National Science Foundation



NSF View on DEI

What activities/outcomes NSF Values

Caveat:

Views expressed are mine, based on my years at NSF; they have not been cleared or approved by NSF

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August 2023

NSF Mission → merit review criteria

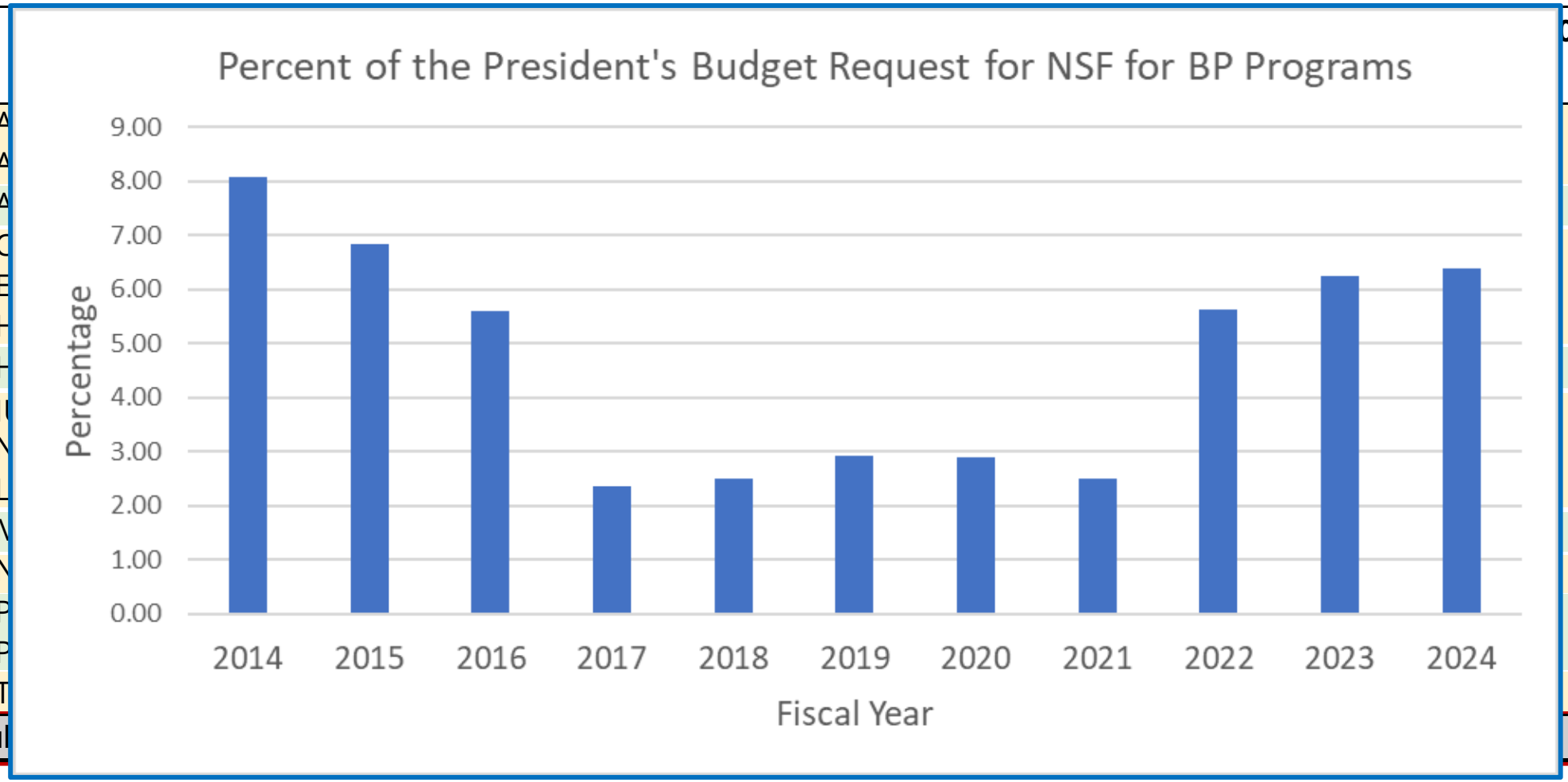
- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and

- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.
  - Education & Outreach
  - Building the economy & workforce of the future through STEM
  - Broadening participation a.k.a. Increasing Diversity, Equity, and Inclusion
  - Impact on other fields of science & engineering
  - National Security
  - … more

FY23 President's Budget Request = $10,492M
Focused Programs to Broaden Participation = $667M

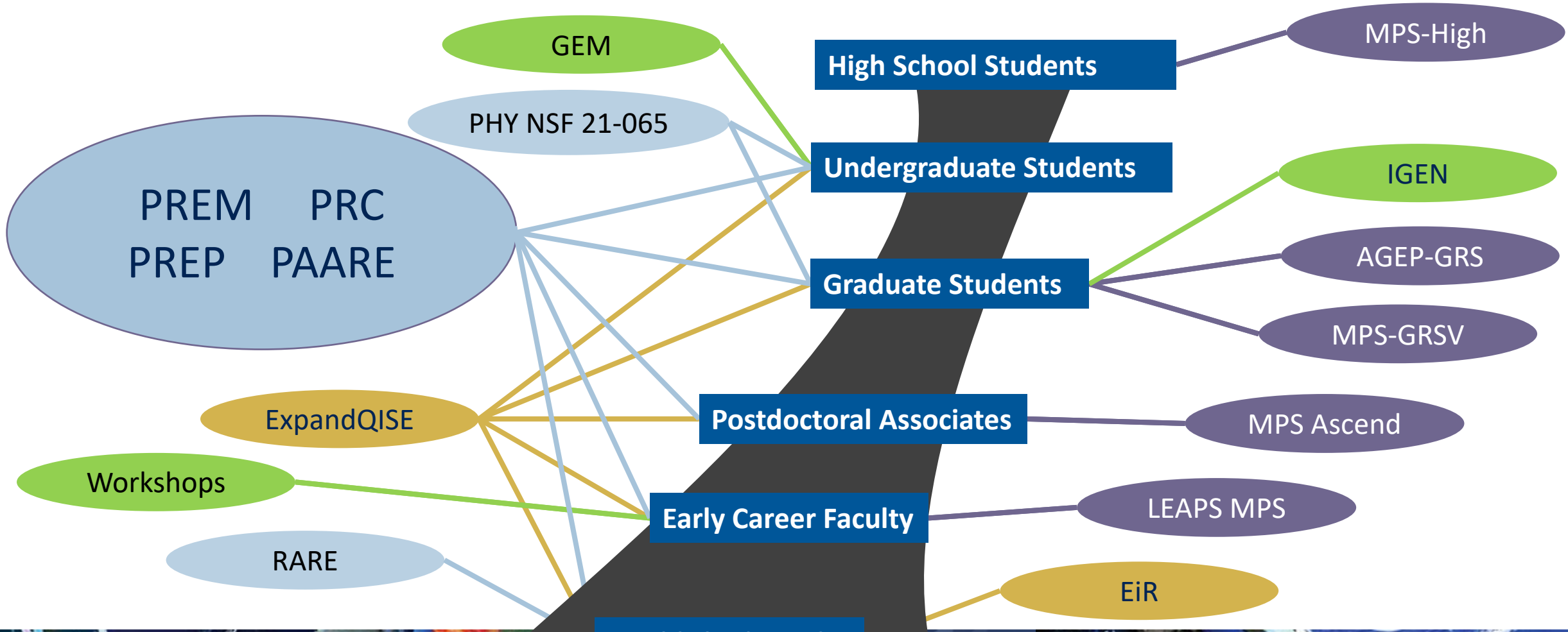
(Dollars in Millions)	FY 2021 Actual	FY 2022 (TBD)	FY 2023 Request	Delta (FY 2021 Actual) Amount	Delta (FY 2021 Actual) Percent
ADVANCE	$18.13	-	$20.50	$2.37	13.1%
Alliances for Graduate Education & the Professoriate (AGEP)	8.00	-	14.00	6.00	75.0%
AGEP Graduate Research Supplements (AGEP-GRS)	8.20	-	4.64	-3.56	-43.4%
Broadening Participation in Biology Fellowships	4.70	-	10.50	5.80	123.4%
Broadening Participation in Engineering (BPE)	6.55	-	9.00	2.45	37.4%
Career-Life Balance (CLB)[1]	2.03	-	0.28	-1.75	-86.2%
Centers of Research Excellence in Science & Tech. (CREST)	24.00	-	41.00	17.00	70.8%
CISE Education and Workforce	13.65	-	12.75	-0.90	-6.6%
CISE-MSI Research Expansion Program	-	-	7.00	7.00	N/A
Coastlines and People (CoPe)	32.59	-	28.00	-4.59	-14.1%
Disability and Rehabilitation Engineering (DARE)	-	-	6.00	6.00	N/A
Excellence Awards in Science & Engineering (EASE)[2]	3.63	-	7.64	4.01	110.7%
Growing Resrch Access for Nationally Transformative Equity & Diversity	-	-	50.00	50.00	N/A
Historically Black Colleges & Univ. Undergrad Program (HBCU-UP)	36.50	-	48.50	12.00	32.9%
HBCU Excellence in Research (HBCU-EiR)	21.25	-	37.93	16.68	78.5%
IUSE: Hispanic Serving Institutions (HSI) Program	46.50	-	60.50	14.00	30.1%
NSF INCLUDES	20.75	-	50.50	29.75	143.3%
Louis Stokes Alliances for Minority Participation (LSAMP)	49.51	-	70.50	20.99	42.4%
MPS Ascending Postdoctoral Research Fellowships (MPS-Acend)	9.26	-	20.00	10.74	115.9%
NSF Scholarships in STEM (S-STEM)[3]	94.70	-	119.15	24.45	25.8%
Partnerships for Research & Ed. in Materials (PREM)	8.95	-	9.00	0.05	0.6%
Partnerships in Astronomy & Astrophysics Res. Ed. (PAARE)	-	-	1.50	1.50	N/A
SBE Build and Broaden	6.30	-	8.00	1.70	27.0%
SBE Postdoctoral Res. Fellowships-Broadening Participation (SPRF-BP)	3.13	-	6.00	2.87	91.5%
Science of Broadening Participation	1.50	-	1.50	-	-
Tribal Colleges & Universities Program (TCUP)	16.50	-	23.00	6.50	39.4%
Subtotal, Focused Programs	**$436.34**	**-**	**$667.39**	**$231.05**	**53.0%**

FY23 President's Budget Request = $10,492M
Focused BP Programs: NSF-wide & MPS Specific = $528M



	021 Actual) Percent
A	13.1%
A	75.0%
A	-43.4%
C	70.8%
E	110.7%
H	32.9%
H	78.5%
I	30.1%
N	143.3%
L	42.4%
M	115.9%
N	25.8%
P	0.6%
P	N/A
T	39.4%
Sul	

MPS invests in people throughout the STEM pathway via DIV-specific, MPS-wide, NSF-wide, and partnership/funded activities



MPS Junior Investigator Workshop – Annual

Goals:

1. provide prospective Principal Investigators with valuable information and advice on the policies, procedures, and opportunities available at NSF,
2. train a pool of future reviewers and encourage volunteering to review as a way to learn about NSF process.

New researchers, assistant professors, and exceptional postdocs considering academic career are encouraged to apply.

In addition to informational presentations on various topics relevant to the future PI's, each participant will write a mock proposal in advance and will go through full panel review processes in breakout sessions.

June 2023 in Alexandria, VA



Participant Support Available!

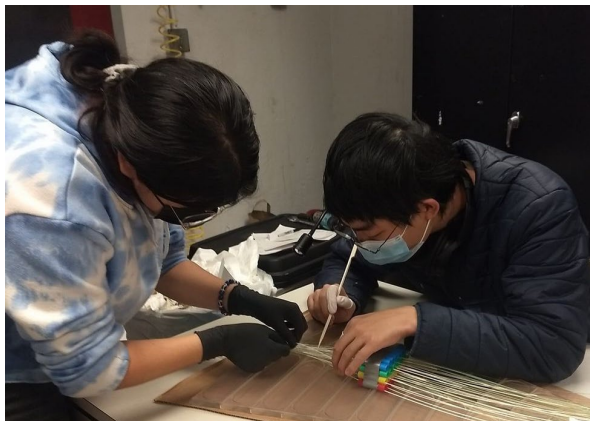
- Hotel room for up to 3 nights
- Coffee breaks & most meals
- Networking reception
- Travel reimbursement up to $200



DEI Activities Within Research Awards

Rosi Reed @ Lehigh University

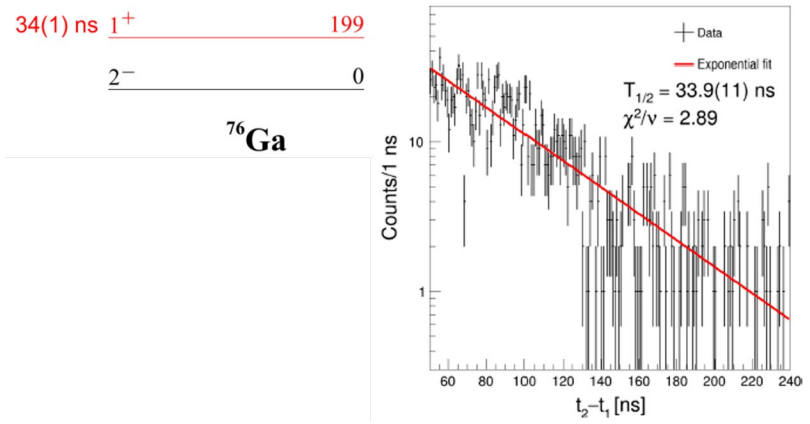
- Jet measurements at RHIC to probe and understand the QGP
- Training and mentoring a diverse group of undergrad and grad students → prepared for STEM careers, K – 12 outreach program
  - Allows near peer mentorship and training
- Attended a MSI → recruits undergrad students from there for summer research projects
  - Work with Lehigh and summer REU students as a cohort → Efficient use of resources

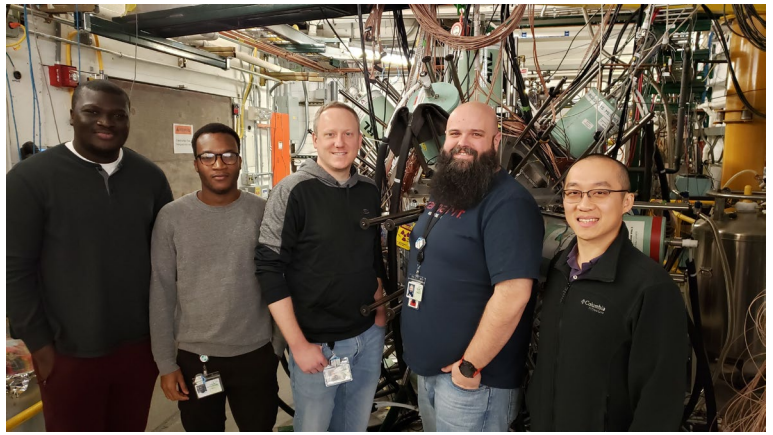





DEI Activities Within Research Awards

- Ben Crider @ Mississippi State University
  - Determine the properties of exotic, neutron-rich nuclear systems that are predicted to exhibit multiple shapes
  - Training and mentoring a diverse group of undergrad and grad students → prepared for STEM careers
  - Physics summer school experience for students with Autism Spectrum Disorder in Mississippi → new generation of highly capable scholars

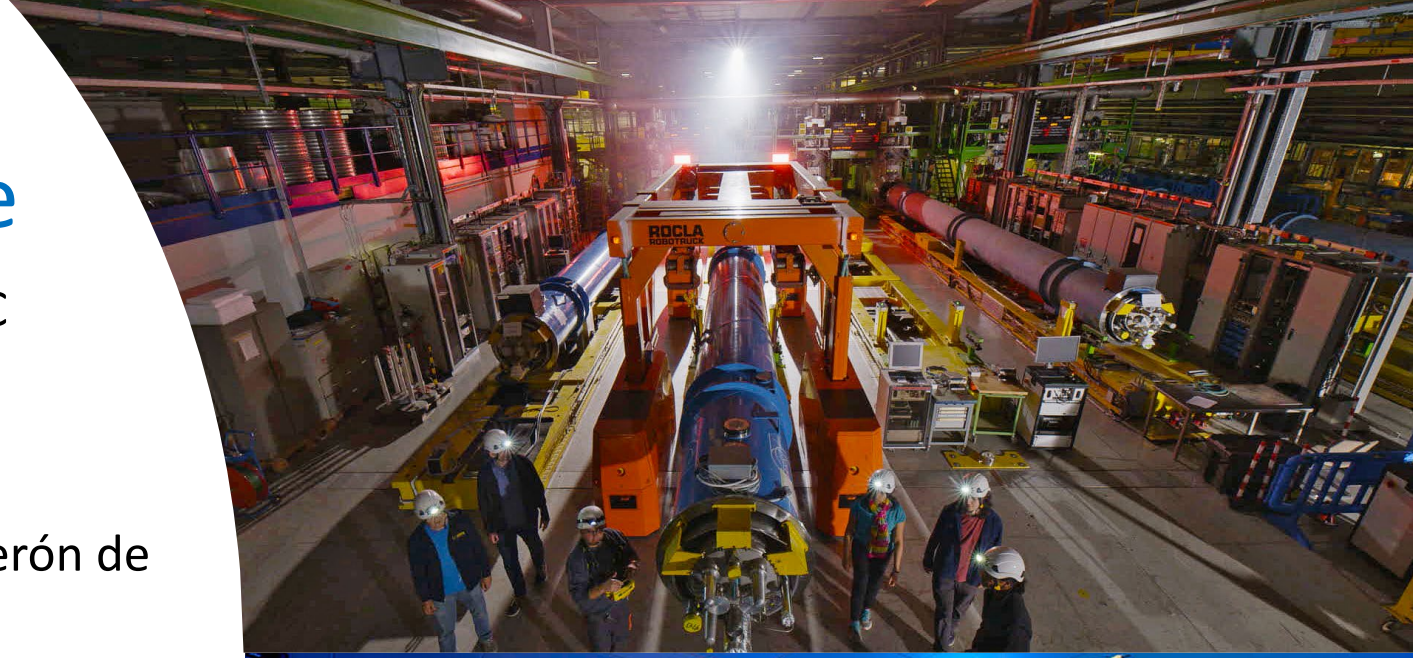






Highlights: Secrets of the Universe

- A giant-screen film about the Physics of the LHC
  - Film focus: heavy-ion collisions at the LHC
  - Excellent opportunity outreach to broader audiences
  - Film science advisor and star, Manuel Calderón de la Barca(UC-Davis)
- Premiered at the Smithsonian National Air and Space Museum, 2019.
  - Other Theater venues: Chicago, Salt Lake City, Toledo. Countries: Denmark, Spain.
- During COVID: Museums engaged with audiences via Webinars hosted by Manuel Calderón de la Barca.
  - Pacific Science Center, Seattle
  - Armagh Planetarium, Ireland
  - California Academy of Sciences, SF
  - The Tech Interactive, San Jose









Take Aways

- If you or your institution are committed to increasing DEI → NSF has many programs that may be able to provide $
- Contact your Program Director – DEI is a priority for all NSF programs
- Successful and effective NSF programs originate in the research communities (we need your ideas)
- Metrics that document demographics and efficacy of activities

Increasing DEI in STEM to mirror the demographics of the US may need intentional, committed, and creative efforts – these are what we are looking for in NSF proposals to the Nuclear Physics Program.

