

Modeling Breakdown Charge

- **Model**

-Do we need a special model for hurricanes?

GFDL model, UK unified model.

We need to look at accuracy of both numerics and physics

- **Coupled model**

For intensity forecast, we may don't need to have a fully coupled model? Maybe not, offline component models, wave models, storm surge models, can be run with hurricane model output.

- **Initial Condition**

Initial conditions, from global data assimilation to regional model – data assimilation.

- **Observation Strategy**

Develop a program to perform hypotheses testing
OSSE, sampling strategies in the inner core, in the ocean,

- **Data assimilation**

Compare different data assimilation approaches, 3DAR, 4DVAR,
ensemble Kalman filter systems

- **Ensemble**

Ensemble can be tested in research models to determine the optimal
numbers, testing at different resolutions

Modeling requirement

- Develop new model and existing model, both need to do
- To see what we missing in model, and verification.
- Interface, new sub-model or existing model
- Need a matrix, study models, intercompare the models. Analyze the current datasets.
- Probabilistic prediction of hurricane intensity, integrated measure of storm intensity
- Connection with other programs, RAINEX, CBLACS, ISPHA, DOE infrastructure experiments.