Support for Near-Real-Time GCOM-W1 AMSR2 Algorithm Software Package (GAASP) Level-2 Products via Direct Broadcast Using the Community Satellite Software Package

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CSPP GAASP Overview

- CSPP supports generation of level-2 products using the NOAA/NESDIS/STAR Global Change Observation Mission-Water (GCOM-W1) AMSR2 Algorithm Software Package (GAASP) in support of direct broadcast for JAXA's GCOM-W1 satellite.

- GAASP generates Science Data Record (SDR) and Environmental Data Record (EDR) data products for near real-time users from the GCOM-W1 data stream.

- GAASP level-1 and level-2 products supported by CSPP-GAASP include bias-corrected Microwave Brightness Temp (MBT), Precipitation (land and ocean rain rates), GHR Sea Surface Temp (SST), Sea Surface Winds (SSW), Total Precipitable Water (TPW), Cloud Liquid Water (CLW), Soil Moisture, Surface Type, Snow Cover, Snow Depth, Snow Water Equivalent, and Sea Ice.

Community Satellite Processing Package

- The Community Satellite Processing Package (CSPP) supports the Direct Broadcast (DB) meteorological and environmental satellite community through the packaging and distribution of open source science software. CSPP supports DB users of both polar orbiting and geostationary satellite data processing and regional real-time applications through distribution of free open source software, and through training in local product applications.

- This poster highlights the GCOM-W1 AMSR2 Algorithm Software Package (GAASP), which was released April, 2020.

- CSPP is funded through NOAA JPSS.

**Website:** `http://cimss.ssec.wisc.edu/cspp`

CSPP GAASP Features

- GAASP (currently version `v2r2`) has been adapted to run in a near-real time environment for direct broadcast users in the CSPP-GAASP package

- Convenient command-line interface allowing the generation of one or more of the available products, for single or multiple SDR input files.

- After the Preprocessor has been run to generate the L1B files, the level-2 modules can be run in parallel.

- Ingest and staging of any required dynamic ancillary data is handled automatically

- Running the Postprocessor generates the final level-2 outputs in NetCDF4 format.

CSPP GAASP Output Products
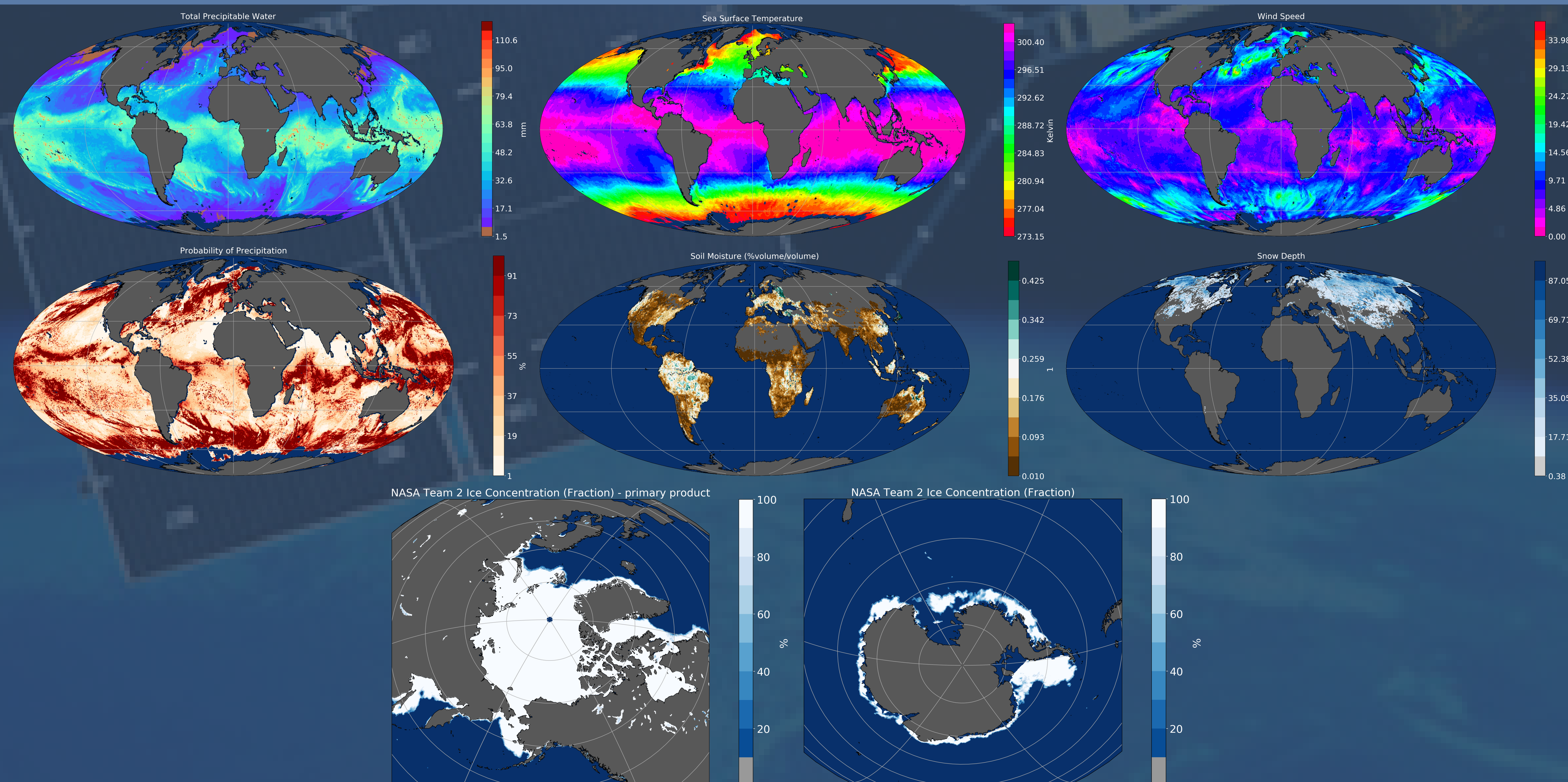
CSPP GAASP Visualizations

- Shown at left are visualizations of a selection of output products from CSPP-GAASP, for the 29th January 2020, from level-1 data acquired via direct broadcast at the University of Wisconsin — Madison.

- Shown below are visualizations of CSPP-GAASP outputs in Unidata's Advanced Weather Interactive Processing System (AWIPS), obtained via direct broadcast from (left) NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) in Miami, Florida, and (right) Geographic Information Network of Alaska (GINA) in Fairbanks, Alaska.

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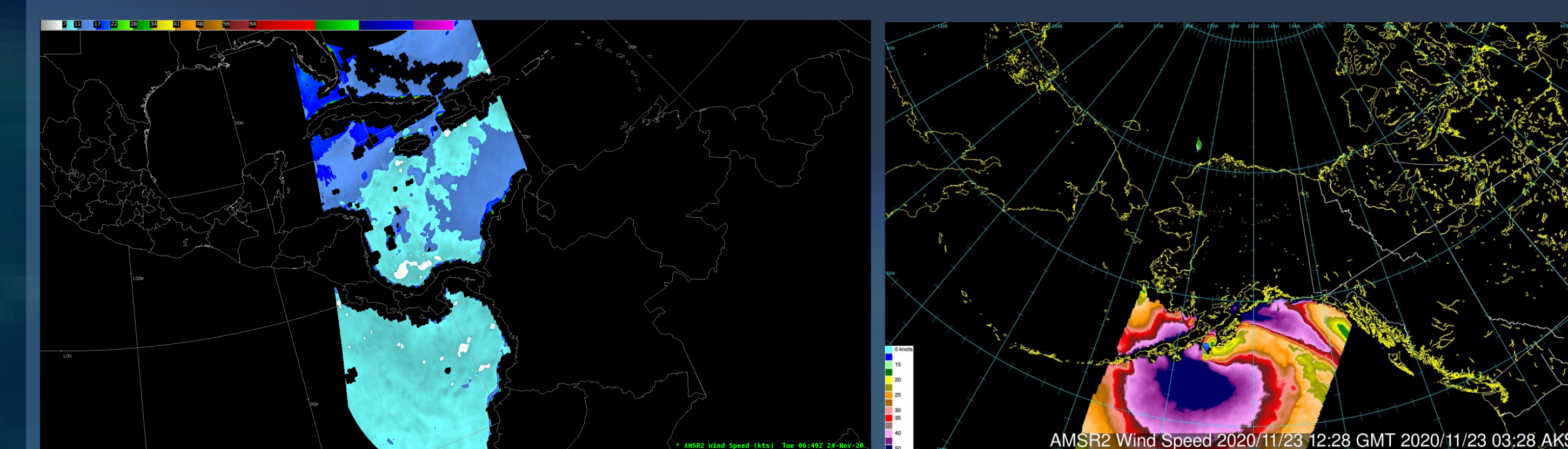
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