

# Astronomy and Observatory Activity

May 31st, 2004  
2:00 -- 5:30pm



# Introduction

- The summit of Mauna Kea hosts several astronomical research facilities.
- Some of you will be doing your internship in a very specific subject.
- Today, we would like to work on the bigger picture: we would like to focus on understanding how an observatory works as an efficient research facility.

# Session Design (1/3)

2:00 - 3:00pm lecture format

- Introducing Keck Observatory (Peter W.)
  - Organization of the Research Facility
  - The Research in Astronomy
  - The Research Instruments
- Introduction to the role playing activity (DLM)
- A quick tour of hq (2 groups) (DLM/SA)
- Students learn who they are (what role they will play)

Break 3:00 - 3:15

# Session Design (2/3)

3:15 - 4:45pm - Work with the real people/mentor

- Students learn who this person is and what they do
  - find out where this person is
  - what is their background (e.g, education; job title; interests; motivation for work)
  - what do they do at the observatory
- Students share a real observatory activity
  - *mentor* describes and works **with** students on a current activity (~30 min) provides material for presentation.
  - *mentor* helps the student plan their presentation (~10 min)

# Session Design (3/3)

4:45 - 5:30pm - Report to the larger group

- Students finalize their presentation to the larger group
- For the presentations, the students play the role of the mentor
  - introduce themselves
  - talk about their role at the observatory
  - share today's activity (hopefully in a hands-on way)

# Play a Keck role, be..

- Dennis McBride \*
- Jason Chin \*
- Tom Nordin \*
- Shui Kwok
- Claire Max
- Antonin Bouchez
- Kevin Tsubota
- Branning Sung\*
- John Gathright

Next slides are notes about the  
research facility context

# 1 - Operation Aspects

- Observatory Mission
- Organization of the Research Facility
  - Partners
  - Departments
- How are Instruments Built
- Keck Observing Schedules
  - Instruments / TACs
- Schedule/Actions for a given night
  - OAs/ SAs / ops group
  - Data collection
- Instrument Configuration

## 2 - Astronomy Group

- What is being observed at Keck
- What was being observed that night
- Why this instrument?
- What is the scientific question?
- How did the observations answer the question?

# 3 - Engineering Group

- How are instrument designed
  - General
  - AO / NIRC2 specifics
- How does the AO instrument work
  - configuration for the observations
- Which part broke?
  - How what is used
- FSM problems solving.
  - Possible causes for the problem
  - Can we reproduce the problem?
  - Can we fix it and can we work around it?