



# Welcome to SWIMS Science Workshop 2015 !!

SWIMS Development Team

SWIMS18 Team



# Before we start...

- ▶ Donation for coffee/tea and snack is welcome!  
~500JPY/person
- ▶ Please send us your presentation before your talk !
  - ▶ They will be uploaded at <http://www.ioa.s.u-tokyo.ac.jp/TAO/swims/index.php?Workshop2015>  
(user : swimsws2015 , pass : Atacama)
  - ▶ Please tell us if there is any slide that cannot be open to public, as we are planning to open them after the workshop
- ▶ Wifi
  - ▶ SSID : SWIMS2015
  - ▶ Pass : TAO2018-Subaru2016-FL

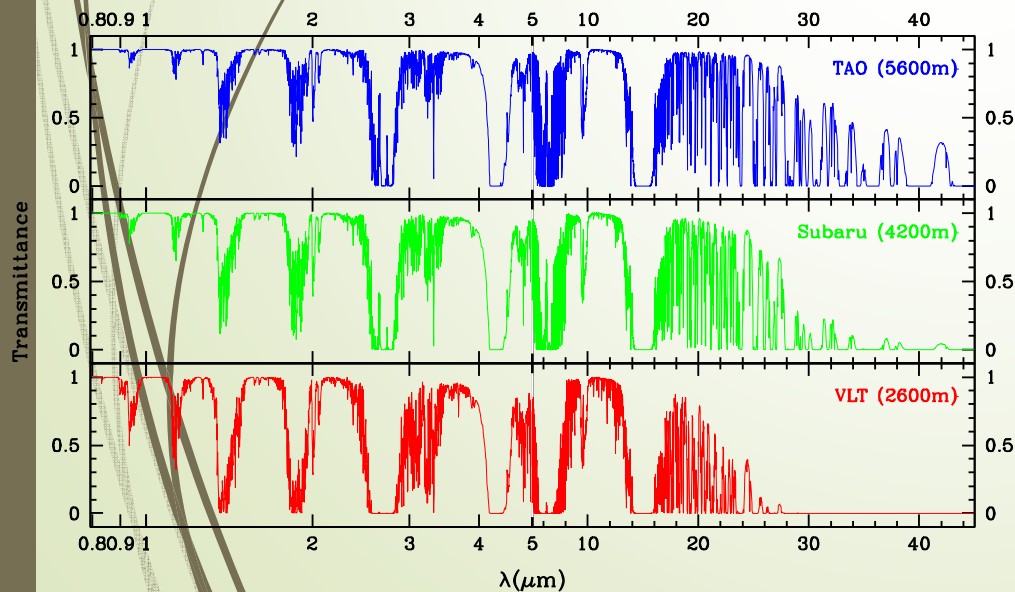


- Banquet at “Hiwa Ochite Sake Tanoshi”
  - Musashi-sakai Station
  - Leave loA around 6:00PM
  - Please follow Hayashi-san
  - 4500JPY for staff ~ 3000JPY for students



# The University of Tokyo Atacama Observatory (TAO) Project

- Construct a **6.5m IR-Optimized Telescope** at the summit of Co. Chajnantor (5640m), at the highest altitude on the Earth.
- Utilize the **broad atmospheric windows** in the infrared.
- As a **university-owned telescope**, carry-out broad range of science from cosmology to solar-system objects





# The Site

- ✓ Summit of Co. Chajnantor
  - ▣ 5640m altitude
- ✓ Excellent conditions
  - ▣ High clear fraction (82% photometric)
  - ▣ Good seeing (median 0.69" @ V-band)
  - ▣ Low water vapor (PWV: 0.85mm median)
- ✓ Obtained 50 year concession from Chilean government
- ✓ miniTAO 1m telescope installed







# Current Status of the Telescope

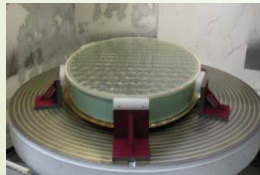
- ▶ Started Construction by Hosei-Yosan on 2013
- ▶ Major components have been delivered
  - ▶ Structure, Mirrors (M1, M2, M3), M1 Cell and Actuators, AGSH, M1 Cell Cart, M1 Cleaner, Part of Enclosure



Primary Mirror at Arizona



Secondary



Tertiary



Base-ring of Enclosure



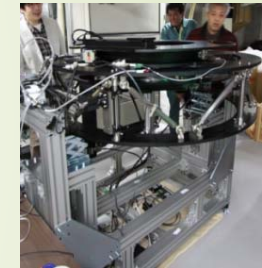
Telescope Mount, Preassembled at Nishiakashi



M1 Cleaning System



M1 Actuator



AGSH



M1 Cell

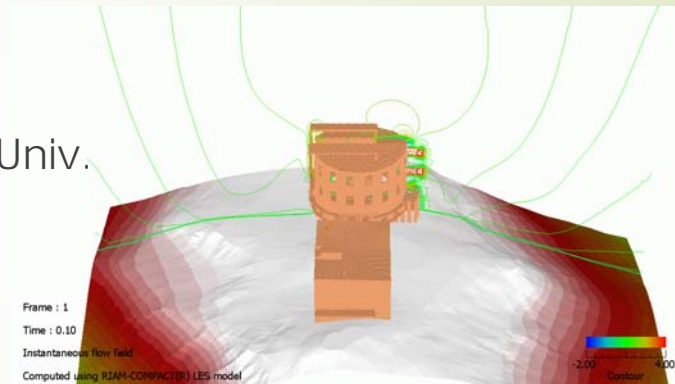


Mirror Cell Cart



# Current Status at Chile

- Summit Facility
  - Basic design completed
  - Foundation-soil investigation completed
  - Wind simulation : In cooperation with Kyushu Univ.
- Base Facility at San Pedro de Atacama
  - Inauguration ceremony on Nov. 2014
  - In operation



TAO Base Facility @SPA



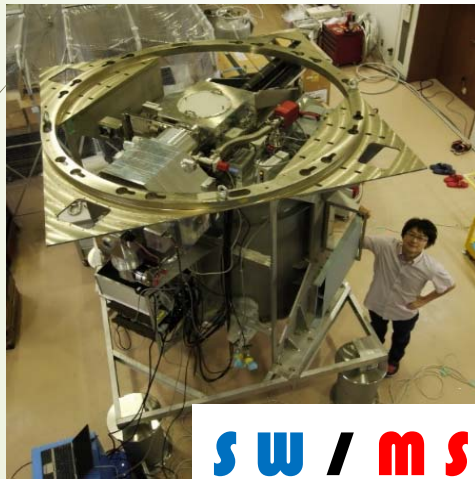




# Instrumentation Plan

Two 1<sup>st</sup> Generation Facility Instruments under construction

- SWIMS (NIR 0.9-2.5 $\mu$ m / Imaging, MOS spectroscopy)
- MIMIZUKU (MIR 2-38 $\mu$ m / imaging, spectroscopy)



2<sup>nd</sup> Generation Instruments under preliminary design

- Optical Instrument (Optimized the the U-band Imaging and spectroscopy)
- High-dispersion Y-band Echelle Spectrograph (TARdYS : Lead by PUC/AIUC)





# Schedule of the Telescope Construction

- ▶ ~2017 Spring : Completion of preassembly and tests of major components in Japan (telescope and enclosure) and in Arizona (mirrors and cells)
- ▶ Mid 2017 : Transport all the components to Chile, and start assembly of the telescope at the summit
- ▶ **End of FY 2017 : First Light**