Example 1 (first stage)

|  |
| --- |
| [Trace] |
| variableName = 'TA\_1\_1\_1' |
| title = 'Air temperature at 2m (HMP)' |
| inputFileName = {'MET\_HMP\_T\_2m\_Avg'} |
| inputFileName\_dates = [datenum(1900,1,1) datenum(2999,12,31)] |
| measurementType = 'Met' |
| units = '°C' |
| instrument = 'HMP155A' |
| instrumentType = '' |
| instrumentSN = 'N4520546' |
| loggedCalibration = [] |
| currentCalibration = [] |
| comments = '' |
| minMax = [-20,50] |
| zeroPt = [-9999] |
| dependent = '' |
| [End] |

Example 2 (second trace)

|  |
| --- |
| [Trace] |
| variableName = 'TA\_1\_2\_1' |
| title = 'Air temperature at 350cm (HMP)' |
| inputFileName = {'MET\_HMP\_T\_350cm\_Avg'} |
| inputFileName\_dates = [datenum(1900,1,1) datenum(2999,12,31)] |
| measurementType = 'met' |
| units = '°C' |
| instrument = 'HMP60' |
| instrumentType = '' |
| instrumentSN = 'S3530641' |
| loggedCalibration = [] |
| currentCalibration = [] |
| comments = '' |
| minMax = [-20,50] |
| zeroPt = [-9999] |
| dependent = '' |
| [End] |

Example 1a (first stage – overwrite feature)

|  |
| --- |
| %---------------------------------------------------------- |
| % Call #include ini files |
| %---------------------------------------------------------- |
| %--> Must be at end of .ini file |
| %--> Comment out include files that are not needed |
| #include EddyPro\_Common\_FirstStage\_include.ini |
| #include EddyPro\_LI7200\_FirstStage\_include.ini |
| #include EddyPro\_LI7700\_FirstStage\_include.ini |
|  |
| %======== Overwriting some LI-7700 include traces ========= |
|  |
| [Trace] |
| variableName = 'CH4\_MIXING\_RATIO' |
| title = 'CH4 in mole fraction of dry air' |
| Overwrite = 1 |
| inputFileName = {'ch4\_mixing\_ratio'} |
| inputFileName\_dates = [datenum(1901,1,1) datenum(2999,1,1)] |
| measurementType = 'flux' |
| units = 'umol / mol dry air' |
| instrument = 'LI-7700' |
| instrumentType = 'LI7700' |
| instrumentSN = '' |
| loggedCalibration = [1 0 datenum(2000,1,1) datenum(2999,1,1)] |
| currentCalibration = [1 0 datenum(2000,1,1) datenum(2999,1,1)] |
| comments = 'no unit conversion; adjusted minMax' |
| minMax = [1,5.5] |
| zeroPt = [-9999] |
| [End] |
|  |
| #include RAD\_FirstStage\_include.ini |

Example 1b (first stage – postEvaluate property)

(old example)

|  |
| --- |
| [Trace] |
| variableName = 'TA\_1\_1\_1' |
| title = 'Air temperature at 2m (HMP)' |
| inputFileName = {'MET\_HMP\_T\_2m\_Avg'} |
| inputFileName\_dates = [datenum(1901,1,1) datenum(2999,1,1)] |
| measurementType = 'met' |
| units = '°C' |
| instrument = 'HMP155A' |
| instrumentType = '' |
| instrumentSN = 'N4520546' |
| loggedCalibration = [] |
| currentCalibration = [] |
| comments = '' |
| Evaluate = 'TA\_1\_1\_1 = shiftMyData(clean\_tv,TA\_1\_1\_1,datenum(2021,11,07,03,00,0),60);' |
| minMax = [-20,50] |
| zeroPt = [-9999] |
| dependent = '' |
| postEvaluate = remove\_spikes\_diurnal\_nonParametric(TA\_1\_1\_1,clean\_tv); |
| [End] |

New example (for complex case e.g., Young) – add to full docs later

|  |
| --- |
| [Trace] |
| variableName = 'var1' |
| loggedCalibration = [1 0 datenum(1901,1,1) datenum(2999,1,1)] |
| currentCalibration = [1000 0 datenum(1901,1,1) datenum(2999,1,1)] |
| comments = 'unit conversion' |
| Evaluate = 'var1 = shiftMyData(clean\_tv,var1,datenum(2021,11,07,03,00,0),60);' |
| minMax = [0,5000] |
| zeroPt = [-9999] |
| [End] |
| [Trace] |
| variableName = 'var2' |
| comments = 'unit conversion' |
| postEvaluate = 'var2 = <some operation using var1>;' |
| [End] |

Example 1b1

|  |
| --- |
| % Example 1 |
| [Trace] |
| variableName = 'no\_evaluate' |
| title = 'No Evaluate or postEvaluate, only calibrations and minMax' |
| inputFileName = {'all\_ones'} |
| inputFileName\_dates = [] |
| measurementType = 'Met' |
| units = '' |
| instrument = '' |
| instrumentType = '' |
| instrumentSN = [] |
| loggedCalibration = [1 0 datenum(1999,1,1) datenum(2999,1,1)] |
| currentCalibration = [2 0 datenum(1999,1,1) datenum(2999,1,1)] |
| comments = '' |
| minMax = [-1, 2] |
| zeroPt = [-9999] |
| dependent = '' |
| [End] |

Example 1b2

|  |
| --- |
| % Example 2 |
| [Trace] |
| variableName = 'evaluate\_1' |
| title = 'Evaluate x = x — 1, clean minMax, calibrate x = 2x, no postEvaluate' |
| inputFileName = {'all\_ones'} |
| inputFileName\_dates = [] |
| measurementType = 'Met' |
| Evaluate = 'evaluate\_1 = evaluate\_1 — 1;' |
| units = '' |
| instrument = '' |
| instrumentType = '' |
| instrumentSN = [] |
| loggedCalibration = [1 0 datenum(1999,1,1) datenum(2999,1,1)] |
| currentCalibration = [2 0 datenum(1999,1,1) datenum(2999,1,1)] |
| comments = '' |
| minMax = [-1, 2] |
| zeroPt = [-9999] |
| dependent = '' |
| [End] |

Example 1b3

|  |
| --- |
| % Example 3 |
| [Trace] |
| variableName = 'postEvaluate\_1' |
| title = 'postEvaluate x = x — 1, clean minMax, calibrate x = 2x, no Evaluate' |
| inputFileName = {'all\_ones'} |
| inputFileName\_dates = [] |
| measurementType = 'Met' |
| postEvaluate = 'postEvaluate\_1 = postEvaluate\_1 — 1;' |
| units = '' |
| instrument = '' |
| instrumentType = '' |
| instrumentSN = [] |
| loggedCalibration = [1 0 datenum(1999,1,1) datenum(2999,1,1)] |
| currentCalibration = [2 0 datenum(1999,1,1) datenum(2999,1,1)] |
| comments = '' |
| minMax = [-1, 2] |
| zeroPt = [-9999] |
| dependent = '' |
| [End] |

Example 1b4

|  |
| --- |
| % Example 4 |
| [Trace] |
| variableName = 'bothEvaluate\_1' |
| title = 'Evaluate x = x — 1, clean minMax, calibrate x = 2x, postEvaluate x = x — 1' |
| inputFileName = {'all\_ones'} |
| inputFileName\_dates = [] |
| measurementType = 'Met' |
| Evaluate = 'bothEvaluate\_1 = bothEvaluate\_1 — 1;' |
| units = '' |
| instrument = '' |
| instrumentType = '' |
| instrumentSN = [] |
| loggedCalibration = [1 0 datenum(1999,1,1) datenum(2999,1,1)] |
| currentCalibration = [2 0 datenum(1999,1,1) datenum(2999,1,1)] |
| comments = '' |
| minMax = [-1, 2] |
| zeroPt = [-9999] |
| dependent = '' |
| postEvaluate = 'bothEvaluate\_1 = bothEvaluate\_1 — 1;' |
| [End] |

Example 1c (first stage – further overwrite example)

|  |
| --- |
| % Example 1 |
| [Trace] |
| variableName = 'T1' |
| Overwrite = 0 |
| ... |
| [End] |
| [Trace] |
| variableName = 'T2' |
| Overwrite = 0 |
| comment = 'Original' |
| ... |
| [End] |
| [Trace] |
| variableName = 'T3' |
| Overwrite = 0 |
| ... |
| [End] |
| [Trace] |
| variableName = 'T4' |
| Overwrite = 0 |
| ... |
| [End] |
| [Trace] |
| variableName = 'T2' |
| Overwrite = 0 |
| comment = 'Duplicate' |
| ... |
| [End] |
| [Trace] |
| variableName = 'T5' |
| Overwrite = 0 |
| ... |
| [End] |
|  |

|  |  |
| --- | --- |
| % Example 2 | % RESULT --> |
| [Trace] | [Trace] |
| variableName = 'T1' | variableName = 'T1' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T2' | variableName = 'T2' |
| Overwrite = 0 | Overwrite = 1 |
| comment = 'Original' | comment = 'Duplicate' |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T3' | variableName = 'T3' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T4' | variableName = 'T4' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T2' | variableName = 'T5' |
| Overwrite = 1 | Overwrite = 0 |
| comment = 'Duplicate' | ... |
| ... | [End] |
| [End] |  |
| [Trace] |  |
| variableName = 'T5' |  |
| Overwrite = 0 |  |
| ... |  |
| [End] |  |
|  |  |

|  |  |
| --- | --- |
| % Example 3 | % RESULT --> |
| [Trace] | [Trace] |
| variableName = 'T1' | variableName = 'T1' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
| [Trace] |  |
| variableName = 'T2' |  |
| Overwrite = 0 |  |
| comment = 'Original' |  |
| ... |  |
| [End] |  |
| [Trace] | [Trace] |
| variableName = 'T3' | variableName = 'T3' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T4' | variableName = 'T4' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T2' | variableName = 'T2' |
| Overwrite = 2 | Overwrite = 2 |
| comment = 'Duplicate' | comment = 'Duplicate' |
| ... | ... |
| [End] | [End] |
| [Trace] | [Trace] |
| variableName = 'T5' | variableName = 'T5' |
| Overwrite = 0 | Overwrite = 0 |
| ... | ... |
| [End] | [End] |
|  |  |

(trace T2 has moved)

Example 3a (third stage) OLD

|  |
| --- |
| # Written by June Skeeter |
| # March 2024 |
| # Modified by <author> |
| # Date: <date> |
|  |
| Metadata: |
| siteID: SITEID1 |
| estYear: <YYYY> |
| lat: <latitude> # North is positive |
| long: <longitude> # West is negative |
| TimeZoneHour: <timezone> # (e.g., for Pacific standard time, GMT - 8) |
|  |
| # Optional parameters to modify default third stage parameters can be added here |
| Processing: |
| ThirdStage: |
| Storage: |
| Apply\_Correction: True |
| REddyProc: |
| Run: True |
| RF\_GapFilling: |
| Run: True |

Example 3b (third stage) OLD

|  |
| --- |
| # Written by June Skeeter |
| # March 2024 |
| # Modified by <author> |
| # Date: <date> |
|  |
| Metadata: |
| siteID: SITEID1 |
| estYear: <YYYY> |
| lat: <latitude> # North is positive |
| long: <longitude> # West is negative |
| TimeZoneHour: <timezone> # (e.g., for Pacific standard time, GMT - 8) |
|  |
| # Optional parameters to modify default third stage parameters can be added here |
| Processing: |
| ThirdStage: |
| Storage: |
| Apply\_Correction: True |
| REddyProc: |
| Run: True |
| RF\_GapFilling: |
| Run: True |
| Models: |
| FCH4\_PI\_F\_RF: |
| var\_dep: FCH4 |
| Predictors: **<add variables here>** |

Example 3a

|  |
| --- |
| # Written by <author> |
| # Date: <date> |
|  |
| Metadata: |
| siteID: SITEID1 |
| estYear: <YYYY> |
| lat: <latitude> # North is positive |
| long: <longitude> # West is negative |
| TimeZoneHour: <timezone> # (e.g., for Pacific standard time, GMT - 8) |
| northOffset: 360 |
| Processing: |
| ThirdStage: |
| Fluxes: |
| # Names of flux variables as they come in from second stage |
| # For fluxes that do not apply, change the key-value pair to NULL (see FNO2 example) |
| # \*\*\* DOUBLE CHECK FLUX NAMES ON RHS MATCH SECOND STAGE TRACES \*\*\* |
| H: H |
| LE: LE |
| NEE: FC |
| FCH4: FCH4 |
| FNO2: NULL |
| Met\_Gap\_Filling: |
| Linear\_Interpolation: |
| # \*\*\* DOUBLE CHECK VARIABLE NAMES ON RHS MATCH SECOND STAGE TRACE NAMES \*\*\* |
| Fill\_Vars: TA\_1\_1\_1,RH\_1\_1\_1,VPD\_1\_1\_1 |
| Standard\_Cleaning: |
| # Filter out values #+/- wakeFilter of northOffset +/- 180 degrees |
| wakeFilter: 30 |
| # If you do not want fluxes filtered during rain events, set to NULL |
| precipCutOff: 0 |
| ... |
| ... |

Example 3d – uStar filtering full uncertainty calcs

|  |
| --- |
| Processing: |
| ThirdStage: |
| REddyProc: |
| # You can turn off REddyProc by setting Run: FALSE |
| # Setting Run: FALSE would normally only be for diagnostic purposes. |
| Run: TRUE |
| Ustar\_filtering: |
| # Keep "run\_defaults" as TRUE to run "fast" ustar filtering |
| # If run\_defaults = FALSE, conduct "full\_uncertainty" |
| run\_defaults: FALSE |

Example 3e – flags

|  |
| --- |
| [Trace] |
| variableName = 'flag\_TA\_1\_1\_1' |
| title = 'Flag: bad data for air temperature (HMP)' |
| inputFileName = {'flag\_TA\_1\_1\_1'} |
| inputFileName\_dates = [datenum(1900,1,1) datenum(2999,12,31)] |
| measurementType = 'Flags' |
| units = '' |
| instrument = '' |
| instrumentType = '' |
| instrumentSN = '' |
| loggedCalibration = [] |
| currentCalibration = [] |
| comments = '' |
| minMax = [-Inf,Inf] |
| zeroPt = [-9999] |
| dependent = 'TA\_1\_1\_1' |
| [End] |