

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
1	All NASA Centers	National Institute for Aerospace Technology (INTA)	Agreement on Cooperative Activities Between NASA and the National Institute For Aerospace Technology of Spain	Umbrella/Framework Agreement (UM/FW)	Broad agreement between NASA and the National Institute for Aerospace Technology of Spain (INTA) to consider cooperation in a variety of fields in Space Science, Earth Science, Aeronautics Research, and Exploration Systems. The agreement also establishes a group to discuss potential cooperative projects in the identified areas. The agreement is automatically extended each year. The expiration date of 2100 was picked because it was far in the future.	12/2/1991	12/31/2100
2	All NASA Centers	Center for Technological Industrial Development (CDTI)	Agreement on Cooperative Activities Between NASA and the Center for Technological Industrial Development of Spain	Umbrella/Framework Agreement (UM/FW)	Umbrella/Framework Agreement (UM/FW): NASA Center: Mentioned different NASA Installations. Broad agreement between NASA and the Center for Technological Industrial Development of Spain (CDTI) that anticipates the negotiation of future agreements between NASA and Spanish agencies in a variety of fields in Space Operations, Space Science, Earth Science, Aeronautics Research, and Exploration Systems. The agreement specifically mentions space vehicle landing facilities and science and technology development programs. It also calls to the establishment of a group to discuss potential cooperative projects. The agreement is automatically extended each year. The expiration date of 2100 was picked because it was far in the future. The CDTI is known presently (August 2008) as the Centre for the Development of Industrial Technology (CDTI).	7/3/1992	12/31/2100
3	All NASA Centers	National Centre for Space Studies (CNES)	Framework Agreement between U.S. Govt. and the French Govt. for cooperative activities in the Exploration and Use of Outer Space for Peaceful Purposes.	Umbrella/Framework Agreement (UM/FW)	Framework Agreement between U.S. Govt. and the French Govt. for cooperative activities in the Exploration and Use of Outer Space for Peaceful Purposes. NASA/CNES/NOAA are identified as implementing agencies. Agreement Signatories: Administrator Michael Griffin of the National Aeronautics and Space Administration (NASA) signed for the United States and Minister Francois Goulard of the Ministry for Higher Education and Research signed for France. Dipnote signed by the Department of State on 4/2/08, referring to the Embassy of France's note No. 505 dated 3/14/2008. Framework Signature Date: 1/23/2007; Entry into Force Date: 4/2/2008; Expiration Date: 4/2/2018.	1/23/2007	4/2/2100
4	All NASA Centers	Indian Space Research Organization (ISRO)	NASA-Indian Space Research Organization (ISRO) Framework Agreement for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Under the NASA-Indian Space Research Organization (ISRO) Framework Agreement, cooperative programs may be undertaken in the following areas: Earth science, observation, and monitoring; Space Science: Exploration systems; Space operations; and other relevant areas of mutual interest...(review agreement for more details regarding what cooperation may be used when implementing...)	2/1/2008	1/1/2100
5	All NASA Centers	Government of the Kingdom of Sweden	Amendment and Extension 1 of U.S./Sweden Framework Agreement - Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Amendment and Extension 1 of the Framework Agreement: U.S. and the Kingdom of Sweden agree to extend the duration of the agreement for 10 additional years, until October 14, 2025. Parties agree to amend the first sentence of Article 5.1 by replacing the word "national" with the word "applicable." Agreement between US and Sweden. Covers a multitude of civil space cooperation in Earth Science, Space Science, Biological and Physical Research, and other areas of mutual interest. Programs may be implemented using: spacecraft and space research platforms; scientific instruments onboard spacecraft and space research; sounding rocket and scientific balloon flights and campaigns; aircraft flights and campaigns; ground-based antennas for tracking and data acquisition; ground-based space research facilities; exchanges of scientific personnel; exchanges of scientific data; and education and public outreach activities. Swedish National Space Board (SNSB) is named as the Swedish implementing agency and NASA is named the US implementing agency.	10/6/2015	10/14/2025
6	All NASA Centers	United Arab Emirates Space Agency (UAESA)	Implementing Arrangement (IA) Between NASA and the United Arab Emirates Space Agency (UAESA) for Cooperation in the Exploration of Mars	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and United Arab Emirates Space Agency (UAESA) for cooperation in the Exploration of Mars.	6/12/2016	12/31/2024
7	All NASA Centers	Canadian Space Agency (CSA)	Extension 10: Mars Exploration Program	Project-Specific Agreement (PSA)	Extension 10 of an existing Mars cooperation agreement.	12/20/2021	12/31/2027
8	All NASA Centers	French National Aerospace Research Center (ONERA)	Umbrella Agreement between the National Aeronautics and Space Administration of the United States of America and the Office National d'Etudes et de Recherches Aérospatiales of France On Cooperation in Civil Aeronautics Research.	Umbrella/Framework Agreement (UM/FW)	The Parties shall identify areas of mutual interest and seek to develop new bilateral cooperative programs or projects, hereinafter referred to as "Programs," in civil aeronautics research and shall work closely together to this end.	4/6/2022	4/6/2032

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9	All NASA Centers	Argentina - National Commission on Space Activities (CONAE)	Extension of Framework Agreement Between the Government of the United States of America and the Government of the Argentine Republic on Cooperation in the Peaceful Uses of Outer Space	Umbrella/Framework Agreement (UM/FW)	This Agreement provides the parties with the foundation to needed to identify areas of mutual interest and seek to develop cooperative programs or projects, hereinafter referred to as Programs, in the exploration and peaceful uses of outer space and shall work closely together to this end. The agreement was signed on October 25, 2011 and entered into force on July 30, 2013 when the second of two dip notes was exchanged. The agreement will be in force for 10 years from July 30, 2013.	7/24/2023	7/30/2026
10	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	Agreement Between NASA and Korea Aerospace Research Institute (KARI) for Associate Membership in the NASA Solar System Exploration Research Virtual Institute (SSERVI)	Project-Specific Agreement (PSA)	Provides for KARI associate membership in the SSERVI, a virtual science institute based at Ames for the study of the moon and planetary bodies.	12/29/2015	12/29/2025
11	Ames Research Center (ARC)	Italian Space Agency (ASI)	Implementing Arrangement (IA) Between NASA and ASI for Associate Membership in the NASA Solar System Exploration Research Virtual Institute (SSERVI)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) to enable ASI to join the NASA Solar System Exploration Research Virtual Institute (SSERVI) as an Associate Member. SSERVI is a virtual institute managed by the NASA Ames Research Center with a mission of advancing the field of solar system science as applied to human exploration. NASA and ASI will provide scientific and engineering expertise to enhance and propel the broad objectives of solar system science.	6/14/2017	6/14/2027
12	Ames Research Center (ARC)	Canadian Space Agency (CSA)	Reimbursable SAA Between the Canadian Space Agency (CSA) and NASA for Participation in the NASA International Internship Project	Project-Specific Agreement (PSA)	Participating in the NASA International Internship (NASA I2 Project)	7/17/2019	12/31/2024
13	Ames Research Center (ARC)	United Arab Emirates Space Agency (UAESA)	Reimbursable Space Act Agreement Between NASA and The United Arab Emirates Space Agency (UAESA) for Participation in the NASA International Internship (I ²) Program	Project-Specific Agreement (PSA)	This agreement enables UAE Space Agency participation in the NASA International Internship Program (NASA I ²), designed to provide a collaborative environment where U.S. interns (university undergraduate students) or fellows (university graduate students) can interact and work alongside international peers on research opportunities.	8/28/2019	12/31/2024
14	Ames Research Center (ARC)	University of New South Wales	Agreement between NASA of the United States of America and the University of New South Wales in relation to the Australian Research Council Centre of Excellence for Quantum Computation and Communication Technology in the Advancement of Quantum Technologies	Project-Specific Agreement (PSA)	Under this Agreement, the Parties seek to engage in fundamental research related to understanding the basic mechanisms of quantum computing. Both Parties will utilize their respective capabilities and expertise to advance the understanding of quantum technologies and its potential applications. Specifically, joint practical and theoretical research will be conducted to further understand the resource and robustness requirements necessary to demonstrate advantages of quantum technologies. The Parties will also explore error mitigation techniques to improve the robustness of quantum technologies, and will explore combinations of quantum algorithms and quantum protocols that may support quantum cloud computing.	9/17/2019	9/19/2024
15	Ames Research Center (ARC)	Israel Space Agency (ISA)	Reimbursable Space Act Agreement Between the Israeli Space Agency (ISA) and NASA for Participation in the NASA International Internship Program (NASA I2)	Project-Specific Agreement (PSA)	This Agreement enables Israel's participation in the NASA International Internship Program (NASA I2), designed to provide a collaborative environment where U.S. and foreign student interns interact and work alongside each other on research opportunities.	9/25/2019	12/31/2024
16	Ames Research Center (ARC)	Karlsruhe Institute of Technology	Agreement between the National Aeronautics and Space Administration of the United States of America and the Karlsruhe Institute of Technology of the Federal Republic of Germany Concerning the Concurrent In-Situ and Lidar Investigation of Ice Containing Clouds in the -40 to 0 Degree Celsius Temperature Range	Project-Specific Agreement (PSA)	Cooperation to fly the KIT-provided Particle Habit Imaging and Polar Scattering (PHIPS) instrument on the NSAA P3-B research aircraft to measure the microphysical characteristics and radiative properties of snowbands in order to fully understand the processes contributing to the increase in reflectivity associated with banded structures. The PHIPS instrument links microphysical details with ice crystal scattering property of polarized light, making it ideally suited to evaluate active remote sensing observations.	12/9/2019	12/9/2024
17	Ames Research Center (ARC)	Victorian Space Science Education Center (VSSEC)	Amendment 2: Reimbursable Agreement for Australia's participation in NASA 1 THE NASA International Internship Project.	Project-Specific Agreement (PSA)	Amendment 2: VSSEC was designated by the Australian Government to manage Australia's participation in this program on its behalf. This Reimbursable Space Act Agreement will be for the purpose of facilitating VSSEC's participation in the National Aeronautics and Space Administration International Internship Program designed to provide a collaborative environment where U.S. interns or fellows can interact and work alongside with international peers on research opportunities.	12/17/2019	12/31/2025
18	Ames Research Center (ARC)	Korea Aerospace Research Institute (KARI)	2nd Amendment to Reimbursable Space Act Agreement between KARI and NASA for Participation In the NASA International Internship Program (NASA I ²)	Implementing Arrangement/Agreement (IA)	This 2nd Amendment facilitates KARI's continued participation in NASA I2, which is managed by ARC for the agency. KARI will submit student nominations to NASA for possible placement in spring, summer, or fall internships at a NASA field center.	1/28/2020	12/31/2025

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19	Ames Research Center (ARC)	Agency for Science, Innovation and Technology (MITA)	Amendment and Extension 2: Reimbursable Space Act Agreement Between the Agency for Science, Innovation and Technology (MITA) and NASA for Participation in the National Aeronautics And Space Administration International Internship Program	Project-Specific Agreement (PSA)	Amendment and Extension 2: This Agreement enables MITA's participation in the NASA International Internship Program (NASA I2), designed to provide a collaborative environment where U.S. and foreign student interns interact and work alongside each other on research opportunities.	3/9/2020	12/31/2025
20	Ames Research Center (ARC)	International Space University (ISU)	Reimbursable Space Act Agreement between the International Space University & the National Aeronautics and Space Administration of the United States of America for Participation in the NASA International Internship Project and NASA Visitor Exchange Program	Project-Specific Agreement (PSA)	This Agreement enables ISU graduate students, on a cost reimbursable basis, to be nominated by ISU and selected by NASA mentors for NASA internships of 12 to 24 weeks.	9/23/2020	12/31/2025
21	Ames Research Center (ARC)	Swiss International Air Lines Limited	Amendment to Nonreimbursable Space Act Agreement Between NASA and Swiss International Air Lines Limited on Research Studies for Improvement of Aviation Safety and Assuring Safe and Effective Human Systems Integration	Project-Specific Agreement (PSA)	Desiring to continue cooperation related to research studies for improvement of aviation safety and ensuring safe and effective human systems integration, under the Agreement signed on February 9, 2016;	3/16/2021	12/31/2025
22	Ames Research Center (ARC)	CENTRALESUPELEC	Non-Reimbursable Space Act Agreement Between NASA and Centralesupélec for the Measurement and Analysis of Recombination Data	Project-Specific Agreement (PSA)	The purpose of this Agreement is to better understand the reactions and emission processes in the expanding flows of N2, Air and CO2 through a series of tests at both the ARC's Electric Arc Shock Tube (EAST) and CentraleSupélec's plasma torch. The joint activity shall utilize studies at both locations to obtain and analyze data on the recombination of reactive species as the high-energy plasma cools. The interest in recombining plasmas is motivated by processes that are responsible for heating the back shell of an entry vehicle during atmospheric entry, which drives sizing of the thermal protection system. NASA shall send 1-2 researchers and equipment (a Tunable Diode Laser, Daylight Solutions 41043-MHF, ECN #2581622) to CentraleSupélec for two weeks each year to complete joint measurements in the plasma torch facility and perform analysis of this collected recombination data. The partner shall send one researcher to ARC for 4 weeks each year to complete joint measurements in the EAST facility and analysis of this collected recombination data. Work by the researcher outside of the responsibilities outlined below is not permitted under this agreement.	8/24/2021	8/24/2024
23	Ames Research Center (ARC)	German Aerospace Center (DLR)	Implementing Arrangement between NASA and The German Aerospace Center for Fundamental Collaboration on the Development of Software Libraries for the use of Quantum Computing in Space Applications	Implementing Arrangement/Agreement (IA)	The DLR-SC group and NASA's QuAIL group will develop quantum computing tools for assessing the potential of quantum computing for space exploration applications. Both parties expect to jointly develop a software library to be used for space exploration applications. This library shall be a collection of software tools for the implementation of quantum algorithms.	11/19/2021	1/17/2025
24	Ames Research Center (ARC)	Belgium - Von Karman Institute for Fluid Dynamics (VKI)	Non-Reimbursable Space Act Agreement between the National Aeronautics and Space Administration and the Von Karman Institute for Fluid Dynamics for Cooperation on Entry Systems Modeling Research	Project-Specific Agreement (PSA)	Under this Agreement, the NASA and VKI intend to focus on joint fundamental research related to four ESM research topics: material response, aerothermodynamics, radiation, and magnetohydrodynamics. The Parties intend to conduct this joint research through a series of joint discussions, tutorials, training, and data and software model exchanges, resulting in joint ESM related technical publications. No hardware is anticipated to be exchanged or tested under this Agreement.	6/8/2022	6/8/2027
25	Ames Research Center (ARC)	Israel - Technion Research and Development Foundation Ltd (TRDF)	Extension of the Non-Reimbursable International Space Act Agreement Between NASA and the Technion Research and Development Foundation Ltd for Suborbital Research and Microgravity Technology Demonstrations of the Fluidic Telescope Experiment (FLUTE)	Project-Specific Agreement (PSA)	FLUTE aims to test innovative approaches and concepts for space-based astronomy by developing a new method for fabricating high-quality optical components in space using fluidic shaping in a microgravity environment. Under this Agreement, NASA and TRDF intend to design and execute experiments aimed at validating these innovative approaches using parabolic microgravity flights.	12/22/2022	5/1/2024
26	Ames Research Center (ARC)	United Kingdom - easyJet Airline Company, Ltd.	NASA-easyJet Safety Dashboard	Project-Specific Agreement (PSA)	Research regarding simulation, information processing, and computational modeling of aviation safety. Collaboration between the Parties will help to assess and refine techniques for the analysis of aircraft and human performance data, automate the analyses of flight safety data, and merge data into a demonstration dashboard for in-time safety assessments. These results are expected to lead to an improved understanding of what factors influence flight crew performance and how flight crew performance changes relate to aircraft performance.	7/19/2023	7/19/2028

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27	Ames Research Center (ARC)	ESA - European Space Agency	NASA-ESA Cooperation on Fundamental Aerothermodynamic Studies in Support of Potential Future Ice Giant Missions	Project-Specific Agreement (PSA)	The study of the heat exchange between gases and solids, especially during hypervelocity entry through planetary atmospheres, is necessary in designing entry systems including thermal protection system. That involves prediction of the heating environment encountered by Earth or planetary entry vehicles. These studies establish aerothermodynamic heating sensitivity during entry by exploring sensitivity to the atmospheric composition of minor species in giant planet atmospheres, especially trace gases such as methane that, if present, could lead to significant increases in hypervelocity shock-layer radiation during entry. Results may lead to generating aerothermodynamic science data for characterizing aerothermal design environments for safer mission design to giant planets.	8/4/2023	9/18/2028
28	Ames Research Center (ARC)	Mexico - Agencia Espacial Mexicana (AEM)	Amendment 2; Reimbursable Space Act Agreement Between NASA and the Agencia Espacial Mexicana (AEM) for Participation in the NASA International Internship Program (NASA I ²)	Project-Specific Agreement (PSA)	Amendment 2 - This amendment to the agreement enables Agencia Espacial Mexicana's (AEM) continued participation in the NASA International Internship Project (NASA I ²) by another 5 years. It is designed to provide a collaborative environment where U.S. interns or fellows (university undergraduate & students) (university graduate students) can interact and work alongside international peers on research opportunities.	12/1/2023	12/31/2028
29	Ames Research Center (ARC)	Germany - German Aerospace Center (DLR)	Extension 4 - MOU between NASA and DLR for the SOFIA Program	Project-Specific Agreement (PSA)	Extension 4 for the Stratospheric Observatory for Infrared Astronomy (SOFIA) MOU agreement, an airborne observatory developed and operated by NASA in partnership with the German Space Agency, DLR. Amendment Extends MOU one additional year for orderly closeout of SOFIA program.	12/12/2023	12/31/2024
30	Ames Research Center (ARC)	ESA - European Space Agency	Amendment 2 to Letter Agreement between ESA and NASA for Laser Interferometer Space Antenna (LISA) mission	Project-Specific Agreement (PSA)	Study agreement to determine NASA contributions to the ESA-led LISA mission.	12/13/2023	12/31/2024
31	Ames Research Center (ARC), Armstrong Flight Research Center (AFRC)	Korea Aerospace Research Institute (KARI)	NASA-KARI Cooperation on Advanced Air Mobility	Implementing Arrangement/Agreement (IA)	Air transportation systems are facing new challenges as novel vehicle types, missions, and operations enter the market. NASA and KARI are undertaking field demonstrations for AAM capabilities in their respective countries. Collaboration between the two agencies is needed to develop requirements for an Advanced Air Mobility ecosystem and integration with Air Navigation Service Providers to enable this diverse set of operations in a scalable, flexible, and resilient manner that ensures safety and security for both existing and new users.	10/17/2022	10/17/2027
32	Ames Research Center (ARC), George C. Marshall Space Flight Center (MSFC)	Fundacao Para a Ciencia e a Technologia (Foundation for Science and Technology) (FCT)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Foundation for Science, Technology and the Ministry of Science, Technology and Higher Education of Portugal for Participation in the NASA International Internship Program (NASA I ²)	Project-Specific Agreement (PSA)	Amendment 1: This amendment + agreement enables Portugal's participation in the NASA International Internship Project ("NASA I ² "). NASA I ² is designed to provide a collaborative environment for U.S. and Portuguese interns to interact and work alongside each other on research opportunities. NASA internship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms). NASA Centers: Agency-wide, beginning with ARC, MSFC. This Reimbursable Space Act Agreement enables Portugal's participation in the NASA International Internship Program (hereinafter referred to as "NASA I ² "). NASA I ² is designed to provide a collaborative environment for U.S. and Portuguese interns (university undergraduate level students) or fellows (university graduate level students) to interact and work alongside each other on research opportunities. NASA internship and fellowship sessions are arranged in three Terms during the calendar year (Spring, Summer, and Fall Terms).	12/10/2018	12/31/2024
33	Ames Research Center (ARC), Headquarters (HQ)	Agencia Espacial Mexicana (AEM)	Letter of Agreement between NASA and AEM regarding cooperation on the AztechSat Constellation	Project-Specific Agreement (PSA)	This NASA-AEM letter of agreement under U.S. law is for cooperation on a constellation of AztechSat CubeSats, as a continuation of the technology demonstration on AztechSat-1 and also to assist a joint NASA-Department of Interior animal tracking effort.	3/25/2022	3/25/2027
34	Ames Research Center (ARC), Langley Research Center (LaRC)	German Aerospace Center (DLR)	Spacecraft Entry Vehicle Subsonic Aerodynamic Study	Implementing Arrangement/Agreement (IA)	NASA designs and provides EEV and ADEPT models to DLR for testing in their wind tunnel. Resulting data is compared to data from similar simulations conducted at LaRC and is jointly analyzed.	7/28/2021	7/28/2024
35	Armstrong Flight Research Center (AFRC)	German Aerospace Center (DLR)	Extension #2 to Implementing Arrangement (IA) Between NASA and the German Aerospace Center for Experimental Optical Methods Applied to Rotorcraft.	Implementing Arrangement/Agreement (IA)	The purpose of this extension is to continue this productive collaboration and to allow for in-person attendance at hover tests and optimization tests as well as to jointly report results. Under Framework Agreement between NASA and the German Aerospace Center on Cooperation IN Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes (signed 12/8/2010)	10/19/2022	12/31/2024

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36	Armstrong Flight Research Center (AFRC)	Canadian Space Agency (CSA)	Reimbursable Space Act Agreement Between NASA and CSA for Airborne Science Research Using the High Altitude Aerosols Water Vapour & Clouds (HAWC) Instruments	Project-Specific Agreement (PSA)	Under this Reimbursable Agreement, CSA will pay NASA to fly the HAWC instruments on the NASA ER-2 plane in the Fall 2023 timeframe	1/25/2023	1/25/2026
37	Armstrong Flight Research Center (AFRC), George C. Marshall Space Flight Center (MSFC)	Norway - University of Bergen (UIB)	Reimbursable Space Act Agreement Between the National Aeronautics And Space Administration and the University of Bergen for the Airborne Lightning Observatory for the Fly's Eye Geostationary Lightning Mapper Simulator and Terrestrial Gamma-Ray Flashes Field Campaign	Project-Specific Agreement (PSA)	NASA will fly three UIB Instruments (FECS, LIP, and BGO) on a NASA ER-2 plane during the ALOFT field campaign.	8/17/2022	8/17/2025
38	Armstrong Flight Research Center (AFRC), Headquarters (HQ)	Finland - Finnish Meteorological Institute (FMI)	UAM Forest Fire operations	Project-Specific Agreement (PSA)	NASA and FMI will coordinate on UAM forest fire operations	3/8/2023	3/4/2027
39	Armstrong Flight Research Center (AFRC), Headquarters (HQ), Kennedy Space Center (KSC)	Italian Space Agency (ASI)	Amendment of the Implementing Arrangement between the National Aeronautics and Space Administration of the United States of America and the Italian Space Agency of the Italian Republic for Technology Demonstrations of the Galileo Receiver for High Elliptical Orbit - GARHEO	Implementing Arrangement/Agreement (IA)	SL-14 launched in November 2019, with the NASA and ASI hardware as two separate payloads that were not integrated. For SpaceLoft 15 (SL-15), in this amendment to the original IA, NASA and ASI are targeting a launch opportunity scheduled for October 2021, as integrated payloads provided by NASA's Flight Opportunities Program. UP Aerospace has been contracted by NASA for installation of NASA and Federal Aviation Administration (FAA) payloads on SL-15. AFTS, which was a payload on SL-14, is to be used to compare multi-GNSS receivers on SL-15. Original Implementing Arrangement with the Italian Space Agency (ASI) was for cooperation on the flight test of the Autonomous Flight Termination System (AFTS), and in particular to examine the signal availability of the GPS+Galileo signals in high elliptical orbits. NASA intends to fly ASI's GPS+GALILEO Software Defined Radio (GARHEO) hardware on board NASA's SL-14 sounding rocket mission in support of this collaboration.	7/26/2021	11/19/2024
40	George C. Marshall Space Flight Center (MSFC)	Space Research Institute (IKI), Russian Academy of Sciences (RAS)	Space Research Institute of the Russian Academy of Sciences (IKI): Cooperation on the ART-XC Instrument Onboard the Russian Spectrum Roentgen Mission (SPG)	Project-Specific Agreement (PSA)	NASA will provide four mirror modules for portions of science data from the Russian Instrument.	4/6/2013	12/31/2025
41	George C. Marshall Space Flight Center (MSFC)	United Kingdom Space Agency (UKSA)	Jupiter Icy Moons Explorer (JUICE) Mission - Particle Environments Package (PEP)	Project-Specific Agreement (PSA)	PEP is a plasma package with six sensors to characterize the plasma environment in the Jovian system. PEP will measure positive and negative ions, electrons, exospheric neutral gas, thermal plasma, and Energetic Neutral Atoms (ENAs) in the energy range from 0.001 eV to 1 MeV. PEP will combine remote global imaging via ENAs with in situ measurements, to address all scientific objectives of the JUICE mission relevant to particle measurements. PEP will seek answers for four overarching science questions: How does the co-rotating magnetosphere of Jupiter interact with the complex and diverse environment of Ganymede? How does the rapidly rotating magnetosphere of Jupiter interact with seemingly inert Callisto? What are the governing mechanisms and their global impact of release of material into the Jupiter magnetosphere from Europa and Io? How do internal and solar wind drivers cause such energetic, time-variable and multi-scale phenomena in the steadily rotating giant magnetosphere of Jupiter?	11/23/2015	6/30/2034
42	George C. Marshall Space Flight Center (MSFC)	Swedish Institute of Space Physics (IRF), Swedish National Space Board (SNSB)	Jupiter Icy Moons Explorer (JUICE) Mission - Particle Environments Package (PEP)	Implementing Arrangement/Agreement (IA)	NASA and the Swedish National Space Board (SNSB) will collaborate on the development of the Particle Environment Package (PEP) of the Jupiter Icy-Moons Explorer (JUICE) mission. PEP is a plasma package with six sensors to characterize the plasma environment in the Jovian system. PEP shall measure positive and negative ions, electrons, exospheric neutral gas, thermal plasma, and energetic neutral atoms (ENAs) in the energy range from 0.001 eV to 1 MeV. PEP shall combine remote global imaging via ENAs with in-situ measurements, to address all scientific objectives of the JUICE mission relevant to particle measurements. Their work on the JUICE mission will be governed by the terms and conditions of the Framework Agreement between the Government of the United States of America and the Government of the Kingdom of Sweden for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes, signed in Stockholm on October 14, 2005, and amended in Washington, on October 6, 2015.	9/20/2016	9/20/2034

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43	George C. Marshall Space Flight Center (MSFC)	European Space Agency (ESA)	Jupiter Icy Moons Explorer (JUICE) Mission - UVS	Implementing Arrangement/Agreement (IA)	NASA will provide the Ultraviolet Spectrograph (UVS) instrument for the ESA JUICE Mission, as well as ground network support.	1/18/2017	6/30/2034
44	George C. Marshall Space Flight Center (MSFC)	Canadian Space Agency (CSA)	Extension/Amendment 1: Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) on the Loan of Space Shuttle Equipment	Implementing Arrangement/Agreement (IA)	Extension/Amendment 1: Implementing Arrangement (IA) Between NASA/CSA to renew and modify the current IA, amending the agreement for 1) the location of the equipment on loan, 2) the new point of contact, and 3) the commencement of activities and duration (Sections 1, 4, 8). Framework Agreement of September 9, 2009, governs this Implementing Arrangement between NASA/CSA on the loan of Space Shuttle Equipment.	10/2/2017	10/2/2027
45	George C. Marshall Space Flight Center (MSFC)	University of Twente	SERVIR-ITC Capacity Building Cooperation	Project-Specific Agreement (PSA)	NASA SERVIR Program and the University of Twente Faculty of Geo-information and Science and Earth Observation (ITC) will cooperate in Earth science capacity building. ITC and SERVIR will jointly develop training and pair ITC faculty with SERVIR scientists to conduct research in food security and agriculture; water resources and water-related disasters; land cover and land use change; and weather and climate in SERVIR regions.	2/12/2018	2/11/2028
46	George C. Marshall Space Flight Center (MSFC)	Brazilian Space Agency (AEB)	Implementing Arrangement (IA) for Cooperation on the Scintillation Prediction Observations Research Task (SPORT)	Implementing Arrangement/Agreement (IA)	Collaborative CubeSat activity with Brazilian Space Agency (AEB) to study ionospheric phenomena. Will launch via CubeSat Launch Initiative.	3/18/2019	12/31/2025
47	George C. Marshall Space Flight Center (MSFC)	Japan Aerospace Exploration Agency (JAXA)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Japan Aerospace Exploration Agency of Japan for Cooperation on JAXA CubeSats on Artemis I	Project-Specific Agreement (PSA)	This MOU covers launch and post-launch activities for the two JAXA CubeSats flying on Artemis I.	7/2/2021	7/2/2032
48	George C. Marshall Space Flight Center (MSFC)	Italian Space Agency (ASI)	NASA-ASI Agreement to Conduct a Preliminary Design Study of the ASI-proposed Lunar Surface Multi-Purpose Habitation Module(s) for the Artemis Program	Project-Specific Agreement (PSA)	NASA-ASI Agreement to Conduct a Preliminary Design Study of the ASI-proposed Lunar Surface Multi-Purpose Habitation Module(s) for the Artemis Program. ASI will conduct the study and present its findings to NASA for consideration.	6/16/2022	6/15/2024
49	George C. Marshall Space Flight Center (MSFC)	IHI Aerospace Co., Ltd. (IA)	Non-Reimbursable Agreement between NASA and IHI Aerospace Co., Ltd. for Research in High-Temperature Plasma-Magnetic Coil Interactions	Project-Specific Agreement (PSA)	IHI Aerospace Co., Ltd. (IA), in conjunction with Kyushu University, have conducted high-fidelity research into high-temperature plasma and magnetic coil interactions for advanced propulsion. Both IA and NASA are investigating similar fundamental research areas with complimentary approaches that, if compared, may give more confidence to those approaches when they yield similar results. Working in parallel, with frequent correspondence, is expected to help the Parties develop a deeper understanding of high temperature plasma interactions with magnetic coils. As part of this collaboration, NASA and IA intend to share research data with the goal of better understanding pulsed high-temperature plasma interactions with magnetic coils.	9/21/2022	10/11/2025
50	George C. Marshall Space Flight Center (MSFC)	Japan Aerospace Exploration Agency (JAXA)	Chromospheric LAYer Spectro-Polarimeter (CLASP) 2	Project-Specific Agreement (PSA)	Chromospheric LAYer Spectro-Polarimeter (CLASP) 2 is a solar physics experiment to be launched on a NASA sounding rocket, and is a follow-on to the highly successful Chromospheric Lyman-Alpha Spectro-Polarimeter (CLASP) sounding rocket mission of 2015.	12/28/2022	12/31/2032

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
51	George C. Marshall Space Flight Center (MSFC), Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Implementing Arrangement (IA) Between NASA and Agenzia Spaziale Italia (ASI) on the Imaging X-ray Polarimetry Explorer (IXPE) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and the Italian Space Agency (ASI) cooperating on the Imaging X-ray Polarimetry Explorer (IXPE) Mission; and recalling terms of framework agreement between the Government of the United States of America and the Government of the Italian Republic of for cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed March 19, 2013, and entered into force on February 11, 2016. IXPE is a Principal Investigator (PI)-managed, Small-class Explorer (SMEX) NASA Mission led by Dr. Martin C. Weisskopf at MSFC. The IXPE missions main objective is to understand the physics of the X-ray emission produced by neutron stars and black holes. IXPE will address this objective by imaging X-rays from celestial objects onto polarization-sensitive imaging X-ray detectors. This mission opens a new window on the Universe by extending X-ray polarization measurements to hundreds of objects. The IXPE observatory will consist of a spacecraft (S/C) bus and three X-ray mirror module assemblies/X-ray polarization-sensitive detector systems. NASA will have overall responsibility for the mission and will provide the in-house fabricated X-ray mirror modules. The polarization-sensitive focal plane detectors will be provided by ASI. These will be based on pioneering work on electron-tracking gas-pixel detectors carried out by IXPE Co-Investigators at INFN and INAF/IAPS.	6/20/2017	12/1/2026
52	Glenn Research Center at Lewis Field (GRC)	National Centre for Space Studies (CNES)	Amendment 2: Dispositif pur l'Etude de la Croissance et des Liquides Critiques (DECLIC)	Project-Specific Agreement (PSA)	Amendment 2: A second amendment was added to the agreement. This amendment also details the refurbishment and re-launch of the DECLIC hardware and extends the Agreement to December 31, 2024, to enable the completion of the ISS operations for the HTI-R insert which is currently on-orbit and the launch and ISS operations of the DSI-R and ALI-R inserts. The original agreement was amended to include collaboration on upgraded versions of the following three DECLIC inserts: the High Temperature Insert-Reflight (HTI-R), the Directional Solidification Insert-Reflight (DSI-R), and the Alice-Like Insert-Reflight (ALI-R). In the original agreement, NASA agreed to provide a launch capability to, and on-orbit accommodations for the DECLIC hardware on the ISS. In addition, CNES received a 12-month on-orbit operational period of utilization by its science investigators and the necessary ISS resources, such as power and crew time.	9/21/2016	12/31/2024
53	Glenn Research Center at Lewis Field (GRC)	Australian National Fabrication Facility Ltd (ANFF)	Umbrella Agreement and Annex 1 between the NASA and the Australian National Fabrication Facility Ltd (ANFF)	Project-Specific Agreement (PSA)	NASA and the ANFF plan to leverage their respective strengths to perform fundamental research to advance nanotechnology-based communications and sensing capabilities for aerospace, terrestrial, and biomedical applications. The goal of this cooperative effort is to explore previous, current, and future work that needs to be addressed in the areas of advanced materials, micro- and nano-electronics, including microfluidics, and Micro?Electromechanical Systems (MEMS), bio-nano applications, sensors and medical devices, and photonics. Accordingly, the Parties will attempt to identify gaps and develop methodologies and strategies through which current technology challenges, both at the material and component levels, could be addressed to advance nanotechnology-based communications and sensing capabilities in both the radio frequency and optical realms. This will be accomplished through a series of simulations, materials analysis, prototype development and testing and characterization. Under Annex 1, the Parties will conduct fundamental research on the physical and electrical properties of advanced nanomaterials aimed at the development of novel sensors for biological and health monitoring applications. Emphasis will be placed on the study of the state-of-the-practice (SOP) and the state-of-the-art (SOA) of microfluidic-based nanostructures necessary for robust, reliable, portable, and re-usable microfluidic sensing devices for bio-sensing applications, culminating in the develop	10/9/2019	10/10/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
54	Glenn Research Center at Lewis Field (GRC)	Australia - The University of Queensland	Amendment 2 -University of Queensland (UQ) Cavity Optomechanical Magnetometers	Project-Specific Agreement (PSA)	Amendment 2 - NASA and UQ are cooperating on ultraprecise sensing capabilities via microcavity optomechanics. The goal of this activity is to advance the development of ultra-sensitive sensor capability, beyond what is currently available. While NASA and UQ will interact in the above activities, the optimization of the cavity optomechanical and double-disk resonator architectures will be primarily performed by UQ. The selective testing for verification and optimization of performance will be done at NASA GRC. Amendment 1 - NASA GRC and researchers from the University of Queensland (UQ) have a shared interest in the field of cavity optomechanical magnetometry. The goal of this activity is to advance the development of ultra-sensitive sensor capability, beyond what is currently available. The overall focus of this work will be on further enhancing the sensitivity primarily using double-disk resonators at two different size-scales. Accordingly, this effort will seek to apply cavity optomechanical magnetometers as magnetic sensors for applications and will perform proof-of-principle demonstrations of those applications. Successful development of cavity optomechanical magnetometers with outstanding sensitivity for measuring low flux fields would be of great benefit/interest for use in space science mission instruments. Applications of cavity optomechanical magnetometers to space research and communications will be performed during this collaboration. While NASA and UQ will interact in the above activities, the optimization of the cavity optomechanical and double-disk resonator architectures will be primarily performed by UQ. The selective testing for verification and optimization of performance will be done at NASA GRC.	12/9/2022	12/31/2025
55	Glenn Research Center at Lewis Field (GRC)	Italy - Italian Center for Aerospace Research (CIRA)	Extension No.1 - Nonreimbursable Space Act Agreement Between NASA and the Italian Center for Aerospace Research (CIRA) (Centro Italiano Ricerche Aerospaziali) SCpA on Supercooled Large Drop Icing Research	Project-Specific Agreement (PSA)	NASA and CIRA will pursue cooperation on the fundamental study of Super-cooled Large Drop (SLD) icing. The purpose of this agreement is to advance aircraft safety through collaborative research in the area of SLD icing. The joint research is intended to improve the ability to accurately characterize and simulate SLD phenomenon, and to determine the ability of existing test facilities to reproduce the various aspects of SLD conditions.	3/21/2023	10/31/2027
56	Glenn Research Center at Lewis Field (GRC)	Canada - National Research Council (NRC)	NASA-NRC Icing on High Lift Systems	Project-Specific Agreement (PSA)	The overall objective of this agreement is to obtain experimental ice shapes on a high-lift configuration in an icing wind tunnel and use these to validate simulated ice shapes from numerical models. The ice shapes generated from these validated numerical models are to be included as part of high Reynolds number tests at the National Transonic Facility (NTF) on the Common Research Model (CRM) in a high-lift configuration. This work will provide a database from which vehicle performance can be used as validation of Computational Fluid Dynamics (CFD) tools in predicting performance degradation due to icing.	3/27/2023	3/27/2027
57	Glenn Research Center at Lewis Field (GRC)	Canada - National Research Council (NRC)	NASA-NRC Icephobic Materials	Project-Specific Agreement (PSA)	Assessment methods of icephobic materials vary across the research community, and there is no recognized standard method to quantify ice adhesion strength. This hinders the development and acceptance of icephobics as a practical ice protection solution. The proposed activity seeks to improve the efficiency of thermal anti-icing systems through the use of icephobic materials as a practical (and durable) solution for the new low power ice protection systems needed by Advanced Air Mobility (AAM) and electric vehicles to market by developing a means to assess icephobic coatings.	3/27/2023	3/27/2027
58	Glenn Research Center at Lewis Field (GRC)	Multilateral - European Space Agency (ESA)	NASA-ESA Letter of Agreement for Fire Safety Experiments on an ESA Parabolic Flight Campaign	Project-Specific Agreement (PSA)	Agreement on the inclusion of NASA experiments and personnel on April 2023 ESA parabolic flight campaign to study fire safety in partial gravity.	4/20/2023	4/19/2024
59	Glenn Research Center at Lewis Field (GRC)	Canada - Concordia University	Non-Reimbursable International Space Act Agreement between NASA and Concordia University for Suborbital Research and the Microgravity Technology Demonstration of an Ultrasonic Blade.	Implementing Arrangement/Agreement (IA)	Concordia has a proprietary custom excavation rig ("Test Rig") with flight heritage. NASA would like to test an ultrasonic excavation blade ("Test Article") in reduced gravity using the Test Rig. Data resulting from the flight would provide Concordia with validation of the Test Rig and novel datasets collected with alternative excavation tools. As part of this collaboration, NASA will attach the Test Article to the Test Rig for experimentation on a parabolic flight campaign provided through the NASA Flight Opportunities Program (FOP). The parabolic flight campaign will consist of two consecutive flights, each consisting of approximately 25-30 parabolic maneuvers to simulate lower gravity environments including micro-gravity, lunar gravity, and Martian gravity. Testing will be conducted during the brief windows of lower gravity environment to assess the impact of gravity on the tested phenomenon. Prior to the parabolic flight, the Parties intend to exchange hardware and lunar simulant for the purposes of integration and ground testing. Upon completion of the parabolic flight campaign, the Test Article will remain with NASA and the Test Rig will be returned by NASA to Concordia.	6/26/2023	7/28/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
60	Glenn Research Center at Lewis Field (GRC)	Canada - National Research Council (NRC)	Amendment 4 - Agreement Between NASA and the National Research Council of Canada (NRCC) Concerning Cooperation in Icing Protection Systems Research	Project-Specific Agreement (PSA)	The purpose of this extension is to continue icing safety research with NRC. The extension will allow for continued data sharing and coordination with the ECC and CIRA both of which have corresponding agreements.	12/15/2023	10/31/2027
61	Glenn Research Center at Lewis Field (GRC)	Canada - Environment Canada	Amendment and Extension 2 - NASA-Environment Canada (EC) Agreement for Cooperative Activities Pertaining to Atmospheric Icing Research	Project-Specific Agreement (PSA)	The purpose of this extension is to continue icing safety research with ECCC. The extension will allow for continued data sharing and coordination with the NRC and CIRA both of which have corresponding agreements.	1/5/2024	10/31/2027
62	Glenn Research Center at Lewis Field (GRC), Headquarters (HQ)	Imperial College of Science Technology and Medicine (Imperial College)	GEER Sensor Testing, Venus	Project-Specific Agreement (PSA)	This proposed NASA and Imperial collaboration expects to address engineering and scientific issues related to the development of seismic sensors capable of operating on the surface of Venus. NASA plans to expose Imperial's seismic sensors to Venus-like conditions in the Glenn Research Center's (GRC) Glenn Extreme Environments Rig (GEER) facility. The exposure of the seismic sensors should provide valuable information to the suitability of said sensor as a component of a potential future Venus seismometer.	9/1/2022	9/1/2028
63	Glenn Research Center at Lewis Field (GRC), Headquarters (HQ), Johnson Space Center (JSC)	European Space Agency (ESA)	Annex 2: Implementing Arrangement (IA) Between NASA and the European Space Agency (ESA) Concerning the Provision by ESA of Elements for NASA's Multi-Purpose Crew Vehicle as a Contribution to the Offset of ESA's Responsibility for International Space Station Common System Operations Costs and to Compensate NASA for Transportation Costs and Other Supporting Services	Implementing Arrangement/Agreement (IA)	Annex 2 covers EM-2 Payment and Technical Discussions for EM-3 and beyond. Barter arrangement. ESA will provide the Service Module (SM) for the Exploration Mission - 1 Multi-Purpose Crew Vehicle (MPCV) as contribution to the offset of ESA's Responsibility for International Space Station common system operations costs and to compensate NASA for transportation costs and other supporting services including TDRSS support and an astronaut ISS increment flight opportunity. Also includes an Annex which lays the groundwork for ESA to also provide the Exploration Mission-2 Service Module and assistance for the Exploration Mission-3 activities.	6/22/2018	12/31/2024
64	Glenn Research Center at Lewis Field (GRC), Headquarters (HQ), Johnson Space Center (JSC)	European Space Agency (ESA)	Annex 2: Implementing Arrangement (IA) Between NASA and the European Space Agency (ESA) Concerning the Provision by ESA of Elements for NASA's Multi-Purpose Crew Vehicle as a Contribution to the Offset of ESA's Responsibility for International Space Station Common System Operations Costs and to Compensate NASA for Transportation Costs and Other Supporting Services	Implementing Arrangement/Agreement (IA)	Annex 2 covers EM-2 Payment and Technical Discussions for EM-3 and beyond. Barter arrangement. ESA will provide the Service Module (SM) for the Exploration Mission - 1 Multi-Purpose Crew Vehicle (MPCV) as contribution to the offset of ESA's Responsibility for International Space Station common system operations costs and to compensate NASA for transportation costs and other supporting services including TDRSS support and an astronaut ISS increment flight opportunity. Also includes an Annex which lays the groundwork for ESA to also provide the Exploration Mission-2 Service Module and assistance for the Exploration Mission-3 activities. Annex 2 is connected with ESA-0339-0	6/22/2018	12/31/2024
65	Glenn Research Center at Lewis Field (GRC), Headquarters (HQ), Johnson Space Center (JSC)	European Space Agency (ESA)	Annex 3: Implementing Arrangement (IA) Between NASA and the European Space Agency (ESA) Concerning the Provision by ESA of Elements for NASA's Multi-Purpose Crew vehicle as a Contribution to the Offset of ESA's Responsibility for International Space Station Common System Operations Costs and to Compensate NASA for Transportation Costs and Other Supporting Services	Implementing Arrangement/Agreement (IA)	Annex 3 covers the provision of ESM-3.	10/6/2021	12/31/2024
66	Glenn Research Center at Lewis Field (GRC), Headquarters (HQ), Johnson Space Center (JSC)	European Space Agency (ESA)	Annex 3: Implementing Arrangement (IA) Between NASA and the European Space Agency (ESA) Concerning the Provision by ESA of Elements for NASA's Multi-Purpose Crew vehicle as a Contribution to the Offset of ESA's Responsibility for International Space Station Common System Operations Costs and to Compensate NASA for Transportation Costs and Other Supporting Services	Implementing Arrangement/Agreement (IA)	Annex 3 covers the provision of ESM-3. Annex 3 is connected with ESA-0339-0 and with Annex 2, ESA-0394-0	10/6/2021	12/31/2024
67	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	Terra/Earth Observing System (EOS AM-1): Multi-Angle Imaging Spectro-Radiometer (MISR)	Project-Specific Agreement (PSA)	Participation by Dr. Jan-Peter Muller on the Multi-Angle Imaging Spectro-Radiometer (MISR) Instrument Team, which is to design, develop, and verify the MISR instrument and MISR data exploitation. Missing UK letter.	9/11/1992	9/30/2025
68	Goddard Space Flight Center (GSFC)	Russian Federal Space Agency (Roskosmos)	WIND Mission/Cooperation in the Konus-WIND Experiment	Project-Specific Agreement (PSA)	Flight on the U.S. WIND mission of the Russian Konus gamma-ray burst detector to enhance the scientific return to the international science community in the area of gamma-ray astronomy.	10/28/1994	12/31/2033

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
69	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Flight of the Measurements of Pollution in the Troposphere (MOPITT) Instrument on Earth Observing System (EOS AM)/Terra	Project-Specific Agreement (PSA)	This MOU establishes the scientific and technical cooperation for the flight of the MOPITT instrument on the NASA EOS-AM1 polar orbiting platform of MOPITT to further cooperation in global change research by enabling the multidisciplinary study and long-term systematic monitoring of Earth, including research involving data from all Earth observing platforms in the International Earth Observing System.	11/15/1994	12/31/2025
70	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES),European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Ocean Surface Topography Mission (OSTM)	Project-Specific Agreement (PSA)	The objective of the Ocean Surface Topography (OSTM) mission is to bring high-precision altimetry to a full operational status through the continuation of the TOPEX/Poseidon and Jason missions. OSTM will be launched aboard the Jason-2 satellite and will be a follow-on to the Jason mission. CNES will provide the PROTEUS platform for the Jason-2 satellite, which is scheduled to launch in June 2008 aboard a NASA-provided Boeing Delta II from Vandenberg Air Force Base, CA. OSTM will provide data for operational and research use for marine meteorology and sea state forecasting, operational oceanography, seasonal forecasting, climate monitoring, and ocean, Earth system, and climate research.	4/16/2008	12/31/2025
71	Goddard Space Flight Center (GSFC)	Kinki University	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Agreement establishes sun photometer stations in Japan, Shirahama (Wakayama Prefecture).	6/24/2011	3/31/2026
72	Goddard Space Flight Center (GSFC)	University of Liege	Belgium (CSL/BELSPO) Solar Probe Plus (SPP) Letter of Agreement	Project-Specific Agreement (PSA)	NASA will develop the Solar Probe Plus (SPP), a spacecraft equipped to perform scientific studies of the Sun. The primary scientific objectives to be carried out during the mission include: to determine the structure and dynamics of the magnetic fields at the sources of both fast and slow solar wind; to trace the flow of energy that heats the corona and accelerates the solar wind; and to determine what mechanisms accelerate and transport energetic particles. Instruments include a wide-field imager, fast ion analyzer, fast electron analyzer, energetic particle instrument, magnetometer, and plasma wave instrument. This Agreement will cover the Belgian contributions to the SPP mission, specifically the contributions to the modeling, testing, and evaluation of the WISPR Investigation on the SPP.	10/10/2011	9/30/2026
73	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	Memorandum of Understanding (MOU) Between the European Space Agency (ESA) and NASA Concerning the Solar Orbiter Mission	Project-Specific Agreement (PSA)	The Solar Orbiter (SO) mission will be specifically devoted to solar and heliospheric physics, providing close-up and high-latitude observations of the Sun. The goal of the mission will be to explore the near-Sun environment to improve the understanding of how the Sun determines the environment of the inner solar system and, more broadly, generates the heliosphere itself, and how fundamental plasma physical processes operate near the Sun. SO is an international collaboration comprising many science instruments and suites, including one instrument and one sensor provided by NASA. ESA will provide the spacecraft, while NASA will provide the launch. The SO orbiter collaboration is taking place within ESA's Cosmic Vision line of missions within the Science Programme. The SO mission is currently planned for a 2017 launch date, with the end of the nominal mission set for 2024.	3/6/2012	12/31/2025
74	Goddard Space Flight Center (GSFC)	University of Liege	Solar Orbiter Collaboration	Project-Specific Agreement (PSA)	The Centre Spatial de Liège (Université de Liège) will provide engineering support to the NASA-provided SoloHi instrument on the European Space Agency (ESA)-led Solar Orbiter mission. The Belgian Federal Science Policy Office (BELSPO) is providing the funding.	10/2/2012	12/31/2025
75	Goddard Space Flight Center (GSFC)	University of Bern	Solar Orbiter Collaboration	Project-Specific Agreement (PSA)	University of Bern will calibrate the NASA-provided Heavy Ion Spectrometer (HIS) instrument for the European Space Agency (ESA) -led Solar Orbiter mission.	10/15/2012	12/31/2025
76	Goddard Space Flight Center (GSFC)	United Kingdom Space Agency (UKSA)	Solar Orbiter Agreement - Heavy Ion Sensor (HIS)	Project-Specific Agreement (PSA)	Agreement for the fabrication, delivery, integration, and data for the NASA-provided HIS to Mullard Space Science Laboratory (MSSL) for integration with the UK Space Agency-provided Solar Wind Analyzer (SWA) instrument suite. The SWA will be integrated onto the ESA-provided Solar Orbiter spacecraft. This Agreement includes provisions for interface coordination, delivery of the payload and its components to the Parties for testing, integration, and science data and data products sharing and archiving.	2/19/2013	12/31/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
77	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) of France on the Scientific Instruments of the Solar Probe Plus (SPP) Payload	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and CNES as NASA's Science Mission Directorate is sponsoring the development of the SPP mission, which is a project in the Living with a Star Program, a series of missions designed to gather critical information about the Sun and its effects on Earth, human activities, and other planetary systems. NASA will develop the SPP, a spacecraft equipped to perform scientific studies of the Sun. NASA plans to launch the SPP in 2018 from Cape Canaveral, Florida. CNES is sponsoring French collaboration on the FIELDS investigation, which consists of a Plasma Wave Instrument and a Magnetometer, and the Solar Wind Electrons Alphas and Protons (SWEAP) investigation, consisting of a Solar Probe Cup (SPC), and a Solar Probe Analyzer (SPAN).	6/10/2013	9/30/2026
78	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Amendment 1: Implementing Arrangement (IA); Modification to the Implementing Arrangement (IA) Between the NASA and the Canadian Space Agency (CSA) on the Origins, Spectral Interpretation, Resources Identification, and Security-Regolith Explorer (OSIRIS-REx) Mission	Implementing Arrangement/Agreement (IA)	This is an amendment 1 to the original Implementing Arrangement (IA) to add NASA delivery of electronic components to CSA. OSIRIS-REx is a NASA-led asteroid sample return mission currently planned for launch in 2016. It is scheduled to rendezvous with RQ36 in 2019 and the sample return capsule should land on Earth in 2023. CSA is expected to provide the OSIRIS-REx Laser Altimeter (OLA) and members of the science team, with the University of Calgary leading the OLA science team. NASA will transfer to CSA 4% by mass of the returned bulk sample and 4% by surface area of the returned contact pad sample. This is an IA under the Canada Framework Agreement.	9/25/2013	12/31/2025
79	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Origins Spectral Interpretation Resource Identification Security-Regolith Explorer (OSIRIS-REx) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and CNES in cooperation on OSIRIS-REx, a NASA-led asteroid sample return mission currently planned for launch in 2016. It is scheduled to rendezvous with asteroid RQ36 in 2019 and the sample return capsule should land on Earth in 2023. CNES is expected to support Co-Investigators from France to provide important modeling work and lead key astronomical observations of RQ36. This is an IA under the U.S.-France Framework Agreement.	12/9/2013	12/31/2025
80	Goddard Space Flight Center (GSFC)	Karunya University	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Karunya University (KU) will cooperate on the operation of an AERONET subphotometer station and/or Lidar stations located at KU. NASA provide the equipment, and USM provides the site.	1/30/2014	6/30/2024
81	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	Space Geodesy: Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) of France on Space Geodesy Activities and Applications	Implementing Arrangement/Agreement (IA)	Space Geodesy: Implementing Arrangement (IA) Between NASA and CNES, Parties will share data and host each other's instruments. This IA falls under the US-France Framework.	4/23/2014	12/31/2024
82	Goddard Space Flight Center (GSFC)	University of Blida	Amendment and Extension 1: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Amendment and Extension 1: Extension of 2002 AERONET Agreement: NASA provides the AERONET equipment; they provide the location and support of the system. RE: Sun photometer station in Algeria.	7/3/2014	6/1/2024
83	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	Implementing Arrangement (IA) Between NASA and the National Center for Space Studies (CNES) of France on the Scientific Payload of the Solar Orbiter Mission	Project-Specific Agreement (PSA)	Implementing Arrangement (IA) Between NASA and CNES on a Solar Orbiter that is a European Space Agency (ESA) mission carried out in cooperation with NASA that will explore the near-Sun environment to improve the understanding of how the Sun creates the environment of the inner solar system, generates the heliosphere itself, and how fundamental plasma physical processes operate near the sun. ESA is providing the spacecraft bus, integration of the instruments onto the bus, mission operations, and overall science operations. NASA is providing instrumentation and an intermediate class launch vehicle. NASA will lead the provision to ESA of the Solar Orbiter Heliospheric Imager (SoloHI), and the Heavy Ion Sensor (HIS), which will be integrated onto the spacecraft as part of the Solar Wind Analyzer (SWA) instrument suite led by the United Kingdom. Solar Orbiter is expected to launch on an Atlas 5 in July 2017. This is an IA under the U.S.-France Framework Agreement.	8/7/2014	12/31/2025
84	Goddard Space Flight Center (GSFC)	United Nations World Meteorological Organization (WMO)	Letter of Arrangement (LOA): Cooperation in the Micro-Pulse Lidar Network (MPLNET) as a Contributing Network	Project-Specific Agreement (PSA)	Letter of Arrangement (LOA) between NASA and the World Meteorological Organization Global atmosphere Watch Program (WMO/GAW) related to the recognition of the Micro-pulse Lidar Network (MPLNET) as a contributing network. Signed May 11, 2015, with no expiration date stated.	5/11/2015	5/11/2100
85	Goddard Space Flight Center (GSFC)	All Nations University College in Koforidua (ANUC) of Ghana	Cooperation in the Aerosol Robotic Network (AERONET) with All Nations University College in Koforidua, Ghana	Project-Specific Agreement (PSA)	Cooperative research on aerosols using sun photometers integrated into a global network.	9/17/2015	9/16/2025
86	Goddard Space Flight Center (GSFC)	Polytechnic of Namibia, Namibia University of Science and Technology (NUST)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Polytechnic of Namibia will cooperate on the AERONET program. NASA will provide equipment on loan in which Gobabeb will host at a mutually agreed location.	9/25/2015	9/24/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
87	Goddard Space Flight Center (GSFC)	Centre for Geophysical Consultancy and Technological Transfer (CGCTT)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Center for Geophysical Consultancy and Technological Transfer of Vietnam will cooperate on the AERONET program. NASA will provide equipment on loan which the partner will host at a mutually agreed location.	10/23/2015	10/22/2025
88	Goddard Space Flight Center (GSFC)	Hokkaido University (HokuDai)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the partner will cooperate on the AERONET program. NASA will provide equipment on loan which Hokkaido University will house at a mutually agreed location.	1/6/2016	1/5/2026
89	Goddard Space Flight Center (GSFC)	Taipei Economic and Cultural Representative Office in the United States (TECRO)	Amendment: Agreement Between NASA and the American Institute in Taiwan (AIT) for Coordination Regarding Normal Operations and Special Uplink Operations for the FORMOSAT-3 Satellite System	Project-Specific Agreement (PSA)	Amendment: This Agreement (and the associated Coordination Arrangement) provides a framework to coordinate the operation of the FORMOSAT-3 Satellite (owned and operated by the National Space Organization (NSPO) of Taiwan) to prevent unacceptable interference to NASA's Earth science missions, including: FAST, GALEX, HESSI, ICESAT, SAMPEX, SWAS, TIMED, TRACE, and GLORY. The Agreement and Coordination Arrangement specify the parameters for uplink and downlink transmissions during normal operation of the FORMOSAT-3 satellite, and specifies pre-coordination required prior to special uplink operations required to upload Global Positioning System data. This activity is implemented by: (1) The Agreement between NASA and the American Institute in Taiwan (AIT), which is the U.S. liaison entity for USG activities with entities in Taiwan; and (2) The Coordination Arrangement between AIT and the Taipei Economic and Cultural Representative Office in the United States (TECRO), which is the Taiwanese liaison entity for Taiwanese activities with entities in the U.S. The period of performance of the activity is June 30, 2015 or until the FORMOSAT-3 Satellite is deactivated, whichever is sooner.	1/12/2016	6/30/2025
90	Goddard Space Flight Center (GSFC)	Instituto Superior Politecnico da Tundavala (ISPT)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and partner will cooperate on the AERONET program. NASA will provide equipment on loan to the Instituto Superior Politecnico da Tundavala (ISPT). ISPT will host and maintain the equipment, and contribute to the AERONET database.	2/5/2016	2/4/2026
91	Goddard Space Flight Center (GSFC)	St. Petersburg State University (Russia)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and St. Petersburg State University (SPSU-Russia) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at SPSU. SPSU has their own instrument, and NASA will provide calibration on that instrument.	3/29/2016	12/31/2024
92	Goddard Space Flight Center (GSFC)	Catholic University of Cameroon (CATUC)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Catholic University of Cameroon (CATUC) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at CATUC. CATUC will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	4/28/2016	3/27/2026
93	Goddard Space Flight Center (GSFC)	Dibrugarh University	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Cooperative research on aerosols using sun photometers integrated into a global network. Dibrugarh University will host a NASA-owned instrument.	9/7/2016	9/6/2026
94	Goddard Space Flight Center (GSFC)	Universidad de San Francisco de Quito (USFQ)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universidad de San Francisco de Quito (USFQ) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at USFQ. USFQ will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	9/16/2016	9/16/2026
95	Goddard Space Flight Center (GSFC)	Lake Chad Basin Commission (LCBC)	Aerosol Robotic Network (AERONET) and Micro Pulse Lidar Network (MPL/NET)	Project-Specific Agreement (PSA)	NASA will provide a Sun Photometer and/or Lidar to the partner; the Partner will tend the instrument(s) and ensure data is uploaded to the global databases.	10/5/2016	10/4/2026
96	Goddard Space Flight Center (GSFC)	Universidad Popular de Cesar (UPC)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universidad Popular del Cesar (UPC) will cooperate on the operation of an AERONET sun photometer station and/or Lidar stations located at UPC. UPC will maintain the NASA-owned instrument, and NASA will provide calibration on that instrument.	11/30/2016	11/29/2026
97	Goddard Space Flight Center (GSFC)	The University Court of the University of Edinburgh	Mini-LHR GreenNet with the University of Edinburgh	Project-Specific Agreement (PSA)	NASA to loan instruments for a University of Edinburgh ground station. The parties will establish one or more mini-LHR stations at mutually agreed sites. University of Edinburgh will host the NASA-owned equipment.	4/26/2017	4/25/2027
98	Goddard Space Flight Center (GSFC)	Norwegian Mapping Authority (NMA)	Reimbursable Space Act Agreement Between NASA and Norwegian Mapping Authority (NMA) Concerning Cooperation on Space Geodesy	Project-Specific Agreement (PSA)	Space Geodesy: Norwegian Mapping Authority (NMA) will reimburse NASA for the installation of a next generation Satellite Laser Ranging (SLR) station in Ny-Alesund, Norway, above the arctic circle. NASA and NMA will cooperate to contribute to the Global Geodetic Observing System.	8/7/2017	8/6/2027

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
99	Goddard Space Flight Center (GSFC)	International Center for Integrated Mountain Development (ICIMOD)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	The scientific goals of National Aeronautics and Space Administration (NASA) and the International Center for Integrated Mountain Development (ICIMOD) is to gain a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To accomplish this objective, NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements and are essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites. In support of this cooperation NASA and ICIMOD will establish one or more Sun photometers at mutually agreed sites, the operation of which will improve the understanding of the properties and concentration of aerosols and clouds, and their impact on both global and regional scales.	10/3/2017	10/3/2027
100	Goddard Space Flight Center (GSFC)	National Agency for Hydrometeorology and Environmental Monitoring	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	To extend the term of the existing AERONET agreement to establish sun photometer station in Mongolia.	11/22/2017	3/31/2027
101	Goddard Space Flight Center (GSFC)	The American Institute in Taiwan	Extension 1: Micro-Pulse Lidar Network (MPLNET) and the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Extension 1: American Institute in Taiwan (AIT)/Taiperi Economic and Cultural Representative Office (TECRO) Agreement to establish lidar and/or sun photometer stations in Taiwan. Also included is the extension of the NASA/AIT Designated Representative Agreement.	11/28/2017	12/31/2027
102	Goddard Space Flight Center (GSFC)	Manila Observatory of the Philippines	Agreement Between NASA and the Manila Observatory of the Philippines for Cooperation on the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Agreement between NASA and the Manila Observatory of the Philippines for Cooperation in the Aerosol Robotic Network (AERONET). Originally signed January 14, 2009, and expired January 30, 2018; then extended to January 30, 2028. NASAs scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality.	3/1/2018	1/30/2028
103	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	NASA-Canadian Space Agency (CSA) X-ray Astronomy Recovery Mission (XARM) Implementing Arrangement (IA)	Implementing Arrangement/Agreement (IA)	Canada will provide calibration testing for the X-ray Astronomy Recovery Mission (XARM) Resolve instrument. NASA and Canadian scientists on the NASA science team.	3/28/2018	12/31/2025
104	Goddard Space Flight Center (GSFC)	Institute of Space Technology (IST)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	to establish a sun photometer station in Pakistan to improve the understanding of the properties and concentrations of aerosols	4/6/2018	8/15/2100
105	Goddard Space Flight Center (GSFC)	National Centre of Meteorology Seismology	Amendment and Extension 1: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	Amendment and Extension 1: NASA and the National Centre of Meteorology and Seismology (NCMS) will cooperate on the AERONET program. NASA will provide equipment on loan which NCMS will host at a mutually agreed location.	5/16/2018	3/31/2027
106	Goddard Space Flight Center (GSFC)	Indian Institute of Technology (IIT), Kanpur	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Indian Institute of Technology (IIT) Kanpur will extend cooperation dating from 2001 on an AERONET sunphotometer station located at IIT Kanpur. NASA provides the equipment, and IIT Kanpur provides the site.	6/6/2018	1/30/2100
107	Goddard Space Flight Center (GSFC)	National Institute of Water and Atmospheric Research Ltd. (NIWA)	Agreement Between NASA and the National Institute of Water and Atmospheric Research of New Zealand for Cooperation in Lidar Atmospheric Measurement Comparisons	Project-Specific Agreement (PSA)	Cooperation in airborne science in the framework of the International Network for the Detection of Atmospheric Composition Change Validation Campaign (NDACC).	6/29/2018	12/31/2028
108	Goddard Space Flight Center (GSFC)	Universite de la Reunion	Network for the Detection of Atmospheric Chemical Change (NDACC)	Project-Specific Agreement (PSA)	NASA will use its mobile validation instrumentation at the Mado facility on Reunion Island to participate in a Network for the Detection of Atmospheric Chemical Change (NDACC) validation campaign with the Universite de la Reunion ozone profiling instruments.	7/4/2018	1/31/2028
109	Goddard Space Flight Center (GSFC)	Eduardo Mondlane University	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	to establish sun photometer stations at mutually agreed sites in Mozambique to measure vital areosol optical properties and water vapor	7/24/2018	12/31/2025
110	Goddard Space Flight Center (GSFC)	University of Botswana - Okavango Research Institute (UB-ORI)	Aerosol Robotic Network (AERONET) with the University of Botswana - Okavango Research Institute (UB-ORI)	Project-Specific Agreement (PSA)	NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of Sun photometers in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides necessary science measurements as well as being essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	9/19/2018	9/19/2028
111	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Implementing Arrangement (IA) for Cooperation on the Balloon-Borne Investigation of Temperature and Speed of Electrons in the Corona (BITSE)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) for cooperation on development and execution of technology demonstration balloon flight for a compact coronagraph instrument. Projected 2019 launch.	9/28/2018	12/31/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
112	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	X-Ray Imaging and Spectroscopy Mission (XRISM)	Project-Specific Agreement (PSA)	NASA will provide a key instrument and mission management expertise to this JAXA-led mission.	10/2/2018	10/2/2029
113	Goddard Space Flight Center (GSFC)	Institute of Oceanology, Polish Academy of Sciences (PAS)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	To establish a sun photometer station to improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on global and regional scales.	10/8/2018	10/8/2028
114	Goddard Space Flight Center (GSFC)	University of the Republic (Uruguay)	NASA UDELAR AERONET	Project-Specific Agreement (PSA)	NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements and are essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	10/9/2018	10/9/2028
115	Goddard Space Flight Center (GSFC)	University of the Witwatersrand	Agreement Between NASA and the University of Witwatersrand, Johannesburg, for Cooperation in the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	AERONET agreement with the University of Witwatersrand will provide a long term loan basis, one or more sun photometer systems and/or associated equipment for continuous operation at mutually-agreed sites; It will provide utilities, security, and housing for the station(s) at mutually-agreed location(s).	11/1/2018	10/28/2028
116	Goddard Space Flight Center (GSFC)	Regional Centre for Mapping of Resources for Development (RCMRD)	Letter of Agreement Between the National Aeronautics and Space Administration and The Regional Centre for Mapping of Resources for Development (RCMRD) Concerning Cooperation on Space Geodesy	Project-Specific Agreement (PSA)	Agreement to support the continued operations of established Global Navigation and Satellite System (GNSS) sites, and establishment of new Space Geodesy research sites in the Regional Centre for Mapping of Resources for Development (RCMRD) region.	11/28/2018	2/6/2027
117	Goddard Space Flight Center (GSFC)	Canadian Space Agency (CSA)	Extension 1 to the Agreement Between NASA and Canadian Space Agency (CSA) for Cooperation on the James Webb Space Telescope (JWST) Program	Project-Specific Agreement (PSA)	Extension 1: This agreement provides for the cooperation between NASA and Canadian Space Agency (CSA) on the James Webb Space Telescope (JWST) mission. CSA will provide the Fine Guidance Sensor while NASA will build the spacecraft. The European Space agency (ESA) is also a mission partner and will launch the mission. Formerly the Next Generation Space Telescope (NGST). Original: This agreement provides for the cooperation between NASA and Canadian Space Agency (CSA) on the James Webb Space Telescope (JWST) mission. CSA will provide the Fine Guidance Sensor while NASA will build the spacecraft. The European Space agency (ESA) is also a mission partner and will launch the mission. Formerly the Next Generation Space Telescope (NGST).	12/11/2018	3/31/2027
118	Goddard Space Flight Center (GSFC)		Implementing Arrangement between NASA and Korea Water Resources Corporation (K-Water) for Cooperation on Drought and Flood Analysis and Prediction in Asia/Korea using the NASA Land Information System (LIS)	Implementing Arrangement/Agreement (IA)	Cooperation on drought and flood analysis with K-Water under the 2016 U.S.-ROK Framework Agreement	12/19/2018	12/19/2024
119	Goddard Space Flight Center (GSFC)	Indian Space Research Organization (ISRO)	Chandrayaan-2 Laser Retroreflector Array (LRA)	Implementing Arrangement/Agreement (IA)	NASA will provide a Laser Retroreflector Array (LRA) which will be mounted to the Chandrayaan-2 Vikram Lander for laser ranging to the LRA from orbit with orbiting laser altimeters, such as the Lunar Orbiter Laser Altimeter (LOLA) on the Lunar Reconnaissance Orbiter (LRO).	2/11/2019	2/11/2025
120	Goddard Space Flight Center (GSFC)	Sao Tome and Principe	Cooperation in the NASA Pandora Project and Pandora Global Network (PGN)	Project-Specific Agreement (PSA)	NASA and Universidade de Sao Tome Principe (USTP) will establish one or more ground based air quality/atmospheric Sun spectrometer systems at mutually agreed site(s). The inclusion of these stations within the Pandora Global Network (PGN) will improve the understanding of the properties and concentrations of select trace gases, and their impact on both global and regional scales. Another objective of this cooperation is to encourage scientists from both NASA and USTP to develop research programs using data collected by USTP along with data available from the Pandora Project database located at NASA's Goddard Space Flight Center in Greenbelt, Maryland.	3/4/2019	3/4/2059
121	Goddard Space Flight Center (GSFC)	Natural Resources Canada (NRCAN)	Cooperation in Space Geodesy that Contribute to the Enhancement of the Global Geodetic Observing System (GGOS)	Project-Specific Agreement (PSA)	NASA/The Department of Natural Resources Canada (NRCAN) will cooperate in scientific programs in Earth observation and the enhancement of the Global Geodetic Observing System (GGOS).	4/16/2019	4/16/2029
122	Goddard Space Flight Center (GSFC)	National University of San Agustin (UNSA)	Extension 3: Space Geodesy: Satellite Laser Ranging (SLR)	Project-Specific Agreement (PSA)	Extension 3: NASA/Universidad Nacional de San Agustin (UNSA) will cooperate on the operation of a satellite laser tracking station at the National University of San Augustin (UNSA) Geophysical Institute at Characato in Arequipa, Peru. Extension 2: Cooperating Agency: Universidad Nacional de San Agustin (Peru) to operate a satellite laser tracking station at the National University of San Augustin (UNSA) Geophysical Institute at Characato in Arequipa, Peru.	4/30/2019	10/25/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
123	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Extension to Memorandum of Understanding (MOU) Between NASA and the Japan Aerospace Exploration Agency (JAXA) for Cooperation on the Global Precipitation Measurement (GPM) Program	Project-Specific Agreement (PSA)	Extension: The purpose of this Memorandum of Understanding (MOU) is to establish the terms and conditions under which NASA and JAXA will cooperate in the joint development, launch, operations and use of the Program for peaceful purposes. The Program consists of NASA and JAXA assets operating in partnership with other earth-observing satellites and instruments to produce global precipitation science data.	5/21/2019	12/31/2029
124	Goddard Space Flight Center (GSFC)	Bureau National D'Etudes Techniques et de Developpement (BNETD)	Agreement between the National Aeronautics and Space Administration and the Bureau National D'Etudes Techniques et de Developpement Concerning Cooperation on Space Geodetic Research	Project-Specific Agreement (PSA)	To establish cooperation in Earth observation and enhancement of the Global Geodetic Observing System (GGOS), development of space geodetic techniques, data sharing from local and global geodetic networks, improved analysis capability, and research on crustal motion, the interactions of the Earth systems, and natural hazards prediction and reduction.	7/12/2019	7/12/2029
125	Goddard Space Flight Center (GSFC)		Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration (NASA) and the European Space Agency (ESA) for Use of NASA's Space Network In Support of Ariane 6 Launches for ESA	Project-Specific Agreement (PSA)	Reimbursable Agreement between NASA and ESA for the use of NASA's Space Network (SN) Tracking and Data Relay Satellite (TDRS) in support of telemetry data independent of the Telemetry Ground Stations for the Ariane 6 Launch Systems (Ariane 6).	7/16/2019	7/16/2024
126	Goddard Space Flight Center (GSFC)	Major University of San Andres	NASA - UMSA AERONET	Project-Specific Agreement (PSA)	to establish sun photometer stations at mutually agreed sites in Bolivia to measure vital aerosol optical properties and water vapor	7/26/2019	7/26/2029
127	Goddard Space Flight Center (GSFC)	Space Research Organization of the Netherlands (SRON)	Agreement Between the National Aeronautics and Space Administration of the United States of American and The Netherlands Institute for Space Research for Cooperation on Using the Spectro-Polarimeter for Exploration on the Plankton, Aerosol, Cloud, ocean Ecosystem Mission	Project-Specific Agreement (PSA)	The PACE mission will extend the high quality ocean ecological, ocean biogeochemical, cloud, and aerosol particle data records begun by NASA in the 1990s. The mission will collect radiometric and polarimetric measurements of the ocean and atmosphere. The PACE observatory is comprised of one primary instrument, an Ocean Color Instrument (OCI) and two auxiliary instruments, the Hyper-Angular Rainbow Polarimeter 2 (HARP-2) and the Spectro-Polarimeter for Exploration (SPEXone). Under this Agreement, SRON will provide the SPEXone instrument to NASA for integration on the PACE spacecraft. SPEXone is a narrow swath and hyperspectral polarimeter, which will be used to characterize aerosol microphysical properties	7/31/2019	8/31/2027
128	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Determining Unknown yet Significant Traits (DUST)	Project-Specific Agreement (PSA)	DUST is a joint NASA-JAXA astrophysics sounding rocket mission. JAXA will provide the DUST payload for launch on a NASA sounding rocket. NASA will perform overall project management for the mission.	8/8/2019	12/31/2024
129	Goddard Space Flight Center (GSFC)	National Research Foundation (NRF)	Extension 1: Satellite Laser Ranging (SLR)	Project-Specific Agreement (PSA)	To continue cooperation with the National Research Foundation at the Hartebeesthoek Radio Astronomy Observatory (HartRAO) station measurement systems.	9/17/2019	9/30/2029
130	Goddard Space Flight Center (GSFC)	Hokkaido University (HokuDai)	Ocean Color Research and Lidar Field Work	Project-Specific Agreement (PSA)	NASA and Hokkaido University will collaborate on field campaigns and incorporate data into the SeaWiFS Bio-Optical Archive and Storage System (SeaBASS) archive. NASA will provide equipment (radiometers, for example) to make in situ measurements on Japanese campaigns. Hokkaido University will allow for visiting researchers and provide necessary support on Japanese campaigns.	10/1/2019	11/28/2024
131	Goddard Space Flight Center (GSFC)	Ministry of International Trade and Industry (MITI)	Amendment to Implementing Arrangement (IA) for Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) on Earth Observing System (EOS)	Implementing Arrangement/Agreement (IA)	The purpose of this Implementing Arrangement (IA) is to establish that the Parties will undertake scientific and technical cooperation for flight of the ASTER instrument on the NASA EOS-AM1 platform. The Parties jointly undertake this program with the purpose of furthering cooperation in global change research by enabling the multidisciplinary study and long-term systematic monitoring of the Earth, including research involving data from all Earth observing platforms contained in the IEOS and related activities of the IGBP, such as sensor calibration and data validation. Amendment to the IA - IA does not expire until end of mission.	10/15/2019	10/24/2026
132	Goddard Space Flight Center (GSFC)	Birla Institute of Technology, Extension Center Jaipur in Rajasthan	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA provides AERONET instrument and support. Partner agrees to provide maintenance.	10/15/2019	10/31/2029

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
133	Goddard Space Flight Center (GSFC)	Arab Academy for Science, Technology and Maritime Transport (AASTMT)	AERONET - Arab Academy for Science, Technology and Maritime Transport (AASTMT)	Project-Specific Agreement (PSA)	The scientific goals of the National Aeronautics and Space Administration (NASA) include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements and are essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	11/17/2019	11/18/2100
134	Goddard Space Flight Center (GSFC)	Bermuda Biological Station for Research, Inc.	Extension 2: Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Bermuda Institute of Ocean Sciences (BIOS) will continue to cooperate on the operation of an AERONET sunphotometer station located at BIOS. NASA provides the equipment, and BIOS provides the site.	11/18/2019	11/18/2100
135	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	Amendment: Hubble Space Telescope (HST)/2.4-Meter Space Telescope (ST)	Project-Specific Agreement (PSA)	Amendment to continue the cooperation between NASA and European Space Agency (ESA) on the HubbleSpace Telescope (HST). Provision of a space observatory for use by the international astronomy community to extend the sensitivity, resolving power, and spectral range of astronomical observations decisively beyond those achievable from Earth observatories.	12/19/2019	12/31/2024
136	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	Amendment: Memorandum of Understanding (MOU) Between NASA and European Space Agency (ESA) Concerning the James Webb Space Telescope (JWST)	Project-Specific Agreement (PSA)	Amendment to the Memorandum of Understanding (MOU) Between NASA-ESA that provides cooperation on the James WebbSpace Telescope (JWST) Mission.	12/19/2019	3/31/2027
137	Goddard Space Flight Center (GSFC)	University of Warsaw	AERONET cooperation with the University of Warsaw	Project-Specific Agreement (PSA)	NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements and are essential for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	12/19/2019	12/31/2050
138	Goddard Space Flight Center (GSFC)	Central Geophysical Observatory (CGO), Institute of Geophysics, Polish Academy of Sciences (PAS)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Institute of Geophysics - Polish Academy of Sciences will cooperate on the operation of an AERONET sunphotometer station located at the Institute of Geophysics. NASA provides the equipment, and the Polish Academy of Sciences provides the site.	4/16/2020	4/16/2030
139	Goddard Space Flight Center (GSFC)	University of Dhaka	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the University of Dhaka will cooperate on the operation of an AERONET sunphotometer station located at the University of Dhaka. NASA provides the equipment, and the University of Dhaka provides the site.	4/16/2020	1/25/2100
140	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	IA for AERONET Cooperation between NASA and ASI	Implementing Arrangement/Agreement (IA)	NASA and ASI shall establish one or more Sun photometers and/or lidar stations (hereinafter also referred to as "the station(s)") at mutually agreed sites. The inclusion of these stations within the global AERONET and/or MPLNET shall significantly improve the understanding of the properties and concentration of aerosols and clouds, and their impact on both global and regional scales. Another objective of this cooperation is to encourage scientists from both NASA and ASI to develop research programs using data collected by ASI along with data available from the global AERONET and MPLNET databases located at NASA's Goddard Space Flight Center in Greenbelt, Maryland.	4/20/2020	4/20/2025
141	Goddard Space Flight Center (GSFC)	Universidad Nacional de Colombia	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universidad Nacional de Colombia will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Colombia. NASA provides the equipment, and Universidad Nacional de Colombia provides the sites.	5/8/2020	6/26/2025
142	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	Amendment (1) to the Implementing Arrangement (IA) Between NASA and CNES for Cooperation in Orbital Debris Conjunction Assessment & Risk Analysis	Implementing Arrangement/Agreement (IA)	The purpose of this IA Amendment is to set forth the responsibilities of the Implementing Agencies for orbital debris conjunction assessment and risk analysis in order to provide improved mitigation options to satellite operators facing in-orbit collisions threats.	6/16/2020	6/15/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
143	Goddard Space Flight Center (GSFC)	European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Extension 1 of the Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the European Organization for the Exploitation of Meteorological Satellites for Cooperation on the Global Precipitation Measurement Mission	Project-Specific Agreement (PSA)	NASA will, for GPM, GCOM-W1, and all other GPM Partners' microwave sensor data, provide access to all Instrument Level 1 data and GPM data in both near real-time and as research products in accordance with GPM Partner data policies; provide access to NASA data products in both near real-time and as research products; and provide access to an algorithm theoretical basis document for the GPM data (including brightness temperature products and precipitation products) that discusses the calibration approach, geolocation, and key aspects of the conversion from instrument counts to brightness temperature. NASA will, for Ground Validation (GV) data provide access to GV data collected by NASA and GPM Partners, subject to GPM Partners' data policies; and for data processing of GPM data, provide read/write tools that can be used to read or write GPM data and NASA data products; provide data browser tools for GPM data and NASA data products; and provide assistance in understanding, interpreting, and using GPM data and NASA data products. EUMETSAT will provide access to EUMETSAT Meteosat Second Generation satellite Spinning Enhanced Visible and Infrared Imager (SEVIRI) and for first generation Metop satellite Microwave Humidity Sounder (MHS) data as quickly as possible from the time of observation, preferably within 24 hours and with as small transmission latency as possible, for the production of standard research quality merged global radiometer products; and provide an algorithm.	7/15/2020	12/31/2029
144	Goddard Space Flight Center (GSFC)	Austrian Research Promotion Agency (FFG)	Amendment 5 to the Agreement between NASA and FFG on the Time History of Events and Macroscale Interactions during Substorms (THEMIS)	Project-Specific Agreement (PSA)	Amendment 5: Cooperation in the Time History of Events and Macroscale Interactions during Substorms, a NASA mission to study the origin and global evolution of the magnetospheric substorm instability.	10/13/2020	3/31/2025
145	Goddard Space Flight Center (GSFC)	Institute of Applied Physics, Academy of Sciences of Moldova (ASM)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	The purpose of this letter agreement is to formalize cooperation between the National Aeronautics and Space Administration (NASA) of the United States of America and the Institute of Applied Physics of the Academy of Sciences (IAP-ASM) of Moldova (hereinafter referred to as "the Parties"), in the global AEROSOL ROBOTIC NETWORK (AERONET) program. NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality.	11/23/2020	9/22/2100
146	Goddard Space Flight Center (GSFC)	National Centre for Space Studies (CNES)	Second Amendment: Implementing Arrangement (IA) to provide data and calibration/validation cooperation between NASA and CNES on the U.S./Japan Global Precipitation Measurement (GPM) mission and French/Indian Megha-Tropiques mission.	Project-Specific Agreement (PSA)	Second Amendment: Implementing Arrangement (IA) to provide data and calibration/validation cooperation between NASA and CNES on the U.S./Japan Global Precipitation Measurement (GPM) mission and French/Indian Megha-Tropiques mission.	12/18/2020	12/31/2024
147	Goddard Space Flight Center (GSFC)	Centre for Remote Imaging, Sensing and Processing (CRISP), National University of Singapore	Agreement Between NASA and Centre for Remote Imaging, Sensing and Processing (CRISP), National University of Singapore (NUS) for Cooperation in the Aerosol Robotic Network (AERONET) and the Micro Pulse Lidar Network (MPLNET)	Project-Specific Agreement (PSA)	For the proposed arrangement, NASA and Centre for Remote Imaging, Sensing and Processing (CRISP), National University of Singapore (NUS) will establish one or more sun photometer and/or lidar stations at mutually agreed sites.	1/12/2021	1/30/2100
148	Goddard Space Flight Center (GSFC)	Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Ben Gurion University will continue to cooperate on the operation of an AERONET sunphotometer station located at Ben Gurion University's Jacob Blaustein Institutes for Desert Research. NASA provides the equipment, and Ben Gurion University provides the site.	4/21/2021	4/30/2100
149	Goddard Space Flight Center (GSFC)	Brazilian Space Agency (AEB)	Amendment 2: Space Geodesy: Space Geodetic Research and Global Positioning System (GPS)	Project-Specific Agreement (PSA)	To establish one or more permanent Global Positioning System (GPS) ground stations in Brazil Implementing Arrangement under the Framework.	4/28/2021	4/30/2030
150	Goddard Space Flight Center (GSFC)	Thailand - Silpakorn University	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Silpakorn University will continue to cooperate on the operation of an AERONET sunphotometer station located at mutually agreed sites in Thailand. NASA provides the equipment, and Silpakorn University provides the sites.	4/30/2021	4/30/2100
151	Goddard Space Flight Center (GSFC)	Universiti Sains Malaysia	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and Universiti Sains Malaysia (USM) will cooperate on the operation of an AERONET sunphotometer station located at USM. NASA provides the equipment, and USM provides the site.	6/10/2021	5/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
152	Goddard Space Flight Center (GSFC)	Geophysical Institute of Peru (IGP)	Agreement between the National Aeronautics and Space Administration (NASA) of the United States of America and the Geophysical Institute of Peru (IGP) for Cooperation in the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena with emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of sun photometers, called AERONET (AErosol RObotic NETwork), in cooperation with a wide range of international partner agencies and institutions. These devices are used to measure water vapor and aerosol optical properties, which are necessary measurements as well as being essential for ground-based validation for aerosol measurements taken by satellites. For the proposed arrangement, the National Aeronautics and Space Administration (NASA) and the Geophysical Institute of Peru (IGP) will establish sun photometer stations at mutually agreed sites.	7/1/2021	7/1/2500
153	Goddard Space Flight Center (GSFC)	European Space Agency	Memorandum of Understanding Concerning the Nancy Grace Roman Space Telescope Mission	Project-Specific Agreement (PSA)	Cooperative agreement for Roman Space Telescope; ESA to provide star-trackers.	7/22/2021	6/30/2034
154	Goddard Space Flight Center (GSFC)	Brazil - Ministry of Science, Technology and Innovation (MCTI)	Agreement on Cooperation in Science, Technology and Innovation between the National Aeronautics and Space Administration (NASA) of the United States of America and the Ministry of Science, Technology and Innovation (MCTI) of the Federative Republic of Brazil for Global Precipitation Measurement Ground Calibration and Validation	Project-Specific Agreement (PSA)	This agreement with the Ministry of Science, Technology and Innovation (MCTI) of Brazil allows for cooperation on calibration and validation for NASA's Global Precipitation Measurement (GPM) satellite. The agreement allows for NASA to use environmental data from Brazil's network of the National Center for Monitoring and Warnings of Natural Disasters (CEMADEN) for GPM cal/val. I will sign by correspondence for NASA, Minister Pontes of MCTI will sign for Brazil.	8/27/2021	8/26/2026
155	Goddard Space Flight Center (GSFC)	Government of Australia	NASA-SmartSat CRC SAR Agreement	Project-Specific Agreement (PSA)	Under this Agreement, NASA and SmartSat CRC will research and propose new system and waveform design to enhance the current SAR beacon technologies. By investigating limitations of existing SAR systems and the means of extending system capabilities to provide additional services, there is opportunity for extending to broader applications in emergency management and future exploration endeavors. NASA and SmartSat CRC will investigate the potential for enhanced services to extend beyond SAR to broader emergency management. The Parties share a goal of enabling highly reliable connectivity for those who may encounter a hazardous situation while living or working in places where reliable terrestrial network coverage is not guaranteed.	11/16/2021	11/16/2024
156	Goddard Space Flight Center (GSFC)	The Bureau of Meteorology of Australia	Loan Agreement between NASA and Australian Bureau of Meteorology on the Global Precipitation Measurement (GPM) Mission.	Project-Specific Agreement (PSA)	NASA GSFC to loan the Australian Bureau of Meteorology (BOM) a NASA Micro Rain Radar (MRR Pro) for BOM to perform precipitation measurements in the Southern Ocean, a critical region lacking in-situ validation for precipitation estimates and in which aerosol, cloud, and precipitation interactions and processes are poorly understood, hindering NASA's capability to predict future climate in this region. BOM will provide all data from the loaned radar to NASA, which will support GPM.	11/18/2021	11/18/2024
157	Goddard Space Flight Center (GSFC)	European Space Agency (ESA)	Amendment 6: Cooperation Under Solar Terrestrial Science Program (STSP) (CLUSTER I and SOHO)	Project-Specific Agreement (PSA)	Amendment 6: The Solar Terrestrial Science Programme (STSP) is composed of two missions: Cluster and SOHO. The combination will enhance the scientific return beyond the objectives of the individual missions. Cluster mission is to investigate small-scale structure in the Earth's plasma environment. Spacecraft SOHO - Solar and Heliospheric Observatory mission is developed by ESA to develop the launch of Ariane V. Expiration date was one year past nominal mission (Dec 2, 1998), but due to mission problems and loss of Cluster, agreement was in limbo until formally extended on Jan 16, 2003.	12/17/2021	12/31/2026
158	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration and the Japan Aerospace Exploration Agency For Space Communication and Navigation Near Space Network Services in Support of the JAXA H-IIA Launch Vehicle for SLIM/XRISM Mission	Project-Specific Agreement (PSA)	This Agreement is for the purpose of providing the JAXA-requested support for Near Space Network ("NSN") Tracking and Data Relay Satellite ("TDRS") services for one launch of the H-IIA launch vehicle (flight No. 47) for the Smart Lander for Investigating Moon ("SLIM") and X-Ray Imaging and Spectroscopy Mission ("XRISM") (the "H-IIA SLIM/XRISM Mission") launching from the Tanegashima Space Center in Japan.	12/22/2021	1/31/2025
159	Goddard Space Flight Center (GSFC)	Poland - Minister of Education and Science of the Republic of Poland	Agreement Between the National Aeronautics and Space Administration and the Minister of Education and Science of the Republic of Poland	Project-Specific Agreement (PSA)	Poland will provide one of ten instruments on the IMAP mission. IMAP is a NASA mission to provide the first comprehensive in situ and remote global observations to discover the fundamental physical processes that control the solar system's evolving space environment.	12/30/2021	12/30/2028
160	Goddard Space Flight Center (GSFC)	Max Planck Institute for Astronomy (MPIA)	Letter of Agreement Concerning Cooperation on the Nancy Grace Roman space Telescope	Project-Specific Agreement (PSA)	MPIA to provide hardware for the Roman CGI instrument.	1/11/2022	6/30/2037

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
161	Goddard Space Flight Center (GSFC)	The University of Auckland	Agreement Between NASA and University of Auckland for Cooperation in the Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	For the proposed arrangement, the National Aeronautics and Space Administration and the University of Auckland will establish one or more Sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on both global and regional scales.	3/7/2022	3/15/2029
162	Goddard Space Flight Center (GSFC)	Yonsei University	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA loans one or more sun photometers and related equipment for use and participation in the AERONET program.	3/18/2022	4/22/2032
163	Goddard Space Flight Center (GSFC)	National Centre for Scientific Research (CNRS), University of Lille 1	AERONET with CNRS	Project-Specific Agreement (PSA)	NASA and CNRS will establish one or more Sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on both global and regional scales. Another objective of this cooperation is to encourage scientists from both NASA and CNRS to develop research programs using data collected by CNRS along with aerosol data available from the global AERONET database located at NASA's Goddard Space Flight Center (GSFC) in Greenbelt, Maryland.	5/13/2022	12/31/2032
164	Goddard Space Flight Center (GSFC)	India - Amity University Haryana of India	AERONET	Project-Specific Agreement (PSA)	The scientific goals of the National Aeronautics and Space Administration (NASA) include a more detailed understanding of global atmospheric change phenomena, with a particular emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of Sun photometers, and the Aerosol Robotic Network (AERONET) in cooperation with a wide range of international partner agencies and institutions. Sun photometers are used to measure water vapor and aerosol optical properties. AERONET provides the necessary science measurements for ground-based validation of aerosol, cloud, and other measurements taken by satellites.	6/14/2022	6/14/2032
165	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and Korea Astronomy and Space Science Institute of the Republic of Korea for Cooperation on the Coronal Diagnostic Experiment (CODEX)	Implementing Arrangement/Agreement (IA)	Cooperation on the Coronal Diagnostic Experiment (CODEX) mission, a joint effort between NASA and KASI regarding a coronagraph instrument for use on the International Space Station (ISS) and potential future missions. The agreement covers integration of the instrument, software and electronic systems, flight of the instrument, testing activities, and data analysis activities. Supersedes KS-0064-0, KS-0064-1	6/29/2022	12/31/2027
166	Goddard Space Flight Center (GSFC)	Korea Astronomy and Space Science Institute (KASI)	Amendment to the Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration and the Korea Astronomy and Space Science Institute for the Coronal Diagnostic Experiment (CODEX)	Project-Specific Agreement (PSA)	Reimbursable activity to support instrument development of a coronagraph to be flown on the joint NASA-KASI Coronal Diagnostic Experiment (CODEX) mission. The agreement covers labor for mission systems engineering, designs for various interfaces and components, integration, and calibration. The amendment covers additional pre-flight testing at GSFC.	8/9/2022	12/31/2025
167	Goddard Space Flight Center (GSFC)	Oman - University of Nizwa (UoN)	AERONET - Aerosol Robotic Network	Project-Specific Agreement (PSA)	For the proposed arrangement, NASA and the University of Nizwa (UoN) (hereinafter referred to individually as "Party" or jointly as the "Parties") will establish one or more Sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and clouds, and their impact on both global and regional scales. Another objective of this cooperation is to encourage scientists from both the United States and Oman to develop research programs using data collected by UoN along with data available from the global AERONET database located at NASA's Goddard Space Flight Center (GSFC) in Greenbelt, Maryland.	8/23/2022	8/23/2032
168	Goddard Space Flight Center (GSFC)	Italian Space Agency (ASI)	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and the Italian Space Agency of the Italian Republic for Cooperation on Space Geodesy	Implementing Arrangement/Agreement (IA)	IA under the US-Italy Framework Agreement. NASA and ASI will partner on the development of space geodetic techniques, data sharing, and other related work.	9/21/2022	9/21/2032
169	Goddard Space Flight Center (GSFC)	Istituto Nazionale di Astrofisica (INAF)	Letter Agreement Between NASA and the National Institute of Astrophysics of the Italian Republic to cooperate on pre-flight testing of the Coronal Diagnostic Experiment	Project-Specific Agreement (PSA)	INAF will provide thermal vacuum and calibration facilities for the coronagraph and use the optical payload systems in Torino, Italy to provide thermal verification prior to the flight of the coronagraph.	11/10/2022	11/10/2029

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
170	Goddard Space Flight Center (GSFC)	Radio Research Agency of Korea	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and the Radio Research Agency of the Republic of Korea for Cooperation on the Interstellar Mapping and Acceleration Probe Active Link for Real Time (I-ALiRT) Service	Project-Specific Agreement (PSA)	To cooperate on the Interstellar Mapping and Acceleration Probe Active Link for Real Time (I-ALiRT) service, a space weather monitoring service to enable new ways of forecasting space weather by streaming real-time observations of conditions headed toward Earth to operators on the ground.	11/29/2022	11/29/2032
171	Goddard Space Flight Center (GSFC)	Japan Aerospace Exploration Agency (JAXA)	Magnetospheric Multiscale Mission (MMS)	Project-Specific Agreement (PSA)	NASA and the Japan Aerospace Exploration Agency (JAXA), have a mutual interest in cooperating on the Magnetospheric Multiscale (MMS) mission. The purpose of this letter is to establish a Letter of Agreement (hereinafter, "the Agreement") between NASA and JAXA (hereinafter, "the Parties") to accommodate the participation of JAXA researchers, Dr. Yoshifumi Saito and Dr. Toshifumi Mukai, in the MMS mission. NASA's Science Mission Directorate (SMD) is sponsoring the development of the MMS mission, which is a project in the Solar Terrestrial Probes (STP) program. The MMS mission will explore the Earth's magnetosphere with a constellation of four spacecraft with identical scientific payloads. Measurements made by these four spacecraft will help to explain the fundamental physical processes involved with magnetic reconnection in the Earth's magnetosphere.	12/28/2022	9/30/2026
172	Goddard Space Flight Center (GSFC)	Istituto di Scienze dell'Atmosfera e del Clima (ISAC)	Hydrological Cycle in Mediterranean Experiment (HyMeX)	Project-Specific Agreement (PSA)	Extension continues the Hydrological Cycle in Mediterranean Experiment (HyMeX): NASA will contribute ground-based precipitation measuring instruments; The Istituto Di Scienze Dell' Atmosfera Del Clima Consiglio Nazionale Delle Ricerche (ISAC) will provide sites and data.	1/11/2023	11/30/2026
173	Goddard Space Flight Center (GSFC)	National Space Policy Secretariat of Japan (NSPS)	Agreement between NASA and NSPS Concerning Cooperation in Space Geodesy for the QZSS Satellite System	Project-Specific Agreement (PSA)	Under this agreement, NSPS will establish GNSS station at NASA's KPGO monitoring site to contribute to the Japanese QZSS system and the Geodesy global network.	1/27/2023	3/31/2033
174	Goddard Space Flight Center (GSFC)	Geoscience Australia	Extension to the Agreement between NASA and Geoscience Australia for Cooperation in Space Geodesy	Project-Specific Agreement (PSA)	Extension to the agreement extends work for 10 years to continue work in space geodetic and satellite laser ranging work	2/1/2023	7/31/2032
175	Goddard Space Flight Center (GSFC)	Korea Republic of - Korea Astronomy and Space Science Institute (KASI)	Amendment to the Implementing Arrangement between the National Aeronautics and Space Administration and the Korea Astronomy and Space Science Institute of the Republic of Korea for Cooperation on the Small Scale Magnetospheric and Ionospheric Plasma Experiment (SNIPE)	Implementing Arrangement/Agreement (IA)	KASI plans to conduct the SNIPE mission, a constellation of four identically-instrumented CubeSats, to observe small scale ionospheric and magnetospheric plasma phenomena. KASI plans for the SNIPE mission CubeSats to each carry a langmuir probe, solid state particle detector, magnetometer, and a gamma-ray burst sensor. The KASI SNIPE mission aligns with NASA's Space Weather Science Applications strategy and objectives, a plan which aims to expand the role of NASA in space weather science by competing ideas and products, leveraging NASA capabilities, collaborating with national and international organizations, and partnering with user communities to facilitate the effective transition of science knowledge to operational environments.	4/26/2023	8/16/2027
176	Goddard Space Flight Center (GSFC)	Canada - University of Western Ontario	Aerosol Robotic Network (AERONET)/ Micro Pulse Lidar Network(MPLNET)	Project-Specific Agreement (PSA)	Cooperative research on aerosols using sun photometers and lidars, including the Micro Pulse Lidar Network (MPLNET), integrated into a global network in cooperation with a wide range of international partner agencies and institutions.	5/2/2023	5/2/2033
177	Goddard Space Flight Center (GSFC)	Canada - Canadian Space Agency (CSA)	Implementing Arrangement Between the National Aeronautics and Space Administration (NASA) and the Canadian Space Agency (CSA) For Cooperation to Maintain a Network of Ground-Based Observatories	Project-Specific Agreement (PSA)	In this cooperation, NASA and CSA plan to share the responsibility to support the sustained operation of the U.S.-Greenland-Canada GBO network. NASA and CSA also plan to expand the science missions these GBOs support, the instrumentation the GBOs house, and the number of physical GBO sites in the broader U.S.-Greenland-Canada GBO network.	6/6/2023	6/8/2033
178	Goddard Space Flight Center (GSFC)	Japan - Japan Aerospace Exploration Agency (JAXA)	X-Ray Imaging and Spectroscopy Mission (XRISM) Near-Space Network (NSN) Communications Coverage	Project-Specific Agreement (PSA)	Cooperative agreement between NASA and JAXA to mitigate the thruster-based safhold concerns for the XRISM project. The Parties intend to implement a spin-rate check on the spacecraft and add NASA's Near-Space Network (NSN) ground station support to minimize the time between passes, thereby speeding ground controller response time. This Agreement supplements the 2018 Memorandum of Understanding between NASA and JAXA for cooperation on XRISM, which addresses the full scope of cooperation between the Parties.	7/20/2023	12/31/2029

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
179	Goddard Space Flight Center (GSFC)	Korea, Republic of - Korea Astronomy and Space Science Institute (KASI)	Second Amendment to the Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration and the Korea Astronomy and Space Science Institute for the Coronal Diagnostic Experiment (CODEX)	Project-Specific Agreement (PSA)	Amendment to the Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration and the Korea Astronomy and Space Science Institute for the Coronal Diagnostic Experiment (CODEX) EPR: \$3,750,000	8/14/2023	12/31/2026
180	Goddard Space Flight Center (GSFC)	Korea, Republic of - Korea Astronomy and Space Science Institute (KASI)	Extension to the Implementing Arrangement (IA) for Cooperation on the Korea Astronomy and Space Science Institute (KASI) Geomagnetic Storm Forecast Model (KFSM)	Implementing Arrangement/Agreement (IA)	Extension to the Implementing Arrangement (IA) for cooperation on the development and installation of Korea Astronomy and Space Science Institute (KASI) geomagnetic storm forecasting model at the GSFC Community Coordinated Modeling Center (CCMC).	8/14/2023	8/14/2028
181	Goddard Space Flight Center (GSFC)	Brazil - Brazilian Space Agency (AEB)	Extension 2 - Very Long Baseline Interferometry (VLBI)	Project-Specific Agreement (PSA)	Extension 2 - NASA and the Brazilian Space Agency (AEB) will continue to cooperate on space geodesy with emphasis in VLBI. NASA loans equipment to AEB, and AEB operates a station. Cooperative space geodesy program with emphasis on the techniques and science derived from Very Long Baseline Interferometry (VLBI) IA under the Framework.	8/28/2023	8/8/2024
182	Goddard Space Flight Center (GSFC)	Spain - University of Valladolid (UVA)	Aerosol Robotic Network (AERONET)	Project-Specific Agreement (PSA)	NASA and the Universidad de Valladolid of Spain will cooperate on the AERONET program. NASA will provide equipment on loan which the Universidad de Valladolid will host at a mutually agreed location.	12/5/2023	12/31/2027
183	Goddard Space Flight Center (GSFC)	Italy - Italian Space Agency (ASI)	Extension to MOU between NASA and the Italian Space Agency (ASI) for Cooperation on the Fermi (formerly GLAST) mission.	Project-Specific Agreement (PSA)	Extends LOA for through 2025 to continue work on Fermi mission while on orbit.	12/29/2023	12/31/2025
184	Goddard Space Flight Center (GSFC)	Italy - Italian Space Agency (ASI)	Implementing Arrangement between NASA and the Italian Space Agency (ASI) on the Niel Gehrels Swift Observatory Mission.	Project-Specific Agreement (PSA)	Outlines responsibilities for work on data and other on orbit tasks for the Swift Observatory.	12/29/2023	9/30/2027
185	Goddard Space Flight Center (GSFC)	Italy - Italian Space Agency (ASI)	Implementing Arrangement between NASA and the Italian Space Agency (ASI) on the Compton Spectrometer and Imager (COSI) Mission	Project-Specific Agreement (PSA)	Outlines responsibilities for cooperation on NASA-led COSI mission, including ASI ground support and data team participation.	12/29/2023	12/31/2032
186	Goddard Space Flight Center (GSFC)	Germany - German Aerospace Center (DLR)	Implementing Arrangement between the National Aeronautics and Space Administration (NASA) and the German Aerospace Center (DLR) for Cooperation on the Multi-Slit Solar Explorer (MUSE) Mission	Implementing Arrangement/Agreement (IA)	The primary goal of the MUSE mission is to investigate the causes of coronal heating and large-scale instability in the solar atmosphere, such as flares and coronal mass ejections, and gain insight into the basic plasma properties of the corona. NASA intends to launch MUSE no earlier than June 2027, and intends to share with DLR the MUSE scientific data. DLR intends to provide spectrograph gratings and a hollow cathode EUV source and support the instrument calibration and scientific investigation.	1/2/2024	1/2/2034
187	Goddard Space Flight Center (GSFC)	France - National Centre for Space Studies (CNES)	Implementing Arrangement between NASA and the Centre National D'Etudes Spatiales (CNES) on the Compton Spectrometer and Imager (COSI) Mission	Project-Specific Agreement (PSA)	Outlines responsibilities for cooperation on NASA-led COSI mission, including French contribution of prototype detector and science team participation.	1/31/2024	12/31/2032
188	Goddard Space Flight Center (GSFC)	United Kingdom - United Kingdom Space Agency (UKSA)	Agreement between the National Aeronautics and Space Administration and the United Kingdom Space Agency for Cooperation on the Hinode Mission	Project-Specific Agreement (PSA)	NASA and UKSA renew their expired cooperation in Hinode, in which they previously cooperated to contribute the Extremeultraviolet Imaging Spectrometer (EIS) instrument. Hinode is an operating mission for which the international agreement had previously been expired for more than one year.	2/7/2024	3/31/2032
189	Goddard Space Flight Center (GSFC)	Sweden - Swedish National Space Agency (SNSA)	Amendment 2 to the Implementing Arrangement Between the National Aeronautics and Space Administration and the Swedish National Space Administration (SNSA) on the Magnetospheric Multiscale Mission (MMS)	Implementing Arrangement/Agreement (IA)	Cooperation on magnetospheric multiscale mission	3/18/2024	3/31/2028
190	Goddard Space Flight Center (GSFC)	Korea, Republic of - Korea Astronomy and Space Science Institute (KASI)	Amendment 3 to the Agreement between NASA and KASI in Solar and Space Physics and Space Weather Research	Project-Specific Agreement (PSA)	Amendment to the Agreement between NASA and KASI in Solar and Space Physics and Space Weather Research	3/20/2024	3/31/2030
191	Goddard Space Flight Center (GSFC)	Switzerland - Swiss Space Office (SSO)	Extension to the Agreement between NASA and the Swiss Space Office on the Solar Terrestrial Observatory (STEREO)	Project-Specific Agreement (PSA)	Cooperation in the Solar Terrestrial Observatory (STEREO) mission, a mission to address the origin, evolution and interplanetary consequences of the coronal mass ejection.	3/22/2024	3/31/2028

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
192	Goddard Space Flight Center (GSFC)	France - National Centre for Space Studies (CNES)	Extension to the Agreement between NASA and the Centre National d'Etudes Spatiales on the Solar Terrestrial Observatory (STEREO)	Project-Specific Agreement (PSA)	Cooperation in the Solar Terrestrial Observatory (STEREO) mission, a mission to address the origin, evolution and interplanetary consequences of the coronal mass ejection.	3/27/2024	3/31/2028
193	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Ministry of Environment of the Slovak Republic	Agreement between the National Aeronautics and Space Administration of the United States of America and the Ministry of Environment of the Slovak Republic for Cooperation in the GLOBE Program	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	12/31/2019	12/31/2100
194	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Australia - Australian Space Agency (ASA)	Global Learning and Observations to Benefit the Environment (GLOBE) program	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	6/19/2020	6/21/2100
195	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Prefeitura de Rio de Janeiro, Brazil	Hazard Monitoring and Disaster Response In and Around Rio de Janeiro, Brazil	Implementing Arrangement/Agreement (IA)	The purpose of this Agreement is to forge cooperation that strengthens scientific collaboration between NASA and the City of Rio de Janeiro, specifically through the routine exchange of knowledge across disciplines and the use of Earth observations data and data products to enable innovative and ongoing efforts to anticipate, monitor and better assess the contributions to disaster risk from multiple natural hazards (including flooding, inundation, landslides, mudslides, drought, heat islands, fires, etc.) in the vicinity of Rio de Janeiro.	10/13/2020	10/30/2025
196	Goddard Space Flight Center (GSFC),Headquarters (HQ)	National Institute of Aeronautics and Space of the Republic of Indonesia (LAPAN)	Agreement between NASA and the National Institute of Aeronautics and Space of the Republic of Indonesia (LAPAN) for Cooperation in the Use of Ozonesondes to study Atmospheric Pollution	Project-Specific Agreement (PSA)	Under this agreement, NASA and LAPAN will collaborate on NASA's Southern Hemisphere Additional Ozonesondes (SHADOZ) program by collecting balloon-borne ozonesonde data obtained from LAPAN from the Island of Java.	11/4/2020	2/4/2025
197	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Reimbursable Space Act Agreement Between the National Aeronautics and Space Administration and the Japan Aerospace Exploration Agency For Space Communication and Navigation Space Network Services in Support of the JAXA H3 Launch Vehicle / Compatibility Test and Precursor Flight	Project-Specific Agreement (PSA)	Reimbursable agreement between NASA and the Japan Aerospace Exploration Corporation (JAXA) for the Space Network (SN) Tracking and Data Relay Satellite (TDRS) services for one launch of the H-3 launch vehicle for the H-3/Mission 1 flight, to provide real-time telemetry of major events. Under this Agreement, the SN TDRS downlink support from NASA is requested for JAXA's scheduled launch of the H-3/Mission 1 with a launch date no earlier than July 1, 2022, which is the precursor flight to Martian Moon eXploration (MMX) mission on the H3 launch vehicle in the summer of 2024.	1/6/2021	3/31/2026
198	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Norwegian Mapping Authority (NMA)	Space Geodesy: Norwegian Mapping Authority (NMA) Agreement	Project-Specific Agreement (PSA)	An agreement for cooperation in the field of space geodesy, including Satellite Laser Ranging (SLR), Very Long Baseline Interferometry (VLBI), and Global Navigation Satellite Systems (GNSS).	2/10/2021	1/1/2031
199	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Royal Government of Bhutan (GOB)	Agreement between the National Aeronautics and Space Administration of the United States of America and the Royal Government of Bhutan for Cooperation in the GLOBE Program	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	3/19/2021	3/19/2026
200	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Ministry of Education, Science, Culture and Sport of the Republic of Armenia	Agreement between the National Aeronautics and Space Administration of the United States of America and the Ministry of Education, Science, Culture and Sport of the Republic of Armenia for Cooperation in the GLOBE Program	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	6/14/2021	6/14/2100
201	Goddard Space Flight Center (GSFC),Headquarters (HQ)	European Space Agency (ESA)	Reimbursable Space Act Agreement Between NASA and the European Space Agency (ESA) for Use of NASA's Space Network Tracking and Data Relay Satellite System (TDRSS) in Support of Vega Launches for ESA	Project-Specific Agreement (PSA)	This Reimbursable Space Act Agreement (hereinafter referred to as 'Agreement') is for the purpose of setting out the terms and conditions with regard to both the initial and the recurrent work to be performed by NASA for ESA's use of the Space Network Tracking and Data Relay Satellite System (TDRSS) in support of telemetry data independent of the Telemetry Ground Stations for the Vega Launch Systems (VEGA).	9/8/2021	5/24/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
202	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Italian Space Agency (ASI)	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and the Italian Space Agency of the Italian Republic for Technology Demonstrations of the Lunar GNSS Receiver Experiment - LuGRE	Implementing Arrangement/Agreement (IA)	LuGRE is an experimental payload that will fly a GPS + Galileo navigation receiver to the lunar surface to demonstrate autonomous real-time onboard navigation in the lunar environment. It will receive GPS and Galileo signals and use them to calculate position, navigation, and timing (PNT) solutions ("fixes") during the Earth-Moon transit phase, and then on the lunar surface for a 12-day surface mission duration. LuGRE will return the navigation solutions themselves, the raw precursor measurements, and raw signal samples, allowing the Implementing Agencies to "play back" the signals in a lab for development of future operational receivers. This is a critical demonstrator for precise onboard lunar navigation, which is itself an enabler for lunar telecommunications network services like LunaNet, lunar-vicinity relays, surface beacons, and other communications and navigation components of the lunar exploration architecture.	9/13/2021	9/13/2026
203	Goddard Space Flight Center (GSFC),Headquarters (HQ)	Indian Space Research Organization (ISRO)	NASA-ISRO Chandrayaan-3 LRA	Implementing Arrangement/Agreement (IA)	NASA is contributing a laser retroreflector array (LRA) to the ISRO Chandrayaan-3 lunar lander mission.	2/25/2022	2/25/2028
204	Goddard Space Flight Center (GSFC),Headquarters (HQ)	German Aerospace Center (DLR)	Amendment to the Implementing Arrangement Between the National Aeronautics and Space Administration and the German Aerospace Center for Cooperation on the Collaborative Effort for Digital Beamforming Synthetic Aperture Radar Studies (CoSAR)	Implementing Arrangement/Agreement (IA)	Cooperation on synthetic aperture radar missions	3/10/2022	3/31/2025
205	Goddard Space Flight Center (GSFC),Headquarters (HQ)	France - National Centre for Space Studies (CNES)	Implementing Arrangement Between the National Aeronautics and Space Administration of the United States of America and the Centre National D'Etudes Spatiales of France on the Nancy Grace Roman Space Telescope Mission.	Implementing Arrangement/Agreement (IA)	NASA and CNES will collaborate on the Nancy Grace Roman Telescope. Through this IA, which is under the French Framework Agreement, CNES will deliver a set of flight superpolished optics for the CGI and data processing pipelines for grism and prism analysis. NASA leads overall project management for the Roman mission.	4/18/2023	4/18/2033
206	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	Agreement Between the European Space Agency (ESA) and NASA Concerning Network and Operations Cross Support	Project-Specific Agreement (PSA)	This agreement provides for a legal framework and the conditions for a mutually beneficial long-term cooperation between NASA and ESA in the areas of network and operations cross support. This includes telemetry data acquisition, tracking, and command. This agreement provides for implementing arrangements to be completed for mission specific activities. This Agreement supersedes and terminates ESA-0239-0, -1, and -2.	3/20/2017	3/21/2027
207	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA)	Earth Observation Satellite Data Exchange	Project-Specific Agreement (PSA)	JAXA will provide non-public data to NASA Principle Investigators who responded to JAXA announcements of opportunity.	2/26/2018	2/26/2028
208	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	South African Radio Astronomical Observatory (SARAO)	Space Geodesy: Hartebeesthoek Radio Astronomy Observatory (HartRAO)	Project-Specific Agreement (PSA)	Agreement between the National Aeronautics and Space Administration (NASA) and the South African Radio Astronomy Observatory (SARAO) concerning Space Geodetic Research using the Global Navigation Satellite System (GNSS) technique. This agreement supersedes a previous agreement with the same organization, then the Hartebeesthoek Radio Astronom Observatory. This agreement establishes one or more permanent GPS ground stations, with the first agreed-upon station to be located at Hartebeesthoek.	9/12/2018	9/12/2028
209	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Nigerian National Space Research and Development Agency (NASDRA)	Extension: Space Geodesy: Extension of LOA Between NASA and the Nigerian National Space Research and Development Agency (NASDRA) for Cooperation on Geo-Hazards Research	Project-Specific Agreement (PSA)	Extension: NASA responsibilities include long term loan of one or more GPS receivers, antennas, computers, and associated equipment, training for use of NASA provide equipment and software, data analysis support. NASDRA responsibilities include - logistical support, personnel, and support data analysis.	9/25/2018	9/25/2028
210	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA)	Wide Field Infrared Space Telescope	Project-Specific Agreement (PSA)	Agreement to study possible cooperation on the NASA WFIRST Mission.	4/3/2020	3/31/2025
211	Goddard Space Flight Center (GSFC),Jet Propulsion Laboratory (JPL)	Chinese Academy of Sciences (CAS)	Amendment and Extension 3: Cooperation on Space Geodesy for the solution on important scientific problems in geophysics	Project-Specific Agreement (PSA)	Amendment and Extension : 3 Cooperation for data exchange in support of space geodetic research and geohazards research.	8/27/2020	3/15/2025
212	Headquarters (HQ)	Russian Federal Space Agency (Roskosmos)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/16/1994	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
213	Headquarters (HQ)	Ministry of Education and the Department of Environmental Protection	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/30/1995	12/31/2100
214	Headquarters (HQ)	Government of the Kingdom of the Netherlands	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2/28/1995	12/31/2100
215	Headquarters (HQ)	Government of the Republic of Senegal	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/17/1995	12/31/2100
216	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/20/1995	12/31/2100
217	Headquarters (HQ)	National Board of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/23/1995	12/31/2100
218	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/24/1995	12/31/2100
219	Headquarters (HQ)	Ministry of the Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/24/1995	12/31/2100
220	Headquarters (HQ)	Ministry of Ecology and Biological Resources	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/27/1995	12/31/2100
221	Headquarters (HQ)	Government of the Kingdom of Norway	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	Mission: Education. The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/5/1995	12/31/2100
222	Headquarters (HQ)	Ministry of Education and Sport	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/12/1995	12/31/2100
223	Headquarters (HQ)	Federal Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/20/1995	12/31/2100
224	Headquarters (HQ)	Ministry of Education, Youth, and Sport	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/20/1995	12/31/2100
225	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/21/1995	12/31/2100
226	Headquarters (HQ)	Ministry of Housing, Land Use Planning, and the Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/21/1995	12/31/2100
227	Headquarters (HQ)	Ministry of Sustainable Development and Planning (MDSP)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1995	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
228	Headquarters (HQ)	Government of Japan	Japan Cross-Waiver of Liability for Cooperation in Peaceful Exploration and Use of Outer Space	Umbrella/Framework Agreement (UM/FW)	Agreement establishing a cross-waiver of liability for cooperation in the exploration and use of space for peaceful purposes to go into force on the date on which the governments of the United States and Japan exchange notes informing each other that their respective legal procedures necessary for entry into force have been completed. That exchange of notes is agreement JA-0292 of 07/20/1995. See, also, agreement JA-0290 of 10/25/1994. All merged here now, others deleted. Note that this cross waiver does not apply to ISS Cooperation.	4/24/1995	12/31/2100
229	Headquarters (HQ)	Ministry of National Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/28/1995	12/31/2100
230	Headquarters (HQ)	Ministry of National Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/5/1995	12/31/2100
231	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/22/1995	12/31/2100
232	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/9/1995	12/31/2100
233	Headquarters (HQ)	Department of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/12/1995	12/31/2100
234	Headquarters (HQ)	Ministry of Culture and Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/28/1995	12/31/2100
235	Headquarters (HQ)	Ministry of Environment of Tunisia	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/27/1995	12/31/2100
236	Headquarters (HQ)	National Agency for Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/23/1995	12/31/2100
237	Headquarters (HQ)	Ministry of Planning and Cooperation	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/27/1995	12/31/2100
238	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/11/1995	12/31/2100
239	Headquarters (HQ)	Ministry of National Education and Religious Affairs	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/12/1995	12/31/2100
240	Headquarters (HQ)	Ministry of National Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/27/1996	12/31/2100
241	Headquarters (HQ)	Ministry of the Environment and Energy	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1996	12/31/2100
242	Headquarters (HQ)	Education Ministry	Global Learning and Observations to benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1996	12/31/2100
243	Headquarters (HQ)	Department of the Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/1/1996	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
244	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/19/1996	12/31/2100
245	Headquarters (HQ)	National Environmental Agency	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/12/1996	12/31/2100
246	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/16/1996	12/31/2100
247	Headquarters (HQ)	Ministry of National Education and Professional Training	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/10/1996	12/31/2100
248	Headquarters (HQ)	Republic of Marshall Islands Government	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/17/1996	12/31/2100
249	Headquarters (HQ)	Ministry of Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/31/1996	12/31/2100
250	Headquarters (HQ)	Ministry of Environment, Natural Resources, and Fisheries	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/15/1996	12/31/2100
251	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/21/1997	12/31/2100
252	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/28/1997	12/31/2100
253	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/30/1997	12/31/2100
254	Headquarters (HQ)	Government of South Africa	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2/17/1997	12/31/2100
255	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/1/1997	12/31/2100
256	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/2/1997	12/31/2100
257	Headquarters (HQ)	Government of Canada	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/7/1997	12/31/2100
258	Headquarters (HQ)	Government of Mongolia	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/6/1997	12/31/2100
259	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/29/1997	12/31/2100
260	Headquarters (HQ)	Ministry of Science and Culture	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/30/1997	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
261	Headquarters (HQ)	Ministry of Secondary and Primary Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/11/1997	12/31/2100
262	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/20/1997	1/1/2100
263	Headquarters (HQ)	National Environmental Council	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/18/1997	12/31/2100
264	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/15/1997	12/31/2100
265	Headquarters (HQ)	Ministry of Basic Education and Culture	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/8/1997	12/31/2100
266	Headquarters (HQ)	National Department of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/7/1997	12/31/2100
267	Headquarters (HQ)	Ministry of National Education and Professional Training	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/13/1997	12/31/2100
268	Headquarters (HQ)	Ministry of Environment, Local Government, and Rural Development	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/18/1997	12/31/2100
269	Headquarters (HQ)	Government of the Republic of Mali	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/19/1997	12/31/2100
270	Headquarters (HQ)	National Central School of Agriculture	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/5/1997	12/31/2100
271	Headquarters (HQ)	Ministry of Education and Popular Development	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/23/1997	12/31/2100
272	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/20/1998	12/31/2100
273	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/16/1998	12/31/2100
274	Headquarters (HQ)	Federal Department for Environment, Transport, Energy, and Communication	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/22/1998	12/31/2100
275	Headquarters (HQ)	Government of Spain	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/5/1998	12/31/2100
276	Headquarters (HQ)	Ministry of Pre-University Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/14/1998	12/31/2100
277	Headquarters (HQ)	Ministry of Foreign Affairs	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists, together to study the global environment.	8/24/1998	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
278	Headquarters (HQ)	Ministry of Education and Science	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/8/1998	12/31/2100
279	Headquarters (HQ)	Ministry of Education and the Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/28/1998	12/31/2100
280	Headquarters (HQ)	Ministry of National Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/6/1998	12/31/2100
281	Headquarters (HQ)	Ministry of Education and Culture	Global Learning and Observations to benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/24/1998	12/31/2100
282	Headquarters (HQ)	Government of Uganda	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/26/1998	12/31/2100
283	Headquarters (HQ)	Ministry of Secondary, Higher Education and Scientific Research	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/18/1998	12/31/2100
284	Headquarters (HQ)	Ministry of Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/23/1998	12/31/2100
285	Headquarters (HQ)	Department of Science and Technology	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/14/1999	12/31/2100
286	Headquarters (HQ)	Ministry of Education and Science	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	1/27/1999	12/31/2100
287	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/10/1999	12/31/2100
288	Headquarters (HQ)	Government of Kuwait	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	4/12/1999	12/31/2100
289	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	5/27/1999	12/31/2100
290	Headquarters (HQ)	Federal Environmental Agency	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/6/1999	12/31/2100
291	Headquarters (HQ)	Institute for the Promotion of Teaching Science and Technology	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/30/1999	12/31/2100
292	Headquarters (HQ)	Central Environmental Authority	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/20/1999	12/31/2100
293	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	2/29/2000	12/31/2100
294	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/2/2000	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
295	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/3/2000	12/31/2100
296	Headquarters (HQ)	Government of Monaco	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/29/2000	12/31/2100
297	Headquarters (HQ)	The Ministry of Education and Youth	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/12/2000	12/31/2100
298	Headquarters (HQ)	Ministry of Foreign Affairs	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/9/2000	12/31/2100
299	Headquarters (HQ)	Ministry of Environment and Forests	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/25/2000	12/31/2100
300	Headquarters (HQ)	Ministry of Education and Higher Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/27/2000	12/31/2100
301	Headquarters (HQ)	Ministry of Science and Technology	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/4/2000	12/31/2100
302	Headquarters (HQ)	Ministry of Education and Culture and the Secretariat of the Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/27/2000	12/31/2100
303	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/16/2001	12/31/2100
304	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/15/2002	12/31/2100
305	Headquarters (HQ)	Government of the Kingdom of Saudi Arabia	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	9/30/2002	12/31/2100
306	Headquarters (HQ)	Ministry of Education and Science	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/3/2002	12/31/2100
307	Headquarters (HQ)	Government of Yugoslavia (first)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/17/2002	12/31/2100
308	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	3/26/2003	12/31/2100
309	Headquarters (HQ)	The Ministry of National Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/11/2003	12/31/2100
310	Headquarters (HQ)	Ministry of Education, Science, Technology and Scientific Research	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/21/2003	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
311	Headquarters (HQ)	The Environment Research Centre, Ministry of Home Affairs and Environment of the Republic of Maldives	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/8/2003	12/31/2100
312	Headquarters (HQ)	Ministry of Education of the Islamic Republic of Mauritania	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/6/2004	1/1/2100
313	Headquarters (HQ)	Ministry of Primary and Secondary Education of the Republic of Congo	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/28/2005	12/31/2100
314	Headquarters (HQ)	For the Ministry of Basic Education and Alphabetization	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/11/2005	12/31/2100
315	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	8/24/2005	12/31/2100
316	Headquarters (HQ)	Ministry of Education	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	11/29/2007	12/31/2100
317	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Joint Understanding	Umbrella/Framework Agreement (UM/FW)	This document is similar to a framework agreement wherein NASA and JAXA have agreed upon standard legal text when concluding lower-level cooperative letters of agreement. There is no contribution from either party.	10/16/2008	12/31/2100
318	Headquarters (HQ)	Ministry of Education of the Sultanate of Oman	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle, and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	12/8/2009	1/1/2100
319	Headquarters (HQ)	National Centre for Space Studies (CNES), European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)	Memorandum of Understanding (MOU) among National Oceanographic and Atmospheric Administration (NOAA), NASA, European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) and National Center for Space Studies [Centre National d'Etudes Spatiales] (CNES) for Cooperation in the Jason-3 Program	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): The Jason-3 Program will design to provide continuity to the accuracy and coverage of the Topex/Poseidon, Jason-1 and OSTM/Jason-2 missions. These three missions collected data for scientific research and support operational applications related to extreme weather events, operational oceanography, climate applications and forecasting. NOAA and The European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) are the lead agencies. NASA and CNES are providing hardware to NOAA and EUMETSAT under separate domestic agreements. NASA's involvement in collaborative activities is very limited -- NASA is supporting NOAA in science selection and, in return, obtaining science data.	7/13/2010	12/31/2030
320	Headquarters (HQ)	Brazil - Federative Republic of Brazil	Brazil Framework Agreement on Cooperation in the Peaceful Uses of Outer Space	Umbrella/Framework Agreement (UM/FW)	This is a Framework Agreement between the United States Government and the Government of the Federative Republic of Brazil on the cooperation in the peaceful uses of outer space. Recalling their useful cooperation through implementation of cooperative activities in a broad range of space science and applications areas and considering the desirability of enhanced cooperation between the agencies have potential benefits to all nations.	3/19/2011	4/3/2038

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
321	Headquarters (HQ)	German Aerospace Center (DLR)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Solar Probe Plus (SPP) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Between NASA and DLR that will develop the Solar Probe Plus (SPP), a spacecraft equipped to perform scientific studies of the Sun. NASA plans to launch the SPP in 2018 from Cape Canaveral, Florida, aboard an Atlas V class launch vehicle. The primary scientific objectives, to be carried out during the mission, will be to determine the structure and dynamics of the magnetic fields at the sources of both fast and slow solar wind, to trace the flow of energy that heats the corona and accelerates the solar wind, and to determine what mechanisms accelerate and transport energetic particles. Instruments include a wide-field imager, fast ion analyzer, fast electron analyzer, energetic particle instrument, magnetometer, and plasma wave instrument. DLR and NASA will be cooperating on the Wide Field Imager for Solar Probe (WISPR) Investigation on the SPP mission. WISPR will track density fluctuations in the solar corona by imaging visible sunlight scattered by electrons in the corona as the spacecraft traverses through its perihelion passes. International participation on this mission also includes France and Belgium.	3/20/2012	9/30/2026
322	Headquarters (HQ)	Government of the Italian Republic	Framework Agreement Between the Government of the United States of America and the Government of the Italian Republic for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Government to Government Agreement between the U.S. and the Italian Republic for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes signed on March 19, 2013. This Agreement enters into force on the date of the last note of an exchange of diplomatic notes in which the Parties notify each other of the completion of their internal procedures necessary for the entry into force of this Agreement. (Italy Note Verbale signed January 19, 2016. Dept. of State Dip Note 195 stamped February 18, 2016.)	3/19/2013	2/11/2026
323	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	7/3/2014	1/1/2100
324	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Hayabusa-2 and OSIRIS-REx Memorandum of Understanding (MOU)	Project-Specific Agreement (PSA)	Hayabusa2 is a JAXA mission, on which NASA is collaborating, which builds on lessons learned from JAXA's initial Hayabusa mission that collected samples from a small asteroid named Itokawa and returned them to Earth in June 2010. Hayabusa-2's target is a 1 kilometer-wide asteroid named 1999 JU3, a C-type asteroid which is thought to contain more organic material than other asteroids. Scientists hope to better understand how the solar system evolved by studying samples from these asteroids. NASA and JAXA are cooperating on the mission science and NASA will receive a portion of the Hayabusa2 sample in exchange for providing Deep Space Network communications and navigation support for the mission. In addition, JAXA and NASA will collaborate on the science of NASA's Origins, Spectral Interpretation, Resource Identification, Security - Regolith Explorer (OSIRIS-REx) mission to mutually maximize their missions' results. OSIRIS-REx, the first U.S. asteroid sample return mission, is scheduled to launch in 2016. OSIRIS-REx will rendezvous with the 500-meter-long asteroid Bennu in 2019 for detailed reconnaissance and a return of samples to Earth in 2023.	11/17/2014	11/17/2025
325	Headquarters (HQ)	Brazilian Space Agency (AEB)	Implementing Arrangement (IA) for Cooperation Between NASA and the Brazilian Space Agency (AEB) of the Federative Republic of Brazil in Heliophysics and Space Weather Research	Implementing Arrangement/Agreement (IA)	NASA and the Brazilian Space Agency (AEB) signed an IA under the U.S.-Brazil Framework Agreement on Cooperation in the Peaceful Uses of Outer Space that will facilitate enhanced cooperation in the fields of solar and space physics (heliophysics) and space weather research. Under the IA, AEB, through the Brazilian National Institute for Space Research (INPE), will acquire and process space weather broadcast data from NASA's Van Allen Probes mission, which was launched in 2012. The IA also enables Brazilian participation in the research working groups of NASA heliophysics missions, including the Van Allen Probes mission and the Magnetospheric MultiScale mission, and promotes continued discussion on new projects for potential U.S.-Brazil collaboration in heliophysics and space weather research.	6/30/2015	6/30/2025
326	Headquarters (HQ)	Brazilian Space Agency (AEB)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	6/30/2015	6/30/2100
327	Headquarters (HQ)	The Ministry of Education and Human Resources, Tertiary Education and Scientific Research of the Republic of Mauritius	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	10/5/2015	10/5/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
328	Headquarters (HQ)	Israel - Israel Space Agency (ISA)	Framework Agreement Between NASA and the Israel Space Agency (ISA) for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement between NASA and the Israel Space Agency (ISA) for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes.	10/13/2015	10/13/2025
329	Headquarters (HQ)	Vietnam Academy of Science and Technology of the Socialist Republic of Vietnam	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE program is an international environmental science and education program that will bring students, teachers, and scientists together to study the global environment.	12/9/2015	12/31/2100
330	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Reimbursable Space Act Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) for International Space Station (ISS) Crew Support Services	Project-Specific Agreement (PSA)	Reimbursable Agreement for NASA to provide crew support services to JAXA. Services include training support, medical support, Star City support, and launch and landing support.	3/23/2016	12/31/2024
331	Headquarters (HQ)	Korea, Republic of - Korea Advanced Institute of Science and Technology (KAIST), Korea, Republic of - Korea Aerospace Research Institute (KARI), Korea, Republic of - Korea Agency for Infrastructure Technology Advancement (KAIA), Korea, Republic of - Korea Astronomy and Space Science Institute (KASI)	Framework Agreement Between the Government of the United States of America and the Government of the Republic of Korea for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Civil and Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement which sets for the terms and conditions for cooperation between the parties in aeronautics and the exploration and use of airspace and outer space for civil and peaceful purposes in areas of common interest.	4/27/2016	11/3/2026
332	Headquarters (HQ)	United Arab Emirates - United Arab Emirates Space Agency (UAESA)	Framework Agreement Between the Government of the United States of America and the Government of the United Arab Emirates for Cooperation in Aeronautics and the Exploration and Use of Airspace and Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement which sets the obligations, terms and conditions for cooperation between the Parties in aeronautics and the exploration and use of airspace and outer space for peaceful purposes in areas of common interest.	6/12/2016	8/18/2028
333	Headquarters (HQ)	Ministry of Education and Economic Development of Bermuda	Extension 1: Agreement Between NASA and the Ministry of Transport of the Government of Bermuda for Space Flight Temporary Mobile Tracking Station	Project-Specific Agreement (PSA)	Extension 1: Agreement between NASA and the Ministry of Transport of the Government of Bermuda for a Space Flight Temporary Mobile Tracking Station.	6/30/2016	6/30/2026
334	Headquarters (HQ)	Government of the Kingdom of Norway	Amendment and Extension 3: Agreement Between the United States of America and the Kingdom of Norway for Cooperation in the Civil Uses of Outer Space	Umbrella/Framework Agreement (UM/FW)	Amendment and Extension 3: The U.S. and the Kingdom of Norway, pursuant to Article 11 of the Agreement signed 10/20/2000 and 11/14/2001, and extended for 10 years by an agreement signed on 10/23/2006, agree to extend the duration of the Agreement for another 10 years, thus extending the expiration date until 11/14/2026. The Parties also agree, pursuant to Article 10 of the Agreement to amend the Agreement by replacing Article 7 in its entirety with new language. 2nd Extension: U.S. Geological Survey (USGS) added as a U.S. Implementing Agency pursuant to Article 2. 1st Extension: This is an extension of the umbrella/framework agreement between the US and Norway for cooperation in the civil uses of outer space. The parties cooperation will be in sounding rocket activity, Space science, Earth science, satellite data acquisition and tracking, and other space activities. The specific cooperation will be set forth in Implementing Arrangements between the Implementing Agencies. NASA and NOAA are the Implementing Agencies for the U.S., and the Norwegian Space Centre (NSC) is the Implementing Agency for Norway.	9/30/2016	11/14/2026
335	Headquarters (HQ)	Canadian Space Agency (CSA)	Implementing Arrangement (IA) on Surface Water Ocean Topography (SWOT) Phase C-F	Implementing Arrangement/Agreement (IA)	Canadian Space Agency (CSA) to provide Extended Interaction Klystrons (EIKs) as part of the NASA KaRIn instrument.	10/17/2016	10/20/2030
336	Headquarters (HQ)	Indian Space Research Organization (ISRO)	Implementing Arrangement (IA) Between NASA and Indian Space Research Organization (ISRO) for Exchange of Personnel Under the Professional Engineer and Scientist Exchange Program (PESEP)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) for cooperation on the Professional Engineer and Scientist Exchange Program (PESEP) established by the India-U.S. Civil Space Joint Working Group.	4/25/2017	4/25/2027

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
337	Headquarters (HQ)	The Republic of Seychelles	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	6/13/2017	8/25/2100
338	Headquarters (HQ)	World Meteorological Organization Global Atmosphere Watch Programme (WMO/GAW)	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	9/25/2017	9/25/2100
339	Headquarters (HQ)	Ministry of Environment	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	1/30/2018	12/21/2500
340	Headquarters (HQ)	Nagoya University of Japan	NASA-University of Nagoya Agreement for the Imaging X-ray Polarimetry Explore (IXPE) Mission	Project-Specific Agreement (PSA)	Nagoya university hardware contribution to the IXPE mission.	2/27/2018	12/31/2026
341	Headquarters (HQ)	Ministry of Basic Education of the Republic of Botswana	Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	6/26/2018	6/26/2100
342	Headquarters (HQ)	American Institute in Taiwan (AIT)	Amendment: Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	Amendment: Agreement between the American Institute in Taiwan (AIT) and the Taipei Economic and Cultural Representative Office (TECRO) in the U.S. for Cooperation in the GLOBE Program. Intending to increase the awareness of students throughout the world about the global environment; seeking to contribute to increased scientific understanding of the Earth; and Desiring to support improved student achievement in science and mathematics.	8/13/2018	8/13/2100
343	Headquarters (HQ)	United Arab Emirates Space Agency (UAESA)	Implementing Arrangement between the National Aeronautics and Space Administration of the United States of America and the United Arab Emirates Space Agency for Cooperation in Human Spaceflight	Implementing Arrangement/Agreement (IA)	Identify areas of interest within human space flight, including robotics and human spaceflight activities, utilization of ISS and Gateway, field studies, ground based research, and analog studies in various scientific domains such as space biology, physical sciences, and human research, utilizing UAE and NASA facilities such as the UAE Mars Science City and the NASA Human Exploration Research Analog; STEM; training of crew, and the possibility of an Emirati as a member of the ISS crew. Contribute to Mars Science City requirements.	10/1/2018	9/30/2028
344	Headquarters (HQ)	German Aerospace Center (DLR)	Implementing Arrangement between NASA and the German Aerospace Center for Cooperation on the Bose-Einstein Condensate Cold Atom Laboratory (BECCAL)	Implementing Arrangement/Agreement (IA)	Cooperation on the Bose-Einstein Condensate Cold Atom Laboratory (BECCAL), a multi-user facility designed to study Bose-Einstein Condensation and ultra-cold quantum gases in the pressurized micro-gravity environment on the International Space Station (ISS).	10/24/2018	12/31/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
345	Headquarters (HQ)	United Nations Environment Programme (UNEP)	Agreement between the National Aeronautics and Space Administration (NASA) of the United States of America and the United Nations Environment Programme (UNEP) for Collaboration in the Promotion and Execution of the Global Learning and Observations to Benefit the Environment (GLOBE) Program and UNEP Activities	Project-Specific Agreement (PSA)	The Global Learning and Observation to Benefit the Environment (GLOBE) Program is an international environmental science and education program, established by the United States Government on Earth Day on April 12, 1994, whose efforts led by the National Aeronautics and Space Administration to bring students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community. In parallel to NASA's efforts through GLOBE, UNEP promotes environmental education, awareness, and training to inspire, inform and enable the nations and its citizens worldwide to improve their quality of life without compromising that of the future generations.	4/25/2019	4/25/2100
346	Headquarters (HQ)	Koninklijk Netherlands Meteorologisch Instituut (KNMI)	Agreement between the National Aeronautics and Space Administration of the United States of America and the State of the Netherlands Koninklijk Nederlands Meteorologisch Instituut For Cooperation in Calibration and Validation of the Tropospheric Monitoring Instrument (Tropomi) instrument	Project-Specific Agreement (PSA)	NASA will transport ozone profiling instruments, including up to two lidar instruments, to the Cesar Observatory in Cabauw, Netherlands, where KNMI will conduct a calibration and validation measurement campaign of the Tropospheric Monitoring Instrument (TropOMI), an instrument on the European Sentinel 5P satellite.	7/29/2019	7/29/2024
347	Headquarters (HQ)	Ministry of Business, Innovation and Employment (MBIE)	Agreement between the National Aeronautics and Space Administration and the Ministry of Business, Innovation and Employment Concerning the Collection and Analysis of Surface Scattering Measurements	Project-Specific Agreement (PSA)	In this cooperative effort, NASA and New Zealand Space Agency will install a GPS radar receiver on Air New Zealand commercial flights to make frequent and ongoing soil moisture measurements along the aircraft's domestic routes in New Zealand, collecting data over a wide range of terrains, seasons, and surface conditions that will be used to calibrate and validate the NASA Cyclone Global Navigation Satellite System (CYGNSS) Earth Venture mission's measurements.	10/22/2019	10/22/2029
348	Headquarters (HQ)		Global Learning and Observations to Benefit the Environment (GLOBE)	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	10/25/2019	12/31/2100
349	Headquarters (HQ)	German Aerospace Center (DLR)	Implementing Arrangement Between the National Aeronautics and Space Administration and the German Aerospace Center for Cooperation on the Aerosol Cloud Meteorology Interactions Over the Western North Atlantic (ACTIVATE) Atmospheric Science Experiment	Implementing Arrangement/Agreement (IA)	The purpose of this activity is to quantify and model how aerosols form clouds, how the meteorological environment affects these processes, and how the resulting cloud properties depend on aerosols and the meteorological environment. DLR will provide the Two Dimensional Stereo/Fast Cloud Droplet Probe and the Backscatter Cloud Probe with Polarization Detection instruments. NASA will fly these instruments on the NASA LaRC King Air and HU-25 aircraft.	11/21/2019	11/21/2024
350	Headquarters (HQ)	Sweden - Swedish National Space Agency (SNSA)	Implementing Arrangement under Framework Agreement with Sweden, for the loan of Omega Watch worn by Swedish Astronaut	Implementing Arrangement/Agreement (IA)	This loan agreement continues OCOM's loan to SNSA of NASA's Omega Watch, originally worn by Swedish citizen and former ESA Astronaut Christer Fuglesang on Space Shuttle Missions STS-116 and STS-128, for public display and education.	4/14/2020	4/13/2025
351	Headquarters (HQ)	Korea Astronomy and Space Science Institute (KASI)	Agreement between the National Aeronautics and Space Administration of the United States of America and the Korea Astronomy and Space Science Institute for Space Geodesy	Project-Specific Agreement (PSA)	Cooperation to share space geodetic data, processed geodetic products, and conduct scientific and technical exchange in the field of space geodesy.	5/26/2020	6/30/2030
352	Headquarters (HQ)	Finnish Geodetic Institute (FGI)	Agreement between the National Aeronautics and Space Administration of the United States of America and the Finnish Geospatial Research Institute for Space Geodesy	Project-Specific Agreement (PSA)	Cooperation to share space geodetic data, processed geodetic products, and conduct scientific and technical exchange in the field of space geodesy.	6/23/2020	6/23/2030

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
353	Headquarters (HQ)	National Centre for Space Studies (CNES)	Global Learning and Observations to Benefit the Environment (GLOBE)	Implementing Arrangement/Agreement (IA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle, and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	10/27/2020	9/16/2040
354	Headquarters (HQ)	Ministry of Education and Sport	Agreement between the National Aeronautics and Space Administration of the United States of America and the Ministry of Education, Science and Sport of the Republic of Slovenia for Cooperation in the GLOBE Program	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	12/3/2020	12/3/2100
355	Headquarters (HQ)	Italian Space Agency (ASI)	NASA-ASI Artemis Study Agreement	Project-Specific Agreement (PSA)	NASA and ASI to conduct feasibility studies on possible Italian elements contributing to the Artemis program, including: the development of lunar surface habitation capabilities and associated technologies for short-duration crewed missions to the lunar surface; lunar telecommunications support; and other potential ASI contributions.	12/4/2020	12/4/2025
356	Headquarters (HQ)	German Aerospace Center (DLR)	Framework Agreement Between NASA and the German Aerospace Center (DLR) On Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Framework Agreement between NASA and DLR on Cooperation in Aeronautics and the Exploration and Use of Outer Space for Peaceful Purposes.	12/12/2020	12/13/2030
357	Headquarters (HQ)	University of Bern	Letter of Agreement between NASA and the University of Bern for Cooperation on the Interstellar Mapping and Acceleration Probe (IMAP) Mission	Project-Specific Agreement (PSA)	The Interstellar Mapping and Acceleration Probe mission will determine the properties of the interstellar medium and the acceleration of suprathermal particles. In the cooperation, University of Bern will provide the IMAP Lo and IMAP Hi instruments as well as calibration for the instruments. This activity also involves data exchange and cooperation research.	2/14/2021	2/24/2028
358	Headquarters (HQ)	Canada - Canadian Space Agency (CSA)	Extension to the Framework Agreement between the Government of the United States of America and the Government of Canada For Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	The Framework Agreement AND its Extension set forth the obligations, terms & conditions for the cooperation between NASA and CSA, or any other designated Agency of either Party, in the exploration and use of outer space for peaceful purposes in areas of common interest and on the basis of equality and mutual benefit.	3/17/2021	5/11/2030
359	Headquarters (HQ)	Russian Federal Space Agency (Roskosmos)	Agreement Between the United States of America and the Russian Federation Concerning Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes	Umbrella/Framework Agreement (UM/FW)	Amendment 5: Extended by an exchange of diplomatic notes. Government to Government Agreement between the U.S. and the Russian Federation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes. Crosscutting. Dip Notes extended the Agreement from June 17, 2007, through June 16, 2012. Russia Dip Note No. 10778 dated 3 Dec 2007, U.S. Dip Note MFA No. 153-07, dated 26 Dec 2007, and State Cable 169755 delivered U.S. Dip Note on 27 Dec 2007.	4/12/2021	12/31/2030
360	Headquarters (HQ)	Polar Knowledge Canada (POLAR)	Amendment 2: Agreement between NASA and Polar Knowledge Canada for Cooperation in the Arctic Boreal Vulnerability Experiment (ABoVE)	Project-Specific Agreement (PSA)	Amendment 2: NASA and Polar Knowledge Canada will cooperate on the Arctic Boreal Vulnerability Experiment to study how social-ecological systems in high northern latitude regions of northwestern North America are responding and feeding back to environmental and social change.	5/14/2021	5/14/2026
361	Headquarters (HQ)	Russia - Ministry of Foreign Affairs	U.S.-Russia Duty-Free Agreement	Umbrella/Framework Agreement (UM/FW)	Extension 4: Procedure for duty-free entry of goods transported within the framework of the U.S.-Russia Civil Space Agreement	9/16/2021	8/25/2026
362	Headquarters (HQ)	United Kingdom Space Agency (UKSA)	Memorandum of Understanding Between the National Aeronautics and Space Administration and the United Kingdom Space Agency for the Provision of the Interstellar Mapping and Acceleration Probe (IMAP) Magnetometer	Project-Specific Agreement (PSA)	Cooperation on the Interstellar Mapping and Acceleration Probe (IMAP) mission. IMAP mission is part of NASA's Solar Terrestrial Probe Program. It is expected to provide the first comprehensive in situ and remote global observations to discover the fundamental physical processes that control the solar system's evolving space environment. UKSA will contribute a magnetometer.	9/22/2021	3/31/2029

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
363	Headquarters (HQ)	Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Cross Support Agreement	Project-Specific Agreement (PSA)	This agreement between NASA and JAXA will facilitate the arranging and managing network and operations cross-support communications services between the Parties, with mission risk-reducing technical capability for bi-directional interoperability between their respective tracking assets and mutual space navigation support, as well as mission operations and ground data systems compatibility.	11/17/2021	11/17/2031
364	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Agreement Between the National Aeronautics and Space Administration of the United States of American and The Japan Aerospace Exploration Agency for Cooperation on the JAXA-led Smart Lander for Investigating Moon (SLIM) mission.	Project-Specific Agreement (PSA)	The Institute of Space and Astronautical Science (ISAS) of JAXA is developing the SLIM mission. The SLIM lander aims to achieve a small scale, light weight probe system and pinpoint landing technology. NASA's planned contribution to this mission includes a laser retroreflector array (LRA), Deep Space Network (DSN) support services, and coordination with the NASA Lunar Reconnaissance Orbiter (LRO).	12/7/2021	12/31/2028
365	Headquarters (HQ)	Canadian Space Agency (CSA)	NASA-CSA Lunar Exploration Accelerator Program (LEAP) Lunar Rover Mission (LRM) Implementing Arrangement	Implementing Arrangement/Agreement (IA)	CSA and NASA are collaborating on CSA's Lunar Rover Mission (LRM) and science payloads, to be delivered via Commercial Lunar Payload Services (CLPS). CSA's lunar rover will carry two scientific instrument payloads – one American and one Canadian. IA will expire one year after commissioning of CSA LRM.	1/20/2022	12/31/2027
366	Headquarters (HQ)	European Space Agency	NASA-ESA PROSPECT MOU	Project-Specific Agreement (PSA)	ESA and NASA are collaborating on ESA's Package for Resource Observation and In-Situ Prospecting For Exploration, Characterization, and Testing (PROSPECT) mission, by delivering this science payload to the lunar surface via Commercial Lunar Payload Services (CLPS).	1/26/2022	6/30/2031
367	Headquarters (HQ)	European Space Agency	NASA-ESA Retroreflector (MPAc) MOU	Project-Specific Agreement (PSA)	ESA and NASA are collaborating on ESA's Retroreflector, by delivering this science payload to the lunar surface via Commercial Lunar Payload Services (CLPS).	1/26/2022	6/30/2031
368	Headquarters (HQ)	Mad Science Group (MSG)	ANNEX 1 between NASA and Mad Science Group Inc under the Non reimbursable Space Act Umbrella Agreement for Cooperation in STEM Education and Engagement Activities Through Interactive Science Enrichment Programs	Umbrella/Framework Agreement (UM/FW)	To continue the partnership between NASA and the MSG Academy of Future Space Explorers (AFSE) begun in 2006, & to expand the partnership to include other STEM-based joint programming.	3/15/2022	3/14/2027
369	Headquarters (HQ)	Mad Science Group (MSG)	Non reimbursable Space Act Umbrella Agreement between NASA and the Mad Science Group (MSG) or Cooperation in Science, Technology, Engineering, and Mathematics (STEM) Education and Engagement Activities	Umbrella/Framework Agreement (UM/FW)	Purpose of this Agreement is to continue the partnership between NASA and the MSG Academy of Future Space Explorers (AFSE) begun in 2006, & to expand the partnership to include other STEM-based joint programming.	3/15/2022	3/14/2027
370	Headquarters (HQ)	European Space Agency	NASA-ESA Artemis Study Letter of Agreement	Project-Specific Agreement (PSA)	NASA and ESA will study, discuss and exchange the necessary information to mature each Party's understanding of possible future mutually beneficial cooperation on Artemis.	4/1/2022	4/5/2027
371	Headquarters (HQ)	New Zealand - New Zealand Space Agency (NZSA)	Non-Reimbursable Space Act Agreement between NASA and the Ministry of Business, Innovation and Employment, acting through its business unit the New Zealand Space Agency, for Collaboration on Cislunar Space Situational Awareness Research	Project-Specific Agreement (PSA)	The CAPSTONE mission offers a unique opportunity to observe a small object (12U CubeSat, ~25 kg) that has a known trajectory, thereby providing important and relevant data on the observation capabilities of well-characterized optical telescopes equipped with SSA enhancements, looking for spacecraft near the Moon. Under this collaboration, NZSA will use optical telescopes at the University of Canterbury and at the University of New South Wales or Earth-based cislunar observation of NASA's CAPSTONE spacecraft in the near vicinity of the Moon. The objective is to demonstrate a cislunar optical sensor containing fourth-order adaptive optics with new innovative optical coherence discriminators to improve the detection of artificial satellites in the region of 0.24 to 4 degrees from the limb of the Moon. NASA intends to provide NZSA with CAPSTONE ephemeris updates during the ballistic lunar transfer phase to NRHO, with additional updates during the observation phase, to enable telescope pointing.	5/24/2022	5/30/2025
372	Headquarters (HQ)	German Aerospace Center (DLR)	NASA-DLR Dragonfly Mission Implementing Arrangement	Implementing Arrangement/Agreement (IA)	NASA and DLR are collaborating on the Dragonfly mission to Titan. DLR is providing instrumentation and data analysis for the Entry Aerosciences Measurements part of the EDL system.	5/25/2022	5/25/2042

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
373	Headquarters (HQ)	European Space Agency	NASA-ESA Lunar Pathfinder (LPF) MOU	Project-Specific Agreement (PSA)	ESA and NASA are collaborating on ESA's Lunar Pathfinder (LPF) spacecraft, by delivering this lunar communications relay to lunar orbit via Commercial Lunar Payload Services (CLPS). This MOU shall remain in force until six years from the date of launch of the LPF spacecraft.	6/15/2022	12/31/2030
374	Headquarters (HQ)	European Space Agency	Framework Agreement Between NASA and the European Space Agency (ESA) for a Strategic Partnership in Earth System Science	Umbrella/Framework Agreement (UM/FW)	The purpose of the Framework Agreement to define the terms and conditions under which NASA and ESA plan to conduct Earth system science cooperation within the overall framework of a strategic partnership.	6/15/2022	6/15/2032
375	Headquarters (HQ)	Belgian Centre Spatiale de Liege (CSL),Beligan Federal Science Policy Office (BELSPO)	NASA-Belgium Letter Agreement on the Ionospheric Connection Explorer (ICON) Mission	Project-Specific Agreement (PSA)	NASA's Science Mission Directorate is sponsoring the development of the ICON mission, a project in the Heliophysics Explorers program. The ICON mission will explore the near-Earth space environment to discover the sources of the region's remarkable variability. ICON will make a complete set of measurements needed to describe the fundamental coupling process occurring in the ionosphere, Earth's natural plasma laboratory. ICON's observations at the edge of space will provide the key physical insights needed to predict conditions in near-Earth space, and enhance understanding of the connection between Earth's weather and space weather. ICON will carry four instruments to achieve its science goals: the dual Michelson Interferometers for Global High-resolution Thermospheric Imaging (MIGHTI), a Far Ultra Violet (FUV) spectrographic imager, an Extreme Ultra Violet (EUV) spectrographic imager, and an Ion Velocity Meter (IVM). This agreement covers the Belgian contributions to ICON, specifically the alignment, testing, calibration, and evaluation of FUV.	6/30/2022	6/30/2027
376	Headquarters (HQ)	University of Bern	Extension - Agreement for the Strofio Instrument on the BepiColombo Mission	Project-Specific Agreement (PSA)	The University of Bern in Switzerland will provide the ion source system for the Strofio instrument that will be a part of the Serena payload on the ESA-led BepiColombo mission to Mercury.	7/30/2022	12/31/2030
377	Headquarters (HQ)	Belgian Science Policy Office	Juno Ultra-Violet Spectrometer (UVS) Extension	Project-Specific Agreement (PSA)	2022 Extension, University of Liege to provide portions of the UVS on NASA-led JUNO mission	8/1/2022	12/31/2026
378	Headquarters (HQ)	Ministry of Business, Innovation and Employment (MBIE)	US - New Zealand Framework Agreement	Umbrella/Framework Agreement (UM/FW)	This Framework Agreement (hereinafter referred to as the "Agreement") sets forth the obligations, terms and conditions for cooperation between the Parties, or their designated Implementing Agencies, in civil aeronautics research and the exploration and use of outer space for peaceful purposes in areas of common interest and on the basis of equality and mutual benefit.	8/9/2022	11/9/2032
379	Headquarters (HQ)	Ministry of Education, Culture, Science, and Technology for the Government of Belize	GLOBE with MoECST	Project-Specific Agreement (PSA)	The GLOBE Program is an international environmental science and education program that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.	9/8/2022	9/8/2100
380	Headquarters (HQ)	National Centre for Space Studies (CNES)	NASA-CNES Lunar Surface Electromagnetic Experiment (LuSEE) Agreement	Implementing Arrangement/Agreement (IA)	CNES is contributing a Search Coil Magnetometer (SCM) to the LUSEE payload, that will be on the NASA CLPS "CP-12" Draper delivery.	9/20/2022	9/20/2032
381	Headquarters (HQ)	University of Bern	NASA-University of Bern: Laser Ablation Ionization Mass Spectrometer (LIMS) instrument delivery on CLPS	Project-Specific Agreement (PSA)	LIMS is an analytical tool to support field measurements and analyze regolith properties, consisting of a miniature reflectron-type Time-of-Flight (RTOF) mass analyzer and pulsed laser system. LIMS is expected to provide chemical analysis of lunar soils and high quality in-situ solids. LIMS is expected to be delivered to the Moon via NASA's Commercial Lunar Payload Services (CLPS) program. This flight is expected to be a technology demonstration of LIMS to further optimize the instruments' in-situ data analysis and concept of operations to enable a future Artemis mission.	10/8/2022	10/8/2032
382	Headquarters (HQ)	National Centre for Space Studies (CNES)	NASA-CNES Farside Seismic Suite (FSS) instrument delivery on CLPS	Implementing Arrangement/Agreement (IA)	FSS instrument, with a contribution of a seismometer by CNES, is expected to be delivered to the lunar surface on the CLPS CP-12 2025 delivery to Schrödinger Basin by Draper	11/30/2022	11/30/2028

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
383	Headquarters (HQ)	Italian Space Agency (ASI)	Memorandum of Understanding (MOU) Between NASA and Agenzia Spaziale Italia (ASI) Concerning the Juno Mission	Project-Specific Agreement (PSA)	This Memorandum of Understanding (MOU) covers cooperation between NASA and the Italian Space Agency (ASI) on the Juno mission to Jupiter. ASI is providing the Jovian Infrared Auroral Mapper (JIRAM) and Ka-Band Transponder (Ka-T) instruments.	12/7/2022	12/31/2026
384	Headquarters (HQ)	Korea Astronomy and Space Science Institute (KASI)	NASA-KASI Lunar Space Environment Monitor (LUSEM) instrument delivery on CLPS	Implementing Arrangement/Agreement (IA)	LUSEM instrument by KASI is expected to be delivered to the lunar surface on the CLPS CP-11 2024 delivery to Reiner Gamma by Intuitive Machines.	12/9/2022	12/9/2028
385	Headquarters (HQ)	Japan - Government of Japan	Framework Agreement between the Government of Japan and the Government of the United States for Cooperation in the Exploration and Use of Outer Space	Umbrella/Framework Agreement (UM/FW)	Civil Space Framework	1/13/2023	1/13/2123
386	Headquarters (HQ)	Israel - Israel Space Agency (ISA)	Implementing Arrangement Between The National Aeronautics and Space Administration (NASA) And The Israel Space Agency (ISA) For Cooperation On The Ultraviolet Transient Astronomy Satellite Mission (ULTRASAT)	Implementing Arrangement/Agreement (IA)	ULTRASAT is an astrophysics research satellite carrying a telescope with a large field of view observing in the ultraviolet. NASA will provide a variety of launch vehicle related necessities. ISA will cover the scientific aspects of ULTRASAT.	2/12/2023	2/12/2030
387	Headquarters (HQ)	Japan Aerospace Exploration Agency (JAXA)	Amendment 1: ALOS/PALSAR Data Mirroring and ALOS-2/PALSAR-2 Science Research and Application between NASA and JAXA	Project-Specific Agreement (PSA)	This Agreement will apply to cooperation related to the ALOS/PALSAR, AVNIR-2 and ALOS-2 ScanSAR data mirroring and ALOS-2/PALSAR-2 science research and application cooperation.	3/14/2023	3/31/2025
388	Headquarters (HQ)	Multilateral - European Space Research Organization (ESRO)	Memorandum of Understanding Between The National Aeronautics and Space Administration of the United States of America (NASA) and the European Space Agency (ESA) concerning the BepiColombo mission.	Project-Specific Agreement (PSA)	Cooperation/Exchange between NASA and ESA regarding BepiColombo. ESA will be obtaining scientific data from instruments aboard the BepiColombo spacecraft and allowing NASA-funded scientists to participate in all mission phases. In exchange, NASA will provide ESA with additional Deep Space Network (DSN) coverage in order to support these activities.	3/29/2023	12/31/2032
389	Headquarters (HQ)	Multilateral - European Space Research Organization (ESRO)	Memorandum of Understanding Between The National Aeronautics and Space Administration of The United States of America and the European Space Agency Concerning the ESA-Led Ariel Mission	Implementing Arrangement/Agreement (IA)	Cooperation between NASA and ESA on launching a space telescope which is expected to observe a large number of known exoplanets to study and characterise the planets' chemical composition and thermal structures. ESA will design and implement the overall mission, design/launch/operate the Ariel spacecraft, along with providing ground station network support during flight operations. NASA will provide Sensor Chip Electronic (SCE) components and provide necessary hardware for the Fine Guidance System (FGS).	3/29/2023	12/31/2033
390	Headquarters (HQ)	Netherlands - The Netherlands Organization of Applied Scientific Research (TNO)	TNO Marconi 2.0 Quantum Comm Study Agreement	Project-Specific Agreement (PSA)	Cooperative study agreement to to explore potential collaboration on technology development for quantum communications and networking, quantum sensors for applications in space-based science and observation, and observatories with ground and adaptive/synchronization capabilities. Such technology development may include modeling of the system and components for predicting the performance of various use cases and/or applications; blind computing; distributed quantum computations; and Very Long Baseline Interferometry ("VLBI"). In addition, the Parties are interested in potential collaboration on architecture studies and development of future quantum missions for technology demonstration and testing of related capabilities, including related training, education and workforce development.	4/12/2023	4/12/2025
391	Headquarters (HQ)	Netherlands - Delft University of Technology (DUT)	TuDelft Marconi 2.0 Quantum Comm Study Agreement	Project-Specific Agreement (PSA)	Cooperative study agreement to to explore potential collaboration on technology development for quantum communications and networking, quantum sensors for applications in space-based science and observation, and observatories with ground and adaptive/synchronization capabilities. Such technology development may include modeling of the system and components for predicting the performance of various use cases and/or applications; blind computing; distributed quantum computations; and Very Long Baseline Interferometry ("VLBI"). In addition, the Parties are interested in potential collaboration on architecture studies and development of future quantum missions for technology demonstration and testing of related capabilities, including related training, education and workforce development.	4/12/2023	4/12/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
392	Headquarters (HQ)	Japan - Japan Aerospace Exploration Agency (JAXA)	MOU between NASA and JAXA Concerning Cooperation on the Martian Moons eXploration (MMX) Mission	Project-Specific Agreement (PSA)	MMX is a JAXA-led mission to the Martian moons Phobos and Deimos, to return a sample and observe the geology, chemistry, and history of the Mars system and the origin of the moons. JAXA will build the MMX spacecraft and NASA will provide the MEGANE instrument, P-sampler, science team participation; and receive a portion of the sample.	4/17/2023	4/17/2034
393	Headquarters (HQ)	Australia - Australian Space Agency (ASA)	Extension 1 - Non-Reimbursable Space Act Agreement between NASA and the Commonwealth of Australia, represented by the Australian Space Agency, Part of The Department of Industry, Science, Energy and Resources for Collaboration Leading to the Planning and System Requirements Review of a Lunar Surface Technology Demonstration	Project-Specific Agreement (PSA)	The Parties intend to collaborate on a mobile robotic technology demonstration, with the primary objective of collecting and delivering lunar regolith to a NASA ISRU technology demonstration facility. Under this Agreement, the parties will discuss and define the requirements of the Agency's contribution to the NASA technology demonstration, from concept to system requirements review. Cooperative activities taking place following the SRR, including building, testing, ground preparation activities, delivery of hardware, and launch shall be covered in a separate Agreement.	4/18/2023	4/30/2024
394	Headquarters (HQ)	Germany - German Aerospace Center (DLR)	Amendment #6; Solar Terrestrial Relations Observatory (STEREO) Mission	Project-Specific Agreement (PSA)	Amendment #6; The STEREO mission reveals the Sun in three dimensions for the first time. DLR provided SEPT detectors, in flight electronics, coronagraphs and other instruments.	5/23/2023	6/30/2026
395	Headquarters (HQ)	Australia – Rocket Technologies International (RTI)	Letter agreement between NASA and Rocket Technologies International (RTI) Concerning OSIRIS-REX re-entry observations (HORIS)	Project-Specific Agreement (PSA)	Re-entry observations of OSIRIS-REX in September. The partners are contributing sensor(s) and plan to collaborate on this re-entry campaign led by the SCLIFLI team out of Langley. The collaboration is expected to use airborne sensors integrated onto one or more NASA aircraft and a RTI-sponsored aircraft flown in the vicinity of the capsule's flight path.	7/12/2023	7/12/2028
396	Headquarters (HQ)	Australia - Australian Space Agency (ASA)	Letter agreement between NASA and Rocket Technologies International (RTI) Concerning OSIRIS-REX re-entry observations (HORIS)	Project-Specific Agreement (PSA)	Re-entry observations of OSIRIS-REX in September. The partners are contributing sensor(s) and plan to collaborate on this re-entry campaign led by the SCLIFLI team out of Langley. The collaboration is expected to use airborne sensors integrated onto one or more NASA aircraft and a RTI-sponsored aircraft flown in the vicinity of the capsule's flight path.	7/12/2023	7/12/2028
397	Headquarters (HQ)	Japan - Japan Aerospace Exploration Agency (JAXA)	Letter Agreement under the Joint Understanding b/t NASA and JAXA Concerning OSIRIS-REX re-entry observations (HORIS)	Project-Specific Agreement (PSA)	Re-entry observations of OSIRIS-REX in September. The partners are contributing sensor(s) and plan to collaborate on this re-entry campaign led by the SCLIFLI team out of Langley. The JAXA agreement also includes an additional contact pad to JAXA for their sample curation and collaboration on a contact pad extraction system.	7/12/2023	12/31/2028
398	Headquarters (HQ)	Germany - University of Stuttgart	Letter agreement between NASA and University Stuttgart (UniST) Concerning OSIRIS-REX re-entry observations (HORIS)	Project-Specific Agreement (PSA)	Re-entry observations of OSIRIS-REX in September. The partners are contributing sensor(s) and plan to collaborate on this re-entry campaign led by the SCLIFLI team out of Langley. The collaboration is expected to use airborne sensors integrated onto one or more NASA aircraft and a RTI-sponsored aircraft flown in the vicinity of the capsule's flight path.	7/25/2023	7/25/2028
399	Headquarters (HQ)	Japan - Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Artemis Study Agreement	Project-Specific Agreement (PSA)	NASA and JAXA plan to establish joint study teams related to lunar surface and cis-lunar cooperation in NASA's Artemis program. The Artemis program will lay the foundation for sustainable lunar exploration and use the Moon to validate deep space systems and operations before embarking on the much farther voyage to Mars. The Artemis program will utilize NASA's Space Launch System (SLS) rocket, a Human Landing System (HLS), a pressurized crew rover, along with the Gateway and other elements.	8/3/2023	7/31/2028
400	Headquarters (HQ)	Australia - University of Southern Queensland	Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer Re-Entry Campaign	Implementing Arrangement/Agreement (IA)	Parties will engage in a joint campaign to observe the entry, descent, and landing of the NASA OSIRIS-REX sample return capsule using airborne sensors integrated onto NASA aircraft and a Rocket Technologies International-sponsored aircraft flown near capsule's flight path.	8/18/2023	8/18/2028

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
401	Headquarters (HQ)	France – Grapevine Productions	Letter agreement between NASA and Grapevine Productions for Sanctuary payload on CLPS	Project-Specific Agreement (PSA)	Cooperation on the delivery of the Sanctuary payload via the NASA Commercial Lunar Payload Services (CLPS) to the lunar surface. Sanctuary is a repository containing 24 synthetic sapphire discs that is expected to be delivered to the surface of the Moon.	9/19/2023	9/19/2033
402	Headquarters (HQ)	Germany - German Aerospace Center (DLR)	Implementing Arrangement between NASA and DLR for Cooperation on the Gravity Recovery and Climate Experiment - Continuity (GRACE-C) Mission	Project-Specific Agreement (PSA)	DLR is providing the instrument support, mission operations, science, and the Launch Vehicle.	10/6/2023	12/31/2038
403	Headquarters (HQ)	India - Indian Space Research Organization (ISRO)	Amendment to the Implementing Arrangement for Cooperation on the Balloon Measurements of the Asian Tropopause Aerosol Layer (BATAL) Campaign	Project-Specific Agreement (PSA)	Balloon measurements of the Asian Tropopause Aerosol Layer (BATAL) campaigns. NASA and ISRO to conduct annual summer campaigns in India from 2017-2020 to make balloon-based measurements of aerosols and clouds in the upper troposphere and lower stratosphere using a variety of instrumentation and balloon flight systems.	10/11/2023	9/20/2027
404	Headquarters (HQ)	Italy - Italian Space Agency (ASI)	Implementing Arrangement between NASA and ASI for Cooperation on the Surface, Biology and Geology (SBG) Mission	Project-Specific Agreement (PSA)	ASI is providing the spacecraft, instrument, and the Launch Vehicle.	10/27/2023	6/30/2036
405	Headquarters (HQ)	Japan - Japan Aerospace Exploration Agency (JAXA)	Extension: Cooperation on the Venus Climate Orbiter (VCO)/Planet-C Mission (Akatsuki)	Project-Specific Agreement (PSA)	This is an extension of the October 5, 2009, agreement for cooperation on the JAXA-led Venus Climate Orbiter (VCO)/Planet-C mission, named Akatsuki. It provides participating scientists and deep space network (DSN) support, extended for 5 more years. This agreement is associated with the Joint Understanding with JAXA.	11/9/2023	12/31/2028
406	Headquarters (HQ)	ESA - European Space Agency	Amendment 3 to Letter Agreement between ESA and NASA for the Advanced Telescope for High Energy Astrophysics (Athena) mission	Project-Specific Agreement (PSA)	Extends LOA for through 2027 and redefines scope of study phase for NASA contribution to Athena mission.	12/13/2023	12/13/2027
407	Headquarters (HQ)	Denmark - Danish Technical University of Denmark	Amendment 4 to Letter Agreement between NASA and DTU for Cooperation on the Nuclear Spectroscopic Telescope Array (NuSTAR) mission	Project-Specific Agreement (PSA)	Extends LOA for through 2033 to continue work on NuSTAR mission while on orbit.	12/21/2023	12/31/2033
408	Headquarters (HQ)	Italy - Italian Space Agency (ASI)	Memorandum of Understanding (MOU) Between NASA and Italian Space Agency (ASI) Concerning Cooperation the BepiColombo Mission	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) between the National Aeronautics and Space Administration of the United States of America and the Italian Space Agency (ASI) Concerning Cooperation the BepiColombo Mission.	12/29/2023	12/31/2032
409	Headquarters (HQ)	Denmark - Technical University of Denmark (DTU)	Letter Agreement between the Technical University of Denmark (DTU) and NASA on Psyche	Project-Specific Agreement (PSA)	Letter Agreement between the Technical University of Denmark (DTU) and NASA on Psyche, science contribution for Psyche magnetometer	2/21/2024	2/21/2039
410	Headquarters (HQ)	ESA - European Space Agency	Memorandum of Understanding (MOU) between ESA and NASA on EnVision (ESA-led Venus mission)	Project-Specific Agreement (PSA)	MOU covers the Venus cooperation on the ESA-led Venus mission. NASA is contributing the mission enabling instrument, VenSAR. EnVision is expected to launch in 2031 by ESA.	3/12/2024	12/31/2042
411	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	Defense Research Establishment (FFI) or Forsvarets Forskning Institutt in Norwegian)	Mars 2020 Radar Imagers for Mars' Subsurface Experiment (RIMFAX) Phase B-F Agreement	Project-Specific Agreement (PSA)	This agreement is for the Norwegian Defense Research Establishment (FFI) to provide the Radar Imagers for Mars' subsurface Experiment (RIMFAX) ground penetrating radar (GPR) to NASA for the Mars 2020 rover.	10/20/2015	6/30/2024
412	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	University of Valladolid (UVA)	Mars 2020 SuperCam Calibration Target Agreement	Project-Specific Agreement (PSA)	This agreement is for the University of Valladolid (UVA) of Spain to provide a calibration target assembly to NASA for the Mars 2020 rover's SuperCam instrument.	11/3/2015	6/30/2024
413	Headquarters (HQ), Jet Propulsion Laboratory (JPL)	The Ministry of Economy and Competitiveness of Spain, The Ministry of Industry Energy and Tourism of Spain, The Center for the Development of Industrial Technology, The National Institute for Aerospace	Memorandum of Understanding (MOU): Mars 2020 Mars Environmental Dynamics Analyzer (MEDA) Memorandum of Understanding (MOU)	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) between NASA and the Ministry of Economy and Competitiveness of Spain, the Ministry of Industry Energy and Tourism of Spain, the Center for the Development of Industrial Technology, and the National Institute for Aerospace Technology 'Esteban Terradas' of Spain; Concerning the Mars Environmental Dynamics Analyzer Instrument for the Mars 2020 Mission.	10/25/2016	6/30/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
414	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Implementing Arrangement (IA): NASA-Italian Space Agency (ASI) Mars 2020	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) under US-Italy Framework. ASI contribution of a laser retro-reflector array to the NASA Mars 2020 rover.	10/9/2017	6/30/2024
415	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	NASA-European Space Agency (ESA) ExoMars 2020 Letter of Agreement	Project-Specific Agreement (PSA)	NASA and ESA cooperation on ExoMars 2020 for exchange of technical expertise, scientific collaboration, and deep space network coordination.	10/18/2017	12/1/2024
416	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	Memorandum of Understanding between NASA and the European Space Agency (ESA) concerning the Flight Elements of the Mars Sample Return (MSR) Campaign	Project-Specific Agreement (PSA)	Under this MOU, NASA will provide the Sample Retrieval Lander and ESA will provide the Earth Return Orbiter to the joint MSR campaign. NASA and ESA expect each spacecraft to launch in 2026 and return Martian samples to Earth in 2031. The NASA Mars 2020 rover will collect the samples.	10/5/2020	9/30/2033
417	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	Peregrine Ion Trap Mass Spectrometer (PITMS)	Project-Specific Agreement (PSA)	NASA will build, launch, and operate the PITMS instrument utilizing the Commercial Lunar Payload Services Program. ESA will provide the Exospheric Mass Spectrometer (EMS) component.	12/22/2020	6/30/2026
418	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	Germany - The Federal Agency for Cartography and Geodesy of Germany (BKG)	Agreement between NASA and the Federal Agency for Cartography and Geodesy of Germany for cooperation in Space Geodesy	Project-Specific Agreement (PSA)	Space Geodesy Cooperation	9/8/2021	9/8/2031
419	Headquarters (HQ),Jet Propulsion Laboratory (JPL)	University of Zurich (UZH)	2nd Extension to NASA-University of Zurich (UZH) Reimbursable Agreement	Project-Specific Agreement (PSA)	Through this Agreement and its Amendments, NASA will, on a reimbursable basis, develop and deliver to UZH an aircraft-compatible version of the sensor head that is part of the existing Compact Wide Imaging Spectrometer (CWIS) currently tested at JPL. NASA will build, calibrate, and deliver the sensor head to UZH. For clarity and traceability, this new development is designated CWIS-11. UZH will then integrate the CWIS-11 imaging spectrometer sensor head onto a suitable research aircraft.	12/20/2022	5/31/2027
420	Headquarters (HQ),Jet Propulsion Laboratory (JPL),Johnson Space Center (JSC)	Institute of Space and Astronautical Science (ISAS),Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Agreement for CubeSat Communications and 3-Way Doppler Support on Artemis I	Project-Specific Agreement (PSA)	A new collaborative agreement between NASA and JAXA in support of deep space communications cooperation for Artemis I. In this Agreement, under the NASA-JAXA Joint Understanding, NASA is providing JAXA with communications and tracking support for its two planned CubeSats, EQUULEUS and OMOTENASHI, while JAXA is providing 3-Way Doppler support to NASA for the MPCV as it travels beyond LEO.	8/4/2020	8/3/2025
421	Headquarters (HQ),Johnson Space Center (JSC)	Mohammed Bin Rashid Space Centre (MBRSC)	Implementing Arrangement for Cooperation in Astronaut Flight Opportunities	Implementing Arrangement/Agreement (IA)	NASA and the Mohammed bin Rashid Space Centre (MBRSC) will work to identify UAE astronaut opportunities and outline flight-specific responsibilities in additional annexes.	9/19/2019	9/18/2024
422	Headquarters (HQ),Johnson Space Center (JSC)	Canada - University of Calagry	Loan of OSIRIS-REx Samples to the University of Calagry - Dr. Hildebrand	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
423	Headquarters (HQ),Johnson Space Center (JSC)	Canada - Royal Ontario Museum	Loan of OSIRIS-REx Samples to Royal Ontario Museum	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
424	Headquarters (HQ),Johnson Space Center (JSC)	Canada - University of Calagry	Loan of OSIRIS-REx Samples to the University of Calagry - Hildebrand	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
425	Headquarters (HQ),Johnson Space Center (JSC)	Japan - Japan Agency for Marine-Earth Science and Technology	Loan of OSIRIS-REx Samples to the Japan Agency for Marine-Earth Science and Technology - Koga	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
426	Headquarters (HQ),Johnson Space Center (JSC)	Japan - Ritsumeikan University	Loan of OSIRIS-REx Samples to Ritsumeikan University	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
427	Headquarters (HQ),Johnson Space Center (JSC)	Japan - Japan Agency for Marine-Earth Science and Technology	Loan of OSIRIS-REx Samples to Japan Agency for Marine-Earth Science and Technology	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
428	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Hokkaido University (HokuDai)	Loan of OSIRIS-REx Samples to Hokkaido University - Yurimoto	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
429	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - Natural History Museum	Loan of OSIRIS-REx Samples to Natural History Museum - Russell	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
430	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - Natural History Museum	Loan of OSIRIS-REx Samples to Natural History Museum - King	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
431	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - Natural History Museum	Loan of OSIRIS-REx Samples to Natural History Museum - Schofield	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
432	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - Natural History Museum	Loan of OSIRIS-REx Samples to Natural History Museum - Bates	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	9/20/2023	9/20/2026
433	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Joint Understanding Multi-layer Acoustic and Conductive-grid Sensor (MACS) and Space Debris Bread Board HTV-X Model	Project-Specific Agreement (PSA)	NASA and JAXA have identified a mutual interest in in-situ measurements to characterize the millimeter-sized orbital debris populations in low-Earth orbit (LEO). The purpose of this Agreement is to establish an agreement for the Parties to design, build, test, and deliver a Multi-layer Acoustic and Conductive-grid Sensor (MACS) (a NASA-JAXA sensor that helps measure the impact of orbital debris) flight hardware unit for a future ISS tech demonstration mission.	9/29/2023	3/31/2027
434	Headquarters (HQ), Johnson Space Center (JSC)	Canada - York University	Loan of OSIRIS-REx Samples to York University - Freemantle - Daly	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
435	Headquarters (HQ), Johnson Space Center (JSC)	France - Centre de Recherches Petrographiques et Geochimiques	Loan of OSIRIS-REx Samples to Centre de Recherches Petrographiques et Geochimiques - Marty	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
436	Headquarters (HQ), Johnson Space Center (JSC)	France - Centre de Recherches Petrographiques et Geochimiques	Loan of OSIRIS-REx Samples to Centre de Recherches Petrographiques et Geochimiques - Marrochi	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
437	Headquarters (HQ), Johnson Space Center (JSC)	France - Centre de Recherches Petrographiques et Geochimiques	Loan of OSIRIS-REx Samples to Centre de Recherches Petrographiques et Geochimiques - Furi - CRNS	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
438	Headquarters (HQ), Johnson Space Center (JSC)	France - Centre de Recherches Petrographiques et Geochimiques	Loan of OSIRIS-REx Samples to Centre de Recherches Petrographiques et Geochimiques - Bekaert	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
439	Headquarters (HQ), Johnson Space Center (JSC)	France - Centre de Recherches Petrographiques et Geochimiques	Loan of OSIRIS-REx Samples to Centre de Recherches Petrographiques et Geochimiques - Villeneuve	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
440	Headquarters (HQ), Johnson Space Center (JSC)	France - Observatoire de la Cote d'Azur (OCA)	Loan of OSIRIS-REx Samples to Observatoire de la Cote d'Azur - OCA_NASA	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
441	Headquarters (HQ), Johnson Space Center (JSC)	France - Centre de Recherches Petrographiques et Geochimiques	Loan of OSIRIS-REx Samples to Centre de Recherches Petrographiques et Geochimiques - Piani	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
442	Headquarters (HQ), Johnson Space Center (JSC)	Germany - Helmholtz Zentrum Muenchen	Loan of OSIRIS-REx Samples to Helmholtz Zentrum Muenchen Deutsches Forschungszentrum für Gesundheit	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
443	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Hokkaido University (HokuDai)	Loan of OSIRIS-REx Samples to University of Hokkaido	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
444	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Tohoku University	Loan of OSIRIS-REx Samples to Tohoku University - Furukawa	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
445	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Hokkaido University (HokuDai)	Loan of OSIRIS-REx Samples to Hokkaido University - Chikarasishi	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
446	Headquarters (HQ), Johnson Space Center (JSC)	Japan - University of Tokyo	Loan of OSIRIS-REx Samples to the University of Tokyo - Tachibana	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
447	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Nagoya University of Japan	Loan of OSIRIS-REx Samples to Nagoya University - Nagano	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
448	Headquarters (HQ), Johnson Space Center (JSC)	Switzerland - ETH Zurich	Loan of OSIRIS-REx Samples to ETH Zurich - Busemann	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
449	Headquarters (HQ), Johnson Space Center (JSC)	Switzerland - ETH Zurich	Loan of OSIRIS-REx Samples to ETH Zurich - Schoenbaechler	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
450	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - Open University	Loan of OSIRIS-REx Samples to the Open University - Greenwood	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
451	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - The Open University	Loan of OSIRIS-REx Samples to the Open University - Grady OU	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
452	Headquarters (HQ), Johnson Space Center (JSC)	United Kingdom - The Open University	Loan of OSIRIS-REx Samples to Open University - Franchi	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/6/2023	10/6/2026
453	Headquarters (HQ), Johnson Space Center (JSC)	Canada - University of British Columbia	Loan of OSIRIS-REx Samples to University of British Columbia - Weis	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
454	Headquarters (HQ), Johnson Space Center (JSC)	Canada - University of Winnipeg	Loan of OSIRIS-REx Samples to University of Winnipeg - Cloutis	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
455	Headquarters (HQ), Johnson Space Center (JSC)	Germany - Goethe University Frankfurt	Loan of OSIRIS-REx Samples to Goethe University of Frankfurt - Brenker	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
456	Headquarters (HQ), Johnson Space Center (JSC)	Japan - Kyushu University	Loan of OSIRIS-REx Samples to National University Corporation Kyushu University - Naraoka	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
457	Headquarters (HQ),Johnson Space Center (JSC)	United Kingdom - University of Manchester	Loan of OSIRIS-REx Samples to University of Manchester - Burgess	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
458	Headquarters (HQ),Johnson Space Center (JSC)	United Kingdom - University of Manchester	Loan of OSIRIS-REx Samples to the University of Manchester - Crowther	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
459	Headquarters (HQ),Johnson Space Center (JSC)	United Kingdom - University of Manchester	Loan of OSIRIS-REx Samples to University of Manchester - Gilmour	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
460	Headquarters (HQ),Johnson Space Center (JSC)	United Kingdom - University of Manchester	Loan of OSIRIS-REx Samples to University of Manchester - Jones	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/20/2023	10/20/2026
461	Headquarters (HQ),Johnson Space Center (JSC)	Australia - Curtin University of Technology	Loan of OSIRIS-REx Samples to Curtin University - Bland	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
462	Headquarters (HQ),Johnson Space Center (JSC)	Australia - Curtin University of Technology	Loan of OSIRIS-REx Samples to Curtin University - Timms	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
463	Headquarters (HQ),Johnson Space Center (JSC)	Australia - Curtin University of Technology	Loan of OSIRIS-REx Samples to Curtin University - Jourdan	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
464	Headquarters (HQ),Johnson Space Center (JSC)	Australia - Curtin University of Technology	Loan of OSIRIS-REx Samples to Curtin University - Reddy	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
465	Headquarters (HQ),Johnson Space Center (JSC)	Australia - Curtin University of Technology	Loan of OSIRIS-REx Samples to Curtin University - Saxey	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
466	Headquarters (HQ),Johnson Space Center (JSC)	Australia - Curtin University of Technology	Loan of OSIRIS-REx Samples to Curtin University - Rickard	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
467	Headquarters (HQ),Johnson Space Center (JSC)	United Kingdom - The University of Oxford	Loan of OSIRIS-REx Samples to University of Oxford - Bowles	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	10/31/2023	10/31/2026
468	Headquarters (HQ),Johnson Space Center (JSC)	Australia - The University of Queensland	Loan of OSIRIS-REx Samples to University of Queensland - MTA	Project-Specific Agreement (PSA)	OSIRIS-REx sample loans to international partners on the OSIRIS-REx sample science team. Samples from the asteroid Bennu. Sample curation managed by JSC Astromaterials group.	11/8/2023	11/8/2026
469	Headquarters (HQ),Johnson Space Center (JSC)	Russia - Russian Federal Space Agency (Roscosmos)	Second Amendment to Implementing Arrangement between National Aeronautics and Space Administration of the United States of America and State Space Corporation "Roscosmos" (Russian Federation) concerning Flying Integrated Crews on U.S. and Russian Crew Transportation Vehicles.	Implementing Arrangement/Agreement (IA)	Second Amendment to the implementing Arrangement between NASA and ROSCOSMOS concerning Flying Integrated Crews on Russian and U.S. Crew Transportation Vehicles, signed on July 14, 2022, as amended.	12/12/2023	12/31/2026
470	Headquarters (HQ),Wallops Flight Facility (WFF)	Canada - Environment Canada	Amendment 4 to the Agreement between the National Aeronautics and Space Administration (NASA) of the United States of America and Environment Canada (EC) of Canada for Cooperation on the Global Precipitation Measurement (GPM) Cold-Season Precipitation Validation Experiment (GCPEX) Project.	Project-Specific Agreement (PSA)	Amendment 4 - NASA and ECCC scientists will "characterize the ability of multi-frequency active and passive microwave sensors to detect and estimate falling snow to improve GPM snowfall retrieval algorithms. The derived data products from field campaigns over Canadian ground sites will advance NASA precipitation modeling and Earth observation data validation objectives for the GPM and CloudSat missions.	9/18/2023	1/31/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
471	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	NASA-Indian Space Research Organization (ISRO) Synthetic Aperture Radar (NISAR)	Implementing Arrangement/Agreement (IA)	This Implementing Arrangement (IA) for the NASA-ISRO Synthetic Aperture Radar (NISAR) mission is concluded under and subject to the Framework Agreement between the National Aeronautics and Space Administration and the Indian Space Research Organisation for Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes, signed on February 1, 2008. In this cooperative activity, NASA will provide: the L-band Synthetic Aperture Radar (SAR) instrument, including a reflector/boom assembly; a high rate telecommunication subsystem for science data; GPS receivers; a solid state recorder; and a payload data subsystem. ISRO will provide: the S-band SAR; the spacecraft bus; and the launch vehicle and associated launch services. NASA will download all science data to U.S. ground stations and ISRO will download selected science data and telemetry data to ISRO's ground station. The NISAR mission will make global measurements of the causes and consequences of land surface changes. Potential areas of research include ecosystem disturbances, ice sheet collapse and natural hazards. The NISAR mission is optimized to measure subtle changes of the Earth's surface associated with motions of the crust and ice surfaces.	9/30/2014	9/30/2034
472	Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA), Ministry of Environment (MOE), National Institute for Environmental Studies (NIES)	Memorandum of Understanding (MOU) for Cooperation on OCO-2 and the Greenhouse Gases Observing Satellite (GOSAT) and GOSAT-2	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU): The GOSAT, OCO-2, and GOSAT-2 missions ("3 CO2 Missions") are elements of the Global Earth Observation System of Systems, and their measurements are expected to improve the understanding of the processes that regulate atmospheric carbon dioxide, enabling more reliable forecasts of carbon dioxide buildup and its impacts on climate change. GOSAT and GOSAT-2 contribute to Japan's implementation of the United Nations Framework Convention on Climate Change - (calibration, validation).	3/17/2015	11/20/2024
473	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	Implementing Arrangement (IA) Between NASA and the Centre National D'Etudes Spatiales (CNES) of France on the SuperCam Instrument for the Mars 2020 Mission	Implementing Arrangement/Agreement (IA)	Mars 2020 is the next strategic mission in NASA's Mars Exploration Program. The mission will land a rover on the planet to conduct a wide range of scientific exploration, consistent with NASA's science goals for the Mars Exploration Program. Mars 2020's objective is to explore for signs of ancient life and habitable environments, study Martian weather and atmosphere, and study Martian geology. NASA plans to launch the mission in July 2020, and land on Mars in February 2021. NASA expects that the rover will conduct operations until at least August 2023. One of the seven scientific and exploration instruments on the Mars 2020 payload includes the SuperCam: Active and Reflectance Mineralogy, Astrobiology, Chemistry, and Imaging at Remote Distances instrument suite. NASA selected Dr. Roger Wiens of the Los Alamos National Laboratory (LANL) as the SuperCam Principal Investigator (PI). Dr. Sylvestre Maurice of the Institut de Recherche en Astrophysique et Planetologie (IRAP/CNRS) is the Deputy Principal Investigator and the science and technical lead of the French contribution to SuperCam. The French team will develop the SuperCam Mast Unit and the American team will develop the SuperCam Body Unit. This Implementing Arrangement will be concluded pursuant to the Framework Agreement between the Government of the French Republic and the Government of the United States of America for Cooperative Activities in the Exploration and Use of Outer Space for Peaceful Purposes.	6/16/2015	6/30/2024
474	Jet Propulsion Laboratory (JPL)	National Institute for Aerospace Technology (INTA), The Spanish Centro para el Desarrollo Tecnológico Industrial (CDTI)	Amendment: Implementation Agreement (IA) Between NASA, Center for the Development of Industrial Technology (CDTI), and National Institute of Aerospace Technology (INTA) Concerning Cooperation on the Mars Science Laboratory (MSL) Mission	Implementing Arrangement/Agreement (IA)	Amendment: Implementation Agreement (IA): In addition to extending the Mars Science Laboratory (MSL) cooperation, this amendment adds the Spanish provision of the High Gain Antenna (HGA) to the Mars 2020 mission and the Temperature and Wind on InSight (TWINS) sensors on the Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission.	6/16/2015	12/31/2025
475	Jet Propulsion Laboratory (JPL)	Government of Spain, National Institute for Aerospace Technology (INTA)	Amendment 2: Scientific Cooperation Agreement Between the United States of America and the Kingdom of Spain for the NASA Tracking Station	Project-Specific Agreement (PSA)	Amendment 2: This is a continuation of cooperation in the utilization of a ground station in Spain for transmission and reception of radio-electric signals in support of space probes, spacecraft, and space science for peaceful ends. Dip notes were required to enter the agreement into force, and these came into force in November 2003. Full agreement (English & Spanish versions, plus both dip notes) now attached.	9/4/2015	11/17/2024
476	Jet Propulsion Laboratory (JPL)	European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), European Space Agency (ESA)	Sentinel-6/Jason-CS	Project-Specific Agreement (PSA)	Cooperation on development and launch of the Sentinel-6/Jason-CS mission.	12/14/2016	12/31/2040

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
477	Jet Propulsion Laboratory (JPL)	European Space Agency (ESA)	Amendment 1: Memorandum of Understanding (MOU) Between NASA and European Space Agency (ESA) Concerning the Euclid Mission	Project-Specific Agreement (PSA)	Amendment 1: Memorandum of Understanding (MOU) between NASA and ESA to continue cooperation on the ESA-led Euclid astrophysics mission under a MOU that entered into force on January 10, 2013. The amendment covers the management of Euclid science operations and data archives, including the integration of the NASA-provided Science Data Center (SDC-US); the selecting of other NASA-funded collaborators including the U.S. Lead Scientist, the provision and operation of the Euclid NASA Science Center, and the conducting of qualification and evaluation activities for the NISP. MOU covering NASA-ESA cooperation on the ESA-led Euclid astrophysics mission. Covers NASA provision of the Near Infrared Spectrograph and Photometer (NISP) instrument sensor chip system.	12/20/2016	7/1/2025
478	Jet Propulsion Laboratory (JPL)	Commonwealth Scientific and Industrial Research Organization (CSIRO), Government of Australia	Amendment 7: Space Vehicle Tracking and Communications Facilities in Australia	Project-Specific Agreement (PSA)	Amendment 7: The 7th Amendment to the Government-to-Government Agreement, signed in October 2017 and formally ratified by Australian Parliament in Feb 2018, extending the agreement until Feb 26, 2043. The 6th Amendment to the Government-to-Government Agreement, signed on March 27, 2014, retroactive to Feb 26, 2012, and extending until Feb 26, 2018. The 5th Amendment to the Government-to-Government Agreement, signed on January 11, 2012, and extending until Feb 26, 2014. The 4th Amendment to the Government-to-Government Agreement, signed on March 17, 2010, retroactive to Feb 26, 2010, and extending until Feb 26, 2012. The 3rd Amendment to the Government to Government Agreement, did Oct 26, 2000, retroactive to Feb 26, 2000, amending the Agreement significantly, establishing CSIRO as the Cooperating Agency, and extending it to Feb 26, 2010. The 2nd Amendment was dated and effective on May 2, 1990. The first amendment was dated and entered into force on Jul 21, 1982. The basic Diplomatic-level agreement provided for cooperation in the establishment, modification, management, operation, maintenance, support, and termination of NASA tracking and communications facilities in Australia. NASA and the Australian Department of Science and the Environment are designated as the cooperating agencies in the Agreement. The diplomatic notes for the basic agreement were exchanged on May 29 1980, but entered into force retroactive to Feb 26, 1980.	10/17/2017	2/26/2043
479	Jet Propulsion Laboratory (JPL)	Commonwealth Scientific and Industrial Research Organization (CSIRO)	Cooperating Agency Arrangement Between the National Aeronautics and Space Administration of the United States of America and the Commonwealth Scientific and Industrial Research Organization of the Commonwealth of Australia for the Management and Operations of Space Vehicle Tracking and Communication Facilities in Australia	Implementing Arrangement/Agreement (IA)	Amendment 3: Full update and amendment to the original 1981 Cooperating Agency Arrangement. This Cooperating Agency Arrangement is pursuant to AS-0126-0, Government to Government Agreement, February 26, 1980, as amended, between NASA and CSIRO to implement the cooperative program for establishment, modification, management, operation, maintenance, support, and termination of NASA tracking and communications facilities in Australia. This Cooperating Agency Arrangement has the same period of performance as the Government to Government Agreement, initially February 26, 1990, then extended to February 26, 2000, and February 26, 2010, and then to February 2018; in February 2018, a completely updated version was signed, extending cooperation until February 2043.	10/11/2018	2/26/2043
480	Jet Propulsion Laboratory (JPL)	Colombian Geological Survey (CGS) (formerly National Institute for Geology and Mineralogy (INGEOMINAS))	Memorandum of Understanding (MOU) Between the National Aeronautics and Space Administration and The Colombian Geological Survey (CGS) Concerning Cooperation on Space Geodesy	Project-Specific Agreement (PSA)	Memorandum of Understanding (MOU) Agreement (follows on from CO-0004-0) to support the continued operations of established Global Navigation and Satellite System (GNSS) sites, and establishment of new Space Geodesy research sites in Colombia. This Agreement follows on from a previous Agreement with the same institution, formerly known as the National Institute for Geology and Mineralogy.	10/24/2018	10/24/2028
481	Jet Propulsion Laboratory (JPL)	King's College London	Agreement Between King's College London (KCL) and the National Aeronautics and Space Administration (NASA) of the United States of America Concerning Cooperation on Joint European Airborne Imaging Spectrometer Science Campaign	Project-Specific Agreement (PSA)	NASA/King's College London will fly remote sensing campaigns at science, calibration, and validation sites throughout Europe with JPL airborne imaging spectrometers using KCL-provided Twin Otter aircraft.	4/29/2019	4/29/2024
482	Jet Propulsion Laboratory (JPL)	Ministry of Emergency Situations	Agreement between NASA and the Ministry of Emergency Situations for Cooperation in Space Geodetic Research	Project-Specific Agreement (PSA)	Cooperation on space geodetic research through one or more Global Positioning System (GPS) ground stations in Armenia, including a GPS ground station at Yerevan.	10/5/2019	1/1/2100
483	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	Airborne Synthetic Aperture Radar (ASAR) Airborne Campaign	Implementing Arrangement/Agreement (IA)	NASA, in partnership with ISRO, using a NASA C-20A/G-III aircraft carrying the ISRO L- and S-band ASAR instrument, shall fly a remote sensing mission campaign over North America. NASA will provide a C-20A/G-III aircraft and associated radar instrument pod, and ISRO will provide the L- and S-band Airborne Synthetic Aperture Radar (ASAR) instrument.	10/9/2019	10/9/2029

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
484	Jet Propulsion Laboratory (JPL)	Korea Astronomy and Space Science Institute (KASI)	Spectro-Photometer for the History of the Universe, Epoch of Reionization, and Ices Explorer (SPHEREx)	Project-Specific Agreement (PSA)	The SPHEREx observatory will consist of a spacecraft bus and the telescope/spectrometers payload instrument. NASA will have overall responsibility for the SPHEREx mission. KASI will provide cryogenic ground support equipment, selected SPHEREx science data support, and participate in the SPHEREx science team.	10/15/2019	12/31/2027
485	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	AVIRIS-NG Airborne Campaign extension	Implementing Arrangement/Agreement (IA)	NASA will provide a C-20A/G-III aircraft and associated radar instrument pod, and ISRO will provide the L- and S-band Airborne Synthetic Aperture Radar (ASAR) instrument. NASA, in partnership with ISRO, using a NASA C-20A/G-III aircraft carrying the ISRO L- and S-band ASAR instrument, shall fly a remote sensing mission campaign over North America.	5/29/2020	9/24/2025
486	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	Extension for the Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Juno Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES to provide researchers and a portion of the Jovian Auroral Distribution Experiment (JADE) on the NASA Juno mission. This IA is under the U.S.-French Umbrella.	7/10/2020	12/31/2024
487	Jet Propulsion Laboratory (JPL)	Canadian Space Agency (CSA)	Amendment 3: Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) for Cooperation on the Cloudsat Mission.	Project-Specific Agreement (PSA)	Amendment 3: Implementing Arrangement (IA) Between NASA and Canadian Space Agency (CSA) for Cooperation on the Cloudsat Mission.	1/7/2021	12/31/2024
488	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	Mars Atmosphere and Volatile Evolution (MAVEN)	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES to provide the Solar Wind Electron Analyzer (SWEA) analyzer, a component of the SWEA instrument, for flight on the NASA MAVEN mission.	3/15/2021	12/31/2024
489	Jet Propulsion Laboratory (JPL)	Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Collaboration on Very Long Baseline Interferometry (VLBI) observations between JAXA's Misasa and NASA's Deep Space Network (DSN) stations	Project-Specific Agreement (PSA)	Collaborative agreement between NASA and JAXA, for the two agencies to carry out Very Long Baseline Interferometry (VLBI) observations between JAXA's Misasa and NASA's DSN stations in order to jointly define a set of celestial and terrestrial reference frames, which would enhance collaboration among the agencies.	12/23/2021	7/11/2031
490	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) on the Mars Science Laboratory (MSL) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) between NASA and CNES in providing significant portions of the Sample Analysis at Mars (SAM) and the Laser-Induced Remote Sensing for Chemistry and Micro-Imaging (ChemCam) payloads on the NASA Mars Science Laboratory (MSL) mission. This IA is under the U.S.-French Umbrella.	1/11/2022	12/31/2025
491	Jet Propulsion Laboratory (JPL)	University of Oslo	Mars 2020 Radar Imager for Mars Subsurface Experiment (RIMFAX)	Project-Specific Agreement (PSA)	The University of Oslo provide the RIMFAX instrument for NASA's Mars 2020 Perseverance rover.	2/7/2022	6/30/2024
492	Jet Propulsion Laboratory (JPL)	Indian Space Research Organization (ISRO)	Agreement between the National Aeronautics and Space Administration (NASA) and the Indian Space Research Organisation (ISRO) for Deep Space Network (DSN) Support For ISRO's Chandrayaan-3 Lunar Lander and Chandrayaan-2 Lunar Orbiter Missions	Project-Specific Agreement (PSA)	This reimbursable Agreement is for support requested from NASA by ISRO for the Chandrayaan-3 and Chandrayaan-2 missions. NASA will assist ISRO by providing navigation support as well as Deep Space Network (DSN) and DSN scheduling services to further ISRO's objectives of achieving Earth-to-Moon transfer orbit, navigation to the Moon, Lunar Orbit Insertion, a soft landing on a pre-defined lunar site, and transfer of data regarding scientific studies of the lunar surface.	2/10/2022	2/10/2025
493	Jet Propulsion Laboratory (JPL)	D-Wave Systems Inc.	Amendment and Extension 4: Space Act Agreement Between NASA and D-Wave Systems Inc., as Amended, for Adiabatic quantum Computing Fabrication Process Development	Project-Specific Agreement (PSA)	Amendment and Extension 4: Cooperation involves adiabatic quantum computing fabrication process development. Amendment will continue JPL support of the development of an Adiabatic Quantum Annealing approach to solving complex optimization problems. JPL will handle fabrication and diagnostic characterization in support of D-Wave's fabrication process development while D-Wave continues to handle the fabrication process, circuit designs and functional testing.	2/17/2022	8/31/2027
494	Jet Propulsion Laboratory (JPL)	Survey of Israel (SOI)	Agreement between the National Aeronautics and Space Administration (NASA) of the United States of America and the State of Israel Ministry of Construction and Housing Survey of Israel (SOI) for cooperation in space geodetic research.	Project-Specific Agreement (PSA)	To extend current geodetic collaboration between NASA and SOI by continuing use of GPS Ground Station(s) in Israel to improve accuracy of Global and Regional Geodetic Measurements	3/1/2022	7/31/2032
495	Jet Propulsion Laboratory (JPL)	National Commission on Space Activities (CONAE)	Memorandum of Understanding Between the National Aeronautics and Space Administration of the United States of America (NASA) and the Comision Nacional De Actividades Espaciales of the Argentine Republic (CONAE) For Cooperation in Space Geodetic Research	Project-Specific Agreement (PSA)	NASA and the National Commission on Space Activities (CONAE) established a permanent geodetic ground station at the Teofilo Tabanera Space Center of CONAE in Cordoba, Argentina. These stations will contribute data to the Global Geodetic Observing System (GGOS) to improve the accuracy of global and regional geodetic measurements. This extension will continue the work for an additional 10 years, with the possibility of establishing future stations.	3/8/2022	10/26/2031

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
496	Jet Propulsion Laboratory (JPL)	German Research Centre for Geosciences (GFZ)	Amendment of the MOU between NASA and GFZ for Cooperation on the Gravity Recovery and Climate Experiment Follow-on (GRACE-Follow On) Mission	Project-Specific Agreement (PSA)	GRACE-FO is a continuation of the science initiated by the United States-German GRACE mission that was launched in 2002. The primary objective of GRACE-FO is to acquire critical data for tracking water movement on and beneath the Earth's surface and understanding changes in ice sheets and global sea levels. Its data will enhance studies of ocean currents and changes in the structure of solid Earth. GRACE-FO will do this by continuing the extremely high-resolution global data record of the Earth's gravity field and how it changes over time. These gravity fields assist in the study of global climatic issues by improving our understanding, among other things, of surface and deep ocean currents, lithospheric and mantle density variations, aquifer depletion, and polar ice sheet mass variations. As with the GRACE mission, GRACE-FO will acquire the gravity field data using two Earth polar-orbiting spacecraft identically equipped and flying in a loosely controlled tandem formation. As the satellites orbit the Earth, variations in the Earth's gravity field will cause the distance between the two GRACE-FO spacecraft to change. The microwave link between the two GRACE-FO spacecraft will measure these changes at the micron level. These measurements will then be used to determine the Earth's gravity field every month. Launch is planned for August 2017 on a GFZ-provided Launch Vehicle.	3/15/2022	12/31/2026
497	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Implementing Arrangement between NASA and ASI for Cooperation on the Surface Biology and Geology Phase A Study	Implementing Arrangement/Agreement (IA)	NASA and ASI are cooperating on Phase A studies for the Earth System Observatory (ESO) Surface Biology and Geology (SBG) mission. The IA only covers the Phase A period and does not signify a commitment by either Implementing Agency for further mission formulation or implementation.	4/19/2022	4/19/2025
498	Jet Propulsion Laboratory (JPL)	National Centre for Space Studies (CNES)	Second Amendment to the Implementing Arrangement between NASA and CNES for Cooperation on the Surface Water and Ocean Topography (SWOT) Mission	Implementing Arrangement/Agreement (IA)	Second Amendment to the Implementing Arrangement (IA) Between NASA and CNES. NASA plans to provide the Payload Module, Ka-band Radar Interferometer (KaRIn), Microwave Radiometer (MR) with its antenna, Laser Retroreflector Array (LRA), Global Positioning System receiver package, launch services, and ground segment elements. The National Centre for Space Studies (CNES) plans to provide the spacecraft bus, KaRIn Radio Frequency Unit (RFU), nadir altimeter, Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) receiver package, and ground segment elements.	9/26/2022	6/15/2032
499	Jet Propulsion Laboratory (JPL)	Swiss Federal Institute of Technology Zurich of the Swiss Confederation (ETH-Zurich)	Seismic Experiment for Interior Structure (SEIS) instrument on NASA's Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission	Project-Specific Agreement (PSA)	NASA-the Swiss Federal Institute of Technology - Zurich (ETHZ), represented by Prof. Domenico Giardini, Institute of Geophysics, InSight Agreement: ETHZ is providing electronic components on the CNES-led Seismic Experiment for Interior Structure (SEIS) instrument for the NASA-led Interior Exploration using Seismic Investigations, Geodesy, and Heat Transport (InSight) mission.	10/13/2022	7/1/2024
500	Jet Propulsion Laboratory (JPL)	India - Indian Institute of Technology, Delhi (IITD)	Agreement between the National Aeronautics and Space Administration of the United States of America and the India Institute of Technology - Delhi Concerning Cooperation on Air Quality Ground Monitoring to Support the Multi-Angle Imager for Aerosols	Project-Specific Agreement (PSA)	IITD will host NASA instruments to collect data to contribute to the MAIA mission.	11/9/2022	11/9/2032
501	Jet Propulsion Laboratory (JPL)	Germany - German Aerospace Center (DLR)	Amendment and Extension 3: Agreement for the Mars Science Laboratory (MSL) Radiation Assessment Detector (RAD) Instrument	Project-Specific Agreement (PSA)	DLR provided the RAD instrument for NASA's MSL mission	12/6/2022	12/31/2030
502	Jet Propulsion Laboratory (JPL)	Germany - German Aerospace Center (DLR)	Amendment 2: Implementing Arrangement for Cooperation on the Interior Exploration of Seismic Investigations, Geodesy and Heat Transport (INSIGHT) Mission	Implementing Arrangement/Agreement (IA)	DLR provided an instrument for the NASA spacecraft	12/9/2022	12/31/2027
503	Jet Propulsion Laboratory (JPL)	Italian Space Agency (ASI)	Implementing Arrangement between NASA and ASI for Cooperation on the Multi-angle Imager for Aerosols Mission	Implementing Arrangement/Agreement (IA)	ASI will provide a spacecraft, launch vehicle and a portion of the ground system for the MAIA observatory.	1/12/2023	9/30/2032
504	Jet Propulsion Laboratory (JPL)	France - National Centre for Space Studies (CNES)	Amendment 2: Implementing Arrangement Between NASA and CNES Seismic Experiment for Interior Structure (SEIS) Instrument for the Interior Exploration Using Seismic Investigations, Geodesy, and Heat Transport (INSIGHT) Mission	Implementing Arrangement/Agreement (IA)	CNES instrument contributions to NASA spacecraft and science cooperation.	4/5/2023	12/31/2027

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
505	Jet Propulsion Laboratory (JPL)	Japan - Japan Aerospace Exploration Agency (JAXA)	Extension 2 - NASA-JAXA Agreement for High-Power Testing Capabilities for JAXA's New Deep Space Antenna	Project-Specific Agreement (PSA)	Extension 2 - NASA and JAXA is seeking to extend its 2017 agreement (as amended in 2019) to provide high power testing capabilities for JAXA's new deep space antenna (Misasa) in consideration of JAXA's providing future tracking hours for NASA on that antenna. In this Agreement, JAXA and NASA will jointly coordinate with two U.S. vendors to test the performance of the JAXA transmitter components at NASA test facilities. In return, JAXA will provide NASA with commensurate tracking time on its new deep space antenna, Misana. The required testing of the transmitter components and the JAXA provisioning of time on its Misasa antenna will be conducted quid-pro-quo on a no-exchange-of-funds basis.	8/29/2023	8/26/2025
506	Jet Propulsion Laboratory (JPL)	Canada - Canadian Space Agency (CSA)	Fourth Extension to the Implementing Arrangement between the National Aeronautics and Space Administration of the United States of America and the Canadian Space Agency on the Mars Science Laboratory Mission.	Implementing Arrangement/Agreement (IA)	CSA provided the APXS instrument for NASA's MSL mission.	11/21/2023	9/30/2028
507	Jet Propulsion Laboratory (JPL)	Italy - Italian Space Agency (ASI)	Extension to MOU between NASA and the Italian Space Agency (ASI) for Cooperation on the Nuclear Spectroscopic Telescope Array (NuSTAR) mission.	Project-Specific Agreement (PSA)	Extends LOA for through 2033 to continue work on NuSTAR mission while on orbit.	12/29/2023	12/31/2033
508	Johnson Space Center (JSC)	Italian Space Agency (ASI)	Memorandum of Understanding (MOU) Between NASA and the Italian Space Agency (ASI) for the Design, Development, Operation and Utilization of Three Mini-Pressurized Logistics Modules for the International Space Station (ISS)	Project-Specific Agreement (PSA)	This Memorandum of Understanding (MOU) agreement supersedes agreement IT-0120 of 12/06/1991, substituting three Mini Pressurized Logistics Modules (MPLMs) as the components to be furnished by Italy for the two MPLMs and a Mini Laboratory called for in IT-0120. In exchange, NASA will launch the MPLMs on the Shuttle and provide ASI .85 per cent of pressurized user accommodations; .85 per cent of accommodations for external payloads, and .85 per cent of utilization resources, and launch ASI's utilization on the Shuttle. NASA will also provide ASI one ASI-provided ISS crew member for one on-orbit increment every five years, with a minimum of 3 crew opportunities. The effective duration of the agreement is through the end of the ISS Program; i.e., December 31, 2020. Dip Notes required to enter into force. Date of dip notes unknown.	10/9/1997	12/31/2024
509	Johnson Space Center (JSC)	European Space Agency (ESA)	Memorandum of Understanding (MOU) Between NASA and the European Space Agency (ESA) Concerning Cooperation on the Civil International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	The specific objectives of the MOU are: to provide the basis for cooperation between NASA and ESA in the detailed design, development, operation, and utilization of the permanently inhabited civil ISS for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient, and effective for both Space Station users and Space Station operators. An exchange of letters from ESA to NASA, dated Nov. 27, 2007, with NASA's response to ESA, dated Nov. 27, 2007, entered the MOU into force.	1/29/1998	12/31/2024
510	Johnson Space Center (JSC)	Canadian Space Agency (CSA), Japan Aerospace Exploration Agency (JAXA), European Space Agency (ESA), Russian Federal Space Agency (Roskosmos)	Umbrella/Framework Agreement Among the Government of Canada, Governments of Member States of the European Space Agency (ESA), the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station	Umbrella/Framework Agreement (UM/FW)	Umbrella/Framework Agreement: Superseded the Intergovernmental Agreement, dated September 29, 1988, (MULT-0001-0). Agreement Among the member countries of European Space Agency (ESA), Canada, Japan, and Russia. The Space Station elements to be provided by each Partner are detailed in the Annex. Cooperation between NASA and each individual Partner will be specified in Memorandum of Understanding's (MOU's), pursuant to this Agreement, and cooperation between NASA and each individual Partner will be specified in Implementing Arrangements pursuant to the MOUs.	1/29/1998	12/31/2024
511	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Memorandum of Understanding (MOU) Between NASA and the Russian Space Agency Concerning Cooperation on the Civil International Space Station	Implementing Arrangement/Agreement (IA)	The specific objectives of this Memorandum of Understanding (MOU) are: to provide the basis for cooperation between NASA and RSA in the detailed design, development, operation and utilization of the permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law; to provide a basis for cooperation that maximizes the total capability of the Space Station to accommodate user needs and that ensures that the Space Station is operated in a manner that is safe, efficient and effective for both Space Station users and Space Station operators. Requires Exchange of Diplomatic Notes to enter into force. Implementing Arrangement under the IGA for ISS. Russia sent dip note for this Agreement to enter into force dated March 27, 1998. Russian Dip Note is attached. U.S. Dip Note responding to Russian Dip Note is NOT attached.	1/29/1998	12/31/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
512	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	Memorandum of Understanding (MOU) Between NASA and the Canadian Space Agency (CSA) Concerning Cooperation on the Civil International Space Station (ISS)	Implementing Arrangement/Agreement (IA)	Specific objectives of this MOU are: to provide the basis for cooperation between NASA and CSA in the detailed design, development, operation and utilization of the permanently inhabited civil international Space Station for peaceful purposes, in accordance with international law. Exchange of Dip Notes Required for entry into force. Dip Notes not available.	1/29/1998	12/31/2030
513	Johnson Space Center (JSC)	European Space Agency (ESA)	Implementing Arrangement (IA) Between NASA and the European Space Agency's (ESA) Concerning Provision of a Cupola in Exchange for NASA's Provision of Shuttle Launch and Return Services for Five External European Payloads	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Pursuant to Articles 1.1 and 16.4 of the NASA/ESA ISS MOU, this Arrangement provides for the provision by ESA of a Cupola and additional goods and services to NASA for the ISS Program in exchange for NASA's provision of Space Shuttle launch and return transportation services for five ESA external ISS payloads.	8/7/2000	12/31/2024
514	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	An Implementing Arrangement (IA) Between NASA and The Canadian Space Agency (CSA) Regarding a Barter of International Space Station (ISS) Supporting Services and Utilization	Implementing Arrangement/Agreement (IA)	This is an Implementing Arrangement (IA) that is entered into pursuant to the Agreement among the Government of USA, Governments of Member States of the European Space Agency, the Government of Japan, Government of Canada Concerning Cooperation on the Civil ISS (the IGA) and the MOU between NASA/CSA Concerning Cooperation on the Civil International Space Station. This Arrangement details the understanding between NASA/CSA regarding a barter of ISS supporting services and utilization and regarding a Special Purpose Dexterous Manipulator (SPDM) and Other Goods and Services Towards Fulfillment of Its Common System Operations Responsibilities Within the Context of the ISS Program and more specifically the Optional Additional Offset detailed therein, this Arrangement provides for the exercise of the Optional/Additional Offset by Canada.	8/16/2001	12/31/2030
515	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Addendum 2: Implementing Arrangement entitled "Protocol Including Terms, Conditions and Assumptions, Summary Balance of Contribution and Obligations to International Space Station (ISS) and Resulting Rights of NASA and RSA to ISS Utilization Accommodations and Resources, and Flight Opportunities" (Balance Agreement) Between NASA and the Federal Space Agency of the Russian Federation	Implementing Arrangement/Agreement (IA)	Addendum 2: Also referred to as the "Second Addendum to the Balance Agreement," this Addendum adjusts the balance of the contributions of the Parties previously established in the original Balance Agreement and Addendum, due to changes in the timeline, programmatic changes, et. al. It effects a partial rebalance of the NASA and Roscosmos efforts regarding crew size and composition, science power platform and its arrays, upmass, habitation, electrical power, stowage, communication services, propellant, waste removal services, water, and liaison office and travel support through December 31, 2011. The Agreement will remain in force until such time as the MOU ceases to be in force.	7/1/2006	12/31/2024
516	Johnson Space Center (JSC)	The University Court of The University of Edinburgh	Reimbursable Space Act Umbrella Agreement Between NASA and The University of Edinburgh Regarding Anthropomorphic Robotic Systems	Umbrella/Framework Agreement (UM/FW)	JSC is leading an agency-wide effort to advance the state of the art of autonomous robot manipulation and mobility operations. JSC's goal is to develop anthropomorphic robotic "caretaker" systems for deep space missions which can provide autonomous tending of spacecraft in absence of crew, reduction of crew time for spacecraft maintenance chores, and response capability for spaceflight emergencies. These efforts led to anthropomorphic robotic demonstration systems culminating with the R5 system. Meanwhile, the UoE which is engaged in research and training related to the interactions between robots and their environments, is leading a national UK initiative on robotics research, and has expressed an interest in advancing their efforts through the reimbursable use of an advanced robotic test bed based on the R5 technology. Thus, this Umbrella Agreement shall establish the parameters for the support NASA will provide to the UoE related to the advancement and loan of NASA robotic technologies. Annex 1's purpose is for NASA and the UoE to undertake design, delivery, and testing of anthropomorphic robotic systems that address key challenges for managing interactions between robots and their environments, between multiple autonomous systems, and between robots and humans. NASA will further develop the NASA R5B test bed to meet the UoE's requirements.	2/26/2015	2/26/2026
517	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) Acting for DLR Institute of Aerospace Medicine for Cooperation on Investigations Utilizing the German Aerospace Center's :envihab Facility	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) Agreement between NASA and DLR to conduct collaborative human research investigations and cooperation utilizing DLR's envihab facility.	4/11/2018	12/31/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
518	Johnson Space Center (JSC)	Israel Space Agency (ISA)	Implementing Arrangement (IA) Between NASA and Israel Space Agency (ISA) for Cooperation on the Matryoshka AstroRad Radiation Experiment (MARE) on NASA's Exploration Mission-1	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA): On its first flight (Exploration Mission-1 or 'EM-1'), NASA will demonstrate its new Space Launch System rocket's heavy-lift capability and send an un-crewed Orion spacecraft into deep space. The agency will also take advantage of additional available mass and space to provide the rare opportunity to fly secondary payloads in the Orion Crew Module (CM) to conduct experiments beyond low-Earth orbit. MARE is one of the secondary payloads that will be installed in the Orion CM that will launch on EM-1. MARE will provide tissue equivalent assessment of the radiation environment that future crews may be exposed to and demonstrate radiation shielding effectiveness of a crew Radiation Shield Vest (RSV). The experiment includes two (2) tissue equivalent torsos, one RSV, active dosimeters, and passive dosimeters. MARE is an experiment co-managed by the German Aerospace Center (DLR) and ISA (hereinafter referred to as 'the experiment team'), whose roles are detailed under a separate DLR-to-ISA MOU. NASA will participate in the MARE payload as a co-Principal Investigator (PI).	4/17/2018	4/17/2026
519	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Implementing Arrangement (IA) Between NASA and the German Aerospace Center (DLR) for Cooperation on the Matryoshka AstroRad Radiation Experiment (MARE) On NASA's Exploration Mission-1	Implementing Arrangement/Agreement (IA)	Under the Implementing Arrangement (IA), on the first flight of Exploration Mission-1 ("EM-1,") NASA will demonstrate its new Space Launch System rocket's heavy-lift capability and send an un-crewed Orion spacecraft into deep space. The agency will also take advantage of additional available mass and space to provide the rare opportunity to fly secondary payloads in the Orion Crew Module (CM) to conduct experiments beyond low-Earth orbit. MARE is one of the secondary payloads that will be installed in the Orion CM that will launch on EM-1. MARE will provide tissue equivalent assessment of the radiation environment that future crews may be exposed to and demonstrate radiation shielding effectiveness of a crew Radiation Shield Vest (RSV). The experiment includes two (2) tissue equivalent torsos, one RSV, active dosimeters, and passive dosimeters. MARE is an experiment co-managed by DLR and the Israel Space Agency (ISA) (hereinafter referred to as "the experiment team"), whose roles are detailed under a separate DLR ISA Memorandum of Understanding. NASA will participate in the MARE payload as a co-Principal Investigator (PI).	6/19/2018	6/19/2026
520	Johnson Space Center (JSC)	Curtin University of Technology	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Philip Bland of Curtin University in Perth, Western Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/10/2019	5/10/2024
521	Johnson Space Center (JSC)	Curtin University of Technology	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Gretchen K. Benedix of Curtin University in Perth, Western Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/10/2019	5/10/2024
522	Johnson Space Center (JSC)	Westfälische Wilhelms-Universität Münster	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Andreas Stracke of Westfälische Wilhelms-Universität in Münster, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/10/2019	5/10/2024
523	Johnson Space Center (JSC)	Curtin University of Technology	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Fred Jourdan of Curtin University in Bentley, Australia, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/29/2019	5/29/2024
524	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Seann J. McKibbin of Vrije Universiteit in Brussels, Belgium, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/29/2019	5/29/2024
525	Johnson Space Center (JSC)	Physical Research Laboratory (PRL)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Dwijesh Ray of Physical Research Laboratory in Ahmedabad, India, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/29/2019	5/29/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
526	Johnson Space Center (JSC)	Chiba Institute of Technology	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Tomoko Arai of Chiba Institute of Technology in Narashino, Chiba, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/29/2019	5/29/2024
527	Johnson Space Center (JSC)	National Institute of Polar Research (NIPR)	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Akira Yamaguch of National Institute of Polar Research in Tokyo, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/29/2019	5/29/2024
528	Johnson Space Center (JSC)	Kyoto University	Agreement between NASA and Kyoto University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Aki Takigawa of Kyoto University in Kyoto, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/9/2019	8/8/2024
529	Johnson Space Center (JSC)	IMPMC-NMHN (Mineralogie)	Agreement between NASA and the Institut de Mineralogie for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Matthieu Gounelle of the Institut de Mineralogie in Paris, France proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/9/2019	8/9/2024
530	Johnson Space Center (JSC)	Max Planck Institute for Chemistry	Agreement between NASA and the Max Planck Institute fur Chemie for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Ulrich Ott of the Max Planck Institute for Chemistry in Mainz, Germany, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/9/2019	8/9/2024
531	Johnson Space Center (JSC)	Tohoku University	Agreement between NASA and Tohoku University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Tomoki Nakamura of Tohoku University in Sendai, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/9/2019	8/9/2024
532	Johnson Space Center (JSC)	Kyushu University	Agreement between NASA and the Kyushu University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Takaaki Noguchi of Kyushu University in Fukuoka, Japan, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/9/2019	8/9/2024
533	Johnson Space Center (JSC)	Birkbeck College of London	Agreement between NASA and Birkbeck University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Hilary Downes of Birkbeck University in London, UK, proposes to use the Antarctic Meteorite samples to undertake scientific investigations led by PI. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/9/2019	8/9/2024
534	Johnson Space Center (JSC)	Curtin University of Technology	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Curtin University Principal Investigator Lucy Forman.	9/18/2019	9/18/2024
535	Johnson Space Center (JSC)	Curtin University of Technology	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Curtin University Principal Investigator Lucy Forman.	9/18/2019	9/18/2024
536	Johnson Space Center (JSC)	Universitat zu Koln	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Universitat zu Koln Principal Investigator Dominik Hezel.	9/18/2019	9/18/2024
537	Johnson Space Center (JSC)	University of Helsinki	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to University of Helsinki Principal Investigator Tomas Kohout.	9/18/2019	9/18/2024
538	Johnson Space Center (JSC)	National Institute of Polar Research (NIPR)	Agreement between NASA and the National Institute of Polar Research for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Makoto Kimura proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	9/18/2019	9/18/2024
539	Johnson Space Center (JSC)	Waseda University	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Waseda University Principal Investigator Yoshihiro Hidaka.	9/18/2019	9/18/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
540	Johnson Space Center (JSC)	Waseda University	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Waseda University Principal Investigator Timothy Fagan.	9/18/2019	9/18/2024
541	Johnson Space Center (JSC)	Open University	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Open University Principal Investigator Mahesh Anand.	9/18/2019	9/18/2024
542	Johnson Space Center (JSC)	University of Glasgow	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to University of Glasgow Principal Investigator Luke Daly.	9/18/2019	9/18/2024
543	Johnson Space Center (JSC)	Freie Universitat Berlin	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Freie Universitat Berlin Principal Investigator Harry Becker.	9/18/2019	9/18/2024
544	Johnson Space Center (JSC)	Open University	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Open University Principal Investigator Mahesh Anand.	9/18/2019	9/18/2024
545	Johnson Space Center (JSC)	European Space Agency (ESA)	NASA-ESA Cooperative Agreement regarding ESA Active Dosimeters (EAD) on Artemis I	Project-Specific Agreement (PSA)	Covers activities regarding the ESA Active Dosimeters (EAD) flying as a secondary payload in the Orion spacecraft during the Artemis I mission.	9/20/2019	9/20/2027
546	Johnson Space Center (JSC)		International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to University of Regina Principal Investigator Ian Coulson.	10/1/2019	10/1/2024
547	Johnson Space Center (JSC)		International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Geoscience Institute, Mineralogy Principal Investigator Frank Erich Brenker.	10/1/2019	10/1/2024
548	Johnson Space Center (JSC)	Swedish Museum of Natural History	International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to Swedish Museum of Natural History Principal Investigator Renaud Merle.	10/1/2019	10/1/2024
549	Johnson Space Center (JSC)		International Antarctic Meteorite Sample Loan Agreement	Project-Specific Agreement (PSA)	Agreement for the loan of Antarctic Meteorite Samples to University of Cambridge Principal Investigator Farhang Nabiei.	10/1/2019	10/1/2024
550	Johnson Space Center (JSC)	Canadian Space Agency (CSA), National Space Development Agency of Japan (NASDA)	"Monitoring the Cellular Immunity by in vitro Delayed Hypersensitivity on the ISS (Immunity Assay, formerly known as MoCISS)" on the ISS	Project-Specific Agreement (PSA)	The Annex is an agreement between NASA and ESA concerning support of the ISS Immunity Assay experiment to investigate the impact of spaceflight stressors on cellular immune functions. ESA will develop the hardware to perform the experiment and NASA will provide 12 hours of crew time on the ISS for the experiment.	10/7/2019	12/31/2024
551	Johnson Space Center (JSC)	Canada - MacEwan University	Agreement between NASA and MacEwan University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Erin Walton proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/29/2019	10/29/2024
552	Johnson Space Center (JSC)	National Research Council (CSIC)	Agreement between NASA and the Institute of Space Sciences of the Spanish National Research Council for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Josep M. Trigo-Rodriguez proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/29/2019	10/29/2024
553	Johnson Space Center (JSC)	University of Manchester	Agreement between NASA and University of Manchester for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Patricia Clay proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/29/2019	10/29/2024
554	Johnson Space Center (JSC)	Curtin University of Technology	Agreement between NASA and Curtin University of Technology for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Alexander Nemchin proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/26/2019	11/26/2024
555	Johnson Space Center (JSC)	Heidelberg University	Agreement between NASA and Heidelberg University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Mario Triecoff proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/26/2019	11/26/2024
556	Johnson Space Center (JSC)	Universitat zu Koln	Agreement between NASA and the Universitat zu Koln for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Frank Wombacher proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/26/2019	11/26/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
557	Johnson Space Center (JSC)	Open University	Agreement between NASA and The Open University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Richard Greenwood proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/26/2019	11/26/2024
558	Johnson Space Center (JSC)	Kobe University	Agreement between NASA and Kobe University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Kazushige Tomeoka proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12/6/2019	12/6/2024
559	Johnson Space Center (JSC)	University of Leicester	Agreement between NASA and the University of Leicester for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator John Bridges proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12/6/2019	12/6/2024
560	Johnson Space Center (JSC)	University of the Basque Country (UPV/EHU)	Agreement between NASA and the University of the Basque Country for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Juan Manuel Madariaga proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/21/2020	1/21/2025
561	Johnson Space Center (JSC)	University of Leicester	Agreement between NASA and the University of Leicester for the Loan of Cosmic Dust Samples	Project-Specific Agreement (PSA)	Principal Investigator John Bridges proposes to use the Cosmic Dust samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Cosmic Dust Sample Curator at JSC and approved by the Cosmic Dust Sample Curator.	2/2/2020	2/3/2025
562	Johnson Space Center (JSC)	CEREGE	Agreement between NASA and CEREGE for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Pierre Rochette proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	2/3/2020	2/3/2025
563	Johnson Space Center (JSC)	University College London	Agreement between NASA and the London Centre for Nanotechnology for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dominic Papineau proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	2/20/2020	2/20/2025
564	Johnson Space Center (JSC)	University College London	Extension of the Agreement Between NASA and The University College London (UCL) for Cooperation on Li-ion Battery Design	Project-Specific Agreement (PSA)	NASA and The University College London (UCL) in the United Kingdom will establish a cooperative agreement to advance an understanding of the relationship between Lithium ion (Li-ion) cell design and thermal runaway phenomena, which can lead to overheating and fire. This collaboration will guide safer battery designs, namely those features that mitigate the hazard of single cell thermal runaway, with potentially wide spectrum of future applications, including automobiles, aircraft and human spaceflight. NASA is conducting research aimed at developing thermal runaway propagation prevention measures in Li-ion battery pack designs, an area of interest to UCL. Meanwhile, among UCL Li-ion battery research interests is the performance of internal short circuit devices in simulating manufacturing defects, which can contribute to thermal runaway behaviors. UCL also has access to synchrotron facilities which provides additional means to acquire, reduce, and analyze in-situ high speed video X-rays of cells during thermal runaway.	5/14/2020	5/24/2025
565	Johnson Space Center (JSC)	Royal Holloway and Bedford New College	Agreement between NASA and the Royal Holloway and Bedford New College for the Loan of Cosmic Dust samples	Project-Specific Agreement (PSA)	Principal Investigator Queenie Chan proposes to use the cosmic dust samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the cosmic dust Sample Curator at JSC and approved by the Sample Curator.	7/22/2020	7/22/2025
566	Johnson Space Center (JSC)	Mohammed Bin Rashid Space Centre (MBRSC)	REIMBURSABLE AGREEMENT BETWEEN THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION OF THE UNITED STATES OF AMERICA AND MOHAMMED BIN RASHID SPACE CENTRE FOR ASTRONAUT TRAINING	Project-Specific Agreement (PSA)	This reimbursable agreement is for the purpose of setting the terms and conditions with regard to training United Arab Emirates (UAE) astronauts for flight to the International Space Station (ISS). Two UAE astronauts will begin training for operational familiarity, flight qualification, and utilization activities at the NASA Johnson Space Center (JSC) in 2020, and two more will begin when the second group of two UAE astronauts will join the upcoming NASA Astronaut Candidate class.	9/8/2020	9/8/2025
567	Johnson Space Center (JSC)	Museum of Applied Arts and Sciences - Powerhouse Museum	Agreement between NASA and Museum of Applied Arts and Sciences - Powerhouse Museum for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Jessica McLean proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	10/14/2020	7/31/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
568	Johnson Space Center (JSC)	European Space Agency (ESA)	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the European Space Agency Concerning Cooperation on the Civil Lunar Gateway	Project-Specific Agreement (PSA)	MOU to realize Gateway cooperation under the ISS IGA.	10/27/2020	12/31/2035
569	Johnson Space Center (JSC)	Government of Canada	Memorandum of Understanding between the Government of the United States of America and the Government of Canada Concerning Cooperation on the Civil Lunar Gateway	Project-Specific Agreement (PSA)	MOU to realize Gateway cooperation under the ISS IGA.	11/15/2020	12/31/2035
570	Johnson Space Center (JSC)	University of Cologne	Agreement between NASA and the University of Cologne for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Carsten Muenker proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12/10/2020	12/10/2025
571	Johnson Space Center (JSC)	CEREGE CNRS Aix-Marseille University	Agreement between NASA and the CEREGE CNRS Aix-Marseille University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Jerome Gattacceca to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	12/28/2020	12/28/2025
572	Johnson Space Center (JSC)	University of Firenze	Agreement between NASA and University of Firenze for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Giovanni Pratesi proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	12/28/2020	12/28/2025
573	Johnson Space Center (JSC)	Government of Japan	Memorandum of Understanding between the National Aeronautics and Space Administration of the United States of America and the Government of Japan Concerning Cooperation on the Civil Lunar Gateway	Project-Specific Agreement (PSA)	MOU to realize Gateway cooperation under the ISS IGA	12/31/2020	12/31/2035
574	Johnson Space Center (JSC)	Osaka University	Agreement between NASA and Osaka University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Kentaro Terada proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	1/11/2021	1/11/2026
575	Johnson Space Center (JSC)	Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA)	Agreement between NASA and ISAS/JAXA for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Tomohiro Usui proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	1/11/2021	1/11/2026
576	Johnson Space Center (JSC)	Ege University	Agreement between NASA and Ege University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Ozan Unsalan proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	1/11/2021	1/11/2026
577	Johnson Space Center (JSC)	Camp Spatial Canada	Agreement between NASA and Camp Spatial Canada for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Marie-Michele Limoges proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	1/21/2021	7/31/2026
578	Johnson Space Center (JSC)	University of Glasgow	Agreement between NASA and the University of Glasgow for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Lydia Hallis to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	1/25/2021	1/25/2025
579	Johnson Space Center (JSC)	IMPMC-NMHN (Mineralogie)	Agreement between NASA and IMPMC/Museum Nati d'Histoire Naturell for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Emmanuel Jacquet proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	1/25/2021	1/25/2026
580	Johnson Space Center (JSC)	University of Manchester	Agreement between NASA and University of Manchester for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Ray Burgess proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	1/25/2021	1/25/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
581	Johnson Space Center (JSC)	MuseoPambata Foundation Inc	Agreement between NASA and the MuseoPambata Foundation, Inc. for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Maria Marcella P. Montero to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	1/27/2021	1/27/2026
582	Johnson Space Center (JSC)	Austria - Natural History Museum	Agreement between NASA and the Natural History Museum for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Ludovic Ferriere use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	1/27/2021	7/31/2026
583	Johnson Space Center (JSC)	RiesKraterMuseum Noerdlingen	Agreement between NASA and the RiesKraterMuseum Noerdlingen for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator David Wittner proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	1/28/2021	1/28/2026
584	Johnson Space Center (JSC)	Stiftung Haus der Geschichte der Bundesrepublik Deutschland	Agreement between NASA and Stiftung Haus der Geschichte der Bundesrepublik Deutschland for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Volker Thiel proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	1/28/2021	1/28/2026
585	Johnson Space Center (JSC)	Canberra Deep Space Communication Complex (CDSCC) to the Australian Museum	Agreement between NASA and The NASA Canberra Deep Space Communication Complex for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Glen Nagle proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	1/28/2021	7/31/2026
586	Johnson Space Center (JSC)	ETH Zurich	Agreement between NASA and ETH Zurich for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Alison Hunt proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	2/4/2021	2/4/2026
587	Johnson Space Center (JSC)	Observatoire Midi-Pyrenees	Agreement between NASA and Observatoire Midi-Pyrenees for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Quitte Ghylaine proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	2/22/2021	2/22/2026
588	Johnson Space Center (JSC)	Japan Space Forum	Agreement between NASA and the Japan Space Forum for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Kazuya Fushimi use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	2/26/2021	2/26/2026
589	Johnson Space Center (JSC)	Noordwijk Space Expo	Agreement between NASA and Noordwijk Space Expo for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Barbara Hoppel proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	2/26/2021	2/26/2026
590	Johnson Space Center (JSC)	The Visitor Center at the Madrid Deep Space Communications Complex	Agreement between NASA and The Visitor Center at the Madrid Deep Space Communications Complex for the Loan of Lunar Samples	Project-Specific Agreement (PSA)	Principal Investigator Ray Burgess proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the lunar Sample Curator at JSC and approved by the Sample Curator	2/26/2021	7/31/2026
591	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Amendment 1: Reimbursable Space Act Agreement Between NASA and the Japan Aerospace Exploration Agency (JAXA) on JAXA's Use of NASA's Common Spares Pool (CSP) to Support the Japanese Experiment Module (JEM)	Implementing Arrangement/Agreement (IA)	Amendment 1 to replace Articles II-VII in their entirety, which updated language to reflect the retirement of the Shuttle and to provide for the Spares Analysis and JAXA payment for estimated CSP requirements through 2020. The Basic Agreement between NASA and JAXA, which enabled JAXA to use the Common Spares Pool, on a reimbursable basis to NASA, for spares/repair parts to maintain the ISS-JEM. The Basics Agreement also supersedes and terminates the previous CSP-JEM Agreement between NASA and JAXA.	3/13/2021	12/31/2024
592	Johnson Space Center (JSC)	Friedrick-Schiller-University Jena	Agreement between NASA and Friedrich-Schiller-University Jena for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Falko Langenhorst proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	3/26/2021	3/26/2026
593	Johnson Space Center (JSC)	Natural History Museum	Agreement between NASA and The Natural History Museum, London for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Martin Suttle proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/8/2021	4/8/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
594	Johnson Space Center (JSC)	Institut de Planetologie et d'Astrophysique de Grenoble	Agreement between NASA and Institute for Planetary science and Astrophysics of Grenoble for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Olivier Poch proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/15/2021	4/15/2026
595	Johnson Space Center (JSC)	Okayama University	Agreement between NASA and Okayama University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Matthew Izawa proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/15/2021	4/15/2026
596	Johnson Space Center (JSC)	Museum fur Naturkunde, Berlin	Agreement between NASA and Museum fur Naturkunde Berlin for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Thomas Kruijer proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/19/2021	4/19/2026
597	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	Agreement between NASA and Japan Aerospace Exploration Agency for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Tomohiro Usui proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/19/2021	4/19/2026
598	Johnson Space Center (JSC)	The University of Oxford	Agreement between NASA and University of Oxford for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator James Bryson proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/19/2021	4/19/2026
599	Johnson Space Center (JSC)	Utrecht University	Agreement between NASA and Utrecht University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Inge Loes ten Kate proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	4/22/2021	4/22/2026
600	Johnson Space Center (JSC)	Polish Academy of Sciences (PAS)	Agreement between NASA and the Polish Academy of Sciences for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Jakub Ciazela proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	5/5/2021	5/5/2026
601	Johnson Space Center (JSC)	Universite de Clermont-Ferrand	Agreement between NASA and Universite de Clermont-Ferrand for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Maud Boyet proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	5/11/2021	5/11/2026
602	Johnson Space Center (JSC)	Free University of Brussels	Agreement between NASA and the Free University of Brussels for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Philippe Claeys use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	5/20/2021	5/20/2026
603	Johnson Space Center (JSC)	Vrije University Brussels (VUB)	Agreement between NASA and the Vrije Universiteit Brussel for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Steven Goderis to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	5/20/2021	5/20/2026
604	Johnson Space Center (JSC)	Royal Holloway and Bedford New College	Agreement between NASA and the Royal Holloway and Bedford New College for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Queenie Chan proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Sample Curator.	5/20/2021	5/20/2026
605	Johnson Space Center (JSC)	European Space Agency	Agreement between NASA and The European Space Agency for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Juergen Schlotz proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	7/12/2021	1/31/2026
606	Johnson Space Center (JSC)	The Board of Trustees of the Science Museum	Agreement between NASA and The Board of Trustees of the Science Museum for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Emily Oldfield proposes to use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	7/12/2021	7/31/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
607	Johnson Space Center (JSC)	University of Bern	Agreement between NASA and the University of Bern for the Loan of Lunar samples	Project-Specific Agreement (PSA)	Principal Investigator Andre Galli use the Lunar samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Lunar Sample Curator at JSC and approved by the Sample Curator.	9/23/2021	9/23/2026
608	Johnson Space Center (JSC)	Russian Federal Space Agency (Roskosmos)	Implementing Arrangement between NASA and ROSCOSMOS of Sustaining Engineering and Maintenance for Functional Cargo Block Module in Exchange of Provision by NASA of On-orbit Stowage and Communication Services through Tracking and Data Relay Satellite System	Implementing Arrangement/Agreement (IA)	The purpose of this IA concerns sustaining engineering and maintenance for Functional Cargo Block module in exchange of provisions by NASA of on-orbit stowage and communication services through the tracking and data relay satellite system.	10/7/2021	12/31/2024
609	Johnson Space Center (JSC)	Physical Research Laboratory (PRL)	Agreement between NASA and The Physical Research Laboratory for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Kuljeet Marhas proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/12/2021	11/12/2026
610	Johnson Space Center (JSC)	Okayama University	Agreement between NASA and Okayama University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Takafumi Niihara proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/12/2021	11/12/2026
611	Johnson Space Center (JSC)	Japan Aerospace Exploration Agency (JAXA)	JAXA Calorimetric Electron Telescope (CALET) Mission	Project-Specific Agreement (PSA)	JAXA launched the CALET instrument to the International Space Station on an HTV for joint science.	12/21/2021	12/31/2024
612	Johnson Space Center (JSC)	ETH Zurich	Agreement between NASA and ETH Zurich for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. My Riebe proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/13/2022	1/13/2027
613	Johnson Space Center (JSC)	European Space Agency	European Space Agency (ESA) contributions to the NASA-sponsored Complement of Integrated Protocols for Human Exploration Research (CIPHER)	Implementing Arrangement/Agreement (IA)	The annex details NASA and ESA's participation and integration in CIPHER, including collaboration on experiments such as routine ultrasound, vascular calcium, spatial cognition, space phys mx CEVIS, and iSafe Vision and Vascular Tests.	1/13/2022	12/31/2030
614	Johnson Space Center (JSC)	Canadian Space Agency (CSA), European Space Agency, National Space Development Agency of Japan (NASDA)	Letter Agreement: NASA-sponsored Complement of Integrated Protocols for Human Exploration Research "CIPHER"	Project-Specific Agreement (PSA)	Agreement between NASA and ESA regarding the support of the ESA participation and integration in the Complement of Integrated Protocols for Human Exploration Research (CIPHER) Complement. ESA will provide hardware and NASA will provide orbit crew time for CIPHER studies.	1/13/2022	12/31/2030
615	Johnson Space Center (JSC)	Brazil - Museu Nacional	Agreement between NASA and Museu Nacional/UFRJ for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Amanda Tosi proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/25/2022	1/25/2027
616	Johnson Space Center (JSC)	Open University	Agreement between NASA and The Open University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Martin Suttle proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/25/2022	1/25/2027
617	Johnson Space Center (JSC)	Australia - University of Adelaide	Agreement between NASA and University of Adelaide for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Stijn Glorie proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/8/2022	4/7/2027
618	Johnson Space Center (JSC)	France - IMPMC-CNRS	Agreement between NASA and IMPMC-CNRS-Paris for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Maximilien Verdier-Paoletti proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/8/2022	4/8/2027
619	Johnson Space Center (JSC)	University of Winnipeg	Agreement between NASA and the University of Winnipeg for the Loan of Lunar Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Edward Cloutis proposes to use the lunar samples to undertake scientific investigations.	4/18/2022	10/31/2026

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
620	Johnson Space Center (JSC)	Universität zu Köln, University of Cologne	Agreement between NASA and the University of Cologne (Universität zu Köln) for the Loan of Lunar Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Vera Assis Fernandes proposes to use the lunar samples to undertake scientific investigations.	4/18/2022	10/31/2026
621	Johnson Space Center (JSC)	Universität zu Köln, University of Cologne	Agreement between NASA and the University of Cologne (Universität zu Köln) for the Loan of Lunar Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Carsten Muenker proposes to use the lunar samples to undertake scientific investigations.	4/18/2022	10/31/2026
622	Johnson Space Center (JSC)	University of Glasgow	Agreement between NASA and the University of Glasgow for the Loan of Lunar Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Lake Daly proposes to use the lunar samples to undertake scientific investigations.	4/18/2022	10/31/2026
623	Johnson Space Center (JSC)	Universita' degli Studi di Padova	Agreement between NASA and Universita' degli Studi di Padova for the Loan of Antarctic Meteorite Samples.	Project-Specific Agreement (PSA)	Principal Investigator Dr. Matteo Massironi proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/18/2022	4/18/2027
624	Johnson Space Center (JSC)	Monash University	Agreement between NASA and Monash University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Andrew Tomkins proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	5/24/2022	5/23/2027
625	Johnson Space Center (JSC)	German Aerospace Center (DLR)	Implementing Arrangement between NASA and the German Aerospace Center for Cooperation on the Complement of Integrated Protocols for Human Exploration Research (CIPHER)	Project-Specific Agreement (PSA)	This IA represents DLR's contributions to the CIPHER study which falls under the umbrella agreement titled "NASA-Sponsored Complement of Integrated Protocols for Human Exploration." The IA indicates two NASA-DLR collaborations, including the spatial cognition and blood and urine sample sharing experiments.	6/22/2022	12/13/2030
626	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Reimbursable Space Act Umbrella Agreement between NASA and Woodside Energy Technologies Pty Ltd for Research in Anthropomorphic Robotic Technology Using NASA's Valkyrie Humanoid Robot.	Umbrella/Framework Agreement (UM/FW)	This Umbrella Agreement is for follow-on work to the previous Umbrella. Under this Umbrella NASA will continue to accelerate the maturation of robotic technology beyond the current state-of-the-art to address operational requirements for both organizations.	7/20/2022	7/25/2027
627	Johnson Space Center (JSC)	Woodside Engineering Technologies PTY LTD.	Annex 1 under the Reimbursable Space Act Umbrella Agreement (AS-0300-0) between NASA and Woodside Energy Technologies Pty Ltd for Research in Anthropomorphic Robotic Technology using NASA's Valkyrie Humanoid Robot.	Umbrella/Framework Agreement (UM/FW)	Annex 1 under the Reimbursable Space Act Umbrella Agreement (AS-0300-0) is for joint research, design, development, and testing of anthropomorphic robots and control technologies relevant to the remote mobile dexterous manipulation needed to operate effectively in remote caretaking of uncrewed and offshore energy facilities. NASA will loan Woodside an existing Valkyrie humanoid robot, with associated hardware and software, for remote manipulation control and application development. Woodside will also reimburse NASA for the development, delivery, and testing of a new anthropomorphic robot suitable for field testing at Woodside and capable of performing remote manipulation tasks relevant to Woodside operations. Umbrella Agreement: AS-0300-0	7/20/2022	7/25/2027
628	Johnson Space Center (JSC)	Australian National University (ANU)	Agreement between NASA and Australian National University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Seann McKibbin proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	8/29/2022	8/28/2027
629	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	NASA-CSA Technical Understanding: PowerBlade/MicroPrep Technology Biological Sample Preparation	Project-Specific Agreement (PSA)	The agreement indicates the role of CSA to loan NASA one PowerBlade unit for a two year period and 25 functional protein purification microfluidic cartridges (MCs) and 25 MCs for total DNA purification from human blood samples.	9/12/2022	12/31/2024
630	Johnson Space Center (JSC)	European Space Agency	Cooperation on Science and Sample Management of The Mars Sample Return Campaign, MSR	Project-Specific Agreement (PSA)	NASA-ESA agree to Mars sample science principals	11/7/2022	9/30/2036
631	Johnson Space Center (JSC)	University of Glasgow	Agreement between NASA and the University of Glasgow, UK, for the Loan of GENESIS Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Luke Daly proposes to use the GENESIS solar wind samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic GENESIS solar wind sample curator at JSC and approved by the curator.	11/16/2022	11/16/2027
632	Johnson Space Center (JSC)	Ministry for Education, Culture, Sports, Science & Technology (MEXT)	Implementing Arrangement between the National Aeronautics and Space Administration of the United States of America and the Ministry of Education, Culture, Sports, Science, and Technology of Japan Concerning Cooperation on the Civil Lunar Gateway Related to a Crew	Implementing Arrangement/Agreement (IA)	MEXT's provision of the Habitation Capability Infrastructure Functions (I-Hab and Halo components) and Logistics Resupply (one HTV-XG mission to Gateway). NASA's provision of a crew opportunity to the Gateway. This IA is under the NASA-Japan Gateway MOU.	12/5/2022	12/31/2100
633	Johnson Space Center (JSC)	European Space Agency	HERA - Enivhab Letter of Agreement	Implementing Arrangement/Agreement (IA)	This agreement will enable an analog experiment exchange between the ESA :envihab testing facility in Cologne, Germany and the NASA ground analog, known as HERA, at JSC.	12/13/2022	12/31/2030

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
634	Johnson Space Center (JSC)	Natural History Museum	Agreement between NASA and Natural History Museum, London, for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Helna Bates proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/3/2023	1/3/2025
635	Johnson Space Center (JSC)	University of Winnipeg	Agreement between NASA and University of Winnipeg	Project-Specific Agreement (PSA)	Principal Investigator Dr. Ed Cloutis proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/3/2023	1/3/2028
636	Johnson Space Center (JSC)	Natural History Museum	Agreement between NASA and Natural History Museum, London, for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Paul Schofield proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/3/2023	1/3/2028
637	Johnson Space Center (JSC)	Earth-Life Science Institute (ELSI)	Agreement between NASA and Earth-Life Science Institute (ELSI), for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Henderson J. Cleaves proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	2/2/2023	2/2/2028
638	Johnson Space Center (JSC)	University of Bern	Agreement between NASA and University of Bern, for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Klaus Mezger proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	2/2/2023	2/2/2028
639	Johnson Space Center (JSC)	Imperial College of Science Technology and Medicine (Imperial College)	Agreement between NASA and Imperial College, for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Mark Rehkaemper proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	2/2/2023	2/2/2028
640	Johnson Space Center (JSC)	Multilateral - European Space Agency (ESA)	Implementing Arrangement between the European Space Agency and the National Aeronautics and Space Administration on the United States of America Concerning an Exchange of Goods and Services in Support of the International Space Station including the Offset of ESA's Responsibility for Common System Operations Costs for 2021-2024	Implementing Arrangement/Agreement (IA)	ESA's fulfillment of its CSOC obligations from January 1, 2021 to December 31, 2024 and an additional exchange of goods and resources.	2/10/2023	12/31/2025
641	Johnson Space Center (JSC)	Canadian Space Agency (CSA)	CSA-NASA CIPHER Agreement	Implementing Arrangement/Agreement (IA)	This agreement documents the contributions from the CSA to the NASA sponsored Complement of Integrated Protocols for Human Exploration Research	2/14/2023	12/31/2030
642	Johnson Space Center (JSC)	Institut de Physique du Globe de Paris	Agreement between NASA and the Institut de Physique du Globe de Paris for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Frederic Moynier proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	3/16/2023	3/16/2028
643	Johnson Space Center (JSC)	University of Goettingen	Agreement between NASA and the University of Goettingen for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Andrea Patzer proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	3/16/2023	3/16/2028
644	Johnson Space Center (JSC)	Australia - The University of Queensland	Agreement between NASA and The University of Queensland for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Trevor Ireland proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/11/2023	4/11/2028
645	Johnson Space Center (JSC)	Germany - Institut fur Planetologie	Agreement between NASA and the Institut fuer Planetologie for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Knut Metzler proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/11/2023	4/11/2028

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
646	Johnson Space Center (JSC)	United Kingdom - University of Manchester	Agreement between NASA and the University of Manchester for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Rhian Jones proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/11/2023	4/11/2028
647	Johnson Space Center (JSC)	United Kingdom - University of Cambridge	Agreement between NASA and University of Cambridge for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Helen Williams proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	4/24/2023	4/24/2028
648	Johnson Space Center (JSC)	Japan - Tohoku University	Agreement between NASA and Tohoku University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Yoshihiro Furukawa proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	6/21/2023	6/21/2028
649	Johnson Space Center (JSC)	Japan - Tohoku University	Agreement between NASA and Tohoku University for the Loan of Antarctic Meteorite Samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Daisuke Nakashima proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	7/11/2023	7/11/2028
650	Johnson Space Center (JSC)	France - National Centre for Space Studies (CNES)	Implementing Arrangement between NASA and CNES for Cooperation on the Complement of Integrated Protocols for Human Exploration Research (CIPHER)	Implementing Arrangement/Agreement (IA)	IA Under France Umbrella Agreement; Cooperation on the NASA Sponsored Complement of Integrated Protocols for Human Exploration Research (CIPHER)	9/1/2023	12/30/2030
651	Johnson Space Center (JSC)	France - Institut de Physique du Globe de Paris	Agreement between the National Aeronautics and Space Administration and Institut de Physique du Globe de Paris for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Jabrane Libidi proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/17/2023	10/17/2028
652	Johnson Space Center (JSC)	France - Institut des Sciences de la Terre d'Orleans	Agreement between the National Aeronautics and Space Administration and Institut des Sciences de la Terre d'Orleans for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Manuel Moreira proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/17/2023	10/17/2028
653	Johnson Space Center (JSC)	France - Institut des Sciences de la Terre d'Orleans	Agreement between the National Aeronautics and Space Administration and Institut des Sciences de la Terre d'Orleans for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Sandrine Peron proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/17/2023	10/17/2028
654	Johnson Space Center (JSC)	Germany - Goethe University Frankfurt	Agreement between the National Aeronautics and Space Administration and Goethe University Frankfurt for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Sheri Singerling proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/17/2023	10/17/2028
655	Johnson Space Center (JSC)	Canada - University of Winnipeg	Agreement between the National Aeronautics and Space Administration and University of Ottawa for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Patrica Clay proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/30/2023	10/30/2028
656	Johnson Space Center (JSC)	Poland - Institute of Geological Sciences, Polish Academy of Sciences	Agreement between the National Aeronautics and Space Administration and Institute of Geological Sciences Wroclaw Frankfurt for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Anna Losiak proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	10/30/2023	10/30/2028
657	Johnson Space Center (JSC)	Japan - Hiroshima University	Agreement between the National Aeronautics and Space Administration and Hiroshima University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Hikaru Yabuta proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/14/2023	11/14/2028
658	Johnson Space Center (JSC)	United Kingdom - University of Manchester	Agreement between the National Aeronautics and Space Administration and University of Manchester for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Romain Tartese proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/20/2023	11/20/2028

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
659	Johnson Space Center (JSC)	Germany - Helmholtz Zentrum Muenchen	Agreement between the National Aeronautics and Space Administration and Helmholtz Zentrum Muenchen Deutsches Forschungszentrum fuer Gesundheit und Umwelt (GmbH) for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Philippe Schmitt-Kopplin proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/29/2023	11/29/2028
660	Johnson Space Center (JSC)	Greece - Agricultural University of Athens	Agreement between the National Aeronautics and Space Administration and Agricultural University of Athens for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Ioannis Baziotis proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/29/2023	11/29/2028
661	Johnson Space Center (JSC)	United Kingdom - Open University	Agreement between the National Aeronautics and Space Administration and The Open University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Monica Grady proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/29/2023	11/29/2028
662	Johnson Space Center (JSC)	United Kingdom - University of Manchester	Agreement between the National Aeronautics and Space Administration and University of Manchester for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Joshua Snape proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	11/30/2023	11/30/2028
663	Johnson Space Center (JSC)	France - Museum National d'Histoire Naturelle	Agreement between the National Aeronautics and Space Administration and Museum National d'Histoire Naturelle for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Brigitte Zanda proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	12/1/2023	12/1/2028
664	Johnson Space Center (JSC)	France - University of Lille 1	Agreement between the National Aeronautics and Space Administration and Universite de Lille for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Hugues Leroux proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/16/2024	1/16/2029
665	Johnson Space Center (JSC)	Germany - Freie Universitat Berlin	Agreement between the National Aeronautics and Space Administration and Freie Universitaet Berlin for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Timm John proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/16/2024	1/16/2029
666	Johnson Space Center (JSC)	United Kingdom - Natural History Museum	Agreement between the National Aeronautics and Space Administration and Natural History Museum, London for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Natasha Almeida proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/17/2024	1/10/2029
667	Johnson Space Center (JSC)	Sweden - Lund University	Agreement between the National Aeronautics and Space Administration and Lund University for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Stephen Hall proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	1/26/2024	1/26/2029
668	Johnson Space Center (JSC)	United Kingdom - Scottish Universities Environmental Research Centre	Agreement between the National Aeronautics and Space Administration and Scottish Universities Environmental Research Centre for the Loan of Antarctic Meteorite samples	Project-Specific Agreement (PSA)	Principal Investigator Dr. Darren Mark proposes to use the Antarctic Meteorite samples to undertake scientific investigations. These investigations are described in one or more sample requests submitted by the PI to the Antarctic Meteorite Sample Curator at JSC and approved by the Antarctic Meteorite Sample Curator.	2/2/2024	2/2/2029
669	Kennedy Space Center (KSC)	Government of Spain	Agreement on Space Cooperation Between the United States of America and the Kingdom of Spain	Umbrella/Framework Agreement (UM/FW)	Authorization for, in case of an emergency, manned space vehicles of the United States to overfly, enter, and depart Spanish air space and use the runways, taxiways, and other installations at the Moron de la Frontera, Rota, and Zaragoza bases; also, agreement to negotiate agreements in promising areas for joint efforts to strengthen cooperation in space science and technology. Dip notes entering the agreement into force were exchange on Sept 3, 1991, and May 12, 1994. The science and technology portion of this agreement was implemented by agreement SP0027 of 12/02/1991 with INTA and agreement SP0028 of 07/03/1992 with CDTI.	7/11/1991	12/31/2100

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
670	Kennedy Space Center (KSC)	German Aerospace Center (DLR)	Implementing Arrangement between the National Aeronautics and Space Administration and the German Aerospace Center for Cooperation on the EDEN-ISS Project	Visiting Researcher Agreement (VRA)	TO goal of the EDEN ISS project is to advance controlled-environment agriculture technologies for use in space by focusing on ground demonstration of plant cultivation technologies and their application to space. NASA will prepare a visiting researcher to visit Neumayer III Station and DLR will provide access to the Neumayer III to the visiting researcher.	6/7/2021	6/7/2024
671	Kennedy Space Center (KSC)	Multilateral - European Space Agency (ESA)	Extension of the Loan Agreement for Follow-On Procurement Spacelab Module	Project-Specific Agreement (PSA)	Extension of agreement of long term long of spacelab module to ESA.	4/8/2022	4/8/2028
672	Kennedy Space Center (KSC)	Germany - Airbus Defence and Space GmbH (Airbus)	Amendment #1; Reimbursable Space Act Umbrella Agreement Between NASA and Airbus for the European Space Agency (ESA) Service Module Launch Site Processing	Umbrella/Framework Agreement (UM/FW)	Annex 2 of the Umbrella Reimbursable Space Act agreement (hereinafter referred to as the "Agreement") provides funds to support Airbus activities under the same scope of work as detailed in the Agreement, for a period of time through 2023, intended to cover the delivery of 2 more ESMs. Annex 2 is associated with umbrella agreement GM-0802-0. This exchange of letters extends the expiration date of the umbrella Reimbursable Space Act Agreement, including its Annex 2, for another 5 years, making the new expiration date June 18, 2028.	6/8/2023	6/16/2028
673	Kennedy Space Center (KSC)	Switzerland - University of Zurich (UZH)	Amendment to Nonreimbursable Agreement Between NASA and the University of Zurich to Enable Cooperation on Biological Research Activities	Project-Specific Agreement (PSA)	NASA and the University of Zurich (UZH) have identified a mutual interest in cooperating on multiple biological research activities, including the terrestrial aspects of research utilizing various platforms such as ground-based micro-gravity simulators, parabolic and suborbital flight campaigns, sounding rockets, and the International Space Station (ISS). In particular, NASA and UZH desire to provide support to each other's investigations and work together to develop and propose new investigations. The current investigations involve studying the epigenetic control of gene expression in altered gravity. UZH has three experiments in this area, one to be conducted on ISS, one on a sounding rocket in Sweden in summer 2018, and last to be conducted on parabolic flights in Switzerland in summer 2018. NASA is also conducting similar research in its microgravity simulators. This Agreement also shall allow the Parties to identify and conduct additional research activities similar to the above investigations. The specific scope of cooperation under this Agreement involves sharing data, expertise and test samples. Exchange of hardware, commitment to fund future investigations, or providing access to particular NASA facilities are beyond the scope of this Agreement.	9/27/2023	10/1/2028
674	Kennedy Space Center (KSC)	ESA - European Space Agency	Reimbursable Agreement between NASA and ESA for storage of the EarthCARE Satellite	Project-Specific Agreement (PSA)	NASA is storing ESA's EarthCARE satellite at the NASA facility located at Vandenberg Air Force Base.	2/28/2024	2/28/2025
675	Langley Research Center (LaRC)	National Centre for Space Studies (CNES)	Implementing Arrangement (IA) Between NASA and the National Centre for Space Studies (CNES) for the Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) Mission	Implementing Arrangement/Agreement (IA)	Implementing Arrangement (IA) to continue the operations of the joint NASA-CNES CALIPSO mission. Replaces the original Memorandum of Understanding (MOU) for this cooperation.	9/8/2011	3/31/2026
676	Langley Research Center (LaRC)	University of Leeds	Reimbursable Space Act Agreement Between NASA and the University of Leeds for the Design, Construction, and Loan of a Diode Laser Hygrometer	Project-Specific Agreement (PSA)	Reimbursable Agreement where NASA will design, build, and loan a Diode Laser Hygrometer to the University of Leeds on a reimbursable basis.	11/11/2017	11/11/2027
677	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Implementing Arrangement Between the National Aeronautics and Space Administration and the German Aerospace Center for Cooperation on the Transformation of Air Transportation Operations	Project-Specific Agreement (PSA)	The ATM system across the globe is facing new challenges as novel vehicle types, missions, and operations enter the market. At the same time, airspace systems also must contend with growth in traditional operations as commercial airline market demand, business aviation, and general aviation continue to expand. The new entrants include thin-haul aircraft, various sizes of unmanned aerial systems (UAS), urban air mobility (UAM) operations, supersonic transport, and an increasing need to facilitate space access. Foundational research and collaboration are required to explore the best manner to develop a future airspace system that enables this diverse set of operations in a scalable, flexible, and resilient manner that ensures safety and security for both existing and new users. Under this Arrangement, NASA and DLR researchers will design algorithms as well as conduct fast-time simulations to gain understanding of new methods and concepts to address the challenges of a future ATM system, which will accelerate development of concepts enabling a diverse set of new entrants and growth in traditional aviation across both European and NASA research projects. NASA and DLR will develop a collaborative project plan that will enable joint research and will leverage concepts and technologies developed at the respective agencies.	3/30/2020	1/31/2026
678	Langley Research Center (LaRC)	Natural Resources Canada (NRCAN)	Collection of Scientific Flight Data on Vortex Sensing	Project-Specific Agreement (PSA)	NASA provides a wake vortex instrument for NRC flight research campaigns	9/1/2020	9/1/2024

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
679	Langley Research Center (LaRC)	Japan Aerospace Exploration Agency (JAXA)	Cooperation under the Joint Understanding on Pre-Launch Activities for the JAXA Extreme Ultraviolet High-Throughput Spectroscopic Telescope (EUVST) Epsilon Mission	Project-Specific Agreement (PSA)	Cooperation on the pre-launch activities of the EUVST mission, including designing and building the spacecraft system, shipping the telescope, and assembly, integration, and testing. This agreement is under the Joint Understanding with Japan.	9/29/2021	9/29/2026
680	Langley Research Center (LaRC)	Germany - Wehrwissenschaftliches Institut für Werk und Betriebsstoffe (WIWeB)	Aeronautics Visiting Researcher	Project-Specific Agreement (PSA)	NASA Langley civil servant conducts materials research at WIWEB Germany	11/11/2021	11/10/2025
681	Langley Research Center (LaRC)	Kungliga Tekniska Hogskolan (KTH)	Amendment to the Agreement Between the National Aeronautics and Space Administration of the United States of America and The Kungliga Tekniska högskolan (KTH) Royal Institute of Technology on Non-Linear Aeroelastic Data Cooperation	Project-Specific Agreement (PSA)	Joint research is intended to better understand non-linear aeroelastic phenomena (the interaction of structural, inertia, and aerodynamic forces). NASA will test a KTH full span flutter test model in its Transonic Dynamics Tunnel at LaRC. This is continuation of cooperation that was conducted under a prior cooperative agreement.	3/8/2022	9/30/2025
682	Langley Research Center (LaRC)	Japan Aerospace Exploration Agency (JAXA)	Amendment 3: NASA-JAXA Airframe Noise Prediction Agreement	Project-Specific Agreement (PSA)	Amendment 3: This amendment will continue productive collaboration on effective research methods for physics-based prediction of airframe noise from civil aircraft through simulations and experimental measurements. Both parties will conduct measurements and gather data from their respective tests that will then be jointly compared and discussed. Amendment 2: The amendment will continue to address key gaps in the understanding and modeling of slat cover noise and extending that knowledge base to realistic slat configurations as well as to noise reduction concepts for slat noise. This cooperative effort will also provide vital data, which will aid the airframe noise research at both organizations and also support the global initiative focused on high fidelity simulations and measurements of airframe noise sources under the AIAA Workshop series on Benchmark Problems for Airframe Noise Computations (BANC). Amendment 1: The National Aeronautics and Space Administration (NASA) and the Japan Aerospace Exploration Agency (JAXA) will conduct research for physics-based prediction of airframe noise from civil aircraft. The primary aim of this activity will be to improve the knowledge of airframe noise sources and corresponding physical mechanisms by working on non-sensitive, fundamental high-lift devices (HLD) and/or landing gear (LG) configurations. NASA/JAXA will conduct research for physics-based prediction of airframe noise from civil aircraft. The primary aim of this activity will be to improve the knowledge of airframe noise sources and corresponding physical mechanisms by working on non-sensitive, fundamental high-lift-devices (HLD) and/or landing gear (LG) configurations.	8/1/2022	7/31/2027
683	Langley Research Center (LaRC)	French National Aerospace Research Center (ONERA)	Implementing Arrangement between NASA and ONERA on Urban Air Mobility Acoustic Duct Liners	Implementing Arrangement/Agreement (IA)	This implementing arrangement supports cooperation in modeling the acoustics of ducted rotors with optimized liners. This work will also compare NASA and ONERA liner design capabilities. This cooperation will further NASA's understanding of how to reduce noise for Urban Air Mobility Vehicles. This implementing arrangement will remain in force for three years.	11/14/2022	11/14/2025
684	Langley Research Center (LaRC)	French National Aerospace Research Center (ONERA)	Implementing Arrangement Between NASA and ONERA on Comparing Computational Fluid Dynamics Solvers for Broadband Noise Prediction	Implementing Arrangement/Agreement (IA)	Umbrella Agreement between the National Aeronautics and Space Administration of the United States of America and the Office National d'Etudes et de Recherches Aéropatiales of France on Cooperation in Civil Aeronautics Research	11/15/2022	11/15/2025
685	Langley Research Center (LaRC)	Delft University of Technology (DUT)	Extension of Non-Reimbursable International Space Act Agreement Between NASA and Delft University of Technology for Fundamental Research in the Area Of Solar Sailing Astrodynamics	Project-Specific Agreement (PSA)	The Parties are each conducting complementary research related to architectural concepts and scientific applications of solar sailing.	11/15/2022	11/15/2025
686	Langley Research Center (LaRC)	Canada - University of Sherbrooke (UdeS)	NASA - University of Sherbrooke Revolutionary Vertical Lift Technology Project	Project-Specific Agreement (PSA)	NASA and UdeS intend to conduct a series of measurements on airfoils with the goal of improving fundamental understanding of noise generation by generic airfoil shapes. Tests include studies of noise generation for variations in Reynolds number, surface roughness, trailing edge bluntness, and airfoil profile. Data will be shared publicly.	11/17/2022	11/17/2026
687	Langley Research Center (LaRC)	Korea Republic of - Korea Institute of Science and Technology (KIST)	Extension of the Fully Reimbursable Space Act Umbrella Agreement Between NASA and the Korea Institute of Science and Technology (KIST) Regarding 4U Nanomaterial Testing	Project-Specific Agreement (PSA)	Fully Reimbursable Space Act Umbrella Agreement: Test new nanomaterial composites provided by South Korea/Korean Institute of Science and Technology (KIST). KIST is developing lightweight structural, multifunctional composites for extreme environments in aerospace applications. New nanomaterial composites to be fabricated will be ultra lightweight and ultra high strength materials with ultra high electrical conductivity and ultra high thermal conductivity to cover various extreme environmental conditions. All four "ultra high" aspects will be referred to as "4U."	12/22/2022	12/31/2025

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
688	Langley Research Center (LaRC)	German Aerospace Center (DLR)	Implementing Arrangement Between NASA and DLR for Cooperation on High Lift Common Research Model Testing	Implementing Arrangement/Agreement (IA)	It is proposed that NASA Langley will collaborate with the German Aerospace Center (DLR-Deutsches Zentrum für Luft- und Raumfahrt e.V.) to collect unique aerodynamic and aero-acoustic data to validate computational fluid dynamics (CFD) method as well as to improve the understanding of wind tunnel installation effects. Testing of the NASA Common Research Model in high lift configuration (CRM-HL) will be accomplished in the low-speed wind tunnel NWB in Braunschweig, operated by the German-Dutch Windtunnel organization (DNW). The data will be collected and analyzed as part of the DLR project ADaMant (Adaptive Data-driven Physical Modeling towards Border of Envelope Applications). ADaMant is an internal project of DLR with a runtime from 01/2021 until 12/2023. Six DLR-institutes participate in ADaMant as well as DLR's model shop, and DNW as external service provider for wind tunnel testing. The overall objective of the project is the improvement of the predictive accuracy, efficiency, and usability of physical modeling in CFD codes applied at the borders of the flight envelope. This is accomplished by the enhancement of numerical methods with a focus on turbulence modeling, scale-resolving approaches, and on transition prediction. The enhancements are to be demonstrated against several dedicated validation experiments, which are also part of the project. It is intended to provide tailored high lift validation data with the CRM-HL as a well-known and representative civil aircraft configuration. For this purpose, it is planned to test the 5.2% scaled version of the CRM-HL semi span model in DNW's low speed facility NWB, located on the premises of DLR in Braunschweig, Germany. In order to provide a configurative variation, a modified CRM-HL configuration will be realized. For this purpose, the leading-edge slat will be exchanged against a vented foldable Krüger flap, designed, and manufactured by DLR. Moreover, the standard through-flow nacelle will be exchanged against a UHBR-variant and a corresponding pylon. All components are to be instrumented.	3/9/2023	3/9/2026
689	Langley Research Center (LaRC)	Canada - National Research Council (NRC)	Extension #1 - Wake Vortex Research	Project-Specific Agreement (PSA)	Extending the duration of the base agreement and noting the use of a new aircraft.	3/27/2023	10/31/2027
690	Langley Research Center (LaRC)	France - French National Aerospace Research Center (ONERA)	Implementing Arrangement Between NASA and ONERA for Cooperation on High-Lift Common Research Model Icing	Implementing Arrangement/Agreement (IA)	The Parties intend to obtain experimental aerodynamic data for artificial ice shapes attached to a high-lift swept-wing airplane model. Testing will be conducted at the NASA Transonic Facility and the ONERA F1 pressurized wind tunnel.	6/20/2023	3/9/2026
691	Langley Research Center (LaRC)	Canada - National Research Council (NRC)	NASA-NRC Qualification of Manufacturing Aerospace Materials - Annex 1 Non-Destructive Evaluation	Umbrella/Framework Agreement (UM/FW)	The purpose of this Annex (1) is to evaluate qualified techniques for manufacturing, inspecting, and testing bonded joints. Certified bonds can reduce dependence on fasteners to ensure reliability in bonded joints. Drilling holes and installing fasteners in bonded joints is a significant bottleneck in manufacturing low-cost, high-performance commercial aircraft from fiber reinforced plastic components.	8/15/2023	8/15/2028
692	Langley Research Center (LaRC)	Germany - German Aerospace Center (DLR)	Implementing Arrangement Between NASA and DLR for Cooperation on the 2023 EcoDemonstrator Emissions Flight Test	Implementing Arrangement/Agreement (IA)	The NASA Armstrong Flight Research Center (AFRC) DC8 aircraft will conduct approximately 60 hours of instrumented flights behind the Boeing 737MAX. In this way, the DC8 functions as an in situ and remote sensing sampling platform for aerosol, trace gas, and cloud microphysics instrumentation and measurements. NASA and DLR scientists will provide these instruments and operate them in flight, where each party contributes unique, complementary capabilities that maximize the science value of the flight campaign. The flights take place in October 2023 with data analyses, archival, and publication to continue for a period of 2 years. Other partnering organizations participating in the test through respective agreements with NASA include The Boeing Corporation, who manufactures and operates the aircraft, as well as General Electric, who manufactures the aircraft engine combustor in collaboration with CFM, Inc.	8/23/2023	8/23/2025
693	Langley Research Center (LaRC)	Korea, Republic of - The National Institute of Environmental Research of the Republic of Korea (NIER)	Memorandum of Understanding Between The National Aeronautics and Space Administration Of The United States Of America And The National Institute of Environmental Research Of The Republic Of Korea For Cooperation On The Asia Air Quality Field Study	Project-Specific Agreement (PSA)	The ASIA-AQ study will address air quality across Asia by integrating ground, airborne, and satellite observations with modeling tools across selected Asian locations. Jim and his team are planning to take the NASA DC-8, GV, and G-III research aircraft to Asia in early 2024 to conduct this campaign. NASA will provide aircraft for conducting science flights to study air quality over selected Asian locations, to include all necessary support equipment, engineering and operational support. NIER will obtain approvals for flight, support negotiations, and participate in joint science missions + share data collected from the field study.	8/30/2023	8/30/2028

Active International Agreements by Signature Date (as of March 31, 2024)

No.	Responsible NASA Installation	Partner Name	Title/Purpose	Type of Agreement	Activity Description	Execution (Signature Date)	Expiration Date
694	Langley Research Center (LaRC)	Japan - Japan Aerospace Exploration Agency (JAXA)	NASA-JAXA Aerodynamic Turbulence Modeling	Project-Specific Agreement (PSA)	Assessment methods of icephobic materials vary across the research community, and there is no recognized standard method to quantify ice adhesion strength. This hinders the development and acceptance of icephobics as a practical ice protection solution. The proposed activity seeks to improve the efficiency of thermal anti-icing systems through the use of icephobic materials as a practical (and durable) solution for the new low power ice protection systems needed by Advanced Air Mobility (AAM) and electric vehicles to market by developing a means to assess icephobic coatings.	10/3/2023	9/30/2025
695	Marshall Space Flight Center (MSFC)	Japan Aerospace Exploration Agency (JAXA)	Solar Physics Satellite (SOLAR-B) Project/Hinode	Project-Specific Agreement (PSA)	SOLAR-B satellite is a JAXA-led mission in sun-synchronous orbit to study the solar photosphere corona, and transition region. JAXA is responsible for the overall spacecraft and launch, and NASA provided the Focal Plane Package, the stand-alone X-Ray Telescope, and major optical components for the EUV Imaging Spectrometer.	6/5/2018	6/10/2025
696	NASA Center Not Specified	Italian Space Agency (ASI)	Implementing Arrangement Between NASA and the Italian Space Agency (ASI) on the Radar for Icy Moons Exploration Instrument (RIME) for the Jupiter Icy Moons Explorer Mission (JUICE)	Implementing Arrangement/Agreement (IA)	JUICE is an ESA-lead mission that will investigate the potentially habitable zones of the Galilean icy satellites: Ganymede, Europa, and Callisto. ASI is providing the RIME, an ice penetrating radar. NASA is providing the radio frequency subsystem for the RIME instrument. The IA is under the US-Italy Space Framework.	8/5/2019	6/30/2034
697	NASA Center Not Specified	National Centre for Space Studies (CNES)	Implementing Arrangement Between NASA and CNES on the Jupiter Icy Moons Explorer Mission (JUICE)	Implementing Arrangement/Agreement (IA)	JUICE is an ESA-led mission that will visit the moons of Jupiter. NASA and CNES are cooperating on the Particle Environment Package (PEP) and the Ultra Violet Spectrograph (UVS) instrument.	6/7/2021	12/31/2036
698	NASA Center Not Specified	United Kingdom Space Agency (UKSA)	MOU Between NASA and UKSA for the Provision of the Lunar Thermal Mapper for the Lunar Trailblazer Mission	Project-Specific Agreement (PSA)	Trailblazer is a NASA-led mission for understanding the Moon's water cycle by detecting and mapping water on the lunar surface at key targets. NASA is planning to provide the spacecraft bus, integration of the instruments onto the bus, mission operations, overall science operations, and the launch of the spacecraft. The UK Space Agency expects to provide the Lunar Thermal Mapper instrument.	10/18/2021	3/31/2031
699	NASA Center Not Specified	Japan Aerospace Exploration Agency (JAXA)	NASA JAXA Letter of Agreement for the Dragonfly Mission	Project-Specific Agreement (PSA)	Dragonfly will deliver a relocatable rotorcraft lander, complete with instrument suite, to the surface of Saturn's moon, Titan, to explore Titan's prebiotic chemistry and habitability. The lander will carry a mass spectrometer, a gamma-ray and neutron spectrometer, a sampling system, a suite of cameras, and a geophysics and meteorology package. JAXA has expressed interest in providing a seismometer that would constitute part of the Dragonfly Geophysics and Meteorology instrument	1/20/2022	1/20/2027
700	NASA Center Not Specified	National Centre for Space Studies (CNES)	Implementing Arrangement between NASA and CNES on the Dragonfly Mission	Implementing Arrangement/Agreement (IA)	NASA's Dragonfly mission will deliver a relocatable rotorcraft lander, complete with instrument suite, to the surface of Saturn's moon, Titan, to investigate the moon's habitability and search for signatures of life. CNES will provide the Gas Chromatograph for the Dragonfly Mass Spectrometer.	1/25/2022	1/25/2047
701	NASA Center Not Specified	Canadian Space Agency (CSA)	Joint Study on Potential Lunar Surface Cooperative Activities Implementing Arrangement	Implementing Arrangement/Agreement (IA)	IA under the 2009 U.S.-Canada Framework Agreement. Description: Establishes the role and responsibilities of the Implementing Agencies and provisions under which they plan to cooperate on a NASA-CSA study on potential lunar surface exploration activities.	11/4/2022	11/4/2027
702	Wallops Flight Facility (WFF)	German Aerospace Center (DLR)	Implementing Arrangement between the National Aeronautics and Space Administration and the German Aerospace Center for Cooperation on the Exchange of Flight-proven Sounding Rocket Component Designs for Scientific Applications	Project-Specific Agreement (PSA)	Cooperation under the Framework Agreement with Germany to discuss, analyze, and improve hardware design, implementation, usage, and performance information for components that have been specially designed and tested for sounding rocket use.	10/13/2021	12/31/2025
703	Wallops Flight Facility (WFF)	Netherlands - National Aerospace Laboratory (NLR)	Annex 1 Between NASA and NLR for Water Brake Testing	Implementing Arrangement/Agreement (IA)	Water brake certification testing on an NLR aircraft at NASA WFF. The umbrella agreement is NL-0105-0.	3/31/2023	3/31/2025
704	Wallops Flight Facility (WFF)	Netherlands - National Aerospace Laboratory (NLR)	NASA-NLR Reimbursable Umbrella and Annex 1 for Runway Testing	Umbrella/Framework Agreement (UM/FW)	NLR will perform certification projects on NASA WFF runways.	3/31/2023	3/31/2028