

RECORD AND DISCLOSURE OF INVENTION

**FOR USE BY NAVY
INTELLECTUAL PROPERTY OFFICE**

DATE DISCLOSURE RECEIVED

NAVY CASE NO.

INSTRUCTIONS: A Navy employee should use this form when submitting an invention disclosure to the Department of the Navy. Fill each blank with the requested information or enter "NONE" as appropriate. Original and two copies should be printed or typed and forwarded to the intellectual property office responsible for providing services to your activity. Where space on the form is inadequate, enter "see attached page," use plain pages as needed, and identify item by number. When completely executed, this form becomes an important legal document useful in proving priority of invention. This form may also be used by a contractor or grantee for disclosing an invention to the Navy.

PART 1. RECORD OF INVENTION

| 1. INVENTOR(S) | ADDRESS | POSITION TITLE | EMPLOYER (Activity & Code No., or Company & address) |
|----------------|------------|----------------|--|
| [REDACTED] | [REDACTED] | [REDACTED] | NAVAIR 4.4.5.1 |
| | | | |

2. DESCRIPTIVE TITLE OF INVENTION

THE HIGH FREQUENCY GRAVITATIONAL WAVE GENERATOR

3. CONCEPTION, INITIAL RECORDS AND RESULTS OF FIRST MODEL

a. EARLIEST DATE AND PLACE INVENTION WAS CONCEIVED (Identify persons and records to support date and place)

09-07-2016 - [REDACTED], Maryland – See list of Individuals in Section 5.

b. DATE AND PRESENT LOCATION OF FIRST SKETCH, DRAWING OR PHOTO AND FIRST WRITTEN DESCRIPTION (Such as notebook entries, etc.)

09-07-2016 - [REDACTED], Maryland

c. DATE AND PLACE OF COMPLETION OF FIRST MODEL, PROTOTYPE, PRELIMINARY SYNTHESIS, FORMULATION, ETC., AND ITS PRESENT LOCATION

N/A

d. DATE AND PLACE OF FIRST TEST OR OPERATION AND THE RESULTS (Give name and address of witnesses, and present location of records)

N/A

4. OTHER RECORDS (Notebook entries, descriptions, reports, drawings, etc.)

| IDENTIFICATION | DATE OF DOCUMENT | PRESENT LOCATION |
|----------------|------------------|------------------|
| N/A | | |

5. OTHER INDIVIDUALS TO WHOM INVENTION WAS DISCLOSED

| NAME | ACTIVITY OR COMPANY INDIVIDUAL REPRESENTS | DATE DISCLOSED | TYPE (oral or written disclosures) |
|------------|---|----------------|------------------------------------|
| [REDACTED] | NAVAIR 4.11 | 09-07-2016 | Written (email) |
| [REDACTED] | NAVAIR / NAWCAD | 09-07-2016 | Written (email) |
| [REDACTED] | NAVAIR 4.4T, 4.4B | 09-07-2016 | Written (email) |
| [REDACTED] | NAVAIR 4.4.5, 4.4.5.1 | 09-07-2016 | Written (email) |
| [REDACTED] | NAVAIR / NAWCAD | 09-07-2016 | Written (email) |
| | | | |

Not Applicable – this is only a theoretical concept, for the time being.

7. IDENTIFY ANY PAST, PRESENT OR CONTEMPLATED USE, SALE, OR PUBLICATION OF THE INVENTION

This invention is a follow-up to Navy Cases PAX 182 and PAX 205. The physical mechanism of the inventive concept is partially described in the publication [REDACTED] 'The high energy electromagnetic field generator, Int. J. Space Science and Engineering, Vol.3, No. 4, 2015 pp.312-317 (peer-reviewed)'. Possible publication (in a suitable journal) of the present concept is being contemplated, to further increase our chances of patent allowance.

8. LIST ANY CLOSELY RELATED PATENTS, PATENT APPLICATIONS AND PUBLICATIONS OF YOURS OR OTHER PERSONS

THIS INVENTION ARISES AS A FOLLOW-UP TO NAVY CASE PAX 182 – 'ULTRAHIGH INTENSITY ELECTROMAGNETIC FIELD GENERATOR' AND NAVY CASE PAX 205 – 'INERTIAL MASS REDUCTION DEVICE'.

PART II. DISCLOSURE OF INVENTION

Attach on separate sheets of paper a full and complete description of the invention, using the outline given below.

a. PURPOSE. State the purpose of the invention.

To generate high frequency gravitational waves (HFGW) exhibiting power levels of 10^{10} Watts (approx. 10^{35} gravitons/sec) and beyond, by high frequency accelerated axial rotation (spin) and/or accelerated high frequency vibration of an electrically charged asymmetric structure, within the context of non-equilibrium thermodynamics, namely far from equilibrium physics (highly non-linear in nature).

b. BACKGROUND. Describe the old methods, materials or apparatus used to perform the purpose of the invention and give their limitations and disadvantages.

No published literature exists on the generation of such high power HFGW (as disclosed by present concept), which has withstood the scrutiny of subject matter experts, since the ultrahigh EM field flux levels could not be achieved (until now). On February 11, 2016 the National Science Foundation publicly announced that the Laser Interferometry Gravitational Wave Observatory (LIGO) had finally detected gravitational waves from the collision of two stellar mass black holes (approx. 30 times the mass of our Sun), thereby showing the physical reality of such waves and further strengthening General Relativity (GR) theory predictions.

c. DESCRIPTION AND OPERATION. Describe clearly and completely the best mode of the invention and give a detailed description of its operation and use. Sketches, prints, photos, or other illustrations should be attached. In the description, use reference characters to refer to components in attached illustrations.

The asymmetric structure which is the HFGW generator, has the ability to control the accelerated modes of vibration and/or spin of its electrically charged surfaces, in particular the rapid rates of change of accelerated-decelerated-accelerated vibration and/or accelerated-decelerated-accelerated gyration (axial spin) of these electrified surfaces, in this manner delaying the onset of relaxation to thermodynamic equilibrium (thereby delaying entropy production), thus generating a physical mechanism which may induce high energy amplification effects.

Under certain 'special' conditions, we (mathematically) observe exponential growth in electromagnetic energy flux (based on angular frequency of vibration) with accelerating vibration.

d. ADVANTAGES AND NEW FEATURES. State the advantages of the invention over the old methods, materials or apparatus described in paragraph b. above, and the features believed to be new.

Advantages of invention have to do with its possible applications ranging from advanced field propulsion (space drive) to communication through solid objects, as well as asteroid (planetoid) disruption and disintegration (in light of all the recent NASA activity on this latter subject, this application is crucial).

As a new feature, the HFGW generation (via the Gertsenshtein Effect) is accompanied by high frequency electromagnetic radiation which can further alter the local spacetime lattice energy density, thereby manipulating the local vacuum energy state.

e. ALTERNATIVES. Indicate any alternative methods, materials, or apparatus of the invention.

- NONE

f. CONTRIBUTIONS BY INVENTORS. If this is a joint invention, indicate what contribution was made by each inventor.

- N/A

PART III. CERTIFICATION OF INVENTORS

I certify that the invention disclosed herein and in the attached documents is the sole joint invention of the undersigned and that the statements and answers are true to my best knowledge and belief.

Date
09/13/2016

Signature
[REDACTED]

PART IV. CERTIFICATION OF WITNESSES

I certify that the invention described herein and in the attached documents has been disclosed to and understood by me.

Date
13 Sep 2016

Signature
[REDACTED]

Business Address
NAS Patuxent River, MD

Date

Signature

Business Address