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BPA Activities -Update

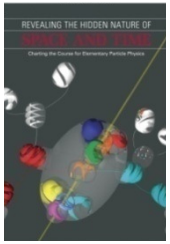
Annual Meeting of the U.S. Liaison Committee - IUPAP
June 7, 2013
Beckman Center, Irvine, Cal.

James Lancaster
Director, BPA

Outline

- Recently released ad hoc studies
  - NP2010 – Last of the decadal surveys
  - Inertial Fusion Energy
  - Undergraduate Physics Education
  - High Magnetic Field Science
- Studies Underway/Other Active Reports
  - Active Spectrum
  - Views - 2015 World Radiocommunication Conference
  - Helium Reserve Report (2010)
- Standing Committee Activities

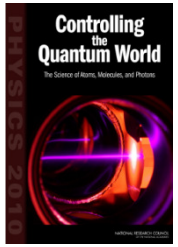
Physics 2010



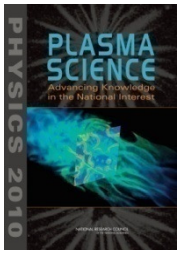
Elementary Particle Physics 2010

- Report released in late April 2006
- Recommended US commitment to ILC.

Atomic, Molecular, Optical Physics 2010



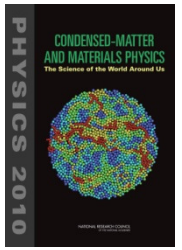
- Report released in Jul 2006
- Good good framing of science



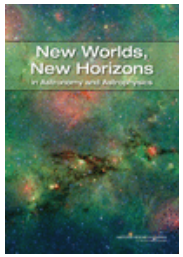
Plasma Science 2010

- Full report released May 2007
- Speaks to the field's unity, calls on DOE to lead the way

Condensed-Matter and Materials Physics 2010



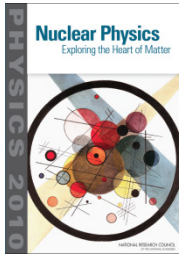
- Full report released Jun 2007
- Clear science objectives; comments on facilities



Astronomy and Astrophysics 2010

- Full report released in August 2010.
- Sets clear priorities: WFIRST and LSST

Nuclear Physics 2010

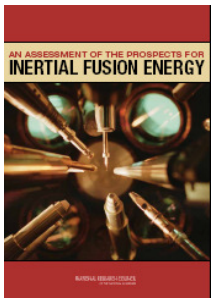


- Full report released in June 2012
- Focus – global context of field

PHYSICS 2010

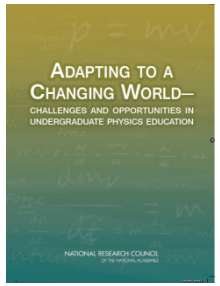
Recent Reports

Inertial Fusion Energy (2013)



- To assess the prospects for inertial confinement fusion energy (ICF) systems, identify key challenges, and advise DOE on development of an R&D roadmap to create a conceptual design for an ICF demonstration plant.
- Major conclusion—Potential benefits of successful development of an ICF energy justify continued investment in fusion energy research/development.

Undergraduate Physics Education (2013)

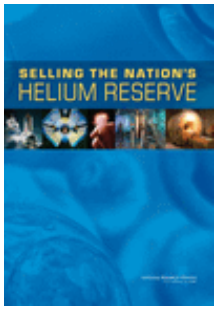


- To identify goals, challenges UPE faces, recommend how to implement best practices on widespread and sustained basis.
- Report has 5 main themes, recommendations for each set of 6 groups involved in UPE.

High Magnetic Field Science (2013)

- To identify status and trends in high magnetic field scientific use in U.S.
- Provides guidance for future research and magnet development for different fields.

Selling the Nation's Helium Reserve (2010)



- Concluded that selling off the reserve as required by the 1996 Act has adversely affected critical users of helium and is not in the best interest of taxpayers or the country.
- U.S. House has passed legislation to address issues raised by the report; under consideration by the U.S. Senate (Hearing held on May 7, 2013).

Studies Underway

- **Active Spectrum**
  - Follow-up to passive radio spectrum study
  - To recommend strategies to accommodate active use of radio spectrum for scientific purposes.
  - Fawwaz Ulaby (University of Michigan) – chair
  - First meeting – August, 2013.
- **Views - 2015 World Radiocommunication Conference**
  - Preparing a short report to articulate views of U.S. science community on specific agenda items at issue at the 2015 WRC that potentially will impact scientific observations.
  - Report in review; expected to be released in July 2013.

Standing Committees - CMMRC

- Condensed Matter and Materials Research Committee (CMMRC)
  - One of the oldest standing committees in NRC. Supported by NSF and DOE.
  - Role is planning, program development, and oversight of activities initiated under its auspices
  - Meets with representatives from federal agencies providing support for the fields noted above, discusses current programs, policies, trends, and issues
  - Where in-depth objective study and analysis is needed, the CMMRC develops plans for studies to be carried out by ad hoc committees/panels that result in NRC reports.

Standing Committees - CAMOS

- Committee on Atomic, Molecular, and Optical Science (CAMOS)
  - Committee is supported by NSF & DOE.
  - Similar to CMMRC – serves as liaison between AMO community and different agencies and offices engaged in science policy and support.

Standing Committees - PLSC

- Plasma Science Committee (PLSC)
  - Committee is supported by DOE.
  - Similar to CMMRC – serves as liaison between the plasma science communities and the different agencies and offices engaged in science policy and support.

Standing Committees - CORF

- Committee on Radio Frequencies (CORF)
  - Represents interests of U.S. scientists using radio frequencies for research—radio astronomers and remote sensing researchers.
  - Deals with radio-frequency requirements and interference protection primarily through filing comments under the aegis of the NAS in public proceedings of the Federal Communications Commission.
  - Acts as a channel for representing the interests of U.S. scientists in the work of the Scientific Committee on Frequency Allocations For Radio Astronomy and Space Science (IUCAF) of the International Council for Science and in working groups of the Radiocommunication Sector of the International Telecommunication Union (ITU).

Standing Committees - CAA

- Committee on Astronomy and Astrophysics (CAA)
  - Recently reconstituted
  - Joint effort – BPA and Space Studies Board
  - Principal role is to support scientific progress in astronomy and astrophysics and to assist the federal government in integrating and planning programs in these fields
  - Includes monitoring progress in implementing the recommendations of the New Worlds New Horizons (NWNH) decadal survey

Questions and Comments