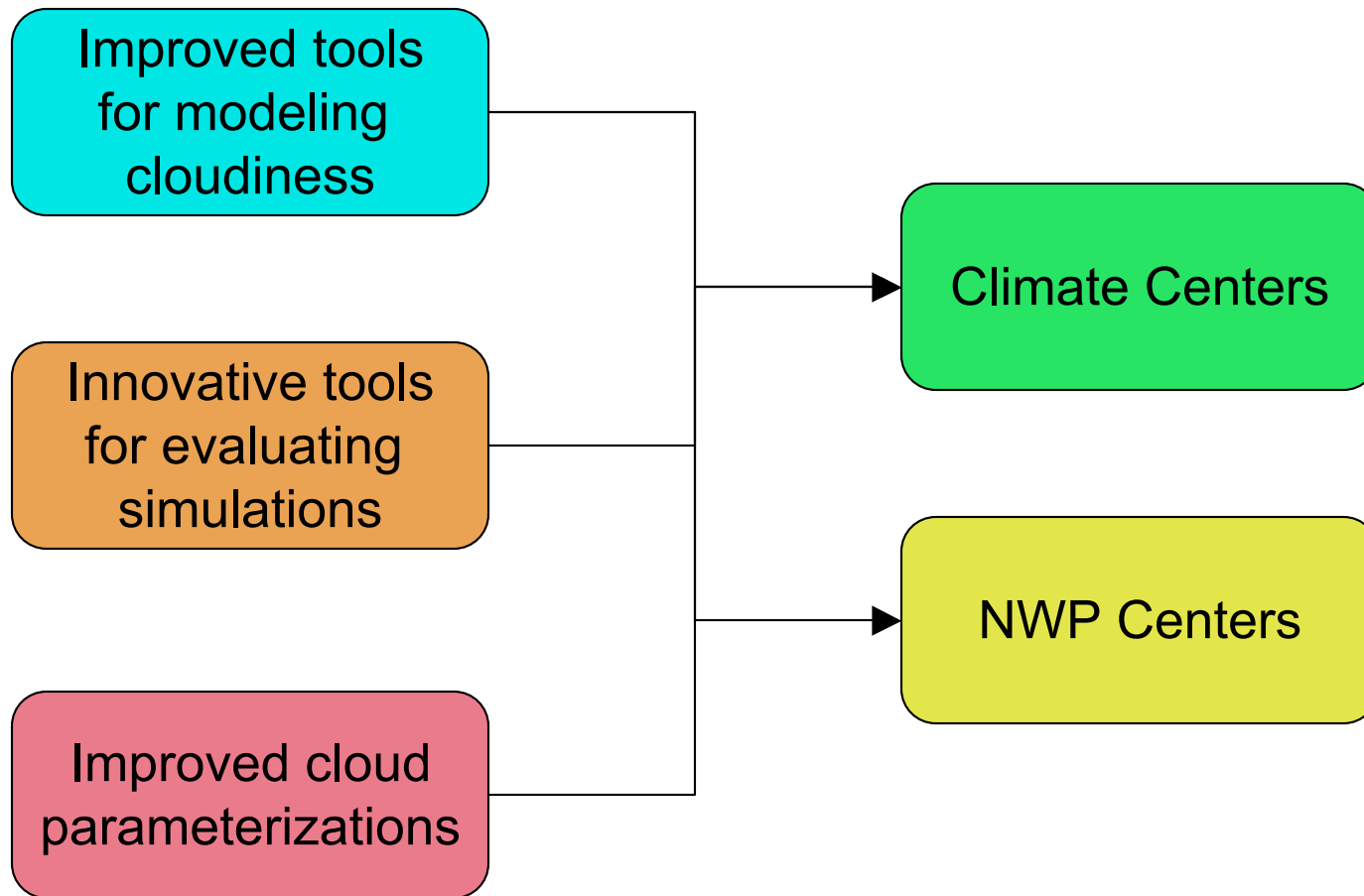


# Knowledge Transfer to NWP & Climate Modeling Centers

CMMAP STM Meeting  
Princeville, HI, 20-22 Feb. 2007



# Goals from Science/Implementation Plan



# Recommendations & General Action Items

*(Aug. 2006 STM)*

## **Recommendation:**

Knowledge Transfer coordinator would also serve as liaison to traditional modeling centers.

## **Action Items:**

- Develop student/post-doc interactions among CMMAP and modeling centers.
- Develop interactions among CMMAP and other high-res. modeling projects affiliated with centers
- Long-term: Foster feedback from centers to CMMAP on implications of advanced parameterizations for climate feedbacks, simulations of past/present/future climate.



# Interactions with the Modeling Groups

- **How best to foster interactions in early days?**  
*One suggestion: students and post-docs.*
- **Sources of students and post-docs:**
  - *Students and post-docs funded through CMMAP (9 GRAs, ?? Postdocs)*
  - *Students and post-docs at the modeling centers.*
- **CMMAP members @ centers can act as:**
  - *Post-doc mentors*
  - *Members of PhD committees*
- **Students can act as “apprentices”.**
  - *Post docs may be particularly nimble and reactive.*
- **Research topics:**
  - *Differences in, e.g., MJO between CAM-SP, CAM, CCSM, etc.*



# Action Items for Students

- 1. Survey MS and PhD students with CMMAP faculty interested in opportunities at centers**  
*(Bill Collins)*
- 2. Survey resources to foster visits for PhD students and fellowships for postdoctoral fellows**  
*(Bill Collins & Rossow, Leo Donner, Howard Barker)*
- 3. Work with KT Coordinator to create student-resource corner on CMMAP website**  
*(Bill Collins)*



# Results from Action Items

## 1. Survey of graduate students:

- $\geq$ Two students from UW interested in CMMAP
- CMMAP info sent to students and faculty at U. Utah
- Interested students will be identified at UCLA



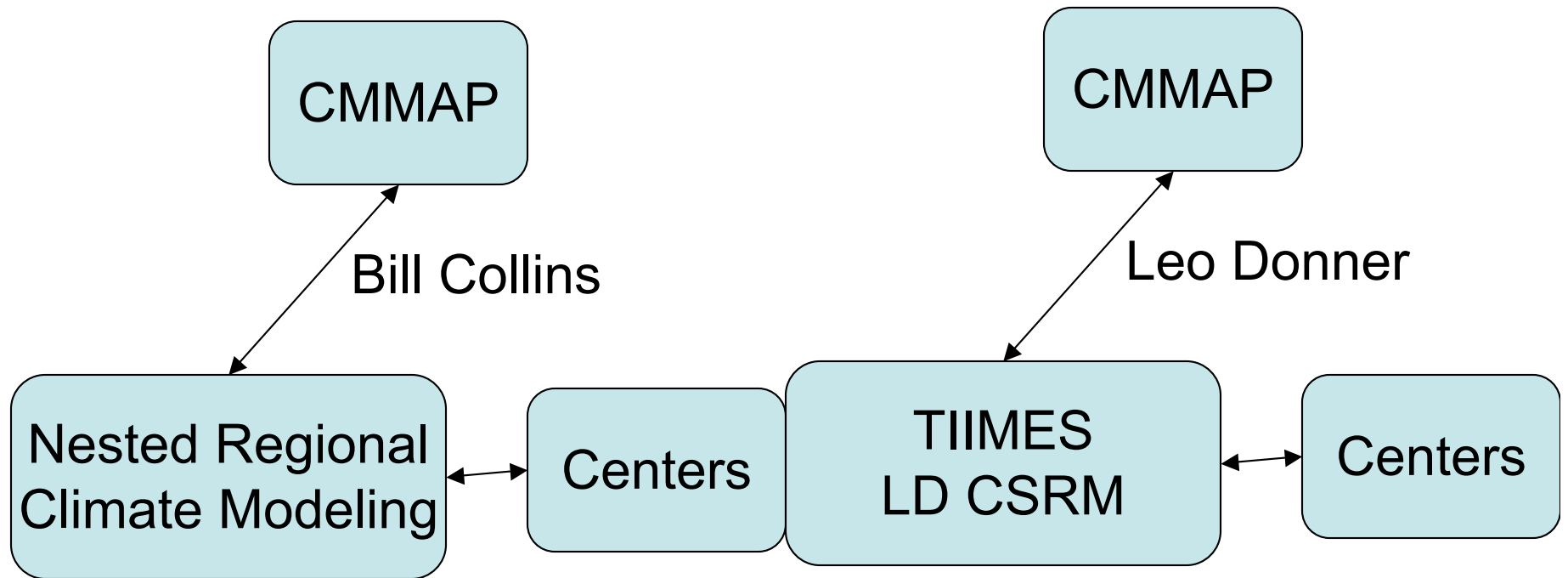
# Results from Action Items

## 2. Survey of resources at centers for students:

- Princeton/GFDL postdoctoral program  
(<http://www.aos.princeton.edu/PostDoc.html>)
- Opportunities available at CUNY for GISS-related work
- NCAR Advanced Study Program  
(<http://www.asp.ucar.edu/>)
  - Postdoctoral fellowships
  - Graduate visitor program
  - Faculty fellowship program



# Action Item: Foster exchange with other Processing-oriented modeling efforts





# Open Issues

- **Disconnect between NWP and climate centers interests:**
  - Short vs. long-range
  - Initial-value prediction vs. forced simulation
- **High priorities for NWP centers:**
  - Improved simulation of diurnal cycle
  - Improved skill at seasonal prediction in extra-tropics
  - Improved skill at intraseasonal variability: MJO
- **Establish links with more NWP centers**



# Recommendations (this meeting)

- **Subject MMF to NWP diagnostic frameworks**
- **Test MMF with deterministic short-range forecasts:**
  - *Long-term (climate) errors exposed by short forecasts*
  - *Also, could run MMF and conventional parameterizations in parallel*
  - *Advantage: these tests are comparatively cheap.*
  - ***ACTION ITEM:*** *B. Collins will arrange tests of SuperCAM in CAPT*
- **Continue tests of MMF in community intercomparisons:**
  - *AMIP-style simulations*
  - *GCSS-style case studies*



# Additional Recommendations

- **Information exchange with the centers:**
  - *Topical sessions at center meetings:*
  - *Examples: CCSM and ECMWF annual conferences*
  - **ACTION ITEM:** *B. Collins to set up session at CCSM workshop*
  - **ACTION ITEM:** *Other KT members to identify opportunities*
  - **ACTION ITEM:** *KT coordinator to set up email notices*

