- **Black is From October 2006:**
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- **MICROPHYSICS-stand alone with OH, O3, HO2 read in is working already in GMI, have asked for pre-industrial, but no action—want to write paper (Liu is lead) that will show that doing COUPLED GAS-PHASE/AEROSOL is important for size distributions, and therefore climate impacts.—Are the pre-industrial O3, OH HO2 documented? Run pre-industrial aerosol emissions and present day O3, etc. Run pre-industrial aerosol emissions and pre-industrial O3, etc. Also with GEOS4 DAS (3 years – do you have tropospheric O3, etc for present day and pre-industrial)**

Apparently runs completed in January – but no one was told.

GOCART – GMI DIFFERENCES, WHERE DO WE GO NEXT; have interactive emissions for dust and sea salt already in GMI (will add DMS soon); We're pretty sure the TP-core, diffusion, and convection are the same used in GOCART and GMI as long as meteorological fields the same. Wet scavenging is different: same in updraft in convective cloud, and large scale cloud (washout + rainout), but GOCART does not do separate convective rainout and washout; Dry deposition is difficult to compare—will examine lifetime differences first to see if necessary to implement in GMI. Sedimentation algorithm similar. Hygroscopic growth is both based on Gerber. Will wait until all of GOCART modules are incorporated and then write intercomparison paper (just use FVGCM or GEOS4). Need Jules.

Huishing =- partially complete. Needs writing up.

Need other new meteorological fields: 1 x 1 fields from GEOS4; CAM3 fields – U of Mich or PNNL; ECMWF ?? when; GFDL who? NCEP: Need at least 5 years.

Still needed.

Can write a short paper comparing aerosol optical properties.

—WRITING IT UP—Huisheng will take lead - ???

—ALGORITHM FOR EMISSIONS (DUST, SEASALT?) Done – might want to look at other algorithms for sea salt. (small sea salt emissions are larger – Tony Clarke)—added to GMI

—CLOUD ACTIVATION Rafaella– Running 2 more paramenterizations (Feingold and Heymsfeld; Segal and Khain) microphysics then will finish paper (all 3 met fields).

—Close to ready for write-up

—Second paper?? possible: using interactive microphysics; droplet number is doubled (present day are done), but Bigyani said they had a bug??? (DAO, FVGCM, and GISS). Still in progress?? Third paper: entraining cloud activation parameterization, need to add to Atlanta GMI. Any plans to add to Goddard GMI?? Fourth paper: Off line: Autoconversion parameterization: K & K and Rotstayn intercomparison, publishing. Fifth paper: dispersion parameterizations (Pinty & Cohard and Daum and Liu, 2 schemes).

AEROCOM emissions—University of Michigan gave pre-industrial and present day to Georgia Tech, but Georgia Tech does not have. Slight glitch, but they have these now.

•STRATEGY FOR FINISHING COUPLED GAS-PHASE/AEROSOL
Bug in code -- ?We asked for a copy of model and did not receive for 2 months. Xiaohong will take quick look. Isolate chemistry in a box model? Need to add Michigan nitrate/ammonium aerosol.

—SETTLE MIE CALCULATIONS FOR FASTJX—easy – Michael, done

—SET UP INTERACTION BETWEEN MICHIGAN/PNNL/GODDARD

—Adding CAM4 aerosol to GMI and intercomparing (March 2007 ready to contribute to GMI in September 2007) – Putting subcontract in place now – will write up microphysics runs.

•OTHER (Leftover) MANUSCRIPTS: Debra working on 2-D aerosol dynamics intercomparison done, want to add aerosol dynamics to COMBO model

•FUTURE IMPLEMENTATIONS-Meteorology, meteorology, meteorology

•aerosol dynamics (3 modes) to COMBO model—add COS for stratospheric model; ice studies also possible. Must also couple PSC's to aerosols in polar regions –Huishing identified as lead – is it possible to use linoz in the stratosphere? OH is not predicted?

•Debra working on sectional model interaction with other aerosol types

•Steve Baughcum, others, might want aerosol mass only added to COMBO for aircraft studies. – still true, but not first priority

•aerosol indirect effect interaction with chemistry and feedbacks to climate – if have coupled – climate version can do now

•Michigan has submitted box model study with SOA – starting to work on coupling aerosol/chemistry together with SOA formation

Michigan working on writing up comparison of microphysics version and mass only version for droplet nucleation (not GMI funded). Will complete end of summer and give fields to Georgia Tech. Hopefully contract with PNNL will be done so Xiaohong

can compare models for effect of present day and pre-industrial chemistry on microphysics.

Need to examine emissions and uncertainty in emissions – Streets, vs Ito, biomass burning emissions uncertainties – group effort???