

ITSC-XX: Lake Geneva, Wisconsin, USA

Overview of NOAA/NESDIS Satellite Data Assimilation Activities in Support of the U.S. Joint Center for Satellite Data Assimilation (JCSDA)

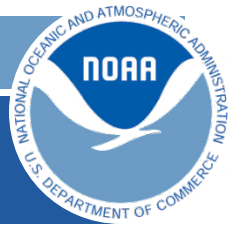
Presented by

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Contributions from:

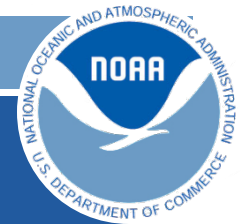
K. Garrett, E. Maddy, B. Johnson, E. Jones, K. Kumar, L. Liu, J. Chen, Z. Ma, Y. Li, F. Weng, Q. Liu



Introduction

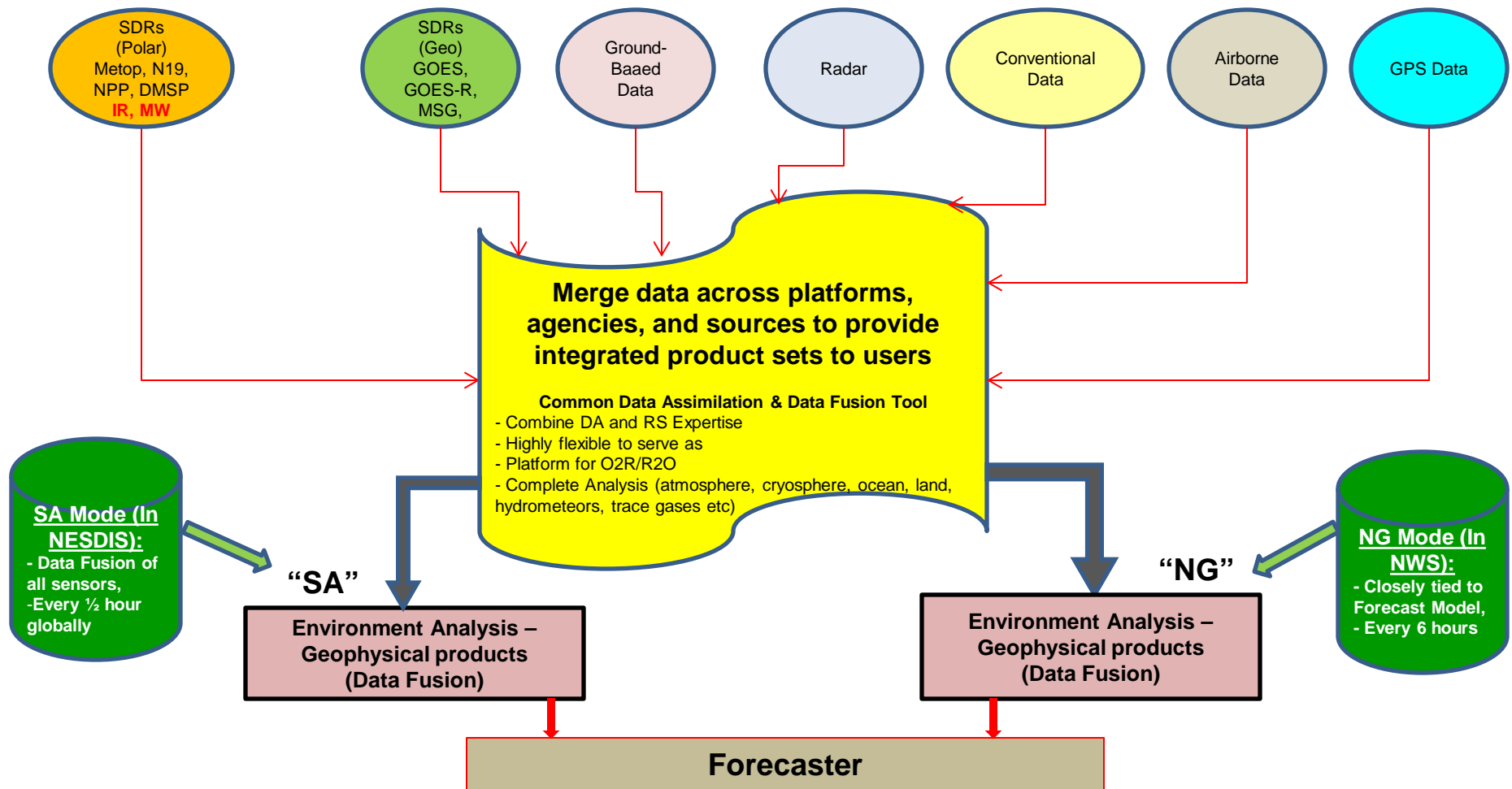
■ Motivation:

- Interest in NOAA/NESDIS to Accelerate/Optimize use of satellite data
- Tap into the Remote Sensing Expertise for Data Assimilation Purposes
- Use NOAA DA tool for data-fusion purposes (pilot project):



Use of NOAA DA (GSI) as Data Fusion Tool

(Satellite, Conventional, ground based, Airborne, etc)



This project aims to merge Remote Sensing and DA Expertise for both Data Fusion and DA Purposes



NESDIS DA Activities

Approach: Activities in NOAA/NESDIS in support of JCSDA include

- Develop Tools needed to facilitate the use of satellite data
 - Spectr. LBL, RT, Active Simulator, Emissivity, (CLBLM, CRTM, CASM & CSEM)
 - Satellite Data Thinning & Representation Optimization (CSTROT)
 - General Satellite QC Tool (MIIDAPS)
- Accelerate/Optimize use of satellite data on NOAA Systems
 - Existing Sensors: ATMS, SSMIS, AMSR2, etc
 - New Sensors: HIMAWARI, ISS-RAPIDSCAT, GPM, SAPHIR, Etc
 - Advance DA Science to allow more satellite data to be used (cloudy/rainy, ..)
- Observing Systems Impact Assessments
 - Data Impact Studies
 - OSSEs
- Reach out to external research community
 - FFO
 - Visiting Scientists, Etc
 - O2R Environment (S4 and JIBB Support and Upgrade)