



Model for Ocean-laNd-Atmosphere prediction (MONAN): The MPAS and JEDI tutorial

(A): refers to Auditorium

(TR): refers to Training Room

Monday, 12 August 2024

08:30-09:00 Registration

09:00-09:30 Overview of the MONAN program (A)

09:30-10:00 Opening Remarks by the host Institution (A)

10:00-10:20 MPAS Overview (A)

10:20-10:35 Downloading and compiling MPAS-Atmosphere (A)

10:35-10:45 Break

10:45-11:30 Dynamics and dynamics configuration (A)

11:30-12:00 Physics and physics configuration (A)

12:00-13:30 Lunch

13:45-14:40 Running MPAS, part 1: Initialization and running a basic global simulation (A)

14:40-15:00 Introduction to the practical exercises (A)

15:00-15:45 Running MPAS, part 2: Variable-resolution, I/O streams, restarts, and other options (A)

15:45-16:00 Practical session (TR)

16:00-16:10 Break

16:10-17:00 Practical session (TR)

Tuesday, 13 August 2024

09:00-09:30 An overview of the structure of MPAS meshes (A)

09:30-10:00 Running MPAS, part 3: Preparing limited-area meshes and LBCs (A)

10:00-10:30 Post-processing and visualizing MPAS-Atmosphere output (A)

10:30-10:45 Break

10:45-11:25 Spatial discretization, filters and transport (A)

11:25-12:00 Unique aspects of MPAS code: Registry, pools, and logging (A)

12:00-13:30 Lunch

13:45-14:25 Adding passive tracers to MPAS-Atmosphere simulations (A)

14:25-15:00 Computing new diagnostic fields in MPAS-Atmosphere simulations (A)

15:00-16:00 Practical session (TR)

16:00-16:10 Break

16:10-17:00 Practical session (TR)

Wednesday, 14 August 2024

09:00-09:20 MPAS mesh generation (A)
09:20-09:55 New MPAS capabilities under development, and concluding remarks (A)
09:55-10:15 MONAN 1.0.0 overview and future plans(A)
10:15-10:35 Overview of MONAN implementation (A)
10:35-10:45 Break
10:45-12:00 Practical session - MPAS mesh generation (TR)
12:00-13:30 Lunch
13:45-16:00 Monan Regional Model Training (TR)
16:00-16:15 Break
16:15-16:55 Monan Regional Model Training (TR)
16:55-17:15 Registering MONAN workshop group photograph
17:15-19:00 Ice break

Thursday, 15 August 2024

09:00-10:00 Fundamentals of Data Assimilation (A)
10:00-10:35 MPAS-JEDI overview and introduction to practical exercises (A)
10:35-10:45 Break
10:45-11:15 Observations (1): Converting BUFR observations to IODA format & HoFX Application (A)
11:15-12:00 Practical session (code build/ctest, observations conversion, HoFX (TR)
12:00-13:30 Lunch
13:45-14:15 Algorithms (1): 3D/4DEnVar (A)
14:15-16:00 Practical session (TR)
16:00-16:10 Break
16:10-17:00 Practical session (3D/4DEnVar with conventional observations) (TR)

Friday, 16 August 2024

09:00-09:15 Algorithms (2): 3DVar, Static B and hybrid-EnVar (A)
09:15-10:00 Observations (3): Satellite radiance DA (A)
10:00-10:35 Algorithms (3): EDA and LETKF (A)
10:35-10:45 Break
10:45-12:00 Workflow and graphics packages (A)
12:00-13:30 Lunch
13:45-14:30 Regional MPAS-JEDI (A)
14:30-16:00 Practical session (TR)
16:00-16:10 Break
16:10-16:45 Practical session (TR)
16:45-17:00 Closing the event (A)