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APPENDIX AVAILABLE ON THE HEI WEB SITE

Research Report 179

Development and Application of an Aerosol Screening Model for Size-Resolved Urban Aerosols

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Appendix C. WRF Namelist

Note: Appendices available only on the Web have been reviewed solely for spelling, grammar, and cross-references to the main text. They have not been formatted or fully edited by HEI.

Appendix C. WRF Namelist

```
&time_control
 run_days                 = 16,
 run_hours                = 0,
 run_minutes              = 0,
 run_seconds              = 0,
 start_year               = 2007,      2007,      2007,
 start_month              = 9,         9,         8,
 start_day                = 28,        28,        21,
 start_hour               = 0,         0,         0,
 start_minute             = 00,        00,        00,
 start_second             = 00,        00,        00,
 end_year                 = 2007,      2007,      2007,
 end_month                = 10,        10,        10,
 end_day                  = 14,        14,        01,
 end_hour                 = 00,        00,        0,
 end_minute               = 00,        00,        00,
 end_second               = 00,        00,        00,
 interval_seconds         = 10800,
 input_from_file          = .true.,   .false.,   .false.,
 history_interval         = 60,        60,        60,
 frames_per_outfile       = 1000,      1000,      1000,
 restart                  = .false.,
 restart_interval         = 5000,
 io_form_history          = 2,
 io_form_restart          = 2,
 io_form_input            = 2,
 io_form_boundary         = 2,
 debug_level              = 0,
 auxinput11_interval_s    = 60, 20, 72
 auxinput11_end_h         = 99999, 99999, 99999
 /

 &domains
 time_step                = 60,
 time_step_fract_num      = 0,
 time_step_fract_den      = 1,
 max_dom                  = 2,
 e_we                     = 61,        85,        52,
 e_sn                     = 49,        88,        43,
 e_vert                   = 30,        30,        30,
 num_metgrid_levels       = 30,
 dx                       = 12000,     4000,      4000,
 dy                       = 12000,     4000,      4000,
 grid_id                  = 1,         2,         3,
 parent_id                = 1,         1,         2,
 i_parent_start           = 1,         16,        21,
 j_parent_start           = 1,         10,        14,
 parent_grid_ratio        = 1,         3,         3,
 parent_time_step_ratio   = 1,         3,         3,
 feedback                 = 1,
```

```
 smooth_option               = 0,
 p_top_requested             = 10000,
 /

 &physics
 mp_physics                             = 2,      2,      2,
 ra_lw_physics                          = 1,      1,      1,
 ra_sw_physics                          = 1,      1,      1,
 radt                                   = 10,     10,     10,
 sf_sfclay_physics                      = 1,      1,      1,
 sf_surface_physics                     = 2,      2,      2,
 bl_pbl_physics                         = 1,      1,      1,
 bldt                                   = 0,      0,      0,
 cu_physics                             = 1,      1,      0,
 cudt                                   = 5,      5,      5,
 isfflx                                 = 1,
 ifsnow                                 = 0,
 icloud                                 = 1,
 surface_input_source                   = 1,
 num_soil_layers                        = 4,
 sf_urban_physics                       = 0,
 maxiens                                = 1,
 maxens                                 = 3,
 maxens2                                = 3,
 maxens3                                = 16,
 ensdim                                 = 144,
 /

 &fdda
 obs_nudge_opt              = 1,1,0,0,0
 max_obs                    = 9999999,
 fdda_start                 =      0.,      0.,      0.,      0.,
0.
 fdda_end                   = 9999999., 9999999., 99999.,
99999., 99999.
 obs_nudge_wind             = 1,1,1,1,1
 obs_coef_wind              = 6.E-3,6.E-3,6.E-4,6.E-4,6.E-4
 obs_nudge_temp             = 1,1,1,1,1
 obs_coef_temp              = 6.E-4,6.E-4,6.E-4,6.E-4,6.E-4
 obs_nudge_mois             = 0,0,0,0,0
 obs_coef_mois              = 6.E-4,6.E-4,6.E-4,6.E-4,6.E-4
 obs_rinxy                  = 80.,40.,1.,1.,1.
 obs_rinsig                 = 0.1,
 obs_twindo                 = 0.3333,
0.3333,0.6666667,0.6666667,0.6666667,
 obs_npfi                   = 10,
 obs_ionf                   = 1,1,
 obs_idynin                 = 0,
 obs_dtramp                 = 1.,
 obs_prt_freq               =  1,  1, 10, 10, 10,
 obs_prt_max                = 1000
 obs_ipf_errob              = .true.
```

```
obs_ipf_nudob                        = .true.
obs_ipf_in4dob                       = .true.
obs_ipf_init                         = .true.
/

&dynamics
w_damping                            = 0,
diff_opt                             = 1,
km_opt                               = 4,
diff_6th_opt                         = 0,       0,       0,
diff_6th_factor                      = 0.12,   0.12,   0.12,
base_temp                            = 290.
damp_opt                             = 0,
zdamp                                = 5000.,  5000.,  5000.,
dampcoef                             = 0.2,    0.2,    0.2
khdif                                = 0,       0,       0,
kvdif                                = 0,       0,       0,
non_hydrostatic                      = .true., .true., .true.,
moist_adv_opt                        = 1,       1,       1,
scalar_adv_opt                       = 1,       1,       1,
/

&bdy_control
spec_bdy_width                       = 5,
spec_zone                            = 1,
relax_zone                           = 4,
specified                            = .true., .false.,.false.,
nested                               = .false., .true., .true.,
/

&grib2
/

&namelist_quilt
nio_tasks_per_group = 0,
nio_groups = 1,
/
```