



Regional Report of KASI

Korea Astronomy and Space Science Institute

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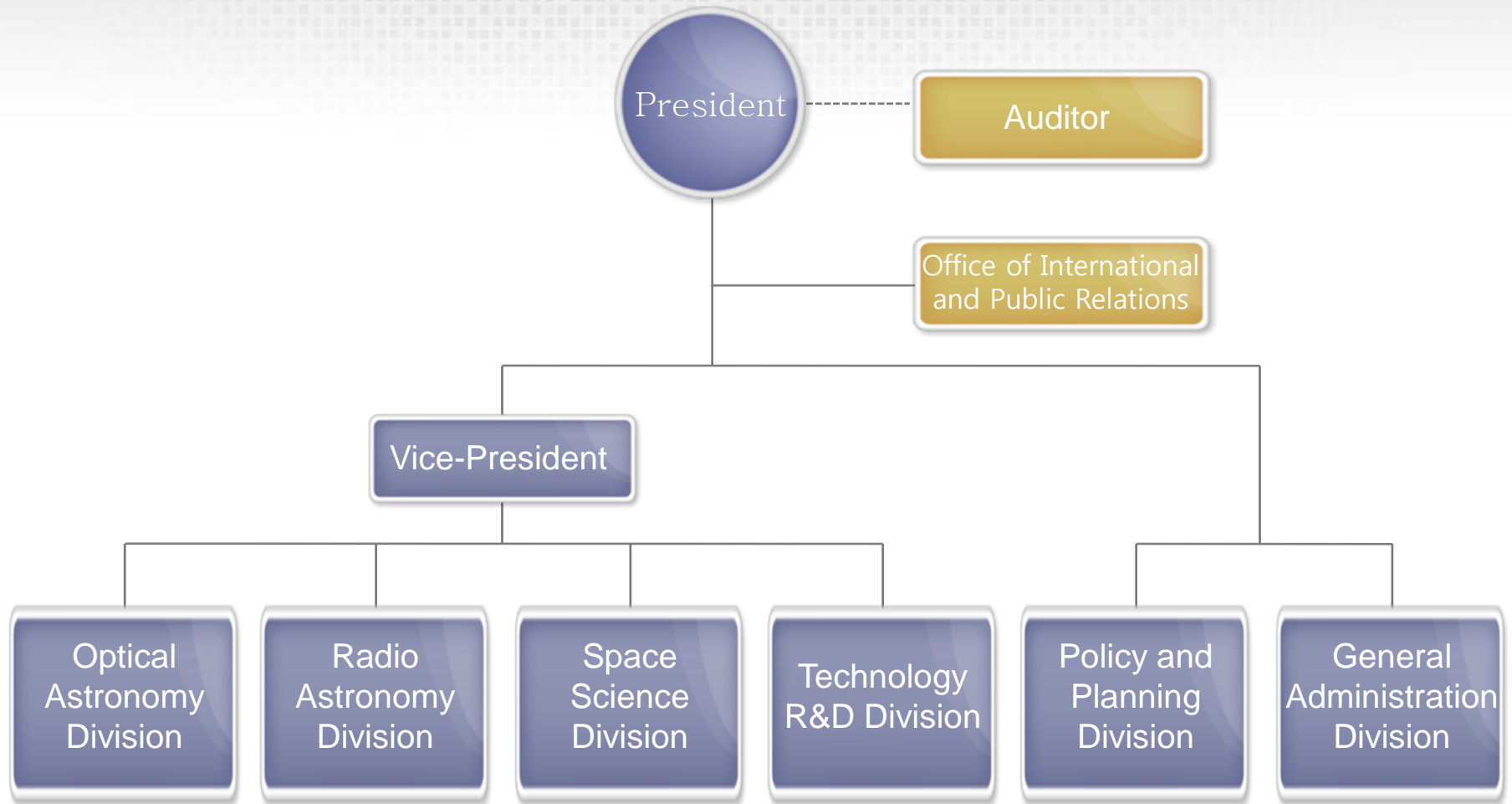


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GENERAL INFORMATION

Organization(2011.06~)



Personnel & Budget(2011.11)

Number of Staff

- ✓ Total 299
 - Research staff 177
 - Engineers & Technicians 50
 - Administrative Staff 72

Budget

- ✓ KRW 50 Billion (USD 46 Million)

KASI Facilities(I)



KASI Headquarter



**Taeduk Radio
Astronomy Observatory**



**Sobaeksan Optical
Astronomy Observatory**



**Bohyunsan Optical
Astronomy Observatory**

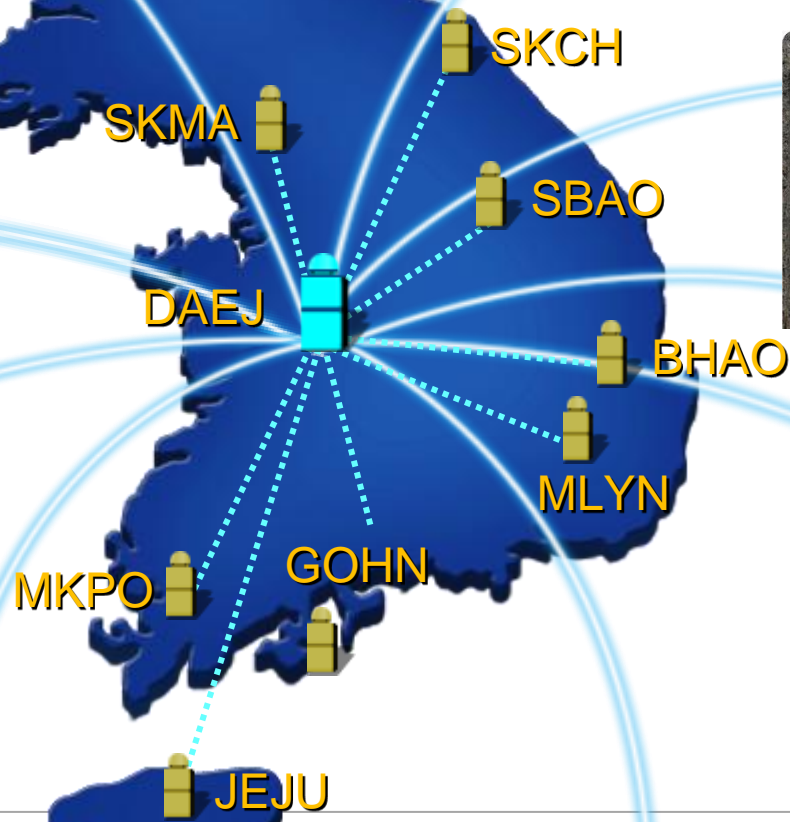
KASI Facilities(II)



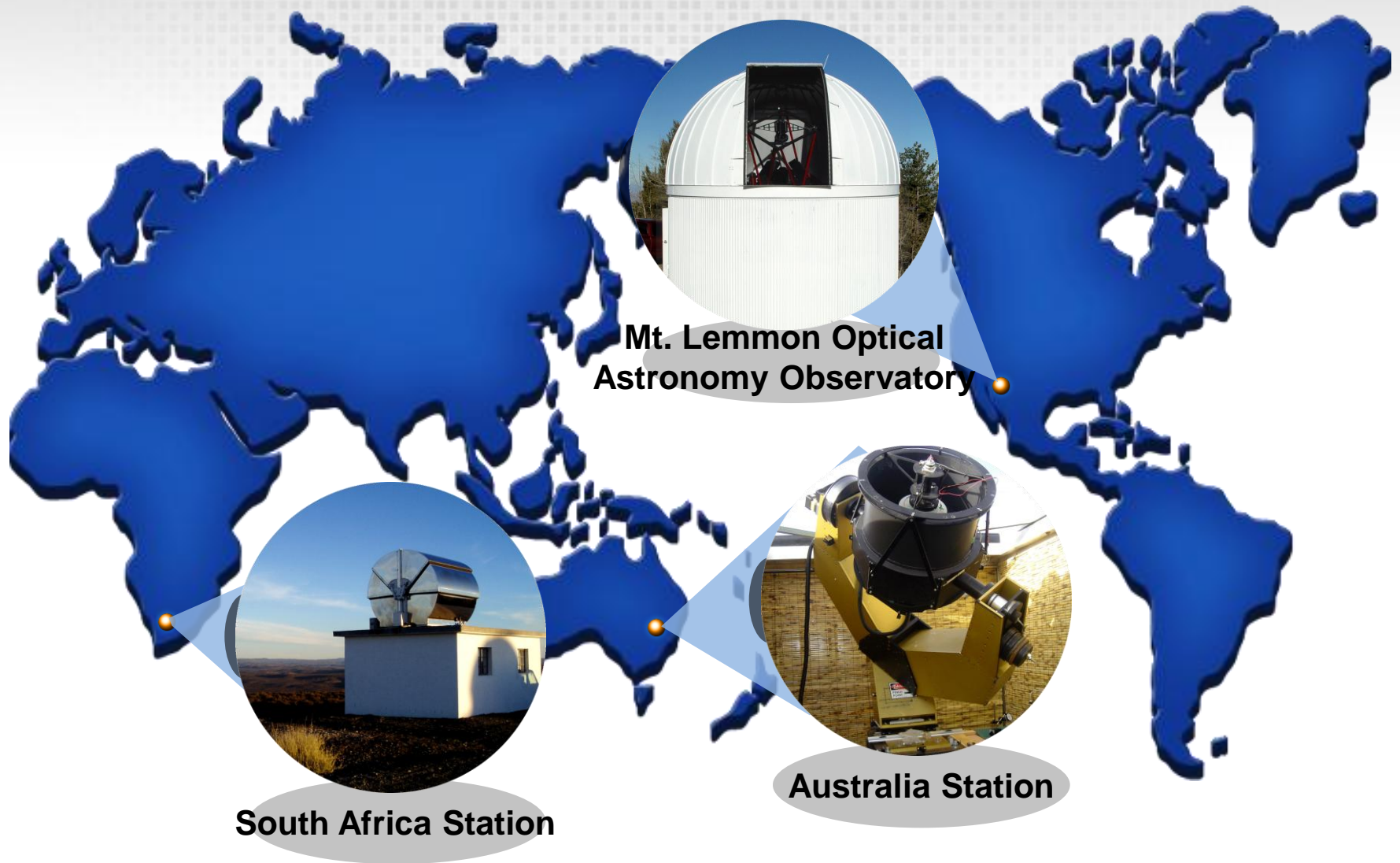
KASI Facilities(III)

GNSS Network

IGS GDC



KASI Facilities (IV)



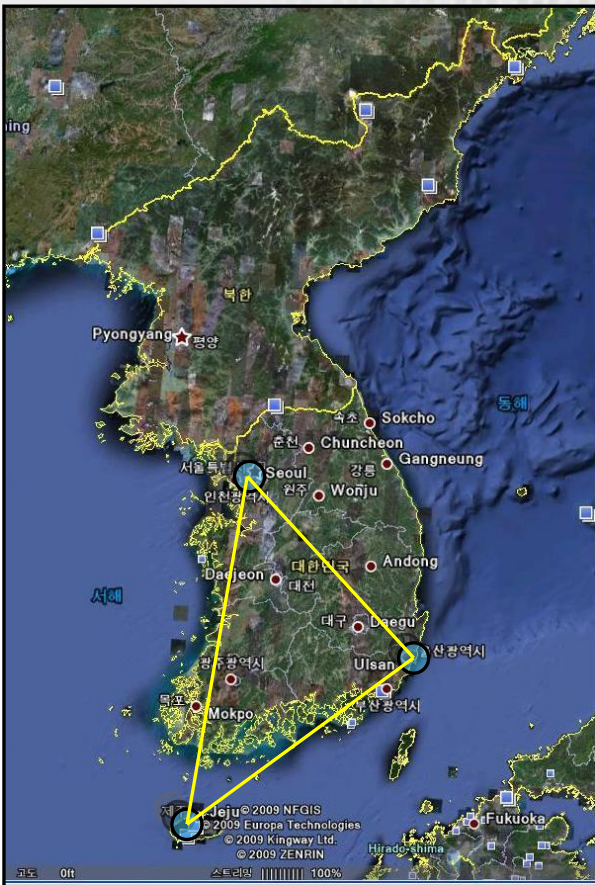


RECENT ACHIEVEMENTS



RECENT ACHIEVEMENTS

Korean VLBI Network Starts its Operation

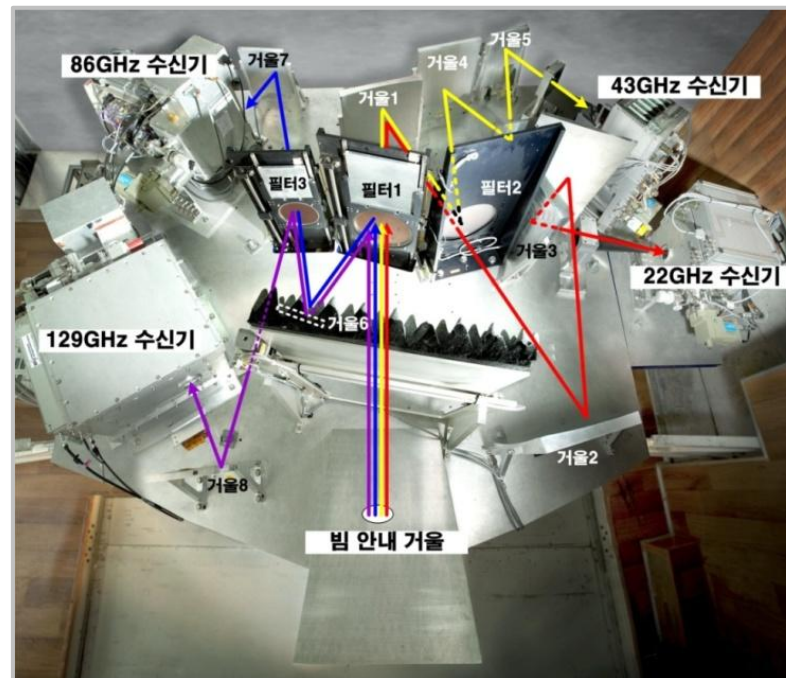


- ✓ Aperture : 21 m
- ✓ Mount : Alt-Az Type
- ✓ Surface : Shaped Cassegrain type
- ✓ Installation : Dec. 1, 2008
- ✓ Pointing Accuracy $\leq 4''$



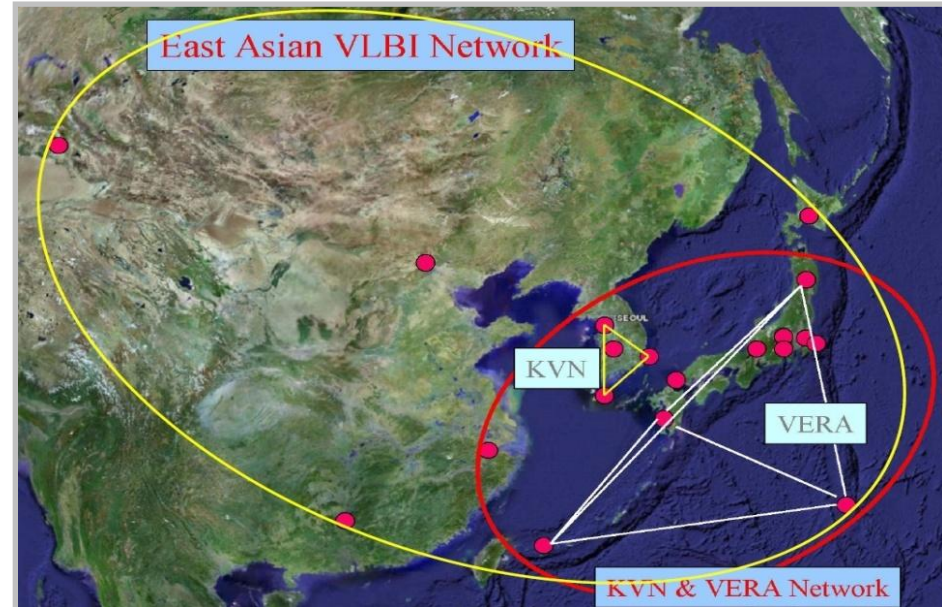
Development of the World's First Four-Channel Simultaneous radio receiver

- ✓ It has been installed on the Yonsei Radio Astronomy Observatory and successfully conducted observing the space radio from the Great Nebulae in Orion.



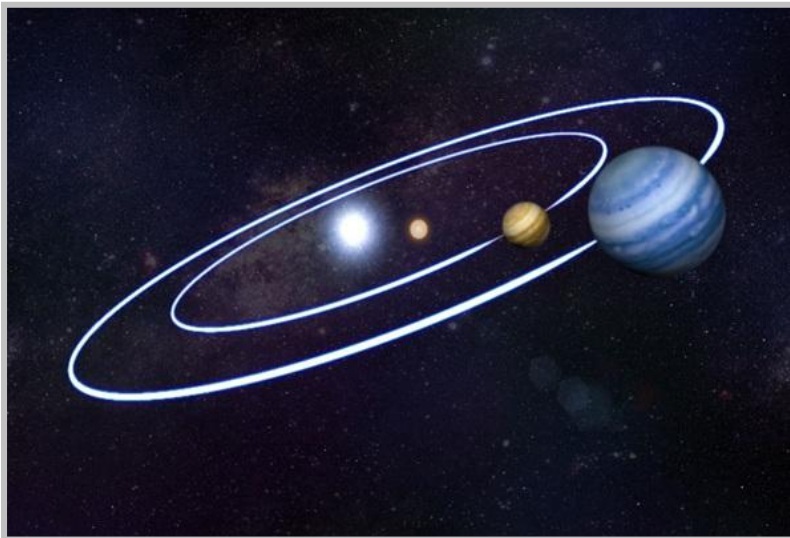
East Asia VLBI Center Construction begins

✓ “East Asia VLBI Center” at KASI Headquarter (2012.09)



The World's First Discovery of Extra-solar Planets with Two Suns

- ✓ **“THE sdB+M ECLIPSING SYSTEM HW VIRGINIS AND ITS CIRCUMBINARY PLANETS,” *Astronomical Journal* (2009)**
- ✓ **In 2011, selected as Top 5 papers of the most cited paper in the period of 2009-2010.**



Success in Infrared Observation of Cosmic Background Radiation

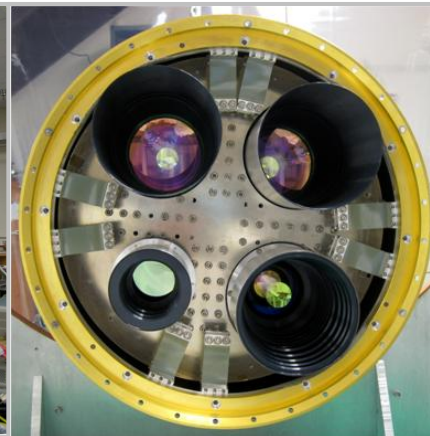
CIBER: Cosmic Infrared Background Experiment

✓ Cooperation

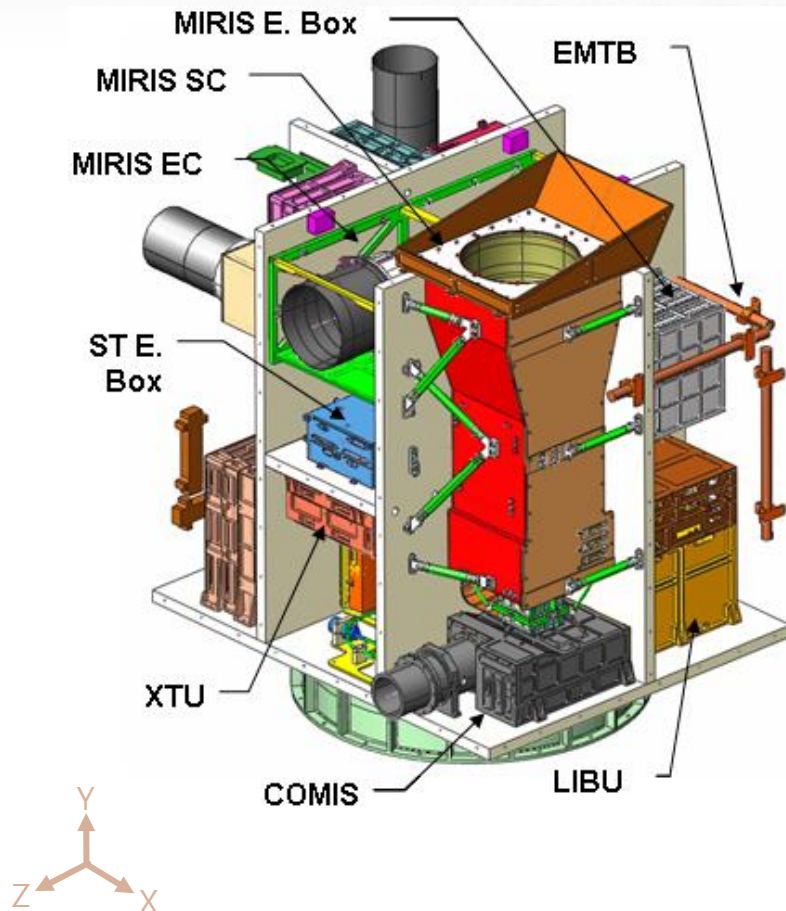
- Sounding rocket : NASA
- CIBER : Caltech/JPL, ISAS/JAXA, KASI

✓ Launch : 1st ('09.2.23.) & 2nd ('10.7.11.) at White Sands Missile Range, Two more launches are planned in 2012

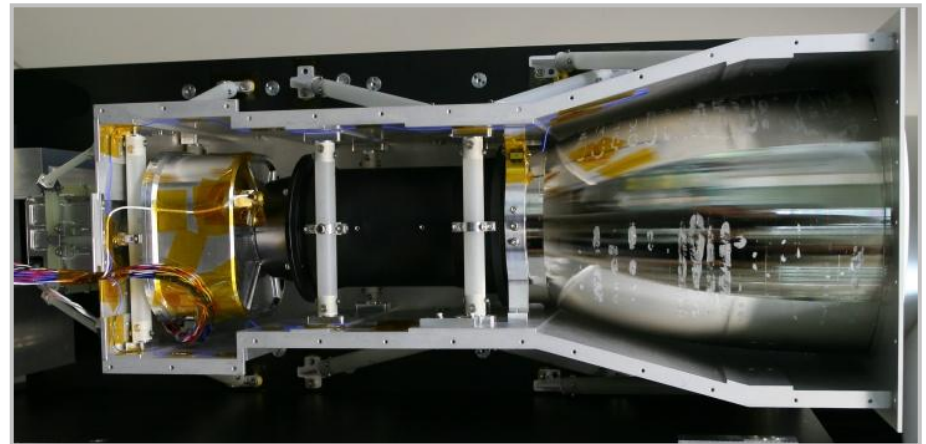
✓ Instruments : Two Imagers and Two Spectrometers at Near IR



Development of the Multipurpose Infrared Imaging System(MIRIS), the main payload of STSAT-3



- ✓ Cooperation :
 - Satellite : SaTReC, KARI
 - Payload : KASI, ISAS/JAXA
- ✓ Launch : 2012. 9. (TBD) by Dnepr
- ✓ Mass : 150 kg
- ✓ Orbit : LEO (600 km)
- ✓ Payload : Multi-purpose IR Imaging System (MIRIS)





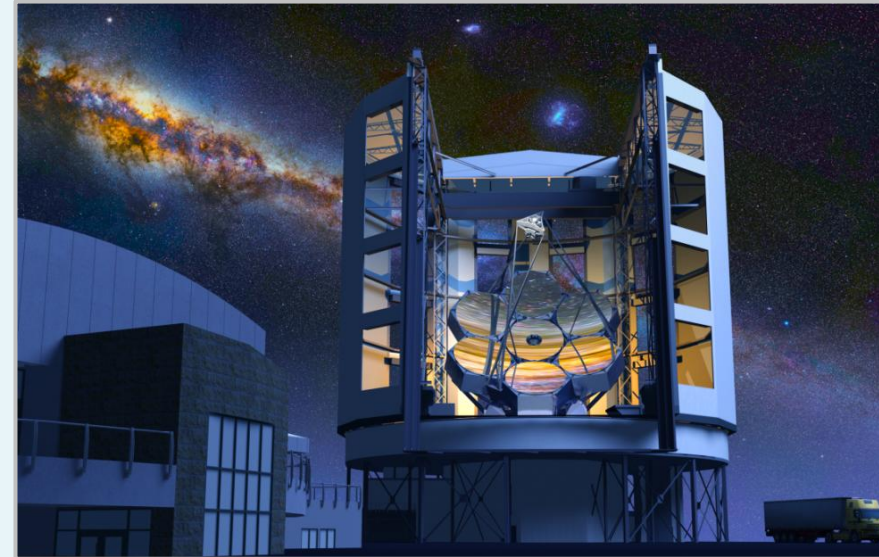
III



MAJOR PROJECTS

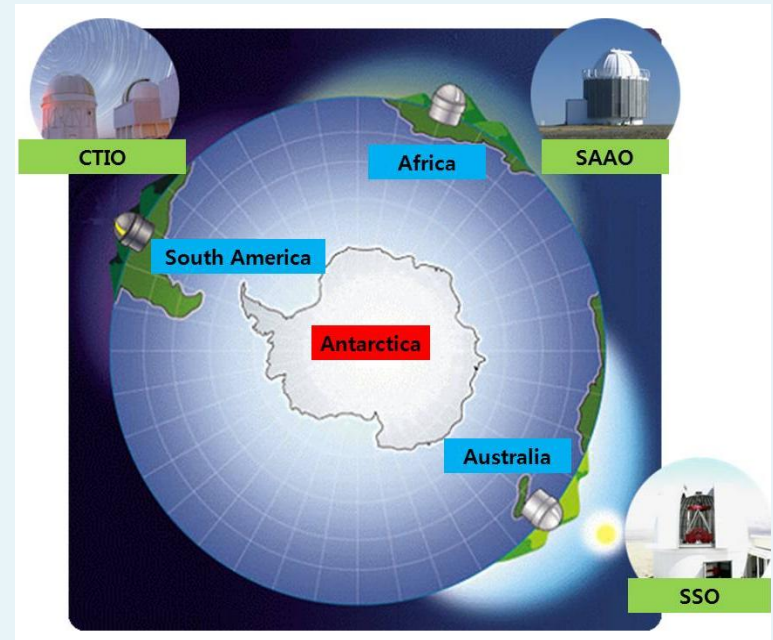
Korean Giant Magellan Telescope (K-GMT Project)

- Budget : 740 Million US Dollar (KASI shares 10%)
- Period : 2009~2018 (10years)
- Diameter : 25.4m (8.4m X 7)
- Location : Las campanas Observatory, Chile
- Participating Org.
 - USA : 7 institutes
 - Australia : 2 institutes(ANU, AAL)
 - Korea : 1 institutes(KASI)



Korean Microlensing Telescope Network (KMTNet)

- **Budget : KRW 30B (USD 26M)**
- **Period : 2009~2018 (10years)**
- **Objectives :**
 - Three identical observing systems
 - 24 hours uninterrupted monitoring of night sky at southern hemisphere
 - Will be installed at CTIO in Chile, SAAO in South Africa, SSO in Australia by the middle of 2014



Space Weather Prediction Center(SWPC)

- Budget : KRW 14B (USD 13M)
- Period : 2007~2013 (7years)
- Objectives:
 - Monitoring the Space Weather and Solar Activities
 - Instrument & model development



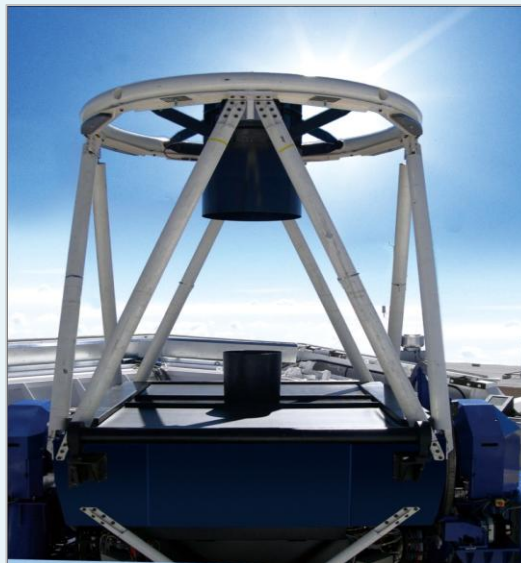
Korean Satellite Laser Ranging System

- Budget : KRW 23B (USD 21M)
- Period : 2008~2014 (7years)
- Objectives:
 - 1 Fixed(1m) SLR System and 1 Mobile(40cm) SLR System
 - Satellite Tracking and Space Geodetic Science Application



Development of electro-optic space surveillance system

- **Budget : KRW 24B (USD 22M)**
- **Period : 2011~2016 (6years)**
- **Objectives:**
 - Optical tracking of Korean LEO satellites
 - Optical surveillance of the GEO belt covering Korean peninsula
 - Optical surveillance of space debris hazardous to Korean satellites





Thank you !!

Korea Astronomy and Space Science Institute