



# Welcome to All!

## Accelerators for America's Future Symposium and Workshop

October 26-28, 2009  
Washington, D.C.



Dennis Kovar  
Associate Director of the Office of Science  
for High Energy Physics



# Particle Accelerators

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**Today particle accelerators are a (the) major tool for basic research**

- **Not just the physical sciences, but also biological and other sciences**

**Today particle accelerators serve the nation and society in many ways**

- **They are utilized in medical, security and industrial applications**
- **Some have said their impact ranks among the highest of modern technology**

**DOE's Office of Science as part of its Mission:**

- **Builds/operates Nation's major user accelerator facilities for basic research**
- **Supports accelerator science/R&D to develop and deliver the forefront research capabilities needed in the future**

**The Office of Science would like to become better informed on:**

- **The opportunities for advancements in accelerator technologies**
- **The impacts of these advancements**
  - **For basics research**
  - **For applications**

**So that investments in accelerator R&D can be directed to best meet the needs of the Office of Science and the Nation**

# The Charge

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- **The Office of High Energy Physics asked Walter Henning and Charles Shank (co-chairs) to propose a mechanism for collecting the information and generating a report that**
  - identify current and future needs of stakeholders
  - seek out crosscutting challenges—technical, cost, policy—whose solutions may have transformative impacts on opportunities for the future
  - identify the areas of accelerator R&D that hold greatest promise
  - provide guidance to bridge the gap between basic accelerator research and technology deployment

## **Across all areas that utilize particle accelerators:**

- Discovery Science
- Medicine and Biology
- Energy and Environment
- National Security
- Industrial Applications and Production

# Symposium and Workshop

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**The Symposium (October 26) is organized to provide an overview and the mechanism for input from the very diverse communities that utilize particle accelerators**

- **There is an outstanding slate of expert speakers**
- **White papers have been solicited for input on opportunities**
- **A poster session has been organized**

**The Workshop (October 27-28) is organized to generate the report that has been requested**

- **Co-chairs have identified Working Group leads in the five areas**
- **The co-chairs and working group leads have identified working group members**
- **Working groups will meet in closed sessions open only to working group members**
- **Findings from the symposium and other material submitted will be drafted into a preliminary report**

# Community Input

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- **Symposium posters and white papers will serve as inputs to the working groups.**
- **You are all very welcome to attend this evening's reception and poster session.**
- **The event offers the wider accelerator community, both builders and users, an opportunity to share their concerns and recommendations with the speakers and workshop participants.**
- **Community participation is essential for the success of this initiative and we urge you to be active participants in the process.**

# Accelerator R&D and Projects

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- **As much as possible our efforts and discussions should focus on basic accelerator related R&D opportunities with transformative potential.**
- **The support and funding for accelerator projects, originates from the individual Offices and Agencies, and will continue to do so.**
- **The division between R&D and projects is not so clear-cut as projects often drive innovation and development.**
- **Addressing this dynamic may well be an outcome of the report.**

# Acknowledgements

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- **Symposium speakers - investing their time and effort in these very important presentations.**
- **Those who submitted white papers and posters - which represent essential community input to working group deliberations.**
- **Working group members and leads - agreeing to take on the challenge.**
- **Walter Henning and Charles Shank – Chairs of the symposium and workshop, a herculean effort.**
- **The Planning Committee - the Chairs and a number of people from ORISE, OHEP, Xenomedia, and Fermilab.**

# Logistics

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- **If you have not retrieved your nametag and agenda please remember to do so.**
- **Should you have questions or requests please consult the staff at the registration desk, someone will be there at all times.**
- **Lunch is on your own, there are many options in the area, Dupont Circle offers many as well.**



# Safety

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**In the event of a building evacuation, ORISE staff will lead you from the room through the staff kitchen fire lane to the 24th street side of the building.**

## Symposium Agenda

### Chairs

Walter Henning, Argonne Distinguished Fellow, ANL and Charles Shank, Director, LBNL (Retired)

### Draft Agenda

Time	Speaker	Affiliation	Title of talk
8:45 am	Dennis Kovar	Associate Director, Office of High Energy Physics, Office of Science, U.S. Department of Energy	Welcome
9:00	W.F. Brinkman	Director Office of Science, U.S. Department of Energy	Opening remarks
9:15	Norman R. Augustine	Retired Chairman & CEO, Lockheed Martin Corporation	<i>Science, Accelerators, Dinosaurs and Asteroids</i>
<b>10:00</b>	<b>Break</b>		
10:15	Fred Dylla	American Institute of Physics	Objectives and speaker introductions
10:30	Tom Katsouleas	Dean, Pratt School of Engineering Duke University	<i>Accelerators and Society's Grand Challenges of the 21st Century</i>
11:15	Bill Barletta	Professor, Massachusetts Institute of Technology	<i>Educating the Next Generation of Scientists and Technologists</i>
<b>12:00 pm</b>	<b>Lunch</b>		
1:30	Charles Shank	Director, Lawrence Berkeley National Laboratory (Retired)	Objectives and Speaker Introductions
1:45	Maury Tigner	Professor, Cornell University	<i>Modern Ships of Discovery</i>
2:15	Juergen Debus	Professor, University of Heidelberg	<i>Accelerators for Medicine: Achievements, Challenges and Opportunities</i>
2:45	Yves Jongen	CEO, Ion Beam Applications (IBA), Belgium	<i>Industrial Applications of Accelerators: Traditional and New</i>
<b>3:15</b>	<b>Coffee Break</b>		
3:30	Jay Davis	Former Director, Defense Threat Reduction Agency	<i>Accelerator Applications in National Security</i>
4:00	Richard Sheffield	Los Alamos National Laboratory	<i>Opportunities for Accelerators in Energy</i>
4:30	Walter Henning (Panel of all previous 5 Speakers)	Argonne Distinguished Fellow, Argonne National Laboratory	Round Table Panel: Question & Answers
<b>5:15</b>	<b>Break</b>		
5:30 – 7:00pm	<b>Poster Session &amp; Reception</b>		

## Symposium on Accelerators for America's Future

October 26, 2009  
Washington Marriott  
Wardman Park,  
Washington DC

Sponsored by the Office of High Energy Physics of the US Department of Energy's Office of Science



Chairs: Walter Henning, Argonne Distinguished Fellow, ANL and Charles Shank, Director, LBNL (Retired)

Exploring the challenges and opportunities for the development of accelerators to meet the nation's needs in:

- Discovery Science
- Medicine and Biology
- Industrial Applications and Production
- Energy and Environment
- National Security