Probability of occurrance

Call:

model.avg(object = Morn\_mod)

Component model call:

lme.formula(fixed = <10 unique values>, data = Occurrance2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

2 4 -1590.85 3189.71 0.00 0.96

12 5 -1593.10 3196.22 6.51 0.04

24 5 -1594.82 3199.66 9.95 0.01

124 6 -1596.83 3205.69 15.98 0.00

234 6 -1599.43 3210.88 21.17 0.00

1 4 -1602.23 3212.47 22.75 0.00

4 4 -1603.96 3215.94 26.23 0.00

14 5 -1605.65 3221.33 31.61 0.00

12346 8 -1607.75 3231.54 41.83 0.00

123456 9 -1610.41 3238.87 49.16 0.00

Term codes:

Denning Moonlight\_before Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 7.995e-01 3.335e-02 3.336e-02 23.967 <2e-16 \*\*\*

Moonlight\_before -9.713e-03 1.784e-03 1.784e-03 5.443 1e-07 \*\*\*

Denningyes 9.522e-04 6.720e-03 6.721e-03 0.142 0.887

Temperature 3.064e-05 4.730e-04 4.731e-04 0.065 0.948

Rainfall -4.857e-08 1.200e-05 1.200e-05 0.004 0.997

Rainfall:Temperature 1.680e-13 2.088e-08 2.089e-08 0.000 1.000

Denningyes:Temperature -3.312e-13 9.627e-08 9.628e-08 0.000 1.000

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 0.7995404 0.0333490 0.0333603 23.967 <2e-16 \*\*\*

Moonlight\_before -0.0097136 0.0017834 0.0017841 5.445 1e-07 \*\*\*

Denningyes 0.0255411 0.0241505 0.0241596 1.057 0.290

Temperature 0.0043973 0.0035920 0.0035934 1.224 0.221

Rainfall -0.0020087 0.0013844 0.0013849 1.450 0.147

Rainfall:Temperature 0.0002072 0.0007035 0.0007037 0.294 0.768

Denningyes:Temperature -0.0163731 0.0137860 0.0137912 1.187 0.235

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Call:

model.avg(object = Day\_mod)

Component model call:

lme.formula(fixed = <7 unique values>, data = Occurrance2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

1 4 -617.70 1243.42 0.00 0.85

3 4 -619.43 1246.87 3.46 0.15

13 5 -622.42 1254.86 11.44 0.00

23 5 -625.16 1260.35 16.93 0.00

134 6 -626.02 1264.06 20.65 0.00

1234 7 -631.75 1277.54 34.12 0.00

1235 7 -634.33 1282.69 39.28 0.00

Term codes:

Denning Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 1.358e-01 4.397e-02 4.398e-02 3.087 0.00202 \*\*

Denningyes 8.688e-03 1.696e-02 1.697e-02 0.512 0.60861

Temperature -3.364e-04 1.308e-03 1.308e-03 0.257 0.79705

Rainfall 1.248e-07 1.658e-05 1.659e-05 0.008 0.99400

Denningyes:Temperature -1.056e-07 5.740e-05 5.742e-05 0.002 0.99853

Rainfall:Temperature 1.257e-12 3.622e-08 3.622e-08 0.000 0.99997

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 0.1357687 0.0439668 0.0439791 3.087 0.00202 \*\*

Denningyes 0.0102278 0.0179691 0.0179759 0.569 0.56937

Temperature -0.0021935 0.0026608 0.0026618 0.824 0.40992

Rainfall 0.0006988 0.0010253 0.0010257 0.681 0.49567

Denningyes:Temperature -0.0037917 0.0101929 0.0101967 0.372 0.71000

Rainfall:Temperature 0.0005015 0.0005215 0.0005217 0.961 0.33633

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Call:

model.avg(object = Even\_mod)

Component model call:

lme.formula(fixed = <10 unique values>, data = Occurrance2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

24 5 -1839.18 3688.38 0.00 0.90

124 6 -1840.67 3693.36 4.98 0.07

2 4 -1843.90 3695.81 7.44 0.02

12 5 -1844.24 3698.49 10.12 0.01

234 6 -1844.73 3701.49 13.11 0.00

4 4 -1846.91 3701.84 13.46 0.00

14 5 -1848.05 3706.12 17.75 0.00

1 4 -1851.01 3710.04 21.66 0.00

12346 8 -1852.48 3721.00 32.62 0.00

123456 9 -1855.67 3729.40 41.02 0.00

Term codes:

Denning Moonlight Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 1.217e+00 1.329e-01 1.329e-01 9.154 < 2e-16 \*\*\*

Temperature -1.620e-02 4.689e-03 4.690e-03 3.454 0.000552 \*\*\*

Moonlight -9.809e-03 1.950e-03 1.951e-03 5.028 5e-07 \*\*\*

Denningyes 3.407e-03 1.379e-02 1.379e-02 0.247 0.804859

Rainfall -5.333e-07 5.551e-05 5.553e-05 0.010 0.992337

Rainfall:Temperature 7.207e-12 2.095e-07 2.096e-07 0.000 0.999973

Denningyes:Temperature 7.273e-12 5.413e-07 5.414e-07 0.000 0.999989

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 1.217e+00 1.329e-01 1.329e-01 9.154 < 2e-16 \*\*\*

Temperature -1.666e-02 3.871e-03 3.872e-03 4.302 1.69e-05 \*\*\*

Moonlight -9.821e-03 1.921e-03 1.922e-03 5.110 3.00e-07 \*\*\*

Denningyes 4.260e-02 2.660e-02 2.661e-02 1.601 0.109

Rainfall -4.183e-04 1.497e-03 1.498e-03 0.279 0.780

Rainfall:Temperature 9.614e-05 7.592e-04 7.594e-04 0.127 0.899

Denningyes:Temperature 6.555e-03 1.487e-02 1.487e-02 0.441 0.659

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Moonlight Temperature Denning Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1 0.97 0.08 <0.01 <0.01 <0.01

N containing models: 7 7 6 3 2 1

Call:

model.avg(object = Night\_mod)

Component model call:

lme.formula(fixed = <10 unique values>, data = Occurrance2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

24 5 -1824.95 3659.92 0.00 0.84

124 6 -1825.64 3663.30 3.38 0.16

234 6 -1829.01 3670.04 10.13 0.01

12346 8 -1832.44 3680.93 21.02 0.00

123456 9 -1834.60 3687.25 27.33 0.00

12 5 -1849.25 3708.51 48.60 0.00

2 4 -1851.35 3710.70 50.79 0.00

4 4 -1976.08 3960.18 300.26 0.00

14 5 -1975.20 3960.42 300.50 0.00

1 4 -1993.21 3994.43 334.51 0.00

Term codes:

Denning Moonlight Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) -6.794e-01 1.104e-01 1.104e-01 6.152 <2e-16 \*\*\*

Temperature 3.033e-02 3.868e-03 3.869e-03 7.839 <2e-16 \*\*\*

Moonlight 3.464e-02 1.913e-03 1.914e-03 18.095 <2e-16 \*\*\*

Denningyes -8.220e-03 2.179e-02 2.179e-02 0.377 0.706

Rainfall -1.259e-05 3.431e-04 3.431e-04 0.037 0.971

Rainfall:Temperature -4.765e-08 1.042e-05 1.042e-05 0.005 0.996

Denningyes:Temperature -2.181e-08 2.647e-05 2.647e-05 0.001 0.999

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) -0.6793839 0.1103939 0.1104347 6.152 <2e-16 \*\*\*

Temperature 0.0303312 0.0038680 0.0038694 7.839 <2e-16 \*\*\*

Moonlight 0.0346368 0.0019135 0.0019142 18.095 <2e-16 \*\*\*

Denningyes -0.0530163 0.0262316 0.0262414 2.020 0.0433 \*

Rainfall -0.0023609 0.0040643 0.0040647 0.581 0.5614

Rainfall:Temperature -0.0019929 0.0007547 0.0007550 2.639 0.0083 \*\*

Denningyes:Temperature -0.0223641 0.0147707 0.0147762 1.514 0.1301

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Moonlight Temperature Denning Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1 1 0.16 0.01 <0.01 <0.01

N containing models: 7 7 6 3 2 1

# Morning

Call:

model.avg(object = Morn\_dur)

Component model call:

lme.formula(fixed = <10 unique values>, data = Morning2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

123456 9 -14462.70 28943.46 0.00 0.58

14 5 -14467.65 28945.33 1.87 0.23

1 4 -14469.57 28947.16 3.70 0.09

124 6 -14467.94 28947.90 4.45 0.06

12 5 -14469.84 28949.71 6.25 0.03

12346 8 -14467.03 28950.12 6.67 0.02

4 4 -14482.75 28973.52 30.06 0.00

234 6 -14481.52 28975.07 31.61 0.00

24 5 -14483.04 28976.10 32.64 0.00

2 4 -14486.81 28981.64 38.18 0.00

Term codes:

Denning Moonlight\_before Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 220.05701 21.27025 21.27657 10.343 <2e-16 \*\*\*

Temperature -1.17705 0.76449 0.76471 1.539 0.124

Rainfall -1.77208 2.95912 2.96016 0.599 0.549

Moonlight\_before 0.03734 0.24803 0.24814 0.150 0.880

DenningYes -57.48211 79.88222 79.89365 0.719 0.472

Rainfall:Temperature 0.07629 0.11455 0.11459 0.666 0.506

DenningYes:Temperature 2.88446 2.97957 2.98000 0.968 0.333

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 220.05701 21.27025 21.27657 10.343 <2e-16 \*\*\*

Temperature -1.33111 0.67518 0.67546 1.971 0.0488 \*

Rainfall -2.97430 3.33485 3.33639 0.891 0.3727

Moonlight\_before 0.05464 0.29845 0.29859 0.183 0.8548

DenningYes -57.48213 79.88222 79.89365 0.719 0.4718

Rainfall:Temperature 0.12805 0.12408 0.12414 1.031 0.3023

DenningYes:Temperature 5.01417 2.18036 2.18137 2.299 0.0215 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Denning Temperature Moonlight\_before Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1.00 0.88 0.68 0.60 0.60 0.58

N containing models: 6 7 7 3 2 1

|  |
| --- |
| Call:  model.avg(object = Morn\_int)  Component model call:  lme.formula(fixed = <10 unique values>, data = Morning2, random = ~1 | ID, na.action = na.exclude)  Component models:  df logLik AICc delta weight  14 5 -10198.06 20406.14 0.00 0.43  1 4 -10199.14 20406.30 0.17 0.40  4 4 -10200.50 20409.01 2.87 0.10  124 6 -10199.76 20411.54 5.40 0.03  12 5 -10200.92 20411.87 5.73 0.02  24 5 -10202.16 20414.34 8.20 0.01  2 4 -10204.06 20416.13 9.99 0.00  234 6 -10204.33 20420.70 14.56 0.00  12346 8 -10204.39 20424.83 18.69 0.00  123456 9 -10204.30 20426.67 20.53 0.00  Term codes:  Denning Moonlight\_before Rainfall Temperature Denning:Temperature Rainfall:Temperature  1 2 3 4 5 6  Model-averaged coefficients:  (full average)  Estimate Std. Error Adjusted SE z value Pr(>|z|)  (Intercept) 5.143e+01 4.646e+00 4.646e+00 11.070 <2e-16 \*\*\*  Temperature -1.503e-01 1.582e-01 1.582e-01 0.950 0.342  DenningYes 1.383e+00 8.766e-01 8.768e-01 1.577 0.115  Moonlight\_before -2.322e-03 1.730e-02 1.730e-02 0.134 0.893  Rainfall 2.935e-05 6.212e-03 6.214e-03 0.005 0.996  Rainfall:Temperature -1.058e-06 2.293e-04 2.293e-04 0.005 0.996  DenningYes:Temperature -9.953e-07 1.691e-03 1.692e-03 0.001 1.000    (conditional average)  Estimate Std. Error Adjusted SE z value Pr(>|z|)  (Intercept) 51.43383 4.64557 4.64642 11.070 <2e-16 \*\*\*  Temperature -0.26216 0.11960 0.11966 2.191 0.0285 \*  DenningYes 1.56003 0.76847 0.76882 2.029 0.0424 \*  Moonlight\_before -0.03615 0.05860 0.05863 0.616 0.5376  Rainfall 0.08353 0.32069 0.32079 0.260 0.7946  Rainfall:Temperature -0.02000 0.02436 0.02437 0.821 0.4119  DenningYes:Temperature -0.06599 0.43042 0.43062 0.153 0.8782  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Relative variable importance:  Denning Temperature Moonlight\_before Rainfall Rainfall:Temperature Denning:Temperature  Importance: 0.89 0.57 0.06 <0.01 <0.01 <0.01  N containing models: 6 7 7 3 2 1 |
|  |
| |  | | --- | | > | |

Start

Component model call:

lme.formula(fixed = <10 unique values>, data = Morning2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

14 5 7085.74 -14161.46 0.00 0.99

1 4 7080.02 -14152.02 9.44 0.01

4 4 7078.79 -14149.57 11.89 0.00

124 6 7078.72 -14145.41 16.05 0.00

12 5 7072.50 -14134.97 26.49 0.00

24 5 7071.54 -14133.05 28.41 0.00

2 4 7068.99 -14129.97 31.49 0.00

234 6 7062.99 -14113.94 47.52 0.00

12346 8 7060.84 -14105.63 55.83 0.00

123456 9 7054.88 -14091.69 69.77 0.00

Term codes:

Denning Moonlight\_before Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 2.720e-01 5.250e-03 5.252e-03 51.791 <2e-16 \*\*\*

Temperature -8.599e-04 1.841e-04 1.842e-04 4.668 3e-06 \*\*\*

DenningYes -5.385e-03 1.099e-03 1.099e-03 4.898 1e-06 \*\*\*

Moonlight\_before -4.580e-08 2.934e-06 2.935e-06 0.016 0.988

Rainfall 1.904e-15 9.434e-10 9.438e-10 0.000 1.000

Rainfall:Temperature 1.399e-19 2.937e-11 2.939e-11 0.000 1.000

DenningYes:Temperature -4.334e-19 2.284e-11 2.284e-11 0.000 1.000

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 2.720e-01 5.250e-03 5.252e-03 51.791 <2e-16 \*\*\*

Temperature -8.676e-04 1.660e-04 1.661e-04 5.223 2e-07 \*\*\*

DenningYes -5.399e-03 1.065e-03 1.066e-03 5.065 4e-07 \*\*\*

Moonlight\_before -1.403e-04 8.185e-05 8.189e-05 1.713 0.0867 .

Rainfall 3.951e-05 1.300e-04 1.301e-04 0.304 0.7613

Rainfall:Temperature 1.881e-07 3.406e-05 3.408e-05 0.006 0.9956

DenningYes:Temperature -6.212e-04 6.015e-04 6.017e-04 1.032 0.3019

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Denning Temperature Moonlight\_before Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1 0.99 <0.01 <0.01 <0.01 <0.01

N containing models: 6 7 7 3 2 1

Call:

model.avg(object = Morn\_stop)

Component model call:

lme.formula(fixed = <10 unique values>, data = Morning2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

4 4 4794.00 -9579.99 0.00 0.43

14 5 4794.59 -9579.16 0.82 0.29

1 4 4793.56 -9579.10 0.89 0.28

24 5 4786.65 -9563.27 16.72 0.00

124 6 4787.17 -9562.32 17.67 0.00

12 5 4786.02 -9562.01 17.98 0.00

2 4 4782.95 -9557.88 22.11 0.00

234 6 4781.88 -9551.73 28.25 0.00

12346 8 4774.48 -9532.91 47.08 0.00

123456 9 4770.66 -9523.25 56.73 0.00

Term codes:

Denning Moonlight\_before Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 4.131e-01 2.366e-02 2.366e-02 17.463 <2e-16 \*\*\*

Temperature -1.236e-03 8.405e-04 8.405e-04 1.470 0.142

DenningYes 5.272e-03 5.032e-03 5.032e-03 1.048 0.295

Moonlight\_before -2.721e-08 3.486e-06 3.487e-06 0.008 0.994

Rainfall 1.203e-10 2.305e-07 2.305e-07 0.001 1.000

Rainfall:Temperature 2.445e-15 6.343e-10 6.344e-10 0.000 1.000

DenningYes:Temperature 5.678e-16 1.406e-09 1.407e-09 0.000 1.000

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 4.131e-01 2.366e-02 2.366e-02 17.463 < 2e-16 \*\*\*

Temperature -1.711e-03 4.054e-04 4.055e-04 4.220 2.44e-05 \*\*\*

DenningYes 9.322e-03 2.649e-03 2.650e-03 3.518 0.000435 \*\*\*

Moonlight\_before -1.202e-04 1.980e-04 1.981e-04 0.607 0.544048

Rainfall 3.783e-04 1.547e-04 1.548e-04 2.444 0.014506 \*

Rainfall:Temperature 9.356e-05 8.150e-05 8.154e-05 1.147 0.251198

DenningYes:Temperature 2.730e-03 1.435e-03 1.435e-03 1.902 0.057169 .

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Temperature Denning Moonlight\_before Rainfall Rainfall:Temperature Denning:Temperature

Importance: 0.72 0.57 <0.01 <0.01 <0.01 <0.01

N containing models: 7 6 7 3 2 1

# Evening

|  |
| --- |
| Call:  model.avg(object = Evening\_dur)  Component model call:  lme.formula(fixed = <10 unique values>, data = Evening2, random = ~1 | ID, na.action = na.exclude)  Component models:  df logLik AICc delta weight  124 6 -12676.21 25364.46 0.00 0.80  123456 9 -12674.85 25367.76 3.31 0.15  12346 8 -12677.07 25370.20 5.74 0.05  24 5 -12694.99 25400.00 35.55 0.00  234 6 -12694.28 25400.59 36.14 0.00  12 5 -12700.15 25410.32 45.87 0.00  14 5 -12710.74 25431.50 67.05 0.00  2 4 -12725.63 25459.28 94.83 0.00  1 4 -12730.65 25469.32 104.87 0.00  4 4 -12731.86 25471.74 107.29 0.00  Term codes:  Denning Moonlight Rainfall Temperature Denning:Temperature Rainfall:Temperature  1 2 3 4 5 6  Model-averaged coefficients:  (full average)  Estimate Std. Error Adjusted SE z value Pr(>|z|)  (Intercept) 226.497308 12.528399 12.534568 18.070 <2e-16 \*\*\*  Temperature -3.010521 0.443384 0.443603 6.787 <2e-16 \*\*\*  Moonlight -1.843174 0.218838 0.218946 8.418 <2e-16 \*\*\*  DenningYes 7.494401 25.464669 25.469825 0.294 0.769  Rainfall -0.011357 0.991324 0.991815 0.011 0.991  Rainfall:Temperature 0.002582 0.037790 0.037809 0.068 0.946  DenningYes:Temperature 0.311707 0.947736 0.947924 0.329 0.742    (conditional average)  Estimate Std. Error Adjusted SE z value Pr(>|z|)  (Intercept) 226.49731 12.52840 12.53457 18.070 <2e-16 \*\*\*  Temperature -3.01052 0.44338 0.44360 6.787 <2e-16 \*\*\*  Moonlight -1.84317 0.21884 0.21895 8.418 <2e-16 \*\*\*  DenningYes 7.49440 25.46467 25.46982 0.294 0.769  Rainfall -0.05716 2.22346 2.22456 0.026 0.979  Rainfall:Temperature 0.01299 0.08398 0.08402 0.155 0.877  DenningYes:Temperature 2.03360 1.53567 1.53643 1.324 0.186  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Relative variable importance:  Moonlight Temperature Denning Rainfall Rainfall:Temperature Denning:Temperature  Importance: 1.00 1.00 1.00 0.20 0.20 0.15  N containing models: 7 7 6 3 2 1 |
|  |
| |  | | --- | | > | |

Call:

model.avg(object = Evening\_Intensity)

Component model call:

lme.formula(fixed = <10 unique values>, data = Evening2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

124 6 -9584.05 19180.13 0.00 0.67

12346 8 -9583.55 19183.15 3.02 0.15

123456 9 -9582.58 19183.23 3.10 0.14

14 5 -9587.98 19185.98 5.86 0.04

12 5 -9605.40 19220.82 40.69 0.00

1 4 -9607.88 19223.78 43.65 0.00

24 5 -9618.16 19246.34 66.21 0.00

234 6 -9617.66 19247.35 67.22 0.00

4 4 -9623.61 19255.24 75.12 0.00

2 4 -9647.79 19303.59 123.46 0.00

Term codes:

Denning Moonlight Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 63.95241 3.77273 3.77454 16.943 < 2e-16 \*\*\*

Temperature -0.84914 0.12979 0.12985 6.539 < 2e-16 \*\*\*

Moonlight -0.20422 0.07269 0.07271 2.809 0.00498 \*\*

DenningYes 8.59331 7.02882 7.03023 1.222 0.22158

Rainfall -0.40944 0.72367 0.72375 0.566 0.57159

Rainfall:Temperature 0.01666 0.02899 0.02899 0.575 0.56556

DenningYes:Temperature -0.08290 0.26186 0.26191 0.317 0.75162

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 63.95241 3.77273 3.77454 16.943 < 2e-16 \*\*\*

Temperature -0.84914 0.12979 0.12985 6.539 < 2e-16 \*\*\*

Moonlight -0.21184 0.06217 0.06220 3.406 0.00066 \*\*\*

DenningYes 8.59331 7.02882 7.03023 1.222 0.22158

Rainfall -1.40489 0.63124 0.63156 2.224 0.02612 \*

Rainfall:Temperature 0.05717 0.02384 0.02385 2.396 0.01656 \*

DenningYes:Temperature -0.57998 0.43755 0.43776 1.325 0.18521

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Denning Temperature Moonlight Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1.00 1.00 0.96 0.29 0.29 0.14

N containing models: 6 7 7 3 2 1

Call:

model.avg(object = Evening\_start)

Component model call:

lme.formula(fixed = <10 unique values>, data = Evening2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

124 6 6098.02 -12184.00 0.00 1

24 5 6088.25 -12166.47 17.53 0

234 6 6085.99 -12159.94 24.06 0

14 5 6084.90 -12159.78 24.22 0

12346 8 6086.61 -12157.16 26.84 0

123456 9 6083.38 -12148.68 35.32 0

4 4 6073.28 -12138.53 45.47 0

12 5 6042.29 -12074.55 109.45 0

1 4 6034.40 -12060.78 123.22 0

2 4 6022.74 -12037.46 146.54 0

Term codes:

Denning Moonlight Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 6.550e-01 6.119e-03 6.122e-03 107.003 <2e-16 \*\*\*

Temperature 2.439e-03 2.139e-04 2.140e-04 11.397 <2e-16 \*\*\*

Moonlight 7.052e-04 1.075e-04 1.076e-04 6.556 <2e-16 \*\*\*

DenningYes -7.461e-03 1.341e-03 1.341e-03 5.562 <2e-16 \*\*\*

Rainfall -2.498e-09 1.658e-06 1.659e-06 0.002 0.999

Rainfall:Temperature 1.568e-11 5.210e-08 5.212e-08 0.000 1.000

DenningYes:Temperature -3.976e-11 2.935e-07 2.935e-07 0.000 1.000

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 6.550e-01 6.119e-03 6.122e-03 107.003 <2e-16 \*\*\*

Temperature 2.439e-03 2.139e-04 2.140e-04 11.397 <2e-16 \*\*\*

Moonlight 7.052e-04 1.075e-04 1.076e-04 6.556 <2e-16 \*\*\*

DenningYes -7.462e-03 1.337e-03 1.338e-03 5.577 <2e-16 \*\*\*

Rainfall -3.343e-04 5.062e-04 5.064e-04 0.660 0.5092

Rainfall:Temperature 1.043e-05 4.119e-05 4.121e-05 0.253 0.8002

DenningYes:Temperature -1.861e-03 7.546e-04 7.550e-04 2.465 0.0137 \*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Temperature Moonlight Denning Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1 1 1 <0.01 <0.01 <0.01

N containing models: 7 7 6 3 2 1

Call:

model.avg(object = Evening\_stop)

Component model call:

lme.formula(fixed = <10 unique values>, data = Evening2, random = ~1 | ID, na.action = na.exclude)

Component models:

df logLik AICc delta weight

2 4 6066.87 -12125.73 0.00 0.99

12 5 6063.55 -12117.08 8.65 0.01

24 5 6060.37 -12110.72 15.02 0.00

1 4 6057.25 -12106.48 19.26 0.00

124 6 6057.64 -12103.25 22.48 0.00

4 4 6053.96 -12099.90 25.83 0.00

14 5 6051.98 -12093.93 31.80 0.00

234 6 6052.41 -12092.79 32.94 0.00

12346 8 6040.67 -12065.28 60.45 0.00

123456 9 6034.50 -12050.92 74.81 0.00

Term codes:

Denning Moonlight Rainfall Temperature Denning:Temperature Rainfall:Temperature

1 2 3 4 5 6

Model-averaged coefficients:

(full average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 8.227e-01 8.036e-04 8.039e-04 1023.332 <2e-16 \*\*\*

Moonlight -6.026e-04 1.096e-04 1.096e-04 5.496 <2e-16 \*\*\*

DenningYes 3.852e-05 3.669e-04 3.670e-04 0.105 0.916

Temperature 1.714e-07 8.819e-06 8.820e-06 0.019 0.984

Rainfall -5.842e-12 3.060e-08 3.061e-08 0.000 1.000

Rainfall:Temperature 1.628e-18 1.291e-11 1.292e-11 0.000 1.000

DenningYes:Temperature -1.763e-20 6.209e-12 6.212e-12 0.000 1.000

(conditional average)

Estimate Std. Error Adjusted SE z value Pr(>|z|)

(Intercept) 8.227e-01 8.036e-04 8.039e-04 1023.332 <2e-16 \*\*\*

Moonlight -6.027e-04 1.095e-04 1.095e-04 5.502 <2e-16 \*\*\*

DenningYes 2.933e-03 1.328e-03 1.329e-03 2.207 0.0273 \*

Temperature 3.077e-04 2.121e-04 2.122e-04 1.450 0.1471

Rainfall -8.435e-05 8.005e-05 8.009e-05 1.053 0.2922

Rainfall:Temperature 2.205e-05 4.210e-05 4.212e-05 0.524 0.6005

DenningYes:Temperature -3.136e-04 7.664e-04 7.668e-04 0.409 0.6825

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Relative variable importance:

Moonlight Denning Temperature Rainfall Rainfall:Temperature Denning:Temperature

Importance: 1 0.01 <0.01 <0.01 <0.01 <0.01

N containing models: 7 6 7 3 2 1