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
## 1          Marts      March    4.900 4.02500      0.09         Trailing hose
## 2          April      April    8.500 3.91000      0.09         Trailing hose
## 3            Maj        May   12.400 3.56500      0.09         Trailing hose
```

```
## 4         Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 5        Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 6          Marts      March    4.900 4.02500      0.09         Trailing hose
## 7          April      April    8.500 3.91000      0.09         Trailing hose
## 8            Maj        May   12.400 3.56500      0.09         Trailing hose
## 9         Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 10       Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 11         Marts      March    4.900 4.02500      0.09         Trailing hose
## 12         April      April    8.500 3.91000      0.09         Trailing hose
## 13           Maj        May   12.400 3.56500      0.09         Trailing hose
## 14        Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 15       Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 16         Marts      March    4.900 4.02500      0.09   Open slot injection
## 17         April      April    8.500 3.91000      0.09   Open slot injection
## 18           Maj        May   12.400 3.56500      0.09   Open slot injection
## 19        Sommer     Summer   16.867 3.18167      0.09   Open slot injection
## 20       Efterår     Autumn   14.600 3.45000      0.09   Open slot injection
## 21         Marts      March    4.900 4.02500      0.09 Closed slot injection
## 22         April      April    8.500 3.91000      0.09 Closed slot injection
## 23           Maj        May   12.400 3.56500      0.09 Closed slot injection
## 24        Sommer     Summer   16.867 3.18167      0.09 Closed slot injection
## 25       Efterår     Autumn   14.600 3.45000      0.09 Closed slot injection
## 26         Marts      March    4.900 4.02500      0.09         Trailing hose
## 27         April      April    8.500 3.91000      0.09         Trailing hose
## 28           Maj        May   12.400 3.56500      0.09         Trailing hose
## 29        Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 30       Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 31         Marts      March    4.900 4.02500      0.09         Trailing hose
## 32         April      April    8.500 3.91000      0.09         Trailing hose
## 33           Maj        May   12.400 3.56500      0.09         Trailing hose
## 34        Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 35       Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 36         Marts      March    4.900 4.02500      0.09         Trailing hose
## 37         April      April    8.500 3.91000      0.09         Trailing hose
## 38           Maj        May   12.400 3.56500      0.09         Trailing hose
## 39        Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 40       Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 41         Marts      March    4.900 4.02500      0.09   Open slot injection
## 42         April      April    8.500 3.91000      0.09   Open slot injection
```

```
## 43          Maj        May   12.400 3.56500      0.09   Open slot injection
## 44       Sommer     Summer   16.867 3.18167      0.09   Open slot injection
## 45      Efterår     Autumn   14.600 3.45000      0.09   Open slot injection
## 46        Marts      March    4.900 4.02500      0.09 Closed slot injection
## 47        April      April    8.500 3.91000      0.09 Closed slot injection
## 48          Maj        May   12.400 3.56500      0.09 Closed slot injection
## 49       Sommer     Summer   16.867 3.18167      0.09 Closed slot injection
## 50      Efterår     Autumn   14.600 3.45000      0.09 Closed slot injection
## 51        Marts      March    4.900 4.02500      0.09         Trailing hose
## 52        April      April    8.500 3.91000      0.09         Trailing hose
## 53          Maj        May   12.400 3.56500      0.09         Trailing hose
## 54       Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 55      Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 56        Marts      March    4.900 4.02500      0.09         Trailing hose
## 57        April      April    8.500 3.91000      0.09         Trailing hose
## 58          Maj        May   12.400 3.56500      0.09         Trailing hose
## 59       Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 60      Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 61        Marts      March    4.900 4.02500      0.09         Trailing hose
## 62        April      April    8.500 3.91000      0.09         Trailing hose
## 63          Maj        May   12.400 3.56500      0.09         Trailing hose
## 64       Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 65      Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 66        Marts      March    4.900 4.02500      0.09   Open slot injection
## 67        April      April    8.500 3.91000      0.09   Open slot injection
## 68          Maj        May   12.400 3.56500      0.09   Open slot injection
## 69       Sommer     Summer   16.867 3.18167      0.09   Open slot injection
## 70      Efterår     Autumn   14.600 3.45000      0.09   Open slot injection
## 71        Marts      March    4.900 4.02500      0.09 Closed slot injection
## 72        April      April    8.500 3.91000      0.09 Closed slot injection
## 73          Maj        May   12.400 3.56500      0.09 Closed slot injection
## 74       Sommer     Summer   16.867 3.18167      0.09 Closed slot injection
## 75      Efterår     Autumn   14.600 3.45000      0.09 Closed slot injection
## 76        Marts      March    4.900 4.02500      0.09         Trailing hose
## 77        April      April    8.500 3.91000      0.09         Trailing hose
## 78          Maj        May   12.400 3.56500      0.09         Trailing hose
## 79       Sommer     Summer   16.867 3.18167      0.09         Trailing hose
## 80      Efterår     Autumn   14.600 3.45000      0.09         Trailing hose
## 81        Marts      March    4.900 4.02500      0.09         Trailing hose
```

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

```
## 30    None       NA          30         Kvæggylle     Cattle FALSE    6.5
## 31 Shallow        4          30         Kvæggylle     Cattle FALSE    6.5
## 32 Shallow        4          30         Kvæggylle     Cattle FALSE    6.5
## 33 Shallow        4          30         Kvæggylle     Cattle FALSE    6.5
## 34 Shallow        4          30         Kvæggylle     Cattle FALSE    6.5
## 35 Shallow        4          30         Kvæggylle     Cattle FALSE    6.5
## 36    Deep        4          30         Kvæggylle     Cattle FALSE    6.5
## 37    Deep        4          30         Kvæggylle     Cattle FALSE    6.5
## 38    Deep        4          30         Kvæggylle     Cattle FALSE    6.5
## 39    Deep        4          30         Kvæggylle     Cattle FALSE    6.5
## 40    Deep        4          30         Kvæggylle     Cattle FALSE    6.5
## 41    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 42    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 43    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 44    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 45    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 46    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 47    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 48    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 49    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 50    None       NA           0         Kvæggylle     Cattle FALSE    6.5
## 51    None       NA          30 Afgasset biomasse  Digestate FALSE    5.1
## 52    None       NA          30 Afgasset biomasse  Digestate FALSE    5.1
## 53    None       NA          30 Afgasset biomasse  Digestate FALSE    5.1
## 54    None       NA          30 Afgasset biomasse  Digestate FALSE    5.1
## 55    None       NA          30 Afgasset biomasse  Digestate FALSE    5.1
## 56 Shallow        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 57 Shallow        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 58 Shallow        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 59 Shallow        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 60 Shallow        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 61    Deep        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 62    Deep        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 63    Deep        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 64    Deep        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 65    Deep        4          30 Afgasset biomasse  Digestate FALSE    5.1
## 66    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 67    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 68    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
```

```
## 69    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 70    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 71    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 72    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 73    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 74    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 75    None       NA           0 Afgasset biomasse  Digestate FALSE    5.1
## 76    None       NA          30        Svinegylle        Pig  TRUE    3.9
## 77    None       NA          30        Svinegylle        Pig  TRUE    3.9
## 78    None       NA          30        Svinegylle        Pig  TRUE    3.9
## 79    None       NA          30        Svinegylle        Pig  TRUE    3.9
## 80    None       NA          30        Svinegylle        Pig  TRUE    3.9
## 81    None       NA          30         Kvæggylle     Cattle  TRUE    6.5
## 82    None       NA          30         Kvæggylle     Cattle  TRUE    6.5
## 83    None       NA          30         Kvæggylle     Cattle  TRUE    6.5
## 84    None       NA          30         Kvæggylle     Cattle  TRUE    6.5
## 85    None       NA          30         Kvæggylle     Cattle  TRUE    6.5
## 86    None       NA          30 Afgasset biomasse  Digestate  TRUE    5.1
## 87    None       NA          30 Afgasset biomasse  Digestate  TRUE    5.1
## 88    None       NA          30 Afgasset biomasse  Digestate  TRUE    5.1
## 89    None       NA          30 Afgasset biomasse  Digestate  TRUE    5.1
## 90    None       NA          30 Afgasset biomasse  Digestate  TRUE    5.1
##    man.ph man.source.pig app.mthd.os app.mthd.cs incorp.deep incorp.shallow  ct
## 1    7.20           TRUE       FALSE       FALSE       FALSE          FALSE 168
## 2    7.20           TRUE       FALSE       FALSE       FALSE          FALSE 168
## 3    7.20           TRUE       FALSE       FALSE       FALSE          FALSE 168
## 4    7.20           TRUE       FALSE       FALSE       FALSE          FALSE 168
## 5    7.20           TRUE       FALSE       FALSE       FALSE          FALSE 168
## 6    7.20           TRUE       FALSE       FALSE       FALSE           TRUE 168
## 7    7.20           TRUE       FALSE       FALSE       FALSE           TRUE 168
## 8    7.20           TRUE       FALSE       FALSE       FALSE           TRUE 168
## 9    7.20           TRUE       FALSE       FALSE       FALSE           TRUE 168
## 10   7.20           TRUE       FALSE       FALSE       FALSE           TRUE 168
## 11   7.20           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 12   7.20           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 13   7.20           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 14   7.20           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 15   7.20           TRUE       FALSE       FALSE        TRUE          FALSE 168
## 16   7.20           TRUE        TRUE       FALSE       FALSE          FALSE 168
```

```
## 17   7.20          TRUE        TRUE       FALSE       FALSE          FALSE 168
## 18   7.20          TRUE        TRUE       FALSE       FALSE          FALSE 168
## 19   7.20          TRUE        TRUE       FALSE       FALSE          FALSE 168
## 20   7.20          TRUE        TRUE       FALSE       FALSE          FALSE 168
## 21   7.20          TRUE       FALSE        TRUE       FALSE          FALSE 168
## 22   7.20          TRUE       FALSE        TRUE       FALSE          FALSE 168
## 23   7.20          TRUE       FALSE        TRUE       FALSE          FALSE 168
## 24   7.20          TRUE       FALSE        TRUE       FALSE          FALSE 168
## 25   7.20          TRUE       FALSE        TRUE       FALSE          FALSE 168
## 26   7.00         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 27   7.00         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 28   7.00         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 29   7.00         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 30   7.00         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 31   7.00         FALSE       FALSE       FALSE       FALSE           TRUE 168
## 32   7.00         FALSE       FALSE       FALSE       FALSE           TRUE 168
## 33   7.00         FALSE       FALSE       FALSE       FALSE           TRUE 168
## 34   7.00         FALSE       FALSE       FALSE       FALSE           TRUE 168
## 35   7.00         FALSE       FALSE       FALSE       FALSE           TRUE 168
## 36   7.00         FALSE       FALSE       FALSE        TRUE          FALSE 168
## 37   7.00         FALSE       FALSE       FALSE        TRUE          FALSE 168
## 38   7.00         FALSE       FALSE       FALSE        TRUE          FALSE 168
## 39   7.00         FALSE       FALSE       FALSE        TRUE          FALSE 168
## 40   7.00         FALSE       FALSE       FALSE        TRUE          FALSE 168
## 41   7.00         FALSE        TRUE       FALSE       FALSE          FALSE 168
## 42   7.00         FALSE        TRUE       FALSE       FALSE          FALSE 168
## 43   7.00         FALSE        TRUE       FALSE       FALSE          FALSE 168
## 44   7.00         FALSE        TRUE       FALSE       FALSE          FALSE 168
## 45   7.00         FALSE        TRUE       FALSE       FALSE          FALSE 168
## 46   7.00         FALSE       FALSE        TRUE       FALSE          FALSE 168
## 47   7.00         FALSE       FALSE        TRUE       FALSE          FALSE 168
## 48   7.00         FALSE       FALSE        TRUE       FALSE          FALSE 168
## 49   7.00         FALSE       FALSE        TRUE       FALSE          FALSE 168
## 50   7.00         FALSE       FALSE        TRUE       FALSE          FALSE 168
## 51   7.90         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 52   7.90         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 53   7.90         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 54   7.90         FALSE       FALSE       FALSE       FALSE          FALSE 168
## 55   7.90         FALSE       FALSE       FALSE       FALSE          FALSE 168
```

```
## 56   7.90         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 57   7.90         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 58   7.90         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 59   7.90         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 60   7.90         FALSE      FALSE      FALSE      FALSE          TRUE 168
## 61   7.90         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 62   7.90         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 63   7.90         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 64   7.90         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 65   7.90         FALSE      FALSE      FALSE       TRUE         FALSE 168
## 66   7.90         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 67   7.90         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 68   7.90         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 69   7.90         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 70   7.90         FALSE       TRUE      FALSE      FALSE         FALSE 168
## 71   7.90         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 72   7.90         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 73   7.90         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 74   7.90         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 75   7.90         FALSE      FALSE       TRUE      FALSE         FALSE 168
## 76   6.47          TRUE      FALSE      FALSE      FALSE         FALSE 168
## 77   6.47          TRUE      FALSE      FALSE      FALSE         FALSE 168
## 78   6.47          TRUE      FALSE      FALSE      FALSE         FALSE 168
## 79   6.47          TRUE      FALSE      FALSE      FALSE         FALSE 168
## 80   6.47          TRUE      FALSE      FALSE      FALSE         FALSE 168
## 81   6.47         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 82   6.47         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 83   6.47         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 84   6.47         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 85   6.47         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 86   6.52         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 87   6.52         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 88   6.52         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 89   6.52         FALSE      FALSE      FALSE      FALSE         FALSE 168
## 90   6.52         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)
```