

Model call record

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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

Make ALFAM2 predictions

Hourly preds

```
preds <- ALFAM2mod(dath, pars = pars, app.name = 'tan.app', time.name = 'ct', group = 'sim')
```

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

```
## Warning in ALFAM2mod(dath, pars = pars, app.name = "tan.app", time.name = "ct", : Running with 12 parameters. Dropped 12 with no match.
```

```
## These secondary parameters have been dropped:
```

```
## app.mthd.os.f0
```

```
## man.source.pig.f0
```

```
## app.mthd.cs.f0
```

```
## app.mthd.bc.r1
## app.mthd.ts.r1
## ts.cereal.hght.r1
## app.mthd.bc.r3
## app.mthd.cs.r3
## incorp.shallow.f4
## incorp.shallow.r3
## incorp.deep.f4
## incorp.deep.r3
##
## These secondary parameters are being used:
## int.f0
## app.rate.ni.f0
## man.dm.f0
## int.r1
## man.dm.r1
## air.temp.r1
## wind.2m.r1
## man.ph.r1
## int.r2
## rain.rate.r2
## int.r3
## man.ph.r3
```

```
dath <- cbind(dath, preds[, -1:-3])
```

Means of hourly

```
dathm <- as.data.frame(summarise(group_by(dath, yr, ct),
                                     er = mean(er),
                                     sim = 0))
```

`summarise()` has grouped output by 'yr'. You can override using the `.groups` argument.

With night application

```
preds <- ALFAM2mod(dathn, pars = pars, app.name = 'tan.app', time.name = 'ct', group = 'sim')
```

User-supplied parameters are being used.

Warning in ALFAM2mod(dathn, pars = pars, app.name = "tan.app", time.name = "ct", : Running with 12 parameters. Dropped 12 with no match

These secondary parameters have been dropped:

```
## app.mthd.os.f0
## man.source.pig.f0
## app.mthd.cs.f0
## app.mthd.bc.r1
## app.mthd.ts.r1
## ts.cereal.hght.r1
## app.mthd.bc.r3
## app.mthd.cs.r3
## incorp.shallow.f4
## incorp.shallow.r3
## incorp.deep.f4
## incorp.deep.r3
##
## These secondary parameters are being used:
## int.f0
## app.rate.ni.f0
## man.dm.f0
## int.r1
## man.dm.r1
## air.temp.r1
## wind.2m.r1
## man.ph.r1
## int.r2
## rain.rate.r2
## int.r3
## man.ph.r3
```

```
dathn <- cbind(dathn, preds[, -1:-3])
```

Means of hourly, night application

```
dathnm <- as.data.frame(summarise(group_by(dathn, yr, ct),
                                     er = mean(er),
                                     sim = 0))
```

`summarise()` has grouped output by 'yr'. You can override using the `.groups` argument.

Without rain

```
preds <- ALFAM2mod(dathnr, pars = pars, app.name = 'tan.app', time.name = 'ct', group = 'sim')
```

User-supplied parameters are being used.

```

## Warning in ALFAM2mod(dathnr, pars = pars, app.name = "tan.app", time.name = "ct", : Running with 12 parameters. Dropped 12 with no match
## These secondary parameters have been dropped:
##   app.mthd.os.f0
##   man.source.pig.f0
##   app.mthd.cs.f0
##   app.mthd.bc.r1
##   app.mthd.ts.r1
##   ts.cereal.hght.r1
##   app.mthd.bc.r3
##   app.mthd.cs.r3
##   incorp.shallow.f4
##   incorp.shallow.r3
##   incorp.deep.f4
##   incorp.deep.r3
##
## These secondary parameters are being used:
##   int.f0
##   app.rate.ni.f0
##   man.dm.f0
##   int.r1
##   man.dm.r1
##   air.temp.r1
##   wind.2m.r1
##   man.ph.r1
##   int.r2
##   rain.rate.r2
##   int.r3
##   man.ph.r3
dathnr <- cbind(dathnr, preds[, -1:-3])

Means of hourly, without rain
dathnrm <- as.data.frame(summarise(group_by(dathnr, yr, ct), er = mean(er), sim = 0))

## `summarise()` has grouped output by 'yr'. You can override using the `.groups` argument.

Mean preds
preds <- ALFAM2mod(datm, pars = pars, app.name = 'tan.app', time.name = 'ct', group = 'sim')

## User-supplied parameters are being used.

```

```
## Warning in ALFAM2mod(datm, pars = pars, app.name = "tan.app", time.name = "ct", : Running with 12 parameters. Dropped 12 with no match.
## These secondary parameters have been dropped:
##   app.mthd.os.f0
##   man.source.pig.f0
##   app.mthd.cs.f0
##   app.mthd.bc.r1
##   app.mthd.ts.r1
##   ts.cereal.hght.r1
##   app.mthd.bc.r3
##   app.mthd.cs.r3
##   incorp.shallow.f4
##   incorp.shallow.r3
##   incorp.deep.f4
##   incorp.deep.r3
##
## These secondary parameters are being used:
##   int.f0
##   app.rate.ni.f0
##   man.dm.f0
##   int.r1
##   man.dm.r1
##   air.temp.r1
##   wind.2m.r1
##   man.ph.r1
##   int.r2
##   rain.rate.r2
##   int.r3
##   man.ph.r3
```

```
datm <- cbind(datm, preds[, -1:-3])
```

Mean with fudge factors

```
preds <- ALFAM2mod(datmf, pars = pars, app.name = 'tan.app', time.name = 'ct', group = 'sim')
```

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

```
## Warning in ALFAM2mod(datmf, pars = pars, app.name = "tan.app", time.name = "ct", : Running with 12 parameters. Dropped 12 with no match.
## These secondary parameters have been dropped:
##   app.mthd.os.f0
##   man.source.pig.f0
```

```

## app.mthd.cs.f0
## app.mthd.bc.r1
## app.mthd.ts.r1
## ts.cereal.hght.r1
## app.mthd.bc.r3
## app.mthd.cs.r3
## incorp.shallow.f4
## incorp.shallow.r3
## incorp.deep.f4
## incorp.deep.r3
##
## These secondary parameters are being used:
## int.f0
## app.rate.ni.f0
## man.dm.f0
## int.r1
## man.dm.r1
## air.temp.r1
## wind.2m.r1
## man.ph.r1
## int.r2
## rain.rate.r2
## int.r3
## man.ph.r3
datmf <- cbind(datmf, preds[, -1:-3])

```