

ARCTAS FORECASTING AND MODELING TEAM:

- Daniel Jacob (Harvard, project scientist), Lyatt Jaegle (UW), Steven Pawson (GSFC)
- Henry Fuelberg (FSU, mission meteorologist)
- Greg Carmichael (U. Iowa), David Streets (ANL)
- Ralph Kahn (JPL)
- Michael Fromm (NRL), Brian Stocks (Canada)
- Jennifer Olson, Gao Chen (LaRC)
- Jose Rodriguez (GSFC), Ross Salawitch (UMd)
- Kelly Chance (SAO)
- John Worden (JPL)
- Allen Chu, Lorraine Remer, Juying Warner, Mian Chin, Peter Colarco, Huishen Bian (GSFC)
- Louisa Emmons (NCAR)
- Yuhang Wang (Georgia Tech), Kelly Chance (SAO)

TASKS IN THE FIELD:

- Provide//interpret/integrate meteorological and chemical forecasts
- Identify special events relevant to flight planning (fires, BrO, satellite validation opportunities...)
- Day-to-day flight planning
- Monitor progress of mission toward its scientific and validation objectives
- Identify any major discrepancies between measurements and expectations
- Provide first-look model results for post-mission data interpretation

METEOROLOGICAL AND CHEMICAL FORECASTING

- **WRF meteorological forecasts (Fuelberg)**
- **MM5-polar forecasts (Wang)**
- **FLEXPART from sources of interest (Fuelberg)**
- **Backward trajectories from flight tracks (Fuelberg)**
- **GEOS-5 global chemical forecasts for CO, aerosols, ozone, CFC tracers (Jacob, Chu, Rodriguez)**
- **CAM-Chem global chemical forecasts including MOPITT CO and MODIS aerosols data assimilation (Emmons)**
- **WRF-STEM near-hemispheric chemical forecasts for full chemistry, aerosols, mercury (Carmichael)**
- **NRT satellite data for MOPITT CO (Emmons), AIRS CO (Chu), MODIS AOD (Chu), MISR aerosols (Kahn), OMI and GOME-2 BrO (Chance), TES ozone and CO (Worden)**
- **Forward trajectories from AIRS CO and MODIS AOD scenes (Chu)**
- **Satellite overpass software (Olson)**
- **Satellite validation opportunities (Kahn, Worden, Emmons, Chu)**

IDENTIFY SPECIAL EVENTS

- **Fires, pyroconvection, and plume transport from analysis of ground and satellite data (Fromm)**
- **MISR maps of boreal fire plume height, optical depth, and smoke type (Kahn)**
- **High-BrO Arctic events from OMI and GOME-2 data (Chance)**
- **REAM regional CTM applied to high-BrO events (Wang)**

MONITOR PROGRESS, IDENTIFY ISSUES

- **Fast data archival, merging, exchange, intercomparisons (Olson)**
- **Photochemical modeling (Olson, Rodriguez)**
- **Bromine chemistry (Rodriguez)**
- **Comparison of aircraft data to GEOS-5/GOCART aerosol model and satellites (Chu)**
- **Near-real-time GEOS-Chem simulations with full chemistry-aerosols-Hg (2-day lag time) (Jacob)**

FORECASTING/MODELING TEAM DAILY SCHEDULE

- Early a.m.: download, visualize, analyze latest forecasts
- 10 a.m.: Flight planning meeting (all are welcome!)
- Noon: flight plans finalized, communicated to aircraft crew
- 4 p.m.: flight plans communicated to Science Team meeting (if no-fly day)