

Global Change Observation Mission (GCOM) Data Recovery by the National Oceanic and Atmospheric Administration (NOAA) – An International Partnership to Capture Critical Operational and Climate Environmental Data Records from Space

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ABSTRACT

NOAA is creating a partnership with the Japan Aerospace Exploration Agency (JAXA) on the Global Change Observation Mission (GCOM) to provide ground station reception, processing, and distribution of Japanese satellite (GCOM-W and GCOM-C) data. The GCOM mission will provide for continuity of data important for the monitoring, modeling, forecasting and research of the atmosphere, oceans and climate. GCOM-W1 data will provide an important gap-filler to permit microwave radiometer data continuity between the termination of the NASA Aqua mission which was launched in May 2002 with a design life of 5 years, and the launch of the NPOESS C-2 spacecraft in 2016 containing the Microwave Imager/Sounder (MIS) sensor. GCOM-C will augment the data provided by the Visible Infrared Imager Radiometer Suite (VIIRS) on NPOESS to support ocean color and climate-related requirements. SGLI data will help fill the NPOESS current observation gap in the morning orbit. The NOAA Ocean Color Mitigation Plan states that GCOM-C will provide an additional Ocean Color source before the scheduled operational VIIRS-NPOESS on C1.

This data will enhance the ability of the National Weather Service (NWS) to improve their forecast models and products, and will provide ocean color data to NOAA users. NOAA is partnering with JAXA to provide data acquisition reception capabilities at the Svalbard Norway ground station, enabling JAXA the ability to downlink the satellite data from each of the 14 orbits per day. Without this improvement, JAXA will only be capable of down linking satellite information 4 times a day to the JAXA satellite site. NOAA will purchase critical ground reception hardware/software, communication links, processing

and distribution services to transfer GCOM-W & GCOM-C satellite data to NOAA and JAXA by 2012.

The presentation shall discuss the current status of the NOAA-JAXA partnership on the GCOM mission. It will provide insight into the roles and responsibilities of each partner. It will provide NOAA-JAXA programmatic information. It will also discuss the potential future operational and scientific benefits of cooperation that includes a U.S. developed Ocean Surface Vector Winds (OSVW) instrumentation (scatterometer) flying aboard JAXA GCOM-W spacecraft, beginning with GCOM-W2.