



SCIENCE

International Cooperation at NASA

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International Cooperation: Overview

- International cooperation at NASA:
 - Has been a cornerstone of NASA's activities throughout its history
 - Since 1958, NASA has concluded over 5000 agreements with over 125 nations and international organizations
 - 590 active international agreements
 - Cooperation now established with every region in the world
 - 8 partners account for ~50% of the agreements
 - ESA, France, Germany, UK, Italy, Canada, Japan, Russia
 - Every Mission Directorate has international partnerships
 - By mission area: 2/3 of agreements are for NASA science missions



Why International Cooperation?

- Benefits of international cooperation:
 - Leverage resources (financial, technological, scientific, etc.)
 - Access foreign capabilities or geography
 - Adds unique capability and/or expertise
 - Increases mission flight opportunities
 - Enhances the scientific return
 - Promote U.S. foreign policy interests
 - NASA follows foreign policy guidance from the U.S. Department of State



International Cooperation: Current Guidelines

- NASA international partners are generally government agencies due to the significant level of investment and legal requirements
- No exchange of funds; each partner funds its respective contributions, but contributions need not be equivalent
- Cooperation must have scientific and technical merit and demonstrate specific benefits
- Joint projects must be within the known scientific, technical and budgetary capabilities of each partner
- Collaboration is structured to establish clearly defined managerial and technical interfaces to:
 - minimize complexity
 - protect against unwarranted technology transfer
- Cooperation must be consistent with foreign policy objectives of each Partner



International Cooperation: Current Guidelines, cont.

- Generally, international partnerships do not involve joint development of technology...
 - each party retains intellectual property rights in the technology/hardware it brings to the partnership, and that which is developed independently of the other party (clean interfaces!)
 - the results of the cooperation are fully shared, and generally published
- ...nor involve products or processes that are potentially of near-term commercial value
 - Source: 2010 US Space Policy – Sector Guidelines – Commercial Space Guidelines: “...departments and agencies shall ... refrain from conducting USG space activities that preclude, discourage, or compete with U.S. commercial space activities...”
- Exploratory discussions are welcome and encouraged, consistent with export control limitations
 - early discussions are limited to the exchange of “public domain” information
- Specific cooperative activities are documented in written, legally binding agreements, closely coordinated with the U.S. Department of State



International Partnership Challenges

- Identifying mutually beneficial cooperation
 - Difficult to align schedules, budgets, and capability needs between two potential partners
 - “Critical path” issues – minimizing the risk of over-interdependence in critical areas
 - “Choice overload” – subject matter experts and project leads have limited bandwidth to fully entertain all partnership opportunities
- Implementing international cooperation
 - Management complexity
 - Decision-making is inherently more complex; communication challenges; differing specifications, standards and assumptions
 - Technical and Programmatic Risk
 - Interfaces are difficult to manage at a distance; harder to monitor progress and get early warning of problems
 - Political risk
 - Budgetary and bureaucratic uncertainties
 - Potential linkage to political issues unrelated to the cooperation



Why Do We Need International Agreements?

- International Agreements are tools that:
 - Clarify responsibilities of the partners
 - Confirm commitments and terms
 - Document the quid pro quo and benefits of the cooperation
 - Protect investment and interests, such as:
 - Technical data rights
 - Intellectual property rights
 - Allocation of risk – cross-waiver of liability
 - Allow import/export of technical data and goods
 - Confirm arrangements to meet international obligations, such as UN Registration Convention, if necessary
 - Can help fulfill an export control requirement



When Do We Draft International Agreements?

- International Agreements are drafted *after* final selections are made; agreements are not typically drafted for Phase-A Studies
- International Agreements are not required for proposals or Concept Study Reports
- Non-U.S. Participation Requirements are detailed in the AO
- If the AO proposal is from a foreign entity – or if U.S. AO proposal includes foreign participation – a Letter of Commitment is requested from the foreign partner’s government agency or funding institution, acknowledging the activity and preferably indicating sufficient funds will be made available
- Note: International Agreements take several months to put into place!



NASA's International Agreements

- NASA's International Agreements do NOT trump export control laws & regulations
- An International Agreement does not replace a contractor's need for a Technical Assistance Agreement



Thank You

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