



 technical information
 general lecture / theory / numerics
 explaining exercises
 exercises

schedule 30.6.2014

time	Monday, 04/08	Tuesday, 05/08	Wednesday, 06/08	Thursday, 07/08	Friday, 08/08
9 - 10	Seminar introduction Fundamentals of large eddy simulation	Numerics and boundary conditions timestep- / advection-methods, pressure-solver, grid	PALM - program structure flow chart, important variables, machine dependencies	Using Topography realization of topography, setup requirements for flow around buildings and for comparison with wind tunnel data	PALM - user-defined code basics, interfaces
10 - 11	basic equations, subgrid-scale models	PALM - program control by physical parameters / model output parameter file, important output files	Parallelization basics, domain decomposition, MPI communication, MPI-calls in PALM	PALM - application posing an exercise (flow around single building)	PALM - how to add user-defined code posing an exercise (flow over leads)
11 - 12		PALM - how to carry out runs with mrun way of operating, file management, configuration file	PALM - application posing an exercise (neutrally stratified boundary layer)	PALM – application by users flow around single building	PALM – application by users developing and testing user-defined code
lunch break					
13 - 14	PALM - Overview	PALM - how to carry out runs with mrun data analysis, netCDF, graphics, posing an exercise (CBL)	PALM – application by users neutrally stratified boundary layer		
14 - 15	PALM - installation using mbuild download, configuration, make, interactive test run	Data visualization with NCL how to use PALM-script palmpilot		Discussion of results / problems	Discussion of results / problems
15 - 16	PALM - installation	PALM – application by users convection between plates	Discussion of results / problems	Using non-cyclic boundary conditions motivation, setup requirements for non-cyclic boundary conditions, realization of turbulent inflow	PALM - how to carry out restart runs steering by parameter file and mrun
16 - 17	Discussion of results / problems	Discussion of results / problems	PALM - debugging basics, examples	Embedded Lagrangian particle model theory, application examples, setup requirements, data output and analysis	Final remarks Closing of seminar