

National Aeronautics and
Space Administration



Dual-Use Technology Development at NASA George C. Marshall Space Flight Center

Cooperative Agreement Notice (CAN) Overview

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MPCSC Bi-Monthly Meeting*

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Dual-Use Technology Development at Marshall Space Flight Center Cooperative Agreement Notice (CAN)

- Enhances Marshall's ability to collaborate with industrial and academic partners in the joint pursuit of high-technology solutions.
- Solicits Cooperative Agreement partnerships from US companies and universities in projects to develop or advance mutually beneficial (dual-use) technologies
- Posted on NASA NSPIRES and FedBizOpps
- Competitively selected opportunity
 - Two-step process
 - Step-1: White Paper submittals for collaborative project ideas
 - Step-2: selected White Papers are invited to submit full Proposals for CA projects
 - Shared project resources contributions by MSFC and the partner
 - Cash or in-kind resources (labor, facility & equipment use, materials), or a combination
 - MSFC provides up to 50% of the total project resources required - matched or exceeded by the partner
- Interactive project collaboration between the partner & MSFC

Marshall Space Flight Center Dual-Use Technology Development 2016 Cooperative Agreement Notice (CAN)

Objective: Competitively select cooperative agreement project partnerships with U.S businesses and universities for advancing the development of a technology to meet a specific NASA need at MSFC as well as a need of the MSFC partner.



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Cooperative Agreement Notice (CAN) 2016

Dual Use Technology Development at
NASA George C. Marshall Space Flight Center

NNM16567212C
Released 9 October 2015

Effective until 30 September 2016

- Released 9 October 2015 #NNM16567212C
 - Posted on [NASA NSPIRES](#) and FedBizOpps
- 2 Step Process
 - White Paper submittal plus invited Proposal submittal
- MSFC project resource contributions from \$10K - \$100K
 - Can be cash and/or other in-kind contributions
 - Facility/equipment use, materials and/or labor value
- Matched or exceeded by Partner resource contributions
- Project Duration up to 12 months
- Up to 8 Cooperative Agreement awards anticipated
- Selection Official: MSFC Associate Director, Technical
- 2 opportunity Periods for Step-1 White Papers
 - Due dates: 4 Nov 2015 4 May 2016

Typically ~5.5 months from Step-1 White Paper drop to Cooperative Agreement project start

- Includes evaluation/selection of submitted White Papers, development/evaluation & selection of invited Proposals, establishment of Cooperative Agreements for selected Proposals

Marshall Dual-use Technology Development CAN

Technology Interest Areas (2016 CAN)

Advancing technologies with commercialization potential that also enable or benefit upcoming MSFC programs and projects.

- Innovative/Advanced Propulsion Systems Technologies
- Technologies Supporting Advanced Manufacturing, Structures and Materials
- Avionics Technologies Supporting Spacecraft & Satellite Systems
- Technologies Supporting Earth Science and Space Environments Research to Applications
- Technologies Benefitting Program Development, Project Management and Systems Engineering
- Technologies Supporting Environmental Control and Life Support (ECLS)
- Technologies Benefitting from ISS Utilization or Demonstration

Marshall Dual-use Technology Development Cooperative Agreement Projects 2014 - 2016

- **Completed 5 cycles for Cooperative Agreement selections**
- **MSFC CAN 2014 2015 Period 1, 2 & 3 2016 Period 1 (of 2)**
 - Total of 27 Cooperative Agreement projects selected for awards from 65 Papers submitted:
 - 18 university projects and 9 industry projects
 - Total MSFC resource contribution value ~\$1.5M
 - Cash contribution, labor, materials, facility and equipment use, and/or other in-kind contributions
 - MSFC Individual project contributions range from \$9K to \$100K
 - Total Partner matching resource contributions: ~\$2.3M
 - Partner labor, materials, facility and equipment use, and/or other in-kind contributions
 - Partner individual project contributions range from \$9K to \$648K
 - **Project technology areas include:**
 - Advanced manufacturing
 - Technologies benefitting launch vehicle and propulsion development
 - Innovative cubesat and other spacecraft propulsion components and systems
 - Spacecraft avionics technologies
 - Green propellant technologies
 - System engineering and design development software tools
 - Technologies enhancing blow-down wind tunnel capability

Step 1 White Paper Assessment Criteria

1. Relevance to NASA/MSFC Need

- Does the proposed project provide a satisfactory solution to a specific NASA MSFC need?

2. Technical Quality & Appropriateness

- Technical approach including anticipated partner & MSFC project roles/tasks, the clarity of the expected outcome, the anticipated accomplishments, and the level of technical challenges versus projected benefit

3. Appropriateness of Cost Projections

- Appropriateness and suitability of the total project cost projections.
- Appropriateness and suitability of the proposed MSFC and partner resource sharing contributions to the total project cost

4. Recommendation

- Is it recommended to invite the Step-2 full project proposal?

Step 2 Proposal Assessment Criteria

1. Technical Merit and Feasibility (50%)

- Project merit, approach, deliverables / personnel & facilities / Technical Schedule & Milestones

2. Business Plan (20%)

- Commercial potential of the technology / Industry Partner's business objectives/ University Partner's research potential for application to commercial use

3. Cost Plan (30%)

- Cost Plan elements & cost milestone schedules (if any) are complete for the scope and tasks of the project
- Total estimated resources needed for the project are adequate, and the cash & in-kind resources contributions of MSFC & the partner are appropriate for each

4. Recommendation

- Is it recommended to select for a Cooperative Agreement project?