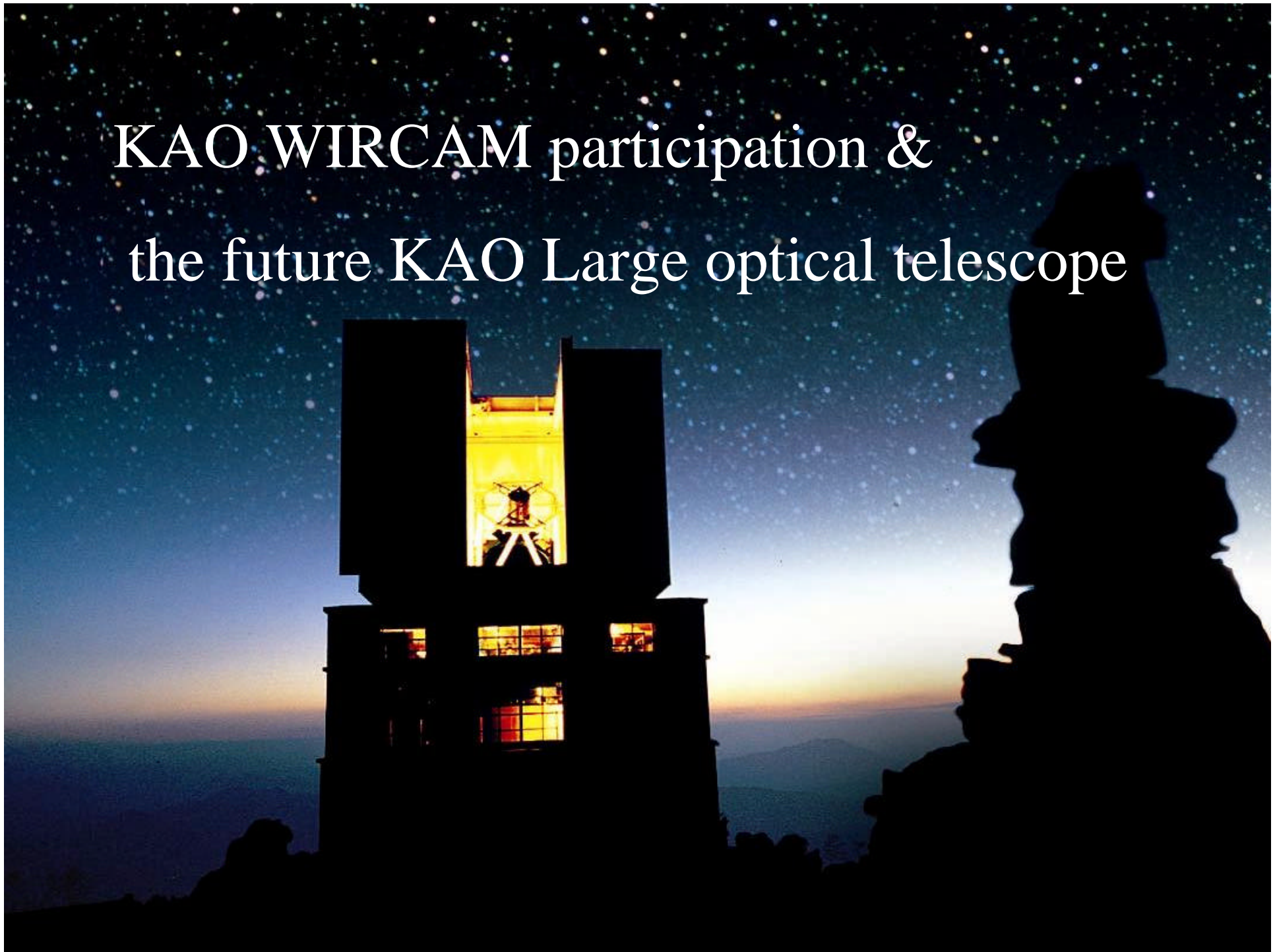


KAO WIRCAM participation &  
the future KAO Large optical telescope





## Brief Introduction to KAO Optical Astronomy

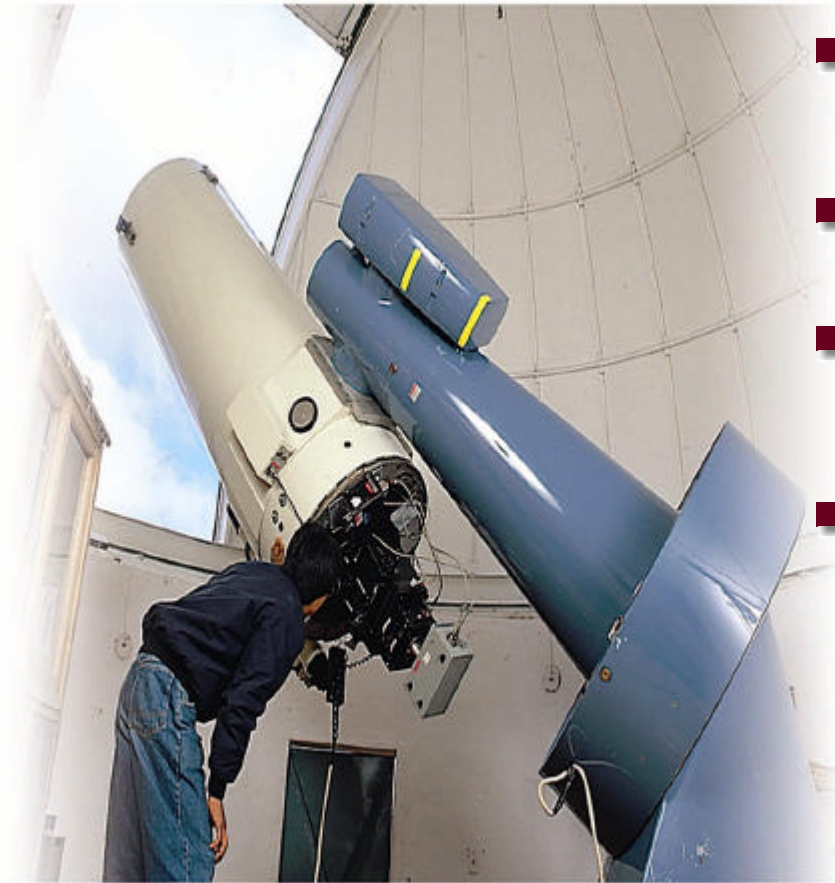


### Two Local Observatories & one group

- Sobaeksan Optical Astronomy Observatory
- Bohyunsan Optical Astronomy Observatory
- Large Telescope Project Group

cf. Taeduk Radio Astronomy Observatory  
Solar team

## **Mt. Sobaek, SOAO - 61cm Reflector Telescope**



- **61cm Min Reflector (f/3.5)  
Boller & Chivens Reflector**
- **Variables, Binaries, etc..**
- **future: long term project, variable stars**
- **Two Astronomers + supporting people**



## ■ Bohyunsan Optical Astronomy Observatory ( B O A O )

- 2K CCD science, now

**Future: Spectroscopy with BOES**

**4 Optical Astronomers + supporting people**



## Large telescope project group

- **Kim, Ho-il (at the CFHT) Group leader**
- - **Hyung, Siek (Science w/ the CFHT Tel)**
- **Chun, Mooyoung (WIRCAM)**
- - **two Astronomers from SOAO & Space S.  
(Kyung, JaeMan & Park, JangHyun)**
- 
- **Brainpool, postdoc, 2 fulltime supporting P.  
(Andre Fletcher, Alex Gusev, ....)**
-

# WIRCAM Project & Conceptual design

- Background

- § The CFHT wants to carry out the competitive survey program.

- Cf, Subaru, Keck, Gemini at the Summit

- § funding problem for the CFHT instrument. (want KAO, Taiwan)

- § possible cooperation in the future

- MegaCam (Optical region) & WIRCam (IR)

- § star formation at  $z \sim 2$ ,

- § survey program

## **MDU between KAO and the CFHT**

- 5 years (KAO's total funding = \$2 million )

§ 2 + 3 years (2000.8-2002.7; 2002.8- 2005.7 )

§ will send one KAO employee to the CFHT

§ .....

§ assign 13.5 nights / yr for 5 years

- One Astronomer at the CFHT

§ carrying out

## ■ KAO Large Telescope Plan & participation in the CFHT WIRCAM Project



? Two aspects

- Scientific Program
- WIRCAM Development itself



## Science

- Oasis Seyfert

§ Seyfert & Emission line object

- CFH12K

§ Globular cluster & G. Halo

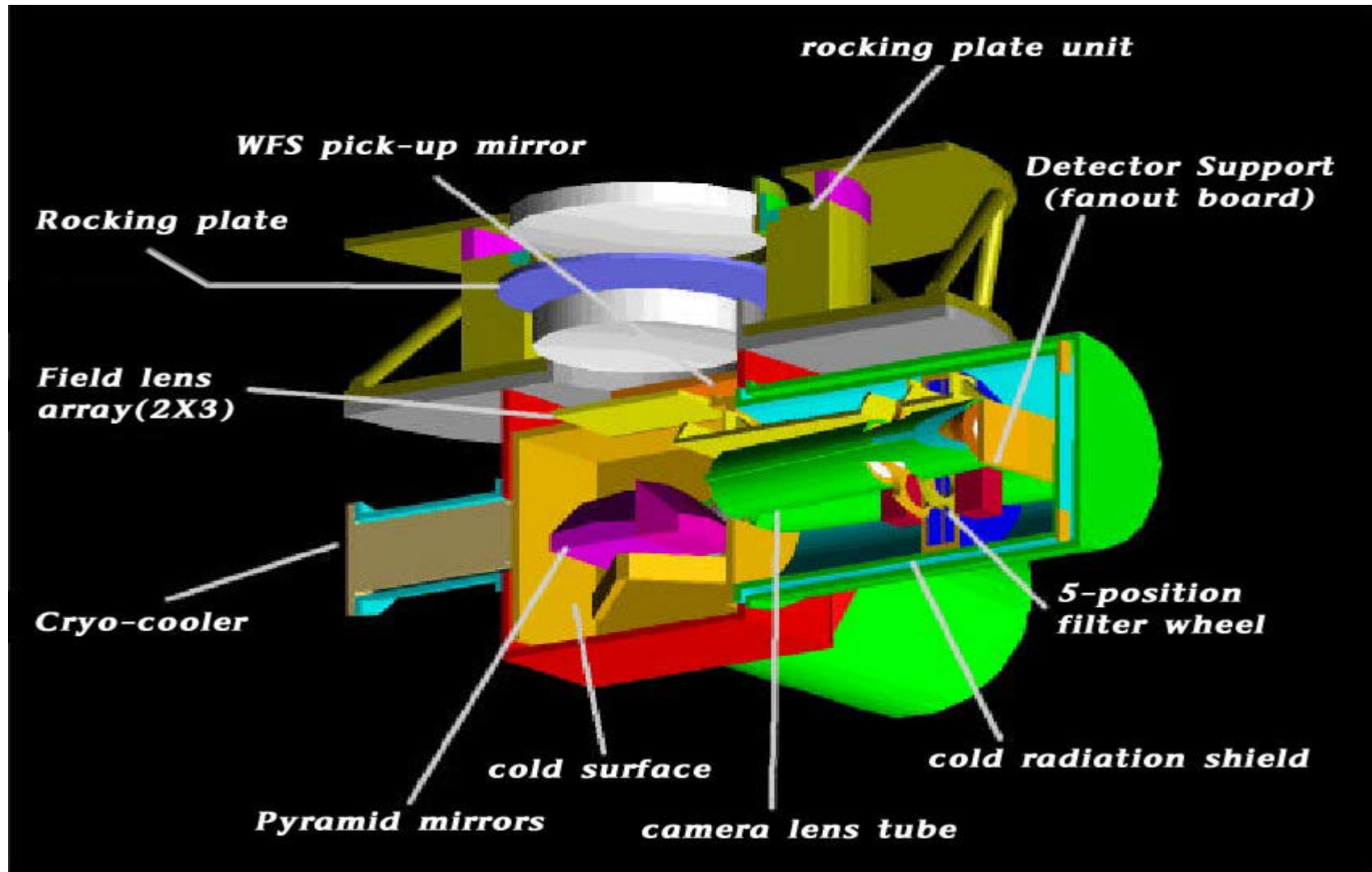
- KAO

• Tip-Tilt, User Software

- France

§ mechanics

■ WIRCam (old diagram, Cassegrain - > now Prime f.)



## **Wrk Packages (~20 VPs) - request of point list**

- Canada
  - § optics
- France
  - § mechanics
- IfA (Hilo)
  - § IR detector
- KAO
  - Tip-Tilt, User Software

## ■ KAO shows interest in these items

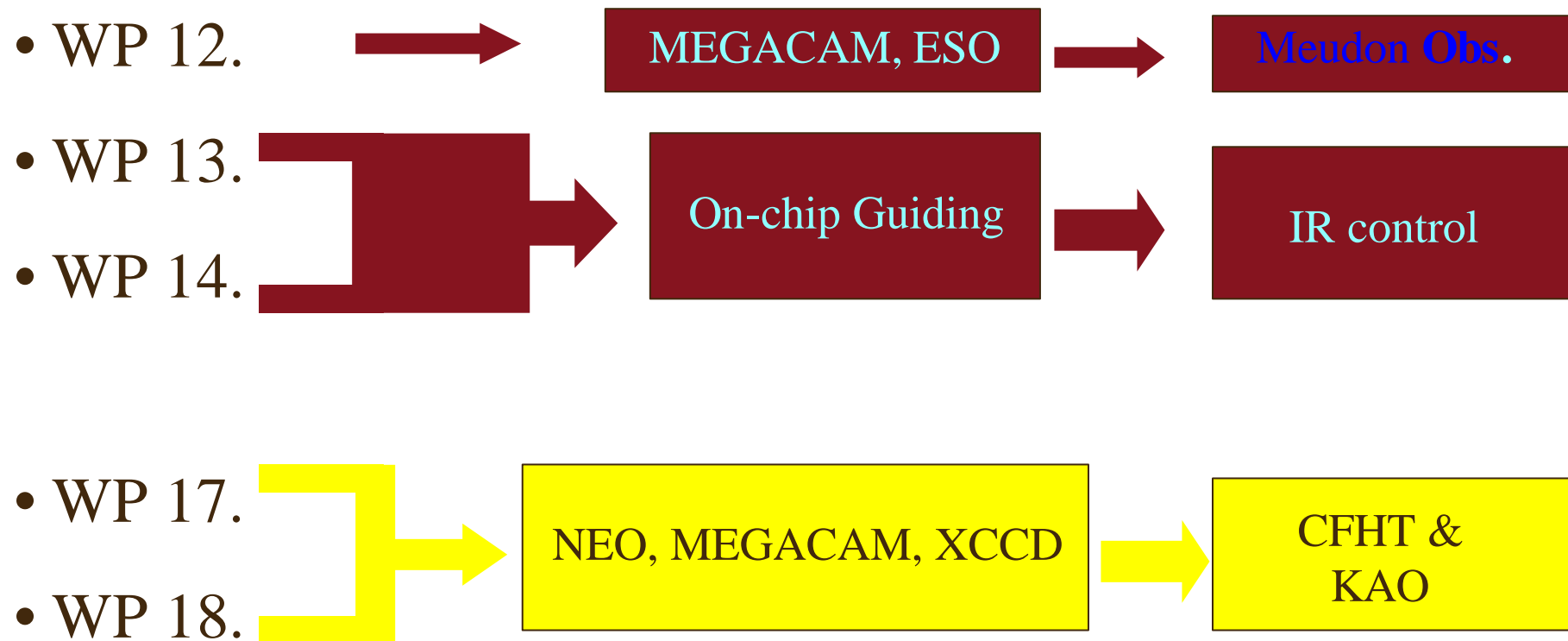
- WP 12. ISU (image stabilizing unit)
- WP 13. Monitoring system

... the above items are related to adaptive optics

- WP 17 & 18 (User and Engineering softwares...)

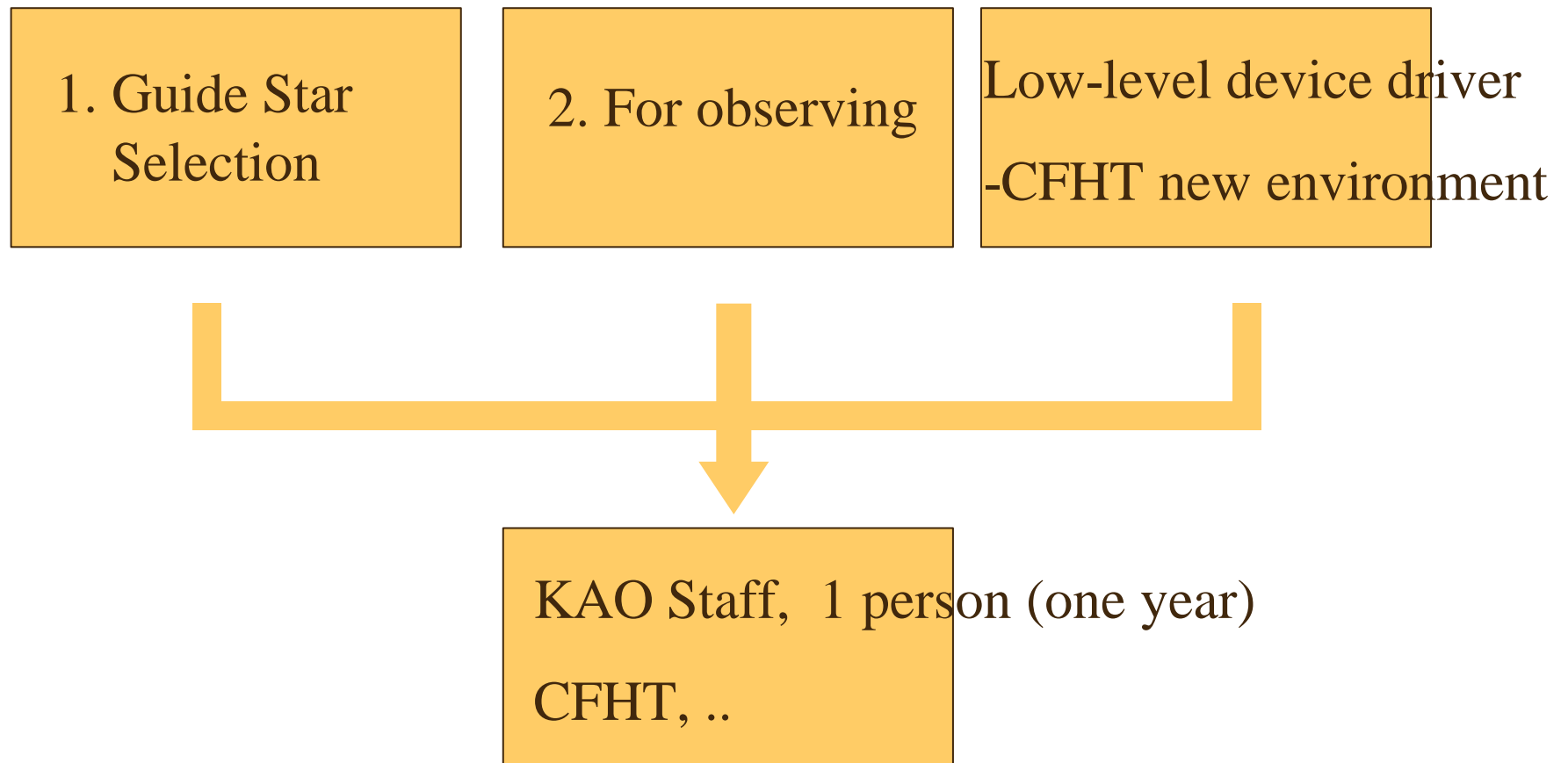
...these are the ones that we thought we really can contribute to the WIRCam construction!

## WIRCAM & KAO (Cass. -> Prime)





# WRCAM User Interface Software (KAO)



## ■ Others (dispatching KAO Scientist & Engineers)

- WP 10. IR Array readout, control & testing (IfA -Hilo)

? 2003, 3? (1-2 Astronomers)

- WP 15. System Integration & Pre-delivery testing (IfA -Hilo)

? 2003.10? (1-2 Astronomers)

- WP 16. On-site testing & Commissioning - CFHT (summit)  
2004.5? (1-2 Engineer & Astronomer)

## ■ Concluding Remarks

- the long term plan for a future large telescope
  - @ funding efforts for \$30-40 millions (2004 - 2011?)
- KAO hopes to find a partner, so both can build an observatory, similar to Keck.
  - ? Role model & case study
  - ? Spain Grand Telescope CANARIAS (GTC), Subaru, Keck
- Meanwhile, we need to access the large telescope & facilities
  - Ⓜ How??