

K-GMT Activities

대형망원경사업단

Center for Large Telescopes

Korea Astronomy and Space Science Institute

Byeong-Gon Park

2022. 2. 16.

Center for Large Telescopes

A Central Workhorse for the Ground-based Large Optical/Infrared Telescopes and Instruments at KASI / in Korea

- ◆ Construction
- ◆ Science Operation
- ◆ Instrument Development
- ◆ Community Engagement and Fostering Next Generation

Construction – Participation in GMT



GMT Status at a glance

◆ New Partner

- Weizmann Institute of Science in Sep. 2021

◆ Site Construction – Well in Process

- Lodge, Restaurant finished
- Power, Communication, Water and Utility finished
- Pier locations for the Mount and Enclosure prepared

◆ Mount

- FDR in Apr. 2021, by ODC Direct and IMT
- IMT built a new factory building for mount FAC

◆ Mirrors

- 3 finished, 3 in process, 1 will be cast 2023

◆ Astro2020

- US-ELT at the highest priority
- GMTO is preparing a proposal for NSF/MREFC funding



Operation – Participation in Gemini Observatory



Gemini Science Operation

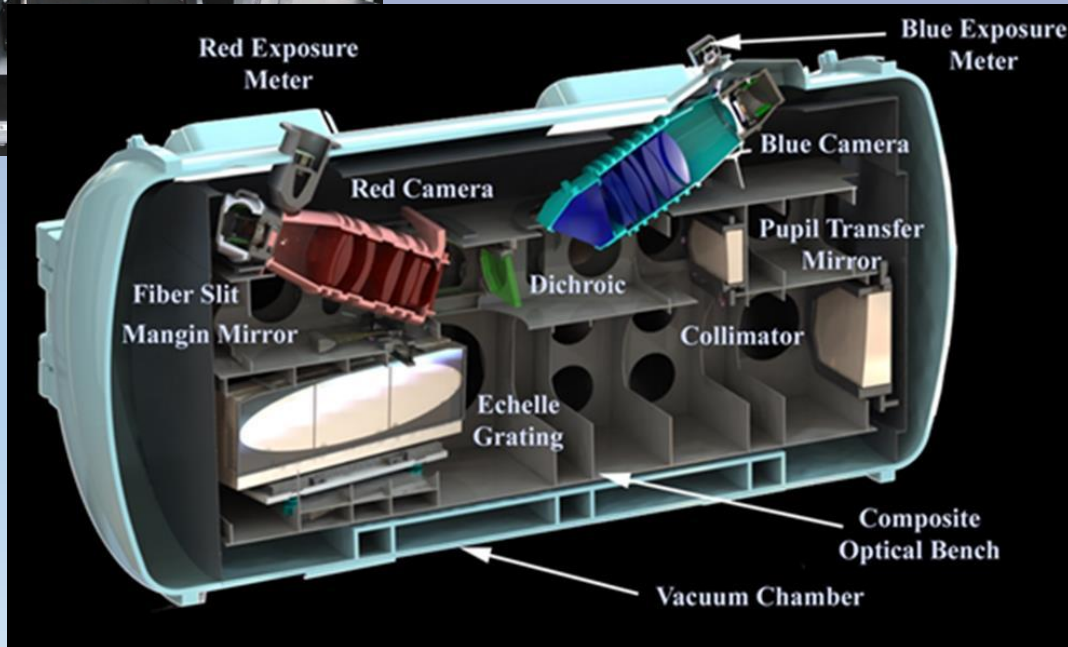
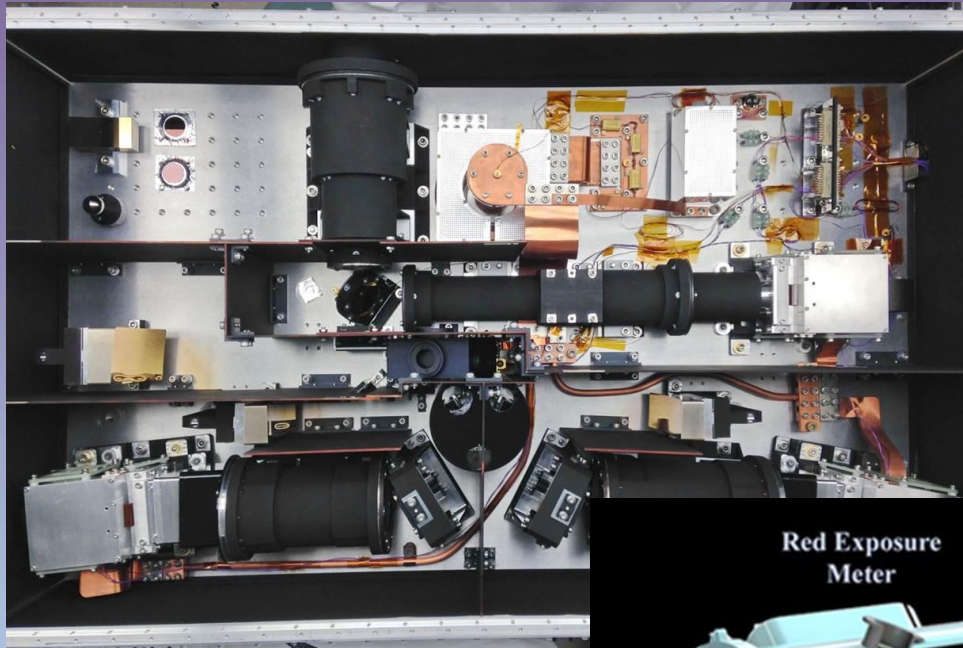
◆ CfLAT operates KGO with 7% share

- More details by "Dr. Soung Chul Yang"

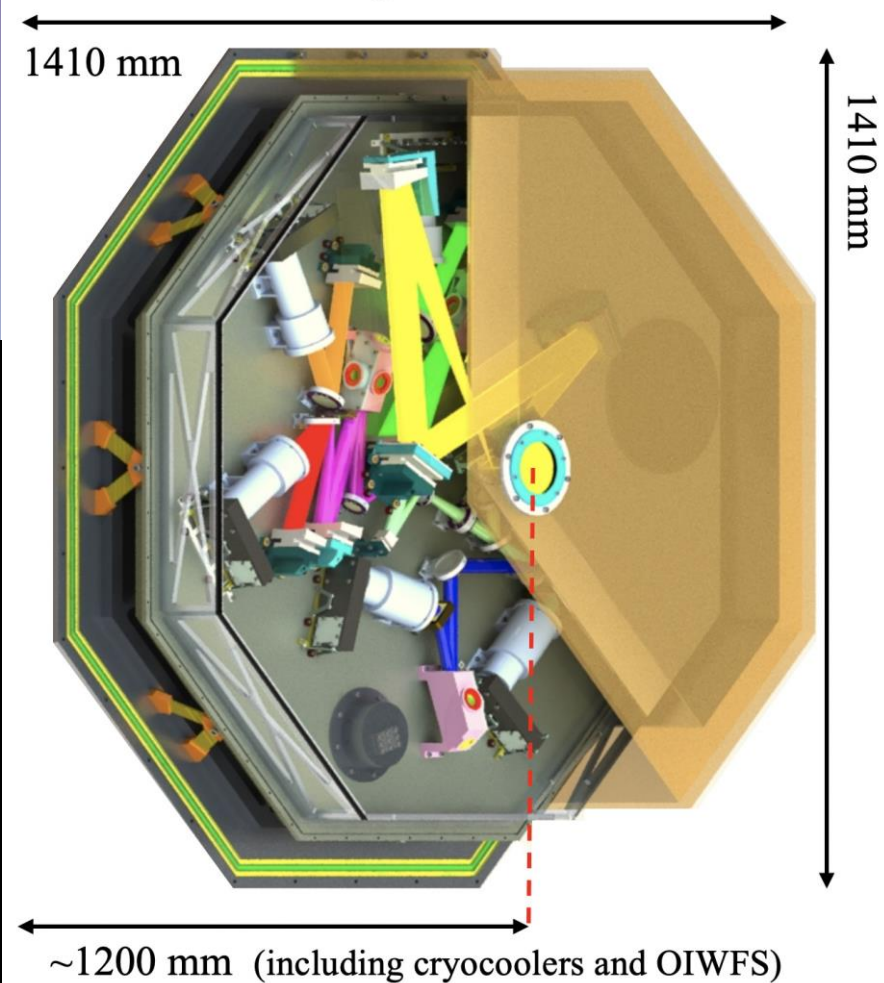
◆ IGRINS

- Currently visiting Gemini S (2020-2022)
- May extend 3 more years, discussion underway

Instrumentation



GMTNIRS Design – December 2020



Instrumentation

◆ GMT Instruments

- G-CLEF with SAO – ultra high-precision PRV machine
 - ✓ The first light instrument of the GMT
 - ✓ Fabrication phase – will be used at Magellan 6.5m for early usage
- GMTNIRS with UTA – high-dispersion spectrograph in JHKLM bands
 - ✓ Preliminary design study in progress
 - ✓ Will be used at Magellan first – named “MagNIFIES”

◆ Gemini Instrument

- IGRINS-2 – a clone of IGRINS as a facility instrument

◆ Others

- CfLAT contribute K-Spec, SPECTR, etc.

Working with / for the Community



With the Korean Astronomical Community

◆ Community engagement through

- Science and Instrument Working Group
- Optical Astronomy Division in Korean Astronomical Society

◆ For younger generation

- GMT Science White Paper Publication (2015, 2019)
- K-GMT Summer School
- International Fellowship Programs – Now KASI-UA, KASI-AURA in preparation

◆ For Survey Science

- Participation in SDSS-4
- Coordinator for Rubin/LSST
- Contact point for large telescope usage by Korean institutions



Thank You for Your Attention!