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2005-0336-F

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# FOIA MARKER

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**Record Group/Collection:** George H.W. Bush Presidential Records  
**Collection/Office of Origin:** Science and Technology Policy, Office of (OSTP)  
**Series:** Bromley, D. Allan, Files  
**Subseries:** General Science Files

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**OA/ID Number:** 62043  
**Folder ID Number:** 62043-003

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**Folder Title:**  
Energy [1991]

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| Stack: | Row: | Section: | Shelf: | Position: |
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|        | 0    | 0        | 0      | 0         |

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"Document Control"

TYPE: ACTION

ORIGINATOR: 02

STATUS I

DOCUMENT NUMBER: 9200112

DIRECTORATE STATUS

FROM: CRESSWELL, Alan

TO: OSTP

JAN 16 1992

DATE OF  
CORRESPONDENCE: 12/30/91

SUBJECT: RE: HIS BINARY FLUID QUANTUM HEAT ENGINE CYCLE.

DIRECTORATE  
ASSIGNED: PHYSICAL SCIENCES

STAFF  
ASSIGNED:

ACTION  
REQUIRED: AS APPROPRIATE

STAFF  
ACTION: *None*

OSTP DUE DATE: 01/27/92

DATE COMPLETED:

SENDER'S DUE DATE:

STAFF DUE DATE

DATE COMPLETED/DEPT:

COPIES TO:

WHITE HOUSE TRACKING #:

CONTACT PERSON:

PHONE:

EXT:

REMARKS:

*No response is needed. The letter is  
nonsense.*

*KCE*

*1/18/92*

OSTP RECEIVED: 01/13/92

DEPT RECEIVED:

FILE: PHYSICAL SCIENCES - *Energy - General*

CENTRAL FILES:





RECEIVED

Scientific Advisory Committee  
to the President.  
The White House,  
Washington,  
USA.

Alan Cresswell.  
Flat No 11, P12: 56  
33 Kemberton Road,  
Selly Oak,  
Birmingham,  
B27 5JN, ENGLAND.  
MAIL ROOM

Dear Sirs,

BINARY FLUID QUANTUM HEAT ENGINE CYCLE.

I am quite certain that the concept of the Second Law of Thermodynamics does not exist. A supreme law of nature must be independent of temperature for its efficiency. For evolution by Darwin it is essential. The details enclosed provide an example for an event; considered to be impossible since the early 1800's.

For 8 months my Prime Minister's advisers have taken the stand that a mistake in science is impossible. The D of E and DTI are actively being disinformed.

Silence through pride, prejudice and vested interests are now the barrier to a discussion on the enclosures. The cycle is absurdly simple and a detailed examination shows the Thermodynamic Laws are only wrong in tiny interpretations.

A vital outcome is that hydrogen will be much cheaper than refined oil. Electricity for electrolysis will be available from thermal energy in 'cold' sea water.

I need support to build an engine. I would discuss details initially direct with White House connections but not with outsiders because extended lines of communication allow infiltration by dogmatists and opportunists which is the situation I have now.

The UK vested interests are very strongly against and so is Brussels where the JET lobby is getting desperate for billions and a ten year budget.

Consider the abolition of pollution, inflation and the time travel paradox.

Yours faithfully,



Alan Cresswell.

"Document Control"

TYPE: ACTION  
ORIGINATOR: 02

DOCUMENT NUMBER: 9125191  
DIRECTORATE STATUS

STATUS I

\*\*\*\*\*

FROM: KANAT, Leslie: JOHNSON STATE COLLEGE

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 12/14/91

SUBJECT: SHE ASKS FOR DR. BROMLEY'S ASSISTANCE WITH SEVERAL  
BILLS REGARDING A MORATORIUM ON NUCLEAR TESTING,  
DEREGULATION OF CERTAIN RADIOACTIVE MATERIALS, AND  
SOLID WASTE INCINERATORS.

\*\*\*\*\*  
DIRECTORATE  
ASSIGNED: DIRECTOR'S OFFICE

STAFF  
ASSIGNED: KAE

ACTION  
REQUIRED: DIRECT REPLY

STAFF  
ACTION: *for DAB signature*

\*\*\*\*\*  
OSTP DUE DATE: SENDER'S DUE DATE:  
DATE COMPLETED: 01/06/91

STAFF DUE DATE  
DATE COMPLETED/DEPT: 1/3/92

\*\*\*\*\*  
COPIES TO: D. Allan Bromley  
ENVIRONMENT  
PHYSICAL SCIENCES

\*\*\*\*\*  
WHITE HOUSE TRACKING #:

CONTACT PERSON:  
PHONE:

REMARKS:

EXT:

OSTP RECEIVED: 12/19/91 DEPT RECEIVED:  
FILE: PHYSICAL SCIENCES-ENERGY

CENTRAL FILES:





# JOHNSON STATE COLLEGE RECEIVED

Johnson, Vermont 05656

91 DEC 19 P 1 : 23

Environmental & Health Sciences

802/635-2356, Extension 325

14 December 1991

OSTP  
MAIL ROOM

President's Science Adviser  
D. Allan Bromley  
The White House  
1600 Pennsylvania Ave N.W.  
Washington, D.C. 20500

D. Allan Bromley:

*She would know!*

I applaud the decision of the DOE to postpone for two years a decision to build the New Production Reactor. Nuclear energy is unsafe, costly and poses long term health and environmental problems.

I further believe that the Johnston Energy Bill should have been voted down; I am glad it was. Please reject the Department of Interior's 1992-1997 offshore drilling program (which proposes to open 800,000,000 acres along coastal regions.

Please stop Senate bills H.R.645 and S.1111 which will deregulate certain radioactive materials.

Please support Gephardt and Kopetksi's bill H.R.3636 and enact a moratorium on nuclear testing - we spend too much time and money on weapons - enough already!

Please co-sponsor Kostmayer's bill H.R. 3253 and place a moratorium on solid waste incinerators.

We must promote renewable energy. The US could become a leader in this technology. What will it take for the federal government to purchase photovoltaic battery rechargers instead of continually purchasing, and throwing away, batteries? A move like that would bring the cost of photovoltaics down and could be all that is necessary to move that industry into the mainstream.

Respectfully,



Leslie Kanat, Ph.D.

EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
WASHINGTON, D.C. 20506

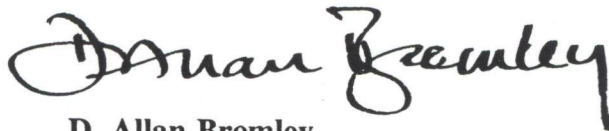
January 3, 1992

Dear Dr. Kanat:

I have taken note of your recommendations concerning nuclear energy, offshore drilling, photovoltaic battery chargers, the New Production Reactor, and the like.

Thank you for your interest in these matters.

Sincerely,

A handwritten signature in black ink, reading "D. Allan Bromley". The signature is fluid and cursive, with the first name "D. Allan" and the last name "Bromley" clearly distinguishable.

D. Allan Bromley  
The Assistant to the President  
for  
Science and Technology

Dr. Leslie Kanat  
Environmental & Health Sciences  
Johnson State College  
Johnson, VT 05656



## STAFFING SHEET

Ltr. - Dr. Kuroki

K. E. K. B.

1/3/12

AS 17

9/25/91

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|                          |  |
|--------------------------|--|
| <b>ACTION REQUESTED:</b> |  |
|--------------------------|--|

[illegible]



"Document Control"

TYPE: INFORMATION

ORIGINATOR: 02

STATUS C

DOCUMENT NUMBER: 9125129

DIRECTORATE STATUS

FROM: PARKER, Eugene N.: UNIVERSITY OF CHICAGO

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 12/10/91

SUBJECT: A LETTER TO ACQUAINT DR. BROMLEY WITH A CONFLICT  
THAT HAS ARISEN IN CONNECTION WITH THE BAHCALL  
REPORT AND THE TIMLEY PURSUIT OF SOME PRESSING  
PROBLEMS IN SOLAR PHYSICS AND ENVIRONMENTAL CHANGE.

DIRECTORATE STAFF  
ASSIGNED: ASSIGNED:

ACTION  
REQUI

\*\*\*\*\*

OSTP D  
DATE C

\*\*\*\*\*

COPIES

\*\*\*\*\*

WHITE H

REMARKS:

OSTP RECE

FILE: P-E

CENTRAL F

ENERGY

2/1/92  
Parker is right, in that  
solar physics was not  
treated well by Bahcall.  
However, solar science &  
it's impact on terrestrial  
climate aren't being  
neglected - viz Global change  
program, and NASA space  
plan program - Karl  
(Parker's best strategy  
would seem to be  
to argue that solar  
science was not  
ranked highly by  
Bahcall precisely  
because it is not  
pure astrophysics.)

STAFF  
ACTION:

\*\*\*\*\*  
TE:

STAFF DUE DATE  
DATE COMPLETED/DEPT:

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

CONTACT PERSON:  
PHONE:

EXT:

RECEIVED:

12-19-91

Karl Gub  
Comment  
memo to my  
reply  
JLS

"Document Control"

TYPE: INFORMATION DOCUMENT NUMBER: 9125129  
ORIGINATOR: 02 STATUS C DIRECTORATE STATUS  
\*\*\*\*\*

FROM: PARKER, Eugene N.: UNIVERSITY OF CHICAGO

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 12/10/91

SUBJECT: A LETTER TO ACQUAINT DR. BROMLEY WITH A CONFLICT  
THAT HAS ARISEN IN CONNECTION WITH THE BAHCALL  
REPORT AND THE TIMLEY PURSUIT OF SOME PRESSING  
PROBLEMS IN SOLAR PHYSICS AND ENVIRONMENTAL CHANGE.

\*\*\*\*\*  
DIRECTORATE STAFF  
ASSIGNED: ASSIGNED:

ACTION STAFF  
REQUIRED: ACTION:

\*\*\*\*\*  
SENDER'S DUE DATE:  
OSTP DUE DATE: STAFF DUE DATE  
DATE COMPLETED: DATE COMPLETED/DEPT:

\*\*\*\*\*  
COPIES TO: D. Allan Bromley  
PHYSICAL SCIENCES  
ENVIRONMENT

\*\*\*\*\*  
WHITE HOUSE TRACKING #: CONTACT PERSON:  
PHONE: EXT:  
REMARKS:

OSTP RECEIVED: 12/17/91 DEPT RECEIVED:  
FILE: P-ENVIRONMENTAL  
CENTRAL FILES:



2141 1

THE UNIVERSITY OF CHICAGO  
THE ENRICO FERMI INSTITUTE  
933 EAST 56TH STREET  
CHICAGO, ILLINOIS 60637

Laboratory for Astrophysics  
and Space Research

91 DEC 17 A 9: 51

TEL: 312-702-7847  
FAX: 312-702-6645  
TELEX: 910-221-5617

December 10, 1991  
MAIL ROOM

Dr. Allan Bromley  
Assistant to the President for Science  
and Technology  
Executive Office of the President  
The White House  
Washington, DC 20500

Dear Dr. Bromley:

The purpose of this letter is to acquaint you with a conflict that has arisen in connection with the Bahcall report and the timely pursuit of some pressing problems in solar physics and environmental change. The best resolution of the difficulty is to make more people aware of it, as perhaps you already are.

The Bahcall Committee was called upon to survey the field of astronomy and astrophysics in the broadest terms, except that for some reason it was not to treat space missions for solar physics. The breadth of the Committee was based on a number of diverse working groups. The reports of the working groups to the Bahcall Committee provide an excellent survey of the scientific issues and the related initiatives across the whole discipline. Unfortunately the final document, i.e. the Bahcall report itself, does not recognize the broad output of the working groups. The report was written mainly by Bahcall and Beichman in a period of about two months, after which it was set in concrete. The final report, then, is a penetrating and interesting presentation of the personal interests of the two authors, with only spotty treatment of the rest of the science. It should be noted that the interests of the two authors probably represents the majority of members of the American Astronomical Society, whose attention is channeled toward the exploration of the universe and the exotic and extreme objects in the universe - active galactic nuclei quasars, black holes, relativistic radio jets, X-ray bursters, etc. Thus the report hardly mentions the solar-stellar connection, astrophysical plasmas, solar and stellar activity, to mention only a few. Nor does the report provide scientific justification of such key projects as the LEST (Large Earth based Solar Telescope) that it lists for future development.

The fundamental difficulty now is that the report is generally regarded as a complete survey of astronomy and astrophysics, so that anything not mentioned is presumed to be unimportant. Thus Congress, NASA, NSF, DOE and others use the report as a basic guideline, and crucial scientific issues are being ignored.

I will not encumber you with a survey of the many ramifications of the misunderstanding. It is sufficient to illustrate the gravity of the problem with one example, which cuts across several special topics.



There has been evidence for several decades that the climate in the northern temperate zone, which varies substantially from one century to the next, may reflect variations in the level of activity of the Sun. For instance Jack Eddy pointed out over twenty years ago that there have been centuries of reduced solar activity (10 such centuries out of the last 70) and that these centuries (where climate data are available) were accompanied by cold climate (mean temperatures down by 1 or 2 °C). He found, too, that there are centuries of hyperactivity (8 in the last 70) which (where climate data are available) were accompanied by warm climate (mean temperatures up by 1 or 2 °C) and serious dessication in southwestern United States. But there was no known physical connection between mean temperature in the northern temperate zone and the magnetic activity of the Sun, so nothing much could be concluded. Was it a statistical fluke?

In the past decade the accumulating observational facts have fallen together to make a solid circumstantial case that there is indeed a direct connection in the simplest possible terms, viz the luminosity of the Sun varies substantially and inexplicably with the level of magnetic activity, and it is simply the changing intensity of the sunlight (by something of the order of a percent) that provides the cool, normal, or warm centuries. Unfortunately the immediate concern over greenhouse gases and global warming distracts attention from the variability of the solar luminosity. And it is a fact that we can do even less about it than we might conceivably do about greenhouse gases. But the solar variability is there and it will not go away. The attached two page appendix outlines the observational facts that require the varying luminosity as a working hypothesis.

It is not understood at present how or why the brightness of the Sun should vary so much as to cause serious swings in our climate. Plages are part of the story, but only part, and the physics of the plage is not understood at all. The whole effect is evidently a basic property of a star like the Sun, originating deep in the convective zone and extending outward through the atmosphere into space. But I cannot be more specific.

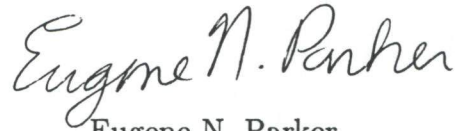
There are a number of scientists in Washington who are aware of the importance of this solar-terrestrial connection, and who understand that it can be investigated by close scrutiny of the Sun and the conditions in space (solar UV and X-rays are part of the phenomenon). It is evident that the solar-stellar connection must be exploited too, because we cannot wait for the Sun to go into a prolonged activity minimum or maximum. That may not happen for a century. But if we monitor a hundred solar-type stars, the phenomenon will become evident in just a few years.

Dr. Eugene Bierly, who heads up the Atmospheric Sciences Division of the NSF has been emphasizing that the variability of our climate includes effects that extend all the way into the Sun and therefore the whole system needs to be investigated. But it is difficult to persuade outsiders that there is a fundamental problem here, because the highly exclusive Bahcall report is taken to be an inclusive and comprehensive survey of the entire field of astronomical science. And the report says nothing about the entire field of solar variability and astrophysical plasma. When you add that to the general intellectual inertia of the scientific community, for which the report speaks in the first place, the result is that a scientific problem of fundamental interest and considerable impact on humanity



is being ignored. And I feel that it is too important to ignore. My hope is that others will feel likewise when acquainted with the facts.

Sincerely,

A handwritten signature in cursive script that reads "Eugene N. Parker". The signature is fluid and elegant, with the first name "Eugene" being the most prominent part.

Eugene N. Parker  
Professor of Physics

ENP:vzs

The ACRIM and NIMBUS data over the last 13 years have shown the luminosity of the Sun (as viewed at Earth) to vary by about one part in  $10^3$  in step with the level of solar activity, the Sun being brighter when the Sun is more active. Careful analysis of the data indicates that the Sun is brighter when more active at least partly because of the calcium plages and faculae associated with regions of strong magnetic field. But the plage phenomenon is itself not understood. A variation of solar luminosity by one part in  $10^3$  has only a small effect on terrestrial climate, and is probably lost in the noise of the local terrestrial weather and climatic fluctuations. However, the observed fact that the luminosity varies with the activity is an astonishing discovery, wholly unanticipated by mortal scientists.

Now the terrestrial climate has taken some unexplained century-long swings in the last millennium. The 15th and 17th centuries averaged about 1.5 C colder than normal in the northern temperate zone (forming the "Little Ice Age") while the 12th century was a comparable amount warmer. The human impact was profound. Southwestern United States was a desert in the 12th century, with part of the prairie reduced to blowing sand. The 15th and 17th centuries of cold produced hard times in Europe and China (where written records exist), with crop yields down. The occasional travelers in the northern prairie in what is now the United States reported killing frosts in the summer. One may ask what caused these long lived changes in climate. Flip answers, such as increased or decreased cloud cover exist, which only leads to the question of why a century of different cloud cover?

It was noted by Jack Eddy some years ago that these climatic variations coincided, perhaps by chance, with the Spörer and Maunder Minima and with the 12th century Maximum in solar activity. Some have disputed the variation of solar activity, because of incomplete observational records of sunspots, etc. But the  $^{14}\text{C}$  production rate obtained from tree ring dating shows the variation loud and clear. The cosmic ray intensity, i.e. the  $^{14}\text{C}$  production rate, was 15-20 percent above normal in the 15th and 17th centuries,



indicating a really deep minimum in solar activity, which permitted free entry of cosmic rays into the solar system. The  $^{14}\text{C}$  production was reduced by a similar amount in the 12th century, indicating an extraordinarily high level of activity. The fact that the luminosity of the Sun is now known to vary with the level of activity, suggests that the luminosity of the Sun varied substantially from the norm with the extraordinary variation of solar activity in the 12th, 15th, and 17th centuries, and this is corroborated by the associated changes in the climate already mentioned. Indeed, data recently recovered from the archives of the Paris Observatory show detailed tracking of the solar activity with the deep cold of the decade 1690–1700.

We may expect that the Sun will play such games again in future centuries. Perhaps starting tomorrow, or in 200 years, or whatever. The implications for the climate and the human race are profound, and we are impatient to study the physics of the luminosity variations. We need to understand the physical nature of the plage, and the sunspot and whatever else contributes to the variation of the luminosity in normal times, and we need to get some direct quantitative measure of how much the luminosity varies (either up or down) in a century of enhanced or reduced activity.

Dr. Sallie Baliunas, at the Harvard-Smithsonian Observatory, has attacked the latter problem by monitoring the luminosity and activity of a host of stars, fifteen of which are solar duplicates (same mass, composition, and age). These fifteen solar duplicates are identical siblings of the Sun. All born to the same genetics. Two of the fifteen have now changed their luminosity by about 4 parts in  $10^3$  in just five years! Two others have been rock steady, as if caught in a prolonged minimum, and the other 11 show the expected 10 year cycles in activity and luminosity of about one part in  $10^3$ .

The circumstantial evidence is clear, with the whole picture falling together. Evidently the Sun plays games with its luminosity to a degree that strongly impacts terrestrial climate. That is to say, the changes in solar luminosity appear to be an important driver in the terrestrial climate, so that a serious study is called for to quantify the empirical

relationship and to understand the physics at both ends (i.e. at the Sun and in the terrestrial atmosphere). It is evident that a study of terrestrial climate may provide a direct measure of the variation of the luminosity of the Sun in the 17th century and perhaps also in the 15th and 12th centuries. It may be the only way we can ever determine those historical changes in  $L_{\odot}$ . It is equally evident that the study of terrestrial climate needs to know the physics of the luminosity changes  $\Delta L_{\odot}$ , which depend on conditions on the smallest scales ( $\sim 10^2$  km) at the Sun. We need to understand the cause of the fibril state of the magnetic field at the visible surface of the Sun and the physics of the plage and the faculae, which are only now becoming accessible to detailed study. We also need to figure out what else is happening to provide  $\Delta L_{\odot}/L_{\odot}$  as large as  $\sim 10^{-2}$ , because the plages alone cannot account for it all.



"Document Control"

TYPE: INFORMATION

ORIGINATOR: 02

STATUS C

DOCUMENT NUMBER: 9124464

DIRECTORATE STATUS

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FROM: WALKER, W.D.: DUKE UNIVERSITY

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 10/11/91

SUBJECT: A LETTER EXPRESSING HIS OPINIONS OF THE COMMITTEE  
CONVENED BY ADMIRAL WATKINS UNDER PROFESSOR CHARLES  
TOWNES, REGARDING RESEARCH PROGRAMS AT DOE. HE ALSO  
PROVIDES IDEAS ON DISPOSAL OF NUCLEAR WASTE.

\*\*\*\*\*

DIRECTORATE  
ASSIGNED:

STAFF  
ASSIGNED:

ACTION  
REQUIRED:

STAFF  
ACTION:

\*\*\*\*\*

SENDER'S DUE DATE:

OSTP DUE DATE:  
DATE COMPLETED:

STAFF DUE DATE  
DATE COMPLETED/DEPT: 2/11/9

\*\*\*\*\*

COPIES TO: D. Allan Bromley  
PHYSICAL SCIENCES  
ENVIRONMENT

\*\*\*\*\*

WHITE HOUSE TRACKING #:

CONTACT PERSON:  
PHONE:

EXT:

REMARKS:

OSTP RECEIVED: 10/17/91  
FILE: P-PHYSICAL SCIENCES

DEPT RECEIVED:

CENTRAL FILES:

4464

Duke University  
RECEIVED  
DURHAM  
NORTH CAROLINA  
27706

DEPARTMENT OF PHYSICS

91 OCT 18 10:12  
WILLIAM D. WALKER  
J.B. DUKE PROFESSOR OF PHYSICS

TELEPHONE 919-684-8210

OFFICE OF THE  
DIRECTOR  
October 11, 1991

Dr. D. Allan Bromley  
Presidential Science Advisor  
Office of Science and Technology  
Washington, DC 20500

Dear Allan,

Recently Admiral Watkins and Dr. Happer at DOE convened a committee under Professor Charles Townes to look at research in DOE. Every research project was to be looked at with the exception of the SSC (the super collider). Apparently the results of these deliberations will be cuts in almost everything; fusion, the Tevatron, RHIC. You, I'm sure, know the details better than I do.

I believe that the results of their plan if implemented will be a near disaster for many research programs. This will inevitably bring about further serious questioning of the validity of the SSC program. People in many branches of physics will question even more the importance of the SSC. The resulting warfare could seriously damage the SSC effort.

I believe that the work of the committee was inherently flawed by the original decision to leave the SSC untouched. For goodness sake let the SSC stretch by a couple of years. Perhaps one might install only one-half the bending magnets and leave three of the four experimental areas nearly unfinished. Everyone should face the fact that the SSC is a shot in the dark! There are no known thresholds that one is aiming at. In the next eighteen months the top quark might be discovered at the Tevatron collider, and its mass would give insights as to the mass of the Higgs boson. What if the SSC is way above the threshold necessary for a Higgs search? Maybe it would make sense to go for one-half to three-fourths of the ultimate design energy or, conversely, maybe more than the design energy.

Leaving Fermilab without the funds to carry on a fixed target program will



deal a terrible blow to the high energy community. The ultimate effect will be to drive a lot of talented people out of the field. Even if the SSC were on time, a much weakened group of people will be preparing for it. It is very important to keep a healthy program going rather than to suck the life out of the community in order to gain a couple of years in time with the SSC.

On another subject, I believe there is a viable alternative to the high-level nuclear waste business that should be considered. This might impact DOE's budget. A look at a map of the world will show that most of it is covered by water so that the oceans should be considered as an ultimate disposal location. In this scheme, high level waste should be kept in the reactor's swimming pools for a mandatory twenty years. Then the waste would be transferred to large communal swimming pools near an ocean. After an additional twenty years there would be a separation of fission products from the heavy elements. The fission products should then be glassified and buried in high integrity containers in ocean mud at a depth of 1000 feet or more. This final burial should have no environmental impact. The remaining heavy elements could be used in reactors.

I would believe that such an arrangement would have less political repercussion than the present course. This option should be seriously tested. The net exposure to workers doing the transport, separation etc. should be carefully calculated and minimized. Since the time on any state's home turf would be limited by statute I would believe that the political reaction would be minimized.

I might write a detailed proposal of my ideas on waste. Connie has been personally involved in a commission siting a low level waste facility so I have thought about waste quite a bit. My ideas were stimulated by Luis Alvarez's suggestion in his autobiography.

I was very saddened to hear about Pat's death.

With best wishes,  
Sincerely,

A handwritten signature in cursive script that reads "Bice Walker".

W.D. Walker

J.B. Duke Professor of Physics

THE WHITE HOUSE

WASHINGTON

February 11, 1992

*Bill*  
Dear Dr. Walker:

Thank you for your letter concerning Fermilab funding, SSC construction and disposal of glassified nuclear wastes in the ocean.

You will be pleased that the President's FY 1993 budget proposes both full funding for the SSC and strong support for Fermilab. The Department of Energy argues, quite correctly, that to begin delaying a construction project as large as the SSC at this very early stage, not only guarantees rapid cost escalation, but makes it much harder to garner the broad support that will be needed to bring the project to completion. It is extremely important to demonstrate now that we have the political will and the technical ability to keep the project on schedule.

My fundamental position on nuclear waste management is that we should continue to work to build support for Yucca mountain as a candidate repository, and for opening the WIPP facility, and I strongly support David LeRoy's efforts to identify candidate sites for retrievable storage. I am sure you agree that these plans are technically sound, and that continued leadership—not technological breakthrough—is the key to establishing a safe and effective long-term program.

Sincerely yours,

*D. Allan Bromley*

D. Allan Bromley  
The Assistant to the President  
for  
Science and Technology

Dr. W.D. Walker  
J.B. Duke Professor of Physics  
Department of Physics  
Duke University  
Durham, NC 27706



## STAFFING SHEET

**SUBJECT:**

Ltr to Dr. Walker - Duke Univ

**ORIGINATOR:**

K. ERB

**PHONE:**

5130

**DATE ORIGINATED:**

2/11/92

DATE DUE:

ASAP

CORR TRACKING NO:

9124464

### EXTERNAL COORDINATION:

|                 | COMMENTS | DATE |
|-----------------|----------|------|
| DIRECTOR        |          |      |
| GENERAL COUNSEL |          |      |
| EXEC. ASST.     |          |      |

**ACTION REQUESTED:**

[illegible]



"Document Control"

TYPE: ACTION

ORIGINATOR: 02

STATUS *IC*

DOCUMENT NUMBER: 9124686

DIRECTORATE STATUS *C*

\*\*\*\*\*

FROM: IYER, Gopalakrishna S.

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE:

NOV 13 1991

SUBJECT: REGARDING COMMERCIALIZATION OF HIS ENERGY INVENTIONS  
OF GLOBAL IMPORTANCE IN THE USA.

\*\*\*\*\*

DIRECTORATE

ASSIGNED: PHYSICAL SCIENCES

STAFF

ASSIGNED:

*Dave Cranmer*

ACTION  
REQUIRED: DIRECT REPLY

STAFF  
ACTION:

\*\*\*\*\*

SENDER'S DUE DATE:

OSTP DUE DATE: 11/20/91

STAFF DUE DATE

DATE COMPLETED:

DATE COMPLETED/DEPT: 11/21/91

\*\*\*\*\*

COPIES TO:  
INTERNATIONAL/POLICY

\*\*\*\*\*

WHITE HOUSE TRACKING #:

CONTACT PERSON:

PHONE:

EXT:

REMARKS:

*Dave - please draft a reply (consult with Dan Pryor, our energy guru, as necessary) over your signature for me to look at. Thanks*

*Karl 11/18*

OSTP RECEIVED: 11/06/91  
FILE: P-PHYSICAL SCIENCES

DEPT RECEIVED:

CENTRAL FILES:

*ENERGY*





4606  
23rd October 1991.

S. Gopalakrishna Iyer, B.A.B.L.,  
Advocate,  
Door No. 40/223,  
Thottakkat Cross Road,  
Ernakulam,  
Cochin - 682 011,  
Kerala State, India.

RECEIVED

91 NOV 6 PM 53

OFFICE OF

DIRECTOR

The Scientific Adviser to the President,  
The White House,  
Washington D.C.,  
The United States of America.

Sir,

Subject: Regarding Commercialisation of my energy inventions  
of global importance, in the U.S.A.

---

I beg to write to you this letter regarding the commercialisation, I desire, of some energy inventions of mine, which would be creating a new energy technology the world over, through an association for the purpose with some manufacturing concern there, which should be very much in the national interests of the U.S.A. also, to ensure for itself a leading role in the said emerging world energy technology, in the future.

Through long years of intellectual effort, keeping well in mind the limitations imposed by the principle of the conservation of energy, as a person with an inventive bent of mind and a Physics graduate also, refreshing myself with the portions of physics relevant to the formulation of the inventions and the energy calculations from text books on the same, I have been able to satisfactorily evolve some patentable energy inventions that are sure to give an energy technology of nominal-cost, abundant, clean power for both static and vehicular purposes on land, sea and in the air.

Some freely available natural sources are used for the purpose of continuous energy release under the inventive techniques, the possibilities revealing themselves to the probing of the analytical mind. As such, the said natural sources function as energy sources

Contd...2/-

for the purposes of the inventions. Energy from the said sources is intensively availed of not only for the working of the invention machines after their initial functioning with some external input for a minute or so, but also for a commercially viable continuous net energy output also.

The invention machines or engines would be rather simple to manufacture and costing comparatively but very moderately and as energy as said is drawn intensively from their sources, single machines could be constructed to give three thousand H.P. and in series up to any extent of power. Energy being drawn from freely available sources, with no external input needed except for getting the machines started and running as said, the running costs of the machines would only be very nominal for covering oiling of moving parts, any needed supervisional charges and external input for initial functioning, mainly. As a matter of fact, the energy inventions would make power, electrical or mechanical, except for a very nominal rate, almost as free as water or air.

As such, the inventions would be rendering the present very much more costly energy technology based on coal, oil, nuclear power, etc., commercially obsolete immediately and replacing it more or less completely within a couple of years in the industrial, commercial and domestic spheres all over the world.

So much so, the patent value of the inventions in the advanced countries alone should at a very low non-commercial estimate even, could come to some two hundred billion U.S. dollars.

Whatever the pains attendant on the technology transition, the new energy technology would be so wholesome as to be of maximum benefit to human well-being in all the foreseeable future.

Professors of Physics, on my explanatory personal disclosure, would immediately endorse the validity of the inventions and their calculable commercially viable surplus output of power also and



nothing else would be required for the due evaluation of the inventions considering their nature, competently.

I would briefly mention here the circumstances that occasion my writing this letter to you.

India is keeping aloof from the Paris International Patent Convention providing priority for a patent application filed by a citizen in a member country in all the others, for enabling sufficient protection for inventions. Further, there is a law in India, requiring unless otherwise sanctioned by the Government, six weeks' wait for any person resident here, pending Government scrutiny regarding any requirement for defence purposes, from the requisite filing<sup>of a</sup> patent application here, before any foreign patent applications could be filed regarding any invention, with penal provisions for any infringement.

As such, bringing out the energy inventions in India, with any disclosure arrangement, would be attendant with very possible leak of technical information and resulting forestalling fraudulent patent applications using such information, in any foreign country with priority in all the Paris Patent Convention countries, even if I had filed patent applications here at the outset, practically defeating almost my entire foreign patent rights, easily worth, as mentioned earlier, more than 200 billion dollars.

Pointing out the above difficulties, I had written to the Government of India as early as 1984, giving the nature and advantages of the energy inventions and natural sources used, without disclosing any invention technical details, agreeing to make a personal disclosure before professors of Physics for due evaluation, provided the Government agreed to the due filing of immediate patent applications in all important advanced countries on the due endorsement then and there by the said professors of the validity of the inventions. The Government was advised by the Energy Centre, I.I.T., Delhi, to which my letter had been referred, to ask me to make a

Contd....4/-

presentation before a select group of scientists and the Government wanted my disclosure to be made to a Government scientist without committing itself in any manner to the filing of any immediate protective foreign patent applications as desired in my letter, which I was not prepared to do. In spite of my repeated attempts through the years, the Government has not cared to consider my view points in the matter for enabling it to be proceeded with. So, finally, I have decided to seek the commercialisation of the inventions in a foreign country and, in pursuance, I am writing this letter to you regarding the same.

Regarding association of some manufacturing concern there for the commercialisation of the inventions, I have in my mind the name of Mr. Alfred Ford, head of the Ford Motors of America. I have read of him as interested in the 'Hare Krishna' cult there. The Ford Motors or a subsidiary for the purpose, could associate in the commercialisation of the inventions.

I would make it clear that as long as I am residing here, with the law in India requiring, before any foreign patent applications could be filed regarding any invention, six weeks' wait for the same from the filing of a patent application here, it would not be proper for me to disclose from here any technical details of the energy inventions with their exceptional and global importance, for which I would have first to be duly enabled to start residing outside India, say, in Kuala Lumpur in Malaysia or in Singapore, with a suiting climate. So much so, all that could be done now would be to reach a preliminary understanding on all relevant aspects of the commercialisation of the inventions.

So much so, for facilitating the said association, the Ford Motors could first take up a couple of other patentable inventions of mine for commercialisation, in which they could easily be interested, before passing to the energy inventions within two or three months time thence. The said two inventions are:

1. a radical chassis structural arrangement for a mini or scooter car, which could become immediately popular

Contd...5/-



in all countries, intended with its mini size but for the use of a couple with, say, two small children also, with costs reduced due to simplifications of mechanical requisites, enabled to be introduced, ensuring at the same time a satisfying very smooth ride. The mini car could be built in more than one suited size also. Preferred by a percentage of buyers of two or three wheelers also, the mini car could shortly reach annual sales of two millions or more in the world countries.

2. A pneumatic tyre modification (for cars, etc) enabling more satisfying and much longer use, which could easily come into general use everywhere in the future.

The above two inventions being functionally merely of ordinary commercial use alone, I could confidentially send the technical details if needed from here itself on the understanding that excepting assessing the merits, nothing else would be done regarding them till I start residing outside India. Regarding these two inventions also, there should be a preliminary understanding regarding relevant matters of an association for their commercialisation before proceeding to a technical disclosure.

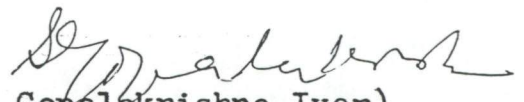
I would like you to duly apprise the U.S. Government of this letter. For enabling an earnest and diligent enough pursuit of this matter as would be requisite, I would request you also to ask the U.S. Government, considering the technological pre-eminence that would accrue to the United States in the basic replacing new energy sphere in the world, in the future, from the proposed commercialisation of my energy inventions there, to directly suggest forthwith to Mr. Ford, acquainting him with the contents of this letter, to write to me himself regarding his willingness to pursue in the manner suggested in my letter, the commercialisation of the inventions concerned, the two inventions specifically mentioned above and, of course, the energy inventions. Then the matter could move forward in a tangible manner, leading in a few months to the commercialisation in due course of the energy inventions there, which as said would be very much in the national interests of the United States also.

Contd....6/-

I am an aged person of 80 years, my wife already dead and with no children and still keeping some health. If you wanted to know anything about my disposition and character, you could contact Justice K.K.Mathew, Retired Judge of the Supreme Court of India, who has known me for the past 35 years and who is residing here also at No.38/90, Sivarama Menon Road, Ernakulam, Cochin-682 018, Kerala State, India and whose Phone No. is "Ernakulam 354450", Kerala State, India.

Awaiting an early reply from you,

Yours faithfully,

  
(S.Gopalakrishna Iyer)



EXECUTIVE OFFICE OF THE PRESIDENT  
OFFICE OF SCIENCE AND TECHNOLOGY POLICY  
WASHINGTON, D.C. 20506

November 21, 1991

Dear Mr. Iyer:

I have been asked to reply to your letter of October 23rd to the Scientific Adviser to the President of the United States regarding patenting and commercialization of your energy inventions. From the information you provided, it appears that a patent application should be filed prior to disclosure to anyone. I suggest you contact the U.S. Patent Office to obtain the necessary information on filing documentation and fee schedules.

Sincerely,



David C. Cranmer  
Fellow

S. Gopalakrishna Iyer, B.A.B.L.  
Advocate,  
Door No. 40/223  
Thottakkat Cross Road  
Ernakulam  
Cochin - 682 011  
Kerala State, INDIA

"CORRESPONDENCE TRACKING"

TYPE: ACTION  
ORIGINATOR: 02

DOCUMENT NUMBER: 9124151

STATUS *RC*

DIRECTORATE STATUS *C*

\*\*\*\*\*

FROM: GOLAY, Michael W.: PROGRAM FOR ADVANCED NUCLEAR POWER STUDIES

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 09/19/91

SUBJECT: A COPY OF THE, "PROCEEDINGS OF THE FIRST MIT  
INTERNATIONAL CONFERENCE ON THE NEXT GENERATION OF  
NUCLEAR POWER TECHNOLOGY" AND A REQUEST FOR IDEAS  
REGARDING HOW TO ENHANCE THE VALUE OF THE SECOND MIT  
INTERNATIONAL CONFERENCE ON THE NEXT GENERATION OF . . .

\*\*\*\*\*

DIRECTORATE

STAFF

ASSIGNED: PHYSICAL SCIENCES

ASSIGNED:

ACTION  
REQUIRED: AS NECESSARY

STAFF  
ACTION:

\*\*\*\*\*

SENDER'S DUE DATE:

OSTP DUE DATE: 10/08/91

STAFF DUE DATE

DATE COMPLETED:

DATE COMPLETED/DEPT: 10/28/91

\*\*\*\*\*

COPIES TO: D. Allan Bromley  
INTERNATIONAL/POLICY

\*\*\*\*\*

WHITE HOUSE TRACKING #:

CONTACT PERSON:

PHONE:

EXT:

REMARKS: *Enclosure to Physical Sciences,  
forward to DAB as necessary.*

OSTP RECEIVED: 09/24/91  
DEPT RECEIVED:

FILE: P-PHYSICAL SCIENCES-ENERGY





**PROGRAM FOR  
ADVANCED NUCLEAR  
POWER STUDIES**

DEPARTMENT  
OF NUCLEAR  
ENGINEERING

MICHAEL W. GOLAY  
PROGRAM  
DIRECTOR

ROOM 24-215  
TELEPHONES (617) 253-5824  
(617) 253-5233  
FAX (617) 258-8863

September 19, 1991

Allan Bromley  
Science Advisor to the President  
Office of Science and Technology Policy  
Old Executive Building, Room 360  
17th and Pennsylvania Ave, NW  
Washington, DC 20506

Dear Dr. Bromley,

You may recall that the MIT Program for Advanced Nuclear Power Studies held the First MIT International Conference on the Next Generation of Nuclear Power Technology in October 1990. Its purpose was to stimulate a high level discussion of future use of nuclear power technology among leaders from the different organizations and constituencies likely to play major roles affecting how this technology is used.

The structure of the meeting utilized six topical sessions, a domestic United States discussion panel and an international panel. In each session keynote and respondent papers were used to introduce the major points concerning a major topic, and most of the session was devoted to a discussion among the attendees. The meeting was private, with attendance by invitation. The enclosed *Proceedings* contains the papers presented and synopses of the discussions.

I believe that the session papers and discussions are unusually thoughtful. They are likely to be of interest to those who are concerned with whether and how nuclear power can be broadly acceptable in the future. Because of your evident interest in these questions, I am sending you the enclosed copy of the *Proceedings*.

I hope that you will find this material interesting. If you would like any information about the MIT Program for Advanced Nuclear Power Studies, or if you have any comments concerning the First MIT International Conference on the Next Generation of Nuclear Power Technology, I would enjoy hearing from you.

Finally, I should note that our series of international conferences on future nuclear power technology is intended as a vehicle for stimulation of consensus regarding how to achieve a broadly acceptable technology. It is intended to foster the refinement of ideas and an intellectual community concerning this topic. The Second MIT International Conference on the Next Generation of Nuclear Power Technology is now being organized for October 13 and 14, 1992. Your ideas regarding how to enhance the value of this conference would be greatly appreciated.

Sincerely,

*Michael W. Golay*  
Michael W. Golay  
Professor of Nuclear Engineering  
Director, Program for Advanced  
Nuclear Power Studies

MWG:pjc

encl

MIT.  
Room -24233  
77 mm and  
C. 24233

RECEIVED  
91 SEP 24 P 2  
OFFICE OF THE  
DIRECTOR



# OSTP STAFFING SHEET

SUBJECT: Ltr. to Michael Golay

ORIGINATOR: Karl Erb PHONE: 5/30

DATE ORIGINATED: 10/28/91 DATE DUE: 10/8/91 CORR TRACKING NO.: 9124151

EXTERNAL COORDINATION: \_\_\_\_\_

|   |                 | COMMENTS | DATE |
|---|-----------------|----------|------|
| ✓ | DIRECTOR        |          |      |
| ✓ | CHIEF OF STAFF  |          |      |
|   | GENERAL COUNSEL |          |      |
| ✓ | EXEC. ASST.     |          |      |

**ACTION REQUESTED:** Please return & I will mail & make copies, etc.  
Dissella.

[illegible]



THE WHITE HOUSE  
WASHINGTON

October 28, 1991

Dear Professor Golay:

Thank you for providing me with a copy of the Proceedings of the First MIT International Conference on the Next Generation of Nuclear Power Technology. I am sorry that neither I nor Karl Erb, now my Associate Director for Physical Sciences and Engineering, were able to attend. Dr. Erb did attend the more recent MIT workshop on the direct cycle HTGR concept, however, and he told me the workshop was a great success. I hope you will continue to keep both of us informed of developments concerning advanced reactor concepts.

Sincerely,

A handwritten signature in dark ink, appearing to read "D. Allan Bromley". The signature is fluid and cursive, with a long horizontal stroke extending to the left.

D. Allan Bromley  
The Assistant to the President  
for  
Science and Technology

Professor Michael W. Golay  
Professor of Nuclear Engineering  
Director, Program for Advanced  
Nuclear Power Studies  
Department of Nuclear Engineering  
Room 24233  
Massachusetts Institute of Technology  
77 Massachusetts Ave.  
Cambridge, MA 02139

"CORRESPONDENCE TRACKING"

TYPE: ACTION DOCUMENT NUMBER: 9124182  
ORIGINATOR: 02 STATUS *IC* DIRECTORATE STATUS *C*  
\*\*\*\*\*

FROM: KELLY, D.A.: SPACE ENERGY ASSOCIATION-SEA/US

TO: DR. D.A. BROMLEY

DATE OF  
CORRESPONDENCE: 09/19/91

SUBJECT: A COPY OF THEIR LATEST, SPECIAL SEPTEMBER EDITION OF  
THEIR SEA/U.S. NEWLETTER, FOR REVIEW AND  
CONSIDERATION.

\*\*\*\*\*  
DIRECTORATE STAFF  
ASSIGNED: PHYSICAL SCIENCES ASSIGNED:

*No reply is necessary*  
ACTION STAFF  
REQUIRED: DIRECT REPLY AS NECESSARY ACTION:

\*\*\*\*\*  
SENDER'S DUE DATE:  
OSTP DUE DATE: 10/08/91 STAFF DUE DATE  
DATE COMPLETED: DATE COMPLETED/DEPT:

\*\*\*\*\*  
COPIES TO: *He*

\*\*\*\*\*  
WHITE HOUSE TRACKING #: CONTACT PERSON:  
PHONE: EXT:

REMARKS: *Newsletter sent to OSTP for information.  
No action was requested by the sender*

*10/6/91*

OSTP RECEIVED: 09/24/91 FILE: P-PHYSICAL SCIENCES-ENERGY  
DEPT RECEIVED:



# SPACE ENERGY ASSOCIATION-SEA/US

Alternate Energy Systems

RECEIVED

P.O. Box 11422  
Clearwater, FL 34616  
(813) 442-3923  
FAX (813) 446-5290

September 19, 1991

Presidential Science Advisor  
The White House  
1600 Pennsylvania Avenue  
Washington, D.C., 20500

Presidential Science Advisor

## Reference:

Dear Sir:

I.E.C.E.C. meeting at Boston, on  
August 3rd thru 9th, 1991

We are enclosing a copy of our latest, Special September edition of our SEA/U.S. newsletter, for your review and consideration at this time.

The results of the recent I.E.C.E.C. meeting at Boston, August 3rd-9th, have been outstanding, - at least as far as the exposure of practical "free energy" hardware/prototype projects has taken us.

It is now becoming apparent that space/ether energy can be converted in two ways that we, and several other groups, now have under study: ie:

- 1) Conversion via high voltage spark gaps, and possibly within vacuum tubes.
- 2) Conversion within the magnetic cores, when the magnet fields surrounding the coils over such magnetic cores are cancelled, (in the case of bifilar or cadueous coils wound over permanent magnets) Such cancellation of the magnetic field, around the conductors causes the orthorotation of the core magnetic field - to contact ether/space ie: (5th dimension) and conduct it into the twin coil sets.

Much study remains to be done in this area, but we are now into the prototype phase on such project work in this new area of applied physics.

A very promising area for future F/E system development are the several electrostatic generators now in progress.

The Swiss M-L Converter was the first of such outstanding F/E systems to be disclosed, and this project work has now been followed up with the Wm Hyde E/S generator, which is featuring a number of new operating components which are considerable improvements over the existing art.

We hope that this information may be of some interest to you at this time.

P.S. We believe that both the D.O.E. and the U.S. Patent Office must now answer to charges of culpable scientific ignorance! We expect to enter a Class Action law suit against these U.S. government agencies shortly!

Yours truly,

D.A. Kelly

# THE SPACE ENERGY ASSOCIATION

SEA/US

QUARTERLY - NEWSLETTER

VOLUME II NO. 3

SEPTEMBER, 1991 \*

\* SPECIAL  
FREE ENERGY  
VALIDATION  
ISSUE

ANY MAJOR INDUSTRIAL NATION THAT FALLS ASLEEP TECHNOLOGICALLY  
IS BOUND TO BE SURPASSED BY OTHER TECHNICALLY ASTUTE NATIONS  
WHICH WILL FILL THE VOID CREATED BY SCIENTIFIC ESTABLISHMENTS  
THAT ARE APATHETIC AND SLOTHFUL IN THEIR JUDGEMENT OF NEW ART!!

SPACE ENERGY ASSOCIATION /U.S.

P.O.Box 11422  
Clearwater, FL.,  
34616



The free energy papers/presentations made at the recent I.E.C.E.C. at Boston on August 3rd through the 9th, has been far more successful than any of us had dared hoped for!

There were a number of excellent, outstanding and worthwhile papers presented by a wide, diverse group of free energy researchers, which have now brought out the reality of the free energy concept beyond any possible doubts.

The most compelling paper presentations were the ones that described either operating F/E prototype hardware, or ones that are now being projected as viable prototype projects.

Some of the theoretical F/E papers were in the excellent category because they clearly showed how certain physical anomalies in operating F/E hardware is not being explained by an intransigent scientific establishment!

Other F/E papers in the outstanding category brought out certain physical phenomena which is directly applicable to F/E units and systems, but which has not yet been fully explored and tested in any F/E project.

The advent of the new, larger Swiss M-L Converter clearly establishes these electrostatic converters systems as a leading contender for future F/E installations.

The later Wm. Hyde E/S generator can be considered as a spin-off system from the Swiss M-L Converter, but it does stand on its own merit because of the introduction of new components within these electrostatic systems which have not been seen before in this art.

The major reason why these electrostatic machines are so efficient and attractive is that, unlike comparable E/M machines, they are not handicapped by sizable magnetic drag in the rotating components, nor are they subjected to back-EMF, i.e. Lenz's Law in their operation.

The E/S discs spin quite easily, even when they are producing near maximum voltage output levels, which make motorizing the discs a relatively easy and effective task.

It is interesting to note that the two leading F/E contenders are hybrid systems, consisting of both rotating/dynamic E/S components and solid-state conversions sections.

Several F/E researchers are now projecting that the full solid-state F/E converters will be the "wave of the future" in F/E, but for the present these s/s projects have encountered serious operating and reliability problems.

Some of these present s/s systems have now established their "proof of principle", in that they do operate effectively, but considerable R & D remains to be done before they eventually establish long-term reliability.

The free energy field is now essentially in the "bird in-hand" situation, with the solid-state F/E systems being the "bird in the bush"! It is now clear that the two electrostatic systems represent the "bird-in-hand" situation since they have both proven their operability and reliability due to the many years that they have been in the developing stages.

Several researchers are now elected - to go with the "bird-in-hand" E/S generators, as now proven by the Swiss M-L Converter and the later Hyde E/S generator.

These F/E researchers believe that it has now become practical to become involved with the now-proven E/S technology, rather than gamble that



SUMMARY OF SIGNIFICANT PAPER/PRESENTATIONS AT THE

AUGUST/91 I.E.C.E.C. EVENT

1. Dr. Harold Aspden, Dept of E.E. /Univ. of Southampton, U.K.  
"On A Testable Unification of E.M., General Relativity & Quantum Mech"

Dr. Aspden's paper has brought out the reality of the free energy concept and shown how present researchers in this field are considered to be "outsiders" by our present intransigent scientific establishment.

He believes that we are now on the threshold of a transition which must change attitudes among the scientific establishment. Further, the transition will indoctrinate our electrical engineers with the belief that a "free energy" exists on a universal scale and stands as a resource offering challenge no less exciting than was the discovery and exploitation of oil fields, ie: petroleum energy!

Dr. Aspden's paper describes the requirements for valid free energy machines, and the background on which this new scientific field is based.

2. Floyd Sweet and T.E. Bearden, "Utilizing Scalar E/M To Tap Vacuum Energy."

The Sweet /Bearden paper/presentation is of major significance to the free energy field, since it describes a scientific breakthrough and workable type of solid-state vacuum energy converter which has been evolved after many years of R & D effort to tap space/vacuum energy.

There is no longer any question about the validity of the V.T.A. project, (Vacuum Triode Amplifier), as evolved by Floyd Sweet, however considerable work remains to be done to assure the reliability of the V.T.A. units.

The key reason why the V.T.A. unit is a valid F/E project is that it falls within the context of a wider technological area which encompasses the prior project work of Hans Coler (Germany 1942) and the Swiss M-L Converter project. These three F/E projects employed similar components, which will be described elsewhere in this special N/L edition.

Tom Bearden explains the profound conversion of vacuum field energy within the V.T.A. which is now a "stand-alone" F/E project, not otherwise connected to other ongoing F/E projects because of the special, "conditioned" permanent magnets used as the cores within the twin, bifilar coil windings.

Another important factor in this V.T.A. project work is that it now points the way to a Unified Field Theory- which will stand up, since the V.T.A. prototypes exhibit anti-gravity reactions during bench tests of several operating prototypes!

3. George Hathaway, "Zero-Point Energy, A New Prime Mover"

The significance of this author's paper/presentation is that he cites the various researchers and the physical effects which translate directly into working free energy systems.

Starting with a characterization of the space/vacuum, a description of various effects are provided, and their relation to practical, working F/E systems and devices, along with formulations pertinent to each system.

The author concludes with a hope that various scientific researchers will be able to review and expand on the subject matter presented in his paper.

A sizable number of references are cited (28) which provide a good support for the basic paper material, and expands on the work of the cited researchers so that a full picture of the work is provided.



8. Richard (Scott) McKie, GammaStar International, Inc.  
"POD-MOD" - Power Generation for a Brave New World Order

This paper/presentation describes the ongoing "POD-MOD" - (Power On Demand Module) project work which is now well along in its R & D stage of progress.

While this presentation tends to describe this project in general, overview terms - is a remarkable solid-state system which makes a very good case for the enhanced tank circuit concept. The tank circuit approach has a lengthy and solid background to draw from in the continued development of this project.

The "POD-MOD" F/E project will be further described elsewhere in this N/L.

9. Dr. P.T. Pappas, Prof. of Physics & Mathematics, Technical Education Institute of Piraeus, Athens, Greece  
"Energy Creation in Electrical Sparks and Discharges: Theory and Direct Experimental Evidence!"

Dr. Pappas's paper is of major importance to the emerging and ongoing F/E field, since he provides detailed information on specific physical phenomena which is directly applicable to several ongoing F/E projects!!

Of particular significance is the statement that "displacement currents exist inside the capacitor gap, and that these currents are effective by equivalent to the conduction currents"-----"!

This statement and its implications has a special meaning to those F/E projects which utilize a modest to large number of capacitors within their solid-state conversion circuitry!

Another useful portion of this paper was the disclosure of the excess energy produced within arc gaps. The theory is backed-up by experimental arc oscillations shown on an oscilloscope, which indicate a buildup of oscillations of much higher amplitude than the D.C. potential allowance in the circuit!

The technical information provided in this extraordinary paper should be of major value to several ongoing F/E projects, which may thus be guided into more effective and optimum design of specific portions of their systems.

10. Troy Reed, "The Reed Magnetic Motor, The Motor of Tomorrow"

Comments on this current, ongoing Reed P.M.M. are provided in another portion of this present Sept./91, N/L.

The present Reed P.M.M. should be considered as R & D in progress and there is a need to refine their present prototype into a more practical design which does not utilize extraneous hardware elements which do not make a cost/effective contribution to the output HP.

11. Shiuji Inomata, ETL, MITI, Japan and, 12. Bruce DePalma, DePalma Inst.  
"New Paradigm and the N-Machine." "N" Machine Pioneer

Again, the value of these paper/presentations is in the disclosure of a long-term true free energy machine which has clearly shown a continuous over-unity-output track record over the years.

Although the o/u/o levels of the "N" machines has never been exceptionally high, being in the 300% to about 500% Efficiency range, they do provide good dependability of operation, and are basically durable and solid F/E machines!

It is probable that they can be continuously improved and evolved to the point that they will be viable contenders for various energy supply/service.



THE HYDE Electrostatic Generator Project & Moray King's Presentation  
to the I.E.C.E.C. (Partial description)

There is now a growing consensus of opinion that the William Hyde electrostatic generator art is both valid and attractive free energy technology which should be rapidly developed since Hyde himself is no longer free to do this after being harrassed and gone into hiding!!!

The Hyde E/S generator art meets all the stringent criteria for judging prospective F/E technology, ie:-

- 1) It is self-running, or can operate at an attractive over-unity-output ratio.
- 2) It has been proven valid with a completed operating prototype with operating specs. and description fully available.
- 3) The operating prototype must run continuously, with no breakdowns, and be dependable and rugged enough to operate continuously under adverse operating conditions, such as 60 HZ. proximity exposure, all forms of radiations, and similar exposure conditions.

The Wm. Hyde U.S. Patent (No. 4,897,592) technical description and full operating prototype of 1987 meets the above criteria for F/E systems, as itemized above.

Moray King's paper/presentation to the August/91 I.E.C.E.C. provides some of the design description and specs of the Hyde prototype and technology which is presented as follows, with some SEA/U.S. input:-

The Hyde electrostatic generator art is based on conventional electrostatic generators by the use of rotating, segmented discs, as in the Swiss M-L Converter.

Wm. Hyde has introduced several new components to electrostatic generator art by way of stator discs and end excitation electrode plates.

An external voltage source (at 3KV.) charges the electrode plates which provide the positive and negative polarization field at the respective ends of the generator. The twin, opposite rotor discs in the Hyde E/S generator spin in the same direction, and thus require the distinct positive and negative excitation within each polarized compartment.

This is a departure from the usual electrostatic machines, ie: Wimshurst generators, as used in the Swiss M-L-C., where the opposite polarities are provided by the contra-rotating Wimshurst discs.

As the rotor discs spin in the same direction, aligned stator segments are alternately exposed to and shield from the the excitor polarization fields. Each stator segment is electrically connected to its counterpart on the opposite stator through a pulsed rectifier circuit, in which the transient voltage pulses are stepped down and directed to a combining rectifier output circuit.

While the Swiss M-L Converter can provide about 70 KV to the solid-state circuitry, when the twin rotors are spun at 60 rpm, the Hyde E/S generator's rotors spin up to about 6000 rpm. With the 3 KV. excitation potential on the excitor end plates, will yield stator pulses in excess of 300 KV, with a very small drag on the rotor discs!

In the accompanying patent drawing, Figures 3 and 4, show rotor and stator segments, respectively, but these are in schematic form, since it is known that Hyde used up to 240 rotor segments and 480 stator segments in his 1987 prototype E/S generator.



# WM. HYDE E/S GENERATOR

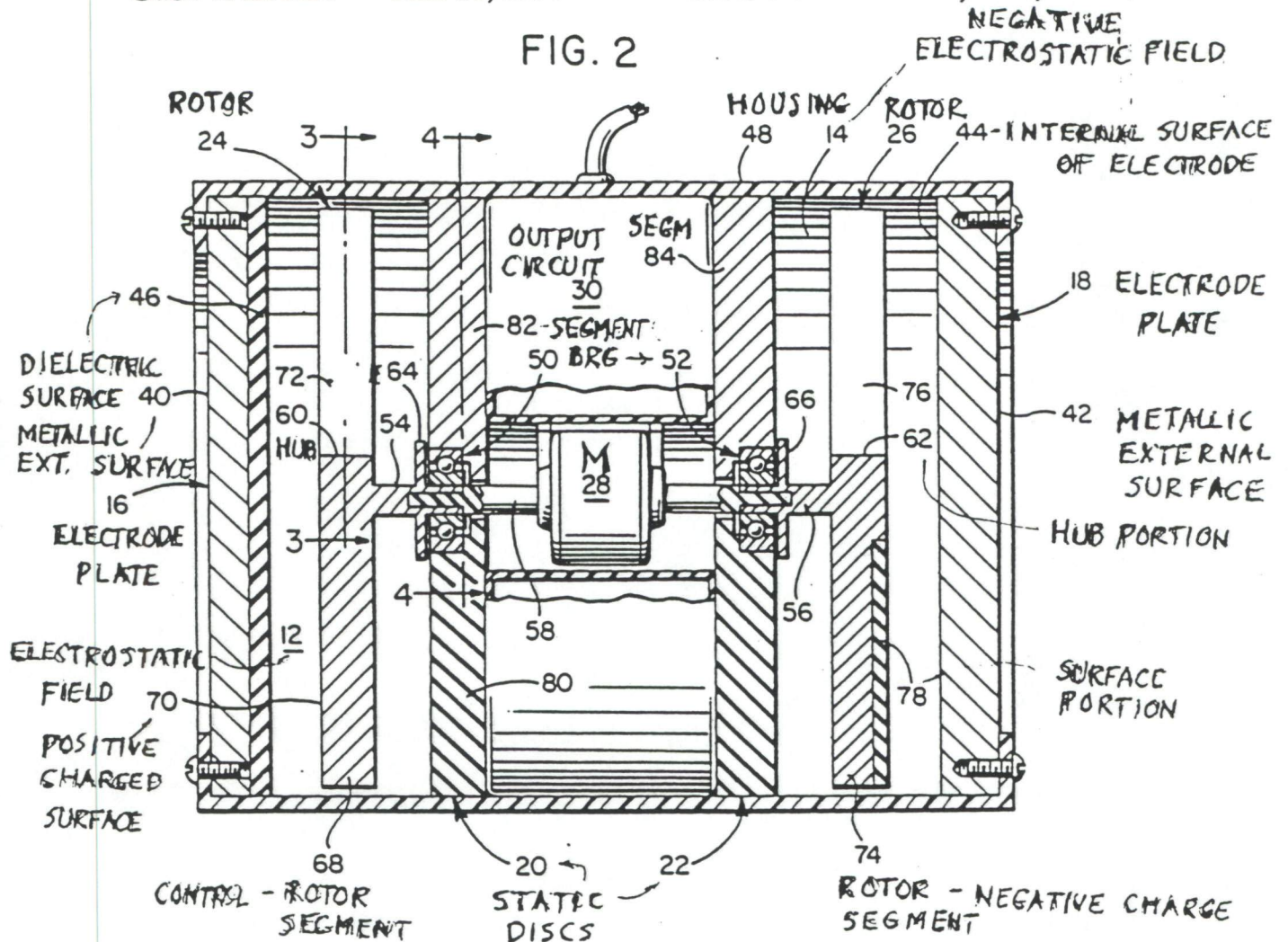
U.S. Patent

Jan. 30, 1990

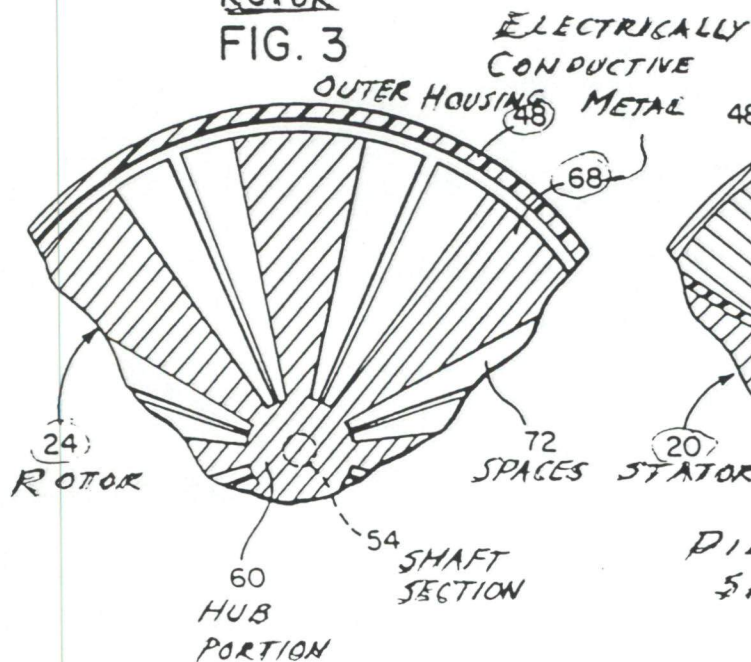
Sheet 2 of 3

4,897,592

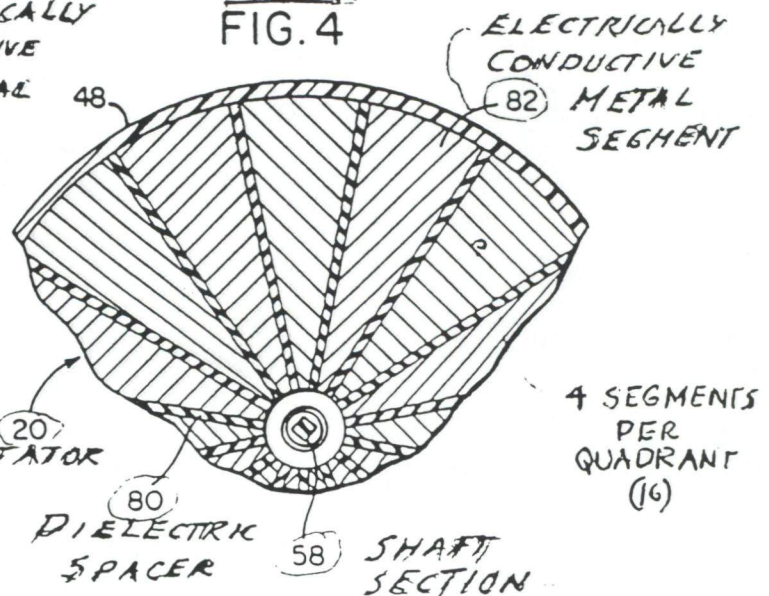
FIG. 2



ROTOR  
FIG. 3



STATOR  
FIG. 4





## The VACUUM TRIODE AMPLIFIER - (V.T.A.) PROJECT

of Floyd Sweet

The V.T.A. (Vacuum Triode Amplifier) is an all solid-state energy converter which is based on the PPCM, or phased conjugate mirror theory, and Whittaker theory.

Floyd Sweet has managed to synthesize these above theories and has developed a complete theoretical basic for the first VT devices. The nuclear potential of his early devices was increased in the activated nuclei of the core, which increased the pumping energy and hence the full energy output.

He next produced an open-loop vacuum triode (VT) with an output of 500 watts, with an input of 33 microwatts. After this he produced several other VT models, including a closed-loop system, (VTA), and one with a 5KW output.

The major reason why the VTA units are a valid F/E project is that they fall within the context of a wider technological area which encompasses the prior project work of Hans Coler (Germany 1942) and that of Paul Baumann, of the Swiss commune "Methernitha".

The common factor in all three of these F/E projects is that they all use twin, bifilar wound coils over permanent magnets (ferrites). The bifilar - (a single length of wire which is helically wound back on itself) as non-inductive windings cancel the magnetic field caused by the normal, exciting EMF flow, and thus allow the core magnet stack to orthorotate its field into the 5th, and higher dimensions, for space energy conversion.

The theory behind this space/ether energy conversion is provided by the past scientific work of Franz Kalusa and Oskar Kline, in 1919 thru 1926. Kalusa proposed a five-dimension theory of gravity, and believed that the 5th and 6th dimensions were "curled up" within the other four dimensions.

This theory was given to Albert Einstein, who at first, did not readily accept it, but was finally convinced of its merit, and gave his approval to be published by the Prussian Science Academy.

It is now believed that this orthorotated magnetic core field directly influences the 5th and higher dimensions and thereby converts ether/space energy into the coils of the V.T.A., the Swiss M-L Converters and the earlier coils of Coler's "Magnetstromapparat" unit.

Although these three F/E units/systems employ the same type of basic construction, ie: bifilar wound coils over the permanent magnet stacks, it is conceded that the Sweet V.T.A. is a "stand-alone device", since it uses special "conditioned or activated" permanent magnet material, unlike the other two F/E Systems cited.

In its physical form, the V.T.A. consists of the two parallel coil and magnets components, which are presumed to be positive and negative polarities, with the inputs connected to a small 60HZ oscillator, which in turn are connected to a standard nine volt battery, as the source.

The twin output leads would be connected to the suitable load at the same end of the coils as the input leads, due to the bifilar winding technique.

From the various reports that have been received about the problems in the operation and testing of the latest V.T.A., it seems that the prototype cannot have not shown the ability to continue operation for extended periods of time. Some believe that the normal operation is subject to outside electrical disturbances, which upset the resonant functioning of the unit.

It may, or may not be possible to clear up this continuous operating problem, and we must await further troubleshooting and development of this unique V.T.A. technology.



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ENTERED VEHICLES MAY BE OF FREE DESIGN AND CONSTRUCTION.

VEHICLES MUST NOT EXCEED SIX METERS IN LENGTH, NOR THREE METERS IN HEIGHT

VEHICLES MUST HAVE ADEQUATE FRICTION BRAKING.

VEHICLES IN WHICH IT IS DIFFICULT TO SEE BEHIND MUST BE EQUIPPED WITH EFFECTIVE

REAR VIEW MIRRORS.

A BRAKE LIGHT, TURN INDICATORS, AND HAZARD LIGHTS MUST BE PRESENT ON ALL

VEHICLES.

A SAFETY BELT MUST BE FITTED TO THE VEHICLE FOR ALL OCCUPANTS AND BE WORN

AT ALL TIMES.

CHAINS , SPROCKETS, BELT DRIVES, AND ALL SIMILAR MECHANISMS MUST BE COVERED

TO PREVENT ACCIDENTAL CONTACT.

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- D > Electric Vehicles with Onboard Combustion Engines (Hybrids)
- E > Combustion Engines Operating on Fuels Other than Gasoline or Diesel
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- G > Miscellaneous