

CCMC Workshop, Key Largo, FL. 2012♪

KMA-NASA Space Weather Center Partnership

Hyesook Lee

Korea Meteorological Administration

CONTENTS :

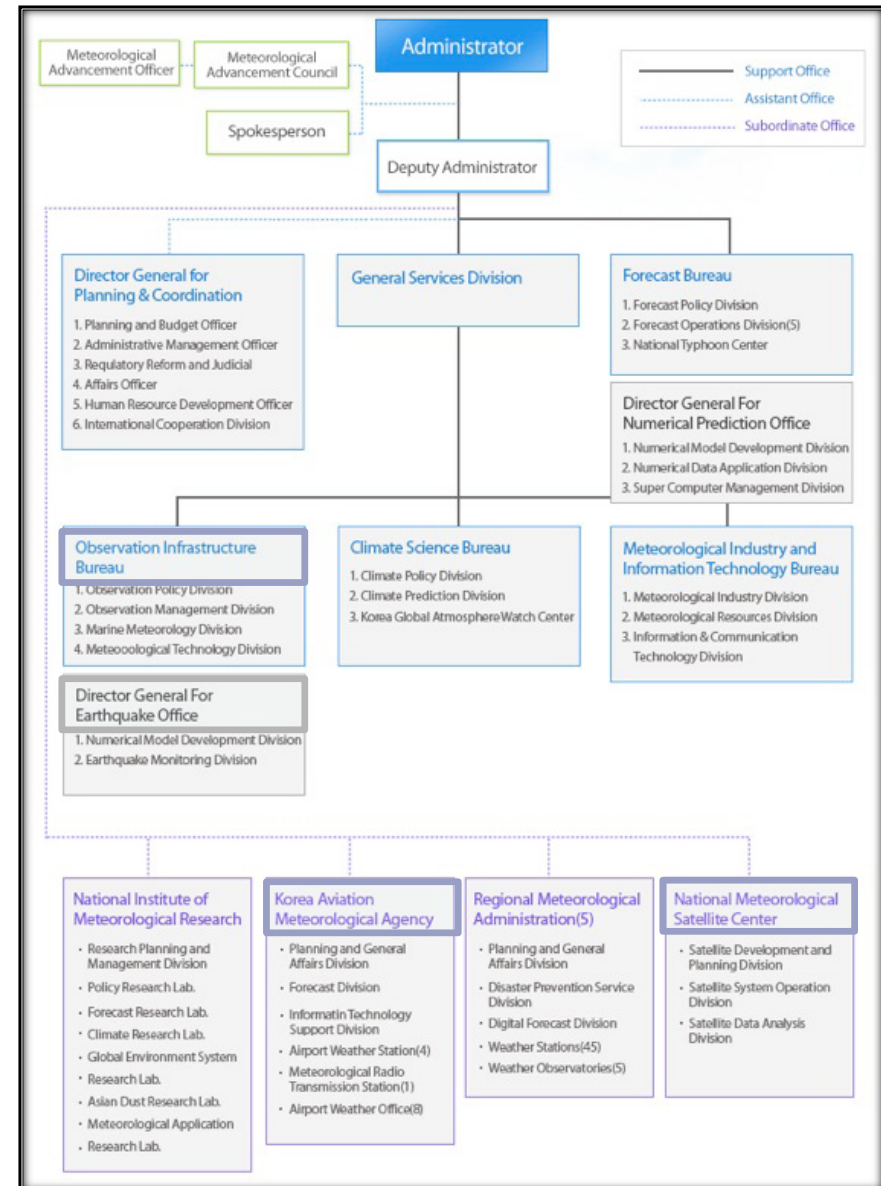
1 Implementation plan of KMA SWC

2 Partnership with NASA SWC

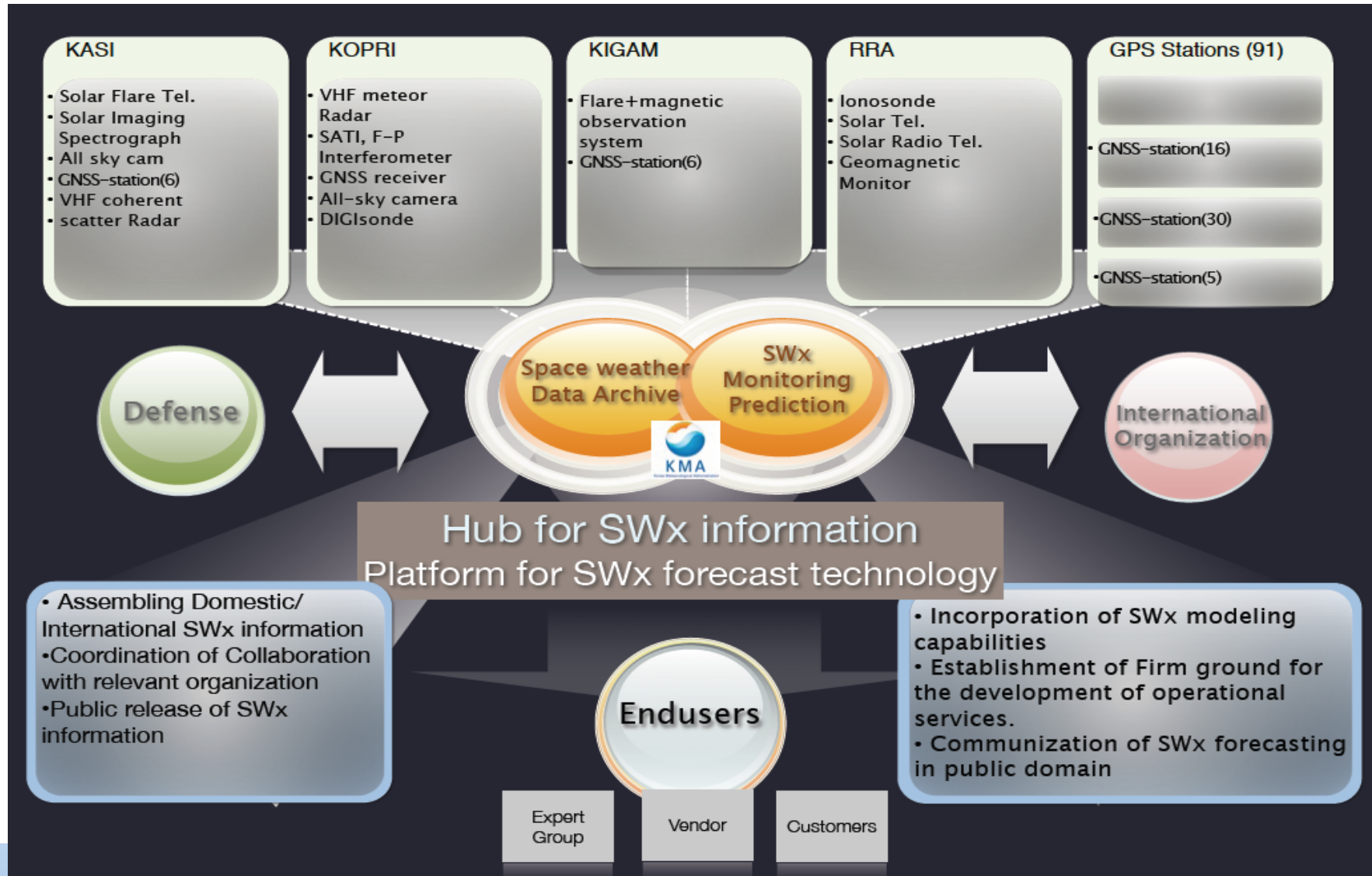
3 Q & A

Organization of KMA & SWx

- OIB is responsible for establishing the basis of SWx matters, such as law, organization, collaborations, etc.
- NMSC is in charge of most of SWx activities, such R&Ds, public services.
- KAMA is expected to play a part to deliver the SWx information to the aviation relevant customers.



Implementation Plan of KMA



[1] Baseline of Space Weather

- Preparation of legal basis and coordination of collaboration

[2] Instrument for Space Weather Monitoring

- Payload on 2nd Geostationary Meteorological Satellite

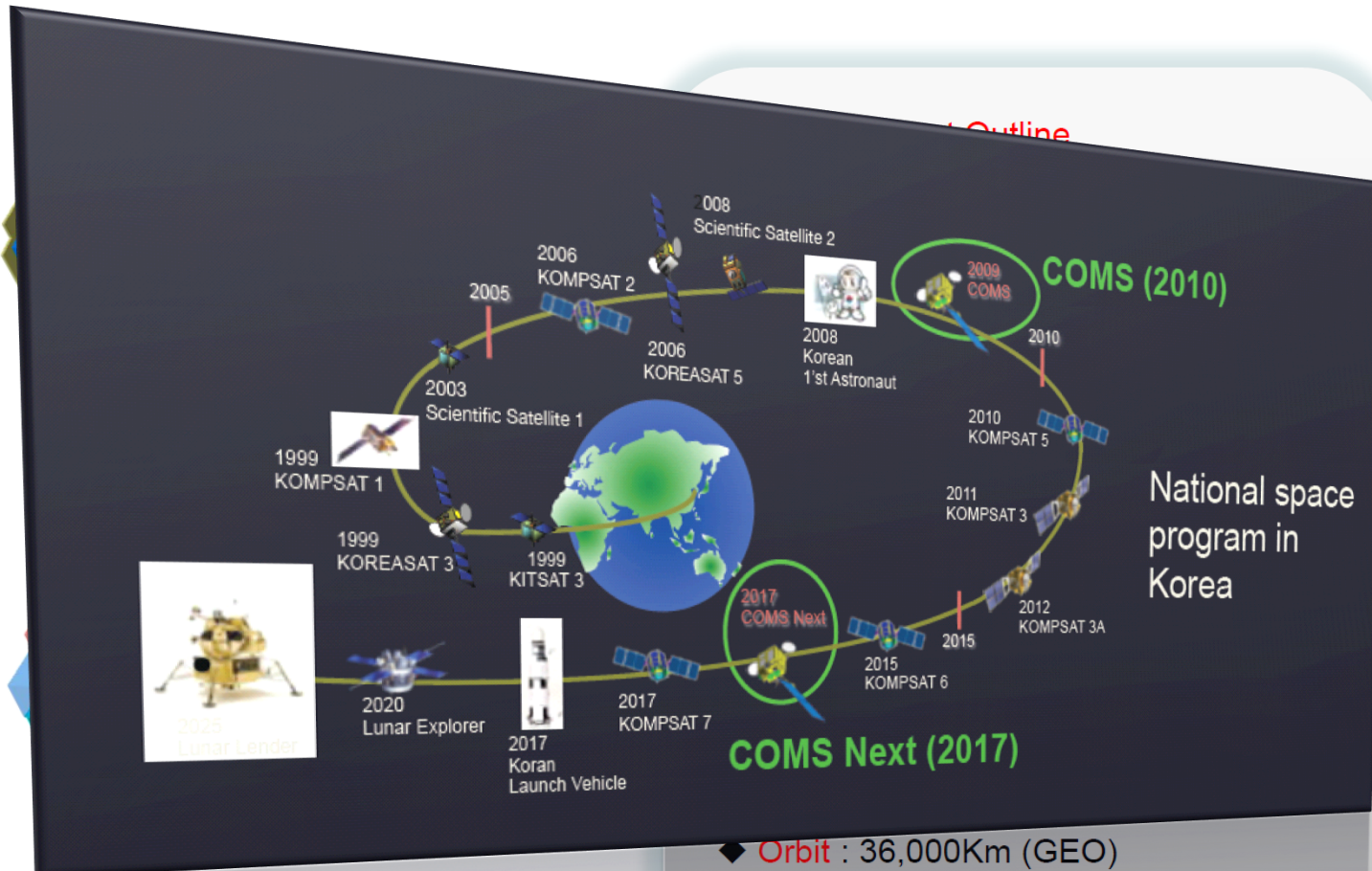
[3] Space Weather Utilization system

- Space Weather Monitoring/Operation system
- Satellite Operation Environment Monitoring

[4] Space Weather Forecasting Model

- Cooperative Research institution – Kyung Hee University(2010-2014)

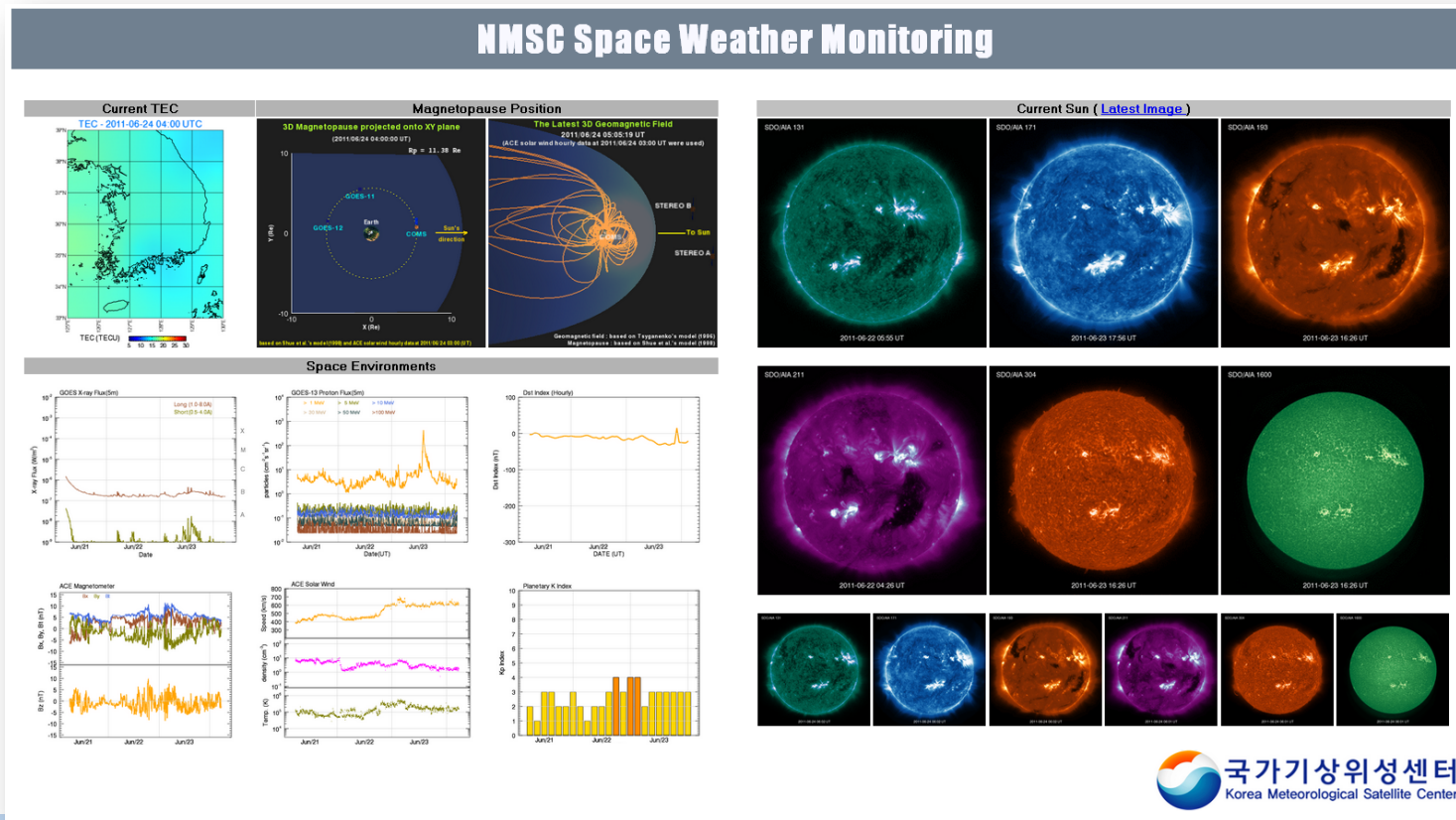
Instruments for SWx Monitoring



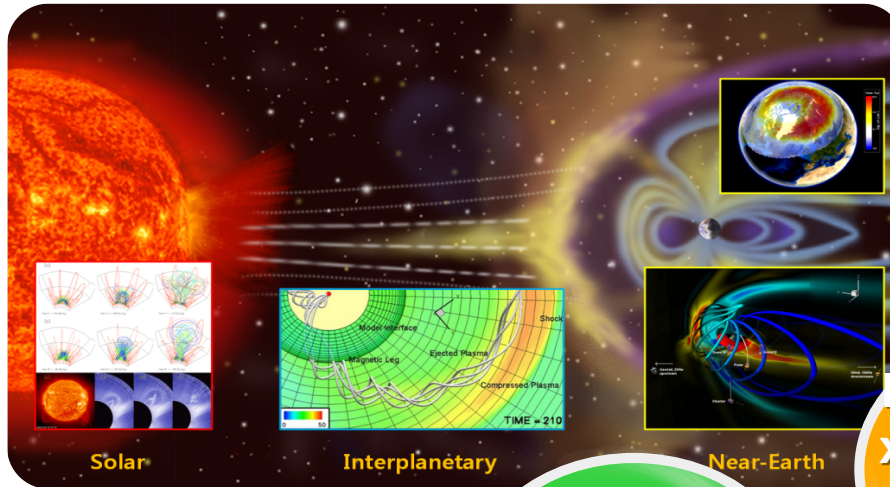
Payload on Geostationary satellite, GK2A in 2017

Space Weather Testbed system

- Build-up Space Weather Data Collection and Testbed system
- Monitoring Space Weather for safe operation of COMS



SWx Forecasting model



Solar

Interplanetary

Near-Earth

Implement Plan

2010

- Development of SWx Forecasting model

SWx Prediction models

2011

- Solar, Interplanetary, Near-Earth prediction model
- Phenomenological model

Integrated SWx Prediction model

2012 – 2013

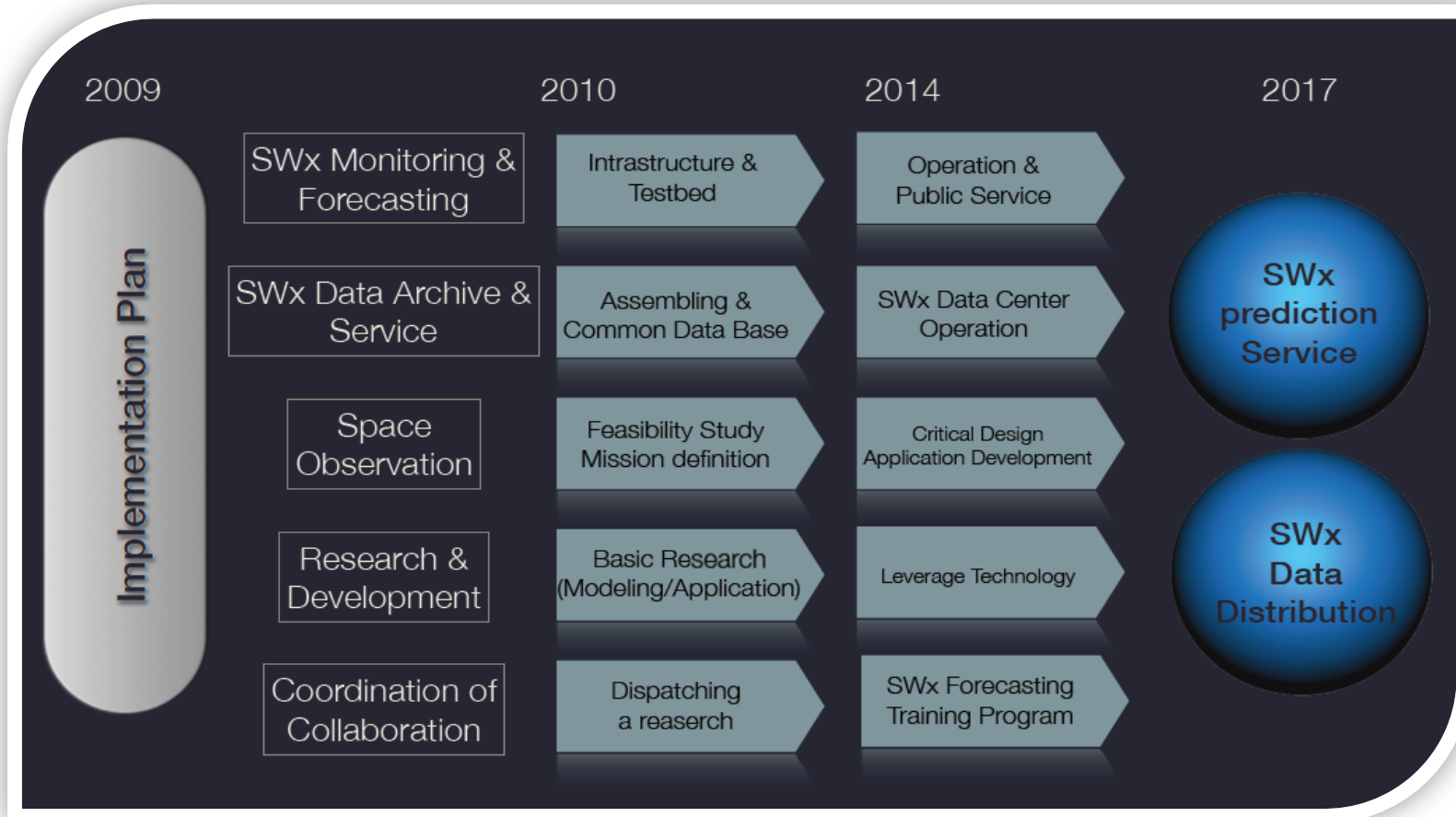
- Integration of prediction models
- Trial operation and validations of integrated model

SWx Operation

2014

- Operation of Initial integrated model of KMA

Space Weather Roadmap of KMA



- Participating domestic and international collaboration
- Capacity building and training staffs

[1] Baseline of Space Weather

[2] Instrument for Space Weather Monitoring

- Preliminary Study on the Space Weather instrument for GK2A (supported by NASA, Dr. Joseph M. Davila)

[3] Space Weather Forecasting Model

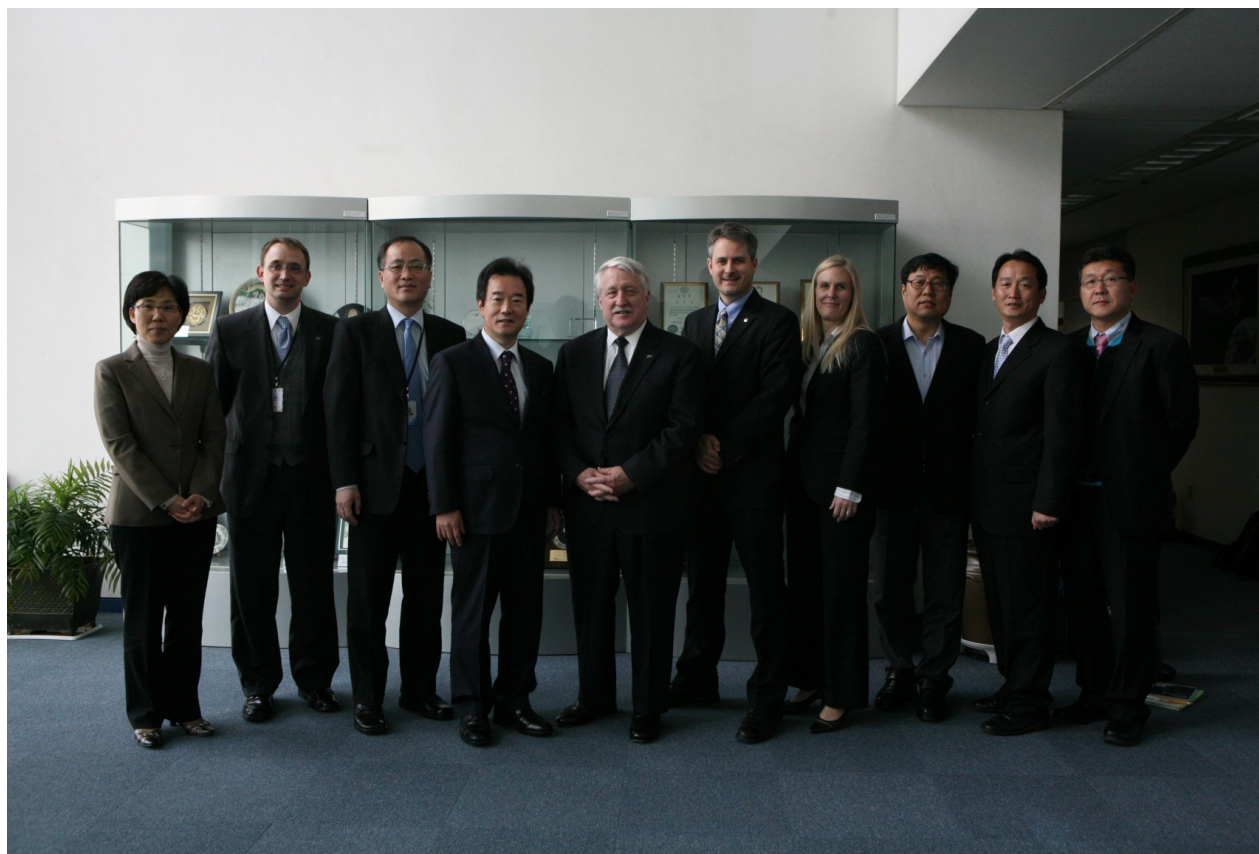
Instrument for Space Weather Monitoring

- Space Weather Instrument Workshop for GEO-KOMPSAT 2 (Nov. 2011)



- 3 invited speakers from NASA/GSFC
- There are 3 candidates for the SWx sensor
 - Coronagraph (CME)
 - GOLD (Geomagnetic and auroral variation)
 - SST/ESA/Mag (Particle/Electrostatic/Magnetic field)
- Mission decision : the end of 2012

KMA-NASA High level meeting



- 2011-12-01, meeting btw. KMA and NASA Associate Administrator
- Bilateral meeting btw. Korea Government and NASA scheduled on April, 2012

[1] Space Weather Operation

- Joint Research for Model Development, Validation and Operation
- Data exchange
- Training, Personnel exchange

[2] Instrumentation

- Joint-Study on the Space Weather instrument for GK2A

[3] Earth Science

- EOS data process & calibration
 - GPM field observation
- 

[1] Baseline of Space Weather

- Establish cooperation framework to advance the space weather forecasting skill
- Data exchange / Personnel exchange

[2] Instrument for Space Weather Monitoring

- Preliminary Study on the Space Weather instrument for GK2A (supported by NASA, Dr. Joseph M. Davila)
- Continuation of Joint-Study on the Space Weather instrument for GK2A

[3] Space Weather Forecasting Model

- Joint research of space weather modeling, model validation and model operation

Q & A

Thank you for attention