Model call record

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September 2020

Calculates emission factors

Check package version.

```
packageVersion('ALFAM2')
```

```
## [1] '0.5.1'
```

Parameter values.

```
ALFAM2pars02
```

```
##            int.f0    app.mthd.os.f0    app.rate.ni.f0         man.dm.f0
##       -0.60568338       -1.74351499       -0.01114900        0.39967070
## man.source.pig.f0    app.mthd.cs.f0            int.r1    app.mthd.bc.r1
##       -0.59202858       -7.63373787       -0.93921516        0.79352480
##         man.dm.r1       air.temp.r1        wind.2m.r1    app.mthd.ts.r1
##       -0.13988189        0.07354268        0.15026720       -0.45907135
## ts.cereal.hght.r1         man.ph.r1            int.r2      rain.rate.r2
##       -0.24471238        0.66500000       -1.79918546        0.39402156
##            int.r3    app.mthd.bc.r3    app.mthd.cs.r3         man.ph.r3
##       -3.22841225        0.56153956       -0.66647417        0.23800000
## incorp.shallow.f4 incorp.shallow.r3    incorp.deep.f4    incorp.deep.r3
##       -0.96496655       -0.58052689       -3.69494954       -1.26569562
```

```
dat
```

```
##    app.timing.dk app.timing air.temp wind.2m rain.rate app.mthd  incorp
## 1          Marts      March    4.900 4.02500      0.09     bsth    none
## 2          April      April    8.500 3.91000      0.09     bsth    none
## 3            Maj        May   12.400 3.56500      0.09     bsth    none
```

```
## 4        Sommer     Summer   16.867 3.18167      0.09     bsth    none
## 5       Efterår     Autumn   14.600 3.45000      0.09     bsth    none
## 6         Marts      March    4.900 4.02500      0.09     bsth shallow
## 7         April      April    8.500 3.91000      0.09     bsth shallow
## 8           Maj        May   12.400 3.56500      0.09     bsth shallow
## 9        Sommer     Summer   16.867 3.18167      0.09     bsth shallow
## 10      Efterår     Autumn   14.600 3.45000      0.09     bsth shallow
## 11        Marts      March    4.900 4.02500      0.09     bsth    deep
## 12        April      April    8.500 3.91000      0.09     bsth    deep
## 13          Maj        May   12.400 3.56500      0.09     bsth    deep
## 14       Sommer     Summer   16.867 3.18167      0.09     bsth    deep
## 15      Efterår     Autumn   14.600 3.45000      0.09     bsth    deep
## 16        Marts      March    4.900 4.02500      0.09       os    none
## 17        April      April    8.500 3.91000      0.09       os    none
## 18          Maj        May   12.400 3.56500      0.09       os    none
## 19       Sommer     Summer   16.867 3.18167      0.09       os    none
## 20      Efterår     Autumn   14.600 3.45000      0.09       os    none
## 21        Marts      March    4.900 4.02500      0.09       cs    none
## 22        April      April    8.500 3.91000      0.09       cs    none
## 23          Maj        May   12.400 3.56500      0.09       cs    none
## 24       Sommer     Summer   16.867 3.18167      0.09       cs    none
## 25      Efterår     Autumn   14.600 3.45000      0.09       cs    none
## 26        Marts      March    4.900 4.02500      0.09     bsth    none
## 27        April      April    8.500 3.91000      0.09     bsth    none
## 28          Maj        May   12.400 3.56500      0.09     bsth    none
## 29       Sommer     Summer   16.867 3.18167      0.09     bsth    none
## 30      Efterår     Autumn   14.600 3.45000      0.09     bsth    none
## 31        Marts      March    4.900 4.02500      0.09     bsth shallow
## 32        April      April    8.500 3.91000      0.09     bsth shallow
## 33          Maj        May   12.400 3.56500      0.09     bsth shallow
## 34       Sommer     Summer   16.867 3.18167      0.09     bsth shallow
## 35      Efterår     Autumn   14.600 3.45000      0.09     bsth shallow
## 36        Marts      March    4.900 4.02500      0.09     bsth    deep
## 37        April      April    8.500 3.91000      0.09     bsth    deep
## 38          Maj        May   12.400 3.56500      0.09     bsth    deep
## 39       Sommer     Summer   16.867 3.18167      0.09     bsth    deep
## 40      Efterår     Autumn   14.600 3.45000      0.09     bsth    deep
## 41        Marts      March    4.900 4.02500      0.09       os    none
## 42        April      April    8.500 3.91000      0.09       os    none
```

```
## 43          Maj        May   12.400 3.56500      0.09       os    none
## 44       Sommer     Summer   16.867 3.18167      0.09       os    none
## 45      Efterår     Autumn   14.600 3.45000      0.09       os    none
## 46        Marts      March    4.900 4.02500      0.09       cs    none
## 47        April      April    8.500 3.91000      0.09       cs    none
## 48          Maj        May   12.400 3.56500      0.09       cs    none
## 49       Sommer     Summer   16.867 3.18167      0.09       cs    none
## 50      Efterår     Autumn   14.600 3.45000      0.09       cs    none
## 51        Marts      March    4.900 4.02500      0.09     bsth    none
## 52        April      April    8.500 3.91000      0.09     bsth    none
## 53          Maj        May   12.400 3.56500      0.09     bsth    none
## 54       Sommer     Summer   16.867 3.18167      0.09     bsth    none
## 55      Efterår     Autumn   14.600 3.45000      0.09     bsth    none
## 56        Marts      March    4.900 4.02500      0.09     bsth shallow
## 57        April      April    8.500 3.91000      0.09     bsth shallow
## 58          Maj        May   12.400 3.56500      0.09     bsth shallow
## 59       Sommer     Summer   16.867 3.18167      0.09     bsth shallow
## 60      Efterår     Autumn   14.600 3.45000      0.09     bsth shallow
## 61        Marts      March    4.900 4.02500      0.09     bsth    deep
## 62        April      April    8.500 3.91000      0.09     bsth    deep
## 63          Maj        May   12.400 3.56500      0.09     bsth    deep
## 64       Sommer     Summer   16.867 3.18167      0.09     bsth    deep
## 65      Efterår     Autumn   14.600 3.45000      0.09     bsth    deep
## 66        Marts      March    4.900 4.02500      0.09       os    none
## 67        April      April    8.500 3.91000      0.09       os    none
## 68          Maj        May   12.400 3.56500      0.09       os    none
## 69       Sommer     Summer   16.867 3.18167      0.09       os    none
## 70      Efterår     Autumn   14.600 3.45000      0.09       os    none
## 71        Marts      March    4.900 4.02500      0.09       cs    none
## 72        April      April    8.500 3.91000      0.09       cs    none
## 73          Maj        May   12.400 3.56500      0.09       cs    none
## 74       Sommer     Summer   16.867 3.18167      0.09       cs    none
## 75      Efterår     Autumn   14.600 3.45000      0.09       cs    none
## 76        Marts      March    4.900 4.02500      0.09     bsth    none
## 77        April      April    8.500 3.91000      0.09     bsth    none
## 78          Maj        May   12.400 3.56500      0.09     bsth    none
## 79       Sommer     Summer   16.867 3.18167      0.09     bsth    none
## 80      Efterår     Autumn   14.600 3.45000      0.09     bsth    none
## 81        Marts      March    4.900 4.02500      0.09     bsth    none
```

```
## 82         April      April    8.500 3.91000      0.09     bsth    none
## 83           Maj        May   12.400 3.56500      0.09     bsth    none
## 84        Sommer     Summer   16.867 3.18167      0.09     bsth    none
## 85       Efterår     Autumn   14.600 3.45000      0.09     bsth    none
## 86         Marts      March    4.900 4.02500      0.09     bsth    none
## 87         April      April    8.500 3.91000      0.09     bsth    none
## 88           Maj        May   12.400 3.56500      0.09     bsth    none
## 89        Sommer     Summer   16.867 3.18167      0.09     bsth    none
## 90       Efterår     Autumn   14.600 3.45000      0.09     bsth    none
##    t.incorp app.rate.ni          man.name man.source  acid man.dm man.ph
## 1        NA          30        Svinegylle        pig FALSE    3.9   7.20
## 2        NA          30        Svinegylle        pig FALSE    3.9   7.20
## 3        NA          30        Svinegylle        pig FALSE    3.9   7.20
## 4        NA          30        Svinegylle        pig FALSE    3.9   7.20
## 5        NA          30        Svinegylle        pig FALSE    3.9   7.20
## 6         4          30        Svinegylle        pig FALSE    3.9   7.20
## 7         4          30        Svinegylle        pig FALSE    3.9   7.20
## 8         4          30        Svinegylle        pig FALSE    3.9   7.20
## 9         4          30        Svinegylle        pig FALSE    3.9   7.20
## 10        4          30        Svinegylle        pig FALSE    3.9   7.20
## 11        4          30        Svinegylle        pig FALSE    3.9   7.20
## 12        4          30        Svinegylle        pig FALSE    3.9   7.20
## 13        4          30        Svinegylle        pig FALSE    3.9   7.20
## 14        4          30        Svinegylle        pig FALSE    3.9   7.20
## 15        4          30        Svinegylle        pig FALSE    3.9   7.20
## 16       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 17       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 18       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 19       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 20       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 21       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 22       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 23       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 24       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 25       NA           0        Svinegylle        pig FALSE    3.9   7.20
## 26       NA          30         Kvæggylle     cattle FALSE    6.5   7.00
## 27       NA          30         Kvæggylle     cattle FALSE    6.5   7.00
## 28       NA          30         Kvæggylle     cattle FALSE    6.5   7.00
## 29       NA          30         Kvæggylle     cattle FALSE    6.5   7.00
```

```
## 30       NA          30         Kvæggylle     cattle FALSE    6.5   7.00
## 31        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 32        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 33        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 34        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 35        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 36        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 37        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 38        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 39        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 40        4          30         Kvæggylle     cattle FALSE    6.5   7.00
## 41       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 42       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 43       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 44       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 45       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 46       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 47       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 48       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 49       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 50       NA           0         Kvæggylle     cattle FALSE    6.5   7.00
## 51       NA          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 52       NA          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 53       NA          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 54       NA          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 55       NA          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 56        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 57        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 58        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 59        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 60        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 61        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 62        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 63        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 64        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 65        4          30 Agfasset biomasse        mix FALSE    5.1   7.90
## 66       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 67       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 68       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
```

```
## 69       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 70       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 71       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 72       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 73       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 74       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 75       NA           0 Agfasset biomasse        mix FALSE    5.1   7.90
## 76       NA          30        Svinegylle        pig  TRUE    3.9   6.47
## 77       NA          30        Svinegylle        pig  TRUE    3.9   6.47
## 78       NA          30        Svinegylle        pig  TRUE    3.9   6.47
## 79       NA          30        Svinegylle        pig  TRUE    3.9   6.47
## 80       NA          30        Svinegylle        pig  TRUE    3.9   6.47
## 81       NA          30         Kvæggylle     cattle  TRUE    6.5   6.47
## 82       NA          30         Kvæggylle     cattle  TRUE    6.5   6.47
## 83       NA          30         Kvæggylle     cattle  TRUE    6.5   6.47
## 84       NA          30         Kvæggylle     cattle  TRUE    6.5   6.47
## 85       NA          30         Kvæggylle     cattle  TRUE    6.5   6.47
## 86       NA          30 Agfasset biomasse        mix  TRUE    5.1   6.52
## 87       NA          30 Agfasset biomasse        mix  TRUE    5.1   6.52
## 88       NA          30 Agfasset biomasse        mix  TRUE    5.1   6.52
## 89       NA          30 Agfasset biomasse        mix  TRUE    5.1   6.52
## 90       NA          30 Agfasset biomasse        mix  TRUE    5.1   6.52
##    man.source.pig app.mthd.os app.mthd.cs incorp.deep incorp.shallow  ct
## 1            TRUE       FALSE       FALSE       FALSE          FALSE 168
## 2            TRUE       FALSE       FALSE       FALSE          FALSE 168
## 3            TRUE       FALSE       FALSE       FALSE          FALSE 168
## 4            TRUE       FALSE       FALSE       FALSE          FALSE 168
## 5            TRUE       FALSE       FALSE       FALSE          FALSE 168
## 6            TRUE       FALSE       FALSE       FALSE           TRUE 168
## 7            TRUE       FALSE       FALSE       FALSE           TRUE 168
## 8            TRUE       FALSE       FALSE       FALSE           TRUE 168
## 9            TRUE       FALSE       FALSE       FALSE           TRUE 168
## 10           TRUE       FALSE       FALSE       FALSE           TRUE 168
## 11           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 12           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 13           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 14           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 15           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 16           TRUE        TRUE       FALSE       FALSE          FALSE 168
```

```
## 17          TRUE       TRUE      FALSE      FALSE         FALSE 168
## 18          TRUE       TRUE      FALSE      FALSE         FALSE 168
## 19          TRUE       TRUE      FALSE      FALSE         FALSE 168
## 20          TRUE       TRUE      FALSE      FALSE         FALSE 168
## 21          TRUE      FALSE       TRUE      FALSE         FALSE 168
## 22          TRUE      FALSE       TRUE      FALSE         FALSE 168
## 23          TRUE      FALSE       TRUE      FALSE         FALSE 168
## 24          TRUE      FALSE       TRUE      FALSE         FALSE 168
## 25          TRUE      FALSE       TRUE      FALSE         FALSE 168
## 26         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 27         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 28         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 29         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 30         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 31         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 32         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 33         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 34         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 35         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 36         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 37         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 38         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 39         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 40         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 41         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 42         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 43         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 44         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 45         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 46         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 47         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 48         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 49         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 50         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 51         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 52         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 53         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 54         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 55         FALSE      FALSE      FALSE      FALSE         FALSE 168
```

```
## 56          FALSE       FALSE       FALSE       FALSE          TRUE 168
## 57          FALSE       FALSE       FALSE       FALSE          TRUE 168
## 58          FALSE       FALSE       FALSE       FALSE          TRUE 168
## 59          FALSE       FALSE       FALSE       FALSE          TRUE 168
## 60          FALSE       FALSE       FALSE       FALSE          TRUE 168
## 61          FALSE       FALSE       FALSE        TRUE         FALSE 168
## 62          FALSE       FALSE       FALSE        TRUE         FALSE 168
## 63          FALSE       FALSE       FALSE        TRUE         FALSE 168
## 64          FALSE       FALSE       FALSE        TRUE         FALSE 168
## 65          FALSE       FALSE       FALSE        TRUE         FALSE 168
## 66          FALSE        TRUE       FALSE       FALSE         FALSE 168
## 67          FALSE        TRUE       FALSE       FALSE         FALSE 168
## 68          FALSE        TRUE       FALSE       FALSE         FALSE 168
## 69          FALSE        TRUE       FALSE       FALSE         FALSE 168
## 70          FALSE        TRUE       FALSE       FALSE         FALSE 168
## 71          FALSE       FALSE        TRUE       FALSE         FALSE 168
## 72          FALSE       FALSE        TRUE       FALSE         FALSE 168
## 73          FALSE       FALSE        TRUE       FALSE         FALSE 168
## 74          FALSE       FALSE        TRUE       FALSE         FALSE 168
## 75          FALSE       FALSE        TRUE       FALSE         FALSE 168
## 76           TRUE       FALSE       FALSE       FALSE         FALSE 168
## 77           TRUE       FALSE       FALSE       FALSE         FALSE 168
## 78           TRUE       FALSE       FALSE       FALSE         FALSE 168
## 79           TRUE       FALSE       FALSE       FALSE         FALSE 168
## 80           TRUE       FALSE       FALSE       FALSE         FALSE 168
## 81          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 82          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 83          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 84          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 85          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 86          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 87          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 88          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 89          FALSE       FALSE       FALSE       FALSE         FALSE 168
## 90          FALSE       FALSE       FALSE       FALSE         FALSE 168
##    tan.app id
## 1      100  1
## 2      100  2
## 3      100  3
```

```
## 4      100  4
## 5      100  5
## 6      100  6
## 7      100  7
## 8      100  8
## 9      100  9
## 10     100 10
## 11     100 11
## 12     100 12
## 13     100 13
## 14     100 14
## 15     100 15
## 16     100 16
## 17     100 17
## 18     100 18
## 19     100 19
## 20     100 20
## 21     100 21
## 22     100 22
## 23     100 23
## 24     100 24
## 25     100 25
## 26     100 26
## 27     100 27
## 28     100 28
## 29     100 29
## 30     100 30
## 31     100 31
## 32     100 32
## 33     100 33
## 34     100 34
## 35     100 35
## 36     100 36
## 37     100 37
## 38     100 38
## 39     100 39
## 40     100 40
## 41     100 41
## 42     100 42
```

```
## 43     100 43
## 44     100 44
## 45     100 45
## 46     100 46
## 47     100 47
## 48     100 48
## 49     100 49
## 50     100 50
## 51     100 51
## 52     100 52
## 53     100 53
## 54     100 54
## 55     100 55
## 56     100 56
## 57     100 57
## 58     100 58
## 59     100 59
## 60     100 60
## 61     100 61
## 62     100 62
## 63     100 63
## 64     100 64
## 65     100 65
## 66     100 66
## 67     100 67
## 68     100 68
## 69     100 69
## 70     100 70
## 71     100 71
## 72     100 72
## 73     100 73
## 74     100 74
## 75     100 75
## 76     100 76
## 77     100 77
## 78     100 78
## 79     100 79
## 80     100 80
## 81     100 81
```

```
## 82     100 82
## 83     100 83
## 84     100 84
## 85     100 85
## 86     100 86
## 87     100 87
## 88     100 88
## 89     100 89
## 90     100 90
```

Run model

With set 2 parameters

```
preds <- ALFAM2mod(dat, pars = ALFAM2pars02, app.name = 'tan.app', time.name = 'ct', time.incorp = 't.incorp', group = 'id', warn = TRUE)
```

```
## User-supplied parameters are being used.
## Incorporation applied (for group 10).
## Incorporation applied (for group 11).
## Incorporation applied (for group 12).
## Incorporation applied (for group 13).
## Incorporation applied (for group 14).
## Incorporation applied (for group 15).
## Incorporation applied (for group 31).
## Incorporation applied (for group 32).
## Incorporation applied (for group 33).
## Incorporation applied (for group 34).
## Incorporation applied (for group 35).
## Incorporation applied (for group 36).
## Incorporation applied (for group 37).
## Incorporation applied (for group 38).
## Incorporation applied (for group 39).
## Incorporation applied (for group 40).
```

```
## Incorporation applied (for group 56).
## Incorporation applied (for group 57).
## Incorporation applied (for group 58).
## Incorporation applied (for group 59).
## Incorporation applied (for group 6).
## Incorporation applied (for group 60).
## Incorporation applied (for group 61).
## Incorporation applied (for group 62).
## Incorporation applied (for group 63).
## Incorporation applied (for group 64).
## Incorporation applied (for group 65).
## Incorporation applied (for group 7).
## Incorporation applied (for group 8).
## Incorporation applied (for group 9).
## Warning in ALFAM2mod(dat, pars = ALFAM2pars02, app.name = "tan.app", time.name = "ct", : Running with 20 parameters. Dropped 4 with no
## These secondary parameters have been dropped:
##   app.mthd.bc.r1
##   app.mthd.ts.r1
##   ts.cereal.hght.r1
##   app.mthd.bc.r3
##
## These secondary parameters are being used:
##   int.f0
##   app.mthd.os.f0
##   app.rate.ni.f0
##   man.dm.f0
##   man.source.pig.f0
##   app.mthd.cs.f0
##   int.r1
##   man.dm.r1
##   air.temp.r1
##   wind.2m.r1
```

```
##   man.ph.r1
##   int.r2
##   rain.rate.r2
##   int.r3
##   app.mthd.cs.r3
##   man.ph.r3
##   incorp.shallow.f4
##   incorp.shallow.r3
##   incorp.deep.f4
##   incorp.deep.r3
```

Check reference condition.

```
ALFAM2mod(ref, pars = ALFAM2pars01, app.name = 'tan.app', time.name = 'ct', time.incorp = 't.incorp', warn = TRUE)
```

```
## User-supplied parameters are being used.
```

```
## Warning in ALFAM2mod(ref, pars = ALFAM2pars01, app.name = "tan.app", time.name
## = "ct", : No matching column for incorporation parameter(s): incorp.deep,
## incorp.shallow. Skipping incorporation.
```

```
## Warning in ALFAM2mod(ref, pars = ALFAM2pars01, app.name = "tan.app", time.name = "ct", : Running with 15 parameters. Dropped 5 with no
## These secondary parameters have been dropped:
##   app.rate.f0
##   incorp.deep.f4
##   incorp.shallow.f4
##   incorp.deep.r3
##   rain.cum.r3
##
## These secondary parameters are being used:
##   int.f0
##   int.r1
##   int.r2
##   int.r3
##   app.mthd.os.f0
##   man.dm.f0
##   app.mthd.bc.r1
##   man.dm.r1
##   air.temp.r1
##   wind.2m.r1
##   man.ph.r1
```

```
##   air.temp.r3
##   app.mthd.os.r3
##   man.ph.r3
##   rain.rate.r2
```

```
##    ct  dt        f0         r1        r2          r3 f4          f        s
## 1 168 168 0.3237724 0.06628499 0.1110777 0.001255181  1 3.7119e-12 71.30525
##           j        e    e.int        er
## 1 0.1708021 28.69475 28.69475 0.2869475
```

```
ALFAM2mod(ref, pars = ALFAM2pars02, app.name = 'tan.app', time.name = 'ct', time.incorp = 't.incorp', warn = TRUE)
```

```
## User-supplied parameters are being used.
```

```
## Warning in ALFAM2mod(ref, pars = ALFAM2pars02, app.name = "tan.app", time.name
## = "ct", : No matching column for incorporation parameter(s): incorp.shallow,
## incorp.deep. Skipping incorporation.
```

```
## Warning in ALFAM2mod(ref, pars = ALFAM2pars02, app.name = "tan.app", time.name = "ct", : Running with 20 parameters. Dropped 4 with no
## These secondary parameters have been dropped:
##   incorp.shallow.f4
##   incorp.shallow.r3
##   incorp.deep.f4
##   incorp.deep.r3
##
## These secondary parameters are being used:
##   int.f0
##   app.mthd.os.f0
##   app.rate.ni.f0
##   man.dm.f0
##   man.source.pig.f0
##   app.mthd.cs.f0
##   int.r1
##   app.mthd.bc.r1
##   man.dm.r1
##   air.temp.r1
##   wind.2m.r1
##   app.mthd.ts.r1
##   ts.cereal.hght.r1
##   man.ph.r1
##   int.r2
```

```
##   rain.rate.r2
##   int.r3
##   app.mthd.bc.r3
##   app.mthd.cs.r3
##   man.ph.r3
```

```
##    ct  dt        f0       r1         r2           r3 f4            f        s
## 1 168 168 0.2589096 0.115023 0.01587869 0.0005910004  1 7.283926e-09 69.96107
##           j        e    e.int        er
## 1 0.1788032 30.03893 30.03893 0.3003893
```

Add results to main df

```
dat$EF <- signif(preds$er, 2)
dat$EFp <- 100 * signif(preds$er, 2)
```