

Agenda 2017 All-Hands ACME Meeting

- Agenda in pdf form - [Agenda 2017 All-Hands ACME Meeting \(6pages\)](#)
- Poster Layout and Poster Titles: [Posters_Layout-2017_ACME_All_Hands.pdf \(2pages\)](#)
- Poster Layout and Abstracts - [Posters_Layout_and_Abstracts_2017_ACME_All-Hands.pdf \(63 pages\)](#)

Call-In Numbers

Plenary Sessions

- <https://global.gotomeeting.com/join/491642301>
- United States: +1 (872) 240-3212
 - alternative number: +1 (619) 550-0035
- Access Code: 491-642-301

Breakout #1

- <https://global.gotomeeting.com/join/185150733>
- United States: +1 (872) 240-3311
 - alternative number: +1 (213) 493-0617
- Access Code: 185-150-733

Breakout #2

- <https://global.gotomeeting.com/join/455841253>
- United States: +1 (872) 240-3311
 - alternative number: +1 (213) 493-0617
- Access Code: 455-841-253

Duration	Start - End Time	Session / Confluence Page	Plenary Room	BreakOut Room 1	BreakOut Room 2	Poster Room
Monday, Jun 5th, 2017						
4h			Morning Sessions Chair: Todd Ringler (8am - 12pm)			Posters Installation
1h	8:00 - 9:00		BER Presentations Gary Geernaert, Dorothy Koch , Shaima Nasiri, Renu Joseph, Bob Vallario			
1h (3x20min)	9:00 - 10:00		ACME Status, Future, Strategic Plan <ul style="list-style-type: none"> • 20 min - David C. Bader • 20 min - Ruby Leung • 20 min - Mark Taylor 			
30 min	10:00 - 10:30	Break				
30min	10:30 - 11:00		ACME v0 Initialization and Results David C. Bader			
1.h (4x15min)	11:00 - 12:00		Selected Talks <ul style="list-style-type: none"> • 15 min - SCM (Single Column Model under CMDV Software) Peter Bogenschütz • 15 min - Global LCLUC drivers, Atul Jain, et al. • 15 min - The ACME spectral finite element non-hydrostatic dynamical core, Mark Taylor, et al. • 15 min - Light-absorbing particles in snow and ice, Hailong Wang, et al. 4x 15min	Group Meeting Workflow, Dean N. Williams , Valentine Anantharaj	Breakout #0	
1h 30min	12:00 - 1:30	Lunch				
4h			Afternoon Sessions Chair: Peter Thornton (1:30pm - 5:30pm)			

1h 30 min	1:30 - 3:00		Tropics Session Moderator: Ruby Leung <ul style="list-style-type: none"> 30 min - ACME interests and capabilities <ul style="list-style-type: none"> 6 min - ACME's interest in tropics Ruby Leung 3 x 8 min - ACME v1 capabilities and tropics relevant v2 roadmap Phil Rasch / Shaocheng Xie , Todd Ringler / stephen price , Peter Thornton / Bill Riley / Katherine Calvin 15 min - NGT interests and capabilities 10 min - BGC-Feedbacks interests and capabilities 5 min - University project 30 min - Discussion 	Group Meeting SE Group + Performance Andy Salinger , Robert Jacob , Philip Jones , Patrick Worley	Breakout #1 	
30 min	3:00 - 3:30	Break				
2 h (6x15min + 30min)	3:30 - 5:30		Group presentations and discussion Atmosphere, Phil Rasch , Shaocheng Xie 15min talk + 5min questions <ul style="list-style-type: none"> Susannah Burrows , How can we make model tuning less laborious and more transparent? (#A12) Wuyin Lin , The path to a well-tuned high-resolution ACME V1 atmosphere model and initial results (#A10) Aaron Donahue , Advances in the application of parallel split physics and dynamics (#A13), Impact of physics parameterization ordering in a global atmosphere model (#A14) Erika Roesler , High Resolution Modeling and Measurements in the Arctic (#A05) Bryce Harrop , Convective gustiness and tropical precipitation biases (#A03) James Edward Jack Reeves Eyre , ENSO in ACME coupled runs (#C02) 	Group presentations and discussion Ocean/cryosphere, Todd Ringler , stephen price Poster Introductions (8x2.5 min = 20 min): <ul style="list-style-type: none"> Nicole Jeffery : Sea-ice biogeochemistry in ACME Shanlin Wang : Ocean and Sea Ice Biogeochemistry in ACME Phillip J. Wolfram : ocean resolution and mixing parameterizations Elizabeth Hunke : CICE Consortium Thi Hoang : Exponential time differencing and parallel implementation Zhu Wang : Fast CVT grid generation for ocean modeling Joseph Zhang : Implementation of a tide-estuary component into MPAS-Ocean framework Robert Letscher : Variable stoichiometry ocean BGC Oral Presentations (4x15 min + 5 min = 80 min): <ul style="list-style-type: none"> Luke Van Roekel : hi-res ocean & ENSO diagnostics Mathew Maltrud : ocean BGC Mark Petersen : ice-ocean simulations Adrian Turner : sea ice in ACME 	Group presentations and discussion Land, Katherine Calvin , Bill Riley , Peter Thornton 4 x 15min talks: <ul style="list-style-type: none"> Jennifer Holm : ACME-FA TES: Using dynamic vegetation and demography to capture changes in forest carbon cycling and competition (#L17) Bill Riley : Half of global terrestrial nutrient uptake occurs in the absence of photosynthetic demand: Implications for the ACME BGC Inter-comparison (#L19) Peter Thornton : Experimental evidence from CO2 enrichment experiments supports the "Relative Demand" approximation for nutrient competition (#L18) Michael Brunke : Variable soil thickness in ALM: Implementation without elevation classes and preparation for implementation with elevation classes (#L20) Discussion: Land perspectives on rescoping the V1 BGC experiments in light of reduced ALCC allocation (1hr)	
1h 30 min	5:30 - 7:00	Dinner		Exec with Lab Management Meeting		
1h	7:00 - 8:00	Evening Sessions		Dinner for Exec with Lab Management Meeting		
1h	7:00 - 8:00		Breakout #2 Ocean/Ice & Collaborators, Todd Ringler , stephen price	Breakout #16	Breakout #3 Deep Dive Rehearsal, Phil Jones	
Tuesday, June 6th, 2017						
4h			Morning Sessions Chair: Phil Rasch (8am - 12pm)			

1h 45min	8:00 - 9:45		ACME v1 DECK, BGC, Cryosphere Experiments + Performance Moderator: Ruby Leung <ul style="list-style-type: none"> 25 min - Update on v1 DECK and water cycle high res experiments Chris Golaz , Wuyin Lin , Peter Caldwell 25 min - Update on v1 BGC experiments Peter Thornton / Bill Riley 25 min - Update on v1 Cryosphere experiments Todd Ringler , stephen price 10 min - Guardians of the ACME Philip Jones 10 min - Only YOU Can Prevent Performance Fires Philip Jones 10 min - General discussion 			
15min	9:45 - 10:00		Photo			
30 min	10:00 - 10:30	Break				
1.5h	10:30 - 12:00		Arctic Session Moderator: Ruby Leung <ul style="list-style-type: none"> 15 min - ACME interests and capabilities <ul style="list-style-type: none"> 6 min - ACME's interest in arctic Ruby Leung 3 x 3 min - Arctic relevant ACME v1 capabilities and v2 roadmap Phil Rasch / Shaocheng Xie , Todd Ringler / stephen price , Peter Thornton / Bill Riley / Katherine Calvin 15 min - HILAT interests and capabilities 10 min - RASM interests and capabilities 10 min - NGA interests and capabilities 5 min - BGC-Feedbacks interests and capabilities 5 min - University project 30 min - Discussion 	Breakout #4 Selected Presentations on Next-Gen Performance and Software Efforts Moderators: Andy Salinger , Philip Jones Tentative agenda: <ul style="list-style-type: none"> C++/Kokkos refactor of HOMME (Salinger, CMDV-SM) Concurrent atm physics/dynamics (Donahue, CMDV-SM) Task Legions and the Coupled System (Jones, LEAP) Next-Gen Coupler with MOAB (Jacob, CMDV-SM) Discussion 	Breakout #5 ACME Diagnostics, Kate Evans , Chengzhu Zhang , others... <ul style="list-style-type: none"> 30min - A-Prime Kate Evans 30min - ACME Diagnostics Chengzhu Zhang , et al. 30 min - Discussion 	
1h 30 min	12:00 - 1:30	Lunch				
4.5 h			Afternoon Sessions Chair: Bill Riley (1:30pm - 6pm)			
30min	1:30-2:00		Coupled BGC (CBGC) (v2) discussion 30min, Todd Ringler (new CBGC modeling capabilities, coupled modeling challenges, metrics to diagnose CBGC),			
1h	2:00 - 3:00		Radiation , and related processes, in the atmosphere, land and ocean, Philip Cameron-Smith <ul style="list-style-type: none"> 10 min - Peter Thornton 10 min - Michael Prather 10 min - Charlie Zender 10 min - Robert Pincus discussion Session page: Radiation Breakout Session (Tuesday 2pm-3pm)	Breakout #6 Critical Path Epic Team, David C. Bader	Breakout #7 Elevation Classes , Steve Ghan	
30 min	3:00-3:30		Sharlene Weatherwax comments + ACME Awards & Best Poster Awards			
30min	3:30-4:00				Live Music and Entertainment by Philip Jones & The Deep Dives band	
2h	4:00- 6:00					Poster Session
1.5h	6:00 - 7:30	Dinner				
1h	7:30 - 8:30	Evening Sessions				
1h	7:30 - 8:30		Breakout #8	ACME Council + GLs Meeting	Breakout #9	Poster Session

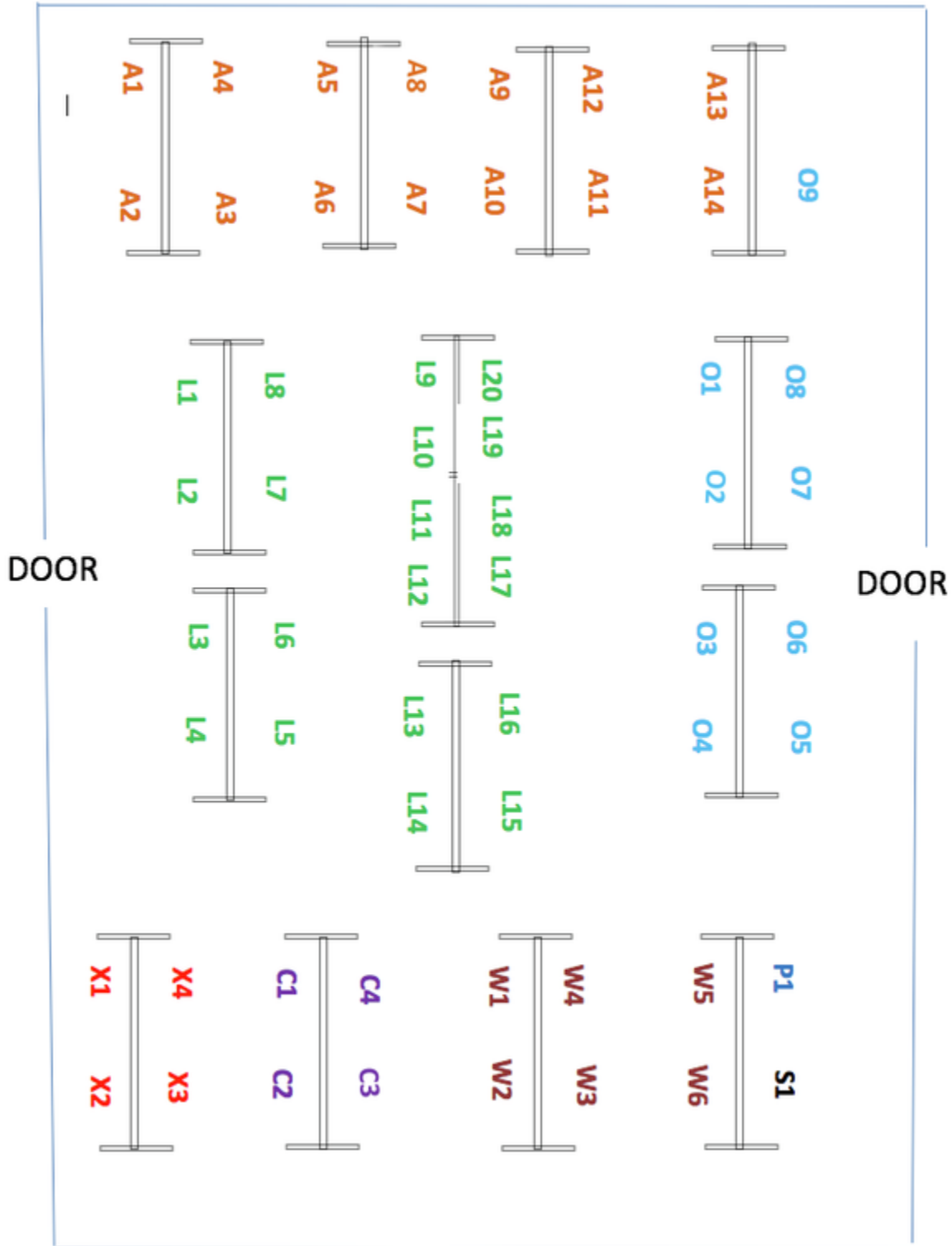
Wednesday, June 7th, 2017

4.5h			Morning Sessions Chair: Philip Jones (8am - 12:30pm)			
1.5h	8:00 - 9:30		Group Meeting Atmosphere, Phil Rasch, Shaocheng Xie 12-month roadmap and new features for ACME v2/v3 atmos	Group Meeting Ocean/Ice, Todd Ringler, stephen price	Group Meeting Land, Katherine Calvin, Bill Riley, Peter Thornton Discussion topics: <ul style="list-style-type: none"> V2 development timeline and staging of pull requests (30 min) Next steps for Land BGC intercomparison and evaluation (1 hr) 	
1h	9:30 - 10:30		Diagnosing Coupled Model Problems Examples from Watercycle Simulations, Chris Golaz <ul style="list-style-type: none"> 20 min - Chris Golaz, Peter Caldwell 20 min - Luke Van Roekel, Mark Petersen 20 min - discussion 			
30 min	10:30 - 11:00	Break				Poster Take Down
22 min+ 2min	11:00 - 11:22		Speed Dating Atmosphere + Coupled Atmosphere + Coupled Speed Dating Topics for conversation	Speed Dating Ocean/Ice+Workflow	Breakout #10	
22 min+ 2min	11:24-11:46		Speed Dating Atmosphere + Ocean/Ice Atmosphere + Ocean/Ice Speed Dating Topics for conversation	Speed Dating Coupled + Performance +SE	Breakout #11	
22 min+ 2min	11:48 - 12:10		Speed Dating Ocean/Ice + Performance	Speed Dating Coupled + Land	Speed Dating / Breakout #12 CMDV-Atm + SE Atmosphere + SE/Performance Speed Dating Topics for conversation	
22 min	12:12 - 12:34		Speed Dating Ocean/Ice + Coupled	Speed Dating Workflow + SE & CIME developers	Breakout #13	
1h 25 min	12:35- 2:00	Lunch				Poster Take Down
4h			Afternoon Sessions Chair: Andy Salinger (2pm - 6pm)			
1h	2:00-3:00		Session v2 versus v3: v3 development, v2/v3 experiments Ruby Leung			
45 min	3:00-3:45		DECK: Diagnostics/Output: science, requirements, softwares, David C. Bader <ul style="list-style-type: none"> 15 min - CMIP6 Output Request, Kate Evans 15 min - CMIP6 Data Archive, ESGF, CMOR, Dean N. Williams 15 min - Discussion 	Breakout #14	Breakout #15	
30 min	3:45 - 4:15	Break				
30min	4:15 - 4:45		Code Management and Processes, Repository David C. Bader, panel discussion <ul style="list-style-type: none"> How to deal with 10+ repositories ? 			
45 min	4:45 - 5:30		Tutorials, David C. Bader <ul style="list-style-type: none"> 10 min - Using CIME-5 to Run Coupled ACME System, (get presenter from Robert Jacob) 10 min - Parallel Tools to Generate, Regrid, and Split Climate Data, Charlie Zender 10 min - A-Prime, Kate Evans 10 min - ACME diagnostics, Chengzhu Zhang 			

15 min	5:30 - 5:45		Wrap Up			
1.5h	6:00 - 7:30 pm	Dinner				

Posters Layout

Posters Layout for the 2017 ACME All-Hands meeting



Poster Numbers

- #A01 Cloud analysis using COSP
- #A02 CAPT simulations with ACME v1 CONUS RRM grid
- #A03 Convective gustiness and tropical precipitation biases
- #A04 Dust Aerosols in ACME and Sensitivity to Model Resolution
- #A05 High Resolution Modeling and Measurements in the Arctic
- #A06 Light-absorbing particles in snow and ice
- #A07 Parametric sensitivity and tuning for ACME-V1 atmosphere model based on short PPE simulations
- #A08 Regionally Refined ACME v1 model over the Contiguous United States
- #A09 The ACME spectral finite element non-hydrostatic dynamical core
- #A10 The path to a well-tuned high-resolution ACME V1 atmosphere model and initial results
- #A11 Soluble iron model development within the ACME
- #A12 How can we make model tuning less laborious and more transparent?
- #A13 Advances in the application of parallel split physics and dynamics
- #A14 Impact of physics parameterization ordering in a global atmosphere model
- #A15 Improving Radiative Transfer Efficiency and Coupling in ACME
- #C01 ACME Priority Metrics: A-PRIME
- #C02 ENSO in ACME coupled runs
- #C03 Fully Coupled High-Resolution ACME V0.1 Approximate Present Day Transients
- #C04 Solar-J: Improved Solar-Heating
- #L01 Soil-Plant-Atmosphere Continuum model for ALM
- #L02 Development and testing of ALMv1-ECA-CNP
- #L03 Evaluation of two decomposition schemes in ALM
- #L04 System Engineering for ALM
- #L05 Exploring the Capability of Topography-based Subgrid Structures
- #L06 Forward and Inverse Uncertainty Quantification for ALM Single Point Model
- #L07 Global LCLUC drivers
- #L08 Vegetation dynamics under water stress
- #L09 Evaluating CMIP5 and CMIP6 land use forcings for ACME v1
- #L10 Integrating the Functionally Assembled Terrestrial Ecosystem Simulator (FATES) into the Accelerated Climate Model for Energy (ACME)
- #L11 Migrating PFLOTRAN into ACME Land Model
- #L12 MOSART-BGC in ACME
- #L13 Overviews of the NGEE-Tropics Project and FATES, a Demographic Vegetation Model for the ACME ESM
- #L14 Productivity and biomass in Amazon forests using ACME land model
- #L15 Runoff partitioning and its impact on water and energy budgets in the ACME land model
- #L16 Soil BGC Scaling
- #L17 ACME-FATES: dynamic vegetation and demography
- #L18 Experimental evidence supports Relative Demand hypothesis
- #L19 Global terrestrial nutrient uptake
- #L20 Implementing variable soil thickness in ALM
- #O01 A Biogeochemical Modeling Study on San Francisco Bay
- #O02 CICE Consortium
- #O03 Evaluation of small-scale, nonlinear physical processes in climate simulations
- #O04 Exponential time differencing and parallel implementation
- #O05 Fast CVT grid generation for ocean modeling
- #O06 Nearshore component of MPAS-O
- #O07 Ocean/Ice BGC in ACME
- #O08 SealceBGC
- #O09 Variable stoichiometry ocean bgc
- #P01 Task Legions and the Coupled System
- #S01 Climate-reproducibility testing with EVE
- #W01 ACME Ensemble Results Explanation and Reproducibility with ProvEn
- #W02 Automated Post Processing
- #W03 Continuous Integration via Github
- #W04 Parallel Tools to Generate, Regrid, and Split Climate Data
- #W05 The New ACME ACME Diagnostics Package
- #W06 Workflow Integrations of the International Land Model Benchmarking (ILAMB) with ACME Land Model (ALM)
- #X01 C++/Kokkos Refactor of HOMME
- #X02 Implementation of a Quasi-3D MMF to ACME
- #X03 Improving coupling workflow in ACME through a common infrastructure
- #X04 Exploring an Ensemble-Based Approach to Atmospheric Climate Modeling and Testing at Scale
- Posters Layout