Overview of NSF and Intro to SBE
Directorates at NSF

- Office of the Director
  - Office of Diversity & Inclusion (ODI)
  - Office of General Counsel (OGC)
  - Office of International & Integrative Activities (OIIA)
  - Office of Legislative & Public Affairs (OLPA)
  - Office of Budget, Finance and Award Management
- Biological Sciences (BIO)
- Computer and Information Science & Engineering (CISE)
- Education and Human Resources (EHR)
- Engineering (ENG)
- Geosciences (GEO)
- Mathematical and Physical Sciences (MPS)
- Social, Behavioral, and Economic Sciences (SBE)
SBE’s Mission

• To promote the understanding of people and their lives by supporting research that reveals basic facets of human behavior

• To encourage research that addresses important societal questions and problems

*Basic Science*
Three Divisions within SBE

- Behavioral & Cognitive Sciences (BCS)
- Social & Economic Sciences (SES)
- National Center for Science & Engineering Statistics (NCSES)
Behavioral and Cognitive Sciences (BCS)

- Archaeology and Archaeometry
- Biological Anthropology
- Cultural Anthropology
- Cognitive Neuroscience
- Developmental and Learning Sciences
- Documenting Endangered Languages
- Geography and Spatial Sciences
- Linguistics
- Perception, Action, & Cognition
- Social Psychology
Social and Economic Sciences (SES)

- Decision Risk and Management Sciences
- Economics
- Law and Social Sciences
- Methodology, Measurement, and Statistics
- Political Science
- Science of Organizations
- Science, Technology, and Society
- Secure and Trustworthy Cyberspace
- Sociology
SBE-Wide Programs and Solicitations

- Science of Learning
- Science of Science and Innovation Policy
- Interdisciplinary Behavioral and Social Sciences (IBSS)
- Resource Implementation for Data Intensive Research in SBE (RIDIR)
- Science of Broadening Participation
Some Relevant Cross-Directorate Initiatives

- Integrative Strategies for Understanding Neural and Cognitive Systems
- Cyberlearning and Future Learning Technologies
- Innovations at the Nexus of Food, Water, and Energy
- Dynamics of Coupled Natural and Human Systems
- INCLUDES
- ADVANCE
- HBCU-UP
Stay in the Loop

• Dear Colleague Letters
• Special Competitions and Investment Areas
• NSF.gov → NSF Social Media
Kinds of proposals (mechanisms)

- Standard research grants
- Research at Undergraduate Institutions (RUI) awards
- CAREER awards
- High risk awards (EAGER, RAPID)
- Doctoral Dissertation Research Improvement grants*
- Training programs
  - Graduate Research Fellowships
  - Post-doctoral Fellowships
  - Research Experiences for Undergraduates
- Workshops
- Major Research Instrumentation (MRI) Awards
- Research Coordination Networks (RCNs)
Faculty Early Career Development Program (CAREER)

- Pre-tenure but tenure-track (or equivalent) faculty
- Integration of research and education
- Single investigator proposal - no Co-PIs
- Minimum $400,000 over 5 years*
- Maximum of three submissions (one per year)
- Deadline: mid- to late July
Anatomy of a Proposal
Proposal Components

• Cover Page
• Project Summary (1 page)
• Table of Contents (auto-generated)
• Project Description (15 pages)
• References Cited
• Biographical Sketches (for all senior personnel)
• Budget
• Current and Pending Support
• Facilities, Equipment, and Other Resources
• Post-doctoral mentoring plan (if applicable)
• Data management plan
• Supplementary Documentation (if applicable - no letters of support)
Proposal Components

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## Cover Sheet

**Program Announcement Information**

**NSF 14-1**

**PHYSICS - ASTRONOMY & COSMOLOGY**

**FOR CONSIDERATION BY NSF ORGANIZATION**

**DATE RECEIVED**: 11/03/2014

**NUMBER OF COPIES**: 1

**DIVISION ASSIGNED**: PHYS

**FUNC CODE**: 1208

**DUNS**: 0848341105521

**FILE LOCATION**: 11099

**Employer Identification Number (or Taxpayer Identification Number)**

**NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE**: NSF

**AWARDS ORGANIZATION CODE (if known)**: 410820099

**ADDRESS OF AWARD ORGANIZATION, INCLUDING ZIP CODE**: Arlington, VA 22230-0000

**NAME OF PRIMARY PLACE OF POST**: US

**ADDRESS OF PRIMARY PLACE OF POST, INCLUDING ZIP CODE**: Arlington, VA 22230-0000

**NAME OF INSTITUTION**: International Conference on Critical Magnetic Fields

**TITLE OF PROPOSED PROJECT**: International Conference on Critical Magnetic Fields

**Requested Amount**: $30,000

**Proposed Duration**: 12 months

**Requested Starting Date**: 11/1/2014

**Confidentiality**: Preliminary Proposal No.

**NSF Proposal Number**: 1509402

**Program Director**: Physicists

**POSTAL ADDRESS**: 426 WILSON BLVD

**Arlington, VA 22230-0000

**United States**

**NAME (TYPED)**: Terry J. Smith

**Highest Degree**: PhD

**Year of Degree**: 1999

**Telephone Number**: 703/292-9000

**Small Business**

**Co-Principal Investigator(s)**

<table>
<thead>
<tr>
<th>Co-PI Name</th>
<th>Co-Principal Investigator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terry J. Smith</td>
<td>Physicist (NSF)</td>
</tr>
<tr>
<td>Co-PI Name</td>
<td>Co-Principal Investigator(s)</td>
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</table>

**Collaborative Status**: Not a collaborative proposal
Proposal Components

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• Data management plan
• Supplementary Documentation (if applicable - no letters of support)
Project Summary (1 page)

• Overview
• Statement of Intellectual Merit
• Statement of Broader Impacts
Proposal Components

• Cover Page
• Project Summary (1 page)
• Table of Contents (auto-generated)
• **Project Description (15 pages)**
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Project Description (15 pages)

• What’s the question?
• Why it’s important to answer it
• How you plan to answer it
• What implications it will have
• Must include a statement of broader impacts and a section addressing result from prior NSF support
Proposal Components

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Biosketches

• For all senior personnel
• 2 pages max.
• Professional Preparation
• Appointments (starting with current)
• Publications (10 max: 5 most relevant, 5 other significant papers)
• Synergistic activities (training, outreach, professional service)
• Collaborators and Other Affiliations
Proposal Components

- Cover Page
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- **Budget**
- Current and Pending Support
- Facilities, Equipment, and Other Resources
- Post-doctoral mentoring plan (if applicable)
- Data management plan
- Supplementary Documentation (if applicable - no letters of support)
Budget

**Size:**
- Reasonable for project
- Aligned with typical award size for the program
- Well-justified and not padded
- Consistent with program/solicitation guidelines

**Eligible Costs:**
- Personnel (PI, Co-PI, Consultants, Research Staff, Students)
- Equipment
- Travel
- Participant recruitment/compensation
- Supplies and services as needed

Indirect costs are included in overall budget - rate is negotiated between Govt and your institution
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• Data management plan
• Supplementary Documentation (if applicable - no letters of support)
Post-doctoral mentoring plan

• 1 page max. description of how Post-Doc will be mentored
• Research training
• Networking and career counseling
• Training in grant writing, publications and presentations
• Support for development of teaching and mentoring skills
• Training in responsible conduct of research
Proposal Components

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- **Data management plan**
- Supplementary Documentation (if applicable - no letters of support)
Data Management Plans

- What kinds of data, software and other materials will your research generate?
- How will you manage it? (e.g. metadata standards, standards for format, content, migration, etc.)
- How will you give others access to your data, preserving confidentiality, security, intellectual property & other rights/requirements?
- How will you archive data and preserve access?

Not “one size fits all”
Proposal Components

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- Supplementary Documentation (if applicable - no letters of support)
Supplementary Documentation

- RUI documents
- Letters of commitment from collaborating organizations
- Other information that establishes feasibility
- Note: We generally give you the benefit of the doubt
- NO letters of support
Breaking Down the Review Process
Proposal Processing

• PI writes and uploads proposal documents to Fastlane or Research.gov
• Sponsored Research Office submits proposal on behalf of institution
• Compliance check
• Review of proposal
• Program Director Recommendation
• Division Director Review of Recommendation
• If award, Division of Grants and Agreements vets and issues award notice
When Proposals are Returned **Without Review**

- Not responsive to the GPG or program announcement/solicitation
- Does not meet an announced proposal deadline date and time
- Inappropriate for NSF funding
- Duplicate or substantially similar to a proposal already under consideration or previously submitted and declined
Types of Reviewers

• Ad hoc reviews - Experts on the proposal topic
• Advisory panels - Representing various topic areas in the discipline
• Internal review by NSF Program Directors

*Panels (and reviewers) are Advisory
Official NSF review criteria

**Intellectual Merit:**
- Importance of topic
- Qualifications
- Creativity & originality
- Transformative?
- Conception & organization
- Access to resources

**Broader Impacts:**
- Training
- Mentoring
- Diversity
- Infrastructure
- Dissemination/Public awareness
- Societal Benefits
NSF Review structure and content

- Provide a rating: Excellent, Very Good, Good, Fair, Poor
- Description of strengths and weaknesses
- Separate analysis of:
  - Intellectual Merit
  - Broader Impacts
  - Any Solicitation-Specific Criteria
- Summary statement of overall assessment
Co-review

• Submit one proposal for consideration by multiple programs
• Choose programs on cover page, **top choice first**
• Decision to co-review is at the discretion of the program directors
• Reviews from multiple perspectives
• Both fund, neither fund, one funds
Post-review process

If declined:

• Notification will be emailed (usually within 6 months)
• Reviews, panel summary, and context statement will be available on Fastlane
• Read and absorb, then dust yourself off!
• Contact Program Director for feedback on next steps

If awarded:

• Program Director will let you know
• Often there are requests for clarification or revision to the protocol or budget
• Provide IRB approval (as applicable)
• Work with PD on public abstract
• Await award notice!

No revision process at NSF, each proposal treated anew
Developing your Proposal Vision

- Why is the work important?
- How is the work unique or innovative?
- Why will this approach be especially valuable or informative?
- How is the team qualified to undertake the work?
Pitfalls to avoid

• Overlooking key aspects of the program announcement and requirements -READ CAREFULLY
• Lacking specificity about method and/or predictions
• Underdeveloped analytic plan
• Disconnect between framing/motivation and proposed activity
• Failing to establish feasibility
• Writing exclusively for an expert audience
Talk to a Program Director!

• Get in touch early in the process (and well before the deadline)
• Send an email requesting a phone meeting rather than cold-calling
• Include a one-page summary of the project
• Ask for feedback on how the project fits with program priorities
• Inquire whether there are other programs or initiatives (such as DCLs) that are relevant
• If a proposal is declined, schedule a follow-up chat to get feedback on whether and if so how to revise
Do’s and Don’ts

**DO:**
- Talk to a program director about your project
- Get feedback from colleagues or mentors on drafts
- Suggest reviewers
- Keep in mind that funding rates are up to 20%
- Volunteer to serve as a reviewer

**DON’T:**
- Self-Handicap
- Try to pull something together too quickly
- Globalize feedback
Common Myths

• Myth #1: Putting a proposal together is a short-term project.

• Myth #2: I need to submit as many proposals as possible to have a chance.

• Myth #3: Small institutions don’t get funded.
Mock Panel
Panel Discussion

• Intellectual Merit
  • Strengths
  • Weaknesses
• Broader Impacts
  • Strengths
  • Weaknesses
• Post-doc Mentoring Plan
• Data management plan
• Overall recommendation (categories vary):
  • Highly Competitive, Competitive, Not Competitive
Thank you!!