en Français](#) 🇫🇷**



**The Lifter is an asymmetrical capacitor which uses High Voltage ( $> 20KV$ ) to produce a thrust.**

The Lifter works without moving parts, flies silently, uses only electrical energy and is able to lift its own weight plus an additional payload. The Lifter uses the Biefeld-Brown effect discovered by Thomas Townsend Brown in 1928. The basic design of the Lifter has been fully described in the Townsend Brown [US Patent N°2949550 filed on Aug 16, 1960](#) and titled "Elektrokinetic Apparatus", you will find in this patent the full description of the main principle used in the Lifter devices.

Today, more than 350 Lifter replications have been done successfully by many experimenters and physicists Worldwide ( see [The Worldwide Lifters replications logbook](#) ).

On January 22th, 2003, I have fully demonstrated with [the 250 g weight Lifter "Maximus \]|"](#) experiment, that a Lifter can be scaled up and also that such a device is able to lift 60 g of payload. It is now possible to build a VTOL craft which will use the Biefeld-Brown effect to fly silently and without moving parts ( see [VTOL Lifter-Craft Mk III](#) ) only powered by electrical energy...

**[VIDEO of Asymmetrical Capacitors \(Lifter like\)](#)**

**[tested in FULL VACCUM at  \$1.72 \times 10^{-6}\$  Torr](#)**

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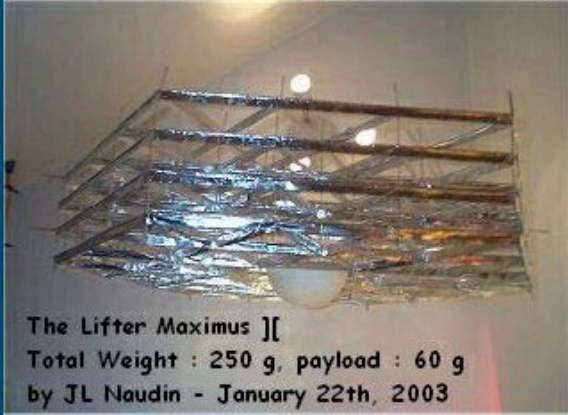
[Click here to Download the full video \( 11 Mb \).](#)

These videos are footage of Gravitec Inc at NASA's NSSTC LEEIF facility in  
Huntsville Alabama.

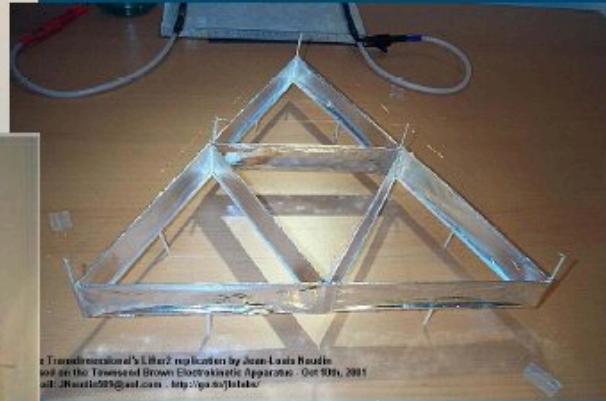
These tests were done in summer 2003 in a full vacuum chamber at pressures of at  
least one times ten to the negative six Torr.

Video courtesy of Hector Luis Serrano ( President of Gravitec Inc. )

# Background



The Lifter Maximus ][  
Total Weight : 250 g, payload : 60 g  
by JL Naudin - January 22th, 2003



Huge ...!!

[dstl]

20 April 2005  
© Dstl 2001



Dstl is part of the  
Ministry of Defence

The Lifter has been fully tested by the [dstl], a part of the British Ministry of Defence

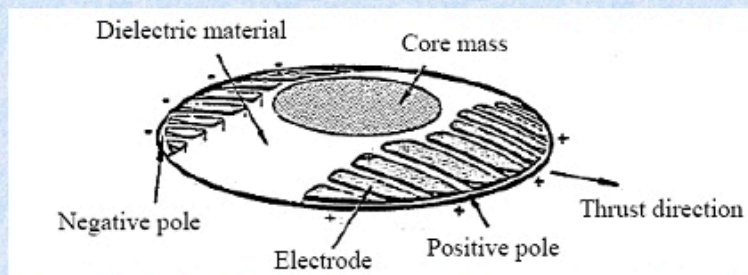


INTERNATIONAL ACADEMY OF  
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Missions to the outer solar system and  
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NEAR-TERM  
ADVANCED SCIENTIFIC SPACE MISSIONS  
Aosta, Italy, July 2-4, 2007



## *Explanation of dynamical Biefeld-Brown Effect from the standpoint of ZPF field*

*Takaaki Musha*





## Force on an Asymmetric Capacitor

by Thomas B. Bahder and Chris Fazi

ARL-TR-XXX

March 2003

When a high voltage (~30 kV) is applied to a capacitor whose electrodes have different physical dimensions, the capacitor experiences a net force toward the smaller electrode (Biefeld-Brown effect). We have verified this effect by building four capacitors of different shapes. The effect may have applications to vehicle propulsion and dielectric pumps. We review the history of this effect briefly through the history of patents by Thomas Townsend Brown. At present, the physical basis for the Biefeld-Brown effect is not understood. The order of magnitude of the net force on the asymmetric capacitor is estimated assuming two different mechanisms of charge conduction between its electrodes: ballistic ionic wind and ionic drift. The calculations indicate that ionic wind is at least three orders of magnitude too small to explain the magnitude of the observed force on the capacitor. The ionic drift transport assumption leads to the correct order of magnitude for the force, however, it is difficult to see how ionic drift enters into the theory. Finally, we present a detailed thermodynamic treatment of the net force on an asymmetric capacitor. In the future, to understand this effect, a detailed theoretical model must be constructed that takes into account plasma effects: ionization of gas (or air) in the high electric field region, charge transport, and resulting dynamic forces on the electrodes. The next series of experiments should determine whether the effect occurs in vacuum, and a careful study should be carried out to determine the dependence of the observed force on gas pressure, gas species and applied voltage.

Approved for public release, distribution unlimited.

[The Lifter has been fully tested by the US Army Research Laboratory.](#)

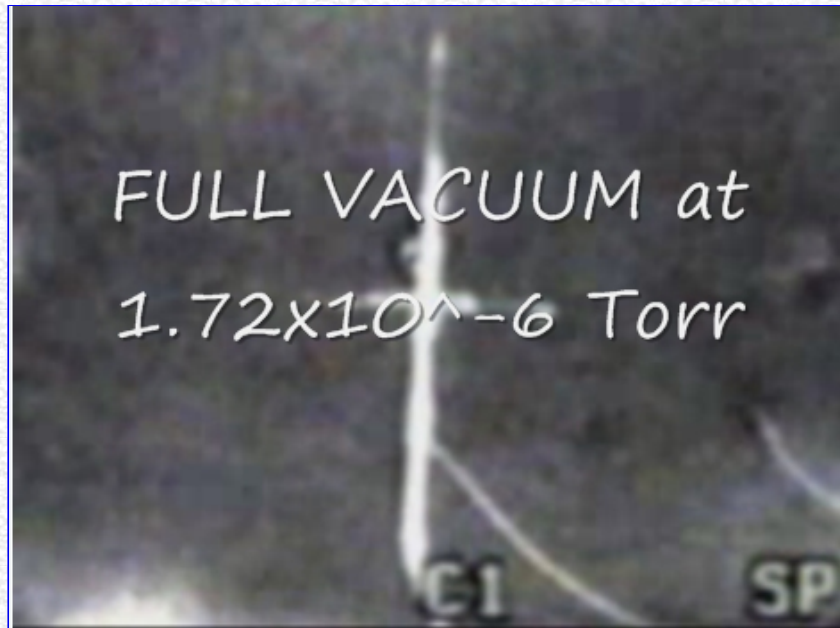
Date



[LATEST UPDATES](#)



December 3,  
2007

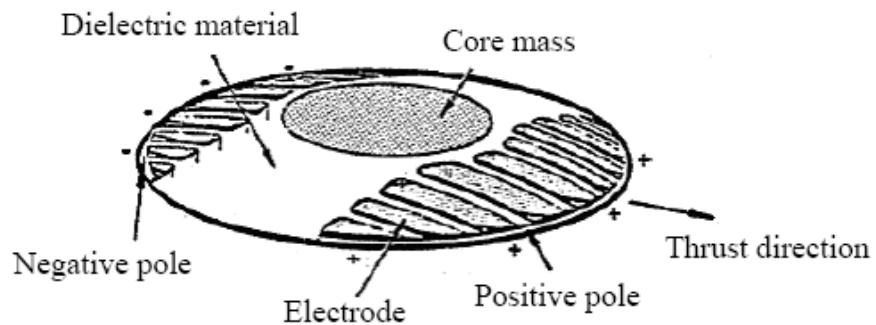


[VIDEOS of Asymmetrical capacitor \(Lifter\) tested in FULL VACUUM](#)

September 4,  
2007

### Explanation of dynamical Biefeld-Brown Effect from the standpoint of ZPF field

Takaaki Musha



 **October**  
**4, 2006**

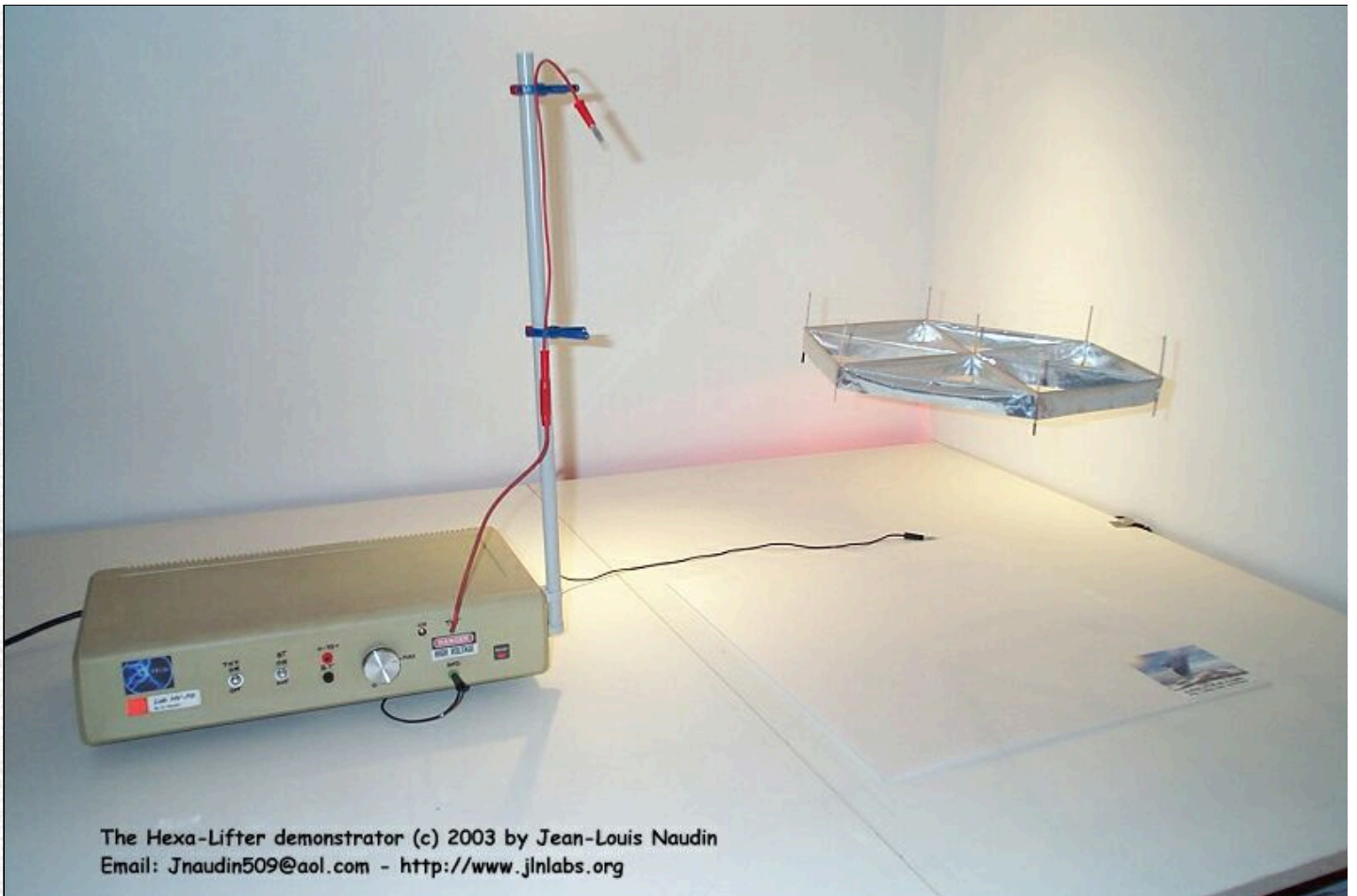
**351** [successful registered Lifters replications Worldwide](#)

March 15, 2006

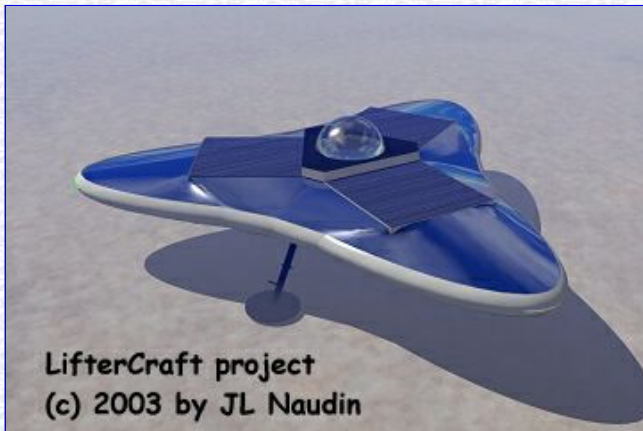


Lifter at the ITA (Instituto Tecnológico de Aeronautica)  
[\(Brazil\)](#)

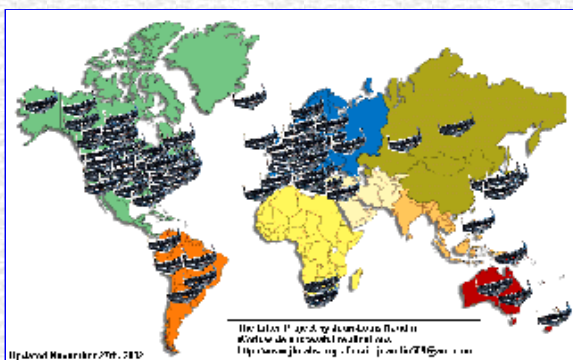
[Lifter demo at the ITA](#)



**[How to build an HexaLifter for your experiments and demonstrations](#)**

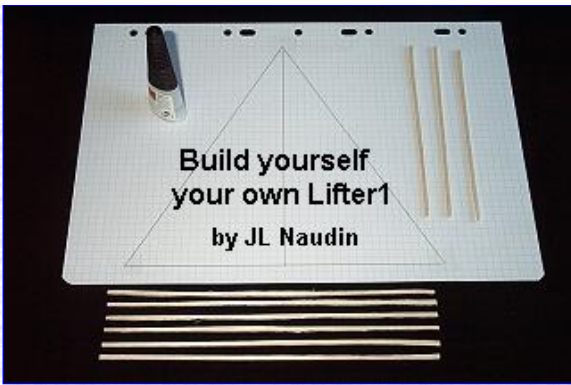


**[The LifterCraft Project](#)**



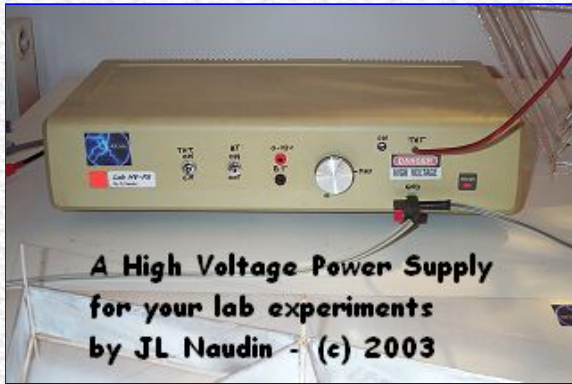
**[The Worldwide Lifters replications](#)**

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## [How to build your own Lifter](#)

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## [Lifter Power Supplies diagrams](#)

**A High Voltage Power Supply  
for your lab experiments  
by JL Naudin - (c) 2003**

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## [Basic Lifter Experiments](#)

**The TDT's Lifter1 experiment by JL Naudin**

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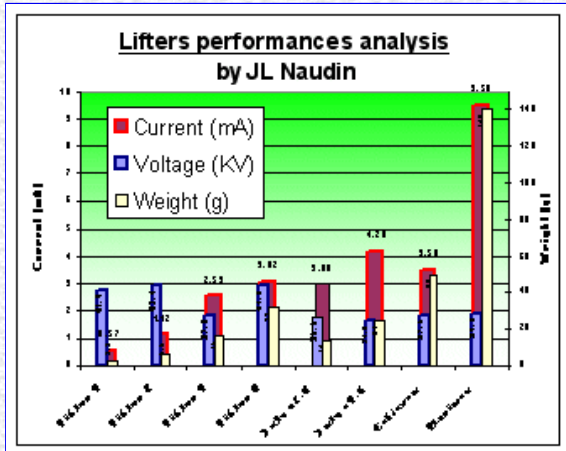
## [Enhanced Lifters - Towards more](#)

**The Lifter Maximus ]]  
Total Weight : 250 g, payload : 60 g  
by JL Naudin - January 22th, 2003**

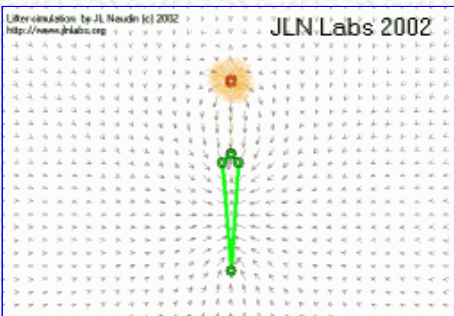
[payload...](#)



## Outdoor Experiments



## Lifters experimental datas and deep tests



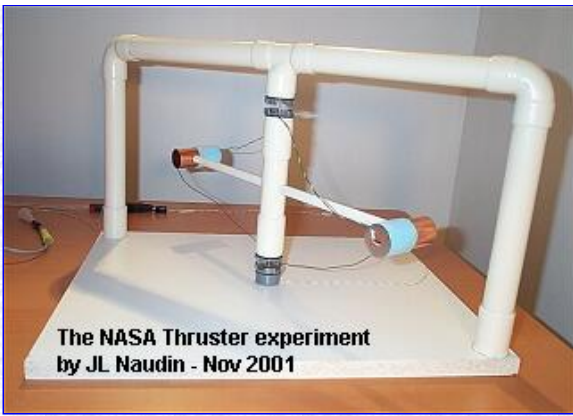
## Theories about the Lifter...



## Applications : UAV, MAV, VTOL-

## Crafts...

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[Asymmetrical capacitors thrusters](#)

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[The Lifter challenges](#)

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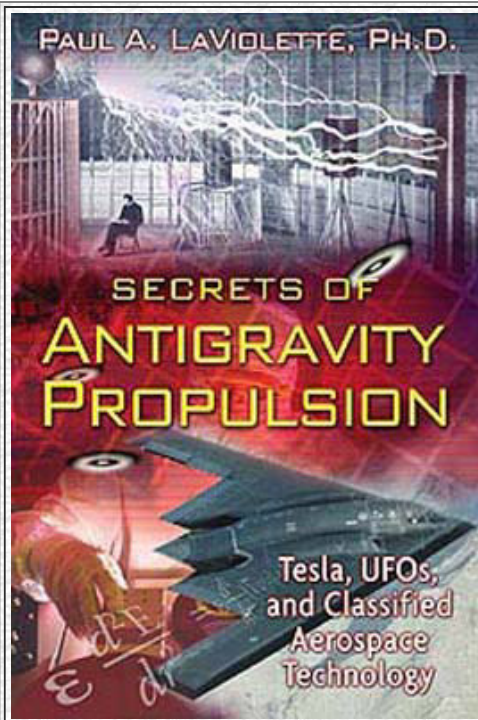


[The Lifter project pressbook](#)

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[The full story of the Lifter project](#)



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**06397758**

*visits since the february 14, 2002*

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# CASE #624

Playwright Render

## SOURCE URL

<http://jnaudin.free.fr/lifters/main.htm>

## DOMAIN

[jnaudin.free.fr](http://jnaudin.free.fr)

## CASE ID

#624 of 924

## CONTEXT FROM ORIGINAL DOCUMENT

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