> summary(corr\_resCO2\_3)

Linear mixed-effects model fit by REML

Data: SW

AIC BIC logLik

851.2138 870.7833 -416.6069

Random effects:

Formula: ~1 | Site

(Intercept) Residual

StdDev: 57.09954 102.7282

Correlation Structure: Continuous AR(1)

Formula: ~Date\_corrected | Site

Parameter estimate(s):

Phi

0.2

Fixed effects: CO2\_uM ~ pH + DO\_mgL + CH4\_uM + Temp\_C + dly\_mean\_wtrlvl

Value Std.Error DF t-value p-value

(Intercept) 866.3741 98.47161 47 8.798212 0.0000

pH -33.4024 9.28917 47 -3.595842 0.0008

DO\_mgL -24.8112 6.94811 47 -3.570924 0.0008

CH4\_uM 3.3166 0.94327 47 3.516098 0.0010

Temp\_C -11.2277 2.88254 47 -3.895059 0.0003

dly\_mean\_wtrlvl -146.2535 68.21951 47 -2.143866 0.0372

Correlation:

(Intr) pH DO\_mgL CH4\_uM Temp\_C

pH -0.549

DO\_mgL -0.620 -0.041

CH4\_uM -0.354 -0.195 0.470

Temp\_C -0.841 0.529 0.404 0.188

dly\_mean\_wtrlvl -0.158 -0.506 0.181 0.253 -0.051

Standardized Within-Group Residuals:

Min Q1 Med Q3 Max

-1.76353673 -0.65920722 0.07700016 0.42680214 2.08896058

Number of Observations: 71

Number of Groups: 19

> summary(corr\_resCH4\_3)

Linear mixed-effects model fit by REML

Data: SW

AIC BIC logLik

685.5901 704.8438 -334.795

Random effects:

Formula: ~1 | Site

(Intercept) Residual

StdDev: 5.20621 10.5186

Correlation Structure: Continuous AR(1)

Formula: ~Date\_corrected | Site

Parameter estimate(s):

Phi

0.2

Fixed effects: CH4\_uM ~ pH + CO2\_uM + NPOC + NH3

Value Std.Error DF t-value p-value

(Intercept) -19.812375 5.276630 60 -3.754740 0.0004

pH 2.209479 0.583176 60 3.788703 0.0004

CO2\_uM 0.030504 0.008185 60 3.727054 0.0004

NPOC 0.183807 0.074615 60 2.463408 0.0166

NH3 15.913054 2.877289 60 5.530571 0.0000

Correlation:

(Intr) pH CO2\_uM NPOC

pH -0.789

CO2\_uM -0.412 0.084

NPOC -0.361 0.157 -0.350

NH3 0.050 0.041 -0.215 -0.081

Standardized Within-Group Residuals:

Min Q1 Med Q3 Max

-2.60692425 -0.41672852 -0.09631875 0.28575241 2.72805722

Number of Observations: 87

Number of Groups: 23