



World Meteorological Organization
Working together in weather, climate and water

NOAA Satellite Conference 2013

David Grimes
President, WMO

WMO Mandate

The UN agency for *weather, climate, operational hydrology* and related geophysical sciences

WMO coordinates activities of its 191 Members in these areas, in support of:

- Protection of life and property
- Economic and social welfare
- Environment /natural resources management
- Capacity building in particular for less advanced countries



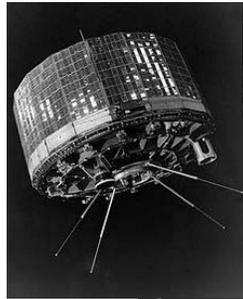
2012-2015 Strategic Plan Priorities

- **Climate** : Global Framework for Climate Services (GFCS)
- **Integration** of observation and information systems
 - WMO Integrated Global Observing System (WIGOS)
 - WMO Information System (WIS)
- **Disaster** risk reduction
- Services to **aviation**
- **Capacity Development**



A Legacy of US Satellite Systems

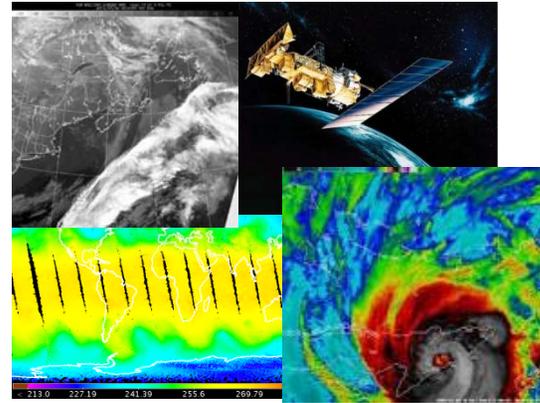
1953



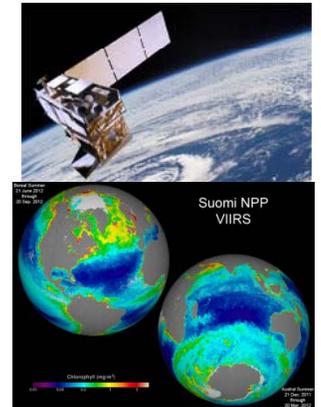
TIROS



ESSA



NOAA

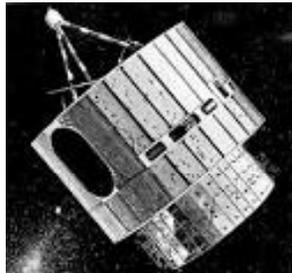


SUOMI-NPP

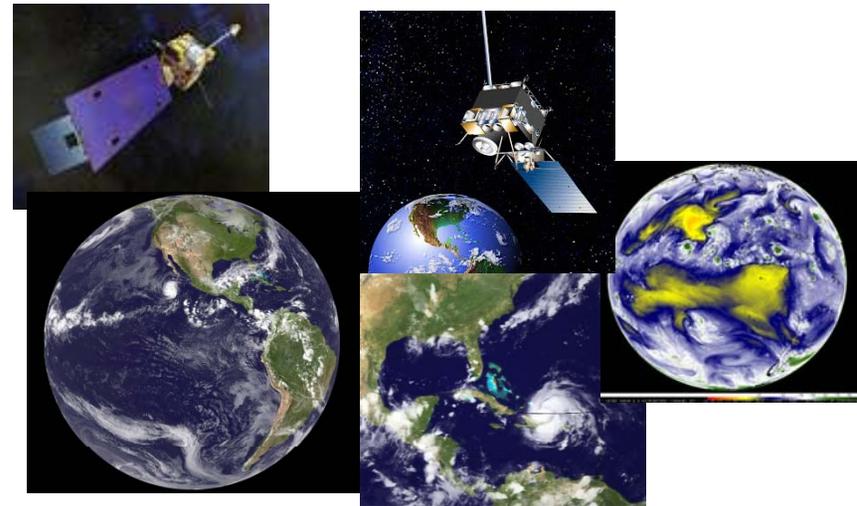
1966



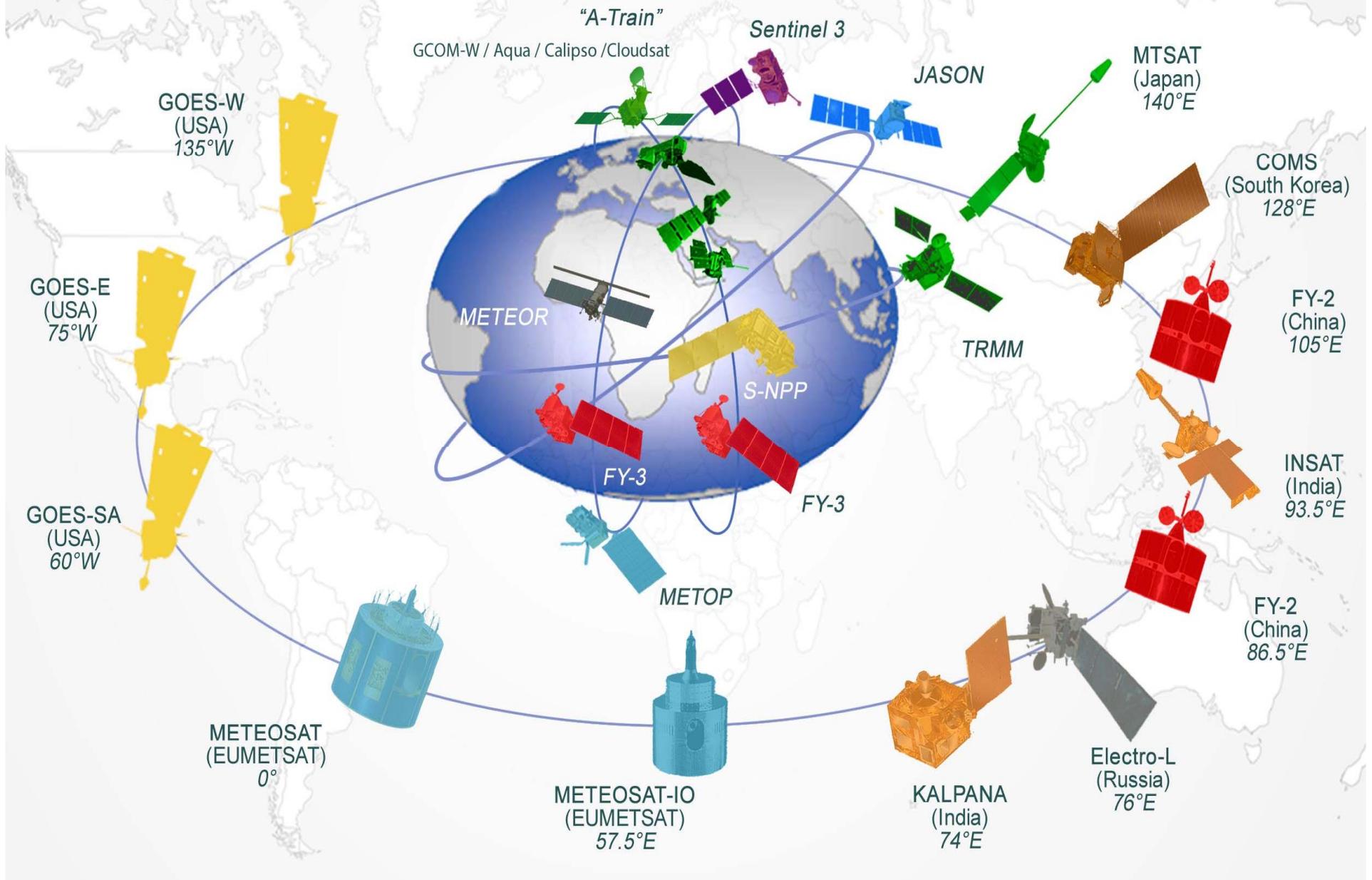
ATS



GOES



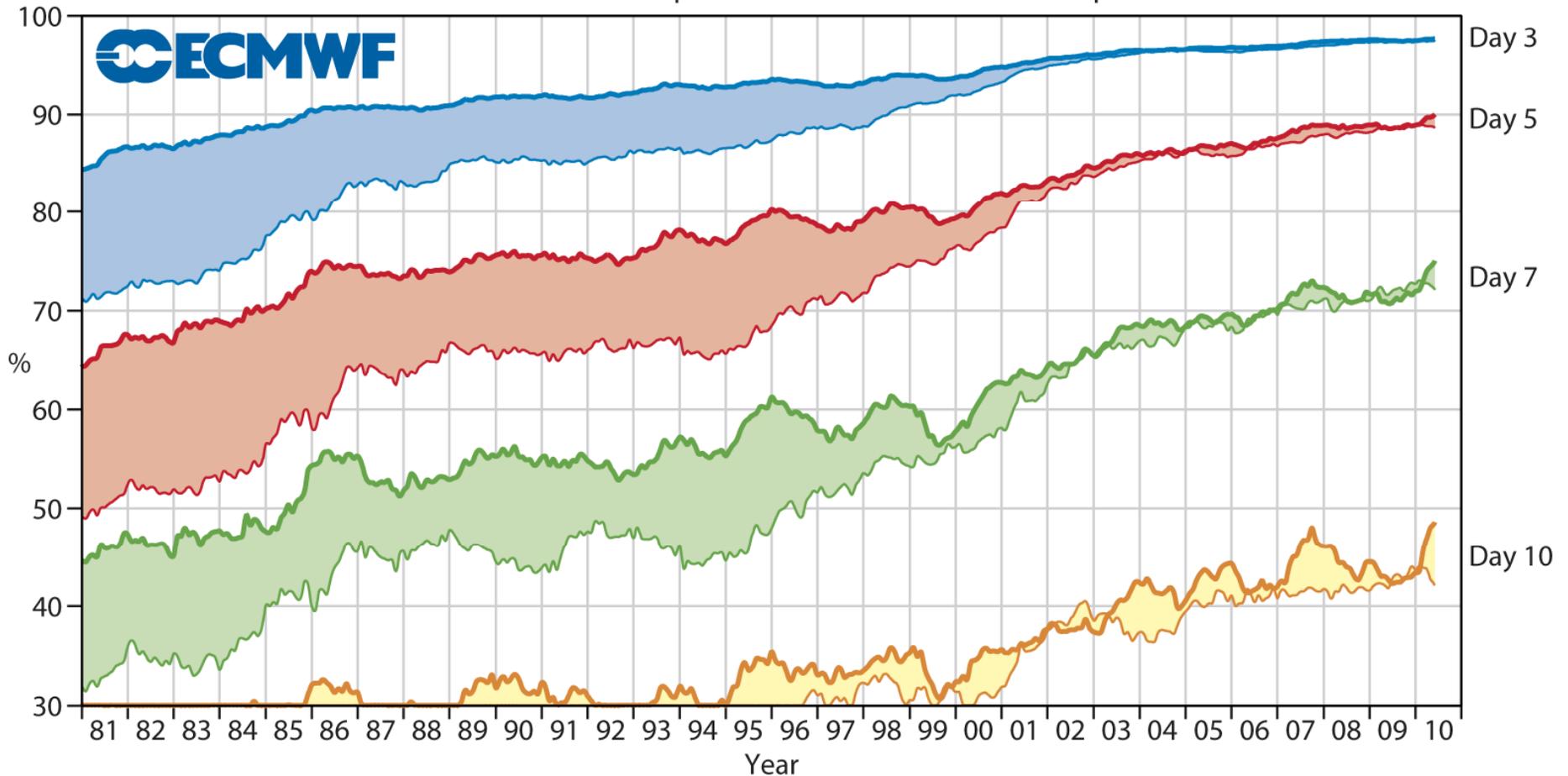
WMO Space-based Global Observing System



Steady Improvements in Weather Prediction

Anomaly correlation of ECMWF 500 hPa height forecasts

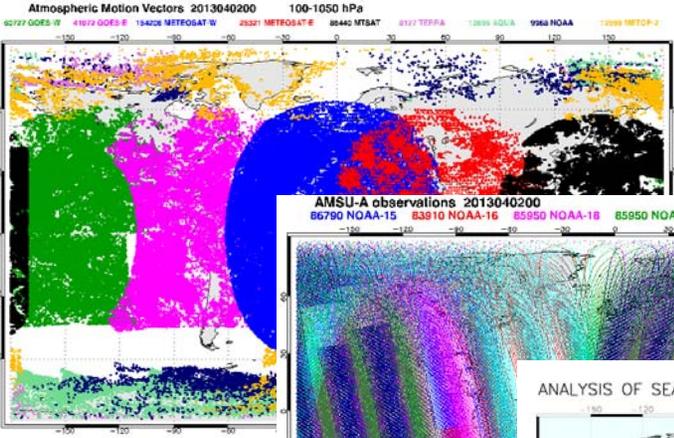
— Northern hemisphere — Southern hemisphere



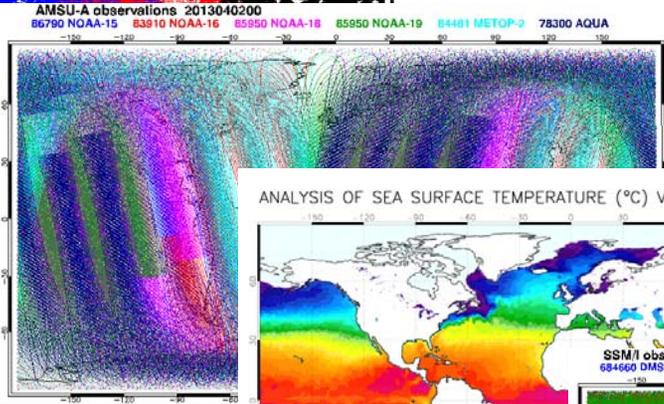
Courtesy of ECMWF. Adapted and extended from Simmons & Hollingsworth (2002)

Example Satellite Observations in NWP

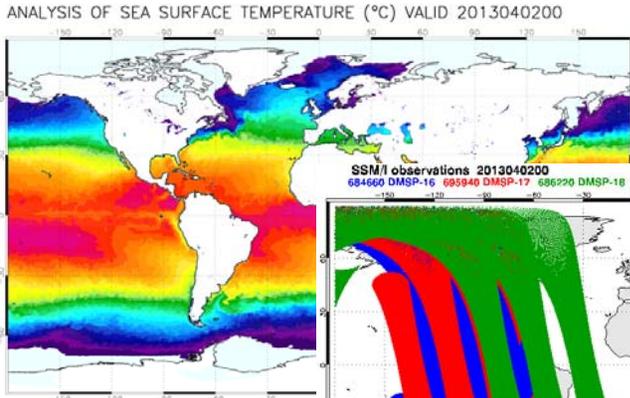
Atmospheric Motion Vectors



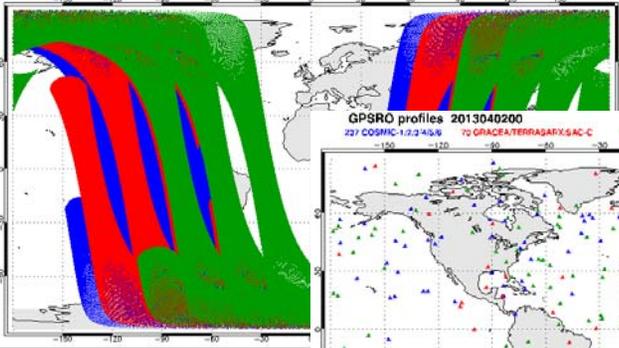
AMSU-A



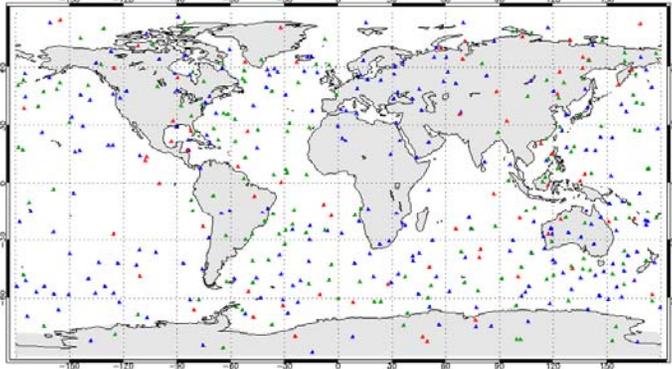
Sea Surface Temperature



SSM/I



GPS-RO



Trends in Space-based Observation

Opportunities and Challenges

- Technology
 - improving observations, processing, communications, data access
- Applications
 - complex, global environmental and societal issues
 - improved knowledge and data exploitation
 - adoption by decision makers
- Growing number of space-faring nations
 - increased capability and resilience
 - greater coordination
- Economic Pressures
 - demonstrate and communicate societal benefits
 - optimize the system



Global Framework for Climate Services

Agriculture



Water

Health



**Disaster
Risk
Reduction**

<http://www.wmo.int/gfcs>



Weather • Climate • Water



Thank You





**World
Meteorological
Organization**

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