



U.S. DEPARTMENT OF
ENERGY

OFFICE OF SCIENCE

Science and The Drive for Transparency

Presented by

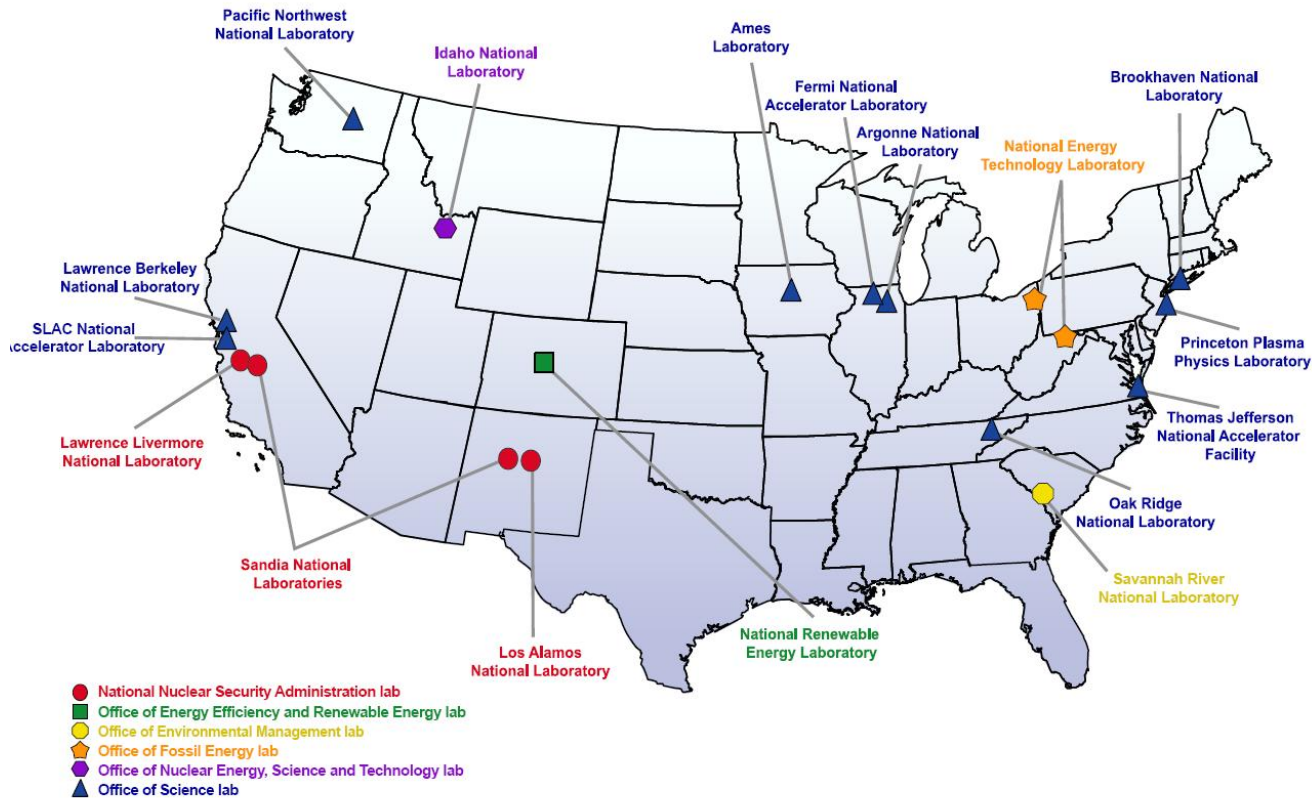
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Deputy Director
for Resource Management**

**Science and Technology Information Program (STIP)
April 22, 2009**

STIP: A Collaboration That Works



DEPARTMENT OF ENERGY NATIONAL LABORATORIES



•16,271 items open to the public in 2008

•No “Collecting” in the traditional sense—everything is searchable

•A model of transparency—more on this later...

First steps taken in 1945 by Vannevar Bush in *“Science The Endless Frontier”*

The Lid Must Be Lifted

“The Government should accept new responsibilities for promoting the flow of new scientific knowledge and the development of scientific talent in our youth. These responsibilities are the proper concern of the Government, for they vitally affect our health, our jobs, and our national security” —A Report to the President by Vannevar Bush, Director of the Office of Scientific Research and Development, July 1945. (United States Government Printing Office, Washington: 1945)



From this initial commitment, where are we today?



TRANSPARENCY



SCIENCE

1. The Administration has a focus on transparency
2. The Secretary of Energy has a focus on Science
3. We need to think of how we can lead in bringing the two together

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

SUBJECT: Transparency and Open Government

My Administration is committed to creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency, public participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in Government.

Government should be transparent. Transparency promotes accountability and provides information for citizens about what their Government is doing. Information maintained by the Federal Government is a national asset. My Administration will take appropriate action, consistent with law and policy, to disclose information rapidly in forms that the public can readily find and use. Executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public. Executive departments and agencies should also solicit public feedback to identify information of greatest use to the public.

Government should be participatory. Public engagement enhances the Government's effectiveness and improves the quality of its decisions. Knowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge. Executive departments and agencies should offer Americans increased opportunities to participate in policymaking and to provide their Government with the benefits of their collective expertise and information. Executive departments and agencies should also solicit public input on how we can increase and improve opportunities for public participation in Government.

Government should be collaborative. Collaboration actively engages Americans in the work of their Government. Executive departments and agencies should use innovative tools, methods, and systems to cooperate among themselves, across all levels of Government, and with nonprofit organizations, businesses, and individuals in the private sector. Executive departments and agencies should solicit public feedback to assess and improve their level of collaboration and to identify new opportunities for cooperation.

I direct the Chief Technology Officer, in coordination with the Director of the Office of Management and Budget (OMB) and the Administrator of General Services, to coordinate the development by appropriate executive departments and agencies, within 120 days, of recommendations for an Open Government Directive, to be issued by the Director of OMB, that instructs executive departments and agencies to take specific actions implementing the principles set forth in this memorandum. The independent agencies should comply with the Open Government Directive.

This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by a party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

This memorandum shall be published in the *Federal Register*.

BARACK OBAMA

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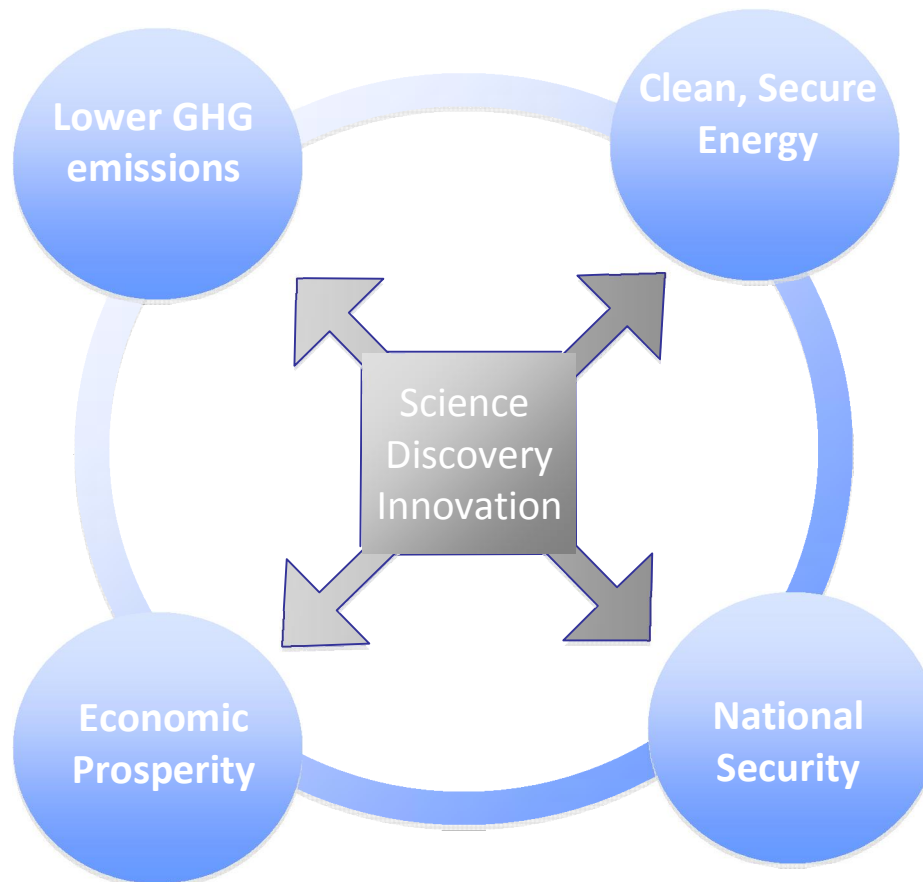
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Secretary Chu's Priorities

Strategic Framework: Science and Discovery at the Core



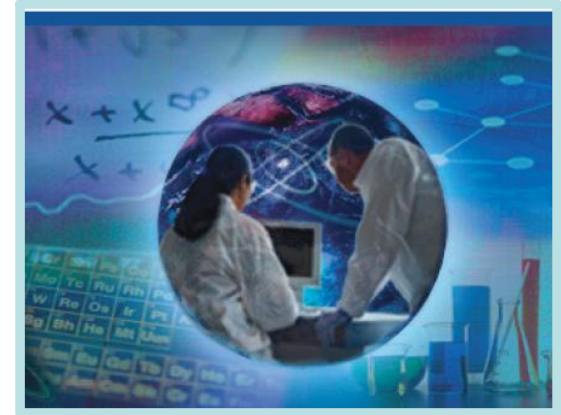
Secretary Chu's Priorities (continued)

Priority : Science and Discovery

Invest in science to achieve transformational discoveries

1. Focus on transformational science

- Connect basic and applied sciences
- Re-energize the national labs as centers of great science and innovation
- Double the Office of Science budget
- Embrace a degree of risk-taking in research
- Create an effective mechanism to integrate national laboratory, university, and industry activities



2. Develop science and engineering talent

- Train the next generation of scientists and engineers
- Attract and retain the most talented researchers

3. Collaborate universally

- Partner globally
- Support the developing world
- Build research networks across departments, government, the nation and the globe

What can we offer in terms of greater transparency for science?

- *Numeric Data*

- *Images*

- *Audio and Video*

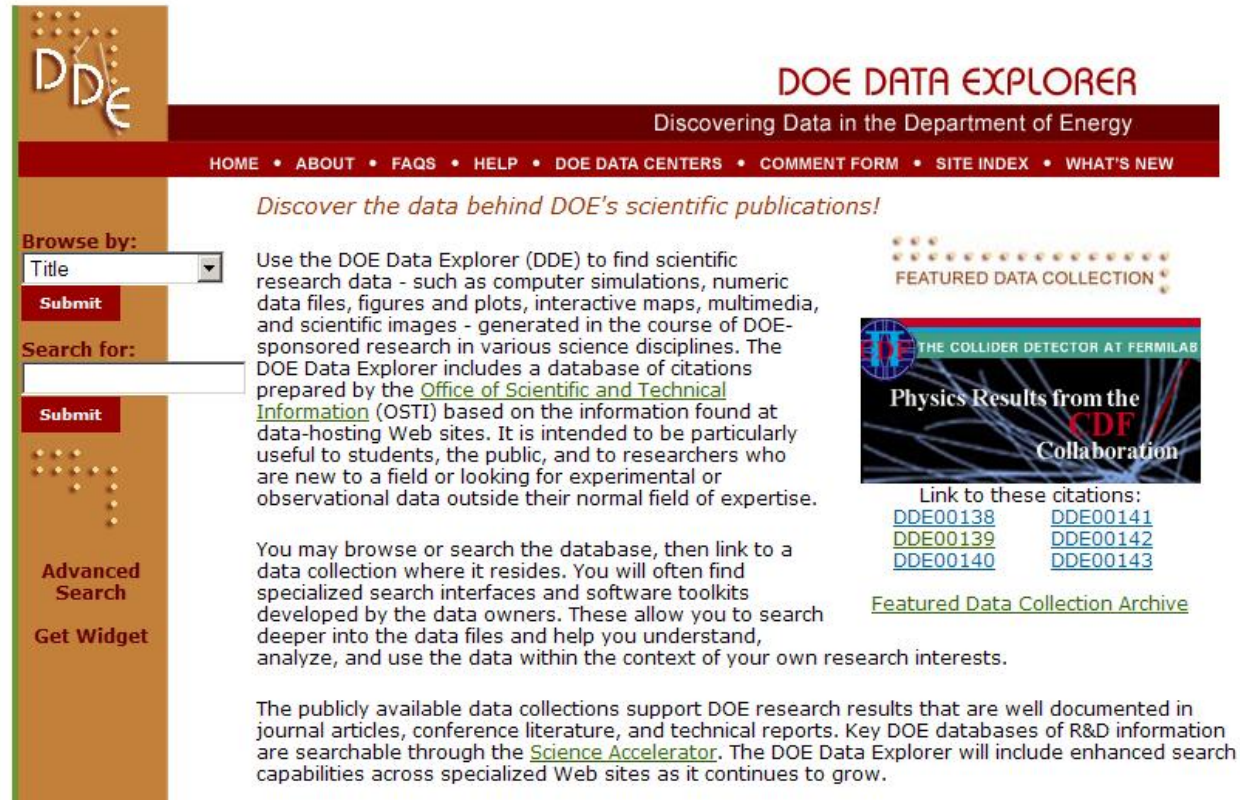
(this is not to ignore ongoing efforts or to ignore how to strengthen them)



Making DOE's scientific non-text information more visible

The DOE Data Explorer, launched in 2008, identifies sources of DOE-funded scientific data:

- Numeric data
- Images
- Data maps
- Plots and figures

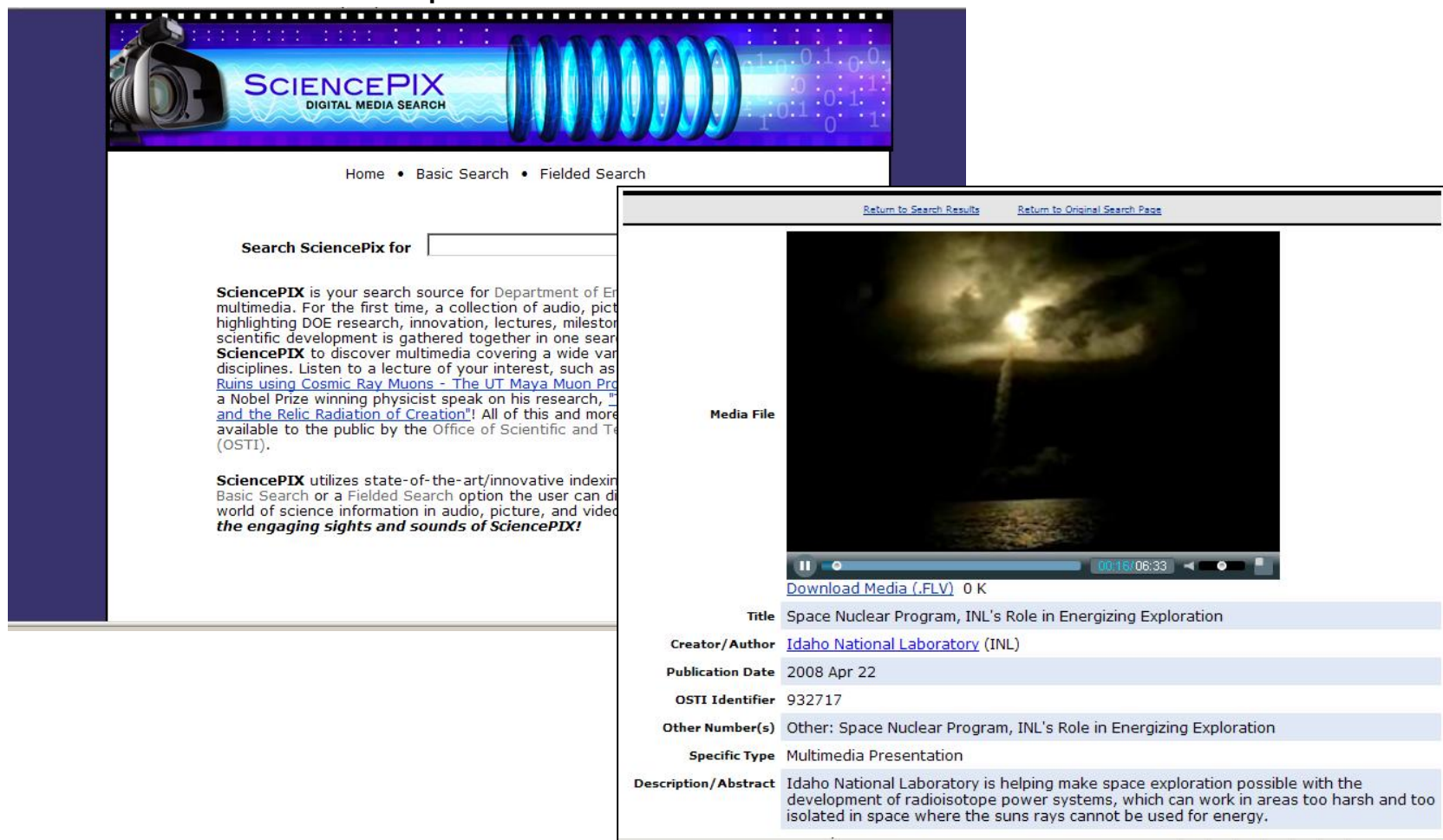


The screenshot shows the DOE Data Explorer website. At the top, the logo 'DDE' is on the left, and the title 'DOE DATA EXPLORER' is on the right, with the subtitle 'Discovering Data in the Department of Energy'. A navigation bar contains links: HOME, ABOUT, FAQs, HELP, DOE DATA CENTERS, COMMENT FORM, SITE INDEX, and WHAT'S NEW. Below the navigation bar, a main heading reads 'Discover the data behind DOE's scientific publications!'. On the left side, there is a search interface with a 'Browse by:' dropdown menu (currently set to 'Title') and a 'Submit' button. Below that is a 'Search for:' text input field with another 'Submit' button. Further down, there are links for 'Advanced Search' and 'Get Widget'. The main content area contains a paragraph explaining the purpose of the DOE Data Explorer (DDE) and its database of citations. It mentions that the database is based on information from the Office of Scientific and Technical Information (OSTI) and is intended to be useful to students, the public, and researchers. Below this paragraph, there is a section titled 'Link to these citations:' with four links: DDE00138, DDE00139, DDE00140, DDE00141, DDE00142, and DDE00143. To the right of the main content, there is a 'FEATURED DATA COLLECTION' section with a graphic for 'THE COLLIDER DETECTOR AT FERMILAB' and 'Physics Results from the CDF Collaboration'. Below this graphic, there is a link to the 'Featured Data Collection Archive'.

This resource is a first step, with enhancements in process to improve searchability and continue to add more digital data sources.

Indexing and accessing audio/video...

“SciencePix” is a small prototype, a proof-of-principle, with videos the national labs have posted on YouTube®.



The screenshot displays the SciencePIX website interface. At the top, there is a banner with the SciencePIX logo and a camera lens graphic. Below the banner, navigation links for Home, Basic Search, and Fielded Search are visible. A search bar is present with the text "Search SciencePix for".

The main content area on the left contains the following text:

SciencePIX is your search source for Department of Energy multimedia. For the first time, a collection of audio, pictures, and video highlighting DOE research, innovation, lectures, milestones, and scientific development is gathered together in one search engine. Use **SciencePIX** to discover multimedia covering a wide variety of disciplines. Listen to a lecture of your interest, such as [Ruins using Cosmic Ray Muons - The UT Maya Muon Project](#), or a Nobel Prize winning physicist speak on his research, "[The Sun and the Relic Radiation of Creation](#)". All of this and more is now available to the public by the Office of Scientific and Technical Information (OSTI).

SciencePIX utilizes state-of-the-art/innovative indexing. Using either Basic Search or a Fielded Search option the user can discover the world of science information in audio, picture, and video. *the engaging sights and sounds of SciencePIX!*

On the right side, a video player is shown with a thumbnail image of a bright sunburst in a dark, cloudy sky. Below the video player, there is a "Download Media (.FLV) 0 K" link. The video player controls show a progress bar at 00:16:06:33.

Below the video player, the following metadata is displayed:

Title	Space Nuclear Program, INL's Role in Energizing Exploration
Creator/Author	Idaho National Laboratory (INL)
Publication Date	2008 Apr 22
OSTI Identifier	932717
Other Number(s)	Other: Space Nuclear Program, INL's Role in Energizing Exploration
Specific Type	Multimedia Presentation
Description/Abstract	Idaho National Laboratory is helping make space exploration possible with the development of radioisotope power systems, which can work in areas too harsh and too isolated in space where the sun's rays cannot be used for energy.

Two questions we need to ask and answer:

1. Of the important things we are now doing to make science transparent and to make the web work better for science; what works best, what needs to be improved, what needs to be dropped?
2. What are the new ideas that need to be entertained?