Model call record

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Calculates emission factors

Check package version.

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

```
## [1] '0.5.0'
```

Parameter values.

```
pars
```

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

Run model

With set 2 parameters

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

```
## User-supplied parameters are being used.
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## Incorporation applied (for group 009-1980).
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## Incorporation applied (for group 009-1990).
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## Incorporation applied (for group 377-1990).
```

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## Incorporation applied (for group 377-2000).
## Incorporation applied (for group 377-2010).
## Incorporation applied (for group 378-1980).
## Incorporation applied (for group 378-1990).
## Incorporation applied (for group 378-2000).
## Incorporation applied (for group 378-2010).
## Incorporation applied (for group 379-1980).
## Incorporation applied (for group 379-1990).
## Incorporation applied (for group 379-2000).
## Incorporation applied (for group 379-2010).
## Incorporation applied (for group 380-1980).
## Incorporation applied (for group 380-1990).
## Incorporation applied (for group 380-2000).
## Incorporation applied (for group 380-2010).
## Incorporation applied (for group 381-1980).
## Incorporation applied (for group 381-1990).
## Incorporation applied (for group 381-2000).
## Incorporation applied (for group 381-2010).
## Incorporation applied (for group 382-1980).
## Incorporation applied (for group 382-1990).
## Incorporation applied (for group 382-2000).
## Incorporation applied (for group 382-2010).
## Incorporation applied (for group 383-1980).
## Incorporation applied (for group 383-1990).
## Incorporation applied (for group 383-2000).
## Incorporation applied (for group 383-2010).
```

```
## Warning in ALFAM2mod(dat, pars = pars, app.name = "tan.app", time.name = "ct", : Running with 22 parameters. Dropped 2 with no match.
## These secondary parameters have been dropped:
##   app.mthd.ts.r1
##   ts.cereal.hght.r1
##
## 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
##   man.ph.r1
##   int.r2
##   rain.rate.r2
##   int.r3
##   app.mthd.bc.r3
##   app.mthd.cs.r3
##   man.ph.r3
##   incorp.shallow.f4
##   incorp.shallow.r3
##   incorp.deep.f4
##   incorp.deep.r3
```

Check reference condition.

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

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

```
## Warning in ALFAM2mod(ref, pars = pars, 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 = pars, app.name = "tan.app", time.name = "ct", : Running with 20 parameters. Dropped 4 with no match.
## 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         j         e     e.int        er
## 1 168 168 0.2589096 0.115023 0.01587869 0.0005910004  1 7.283926e-09 69.96107 0.1788032 30.03893 30.03893 0.3003893
```

With default values

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

```
## Default parameters (Set 2) are being used.

## Incorporation applied (for group 009-1980).

## Incorporation applied (for group 009-1990).

## Incorporation applied (for group 009-2000).

## Incorporation applied (for group 009-2010).
```

```
## Incorporation applied (for group 010-1980).
## Incorporation applied (for group 010-1990).
## Incorporation applied (for group 010-2000).
## Incorporation applied (for group 010-2010).
## Incorporation applied (for group 011-1980).
## Incorporation applied (for group 011-1990).
## Incorporation applied (for group 011-2000).
## Incorporation applied (for group 011-2010).
## Incorporation applied (for group 012-1980).
## Incorporation applied (for group 012-1990).
## Incorporation applied (for group 012-2000).
## Incorporation applied (for group 012-2010).
## Incorporation applied (for group 013-1980).
## Incorporation applied (for group 013-1990).
## Incorporation applied (for group 013-2000).
## Incorporation applied (for group 013-2010).
## Incorporation applied (for group 014-1980).
## Incorporation applied (for group 014-1990).
## Incorporation applied (for group 014-2000).
## Incorporation applied (for group 014-2010).
## Incorporation applied (for group 015-1980).
## Incorporation applied (for group 015-1990).
## Incorporation applied (for group 015-2000).
## Incorporation applied (for group 015-2010).
## Incorporation applied (for group 016-1980).
## Incorporation applied (for group 016-1990).
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## Incorporation applied (for group 016-2000).
## Incorporation applied (for group 016-2010).
## Incorporation applied (for group 021-1980).
## Incorporation applied (for group 021-1990).
## Incorporation applied (for group 021-2000).
## Incorporation applied (for group 021-2010).
## Incorporation applied (for group 022-1980).
## Incorporation applied (for group 022-1990).
## Incorporation applied (for group 022-2000).
## Incorporation applied (for group 022-2010).
## Incorporation applied (for group 023-1980).
## Incorporation applied (for group 023-1990).
## Incorporation applied (for group 023-2000).
## Incorporation applied (for group 023-2010).
## Incorporation applied (for group 024-1980).
## Incorporation applied (for group 024-1990).
## Incorporation applied (for group 024-2000).
## Incorporation applied (for group 024-2010).
## Incorporation applied (for group 026-1980).
## Incorporation applied (for group 026-1990).
## Incorporation applied (for group 026-2000).
## Incorporation applied (for group 026-2010).
## Incorporation applied (for group 027-1980).
## Incorporation applied (for group 027-1990).
## Incorporation applied (for group 027-2000).
## Incorporation applied (for group 027-2010).
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## Incorporation applied (for group 028-1980).
## Incorporation applied (for group 028-1990).
## Incorporation applied (for group 028-2000).
## Incorporation applied (for group 028-2010).
## Incorporation applied (for group 029-1980).
## Incorporation applied (for group 029-1990).
## Incorporation applied (for group 029-2000).
## Incorporation applied (for group 029-2010).
## Incorporation applied (for group 030-1980).
## Incorporation applied (for group 030-1990).
## Incorporation applied (for group 030-2000).
## Incorporation applied (for group 030-2010).
## Incorporation applied (for group 031-1980).
## Incorporation applied (for group 031-1990).
## Incorporation applied (for group 031-2000).
## Incorporation applied (for group 031-2010).
## Incorporation applied (for group 035-1980).
## Incorporation applied (for group 035-1990).
## Incorporation applied (for group 035-2000).
## Incorporation applied (for group 035-2010).
## Incorporation applied (for group 036-1980).
## Incorporation applied (for group 036-1990).
## Incorporation applied (for group 036-2000).
## Incorporation applied (for group 036-2010).
## Incorporation applied (for group 046-1980).
## Incorporation applied (for group 046-1990).
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## Incorporation applied (for group 046-2000).
## Incorporation applied (for group 046-2010).
## Incorporation applied (for group 047-1980).
## Incorporation applied (for group 047-1990).
## Incorporation applied (for group 047-2000).
## Incorporation applied (for group 047-2010).
## Incorporation applied (for group 048-1980).
## Incorporation applied (for group 048-1990).
## Incorporation applied (for group 048-2000).
## Incorporation applied (for group 048-2010).
## Incorporation applied (for group 049-1980).
## Incorporation applied (for group 049-1990).
## Incorporation applied (for group 049-2000).
## Incorporation applied (for group 049-2010).
## Incorporation applied (for group 050-1980).
## Incorporation applied (for group 050-1990).
## Incorporation applied (for group 050-2000).
## Incorporation applied (for group 050-2010).
## Incorporation applied (for group 051-1980).
## Incorporation applied (for group 051-1990).
## Incorporation applied (for group 051-2000).
## Incorporation applied (for group 051-2010).
## Incorporation applied (for group 052-1980).
## Incorporation applied (for group 052-1990).
## Incorporation applied (for group 052-2000).
## Incorporation applied (for group 052-2010).
```

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## Incorporation applied (for group 053-1980).
## Incorporation applied (for group 053-1990).
## Incorporation applied (for group 053-2000).
## Incorporation applied (for group 053-2010).
## Incorporation applied (for group 058-1980).
## Incorporation applied (for group 058-1990).
## Incorporation applied (for group 058-2000).
## Incorporation applied (for group 058-2010).
## Incorporation applied (for group 059-1980).
## Incorporation applied (for group 059-1990).
## Incorporation applied (for group 059-2000).
## Incorporation applied (for group 059-2010).
## Incorporation applied (for group 060-1980).
## Incorporation applied (for group 060-1990).
## Incorporation applied (for group 060-2000).
## Incorporation applied (for group 060-2010).
## Incorporation applied (for group 061-1980).
## Incorporation applied (for group 061-1990).
## Incorporation applied (for group 061-2000).
## Incorporation applied (for group 061-2010).
## Incorporation applied (for group 063-1980).
## Incorporation applied (for group 063-1990).
## Incorporation applied (for group 063-2000).
## Incorporation applied (for group 063-2010).
## Incorporation applied (for group 064-1980).
## Incorporation applied (for group 064-1990).
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## Incorporation applied (for group 064-2000).
## Incorporation applied (for group 064-2010).
## Incorporation applied (for group 065-1980).
## Incorporation applied (for group 065-1990).
## Incorporation applied (for group 065-2000).
## Incorporation applied (for group 065-2010).
## Incorporation applied (for group 066-1980).
## Incorporation applied (for group 066-1990).
## Incorporation applied (for group 066-2000).
## Incorporation applied (for group 066-2010).
## Incorporation applied (for group 067-1980).
## Incorporation applied (for group 067-1990).
## Incorporation applied (for group 067-2000).
## Incorporation applied (for group 067-2010).
## Incorporation applied (for group 068-1980).
## Incorporation applied (for group 068-1990).
## Incorporation applied (for group 068-2000).
## Incorporation applied (for group 068-2010).
## Incorporation applied (for group 072-1980).
## Incorporation applied (for group 072-1990).
## Incorporation applied (for group 072-2000).
## Incorporation applied (for group 072-2010).
## Incorporation applied (for group 073-1980).
## Incorporation applied (for group 073-1990).
## Incorporation applied (for group 073-2000).
## Incorporation applied (for group 073-2010).
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## Incorporation applied (for group 083-1980).
## Incorporation applied (for group 083-1990).
## Incorporation applied (for group 083-2000).
## Incorporation applied (for group 083-2010).
## Incorporation applied (for group 084-1980).
## Incorporation applied (for group 084-1990).
## Incorporation applied (for group 084-2000).
## Incorporation applied (for group 084-2010).
## Incorporation applied (for group 085-1980).
## Incorporation applied (for group 085-1990).
## Incorporation applied (for group 085-2000).
## Incorporation applied (for group 085-2010).
## Incorporation applied (for group 086-1980).
## Incorporation applied (for group 086-1990).
## Incorporation applied (for group 086-2000).
## Incorporation applied (for group 086-2010).
## Incorporation applied (for group 087-1980).
## Incorporation applied (for group 087-1990).
## Incorporation applied (for group 087-2000).
## Incorporation applied (for group 087-2010).
## Incorporation applied (for group 088-1980).
## Incorporation applied (for group 088-1990).
## Incorporation applied (for group 088-2000).
## Incorporation applied (for group 088-2010).
## Incorporation applied (for group 089-1980).
## Incorporation applied (for group 089-1990).
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## Incorporation applied (for group 089-2000).
## Incorporation applied (for group 089-2010).
## Incorporation applied (for group 090-1980).
## Incorporation applied (for group 090-1990).
## Incorporation applied (for group 090-2000).
## Incorporation applied (for group 090-2010).
## Incorporation applied (for group 095-1980).
## Incorporation applied (for group 095-1990).
## Incorporation applied (for group 095-2000).
## Incorporation applied (for group 095-2010).
## Incorporation applied (for group 096-1980).
## Incorporation applied (for group 096-1990).
## Incorporation applied (for group 096-2000).
## Incorporation applied (for group 096-2010).
## Incorporation applied (for group 097-1980).
## Incorporation applied (for group 097-1990).
## Incorporation applied (for group 097-2000).
## Incorporation applied (for group 097-2010).
## Incorporation applied (for group 098-1980).
## Incorporation applied (for group 098-1990).
## Incorporation applied (for group 098-2000).
## Incorporation applied (for group 098-2010).
## Incorporation applied (for group 100-1980).
## Incorporation applied (for group 100-1990).
## Incorporation applied (for group 100-2000).
## Incorporation applied (for group 100-2010).
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## Incorporation applied (for group 101-1980).
## Incorporation applied (for group 101-1990).
## Incorporation applied (for group 101-2000).
## Incorporation applied (for group 101-2010).
## Incorporation applied (for group 102-1980).
## Incorporation applied (for group 102-1990).
## Incorporation applied (for group 102-2000).
## Incorporation applied (for group 102-2010).
## Incorporation applied (for group 103-1980).
## Incorporation applied (for group 103-1990).
## Incorporation applied (for group 103-2000).
## Incorporation applied (for group 103-2010).
## Incorporation applied (for group 104-1980).
## Incorporation applied (for group 104-1990).
## Incorporation applied (for group 104-2000).
## Incorporation applied (for group 104-2010).
## Incorporation applied (for group 105-1980).
## Incorporation applied (for group 105-1990).
## Incorporation applied (for group 105-2000).
## Incorporation applied (for group 105-2010).
## Incorporation applied (for group 109-1980).
## Incorporation applied (for group 109-1990).
## Incorporation applied (for group 109-2000).
## Incorporation applied (for group 109-2010).
## Incorporation applied (for group 110-1980).
## Incorporation applied (for group 110-1990).
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## Incorporation applied (for group 110-2000).
## Incorporation applied (for group 110-2010).
## Incorporation applied (for group 112-1980).
## Incorporation applied (for group 112-1990).
## Incorporation applied (for group 112-2000).
## Incorporation applied (for group 112-2010).
## Incorporation applied (for group 113-1980).
## Incorporation applied (for group 113-1990).
## Incorporation applied (for group 113-2000).
## Incorporation applied (for group 113-2010).
## Incorporation applied (for group 114-1980).
## Incorporation applied (for group 114-1990).
## Incorporation applied (for group 114-2000).
## Incorporation applied (for group 114-2010).
## Incorporation applied (for group 115-1980).
## Incorporation applied (for group 115-1990).
## Incorporation applied (for group 115-2000).
## Incorporation applied (for group 115-2010).
## Incorporation applied (for group 116-1980).
## Incorporation applied (for group 116-1990).
## Incorporation applied (for group 116-2000).
## Incorporation applied (for group 116-2010).
## Incorporation applied (for group 117-1980).
## Incorporation applied (for group 117-1990).
## Incorporation applied (for group 117-2000).
## Incorporation applied (for group 117-2010).
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## Incorporation applied (for group 118-1980).
## Incorporation applied (for group 118-1990).
## Incorporation applied (for group 118-2000).
## Incorporation applied (for group 118-2010).
## Incorporation applied (for group 119-1980).
## Incorporation applied (for group 119-1990).
## Incorporation applied (for group 119-2000).
## Incorporation applied (for group 119-2010).
## Incorporation applied (for group 124-1980).
## Incorporation applied (for group 124-1990).
## Incorporation applied (for group 124-2000).
## Incorporation applied (for group 124-2010).
## Incorporation applied (for group 125-1980).
## Incorporation applied (for group 125-1990).
## Incorporation applied (for group 125-2000).
## Incorporation applied (for group 125-2010).
## Incorporation applied (for group 126-1980).
## Incorporation applied (for group 126-1990).
## Incorporation applied (for group 126-2000).
## Incorporation applied (for group 126-2010).
## Incorporation applied (for group 127-1980).
## Incorporation applied (for group 127-1990).
## Incorporation applied (for group 127-2000).
## Incorporation applied (for group 127-2010).
## Incorporation applied (for group 129-1980).
## Incorporation applied (for group 129-1990).
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## Incorporation applied (for group 129-2000).
## Incorporation applied (for group 129-2010).
## Incorporation applied (for group 130-1980).
## Incorporation applied (for group 130-1990).
## Incorporation applied (for group 130-2000).
## Incorporation applied (for group 130-2010).
## Incorporation applied (for group 131-1980).
## Incorporation applied (for group 131-1990).
## Incorporation applied (for group 131-2000).
## Incorporation applied (for group 131-2010).
## Incorporation applied (for group 132-1980).
## Incorporation applied (for group 132-1990).
## Incorporation applied (for group 132-2000).
## Incorporation applied (for group 132-2010).
## Incorporation applied (for group 137-1980).
## Incorporation applied (for group 137-1990).
## Incorporation applied (for group 137-2000).
## Incorporation applied (for group 137-2010).
## Incorporation applied (for group 138-1980).
## Incorporation applied (for group 138-1990).
## Incorporation applied (for group 138-2000).
## Incorporation applied (for group 138-2010).
## Incorporation applied (for group 142-1980).
## Incorporation applied (for group 142-1990).
## Incorporation applied (for group 142-2000).
## Incorporation applied (for group 142-2010).
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## Incorporation applied (for group 143-1980).
## Incorporation applied (for group 143-1990).
## Incorporation applied (for group 143-2000).
## Incorporation applied (for group 143-2010).
## Incorporation applied (for group 145-1980).
## Incorporation applied (for group 145-1990).
## Incorporation applied (for group 145-2000).
## Incorporation applied (for group 145-2010).
## Incorporation applied (for group 146-1980).
## Incorporation applied (for group 146-1990).
## Incorporation applied (for group 146-2000).
## Incorporation applied (for group 146-2010).
## Incorporation applied (for group 147-1980).
## Incorporation applied (for group 147-1990).
## Incorporation applied (for group 147-2000).
## Incorporation applied (for group 147-2010).
## Incorporation applied (for group 148-1980).
## Incorporation applied (for group 148-1990).
## Incorporation applied (for group 148-2000).
## Incorporation applied (for group 148-2010).
## Incorporation applied (for group 149-1980).
## Incorporation applied (for group 149-1990).
## Incorporation applied (for group 149-2000).
## Incorporation applied (for group 149-2010).
## Incorporation applied (for group 150-1980).
## Incorporation applied (for group 150-1990).
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## Incorporation applied (for group 150-2000).
## Incorporation applied (for group 150-2010).
## Incorporation applied (for group 151-1980).
## Incorporation applied (for group 151-1990).
## Incorporation applied (for group 151-2000).
## Incorporation applied (for group 151-2010).
## Incorporation applied (for group 152-1980).
## Incorporation applied (for group 152-1990).
## Incorporation applied (for group 152-2000).
## Incorporation applied (for group 152-2010).
## Incorporation applied (for group 157-1980).
## Incorporation applied (for group 157-1990).
## Incorporation applied (for group 157-2000).
## Incorporation applied (for group 157-2010).
## Incorporation applied (for group 158-1980).
## Incorporation applied (for group 158-1990).
## Incorporation applied (for group 158-2000).
## Incorporation applied (for group 158-2010).
## Incorporation applied (for group 159-1980).
## Incorporation applied (for group 159-1990).
## Incorporation applied (for group 159-2000).
## Incorporation applied (for group 159-2010).
## Incorporation applied (for group 160-1980).
## Incorporation applied (for group 160-1990).
## Incorporation applied (for group 160-2000).
## Incorporation applied (for group 160-2010).
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## Incorporation applied (for group 162-1980).
## Incorporation applied (for group 162-1990).
## Incorporation applied (for group 162-2000).
## Incorporation applied (for group 162-2010).
## Incorporation applied (for group 163-1980).
## Incorporation applied (for group 163-1990).
## Incorporation applied (for group 163-2000).
## Incorporation applied (for group 163-2010).
## Incorporation applied (for group 164-1980).
## Incorporation applied (for group 164-1990).
## Incorporation applied (for group 164-2000).
## Incorporation applied (for group 164-2010).
## Incorporation applied (for group 165-1980).
## Incorporation applied (for group 165-1990).
## Incorporation applied (for group 165-2000).
## Incorporation applied (for group 165-2010).
## Incorporation applied (for group 170-1980).
## Incorporation applied (for group 170-1990).
## Incorporation applied (for group 170-2000).
## Incorporation applied (for group 170-2010).
## Incorporation applied (for group 171-1980).
## Incorporation applied (for group 171-1990).
## Incorporation applied (for group 171-2000).
## Incorporation applied (for group 171-2010).
## Incorporation applied (for group 175-1980).
## Incorporation applied (for group 175-1990).
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## Incorporation applied (for group 175-2000).
## Incorporation applied (for group 175-2010).
## Incorporation applied (for group 176-1980).
## Incorporation applied (for group 176-1990).
## Incorporation applied (for group 176-2000).
## Incorporation applied (for group 176-2010).
## Incorporation applied (for group 178-1980).
## Incorporation applied (for group 178-1990).
## Incorporation applied (for group 178-2000).
## Incorporation applied (for group 178-2010).
## Incorporation applied (for group 179-1980).
## Incorporation applied (for group 179-1990).
## Incorporation applied (for group 179-2000).
## Incorporation applied (for group 179-2010).
## Incorporation applied (for group 180-1980).
## Incorporation applied (for group 180-1990).
## Incorporation applied (for group 180-2000).
## Incorporation applied (for group 180-2010).
## Incorporation applied (for group 181-1980).
## Incorporation applied (for group 181-1990).
## Incorporation applied (for group 181-2000).
## Incorporation applied (for group 181-2010).
## Incorporation applied (for group 182-1980).
## Incorporation applied (for group 182-1990).
## Incorporation applied (for group 182-2000).
## Incorporation applied (for group 182-2010).
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## Incorporation applied (for group 183-1980).
## Incorporation applied (for group 183-1990).
## Incorporation applied (for group 183-2000).
## Incorporation applied (for group 183-2010).
## Incorporation applied (for group 184-1980).
## Incorporation applied (for group 184-1990).
## Incorporation applied (for group 184-2000).
## Incorporation applied (for group 184-2010).
## Incorporation applied (for group 185-1980).
## Incorporation applied (for group 185-1990).
## Incorporation applied (for group 185-2000).
## Incorporation applied (for group 185-2010).
## Incorporation applied (for group 190-1980).
## Incorporation applied (for group 190-1990).
## Incorporation applied (for group 190-2000).
## Incorporation applied (for group 190-2010).
## Incorporation applied (for group 191-1980).
## Incorporation applied (for group 191-1990).
## Incorporation applied (for group 191-2000).
## Incorporation applied (for group 191-2010).
## Incorporation applied (for group 192-1980).
## Incorporation applied (for group 192-1990).
## Incorporation applied (for group 192-2000).
## Incorporation applied (for group 192-2010).
## Incorporation applied (for group 193-1980).
## Incorporation applied (for group 193-1990).
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## Incorporation applied (for group 193-2000).
## Incorporation applied (for group 193-2010).
## Incorporation applied (for group 195-1980).
## Incorporation applied (for group 195-1990).
## Incorporation applied (for group 195-2000).
## Incorporation applied (for group 195-2010).
## Incorporation applied (for group 196-1980).
## Incorporation applied (for group 196-1990).
## Incorporation applied (for group 196-2000).
## Incorporation applied (for group 196-2010).
## Incorporation applied (for group 197-1980).
## Incorporation applied (for group 197-1990).
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## Incorporation applied (for group 362-1990).
## Incorporation applied (for group 362-2000).
## Incorporation applied (for group 362-2010).
## Incorporation applied (for group 363-1980).
## Incorporation applied (for group 363-1990).
## Incorporation applied (for group 363-2000).
## Incorporation applied (for group 363-2010).
## Incorporation applied (for group 364-1980).
## Incorporation applied (for group 364-1990).
## Incorporation applied (for group 364-2000).
## Incorporation applied (for group 364-2010).
```

```
## Incorporation applied (for group 365-1980).
## Incorporation applied (for group 365-1990).
## Incorporation applied (for group 365-2000).
## Incorporation applied (for group 365-2010).
## Incorporation applied (for group 366-1980).
## Incorporation applied (for group 366-1990).
## Incorporation applied (for group 366-2000).
## Incorporation applied (for group 366-2010).
## Incorporation applied (for group 367-1980).
## Incorporation applied (for group 367-1990).
## Incorporation applied (for group 367-2000).
## Incorporation applied (for group 367-2010).
## Incorporation applied (for group 368-1980).
## Incorporation applied (for group 368-1990).
## Incorporation applied (for group 368-2000).
## Incorporation applied (for group 368-2010).
## Incorporation applied (for group 369-1980).
## Incorporation applied (for group 369-1990).
## Incorporation applied (for group 369-2000).
## Incorporation applied (for group 369-2010).
## Incorporation applied (for group 370-1980).
## Incorporation applied (for group 370-1990).
## Incorporation applied (for group 370-2000).
## Incorporation applied (for group 370-2010).
## Incorporation applied (for group 371-1980).
## Incorporation applied (for group 371-1990).
```

```
## Incorporation applied (for group 371-2000).
## Incorporation applied (for group 371-2010).
## Incorporation applied (for group 372-1980).
## Incorporation applied (for group 372-1990).
## Incorporation applied (for group 372-2000).
## Incorporation applied (for group 372-2010).
## Incorporation applied (for group 373-1980).
## Incorporation applied (for group 373-1990).
## Incorporation applied (for group 373-2000).
## Incorporation applied (for group 373-2010).
## Incorporation applied (for group 374-1980).
## Incorporation applied (for group 374-1990).
## Incorporation applied (for group 374-2000).
## Incorporation applied (for group 374-2010).
## Incorporation applied (for group 375-1980).
## Incorporation applied (for group 375-1990).
## Incorporation applied (for group 375-2000).
## Incorporation applied (for group 375-2010).
## Incorporation applied (for group 376-1980).
## Incorporation applied (for group 376-1990).
## Incorporation applied (for group 376-2000).
## Incorporation applied (for group 376-2010).
## Incorporation applied (for group 377-1980).
## Incorporation applied (for group 377-1990).
## Incorporation applied (for group 377-2000).
## Incorporation applied (for group 377-2010).
```

```
## Incorporation applied (for group 378-1980).

## Incorporation applied (for group 378-1990).

## Incorporation applied (for group 378-2000).

## Incorporation applied (for group 378-2010).

## Incorporation applied (for group 379-1980).

## Incorporation applied (for group 379-1990).

## Incorporation applied (for group 379-2000).

## Incorporation applied (for group 379-2010).

## Incorporation applied (for group 380-1980).

## Incorporation applied (for group 380-1990).

## Incorporation applied (for group 380-2000).

## Incorporation applied (for group 380-2010).

## Incorporation applied (for group 381-1980).

## Incorporation applied (for group 381-1990).

## Incorporation applied (for group 381-2000).

## Incorporation applied (for group 381-2010).

## Incorporation applied (for group 382-1980).

## Incorporation applied (for group 382-1990).

## Incorporation applied (for group 382-2000).

## Incorporation applied (for group 382-2010).

## Incorporation applied (for group 383-1980).

## Incorporation applied (for group 383-1990).

## Incorporation applied (for group 383-2000).

## Incorporation applied (for group 383-2010).

## Warning in ALFAM2mod(dat, app.name = "tan.app", time.name = "ct", time.incorp = "t.incorp", : Running with 22 parameters. Dropped 2 wit
## These secondary parameters have been dropped:
##   app.mthd.ts.r1
```

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

Add results to main df

```
dat$emis <- signif(preds$e, 2)
dat$EF <- signif(preds$er, 2)

dat$emis.def <- signif(preds.def$e, 2)
dat$EF.def <- signif(preds.def$er, 2)
```