

# MODELING AND SUPPORT WORKING GROUP

## CHEMICAL FORECASTS

- Four standard chemical forecasts in the field:
  - GEOS-5 Chu/Jacob/Rodriguez
  - CAM-Chem Emmons
  - WRF-STEM Carmichael
  - WRF-FLEXPART Fuelberg
- All forecasts will use a common polar orthographic projection with 90°W at bottom for their maps, and a common altitude coordinate (km) for their profiles
- We will try to use a common visualization software (Jaegle), map forecasts onto Google Earth (Colarco)
- Carmichael will explore the value of constructing a model 'ensemble' for the three chemical forecast products, for common variables such as total CO
- All forecasts will use gridded anthropogenic emissions from David Streets to be provided by early March

# SPECIAL EVENTS

## FIRES

- Fromm/Stocks will provide support for fire detection, pyroconvection development during summer deployment; rely on MODIS firecount data for spring deployment
- Gridded inventories of fuel burned and fire emissions for use in chemical forecasts will be available from NRL (Reid) and GEOS-5 (da Silva) on basis of MODIS firecount data for both spring and summer deployments
- CALIPSO, MISR will provide plume height information with ~1 day lag

## HALOGEN EVENTS

- BrO satellite imagery from OMI and GOME-2 will be provided with 1-2 days lag (Chance)
- REAM CTM will forecast ozone depletion, BrO<sub>x</sub> transport associated with high-BrO events observed from space (Wang/Chance)

## VOLCANOES

- SO<sub>2</sub> satellite imagery from OMI will be provided with 1-2 days lag (Gleason)

# FLIGHT PLANNING MEETINGS

- We will seek to streamline the process for presentation of chemical forecasts and NRT satellite data at the 10 a.m. daily meeting
  - Try to be more expeditious, but still make sure that diversity of views can be expressed
  - Use of common map projections and visualization software should greatly facilitate the synthesis of the different forecasting products

## **OUR ROLE IN ARCTAS-Cal (CARB)**

- **Still not clear. Presence of chemical forecasting groups is desirable but maybe not with full personnel**
- **Will CARB have their own modelers to support flight planning?**

## **UPDATE ON PRE-HIPPO**

- **They will try to move up their spring deployment by 1-2 weeks to accommodate us**
- **Prefer intercomparison to be conducted as concentric spirals rather than wingtip-to-wingtip – do the pilots still need to meet first?**