



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.

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This document was reviewed by the HEI Health Review Committee.

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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,
/

```