Flight Opportunities

Next-Generation Suborbital Researchers Conference

Suborbital Grant Writing

June 2-4 2016

NASA Flight Opportunities Program

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Flight Opportunities Call/Solicitation Overview

Goal of Internal Calls and External Solicitations

- Demonstrate crosscutting space technologies in relevant space-like environments using currently available U.S. commercial reduced gravity, high-altitude balloon, and suborbital reusable flight capabilities

External

(Use Any Qualified Flight Vehicle)

SpaceTech-REDDI NRA Appendix F1 Solicitation

Universities

Private Entities (for-profit)

Private Entities (non-profit)

***FFRDCs** (incl. NASA JPL)*

Foreign Entities

w/ Lead U.S. Partner

Internal

(Use IDIQ-2 Contract Flight Vehicles)

NASA Internal Call

STMD Programs
(e.g. GCD, NRA, CIF, SBIR, SST)

Other Mission Directorates
(e.g. ROSES, HOPE, USIP, HERO)

Other Government Agencies
(e.g. FAA)

Call/Solicitation Overview

Eligibility

- TRL 4 at time of submission - hardware should already have been bench tested
- U.S. entities (for-profit & non-profit)
- Foreign entities when in partnership with a U.S. entity – U.S. entity must be lead

Key Dates

- External Calls – 2 per year
- Internal Calls – 4 per year

REDDI F1 Award Details

- Awards up to $300K
  - Max $250K for allowable flight costs (flight costs + indirect costs related to flight cost only)
  - Max $50K for other costs (indirect costs, travel, labor, materials to build flight hardware)
  - Max amounts include any indirect costs if applicable
  - Researchers contract directly with Flight Providers for flights

NASA Internal Award Details

- FO provides flight from flight providers currently on contract with FO
- Max $50K for other costs (no Civil Service travel or labor)

Call/Solicitation Overview

Topics

- **Topic 1: Demonstration of Space Technology Payloads**
  - Technologies that address one or more needs described in Space Technology Roadmaps (STRs) , National Research Council (NRC) recommendations, Strategic Space Technology Investment Plan (SSTIP), and STMD focus areas

- **Topic 2: Demonstration of Vehicle Capability Enhancements and Onboard Research Facilities for Payload Accommodation**
  - Demonstration of new or enhanced onboard facilities for commercial suborbital reusable launch vehicles, reduced gravity aircraft, and high altitude balloons that will improve or enable use vehicles for science research and/or technology flight test applications

Evaluation Criteria Overview

REDDI F1 Evaluation Criteria

- **Criterion 1 - Relevance to U.S. Space Exploration and Utilization (40%)**
  - Alignment
  - Comparison to State of the Art
  - Infusion Potential

Important for STMD investment decision

- **Criterion 2 - Technical Approach (35%)**
  - TRL Assessment
  - Technology Development Plan
    - Includes degree of support/funding provided to date by other sponsors
    - Demonstrate flight test is required
  - Flight Test Plan
  - Qualifications and Capabilities
- **Criterion 3 - Cost, Value, and Schedule (25%)**
  - Cost – i.e. test plan makes optimal use of flight(s))
  - Value
    - Technology reduces mission and life-cycle costs, increases safety, or reduces risk, etc.
    - Potential to benefit more than one customer or mission type
    - Extent of cost-sharing provided by proposer
  - Schedule

Evaluation Criteria Overview

NASA Internal Call Evaluation Criteria

- **Criterion 1 - NASA Mission Directorate Sponsorship**
- **Criterion 2 - Relevance to U.S. Space Exploration and Utilization**
- **Criterion 3 – Comparison to State of the Art**
- **Criterion 4 – Past Performance**

Important Things to Communicate

Technology Need

- Describe current state of the art
- Describe need for improvement
- Describe how your technology will advance the state of the art
- What will I now be able to do?

Technology Concept

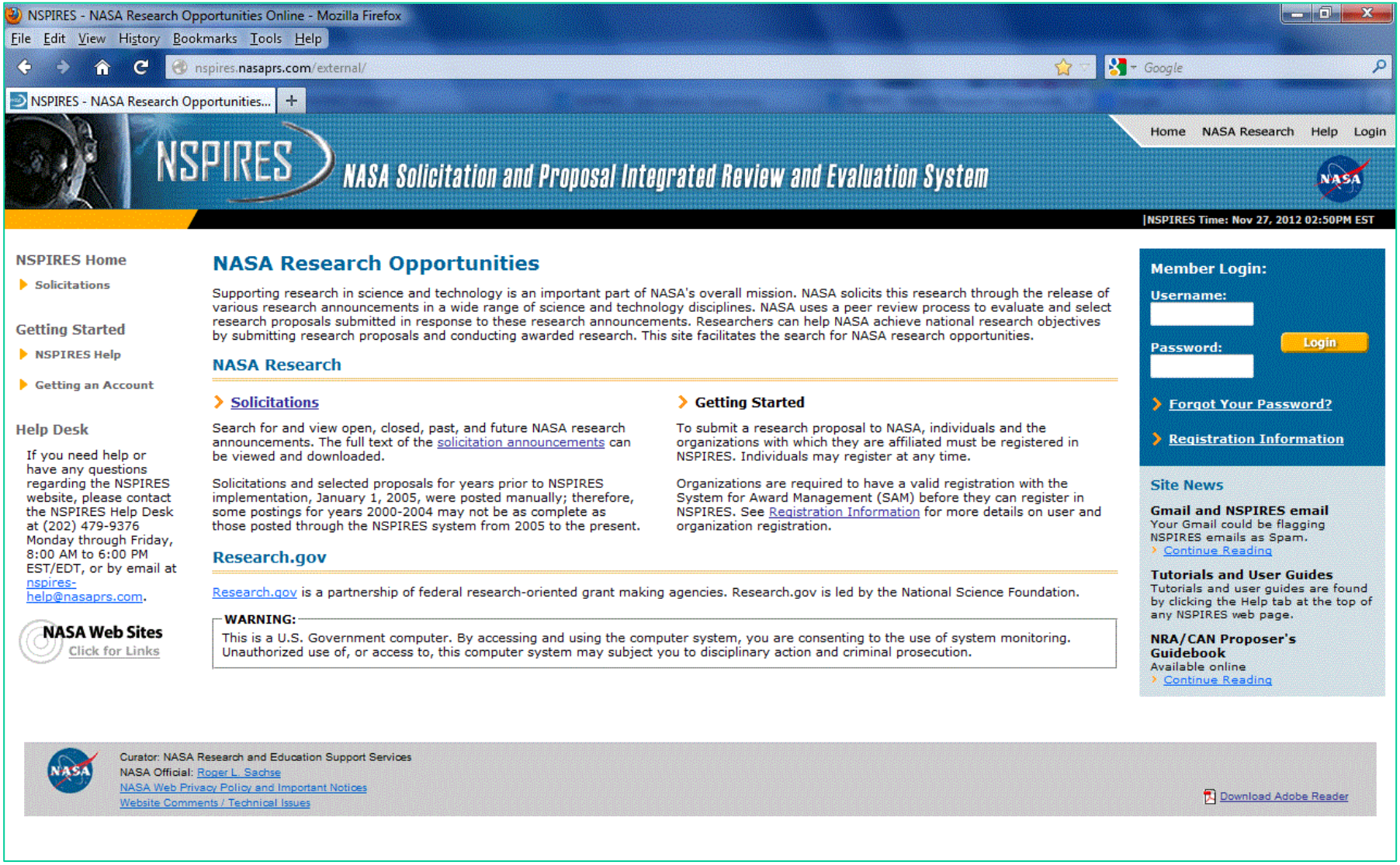
- Describe your technology – how does your technology work
- If the technical review panels don't understand how your technology works, it's difficult to evaluate

Flight Test Plan

- Make sure that you have worked out the flight test with the flight provider – minimum number of parabolas, minimum altitude, etc.

NSPIRES Can be Daunting

Get Started Early!!



NSPIRES Lessons Learned

Organization Registration

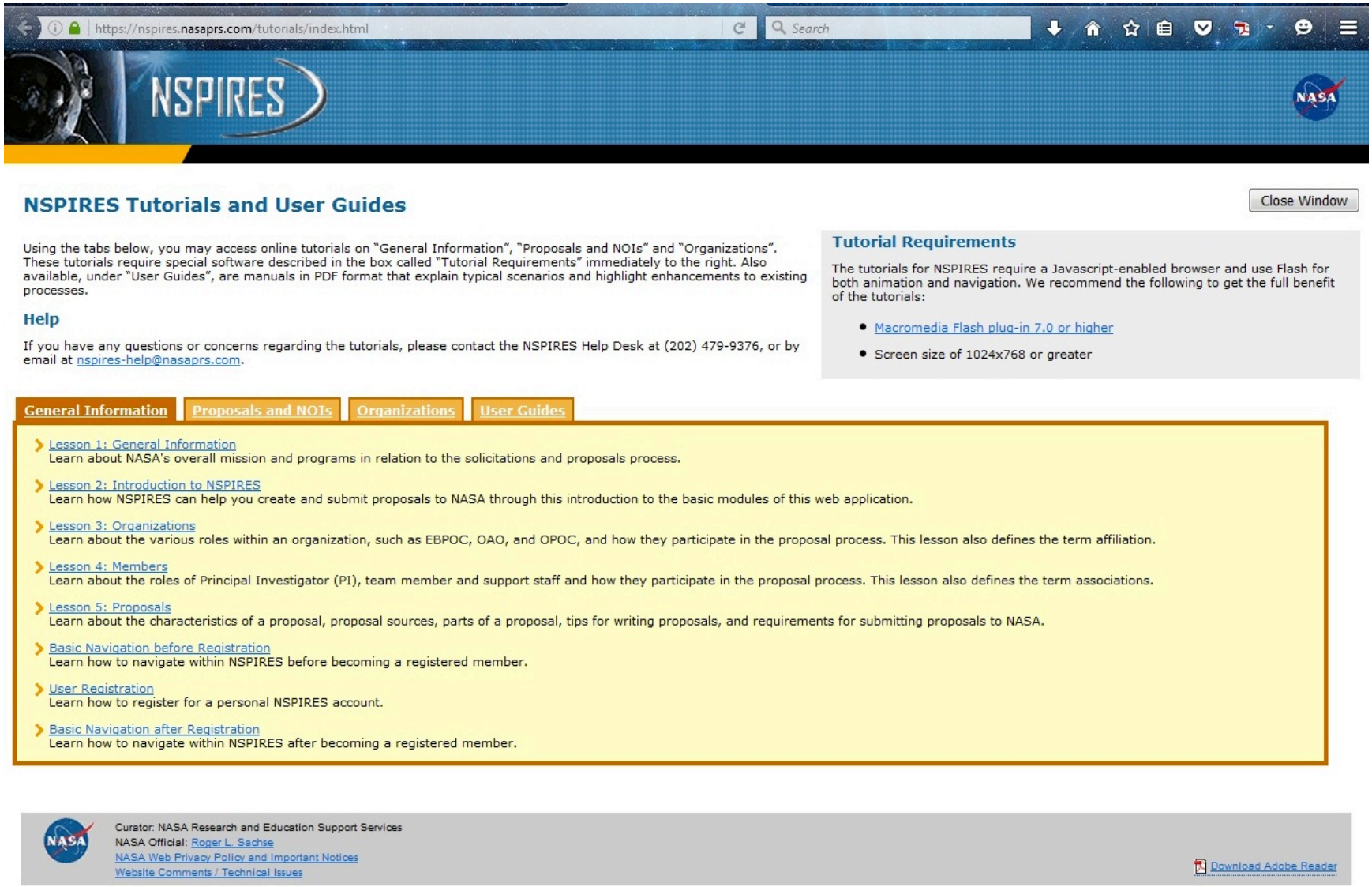
- Registering an org in NSPIRES can take several days
- Org must first be registered in System for Award Management (SAM)
- Start at least two weeks before proposal deadline to make sure enough time
- See NSPIRES FAQ on Organization Registration for more info

Member Registration

- All investigators named on proposal cover page typically have to be registered in NSPIRES
- Registering for individual account is quick, but to affiliate with your organization (required for Principal Investigator), the org has to approve affiliation – may delay process
- See NSPIRES FAQ on Member Registration for more info

Proposal Submission

- Proposal submission process is complex and involves multiple steps
- You are strongly encouraged to begin process well in advance of deadline
- Principal Investigator releases prepared proposal (proposal document upload and NSPIRES cover page elements) to organization, and Authorized Organizational Representative is person who submits proposal to NASA
- Coordination between PI and AOR is essential to submit proposals on time

NSPIRES Tutorials

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