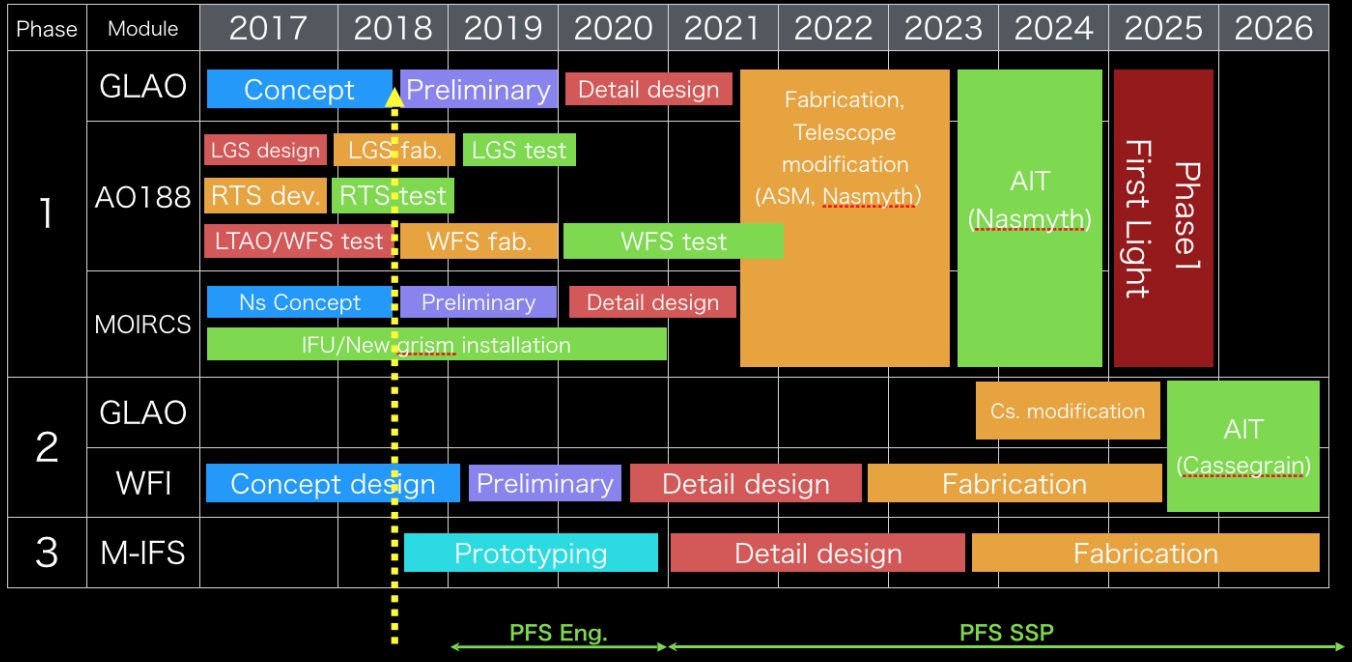
Discussion (III)

A/I toward CoDR 2018 and future

ULTIMATE-Subaru: Schedule



GLAO CoDR planned in early July, 2018

ULTIMATE-Subaru GLAO & Instrument

- GLAO reduces the FWHM by 50%
  - FWHM~0”.2-0”.3 under moderate seeing condition, 0”.5 even under bad seeing condition
  - No one doubts the benefits from GLAO for most of science cases, but no strong killer science
- K-band coverage is a key for the ULTIMATE-Subaru science cases
  - Wide-field K-band (or NB in K-band) survey is a unique point
  - Is K-band in M-IFS necessary?
    - Technical development in K-band fiber is essential
    - Compromise between science case in K and cost for having K-band fiber
- Instrument priority
  - Current assumption: MOIRCS → WFI → M-IFS
  - Define the requirement for instruments from science
    - minimum FoV, spatial resolution, spectral resolution, # of filters etc.
  - We need to come back to the discussion about instrument priority after MOIRCS including the community not only in Japanese, but also in the collaborator’s community
    - Priority should be decided mainly by science
    - Key technology development also needs to be considered

Collaboration framework

- Two different collaboration scheme before and after ASM
  - A: Design and feasibility study, prototyping, experiment (including ULTIMATE-START)
    - Experiment platform, access to the international telescope time, internship
  - B: Actual development for ULTIMATE subsystem
    - Discussion and access to the ULTIMATE SSP survey

Interests from collaborators

- ANU: Simulation, WFS, LGSF
- AAO: Fiber-fed M-IFS (Starbug, K-band fiber)
- ASIAA: Ns rotator (IMR/INR), Wide-field corrector lens, WFI, IFU slit, AO real-time control
- NRC-HIA: WFI, Fiber-fed High-res. (R~30,000) MOS spec., GIRMOS type MOAO IFU

Is it possible to submit a collaborative funding proposal?

Science team organization

- International science team should be organized to develop science case
  - Invite more scientists from possible collaborators' community into our science WG
- Assign a person in charge for science in each collaborator
- Summary of the instrument requirement is necessary to have optimal specification of the instrument
  - Current procedure is to maximize the capability, but we need compromise to make realistic instrument specification
  - Important to reconsider the instrument priority

After CoDR 2018

- Continue the design and experiment for the WFS & LGSF
- ASM funding proposal based on the feasibility study & cost estimation
- Develop ULTIMATE-START system: 4 laser system, LTAO SH-WFS
  - Demonstrate the 4 laser operation & tomographic wavefront sensing
- Toward CoDR for WFI and M-IFS
  - Come up with the concept optical/mechanical design of the
  - Key technology development/feasibility study
    - K-band fiber, Tunable filter, fiber positioner

Next meeting

- Science, technical, and management meeting in Feb, 2019
- Invite more scientists from Japan and international community
- Focus more on the science with ULTIMATE
- Where? Sendai? Hilo? or Good hot spring place?