

Modeling Group Action Items:

David:

- figure out if the systematic error results are as optimistic as they seem. Probably need to run the OCO cases again, for comparison.
- Rerun the mistuning cases.
- Try to quantify transport errors.
- Run high resolution model with diurnal cycle and fossil fuel to get a more accurate picture.
- Multiple cases with different random error seeds to get more interesting statistics.
- Incorporate in situ and GOSAT data as truth
- Simulate observations (with uncertainties) in the style of these platforms and see what the added value of ascends data is.

Peter:

- Run inversion studies that parallel David's presentation
- Examine effects a minimum detectable level on inversions
- Forward calculations using TM5 (signal detection)

Randy/Anna:

- Complete fossil fuel tests, including China emission doubling scenario
- Forward calculation of sensitivity to ocean fluxes

Andy/Scott:

- Compare with David's results
- Use different flux scenarios from Randy
- Realistic regional source/sink signal detection

AER:

- Validation studies with WRF-STILT for concentration towers, aircraft, TCCON
- Urban plumes and high resolution modeling (signal detection)
- Work with Randy to use CASA model for more realistic posterior flux error calculations, keeping track of important particle information
- Comparisons of adjoint results with footprint results

General:

- Leverage Antarctic measurements to constrain the southern oceans?
- Examine impacts of different biases on retrieval errors.