**1. M3DRY base simulations**

Folder name: base\M3Dry

File names: ${site}\_M3Dry.csv where ${site} is “Auchencorth” for Auchencorth Moss,
“Borden” for Borden Forest, “Buga” for Bugacpuszta, “EB” for Easter Bush, “HF” for Harvard Forest, “HYY” for Hyytiala, “Ispra” for Ispra, and “Ramat” for Ramat Hanadiv.

All files are csv files with time series of M3Dry single point model results for the specified site. Missing values are indicated with -999.99. Each location-specific csv file contains the following 18 columns:

* Column 1, Label: “YR”, units: none. Year associated with the values in columns 6 – 18
* Column 2, Label: “month”, units: none. Month associated with the values in columns 6 – 18
* Column 3, Label: “day”, units: none. Day associated with the values in columns 6 – 18
* Column 4, Label: “IHR”, units: none. Hour associated with the values in columns 6 – 18
* Column 5, Label: “mns”, units: none. Minutes associated with the values in columns 6 – 18
* Column 6, Label: “vdo3”, units: m s-1. M3Dry modeled ozone dry deposition velocity
* Column 7, Label: “ra”, units: s m-1. M3Dry modeled aerodynamic resistance
* Column 8, Label: “RSURFO3”, units: s m-1. M3Dry modeled bulk surface resistance
* Column 9, Label: “rstom”, units: s m-1. M3Dry modeled stomatal resistance
* Column 10, Label: “rmeso”, units: s m-1. M3Dry modeled mesophyll resistance
* Column 11, Label: “res\_cut”, units: s m-1. M3Dry modeled cuticular resistance
* Column 12, Label: “econ\_st”, units: m s-1. M3Dry modeled stomatal effective conductance
* Column 13, Label: “econ\_cut”, units: m s-1. M3Dry modeled cuticular effective conductance
* Column 14, Label: “econ\_soil”, units: m s-1. M3Dry modeled soil effective conductance
* Column 15, Label: “econ\_lcan”, units: m s-1. M3Dry modeled lower canopy effective conductance
* Column 16, Label: “rbo3”, units: s m-1. M3Dry modeled quasi-laminar sublayer resistance
* Column 17, Label: “rinc”, units: s m-1. M3Dry modeled in-canopy convective resistance
* Column 18, Label: “FlagAQ”, units: none. AQMEII Flag copied from the observational input file, indicating whether the observed ozone dry deposition velocity should be used for analysis. Not used for any M3Dry calculations

**2. M3DRY-psn base simulations**

Folder name: base\M3Dry-psn

File names: ${site}\_M3Dry-psn.csv where ${site} is “Auchencorth” for Auchencorth Moss,
“Borden” for Borden Forest, “Buga” for Bugacpuszta, “EB” for Easter Bush, “HF” for Harvard Forest, “HYY” for Hyytiala, “Ispra” for Ispra, and “Ramat” for Ramat Hanadiv.

All files are csv files with time series of M3Dry-psn single point model results for the specified site. Missing values are indicated with -999.99. Each location-specific csv file contains the following 18 columns:

* Column 1, Label: “YR”, units: none. Year associated with the values in columns 6 – 18
* Column 2, Label: “month”, units: none. Month associated with the values in columns 6 – 18
* Column 3, Label: “day”, units: none. Day associated with the values in columns 6 – 18
* Column 4, Label: “IHR”, units: none. Hour associated with the values in columns 6 – 18
* Column 5, Label: “mns”, units: none. Minutes associated with the values in columns 6 – 18
* Column 6, Label: “vdo3”, units: m s-1. M3Dry-psn modeled ozone dry deposition velocity
* Column 7, Label: “ra”, units: s m-1. M3Dry-psn modeled aerodynamic resistance
* Column 8, Label: “RSURFO3”, units: s m-1. M3Dry-psn modeled bulk surface resistance
* Column 9, Label: “rstom”, units: s m-1. M3Dry-psn modeled stomatal resistance
* Column 10, Label: “rmeso”, units: s m-1. M3Dry-psn modeled mesophyll resistance
* Column 11, Label: “res\_cut”, units: s m-1. M3Dry-psn modeled cuticular resistance
* Column 12, Label: “econ\_st”, units: m s-1. M3Dry-psn modeled stomatal effective conductance
* Column 13, Label: “econ\_cut”, units: m s-1. M3Dry-psn modeled cuticular effective conductance
* Column 14, Label: “econ\_soil”, units: m s-1. M3Dry-psn modeled soil effective conductance
* Column 15, Label: “econ\_lcan”, units: m s-1. M3Dry-psn modeled lower canopy effective conductance
* Column 16, Label: “rbo3”, units: s m-1. M3Dry-psn modeled quasi-laminar sublayer resistance
* Column 17, Label: “rinc”, units: s m-1. M3Dry-psn modeled in-canopy convective resistance
* Column 18, Label: “FlagAQ”, units: none. AQMEII Flag copied from the observational input file, indicating whether the observed ozone dry deposition velocity should be used for analysis. Not used for any M3Dry-psn-psn calculations

**3. STAGE base simulations**

Folder name: base\STAGE

File names: O3\_${site}\_v5.3.2\_STAGE\_fluxes.csv where ${site} is “Auchencorth\_Moss” for Auchencorth Moss, “Borden\_Forest” for Borden Forest, “Bugacpuszta” for Bugacpuszta, “Easter\_Bush” for Easter Bush, “Harvard\_Forest” for Harvard Forest, “Hyytiala” for Hyytiala, “Ispra” for Ispra, and “Ramat” for Ramat Hanadiv.

All files are csv files with time series of STAGE single point model results data for the specified site. Missing values are indicated with -999.99. Each location-specific csv file contains the following 16 columns:

* Column 1, Label: “Date\_and\_Time”, units: none. Date and time associated with the values in columns 2 – 9
* Column 2, Label: “Vd\_mod”, units: m s-1. STAGE modeled ozone dry deposition velocity
* Column 3, Label: “G\_stom”, units: m s-1. STAGE modeled stomatal effective conductance
* Column 4, Label: “G\_cut”, units: m s-1. STAGE modeled cuticular effective conductance
* Column 5, Label: “G\_soil”, units: m s-1. STAGE modeled soil effective conductance
* Column 6, Label: “Ra”, units: s m-1. STAGE modeled aerodynamic resistance
* Column 7, Label: “Rst”, units: s m-1. STAGE modeled stomatal resistance
* Column 8, Label: “Rcut”, units: s m-1. STAGE modeled cuticular resistance
* Column 9, Label: “Rsoil”, units: s m-1. STAGE modeled soil resistance

**4. STAGE sensitivity simulations**

Folder name: sens\STAGE

File names: ${site}\_{case}.csv

where ${site} is “AUCH” for Auchencorth Moss, “BORD” for Borden Forest, “BUGA” for Bugacpuszta, “EAST” for Easter Bush, “HARV” for Harvard Forest, “HYYT” for Hyytiala, “ISPR” for Ispra, and “RAMA” for Ramat Hanadiv and ${case} can have the following values depending on the different STAGE configurations described in Khan et al. (2025) and summarized in Table 2 of that paper:

* “Base” for the STAGE base configuration,
* “frh\_l\_01”, “frh\_l\_0325”, “frh\_l\_055”, “frh\_l\_0775”, and “frh\_l\_1” for the STAGE configurations used in the sensitivity simulations related to relative humidity stress
* “ri\_100”, “ri\_163”, “ri\_225”, “ri\_288”, and “ri\_350” for the STAGE configurations used in the sensitivity simulations related to the initial stomatal resistance
* “wwlt\_00100”, “wwlt\_00325”, “wwlt\_00550”, “wwlt\_00775”, and “wwlt\_01000” for the STAGE configurations used in the sensitivity simulations related to the soil moisture stress

All files are csv files with time series of STAGE single point model results for the specified site and case. Missing values are indicated with -999.99. Each location-and-case-specific csv file contains the following 5 columns:

* Column 1, Label: “Date\_and\_Time”, units: none. Date and time associated with the values in columns 2 – 9
* Column 2, Label: “gas\_vd\_O3”, units: m s-1. STAGE modeled ozone dry deposition velocity
* Column 3, Label: “EGstom\_O3”, units: m s-1. STAGE modeled stomatal effective conductance
* Column 4, Label: “Rsfc\_O3”, units: s m-1. STAGE modeled bulk surface resistance
* Column 5, Label: “Rstom\_O3”, units: s m-1. STAGE modeled stomatal resistance