Foreword

The Fourth Assessment Report issued by the Intergovernmental Panel on Climate Change (IPCC) in 2007 states that most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic Green House Gas (GHG) concentrations. The drastic increase in the concentration of GHGs, particularly carbon dioxide (CO_2), caused directly and indirectly by human activities, is attributed to the fact that the emission of CO_2 into the atmosphere in the process of the mass consumption of fossil fuel, deforestation, etc., significantly surpasses the absorption by the land ecosystem and the oceans. Thus, it is imperative to balance the emission due to human activities and the absorption by the nature, in order to stabilize the climate for the future. In the meantime, however, we, humans, have not grasped, to a sufficient level, the mechanisms of the absorption by land ecosystem and ocean, and the climatological feedback in the carbon cycle involving atmosphere, land ecosystem and ocean. This lack of understanding comprises a substantial part of the uncertainty in predicting future climate change.

The clarification of these problems involves not only an ascertainment of the spatial and temporal variations in the CO_2 emission from human activities but also a calculation of the spatial distribution and temporal variation of CO_2 and also methane (CH_4), which is the second largest contributor to global warming after CO_2, and the spatial distribution and temporal variation of the source and sink in land ecosystem and oceans, based on earth observation, and ultimately an attainment of adequate scientific knowledge on the underlying mechanisms. These efforts to observe GHG concentrations and to analyze the causes of their variations at some locations are, though still limited, in progress. On top of these attempts, it is vital to observe the distributions of CO_2, CH_4, and other GHG concentrations, which fluctuate both spatially and temporally, on the global scale, using satellite platforms, in a continuous and systematic manner, and to elucidate the current issues, with a goal to elevate the reliability of prediction of future climate change and climate system models effective for assessing the consequences of climate change.

Aiming for fulfilling the above requirements, the Japan Aerospace Exploration Agency (JAXA), the National Institute for Environmental Studies (NIES) and the Ministry of the Environment (MOE) (hereinafter referred to as the "Three Parties" collectively) have started the GOSAT (Greenhouse gases Observing SATellite) Project. The Three Parties shall make the third announcement on an opportunity for research using the data acquired by the Thermal And Near infrared Sensor for carbon Observation (TANSO) sensor onboard GOSAT on August 20, 2010.

This third research announcement (hereinafter referred to as RA) is initiated for soliciting proposals on advanced research using actual data acquired for a year and a half by GOSAT, which was successfully launched on January 23, 2009. The details of the RA are provided in the following RA documents. Note that the RA Office is set up inside NIES.

RA Document

GOSAT Research Announcement (main text)

Appendix A	Outlines of GOSAT and TANSO Sensor
Appendix B	GOSAT/TANSO Calibration and Validation Plan and Overview of Processing Algorithms
Appendix C	Operation Policies of GOSAT and Basic Observation Plan of the TANSO Sensor
Appendix D	Contents of Research Proposal and Application Forms
Appendix E	General Contractual Conditions for the Joint Research on the GOSAT data
Appendix F	User Category, Glossary and Abbreviation List

Schedule for the 3rd RA (Current RA)

Launch of GOSAT	January 23, 2009
Release of the 3rd RA	August 20, 2010
Deadline for submission of proposals	October 29, 2010
Notification of the selection results	January 31, 2011
Sign up of the agreement	February 1, 2011 or later
3rd PI meeting/workshop	Scheduled sometime between May and August, 2011 (TBD)
Submission of interim reports	January 31, 2012

For more information, please contact:

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Acceptance time: Weekday (excluding Japanese national holidays) 10:00-17:00

August, 2010

Japan Aerospace Exploration Agency (JAXA)
National Institute for Environment Studies (NIES)
Ministry of the Environment (MOE)