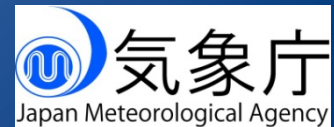


SST activities at JMA

Shiro ISHIZAKI, Yukio KURIHARA,
Akiko SHOJI, Masakazu HIGAKI, Mika
KIMURA, and Yoshiaki KANNO



GHRSSST XV @CapeTown 2014

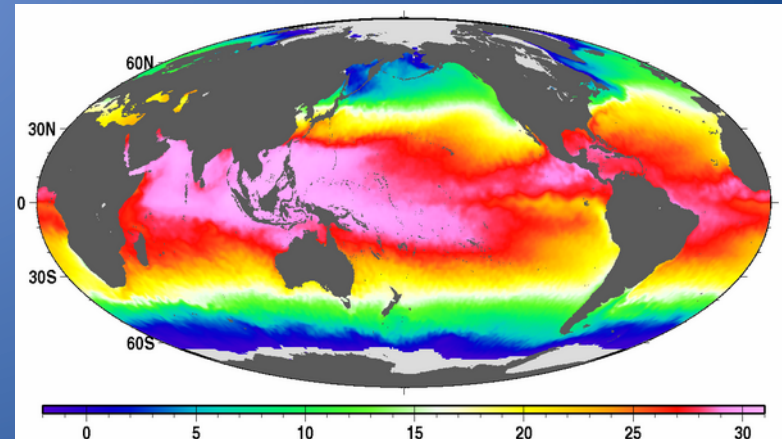


Topics

1. MGDSST (Global SST analysis)
2. MTSAT SST
3. Regional SST analysis
4. Himawari-8/9 (successor of MTSAT)

MGDSST

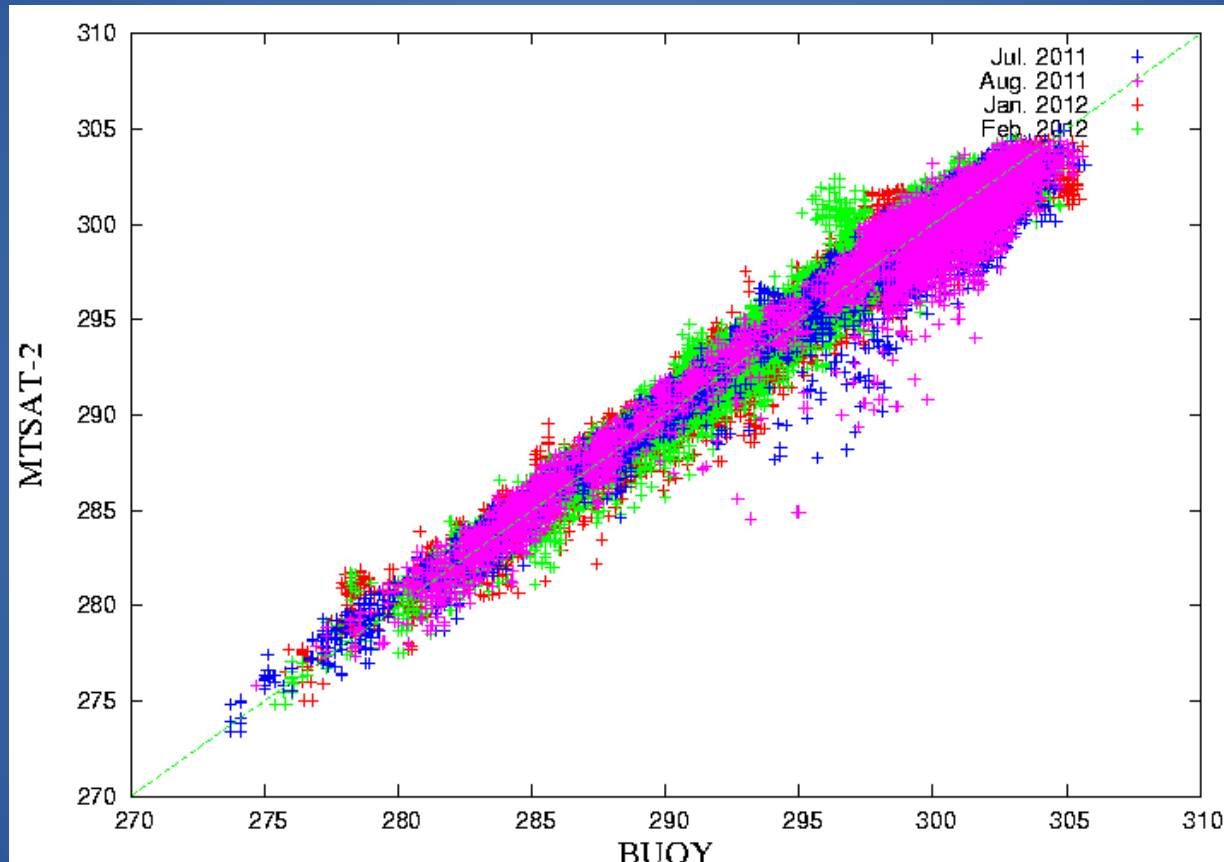
- Global, $1/4^\circ$ resolution, Daily
- Input : AVHRR, AMSR2, Windsat, in-situ
- prompt /delayed analysis and reanalysis
 - » start to use AMSR2 SST for delayed (after 5-months) analysis
- text formatted files :
 - » available by
NEAR-GOOS Database
<http://goos.kishou.go.jp/>



MTSAT SST

- physical retrieval method
 - » 1-D Var based on single layer RTM considering;
 - water vapor absorption
 - sea surface emissivity
- generated on operational basis

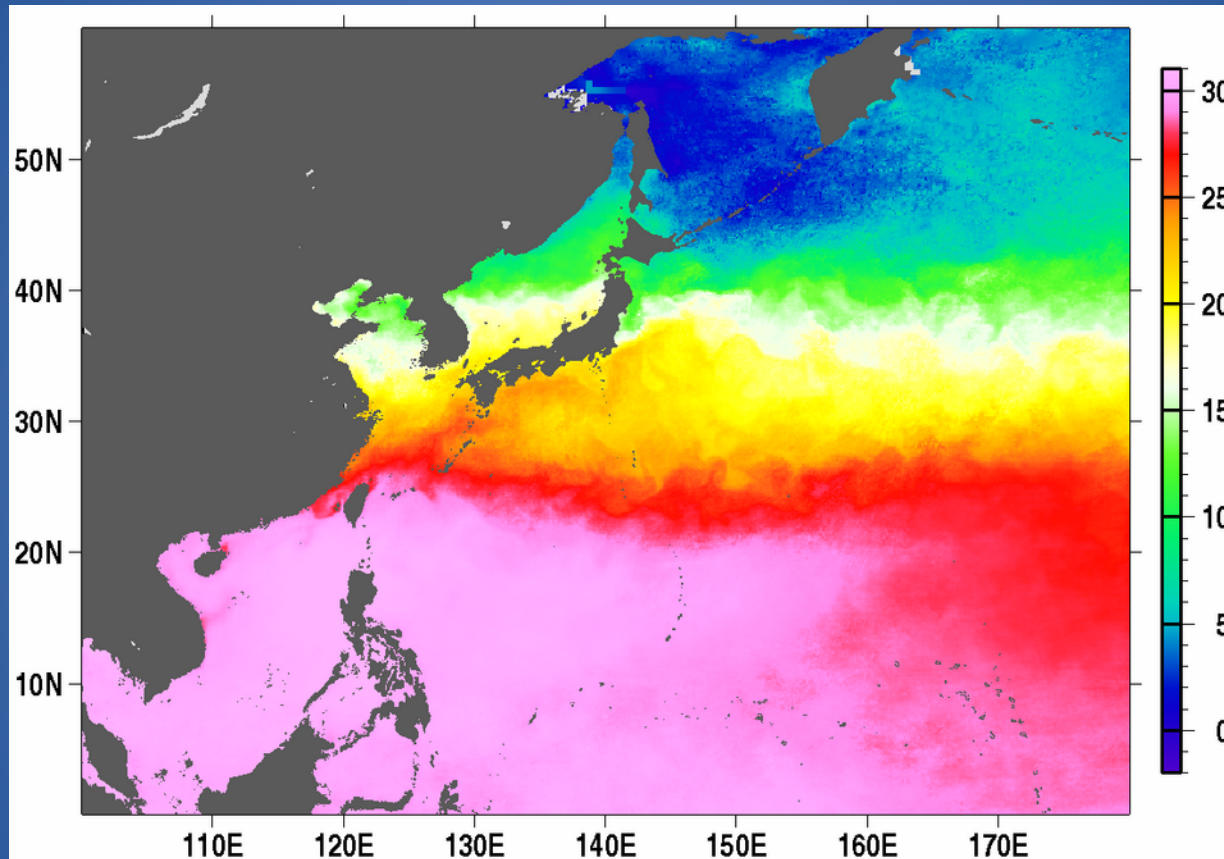
Comparison: MTSAT with Buoy



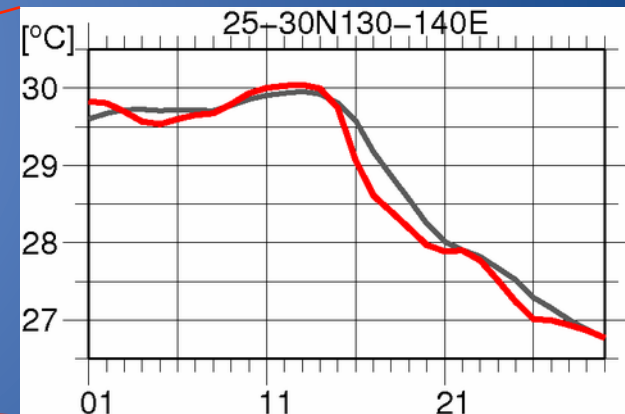
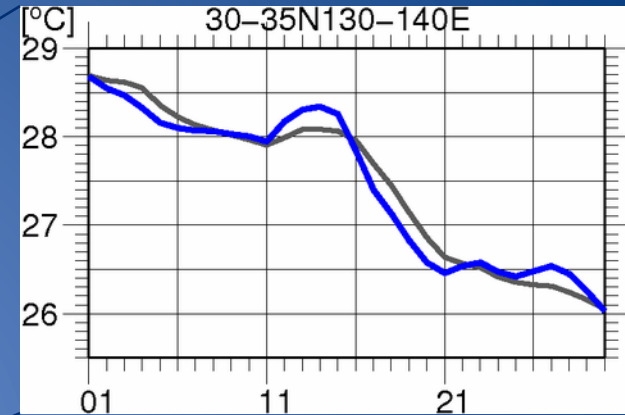
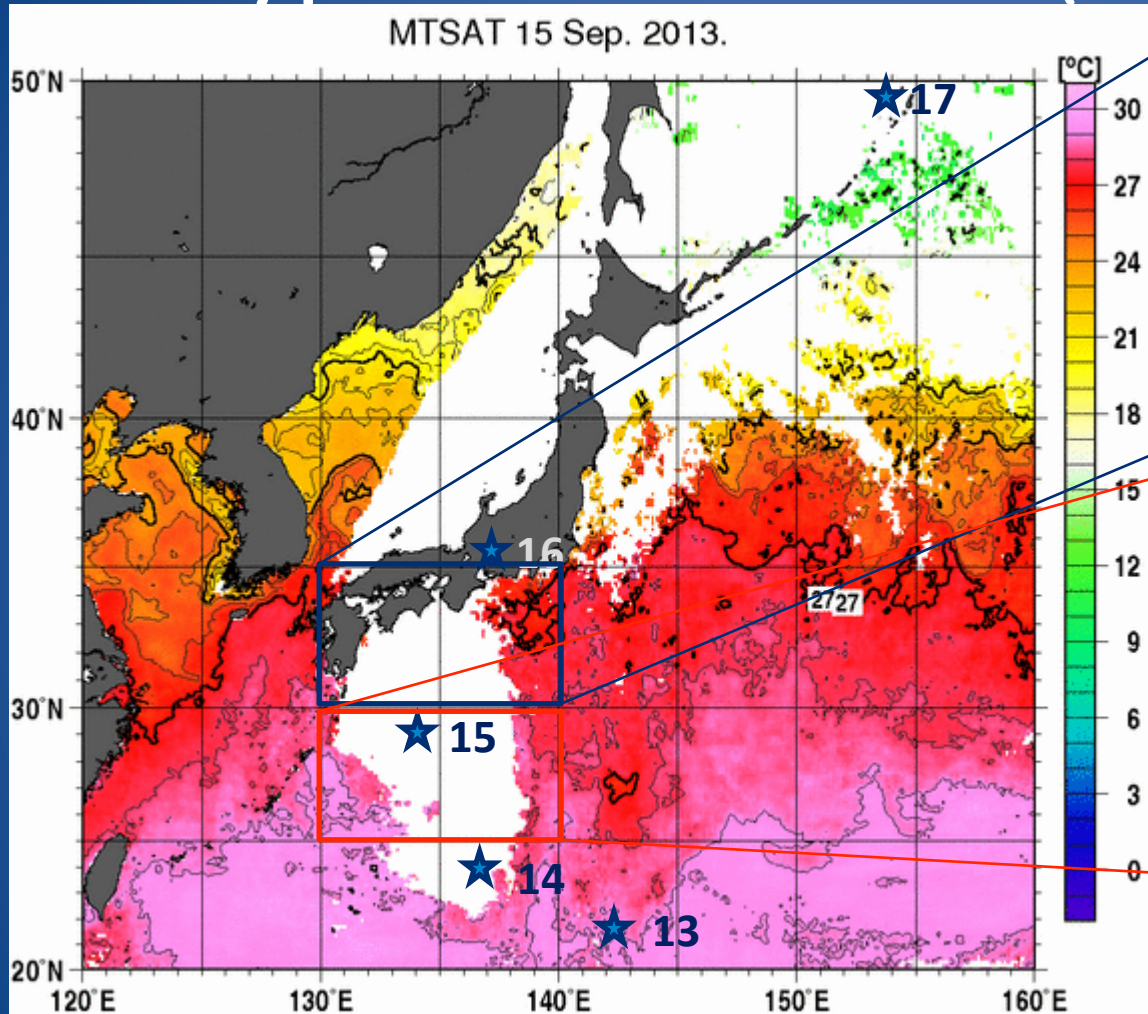
Regional SST analysis

- western North Pacific, $1/10^\circ$ resolution, Daily
- Input : AVHRR, AMSR2, MTSAT, in-situ
- time-space decomposition
 - » shorter/smaller scale, compared to MGDSST, is considered
- under development
 - » start to generate L4 product on operational basis for testing its performance

Regional SST analysis



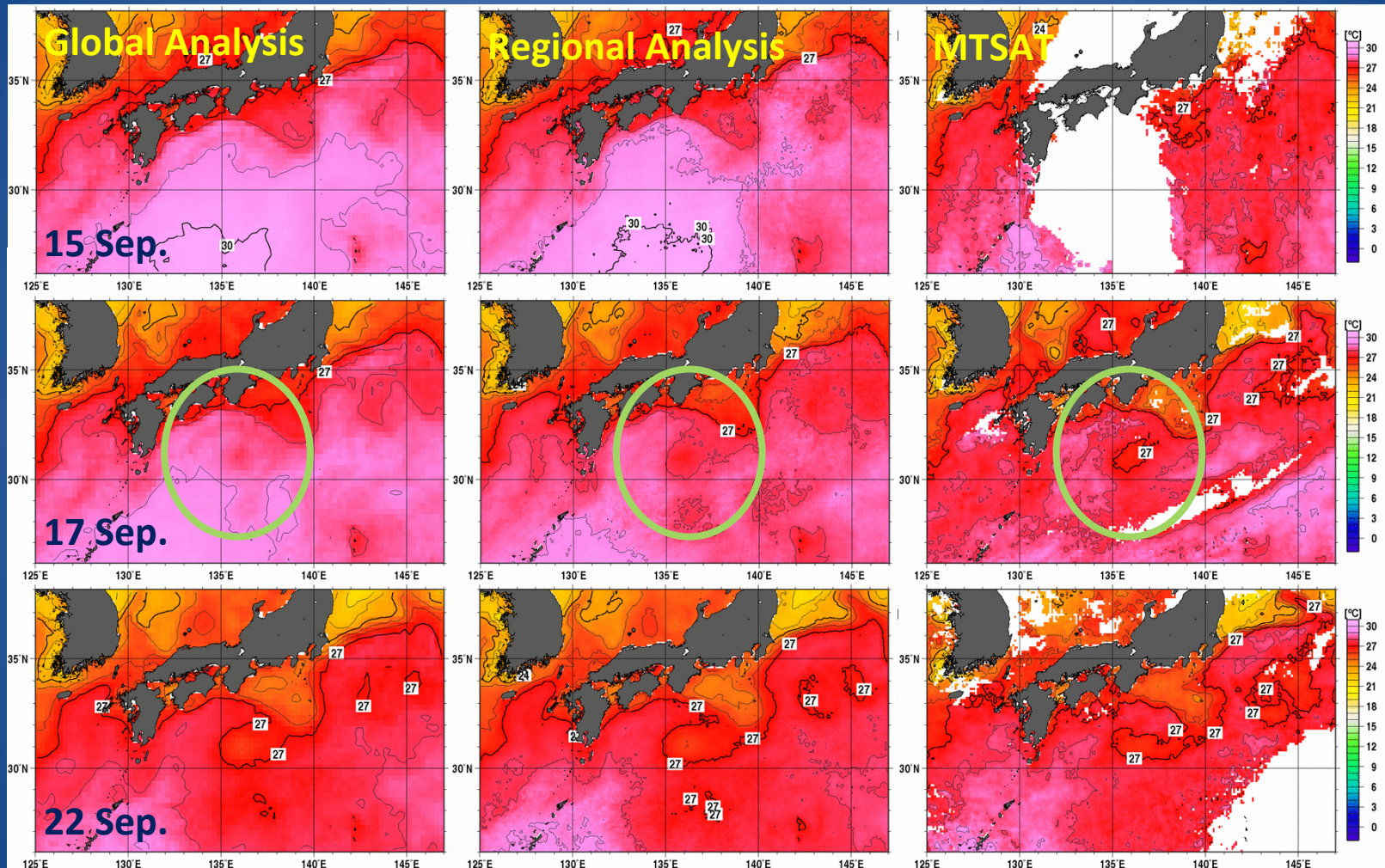
Typhoon Man-Yi (Sep.2013)



color : regional analysis
gray : global analysis

position of center of typhoon

After the typhoon Man-Yi passed



Regional analysis captures SST decrease

GDS 2.0 Implementation

- JMA has a plan to create files of NetCDF version based on GDS-2.0 format for
 - » MGDSST
 - » MTSAT SST
 - » SST of Himawari-8 (plan to be launched in 2014)
 - » Regional SST analysis (under developing)
- schedule : TBD

Himawari-8/9

Japan's Next Generation Satellites

by courtesy of Mr. Yoshiro Tanaka (JMA)



*"Himawari" is a Japanese word
for this flower ->>>*

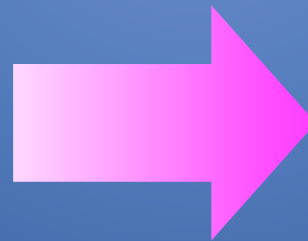


MTSAT -> Himawari-8/9

- Number of channels 5 -> 16
 - Spatial resolutions VIS: 2km -> 0.5km
 IR: 4.0 km -> 2.0 km
 - Temporal resolutions 30/60 min -> 10 min
- (Total data size: 50 times!!)

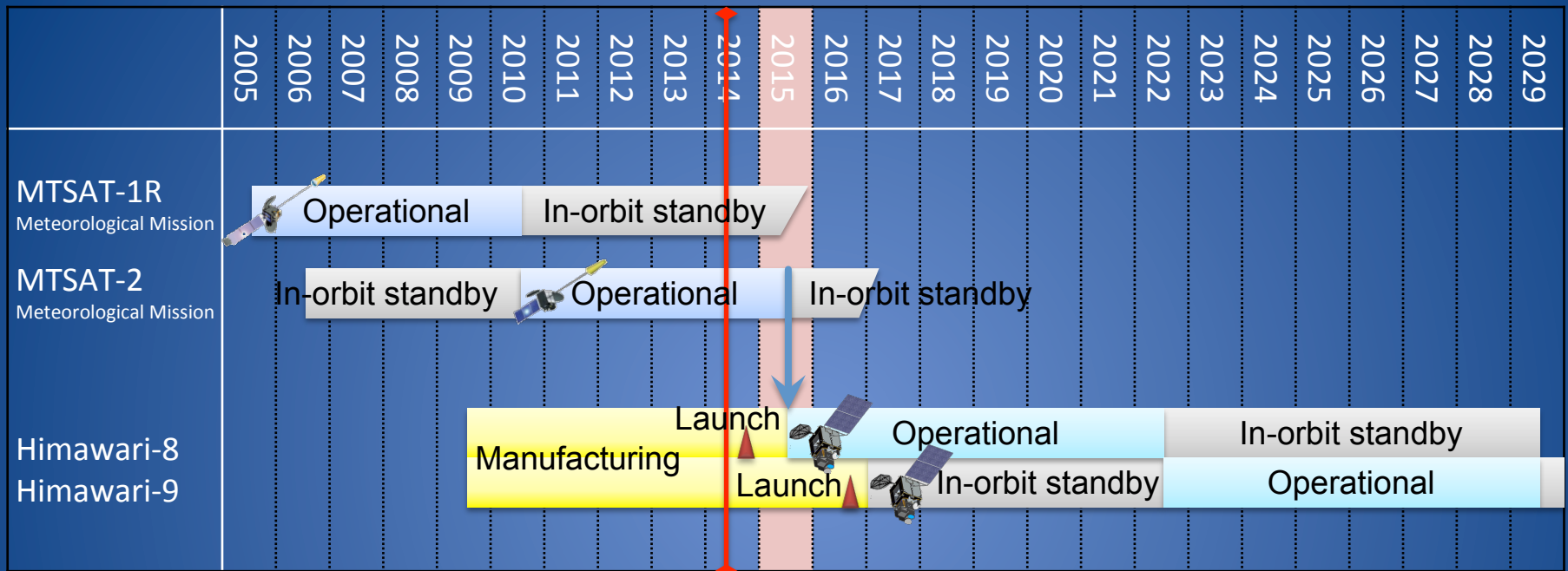


B/W TV



HD TV

Transition of Operational Satellites



- Launch of **Himawari-8** is 2014 (Q3-4), start operation in 2015
- Launch of **Himawari-9** for in-orbit standby is scheduled in 2016
- **Himawari-8/9** will be in operation **for 15 years** around 140 E covering East Asia and Western Pacific