

## **A BUFR and GRIB Tailoring System for NPP/JPSS and GCOM Products**

Yi Song<sup>a</sup>, Thomas King<sup>a</sup>, and Walter Wolf<sup>b</sup>

<sup>a</sup>*IMSG at NOAA Center for Satellite Applications and Research, USA, Yi.Song@noaa.gov,*

<sup>b</sup>*NOAA/NESDIS/STAR, USA.*

A tailoring software system that will convert the satellite products into Binary Universal Form for the Representation of meteorological data (BUFR) and GRIdded Binary Edition 2 (GRIB2) formatted files is under development at NOAA/NESDIS/STAR. This Reformatting Toolkit will convert the products of the NPOESS Preparatory Project (NPP)/Joint Polar Satellite System (JPSS) and the Global Change Observation Mission 1st - Water (GCOM-W1) Advanced Microwave Scanning Radiometer 2 (AMSR2) into BUFR and GRIB2 files. The current toolkit development schedule consists of four phases, each adding new tailoring capabilities. In phase 1, the NPP Cross-track Infrared Sounder (CrIS) Radiances, Advanced Technology Microwave Sounder (ATMS) Radiances and Visible/Infrared Imager Radiometer Suite (VIIRS) Radiances will be converted into BUFR files. In phase 2, this software system will reformat the NPP VIIRS Aerosol Optical Thickness (AOT), VIIRS Sea Surface Temperature (SST), Ozone Mapping and Profiler Suite (OMPS) Nadir Profile (NP) and OMPS Total Column (TC) data into BUFR files. In phase 3, the NPP VIIRS Polar Winds will be converted into BUFR file and the Green Vegetation Fraction will be converted into GRIB2 file. In phase 4, this software will convert the GCOM-W1 AMSR2 Microwave Brightness Temperature, Total Precipitable Water (TPW), Cloud Liquid Water (CLW), Sea Surface Temperature (SST), Sea Surface Winds (SSW) into BUFR files and Soil Moisture (SM) into GRIB2 file, and convert NPP Ozone Limb Profile into BUFR file. Currently, the toolkit is running in the NPP Data Exploitation (NDE) environment tailoring phase 1 and 2 products. NDE is distributing these tailored products to the NOAA Environmental Modeling Center (EMC) and the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT) in near real-time. The phase 3 and 4 tailoring capabilities are currently in development with phase 3 update scheduled for delivery to NDE in the summer of 2013. The details of this toolkit design and its products will be discussed.