



Broader Impacts

an NSF perspective

- There are two merit review criteria set by the National Science Board
 - Intellectual Merit
 - Broader Impacts
- All successful proposals have to address both criteria.
- Broader Impacts can have many facets
 - Engaging the broader community in the research that we do.
 - Engaging others in the importance of the work that we do.



NSF Merit Criterion 2

- Many see the Broader Impacts issue as extra work that could detract from the research effort...
- In NSF/Physics we see it differently:
 - **Engagement**
 - It helps to forge collaborations in the external community across different groups.
 - It helps to forge cooperation within and across funding agencies to meet the needs of the research community.
 - **Adding Value**
 - New resources including funding opportunities
 - **Transformational**
 - New Scientific and Technical Opportunities
 - Developing and advancing the current and future Workforce



Engagement

At Snowmass 2013/CPM2012

-  **The General Public**
-  **Policy Makers and Opinion Leaders**
-  **The Science Community**
-  **Teachers 5-16**
-  **Students 5-16**

At NSF

-  **Physics**
-  **Broadening Participation**
-  **Education and Interdisciplinary Research**
-  **Physics at the Information Frontier**
-  **Multidisciplinary Activities**
-  **Cyber Infrastructure**
-  **International**
-  **Education and Human Resources**
-  **With other agencies**



Engagement: Some Examples

Adding Value – Programs/Projects

Interdisciplinary Research and Education

-  QuarkNet*
-  CHEPREO
-  Planetarium Show*
-  Feature-length Video Program
-  REU programs

Cyber Infrastructure

-  Open Science Grid*
-  DASPOS
-  ISGTW

Multidisciplinary Activity – Broadening Participation

-  AGEP Graduate Supplements

International

-  Partnerships in International Science and Engineering
-  Particle Physics School*
-  Grid School*
-  Accelerator School*

Partnering with other Agencies

-  DOE*



Impact of Adding Value

EPP/PA/THY Program Funding FY 12*

 EPP Base Program	\$24.7M
 LHC Research Program	\$18M
 PA Base Program	\$11.47M
 Underground Science	\$17.29M
 IceCube Ops	\$3.45M
 THY Base Program	\$13.59M
 Physics Frontier Centers	\$6.04M
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Subtotal	\$94.54M
 Allied Funding - Added Value (EPP, PA and THY)	\$30.3M
 EPP/PA/THY Total	\$124.84M



Your efforts are: important and essential

- You engage the research and broader community at all levels.
- You add significant value to the program.
 - Workforce Resources
 - Technical and Computational Resources
 - Financial Resources
- The effects are transformative.
 - Advancing Frontier Research Science “*Without Borders*”