

APPENDIX C
ASSOCIATED TERMS AND CONDITIONS
OF RESEARCH AGREEMENTS
(FOR THE EARTH OBSERVATION RESEARCH
ANNOUNCEMENT)

3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS COMMISSIONED RESEARCH AGREEMENT BETWEEN THE JAPAN AEROSPACE EXPLORATION AGENCY AND THE RESEARCH ORGANIZATION (C-1 ~ C-13)

3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS COLLABORATIVE RESEARCH AGREEMENT (FUNDED) BETWEEN THE JAPAN AEROSPACE EXPLORATION AGENCY AND THE RESEARCH ORGANIZATION (C-14 ~ C-25)

3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS COLLABORATIVE RESEARCH AGREEMENT (NON-FUNDED) BETWEEN THE JAPAN AEROSPACE EXPLORATION AGENCY AND THE RESEARCH ORGANIZATION (C-26 ~ C-36)

3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS
COMMISSIONED RESEARCH AGREEMENT
BETWEEN
THE JAPAN AEROSPACE EXPLORATION AGENCY
AND
THE RESEARCH ORGANIZATION

JAPAN AEROSPACE EXPLORATION AGENCY

**3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS
COMMISSIONED RESEARCH AGREEMENT
BETWEEN THE JAPAN AEROSPACE EXPLORATION AGENCY
AND THE RESEARCH ORGANIZATION**

This agreement ("Agreement") is entered into between the Japan Aerospace Exploration Agency, established under the provision of the Law Concerning the Japan Aerospace Exploration Agency on October 1, 2003, represented by its President and having its principal office at 7-44-1 Higashimachi, Jindaiji, Choufu-shi, Tokyo, Japan ("JAXA") and a research organization ("Research Organization", hereinafter "RO") that submitted an application form for the below described research activities to JAXA, hereinafter collectively referred to as "the Parties".

WITNESSETH

WHEREAS, JAXA issued the Research Announcement ("RA") to engage in research activities directly related to retrieval algorithms for geophysical products, product validation, and data application of earth observation satellites, and the RO applied pursuant to such RA;

WHEREAS, JAXA accepted the RO's proposal that was in response to the RA, delivered the confirmation sheet to the RO and JAXA further desires to utilize such proposal in JAXA's project; and

WHEREAS, JAXA desires to commission the RO to engage in the above research activities.

NOW, THEREFORE, in consideration of the mutual agreements hereinafter set forth, and for other good and reasonable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

Article 1. Definitions

1. The following capitalized terms in this Agreement shall have the following meanings.
 - (1) "Research Results" means the technical results and scientific knowledge derived from the implementation of the Research Project pursuant to this Agreement, including all inventions, ideas, designs, literary works, algorithms (including Technological development accompanied by Program/Data to embody such algorithms), and Know-How.
 - (2) "Intellectual Property Rights" generated in the course of implementation of this Agreement means the following:
 - (i) Industrial Property Rights (as defined below);
 - (ii) Potential Industrial Property Rights (as defined below);
 - (iii) computer programs, software, and databases (hereinafter "Program/Data") Copyrights (as defined below);
 - (iv) Rights equivalent to each of the above rights in foreign countries; and
 - (v) Rights to use technical information specified by mutual consultation between both Parties that are objectively identifiable, such as documents, can be kept confidential, and are of proprietary value (referred to as "Know-How" in this Agreement)."Industrial Property Rights" means all domestic and foreign patents, utility models, and industrial designs.
"Potential Industrial Property Rights" means all domestic and foreign application rights for patents, utility models, or industrial designs.
"Program/Data Copyrights" means all domestic and foreign copyrights related to Program/Data.
 - (3) "Commissioned Research Plan" means the plan described in the Attachment 1 of the Application Form for the Research Announcement on the Earth Observations Commissioned Research Agreement (hereinafter "Application Form").
 - (4) "Research Period" means the research period as described in the Commissioned Research Plan. In accordance with the provisions of this Agreement, in the event that the Agreement ended prior to the completion date of the research originally set, the date the Agreement ends shall be read as the Research Period.

- (5) “Annual Evaluation” means evaluation by JAXA for the results achieved within the year in which this Agreement was concluded. JAXA evaluates the results by reports presented at the research presentation meeting by the RO and Research Results Report.
- (6) “Earth Observation Satellite Data” means data sets obtained from satellites, which are retained by JAXA at the time of execution of this Agreement. The available data sets including names of satellites or sensors, observation period that can be offered, and observation areas are listed in the Attachment of this Agreement.
- (7) “Meteorological Data” means the data provided by the Japanese Meteorological Agency.
2. In this Agreement, “Invention etc.” contains multiple meanings: When it is a subject of patent rights, it refers to an invention; when it is a subject of a utility model, it refers to an idea; when it is a subject of industrial design rights as well as copy rights of programs and databases, it refers to a creation; when it is a subject of algorithms and Know-How, it refers to a proposition.
3. In this Agreement, “utilization” of the Intellectual Property Rights and Research Results refers to the acts specified in Paragraph 3 of Article 2 of the Patent Act, the acts specified in Paragraph 3 of Article 2 of the Utility Model Act, the acts specified in Paragraph 2 of Article 2 of the Design Act, and exercise of the rights specified in Article 21 and 27 of the Copyright Act (including the use of the secondary publication created by JAXA), and the use of algorithms and Know-How.
4. In this Agreement, “PI” (Principal Investigator) refers to the person who submitted the research proposal to this Research Announcement and who is also the RO employee selected to be responsible for the implementation of the accepted Research Project. “CI” means “Co-Investigator” who supports the research activities represented by the PI. Names, affiliation, and other information concerning the PI and CI (hereinafter collectively “Commissioned Researchers”) shall be described in the Commissioned Research Plan.

Article 2. Purpose and Scope of Research Project

The RO shall implement the following tasks.

- (1) The RO shall conduct the research activities (“Research Project”) in accordance with the Statement of Work issued by JAXA (“Statement of Work”) and the Commissioned Research Plan.
- (2) The RO shall respond to requests from JAXA and attend required meetings hosted by JAXA such as the workshop at the end of each fiscal year.
- (3) The RO shall report the Research Results and progress of the research at the annual workshops and meetings hosted by JAXA.
- (4) Each year before the end of the Agreement Period, the RO shall deliver the Research Results, which are acquired during the effective term of the Agreement, to JAXA in the form of a Progress Report in accordance with the Statement of Work. The Progress Report shall contain the deliverable Research Results specified in the Statement of Work. In addition, at the end of the research period, the RO shall deliver the Progress Report to JAXA regarding the Research Results acquired during the whole of the commissioned research period. In such a case, the RO will not be required to deliver another Progress Report for the final year of the Agreement.

Article 3. Conclusion and Renewal of the Agreement

1. The Agreement shall be concluded upon the acceptance through the issuance of the Confirmation Sheet by JAXA for the application submitted by the RO using the Application Form, and the Agreement shall become effective as of the date prescribed in the Confirmation Sheet issued by JAXA and shall continue to be in effect until the end of the present Japanese fiscal year (“Agreement Term”). In case of a conflict between the Confirmation Sheet and this Agreement, the terms and conditions stipulated in the Confirmation Sheet will supersede this Agreement.
2. The Agreement Term shall be renewed for one Fiscal Year from the end of the Research Period, provided that JAXA approves the renewal of the Agreement by the Annual Evaluation and the Parties mutually agree upon the amount to be paid by JAXA for the extended period; the RO shall submit a renewal Application Form to JAXA and JAXA shall approve by issuing a new Confirmation Sheet. Thereafter the procedure shall be the same as above.

Article 4. Annual Evaluation

1. JAXA shall conduct an Annual Evaluation regarding the contents of this Agreement fairly at the end of the Agreement Term.
2. In the event that the results of the evaluation fails in the Annual Evaluation, the provisions in

Article 30 (“Incompleteness of Performance”) shall be applied.

Article 5. Commissioned Researchers

1. The RO shall allow the Commissioned Researchers listed in the Commissioned Research Plan participate in the commissioned research.
2. The RO shall undertake necessary measures to ensure that all the Commissioned Researchers comply with the contents of this Agreement.
3. If the RO intends to let researchers other than the CIs described in the Commissioned Research Plan participate in this commissioned research as CIs, the RO shall obtain prior written consent from JAXA, and the RO shall undertake necessary measures to ensure that such personnel comply with the contents of this Agreement.
4. In the event that the PI comes to be no longer engaged in the Research Project at RO because of PI's death, retirement, a leave of absence from work, or any other reasons, JAXA may terminate this Agreement. Provided, however, if the RO designates another researcher who belongs to the RO as the PI's successor and JAXA approves the succession, the Parties may amend this Agreement, with the succeeding researcher being a new PI. The terms and conditions of the amendment to this Agreement shall be determined separately upon mutual consultation and consent.

Article 6. Prohibition of Subcontract

1. The RO shall not commission the whole Research Project to a third party (hereinafter “Subcontract”). Provided, however, that the RO may subcontract part of it upon prior written application to JAXA and approval from JAXA. Should there be a case where subcontractors further re-commission the Research Project to a third party, the company name, address, and scope of business of such third party are required to be submitted to the RO in writing.
2. If the RO subcontracts the Research Project in accordance with the preceding Paragraph, any act of all the third parties involved in the subcontract, which includes a contractor and commissioned party of the RO, re-commissioned party, subcontractor and supplier at any tier, in connection with the subcontractor shall be deemed to be an act of the RO and the RO shall be responsible therefor.
3. If the RO subcontract part of this Agreement, the RO shall conclude an agreement with the subcontractor on matters necessary for the RO to comply with this Agreement and on matters designated by JAXA.

Article 7. Research Funding

1. JAXA shall make advance payment of the “Research Funding” stated in the Confirmation Sheet or Continuous Confirmation Sheet, which is issued in accordance with Article 3, to the RO as a necessary research expense to carry out the Agreement.
2. JAXA shall, within thirty (30) days from the date when they receive an invoice duly issued by the RO, make payment for the Research Funding described in the previous Paragraph.
3. If the RO wishes to reallocate expenses between Expense Item Categories of the Commissioned Research Plan for more than 50% of the total direct expense (3,000,000 Japanese yen, in case the amount of 50% is less than 3,000,000 Japanese yen) increase or decrease, the RO shall obtain a written approval from JAXA in advance.
4. Provided, however, that the RO shall not conduct the reallocation of budget between the general administrative expenses and the direct expenses.
5. In case that JAXA fails to pay the Research Funding within the period specified in Paragraph 2, the RO may request JAXA to pay default interest of three (3) percent per annum on such unpaid amount for the period from the immediately succeeding day of the due date for payment to the date of actual payment.
6. If the interest on late payment calculated following the preceding Paragraph is less than 10,000 Japanese yen, JAXA shall be exempt from payment of such interest. Where there is a fraction of that amount, and if it is less than 1,000 yen, such a fraction shall be rounded down.

Article 8. Accounting

The RO shall maintain books to record expenses according to items and store documents to prove such expenses. In addition, the RO shall keep all the accounting documents for seven (7) years after

the end of this Agreement counting from the next fiscal year. JAXA may request the RO to submit a copy of such books and documents to clarify the expenses, and the RO shall respond to such requests from JAXA.

Article 9. Submission of Completion Notice and Financial Report

1. Upon completion of the tasks stipulated in Article 2, the RO shall create a completion notice and submit it to JAXA before the end of the Agreement Term.
2. In the event that the research expenses, stated in Paragraph 1 of Article 7, exceed one (1) million Japanese yen, the RO shall submit a Financial Report containing the expenses breakdown to JAXA within 61 days after the end of this Agreement.

Article 10. Determining the Contract Amount

1. Upon receipt of the Financial Report stipulated in Paragraph 2 of the previous Article, JAXA shall adjust the expenses within the limit of the original contract amount in accordance with the present Article, Article 11 (Investigation of Actual Expenses), and Article 12 (Return of Paid Research Funding) and determine the final contract amount and notify the RO of the amount.
2. In the calculation of the actual expenses, the general administrative expenses ratio shall be calculated by using the ratio applied at the time the contract is concluded.

Article 11. Investigation of Actual Expenses

In determining the contract amount stipulated in Paragraph 1 in the previous Article, JAXA shall investigate whether the actual expenses conform with the contents of this Agreement and accompanied conditions. If necessary, JAXA may request the RO to submit reference reports or materials or may enter the RO's office to inspect the books and the relevant documents.

Article 12. Return of Paid Research Funding

1. After the payment by the method stipulated in Paragraph 1 and 2 of Article 7, if the amount already paid exceeds the final contract amount determined through the process stipulated in Paragraph 1 of Article 10, JAXA shall reclaim the excess amount from the RO.
2. In the case of the previous Paragraph, the RO shall remit such funds within thirty (30) days from the date when the RO receives an invoice issued by JAXA with regard to such funds.
3. In the event there is no return made by the RO within the set time limit as described in the preceding Paragraph, the provisions of Paragraph 5 and 6 of Article 7 shall be applied.

Article 13. Ownership of the Rights to the Acquired Property

1. The ownership of the facilities, equipment, and items acquired with the Research Funding in accordance with Paragraph 1 of Article 7 shall be retained by JAXA. However, upon mutual agreement between JAXA and the RO the ownership of the facilities, equipment, and items may be transferred to the RO.
2. The RO shall create a list of acquired property for the facilities, equipment, and items mentioned in the previous Paragraph and manage the facilities, equipment, and items with the care of a good manager. When this Agreement ends, the RO must submit a list of acquired property to JAXA. In case there is no acquired property, the RO shall indicate so in the list of the acquired property.

Article 14. Providing of the Earth Observation Satellite Data and its Conditions

1. JAXA will provide the RO with the Earth Observation Satellite Data necessary for the implementation of this Agreement free of charge via internet in accordance with the following conditions:
 - (1) The RO agrees and accepts that JAXA may not provide all the Earth Observation Satellite Data which the RO may request due to restrictions in the allowance range of JAXA's equipment and in resources. Amongst the Earth Observation Satellite Data, for which the RO may request JAXA, the maximum number of scenes of each standard data collected from the Advanced Land Observing Satellite (ALOS) and the Advanced Land Observing Satellite-2 (ALOS-2) shall be limited by JAXA depending on the evaluation of the Commissioned Research Plan;
 - (2) JAXA does not guarantee a specific quality or the timely provision of the Earth Observation Satellite Data and will not be liable for any deterioration in data quality and delay in providing

the data;

- (3) JAXA will not be liable for any situation whereby the Earth Observation Satellite Data cannot be supplied to the RO due to faults relating to the satellites, limitations on their operations, or for any other reasons; and
 - (4) The RO shall bear the costs of media and shipment if the RO requests that JAXA provides the Earth Observation Satellite Data via physical media.
2. With respect to the handling of the Earth Observation Satellite Data provided by JAXA, the RO shall follow the conditions below:
 - (1) The RO may not duplicate the Earth Observation Satellite Data for any purpose other than creating a backup. However, this excludes the duplication of the data for the purpose of providing the data to the Commissioned Researchers stated in Article 5 and the subcontractors stated in Article 6 (hereinafter collectively “PI etc.”) stated in Article 6, which are necessary for the implementation of this Agreement;
 - (2) The RO may not disclose the Earth Observation Satellite Data to any third party except for the PI etc.;
 - (3) The RO shall use the provided Earth Observation Satellite Data solely for the purposes stipulated in this Agreement; and
 - (4) The RO shall return or otherwise appropriately manage the Earth Observation Satellite Data in accordance with the instructions of JAXA after the end of this Agreement.
 3. Any rights relating to the Earth Observation Satellite Data provided by JAXA to the RO shall confirm to the following:
 - (1) JAXA retains the Intellectual Property Rights of all the Earth Observation Satellite Data, except for ALOS PALSAR data of which METI (Ministry of Economy, Trade and Industry) is the joint owner;
 - (2) If value-added products (modified products with high-level processing which are irreversible to standard data. High-level data processing includes data analysis or combining multiple-satellite data, image processing based on external information, and physical quantity conversion.) are solely developed by the RO out of the Earth Observation Satellite Data in the course of executing the Research Project, the RO retains the Intellectual Property Rights and any other rights of such value-added products;
 - (3) Except for cases under Item (2), all Intellectual Property Rights and any other rights of the data developed by modifying the Earth Observation Satellite Data shall be owned by JAXA; and
 - (4) In case the RO uses the modified Earth Observation Satellite Data for commercial purposes, the RO shall notify JAXA and comply with the license conditions to be set by JAXA.

Article 15. Providing of Meteorological Data and its Conditions

1. JAXA will attempt to provide the RO with the Meteorological Data necessary for the implementation of this Agreement free of charge.
2. The rights relating to the Meteorological Data provided by JAXA shall not be transferred to the RO through the supply. In addition, as regards the handling of the rights of such data, the RO shall follow the instructions of JAXA.
3. The RO may not provide or disclose the provided Meteorological Data to any third party except for the PI etc.
4. The RO shall use the provided Meteorological Data solely for the purposes of this Agreement.
5. The RO shall return or otherwise appropriately manage the Meteorological Data in accordance with the instructions of JAXA after the end of this Agreement.

Article 16. Providing of Technical Data

1. JAXA will provide the RO with the technical information and Program/Data such as satellite operation data and ground verification data owned by JAXA, excluding the Earth Observation Satellite Data and the Meteorological Data (hereinafter “Technical Data”) that are necessary for the implementation of this Agreement and will allow the RO to use the Technical Data and provide advice when required, free of charge.
2. The RO shall not use the Technical Data provided by JAXA for any purpose other than the purposes of the Agreement and must not disclose it to any third parties except for the PI etc.
3. The RO shall return or otherwise appropriately dispose of the Technical Data provided by JAXA in accordance with the instructions from JAXA after the end of this Agreement.

Article 17. Ownership of the Research Results

1. Amongst the Research Results that the RO acquired through the implementation of this Agreement, the ownership of the Research Results specified to be delivered to JAXA in the Statement of Work shall belong to JAXA. Such Research Results do not include the data that is proved to be already possessed by the RO at the time of concluding this Agreement.
2. The copyright of the documents, which include the rights regulated in Article 27 and 28 of the Copyright Act, that JAXA specifies to be delivered by the RO shall be transferred to JAXA at the point of delivery. In this case, the RO shall not exercise the moral rights.
3. In addition to Paragraph 1, for the purpose of confirming the progress of the Research Project, JAXA may demand the RO to show all the Research Results acquired through the implementation of this Agreement.
4. JAXA shall obtain the prior written consent of the RO in case JAXA plans to disclose the Research Results presented or submitted by the RO (excluding the delivered Research Results).
5. The RO shall obtain the prior written consent of JAXA if the RO plans to disclose the Research Results of which the ownership belongs to JAXA as specified in Paragraph 1 to a third party.

Article 18. Usage of the Research Results

1. Amongst the Research Results acquired through the implementation of this Agreement, JAXA may use the Research Results except for the ones specified in Paragraph 1 of the previous Article free of charge for the purposes of its own research and development (including the case that JAXA allows a third party, which includes JAXA's collaborative research partners, to use the Research Results for JAXA's own purposes) as well as only for non-commercial and peaceful purposes.
2. Amongst the Research Results acquired through the implementation of this Agreement, the RO may use the Research Results which are delivered to JAXA in accordance with Paragraph 1 of the previous Article free of charge for the purposes of its own research and development (including the case that the RO allows a third party to use the Research Results for the RO's own purposes) as well as only for non-commercial and peaceful purposes, upon the prior consent of JAXA.

Article 19. Industrial Property Rights

1. The RO shall report the existence of Potential Industrial Property Rights generated in the course of the Research Project, if any, and submit a document with such information to JAXA without delay, as well as taking a procedure to apply for its Industrial Property Rights following JAXA's instructions. If the RO is successfully granted such Industrial Property Rights, it shall notify JAXA without delay.
2. The RO shall consult with JAXA in each case of the important matters concerning the application procedure for the Industrial Property Rights described in the previous Article.
3. The expense incurred in applying to the Industrial Property Rights as described in Paragraph 1 shall be borne by JAXA.
4. In the event the Invention etc. that are generated by the Commissioned Researchers stipulated in Article 5 are properties subject to registration for the Industrial Property Rights under the name of the duty of the Commissioned Researchers, the RO shall concludes an agreement that stipulates the right to apply for the Industrial Property Rights concerning such invention belongs to the RO with the Commissioned Researcher or shall set the rules for regulating the duties of the employees regarding such a matter.
5. If the technology developed by the RO due to the implementation of the Research Project is recognized as an invention, JAXA, if necessary, may succeed the right to apply for the Industrial Property Rights from the RO and make an application for such Potential Industrial Property Rights to be registered Industrial Property Rights in JAXA's name, after receiving the materials required for the application from the RO.

Article 20. Application for Industrial Property Rights Overseas

The provisions of the previous Article shall apply to the case of application for the Industrial Property Rights and preservation of such rights in foreign countries.

Article 21. Ownership of Industrial Property Rights

1. The RO shall transfer the Industrial Property Rights obtained in compliance with Paragraph 1 of Article 19 to JAXA. In this case, the cost for the transfer shall be included in the Research Funding stipulated in Paragraph 1 of Article 7.
2. If the RO requests a license to use the Industrial Property Rights transferred to JAXA under the preceding Paragraph or applied by JAXA under Paragraph 5 of Article 19, JAXA will grant the RO such a license unless otherwise deemed to be inappropriate. The conditions for the approval shall be determined by mutual agreement between the Parties as necessary.
3. With regard to the Industrial Property Rights stipulated in Paragraph 1 of Article 19, if the RO, before obtaining the Rights, wishes to use it for any purpose other than the purposes of the Agreement, or wishes to grant its use to a third party, shall consult with JAXA as necessary.
4. In accordance with the provisions in Paragraph 1, JAXA, based on the criteria determined by JAXA, shall bear the total or a portion of the costs, which the RO should pay the Commissioned Researcher who created the technology, which is subject to registration for the Industrial Property Rights transferred from the RO and the Right to receive the transferred Industrial Property Rights from the RO stipulated in Paragraph 5 of Article 19.

Article 22. Ownership of Program/Data Copyrights

1. Upon completion of this Agreement, the RO shall notify JAXA without delay in the event that the RO creates a Program/Data that may potentially constitute the Program/Data Copyrights. In this case, the Program/Data which is specified to be delivered to JAXA in the Statement of Work shall be excluded from the notification stipulated in this Article.
2. The RO shall transfer the Program/Data Copyrights acquired through the implementation of this Agreement, including the rights stipulated in Article 27 and 28 of the Copyrights Act, to JAXA. The cost for this transfer shall be included in the Research Funding stipulated in Paragraph 1 of Article 7. Regarding the Program/Data of which the RO already had its rights prior to the conclusion of this Agreement as well as the Know-How, routine, subroutine and modules, which are commonly used by similar programs, specified by the RO, the copyrights of such Program/Data are retained by the RO but not transferred to JAXA.
3. In the event that the RO transfer copyrights to JAXA, if the product subject to the copyright is created by the RO, the RO waives any related moral rights. If it is created by a third party but not by the RO, the RO shall take measures to prevent the third party from using any related moral rights.
4. If the RO requests a license to use the Program/Data Copyrights transferred to JAXA, JAXA will grant the RO such a license unless otherwise deemed to be inappropriate. The conditions for the approval shall be determined by mutual agreement between the Parties as necessary.
5. In the event that programs are modified/adapted not by JAXA or the RO but by a third party, JAXA shall bear the responsibility related to the use of such programs and the RO shall not bear any liability caused by such programs.
6. With regard to the Know-How, routine, subroutine and modules utilized commonly by similar programs, the copyrights of which are retained by the RO in accordance with Paragraph 2 of this Article, the RO shall approve JAXA of a royalty-free right to use such products in the form of the program acquired through the implementation of the Agreement without consent from the RO. In such case, the right to use shall include the right of JAXA to grant a third party the right to use the Know-How, routine, subroutine, and modules without paying any royalties to the RO.

Article 22.2. Exception for the Ownership of Intellectual Property Rights

1. In the event that the RO acquired Intellectual Property Rights through the implementation of this Agreement, or creates Program/Data Copyrights, such rights shall not be transferred to JAXA if the RO sends a document to JAXA to the effect that the RO complies all the conditions below despite the specification stipulated from Article 19 to the previous Article.
 - (1) In the event that the RO acquired Invention etc. that may potentially constitute the Intellectual Property Rights or created Program/Data Copyrights in the course of the Research Project, the RO shall report the existence in writing to JAXA without delay.
 - (2) The RO shall report JAXA the situation of utilization of such Intellectual Property Rights in the way determined by JAXA.
 - (3) The RO shall obtain prior consent of JAXA in case of transferring such Intellectual Property

Rights specified by JAXA to a third party.

- (4) The RO shall grant JAXA the royalty-free right to use such Intellectual Property Rights for the purposes of its own research and development. Such Intellectual Property Rights do not include the right of JAXA to grant a third party the right to use such Intellectual Property Rights.
- (5) In the event that the RO did not utilize such Intellectual Property Rights for a considerable period and did not have a duly reason for such situation, the RO shall grant a third party the right to use such Intellectual Property Rights if there is a necessity for JAXA to promote utilization of such specific Intellectual Property Rights by the demand of the Japanese government.
2. In the event that the RO applied or requested (hereinafter “application”) for the Intellectual Property Rights or registered the establishment for such application, the RO shall report JAXA within sixty (60) days from the day of application or registration in a form determined separately.

Article 23. Use of Facilities

1. The RO may use JAXA’s facilities and equipment (hereinafter “Facilities”) free of charge with the prior consent of JAXA if there is a necessity for the implementation of this Agreement.
2. In the case of using JAXA’s Facilities, the RO shall use the Facilities in compliance with all the regulations stipulated by JAXA.

Article 24. Installation of Instruments

If it is necessary for the implementation of this Agreement, the RO may install necessary instruments and other items into JAXA’s facilities with the prior consent of JAXA. In such a case the RO shall follow the rules and regulations stipulated by JAXA.

Article 25. Delivery, Storage, and Return of Lent Items

1. If it is necessary for the implementation of this Agreement, JAXA shall lend the RO any instruments and other items owned by JAXA.
2. Upon delivery of the instruments and items for lending (hereinafter “Lent Items”) in accordance with the preceding Paragraph, JAXA shall submit a delivery note to the RO, and the RO shall submit a receipt to JAXA.
3. In the event that the RO received the delivery of the Lent Items, the RO shall confirm the presence of any abnormality regarding the items, amount, etc. If a lack of quantity or abnormality including inappropriate quality and standard for use with the Lent Items is found, the RO shall notify JAXA of the matter immediately and seek further instructions.
4. The RO shall manage and use the delivered Lent Items with the care of a good manager and shall not use the Lent Items for any purpose other than the purposes of this Agreement.
5. The RO shall maintain books of receipts, shipment, and management of the delivered Lent Items and shall record and organize the receipts to always make the situation of the Lent Items clear.
6. In the case of loss or damage to the Lent Items, the RO shall report this to JAXA without delay.
7. In the event that all or part of the Lent Items become unnecessary due to the completion of the whole or part of this Agreement as well as any amendment or termination of this Agreement, the RO shall notify JAXA and undertake procedures to return the Lent Items in compliance with JAXA’s instructions without delay.

Article 26. Confidentiality

1. In this Agreement, “Confidentiality Information” means any information that corresponds to any of the following:
 - (1) Any information that includes documents classified “Confidential”, any material object such as a sample, or any information, either material or immaterial, which JAXA and the RO agreed to handle as the Confidential Information by a written agreement, obtained through the implementation of this Agreement.
 - (2) Any information disclosed or distributed to the other party as the Confidential Information in the forms of documents, drawings, photographs, specimens, samples, magnetic tapes, floppy disks, or the like for the purposes of this Agreement.
2. The Parties shall appropriately keep the Confidential Information secret and shall not disclose or divulge any Confidential Information to any party other than those who engage in this Agreement; provided, however, that any information which corresponds to any of the following

is not included in the Confidential Information :

- (1) Information that is already known to the public when disclosed by the disclosing party;
 - (2) Information that becomes known to the public after the disclosure by the disclosing party without intentional misconduct or negligence of the receiving party;
 - (3) Information that the receiving party already had before the disclosure by the disclosing party and that the receiving party can verify such a fact;
 - (4) Information with proof that the receiving party acquires legally from a duly authorized third party not subject to confidentiality obligations;
 - (5) Information and materials that the receiving party independently acquire without utilizing information obtained from the disclosing party and that the receiving party can verify such a fact;
 - (6) Information with prior written consent from the disclosing party for the disclosure and the publication; or
 - (7) Information that is required to be disclosed by applicable laws, judgment or order of a competent court. In this case, the receiving party shall promptly notify the disclosing party of the necessity of disclosure.
3. The confidentiality obligation under Paragraph 2 shall remain effective for a period of five (5) years after the termination of this Agreement. However, this period of keeping confidentiality may be extended or shortened by mutual agreement between JAXA and the RO.

Article 27. Publication of Research Results

1. The RO may release or publish the Research Results acquired through the implementation of this Agreement and delivered in accordance with Paragraph 1 of Article 17 (hereinafter "Publication of Research Results"), provided that the RO complies with the obligations of confidentiality stipulated in Article 26.
2. In the case of the preceding Paragraph, the RO shall notify JAXA with a written document and obtain written consent from JAXA prior to the publication of Research Results. In this case, JAXA will not unreasonably withhold the consent for the RO's request.
3. Upon receiving the notice, JAXA will request correction of the content of the publication in a written form if it is judged that such content includes a part which may lead to the loss of the future interest of JAXA, and the RO shall consult with JAXA about such part. The RO may not publish the part that has been notified as contents, which potentially cause a loss of future interest of JAXA when published as described in this Paragraph, without consent from JAXA.
4. The RO shall state in the publication of the Research Results that such results have been obtained pursuant to this Agreement and identify the owner of the rights to the Earth Observation Satellite Data and Meteorological Data used in such publication.
5. After disclosing or publishing the Research Results that belong to the RO, the RO shall provide JAXA with a copy of the publication as soon as possible. JAXA is entitled to a royalty-free right to use, duplicate, and distribute the provided publications unless the copyright of such publication is owned by an academic society.

Article 28. Security

Upon implementation of this Agreement, the RO shall take security measures in accordance with the JAXA's regulations and must follow JAXA's instructions.

Article 29. Impossibility of Performance

1. In the event it becomes impossible for the RO to carry out all or any part of this Agreement due to any reason attributable to the RO, JAXA may terminate all or any part of this Agreement.
2. If this Agreement is terminated as set forth in the preceding Paragraph, JAXA shall apply the provisions of Paragraph 1 of Article 12 and claim a refund of any unexpended Research Funding.
3. If this Agreement is terminated as set forth in Paragraph 2, JAXA may charge the RO a penalty in accordance with Paragraph 3 of Article 32.

Article 30. Incompleteness of Performance

1. If it is confirmed that the performance of the RO for this Agreement does not comply with the purposes of this Agreement due to any reason attributable to the RO, JAXA may claim subsequent completion by the RO with an appropriate period set by JAXA.

2. In the event that there is no prospect that the RO completes the performance which complies with the purposes of this Agreement despite the claim made for the subsequent completion stipulated in Paragraph 1, JAXA may terminate all or any part of this Agreement.
3. If this Agreement is terminated as set forth in the preceding Paragraph, JAXA shall apply the provisions of Paragraph 1 of Article 12 and claim a refund of any unexpended Research Funding.
4. If the Agreement is terminated as set forth in Paragraph 2, JAXA may charge the RO a penalty in accordance with paragraph 3 of Article 32.

Article 31. Extension of the Delivery Deadline

1. In case there is a legitimate reason that the RO cannot fulfill the obligation by the delivery deadline, the RO may notify JAXA of such a reason and planned delivery date in advance and apply for an extension of the delivery deadline in writing. In this case, if it is approved that the extension of the delivery deadline does not hinder the achievement of the objective of this Agreement, JAXA may approve the extension.
2. In the event the RO does not fulfill the obligation by the scheduled delivery date, JAXA may terminate all or any part of this Agreement.
3. If this Agreement is terminated as set forth in the preceding Paragraph, JAXA shall apply the provisions of Paragraph 1 of Article 12 and claim a refund of any unexpended Research Funding.
4. If this Agreement is terminated as set forth in Paragraph 2, JAXA may charge the RO a penalty in accordance with Paragraph 3 of Article 32.

Article 32. Termination of the Agreement

1. The Parties may terminate this Agreement in any case that corresponds to any one of the following. In such a case, the Parties agree to waive any claim against the other.
 - (1) Upon the consent of both JAXA and the RO;
 - (2) When the other party commits a dishonest and/or inequitable act, provided that the breaching party fails to offer any effective and satisfactory remedial measures within seven (7) days after receiving demands for corrective action from the harmed party;
 - (3) When the other party breaches this Agreement, provided that the breaching party fails to offer any effective and satisfactory remedial measures within seven (7) days after receiving demands for corrective action from the harmed party;
 - (4) When the events stipulated in Paragraph 4 of Article 5 occurs and there is no one who engages in this commissioned research at the RO;
 - (5) When unavoidable circumstances occur such as a natural disaster; or
 - (6) When the RO sends a written notice to JAXA in accordance with the Paragraph 2 of Article 34.
2. Upon termination of this Agreement, the RO shall promptly submit to JAXA all work in progress and completed work based on the research carried out prior to the termination.
3. In the event that this Agreement is terminated in accordance with Item 2 or 3 of Paragraph 1, JAXA and the RO may claim a penalty equivalent to 10% of the Research Funding stipulated in Paragraph 1 of Article 7 which corresponds to the contents of the termination above against the other party. However, if the amount of the penalty is less than 10,000 Japanese yen, the payment of such penalty is not required. Where there is a fraction of that amount and if it is less than 1,000 yen, such a fraction shall be rounded down.
4. The Parties shall waive any claim against the other if this Agreement is terminated pursuant to Paragraph 1, Item 5 of this Article.

Article 33. Effective Term of the Agreement

1. Effective Term of the Agreement shall be the period set forth in Article 3.
2. Even after the end of the effective term of the Agreement stipulated in the previous Paragraph, provisions in Paragraph 2 and 3 of Article 14 (Providing of the Earth Observation Satellite Data and its Conditions), Paragraph 2 to 5 of Article 15 (Providing of Meteorological Data and its Conditions), Article 16 (Providing of Technical Data), Article 18 (Usage of the Research Results) to 22 (Ownership of the Copyrights of Program/Data), and Article 27 (Publication of Research Results) shall continue to be effective for the duration of the continuance of the rights set forth in each Article, And the provisions in Article 26 (Confidentiality) and Article 27 (Publication of Research Results) shall be effective during the period set forth in each Article .

Article 34. Amendment of the Agreement

1. JAXA can amend the contents of this Agreement. In such a case, JAXA announces the amended contents by posting it to the website operated by JAXA, and thereafter the Agreement is handled based on the amended contents.
2. In the case the RO has a legitimate reason for not agreeing with the amendment of the previous paragraph, the RO may terminate the Agreement by notifying JAXA in writing within thirty (30) days from the date the amended contents are posted on the website.

Article 35. Governing Law

This Agreement shall be governed and interpreted under the laws of Japan.

Article 36. Language

All communications between JAXA and the RO under this Agreement shall be in either Japanese or English.

Article 37. Consultation

In the event that any doubts arise with regard to any matters not stipulated in this Agreement and the provisions stipulated in this Agreement, it shall be resolved upon mutual agreement between JAXA and the RO.

Attachment “Earth Observation Satellite Data”

Name of Satellite or Sensor	Observation Period (YYYY/MM/DD)	Observable Area
JERS (Japanese Earth Observation Satellite)	1992/09/01 ~1998/10/11	Global
ADEOS (Advanced Earth Observation Satellite)	1996/10/15 ~1997/06/29	Global
TRMM (Tropical Rainfall Measuring Mission)	1997/12 ~2015/04	Global (PR: Approximately 36°S-36°N. TMI and VIRS: Approximately 38°S-38°N)
AMSR-E (Advanced Microwave Scanning Radiometer for EOS-Aqua satellite)	2002/06/19 ~2011/10/04	Global
ADEOS-II (Advanced Earth Observing Satellite-II)	2003/01 ~2003/10	Global
ALOS (Advanced Land Observing Satellite) * number of scenes limited	2006/05/16 ~2011/04/22	Global
GOSAT (Greenhouse Gases Observing Satellite)	2009/04/23~	Global
GCOM-W (The Global Change Observation Mission - Water)	2012/07~	Global
GPM (Global Precipitation Measurement)	2014/03~	Global (DPR: Approximately 66°S-66°N. GMI: Approximately 68°S-68°N)
ALOS-2 (Advanced Land Observing Satellite-2) * number of scenes limited	2014/08/04~	Global
GCOM-C (The Global Change Observation Mission-Climate)	2018/01~	Global

* GOSAT-2, EarthCARE, ALOS-3, ALOS-4, and MOLI will be added by revision of the Agreement pursuant to Article 34 when provision of data becomes available.

3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS
COLLABORATIVE RESEARCH AGREEMENT (FUNDED)
BETWEEN
THE JAPAN AEROSPACE EXPLORATION AGENCY
AND
THE RESEARCH ORGANIZATION

JAPAN AEROSPACE EXPLORATION AGENCY

**3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS
COLLABORATIVE RESEARCH AGREEMENT (FUNDED)
BETWEEN THE JAPAN AEROSPACE EXPLORATION AGENCY
AND THE RESEARCH ORGANIZATION**

This agreement ("Agreement") is entered into between the Japan Aerospace Exploration Agency, established under the provision of the Law Concerning the Japan Aerospace Exploration Agency on October 1, 2003, represented by its President and having its principal office at 7-44-1 Higashimachi, Jindaiji, Choufu-shi, Tokyo, Japan ("JAXA") and a research organization ("Research Organization", hereinafter "RO") that submitted an application form for the below described research activities to JAXA, hereinafter collectively referred to as "the Parties".

WITNESSETH

WHEREAS, JAXA issued the Research Announcement ("RA") to engage in collaborative research activities directly related to retrieval algorithms for geophysical products, product validation, and data application of earth observation satellites, and the RO applied pursuant to such RA;

WHEREAS, JAXA accepted the RO's proposal that was in response to the RA, delivered the confirmation sheet to the RO and JAXA further desires to utilize such proposal in JAXA's project; and

WHEREAS, JAXA desires to engage in the above research activities in collaboration with the RO.

NOW, THEREFORE, in consideration of the mutual agreements hereinafter set forth, and for other good and reasonable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

Article 1. Definitions

1. The following capitalized terms in this Agreement shall have the following meanings:

- (1) "Research Results" means the technical results and scientific knowledge derived from the implementation of the "Research Project" (research activities based on the proposal) pursuant to this Agreement, including all inventions, ideas, designs, literary works, algorithms (including Technological development accompanied by Program/Data to embody such algorithms), and Know-How.
- (2) "Intellectual Property Rights" generated in the course of implementation of the Agreement means the following:
 - (i) Industrial Property Rights (as defined below);
 - (ii) Potential Industrial Property Rights (as defined below);
 - (iii) computer programs, software, and databases (hereinafter "Program/Data") Copyrights (as defined below);
 - (iv) Rights equivalent to each of the above rights in foreign countries; and
 - (v) Rights to use technical information specified by mutual consultation between both Parties that are objectively identifiable, such as documents, can be kept confidential, and are of proprietary value (referred to as "Know-How" in this Agreement)."Industrial Property Rights" means all domestic and foreign patents, utility models, and industrial designs.
"Potential Industrial Property Rights" means all domestic and foreign application rights for patents, utility models, or industrial designs.
"Program/Data Copyrights" means all domestic and foreign copyrights related to Program/Data.
- (3) "Collaborative Research Plan" means the plan described in the Attachment of the Application Form for the 3rd Research Announcement on the Earth Observations Collaborative Research Agreement (Funded) ("Application Form").
- (4) "Research Period" means the period as described in the Collaborative Research Plan. In accordance with the provisions of this Agreement, in the event that the Agreement ended prior

to the completion date of the research originally set, the date the Agreement ends shall be read as the Research Period.

- (5) "Annual Evaluation" means evaluation by JAXA for the results achieved within the year in which this Agreement was concluded. JAXA evaluates the results by reports presented at the research presentation meeting by the RO and Research Results Report (as defined below).
 - (6) "Earth Observation Satellite Data" means data sets obtained from satellites which are retained by JAXA at the time of execution of this Agreement. The available data sets including names of satellites or sensors, observation period that can be offered, and observation areas are listed in the Attachment A of this Agreement.
 - (7) "Meteorological Data" means data provided by the Japan Meteorological Agency.
2. In this Agreement, "Invention etc." contains multiple meanings: When it is a subject of patent rights, it refers to an invention; when it is a subject of a utility model, it refers to an idea; when it is a subject of industrial design rights as well as copy rights of programs and databases, it refers to a creation; when it is a subject of algorithms and Know-How it refers to a proposition.
 3. In this Agreement, "utilization" of the intellectual property rights and Research Results refers to the acts specified in Paragraph 3 of Article 2 of the Patent Act, the acts specified in Paragraph 3 of Article 2 of the Utility Model Act, the acts specified in Paragraph 2 of Article 2 of the Design Act, and exercise of the rights specified in Article 21 and 27 of the Copyright Act (including the use of the secondary publication created by JAXA or the RO), and the use of algorithms and Know-How.
 4. In this Agreement, "PI" (Principal Investigator) refers to the person who submitted the research proposal to this Research Announcement and who is also the RO employee selected to be responsible for the implementation of the accepted Research Project. "CI" means "Co-Investigator" who supports the research activities represented by the PI. Names, affiliation, and other information concerning PI and CI (hereinafter collectively "Collaborative Researchers") shall be described in the Collaborative Research Plan.

Article 2. JAXA's Performance for Research Project and the RO's General Responsibilities for Research Project

1. JAXA shall make reasonable efforts to perform the following tasks related to the Research Project:
 - (1) Deliver the Earth Observation Satellite Data and Meteorological Data required for performing the collaborative research to the RO free of charge;
 - (2) Hold research presentation meetings check progress of the research and other necessary meetings (hereinafter collectively "Research Presentation Meeting"); and
 - (3) Carry out an Annual Evaluation based on the report made in the Research Presentation Meeting stipulated in the previous Paragraph and the Research Results Report submitted at the end of fiscal year for the Annual Evaluation.
2. For the purpose of ensuring the RO's performance of the above obligations, the RO shall perform certain actions including, but not limited to:
 - (1) Conduct and complete the Research Project in accordance with the Collaborative Research Plan;
 - (2) Participate in the Research Presentation Meeting hosted by JAXA every fiscal year in response to the request from JAXA;
 - (3) Participate in the Research Presentation Meeting hosted by JAXA every year to report on the Research Results and progress of research to JAXA; and
 - (4) Deliver a report of all the Research Results obtained during the period of the Agreement by the end of each fiscal year of the period of the Agreement to JAXA. Furthermore, at the end of the Research Period, the RO shall report all the Research Results obtained throughout the entire period of the collaborative research in the Final Report and submit it to JAXA. In this case, the RO does not need to separately submit an annual report for the final year of the term. Any reports stipulated in this paragraph shall be sent by e-mail in PDF format. However, if e-mail or other online means are not available for submitting such reports, submission by a hard copy or by an electronic storage medium containing such report in PDF format shall be accepted.

Article 3. Conclusion and Renewal of the Agreement

1. The Agreement shall be concluded upon the acceptance through the issuance of the Confirmation Sheet by JAXA for the application submitted by the RO using the Application Form, and the

Agreement shall become effective as of the date prescribed in the Confirmation Sheet issued by JAXA, and the period of the Agreement shall be the period described in the Confirmation Sheet issued by JAXA. In case of a conflict between the Confirmation Sheet and this Agreement, the terms and conditions stipulated in the Confirmation Sheet will supersede this Agreement.

2. The Agreement Term shall be renewed for one Fiscal Year from the end of the Research Period, provided that JAXA approves the renewal of the Agreement by the Annual Evaluation and the Parties mutually agree upon the amount to be paid by JAXA for the extended period; the RO shall submit a renewal Application Form to JAXA and JAXA shall approve by issuing a new Confirmation Sheet. Thereafter the procedure shall be the same as above.

Article 4. Collaborative Researchers

1. The RO shall allow the Collaborative Researchers listed in the Collaborative Research Plan participate in the collaborative research
2. JAXA shall allow those who are listed on the Collaborative Research Plan to participate in the Research Project.
3. The RO shall undertake necessary measures to ensure that all the Collaborative Researchers comply with the contents of the Agreement.
4. If the RO intends to let researchers other than the CIs described in the Collaborative Research Plan participate in this collaborative research as CIs, the RO shall obtain prior written consent from JAXA, and the RO shall undertake necessary measures to ensure that such personnel comply with the contents of the Agreement.
5. In the event that the PI comes to be no longer engaged in the Research Project at RO because of PI's death, retirement, a leave of absence from work, or any other reasons, JAXA may terminate this Agreement. Provided, however, if the RO designates another researcher who belongs to the RO as the PI's successor, and JAXA approves the succession, the Parties may amend this Agreement, with the succeeding researcher being a new PI. The terms and conditions of the amendment to this Agreement shall be determined separately upon mutual consultation and consent.

Article 5. Prohibition of Subcontract

1. The RO shall not commission the whole Research Project to a third party (hereinafter "Subcontract"). Provided, however, that the RO may subcontract part of it upon prior written application to JAXA and approval from JAXA. Should there be a case where subcontractors re-commission part of the Research Project to a third party, the company name, address, and scope of business of such third party are required to be submitted to the RO in writing.
2. If the RO subcontracts the Research Project in accordance with the preceding Paragraph, any act of all the third parties involved in the subcontract, which includes a contractor and commissioned party of the RO, re-commissioned party, subcontractor and supplier at any tier, in connection with the subcontractor shall be deemed to be an act of the RO and the RO shall be responsible therefor.
3. If the RO subcontract part of the Agreement, the RO shall conclude an agreement with the subcontractor on matters necessary for the RO to comply with the Agreement and on matters designated by JAXA.

Article 6. Research Funding

1. The Confirmation Sheet issued on the basis of Article 3 identifies the amount of funding to be provided by JAXA to the RO for the Research Project ("Research Funding") and JAXA shall pay such amount to the RO in advance.
2. JAXA shall, within thirty (30) days from the date when JAXA receives an invoice duly issued by the RO, make payment for the Research Funding described in the previous Paragraph.
3. If the RO wishes to reallocate expenses between Expense Item Categories of the Collaborative Research Plan for more than 50% of the total direct expense (3,000,000 Japanese yen, in case the amount of 50% is less than 3,000,000 Japanese yen) increase or decrease, the RO shall obtain a written approval from JAXA in advance.
4. Provided, however, that the RO shall not conduct the reallocation of budget between the general administrative expenses and the direct expenses.
5. In case that JAXA fails to pay the Research Funding within the period specified in Paragraph 2,

the RO may request JAXA to pay default interest of three (3) percent per annum on such unpaid amount for the period from the immediately succeeding day of the due date for payment to the date of actual payment.

6. If the interest on late payment calculated following the preceding paragraph is less than 10,000 Japanese yen, JAXA shall be exempt from payment of such interest. Where there is a fraction of that amount and if it is less than 1,000 yen, such a fraction shall be rounded down.

Article 7. Accounting

1. The RO shall conduct accounting of the Research Funding stipulated in Article 6.
2. The RO shall maintain books to record expenses according to items and store documents to prove such expenses. In addition, the RO shall keep all the accounting documents for seven (7) years after the end of the Agreement counting from the next fiscal year. JAXA may request the RO to submit a copy of such books and documents to clarify the expenses, and the RO shall respond to such requests from JAXA.

Article 8. Submission of Financial Report

In the event that the research expenses, stated in Paragraph 1 of Article 6, exceed one (1) million Japanese yen, the RO shall submit a Financial Report containing the expenses breakdown to JAXA within 61 days after the end of the Agreement.

Article 9. Determination of Contract Amount

1. Upon receipt of the Financial Report stipulated in Paragraph 2 of the previous Article, JAXA shall adjust the expenses within the limit of the original contract amount in accordance with the present Article, Article 10 (Investigation of Actual Expenses), and Article 11 (Return of Paid Research Funding) and determine the final contract amount and notify the RO of the amount.
2. In the calculation of the actual expenses, the general administrative expenses ratio shall be calculated by using the ratio applied at the time the contract was concluded.

Article 10. Investigation of Actual Expenses

In determining the contract amount stipulated in Paragraph 1 of the previous Article, JAXA shall investigate whether the actual expenses conform with the contents of the Agreement and accompanied conditions. If necessary, JAXA may request the RO to submit reference reports or materials or may enter the RO's office to inspect the books and the relevant documents.

Article 11. Return of Paid Research Funding

1. After the payment by the method stipulated in paragraph 1 and 2 of Article 6, if the amount already paid exceeds the final contract amount determined through the process stipulated in paragraph 1 of Article 9, JAXA shall reclaim the excess amount from the RO.
2. In the case of the previous paragraph, the RO shall remit such funds within thirty (30) days from the date when the RO receives an invoice issued by JAXA with regard to such funds.
3. In the event there is no return made by the RO within the set time limit as described in the preceding paragraph, the provisions of paragraph 5 and 6 of Article 6 shall be applied.

Article 12. Ownership of the Rights to the Acquired Property

1. The ownership of the facilities, equipment, and items acquired with the Research Funding in accordance with Paragraph 1 of Article 6 shall be retained by JAXA. However, upon mutual agreement between JAXA and the RO the ownership of the facilities, equipment, and items may be transferred to the RO.
2. The RO shall create a list of acquired property for the facilities, equipment, and items mentioned in the previous paragraph and manage the facilities, equipment, and items with the care of a good manager. When the Agreement ends, the RO must submit a list of acquired property to JAXA. In case there is no acquired property, the RO shall indicate so in the list of the acquired property.

Article 13. Providing of Earth Observation Satellite Data by JAXA and its Conditions

1. JAXA will provide the RO with the Earth Observation Satellite Data for the Research Project free of charge via internet in accordance with Article 2.1.(1) subject to the following conditions:

- (1) The RO agrees and accepts that JAXA may not provide all the Earth Observation Satellite Data which the RO may request due to restrictions in the allowance range of JAXA's equipment and in resources. Amongst the Earth Observation Satellite Data, for which the RO may request JAXA, the maximum number of scenes of each standard data collected from the Advanced Land Observing Satellite (ALOS) and the Advanced Land Observing Satellite-2 (ALOS-2) shall be limited by JAXA depending on the evaluation of the Collaborative Research Plan;
 - (2) JAXA does not guarantee a specific quality or the timely provision of the Earth Observation Satellite Data and will not be liable for any deterioration in data quality and delay in providing the data;
 - (3) JAXA will not be liable for any situation whereby the Earth Observation Satellite Data cannot be supplied to the RO due to faults relating to the satellites, limitations on their operations, or for any other reasons; and
 - (4) The RO shall bear the costs of media and shipment if the RO requests that JAXA provides the Earth Observation Satellite Data via physical media.
2. With respect to the handling of the Earth Observation Satellite Data provided by JAXA, the RO shall follow the conditions below:
- (1) The RO may not duplicate the Earth Observation Satellite Data for any purpose other than creating a backup. However, this excludes the duplication of the data for the purpose of providing the data to Collaborative Researchers stipulated in Article 4 and the subcontractors stipulated in Article 5 (hereinafter collectively "PIs etc."), which are necessary for the implementation of the Research Project;
 - (2) The RO may not disclose the Earth Observation Satellite Data to any third party except for the PI etc.;
 - (3) The RO shall use the provided Earth Observation Satellite Data solely for the purposes of the Research Project; and
 - (4) The RO shall return or otherwise appropriately manage the Earth Observation Satellite Data in accordance with the instructions of JAXA after the end of the Agreement.
3. Any rights relating to the Earth Observation Satellite Data provided by JAXA to the RO shall conform to the following:
- (1) JAXA retains the Intellectual Property Rights of all the Earth Observation Satellite Data, except for ALOS PALSAR data of which METI (Ministry of Economy, Trade and Industry) is the joint owner;
 - (2) If value-added products (modified products with high-level processing which are irreversible to standard data. High-level data processing includes data analysis or combining multiple-satellite data, image processing based on external information, and physical quantity conversion.) are solely developed by the RO out of the Earth Observation Satellite Data in the course of executing the Research Project, the RO retains the Intellectual Property Rights and any other rights of such value-added products;
 - (3) If the RO and JAXA jointly modify the Earth Observation Satellite Data which is provided by JAXA and develop any value-added products through the implementation of the Research Project, the RO and JAXA will discuss and determine the ownership of rights to the value-added products in consideration of the degree of each party's contribution and other factors to be considered;
 - (4) Except for cases under Item (2) and (3), all Intellectual Property Rights and any other rights of the data developed by modifying the Earth Observation Satellite Data shall be owned by JAXA; and
 - (5) In case the RO uses the modified Earth Observation Satellite Data for commercial purposes, the RO shall notify JAXA and comply with the license conditions to be set by JAXA.

Article 14. Providing of Meteorological Data by JAXA and its Conditions

1. For the purposes of performing the Research Project, JAXA will attempt to provide the RO with the Meteorological Data in accordance with Article 2.1.(1).
2. Any rights relating to the Meteorological Data provided by JAXA shall not be transferred to the RO through the supply. In addition, as regards the handling of the rights of such data, the RO shall follow instructions of JAXA.
3. The RO may not provide or disclose the provided Meteorological Data to any third party except for PI etc.

4. The RO shall use the provided Meteorological Data solely for the purpose of conducting the Research Project.
5. The RO shall return or otherwise appropriately manage the Meteorological Data in accordance with the instructions of JAXA after the end of the Research Period.

Article 15. Disclosure of Technical Data

1. Each party shall disclose to the other party the technical information and Program/Data such as satellite operation data and ground verification data owned by JAXA excluding the Earth Observation Satellite Data and the Meteorological Data (hereinafter "Technical Data") that are necessary for performing the collaborative research and shall allow the other party to use the Technical Data and provide advice when required, free of charge.
2. The Parties shall not use the Technical Data provided by the other party for any purpose other than the purposes of the collaborative research and must not disclose it to any third party except for the PI etc..
3. The Parties shall return or otherwise appropriately dispose of the Technical Data provided by the other party in accordance with the instructions of the other party after the end of the Agreement.

Article 16. Usage of Research Results

1. Each party may use the Research Result acquired through the collaborative research free of charge for the purposes of its own research and development (including the case that each party allows a third party, which includes each party's collaborative research partners, to use the Research Results for each party's own purposes) as well as only for non-commercial and peaceful purposes without prior consent from the other party.
2. With regard to the copyrights in the Final Reports submitted by the RO to JAXA, JAXA may freely use, edit, duplicate, and distribute such reports. In this case, the Collaborative Researchers shall waive any related moral rights to the copyrights in the Final Reports.

Article 17. Ownership of Research Results

1. Both Parties shall solely own the rights of the Research Results if JAXA or the RO solely generates such Research Results in the course of the collaborative research.
2. The Parties shall jointly own the rights to the Research Results jointly generated by the Parties through the course of the collaborative research, and the portion of the ownership of such results shall be determined upon mutual agreement between the Parties in consideration of the degrees of each party's contribution and other factors to be considered.

Article 18. Application of Intellectual Property Rights

1. JAXA or the RO shall give the other party prompt written notice of Intellectual Property Rights generated, such as the Invention, Utility Model, and Creation, in the course of the collaborative research and discuss the ownership of such generated Intellectual Property Rights, as well as whether it is necessary to submit an application for registration of such Intellectual Property Rights.
2. JAXA and/or the RO shall take any necessary procedures for any Industrial Property Rights owned by and/or held by each party's Collaborative Researchers (including the Invention etc. jointly generated by such Joint Researcher and JAXA or the RO) to be transferred by such Joint Researcher to JAXA or the RO.
3. If JAXA or the RO solely generates Potential Intellectual Property Rights in the course of the collaborative research ("Solely-Owned Intellectual Property Rights"), the party may take steps to apply for the registration of the resulting Intellectual Property Rights as solely-owned ones, provided that it shall obtain prior confirmation of the other party. In this case, expenses for application and rights preservation shall be borne by the party solely holding the Intellectual Property Rights.
4. In the event that the Parties jointly generate an Invention etc. and submit an application for Intellectual Property Rights to such invention, the Parties shall enter into a separate joint ownership agreement ("Joint Ownership Agreement") and jointly perform submission of the application and other procedures according to the Joint Ownership Agreement. In this case, expenses for application and rights preservation shall be borne by both JAXA and the RO

depending on the degree of ownership.

Article 19. Application for Intellectual Property Rights Overseas

1. The provisions of the previous Article shall apply to the case of application for the Intellectual Property Rights and preservation of such rights in foreign countries.
2. In the case of an application for the Intellectual Property Rights jointly owned by the Parties pursuant to Paragraph 4 of the previous Article, the Parties shall discuss whether it is necessary to submit an application for registration of such Intellectual Property Rights.

Article 20. Utilization of Jointly-Owned Intellectual Property Rights

In case either of the Parties utilizes the Jointly-Owned Intellectual Property Rights, such party shall obtain the consent of the other party in advance and pay utilization fee as set forth in a separate utilization agreement, except for the case stipulated in Article 16.

Article 21. License of Utilization of Jointly-Owned Intellectual Property Rights to Third Party

1. The Parties may grant to any third party a license to use the Jointly-Owned Intellectual Property Rights; provided, however, that the relevant party shall obtain the prior written consent of the other party, and determine the licensing terms after discussion with the other party.
2. In the case of granting a license to use the Jointly-Owned Intellectual Property Rights to a third party following the previous Paragraph, the relevant party shall collect the usage fee from such third party as set forth in the separate usage agreement. The usage fee to be collected from the third party shall be distributed between the Parties pro rata in proportion to their respective interests in those rights.

Article 22. Transfer of Interests to Jointly-Owned Intellectual Property Rights

1. The Parties may transfer their respective interests to the Jointly-Owned Intellectual Property Rights generated in the course of the collaborative research only to their respective designees after discussion between the Parties. Such transfer may be carried out pursuant to a separate transfer agreement. In this event, the Parties shall cause its designee to succeed to all of its rights and obligations with respect to those Intellectual Property Rights.
2. If JAXA or the RO disclaims its interests in the Jointly-Owned Intellectual Property Rights, the relevant party shall give the other party prior notice thereof and transfer its interests to the other party, only if the other party wishes to acquire it.

Article 23. Improved Invention

If JAXA or the RO alters or improves the Jointly-Owned Intellectual Property within one (1) year from the application for registration of the original Jointly-Owned Intellectual Property Rights, the party shall provide a written notice without delay to the other party describing the alterations or improvements. Ownership and other issues of the Intellectual Property Rights concerning the altered or improved invention shall be determined through discussion between the Parties.

Article 24. Designation of Know-How

1. After mutual agreement by the Parties, JAXA and the RO shall promptly designate Know-How regarding the Research Results which are appropriate to be treated as Know-How.
2. Upon designation of Know-How, a period during which the Know-How shall be kept in confidence shall be specified.
3. After designating the Know-How, such Know-How shall be kept in confidence, in principle, for five (5) years commencing on the day immediately following the date of the completion of this Agreement; provided, however, that JAXA and the RO may extend or shorten that period upon mutual agreement.

Article 25. Use of Facilities

1. The Parties may use facilities and equipment (hereinafter "Facilities") of the other party free of charge with the prior consent of the other party if it is necessary for implementation of the Research Project.
2. The Parties shall follow rules and regulations of the other party in the case of using the Facilities of the other party.

Article 26. Installation of Instruments

1. If it is necessary for implementation of the collaborative research, the Parties may install necessary instruments and other items into the facility of the other party with the prior consent of the other party. In such a case, the party which installs such instruments or items shall follow the rules and regulations of the other party.
2. In the event that JAXA or the RO uses the items etc. installed by the other party (hereinafter "Installed Items"), such party shall obtain the prior consent of the other party and shall not use the Installed Items for any purpose other than the implementation of the collaborative research.
3. In the event that JAXA or the RO loses or damages the Installed Items, such party should immediately notify the other party such fact irrespective of the reason.

Article 27. Delivery, Storage, and Return of Lent Items

1. The Parties may lend instruments and other items to the other party if it is necessary for implementation of the collaborative research.
2. Upon delivery of the instruments and items for lending (hereinafter "Lent Items") in accordance with the previous Paragraph, owner of the Lent Items ("Lessor") shall submit a delivery note to the other, and the other party shall submit a receipt to the Lessor.
3. In the event that the Parties received the delivery of the Lent Items, the receiving party shall confirm the presence of any abnormality regarding the items, amount, etc. If a lack of quantity or abnormality including inappropriate quality and standard for use with the Lent Items is found, the receiving party shall notify the Lessor of the matter immediately and seek further instructions.
4. The Parties shall manage and use the delivered Lent Items with the care of a good manager and shall not use the Lent Items for any purpose other than the purposes of the collaborative research.
5. The Parties shall maintain books of receipts, shipment, and management of the delivered Lent Items and shall record and organize the receipts to always make the situation of the Lent Items clear.
6. In the case of loss or damage to the Lent Equipment, JAXA and the RO shall report this to the Lessor without delay.
7. In the event that all or part of the Lent Items become unnecessary due to the completion of the whole or part of the Agreement as well as of any amendment or termination of the Agreement, the Parties shall notify the Lessor and undertake procedures to return the Lent Items in compliance with the Lessor's instructions without delay.

Article 28. Confidentiality

1. In this Agreement, "Confidential Information" means any information that corresponds to any of the following:
 - (1) Any information that includes documents classified "Confidential", any material object such as a sample, or any information, either material or immaterial, which JAXA and the RO agreed to handle as the Confidential Information by a written agreement, obtained in the course of the collaborative research; or
 - (2) Any information disclosed or distributed to the other party as the Confidential Information in the forms of documents, drawings, photographs, specimens, samples, magnetic tapes, floppy disks, or the like for the purpose of the collaborative research.
2. The Parties shall appropriately keep the Confidential Information secret and shall not disclose or divulge any Confidential Information to any party other than those who engage in the collaborative research; provided, however, that any information which corresponds to any of the following is not included in the Confidential Information.
 - (1) Information that is already known to the public when disclosed by the disclosing party;
 - (2) Information that becomes known to the public after the disclosure by the disclosing party without intentional misconduct or negligence of the receiving party;
 - (3) Information that the receiving party already had before the disclosure by the disclosing party and that the receiving party can verify such a fact;
 - (4) Information with proof that the receiving party acquires from a duly authorized third party not subject to confidentiality obligations;
 - (5) Information and materials that the receiving party independently develops without utilizing

information obtained from the disclosing party and that the receiving party can verify such a fact;

- (6) Information with prior written consent of the disclosing party for the disclosure and the publication; or
 - (7) Information that is required to be disclosed by applicable laws, judgment or order of a competent court. In this case, the receiving party shall promptly notify the disclosing party of the necessity of disclosure.
3. The confidentiality obligation under the previous Paragraph shall remain effective for a period of five (5) years after the termination of the Agreement. However, this period of keeping confidentiality may be extended or shortened by mutual agreement between JAXA and the RO.

Article 29. Publication of Research Results

1. The Parties may release or publish the Research Results obtained in the course of the collaborative research (hereinafter "Publication of Research Results"), provided that such publishing party complies with the obligations of confidentiality stipulated in Article 28.
2. In the case of the preceding Paragraph, JAXA or the RO ("the publishing party") shall notify the other party with a written document and obtain written consent from the other party prior to the publication of Research Results. In this case, the other party will not unreasonably withhold the consent for the publishing party's request.
3. Upon receiving the notice, the other party will request correction of the content of the publication in a written form if it is judged that such content includes a part which may lead to the loss of the future interest of the other party, and the publishing party shall consult with the other party about such part. The publishing party may not publish the part that has been notified as contents, which potentially cause a loss of the future interest of the other party when published as described in this Paragraph, without consent of the other party.
4. The RO shall state in the publication that such Research Results have been obtained pursuant to this Agreement and identify the owner of the rights to the Earth Observation Satellite Data and Meteorological Data used in such publication.
5. The period during which the notification pursuant to Paragraph 2 is required shall be one (1) year from the day following the day of termination of the Agreement. However, this period may be extended or shortened by mutual agreement between JAXA and the RO.
6. JAXA and the RO shall provide the other party with a copy of the publication immediately after the disclosing or publishing such publication. Each party is entitled to a royalty-free right to use, duplicate, and distribute the provided publications, unless the copyright of such publication is owned by an academic society.

Article 30. Security

In the course of the collaborative research, the Parties shall take necessary procedures for maintaining an order in the areas managed by each party, ensuring appropriate and smooth operation of the research, and ensuring protection of important property and information (security).

Article 31. Termination of the Contract

1. The Parties may terminate the Agreement in any case that corresponds to any one of the following. In such a case, the Parties agree to waive any claim against the other.
 - (1) Upon the consent of both JAXA and the RO;
 - (2) When the other party commits a dishonest and/or inequitable act; provided, that the breaching party fails to offer any effective and satisfactory remedial measures within seven (7) days after receiving demands for corrective action from the harmed party;
 - (3) When the other party breaches this Agreement, provided, that the breaching party fails to offer any effective and satisfactory remedial measures within seven (7) days after receiving demands for corrective action from the harmed party;
 - (4) When the events stipulated in Paragraph 5 of Article 4 occurs and there is no one who engages in this collaborative research at the RO;
 - (5) When an inevitable reason such as a natural disaster arises; or
 - (6) When the RO sends a written notice to JAXA in accordance with the paragraph 2 of Article 33.
2. In a case where the Agreement is terminated due to the reasons described in the previous Paragraph, JAXA shall request refund of the funding which is no longer necessary pursuant to

Paragraph 1 of Article 11.

3. Upon termination of the Agreement, the RO shall promptly submit to JAXA all work in progress and completed work based on the research carried out prior to the termination.
4. The Parties shall waive any claim against the other if the Agreement is terminated pursuant to Paragraph 1, Item 5 of this Article.

Article 32. Effective Term of the Agreement

1. The effective term of the Agreement shall be the period set forth in Article 3.
2. Even after the end of the effective term of the Agreement stipulated in the previous Paragraph, the provisions in Paragraph 2 and 3 of Article 13 (Providing of Earth Observation Satellite Data by JAXA and its Conditions), Paragraph 2 to 5 of Article 14 (Providing of Meteorological Data by JAXA and its Conditions), Paragraph 3 of Article 15 (Exchange of Technical Information etc.), and Article 16 (Usage of Research Results) through Article 22 (Transfer of interests to Jointly-Owned Intellectual Property Rights) shall continue to be effective for the duration of the continuance of the rights set forth in each Article and Paragraph, and the provisions in Article 23 (Improved Invention), Article 24 (Designation of Know-How), Article 28 (Confidentiality), and Article 29 (Publication of Research Results) shall be effective during the period set forth in each Article.

Article 33. Amendment of the Agreement

1. JAXA can amend the contents of this Agreement. In such a case, JAXA announces the amended contents by posting it to the website operated by JAXA, and thereafter the Agreement is handled based on the amended contents.
2. In the case the RO has a legitimate reason for not agreeing with the amendment of the previous paragraph, the RO may terminate the Agreement by notifying JAXA in writing within thirty (30) days from the date the amended contents are posted on the website.

Article 34. Governing Law

This Agreement shall be governed and interpreted under the laws of Japan.

Article 35. Language

All communications between JAXA and the RO under this Agreement shall be in either Japanese or English.

Article 36. Consultation

In the event that any doubts arise with regard to any matters not stipulated in this Agreement and the provisions stipulated in this Agreement, it shall be resolved upon mutual agreement between JAXA and the RO.

Attachment “Earth Observation Satellite Data”

Name of Satellite or Sensor	Observation Period (YYYY/MM/DD)	Observable Area
JERS (Japanese Earth Observation Satellite)	1992/09/01 ~1998/10/11	Global
ADEOS (Advanced Earth Observation Satellite)	1996/10/15 ~1997/06/29	Global
TRMM (Tropical Rainfall Measuring Mission)	1997/12 ~2015/04	Global (PR: Approximately 36°S-36°N. TMI and VIRS: Approximately 38°S-38°N)
AMSR-E (Advanced Microwave Scanning Radiometer for EOS-Aqua satellite)	2002/06/19 ~2011/10/04	Global
ADEOS-II (Advanced Earth Observing Satellite-II)	2003/01 ~2003/10	Global
ALOS (Advanced Land Observing Satellite) * number of scenes limited	2006/05/16 ~2011/04/22	Global
GOSAT (Greenhouse Gases Observing Satellite)	2009/04/23~	Global
GCOM-W (The Global Change Observation Mission - Water)	2012/7~	Global
GPM (Global Precipitation Measurement)	2014/03~	Global (DPR: Approximately 66°S-66°N. GMI: Approximately 68°S-68°N)
ALOS-2 (Advanced Land Observing Satellite-2) * number of scenes limited	2014/08/04~	Global
GCOM-C (The Global Change Observation Mission-Climate)	2018/1~	Global

* GOSAT-2, EarthCARE, ALOS-3, ALOS-4, and MOLI will be added by revision of the Agreement pursuant to Article 33 when provision of data becomes available.

3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS
COLLABORATIVE RESEARCH AGREEMENT (NON-FUNDED)
BETWEEN
THE JAPAN AEROSPACE EXPLORATION AGENCY (JAXA)
AND
THE RESEARCH ORGANIZATION

JAPAN AEROSPACE EXPLORATION AGENCY

**3rd RESEARCH ANNOUNCEMENT ON THE EARTH OBSERVATIONS
COLLABORATIVE RESEARCH AGREEMENT (NON-FUNDED)
BETWEEN THE JAPAN AEROSPACE EXPLORATION AGENCY
AND THE RESEARCH ORGANIZATION**

This agreement ("Agreement") is entered into between the Japan Aerospace Exploration Agency, established under the provision of the Law Concerning the Japan Aerospace Exploration Agency on October 1, 2003, represented by its President and having its principal office at 7-44-1 Higashimachi, Jindaiji, Choufu-shi, Tokyo, Japan ("JAXA") and a research organization ("Research Organization", hereinafter "RO") that submitted an application form for the below described research activities to JAXA, hereinafter collectively referred to as "the Parties".

WITNESSETH

WHEREAS, JAXA issued the Research Announcement ("RA") to engage in collaborative research activities directly related to retrieval algorithms for geophysical products, product validation, and data application of earth observation satellites, and the RO applied pursuant to such RA;

WHEREAS, JAXA accepted the RO's proposal that was in response to the RA, delivered the confirmation sheet to the RO and JAXA further desires to utilize such proposal in JAXA's project; and

WHEREAS, JAXA desires to engage in the above research activities in collaboration with the RO.

NOW, THEREFORE, in consideration of the mutual agreements hereinafter set forth, and for other good and reasonable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereby agree as follows:

Article 1. Definitions

1. The following capitalized terms in this Agreement shall have the following meanings:

- (1) "Research Results" means the technical results and scientific knowledge derived from the implementation of the "Research Project" (research activities based on the proposal) pursuant to this Agreement, including all inventions, ideas, designs, literary works, algorithms (including Technological development accompanied by Program/Data to embody such algorithms), and Know-How.
- (2) "Intellectual Property Rights" generated in the course of implementation of the Agreement means the following:
 - (i) Industrial Property Rights (as defined below);
 - (ii) Potential Industrial Property Rights (as defined below);
 - (iii) computer programs, software, and databases (hereinafter "Program/Data") Copyrights (as defined below);
 - (iv) Rights equivalent to each of the above rights in foreign countries; and
 - (v) Rights to use technical information specified by mutual consultation between both Parties that are objectively identifiable, such as documents, can be kept confidential, and are of proprietary value (referred to as "Know-How" in this Agreement)."Industrial Property Rights" means all domestic and foreign patents, utility models, and industrial designs.
"Potential Industrial Property Rights" means all domestic and foreign application rights for patents, utility models, or industrial designs.
"Program/Data Copyrights" means all domestic and foreign copyrights related to Program/Data.
- (3) "Collaborative Research Plan" means the plan described in the Attachment of the Application Form for the 3rd Research Announcement on the Earth Observations Collaborative Research Agreement (Non-Funded) ("Application Form").
- (4) "Research Period" means the period as described in the Collaborative Research Plan. In accordance with the provisions of this Agreement, in the event that the Agreement ended prior

to the completion date of the research originally set, the date the Agreement ends shall be read as the Research Period.

- (5) "Annual Evaluation" means evaluation by JAXA of the research results achieved at the end of each Japanese fiscal year, in order to assess the progress of the research.
 - (6) "Earth Observation Satellite Data" means data sets obtained from satellites which are retained by JAXA at the time of execution of this Agreement. The available data sets including names of satellites or sensors, observation periods that can be offered, and observation areas are listed in the Attachment A of this Agreement.
 - (7) "Meteorological Data" means data provided by the Japan Meteorological Agency.
2. In this Agreement, "Invention etc." contains multiple meanings: When it is a subject of patent rights, it refers to an invention; when it is a subject of a utility model, it refers to an idea; when it is a subject of industrial design rights as well as copy rights of program and database, it refers to a creation; when it is a subject of algorithms and Know-How, it refers to a proposition.
 3. In this Agreement, "utilization" of the Intellectual Property Rights and Research Results refers to the acts specified in Paragraph 3 of Article 2 of the Patent Act, the acts specified in Paragraph 3 of Article 2 of the Utility Model Act, the acts specified in Paragraph 2 of Article 2 of the Design Act, and exercise of the rights specified in Article 21 and 27 of the Copyright Act (including the use of the secondary publication created by JAXA or the RO), and the use of algorithms and Know-How.
 4. In this Agreement, "PI" (Principal Investigator) refers to the person who submitted the research proposal to this Research Announcement and who is also the RO employee selected to be responsible for the implementation of the accepted Research Project. "CI" means "Co-Investigator" who supports the research activities represented by the PI. Names, affiliation, and other information concerning the PI and CI (hereinafter collectively "Collaborative Researchers") shall be described in the Collaborative Research Plan.

Article 2. JAXA's Performance for Research Project and the RO's General Responsibilities for Research Project

1. JAXA shall make reasonable efforts to perform the following tasks related to the Research Project:
 - (1) Deliver the Earth Observation Satellite Data and Meteorological Data required for performing the collaborative research to the RO free of charge;
 - (2) Hold research presentation meetings (Research Presentation Meeting) to check progress of the research and other necessary meetings; and
 - (3) Carry out an Annual Evaluation based on the report made in the Research Presentation Meeting stipulated in the previous Paragraph or written reports similar to the one stipulated therein.
2. For the purpose of ensuring the RO's performance of the above obligations, the RO shall perform certain actions including, but not limited to:
 - (1) Conduct and complete the Research Project in accordance with the Collaborative Research Plan;
 - (2) Participate in the Research Presentation Meeting hosted by JAXA every fiscal year in response to the request from JAXA;
 - (3) Report on the Research Results and progress of research in the Research Presentation Meeting stipulated in the previous Paragraph, or submit in a written form to JAXA by the day before the Annual Evaluation that JAXA implements every fiscal year;
 - (4) Deliver a report of all the Research Results obtained during the fiscal year by the end of each fiscal year to JAXA. Furthermore, at the end of the research period, the RO shall report all the Research Results obtained throughout the entire period of the collaborative research in the Final Report and submit it to JAXA. In this case, the RO does not need to separately submit an annual report for the final year of the term; and
 - (5) Alternatively may substitute the submission of a thesis published during the Research Period for the submission of the report of Research Results.

Article 3. Conclusion of the Agreement

The Agreement shall be concluded upon the acceptance through the issuance of the Confirmation Sheet by JAXA for the application submitted by the RO using the Application Form, and the Agreement shall become effective as of the date prescribed in the Confirmation Sheet issued by JAXA, and the period of the Agreement shall be the period described in the Confirmation Sheet issued by

JAXA. In case of a conflict between the Confirmation Sheet and this Agreement, the terms and conditions stipulated in the Confirmation Sheet will supersede this Agreement.

Article 4. Collaborative Researchers

1. The RO shall allow the Collaborative Researchers listed in the Collaborative Research Plan participate in the collaborative research.
2. JAXA shall allow those who are listed in the Collaborative Research Plan to participate in the Research Project.
3. The RO shall undertake necessary measures to ensure that all the Collaborative Researchers comply with the contents of the Agreement.
4. If the RO intends to let researchers other than the CIs described in the Collaborative Research Plan participate in this collaborative research as CIs, the RO shall obtain prior written consent from JAXA, and the RO shall undertake necessary measures to ensure that such personnel comply with the contents of the Agreement.

Article 5. Research Funding

Each party shall bear the necessary costs of fulfilling its own responsibilities under this Agreement.

Article 6. Ownership of the Rights to the Acquired Property

The facilities, equipment, and items acquired by each party in the course of the collaborative research shall be owned by the party who purchased such equipment.

Article 7. Providing of Earth Observation Satellite Data by JAXA and its Conditions

1. JAXA will provide the RO with the Earth Observation Satellite Data for the Research Project free of charge via internet in accordance with Article 2.1.(1) subject to the following conditions:
 - (1) The RO agrees and accepts that JAXA may not provide all the Earth Observation Satellite Data which the RO may request due to restrictions in the allowance range of JAXA's equipment and in resources. Amongst the Earth Observation Satellite Data, for which the RO may request JAXA, the maximum number of scenes of each standard data collected from the Advanced Land Observing Satellite (ALOS) and the Advanced Land Observing Satellite-2 (ALOS-2) shall be limited by JAXA depending on the evaluation of the Collaborative Research Plan;
 - (2) JAXA does not guarantee a specific quality or the timely provision of the Earth Observation Satellite Data and will not be liable for any deterioration in data quality and delay in providing the data;
 - (3) JAXA will not be liable for any situation whereby the Earth Observation Satellite Data cannot be supplied to the RO due to faults relating to the satellites, limitations on their operations, or for any other reasons; and
 - (4) The RO shall bear the costs of media and shipment if the RO requests that JAXA provides the Earth Observation Satellite Data via physical media.
2. With respect to the handling of the Earth Observation Satellite Data provided by JAXA, the RO shall follow the conditions below:
 - (1) The RO may not duplicate the Earth Observation Satellite Data for any purpose other than creating a backup. However, this excludes the duplication of the data for the purpose of providing the data to the Collaborative Researchers engaged in the Research Project as stipulated in Article 4 which are necessary for the implementation of the Research Project;
 - (2) The RO may not disclose the Earth Observation Satellite Data to any third party except for the Collaborative Researchers;
 - (3) The RO shall use the provided Earth Observation Satellite Data solely for the purposes of the Research Project; and
 - (4) The RO shall return or otherwise appropriately manage the Earth Observation Satellite Data in accordance with the instructions of JAXA after the end of the Agreement.
3. Any rights relating to the Earth Observation Satellite Data provided by JAXA to the RO shall conform to the following:
 - (1) JAXA retains the Intellectual Property Rights of all the Earth Observation Satellite Data, except for ALOS PALSAR data of which METI (Ministry of Economy, Trade and Industry) is the joint owner;
 - (2) If value-added products (modified products with high-level processing which are irreversible to

standard data. High-level data processing includes data analysis or combining multiple-satellite data, image processing based on external information, and physical quantity conversion.) are solely developed by the RO out of the Earth Observation Satellite Data in the course of executing the Research Project, the RO retains the Intellectual Property Rights and any other rights of such value-added products;

- (3) If the RO and JAXA jointly modify the Earth Observation Satellite Data which is provided by JAXA and develop any value-added products through the implementation of the Research Project, the RO and JAXA will discuss and determine the ownership of rights to the value-added products in consideration of the degree of each party's contribution and other factors to be considered;
- (4) Except for cases under Item (2) and (3), all Intellectual Property Rights and any other rights of the data developed by modifying the Earth Observation Satellite Data shall be owned by JAXA; and
- (5) In case the RO uses the modified Earth Observation Satellite Data for commercial purposes, the RO shall notify JAXA and comply with the license conditions to be set by JAXA.

Article 8. Providing of Meteorological Data by JAXA and its Conditions

1. For the purposes of performing the Research Project, JAXA will attempt to provide the RO with the Meteorological Data based on Article 2.1.(1).
2. Any rights relating to the Meteorological Data provided by JAXA shall not be transferred to the RO through the supply. In addition, as regards the handling of the rights of such data, the RO shall follow the instructions of JAXA.
3. The RO may not provide or disclose the provided Meteorological Data to any third party except for the Collaborative Researchers.
4. The RO shall use the provided Meteorological Data solely for the purposes of conducting the Research Project.
5. The RO shall return or otherwise appropriately manage the Meteorological Data in accordance with the instructions of JAXA after the end of this Agreement.

Article 9. Disclosure of Technical Data

1. Each party shall disclose to the other party the technical information and Program/Data such as satellite operation data and ground verification data owned by JAXA excluding the Earth Observation Satellite Data and the Meteorological Data (hereinafter "Technical Data") that are necessary for performing the collaborative research and shall allow the other party to use the Technical Data and provide advice when required, free of charge.
2. The Parties shall not use the Technical Data provided by the other party for any purpose other than the purposes of the collaborative research and must not disclose it to any third party except for the Collaborative Researchers.
3. The Parties shall return or otherwise appropriately dispose of the Technical Data provided by the other party in accordance with the instructions of the other party after the end of the Agreement.

Article 10. Usage of Research Results

1. Each party may use the Research Result acquired through the collaborative research free of charge for the purposes of its own research and development (including the case that each party allows a third party, which includes each party's collaborative research partners, to use the Research Results for each party's own purposes) as well as only for non-commercial and peaceful purposes without prior consent from the other party.
2. With regard to the copyrights in the Final Reports submitted by the RO to JAXA, JAXA may freely use, edit, duplicate, and distribute such reports. In this case, the Collaborative Researchers shall waive any related moral rights to the copyrights in the Final Reports.

Article 11. Ownership of Research Results

1. Both Parties shall solely own the rights of the Research Results only if JAXA or the RO solely generates such Research Results in the course of the collaborative research.
2. The Parties shall jointly own the rights to the Research Results jointly generated by the Parties through the course of the collaborative research, and the portion of the ownership of such results

shall be determined upon mutual agreement between the Parties in consideration of the degrees of each party's contribution and other factors to be considered.

Article 12. Application of Intellectual Property Rights

1. JAXA or the RO shall give the other party prompt written notice of Intellectual Property Rights generated in the course of the collaborative research, such as Inventions, Utility Models, and Creations, and discuss the ownership of such generated Intellectual Property Rights, as well as whether it is necessary to submit an application for registration of such Intellectual Property Rights.
2. JAXA and/or the RO shall take any necessary procedures for any Industrial Property Rights owned by and/or held by each party's Collaborative Researcher (including the Invention etc. jointly generated by such Joint Researcher and JAXA or the RO) to be transferred by such Joint Researcher to JAXA or the RO.
3. If JAXA or the RO solely generates Potential Intellectual Property Rights in the course of the collaborative research ("Solely-Owned Intellectual Property Rights"), the party may take steps to apply for the registration of the resulting Intellectual Property Rights as solely-owned ones, provided that it shall obtain prior confirmation of the other party. In this case, expenses for application and rights preservation shall be borne by the party solely holding the Intellectual Property Rights.
4. In the event that the Parties jointly generate an Invention etc. and submit an application for Intellectual Property Rights to such invention, the Parties shall enter into a separate joint ownership agreement ("Joint Ownership Agreement") and jointly perform submission of the application and other procedures according to the Joint Ownership Agreement. In this case, expenses for application and rights preservation shall be borne by both JAXA and the RO depending on the degree of ownership.

Article 13. Application of Intellectual Property Rights Overseas

1. The provisions of the previous Article shall apply to the case of application for the Intellectual Property Rights and preservation of such rights in foreign countries.
2. In the case of an application for the Intellectual Property Rights jointly owned by the Parties pursuant to Paragraph 4 of the previous Article, the Parties shall discuss whether it is necessary to submit an application for registration of such Intellectual Property Rights.

Article 14. Utilization of Jointly-Owned Intellectual Property Rights

In case either of the Parties utilizes the Jointly-Owned Intellectual Property Rights, such party shall obtain the consent of the other party in advance and pay a utilization fee as set forth in the separate utilization agreement, except for the case stipulated in Article 10.

Article 15. License of Utilization of Jointly-Owned Intellectual Property Rights to Third Party

1. The Parties may grant to any third party a license to use the Jointly-Owned Intellectual Property Rights; provided, however, that the relevant party shall obtain the prior written consent of the other party, and determine the licensing terms after discussion with the other party.
2. In the case of granting a license to use the Jointly-Owned Intellectual Property Rights to a third party following the previous Paragraph, the relevant party shall collect the usage fee from such third party as set forth in the separate usage agreement. The usage fee to be collected from the third party shall be distributed between the Parties pro rata in proportion to their respective interests in those rights.

Article 16. Transfer of Interests to Jointly-Owned Intellectual Property Rights

1. The Parties may transfer their respective interests to the Jointly-Owned Intellectual Property Rights generated in the course of the collaborative research only to their respective designees after discussion between the Parties. Such transfer may be carried out pursuant to a separate transfer agreement. In this event, the Parties shall cause its designee to succeed to all of its rights and obligations with respect to those Intellectual Property Rights.
2. If JAXA or the RO disclaims its interests in the Jointly-Owned Intellectual Property Rights, the relevant party shall give the other party prior notice thereof and transfer its interests to the other party, only if the other party wishes to acquire it.

Article 17. Improved Invention

If JAXA or the RO alters or improves the Jointly-Owned Intellectual Property within one (1) year from the application for registration of the original Jointly-Owned Intellectual Property Rights, the party shall provide a written notice without delay to the other party describing the alterations or improvements. Ownership and other issues of the Intellectual Property Rights concerning the altered or improved invention shall be determined through discussion between the Parties.

Article 18. Designation of Know-How

1. After mutual agreement by the Parties, JAXA and the RO shall promptly designate Know-How regarding the Research Results which are appropriate to be treated as Know-How.
2. Upon designation of Know-How, a period during which the Know-How shall be kept in confidence shall be specified.
3. After designating the Know-How, such Know-How shall be kept in confidence, in principle, for five (5) years commencing on the day immediately following the date of the completion of this Agreement; provided, however, that JAXA and the RO may extend or shorten that period upon mutual agreement.

Article 19. Use of Facilities

1. The Parties may use facilities and equipment (hereinafter "Facilities") of the other party free of charge with the prior consent of the other party if it is necessary for implementation of the Research Project.
2. The Parties shall follow the rules and regulations of the other party in the case of using the Facilities of the other party.

Article 20. Installation of Instruments

1. If it is necessary for implementation of the collaborative research, the Parties may install necessary instruments and other items into the facility of the other party with the prior consent of the other party. In such a case, the party which installs such instruments or items shall follow the rules and regulations of the other party.
2. In the event that JAXA or the RO uses the items etc. installed by the other party (hereinafter "Installed Items"), such party shall obtain the prior consent of the other party and shall not use the Installed Items for any purpose other than the implementation of the collaborative research.
3. In the event that JAXA or the RO loses or damages the Installed Items, such party should immediately notify the other party of such fact irrespective of the reason.

Article 21. Delivery, Storage, and Return of Lent Items

1. The Parties may lend instruments and other items to the other party if it is necessary for implementation of the collaborative research.
2. Upon delivery of the instruments and items for lending (hereinafter "Lent Items") in accordance with the previous Paragraph, the owner of the Lent Items ("Lessor") shall submit a delivery note to the other party and the other party shall submit a receipt to the Lessor.
3. In the event that the Parties received the delivery of the Lent Items, the receiving party shall confirm the presence of any abnormality regarding the items, amount, etc. If a lack of quantity or abnormality including inappropriate quality and standard for use with the Lent Items is found, the receiving party shall notify the Lessor of the matter immediately and seek further instructions.
4. The Parties shall manage and use the Lent Items with the care of a good manager and shall not use the Lent Items for any purpose other than the purposes of the collaborative research.
5. The Parties shall maintain books of receipts, shipment, and management of the delivered Lent Items and shall record and organize the receipts to always make the situation of the Lent Items clear.
6. In the case of loss or damage to the Lent Equipment, JAXA and the RO shall report this to the Lessor without delay.
7. In the event that all or part of the Lent Items become unnecessary due to the completion of the whole or part of the Agreement as well as of any amendment or termination of the Agreement, the Parties shall notify the Lessor and undertake procedures to return the Lent Items in

compliance with the Lessor's instructions without delay.

Article 22. Confidentiality

1. In this Agreement, "Confidential Information" means any information that corresponds to any of the following:
 - (1) Any information that includes documents classified "Confidential", any material object such as a sample, or any information, either material or immaterial, which JAXA and the RO agreed to handle as the Confidential Information by a written agreement, obtained in the course of the collaborative research; or
 - (2) Any information disclosed or distributed to the other party as the Confidential Information in the forms of documents, drawings, photographs, specimens, samples, magnetic tapes, floppy disks, or the like for the purpose of the collaborative research.
2. The Parties shall appropriately keep the Confidential Information secret and shall not disclose or divulge any Confidential Information to any party other than those who engage in the Research Project; provided, however, that any information which corresponds to any of the following is not included in the Confidential Information.
 - (1) Information that is already known to the public when disclosed by the disclosing party;
 - (2) Information that becomes known to the public after the disclosure by the disclosing party without intentional misconduct or negligence of the receiving party;
 - (3) Information that the receiving party already had before the disclosure by the disclosing party and that the receiving party can verify such a fact;
 - (4) Information with proof that the receiving party acquires from a duly authorized third party not subject to confidentiality obligations;
 - (5) Information and materials that the receiving party independently develops without utilizing information obtained from the disclosing party and that the receiving party can verify such a fact;
 - (6) Information with prior written consent of the disclosing party for disclosure or publication; or
 - (7) Information that is required to be disclosed by applicable laws, judgment or order of a competent court. In this case, the receiving party shall promptly notify the disclosing party of the necessity of disclosure.
3. The confidentiality obligation under the previous Paragraph shall remain effective for a period of five (5) years after the termination of the Agreement. However, this period of keeping confidentiality may be extended or shortened by mutual agreement between JAXA and the RO.

Article 23. Publication of Research Results

1. The Parties may release or publish the Research Results obtained in the course of the collaborative research (hereinafter "Publication of Research Results"), provided that such publishing party complies with the obligations of confidentiality stipulated in Article 22.
2. In the case of the preceding Paragraph, JAXA or the RO ("the publishing party") shall notify the other party with a written document and obtain written consent from the other party prior to the publication of Research Results. In this case, the other party will not unreasonably withhold the consent for the publishing party's request.
3. Upon receiving the notice, the other party will request correction of the content of the publication in written form if it is judged that such content includes a part which may lead to the loss of the future interest of the other party, and the publishing party shall consult with the other party about such part. The publishing party may not publish the part that has been notified as contents, which potentially cause a loss of the future interest of the other party when published as described in this Paragraph, without the consent of the other party.
4. The RO shall state in the publication that such Research Results have been obtained pursuant to this Agreement and identify the owner of the rights to the Earth Observation Satellite Data and Meteorological Data used in such publication.
5. The period during which the notification pursuant to Paragraph 2 is required shall be one (1) year from the day following the day of termination of the Agreement. However, this period may be extended or shortened by mutual agreement between JAXA and the RO.
6. JAXA and the RO shall provide the other party with a copy of the publication immediately after the disclosing or publishing such publication. Each party is entitled to a royalty-free right to use, duplicate, and distribute the provided publications, unless the copyright of such publication is

owned by an academic society.

Article 24. Security

In the course of the collaborative research, the Parties shall take necessary procedures for maintaining order in the areas managed by each party, ensuring appropriate and smooth operation of the research, and ensuring the protection of important property and information (security).

Article 25. Termination of the Contract

1. The Parties may terminate the Agreement in any case that corresponds to any one of the following. In such a case, the Parties agree to waive any claim against the other.
 - (1) Upon the consent of both JAXA and the RO;
 - (2) When the other party commits a dishonest and/or inequitable act, provided that the breaching party fails to offer any effective and satisfactory remedial measures within seven (7) days after receiving demands for corrective action from the harmed party;
 - (3) When the other party breaches this Agreement, provided that the breaching party fails to offer any effective and satisfactory remedial measures within seven (7) days after receiving demands for corrective action from the harmed party;
 - (4) When JAXA determines that it cannot continue the Research Project with the RO as a result of the Annual Evaluation stipulated in Article 2.1.(3);
 - (5) When an inevitable reason such as a natural disaster arises; or
 - (6) When the RO sends a written notice to JAXA in accordance with the paragraph 2 of Article 28.
2. Upon termination of the Agreement, the RO shall promptly submit to JAXA all work in progress and completed work based on the research carried out prior to the termination.
3. The Parties shall waive any claim against the other if the Agreement is terminated pursuant to Paragraph 1, Item 5 of this Article.

Article 26. Change of PI and Change of RO

1. In the event that the PI comes to be no longer engaged in the collaborative research at RO because of PI's death, retirement, a leave of absence from work, or any other reasons (hereinafter "Change of PI"), the RO shall immediately notify JAXA, and the Agreement shall be automatically terminated at the time of the relevant event occurs; provided, however, that if the RO designates another researcher who belongs to the RO as the PI's successor, and JAXA approves the succession, the Parties may amend this Agreement, with the succeeding researcher being a new PI. The terms and conditions of the amendment to this Agreement shall be determined separately upon mutual consultation and consent.
2. In the case that the PI wishes to continue the same RA research after the PI moves to another research organization (hereinafter "new RO"), the new RO and JAXA must agree anew to the Agreement to carry out the collaborative research activities; provided, however, that in the case that JAXA examines the contents of the application from the new RO and judges that the contents do not conform with the purposes of the RA, JAXA reserves the right to reject any subsequent execution of the Agreement with the new RO. In such a case, JAXA will not take any responsibility for the RO, the PI, or the new RO and will not pay any compensation.
3. In the case of the "Automatic Termination" in accordance with the paragraph 1 hereof, the RO shall promptly submit to JAXA all work in progress and completed work based on the research carried out prior to the termination, by no later than six (6) months from the date of termination of the collaborative research; provided, however, that this shall not apply to the case that the new RO to which the PI is newly affiliated and JAXA execute the Agreement in accordance with the provision provided for in Paragraph 2 hereof.

Article 27. Effective Term

1. The effective term of the Agreement shall be the period set forth in Article 3.
2. Even after the end of the Effective Term of the Agreement stipulated in the previous Paragraph, the provisions in Paragraph 2 and 3 of Article 7 (Providing of Earth Observation Satellite Data by JAXA and its Conditions), Paragraph 2 to 5 of Article 8 (Providing of Meteorological Data by JAXA and its Conditions), Paragraph 3 of Article 9 (Exchange of Technical Information etc.), and Article 10 (Usage of Research Results) through Article 16 (Transfer of interests to Jointly-Owned Intellectual Property Rights) shall continue to be effective for the duration of the continuance of

the rights set forth in each Article and Paragraph, and the provisions in Article 17 (Improved Invention), Article 18 (Designation of Know-How), Article 22 (Confidentiality) and Article 23 (Publication of Research Results) shall be effective during the period set forth in each Article.

Article 28. Amendment of the Agreement

1. JAXA can amend the contents of this Agreement. In such a case, JAXA announces the amended contents by posting it to the website operated by JAXA, and thereafter the Agreement is handled based on the amended contents.
2. In the case the RO has a legitimate reason for not agreeing with the amendment of the previous paragraph, the RO may terminate the Agreement by notifying JAXA in writing within thirty (30) days from the date the amended contents are posted on the website.

Article 29. Governing Law

This Agreement shall be governed and interpreted under the laws of Japan.

Article 30. Language

All communications between JAXA and the RO under this Agreement shall be in either Japanese or English.

Article 31. Consultation

In the event that any doubt arises with regard to any matters not stipulated in this Agreement and the provisions stipulated in this Agreement, it shall be resolved upon mutual agreement between JAXA and the RO.

Attachment “Earth Observation Satellite Data”

Name of Satellite or Sensor	Observation Period (YYYY/MM/DD)	Observable Area
JERS (Japanese Earth Observation Satellite)	1992/09/01 ~1998/10/11	Global
ADEOS (Advanced Earth Observation Satellite)	1996/10/15 ~1997/06/29	Global
TRMM (Tropical Rainfall Measuring Mission)	1997/12 ~2015/04	Global (PR: Approximately 36°S-36°N. TMI and VIRS: Approximately 38°S-38°N)
AMSR-E (Advanced Microwave Scanning Radiometer for EOS-Aqua satellite)	2002/06/19 ~2011/10/04	Global
ADEOS-II (Advanced Earth Observing Satellite-II)	2003/01 ~2003/10	Global
ALOS (Advanced Land Observing Satellite) * number of scenes limited	2006/05/16 ~2011/04/22	Global
GOSAT (Greenhouse Gases Observing Satellite)	2009/04/23~	Global
GCOM-W (The Global Change Observation Mission - Water)	2012/7~	Global
GPM (Global Precipitation Measurement)	2014/03~	Global (DPR: Approximately 66°S-66°N. GMI: Approximately 68°S-68°N)
ALOS-2 (Advanced Land Observing Satellite-2) * number of scenes limited	2014/08/04~	Global
GCOM-C (The Global Change Observation Mission-Climate)	2018/1~	Global

* GOSAT-2, EarthCARE, ALOS-3, ALOS-4, and MOLI will be added by revision of the Agreement pursuant to Article 28 when provision of data becomes available.