

# Colorado College Mentoring



*Luke Van Roekel and Howard Drossman*

# Many Learning Styles

- *Students learn in a number of ways*



*Auditory*



*Visual*



*Tactile*

- *It is imperative to include them all*

# AIR Students Teaching YES Students

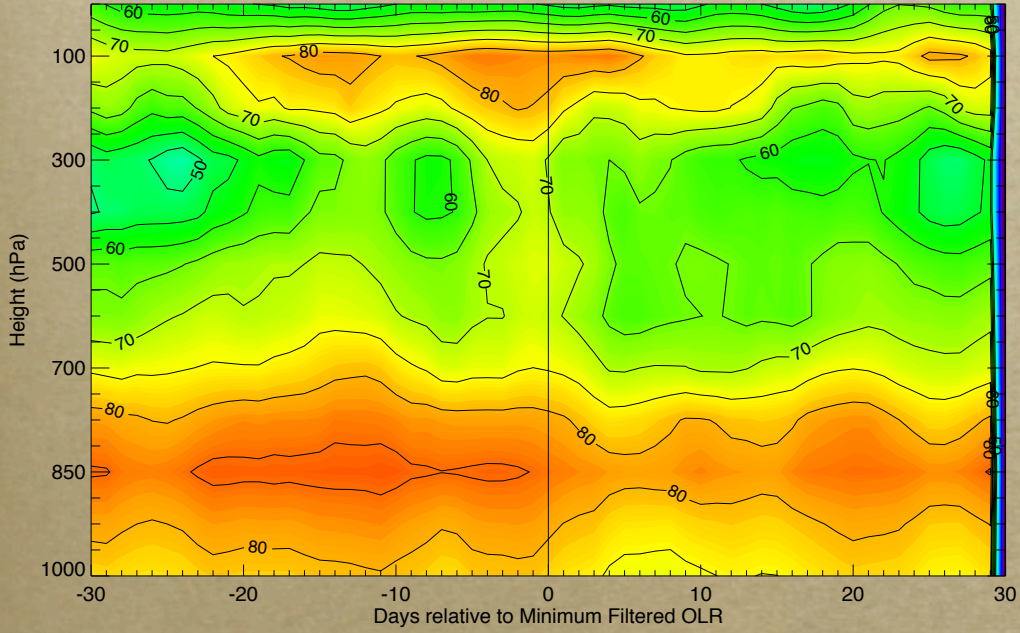


# POGIL (process oriented guided Inquiry learning)

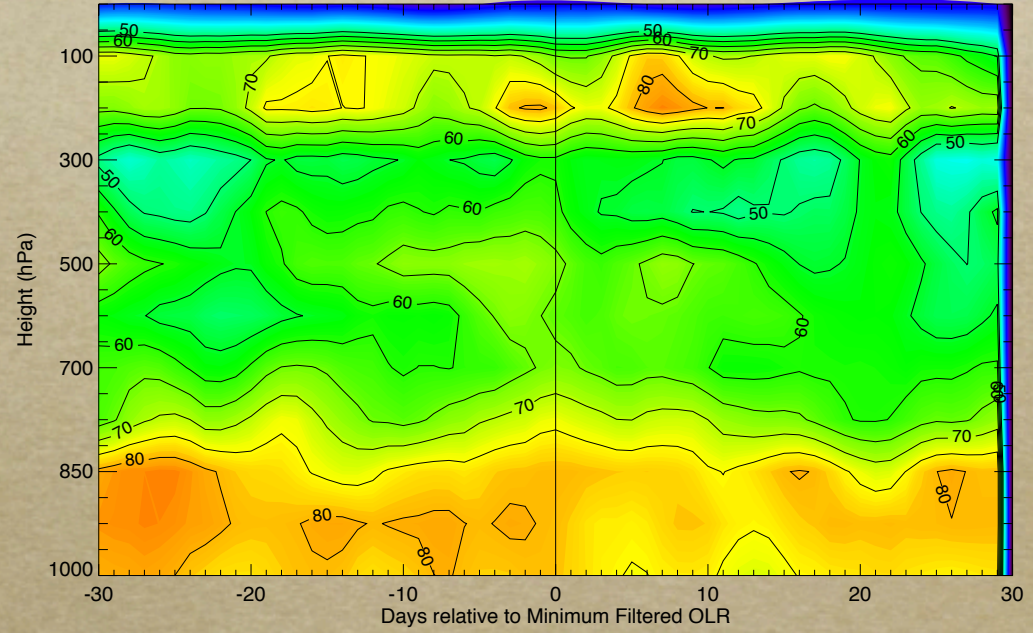
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- *Constructing their own understanding based on prior knowledge and experience and skills*
- *following a learning cycle or exploration, concept formation and application*
- *connecting and visualizing concepts and multiple representations*
- *discussing and interacting with others*
- *reflecting on their progress and assesing their own performance*

Relative Humidity Composite during MJO Passage (SP-CAM)



Relative Humidity Composite during MJO Passage (CAM)



## Example POGIL Exercise

### Learning Goals:

Understand how to interpret three-dimensional model plots

Understand when an MMF improves representation of the MJO

1. Why is height on the y-axis represented as a pressure and not an altitude?
2. What parameter is represented by the different colors? At which colors is this a minimum?
3. What is OLR? At what “day” is OLR at a minimum?
4. How does that “day” relate to the position of the MJO? How does the relative humidity compare to the other days at that position as averaged over all altitudes?
5. Comparing SP-CAM and CAM, which has a greater relative humidity averaged over all altitudes?
6. Why does a greater relative humidity imply a better MMF representation of the MJO?

# Now it's your turn

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- *Groups - make sure there is a mixed group of PhD modelers, grad students and educators)*
- *Two tasks - Explain the MMF and the MJO*
- *Use data as much as possible, pictures, etc...*
- *Submit to us for future use.*

## POGIL Exercise

Names (also include PhD – Atmospheric Science, Educator, PhD – Other field, Grad Student, etc...):

Manager \_\_\_\_\_

Recorder \_\_\_\_\_

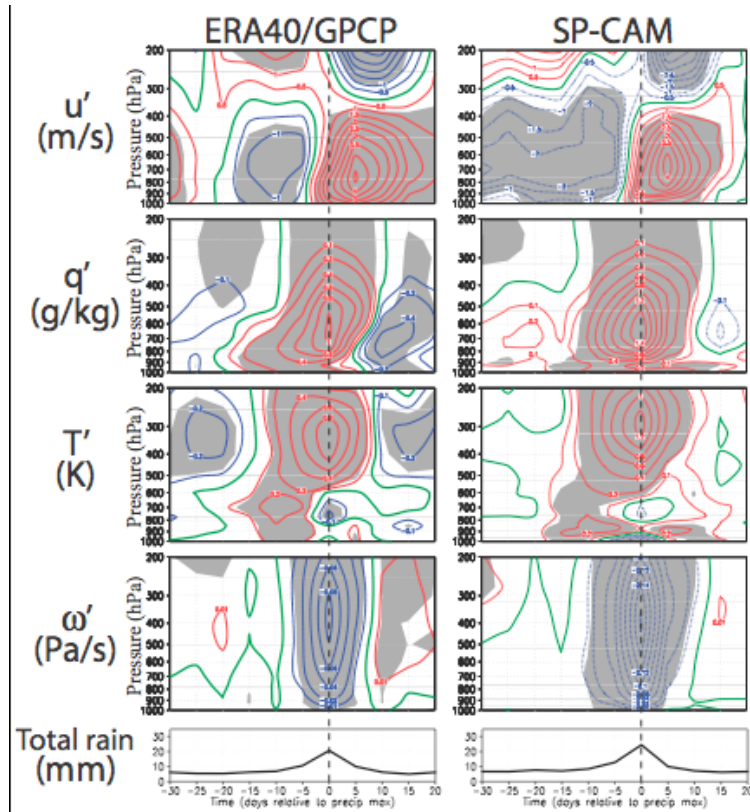
Reporter \_\_\_\_\_

Process Observer \_\_\_\_\_

### Learning Goals:

Understand how to interpret three-dimensional model plots

Understand when an MMF improves representation of the MJO





## POGIL Exercise

Names (also include PhD – Atmospheric Science, Educator, PhD – Other field, Grad Student, etc...):

Manager \_\_\_\_\_

Recorder \_\_\_\_\_

Reporter \_\_\_\_\_

Process Observer \_\_\_\_\_

### Learning Goals:

Understand how to interpret three-dimensional model plots

Understand when an MMF improves representation of the MJO

Feel free to include your own...

