

Science and Technology Releases

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Carter - Mondale Presidential Campaign

For America's third century, why not our best?

September 21, 1976, MEMO

TO: Kitty Schirmer
Noel Sterrett

FROM: Fred Wood *FW*

RE: Revisions and Additions to the
Engineering Societies Questionnaire

Several science and engineering organizations/publications (e.g., the American Institute of Aeronautics and Astronautics, the International Society for Technology Assessment) have asked for more details about Governor Carter's views on NASA, telecommunications, and technology assessment.

Rather than write separate articles, we are revising the original questionnaire response by rewriting the answer to Question 8 (on NASA) and adding two new questions and answers (Q&A 17 on telecommunications and Q&A 18 on technology assessment).

The draft revisions and additions are attached. The telecommunications answer (Q&A 17) is already approved material (cleared by Oliver Miller in late May 1976). The revised NASA answer is based in part on Gov. Carter's record with respect to earth resources satellites (see letter attached). The technology assessment answer (Q&A 18) includes new material, but is entirely consistent with Jimmy Carter's overall perspective and with his expressed interest in this area while Governor of Georgia.

Perhaps we can go over these answers later this week by phone, maybe on Friday. My phone numbers are 202/676-7380 or 7384 (GWU); 202/857-1600 (Carter/Mondale HQ); 703/524-0872 (Home).

Thanks very much.

Attachments

1800 M. STREET, N.W. WASHINGTON, D.C. 20036 202/857-1600

DRAFT

NOT FOR DISTRIBUTION

.Q 8. What do you see as the future role, priorities, and funding for NASA? Within NASA's budget what importance do you place upon aeronautical R&D, space science and space applications?

A. ~~While I have not focused directly on NASA's specific funding and priorities,~~ clearly this agency's expertise is needed in emerging priority civilian programs such as energy conservation and telecommunication systems, as well as in NASA's own continuing aeronautics and space programs.

① Over the last 15 years, NASA has carried out with remarkable success its mission in the areas of aeronautical research and space explorations. ~~Knowledge gained from NASA projects has led to increased knowledge of man and the quality of life on earth, as well as a better understanding of the space environment. Also important are the spin-offs from NASA research which directly contribute to solution of pressing national problems.~~

⑤ With respect to space applications, one important area is the prospect of vastly improved telecommunications through use of satellites. ~~I am pleased to note the efforts at NASA to evaluate the potential of satellite communications for activities such as video conferencing and data transfer.~~

⑦ As a farmer myself, I am very much interested in the contributions that NASA's earth resources satellites and remote sensing technology can make to agriculture and to solving the problems of meeting future demand for food as well as for energy, raw materials, and water.

③ While Governor of Georgia, data from the ERTS satellite (now called "Landsat") played a valuable role in the preparation of statewide water resource, geologic, landform, and vegetation maps as well as in the investigation of regional mineral resources and in the charting of sediment on the Georgia coast. Land cover maps were prepared using ERTS imagery for the southwestern portion of the State and for the Atlanta area, using computer techniques developed at the Georgia Institute of Technology.

⑥ ~~Other application areas which appear promising include space medicine and manufacturing and space generated solar power. We must carefully work out the means by which all peoples can share the benefits of space science and technology, without trespassing against the legitimate defense and security concerns of individual nations. I believe that application of space technology to solving global as well as state and national problems is one way by which American know-how can make unique and lasting contributions to the welfare of mankind.~~

⑦ I have been watching with deep interest and deep pride the superb, exciting success of our exploration of Mars. Americans have always been explorers and discoverers, ~~opening new frontiers and pushing back the boundaries of knowledge.~~ We will continue to explore the new frontiers of the universe, but our future activities in this area must be carefully selected and planned within the context of realistic appraisal of our resources and our other national priorities.

⑧ One clear priority will be to maintain our preeminence as the undisputed leader in aerospace technology. ~~To do this, we must have a steady commitment to the aerospace professionals—the scientists, engineers, technicians, R&D managers—who have committed their careers to acquiring and advancing the specialized skills necessary to the industry. Within limits, these skills are transferable to other domestic sectors of technology. But the core of the profession must be held intact. This requires much better coordination between government and private aerospace projects so that industrial and manpower resources are used efficiently without either debilitating slumps or excessively costly crash programs.~~

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Q 17. What role do you see for telecommunications in meeting national needs such as conserving energy and creating new job opportunities? What should be the goals for federal involvement in the telecommunications area?

A. One important part of a comprehensive energy conservation program is the effective use of telecommunications technology--including the telephone, mobile radio, television, satellites, and computers. In a time of widespread inflation and high unemployment, telecommunications is one of the few sectors of the economy which has consistently provided more jobs with increased productivity. New applications of telecommunications can do much more to improve our quality of life and conserve our scarce resources.

I am pleased to note the efforts at a number of universities and research institutes to evaluate the potential of telecommunications for increasing the efficiency of energy-intensive activities such as travel. New ways of using telecommunications--such as telephones linked to computers or audio and video conferencing--offer substantial promise.

In other areas, we can, for example, make better use of mobile radio and computers for on-the-spot diagnosis of heart attacks and delivery of emergency medical services. We can offer greater variety and quality of educational and community-oriented programming through broadcast and cable television.

The technology is here today. What we need--but do not yet have--are the institutional mechanisms and commitment in both the public and private sectors to make best use of our technological assets.

The federal government can play a constructive role in encouraging more effective use of telecommunications. I believe that the federal research and development emphasis should be on innovative uses of telecommunications and information services--particularly for improving productivity in the delivery of public services by federal, state, and local government agencies.

In addition, there is a need to review the Communications Act of 1934 --the basic legislative framework for national communications policy--with respect to the technological, economic, social, and other changes which have occurred since its enactment. When the Act was first passed, television, satellites, and computers did not exist. The thrust of new technology is raising policy issues which the Act does not now address.

Telecommunications is of growing importance to the nation and indeed to the world. We should encourage public participation in the formulation of communications policy, and insure that the views of users and consumers along with industrial producers and suppliers are well represented. Another goal will be to make sure that the promise of telecommunications technology reaches out to rural and lesser developed areas, as well as to our urban and suburban centers.

done already

Q 18. You mentioned earlier (Q 10) your long interest in futures research, and your actions while Governor of Georgia to utilize futures research and technology assessment in government planning and decisionmaking. How do you view these functions fitting into federal decisionmaking?

A. The people of this country want to, and have a right to, choose and build their future and the future of this nation rather than accepting it passively as something over which they have no control. They are particularly concerned that science and technology be developed to fit their needs and to serve their values. Technology should improve the quality of our lives and environment, rather than degrade and distort it.

To choose the future means to study alternative possibilities and options and plan the steps by which we get from here to where we want to go. ~~Futures research~~ ^{← Futures Planning} should be carried on throughout government, and particularly in the Executive Offices which direct and control the cumbersome machinery of day-to-day administration of the government. Without future planning, we are carried blindly along by trends set in motion to deal with situations which no longer exist.

I note and approve the steps Congress has recently taken to encourage every Congressional Committee to consider the future impacts of legislative actions. As President, I will demand that every action and decision of the Executive Branch also be weighed in the light of its long-range implications for our way of life.

Technology assessment, in which I have had a long interest, is the examination of every potential technological development in order to anticipate and plan for the consequences it may have for our economy, our working patterns, our family life, our environment, our institutions and well-being. Our decisionmakers--from Congress and the President to the general public--can then make wiser decisions as to how to maximize the benefits of new technology and distribute those benefits equitably, and how to avoid the unintended and possibly detrimental impacts which some technologies may have.

Government R&D investments or regulatory policies can unwittingly hinder the introduction of a new and valuable technology or, on the other hand, allow a swiftly growing technology to inflict new and irreversible health or environmental damage before we realize it. I am pledged to the position that government should never unnecessarily intervene in the healthy operations of business and industry, and I also believe that it is better to anticipate and avoid mistakes than to try to clean them up afterward. Therefore I believe that government policy toward developing technologies and their impacts should be clarified early, to avoid stepping in later with heavy-handed regulation and punitive actions after big capital investments have been made.

Neither futures research nor its application in policy studies is the province solely of technical elites, although the best efforts of both physical and social scientists are needed. The public, the citizens, must be given every opportunity to participate in this process because it is we and our children who will reap the benefits or suffer the consequences of new technology.

Therefore as President I will press every government agency to pursue futures research and technology assessment to help them make wiser decisions, but I will also seek and require better means of involving the public in these activities.



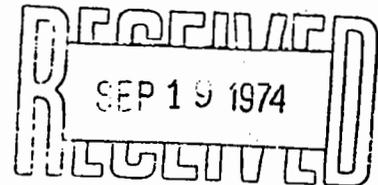
Executive Department
Atlanta 30334

Jimmy Carter
GOVERNOR

Frank Moore
EXECUTIVE SECRETARY

September 11, 1974

SEN. FRANK E. MOSS



WASHINGTON, D. C.

The Honorable Frank E. Moss, Chairman
Committee in Aeronautical and Space Sciences
United States Senate
3121 New Senate Office Building
Washington, D. C. 20510

Dear Senator Moss:

Georgia has long recognized the need for more and better information concerning the nature and distribution of our natural resources, as well as the extent of man's activities on the land and water. This need has resulted in a system of programs whose common objective is the collection, storage, and distribution of land use and resource information for use by planners, educators, and the general public in addressing the critical problems which now face us.

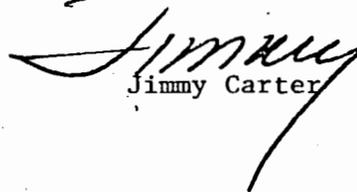
Over the past two years, ERTS has played an increasingly valuable role in this process. In Georgia, satellite data has been used in the preparation of statewide water resource, geologic, landform, and vegetation maps as well as in the investigation of regional mineral resources and in the charting of sediment transport on the Georgia coast. Land cover maps have been prepared utilizing ERTS imagery for the southwestern portion of the State and for the Atlanta area, using computer techniques developed at the Georgia Institute of Technology. Future applications will include the development of programs for monitoring short term land use and resource changes with a particular emphasis on the Coastal Region, and for monitoring strip mine development all over the State. An interpretative atlas has been prepared from ERTS imagery which presents geologic, landform, and land use information for the entire State.

The great interest which has developed in Georgia, and in a great many other States as well, concerning the application of satellite-obtained remote sensing is a clear indication of the need for the type of agency envisioned in S. 2350 and S. 3484. However, I feel that it is extremely important that this organization have a basic responsibility for all types of non-military

The Honorable Frank E. Moss
Page Two
September 11, 1974

remote sensing operations which are currently conducted by the Federal Government. The difficulties, as well as the opportunities, which are inherent in the ERTS program equally apply to the high-altitude photographic programs conducted by NASA. ERTS must be seen as only one of a series of remote sensing platforms, all of which have varying degrees of applicability in our inventory effort and many of which are available only through Federal programs. If remote sensing is to continue to be a primary ingredient in land use planning, then increased coordination and cooperation will be essential.

Sincerely,



Jimmy Carter

JC:gds



Carter - Mondale Presidential Campaign

For America's third century, why not our best?

October 4, 1976

Ms. Kitty Schirmer ✓
Mr. Noel Sterrett ✓
Issues Department
Carter/Mondale Campaign
P.O. Box 1976
Atlanta, Ga. 30301

Dear Kitty and Noel:

1. NASA statement.

Deadline: Friday, October 8. We need clearance on this statement for use by the American Institute of Aeronautics and Astronautics in one of their publications, and for use as a message to the International Astronautics Federation which is meeting in Anaheim, California, next week. A copy is attached.

2. Technology assessment statement.

Deadline: Friday, October 8. We need clearance on this statement for use by the International Society for Technology Assessment in their monthly newsletter. A copy of the statement is attached.

3. Science and engineering endorsements.

I am currently coordinating an effort to seek support and endorsements from the science and engineering leadership. Details are attached. I would very much appreciate your forwarding to me the names and phone numbers of any scientists and engineers whom you think we should contact.

Thanks in advance. I can be reached at 202/676-7380, 7384 (GWU) or 202/857-1600, 1618 (Carter/Mondale).

Sincerely,

Fred B. Wood
Organizational Liaison Office,
Carter/Mondale Campaign

FBW:e

Attachments

1800 M. STREET, N.W. WASHINGTON, D.C. 20036 202/857-1600

Handwritten:
JGW
751-64-85

Q 8. What do you see as the future role, priorities, and funding for NASA? Within NASA's budget what importance do you place upon aeronautical R&D, space science and space applications?

NASA Statement

A. While I have not focused directly on NASA's specific funding and priorities, clearly this agency's expertise is needed in emerging priority civilian programs such as energy conservation and telecommunication systems, as well as in NASA's own continuing aeronautics and space programs.

Over the last 15 years, NASA has carried out with remarkable success its mission in the areas of aeronautical research and space exploration. Knowledge gained from NASA projects has led to increased knowledge of man and the quality of life on earth, as well as a better understanding of the space environment. Also important are the spin-offs from NASA research which directly contribute to solution of pressing national problems.

With respect to space applications, one important area is the prospect of vastly improved telecommunications through use of satellites. I am pleased to note the efforts at NASA to evaluate the potential of satellite communications for activities such as video conferencing and data transfer.

As a farmer myself, I am very much interested in the contributions that NASA's earth resources satellites and remote sensing technology can make to agriculture and to solving the problems of meeting future demand for food as well as for energy, raw materials, and water.

While Governor of Georgia, data from the ERTS satellite (now called "Landsat") played a valuable role in the preparation of statewide water resource, geologic, landform, and vegetation maps as well as in the investigation of regional mineral resources and in the charting of sediment on the Georgia coast. Land cover maps were prepared using ERTS imagery for the southwestern portion of the State and for the Atlanta area, using computer techniques developed at the Georgia Institute of Technology.

Other application areas which appear promising include space medicine and manufacturing and space generated solar power. [We must carefully work out the means by which all peoples can share the benefits of space science and technology, without trespassing against the legitimate defense and security concerns of individual nations.] I believe that application of space technology to solving global as well as state and national problems is one way by which American know-how can make unique and lasting contributions to the welfare of mankind.

I have been watching with deep interest and deep pride the superb, exciting success of our exploration of Mars. Americans have always been explorers and discoverers, opening new frontiers and pushing back the boundaries of knowledge. We will continue to explore the new frontiers of the universe, but our future activities in this area must be carefully selected and planned within the context of realistic appraisal of our resources and our other national priorities.

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Q 18. You mentioned earlier (Q 10) your long interest in futures research, and your actions while Governor of Georgia to utilize futures research and technology assessment in government planning and decisionmaking. How do you view these functions fitting into federal decisionmaking?

Technology Assessment Statement

A. The people of this country want to, and have a right to, choose and build their future and the future of this nation rather than accepting it passively as something over which they have no control. They are particularly concerned that science and technology be developed to fit their needs and to serve their values. Technology should improve the quality of our lives and environment, rather than degrade and distort it.

To choose the future means to study alternative possibilities and options and plan the steps by which we get from here to where we want to go. Futures research should be carried on throughout government, and particularly in the Executive Offices which direct and control the cumbersome machinery of day-to-day administration of the government. Without future planning, we are carried blindly along by trends set in motion to deal with situations which no longer exist.

I note and approve the steps Congress has recently taken to encourage every Congressional Committee to consider the future impacts of legislative actions. As President, I will demand that every action and decision of the Executive Branch also be weighed in the light of its long-range implications for our way of life.

Technology assessment, in which I have had a long interest, is the examination of every potential technological development in order to anticipate and plan for the consequences it may have for our economy, our working patterns, our family life, our environment, our institutions and well-being. Our decisionmakers--from Congress and the President to the general public--can then make wiser decisions as to how to maximize the benefits of new technology and distribute those benefits equitably, and how to avoid the unintended and possibly detrimental impacts which some technologies may have.

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Therefore as President I will press every government agency to pursue futures research and technology assessment to help them make wiser decisions, but I will also seek and require better means of involving the public in these activities.

October 12, 1976, MEMO

TO: Kitty Schirmer
Noel Sterrett ✓

FROM: Fred Wood *FW*

RE: NASA and Technology Assessment Statements

Attached are copies of the revised NASA and technology assessment statements, as cleared Saturday, and submitted to the American Institute of Aeronautics and Astronautics and the International Society for Technology Assessment, respectively, for use in their newsletters.

Thanks very much for your assistance.

Attachments

cc: Dan Dozier/Joe Duffey
Paul Suplizio/Jack Brebbia
Karl Sonneman/Jeff Werner

10-12-76

*James Harford exec sec
AIAA
1290 Ave of Amer NY*

*cc Johnson
AIAA DC office*

*John Newbauer AIAA
Gilbert Keys Senate Aero + Space
Sciences Comm*

GOVERNOR JIMMY CARTER'S VIEWS ON NASA AND RELATED AERONAUTICS AND
ASTRONAUTICS ACTIVITIES

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NASA's specific funding and priorities will receive close attention if I am elected. Clearly this agency's expertise is needed in emerging priority civilian programs such as energy conservation and telecommunication systems, as well as in NASA's own continuing aeronautics and space programs.

Over the last 15 years, NASA has carried out with remarkable success its mission in the areas of aeronautical research and space exploration. Knowledge gained from NASA projects has led to increased knowledge of man and the quality of life on earth, as well as a better understanding of the space environment. Also important are the spin-offs from NASA research which directly contribute to solution of pressing national problems.

With respect to space applications, one important area is the prospect of vastly improved telecommunications through use of satellites. I am pleased to note the efforts at NASA to evaluate the potential of satellite communications for activities such as video conferencing and data transfer.

As a farmer myself, I am very much interested in the contributions that NASA's earth resources satellites and remote sensing technology can make to agriculture and to solving the problems of meeting future demand for food as well as for energy, raw materials, and water.

While Governor of Georgia, data from the ERTS satellite (now called "Landsat") played a valuable role in the preparation of statewide water resource, geologic, landform, and vegetation maps as well as in the investigation of regional mineral resources and in the charting of sediment

(more)

GOVERNOR JIMMY CARTER'S VIEWS ON NASA AND RELATED AERONAUTICS
AND ASTRONAUTICS ACTIVITIES

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on the Georgia coast. Land cover maps were prepared using ERTS imagery for the southwestern portion of the State and for the Atlanta area, using computer techniques developed at the Georgia Institute of Technology.

Other application areas which appear promising include space medicine and manufacturing and space generated solar power, all of which will be more feasible through use of the space shuttle. We must carefully work out the means by which all peoples can share the benefits of space science and technology, without trespassing against the legitimate defense and security concerns of individual nations. I believe that application of space technology to solving global as well as state and national problems is one way by which American know-how can make unique and lasting contributions to the welfare of mankind.

One clear priority will be to maintain our preeminence as the undisputed leader in aerospace technology. To do this, we must have a steady commitment to the aerospace professionals--the scientists, engineers, technicians, R&D managers--who have committed their careers to acquiring and advancing the specialized skills necessary to the industry. Within limits, these skills are transferable to other domestic sectors of technology. But the core of the profession must be held intact. This requires much better coordination between government and private aerospace projects so that industrial and manpower resources are used efficiently without either debilitating slumps or excessively costly crash programs.

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GOVERNOR JIMMY CARTER'S VIEWS ON FUTURES RESEARCH
AND TECHNOLOGY ASSESSMENT

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The people of this country want to, and have a right to, choose and build their future and the future of this nation rather than accepting it passively as something over which they have no control. They are particularly concerned that science and technology be developed to fit their needs and to serve their values. Technology should improve the quality of our lives and environment, rather than degrade and distort it.

To choose the future means to study alternative possibilities and options and plan the steps by which we get from here to where we want to go. Futures research should be carried on throughout government, and particularly in the executive offices which direct and control the cumbersome machinery of day-to-day administration of the government. Without future planning, we are carried blindly along by trends set in motion to deal with situations which no longer exist.

I note and approve the steps Congress has recently taken to establish the Office of Technology Assessment and to encourage every congressional committee to consider the future impacts of legislative actions. As President, I will demand that every action and decision of the Executive Branch also be weighed in the light of its long-range implications for our way of life.

Technology assessment, in which I have had a long interest, is the examination of every potential technological development in order to anticipate and plan for the consequences it may have for our economy, our working patterns, our family life, our environment, our institutions and well-being.

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GOVERNOR JIMMY CARTER'S VIEWS ON FUTURES RESEARCH
AND TECHNOLOGY ASSESSMENT

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####

**JIMMY
CARTER**

**WALTER
MONDALE**



Leaders, for a change.

October 9, 1976

*Final copy
as ok'd by
Kitty Schinner*

Telegram

TO: Ms. Mireille Gerard
Congress of the International
Astronautical Federation
Grand Hotel
1 Hotel Way
Anaheim, CA 92802

COPY TO: Mr. Johan Benson
American Institute of Aeronautics
and Astronautics
Inn of the Park
1855 South Harbor Blvd.
Anaheim, CA 92802

Mr. James Harford
American Institute of
Aeronautics and Astronautics
Inn of the Park
1855 South Harbor Blvd.
Anaheim, CA 92802

mail

Dear Friends:

Please accept my warmest personal greetings on the occasion of your 27th Congress of the International Astronautical Federation.

Over the last 15 years, NASA has carried out with remarkable success its mission in the areas of aeronautical research and space exploration. Knowledge gained from NASA projects has led to increased knowledge of man and the quality of life on earth, as well as a better understanding of the space environment. Also important are the spin-offs from NASA research which directly contribute to solution of pressing national problems.

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(more)



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Other application areas which appear promising include space medicine and manufacturing and space generated solar power. We must carefully work out the means by which all peoples can share the benefits of space science and technology, without trespassing against the legitimate defense and security concerns of individual nations. I believe that application of space technology to solving global as well as state and national problems is one way by which American know-how can make unique and lasting contributions to the welfare of mankind.

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With warmest regards,

Jimmy Carter

**JIMMY
CARTER**

**WALTER
MONDALE**



Leaders, for a change.

October 8, 1976

TO: Congress of the International
Astronautical Federation
Grand Hotel
1 Hotel Way
Anaheim, California 02802

Not Sent MD

Dear Friends:

Please accept my warmest personal greetings on the occasion of your 27th Congress of the International Astronautical Federation. Over the last fifteen years, our space program has carried out with remarkable success its mission in the areas of aeronautical research and space exploration.

As a farmer, I am keenly interested in the contributions earth resources satellites and remote sensing technology can make to agriculture and to solving the problems of meeting future demands for food as well as for energy, raw materials, and water. While Governor of Georgia, data from the ERTS satellite, now called "Landsat," played a valuable role in the preparation of statewide water resource, geologic, landform, and vegetation maps as well as in the investigation of regional mineral resources and the charting of sediment on the Georgia coast.

Another important area is the prospect of vastly improved telecommunications through the use of satellites. In a time of widespread inflation and high unemployment, telecommunications--including the telephone, mobile radio, television, satellites, and computers--is one of the few sectors of the economy which has consistently provided more jobs with increased productivity. New applications of telecommunications can do much more to improve our quality of life and conserve our scarce resources.



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Warm regards,

Jimmy Carter
Democratic Presidential Candidate

M E M O

To: Kitty Schirmer

From: Karl Sonneman

Re: Greeting to 27th Congress of the International Astronautical Federation

The attached greeting to the Congress of the International Astronautical Federation requires approval of the Issues Office.

The Congress begins Monday, October 11, 1976 at Anaheim, California. I would appreciate having this given early consideration, in order that we may deliver the greeting to the Congress on Monday.

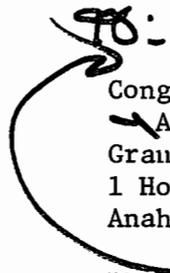
Thank you.



Carter - Mondale Presidential Campaign

For America's third century, why not our best?

October 7, 1976



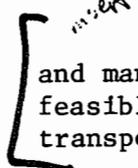
Congress of the International
Astronautical Federation
Grand Hotel
1 Hotel Way
Anaheim, CA 92802

ATTN: Mireille Gerard

~~Ladies and Gentlemen:~~

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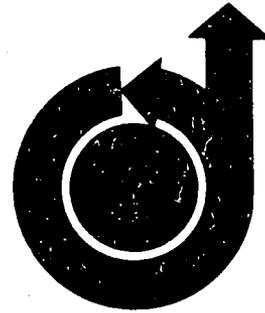
Other applications which appear promising include space medicine and manufacturing and space generated solar power, all of which will be more feasible at lower cost through use of the space shuttle, our newest space transportation system.

We must carefully work out the means by which all peoples can share the benefits of space science and technology, without trespassing against the legitimate defense and security concerns of individual nations. I believe that application of space technology to solving global as well as state and national problems is one way by which American know-how can make unique and lasting contributions to the welfare of mankind.

~~With sincere good wishes,~~ *Warm Regards*

Jimmy Carter
Democratic Presidential Candidate
1625 MASSACHUSETTS AVE, WASHINGTON, D.C. 20036 202/857-1600





AMERICAN
INSTITUTE OF
AERONAUTICS AND
ASTRONAUTICS

WASHINGTON OFFICE
1625 I ST., N.W.
WASHINGTON, D.C.
20006
202/785-0293

September 13, 1976

The Honorable Jimmy Carter
P.O. Box 1976
Atlanta, Ga. 30301

Dear Mr. Carter:

The AIAA is one of the 23 engineering societies that submitted to you and President Ford the Presidential questionnaire asking for your views on areas of concern to our membership. As a society of aerospace professionals we were particularly interested in your answer to question 8 regarding NASA's future. We were pleased with your general statement commending NASA's achievements and your strong support for the benefits of communications satellite technology.

With regard to the latter, I would like to bring to your attention the fact that because of fiscal constraints NASA was forced to cease Research and Development in this field which has just begun to fulfill its immense promise. In our concern that this policy would inevitably cause the United States to lose its leadership in space communications to other nations, AIAA developed a position paper which urged NASA to return to this field of R & D. We believe there are large national and international social and economic benefits to be gained by such a course of action.

For your information I am enclosing our position paper on this subject as well as a copy of our July/August magazine which contains an article describing some of the advanced space systems involving communications technology that could be developed in the 1980-2000 time frame. (1980-2000 Raising our Sights for Advanced Space Systems, by Ivan Bekey and Harris Mayer, Pg. 34)

While you singled out communications satellite technology as the area holding the greatest potential we believe there are other fields which show great promise including LANDSAT (formerly Earth Resources Satellite), space processing or manufacturing,

Solar power satellites, navigation and weather satellites, and numerous fields in space sciences many with foreseeable applications to earthly problems.

We of AIAA have especially high hopes for the LANDSAT program which promises benefits in many areas including crop yield and disease assessment, land use evaluation, pollution monitoring, hydrology, mineral resource detection and others. In fact, in our testimony before the platform committees of both parties we suggested that this country should set up a global resources information system by 1985 as a new space applications program goal. A copy of our entire testimony is enclosed for your information.

We know that as Governor of Georgia you were a strong supporter of the LANDSAT (ERTS as it was then) program. We hope that its omission in your response to question 8 does not signify a lessening of your support for the program. A copy of your letter to Senator Moss (September 11, 1974) endorsing ERTS is enclosed for your reference.

Our testimony before the platform committee goes into greater detail on other benefits to be realized from space technology but it also emphasizes the substantial benefits our aeronautical technology has brought to the nation. It mentions, for example, that aviation export sales brought us a \$6 billion positive return to our balance of payments. The Aerospace Industry is, in fact, the leading exporter of U.S. manufactured goods.

NASA's R & D program, which AIAA feels is not adequately funded, has helped to keep the U.S. in the lead in aeronautics in the past. Our lead, however, is being eroded by a number of factors such as heavy foreign government investment in their aviation industry and the creation of consortia between nations. These policies have led to the building of the Concorde, the A-300 Air-Bus, and new helicopters which have reduced our share of the market from 80% in 1965 to 40% today. In military aviation you have seen how eager we were to examine the technology of Soviet Mig-25 "Foxybat" which landed in Japan. It is touted as the fastest and highest flying operational fighter in the world. If we are to be first in aviation and to reap the benefits that come from it we must continue to invest in NASA's aeronautical research and development programs whose discoveries benefit civil as well as military aviation.

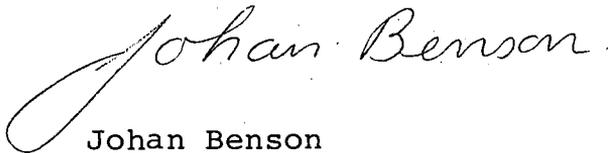
While AIAA is, of course, most concerned with aerospace R & D we are mindful of the need for this nation to invest in all forms of R & D if we are to have a strong economy which can create the

resources to help solve the many domestic and international problems that confront us. In our testimony before the platform committees we noted the sharp decline of U.S. productivity in recent years and its correlation with the decline of R & D as a percent of G.N.P. In concurrence with our sister societies, we therefore urged the platform committees to take a strong stand on behalf of a renewed program of federal support for research and development which would elevate the level of federal and private R & D as a percent of G.N.P.

Our efforts were of little avail though frankly, the Republican Platform at least has a section on Science and Technology and mentioned briefly the benefits of our space program, whereas the Democratic Platform had only scattered references to Science and Technology.

I bring these matters to your attention because we are concerned not only with Aerospace technology and the welfare of our members who create it, but also because we believe these and other technologies are essential to our nation's long term progress and survival. We welcome any opportunity to explain our views to you or staff at length.

Sincerely,

A handwritten signature in cursive script that reads "Johan Benson". The signature is written in dark ink and is positioned above the typed name and title.

Johan Benson
Director, Washington Office

Astronautics & Aeronautics

A PUBLICATION OF THE AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

August 25, 1976

Mr. James Earl Carter
Issues Office
Carter-Mondale Campaign
P.O. Box 1976
Atlanta, Georgia 30301

Dear Mr. Carter:

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Having this background in mind, I would like to be able to present to the professional aerospace community your view of several matters of moment to it--as indicative of your approach to its interests. I would publish your responses in the October issue of Astronautics & Aeronautics. I am posing these same questions to Mr. Ford; and his views would appear juxtaposed to yours. If he does not reply, I will publish your response with an editorial note explaining why it runs alone. We would greatly appreciate your answering the questions and representing some of your views to our readers before the election.

I used the phrase "indicative of your approach." I would hope the questions will prove practical and economical to that purpose. The questions take point in the AIAA statement to the Republican and Democratic platform committees (as summarized on the attached sheet):

1. Do you think research and development (R&D) needs a stronger Federal government investment? Where do you see the pressure points for greater support?
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August 25, 1976

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7. Do you rule out a supersonic transport development by the U.S. in the decade ahead (by 1985)?

Please give us any other thoughts that you feel bear on the future of air and space.

Thank you again for considering this request. I must have your response approved for publication by September 10th.

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John Newbauer
Editor-in-Chief, A/A

JN:EG

Enclosure

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Among the widely diverse interests represented at the one-day hearing—ranging from the Republican Party (Senator James Buckley) through the Hungarian Freedom Fighters to the Gay Activists Alliance—the AIAA was the only technical or scientific society represented. (The National Society of Professional Engineers had appeared before the Democratic Committee but not the Republican—maybe they have an inside track on the November election outcome!)

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The key points of the statement by Dr. Heiss included the following, as outlined by him in his memo for record of May 7:

1. *Need to give the U.S. space program a new comprehensive goal, namely, establishment of a global resources information system by 1985...*The statistical data base to make scientifically reliable inferences from measurements today is lacking. Tremendous efforts already go into establishing such data and observations, but they still are, despite all efforts, quite regional and local in nature and difficult to integrate on a global scale.

The direct economic benefits of such information would essentially pay for the cost of establishing such a system over the next ten to fifteen years...Accurate objective information on wheat crops in commodity markets, for instance, would reestablish the workings of free world trade where today information monopolies on some regions are exploited by certain countries at the expense of the U.S. economy and consumer.

Overall, the likely cost of developing, deploying, and operating a global resources information system—say, at funding levels between \$300 and \$400 million a year—would be directly justified and "covered" by the immediate real benefits of such information, for example, in terms of food commodities, their distribution, and their production world wide.

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Platform Committee
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Rivlin: Giving Congress the low as well as high option.

8/31/76 - Mr. Sterneth - This confirms
our telephone conversation of this
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A PUBLICATION OF
Mrs. E. Gray

August 25, 1976

Mr. James Earl Carter
Issues Office
Carter-Mondale Campaign
P.O. Box 1976
Atlanta, Georgia 30301

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Duplicate
copy.

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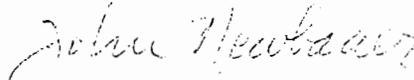
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Carter - Mondale Presidential Campaign

For America's third century, why not our best?

September 29, 1976

SUBJECT: Seeking Support and Endorsements from the
Science and Engineering Leadership

FROM: Fred Wood

Under the auspices of the campaign's Organizational Liaison Office, we are in the midst of a coordinated effort to develop political support in the science and engineering community. The first phase has been to communicate Governor Carter's views on matters of concern to scientists and engineers via the publications and newsletters of their professional organizations.

The second phase is to identify Carter/Mondale supporters among the leadership of the science and engineering community (and in particular the professional organizations and societies), and to ask these scientists and engineers for their individual endorsements and support of Governor Carter and Senator Mondale.

Collectively, these endorsements will serve as a basis for a news release and/or press conference and perhaps other special events designed to help demonstrate and mobilize support in the science and engineering community.

To the extent possible, endorsements and support will be sought on a balanced and representative basis according to:

- o scientific discipline (e.g., anthropology, physics, management science)
- o engineering field (e.g., civil, mechanical, electrical)
- o area of interest (e.g., R&D, energy, food, communications)
- o type of affiliation (e.g., university, industry, small business, public interest)
- o geographical location

IF YOU HAVE SUGGESTIONS ON SCIENCE AND ENGINEERING LEADERS WE SHOULD CONTACT, PLEASE CALL OR MAIL THE NAMES (AND PHONE NUMBERS) IN TO US AS SOON AS POSSIBLE, SO THAT WE CAN FOLLOW-UP PROMPTLY.

1800 M. STREET, N.W. WASHINGTON, D.C. 20036 202/857-1600

Response Form:

SCIENCE AND ENGINEERING LEADERSHIP
FOR CARTER/MONDALE

Name: _____

Date: _____

Title: _____

Affiliation: _____

Office Address: _____

Office Phone: _____

Home Address: _____

Home Phone: _____

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In support of the public statement
I authorize the use of my

name

Yes

No

title

Yes

No

affiliation

Yes

No

city & state

Yes

No

fold up

My major disciplines or
fields or areas of
interest are:

I suggest you also
contact (use back
if more space is
needed):

Name _____ Phone _____

Address _____

Name _____ Phone _____

Address _____

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first class
stamp here

FIRST CLASS

TO: Dr. Fred B. Wood
Organizational Liaison Office
Carter/Mondale Campaign
1800 M Street, N.W., Suite 612
Washington, D.C. 20036

LIST OF ENGINEERING FIELDS
AND SCIENTIFIC DISCIPLINES

A. Engineering Fields

1. Chemical
2. Civil
3. Electrical
4. Mechanical
5. Industrial
6. Aeronautical
7. Mining
8. Safety
9. Manufacturing
10. Automotive
11. Transportation
12. etc.

B. Scientific Disciplines

1. Biological Sciences
(e.g., Biology, Genetics, Ecology, Ecosystem Analysis, Biochemistry)
2. Medical Sciences
(e.g., Medicine, Physiology, Dentistry, Psychiatry)
3. Earth Sciences
(e.g., Geology, Geography, Geochemistry, Agriculture, Oceanography)
4. Mathematical and Physical Sciences
(e.g., Mathematics, Statistics, Physics, Chemistry, Astronomy)
5. Social Sciences
(e.g., Anthropology, Economics, Sociology, Political Science, Psychology, History & Philosophy of Science, Science Policy, Education, Jurisprudence)
6. Computer and Communication Sciences
7. Systems and Cybernetic Sciences
8. Management and Policy Sciences

JIMMY CARTER ON SOME SUBJECTS OF CONCERN TO
THE SCIENCE AND ENGINEERING COMMUNITY

o Jimmy Carter's commitment to seeking the advice and involvement of the science and engineering community.

"It is crucial that the advice of the scientific and engineering community of this nation be actively and permanently sought by elected officials in the evolution of national policy dealing with the complicated, unpredictable, and rapidly changing problems of this modern world.

"I am calling for cooperation of the scientific and political communities to help better understand and solve these problems. We must even face the prospect of changing our basic ways of living. This change will either be made on our own initiative in a planned and rational way, or forced on us with chaos and suffering by the inexorable laws of nature.

"The day when political leaders could make effective policy decisions independently and turn to the scientific community only for assistance in implementation has long passed. We must remember that, in our search for peace in the world and a better quality of life at home, we depend on and must call upon the best talent we can find in the business world, labor, the professions, and most certainly, in the universities and the scientific and engineering community."

o Jimmy Carter's understanding of the importance of maintaining our technological leadership.

"I know that technological innovation--the application of advanced scientific discoveries--has become one of the major driving forces of the free world market economy. Innovation has not replaced the elements of industrial activity: land, labor, and capital. But applied technology has become a controlling factor, an ingredient that helps determine competitive superiority.

"It is on existing technological leadership that the present and continuing economic strength of the U.S. is largely based. While much of this leadership stems from the competitive entrepreneurial spirit of U.S. industry, and on the innate creativity of our people, underneath lies a solid base of superior science and engineering education as well as scientific and technical knowledge.

"Education and knowledge are what planners call long leadtime items. That is, the economic payoffs of resources spent on science and engineering education and on research and development are usually delayed and often indirect. But the support of this technological base is nonetheless essential."

o Jimmy Carter on energy research and development.

"The transition from present fuel-fired plants to a wide range of new ways of saving and producing energy is indeed a major federal responsibility. I am committed to shifting our research and development emphasis to alternative energy sources and comprehensive energy conservation programs.

"A major immediate need is to derive maximum energy from coal, while preserving environmental quality. We must invest in improved mining efficiency, cleaner combustion technology, and a better transportation system. With respect to nuclear energy, we should apply much stronger safety standards as we regulate its use. At the same time, we need a major thrust to greatly increase the development and use of solar and other renewable sources of energy.

"For example, solar heating and cooling are ready for use today in new construction and many existing buildings. And solar electric plants may be able to meet much of our future growth in demand for electric power. Other possibilities include geothermal power, wind energy, conversion of urban waste to fuel, and use of agricultural waste in the production of alcohol."

o Jimmy Carter on environmental research and development.

"Environmental research and development within the public and private sectors should be increased substantially. For the immediate future, we must learn how to correct the damage we have already done, but more importantly, we need research on how to build a society in which renewable and nonrenewable resources are used wisely and efficiently. The technological community should be encouraged to produce better air and water pollution control equipment, and more importantly, to produce technology which produces less pollution."

o Jimmy Carter on telecommunications research and development.

"In a time of widespread inflation and high unemployment, telecommunications is one of the few sectors of the economy which has consistently provided more jobs with increasing productivity. New applications of telecommunications can do much more to improve our quality of life and conserve scarce resources.

"We can, for example, make better use of mobile radio and computers for on-the-spot diagnosis of heart attacks and for other emergency medical services. New ways of using telecommunications--such as telephones linked to computers or videoconferencing via satellite--offer the potential for increasing the efficiency of energy-intensive activities such as travel.

"The technology is here today. What we need--but do not yet have--are the institutional mechanisms and commitment in both the public and private sectors to make best use of our technological assets. I believe that the federal research and development emphasis should be on innovative uses of telecommunications and information services--particularly for improving productivity in the delivery of public services by federal, state, and local government agencies."

o Jimmy Carter's scientific and systematic approach to decisionmaking:

"The exact procedure by which I arrive at a decision on a major policy issue is derived to some degree from my scientific and engineering background. I like to study first all the efforts that have been made historically toward the same goal, to bring together advice or ideas from as wide or divergent points-of-view as possible, to assimilate them personally or with a small staff, to assess the quality of the points-of-view and identify the source of those proposals and, if I think the source is worthy, then to include that person or entity into a group I can call in to help me personally to discuss the matter in some depth.

"I then make a general decision about what should be done involving time schedules, necessity for legislation, executive acts, publicity to be focused on the issue. Finally, I like to assign task forces to work on different aspects of the problem, and I like to be personally involved so that I can know the thought processes that go into the final decisions and also so that I can be a spokesman, without prompting, when I take my case to the people or the Congress."

o Jimmy Carter's understanding of the complexity of national and world problems and commitment to a more comprehensive policymaking process:

"I recognize that in our fast-changing technological world, the inter-relationships among societal factors are indeed difficult to understand. Increases in world population, food shortages, environmental deterioration, depletion of irreplaceable commodities, trade barriers and price disruptions, arms buildups, arguments over control of the seas, and many other similar problems are each one serious in themselves, but each has a complicating effect on the others.

"The federal government is ill-equipped to deal with a growing number of these complex problems which transcend department jurisdictions. For example, foreign and domestic issues are becoming more interrelated; domestic prosperity and international relations are affected by our agricultural policy, by raw materials and oil policies, and by our export policies, among others.

"We must develop a policymaking and management machinery that transcends narrow perspectives and deals with complex problems on a comprehensive, systematic basis."

o Jimmy Carter's commitment to international cooperation on critical world problems.

"A stable world order cannot become a reality when people of many nations of the world suffer mass starvation; when the countries with capital and technology belligerently confront other nations for the control of raw materials and energy sources; when open and non-discriminatory trade has become the exception rather than the rule; when there are no established arrangements for supplying the world's food and energy, nor for governing control and development of the seas; and when there are no effective efforts to deal with population explosions or environmental quality.

"The intensity of these interrelated problems is rapidly increasing. Better mechanisms for consultation on these problems that affect everyone on this planet must be established and utilized. We should end the current diplomatic isolation of the United States in international forums by working more closely with our allies and the developing world on a basis of mutual understanding consistent with our respective national interests."

o Jimmy Carter's commitment to control nuclear proliferation.

"As President, I will (1) make no new commitments for the sale of nuclear technology or fuel to countries which refuse to forego nuclear explosives, to refrain from national nuclear reprocessing, and to place their nuclear facilities under IAEA safeguards; (2) support a strengthening of the safeguards and inspection authority of the IAEA; (3) call for an international Conference on Energy, to explore non-nuclear means of meeting energy demands of other nations; (4) redirect our own energy R&D efforts to correct the disproportionate emphasis which we have placed on nuclear power at the expense of renewable energy technologies; (5) follow through on my belief that the U.S. can and should negotiate a comprehensive test ban treaty with the Soviet Union, and reduce, through the SALT talks, strategic nuclear forces and technology; and (6) encourage the Soviet Union to join us in a total ban on nuclear explosives for at least five years, including so-called "peaceful nuclear devices."

o Jimmy Carter's engineering and science background.

"I began my professional career as an engineer. Graduating from the U.S. Naval Academy in 1946, I took advanced studies in nuclear physics at Union College and until 1953 worked under Admiral Rickover in the development of the atomic submarine program.

"Since then my career has turned to farming, business, planning, and public service at the local, state, and national levels. But throughout, I have maintained a commitment to science and technology as one of our nation's most important resources.

"Serving in the 1960's as State Senator and later as president of the Georgia Planning Association, I studied the techniques of long-range planning in order to assess what our people possessed in resources, what we would like to be in years to come, and the alternative courses of action open to us. And, when Governor of Georgia, I appointed a Science Advisor and supported activities in technology transfer, technology assessment, and the effective use of science and technology within the various state agencies."

Carter-Mondale On The Issues

JIMMY CARTER ON THE SPACE PROGRAM

Over the last 15 years, NASA has carried out with remarkable success its mission in the areas of aeronautical research and space exploration. Clearly this agency's expertise is needed in emerging priority civilian programs.

As a farmer, I am very much interested in the contribution that NASA's earth resources satellites and remote sensing technology can make to agriculture and to solving the problems of meeting future demand for food as well as for energy, raw materials and water.

While I was Governor of Georgia, data from the ERTS satellite (now called "Landsat") played a valuable role in the preparation of statewide water resource, geologic, landform, and vegetation maps as well as in the investigation of regional mineral resources and in the charting of sediment on the Georgia coast. Land cover maps were prepared using ERTS imagery for the southwestern portion of the State and for the Atlanta area, using computer techniques at the Georgia Institute of Technology.

Another important area is the prospect of vastly improved telecommunications through the use of satellites. In a time of widespread inflation and high unemployment, telecommunications -- including the telephone, mobile radio, television, satellites, and computers -- is one of the few sectors of the economy which has consistently provided more jobs with increased productivity. New applications of telecommunications can do much more to improve our quality of life and conserve our scarce resources.

The federal government can, through agencies such as NASA, play a constructive role in encouraging more innovative uses of telecommunications and information services -- particularly for improving productivity in the delivery of public services by federal, state, and local government agencies.

The creative scientific abilities gathered by NASA should be used to develop technologically feasible solutions to many of the problems facing our nation such as the development of new energy sources and better transfer of technological innovations.



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JIMMY CARTER ON THE SPACE PROGRAM

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Jimmy Carter Presidential Campaign

JIMMY CARTER ON THE RELATIONSHIP BETWEEN GOVERNMENT AND THE SCIENTIFIC COMMUNITY

It is crucial that the advice of the scientific and professional community of this nation be actively and permanently sought by elected officials in the evolution of national policy dealing with the complicated, unpredictable and rapidly changing technological problems of this modern world.

The day when political leaders could make effective policy decisions independently and turn to the scientific community only for assistance in implementation has long passed.

The Office of Science Advisor to the President should be upgraded immediately to provide a permanent and high level relationship between the White House decision-making process and the scientific community.

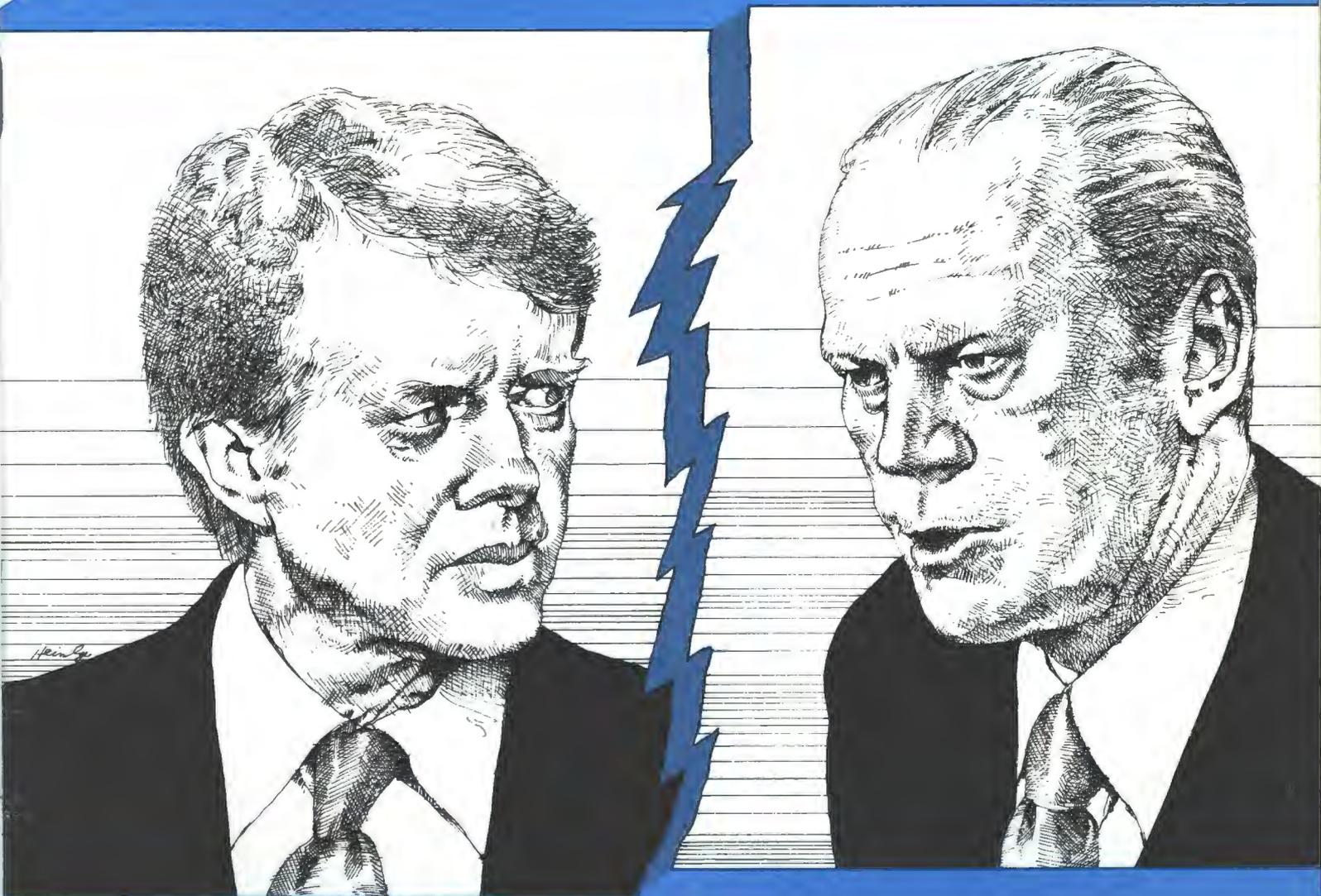
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Chemical &
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NEWS

October 18, 1976



CARTER and FORD

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