108TH CONGRESS 2d Session Report 108–422

# INTERNATIONAL GEOPHYSICAL YEAR 50TH ANNIVERSARY

FEBRUARY 18, 2004.-Referred to the House Calendar and ordered to be printed

# Mr. BOEHLERT, from the Committee on Science, submitted the following

# REPORT

### [To accompany H. Con. Res. 189]

The Committee on Science, to whom was referred the concurrent resolution (H. Con. Res. 189) celebrating the 50th anniversary of the International Geophysical Year (IGY) and supporting an International Geophysical Year-2 (IGY-2) in 2007–08, having considered the same, report favorably thereon with an amendment and recommend that the concurrent resolution as amended be agreed to.

# CONTENTS

		Р
I.	Amendment	
II.	Purpose of the Bill	
III.	Background and Need for the Legislation	
IV.	Summary of Hearings	
V.	Committee Actions	
VI.	Summary of Major Provisions of the Bill	
	Section-by-Section Analysis (by Title and Section)	
VIII.	Committee Views	
IX.	Cost Estimate	
	Congressional Budget Office Cost Estimate	
XI.	Compliance With Public Law 104–4 (Unfunded Mandates)	
XII.	Committee Oversight Findings and Recommendations	
XIII.	Statement on General Performance Goals and Objectives	
XIV.	Constitutional Authority Statement	
XV.	Federal Advisory Committee Statement	
	Congressional Accountability Act	
XVII.	Statement on Preemption of State, Local, or Tribal Law	
	Changes in Existing Law Made by the Bill, as Reported	
XIX.	Committee Recommendations	
XX.	Proceedings of Full Committee Markup	

# I. AMENDMENT

The amendment is as follows:

Strike all after the resolving clause and insert the following: 29–006

That it is the sense of the Congress that the President should— (1) endorse the concept of a worldwide IGY-2 for the 2007-2008 timeframe; (2) direct the Director of the National Science Foundation and the Administrator of the National Aeronautics and Space Administration, in association with the National Academy of Sciences and other relevant governmental and nongovernmental organizations, to initiate interagency and international inquir-ies and discussions that explore the opportunities for a worldwide IGY-2 in the 2007-2008 timeframe, emphasizing activities dedicated to global environmental research, education, and protection; and

(3) submit to Congress at the earliest practical date, but no later than 6 months after the date of adoption of this resolution, a report detailing the steps taken in carrying out paragraphs (1) and (2), including descriptions of possible activities and organizational structures for an IGY-2 in 2007–2008.

# II. PURPOSE OF THE BILL

The purpose of the concurrent resolution is to celebrate the 50th anniversary of the International Geophysical Year (IGY) and support an International Geophysical Year-2 (IGY-2) in 2007-08.

# III. BACKGROUND AND NEED FOR THE LEGISLATION

This resolution calls for a worldwide program of activities to commemorate the 50th anniversary of the most successful global scientific endeavor in human history-the International Geophysical Year (IGY) of 1957-58. The Committee first discussed the idea of an IGY resolution with Mr. Harvey Meyerson, who served as the President of the 1992 International Space Year (ISY).

The 60 nations and 60,000 scientists who participated in the IGY left an ongoing legacy beyond measure. Satellite communications, modern weather forecasting, modern natural disaster prediction and management, from volcanic eruptions to El Nino-are all legacies of IGY scientific activities that covered the globe and breached the space frontier.

The space age itself is a child of the IGY. The program of events included the launching of the first artificial satellites, Sputnik and Vanguard. The IGY also produced the pathbreaking decision to set aside an entire continent—Antarctica—for cooperative study. This IGY program alone—which was permanently institutionalized by the Antarctica Treaty—made the year a scientific triumph.

In a still broader context, the IGY marked the coming of age of international science. Globally coordinated activities that save millions of lives today—such as the campaigns to contain and find cures for SARS and AIDS—owe their inspiration and working model to the unprecedented number of scientists from throughout the world who banded together to implement the IGY. Scientific findings from thousands of locations, ranging from world research centers to remote field stations, were collected and organized by this global team. The result was an unprecedented range of discoveries for human benefit. The great British geophysicist Sydney Chapman, who helped conceive the IGY, called it "the greatest example of world-wide scientific cooperation in the history of our race.

The concurrent resolution calls for an "IGY-2" that would be even more extensive in its global reach and more comprehensive in its research and applications. The biological sciences, genetics, computer sciences, and the neurosciences, among others, have made tremendous advances worldwide during the half century since the IGY. At the same time, new integrative linkages are being established among mathematics, physics, the geosciences, the life sciences, the social sciences, and the humanities as well.

As a consequence, there is a coming together in the study of our planet and its diverse inhabitants whose potential scope and significance is only beginning to be perceived even among those directly involved. In addition to promoting research, IGY-2 would provide a stage for showcasing these new developments and a forum for presentation and discussion of their continually unfolding cultural as well as scientific significance.

Indeed, one of IGY-2's most important contributions would be to enhance public awareness of global activities that provide hope and example in an era when conflict and strife occupy the foreground of public policy and public attention. George Kistiakowsky, science adviser to President Dwight Eisenhower under whose presidency the IGY occurred, said at the time: "Science is today one of the few common languages of mankind; it can provide a basis for understanding and communication of ideas between people that is independent of political boundaries and ideologies [and] that can contribute in a major way to the reduction of tension between nations."

Those words spoken more than 40 years ago resonate with special significance today when the web of global ties among scientists is so much more extensive yet still largely unrecognized. There is a glimpse of its saving potential in the inspiring worldwide response of scientists and public health professionals to the SARS outbreak—a response inconceivable without the collaborative lines of communication established during the past half century. At a minimum, the work of these unsung heroes deserves greater recognition than it has received—and IGY-2 would do that.

It is entirely fitting that the United States take the lead in launching an IGY-2 and that Congress provide the impetus. The IGY of 1957-58 was conceived in 1950 in Silver Spring, Maryland, at a dinner hosted by Professor James Van Allen and attended by scientists from Europe, including Sydney Chapman. They discussed the International Polar Years that had been held at 50 year intervals—first in 1882, then in 1932. The next one was scheduled for 1982. These visionary scientists came up with the idea of accelerating the schedule to a 25-year interval, which would occur in 1957, and expanding its coverage to the entire globe, so as to take full advantage of rapid advances in research and instrumentation. They took their idea to governments and scientific organizations and made it happen. Fittingly, James Van Allen won the Nobel Prize for discovery during the IGY of the radiation belts that bear his name.

Subsequently, in 1985, Congress passed a resolution calling for a year of globally coordinated space activity in 1992, to mark the simultaneously occurring 35th anniversary of the IGY and 500th anniversary of Columbus' voyage of discovery. The bipartisan resolution for this International Space Year, or ISY, was introduced by Senator Spark Matsunaga and endorsed by President Reagan. At the President's direction, the United States led a worldwide planning effort that culminated with the implementation of an ISY in 1992 that made major contributions to international scientific cooperation, notably in the field of global environmental monitoring. The contributions to humanity of an IGY-2 will be remembered with gratitude both in the near future and for generations to come.

# IV. SUMMARY OF HEARINGS

The Committee did not hold any hearings on the concurrent resolution.

# V. COMMITTEE ACTIONS

On Wednesday, February 4, 2004, the Full Committee on Science met to consider the concurrent resolution. Mr. Udall offered an amendment that changed the reporting date to 6 months after the adoption of this resolution. The amendment was adopted by a voice vote.

Mr. Gordon moved that the Committee favorably report the concurrent resolution, H. Con. Res. 189, as amended, to the House with the recommendation that the concurrent resolution, as amended, be agreed to, and that the staff be instructed to make technical and conforming changes to the concurrent resolution, as amended, and prepare the legislative report and that the Chairman take all necessary steps to bring the concurrent resolution before the House for consideration. The motion was agreed to by a voice vote.

### VI. SUMMARY OF MAJOR PROVISIONS OF THE AMENDMENT

The concurrent resolution, as reported, is designed to celebrate the 50th anniversary of the International Geophysical Year (IGY) and support an International Geophysical Year-2 (IGY-2) in 2007– 08.

## VII. SECTION-BY-SECTION ANALYSIS OF THE BILL AS REPORTED

The concurrent resolution states several findings establishing the significance of the International Geophysical Year and resolves that the President should:

(1) Endorse the concept of a worldwide IGY-2 for the 2007-2008 period;

(2) Direct the Director of the National Science Foundation and the Administrator of the National Aeronautics and Space Administration, in association with the National Academy of Sciences and other governmental and nongovernmental organizations, to initiate interagency and international inquiries and discussions that explore the opportunities for a worldwide IGY-2 in the 2007-2008 period, emphasizing activities dedicated to global environmental research, education, and protection; and

(3) Submit to Congress at the earliest practical date but no later than 6 months after the date of adoption of this resolution, a report detailing the steps taken in carrying out paragraphs (1) and (2); including descriptions of possible activities and organizational structures for an IGY-2 in 2007-2008.

# VIII. COMMITTEE VIEWS

The Committee strongly endorses the purpose of the concurrent resolution.

# IX. COST ESTIMATE

A cost estimate and comparison was not prepared by the Director of the Congressional Budget Office since the measure is a concurrent resolution.

Since H. Con. Res. 189 is a resolution, the measure does not contain new budget authority, credit authority, or changes in revenues or tax expenditures.

# X. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

The Congressional Budget Office is not required to submit a cost estimate on a resolution.

# XI. COMPLIANCE WITH PUBLIC LAW 104–4

H. Con. Res. 189 contains no unfunded mandates.

# XII. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

The Committee on Science's oversight findings and recommendations are reflected in the body of this report.

# XIII. STATEMENT ON GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause (3)(c) of House rule XIII, the goals of H. Con. Res. 189 are to celebrate the 50th anniversary of the International Geophysical Year and support an International Geophysical Year-2 (IGY-2) in 2007–2008.

# XIV. CONSTITUTIONAL AUTHORITY STATEMENT

Article I of the Constitution of the United States grants Congress the authority to adopt H. Con. Res. 189.

# XV. FEDERAL ADVISORY COMMITTEE STATEMENT

H. Con. Res. 189 does not establish or authorize the establishment of any advisory committee.

# XVI. CONGRESSIONAL ACCOUNTABILITY ACT

The Committee finds that H. Con. Res. 189 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104-1).

# XVII. STATEMENT ON PREEMPTION OF STATE, LOCAL, OR TRIBAL LAW

This measure is a resolution and therefore, does not preempt any state, local, or tribal law.

XVIII. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

This resolution does not amend any existing Federal statute.

# XIX. Committee Recommendations

On February 4, 2004, the Committee on Science favorably reported the H. Con. Res. 189, as amended, by a voice vote, and recommended that it be agreed to.

# XX. PROCEEDINGS OF THE FULL COMMITTEE MARKUP ON H. CON. RES. 189, CELE-BRATING THE 50TH ANNIVERSARY OF THE INTERNATIONAL GEOPHYSICAL YEAR (IGY) AND SUPPORTING AN INTERNATIONAL GEOPHYSICAL YEAR-2 (IGY-2) IN 2007-08

# WEDNESDAY, FEBRUARY 4, 2004

HOUSE OF REPRESENTATIVES, COMMITTEE ON SCIENCE, Washington, DC.

The Committee met, pursuant to call, at 10:08 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Sherwood L. Boehlert [Chairman of the Committee] presiding.

Boehlert [Chairman of the Committee] presiding. Chairman BOEHLERT. Good morning. The Committee on Science will be in order. We will begin with a few brief administrative matters involving the Subcommittee assignments. I ask unanimous consent to change the ratio of the Subcommittee on Energy from ten Republican Members and eight Democrat Members to eleven Republican Members and nine Democrats. Without objection, so ordered.

I ask unanimous consent that the gentleman from Texas, the Honorable Ralph Hall, be elected to the Subcommittee on Energy and to the Subcommittee on Space and Aeronautics. Without objection, so ordered.

Let me just say this is—you will notice some adjustments in the chairs up here, in the line up. First of all, it is a pleasure for me to welcome Mr. Hall to our side of the aisle. We have come to expect wonderful things from Mr. Hall. And one of the things that I admire most about him, in addition to his wit, is his good judgment. So Mr. Hall, welcome.

And I also want to welcome my dear friend and colleague of many years, Bart Gordon, to the position as Ranking Member as leader of the Democrats. He is not leader of the opposition; he is leader of our partners in this effort. And I want to particularly note that he has been a most active Member of this committee from the beginning, from his first time here in 1985 as a freshman Member. He is a thoughtful, deliberative guy. He is a guy who pays attention to the issues and one from whom I will expect great things in the future. I would point out that he also has a minor Committee assignment. He is a Member of Energy and Commerce, but this is where he devotes his—so much time and attention to very productive results. So Mr. Gordon, welcome. Mr. Hall, welcome. We are glad to have everyone here.

And now the Chair is pleased to recognize the Ranking Member from Tennessee, Mr. Gordon.

Mr. GORDON. Mr. Chairman, I should just say amen. I don't think I can beat your kind remarks. Thank you very much. I am excited about having the opportunity to serve as the Ranking Member. And I am pleased that our friend, Mr. Hall, is going to stay and be the referee. He has set a very good example for us, as you said, in working in a bipartisan manner. We want to continue that example.

I think today is fitting that we have a full agenda, and so I want to be very brief and-so that we can move forward, but I do want to thank you for allowing Congressman Udall and Congressman Miller to have two bills today. And I hope that you will help us bring these to the Floor as promptly as you have brought them to this committee.

Thank you very much.

Chairman BOEHLERT. Mr. Hall.

Mr. HALL. Mr. Chairman, and to the Ranking Member and to the other Members, I thank you very much. I am honored to be back on the Committee.

I want to thank Mr. Gordon for his good judgment and for his kindness in keeping the team in place that we had set in place. They are good people and good folks to work with. I want to thank all of them from either side of the docket who have welcomed me here. Actually, when I decided-made the decision to switch parties, I didn't call anyone. I didn't call the President or anyone. I didn't tell anyone, including my wife, which was a mistake. I an-nounced that I was making the switch and put it on the wire and then called and spoke to the Speaker. All I expected from him was that my seniority would be honored, and he said it would be. You have done that. And to both sides, I am the same guy I was when I came over here. I am probably the Speaker's problem now. So we will just have to wait and see how things go, but I am honored to be back with a group of men and women that I admire, respect, and look forward to working with.

Thank you, and I yield back my time.

Chairman BOEHLERT. Thank you so much. As those who have observed the deliberations of this committee would have testified to, it really doesn't matter where you sit in this committee, because we have some very important work and partisanship doesn't rear its ugly head very often here. On occasion it does, and we are all familiar with that. But when all is said and done, we work as a team, this Science Committee, and I am very proud of that. And so no matter where they are sitting, everybody is part of the team, and I thank them for their cooperation and support and vision as we look to the future.

Pursuant to notice, the Committee on Science meets today to consider the following measures: H.R. 3551, the Surface Transpor-tation Research Act of 2004; H.R. 3752, the Commercial Space Launch Amendments Act of 2004; H.R. 912, Charles "Pete" Conrad Astronomy Awards Act; H.R. 1292, Remote Sensing Applications Act of 2003; H.R. 3389, To amend the Stevenson-Wydler Technology Innovation Act of 1980 to permit Malcolm Baldrige National Quality Awards to be made to nonprofit organizations; and H. Con. Res. 189, Celebrating the 50th anniversary of the International Geophysical Year and supporting an International Geophysical Year-2 in 2007–08. I ask unanimous consent for the authority to recess the Subcommittee at any point, and without objection, it is ordered.

We will now proceed with opening statements. I want to welcome everyone here for this important markup. We want to get done by 11:00 a.m., so we will need to be brief. I am not planning to make any statements this morning other than this one, so I will discuss each of the bills right now. But first let me say that all of the bills, as usual, reflect long hours of bipartisan work on important issues. The smooth markup that we expect today is the result of countless hours of staff work on both sides of the aisle working out the kinks.

The first that we will take up is the Transportation Research and Development Act offered by Dr. Ehlers and the negotiated amendments to it. The bill ensures that we will be devoting more resources to transportation R&D and that those resources will be better targeted. The bill authorizes an organized R&D effort that will focus on questions related to safety, environment, demographics, and getting the most out of the infrastructure that is already in place. It is an eminently sensible approach, and we will work hard to see that it becomes part of the overall highway bill. I know many Members have contributed ideas to the bill and to the amendments, including, in addition to the ones I have to offer, two freshmen Members on our side of the aisle, Mr. Neugebauer and Ms. Burgess—Dr. Burgess. I thank them for their contributions.

The second measure on the roster is Mr. Rohrabacher's bill to amend the *Commercial Space Launch Act*. I want to thank Chairman Rohrabacher for bringing this important matter to our attention. We need to create a balanced and predictable regulatory regime that can help jump-start a commercial human space flight industry while protecting the public. I think that this bill does just that. I know some have concerns about the provision in the bill extending indemnification for just 3 years. I don't want to have a long debate in this now, but the argument for indemnification has always been that we need to help out an infant industry. Well, no industry can remain infant forever. Indemnification has already been extended many times. Infancy has lasted long enough. In industry's interest, we need to send the signal now that the insurance regime out to be changing in the future. It certainly would not be fair or wise to catch industry off guard.

The third bill is also offered by Chairman Rohrabacher. It would set up awards for amateur astronomers who discover near-Earth asteroids. It is one of those ideas that is so obviously good that it is amazing that it hasn't happened already. The fourth bill is Mr. Udall's remote sensing bill. This is also a

The fourth bill is Mr. Udall's remote sensing bill. This is also a sensible bill that we passed in the last Congress. We ought to be doing more to ensure that the remote sensing data we have is actually being used. Mr. Weldon will be offering a helpful amendment on that to single out one use of the data: locating forest fires. I support that amendment.

The fifth bill would expand the Baldrige Quality Awards to include nonprofits. I helped craft the legislation creating the Baldrige Award years ago. Little did I appreciate then what a major success the award would be. I congratulate Mr. Miller on his bill to expand the award.

The sixth bill by Mr. Udall would call for another International Geophysical Year, 50 years after the first one was so successful in bringing the world together to conduct pioneering research in Antarctica, research several of us got to see firsthand last year. This is another idea that deserves this committee's support.

I congratulate all of my colleagues on their hard work on these bills, and I look forward to their prompt passage here and on the House Floor.

Let me once again restate the deep appreciation all of us have, on both sides, for the outstanding work of the very capable and hardworking professional staff. These are people who are here long after we have gone home, long after we have checked out of the airport to return to our Districts, working day and night and weekends to provide us with the support we need to do the good work we are doing.

I now recognize Mr. Gordon for five minutes to present his opening remarks.

### [The prepared statement of Chairman Boehlert follows:]

#### PREPARED STATEMENT OF CHAIRMAN SHERWOOD BOEHLERT

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The sixth bill, by Mr. Udall, would call for another International Geophysical Year, 50 years after the first one was so successful in bringing the world together to conduct pioneering research in Antarctica—research several of us got to see firsthand last year. This is another idea that deserves this committee's support.

I congratulate all my colleagues on their hard work on these bills, and I look forward to their prompt passage here—and on the House Floor.

Mr. Gordon.

Mr. GORDON. Mr. Chairman, I am pleased to report to the Committee that the Democratic Caucus of the Science Committee has elected the Honorable Nick Lampson of Texas as the Ranking Democrat on the Subcommittee on Space and Aeronautics. Mr. Lampson has been a Member of the Committee and the Subcommittee since his election to Congress in 1996. He represents the Johnson—we will try again here. Okay. He represents the Johnson Space Center in Houston, and he has been out front in his vision for human space flight. Accordingly, I ask unanimous consent that the seniority order for the Democratic membership of the Subcommittee on Space and Aeronautics be changed to reflect the action of our Caucus, placing Mr. Lampson first in the Democratic seniority.

Chairman BOEHLERT. Without objection.

Mr. GORDON. Mr. Chairman, I ask unanimous consent for another request, and that is I am pleased to report to the Committee that the Democratic Caucus of the Science Committee has elected the Honorable John Larson of Connecticut as ranking Democrat on the Subcommittee on Energy. John has been a Member of the Committee since 1998, also serves as the Ranking Member on the House Administration Committee, and was a leader in developing many of the R&D provisions of the energy bill. Accordingly, I ask unanimous consent that the Honorable John Larson be elected to the Subcommittee on Energy and that rank in seniority is first on the Democratic membership.

Chairman BOEHLERT. Without objection.

Mr. GORDON. Mr. Chairman, respecting your interest in getting out by 11:00, I will reserve any remarks on the bills as they come forth.

Chairman BOEHLERT. Thank you very much. Without objection, all Members may place opening statements in the records at this point—in the record at this point.

We will now consider the Concurrent Resolution, H. Con. Res. 189, Celebrating the 50th anniversary of the International Geophysical Year and supporting an International Geophysical Year-2 in 2007–08.

I now recognize Mr. Gordon for such time as he may consume.

Mr. GORDON. Thank you. I want to congratulate Mr. Udall for, once again, showing leadership on an important environmental issue. The bill properly commemorates the magnificent achievements of International Geophysical Year. A new IGY will be good for the environment. It will also be healthy for our standing as a Nation to take the leadership role in developing a new IGY for the 21st Century.

And I yield the balance of my time to Mr. Udall.

Mr. UDALL. I want to thank my colleague for Tennessee—from Tennessee for yielding. And Mr. Chairman, I am really pleased that we are going to mark this important resolution up today. And I would like to ask unanimous consent to enter into the record letters of endorsement for this resolution.

Chairman BOEHLERT. Without objection, so ordered.

[The information follows:]

# **SAGU**

15 September 2003

The Honorable Mark Udall U.S. House of Representatives Washington, D.C. 20515 The Honorable Vern Ehlers U.S. House of Representatives Washington, D.C. 20515

Dear Representatives Udall and Ehlers:

On behalf of the American Geophysical Union (AGU), I would like to endorse House Concurrent Resolution 189, Celebrating the 50<sup>th</sup> Anniversary of the International Geophysical Year (IGY) and supporting an International Geophysical Year-2 (IGY-2) in 2007-2008. As a worldwide scientific society pledged to advancing, through unselfish cooperation in research, the understanding of Earth and space for the benefit of society, our goals are aligned with the spirit and tenor of your resolution.

The nature of our science demands both interdisciplinary and international cooperation. Nearly one third of AGU's 40,000 members are from outside the United States and the percentage is steadily increasing. It is probably fair to say the first IGY was a prime catalyst for the explosion of geophysics research in the latter half of the  $20^{\circ}$  century, bolstered by the spirit of collaboration and cooperation across international borders. We are poised to make new and exciting advances in geophysics and a second IGY, as you propose, could help propel the scientific community towards a more integrated and interdisciplinary approach of understanding Earth and its environment in space.

Just last year AGU convened a well-received scientific session at our Fall meeting in San Francisco entitled "Outstanding Questions about Earth and Space Science a Half Century after IGY." Talks ranged across the traditional disciplines of geophysics, from space physics and seismology to oceanography and the study of planets, but also included perspectives on the rapidly growing research field involving the interaction of the biosphere and the physical world. AGU recently added an entirely new disciplinary section, Biogeosciences, to capture the explosion of research in this exciting field. Thus your proposal to include the life sciences as part of the IGY framework rightly recognizes a cutting cdge interdisciplinary aspect of our science.

As you propose, the successful study of the Earth system must include the interaction between biosphere, atmosphere, hydrosphere, and needs also to consider the Earth's environment in space and, for example, the influence of solar activity on Earth processes. New Earth and space-based systems, integrated for global monitoring and data collection, will take advantage of state-of-the-art and developing technologies in sensing, analyzing, and communicating that should provide orders of magnitude greater scientific information than what was possible 50 years ago. The challenge we face, and which you allude to in your letter, is to utilize the expected tremendous gains in scientific knowledge for helping society solve increasingly complex problems.

A worldwide scientific community that advances, through unsclifish cooperation in vasearch, the understanding of Earth and space for the benefit of homonity. 2000 Florida Avenue, NW, Washington, DC 20009-1277 USA Tel: -1 202.462.6900 Fax: +1 202.328.0566 www.agu.org



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> RICHARD E. HALLGREN, EXECUTIVE DIRECTOR EMERITUS KENNETH C. SPLENGLER, EXECUTIVE DIRECTOR EMERITUS

July 18, 2003

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Mark E. Udali DC Office

The Honorable Mark Udall U.S. House of Representatives 115 Cannon House Office Bldg. Washington, D.C. 20515

RONALD D. MCPHERSON, EXECUTIVE DIRECTOR

Dear Representative Udall,

I am writing on behalf of the American Meteorological Society to offer our full endorsement of H. Con. Res. 189, the resolution calling for a worldwide program of activities to commemorate the 50<sup>th</sup> anniversary of the International Geophysical Year of 1957-1958.

As with you, we are of the belief that a second International Geophysical Year will be an important enterprise, both to honor the success of the first IGY, as well as to launch a new era of international, interdisciplinary cooperation in the sciences. Perhaps now more than ever, efforts in communication across national boarders in the crucial area of human endeavor that is the sciences is of extreme importance. They can contribute to international understanding, while at the same time giving added impetus to further explorations into human knowledge and into the improvement of the lot of all mankind.

This is a very important effort, and you can count on AMS to be supportive. At the same time, I would like to thank you for this initiative in recognizing the 50<sup>th</sup> anniversary of the first International Geophysical Year and to put this on the calendar of events for 2007-2008 and all it can mean to all of us in the sciences and all of us as inhabitants of this planet.

You and your staff should feel free to get in touch with me -- and members of my staff -- in connection with IGY-2. As the scientific and professional society representing the atmospheric and related oceanic and hydrologic sciences and services, we are enthusiastic about these endeavors. Count on us as supporters and as a resource.

Once again, thank you for introducing this Resolution.

Sincerely,

Ponald D. M. Dherrow

Ronald D. McPherson Executive Director

cc: Doug Stone AMS Government Relations Representative

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# AMERICAN GEOLOGICAL **INSTITUTE**

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#### EXECUTIVE COMMITTEE R. .... July 25, 2003 PRESIDENT M. Ray Thomasson Thomasson Partner Associates, Inc. The Honorable Mark Udall The Honorable Vern Ehlers AUG 1 U.S. House of Representatives Washington, D.C. 20515 U.S. House of Representatives Washington, D.C. 20515 NOR É. UGRE PRESIDENT-ELECT Barbara Tewksbury Hamilton College Dear Representatives Udall and Ehlers: On behalf of the American Geological Institute's Executive Committee. I would like to PAST PRESIDENT Steven M. Stanley The Johns Hopkins University commend you for introducing House Concurrent Resolution 189 and endorse the resolution and its proposal for a second International Geophysical Year (IGY) in 2007-2008 to celebrate the 50th anniversary of the first IGY. The American Geological Institute (AGI) is a nonprofit federation of 41 geoscientific societies SECRETARY David R. Wunsch New Hampshire Geological Survey and associations that represent more than 100,000 geologists, geophysicists, and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in TREASURER Steven L. Veal DCX Resources, Ltd. society's use of resources and interaction with the environment. The first IGY remains a defining moment in the development of modern geoscience and in particular the international collaboration and cooperation that is a defining trait of our science today. Many of AGI's Member Societies have a significant percentage of their membership MEMBER AT LARGE Joseph A. Briskey Jr. U.S. Geological Survey outside the United States, some even a majority. In our electronic age, the barriers to communication have come down dramatically. But barriers do remain, and a second IGY could MEMBER AT LARGE R. Heather Macdonald College of William and Mary help to bring those down even further. IGY's emphasis on comprehensive global data collection opened up many corners of the world to researchers. The advances in our understanding of the ocean floor and Antarctica, among others, helped foster the burgeoning plate tectonics revolution that came to redefine the MEMBER AT LARGE Priscilla Nelson National Science Foundation geosciences. The broad deployment of newly developed technologies was key to IGY's success. Today, exciting new observational, analytical and telecommunications technologies can provide unprecedented insight into the forces that shape our dynamic planet. Your proposed inclusion of the life sciences in this new IGY appropriately reflects the growing AGI FOUNDATION Russell G. Slayback recognition of interconnectedness between ecosystems and the nutrient-providing framework of Leggette, Brashears & Graham rock, soil, water, and air that supports them as part of the Earth system. At the same time, it should be noted that in broadening the tent, we must take care not to dilute the potential impact of this second IGY on the disciplines that gained so much from the first one. EXECUTIVE DIRECTOR Marcus E. Milling

AGI MEMBER SOCIETIES
American Association of Petroleum Geologists + American Association of Statigraphic Palvrologists - American Geophysical Union - American Institute of Hydrology
American Institute of Professional Geologists + American Rock Mechanics Association of Statigraphic Palvrologists - Association for Women Geoscientists + Association of American State Geologists
Association of Earth Science Editors + Association of Engineering Geologists - The Clay Minerals Society - Council on Undergraduate Reaserch, Geosciences Drivison
Environmental and Engineering Geophysical Society - Perceds of Mineralogy - Geo-Institute of ASCE - Ceological Society of America - Geoscience Informationa Society
Geothermal Resources Council - International Association of Black Geologists and Ceophysicits - National Association of Galac Society of America - Minical Association of Black Geological Society of America - Association of Galac Society of America - National Association of Black Geological Society of America - Blacenstrological Society of America - Minical Association of Black Geological Society of America - Palenotalogical Society of America - Minical Association of Black Geological Society of America - Palenotalogical So



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The Honorable Mark Udall 115 Cannon House Office Building Washington, DC 20515

Dear Representative Udall:

August 5, 2003

I am writing to express the Geological Society of America's (GSA) support for your H Con Res 189, a resolution that you introduced in the House of Representatives calling for a worldwide program of activities to commemorate the 50th anniversary of the International Geophysical Year 1957-1958. The GSA's 17,000 members represent a broad spectrum geoscientist around the country and world.

The first IGY defined unparalleled international cooperation and collaboration in the development of modern geoscience. It is most appropriate to celebrate this achievement 50 years later with a worldwide IGY-2 in the 2007-2008 timeframe. A focus on global, interdisciplinary cooperation in the sciences is important as we attempt to address the multitude of issues facing humankind in the future. Many important and exciting research questions lie on the intersection of the physical and biological sciences.

The Geological Society of America stands ready to assist in any way it can with the proposed IGY-2. Please contact me if I can provide any additional support for your resolution and IGY-2. Thank you for introducing H Con Res 189.

Sincerely,

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B. Clark Burchfiel President

SCIENCE . STEWARDSHIP . SERVICE



UNION GEODESIQUE ET GEOPHYSIQUE INTERNATIONALE INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS

> RECEIVED AUG 0 8 2003

Boulder, CO July 31, 2003

Mark E. Udali DC Office Congressman Mark Udall 115 Cannon HOB Washington D.C 20515 U.S.A.

Dear Congressman Udall,

A copy of your H. Con. Res. 189, a Concurrent Resolution celebrating the 50<sup>th</sup> Anniversary of the International Geophysical Year (IGY), was sent to me by the Secretariat of the International Council for Science (ICSU) in Paris, France. The International Union of Geodesy and Geophysics (IUGG) was the sponsoring organization of the original IGY, and is certainly in favor of this Resolution. We would like to seek ways in which we can both support and make use of the Resolution to achieve the purposes of both recognizing the tremendous progress in scientific knowledge that the IGY engendered, and inspiring new scientific studies.

In the United States, the organization that adheres to IUGG is the National Academics, through their Board on International Scientific Organizations (Division of Policy and Global Affairs). They also are the Adhering Organization to the International Council for Science (ICSU), and they could be of considerable help in coordinating international scientific support. For example, the International Union of Geological Sciences (IUGS) is partnering with IUGG to seek a Resolution in the United Nations that would declare an International Year of Planet Earth. Several other of the scientific committees and Unions within ICSU (again, including IUGG) are planning a new International Polar Year that will also serve to commemorate the IGY. Finally, the 24<sup>th</sup> General Assembly of IUGG in 2007 (Perugia, Italy) will include a celebration of IGY and we have a committee hard at work to coordinate the many communities that wish to participate.

As an international nongovernmental organization, IUGG strongly encourages the actions proposed by H. Con. Res. 189 to endorse the concept of a world-wide IGY-2 for the 2007-2008 time frame, and could assist, as appropriate, to deliver the prescribed report to Congress by March 15, 2004. Coincidentally, the office of the IUGG Secretariat is presently located in Boulder, Colorado, within the Cooperative Institute for Research in Environmental Sciences of the University of Colorado.

ours sincerely. Jo Ann Joselyn, Ph.D. IUGG Secretary General

President URI SHAMIR Technion - Israel Institute of Technology Civil & Environmental Engineering Haffa 32000 ISRAEL ISRAEL Tel.: (972) 4 822 8898 Vice-President TOM BEER CSIRO Environmental Risk Network PB1, Aspendaie Victoria 3195 AUSTRALIA Tel.: 61 (0) 3 9239 4546 Fax: 61 (0) 3 9239 4444 Secretary-General JO ANN JOSELYN University of Colorado CIRES UCB 216 Boulder CO 80309-0216 USA Tel. : (1) 303 497 3147 Fax : (1) 303 497 3645 Treasurer

AKSEL WALLOE HANSEN University of Copenhagen Department of Geophysics Julianes Maries Vej 30 2100 Copenhagen OE DENMARK Tel.: (45) 35 32 05 67 Fax: (45) 35 36 53 57 Mr. UDALL. I introduced the resolution last year, calling for a worldwide program of activities to commemorate the 50th anniversary of the most successful global scientific endeavor in human history, the International Geophysical Year of 1957–58. It is hard to imagine not commemorating the historical global undertaking that was the International Geophysical Year, popularly known as the IGY.

There were 60,000 scientists in 60 nations who participated in that IGY, and they left an ongoing legacy that is beyond measure. Satellite communications, modern weather forecasting, modern natural disaster prediction and management from volcanic eruptions to El Niño, these are all legacies of the IGY scientific activities.

In a broader context, the IGY marked the coming of age of international science, globally coordinated activities that saved millions of lives today, such as the campaigns to contain and find cures for SARS and AIDS owe their working model to the scientists from throughout the world who banded together to implement IGY. My resolution calls for an IGY-2 that would be even more exten-

My resolution calls for an IGY-2 that would be even more extensive in its global reach and more comprehensive in its research and applications. The frontiers of science are continually expanding. The biological sciences, genetics, computer sciences, and the neurosciences, among others, have made tremendous advances worldwide during the 50 years since the IGY.

IGY-2 would not only promote research, but it would provide a stage for showcasing these new scientific developments in a forum for presentation and discussion of their unfolding significance. And I think, Mr. Chairman, you would agree with this that it is entirely fitting that the United States take the lead in launching an IGY-2 and that we, in the Science Committee, and the Congress provide the impetus. In 1985, the 35th anniversary was marked by a resolution authored by Senator Spark Matsunaga, which called for a year of global coordination of space activity. And from President Reagan's direction, the—out of that resolution, the U.S. led a worldwide planning effort that culminated in the implementation of an International Space Year in 1992, which made major scientific contributions.

So we have both scientific and congressional precedence for the U.S. to take the lead internationally in calling for an IGY–2. In that spirit, I urge my colleagues to join me in promoting this initiative in support of modern science, if I could add, the mission of the Science Committee and international scientific cooperation.

In conclusion, Mr. Chairman, as we have discussed, I will have a technical amendment to offer to adjust dates in the resolution, and I want to thank you for indicating your support for the amendment and for the resolution in general.

[The prepared statement of Mr. Udall follows:]

## PREPARED STATEMENT OF REPRESENTATIVE MARK UDALL

Mr. Chairman, I'm pleased that we're marking up this important resolution today. (I'd like to ask unanimous consent to enter into the record letters of endorsement for my resolution.)

Last year, I introduced this resolution calling for a worldwide program of activities to commemorate the 50th anniversary of the most successful global scientific endeavor in human history—the International Geophysical Year of 1957–58.

It is hard to imagine *not* commemorating the historic global undertaking that was the International Geophysical Year, popularly remembered as the IGY.

The 60 nations and 60,000 scientists who participated in the IGY left an ongoing legacy that is beyond measure. Satellite communications, modern weather fore-casting, modern natural disaster prediction and management, from volcanic eruptions to El Niño-they are all legacies of IGY scientific activities that spanned the globe and breached the space frontier.

In a broader context, the IGY marked the coming of age of international science. Globally coordinated activities that save millions of lives today—such as the cam-paigns to contain and find cures for SARS and AIDS—owe their working model to the scientists from throughout the world who banded together to implement the IGY.

My resolution calls for an "IGY-2" that would be even more extensive in its global reach and more comprehensive in its research and applications. After all, the fron-tiers of science are continually expanding. The biological sciences, genetics, computer sciences, and the neurosciences, among others, have made tremendous ad-vances worldwide during the half-century since the IGY.

IGY-2 would not only promote research, but it would also provide a stage for showcasing these new scientific developments and a forum for presentation and discussion of their continually unfolding significance. It is entirely fitting that the United States take the lead in launching an IGY–

and that Congress provide the impetus. In 1985, to mark the 35th anniversary of the IGY, Congress passed a resolution— authored by Senator Spark Matsunaga—calling for a year of globally coordinated space activity.

At President Reagan's direction, the U.S. led a worldwide planning effort that cul-minated in the implementation of an International Space Year in 1992, which made major scientific contributions, notably in the field of global environmental monitoring.

So we have both scientific and Congressional precedent for the U.S. to take the lead internationally in calling for an IGY-2.

I urge my colleagues to join me in promoting this initiative in support of modern

science and international scientific cooperation. Mr. Chairman, as we've discussed, I will have a technical amendment to offer to adjust dates in the resolution. I'd like to thank you for indicating you will accept this amendment.

Chairman BOEHLERT. Thank you so much.

Without objection, all Members may place opening statements in the record at this point.

ask unanimous consent that the Concurrent Resolution is considered as read and open to amendment at any point and that the Members proceed with the amendments in the order of the roster. Without objection, so ordered.

The first amendment on the roster is offered by Mr. Udall.

Mr. UDALL. Mr. Chairman, I have an amendment at the desk.

Chairman BOEHLERT. The Clerk shall report.

Ms. TESSIERI. Amendment to H. Con. Res. 189 offered by Mr. Udall of Colorado.

[Amendment offered by Mr. Udall appears in the Appendix.]

Chairman BOEHLERT. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

The gentleman from Colorado?

Mr. **UDALL**. Mr. Chairman, briefly, this is a straightforward technical amendment to adjust the dates in the bill. I would urge its adoption.

Chairman BOEHLERT. Thank you very much.

Mr. Ehlers.

Mr. EHLERS. Thank you, Mr. Chairman.

I am pleased to support my colleague's amendment and the underlying resolution. In 1958, as he observed, over 60,000 scientists from around the globe participated in the first International Geophysical Year. I was a graduate student at that time, and I still remember the event and the tremendous effect that it had on geophysical sciences. Tremendous scientific advances in Earth sciences—in all Earth sciences came about because of their efforts. For example, work to develop satellites for studying the upper atmosphere led to the beginning of our nation's space program.

Yet, with all of the advances we have seen, understanding the complex behavior of the Earth's environment remains a daunting task. So I am pleased that the resolution calls for a second International Geophysical Year that will coordinate the efforts a new generation of Earth scientists. We can barely begin to imagine what amazing discoveries will come about through their work.

I urge my colleagues to recognize the legacy of the International Geophysical Year and support this resolution.

I vield back the balance of my time.

[The prepared statement of Mr. Ehlers follows:]

### PREPARED STATEMENT OF REPRESENTATIVE VERNON J. EHLERS

I am pleased to support my colleague's amendment and the underlying resolution. In 1958, over 60,000 scientists from around the globe participated in the first Inter-In 1958, over 60,000 scientists from around the globe participated in the first inter-national Geophysical Year. Tremendous scientific advances in earth sciences came about because of their efforts. For example, work to develop satellites for studying the upper atmosphere led to the beginning of our nation's space program. Yet, with all the advances we've seen, understanding the complex behavior of the Earth's environment remains a daunting task. So, I am pleased that the resolution calls for a second International Geophysical Year that will coordinate the efforts of a new generating of Forth gringities.

a new generation of Earth scientists. We can barely begin to imagine what amazing discoveries will come about through their work.

I urge my colleagues to recognize the legacy of the International Geophysical Year and support this resolution.

Chairman BOEHLERT. Thank you very much. The question is on the amendment. All of those in favor, signify by saying aye. Opposed, no. The ayes appear to have it, and the amendment is agreed to.

The question—Counselor, are you signaling me for something? When an upstate New Yorker tries to get my attention, he does, and you did.

The question is now on the concurrent resolution, as amended, H. Con. Res. 189, Celebrating the 50th anniversary of the International Geophysical Year and supporting an International Geophysical Year-2 in 2007-08. All of those in favor, say aye. Opposed, say no. In the opinion of the Chair, the ayes have it.

I will now recognize Mr. Gordon to offer a motion.

Mr. GORDON. Mr. Chairman, I move that the Committee favor-ably report H. Con. Res. 189 as the amendment to the House with the recommendation that the concurrent resolution, as amended, do pass. Furthermore, I move that the staff be instructed to prepare the legislative report and make necessary technical and conforming changes, and that the Chairman take all necessary steps to bring the concurrent resolution before the House for consideration.

Chairman BOEHLERT. The question is on the motion to report the bill favorably. Those in favor of the motion will signify by saying aye. Opposed, no. The ayes appear to have it, and the resolution is favorably reported.

Without objection, the motion to reconsider is laid upon the table. I move that Members have two subsequent calendar days in which to submit supplemental, minority, or additional views on the measure. I move pursuant to Clause 1 of Rule 22 of the Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to adopt and pass House Concurrent Resolution 189, as amended, and go to conference with the Senate on House Concurrent Resolution 189 or a similar Senate bill. Without objection, so ordered.

This concludes our committee markup, and I thank my colleagues for their enthusiastic participation. We are now adjourned. [Whereupon, at 1:33 p.m., the Committee was adjourned.]

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Appendix:

Amendment Roster, Amendment, H. Con. Res. 189, Summary of H. Con. Res. 189

# COMMITTEE ON SCIENCE FULL COMMITTEE MARKUP

# February 4, 2004

# AMENDMENT ROSTER

# H.Con.Res. 189, Celebrating the 50<sup>th</sup> anniversary of the International Geophysical Year and supporting an International Geophysical Year-2 in 2007-2008

-Motion to adopt the bill, as amended: agreed to by a voice vote. -Motion to report the bill, as amended: agreed to by a voice vote.

No.	Sponsor	Description	Results
1.	Mr. Udall	Clarifying amendment to adjust dates in the resolution.	Adopted by a voice vote.

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# AMENDMENT TO H. CON. RES. 189 Offered by Mr. Udall of Colorado

Page 3, line 15, strike "March 15, 2004" and insert "6 months after the date of adoption of this resolution".

F:\V8\020204\020204.082 February 2, 2004

# <sup>108TH CONGRESS</sup> H. CON. RES. 189

Celebrating the 50th anniversary of the International Geophysical Year (IGY) and supporting an International Geophysical Year-2 (IGY-2) in 2007–08.

# IN THE HOUSE OF REPRESENTATIVES

MAY 21, 2003

Mr. UDALL of Colorado (for himself and Mr. EHLERS) submitted the following concurrent resolution; which was referred to the Committee on Science

# **CONCURRENT RESOLUTION**

- Celebrating the 50th anniversary of the International Geophysical Year (IGY) and supporting an International Geophysical Year-2 (IGY-2) in 2007–08.
- Whereas the year 2007 is the 50th anniversary of the IGY of 1957–58;
- Whereas the IGY, conceived in and promoted by the United States, was the largest cooperative international scientific endeavor undertaken to that date, involving more than 60,000 scientists from 66 nations;
- Whereas the IGY legacy includes the dedication of an entire continent to cooperative scientific study through the Antarctica Treaty and the inauguration of the global space age through the launching of Sputnik and Vanguard;

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- Whereas IGY cooperation continues as the model and inspiration for contemporary world science and also, in this strife-torn era, for the human species as a whole;
- Whereas the IGY was conceived as a follow-on to the International Polar Year of 1932 that would reflect new and more globally comprehensive research and measurement techniques in geophysics; and whereas in like-minded spirit it would be appropriate for an IGY-2 to reflect global developments in biology, genetics, the neurosciences, and other areas of scientific research;
- Whereas it also would be appropriate for an IGY-2 to recognize interdisciplinary research that incorporates the physical and social sciences and the humanities in enriching understanding of diverse life on Earth;
- Whereas the 35th anniversary of the IGY was commemorated by the International Space Year, a globally implemented congressional initiative conceived by the late Senator Spark Matsunaga of Hawaii, that was highlighted by globally coordinated environmental monitoring and research whose ongoing legacy continues to benefit humanity; and
- Whereas it is entirely fitting that Congress takes the lead again, in the same spirit, in promoting global cooperation through worldwide commemoration of the IGY with activities reflecting the unity and diversity of life on Earth: Now, therefore, be it
- 1 Resolved by the House of Representatives (the Senate
- 2 concurring), That it is the sense of the Congress that the
- 3 President should-

•HCON 189 IH

	3
1	(1) endorse the concept of a worldwide IGY-2
2	for the 2007–2008 timeframe;
3	(2) direct the Director of the National Science
4	Foundation and the Administrator of the National
5	Aeronautics and Space Administration, in associa-
6	tion with the National Academy of Sciences and
7	other relevant governmental and nongovernmental
8	organizations, to initiate interagency and inter-
9	national inquiries and discussions that explore the
10	opportunities for a worldwide IGY-2 in the $2007-$
11	2008 timeframe, emphasizing activities dedicated to
12	global environmental research, education, and pro-
13	tection; and
14	(3) submit to Congress at the earliest practical
15	date, but no later than March 15, 2004, a report de-
16	tailing the steps taken in carrying out paragraphs
17	(1) and (2), including descriptions of possible activi-
18	ties and organizational structures for an IGY $-2$ in
19	2007–2008.

•HCON 189 IH

Summary of H. Con. Res 189, Celebrating the 50th Anniversary of the International Geophysical Year and Supporting an International Geophysical Year-2 in 2007-08

#### **Purpose of the Resolution**

To recognize the 50th anniversary of the International Geophysical Year and support an International Geophysical Year-2 in 2007–08.

### Background

In 1952, the International Council of Scientific Unions proposed a comprehensive series of global geophysical activities to span the period July 1957–December 1958, called the International Geophysical Year (IGY). The purpose, as described by the National Academy of Sciences (NAS), was ". . .to observe geophysical phenomena and to secure data from all parts of the world; to conduct this effort on a coordinated basis by fields, and in space and time, so that results could be collated in a meaningful manner."

Although representatives of 46 countries originally agreed to participate in the IGY, by the close of the year, 67 countries had become involved. American participation in the IGY was charged to a U.S. National Committee appointed in March 1953 by the NAS. The U.S. program included investigations of aurora and airglow, cosmic rays, geomagnetism, glaciology, gravity, the ionosphere, determinations of longitude and latitude, meteorology, oceanography, seismology, solar activity, and the upper atmosphere. In addition, a technical panel was set up to attempt to launch an artificial satellite into orbit around the earth. It was the IGY rocket and satellite research that led the U.S. to develop its space program. IGY activities spanned the globe from the North to the South Poles. Special atten-

IGY activities spanned the globe from the North to the South Poles. Special attention was given to the Antarctic, where research on ice depths yielded radically new estimates of the Earth's total ice content. IGY Antarctic research also contributed to improved meteorological prediction, advances in the theoretical analysis of glaciers, and better understanding of seismological phenomena in the Southern Hemisphere.

This resolution expresses the sense of Congress that the President should: (1) endorse the concept of a worldwide International Geophysical Year-Two (IGY-2) for the 2007–2008 time frame (the 50th anniversary of the IGY of 1957–1958); (2) require the Director of the National Science Foundation and the Administrator of the National Aeronautics and Space Administration to initiate interagency and international inquiries and discussions that explore the opportunities for a worldwide IGY-2, emphasizing activities dedicated to global environmental research, education, and protection; and (3) submit to Congress a report detailing the steps taken in carrying out this Act.

This resolution is endorsed by the American Geophysical Union.

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