

# **AEROSOL WORKING GROUP**

5<sup>th</sup> International GEOS-Chem  
Meeting

# MAJOR ADVANCES SINCE LAST GC MTG

- The addition of 2 microphysics packages: TOMAS & APM
- Addition of ISORROPIA II
- Addition of aromatic SOA
- Update of aerosol optics
- Aerosol benchmarks (US and EU only)
- Updates to emissions and deposition & fixes

# HIGH PRIORITY DEVELOPMENTS

Model Development	Development Group	Readiness
APM microphysics	SUNY-Albany (Fangqun Yu)	V9-01-02
Sea salt emission & deposition modifications	UW (Lyatt Jaeglé)	Very high
Radiative Forcing calculations	Sub-group	low

Email Colette  
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interested in participating (email will  
go out to GEOS-Chem list)

# MEDIUM PRIORITY DEVELOPMENTS

Model Development	Development Group	Readiness
Dry dep over snow/ice	Harvard (Jenny Fisher)	V9-01-02
Seasonality to Streets NH3 emissions	Harvard (Jenny Fisher)	V9-01-02
Expanded SOA option	Caltech (Havala Pye)	At Harvard
Dust sub-micron size distribution for optics	CSU (David Ridley)	High
Option to uptake SO2, HNO3 & H2SO4 on dust	NASA Langley (Duncan Fairlie)	High
Cold T scavenging	Harvard (Qiaoqiao Wang)	Medium
Accumulation mode scavenging update	Harvard (Qiaoqiao Wang)	Medium
Addition of effective wind speed to GC met fields for dust & sea salt emissions calculation	GCST	Low

# LOW PRIORITY DEVELOPMENTS

Model Development	Development Group	Readiness
Clean up of AOD diagnostics	Harvard (Patrick Kim)	V9-01-02
Marine OA sources	CSU (Kateryna Lapina)	High
FlexAOD	L'Aquila (Gabriele Curci)	Medium
Dust simulation expansion: tagged simulation, oxalate, P, Fe chemistry	NC State (Matthew Johnson)	Low
Cloud water pH & sulfate chemistry	UW (Becky Alexander)	Low
Addition of deposition obs to standard aerosol benchmark	CSU (Colette Heald)	Low

# DEVELOPMENTS WITH NO PLAN FOR STD CODE

Model Development	Development Group	Readiness
Tagged sulfate/nitrate	UW (Becky Alexander)	High
PBAP (primary biological aerosol particles)	CSU (Colette Heald)	High
DMS oxidation scheme update	?	Low

# PHILISOPHICAL DISCUSSION

How to balance inclusive updates vs. expanding tracer #s and divergent run options?