Weston 5CSRTT ANOVA Results

Daniel Palmer, PhD

October 31, 2017

# Weston 5-CSRTT ANOVA Results Report

This report details the standard univariate analyses of the Weston project data. The data used in this analysis represents the completed datasets obtained from the datafiles used for the spotfire website.

## Pretraining - Punish Incorrect

### Number of Sessions

This ANOVA was a 2 (Sex) x 2 (Genotype) x 2 (Test Site) design.

#### APP/PS1 Mice

pretrain.anova$APP$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 6205.5 1 289.8432 < 0.00000000000000022 \*\*\*  
## TestSite 109.9 1 5.1342 0.026905 \*   
## Genotype 227.1 1 10.6056 0.001817 \*\*   
## Sex 11.8 1 0.5528 0.459960   
## TestSite:Genotype 77.4 1 3.6141 0.061869 .   
## TestSite:Sex 27.8 1 1.2989 0.258721   
## Genotype:Sex 63.3 1 2.9571 0.090408 .   
## TestSite:Genotype:Sex 81.3 1 3.7987 0.055747 .   
## Residuals 1348.8 63   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### 5xFAD Mice

pretrain.anova$TG5x$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 2890.67 1 235.8003 < 0.00000000000000022 \*\*\*  
## TestSite 184.02 1 15.0108 0.0002483 \*\*\*  
## Genotype 79.91 1 6.5184 0.0129955 \*   
## Sex 5.64 1 0.4598 0.5000974   
## TestSite:Genotype 4.28 1 0.3491 0.5566331   
## TestSite:Sex 15.58 1 1.2706 0.2637350   
## Genotype:Sex 1.99 1 0.1627 0.6879917   
## TestSite:Genotype:Sex 2.26 1 0.1845 0.6689458   
## Residuals 809.09 66   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### 3xTG Mice

pretrain.anova$TG3x$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 9046.6 1 525.6699 < 0.0000000000000002 \*\*\*  
## TestSite 63.8 1 3.7087 0.05782 .   
## Genotype 11.7 1 0.6800 0.41213   
## Sex 14.7 1 0.8570 0.35748   
## TestSite:Genotype 20.9 1 1.2163 0.27353   
## TestSite:Sex 22.7 1 1.3197 0.25420   
## Genotype:Sex 0.9 1 0.0498 0.82407   
## TestSite:Genotype:Sex 0.9 1 0.0509 0.82212   
## Residuals 1325.1 77   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Acquisition Training: 4 Second Phase

### Number of Sessions

This ANOVA was a 2 (Sex) x 2 (Genotype) x 2 (Test Site) design.

#### APP/PS1 Mice

acq.4.anova$APP$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 5194.7 1 366.9246 < 0.0000000000000002 \*\*\*  
## TestSite 12.6 1 0.8885 0.34846   
## Genotype 62.9 1 4.4406 0.03794 \*   
## Sex 1.8 1 0.1242 0.72534   
## TestSite:Genotype 0.6 1 0.0433 0.83571   
## TestSite:Sex 41.7 1 2.9419 0.08983 .   
## Genotype:Sex 4.8 1 0.3405 0.56101   
## TestSite:Genotype:Sex 8.3 1 0.5867 0.44574   
## Residuals 1245.9 88   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### 5xFAD Mice

acq.4.anova$TG5x$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 4625.6 1 227.8622 < 0.0000000000000002 \*\*\*  
## TestSite 4.7 1 0.2297 0.63321   
## Genotype 25.7 1 1.2650 0.26440   
## Sex 37.4 1 1.8439 0.17867   
## TestSite:Genotype 22.0 1 1.0857 0.30087   
## TestSite:Sex 2.5 1 0.1213 0.72860   
## Genotype:Sex 28.8 1 1.4183 0.23755   
## TestSite:Genotype:Sex 63.6 1 3.1336 0.08087 .   
## Residuals 1481.9 73   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### APP/PS1 Mice

acq.4.anova$TG3x$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 4507.0 1 242.6715 <0.0000000000000002 \*\*\*  
## TestSite 20.0 1 1.0789 0.3022   
## Genotype 0.7 1 0.0387 0.8446   
## Sex 15.5 1 0.8340 0.3640   
## TestSite:Genotype 24.4 1 1.3162 0.2548   
## TestSite:Sex 23.3 1 1.2560 0.2659   
## Genotype:Sex 25.3 1 1.3609 0.2470   
## TestSite:Genotype:Sex 1.8 1 0.0991 0.7537   
## Residuals 1430.1 77   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Acquisition Training: 2 Second Phase

### Number of Sessions

This ANOVA was a 2 (Sex) x 2 (Genotype) x 2 (Test Site) design.

#### APP/PS1 Mice

acq.2.anova$APP$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 6215.0 1 164.0489 < 0.00000000000000022 \*\*\*  
## TestSite 0.8 1 0.0207 0.8859   
## Genotype 754.0 1 19.9011 0.00002401 \*\*\*  
## Sex 30.0 1 0.7912 0.3762   
## TestSite:Genotype 13.4 1 0.3544 0.5532   
## TestSite:Sex 28.8 1 0.7604 0.3856   
## Genotype:Sex 45.5 1 1.2013 0.2761   
## TestSite:Genotype:Sex 4.0 1 0.1065 0.7449   
## Residuals 3333.9 88   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### 5xFAD Mice

acq.2.anova$TG5x$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 5928.0 1 106.5049 0.0000000000000006543 \*\*\*  
## TestSite 60.4 1 1.0856 0.30089   
## Genotype 1.5 1 0.0272 0.86937   
## Sex 29.4 1 0.5289 0.46938   
## TestSite:Genotype 159.3 1 2.8615 0.09499 .   
## TestSite:Sex 8.2 1 0.1482 0.70140   
## Genotype:Sex 25.5 1 0.4587 0.50036   
## TestSite:Genotype:Sex 108.2 1 1.9445 0.16741   
## Residuals 4063.2 73   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

#### APP/PS1 Mice

acq.2.anova$TG3x$Sessions

## Anova Table (Type III tests)  
##   
## Response: as.matrix(data.depend)  
## Sum Sq Df F value Pr(>F)   
## (Intercept) 9602.8 1 139.8775 < 0.00000000000000022 \*\*\*  
## TestSite 625.2 1 9.1066 0.003452 \*\*   
## Genotype 11.5 1 0.1674 0.683594   
## Sex 420.6 1 6.1264 0.015515 \*   
## TestSite:Genotype 13.0 1 0.1896 0.664444   
## TestSite:Sex 21.8 1 0.3170 0.575037   
## Genotype:Sex 0.1 1 0.0018 0.966077   
## TestSite:Genotype:Sex 27.4 1 0.3985 0.529756   
## Residuals 5286.2 77   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Probe Trial Data

### Total Session Length

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$TotalTime, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df  
## (Intercept) 2481383033 1  
## TestSite 8670129 1  
## Genotype 19665374 1  
## Sex 4277172 1  
## TestSite:Genotype 5938448 1  
## TestSite:Sex 369377 1  
## Genotype:Sex 261584 1  
## TestSite:Genotype:Sex 8331 1  
## Age.Months 7572957 2  
## TestSite:Age.Months 2468515 2  
## Genotype:Age.Months 986330 2  
## Sex:Age.Months 1203250 2  
## TestSite:Genotype:Age.Months 1005047 2  
## TestSite:Sex:Age.Months 2534681 2  
## Genotype:Sex:Age.Months 365831 2  
## TestSite:Genotype:Sex:Age.Months 375499 2  
## Stimulus.Length 4779819 3  
## TestSite:Stimulus.Length 126482 3  
## Genotype:Stimulus.Length 52886 3  
## Sex:Stimulus.Length 172902 3  
## TestSite:Genotype:Stimulus.Length 176462 3  
## TestSite:Sex:Stimulus.Length 756916 3  
## Genotype:Sex:Stimulus.Length 137445 3  
## TestSite:Genotype:Sex:Stimulus.Length 84187 3  
## Age.Months:Stimulus.Length 592493 6  
## TestSite:Age.Months:Stimulus.Length 496385 6  
## Genotype:Age.Months:Stimulus.Length 655193 6  
## Sex:Age.Months:Stimulus.Length 937106 6  
## TestSite:Genotype:Age.Months:Stimulus.Length 618187 6  
## TestSite:Sex:Age.Months:Stimulus.Length 634535 6  
## Genotype:Sex:Age.Months:Stimulus.Length 133282 6  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 411453 6  
## Error SS den Df F  
## (Intercept) 96149812 76 1961.3674  
## TestSite 96149812 76 6.8532  
## Genotype 96149812 76 15.5442  
## Sex 96149812 76 3.3808  
## TestSite:Genotype 96149812 76 4.6939  
## TestSite:Sex 96149812 76 0.2920  
## Genotype:Sex 96149812 76 0.2068  
## TestSite:Genotype:Sex 96149812 76 0.0066  
## Age.Months 56590752 152 10.1703  
## TestSite:Age.Months 56590752 152 3.3152  
## Genotype:Age.Months 56590752 152 1.3246  
## Sex:Age.Months 56590752 152 1.6159  
## TestSite:Genotype:Age.Months 56590752 152 1.3498  
## TestSite:Sex:Age.Months 56590752 152 3.4040  
## Genotype:Sex:Age.Months 56590752 152 0.4913  
## TestSite:Genotype:Sex:Age.Months 56590752 152 0.5043  
## Stimulus.Length 22820953 228 15.9181  
## TestSite:Stimulus.Length 22820953 228 0.4212  
## Genotype:Stimulus.Length 22820953 228 0.1761  
## Sex:Stimulus.Length 22820953 228 0.5758  
## TestSite:Genotype:Stimulus.Length 22820953 228 0.5877  
## TestSite:Sex:Stimulus.Length 22820953 228 2.5207  
## Genotype:Sex:Stimulus.Length 22820953 228 0.4577  
## TestSite:Genotype:Sex:Stimulus.Length 22820953 228 0.2804  
## Age.Months:Stimulus.Length 57423445 456 0.7842  
## TestSite:Age.Months:Stimulus.Length 57423445 456 0.6570  
## Genotype:Age.Months:Stimulus.Length 57423445 456 0.8671  
## Sex:Age.Months:Stimulus.Length 57423445 456 1.2403  
## TestSite:Genotype:Age.Months:Stimulus.Length 57423445 456 0.8182  
## TestSite:Sex:Age.Months:Stimulus.Length 57423445 456 0.8398  
## Genotype:Sex:Age.Months:Stimulus.Length 57423445 456 0.1764  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 57423445 456 0.5446  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0106736 \*   
## Genotype 0.0001779 \*\*\*  
## Sex 0.0698658 .   
## TestSite:Genotype 0.0334035 \*   
## TestSite:Sex 0.5905421   
## Genotype:Sex 0.6506111   
## TestSite:Genotype:Sex 0.9355386   
## Age.Months 0.000071557716 \*\*\*  
## TestSite:Age.Months 0.0389730 \*   
## Genotype:Age.Months 0.2689562   
## Sex:Age.Months 0.2020994   
## TestSite:Genotype:Age.Months 0.2623941   
## TestSite:Sex:Age.Months 0.0357936 \*   
## Genotype:Sex:Age.Months 0.6127971   
## TestSite:Genotype:Sex:Age.Months 0.6049432   
## Stimulus.Length 0.000000001974 \*\*\*  
## TestSite:Stimulus.Length 0.7379548   
## Genotype:Stimulus.Length 0.9124928   
## Sex:Stimulus.Length 0.6314593   
## TestSite:Genotype:Stimulus.Length 0.6236652   
## TestSite:Sex:Stimulus.Length 0.0587066 .   
## Genotype:Sex:Stimulus.Length 0.7120957   
## TestSite:Genotype:Sex:Stimulus.Length 0.8395433   
## Age.Months:Stimulus.Length 0.5826452   
## TestSite:Age.Months:Stimulus.Length 0.6845212   
## Genotype:Age.Months:Stimulus.Length 0.5189232   
## Sex:Age.Months:Stimulus.Length 0.2842686   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.5561628   
## TestSite:Sex:Age.Months:Stimulus.Length 0.5395698   
## Genotype:Sex:Age.Months:Stimulus.Length 0.9831608   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.7742820   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.93478 0.079731  
## TestSite:Age.Months 0.93478 0.079731  
## Genotype:Age.Months 0.93478 0.079731  
## Sex:Age.Months 0.93478 0.079731  
## TestSite:Genotype:Age.Months 0.93478 0.079731  
## TestSite:Sex:Age.Months 0.93478 0.079731  
## Genotype:Sex:Age.Months 0.93478 0.079731  
## TestSite:Genotype:Sex:Age.Months 0.93478 0.079731  
## Stimulus.Length 0.74719 0.000578  
## TestSite:Stimulus.Length 0.74719 0.000578  
## Genotype:Stimulus.Length 0.74719 0.000578  
## Sex:Stimulus.Length 0.74719 0.000578  
## TestSite:Genotype:Stimulus.Length 0.74719 0.000578  
## TestSite:Sex:Stimulus.Length 0.74719 0.000578  
## Genotype:Sex:Stimulus.Length 0.74719 0.000578  
## TestSite:Genotype:Sex:Stimulus.Length 0.74719 0.000578  
## Age.Months:Stimulus.Length 0.68787 0.119411  
## TestSite:Age.Months:Stimulus.Length 0.68787 0.119411  
## Genotype:Age.Months:Stimulus.Length 0.68787 0.119411  
## Sex:Age.Months:Stimulus.Length 0.68787 0.119411  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.68787 0.119411  
## TestSite:Sex:Age.Months:Stimulus.Length 0.68787 0.119411  
## Genotype:Sex:Age.Months:Stimulus.Length 0.68787 0.119411  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.68787 0.119411  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.93877 0.0001077 \*\*\*  
## TestSite:Age.Months 0.93877 0.0421139 \*   
## Genotype:Age.Months 0.93877 0.2684940   
## Sex:Age.Months 0.93877 0.2037126   
## TestSite:Genotype:Age.Months 0.93877 0.2621500   
## TestSite:Sex:Age.Months 0.93877 0.0388329 \*   
## Genotype:Sex:Age.Months 0.93877 0.6010187   
## TestSite:Genotype:Sex:Age.Months 0.93877 0.5933567   
## Stimulus.Length 0.83899 0.00000002922 \*\*\*  
## TestSite:Stimulus.Length 0.83899 0.7031600   
## Genotype:Stimulus.Length 0.83899 0.8831968   
## Sex:Stimulus.Length 0.83899 0.6018672   
## TestSite:Genotype:Stimulus.Length 0.83899 0.5945885   
## TestSite:Sex:Stimulus.Length 0.83899 0.0697173 .   
## Genotype:Sex:Stimulus.Length 0.83899 0.6781950   
## TestSite:Genotype:Sex:Stimulus.Length 0.83899 0.8046908   
## Age.Months:Stimulus.Length 0.89051 0.5691909   
## TestSite:Age.Months:Stimulus.Length 0.89051 0.6665657   
## Genotype:Age.Months:Stimulus.Length 0.89051 0.5089152   
## Sex:Age.Months:Stimulus.Length 0.89051 0.2877891   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.89051 0.5440983   
## TestSite:Sex:Age.Months:Stimulus.Length 0.89051 0.5284086   
## Genotype:Sex:Age.Months:Stimulus.Length 0.89051 0.9761531   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.89051 0.7541075   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.9617280  
## TestSite:Age.Months 0.9617280  
## Genotype:Age.Months 0.9617280  
## Sex:Age.Months 0.9617280  
## TestSite:Genotype:Age.Months 0.9617280  
## TestSite:Sex:Age.Months 0.9617280  
## Genotype:Sex:Age.Months 0.9617280  
## TestSite:Genotype:Sex:Age.Months 0.9617280  
## Stimulus.Length 0.8700709  
## TestSite:Stimulus.Length 0.8700709  
## Genotype:Stimulus.Length 0.8700709  
## Sex:Stimulus.Length 0.8700709  
## TestSite:Genotype:Stimulus.Length 0.8700709  
## TestSite:Sex:Stimulus.Length 0.8700709  
## Genotype:Sex:Stimulus.Length 0.8700709  
## TestSite:Genotype:Sex:Stimulus.Length 0.8700709  
## Age.Months:Stimulus.Length 0.9657346  
## TestSite:Age.Months:Stimulus.Length 0.9657346  
## Genotype:Age.Months:Stimulus.Length 0.9657346  
## Sex:Age.Months:Stimulus.Length 0.9657346  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9657346  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9657346  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9657346  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9657346  
## Pr(>F[HF])  
## Age.Months 0.00009241043965  
## TestSite:Age.Months 0.04090786290032  
## Genotype:Age.Months 0.26869432000273  
## Sex:Age.Months 0.20312252950179  
## TestSite:Genotype:Age.Months 0.26226743904032  
## TestSite:Sex:Age.Months 0.03766439338166  
## Genotype:Sex:Age.Months 0.60551938059376  
## TestSite:Genotype:Sex:Age.Months 0.59778368000481  
## Stimulus.Length 0.00000001735389  
## TestSite:Stimulus.Length 0.71041229746114  
## Genotype:Stimulus.Length 0.88962236813217  
## Sex:Stimulus.Length 0.60798017287603  
## TestSite:Genotype:Stimulus.Length 0.60059348812141  
## TestSite:Sex:Stimulus.Length 0.06744031574221  
## Genotype:Sex:Stimulus.Length 0.68523882582993  
## TestSite:Genotype:Sex:Stimulus.Length 0.81210660088155  
## Age.Months:Stimulus.Length 0.57858318149709  
## TestSite:Age.Months:Stimulus.Length 0.67910807580263  
## Genotype:Age.Months:Stimulus.Length 0.51591069297225  
## Sex:Age.Months:Stimulus.Length 0.28539381324855  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.55252313709762  
## TestSite:Sex:Age.Months:Stimulus.Length 0.53620532957108  
## Genotype:Sex:Age.Months:Stimulus.Length 0.98123405294237  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.76823870683292

#### 5xFAD Mice

summary(probe.anova$TG5x$TotalTime, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$TG5x$TotalTime, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df  
## (Intercept) 2768567076 1  
## TestSite 1152829 1  
## Genotype 3031295 1  
## Sex 1151485 1  
## TestSite:Genotype 3313691 1  
## TestSite:Sex 1696708 1  
## Genotype:Sex 2230772 1  
## TestSite:Genotype:Sex 1210913 1  
## Age.Months 15954670 2  
## TestSite:Age.Months 10455507 2  
## Genotype:Age.Months 3555960 2  
## Sex:Age.Months 3757205 2  
## TestSite:Genotype:Age.Months 4942596 2  
## TestSite:Sex:Age.Months 3337559 2  
## Genotype:Sex:Age.Months 2175266 2  
## TestSite:Genotype:Sex:Age.Months 1333585 2  
## Stimulus.Length 22210332 3  
## TestSite:Stimulus.Length 473472 3  
## Genotype:Stimulus.Length 1002318 3  
## Sex:Stimulus.Length 132091 3  
## TestSite:Genotype:Stimulus.Length 278368 3  
## TestSite:Sex:Stimulus.Length 520944 3  
## Genotype:Sex:Stimulus.Length 142674 3  
## TestSite:Genotype:Sex:Stimulus.Length 901435 3  
## Age.Months:Stimulus.Length 1194553 6  
## TestSite:Age.Months:Stimulus.Length 922384 6  
## Genotype:Age.Months:Stimulus.Length 765575 6  
## Sex:Age.Months:Stimulus.Length 912048 6  
## TestSite:Genotype:Age.Months:Stimulus.Length 685226 6  
## TestSite:Sex:Age.Months:Stimulus.Length 919671 6  
## Genotype:Sex:Age.Months:Stimulus.Length 250323 6  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 131177 6  
## Error SS den Df  
## (Intercept) 119037800 67  
## TestSite 119037800 67  
## Genotype 119037800 67  
## Sex 119037800 67  
## TestSite:Genotype 119037800 67  
## TestSite:Sex 119037800 67  
## Genotype:Sex 119037800 67  
## TestSite:Genotype:Sex 119037800 67  
## Age.Months 98923778 134  
## TestSite:Age.Months 98923778 134  
## Genotype:Age.Months 98923778 134  
## Sex:Age.Months 98923778 134  
## TestSite:Genotype:Age.Months 98923778 134  
## TestSite:Sex:Age.Months 98923778 134  
## Genotype:Sex:Age.Months 98923778 134  
## TestSite:Genotype:Sex:Age.Months 98923778 134  
## Stimulus.Length 38027895 201  
## TestSite:Stimulus.Length 38027895 201  
## Genotype:Stimulus.Length 38027895 201  
## Sex:Stimulus.Length 38027895 201  
## TestSite:Genotype:Stimulus.Length 38027895 201  
## TestSite:Sex:Stimulus.Length 38027895 201  
## Genotype:Sex:Stimulus.Length 38027895 201  
## TestSite:Genotype:Sex:Stimulus.Length 38027895 201  
## Age.Months:Stimulus.Length 70920262 402  
## TestSite:Age.Months:Stimulus.Length 70920262 402  
## Genotype:Age.Months:Stimulus.Length 70920262 402  
## Sex:Age.Months:Stimulus.Length 70920262 402  
## TestSite:Genotype:Age.Months:Stimulus.Length 70920262 402  
## TestSite:Sex:Age.Months:Stimulus.Length 70920262 402  
## Genotype:Sex:Age.Months:Stimulus.Length 70920262 402  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 70920262 402  
## F  
## (Intercept) 1558.2781  
## TestSite 0.6489  
## Genotype 1.7062  
## Sex 0.6481  
## TestSite:Genotype 1.8651  
## TestSite:Sex 0.9550  
## Genotype:Sex 1.2556  
## TestSite:Genotype:Sex 0.6816  
## Age.Months 10.8059  
## TestSite:Age.Months 7.0814  
## Genotype:Age.Months 2.4084  
## Sex:Age.Months 2.5447  
## TestSite:Genotype:Age.Months 3.3476  
## TestSite:Sex:Age.Months 2.2605  
## Genotype:Sex:Age.Months 1.4733  
## TestSite:Genotype:Sex:Age.Months 0.9032  
## Stimulus.Length 39.1316  
## TestSite:Stimulus.Length 0.8342  
## Genotype:Stimulus.Length 1.7659  
## Sex:Stimulus.Length 0.2327  
## TestSite:Genotype:Stimulus.Length 0.4904  
## TestSite:Sex:Stimulus.Length 0.9178  
## Genotype:Sex:Stimulus.Length 0.2514  
## TestSite:Genotype:Sex:Stimulus.Length 1.5882  
## Age.Months:Stimulus.Length 1.1285  
## TestSite:Age.Months:Stimulus.Length 0.8714  
## Genotype:Age.Months:Stimulus.Length 0.7233  
## Sex:Age.Months:Stimulus.Length 0.8616  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.6473  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8688  
## Genotype:Sex:Age.Months:Stimulus.Length 0.2365  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.1239  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.423368   
## Genotype 0.195952   
## Sex 0.423637   
## TestSite:Genotype 0.176605   
## TestSite:Sex 0.331969   
## Genotype:Sex 0.266489   
## TestSite:Genotype:Sex 0.411981   
## Age.Months 0.00004458 \*\*\*  
## TestSite:Age.Months 0.001193 \*\*   
## Genotype:Age.Months 0.093843 .   
## Sex:Age.Months 0.082284 .   
## TestSite:Genotype:Age.Months 0.038135 \*   
## TestSite:Sex:Age.Months 0.108263   
## Genotype:Sex:Age.Months 0.232860   
## TestSite:Genotype:Sex:Age.Months 0.407714   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.476504   
## Genotype:Stimulus.Length 0.154898   
## Sex:Stimulus.Length 0.873509   
## TestSite:Genotype:Stimulus.Length 0.689300   
## TestSite:Sex:Stimulus.Length 0.433206   
## Genotype:Sex:Stimulus.Length 0.860299   
## TestSite:Genotype:Sex:Stimulus.Length 0.193430   
## Age.Months:Stimulus.Length 0.344778   
## TestSite:Age.Months:Stimulus.Length 0.515866   
## Genotype:Age.Months:Stimulus.Length 0.631077   
## Sex:Age.Months:Stimulus.Length 0.523169   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.692285   
## TestSite:Sex:Age.Months:Stimulus.Length 0.517778   
## Genotype:Sex:Age.Months:Stimulus.Length 0.964416   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.993431   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.95966 0.25698  
## TestSite:Age.Months 0.95966 0.25698  
## Genotype:Age.Months 0.95966 0.25698  
## Sex:Age.Months 0.95966 0.25698  
## TestSite:Genotype:Age.Months 0.95966 0.25698  
## TestSite:Sex:Age.Months 0.95966 0.25698  
## Genotype:Sex:Age.Months 0.95966 0.25698  
## TestSite:Genotype:Sex:Age.Months 0.95966 0.25698  
## Stimulus.Length 0.85132 0.06043  
## TestSite:Stimulus.Length 0.85132 0.06043  
## Genotype:Stimulus.Length 0.85132 0.06043  
## Sex:Stimulus.Length 0.85132 0.06043  
## TestSite:Genotype:Stimulus.Length 0.85132 0.06043  
## TestSite:Sex:Stimulus.Length 0.85132 0.06043  
## Genotype:Sex:Stimulus.Length 0.85132 0.06043  
## TestSite:Genotype:Sex:Stimulus.Length 0.85132 0.06043  
## Age.Months:Stimulus.Length 0.77551 0.68761  
## TestSite:Age.Months:Stimulus.Length 0.77551 0.68761  
## Genotype:Age.Months:Stimulus.Length 0.77551 0.68761  
## Sex:Age.Months:Stimulus.Length 0.77551 0.68761  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.77551 0.68761  
## TestSite:Sex:Age.Months:Stimulus.Length 0.77551 0.68761  
## Genotype:Sex:Age.Months:Stimulus.Length 0.77551 0.68761  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.77551 0.68761  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.96123  
## TestSite:Age.Months 0.96123  
## Genotype:Age.Months 0.96123  
## Sex:Age.Months 0.96123  
## TestSite:Genotype:Age.Months 0.96123  
## TestSite:Sex:Age.Months 0.96123  
## Genotype:Sex:Age.Months 0.96123  
## TestSite:Genotype:Sex:Age.Months 0.96123  
## Stimulus.Length 0.91191  
## TestSite:Stimulus.Length 0.91191  
## Genotype:Stimulus.Length 0.91191  
## Sex:Stimulus.Length 0.91191  
## TestSite:Genotype:Stimulus.Length 0.91191  
## TestSite:Sex:Stimulus.Length 0.91191  
## Genotype:Sex:Stimulus.Length 0.91191  
## TestSite:Genotype:Sex:Stimulus.Length 0.91191  
## Age.Months:Stimulus.Length 0.92210  
## TestSite:Age.Months:Stimulus.Length 0.92210  
## Genotype:Age.Months:Stimulus.Length 0.92210  
## Sex:Age.Months:Stimulus.Length 0.92210  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.92210  
## TestSite:Sex:Age.Months:Stimulus.Length 0.92210  
## Genotype:Sex:Age.Months:Stimulus.Length 0.92210  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.92210  
## Pr(>F[GG])   
## Age.Months 0.00005876 \*\*\*  
## TestSite:Age.Months 0.001402 \*\*   
## Genotype:Age.Months 0.096151 .   
## Sex:Age.Months 0.084609 .   
## TestSite:Genotype:Age.Months 0.040084 \*   
## TestSite:Sex:Age.Months 0.110506   
## Genotype:Sex:Age.Months 0.233337   
## TestSite:Genotype:Sex:Age.Months 0.404378   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.467495   
## Genotype:Stimulus.Length 0.160194   
## Sex:Stimulus.Length 0.856546   
## TestSite:Genotype:Stimulus.Length 0.672047   
## TestSite:Sex:Stimulus.Length 0.426313   
## Genotype:Sex:Stimulus.Length 0.842858   
## TestSite:Genotype:Sex:Stimulus.Length 0.197563   
## Age.Months:Stimulus.Length 0.344988   
## TestSite:Age.Months:Stimulus.Length 0.509001   
## Genotype:Age.Months:Stimulus.Length 0.620029   
## Sex:Age.Months:Stimulus.Length 0.516013   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.679538   
## TestSite:Sex:Age.Months:Stimulus.Length 0.510836   
## Genotype:Sex:Age.Months:Stimulus.Length 0.956915   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.990971   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.9890258  
## TestSite:Age.Months 0.9890258  
## Genotype:Age.Months 0.9890258  
## Sex:Age.Months 0.9890258  
## TestSite:Genotype:Age.Months 0.9890258  
## TestSite:Sex:Age.Months 0.9890258  
## Genotype:Sex:Age.Months 0.9890258  
## TestSite:Genotype:Sex:Age.Months 0.9890258  
## Stimulus.Length 0.9545482  
## TestSite:Stimulus.Length 0.9545482  
## Genotype:Stimulus.Length 0.9545482  
## Sex:Stimulus.Length 0.9545482  
## TestSite:Genotype:Stimulus.Length 0.9545482  
## TestSite:Sex:Stimulus.Length 0.9545482  
## Genotype:Sex:Stimulus.Length 0.9545482  
## TestSite:Genotype:Sex:Stimulus.Length 0.9545482  
## Age.Months:Stimulus.Length 1.0146762  
## TestSite:Age.Months:Stimulus.Length 1.0146762  
## Genotype:Age.Months:Stimulus.Length 1.0146762  
## Sex:Age.Months:Stimulus.Length 1.0146762  
## TestSite:Genotype:Age.Months:Stimulus.Length 1.0146762  
## TestSite:Sex:Age.Months:Stimulus.Length 1.0146762  
## Genotype:Sex:Age.Months:Stimulus.Length 1.0146762  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 1.0146762  
## Pr(>F[HF])  
## Age.Months 0.0000482055312882336255836  
## TestSite:Age.Months 0.0012484057991443860396313  
## Genotype:Age.Months 0.0944913581478941805302796  
## Sex:Age.Months 0.0829362672684017809832113  
## TestSite:Genotype:Age.Months 0.0386767776865670903641004  
## TestSite:Sex:Age.Months 0.1088942937107716946165681  
## Genotype:Sex:Age.Months 0.2330016274844826096313000  
## TestSite:Genotype:Sex:Age.Months 0.4067859006433194313245849  
## Stimulus.Length 0.0000000000000000003644443  
## TestSite:Stimulus.Length 0.4719646102354495553754532  
## Genotype:Stimulus.Length 0.1576204607719689509970351  
## Sex:Stimulus.Length 0.8650699862067363632434081  
## TestSite:Genotype:Stimulus.Length 0.6805993596147142943308950  
## TestSite:Sex:Stimulus.Length 0.4297447115521381144631619  
## Genotype:Sex:Stimulus.Length 0.8516066461797735520633523  
## TestSite:Genotype:Sex:Stimulus.Length 0.1955716214921406903570755  
## Age.Months:Stimulus.Length 0.3447779821308712966398957  
## TestSite:Age.Months:Stimulus.Length 0.5158657617470161493855585  
## Genotype:Age.Months:Stimulus.Length 0.6310771152514825788060193  
## Sex:Age.Months:Stimulus.Length 0.5231690245056497268194562  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.6922851406763601556093590  
## TestSite:Sex:Age.Months:Stimulus.Length 0.5177775537584048404227133  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9644162942645966296595361  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9934305948781222417309777

#### 3xTG Mice

summary(probe.anova$TG3x$TotalTime, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$TG3x$TotalTime, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df  
## (Intercept) 3864306935 1  
## TestSite 35117 1  
## Genotype 2870983 1  
## Sex 6649875 1  
## TestSite:Genotype 90745 1  
## TestSite:Sex 484586 1  
## Genotype:Sex 71228 1  
## TestSite:Genotype:Sex 1180759 1  
## Age.Months 42558635 2  
## TestSite:Age.Months 4103498 2  
## Genotype:Age.Months 8405501 2  
## Sex:Age.Months 1555458 2  
## TestSite:Genotype:Age.Months 2048247 2  
## TestSite:Sex:Age.Months 3710211 2  
## Genotype:Sex:Age.Months 1422742 2  
## TestSite:Genotype:Sex:Age.Months 2867412 2  
## Stimulus.Length 18548652 3  
## TestSite:Stimulus.Length 209202 3  
## Genotype:Stimulus.Length 364069 3  
## Sex:Stimulus.Length 13276 3  
## TestSite:Genotype:Stimulus.Length 1132504 3  
## TestSite:Sex:Stimulus.Length 229784 3  
## Genotype:Sex:Stimulus.Length 1027605 3  
## TestSite:Genotype:Sex:Stimulus.Length 1405091 3  
## Age.Months:Stimulus.Length 363042 6  
## TestSite:Age.Months:Stimulus.Length 1476671 6  
## Genotype:Age.Months:Stimulus.Length 802574 6  
## Sex:Age.Months:Stimulus.Length 767831 6  
## TestSite:Genotype:Age.Months:Stimulus.Length 391897 6  
## TestSite:Sex:Age.Months:Stimulus.Length 825294 6  
## Genotype:Sex:Age.Months:Stimulus.Length 554904 6  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 1318244 6  
## Error SS den Df  
## (Intercept) 172185588 68  
## TestSite 172185588 68  
## Genotype 172185588 68  
## Sex 172185588 68  
## TestSite:Genotype 172185588 68  
## TestSite:Sex 172185588 68  
## Genotype:Sex 172185588 68  
## TestSite:Genotype:Sex 172185588 68  
## Age.Months 98662084 136  
## TestSite:Age.Months 98662084 136  
## Genotype:Age.Months 98662084 136  
## Sex:Age.Months 98662084 136  
## TestSite:Genotype:Age.Months 98662084 136  
## TestSite:Sex:Age.Months 98662084 136  
## Genotype:Sex:Age.Months 98662084 136  
## TestSite:Genotype:Sex:Age.Months 98662084 136  
## Stimulus.Length 42875700 204  
## TestSite:Stimulus.Length 42875700 204  
## Genotype:Stimulus.Length 42875700 204  
## Sex:Stimulus.Length 42875700 204  
## TestSite:Genotype:Stimulus.Length 42875700 204  
## TestSite:Sex:Stimulus.Length 42875700 204  
## Genotype:Sex:Stimulus.Length 42875700 204  
## TestSite:Genotype:Sex:Stimulus.Length 42875700 204  
## Age.Months:Stimulus.Length 78487936 408  
## TestSite:Age.Months:Stimulus.Length 78487936 408  
## Genotype:Age.Months:Stimulus.Length 78487936 408  
## Sex:Age.Months:Stimulus.Length 78487936 408  
## TestSite:Genotype:Age.Months:Stimulus.Length 78487936 408  
## TestSite:Sex:Age.Months:Stimulus.Length 78487936 408  
## Genotype:Sex:Age.Months:Stimulus.Length 78487936 408  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 78487936 408  
## F  
## (Intercept) 1526.1026  
## TestSite 0.0139  
## Genotype 1.1338  
## Sex 2.6262  
## TestSite:Genotype 0.0358  
## TestSite:Sex 0.1914  
## Genotype:Sex 0.0281  
## TestSite:Genotype:Sex 0.4663  
## Age.Months 29.3323  
## TestSite:Age.Months 2.8282  
## Genotype:Age.Months 5.7932  
## Sex:Age.Months 1.0721  
## TestSite:Genotype:Age.Months 1.4117  
## TestSite:Sex:Age.Months 2.5572  
## Genotype:Sex:Age.Months 0.9806  
## TestSite:Genotype:Sex:Age.Months 1.9763  
## Stimulus.Length 29.4178  
## TestSite:Stimulus.Length 0.3318  
## Genotype:Stimulus.Length 0.5774  
## Sex:Stimulus.Length 0.0211  
## TestSite:Genotype:Stimulus.Length 1.7961  
## TestSite:Sex:Stimulus.Length 0.3644  
## Genotype:Sex:Stimulus.Length 1.6298  
## TestSite:Genotype:Sex:Stimulus.Length 2.2284  
## Age.Months:Stimulus.Length 0.3145  
## TestSite:Age.Months:Stimulus.Length 1.2794  
## Genotype:Age.Months:Stimulus.Length 0.6953  
## Sex:Age.Months:Stimulus.Length 0.6652  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.3395  
## TestSite:Sex:Age.Months:Stimulus.Length 0.7150  
## Genotype:Sex:Age.Months:Stimulus.Length 0.4808  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 1.1421  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.90660   
## Genotype 0.29073   
## Sex 0.10974   
## TestSite:Genotype 0.85042   
## TestSite:Sex 0.66316   
## Genotype:Sex 0.86730   
## TestSite:Genotype:Sex 0.49701   
## Age.Months 0.000000000025652339 \*\*\*  
## TestSite:Age.Months 0.06260 .   
## Genotype:Age.Months 0.00385 \*\*   
## Sex:Age.Months 0.34518   
## TestSite:Genotype:Age.Months 0.24728   
## TestSite:Sex:Age.Months 0.08125 .   
## Genotype:Sex:Age.Months 0.37773   
## TestSite:Genotype:Sex:Age.Months 0.14254   
## Stimulus.Length 0.000000000000000755 \*\*\*  
## TestSite:Stimulus.Length 0.80237   
## Genotype:Stimulus.Length 0.63048   
## Sex:Stimulus.Length 0.99584   
## TestSite:Genotype:Stimulus.Length 0.14908   
## TestSite:Sex:Stimulus.Length 0.77875   
## Genotype:Sex:Stimulus.Length 0.18363   
## TestSite:Genotype:Sex:Stimulus.Length 0.08602 .   
## Age.Months:Stimulus.Length 0.92935   
## TestSite:Age.Months:Stimulus.Length 0.26553   
## Genotype:Age.Months:Stimulus.Length 0.65354   
## Sex:Age.Months:Stimulus.Length 0.67784   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.91579   
## TestSite:Sex:Age.Months:Stimulus.Length 0.63769   
## Genotype:Sex:Age.Months:Stimulus.Length 0.82271   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.33696   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.93315 0.09847  
## TestSite:Age.Months 0.93315 0.09847  
## Genotype:Age.Months 0.93315 0.09847  
## Sex:Age.Months 0.93315 0.09847  
## TestSite:Genotype:Age.Months 0.93315 0.09847  
## TestSite:Sex:Age.Months 0.93315 0.09847  
## Genotype:Sex:Age.Months 0.93315 0.09847  
## TestSite:Genotype:Sex:Age.Months 0.93315 0.09847  
## Stimulus.Length 0.98195 0.94341  
## TestSite:Stimulus.Length 0.98195 0.94341  
## Genotype:Stimulus.Length 0.98195 0.94341  
## Sex:Stimulus.Length 0.98195 0.94341  
## TestSite:Genotype:Stimulus.Length 0.98195 0.94341  
## TestSite:Sex:Stimulus.Length 0.98195 0.94341  
## Genotype:Sex:Stimulus.Length 0.98195 0.94341  
## TestSite:Genotype:Sex:Stimulus.Length 0.98195 0.94341  
## Age.Months:Stimulus.Length 0.62292 0.05367  
## TestSite:Age.Months:Stimulus.Length 0.62292 0.05367  
## Genotype:Age.Months:Stimulus.Length 0.62292 0.05367  
## Sex:Age.Months:Stimulus.Length 0.62292 0.05367  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.62292 0.05367  
## TestSite:Sex:Age.Months:Stimulus.Length 0.62292 0.05367  
## Genotype:Sex:Age.Months:Stimulus.Length 0.62292 0.05367  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.62292 0.05367  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.93733  
## TestSite:Age.Months 0.93733  
## Genotype:Age.Months 0.93733  
## Sex:Age.Months 0.93733  
## TestSite:Genotype:Age.Months 0.93733  
## TestSite:Sex:Age.Months 0.93733  
## Genotype:Sex:Age.Months 0.93733  
## TestSite:Genotype:Sex:Age.Months 0.93733  
## Stimulus.Length 0.98747  
## TestSite:Stimulus.Length 0.98747  
## Genotype:Stimulus.Length 0.98747  
## Sex:Stimulus.Length 0.98747  
## TestSite:Genotype:Stimulus.Length 0.98747  
## TestSite:Sex:Stimulus.Length 0.98747  
## Genotype:Sex:Stimulus.Length 0.98747  
## TestSite:Genotype:Sex:Stimulus.Length 0.98747  
## Age.Months:Stimulus.Length 0.88400  
## TestSite:Age.Months:Stimulus.Length 0.88400  
## Genotype:Age.Months:Stimulus.Length 0.88400  
## Sex:Age.Months:Stimulus.Length 0.88400  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.88400  
## TestSite:Sex:Age.Months:Stimulus.Length 0.88400  
## Genotype:Sex:Age.Months:Stimulus.Length 0.88400  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.88400  
## Pr(>F[GG])   
## Age.Months 0.000000000094205651 \*\*\*  
## TestSite:Age.Months 0.066291 .   
## Genotype:Age.Months 0.004692 \*\*   
## Sex:Age.Months 0.341999   
## TestSite:Genotype:Age.Months 0.247547   
## TestSite:Sex:Age.Months 0.085033 .   
## Genotype:Sex:Age.Months 0.373351   
## TestSite:Genotype:Sex:Age.Months 0.145665   
## Stimulus.Length 0.000000000000001114 \*\*\*  
## TestSite:Stimulus.Length 0.799871   
## Genotype:Stimulus.Length 0.628353   
## Sex:Stimulus.Length 0.995588   
## TestSite:Genotype:Stimulus.Length 0.149842   
## TestSite:Sex:Stimulus.Length 0.776240   
## Genotype:Sex:Stimulus.Length 0.184266   
## TestSite:Genotype:Sex:Stimulus.Length 0.086875 .   
## Age.Months:Stimulus.Length 0.912743   
## TestSite:Age.Months:Stimulus.Length 0.270277   
## Genotype:Age.Months:Stimulus.Length 0.635739   
## Sex:Age.Months:Stimulus.Length 0.659028   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.897926   
## TestSite:Sex:Age.Months:Stimulus.Length 0.620613   
## Genotype:Sex:Age.Months:Stimulus.Length 0.801135   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.337655   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.962961  
## TestSite:Age.Months 0.962961  
## Genotype:Age.Months 0.962961  
## Sex:Age.Months 0.962961  
## TestSite:Genotype:Age.Months 0.962961  
## TestSite:Sex:Age.Months 0.962961  
## Genotype:Sex:Age.Months 0.962961  
## TestSite:Genotype:Sex:Age.Months 0.962961  
## Stimulus.Length 1.037380  
## TestSite:Stimulus.Length 1.037380  
## Genotype:Stimulus.Length 1.037380  
## Sex:Stimulus.Length 1.037380  
## TestSite:Genotype:Stimulus.Length 1.037380  
## TestSite:Sex:Stimulus.Length 1.037380  
## Genotype:Sex:Stimulus.Length 1.037380  
## TestSite:Genotype:Sex:Stimulus.Length 1.037380  
## Age.Months:Stimulus.Length 0.967563  
## TestSite:Age.Months:Stimulus.Length 0.967563  
## Genotype:Age.Months:Stimulus.Length 0.967563  
## Sex:Age.Months:Stimulus.Length 0.967563  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.967563  
## TestSite:Sex:Age.Months:Stimulus.Length 0.967563  
## Genotype:Sex:Age.Months:Stimulus.Length 0.967563  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.967563  
## Pr(>F[HF])  
## Age.Months 0.000000000055333080459  
## TestSite:Age.Months 0.064757377598536960961  
## Genotype:Age.Months 0.004327251729349563224  
## Sex:Age.Months 0.343341427766219398077  
## TestSite:Genotype:Age.Months 0.247462163235112803106  
## TestSite:Sex:Age.Months 0.083466780157218839475  
## Genotype:Sex:Age.Months 0.375187905415998224079  
## TestSite:Genotype:Sex:Age.Months 0.144389469485109139812  
## Stimulus.Length 0.000000000000000754974  
## TestSite:Stimulus.Length 0.802370925882155971998  
## Genotype:Stimulus.Length 0.630478880123339635588  
## Sex:Stimulus.Length 0.995842896258098742024  
## TestSite:Genotype:Stimulus.Length 0.149075747620793258585  
## TestSite:Sex:Stimulus.Length 0.778752845488178135902  
## Genotype:Sex:Stimulus.Length 0.183629565550025714016  
## TestSite:Genotype:Sex:Stimulus.Length 0.086021458982004750382  
## Age.Months:Stimulus.Length 0.925095786553425281085  
## TestSite:Age.Months:Stimulus.Length 0.266869066395423903959  
## Genotype:Age.Months:Stimulus.Length 0.648756180990263442432  
## Sex:Age.Months:Stimulus.Length 0.672792488121145559887  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.911181236162155405722  
## TestSite:Sex:Age.Months:Stimulus.Length 0.633102228935995325898  
## Genotype:Sex:Age.Months:Stimulus.Length 0.817004696343376468626  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.337206757760636688381

### Total Completed Trials

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$TotalTrials, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 2128515 1 876.09  
## TestSite 22 1 876.09  
## Genotype 36 1 876.09  
## Sex 9 1 876.09  
## TestSite:Genotype 32 1 876.09  
## TestSite:Sex 0 1 876.09  
## Genotype:Sex 1 1 876.09  
## TestSite:Genotype:Sex 0 1 876.09  
## Age.Months 6 2 999.78  
## TestSite:Age.Months 25 2 999.78  
## Genotype:Age.Months 10 2 999.78  
## Sex:Age.Months 1 2 999.78  
## TestSite:Genotype:Age.Months 14 2 999.78  
## TestSite:Sex:Age.Months 12 2 999.78  
## Genotype:Sex:Age.Months 1 2 999.78  
## TestSite:Genotype:Sex:Age.Months 12 2 999.78  
## Stimulus.Length 8 3 822.69  
## TestSite:Stimulus.Length 2 3 822.69  
## Genotype:Stimulus.Length 8 3 822.69  
## Sex:Stimulus.Length 1 3 822.69  
## TestSite:Genotype:Stimulus.Length 7 3 822.69  
## TestSite:Sex:Stimulus.Length 9 3 822.69  
## Genotype:Sex:Stimulus.Length 3 3 822.69  
## TestSite:Genotype:Sex:Stimulus.Length 2 3 822.69  
## Age.Months:Stimulus.Length 10 6 1400.28  
## TestSite:Age.Months:Stimulus.Length 4 6 1400.28  
## Genotype:Age.Months:Stimulus.Length 11 6 1400.28  
## Sex:Age.Months:Stimulus.Length 11 6 1400.28  
## TestSite:Genotype:Age.Months:Stimulus.Length 11 6 1400.28  
## TestSite:Sex:Age.Months:Stimulus.Length 11 6 1400.28  
## Genotype:Sex:Age.Months:Stimulus.Length 5 6 1400.28  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 17 6 1400.28  
## den Df F  
## (Intercept) 76 184646.3433  
## TestSite 76 1.9330  
## Genotype 76 3.0958  
## Sex 76 0.7747  
## TestSite:Genotype 76 2.7890  
## TestSite:Sex 76 0.0198  
## Genotype:Sex 76 0.0461  
## TestSite:Genotype:Sex 76 0.0193  
## Age.Months 152 0.4636  
## TestSite:Age.Months 152 1.8982  
## Genotype:Age.Months 152 0.7530  
## Sex:Age.Months 152 0.1082  
## TestSite:Genotype:Age.Months 152 1.0938  
## TestSite:Sex:Age.Months 152 0.9069  
## Genotype:Sex:Age.Months 152 0.1050  
## TestSite:Genotype:Sex:Age.Months 152 0.8977  
## Stimulus.Length 228 0.6996  
## TestSite:Stimulus.Length 228 0.1929  
## Genotype:Stimulus.Length 228 0.7188  
## Sex:Stimulus.Length 228 0.1076  
## TestSite:Genotype:Stimulus.Length 228 0.6314  
## TestSite:Sex:Stimulus.Length 228 0.8754  
## Genotype:Sex:Stimulus.Length 228 0.2525  
## TestSite:Genotype:Sex:Stimulus.Length 228 0.2262  
## Age.Months:Stimulus.Length 456 0.5534  
## TestSite:Age.Months:Stimulus.Length 456 0.2315  
## Genotype:Age.Months:Stimulus.Length 456 0.5813  
## Sex:Age.Months:Stimulus.Length 456 0.5943  
## TestSite:Genotype:Age.Months:Stimulus.Length 456 0.6038  
## TestSite:Sex:Age.Months:Stimulus.Length 456 0.6201  
## Genotype:Sex:Age.Months:Stimulus.Length 456 0.2820  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 456 0.9102  
## Pr(>F)   
## (Intercept) < 0.0000000000000002 \*\*\*  
## TestSite 0.16849   
## Genotype 0.08252 .   
## Sex 0.38155   
## TestSite:Genotype 0.09903 .   
## TestSite:Sex 0.88846   
## Genotype:Sex 0.83066   
## TestSite:Genotype:Sex 0.88982   
## Age.Months 0.62992   
## TestSite:Age.Months 0.15337   
## Genotype:Age.Months 0.47272   
## Sex:Age.Months 0.89753   
## TestSite:Genotype:Age.Months 0.33756   
## TestSite:Sex:Age.Months 0.40593   
## Genotype:Sex:Age.Months 0.90043   
## TestSite:Genotype:Sex:Age.Months 0.40966   
## Stimulus.Length 0.55315   
## TestSite:Stimulus.Length 0.90119   
## Genotype:Stimulus.Length 0.54168   
## Sex:Stimulus.Length 0.95558   
## TestSite:Genotype:Stimulus.Length 0.59542   
## TestSite:Sex:Stimulus.Length 0.45451   
## Genotype:Sex:Stimulus.Length 0.85950   
## TestSite:Genotype:Sex:Stimulus.Length 0.87814   
## Age.Months:Stimulus.Length 0.76736   
## TestSite:Age.Months:Stimulus.Length 0.96629   
## Genotype:Age.Months:Stimulus.Length 0.74534   
## Sex:Age.Months:Stimulus.Length 0.73494   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.72733   
## TestSite:Sex:Age.Months:Stimulus.Length 0.71424   
## Genotype:Sex:Age.Months:Stimulus.Length 0.94541   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.48723   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic  
## Age.Months 0.51929  
## TestSite:Age.Months 0.51929  
## Genotype:Age.Months 0.51929  
## Sex:Age.Months 0.51929  
## TestSite:Genotype:Age.Months 0.51929  
## TestSite:Sex:Age.Months 0.51929  
## Genotype:Sex:Age.Months 0.51929  
## TestSite:Genotype:Sex:Age.Months 0.51929  
## Stimulus.Length 0.57423  
## TestSite:Stimulus.Length 0.57423  
## Genotype:Stimulus.Length 0.57423  
## Sex:Stimulus.Length 0.57423  
## TestSite:Genotype:Stimulus.Length 0.57423  
## TestSite:Sex:Stimulus.Length 0.57423  
## Genotype:Sex:Stimulus.Length 0.57423  
## TestSite:Genotype:Sex:Stimulus.Length 0.57423  
## Age.Months:Stimulus.Length 0.04864  
## TestSite:Age.Months:Stimulus.Length 0.04864  
## Genotype:Age.Months:Stimulus.Length 0.04864  
## Sex:Age.Months:Stimulus.Length 0.04864  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.04864  
## TestSite:Sex:Age.Months:Stimulus.Length 0.04864  
## Genotype:Sex:Age.Months:Stimulus.Length 0.04864  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.04864  
## p-value  
## Age.Months 0.000000000021  
## TestSite:Age.Months 0.000000000021  
## Genotype:Age.Months 0.000000000021  
## Sex:Age.Months 0.000000000021  
## TestSite:Genotype:Age.Months 0.000000000021  
## TestSite:Sex:Age.Months 0.000000000021  
## Genotype:Sex:Age.Months 0.000000000021  
## TestSite:Genotype:Sex:Age.Months 0.000000000021  
## Stimulus.Length 0.000000076520  
## TestSite:Stimulus.Length 0.000000076520  
## Genotype:Stimulus.Length 0.000000076520  
## Sex:Stimulus.Length 0.000000076520  
## TestSite:Genotype:Stimulus.Length 0.000000076520  
## TestSite:Sex:Stimulus.Length 0.000000076520  
## Genotype:Sex:Stimulus.Length 0.000000076520  
## TestSite:Genotype:Sex:Stimulus.Length 0.000000076520  
## Age.Months:Stimulus.Length 0.000000000000  
## TestSite:Age.Months:Stimulus.Length 0.000000000000  
## Genotype:Age.Months:Stimulus.Length 0.000000000000  
## Sex:Age.Months:Stimulus.Length 0.000000000000  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.000000000000  
## TestSite:Sex:Age.Months:Stimulus.Length 0.000000000000  
## Genotype:Sex:Age.Months:Stimulus.Length 0.000000000000  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.000000000000  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])  
## Age.Months 0.67535 0.5547  
## TestSite:Age.Months 0.67535 0.1674  
## Genotype:Age.Months 0.67535 0.4251  
## Sex:Age.Months 0.67535 0.8170  
## TestSite:Genotype:Age.Months 0.67535 0.3176  
## TestSite:Sex:Age.Months 0.67535 0.3719  
## Genotype:Sex:Age.Months 0.67535 0.8205  
## TestSite:Genotype:Sex:Age.Months 0.67535 0.3748  
## Stimulus.Length 0.72903 0.5104  
## TestSite:Stimulus.Length 0.72903 0.8433  
## Genotype:Stimulus.Length 0.72903 0.5006  
## Sex:Stimulus.Length 0.72903 0.9131  
## TestSite:Genotype:Stimulus.Length 0.72903 0.5468  
## TestSite:Sex:Stimulus.Length 0.72903 0.4268  
## Genotype:Sex:Stimulus.Length 0.72903 0.7964  
## TestSite:Genotype:Sex:Stimulus.Length 0.72903 0.8169  
## Age.Months:Stimulus.Length 0.64067 0.6897  
## TestSite:Age.Months:Stimulus.Length 0.64067 0.9148  
## Genotype:Age.Months:Stimulus.Length 0.64067 0.6697  
## Sex:Age.Months:Stimulus.Length 0.64067 0.6604  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.64067 0.6536  
## TestSite:Sex:Age.Months:Stimulus.Length 0.64067 0.6421  
## Genotype:Sex:Age.Months:Stimulus.Length 0.64067 0.8830  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.64067 0.4553  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.6832236 0.5568567  
## TestSite:Age.Months 0.6832236 0.1671063  
## Genotype:Age.Months 0.6832236 0.4265353  
## Sex:Age.Months 0.6832236 0.8196214  
## TestSite:Genotype:Age.Months 0.6832236 0.3183053  
## TestSite:Sex:Age.Months 0.6832236 0.3729073  
## Genotype:Sex:Age.Months 0.6832236 0.8231598  
## TestSite:Genotype:Sex:Age.Months 0.6832236 0.3758907  
## Stimulus.Length 0.7514768 0.5144613  
## TestSite:Stimulus.Length 0.7514768 0.8493613  
## Genotype:Stimulus.Length 0.7514768 0.5044987  
## Sex:Stimulus.Length 0.7514768 0.9179297  
## TestSite:Genotype:Stimulus.Length 0.7514768 0.5514574  
## TestSite:Sex:Stimulus.Length 0.7514768 0.4295320  
## Genotype:Sex:Stimulus.Length 0.7514768 0.8028451  
## TestSite:Genotype:Sex:Stimulus.Length 0.7514768 0.8232005  
## Age.Months:Stimulus.Length 0.6790598 0.6999039  
## TestSite:Age.Months:Stimulus.Length 0.6790598 0.9231569  
## Genotype:Age.Months:Stimulus.Length 0.6790598 0.6795394  
## Sex:Age.Months:Stimulus.Length 0.6790598 0.6700645  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.6790598 0.6631766  
## TestSite:Sex:Age.Months:Stimulus.Length 0.6790598 0.6514335  
## Genotype:Sex:Age.Months:Stimulus.Length 0.6790598 0.8925261  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.6790598 0.4595903

#### 5xFAD Mice

summary(probe.anova$TG5x$TotalTrials, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 2080713 1 7111.3  
## TestSite 915 1 7111.3  
## Genotype 147 1 7111.3  
## Sex 274 1 7111.3  
## TestSite:Genotype 108 1 7111.3  
## TestSite:Sex 638 1 7111.3  
## Genotype:Sex 9 1 7111.3  
## TestSite:Genotype:Sex 25 1 7111.3  
## Age.Months 886 2 8588.0  
## TestSite:Age.Months 962 2 8588.0  
## Genotype:Age.Months 405 2 8588.0  
## Sex:Age.Months 661 2 8588.0  
## TestSite:Genotype:Age.Months 585 2 8588.0  
## TestSite:Sex:Age.Months 522 2 8588.0  
## Genotype:Sex:Age.Months 339 2 8588.0  
## TestSite:Genotype:Sex:Age.Months 205 2 8588.0  
## Stimulus.Length 83 3 2244.6  
## TestSite:Stimulus.Length 9 3 2244.6  
## Genotype:Stimulus.Length 80 3 2244.6  
## Sex:Stimulus.Length 24 3 2244.6  
## TestSite:Genotype:Stimulus.Length 77 3 2244.6  
## TestSite:Sex:Stimulus.Length 41 3 2244.6  
## Genotype:Sex:Stimulus.Length 61 3 2244.6  
## TestSite:Genotype:Sex:Stimulus.Length 75 3 2244.6  
## Age.Months:Stimulus.Length 48 6 3886.3  
## TestSite:Age.Months:Stimulus.Length 40 6 3886.3  
## Genotype:Age.Months:Stimulus.Length 50 6 3886.3  
## Sex:Age.Months:Stimulus.Length 55 6 3886.3  
## TestSite:Genotype:Age.Months:Stimulus.Length 123 6 3886.3  
## TestSite:Sex:Age.Months:Stimulus.Length 48 6 3886.3  
## Genotype:Sex:Age.Months:Stimulus.Length 55 6 3886.3  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 40 6 3886.3  
## den Df F  
## (Intercept) 67 19603.6370  
## TestSite 67 8.6194  
## Genotype 67 1.3884  
## Sex 67 2.5777  
## TestSite:Genotype 67 1.0160  
## TestSite:Sex 67 6.0113  
## Genotype:Sex 67 0.0810  
## TestSite:Genotype:Sex 67 0.2376  
## Age.Months 134 6.9119  
## TestSite:Age.Months 134 7.5087  
## Genotype:Age.Months 134 3.1616  
## Sex:Age.Months 134 5.1608  
## TestSite:Genotype:Age.Months 134 4.5641  
## TestSite:Sex:Age.Months 134 4.0697  
## Genotype:Sex:Age.Months 134 2.6418  
## TestSite:Genotype:Sex:Age.Months 134 1.5957  
## Stimulus.Length 201 2.4717  
## TestSite:Stimulus.Length 201 0.2603  
## Genotype:Stimulus.Length 201 2.3999  
## Sex:Stimulus.Length 201 0.7095  
## TestSite:Genotype:Stimulus.Length 201 2.3021  
## TestSite:Sex:Stimulus.Length 201 1.2286  
## Genotype:Sex:Stimulus.Length 201 1.8344  
## TestSite:Genotype:Sex:Stimulus.Length 201 2.2245  
## Age.Months:Stimulus.Length 402 0.8225  
## TestSite:Age.Months:Stimulus.Length 402 0.6872  
## Genotype:Age.Months:Stimulus.Length 402 0.8646  
## Sex:Age.Months:Stimulus.Length 402 0.9540  
## TestSite:Genotype:Age.Months:Stimulus.Length 402 2.1122  
## TestSite:Sex:Age.Months:Stimulus.Length 402 0.8244  
## Genotype:Sex:Age.Months:Stimulus.Length 402 0.9505  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 402 0.6868  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0045537 \*\*   
## Genotype 0.2428518   
## Sex 0.1130810   
## TestSite:Genotype 0.3170937   
## TestSite:Sex 0.0168274 \*   
## Genotype:Sex 0.7767970   
## TestSite:Genotype:Sex 0.6275171   
## Age.Months 0.0013905 \*\*   
## TestSite:Age.Months 0.0008112 \*\*\*  
## Genotype:Age.Months 0.0455333 \*   
## Sex:Age.Months 0.0069316 \*\*   
## TestSite:Genotype:Age.Months 0.0120897 \*   
## TestSite:Sex:Age.Months 0.0192380 \*   
## Genotype:Sex:Age.Months 0.0749389 .   
## TestSite:Genotype:Sex:Age.Months 0.2066026   
## Stimulus.Length 0.0629329 .   
## TestSite:Stimulus.Length 0.8539501   
## Genotype:Stimulus.Length 0.0690433 .   
## Sex:Stimulus.Length 0.5473534   
## TestSite:Genotype:Stimulus.Length 0.0783107 .   
## TestSite:Sex:Stimulus.Length 0.3004279   
## Genotype:Sex:Stimulus.Length 0.1421109   
## TestSite:Genotype:Sex:Stimulus.Length 0.0865045 .   
## Age.Months:Stimulus.Length 0.5529084   
## TestSite:Age.Months:Stimulus.Length 0.6600822   
## Genotype:Age.Months:Stimulus.Length 0.5209170   
## Sex:Age.Months:Stimulus.Length 0.4562124   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.0509680 .   
## TestSite:Sex:Age.Months:Stimulus.Length 0.5514640   
## Genotype:Sex:Age.Months:Stimulus.Length 0.4586740   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.6604265   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.50073 0.00000  
## TestSite:Age.Months 0.50073 0.00000  
## Genotype:Age.Months 0.50073 0.00000  
## Sex:Age.Months 0.50073 0.00000  
## TestSite:Genotype:Age.Months 0.50073 0.00000  
## TestSite:Sex:Age.Months 0.50073 0.00000  
## Genotype:Sex:Age.Months 0.50073 0.00000  
## TestSite:Genotype:Sex:Age.Months 0.50073 0.00000  
## Stimulus.Length 0.87890 0.13154  
## TestSite:Stimulus.Length 0.87890 0.13154  
## Genotype:Stimulus.Length 0.87890 0.13154  
## Sex:Stimulus.Length 0.87890 0.13154  
## TestSite:Genotype:Stimulus.Length 0.87890 0.13154  
## TestSite:Sex:Stimulus.Length 0.87890 0.13154  
## Genotype:Sex:Stimulus.Length 0.87890 0.13154  
## TestSite:Genotype:Sex:Stimulus.Length 0.87890 0.13154  
## Age.Months:Stimulus.Length 0.14461 0.00000  
## TestSite:Age.Months:Stimulus.Length 0.14461 0.00000  
## Genotype:Age.Months:Stimulus.Length 0.14461 0.00000  
## Sex:Age.Months:Stimulus.Length 0.14461 0.00000  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.14461 0.00000  
## TestSite:Sex:Age.Months:Stimulus.Length 0.14461 0.00000  
## Genotype:Sex:Age.Months:Stimulus.Length 0.14461 0.00000  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.14461 0.00000  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.66699 0.005367 \*\*  
## TestSite:Age.Months 0.66699 0.003669 \*\*  
## Genotype:Age.Months 0.66699 0.066608 .   
## Sex:Age.Months 0.66699 0.016858 \*   
## TestSite:Genotype:Age.Months 0.66699 0.025183 \*   
## TestSite:Sex:Age.Months 0.66699 0.035303 \*   
## Genotype:Sex:Age.Months 0.66699 0.096799 .   
## TestSite:Genotype:Sex:Age.Months 0.66699 0.212335   
## Stimulus.Length 0.92330 0.068038 .   
## TestSite:Stimulus.Length 0.92330 0.838735   
## Genotype:Stimulus.Length 0.92330 0.074251 .   
## Sex:Stimulus.Length 0.92330 0.536736   
## TestSite:Genotype:Stimulus.Length 0.92330 0.083623 .   
## TestSite:Sex:Stimulus.Length 0.92330 0.300148   
## Genotype:Sex:Stimulus.Length 0.92330 0.146977   
## TestSite:Genotype:Sex:Stimulus.Length 0.92330 0.091863 .   
## Age.Months:Stimulus.Length 0.64128 0.507858   
## TestSite:Age.Months:Stimulus.Length 0.64128 0.595836   
## Genotype:Age.Months:Stimulus.Length 0.64128 0.482255   
## Sex:Age.Months:Stimulus.Length 0.64128 0.430963   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.64128 0.082388 .   
## TestSite:Sex:Age.Months:Stimulus.Length 0.64128 0.506697   
## Genotype:Sex:Age.Months:Stimulus.Length 0.64128 0.432906   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.64128 0.596127   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.6754704 0.005184287  
## TestSite:Age.Months 0.6754704 0.003529799  
## Genotype:Age.Months 0.6754704 0.065977723  
## Sex:Age.Months 0.6754704 0.016479899  
## TestSite:Genotype:Age.Months 0.6754704 0.024716547  
## TestSite:Sex:Age.Months 0.6754704 0.034763207  
## Genotype:Sex:Age.Months 0.6754704 0.096194688  
## TestSite:Genotype:Sex:Age.Months 0.6754704 0.212295265  
## Stimulus.Length 0.9671096 0.065072367  
## TestSite:Stimulus.Length 0.9671096 0.847647543  
## Genotype:Stimulus.Length 0.9671096 0.071229563  
## Sex:Stimulus.Length 0.9671096 0.542899180  
## TestSite:Genotype:Stimulus.Length 0.9671096 0.080545854  
## TestSite:Sex:Stimulus.Length 0.9671096 0.300346308  
## Genotype:Sex:Stimulus.Length 0.9671096 0.144183982  
## TestSite:Genotype:Sex:Stimulus.Length 0.9671096 0.088763510  
## Age.Months:Stimulus.Length 0.6852246 0.514526774  
## TestSite:Age.Months:Stimulus.Length 0.6852246 0.605269906  
## Genotype:Age.Months:Stimulus.Length 0.6852246 0.488036839  
## Sex:Age.Months:Stimulus.Length 0.6852246 0.434905318  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.6852246 0.077618541  
## TestSite:Sex:Age.Months:Stimulus.Length 0.6852246 0.513326436  
## Genotype:Sex:Age.Months:Stimulus.Length 0.6852246 0.436919768  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.6852246 0.605568271

#### 3xTG Mice

summary(probe.anova$TG3x$TotalTrials, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$TG3x$TotalTrials, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 2112037 1 3448.1  
## TestSite 1 1 3448.1  
## Genotype 0 1 3448.1  
## Sex 235 1 3448.1  
## TestSite:Genotype 13 1 3448.1  
## TestSite:Sex 6 1 3448.1  
## Genotype:Sex 0 1 3448.1  
## TestSite:Genotype:Sex 3 1 3448.1  
## Age.Months 45 2 3272.6  
## TestSite:Age.Months 208 2 3272.6  
## Genotype:Age.Months 83 2 3272.6  
## Sex:Age.Months 79 2 3272.6  
## TestSite:Genotype:Age.Months 79 2 3272.6  
## TestSite:Sex:Age.Months 272 2 3272.6  
## Genotype:Sex:Age.Months 94 2 3272.6  
## TestSite:Genotype:Sex:Age.Months 80 2 3272.6  
## Stimulus.Length 34 3 1788.2  
## TestSite:Stimulus.Length 40 3 1788.2  
## Genotype:Stimulus.Length 19 3 1788.2  
## Sex:Stimulus.Length 25 3 1788.2  
## TestSite:Genotype:Stimulus.Length 36 3 1788.2  
## TestSite:Sex:Stimulus.Length 42 3 1788.2  
## Genotype:Sex:Stimulus.Length 38 3 1788.2  
## TestSite:Genotype:Sex:Stimulus.Length 46 3 1788.2  
## Age.Months:Stimulus.Length 26 6 3715.8  
## TestSite:Age.Months:Stimulus.Length 67 6 3715.8  
## Genotype:Age.Months:Stimulus.Length 53 6 3715.8  
## Sex:Age.Months:Stimulus.Length 71 6 3715.8  
## TestSite:Genotype:Age.Months:Stimulus.Length 41 6 3715.8  
## TestSite:Sex:Age.Months:Stimulus.Length 28 6 3715.8  
## Genotype:Sex:Age.Months:Stimulus.Length 60 6 3715.8  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 60 6 3715.8  
## den Df F  
## (Intercept) 68 41650.8938  
## TestSite 68 0.0251  
## Genotype 68 0.0010  
## Sex 68 4.6366  
## TestSite:Genotype 68 0.2530  
## TestSite:Sex 68 0.1104  
## Genotype:Sex 68 0.0031  
## TestSite:Genotype:Sex 68 0.0622  
## Age.Months 136 0.9287  
## TestSite:Age.Months 136 4.3291  
## Genotype:Age.Months 136 1.7311  
## Sex:Age.Months 136 1.6325  
## TestSite:Genotype:Age.Months 136 1.6443  
## TestSite:Sex:Age.Months 136 5.6503  
## Genotype:Sex:Age.Months 136 1.9479  
## TestSite:Genotype:Sex:Age.Months 136 1.6629  
## Stimulus.Length 204 1.3061  
## TestSite:Stimulus.Length 204 1.5224  
## Genotype:Stimulus.Length 204 0.7312  
## Sex:Stimulus.Length 204 0.9620  
## TestSite:Genotype:Stimulus.Length 204 1.3683  
## TestSite:Sex:Stimulus.Length 204 1.5926  
## Genotype:Sex:Stimulus.Length 204 1.4301  
## TestSite:Genotype:Sex:Stimulus.Length 204 1.7593  
## Age.Months:Stimulus.Length 408 0.4768  
## TestSite:Age.Months:Stimulus.Length 408 1.2202  
## Genotype:Age.Months:Stimulus.Length 408 0.9634  
## Sex:Age.Months:Stimulus.Length 408 1.2991  
## TestSite:Genotype:Age.Months:Stimulus.Length 408 0.7465  
## TestSite:Sex:Age.Months:Stimulus.Length 408 0.5190  
## Genotype:Sex:Age.Months:Stimulus.Length 408 1.1015  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 408 1.1035  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.874556   
## Genotype 0.974674   
## Sex 0.034846 \*   
## TestSite:Genotype 0.616566   
## TestSite:Sex 0.740756   
## Genotype:Sex 0.955431   
## TestSite:Genotype:Sex 0.803853   
## Age.Months 0.397557   
## TestSite:Age.Months 0.015043 \*   
## Genotype:Age.Months 0.180977   
## Sex:Age.Months 0.199242   
## TestSite:Genotype:Age.Months 0.196969   
## TestSite:Sex:Age.Months 0.004393 \*\*   
## Genotype:Sex:Age.Months 0.146532   
## TestSite:Genotype:Sex:Age.Months 0.193425   
## Stimulus.Length 0.273516   
## TestSite:Stimulus.Length 0.209830   
## Genotype:Stimulus.Length 0.534492   
## Sex:Stimulus.Length 0.411678   
## TestSite:Genotype:Stimulus.Length 0.253589   
## TestSite:Sex:Stimulus.Length 0.192316   
## Genotype:Sex:Stimulus.Length 0.235108   
## TestSite:Genotype:Sex:Stimulus.Length 0.156150   
## Age.Months:Stimulus.Length 0.825625   
## TestSite:Age.Months:Stimulus.Length 0.294695   
## Genotype:Age.Months:Stimulus.Length 0.449718   
## Sex:Age.Months:Stimulus.Length 0.256313   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.612460   
## TestSite:Sex:Age.Months:Stimulus.Length 0.794000   
## Genotype:Sex:Age.Months:Stimulus.Length 0.360641   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.359439   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.99068 0.73080  
## TestSite:Age.Months 0.99068 0.73080  
## Genotype:Age.Months 0.99068 0.73080  
## Sex:Age.Months 0.99068 0.73080  
## TestSite:Genotype:Age.Months 0.99068 0.73080  
## TestSite:Sex:Age.Months 0.99068 0.73080  
## Genotype:Sex:Age.Months 0.99068 0.73080  
## TestSite:Genotype:Sex:Age.Months 0.99068 0.73080  
## Stimulus.Length 0.83297 0.03224  
## TestSite:Stimulus.Length 0.83297 0.03224  
## Genotype:Stimulus.Length 0.83297 0.03224  
## Sex:Stimulus.Length 0.83297 0.03224  
## TestSite:Genotype:Stimulus.Length 0.83297 0.03224  
## TestSite:Sex:Stimulus.Length 0.83297 0.03224  
## Genotype:Sex:Stimulus.Length 0.83297 0.03224  
## TestSite:Genotype:Sex:Stimulus.Length 0.83297 0.03224  
## Age.Months:Stimulus.Length 0.70361 0.28337  
## TestSite:Age.Months:Stimulus.Length 0.70361 0.28337  
## Genotype:Age.Months:Stimulus.Length 0.70361 0.28337  
## Sex:Age.Months:Stimulus.Length 0.70361 0.28337  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.70361 0.28337  
## TestSite:Sex:Age.Months:Stimulus.Length 0.70361 0.28337  
## Genotype:Sex:Age.Months:Stimulus.Length 0.70361 0.28337  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.70361 0.28337  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.99077 0.396831   
## TestSite:Age.Months 0.99077 0.015326 \*   
## Genotype:Age.Months 0.99077 0.181313   
## Sex:Age.Months 0.99077 0.199507   
## TestSite:Genotype:Age.Months 0.99077 0.197243   
## TestSite:Sex:Age.Months 0.99077 0.004518 \*\*  
## Genotype:Sex:Age.Months 0.99077 0.146981   
## TestSite:Genotype:Sex:Age.Months 0.99077 0.193713   
## Stimulus.Length 0.89000 0.274570   
## TestSite:Stimulus.Length 0.89000 0.214228   
## Genotype:Stimulus.Length 0.89000 0.519710   
## Sex:Stimulus.Length 0.89000 0.404287   
## TestSite:Genotype:Stimulus.Length 0.89000 0.255753   
## TestSite:Sex:Stimulus.Length 0.89000 0.197507   
## Genotype:Sex:Stimulus.Length 0.89000 0.238254   
## TestSite:Genotype:Sex:Stimulus.Length 0.89000 0.162731   
## Age.Months:Stimulus.Length 0.88988 0.805247   
## TestSite:Age.Months:Stimulus.Length 0.88988 0.297703   
## Genotype:Age.Months:Stimulus.Length 0.88988 0.443720   
## Sex:Age.Months:Stimulus.Length 0.88988 0.261280   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.88988 0.597460   
## TestSite:Sex:Age.Months:Stimulus.Length 0.88988 0.773552   
## Genotype:Sex:Age.Months:Stimulus.Length 0.88988 0.359943   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.88988 0.358810   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 1.0203659 0.397557431  
## TestSite:Age.Months 1.0203659 0.015042725  
## Genotype:Age.Months 1.0203659 0.180977218  
## Sex:Age.Months 1.0203659 0.199241866  
## TestSite:Genotype:Age.Months 1.0203659 0.196968611  
## TestSite:Sex:Age.Months 1.0203659 0.004392956  
## Genotype:Sex:Age.Months 1.0203659 0.146531880  
## TestSite:Genotype:Sex:Age.Months 1.0203659 0.193424814  
## Stimulus.Length 0.9297960 0.274254714  
## TestSite:Stimulus.Length 0.9297960 0.212664635  
## Genotype:Stimulus.Length 0.9297960 0.525250914  
## Sex:Stimulus.Length 0.9297960 0.407093517  
## TestSite:Genotype:Stimulus.Length 0.9297960 0.255024426  
## TestSite:Sex:Stimulus.Length 0.9297960 0.195644209  
## Genotype:Sex:Stimulus.Length 0.9297960 0.237159536  
## TestSite:Genotype:Sex:Stimulus.Length 0.9297960 0.160337752  
## Age.Months:Stimulus.Length 0.9745842 0.821179836  
## TestSite:Age.Months:Stimulus.Length 0.9745842 0.295412611  
## Genotype:Age.Months:Stimulus.Length 0.9745842 0.448409709  
## Sex:Age.Months:Stimulus.Length 0.9745842 0.257466928  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9745842 0.609134130  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9745842 0.789517800  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9745842 0.360526917  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9745842 0.359340174

### Trial Accuracy

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$Accuracy, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 5654716 1 9392.1  
## TestSite 1374 1 9392.1  
## Genotype 233 1 9392.1  
## Sex 47 1 9392.1  
## TestSite:Genotype 99 1 9392.1  
## TestSite:Sex 2 1 9392.1  
## Genotype:Sex 67 1 9392.1  
## TestSite:Genotype:Sex 218 1 9392.1  
## Age.Months 838 2 6900.4  
## TestSite:Age.Months 38 2 6900.4  
## Genotype:Age.Months 114 2 6900.4  
## Sex:Age.Months 5 2 6900.4  
## TestSite:Genotype:Age.Months 26 2 6900.4  
## TestSite:Sex:Age.Months 319 2 6900.4  
## Genotype:Sex:Age.Months 235 2 6900.4  
## TestSite:Genotype:Sex:Age.Months 183 2 6900.4  
## Stimulus.Length 29308 3 10355.8  
## TestSite:Stimulus.Length 37 3 10355.8  
## Genotype:Stimulus.Length 122 3 10355.8  
## Sex:Stimulus.Length 42 3 10355.8  
## TestSite:Genotype:Stimulus.Length 150 3 10355.8  
## TestSite:Sex:Stimulus.Length 56 3 10355.8  
## Genotype:Sex:Stimulus.Length 169 3 10355.8  
## TestSite:Genotype:Sex:Stimulus.Length 64 3 10355.8  
## Age.Months:Stimulus.Length 449 6 19718.4  
## TestSite:Age.Months:Stimulus.Length 128 6 19718.4  
## Genotype:Age.Months:Stimulus.Length 249 6 19718.4  
## Sex:Age.Months:Stimulus.Length 161 6 19718.4  
## TestSite:Genotype:Age.Months:Stimulus.Length 207 6 19718.4  
## TestSite:Sex:Age.Months:Stimulus.Length 267 6 19718.4  
## Genotype:Sex:Age.Months:Stimulus.Length 198 6 19718.4  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 643 6 19718.4  
## den Df F  
## (Intercept) 76 45757.2203  
## TestSite 76 11.1184  
## Genotype 76 1.8869  
## Sex 76 0.3786  
## TestSite:Genotype 76 0.8011  
## TestSite:Sex 76 0.0132  
## Genotype:Sex 76 0.5431  
## TestSite:Genotype:Sex 76 1.7643  
## Age.Months 152 9.2295  
## TestSite:Age.Months 152 0.4203  
## Genotype:Age.Months 152 1.2577  
## Sex:Age.Months 152 0.0525  
## TestSite:Genotype:Age.Months 152 0.2878  
## TestSite:Sex:Age.Months 152 3.5172  
## Genotype:Sex:Age.Months 152 2.5930  
## TestSite:Genotype:Sex:Age.Months 152 2.0106  
## Stimulus.Length 228 215.0884  
## TestSite:Stimulus.Length 228 0.2722  
## Genotype:Stimulus.Length 228 0.8928  
## Sex:Stimulus.Length 228 0.3055  
## TestSite:Genotype:Stimulus.Length 228 1.1039  
## TestSite:Sex:Stimulus.Length 228 0.4092  
## Genotype:Sex:Stimulus.Length 228 1.2435  
## TestSite:Genotype:Sex:Stimulus.Length 228 0.4720  
## Age.Months:Stimulus.Length 456 1.7309  
## TestSite:Age.Months:Stimulus.Length 456 0.4940  
## Genotype:Age.Months:Stimulus.Length 456 0.9589  
## Sex:Age.Months:Stimulus.Length 456 0.6215  
## TestSite:Genotype:Age.Months:Stimulus.Length 456 0.7972  
## TestSite:Sex:Age.Months:Stimulus.Length 456 1.0295  
## Genotype:Sex:Age.Months:Stimulus.Length 456 0.7644  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 456 2.4784  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0013236 \*\*   
## Genotype 0.1735909   
## Sex 0.5401671   
## TestSite:Genotype 0.3735818   
## TestSite:Sex 0.9089374   
## Genotype:Sex 0.4634169   
## TestSite:Genotype:Sex 0.1880622   
## Age.Months 0.0001648 \*\*\*  
## TestSite:Age.Months 0.6576066   
## Genotype:Age.Months 0.2872477   
## Sex:Age.Months 0.9489088   
## TestSite:Genotype:Age.Months 0.7503156   
## TestSite:Sex:Age.Months 0.0321209 \*   
## Genotype:Sex:Age.Months 0.0780980 .   
## TestSite:Genotype:Sex:Age.Months 0.1374579   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.8454500   
## Genotype:Stimulus.Length 0.4455637   
## Sex:Stimulus.Length 0.8213749   
## TestSite:Genotype:Stimulus.Length 0.3483491   
## TestSite:Sex:Stimulus.Length 0.7465579   
## Genotype:Sex:Stimulus.Length 0.2947129   
## TestSite:Genotype:Sex:Stimulus.Length 0.7021030   
## Age.Months:Stimulus.Length 0.1120500   
## TestSite:Age.Months:Stimulus.Length 0.8129358   
## Genotype:Age.Months:Stimulus.Length 0.4526245   
## Sex:Age.Months:Stimulus.Length 0.7131552   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.5724024   
## TestSite:Sex:Age.Months:Stimulus.Length 0.4052663   
## Genotype:Sex:Age.Months:Stimulus.Length 0.5982348   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.0227494 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.96339 0.246902  
## TestSite:Age.Months 0.96339 0.246902  
## Genotype:Age.Months 0.96339 0.246902  
## Sex:Age.Months 0.96339 0.246902  
## TestSite:Genotype:Age.Months 0.96339 0.246902  
## TestSite:Sex:Age.Months 0.96339 0.246902  
## Genotype:Sex:Age.Months 0.96339 0.246902  
## TestSite:Genotype:Sex:Age.Months 0.96339 0.246902  
## Stimulus.Length 0.87628 0.079071  
## TestSite:Stimulus.Length 0.87628 0.079071  
## Genotype:Stimulus.Length 0.87628 0.079071  
## Sex:Stimulus.Length 0.87628 0.079071  
## TestSite:Genotype:Stimulus.Length 0.87628 0.079071  
## TestSite:Sex:Stimulus.Length 0.87628 0.079071  
## Genotype:Sex:Stimulus.Length 0.87628 0.079071  
## TestSite:Genotype:Sex:Stimulus.Length 0.87628 0.079071  
## Age.Months:Stimulus.Length 0.64171 0.036261  
## TestSite:Age.Months:Stimulus.Length 0.64171 0.036261  
## Genotype:Age.Months:Stimulus.Length 0.64171 0.036261  
## Sex:Age.Months:Stimulus.Length 0.64171 0.036261  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.64171 0.036261  
## TestSite:Sex:Age.Months:Stimulus.Length 0.64171 0.036261  
## Genotype:Sex:Age.Months:Stimulus.Length 0.64171 0.036261  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.64171 0.036261  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.96468  
## TestSite:Age.Months 0.96468  
## Genotype:Age.Months 0.96468  
## Sex:Age.Months 0.96468  
## TestSite:Genotype:Age.Months 0.96468  
## TestSite:Sex:Age.Months 0.96468  
## Genotype:Sex:Age.Months 0.96468  
## TestSite:Genotype:Sex:Age.Months 0.96468  
## Stimulus.Length 0.91479  
## TestSite:Stimulus.Length 0.91479  
## Genotype:Stimulus.Length 0.91479  
## Sex:Stimulus.Length 0.91479  
## TestSite:Genotype:Stimulus.Length 0.91479  
## TestSite:Sex:Stimulus.Length 0.91479  
## Genotype:Sex:Stimulus.Length 0.91479  
## TestSite:Genotype:Sex:Stimulus.Length 0.91479  
## Age.Months:Stimulus.Length 0.86087  
## TestSite:Age.Months:Stimulus.Length 0.86087  
## Genotype:Age.Months:Stimulus.Length 0.86087  
## Sex:Age.Months:Stimulus.Length 0.86087  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.86087  
## TestSite:Sex:Age.Months:Stimulus.Length 0.86087  
## Genotype:Sex:Age.Months:Stimulus.Length 0.86087  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.86087  
## Pr(>F[GG])   
## Age.Months 0.0002032 \*\*\*  
## TestSite:Age.Months 0.6503531   
## Genotype:Age.Months 0.2866548   
## Sex:Age.Months 0.9443699   
## TestSite:Genotype:Age.Months 0.7424400   
## TestSite:Sex:Age.Months 0.0337664 \*   
## Genotype:Sex:Age.Months 0.0802043 .   
## TestSite:Genotype:Sex:Age.Months 0.1392627   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.8282032   
## Genotype:Stimulus.Length 0.4382958   
## Sex:Stimulus.Length 0.8036913   
## TestSite:Genotype:Stimulus.Length 0.3457535   
## TestSite:Sex:Stimulus.Length 0.7288713   
## Genotype:Sex:Stimulus.Length 0.2946180   
## TestSite:Genotype:Sex:Stimulus.Length 0.6851377   
## Age.Months:Stimulus.Length 0.1240079   
## TestSite:Age.Months:Stimulus.Length 0.7865667   
## Genotype:Age.Months:Stimulus.Length 0.4446426   
## Sex:Age.Months:Stimulus.Length 0.6887669   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.5557296   
## TestSite:Sex:Age.Months:Stimulus.Length 0.4008926   
## Genotype:Sex:Age.Months:Stimulus.Length 0.5798721   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.0299332 \*   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.9893306 1.755665e-04  
## TestSite:Age.Months 0.9893306 6.554433e-01  
## Genotype:Age.Months 0.9893306 2.870771e-01  
## Sex:Age.Months 0.9893306 9.475806e-01  
## TestSite:Genotype:Age.Months 0.9893306 7.479719e-01  
## TestSite:Sex:Age.Months 0.9893306 3.260925e-02  
## Genotype:Sex:Age.Months 0.9893306 7.872897e-02  
## TestSite:Genotype:Sex:Age.Months 0.9893306 1.380028e-01  
## Stimulus.Length 0.9524526 3.514496e-63  
## TestSite:Stimulus.Length 0.9524526 8.361016e-01  
## Genotype:Stimulus.Length 0.9524526 4.415997e-01  
## Sex:Stimulus.Length 0.9524526 8.117693e-01  
## TestSite:Genotype:Stimulus.Length 0.9524526 3.469644e-01  
## TestSite:Sex:Stimulus.Length 0.9524526 7.369064e-01  
## Genotype:Sex:Stimulus.Length 0.9524526 2.947072e-01  
## TestSite:Genotype:Sex:Stimulus.Length 0.9524526 6.928293e-01  
## Age.Months:Stimulus.Length 0.9310860 1.178074e-01  
## TestSite:Age.Months:Stimulus.Length 0.9310860 8.004644e-01  
## Genotype:Age.Months:Stimulus.Length 0.9310860 4.488551e-01  
## Sex:Age.Months:Stimulus.Length 0.9310860 7.015170e-01  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9310860 5.644271e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9310860 4.032485e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9310860 5.894473e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9310860 2.605076e-02

#### 5xFAD Mice

summary(probe.anova$TG5x$Accuracy, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 5869639 1 15676  
## TestSite 2 1 15676  
## Genotype 6096 1 15676  
## Sex 18 1 15676  
## TestSite:Genotype 1086 1 15676  
## TestSite:Sex 6 1 15676  
## Genotype:Sex 58 1 15676  
## TestSite:Genotype:Sex 71 1 15676  
## Age.Months 99 2 11560  
## TestSite:Age.Months 904 2 11560  
## Genotype:Age.Months 63 2 11560  
## Sex:Age.Months 104 2 11560  
## TestSite:Genotype:Age.Months 176 2 11560  
## TestSite:Sex:Age.Months 132 2 11560  
## Genotype:Sex:Age.Months 211 2 11560  
## TestSite:Genotype:Sex:Age.Months 117 2 11560  
## Stimulus.Length 44508 3 11986  
## TestSite:Stimulus.Length 96 3 11986  
## Genotype:Stimulus.Length 1299 3 11986  
## Sex:Stimulus.Length 187 3 11986  
## TestSite:Genotype:Stimulus.Length 212 3 11986  
## TestSite:Sex:Stimulus.Length 30 3 11986  
## Genotype:Sex:Stimulus.Length 25 3 11986  
## TestSite:Genotype:Sex:Stimulus.Length 7 3 11986  
## Age.Months:Stimulus.Length 442 6 19074  
## TestSite:Age.Months:Stimulus.Length 236 6 19074  
## Genotype:Age.Months:Stimulus.Length 107 6 19074  
## Sex:Age.Months:Stimulus.Length 315 6 19074  
## TestSite:Genotype:Age.Months:Stimulus.Length 342 6 19074  
## TestSite:Sex:Age.Months:Stimulus.Length 396 6 19074  
## Genotype:Sex:Age.Months:Stimulus.Length 116 6 19074  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 275 6 19074  
## den Df F  
## (Intercept) 67 25086.5788  
## TestSite 67 0.0077  
## Genotype 67 26.0537  
## Sex 67 0.0770  
## TestSite:Genotype 67 4.6428  
## TestSite:Sex 67 0.0264  
## Genotype:Sex 67 0.2468  
## TestSite:Genotype:Sex 67 0.3031  
## Age.Months 134 0.5744  
## TestSite:Age.Months 134 5.2399  
## Genotype:Age.Months 134 0.3643  
## Sex:Age.Months 134 0.6046  
## TestSite:Genotype:Age.Months 134 1.0190  
## TestSite:Sex:Age.Months 134 0.7674  
## Genotype:Sex:Age.Months 134 1.2228  
## TestSite:Genotype:Sex:Age.Months 134 0.6786  
## Stimulus.Length 201 248.7841  
## TestSite:Stimulus.Length 201 0.5353  
## Genotype:Stimulus.Length 201 7.2625  
## Sex:Stimulus.Length 201 1.0476  
## TestSite:Genotype:Stimulus.Length 201 1.1831  
## TestSite:Sex:Stimulus.Length 201 0.1692  
## Genotype:Sex:Stimulus.Length 201 0.1400  
## TestSite:Genotype:Sex:Stimulus.Length 201 0.0392  
## Age.Months:Stimulus.Length 402 1.5519  
## TestSite:Age.Months:Stimulus.Length 402 0.8302  
## Genotype:Age.Months:Stimulus.Length 402 0.3768  
## Sex:Age.Months:Stimulus.Length 402 1.1078  
## TestSite:Genotype:Age.Months:Stimulus.Length 402 1.1997  
## TestSite:Sex:Age.Months:Stimulus.Length 402 1.3922  
## Genotype:Sex:Age.Months:Stimulus.Length 402 0.4059  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 402 0.9649  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.9303533   
## Genotype 0.000002949 \*\*\*  
## Sex 0.7822706   
## TestSite:Genotype 0.0347826 \*   
## TestSite:Sex 0.8713667   
## Genotype:Sex 0.6209294   
## TestSite:Genotype:Sex 0.5838051   
## Age.Months 0.5644340   
## TestSite:Age.Months 0.0064406 \*\*   
## Genotype:Age.Months 0.6953928   
## Sex:Age.Months 0.5477717   
## TestSite:Genotype:Age.Months 0.3637391   
## TestSite:Sex:Age.Months 0.4662467   
## Genotype:Sex:Age.Months 0.2976613   
## TestSite:Genotype:Sex:Age.Months 0.5090575   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.6585863   
## Genotype:Stimulus.Length 0.0001194 \*\*\*  
## Sex:Stimulus.Length 0.3725913   
## TestSite:Genotype:Stimulus.Length 0.3172542   
## TestSite:Sex:Stimulus.Length 0.9170706   
## Genotype:Sex:Stimulus.Length 0.9359738   
## TestSite:Genotype:Sex:Stimulus.Length 0.9895955   
## Age.Months:Stimulus.Length 0.1599702   
## TestSite:Age.Months:Stimulus.Length 0.5470413   
## Genotype:Age.Months:Stimulus.Length 0.8937105   
## Sex:Age.Months:Stimulus.Length 0.3569279   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.3053968   
## TestSite:Sex:Age.Months:Stimulus.Length 0.2163594   
## Genotype:Sex:Age.Months:Stimulus.Length 0.8751197   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.4486758   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.89401 0.0247916  
## TestSite:Age.Months 0.89401 0.0247916  
## Genotype:Age.Months 0.89401 0.0247916  
## Sex:Age.Months 0.89401 0.0247916  
## TestSite:Genotype:Age.Months 0.89401 0.0247916  
## TestSite:Sex:Age.Months 0.89401 0.0247916  
## Genotype:Sex:Age.Months 0.89401 0.0247916  
## TestSite:Genotype:Sex:Age.Months 0.89401 0.0247916  
## Stimulus.Length 0.67228 0.0000857  
## TestSite:Stimulus.Length 0.67228 0.0000857  
## Genotype:Stimulus.Length 0.67228 0.0000857  
## Sex:Stimulus.Length 0.67228 0.0000857  
## TestSite:Genotype:Stimulus.Length 0.67228 0.0000857  
## TestSite:Sex:Stimulus.Length 0.67228 0.0000857  
## Genotype:Sex:Stimulus.Length 0.67228 0.0000857  
## TestSite:Genotype:Sex:Stimulus.Length 0.67228 0.0000857  
## Age.Months:Stimulus.Length 0.41836 0.0000253  
## TestSite:Age.Months:Stimulus.Length 0.41836 0.0000253  
## Genotype:Age.Months:Stimulus.Length 0.41836 0.0000253  
## Sex:Age.Months:Stimulus.Length 0.41836 0.0000253  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.41836 0.0000253  
## TestSite:Sex:Age.Months:Stimulus.Length 0.41836 0.0000253  
## Genotype:Sex:Age.Months:Stimulus.Length 0.41836 0.0000253  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.41836 0.0000253  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.90417  
## TestSite:Age.Months 0.90417  
## Genotype:Age.Months 0.90417  
## Sex:Age.Months 0.90417  
## TestSite:Genotype:Age.Months 0.90417  
## TestSite:Sex:Age.Months 0.90417  
## Genotype:Sex:Age.Months 0.90417  
## TestSite:Genotype:Sex:Age.Months 0.90417  
## Stimulus.Length 0.82144  
## TestSite:Stimulus.Length 0.82144  
## Genotype:Stimulus.Length 0.82144  
## Sex:Stimulus.Length 0.82144  
## TestSite:Genotype:Stimulus.Length 0.82144  
## TestSite:Sex:Stimulus.Length 0.82144  
## Genotype:Sex:Stimulus.Length 0.82144  
## TestSite:Genotype:Sex:Stimulus.Length 0.82144  
## Age.Months:Stimulus.Length 0.76763  
## TestSite:Age.Months:Stimulus.Length 0.76763  
## Genotype:Age.Months:Stimulus.Length 0.76763  
## Sex:Age.Months:Stimulus.Length 0.76763  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.76763  
## TestSite:Sex:Age.Months:Stimulus.Length 0.76763  
## Genotype:Sex:Age.Months:Stimulus.Length 0.76763  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.76763  
## Pr(>F[GG])   
## Age.Months 0.5477251   
## TestSite:Age.Months 0.0083603 \*\*   
## Genotype:Age.Months 0.6740755   
## Sex:Age.Months 0.5318326   
## TestSite:Genotype:Age.Months 0.3576803   
## TestSite:Sex:Age.Months 0.4544558   
## Genotype:Sex:Age.Months 0.2953116   
## TestSite:Genotype:Sex:Age.Months 0.4950188   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.6236128   
## Genotype:Stimulus.Length 0.0003738 \*\*\*  
## Sex:Stimulus.Length 0.3640260   
## TestSite:Genotype:Stimulus.Length 0.3143604   
## TestSite:Sex:Stimulus.Length 0.8846526   
## Genotype:Sex:Stimulus.Length 0.9068935   
## TestSite:Genotype:Sex:Stimulus.Length 0.9791949   
## Age.Months:Stimulus.Length 0.1787900   
## TestSite:Age.Months:Stimulus.Length 0.5208198   
## Genotype:Age.Months:Stimulus.Length 0.8504469   
## Sex:Age.Months:Stimulus.Length 0.3551578   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.3100466   
## TestSite:Sex:Age.Months:Stimulus.Length 0.2307137   
## Genotype:Sex:Age.Months:Stimulus.Length 0.8301598   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.4349535   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.9277781 5.519930e-01  
## TestSite:Age.Months 0.9277781 7.839295e-03  
## Genotype:Age.Months 0.9277781 6.795425e-01  
## Sex:Age.Months 0.9277781 5.359041e-01  
## TestSite:Genotype:Age.Months 0.9277781 3.592578e-01  
## TestSite:Sex:Age.Months 0.9277781 4.574764e-01  
## Genotype:Sex:Age.Months 0.9277781 2.959556e-01  
## TestSite:Genotype:Sex:Age.Months 0.9277781 4.986077e-01  
## Stimulus.Length 0.8552106 4.944388e-58  
## TestSite:Stimulus.Length 0.8552106 6.307606e-01  
## Genotype:Stimulus.Length 0.8552106 3.010325e-04  
## Sex:Stimulus.Length 0.8552106 3.658751e-01  
## TestSite:Genotype:Stimulus.Length 0.8552106 3.150872e-01  
## TestSite:Sex:Stimulus.Length 0.8552106 8.917429e-01  
## Genotype:Sex:Stimulus.Length 0.8552106 9.133510e-01  
## TestSite:Genotype:Sex:Stimulus.Length 0.8552106 9.817713e-01  
## Age.Months:Stimulus.Length 0.8312498 1.734346e-01  
## TestSite:Age.Months:Stimulus.Length 0.8312498 5.286746e-01  
## Genotype:Age.Months:Stimulus.Length 0.8312498 8.641054e-01  
## Sex:Age.Months:Stimulus.Length 0.8312498 3.559484e-01  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.8312498 3.089730e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8312498 2.267604e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.8312498 8.442171e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.8312498 4.391902e-01

#### 3xTG Mice

summary(probe.anova$TG3x$Accuracy, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 5483873 1 21139  
## TestSite 1804 1 21139  
## Genotype 3946 1 21139  
## Sex 920 1 21139  
## TestSite:Genotype 148 1 21139  
## TestSite:Sex 2 1 21139  
## Genotype:Sex 209 1 21139  
## TestSite:Genotype:Sex 171 1 21139  
## Age.Months 126 2 15669  
## TestSite:Age.Months 1220 2 15669  
## Genotype:Age.Months 1135 2 15669  
## Sex:Age.Months 106 2 15669  
## TestSite:Genotype:Age.Months 94 2 15669  
## TestSite:Sex:Age.Months 5 2 15669  
## Genotype:Sex:Age.Months 354 2 15669  
## TestSite:Genotype:Sex:Age.Months 116 2 15669  
## Stimulus.Length 49762 3 11347  
## TestSite:Stimulus.Length 274 3 11347  
## Genotype:Stimulus.Length 241 3 11347  
## Sex:Stimulus.Length 261 3 11347  
## TestSite:Genotype:Stimulus.Length 181 3 11347  
## TestSite:Sex:Stimulus.Length 76 3 11347  
## Genotype:Sex:Stimulus.Length 512 3 11347  
## TestSite:Genotype:Sex:Stimulus.Length 41 3 11347  
## Age.Months:Stimulus.Length 188 6 17762  
## TestSite:Age.Months:Stimulus.Length 53 6 17762  
## Genotype:Age.Months:Stimulus.Length 287 6 17762  
## Sex:Age.Months:Stimulus.Length 133 6 17762  
## TestSite:Genotype:Age.Months:Stimulus.Length 353 6 17762  
## TestSite:Sex:Age.Months:Stimulus.Length 148 6 17762  
## Genotype:Sex:Age.Months:Stimulus.Length 290 6 17762  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 246 6 17762  
## den Df F  
## (Intercept) 68 17640.2109  
## TestSite 68 5.8034  
## Genotype 68 12.6930  
## Sex 68 2.9609  
## TestSite:Genotype 68 0.4749  
## TestSite:Sex 68 0.0071  
## Genotype:Sex 68 0.6723  
## TestSite:Genotype:Sex 68 0.5498  
## Age.Months 136 0.5463  
## TestSite:Age.Months 136 5.2954  
## Genotype:Age.Months 136 4.9239  
## Sex:Age.Months 136 0.4593  
## TestSite:Genotype:Age.Months 136 0.4082  
## TestSite:Sex:Age.Months 136 0.0232  
## Genotype:Sex:Age.Months 136 1.5377  
## TestSite:Genotype:Sex:Age.Months 136 0.5028  
## Stimulus.Length 204 298.2002  
## TestSite:Stimulus.Length 204 1.6437  
## Genotype:Stimulus.Length 204 1.4467  
## Sex:Stimulus.Length 204 1.5639  
## TestSite:Genotype:Stimulus.Length 204 1.0839  
## TestSite:Sex:Stimulus.Length 204 0.4538  
## Genotype:Sex:Stimulus.Length 204 3.0667  
## TestSite:Genotype:Sex:Stimulus.Length 204 0.2484  
## Age.Months:Stimulus.Length 408 0.7208  
## TestSite:Age.Months:Stimulus.Length 408 0.2039  
## Genotype:Age.Months:Stimulus.Length 408 1.0994  
## Sex:Age.Months:Stimulus.Length 408 0.5096  
## TestSite:Genotype:Age.Months:Stimulus.Length 408 1.3496  
## TestSite:Sex:Age.Months:Stimulus.Length 408 0.5653  
## Genotype:Sex:Age.Months:Stimulus.Length 408 1.1097  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 408 0.9408  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0187089 \*   
## Genotype 0.0006761 \*\*\*  
## Sex 0.0898496 .   
## TestSite:Genotype 0.4930891   
## TestSite:Sex 0.9331189   
## Genotype:Sex 0.4151273   
## TestSite:Genotype:Sex 0.4609428   
## Age.Months 0.5803705   
## TestSite:Age.Months 0.0061009 \*\*   
## Genotype:Age.Months 0.0086190 \*\*   
## Sex:Age.Months 0.6327117   
## TestSite:Genotype:Age.Months 0.6656870   
## TestSite:Sex:Age.Months 0.9771069   
## Genotype:Sex:Age.Months 0.2185889   
## TestSite:Genotype:Sex:Age.Months 0.6059550   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.1804639   
## Genotype:Stimulus.Length 0.2303467   
## Sex:Stimulus.Length 0.1993090   
## TestSite:Genotype:Stimulus.Length 0.3569262   
## TestSite:Sex:Stimulus.Length 0.7149085   
## Genotype:Sex:Stimulus.Length 0.0290178 \*   
## TestSite:Genotype:Sex:Stimulus.Length 0.8624167   
## Age.Months:Stimulus.Length 0.6330566   
## TestSite:Age.Months:Stimulus.Length 0.9755063   
## Genotype:Age.Months:Stimulus.Length 0.3618884   
## Sex:Age.Months:Stimulus.Length 0.8011609   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.2339305   
## TestSite:Sex:Age.Months:Stimulus.Length 0.7579735   
## Genotype:Sex:Age.Months:Stimulus.Length 0.3557802   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.4654723   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.74058 0.000043  
## TestSite:Age.Months 0.74058 0.000043  
## Genotype:Age.Months 0.74058 0.000043  
## Sex:Age.Months 0.74058 0.000043  
## TestSite:Genotype:Age.Months 0.74058 0.000043  
## TestSite:Sex:Age.Months 0.74058 0.000043  
## Genotype:Sex:Age.Months 0.74058 0.000043  
## TestSite:Genotype:Sex:Age.Months 0.74058 0.000043  
## Stimulus.Length 0.80763 0.014078  
## TestSite:Stimulus.Length 0.80763 0.014078  
## Genotype:Stimulus.Length 0.80763 0.014078  
## Sex:Stimulus.Length 0.80763 0.014078  
## TestSite:Genotype:Stimulus.Length 0.80763 0.014078  
## TestSite:Sex:Stimulus.Length 0.80763 0.014078  
## Genotype:Sex:Stimulus.Length 0.80763 0.014078  
## TestSite:Genotype:Sex:Stimulus.Length 0.80763 0.014078  
## Age.Months:Stimulus.Length 0.67361 0.166646  
## TestSite:Age.Months:Stimulus.Length 0.67361 0.166646  
## Genotype:Age.Months:Stimulus.Length 0.67361 0.166646  
## Sex:Age.Months:Stimulus.Length 0.67361 0.166646  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.67361 0.166646  
## TestSite:Sex:Age.Months:Stimulus.Length 0.67361 0.166646  
## Genotype:Sex:Age.Months:Stimulus.Length 0.67361 0.166646  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.67361 0.166646  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.79402  
## TestSite:Age.Months 0.79402  
## Genotype:Age.Months 0.79402  
## Sex:Age.Months 0.79402  
## TestSite:Genotype:Age.Months 0.79402  
## TestSite:Sex:Age.Months 0.79402  
## Genotype:Sex:Age.Months 0.79402  
## TestSite:Genotype:Sex:Age.Months 0.79402  
## Stimulus.Length 0.86786  
## TestSite:Stimulus.Length 0.86786  
## Genotype:Stimulus.Length 0.86786  
## Sex:Stimulus.Length 0.86786  
## TestSite:Genotype:Stimulus.Length 0.86786  
## TestSite:Sex:Stimulus.Length 0.86786  
## Genotype:Sex:Stimulus.Length 0.86786  
## TestSite:Genotype:Sex:Stimulus.Length 0.86786  
## Age.Months:Stimulus.Length 0.88969  
## TestSite:Age.Months:Stimulus.Length 0.88969  
## Genotype:Age.Months:Stimulus.Length 0.88969  
## Sex:Age.Months:Stimulus.Length 0.88969  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.88969  
## TestSite:Sex:Age.Months:Stimulus.Length 0.88969  
## Genotype:Sex:Age.Months:Stimulus.Length 0.88969  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.88969  
## Pr(>F[GG])   
## Age.Months 0.54062   
## TestSite:Age.Months 0.01080 \*   
## Genotype:Age.Months 0.01437 \*   
## Sex:Age.Months 0.58818   
## TestSite:Genotype:Age.Months 0.61862   
## TestSite:Sex:Age.Months 0.95539   
## Genotype:Sex:Age.Months 0.22172   
## TestSite:Genotype:Sex:Age.Months 0.56376   
## Stimulus.Length < 0.0000000000000002 \*\*\*  
## TestSite:Stimulus.Length 0.18729   
## Genotype:Stimulus.Length 0.23437   
## Sex:Stimulus.Length 0.20515   
## TestSite:Genotype:Stimulus.Length 0.35205   
## TestSite:Sex:Stimulus.Length 0.68750   
## Genotype:Sex:Stimulus.Length 0.03592 \*   
## TestSite:Genotype:Sex:Stimulus.Length 0.83537   
## Age.Months:Stimulus.Length 0.61707   
## TestSite:Age.Months:Stimulus.Length 0.96658   
## Genotype:Age.Months:Stimulus.Length 0.36112   
## Sex:Age.Months:Stimulus.Length 0.78065   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.23995   
## TestSite:Sex:Age.Months:Stimulus.Length 0.73789   
## Genotype:Sex:Age.Months:Stimulus.Length 0.35536   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.45852   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.8099008 5.440118e-01  
## TestSite:Age.Months 0.8099008 1.033223e-02  
## Genotype:Age.Months 0.8099008 1.381430e-02  
## Sex:Age.Months 0.8099008 5.919886e-01  
## TestSite:Genotype:Age.Months 0.8099008 6.226606e-01  
## TestSite:Sex:Age.Months 0.8099008 9.576532e-01  
## Genotype:Sex:Age.Months 0.8099008 2.215639e-01  
## TestSite:Genotype:Sex:Age.Months 0.8099008 5.673653e-01  
## Stimulus.Length 0.9054909 1.547157e-67  
## TestSite:Stimulus.Length 0.9054909 1.853544e-01  
## Genotype:Stimulus.Length 0.9054909 2.332817e-01  
## Sex:Stimulus.Length 0.9054909 2.035157e-01  
## TestSite:Genotype:Stimulus.Length 0.9054909 3.535818e-01  
## TestSite:Sex:Stimulus.Length 0.9054909 6.957260e-01  
## Genotype:Sex:Stimulus.Length 0.9054909 3.379997e-02  
## TestSite:Genotype:Sex:Stimulus.Length 0.9054909 8.436784e-01  
## Age.Months:Stimulus.Length 0.9743601 6.294875e-01  
## TestSite:Age.Months:Stimulus.Length 0.9743601 9.736830e-01  
## Genotype:Age.Months:Stimulus.Length 0.9743601 3.617564e-01  
## Sex:Age.Months:Stimulus.Length 0.9743601 7.966384e-01  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9743601 2.353266e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9743601 7.535211e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9743601 3.557291e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9743601 4.639389e-01

### Trial Omissions

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$Omission, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$APP$Omission, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 565019 1 32934  
## TestSite 9 1 32934  
## Genotype 2423 1 32934  
## Sex 47 1 32934  
## TestSite:Genotype 673 1 32934  
## TestSite:Sex 65 1 32934  
## Genotype:Sex 874 1 32934  
## TestSite:Genotype:Sex 534 1 32934  
## Age.Months 2237 2 15909  
## TestSite:Age.Months 663 2 15909  
## Genotype:Age.Months 135 2 15909  
## Sex:Age.Months 371 2 15909  
## TestSite:Genotype:Age.Months 324 2 15909  
## TestSite:Sex:Age.Months 958 2 15909  
## Genotype:Sex:Age.Months 380 2 15909  
## TestSite:Genotype:Sex:Age.Months 308 2 15909  
## Stimulus.Length 59660 3 15069  
## TestSite:Stimulus.Length 321 3 15069  
## Genotype:Stimulus.Length 203 3 15069  
## Sex:Stimulus.Length 111 3 15069  
## TestSite:Genotype:Stimulus.Length 11 3 15069  
## TestSite:Sex:Stimulus.Length 67 3 15069  
## Genotype:Sex:Stimulus.Length 362 3 15069  
## TestSite:Genotype:Sex:Stimulus.Length 30 3 15069  
## Age.Months:Stimulus.Length 132 6 28650  
## TestSite:Age.Months:Stimulus.Length 362 6 28650  
## Genotype:Age.Months:Stimulus.Length 290 6 28650  
## Sex:Age.Months:Stimulus.Length 110 6 28650  
## TestSite:Genotype:Age.Months:Stimulus.Length 441 6 28650  
## TestSite:Sex:Age.Months:Stimulus.Length 224 6 28650  
## Genotype:Sex:Age.Months:Stimulus.Length 237 6 28650  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 245 6 28650  
## den Df F  
## (Intercept) 76 1303.8561  
## TestSite 76 0.0218  
## Genotype 76 5.5915  
## Sex 76 0.1081  
## TestSite:Genotype 76 1.5535  
## TestSite:Sex 76 0.1495  
## Genotype:Sex 76 2.0179  
## TestSite:Genotype:Sex 76 1.2324  
## Age.Months 152 10.6864  
## TestSite:Age.Months 152 3.1677  
## Genotype:Age.Months 152 0.6452  
## Sex:Age.Months 152 1.7715  
## TestSite:Genotype:Age.Months 152 1.5457  
## TestSite:Sex:Age.Months 152 4.5751  
## Genotype:Sex:Age.Months 152 1.8146  
## TestSite:Genotype:Sex:Age.Months 152 1.4700  
## Stimulus.Length 228 300.8998  
## TestSite:Stimulus.Length 228 1.6202  
## Genotype:Stimulus.Length 228 1.0229  
## Sex:Stimulus.Length 228 0.5583  
## TestSite:Genotype:Stimulus.Length 228 0.0563  
## TestSite:Sex:Stimulus.Length 228 0.3400  
## Genotype:Sex:Stimulus.Length 228 1.8243  
## TestSite:Genotype:Sex:Stimulus.Length 228 0.1512  
## Age.Months:Stimulus.Length 456 0.3491  
## TestSite:Age.Months:Stimulus.Length 456 0.9607  
## Genotype:Age.Months:Stimulus.Length 456 0.7699  
## Sex:Age.Months:Stimulus.Length 456 0.2914  
## TestSite:Genotype:Age.Months:Stimulus.Length 456 1.1688  
## TestSite:Sex:Age.Months:Stimulus.Length 456 0.5955  
## Genotype:Sex:Age.Months:Stimulus.Length 456 0.6292  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 456 0.6490  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.88303   
## Genotype 0.02060 \*   
## Sex 0.74322   
## TestSite:Genotype 0.21645   
## TestSite:Sex 0.70009   
## Genotype:Sex 0.15954   
## TestSite:Genotype:Sex 0.27045   
## Age.Months 0.00004545 \*\*\*  
## TestSite:Age.Months 0.04490 \*   
## Genotype:Age.Months 0.52597   
## Sex:Age.Months 0.17357   
## TestSite:Genotype:Age.Months 0.21649   
## TestSite:Sex:Age.Months 0.01176 \*   
## Genotype:Sex:Age.Months 0.16641   
## TestSite:Genotype:Sex:Age.Months 0.23319   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.18546   
## Genotype:Stimulus.Length 0.38325   
## Sex:Stimulus.Length 0.64310   
## TestSite:Genotype:Stimulus.Length 0.98239   
## TestSite:Sex:Stimulus.Length 0.79644   
## Genotype:Sex:Stimulus.Length 0.14350   
## TestSite:Genotype:Sex:Stimulus.Length 0.92881   
## Age.Months:Stimulus.Length 0.91036   
## TestSite:Age.Months:Stimulus.Length 0.45137   
## Genotype:Age.Months:Stimulus.Length 0.59385   
## Sex:Age.Months:Stimulus.Length 0.94100   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.32180   
## TestSite:Sex:Age.Months:Stimulus.Length 0.73400   
## Genotype:Sex:Age.Months:Stimulus.Length 0.70692   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.69098   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.98415 0.54919  
## TestSite:Age.Months 0.98415 0.54919  
## Genotype:Age.Months 0.98415 0.54919  
## Sex:Age.Months 0.98415 0.54919  
## TestSite:Genotype:Age.Months 0.98415 0.54919  
## TestSite:Sex:Age.Months 0.98415 0.54919  
## Genotype:Sex:Age.Months 0.98415 0.54919  
## TestSite:Genotype:Sex:Age.Months 0.98415 0.54919  
## Stimulus.Length 0.93291 0.39326  
## TestSite:Stimulus.Length 0.93291 0.39326  
## Genotype:Stimulus.Length 0.93291 0.39326  
## Sex:Stimulus.Length 0.93291 0.39326  
## TestSite:Genotype:Stimulus.Length 0.93291 0.39326  
## TestSite:Sex:Stimulus.Length 0.93291 0.39326  
## Genotype:Sex:Stimulus.Length 0.93291 0.39326  
## TestSite:Genotype:Sex:Stimulus.Length 0.93291 0.39326  
## Age.Months:Stimulus.Length 0.65950 0.05931  
## TestSite:Age.Months:Stimulus.Length 0.65950 0.05931  
## Genotype:Age.Months:Stimulus.Length 0.65950 0.05931  
## Sex:Age.Months:Stimulus.Length 0.65950 0.05931  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.65950 0.05931  
## TestSite:Sex:Age.Months:Stimulus.Length 0.65950 0.05931  
## Genotype:Sex:Age.Months:Stimulus.Length 0.65950 0.05931  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.65950 0.05931  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.98439  
## TestSite:Age.Months 0.98439  
## Genotype:Age.Months 0.98439  
## Sex:Age.Months 0.98439  
## TestSite:Genotype:Age.Months 0.98439  
## TestSite:Sex:Age.Months 0.98439  
## Genotype:Sex:Age.Months 0.98439  
## TestSite:Genotype:Sex:Age.Months 0.98439  
## Stimulus.Length 0.95246  
## TestSite:Stimulus.Length 0.95246  
## Genotype:Stimulus.Length 0.95246  
## Sex:Stimulus.Length 0.95246  
## TestSite:Genotype:Stimulus.Length 0.95246  
## TestSite:Sex:Stimulus.Length 0.95246  
## Genotype:Sex:Stimulus.Length 0.95246  
## TestSite:Genotype:Sex:Stimulus.Length 0.95246  
## Age.Months:Stimulus.Length 0.88643  
## TestSite:Age.Months:Stimulus.Length 0.88643  
## Genotype:Age.Months:Stimulus.Length 0.88643  
## Sex:Age.Months:Stimulus.Length 0.88643  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.88643  
## TestSite:Sex:Age.Months:Stimulus.Length 0.88643  
## Genotype:Sex:Age.Months:Stimulus.Length 0.88643  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.88643  
## Pr(>F[GG])   
## Age.Months 0.00005078 \*\*\*  
## TestSite:Age.Months 0.04571 \*   
## Genotype:Age.Months 0.52364   
## Sex:Age.Months 0.17418   
## TestSite:Genotype:Age.Months 0.21681   
## TestSite:Sex:Age.Months 0.01218 \*   
## Genotype:Sex:Age.Months 0.16706   
## TestSite:Genotype:Sex:Age.Months 0.23338   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.18783   
## Genotype:Stimulus.Length 0.38094   
## Sex:Stimulus.Length 0.63467   
## TestSite:Genotype:Stimulus.Length 0.97936   
## TestSite:Sex:Stimulus.Length 0.78671   
## Genotype:Sex:Stimulus.Length 0.14647   
## TestSite:Genotype:Sex:Stimulus.Length 0.92183   
## Age.Months:Stimulus.Length 0.89248   
## TestSite:Age.Months:Stimulus.Length 0.44505   
## Genotype:Age.Months:Stimulus.Length 0.57928   
## Sex:Age.Months:Stimulus.Length 0.92605   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.32335   
## TestSite:Sex:Age.Months:Stimulus.Length 0.71378   
## Genotype:Sex:Age.Months:Stimulus.Length 0.68748   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.67208   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 1.0103612 4.545391e-05  
## TestSite:Age.Months 1.0103612 4.489531e-02  
## Genotype:Age.Months 1.0103612 5.259702e-01  
## Sex:Age.Months 1.0103612 1.735725e-01  
## TestSite:Genotype:Age.Months 1.0103612 2.164939e-01  
## TestSite:Sex:Age.Months 1.0103612 1.176464e-02  
## Genotype:Sex:Age.Months 1.0103612 1.664113e-01  
## TestSite:Genotype:Sex:Age.Months 1.0103612 2.331856e-01  
## Stimulus.Length 0.9935774 1.761661e-78  
## TestSite:Stimulus.Length 0.9935774 1.857835e-01  
## Genotype:Stimulus.Length 0.9935774 3.829473e-01  
## Sex:Stimulus.Length 0.9935774 6.419876e-01  
## TestSite:Genotype:Stimulus.Length 0.9935774 9.820054e-01  
## TestSite:Sex:Stimulus.Length 0.9935774 7.951620e-01  
## Genotype:Sex:Stimulus.Length 0.9935774 1.438953e-01  
## TestSite:Genotype:Sex:Stimulus.Length 0.9935774 9.279118e-01  
## Age.Months:Stimulus.Length 0.9609534 9.046229e-01  
## TestSite:Age.Months:Stimulus.Length 0.9609534 4.493033e-01  
## Genotype:Age.Months:Stimulus.Length 0.9609534 5.890144e-01  
## Sex:Age.Months:Stimulus.Length 0.9609534 9.362694e-01  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9609534 3.223793e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9609534 7.273190e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9609534 7.004829e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9609534 6.847168e-01

#### 5xFAD Mice

summary(probe.anova$TG5x$Omission, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$TG5x$Omission, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 691234 1 37081  
## TestSite 3381 1 37081  
## Genotype 1624 1 37081  
## Sex 21 1 37081  
## TestSite:Genotype 604 1 37081  
## TestSite:Sex 60 1 37081  
## Genotype:Sex 114 1 37081  
## TestSite:Genotype:Sex 65 1 37081  
## Age.Months 13121 2 22392  
## TestSite:Age.Months 1137 2 22392  
## Genotype:Age.Months 120 2 22392  
## Sex:Age.Months 244 2 22392  
## TestSite:Genotype:Age.Months 409 2 22392  
## TestSite:Sex:Age.Months 770 2 22392  
## Genotype:Sex:Age.Months 1149 2 22392  
## TestSite:Genotype:Sex:Age.Months 143 2 22392  
## Stimulus.Length 87454 3 20412  
## TestSite:Stimulus.Length 155 3 20412  
## Genotype:Stimulus.Length 930 3 20412  
## Sex:Stimulus.Length 71 3 20412  
## TestSite:Genotype:Stimulus.Length 134 3 20412  
## TestSite:Sex:Stimulus.Length 113 3 20412  
## Genotype:Sex:Stimulus.Length 117 3 20412  
## TestSite:Genotype:Sex:Stimulus.Length 46 3 20412  
## Age.Months:Stimulus.Length 1348 6 29813  
## TestSite:Age.Months:Stimulus.Length 316 6 29813  
## Genotype:Age.Months:Stimulus.Length 472 6 29813  
## Sex:Age.Months:Stimulus.Length 437 6 29813  
## TestSite:Genotype:Age.Months:Stimulus.Length 480 6 29813  
## TestSite:Sex:Age.Months:Stimulus.Length 281 6 29813  
## Genotype:Sex:Age.Months:Stimulus.Length 143 6 29813  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 121 6 29813  
## den Df F  
## (Intercept) 67 1248.9509  
## TestSite 67 6.1085  
## Genotype 67 2.9345  
## Sex 67 0.0379  
## TestSite:Genotype 67 1.0911  
## TestSite:Sex 67 0.1081  
## Genotype:Sex 67 0.2065  
## TestSite:Genotype:Sex 67 0.1183  
## Age.Months 134 39.2615  
## TestSite:Age.Months 134 3.4013  
## Genotype:Age.Months 134 0.3593  
## Sex:Age.Months 134 0.7296  
## TestSite:Genotype:Age.Months 134 1.2241  
## TestSite:Sex:Age.Months 134 2.3042  
## Genotype:Sex:Age.Months 134 3.4369  
## TestSite:Genotype:Sex:Age.Months 134 0.4280  
## Stimulus.Length 201 287.0598  
## TestSite:Stimulus.Length 201 0.5076  
## Genotype:Stimulus.Length 201 3.0529  
## Sex:Stimulus.Length 201 0.2344  
## TestSite:Genotype:Stimulus.Length 201 0.4383  
## TestSite:Sex:Stimulus.Length 201 0.3719  
## Genotype:Sex:Stimulus.Length 201 0.3825  
## TestSite:Genotype:Sex:Stimulus.Length 201 0.1496  
## Age.Months:Stimulus.Length 402 3.0296  
## TestSite:Age.Months:Stimulus.Length 402 0.7098  
## Genotype:Age.Months:Stimulus.Length 402 1.0612  
## Sex:Age.Months:Stimulus.Length 402 0.9812  
## TestSite:Genotype:Age.Months:Stimulus.Length 402 1.0793  
## TestSite:Sex:Age.Months:Stimulus.Length 402 0.6315  
## Genotype:Sex:Age.Months:Stimulus.Length 402 0.3221  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 402 0.2711  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.016001 \*   
## Genotype 0.091330 .   
## Sex 0.846191   
## TestSite:Genotype 0.299989   
## TestSite:Sex 0.743321   
## Genotype:Sex 0.650958   
## TestSite:Genotype:Sex 0.732012   
## Age.Months 0.000000000000038 \*\*\*  
## TestSite:Age.Months 0.036233 \*   
## Genotype:Age.Months 0.698820   
## Sex:Age.Months 0.484007   
## TestSite:Genotype:Age.Months 0.297297   
## TestSite:Sex:Age.Months 0.103782   
## Genotype:Sex:Age.Months 0.035027 \*   
## TestSite:Genotype:Sex:Age.Months 0.652709   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.677497   
## Genotype:Stimulus.Length 0.029581 \*   
## Sex:Stimulus.Length 0.872360   
## TestSite:Genotype:Stimulus.Length 0.725852   
## TestSite:Sex:Stimulus.Length 0.773389   
## Genotype:Sex:Stimulus.Length 0.765734   
## TestSite:Genotype:Sex:Stimulus.Length 0.929887   
## Age.Months:Stimulus.Length 0.006574 \*\*   
## TestSite:Age.Months:Stimulus.Length 0.641921   
## Genotype:Age.Months:Stimulus.Length 0.385274   
## Sex:Age.Months:Stimulus.Length 0.437494   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.374108   
## TestSite:Sex:Age.Months:Stimulus.Length 0.705053   
## Genotype:Sex:Age.Months:Stimulus.Length 0.925338   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.950299   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.99386 0.81603  
## TestSite:Age.Months 0.99386 0.81603  
## Genotype:Age.Months 0.99386 0.81603  
## Sex:Age.Months 0.99386 0.81603  
## TestSite:Genotype:Age.Months 0.99386 0.81603  
## TestSite:Sex:Age.Months 0.99386 0.81603  
## Genotype:Sex:Age.Months 0.99386 0.81603  
## TestSite:Genotype:Sex:Age.Months 0.99386 0.81603  
## Stimulus.Length 0.73545 0.00115  
## TestSite:Stimulus.Length 0.73545 0.00115  
## Genotype:Stimulus.Length 0.73545 0.00115  
## Sex:Stimulus.Length 0.73545 0.00115  
## TestSite:Genotype:Stimulus.Length 0.73545 0.00115  
## TestSite:Sex:Stimulus.Length 0.73545 0.00115  
## Genotype:Sex:Stimulus.Length 0.73545 0.00115  
## TestSite:Genotype:Sex:Stimulus.Length 0.73545 0.00115  
## Age.Months:Stimulus.Length 0.65494 0.12439  
## TestSite:Age.Months:Stimulus.Length 0.65494 0.12439  
## Genotype:Age.Months:Stimulus.Length 0.65494 0.12439  
## Sex:Age.Months:Stimulus.Length 0.65494 0.12439  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.65494 0.12439  
## TestSite:Sex:Age.Months:Stimulus.Length 0.65494 0.12439  
## Genotype:Sex:Age.Months:Stimulus.Length 0.65494 0.12439  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.65494 0.12439  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.99390  
## TestSite:Age.Months 0.99390  
## Genotype:Age.Months 0.99390  
## Sex:Age.Months 0.99390  
## TestSite:Genotype:Age.Months 0.99390  
## TestSite:Sex:Age.Months 0.99390  
## Genotype:Sex:Age.Months 0.99390  
## TestSite:Genotype:Sex:Age.Months 0.99390  
## Stimulus.Length 0.85138  
## TestSite:Stimulus.Length 0.85138  
## Genotype:Stimulus.Length 0.85138  
## Sex:Stimulus.Length 0.85138  
## TestSite:Genotype:Stimulus.Length 0.85138  
## TestSite:Sex:Stimulus.Length 0.85138  
## Genotype:Sex:Stimulus.Length 0.85138  
## TestSite:Genotype:Sex:Stimulus.Length 0.85138  
## Age.Months:Stimulus.Length 0.88466  
## TestSite:Age.Months:Stimulus.Length 0.88466  
## Genotype:Age.Months:Stimulus.Length 0.88466  
## Sex:Age.Months:Stimulus.Length 0.88466  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.88466  
## TestSite:Sex:Age.Months:Stimulus.Length 0.88466  
## Genotype:Sex:Age.Months:Stimulus.Length 0.88466  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.88466  
## Pr(>F[GG])   
## Age.Months 0.00000000000004484 \*\*\*  
## TestSite:Age.Months 0.03653 \*   
## Genotype:Age.Months 0.69752   
## Sex:Age.Months 0.48323   
## TestSite:Genotype:Age.Months 0.29717   
## TestSite:Sex:Age.Months 0.10414   
## Genotype:Sex:Age.Months 0.03532 \*   
## TestSite:Genotype:Sex:Age.Months 0.65148   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.64792   
## Genotype:Stimulus.Length 0.03753 \*   
## Sex:Stimulus.Length 0.84210   
## TestSite:Genotype:Stimulus.Length 0.69436   
## TestSite:Sex:Stimulus.Length 0.74090   
## Genotype:Sex:Stimulus.Length 0.73333   
## TestSite:Genotype:Sex:Stimulus.Length 0.90558   
## Age.Months:Stimulus.Length 0.00931 \*\*   
## TestSite:Age.Months:Stimulus.Length 0.62476   
## Genotype:Age.Months:Stimulus.Length 0.38301   
## Sex:Age.Months:Stimulus.Length 0.43196   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.37254   
## TestSite:Sex:Age.Months:Stimulus.Length 0.68537   
## Genotype:Sex:Age.Months:Stimulus.Length 0.90844   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.93632   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 1.0241907 3.800452e-14  
## TestSite:Age.Months 1.0241907 3.623296e-02  
## Genotype:Age.Months 1.0241907 6.988200e-01  
## Sex:Age.Months 1.0241907 4.840075e-01  
## TestSite:Genotype:Age.Months 1.0241907 2.972966e-01  
## TestSite:Sex:Age.Months 1.0241907 1.037816e-01  
## Genotype:Sex:Age.Months 1.0241907 3.502730e-02  
## TestSite:Genotype:Sex:Age.Months 1.0241907 6.527093e-01  
## Stimulus.Length 0.8879845 1.397607e-64  
## TestSite:Stimulus.Length 0.8879845 6.556582e-01  
## Genotype:Stimulus.Length 0.8879845 3.538660e-02  
## Sex:Stimulus.Length 0.8879845 8.502775e-01  
## TestSite:Genotype:Stimulus.Length 0.8879845 7.026303e-01  
## TestSite:Sex:Stimulus.Length 0.8879845 7.494856e-01  
## Genotype:Sex:Stimulus.Length 0.8879845 7.418863e-01  
## TestSite:Genotype:Sex:Stimulus.Length 0.8879845 9.123267e-01  
## Age.Months:Stimulus.Length 0.9697168 7.200645e-03  
## TestSite:Age.Months:Stimulus.Length 0.9697168 6.375939e-01  
## Genotype:Age.Months:Stimulus.Length 0.9697168 3.847464e-01  
## Sex:Age.Months:Stimulus.Length 0.9697168 4.361274e-01  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9697168 3.737570e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9697168 7.001057e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9697168 9.212666e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9697168 9.469849e-01

#### 3xTG Mice

summary(probe.anova$TG3x$Omission, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 719518 1 42493  
## TestSite 227 1 42493  
## Genotype 2060 1 42493  
## Sex 495 1 42493  
## TestSite:Genotype 130 1 42493  
## TestSite:Sex 284 1 42493  
## Genotype:Sex 11 1 42493  
## TestSite:Genotype:Sex 661 1 42493  
## Age.Months 7563 2 25695  
## TestSite:Age.Months 2805 2 25695  
## Genotype:Age.Months 1064 2 25695  
## Sex:Age.Months 587 2 25695  
## TestSite:Genotype:Age.Months 516 2 25695  
## TestSite:Sex:Age.Months 83 2 25695  
## Genotype:Sex:Age.Months 370 2 25695  
## TestSite:Genotype:Sex:Age.Months 1145 2 25695  
## Stimulus.Length 78930 3 20359  
## TestSite:Stimulus.Length 52 3 20359  
## Genotype:Stimulus.Length 691 3 20359  
## Sex:Stimulus.Length 49 3 20359  
## TestSite:Genotype:Stimulus.Length 220 3 20359  
## TestSite:Sex:Stimulus.Length 81 3 20359  
## Genotype:Sex:Stimulus.Length 946 3 20359  
## TestSite:Genotype:Sex:Stimulus.Length 272 3 20359  
## Age.Months:Stimulus.Length 626 6 35892  
## TestSite:Age.Months:Stimulus.Length 245 6 35892  
## Genotype:Age.Months:Stimulus.Length 741 6 35892  
## Sex:Age.Months:Stimulus.Length 212 6 35892  
## TestSite:Genotype:Age.Months:Stimulus.Length 100 6 35892  
## TestSite:Sex:Age.Months:Stimulus.Length 333 6 35892  
## Genotype:Sex:Age.Months:Stimulus.Length 287 6 35892  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 316 6 35892  
## den Df F  
## (Intercept) 68 1151.4191  
## TestSite 68 0.3632  
## Genotype 68 3.2971  
## Sex 68 0.7918  
## TestSite:Genotype 68 0.2086  
## TestSite:Sex 68 0.4549  
## Genotype:Sex 68 0.0170  
## TestSite:Genotype:Sex 68 1.0585  
## Age.Months 136 20.0144  
## TestSite:Age.Months 136 7.4234  
## Genotype:Age.Months 136 2.8151  
## Sex:Age.Months 136 1.5544  
## TestSite:Genotype:Age.Months 136 1.3653  
## TestSite:Sex:Age.Months 136 0.2207  
## Genotype:Sex:Age.Months 136 0.9791  
## TestSite:Genotype:Sex:Age.Months 136 3.0304  
## Stimulus.Length 204 263.6329  
## TestSite:Stimulus.Length 204 0.1726  
## Genotype:Stimulus.Length 204 2.3070  
## Sex:Stimulus.Length 204 0.1629  
## TestSite:Genotype:Stimulus.Length 204 0.7332  
## TestSite:Sex:Stimulus.Length 204 0.2702  
## Genotype:Sex:Stimulus.Length 204 3.1592  
## TestSite:Genotype:Sex:Stimulus.Length 204 0.9071  
## Age.Months:Stimulus.Length 408 1.1867  
## TestSite:Age.Months:Stimulus.Length 408 0.4641  
## Genotype:Age.Months:Stimulus.Length 408 1.4041  
## Sex:Age.Months:Stimulus.Length 408 0.4012  
## TestSite:Genotype:Age.Months:Stimulus.Length 408 0.1895  
## TestSite:Sex:Age.Months:Stimulus.Length 408 0.6307  
## Genotype:Sex:Age.Months:Stimulus.Length 408 0.5446  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 408 0.5993  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.5487540   
## Genotype 0.0738108 .   
## Sex 0.3766934   
## TestSite:Genotype 0.6493402   
## TestSite:Sex 0.5022980   
## Genotype:Sex 0.8967414   
## TestSite:Genotype:Sex 0.3072068   
## Age.Months 0.00000002404 \*\*\*  
## TestSite:Age.Months 0.0008713 \*\*\*  
## Genotype:Age.Months 0.0633957 .   
## Sex:Age.Months 0.2150396   
## TestSite:Genotype:Age.Months 0.2587683   
## TestSite:Sex:Age.Months 0.8022273   
## Genotype:Sex:Age.Months 0.3782758   
## TestSite:Genotype:Sex:Age.Months 0.0515703 .   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.9148211   
## Genotype:Stimulus.Length 0.0777671 .   
## Sex:Stimulus.Length 0.9212470   
## TestSite:Genotype:Stimulus.Length 0.5333113   
## TestSite:Sex:Stimulus.Length 0.8468066   
## Genotype:Sex:Stimulus.Length 0.0257121 \*   
## TestSite:Genotype:Sex:Stimulus.Length 0.4385267   
## Age.Months:Stimulus.Length 0.3123226   
## TestSite:Age.Months:Stimulus.Length 0.8348743   
## Genotype:Age.Months:Stimulus.Length 0.2116135   
## Sex:Age.Months:Stimulus.Length 0.8782290   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9797008   
## TestSite:Sex:Age.Months:Stimulus.Length 0.7056810   
## Genotype:Sex:Age.Months:Stimulus.Length 0.7742115   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.7309497   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.96755 0.33119  
## TestSite:Age.Months 0.96755 0.33119  
## Genotype:Age.Months 0.96755 0.33119  
## Sex:Age.Months 0.96755 0.33119  
## TestSite:Genotype:Age.Months 0.96755 0.33119  
## TestSite:Sex:Age.Months 0.96755 0.33119  
## Genotype:Sex:Age.Months 0.96755 0.33119  
## TestSite:Genotype:Sex:Age.Months 0.96755 0.33119  
## Stimulus.Length 0.72384 0.00063  
## TestSite:Stimulus.Length 0.72384 0.00063  
## Genotype:Stimulus.Length 0.72384 0.00063  
## Sex:Stimulus.Length 0.72384 0.00063  
## TestSite:Genotype:Stimulus.Length 0.72384 0.00063  
## TestSite:Sex:Stimulus.Length 0.72384 0.00063  
## Genotype:Sex:Stimulus.Length 0.72384 0.00063  
## TestSite:Genotype:Sex:Stimulus.Length 0.72384 0.00063  
## Age.Months:Stimulus.Length 0.62784 0.06070  
## TestSite:Age.Months:Stimulus.Length 0.62784 0.06070  
## Genotype:Age.Months:Stimulus.Length 0.62784 0.06070  
## Sex:Age.Months:Stimulus.Length 0.62784 0.06070  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.62784 0.06070  
## TestSite:Sex:Age.Months:Stimulus.Length 0.62784 0.06070  
## Genotype:Sex:Age.Months:Stimulus.Length 0.62784 0.06070  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.62784 0.06070  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.96857  
## TestSite:Age.Months 0.96857  
## Genotype:Age.Months 0.96857  
## Sex:Age.Months 0.96857  
## TestSite:Genotype:Age.Months 0.96857  
## TestSite:Sex:Age.Months 0.96857  
## Genotype:Sex:Age.Months 0.96857  
## TestSite:Genotype:Sex:Age.Months 0.96857  
## Stimulus.Length 0.84199  
## TestSite:Stimulus.Length 0.84199  
## Genotype:Stimulus.Length 0.84199  
## Sex:Stimulus.Length 0.84199  
## TestSite:Genotype:Stimulus.Length 0.84199  
## TestSite:Sex:Stimulus.Length 0.84199  
## Genotype:Sex:Stimulus.Length 0.84199  
## TestSite:Genotype:Sex:Stimulus.Length 0.84199  
## Age.Months:Stimulus.Length 0.87966  
## TestSite:Age.Months:Stimulus.Length 0.87966  
## Genotype:Age.Months:Stimulus.Length 0.87966  
## Sex:Age.Months:Stimulus.Length 0.87966  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.87966  
## TestSite:Sex:Age.Months:Stimulus.Length 0.87966  
## Genotype:Sex:Age.Months:Stimulus.Length 0.87966  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.87966  
## Pr(>F[GG])   
## Age.Months 0.00000003754 \*\*\*  
## TestSite:Age.Months 0.001002 \*\*   
## Genotype:Age.Months 0.065226 .   
## Sex:Age.Months 0.215703   
## TestSite:Genotype:Age.Months 0.258740   
## TestSite:Sex:Age.Months 0.795300   
## Genotype:Sex:Age.Months 0.376119   
## TestSite:Genotype:Sex:Age.Months 0.053313 .   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.886476   
## Genotype:Stimulus.Length 0.089088 .   
## Sex:Stimulus.Length 0.893785   
## TestSite:Genotype:Stimulus.Length 0.511611   
## TestSite:Sex:Stimulus.Length 0.812981   
## Genotype:Sex:Stimulus.Length 0.033704 \*   
## TestSite:Genotype:Sex:Stimulus.Length 0.425078   
## Age.Months:Stimulus.Length 0.314545   
## TestSite:Age.Months:Stimulus.Length 0.812566   
## Genotype:Age.Months:Stimulus.Length 0.219218   
## Sex:Age.Months:Stimulus.Length 0.857199   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.970875   
## TestSite:Sex:Age.Months:Stimulus.Length 0.685069   
## Genotype:Sex:Age.Months:Stimulus.Length 0.751909   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.709549   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.9964968 2.526514e-08  
## TestSite:Age.Months 0.9964968 8.849793e-04  
## Genotype:Age.Months 0.9964968 6.359723e-02  
## Sex:Age.Months 0.9964968 2.151154e-01  
## TestSite:Genotype:Age.Months 0.9964968 2.587677e-01  
## TestSite:Sex:Age.Months 0.9964968 8.014699e-01  
## Genotype:Sex:Age.Months 0.9964968 3.780400e-01  
## TestSite:Genotype:Sex:Age.Months 0.9964968 5.176171e-02  
## Stimulus.Length 0.8771515 1.163895e-61  
## TestSite:Stimulus.Length 0.8771515 8.936010e-01  
## Genotype:Stimulus.Length 0.8771515 8.643697e-02  
## Sex:Stimulus.Length 0.8771515 9.007149e-01  
## TestSite:Genotype:Stimulus.Length 0.8771515 5.167624e-01  
## TestSite:Sex:Stimulus.Length 0.8771515 8.212487e-01  
## Genotype:Sex:Stimulus.Length 0.8771515 3.172880e-02  
## TestSite:Genotype:Sex:Stimulus.Length 0.8771515 4.283155e-01  
## Age.Months:Stimulus.Length 0.9623940 3.130618e-01  
## TestSite:Age.Months:Stimulus.Length 0.9623940 8.282901e-01  
## Genotype:Age.Months:Stimulus.Length 0.9623940 2.139706e-01  
## Sex:Age.Months:Stimulus.Length 0.9623940 8.720824e-01  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9623940 9.772916e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9623940 6.995077e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9623940 7.675710e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9623940 7.245514e-01

### Premature Responses

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$Premature, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 16747.6 1 2269.7  
## TestSite 21.8 1 2269.7  
## Genotype 36.6 1 2269.7  
## Sex 498.7 1 2269.7  
## TestSite:Genotype 2.8 1 2269.7  
## TestSite:Sex 46.6 1 2269.7  
## Genotype:Sex 4.6 1 2269.7  
## TestSite:Genotype:Sex 53.4 1 2269.7  
## Age.Months 189.5 2 1495.9  
## TestSite:Age.Months 20.7 2 1495.9  
## Genotype:Age.Months 32.0 2 1495.9  
## Sex:Age.Months 21.3 2 1495.9  
## TestSite:Genotype:Age.Months 5.1 2 1495.9  
## TestSite:Sex:Age.Months 35.7 2 1495.9  
## Genotype:Sex:Age.Months 52.6 2 1495.9  
## TestSite:Genotype:Sex:Age.Months 5.7 2 1495.9  
## Stimulus.Length 144.3 3 1332.2  
## TestSite:Stimulus.Length 12.8 3 1332.2  
## Genotype:Stimulus.Length 11.4 3 1332.2  
## Sex:Stimulus.Length 8.7 3 1332.2  
## TestSite:Genotype:Stimulus.Length 13.1 3 1332.2  
## TestSite:Sex:Stimulus.Length 3.7 3 1332.2  
## Genotype:Sex:Stimulus.Length 40.3 3 1332.2  
## TestSite:Genotype:Sex:Stimulus.Length 3.0 3 1332.2  
## Age.Months:Stimulus.Length 13.1 6 2956.8  
## TestSite:Age.Months:Stimulus.Length 50.1 6 2956.8  
## Genotype:Age.Months:Stimulus.Length 22.6 6 2956.8  
## Sex:Age.Months:Stimulus.Length 74.5 6 2956.8  
## TestSite:Genotype:Age.Months:Stimulus.Length 24.9 6 2956.8  
## TestSite:Sex:Age.Months:Stimulus.Length 21.7 6 2956.8  
## Genotype:Sex:Age.Months:Stimulus.Length 79.5 6 2956.8  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 14.1 6 2956.8  
## den Df F  
## (Intercept) 76 560.7881  
## TestSite 76 0.7294  
## Genotype 76 1.2258  
## Sex 76 16.6996  
## TestSite:Genotype 76 0.0929  
## TestSite:Sex 76 1.5617  
## Genotype:Sex 76 0.1537  
## TestSite:Genotype:Sex 76 1.7891  
## Age.Months 152 9.6271  
## TestSite:Age.Months 152 1.0497  
## Genotype:Age.Months 152 1.6265  
## Sex:Age.Months 152 1.0838  
## TestSite:Genotype:Age.Months 152 0.2576  
## TestSite:Sex:Age.Months 152 1.8122  
## Genotype:Sex:Age.Months 152 2.6699  
## TestSite:Genotype:Sex:Age.Months 152 0.2899  
## Stimulus.Length 228 8.2332  
## TestSite:Stimulus.Length 228 0.7282  
## Genotype:Stimulus.Length 228 0.6523  
## Sex:Stimulus.Length 228 0.4962  
## TestSite:Genotype:Stimulus.Length 228 0.7493  
## TestSite:Sex:Stimulus.Length 228 0.2114  
## Genotype:Sex:Stimulus.Length 228 2.2985  
## TestSite:Genotype:Sex:Stimulus.Length 228 0.1739  
## Age.Months:Stimulus.Length 456 0.3360  
## TestSite:Age.Months:Stimulus.Length 456 1.2886  
## Genotype:Age.Months:Stimulus.Length 456 0.5808  
## Sex:Age.Months:Stimulus.Length 456 1.9152  
## TestSite:Genotype:Age.Months:Stimulus.Length 456 0.6389  
## TestSite:Sex:Age.Months:Stimulus.Length 456 0.5574  
## Genotype:Sex:Age.Months:Stimulus.Length 456 2.0422  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 456 0.3614  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.3957487   
## Genotype 0.2717199   
## Sex 0.0001076 \*\*\*  
## TestSite:Genotype 0.7614008   
## TestSite:Sex 0.2152538   
## Genotype:Sex 0.6960880   
## TestSite:Genotype:Sex 0.1850267   
## Age.Months 0.0001157 \*\*\*  
## TestSite:Age.Months 0.3525549   
## Genotype:Age.Months 0.2000179   
## Sex:Age.Months 0.3409180   
## TestSite:Genotype:Age.Months 0.7732515   
## TestSite:Sex:Age.Months 0.1667994   
## Genotype:Sex:Age.Months 0.0725098 .   
## TestSite:Genotype:Sex:Age.Months 0.7487305   
## Stimulus.Length 0.00003173 \*\*\*  
## TestSite:Stimulus.Length 0.5361323   
## Genotype:Stimulus.Length 0.5822766   
## Sex:Stimulus.Length 0.6852411   
## TestSite:Genotype:Stimulus.Length 0.5237393   
## TestSite:Sex:Stimulus.Length 0.8884537   
## Genotype:Sex:Stimulus.Length 0.0782755 .   
## TestSite:Genotype:Sex:Stimulus.Length 0.9139799   
## Age.Months:Stimulus.Length 0.9178038   
## TestSite:Age.Months:Stimulus.Length 0.2608806   
## Genotype:Age.Months:Stimulus.Length 0.7457153   
## Sex:Age.Months:Stimulus.Length 0.0768167 .   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.6991124   
## TestSite:Sex:Age.Months:Stimulus.Length 0.7642200   
## Genotype:Sex:Age.Months:Stimulus.Length 0.0588213 .   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9031260   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.91472 0.03535  
## TestSite:Age.Months 0.91472 0.03535  
## Genotype:Age.Months 0.91472 0.03535  
## Sex:Age.Months 0.91472 0.03535  
## TestSite:Genotype:Age.Months 0.91472 0.03535  
## TestSite:Sex:Age.Months 0.91472 0.03535  
## Genotype:Sex:Age.Months 0.91472 0.03535  
## TestSite:Genotype:Sex:Age.Months 0.91472 0.03535  
## Stimulus.Length 0.92537 0.32667  
## TestSite:Stimulus.Length 0.92537 0.32667  
## Genotype:Stimulus.Length 0.92537 0.32667  
## Sex:Stimulus.Length 0.92537 0.32667  
## TestSite:Genotype:Stimulus.Length 0.92537 0.32667  
## TestSite:Sex:Stimulus.Length 0.92537 0.32667  
## Genotype:Sex:Stimulus.Length 0.92537 0.32667  
## TestSite:Genotype:Sex:Stimulus.Length 0.92537 0.32667  
## Age.Months:Stimulus.Length 0.71156 0.19777  
## TestSite:Age.Months:Stimulus.Length 0.71156 0.19777  
## Genotype:Age.Months:Stimulus.Length 0.71156 0.19777  
## Sex:Age.Months:Stimulus.Length 0.71156 0.19777  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.71156 0.19777  
## TestSite:Sex:Age.Months:Stimulus.Length 0.71156 0.19777  
## Genotype:Sex:Age.Months:Stimulus.Length 0.71156 0.19777  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.71156 0.19777  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.92142 0.0001891 \*\*\*  
## TestSite:Age.Months 0.92142 0.3481466   
## Genotype:Age.Months 0.92142 0.2021394   
## Sex:Age.Months 0.92142 0.3370473   
## TestSite:Genotype:Age.Months 0.92142 0.7551908   
## TestSite:Sex:Age.Months 0.92142 0.1700265   
## Genotype:Sex:Age.Months 0.92142 0.0772450 .   
## TestSite:Genotype:Sex:Age.Months 0.92142 0.7307418   
## Stimulus.Length 0.94885 0.00004677 \*\*\*  
## TestSite:Stimulus.Length 0.94885 0.5294106   
## Genotype:Stimulus.Length 0.94885 0.5744403   
## Sex:Stimulus.Length 0.94885 0.6754654   
## TestSite:Genotype:Stimulus.Length 0.94885 0.5173353   
## TestSite:Sex:Stimulus.Length 0.94885 0.8793038   
## Genotype:Sex:Stimulus.Length 0.94885 0.0817717 .   
## TestSite:Genotype:Sex:Stimulus.Length 0.94885 0.9057405   
## Age.Months:Stimulus.Length 0.89808 0.9024675   
## TestSite:Age.Months:Stimulus.Length 0.89808 0.2652590   
## Genotype:Age.Months:Stimulus.Length 0.89808 0.7274491   
## Sex:Age.Months:Stimulus.Length 0.89808 0.0851167 .   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.89808 0.6820033   
## TestSite:Sex:Age.Months:Stimulus.Length 0.89808 0.7456488   
## Genotype:Sex:Age.Months:Stimulus.Length 0.89808 0.0665452 .   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.89808 0.8868000   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.9432616 0.00016493563  
## TestSite:Age.Months 0.9432616 0.34942962634  
## Genotype:Age.Months 0.9432616 0.20157095564  
## Sex:Age.Months 0.9432616 0.33817847594  
## TestSite:Genotype:Age.Months 0.9432616 0.76039679860  
## TestSite:Sex:Age.Months 0.9432616 0.16914017410  
## Genotype:Sex:Age.Months 0.9432616 0.07590167745  
## TestSite:Genotype:Sex:Age.Months 0.9432616 0.73591698143  
## Stimulus.Length 0.9896259 0.00003432835  
## TestSite:Stimulus.Length 0.9896259 0.53479615808  
## Genotype:Stimulus.Length 0.9896259 0.58071833447  
## Sex:Stimulus.Length 0.9896259 0.68330016721  
## TestSite:Genotype:Stimulus.Length 0.9896259 0.52246660831  
## TestSite:Sex:Stimulus.Length 0.9896259 0.88666424672  
## Genotype:Sex:Stimulus.Length 0.9896259 0.07897222906  
## TestSite:Genotype:Sex:Stimulus.Length 0.9896259 0.91237594386  
## Age.Months:Stimulus.Length 0.9746162 0.91425632483  
## TestSite:Age.Months:Stimulus.Length 0.9746162 0.26197950038  
## Genotype:Age.Months:Stimulus.Length 0.9746162 0.74135127793  
## Sex:Age.Months:Stimulus.Length 0.9746162 0.07879830182  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9746162 0.69501192622  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9746162 0.75979036270  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9746162 0.06065048041  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9746162 0.89932923784

#### 5xFAD Mice

summary(probe.anova$TG5x$Premature, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 16647.9 1 4212.1  
## TestSite 1.6 1 4212.1  
## Genotype 1.4 1 4212.1  
## Sex 55.6 1 4212.1  
## TestSite:Genotype 198.3 1 4212.1  
## TestSite:Sex 47.7 1 4212.1  
## Genotype:Sex 71.3 1 4212.1  
## TestSite:Genotype:Sex 2.7 1 4212.1  
## Age.Months 33.6 2 2286.1  
## TestSite:Age.Months 24.9 2 2286.1  
## Genotype:Age.Months 48.1 2 2286.1  
## Sex:Age.Months 55.2 2 2286.1  
## TestSite:Genotype:Age.Months 27.2 2 2286.1  
## TestSite:Sex:Age.Months 45.5 2 2286.1  
## Genotype:Sex:Age.Months 105.3 2 2286.1  
## TestSite:Genotype:Sex:Age.Months 67.2 2 2286.1  
## Stimulus.Length 457.7 3 2651.3  
## TestSite:Stimulus.Length 28.4 3 2651.3  
## Genotype:Stimulus.Length 13.1 3 2651.3  
## Sex:Stimulus.Length 2.8 3 2651.3  
## TestSite:Genotype:Stimulus.Length 28.1 3 2651.3  
## TestSite:Sex:Stimulus.Length 26.8 3 2651.3  
## Genotype:Sex:Stimulus.Length 9.0 3 2651.3  
## TestSite:Genotype:Sex:Stimulus.Length 53.2 3 2651.3  
## Age.Months:Stimulus.Length 16.8 6 4186.5  
## TestSite:Age.Months:Stimulus.Length 50.9 6 4186.5  
## Genotype:Age.Months:Stimulus.Length 15.7 6 4186.5  
## Sex:Age.Months:Stimulus.Length 52.8 6 4186.5  
## TestSite:Genotype:Age.Months:Stimulus.Length 115.4 6 4186.5  
## TestSite:Sex:Age.Months:Stimulus.Length 23.6 6 4186.5  
## Genotype:Sex:Age.Months:Stimulus.Length 13.6 6 4186.5  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 126.5 6 4186.5  
## den Df F  
## (Intercept) 67 264.8091  
## TestSite 67 0.0258  
## Genotype 67 0.0216  
## Sex 67 0.8836  
## TestSite:Genotype 67 3.1541  
## TestSite:Sex 67 0.7585  
## Genotype:Sex 67 1.1348  
## TestSite:Genotype:Sex 67 0.0434  
## Age.Months 134 0.9834  
## TestSite:Age.Months 134 0.7311  
## Genotype:Age.Months 134 1.4087  
## Sex:Age.Months 134 1.6181  
## TestSite:Genotype:Age.Months 134 0.7984  
## TestSite:Sex:Age.Months 134 1.3338  
## Genotype:Sex:Age.Months 134 3.0853  
## TestSite:Genotype:Sex:Age.Months 134 1.9695  
## Stimulus.Length 201 11.5658  
## TestSite:Stimulus.Length 201 0.7178  
## Genotype:Stimulus.Length 201 0.3304  
## Sex:Stimulus.Length 201 0.0716  
## TestSite:Genotype:Stimulus.Length 201 0.7093  
## TestSite:Sex:Stimulus.Length 201 0.6761  
## Genotype:Sex:Stimulus.Length 201 0.2280  
## TestSite:Genotype:Sex:Stimulus.Length 201 1.3439  
## Age.Months:Stimulus.Length 402 0.2694  
## TestSite:Age.Months:Stimulus.Length 402 0.8153  
## Genotype:Age.Months:Stimulus.Length 402 0.2517  
## Sex:Age.Months:Stimulus.Length 402 0.8448  
## TestSite:Genotype:Age.Months:Stimulus.Length 402 1.8469  
## TestSite:Sex:Age.Months:Stimulus.Length 402 0.3779  
## Genotype:Sex:Age.Months:Stimulus.Length 402 0.2181  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 402 2.0248  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.87279   
## Genotype 0.88352   
## Sex 0.35059   
## TestSite:Genotype 0.08028 .   
## TestSite:Sex 0.38692   
## Genotype:Sex 0.29059   
## TestSite:Genotype:Sex 0.83563   
## Age.Months 0.37672   
## TestSite:Age.Months 0.48328   
## Genotype:Age.Months 0.24807   
## Sex:Age.Months 0.20213   
## TestSite:Genotype:Age.Months 0.45216   
## TestSite:Sex:Age.Months 0.26694   
## Genotype:Sex:Age.Months 0.04898 \*   
## TestSite:Genotype:Sex:Age.Months 0.14355   
## Stimulus.Length 0.0000005018 \*\*\*  
## TestSite:Stimulus.Length 0.54238   
## Genotype:Stimulus.Length 0.80337   
## Sex:Stimulus.Length 0.97512   
## TestSite:Genotype:Stimulus.Length 0.54747   
## TestSite:Sex:Stimulus.Length 0.56762   
## Genotype:Sex:Stimulus.Length 0.87681   
## TestSite:Genotype:Sex:Stimulus.Length 0.26128   
## Age.Months:Stimulus.Length 0.95103   
## TestSite:Age.Months:Stimulus.Length 0.55843   
## Genotype:Age.Months:Stimulus.Length 0.95850   
## Sex:Age.Months:Stimulus.Length 0.53588   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.08882 .   
## TestSite:Sex:Age.Months:Stimulus.Length 0.89304   
## Genotype:Sex:Age.Months:Stimulus.Length 0.97095   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.06134 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.91671 0.056718  
## TestSite:Age.Months 0.91671 0.056718  
## Genotype:Age.Months 0.91671 0.056718  
## Sex:Age.Months 0.91671 0.056718  
## TestSite:Genotype:Age.Months 0.91671 0.056718  
## TestSite:Sex:Age.Months 0.91671 0.056718  
## Genotype:Sex:Age.Months 0.91671 0.056718  
## TestSite:Genotype:Sex:Age.Months 0.91671 0.056718  
## Stimulus.Length 0.78682 0.007581  
## TestSite:Stimulus.Length 0.78682 0.007581  
## Genotype:Stimulus.Length 0.78682 0.007581  
## Sex:Stimulus.Length 0.78682 0.007581  
## TestSite:Genotype:Stimulus.Length 0.78682 0.007581  
## TestSite:Sex:Stimulus.Length 0.78682 0.007581  
## Genotype:Sex:Stimulus.Length 0.78682 0.007581  
## TestSite:Genotype:Sex:Stimulus.Length 0.78682 0.007581  
## Age.Months:Stimulus.Length 0.43266 0.000054  
## TestSite:Age.Months:Stimulus.Length 0.43266 0.000054  
## Genotype:Age.Months:Stimulus.Length 0.43266 0.000054  
## Sex:Age.Months:Stimulus.Length 0.43266 0.000054  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.43266 0.000054  
## TestSite:Sex:Age.Months:Stimulus.Length 0.43266 0.000054  
## Genotype:Sex:Age.Months:Stimulus.Length 0.43266 0.000054  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.43266 0.000054  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.92312 0.37134   
## TestSite:Age.Months 0.92312 0.47319   
## Genotype:Age.Months 0.92312 0.24834   
## Sex:Age.Months 0.92312 0.20415   
## TestSite:Genotype:Age.Months 0.92312 0.44341   
## TestSite:Sex:Age.Months 0.92312 0.26643   
## Genotype:Sex:Age.Months 0.92312 0.05328 .   
## TestSite:Genotype:Sex:Age.Months 0.92312 0.14736   
## Stimulus.Length 0.86032 0.000002491 \*\*\*  
## TestSite:Stimulus.Length 0.86032 0.52275   
## Genotype:Stimulus.Length 0.86032 0.77299   
## Sex:Stimulus.Length 0.86032 0.96211   
## TestSite:Genotype:Stimulus.Length 0.86032 0.52748   
## TestSite:Sex:Stimulus.Length 0.86032 0.54624   
## Genotype:Sex:Stimulus.Length 0.86032 0.84887   
## TestSite:Genotype:Sex:Stimulus.Length 0.86032 0.26340   
## Age.Months:Stimulus.Length 0.81633 0.92695   
## TestSite:Age.Months:Stimulus.Length 0.81633 0.53721   
## Genotype:Age.Months:Stimulus.Length 0.81633 0.93630   
## Sex:Age.Months:Stimulus.Length 0.81633 0.51678   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.81633 0.10483   
## TestSite:Sex:Age.Months:Stimulus.Length 0.81633 0.86032   
## Genotype:Sex:Age.Months:Stimulus.Length 0.81633 0.95255   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.81633 0.07624 .   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.9480956 0.373154904118  
## TestSite:Age.Months 0.9480956 0.476559093777  
## Genotype:Age.Months 0.9480956 0.248287711365  
## Sex:Age.Months 0.9480956 0.203517969875  
## TestSite:Genotype:Age.Months 0.9480956 0.446333429349  
## TestSite:Sex:Age.Months 0.9480956 0.266637188191  
## Genotype:Sex:Age.Months 0.9480956 0.051844722391  
## TestSite:Genotype:Sex:Age.Months 0.9480956 0.146123375460  
## Stimulus.Length 0.8977984 0.000001619673  
## TestSite:Stimulus.Length 0.8977984 0.528302867589  
## Genotype:Stimulus.Length 0.8977984 0.781718821264  
## Sex:Stimulus.Length 0.8977984 0.966182156248  
## TestSite:Genotype:Stimulus.Length 0.8977984 0.533129395056  
## TestSite:Sex:Stimulus.Length 0.8977984 0.552283993786  
## Genotype:Sex:Stimulus.Length 0.8977984 0.857038483459  
## TestSite:Genotype:Sex:Stimulus.Length 0.8977984 0.262921257564  
## Age.Months:Stimulus.Length 0.8884865 0.937684066165  
## TestSite:Age.Months:Stimulus.Length 0.8884865 0.546028170981  
## Genotype:Age.Months:Stimulus.Length 0.8884865 0.946266347025  
## Sex:Age.Months:Stimulus.Length 0.8884865 0.524730387620  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.8884865 0.098196073414  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8884865 0.874422809722  
## Genotype:Sex:Age.Months:Stimulus.Length 0.8884865 0.960941275256  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.8884865 0.069965017121

#### 3xTG Mice

summary(probe.anova$TG3x$Premature, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 50745 1 7570.8  
## TestSite 50 1 7570.8  
## Genotype 67 1 7570.8  
## Sex 1706 1 7570.8  
## TestSite:Genotype 20 1 7570.8  
## TestSite:Sex 9 1 7570.8  
## Genotype:Sex 159 1 7570.8  
## TestSite:Genotype:Sex 24 1 7570.8  
## Age.Months 88 2 7945.9  
## TestSite:Age.Months 219 2 7945.9  
## Genotype:Age.Months 80 2 7945.9  
## Sex:Age.Months 15 2 7945.9  
## TestSite:Genotype:Age.Months 20 2 7945.9  
## TestSite:Sex:Age.Months 181 2 7945.9  
## Genotype:Sex:Age.Months 320 2 7945.9  
## TestSite:Genotype:Sex:Age.Months 104 2 7945.9  
## Stimulus.Length 720 3 3266.8  
## TestSite:Stimulus.Length 11 3 3266.8  
## Genotype:Stimulus.Length 8 3 3266.8  
## Sex:Stimulus.Length 21 3 3266.8  
## TestSite:Genotype:Stimulus.Length 91 3 3266.8  
## TestSite:Sex:Stimulus.Length 88 3 3266.8  
## Genotype:Sex:Stimulus.Length 82 3 3266.8  
## TestSite:Genotype:Sex:Stimulus.Length 81 3 3266.8  
## Age.Months:Stimulus.Length 116 6 6599.8  
## TestSite:Age.Months:Stimulus.Length 128 6 6599.8  
## Genotype:Age.Months:Stimulus.Length 44 6 6599.8  
## Sex:Age.Months:Stimulus.Length 57 6 6599.8  
## TestSite:Genotype:Age.Months:Stimulus.Length 95 6 6599.8  
## TestSite:Sex:Age.Months:Stimulus.Length 60 6 6599.8  
## Genotype:Sex:Age.Months:Stimulus.Length 81 6 6599.8  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 83 6 6599.8  
## den Df F  
## (Intercept) 68 455.7894  
## TestSite 68 0.4509  
## Genotype 68 0.6031  
## Sex 68 15.3242  
## TestSite:Genotype 68 0.1827  
## TestSite:Sex 68 0.0811  
## Genotype:Sex 68 1.4323  
## TestSite:Genotype:Sex 68 0.2148  
## Age.Months 136 0.7501  
## TestSite:Age.Months 136 1.8723  
## Genotype:Age.Months 136 0.6827  
## Sex:Age.Months 136 0.1285  
## TestSite:Genotype:Age.Months 136 0.1681  
## TestSite:Sex:Age.Months 136 1.5506  
## Genotype:Sex:Age.Months 136 2.7388  
## TestSite:Genotype:Sex:Age.Months 136 0.8931  
## Stimulus.Length 204 14.9949  
## TestSite:Stimulus.Length 204 0.2228  
## Genotype:Stimulus.Length 204 0.1588  
## Sex:Stimulus.Length 204 0.4411  
## TestSite:Genotype:Stimulus.Length 204 1.8979  
## TestSite:Sex:Stimulus.Length 204 1.8256  
## Genotype:Sex:Stimulus.Length 204 1.7013  
## TestSite:Genotype:Sex:Stimulus.Length 204 1.6825  
## Age.Months:Stimulus.Length 408 1.1981  
## TestSite:Age.Months:Stimulus.Length 408 1.3218  
## Genotype:Age.Months:Stimulus.Length 408 0.4557  
## Sex:Age.Months:Stimulus.Length 408 0.5823  
## TestSite:Genotype:Age.Months:Stimulus.Length 408 0.9757  
## TestSite:Sex:Age.Months:Stimulus.Length 408 0.6133  
## Genotype:Sex:Age.Months:Stimulus.Length 408 0.8369  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 408 0.8575  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.5041596   
## Genotype 0.4400913   
## Sex 0.0002122 \*\*\*  
## TestSite:Genotype 0.6704527   
## TestSite:Sex 0.7767376   
## Genotype:Sex 0.2355485   
## TestSite:Genotype:Sex 0.6445303   
## Age.Months 0.4742669   
## TestSite:Age.Months 0.1577187   
## Genotype:Age.Months 0.5069543   
## Sex:Age.Months 0.8795019   
## TestSite:Genotype:Age.Months 0.8454712   
## TestSite:Sex:Age.Months 0.2158459   
## Genotype:Sex:Age.Months 0.0682170 .   
## TestSite:Genotype:Sex:Age.Months 0.4117771   
## Stimulus.Length 0.000000007392 \*\*\*  
## TestSite:Stimulus.Length 0.8804649   
## Genotype:Stimulus.Length 0.9238836   
## Sex:Stimulus.Length 0.7238761   
## TestSite:Genotype:Stimulus.Length 0.1310990   
## TestSite:Sex:Stimulus.Length 0.1436388   
## Genotype:Sex:Stimulus.Length 0.1679292   
## TestSite:Genotype:Sex:Stimulus.Length 0.1719285   
## Age.Months:Stimulus.Length 0.3062262   
## TestSite:Age.Months:Stimulus.Length 0.2460213   
## Genotype:Age.Months:Stimulus.Length 0.8408795   
## Sex:Age.Months:Stimulus.Length 0.7445491   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.4412122   
## TestSite:Sex:Age.Months:Stimulus.Length 0.7197401   
## Genotype:Sex:Age.Months:Stimulus.Length 0.5418906   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.5262758   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.92718 0.079421  
## TestSite:Age.Months 0.92718 0.079421  
## Genotype:Age.Months 0.92718 0.079421  
## Sex:Age.Months 0.92718 0.079421  
## TestSite:Genotype:Age.Months 0.92718 0.079421  
## TestSite:Sex:Age.Months 0.92718 0.079421  
## Genotype:Sex:Age.Months 0.92718 0.079421  
## TestSite:Genotype:Sex:Age.Months 0.92718 0.079421  
## Stimulus.Length 0.77757 0.004930  
## TestSite:Stimulus.Length 0.77757 0.004930  
## Genotype:Stimulus.Length 0.77757 0.004930  
## Sex:Stimulus.Length 0.77757 0.004930  
## TestSite:Genotype:Stimulus.Length 0.77757 0.004930  
## TestSite:Sex:Stimulus.Length 0.77757 0.004930  
## Genotype:Sex:Stimulus.Length 0.77757 0.004930  
## TestSite:Genotype:Sex:Stimulus.Length 0.77757 0.004930  
## Age.Months:Stimulus.Length 0.49708 0.000820  
## TestSite:Age.Months:Stimulus.Length 0.49708 0.000820  
## Genotype:Age.Months:Stimulus.Length 0.49708 0.000820  
## Sex:Age.Months:Stimulus.Length 0.49708 0.000820  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.49708 0.000820  
## TestSite:Sex:Age.Months:Stimulus.Length 0.49708 0.000820  
## Genotype:Sex:Age.Months:Stimulus.Length 0.49708 0.000820  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.49708 0.000820  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.93212 0.46574   
## TestSite:Age.Months 0.93212 0.16076   
## Genotype:Age.Months 0.93212 0.49723   
## Sex:Age.Months 0.93212 0.86590   
## TestSite:Genotype:Age.Months 0.93212 0.83081   
## TestSite:Sex:Age.Months 0.93212 0.21720   
## Genotype:Sex:Age.Months 0.93212 0.07228 .   
## TestSite:Genotype:Sex:Age.Months 0.93212 0.40566   
## Stimulus.Length 0.84410 0.00000008259 \*\*\*  
## TestSite:Stimulus.Length 0.84410 0.84909   
## Genotype:Stimulus.Length 0.84410 0.89723   
## Sex:Stimulus.Length 0.84410 0.69076   
## TestSite:Genotype:Stimulus.Length 0.84410 0.14151   
## TestSite:Sex:Stimulus.Length 0.84410 0.15356   
## Genotype:Sex:Stimulus.Length 0.84410 0.17667   
## TestSite:Genotype:Sex:Stimulus.Length 0.84410 0.18045   
## Age.Months:Stimulus.Length 0.83205 0.30971   
## TestSite:Age.Months:Stimulus.Length 0.83205 0.25431   
## Genotype:Age.Months:Stimulus.Length 0.83205 0.80878   
## Sex:Age.Months:Stimulus.Length 0.83205 0.71335   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.83205 0.43246   
## TestSite:Sex:Age.Months:Stimulus.Length 0.83205 0.68954   
## Genotype:Sex:Age.Months:Stimulus.Length 0.83205 0.52406   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.83205 0.50980   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.9573678  
## TestSite:Age.Months 0.9573678  
## Genotype:Age.Months 0.9573678  
## Sex:Age.Months 0.9573678  
## TestSite:Genotype:Age.Months 0.9573678  
## TestSite:Sex:Age.Months 0.9573678  
## Genotype:Sex:Age.Months 0.9573678  
## TestSite:Genotype:Sex:Age.Months 0.9573678  
## Stimulus.Length 0.8794583  
## TestSite:Stimulus.Length 0.8794583  
## Genotype:Stimulus.Length 0.8794583  
## Sex:Stimulus.Length 0.8794583  
## TestSite:Genotype:Stimulus.Length 0.8794583  
## TestSite:Sex:Stimulus.Length 0.8794583  
## Genotype:Sex:Stimulus.Length 0.8794583  
## TestSite:Genotype:Sex:Stimulus.Length 0.8794583  
## Age.Months:Stimulus.Length 0.9058890  
## TestSite:Age.Months:Stimulus.Length 0.9058890  
## Genotype:Age.Months:Stimulus.Length 0.9058890  
## Sex:Age.Months:Stimulus.Length 0.9058890  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9058890  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9058890  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9058890  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9058890  
## Pr(>F[HF])  
## Age.Months 0.46898218656556  
## TestSite:Age.Months 0.15963241360969  
## Genotype:Age.Months 0.50092344863939  
## Sex:Age.Months 0.87115670132401  
## TestSite:Genotype:Age.Months 0.83644610345795  
## TestSite:Sex:Age.Months 0.21672082298852  
## Genotype:Sex:Age.Months 0.07074075616291  
## TestSite:Genotype:Sex:Age.Months 0.40799758663114  
## Stimulus.Length 0.00000004773641  
## TestSite:Stimulus.Length 0.85698013534498  
## Genotype:Stimulus.Length 0.90408360626613  
## Sex:Stimulus.Length 0.69880560615420  
## TestSite:Genotype:Stimulus.Length 0.13910016975243  
## TestSite:Sex:Stimulus.Length 0.15128063310231  
## Genotype:Sex:Stimulus.Length 0.17469145710704  
## TestSite:Genotype:Sex:Stimulus.Length 0.17852575695127  
## Age.Months:Stimulus.Length 0.30828654440742  
## TestSite:Age.Months:Stimulus.Length 0.25068734743006  
## Genotype:Age.Months:Stimulus.Length 0.82383649576714  
## Sex:Age.Months:Stimulus.Length 0.72778759806039  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.43657429173004  
## TestSite:Sex:Age.Months:Stimulus.Length 0.70349091847362  
## Genotype:Sex:Age.Months:Stimulus.Length 0.53227976483369  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.51740616160883

### Perseverative Errors

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$Perseverative, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$APP$Perseverative, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 54151 1 9360.3  
## TestSite 96 1 9360.3  
## Genotype 327 1 9360.3  
## Sex 218 1 9360.3  
## TestSite:Genotype 126 1 9360.3  
## TestSite:Sex 137 1 9360.3  
## Genotype:Sex 269 1 9360.3  
## TestSite:Genotype:Sex 430 1 9360.3  
## Age.Months 156 2 5175.7  
## TestSite:Age.Months 70 2 5175.7  
## Genotype:Age.Months 181 2 5175.7  
## Sex:Age.Months 9 2 5175.7  
## TestSite:Genotype:Age.Months 120 2 5175.7  
## TestSite:Sex:Age.Months 13 2 5175.7  
## Genotype:Sex:Age.Months 44 2 5175.7  
## TestSite:Genotype:Sex:Age.Months 24 2 5175.7  
## Stimulus.Length 916 3 4367.2  
## TestSite:Stimulus.Length 154 3 4367.2  
## Genotype:Stimulus.Length 27 3 4367.2  
## Sex:Stimulus.Length 49 3 4367.2  
## TestSite:Genotype:Stimulus.Length 22 3 4367.2  
## TestSite:Sex:Stimulus.Length 19 3 4367.2  
## Genotype:Sex:Stimulus.Length 1 3 4367.2  
## TestSite:Genotype:Sex:Stimulus.Length 17 3 4367.2  
## Age.Months:Stimulus.Length 121 6 8018.8  
## TestSite:Age.Months:Stimulus.Length 46 6 8018.8  
## Genotype:Age.Months:Stimulus.Length 113 6 8018.8  
## Sex:Age.Months:Stimulus.Length 43 6 8018.8  
## TestSite:Genotype:Age.Months:Stimulus.Length 54 6 8018.8  
## TestSite:Sex:Age.Months:Stimulus.Length 236 6 8018.8  
## Genotype:Sex:Age.Months:Stimulus.Length 33 6 8018.8  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 57 6 8018.8  
## den Df F  
## (Intercept) 76 439.6749  
## TestSite 76 0.7765  
## Genotype 76 2.6559  
## Sex 76 1.7687  
## TestSite:Genotype 76 1.0238  
## TestSite:Sex 76 1.1159  
## Genotype:Sex 76 2.1872  
## TestSite:Genotype:Sex 76 3.4952  
## Age.Months 152 2.2873  
## TestSite:Age.Months 152 1.0308  
## Genotype:Age.Months 152 2.6548  
## Sex:Age.Months 152 0.1300  
## TestSite:Genotype:Age.Months 152 1.7624  
## TestSite:Sex:Age.Months 152 0.1854  
## Genotype:Sex:Age.Months 152 0.6390  
## TestSite:Genotype:Sex:Age.Months 152 0.3577  
## Stimulus.Length 228 15.9450  
## TestSite:Stimulus.Length 228 2.6857  
## Genotype:Stimulus.Length 228 0.4652  
## Sex:Stimulus.Length 228 0.8496  
## TestSite:Genotype:Stimulus.Length 228 0.3883  
## TestSite:Sex:Stimulus.Length 228 0.3344  
## Genotype:Sex:Stimulus.Length 228 0.0156  
## TestSite:Genotype:Sex:Stimulus.Length 228 0.2988  
## Age.Months:Stimulus.Length 456 1.1463  
## TestSite:Age.Months:Stimulus.Length 456 0.4326  
## Genotype:Age.Months:Stimulus.Length 456 1.0726  
## Sex:Age.Months:Stimulus.Length 456 0.4078  
## TestSite:Genotype:Age.Months:Stimulus.Length 456 0.5148  
## TestSite:Sex:Age.Months:Stimulus.Length 456 2.2397  
## Genotype:Sex:Age.Months:Stimulus.Length 456 0.3135  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 456 0.5408  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.38099   
## Genotype 0.10730   
## Sex 0.18752   
## TestSite:Genotype 0.31482   
## TestSite:Sex 0.29416   
## Genotype:Sex 0.14329   
## TestSite:Genotype:Sex 0.06540 .   
## Age.Months 0.10502   
## TestSite:Age.Months 0.35921   
## Genotype:Age.Months 0.07357 .   
## Sex:Age.Months 0.87824   
## TestSite:Genotype:Age.Months 0.17512   
## TestSite:Sex:Age.Months 0.83095   
## Genotype:Sex:Age.Months 0.52923   
## TestSite:Genotype:Sex:Age.Months 0.69985   
## Stimulus.Length 0.000000001911 \*\*\*  
## TestSite:Stimulus.Length 0.04737 \*   
## Genotype:Stimulus.Length 0.70688   
## Sex:Stimulus.Length 0.46807   
## TestSite:Genotype:Stimulus.Length 0.76154   
## TestSite:Sex:Stimulus.Length 0.80045   
## Genotype:Sex:Stimulus.Length 0.99734   
## TestSite:Genotype:Sex:Stimulus.Length 0.82627   
## Age.Months:Stimulus.Length 0.33434   
## TestSite:Age.Months:Stimulus.Length 0.85713   
## Genotype:Age.Months:Stimulus.Length 0.37794   
## Sex:Age.Months:Stimulus.Length 0.87393   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.79727   
## TestSite:Sex:Age.Months:Stimulus.Length 0.03848 \*   
## Genotype:Sex:Age.Months:Stimulus.Length 0.92994   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.77724   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.97656 0.41085  
## TestSite:Age.Months 0.97656 0.41085  
## Genotype:Age.Months 0.97656 0.41085  
## Sex:Age.Months 0.97656 0.41085  
## TestSite:Genotype:Age.Months 0.97656 0.41085  
## TestSite:Sex:Age.Months 0.97656 0.41085  
## Genotype:Sex:Age.Months 0.97656 0.41085  
## TestSite:Genotype:Sex:Age.Months 0.97656 0.41085  
## Stimulus.Length 0.93832 0.44624  
## TestSite:Stimulus.Length 0.93832 0.44624  
## Genotype:Stimulus.Length 0.93832 0.44624  
## Sex:Stimulus.Length 0.93832 0.44624  
## TestSite:Genotype:Stimulus.Length 0.93832 0.44624  
## TestSite:Sex:Stimulus.Length 0.93832 0.44624  
## Genotype:Sex:Stimulus.Length 0.93832 0.44624  
## TestSite:Genotype:Sex:Stimulus.Length 0.93832 0.44624  
## Age.Months:Stimulus.Length 0.68218 0.10465  
## TestSite:Age.Months:Stimulus.Length 0.68218 0.10465  
## Genotype:Age.Months:Stimulus.Length 0.68218 0.10465  
## Sex:Age.Months:Stimulus.Length 0.68218 0.10465  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.68218 0.10465  
## TestSite:Sex:Age.Months:Stimulus.Length 0.68218 0.10465  
## Genotype:Sex:Age.Months:Stimulus.Length 0.68218 0.10465  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.68218 0.10465  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])  
## Age.Months 0.97710 0.10635  
## TestSite:Age.Months 0.97710 0.35789  
## Genotype:Age.Months 0.97710 0.07493  
## Sex:Age.Months 0.97710 0.87381  
## TestSite:Genotype:Age.Months 0.97710 0.17600  
## TestSite:Sex:Age.Months 0.97710 0.82607  
## Genotype:Sex:Age.Months 0.97710 0.52576  
## TestSite:Genotype:Sex:Age.Months 0.97710 0.69493  
## Stimulus.Length 0.95783 0.000000003871  
## TestSite:Stimulus.Length 0.95783 0.04988  
## Genotype:Stimulus.Length 0.95783 0.69863  
## Sex:Stimulus.Length 0.95783 0.46405  
## TestSite:Genotype:Stimulus.Length 0.95783 0.75295  
## TestSite:Sex:Stimulus.Length 0.95783 0.79186  
## Genotype:Sex:Stimulus.Length 0.95783 0.99669  
## TestSite:Genotype:Sex:Stimulus.Length 0.95783 0.81782  
## Age.Months:Stimulus.Length 0.90109 0.33508  
## TestSite:Age.Months:Stimulus.Length 0.90109 0.83948  
## Genotype:Age.Months:Stimulus.Length 0.90109 0.37641  
## Sex:Age.Months:Stimulus.Length 0.90109 0.85678  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.90109 0.77901  
## TestSite:Sex:Age.Months:Stimulus.Length 0.90109 0.04483  
## Genotype:Sex:Age.Months:Stimulus.Length 0.90109 0.91608  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.90109 0.75910  
##   
## Age.Months   
## TestSite:Age.Months   
## Genotype:Age.Months .   
## Sex:Age.Months   
## TestSite:Genotype:Age.Months   
## TestSite:Sex:Age.Months   
## Genotype:Sex:Age.Months   
## TestSite:Genotype:Sex:Age.Months   
## Stimulus.Length \*\*\*  
## TestSite:Stimulus.Length \*   
## Genotype:Stimulus.Length   
## Sex:Stimulus.Length   
## TestSite:Genotype:Stimulus.Length   
## TestSite:Sex:Stimulus.Length   
## Genotype:Sex:Stimulus.Length   
## TestSite:Genotype:Sex:Stimulus.Length   
## Age.Months:Stimulus.Length   
## TestSite:Age.Months:Stimulus.Length   
## Genotype:Age.Months:Stimulus.Length   
## Sex:Age.Months:Stimulus.Length   
## TestSite:Genotype:Age.Months:Stimulus.Length   
## TestSite:Sex:Age.Months:Stimulus.Length \*   
## Genotype:Sex:Age.Months:Stimulus.Length   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 1.0025730  
## TestSite:Age.Months 1.0025730  
## Genotype:Age.Months 1.0025730  
## Sex:Age.Months 1.0025730  
## TestSite:Genotype:Age.Months 1.0025730  
## TestSite:Sex:Age.Months 1.0025730  
## Genotype:Sex:Age.Months 1.0025730  
## TestSite:Genotype:Sex:Age.Months 1.0025730  
## Stimulus.Length 0.9994531  
## TestSite:Stimulus.Length 0.9994531  
## Genotype:Stimulus.Length 0.9994531  
## Sex:Stimulus.Length 0.9994531  
## TestSite:Genotype:Stimulus.Length 0.9994531  
## TestSite:Sex:Stimulus.Length 0.9994531  
## Genotype:Sex:Stimulus.Length 0.9994531  
## TestSite:Genotype:Sex:Stimulus.Length 0.9994531  
## Age.Months:Stimulus.Length 0.9781443  
## TestSite:Age.Months:Stimulus.Length 0.9781443  
## Genotype:Age.Months:Stimulus.Length 0.9781443  
## Sex:Age.Months:Stimulus.Length 0.9781443  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9781443  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9781443  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9781443  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9781443  
## Pr(>F[HF])  
## Age.Months 0.105022015530389  
## TestSite:Age.Months 0.359206308134558  
## Genotype:Age.Months 0.073573426515178  
## Sex:Age.Months 0.878235575768052  
## TestSite:Genotype:Age.Months 0.175118314761460  
## TestSite:Sex:Age.Months 0.830953836847244  
## Genotype:Sex:Age.Months 0.529231188148438  
## TestSite:Genotype:Sex:Age.Months 0.699850884081461  
## Stimulus.Length 0.000000001928144  
## TestSite:Stimulus.Length 0.047397388527274  
## Genotype:Stimulus.Length 0.706774924236992  
## Sex:Stimulus.Length 0.468022486750120  
## TestSite:Genotype:Stimulus.Length 0.761430027702218  
## TestSite:Sex:Stimulus.Length 0.800346394334419  
## Genotype:Sex:Stimulus.Length 0.997337347600754  
## TestSite:Genotype:Sex:Stimulus.Length 0.826162396242404  
## Age.Months:Stimulus.Length 0.334536347330009  
## TestSite:Age.Months:Stimulus.Length 0.853443824689263  
## Genotype:Age.Months:Stimulus.Length 0.377646807458520  
## Sex:Age.Months:Stimulus.Length 0.870364351254027  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.793418881188764  
## TestSite:Sex:Age.Months:Stimulus.Length 0.039799531372904  
## Genotype:Sex:Age.Months:Stimulus.Length 0.927110967688473  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.773405326988831

#### 5xFAD Mice

summary(probe.anova$TG5x$Perseverative, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$TG5x$Perseverative, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 66186 1 12170.0  
## TestSite 2330 1 12170.0  
## Genotype 827 1 12170.0  
## Sex 362 1 12170.0  
## TestSite:Genotype 548 1 12170.0  
## TestSite:Sex 181 1 12170.0  
## Genotype:Sex 854 1 12170.0  
## TestSite:Genotype:Sex 148 1 12170.0  
## Age.Months 316 2 9379.1  
## TestSite:Age.Months 1116 2 9379.1  
## Genotype:Age.Months 266 2 9379.1  
## Sex:Age.Months 81 2 9379.1  
## TestSite:Genotype:Age.Months 230 2 9379.1  
## TestSite:Sex:Age.Months 231 2 9379.1  
## Genotype:Sex:Age.Months 52 2 9379.1  
## TestSite:Genotype:Sex:Age.Months 30 2 9379.1  
## Stimulus.Length 2160 3 3886.2  
## TestSite:Stimulus.Length 85 3 3886.2  
## Genotype:Stimulus.Length 160 3 3886.2  
## Sex:Stimulus.Length 8 3 3886.2  
## TestSite:Genotype:Stimulus.Length 27 3 3886.2  
## TestSite:Sex:Stimulus.Length 55 3 3886.2  
## Genotype:Sex:Stimulus.Length 16 3 3886.2  
## TestSite:Genotype:Sex:Stimulus.Length 22 3 3886.2  
## Age.Months:Stimulus.Length 144 6 8106.2  
## TestSite:Age.Months:Stimulus.Length 178 6 8106.2  
## Genotype:Age.Months:Stimulus.Length 120 6 8106.2  
## Sex:Age.Months:Stimulus.Length 97 6 8106.2  
## TestSite:Genotype:Age.Months:Stimulus.Length 106 6 8106.2  
## TestSite:Sex:Age.Months:Stimulus.Length 137 6 8106.2  
## Genotype:Sex:Age.Months:Stimulus.Length 147 6 8106.2  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 122 6 8106.2  
## den Df F  
## (Intercept) 67 364.3773  
## TestSite 67 12.8257  
## Genotype 67 4.5505  
## Sex 67 1.9908  
## TestSite:Genotype 67 3.0160  
## TestSite:Sex 67 0.9953  
## Genotype:Sex 67 4.7040  
## TestSite:Genotype:Sex 67 0.8172  
## Age.Months 134 2.2573  
## TestSite:Age.Months 134 7.9739  
## Genotype:Age.Months 134 1.8984  
## Sex:Age.Months 134 0.5781  
## TestSite:Genotype:Age.Months 134 1.6447  
## TestSite:Sex:Age.Months 134 1.6510  
## Genotype:Sex:Age.Months 134 0.3697  
## TestSite:Genotype:Sex:Age.Months 134 0.2153  
## Stimulus.Length 201 37.2325  
## TestSite:Stimulus.Length 201 1.4578  
## Genotype:Stimulus.Length 201 2.7540  
## Sex:Stimulus.Length 201 0.1354  
## TestSite:Genotype:Stimulus.Length 201 0.4584  
## TestSite:Sex:Stimulus.Length 201 0.9499  
## Genotype:Sex:Stimulus.Length 201 0.2748  
## TestSite:Genotype:Sex:Stimulus.Length 201 0.3729  
## Age.Months:Stimulus.Length 402 1.1889  
## TestSite:Age.Months:Stimulus.Length 402 1.4672  
## Genotype:Age.Months:Stimulus.Length 402 0.9950  
## Sex:Age.Months:Stimulus.Length 402 0.8021  
## TestSite:Genotype:Age.Months:Stimulus.Length 402 0.8732  
## TestSite:Sex:Age.Months:Stimulus.Length 402 1.1321  
## Genotype:Sex:Age.Months:Stimulus.Length 402 1.2163  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 402 1.0057  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0006423 \*\*\*  
## Genotype 0.0365762 \*   
## Sex 0.1628813   
## TestSite:Genotype 0.0870420 .   
## TestSite:Sex 0.3220505   
## Genotype:Sex 0.0336458 \*   
## TestSite:Genotype:Sex 0.3692373   
## Age.Months 0.1085985   
## TestSite:Age.Months 0.0005346 \*\*\*  
## Genotype:Age.Months 0.1538131   
## Sex:Age.Months 0.5623739   
## TestSite:Genotype:Age.Months 0.1969357   
## TestSite:Sex:Age.Months 0.1957414   
## Genotype:Sex:Age.Months 0.6916740   
## TestSite:Genotype:Sex:Age.Months 0.8066170   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.2272710   
## Genotype:Stimulus.Length 0.0436619 \*   
## Sex:Stimulus.Length 0.9388474   
## TestSite:Genotype:Stimulus.Length 0.7116256   
## TestSite:Sex:Stimulus.Length 0.4174772   
## Genotype:Sex:Stimulus.Length 0.8435548   
## TestSite:Genotype:Sex:Stimulus.Length 0.7726319   
## Age.Months:Stimulus.Length 0.3111828   
## TestSite:Age.Months:Stimulus.Length 0.1880675   
## Genotype:Age.Months:Stimulus.Length 0.4282003   
## Sex:Age.Months:Stimulus.Length 0.5686856   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.5145424   
## TestSite:Sex:Age.Months:Stimulus.Length 0.3426857   
## Genotype:Sex:Age.Months:Stimulus.Length 0.2967466   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.4210493   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.97647 0.45581  
## TestSite:Age.Months 0.97647 0.45581  
## Genotype:Age.Months 0.97647 0.45581  
## Sex:Age.Months 0.97647 0.45581  
## TestSite:Genotype:Age.Months 0.97647 0.45581  
## TestSite:Sex:Age.Months 0.97647 0.45581  
## Genotype:Sex:Age.Months 0.97647 0.45581  
## TestSite:Genotype:Sex:Age.Months 0.97647 0.45581  
## Stimulus.Length 0.93899 0.52984  
## TestSite:Stimulus.Length 0.93899 0.52984  
## Genotype:Stimulus.Length 0.93899 0.52984  
## Sex:Stimulus.Length 0.93899 0.52984  
## TestSite:Genotype:Stimulus.Length 0.93899 0.52984  
## TestSite:Sex:Stimulus.Length 0.93899 0.52984  
## Genotype:Sex:Stimulus.Length 0.93899 0.52984  
## TestSite:Genotype:Sex:Stimulus.Length 0.93899 0.52984  
## Age.Months:Stimulus.Length 0.47799 0.00046  
## TestSite:Age.Months:Stimulus.Length 0.47799 0.00046  
## Genotype:Age.Months:Stimulus.Length 0.47799 0.00046  
## Sex:Age.Months:Stimulus.Length 0.47799 0.00046  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.47799 0.00046  
## TestSite:Sex:Age.Months:Stimulus.Length 0.47799 0.00046  
## Genotype:Sex:Age.Months:Stimulus.Length 0.47799 0.00046  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.47799 0.00046  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.97701  
## TestSite:Age.Months 0.97701  
## Genotype:Age.Months 0.97701  
## Sex:Age.Months 0.97701  
## TestSite:Genotype:Age.Months 0.97701  
## TestSite:Sex:Age.Months 0.97701  
## Genotype:Sex:Age.Months 0.97701  
## TestSite:Genotype:Sex:Age.Months 0.97701  
## Stimulus.Length 0.95683  
## TestSite:Stimulus.Length 0.95683  
## Genotype:Stimulus.Length 0.95683  
## Sex:Stimulus.Length 0.95683  
## TestSite:Genotype:Stimulus.Length 0.95683  
## TestSite:Sex:Stimulus.Length 0.95683  
## Genotype:Sex:Stimulus.Length 0.95683  
## TestSite:Genotype:Sex:Stimulus.Length 0.95683  
## Age.Months:Stimulus.Length 0.80958  
## TestSite:Age.Months:Stimulus.Length 0.80958  
## Genotype:Age.Months:Stimulus.Length 0.80958  
## Sex:Age.Months:Stimulus.Length 0.80958  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.80958  
## TestSite:Sex:Age.Months:Stimulus.Length 0.80958  
## Genotype:Sex:Age.Months:Stimulus.Length 0.80958  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.80958  
## Pr(>F[GG])   
## Age.Months 0.109923   
## TestSite:Age.Months 0.000598 \*\*\*  
## Genotype:Age.Months 0.154878   
## Sex:Age.Months 0.558531   
## TestSite:Genotype:Age.Months 0.197615   
## TestSite:Sex:Age.Months 0.196433   
## Genotype:Sex:Age.Months 0.686784   
## TestSite:Genotype:Sex:Age.Months 0.801596   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.228702   
## Genotype:Stimulus.Length 0.046169 \*   
## Sex:Stimulus.Length 0.933004   
## TestSite:Genotype:Stimulus.Length 0.703142   
## TestSite:Sex:Stimulus.Length 0.414572   
## Genotype:Sex:Stimulus.Length 0.835077   
## TestSite:Genotype:Sex:Stimulus.Length 0.763814   
## Age.Months:Stimulus.Length 0.314582   
## TestSite:Age.Months:Stimulus.Length 0.201771   
## Genotype:Age.Months:Stimulus.Length 0.419488   
## Sex:Age.Months:Stimulus.Length 0.545629   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.496810   
## TestSite:Sex:Age.Months:Stimulus.Length 0.342931   
## Genotype:Sex:Age.Months:Stimulus.Length 0.301544   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.413095   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 1.0060106  
## TestSite:Age.Months 1.0060106  
## Genotype:Age.Months 1.0060106  
## Sex:Age.Months 1.0060106  
## TestSite:Genotype:Age.Months 1.0060106  
## TestSite:Sex:Age.Months 1.0060106  
## Genotype:Sex:Age.Months 1.0060106  
## TestSite:Genotype:Sex:Age.Months 1.0060106  
## Stimulus.Length 1.0041812  
## TestSite:Stimulus.Length 1.0041812  
## Genotype:Stimulus.Length 1.0041812  
## Sex:Stimulus.Length 1.0041812  
## TestSite:Genotype:Stimulus.Length 1.0041812  
## TestSite:Sex:Stimulus.Length 1.0041812  
## Genotype:Sex:Stimulus.Length 1.0041812  
## TestSite:Genotype:Sex:Stimulus.Length 1.0041812  
## Age.Months:Stimulus.Length 0.8805308  
## TestSite:Age.Months:Stimulus.Length 0.8805308  
## Genotype:Age.Months:Stimulus.Length 0.8805308  
## Sex:Age.Months:Stimulus.Length 0.8805308  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.8805308  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8805308  
## Genotype:Sex:Age.Months:Stimulus.Length 0.8805308  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.8805308  
## Pr(>F[HF])  
## Age.Months 0.1085985422957726487247498  
## TestSite:Age.Months 0.0005345935590791275936542  
## Genotype:Age.Months 0.1538131069936918005058857  
## Sex:Age.Months 0.5623739495250507092194425  
## TestSite:Genotype:Age.Months 0.1969356727593254696717651  
## TestSite:Sex:Age.Months 0.1957414033474819403668477  
## Genotype:Sex:Age.Months 0.6916740259076277208549755  
## TestSite:Genotype:Sex:Age.Months 0.8066170414083084772016718  
## Stimulus.Length 0.0000000000000000003520714  
## TestSite:Stimulus.Length 0.2272709604879454003967254  
## Genotype:Stimulus.Length 0.0436618797699036345627555  
## Sex:Stimulus.Length 0.9388474161524931194122701  
## TestSite:Genotype:Stimulus.Length 0.7116255811923277718733516  
## TestSite:Sex:Stimulus.Length 0.4174771503457742616305381  
## Genotype:Sex:Stimulus.Length 0.8435547853376579308104510  
## TestSite:Genotype:Sex:Stimulus.Length 0.7726318601114305906207846  
## Age.Months:Stimulus.Length 0.3134624310977155436930275  
## TestSite:Age.Months:Stimulus.Length 0.1965721003655677978638749  
## Genotype:Age.Months:Stimulus.Length 0.4230526176815506689266044  
## Sex:Age.Months:Stimulus.Length 0.5547487234115270338108417  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.5038592431926980363954272  
## TestSite:Sex:Age.Months:Stimulus.Length 0.3430355635346260534390694  
## Genotype:Sex:Age.Months:Stimulus.Length 0.2998798692034131962991239  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.4163672907771105990981653

#### 3xTG Mice

summary(probe.anova$TG3x$Perseverative, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 31892 1 4991.2  
## TestSite 541 1 4991.2  
## Genotype 1047 1 4991.2  
## Sex 168 1 4991.2  
## TestSite:Genotype 84 1 4991.2  
## TestSite:Sex 19 1 4991.2  
## Genotype:Sex 11 1 4991.2  
## TestSite:Genotype:Sex 13 1 4991.2  
## Age.Months 724 2 3223.1  
## TestSite:Age.Months 14 2 3223.1  
## Genotype:Age.Months 374 2 3223.1  
## Sex:Age.Months 210 2 3223.1  
## TestSite:Genotype:Age.Months 58 2 3223.1  
## TestSite:Sex:Age.Months 23 2 3223.1  
## Genotype:Sex:Age.Months 1 2 3223.1  
## TestSite:Genotype:Sex:Age.Months 118 2 3223.1  
## Stimulus.Length 1409 3 3211.6  
## TestSite:Stimulus.Length 13 3 3211.6  
## Genotype:Stimulus.Length 45 3 3211.6  
## Sex:Stimulus.Length 36 3 3211.6  
## TestSite:Genotype:Stimulus.Length 92 3 3211.6  
## TestSite:Sex:Stimulus.Length 17 3 3211.6  
## Genotype:Sex:Stimulus.Length 42 3 3211.6  
## TestSite:Genotype:Sex:Stimulus.Length 97 3 3211.6  
## Age.Months:Stimulus.Length 36 6 4847.9  
## TestSite:Age.Months:Stimulus.Length 47 6 4847.9  
## Genotype:Age.Months:Stimulus.Length 19 6 4847.9  
## Sex:Age.Months:Stimulus.Length 108 6 4847.9  
## TestSite:Genotype:Age.Months:Stimulus.Length 67 6 4847.9  
## TestSite:Sex:Age.Months:Stimulus.Length 107 6 4847.9  
## Genotype:Sex:Age.Months:Stimulus.Length 30 6 4847.9  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 75 6 4847.9  
## den Df F  
## (Intercept) 68 434.4860  
## TestSite 68 7.3705  
## Genotype 68 14.2638  
## Sex 68 2.2877  
## TestSite:Genotype 68 1.1458  
## TestSite:Sex 68 0.2601  
## Genotype:Sex 68 0.1503  
## TestSite:Genotype:Sex 68 0.1768  
## Age.Months 136 15.2849  
## TestSite:Age.Months 136 0.2993  
## Genotype:Age.Months 136 7.8817  
## Sex:Age.Months 136 4.4369  
## TestSite:Genotype:Age.Months 136 1.2160  
## TestSite:Sex:Age.Months 136 0.4851  
## Genotype:Sex:Age.Months 136 0.0310  
## TestSite:Genotype:Sex:Age.Months 136 2.4861  
## Stimulus.Length 204 29.8318  
## TestSite:Stimulus.Length 204 0.2767  
## Genotype:Stimulus.Length 204 0.9438  
## Sex:Stimulus.Length 204 0.7591  
## TestSite:Genotype:Stimulus.Length 204 1.9418  
## TestSite:Sex:Stimulus.Length 204 0.3653  
## Genotype:Sex:Stimulus.Length 204 0.8887  
## TestSite:Genotype:Sex:Stimulus.Length 204 2.0440  
## Age.Months:Stimulus.Length 408 0.5022  
## TestSite:Age.Months:Stimulus.Length 408 0.6603  
## Genotype:Age.Months:Stimulus.Length 408 0.2692  
## Sex:Age.Months:Stimulus.Length 408 1.5139  
## TestSite:Genotype:Age.Months:Stimulus.Length 408 0.9334  
## TestSite:Sex:Age.Months:Stimulus.Length 408 1.5009  
## Genotype:Sex:Age.Months:Stimulus.Length 408 0.4151  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 408 1.0462  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0083964 \*\*   
## Genotype 0.0003365 \*\*\*  
## Sex 0.1350383   
## TestSite:Genotype 0.2882072   
## TestSite:Sex 0.6116723   
## Genotype:Sex 0.6994536   
## TestSite:Genotype:Sex 0.6755035   
## Age.Months 0.0000010282424750663 \*\*\*  
## TestSite:Age.Months 0.7418484   
## Genotype:Age.Months 0.0005771 \*\*\*  
## Sex:Age.Months 0.0135941 \*   
## TestSite:Genotype:Age.Months 0.2996233   
## TestSite:Sex:Age.Months 0.6166800   
## Genotype:Sex:Age.Months 0.9694356   
## TestSite:Genotype:Sex:Age.Months 0.0870080 .   
## Stimulus.Length 0.0000000000000004922 \*\*\*  
## TestSite:Stimulus.Length 0.8421692   
## Genotype:Stimulus.Length 0.4204017   
## Sex:Stimulus.Length 0.5182465   
## TestSite:Genotype:Stimulus.Length 0.1240041   
## TestSite:Sex:Stimulus.Length 0.7781181   
## Genotype:Sex:Stimulus.Length 0.4478854   
## TestSite:Genotype:Sex:Stimulus.Length 0.1088932   
## Age.Months:Stimulus.Length 0.8067492   
## TestSite:Age.Months:Stimulus.Length 0.6818546   
## Genotype:Age.Months:Stimulus.Length 0.9511333   
## Sex:Age.Months:Stimulus.Length 0.1720138   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.4707009   
## TestSite:Sex:Age.Months:Stimulus.Length 0.1763398   
## Genotype:Sex:Age.Months:Stimulus.Length 0.8690252   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.3947440   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.71137 0.000011  
## TestSite:Age.Months 0.71137 0.000011  
## Genotype:Age.Months 0.71137 0.000011  
## Sex:Age.Months 0.71137 0.000011  
## TestSite:Genotype:Age.Months 0.71137 0.000011  
## TestSite:Sex:Age.Months 0.71137 0.000011  
## Genotype:Sex:Age.Months 0.71137 0.000011  
## TestSite:Genotype:Sex:Age.Months 0.71137 0.000011  
## Stimulus.Length 0.86003 0.073556  
## TestSite:Stimulus.Length 0.86003 0.073556  
## Genotype:Stimulus.Length 0.86003 0.073556  
## Sex:Stimulus.Length 0.86003 0.073556  
## TestSite:Genotype:Stimulus.Length 0.86003 0.073556  
## TestSite:Sex:Stimulus.Length 0.86003 0.073556  
## Genotype:Sex:Stimulus.Length 0.86003 0.073556  
## TestSite:Genotype:Sex:Stimulus.Length 0.86003 0.073556  
## Age.Months:Stimulus.Length 0.41869 0.000019  
## TestSite:Age.Months:Stimulus.Length 0.41869 0.000019  
## Genotype:Age.Months:Stimulus.Length 0.41869 0.000019  
## Sex:Age.Months:Stimulus.Length 0.41869 0.000019  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.41869 0.000019  
## TestSite:Sex:Age.Months:Stimulus.Length 0.41869 0.000019  
## Genotype:Sex:Age.Months:Stimulus.Length 0.41869 0.000019  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.41869 0.000019  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.77602  
## TestSite:Age.Months 0.77602  
## Genotype:Age.Months 0.77602  
## Sex:Age.Months 0.77602  
## TestSite:Genotype:Age.Months 0.77602  
## TestSite:Sex:Age.Months 0.77602  
## Genotype:Sex:Age.Months 0.77602  
## TestSite:Genotype:Sex:Age.Months 0.77602  
## Stimulus.Length 0.90281  
## TestSite:Stimulus.Length 0.90281  
## Genotype:Stimulus.Length 0.90281  
## Sex:Stimulus.Length 0.90281  
## TestSite:Genotype:Stimulus.Length 0.90281  
## TestSite:Sex:Stimulus.Length 0.90281  
## Genotype:Sex:Stimulus.Length 0.90281  
## TestSite:Genotype:Sex:Stimulus.Length 0.90281  
## Age.Months:Stimulus.Length 0.77983  
## TestSite:Age.Months:Stimulus.Length 0.77983  
## Genotype:Age.Months:Stimulus.Length 0.77983  
## Sex:Age.Months:Stimulus.Length 0.77983  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.77983  
## TestSite:Sex:Age.Months:Stimulus.Length 0.77983  
## Genotype:Sex:Age.Months:Stimulus.Length 0.77983  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.77983  
## Pr(>F[GG])   
## Age.Months 0.0000111660091007 \*\*\*  
## TestSite:Age.Months 0.685669   
## Genotype:Age.Months 0.001701 \*\*   
## Sex:Age.Months 0.021786 \*   
## TestSite:Genotype:Age.Months 0.292586   
## TestSite:Sex:Age.Months 0.569247   
## Genotype:Sex:Age.Months 0.940743   
## TestSite:Genotype:Sex:Age.Months 0.101088   
## Stimulus.Length 0.0000000000000105 \*\*\*  
## TestSite:Stimulus.Length 0.822237   
## Genotype:Stimulus.Length 0.413451   
## Sex:Stimulus.Length 0.506084   
## TestSite:Genotype:Stimulus.Length 0.130560   
## TestSite:Sex:Stimulus.Length 0.757555   
## Genotype:Sex:Stimulus.Length 0.439431   
## TestSite:Genotype:Sex:Stimulus.Length 0.115655   
## Age.Months:Stimulus.Length 0.762661   
## TestSite:Age.Months:Stimulus.Length 0.643772   
## Genotype:Age.Months:Stimulus.Length 0.920895   
## Sex:Age.Months:Stimulus.Length 0.189048   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.455112   
## TestSite:Sex:Age.Months:Stimulus.Length 0.193085   
## Genotype:Sex:Age.Months:Stimulus.Length 0.826471   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.388527   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.7907718  
## TestSite:Age.Months 0.7907718  
## Genotype:Age.Months 0.7907718  
## Sex:Age.Months 0.7907718  
## TestSite:Genotype:Age.Months 0.7907718  
## TestSite:Sex:Age.Months 0.7907718  
## Genotype:Sex:Age.Months 0.7907718  
## TestSite:Genotype:Sex:Age.Months 0.7907718  
## Stimulus.Length 0.9438753  
## TestSite:Stimulus.Length 0.9438753  
## Genotype:Stimulus.Length 0.9438753  
## Sex:Stimulus.Length 0.9438753  
## TestSite:Genotype:Stimulus.Length 0.9438753  
## TestSite:Sex:Stimulus.Length 0.9438753  
## Genotype:Sex:Stimulus.Length 0.9438753  
## TestSite:Genotype:Sex:Stimulus.Length 0.9438753  
## Age.Months:Stimulus.Length 0.8445109  
## TestSite:Age.Months:Stimulus.Length 0.8445109  
## Genotype:Age.Months:Stimulus.Length 0.8445109  
## Sex:Age.Months:Stimulus.Length 0.8445109  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.8445109  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8445109  
## Genotype:Sex:Age.Months:Stimulus.Length 0.8445109  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.8445109  
## Pr(>F[HF])  
## Age.Months 0.000009538272081089999  
## TestSite:Age.Months 0.689897126206970079387  
## Genotype:Age.Months 0.001583237740768977985  
## Sex:Age.Months 0.021118115906766959933  
## TestSite:Genotype:Age.Months 0.293203738914376954572  
## TestSite:Sex:Age.Months 0.572754294658913476468  
## Genotype:Sex:Age.Months 0.943311414437759676588  
## TestSite:Genotype:Sex:Age.Months 0.100115016852636767863  
## Stimulus.Length 0.000000000000002879747  
## TestSite:Stimulus.Length 0.831016869170301375469  
## Genotype:Stimulus.Length 0.416498386519378649417  
## Sex:Stimulus.Length 0.511372463879997241065  
## TestSite:Genotype:Stimulus.Length 0.127756369045193496348  
## TestSite:Sex:Stimulus.Length 0.766552321302115258206  
## Genotype:Sex:Stimulus.Length 0.443123688507016333382  
## TestSite:Genotype:Sex:Stimulus.Length 0.112753117139720263062  
## Age.Months:Stimulus.Length 0.776965830990707595483  
## TestSite:Age.Months:Stimulus.Length 0.655899193084739318138  
## Genotype:Age.Months:Stimulus.Length 0.931492322463091548812  
## Sex:Age.Months:Stimulus.Length 0.183891152904301219406  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.460168304822883289518  
## TestSite:Sex:Age.Months:Stimulus.Length 0.188026143405324752678  
## Genotype:Sex:Age.Months:Stimulus.Length 0.840555182886719931545  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.390698414923946524269

### Correct Response Latency

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$CorrectLat, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$APP$CorrectLat, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 1077.24 1 6.3887  
## TestSite 0.08 1 6.3887  
## Genotype 0.08 1 6.3887  
## Sex 0.12 1 6.3887  
## TestSite:Genotype 0.01 1 6.3887  
## TestSite:Sex 0.00 1 6.3887  
## Genotype:Sex 0.21 1 6.3887  
## TestSite:Genotype:Sex 0.00 1 6.3887  
## Age.Months 0.19 2 2.7525  
## TestSite:Age.Months 0.04 2 2.7525  
## Genotype:Age.Months 0.08 2 2.7525  
## Sex:Age.Months 0.00 2 2.7525  
## TestSite:Genotype:Age.Months 0.00 2 2.7525  
## TestSite:Sex:Age.Months 0.11 2 2.7525  
## Genotype:Sex:Age.Months 0.03 2 2.7525  
## TestSite:Genotype:Sex:Age.Months 0.13 2 2.7525  
## Stimulus.Length 4.45 3 2.5001  
## TestSite:Stimulus.Length 0.05 3 2.5001  
## Genotype:Stimulus.Length 0.02 3 2.5001  
## Sex:Stimulus.Length 0.14 3 2.5001  
## TestSite:Genotype:Stimulus.Length 0.03 3 2.5001  
## TestSite:Sex:Stimulus.Length 0.02 3 2.5001  
## Genotype:Sex:Stimulus.Length 0.01 3 2.5001  
## TestSite:Genotype:Sex:Stimulus.Length 0.02 3 2.5001  
## Age.Months:Stimulus.Length 0.11 6 4.7575  
## TestSite:Age.Months:Stimulus.Length 0.04 6 4.7575  
## Genotype:Age.Months:Stimulus.Length 0.08 6 4.7575  
## Sex:Age.Months:Stimulus.Length 0.08 6 4.7575  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.11 6 4.7575  
## TestSite:Sex:Age.Months:Stimulus.Length 0.03 6 4.7575  
## Genotype:Sex:Age.Months:Stimulus.Length 0.05 6 4.7575  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.08 6 4.7575  
## den Df F  
## (Intercept) 75 12646.1132  
## TestSite 75 0.9623  
## Genotype 75 0.9556  
## Sex 75 1.3933  
## TestSite:Genotype 75 0.1422  
## TestSite:Sex 75 0.0166  
## Genotype:Sex 75 2.4301  
## TestSite:Genotype:Sex 75 0.0208  
## Age.Months 150 5.2419  
## TestSite:Age.Months 150 0.9708  
## Genotype:Age.Months 150 2.2584  
## Sex:Age.Months 150 0.0616  
## TestSite:Genotype:Age.Months 150 0.0308  
## TestSite:Sex:Age.Months 150 2.9742  
## Genotype:Sex:Age.Months 150 0.8875  
## TestSite:Genotype:Sex:Age.Months 150 3.6659  
## Stimulus.Length 225 133.4622  
## TestSite:Stimulus.Length 225 1.4831  
## Genotype:Stimulus.Length 225 0.5001  
## Sex:Stimulus.Length 225 4.2402  
## TestSite:Genotype:Stimulus.Length 225 0.8762  
## TestSite:Sex:Stimulus.Length 225 0.5596  
## Genotype:Sex:Stimulus.Length 225 0.2284  
## TestSite:Genotype:Sex:Stimulus.Length 225 0.7337  
## Age.Months:Stimulus.Length 450 1.7624  
## TestSite:Age.Months:Stimulus.Length 450 0.6519  
## Genotype:Age.Months:Stimulus.Length 450 1.1855  
## Sex:Age.Months:Stimulus.Length 450 1.2199  
## TestSite:Genotype:Age.Months:Stimulus.Length 450 1.7178  
## TestSite:Sex:Age.Months:Stimulus.Length 450 0.4650  
## Genotype:Sex:Age.Months:Stimulus.Length 450 0.8381  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 450 1.3060  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.329766   
## Genotype 0.331448   
## Sex 0.241583   
## TestSite:Genotype 0.707195   
## TestSite:Sex 0.897866   
## Genotype:Sex 0.123235   
## TestSite:Genotype:Sex 0.885811   
## Age.Months 0.006302 \*\*   
## TestSite:Age.Months 0.381165   
## Genotype:Age.Months 0.108057   
## Sex:Age.Months 0.940244   
## TestSite:Genotype:Age.Months 0.969691   
## TestSite:Sex:Age.Months 0.054109 .   
## Genotype:Sex:Age.Months 0.413843   
## TestSite:Genotype:Sex:Age.Months 0.027900 \*   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.219934   
## Genotype:Stimulus.Length 0.682585   
## Sex:Stimulus.Length 0.006127 \*\*   
## TestSite:Genotype:Stimulus.Length 0.454143   
## TestSite:Sex:Stimulus.Length 0.642231   
## Genotype:Sex:Stimulus.Length 0.876588   
## TestSite:Genotype:Sex:Stimulus.Length 0.532880   
## Age.Months:Stimulus.Length 0.105183   
## TestSite:Age.Months:Stimulus.Length 0.688613   
## Genotype:Age.Months:Stimulus.Length 0.312752   
## Sex:Age.Months:Stimulus.Length 0.294613   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.115065   
## TestSite:Sex:Age.Months:Stimulus.Length 0.834251   
## Genotype:Sex:Age.Months:Stimulus.Length 0.540875   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.252883   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.98392 0.54901  
## TestSite:Age.Months 0.98392 0.54901  
## Genotype:Age.Months 0.98392 0.54901  
## Sex:Age.Months 0.98392 0.54901  
## TestSite:Genotype:Age.Months 0.98392 0.54901  
## TestSite:Sex:Age.Months 0.98392 0.54901  
## Genotype:Sex:Age.Months 0.98392 0.54901  
## TestSite:Genotype:Sex:Age.Months 0.98392 0.54901  
## Stimulus.Length 0.63946 0.00000  
## TestSite:Stimulus.Length 0.63946 0.00000  
## Genotype:Stimulus.Length 0.63946 0.00000  
## Sex:Stimulus.Length 0.63946 0.00000  
## TestSite:Genotype:Stimulus.Length 0.63946 0.00000  
## TestSite:Sex:Stimulus.Length 0.63946 0.00000  
## Genotype:Sex:Stimulus.Length 0.63946 0.00000  
## TestSite:Genotype:Sex:Stimulus.Length 0.63946 0.00000  
## Age.Months:Stimulus.Length 0.47017 0.00004  
## TestSite:Age.Months:Stimulus.Length 0.47017 0.00004  
## Genotype:Age.Months:Stimulus.Length 0.47017 0.00004  
## Sex:Age.Months:Stimulus.Length 0.47017 0.00004  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.47017 0.00004  
## TestSite:Sex:Age.Months:Stimulus.Length 0.47017 0.00004  
## Genotype:Sex:Age.Months:Stimulus.Length 0.47017 0.00004  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.47017 0.00004  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.98418  
## TestSite:Age.Months 0.98418  
## Genotype:Age.Months 0.98418  
## Sex:Age.Months 0.98418  
## TestSite:Genotype:Age.Months 0.98418  
## TestSite:Sex:Age.Months 0.98418  
## Genotype:Sex:Age.Months 0.98418  
## TestSite:Genotype:Sex:Age.Months 0.98418  
## Stimulus.Length 0.80787  
## TestSite:Stimulus.Length 0.80787  
## Genotype:Stimulus.Length 0.80787  
## Sex:Stimulus.Length 0.80787  
## TestSite:Genotype:Stimulus.Length 0.80787  
## TestSite:Sex:Stimulus.Length 0.80787  
## Genotype:Sex:Stimulus.Length 0.80787  
## TestSite:Genotype:Sex:Stimulus.Length 0.80787  
## Age.Months:Stimulus.Length 0.79591  
## TestSite:Age.Months:Stimulus.Length 0.79591  
## Genotype:Age.Months:Stimulus.Length 0.79591  
## Sex:Age.Months:Stimulus.Length 0.79591  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.79591  
## TestSite:Sex:Age.Months:Stimulus.Length 0.79591  
## Genotype:Sex:Age.Months:Stimulus.Length 0.79591  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.79591  
## Pr(>F[GG])   
## Age.Months 0.006581 \*\*   
## TestSite:Age.Months 0.380061   
## Genotype:Age.Months 0.108966   
## Sex:Age.Months 0.938076   
## TestSite:Genotype:Age.Months 0.968256   
## TestSite:Sex:Age.Months 0.054989 .   
## Genotype:Sex:Age.Months 0.412440   
## TestSite:Genotype:Sex:Age.Months 0.028581 \*   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.226488   
## Genotype:Stimulus.Length 0.643016   
## Sex:Stimulus.Length 0.010697 \*   
## TestSite:Genotype:Stimulus.Length 0.435621   
## TestSite:Sex:Stimulus.Length 0.605463   
## Genotype:Sex:Stimulus.Length 0.836218   
## TestSite:Genotype:Sex:Stimulus.Length 0.505976   
## Age.Months:Stimulus.Length 0.123245   
## TestSite:Age.Months:Stimulus.Length 0.653118   
## Genotype:Age.Months:Stimulus.Length 0.316136   
## Sex:Age.Months:Stimulus.Length 0.299890   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.133034   
## TestSite:Sex:Age.Months:Stimulus.Length 0.793997   
## Genotype:Sex:Age.Months:Stimulus.Length 0.518833   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.262258   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 1.0104878  
## TestSite:Age.Months 1.0104878  
## Genotype:Age.Months 1.0104878  
## Sex:Age.Months 1.0104878  
## TestSite:Genotype:Age.Months 1.0104878  
## TestSite:Sex:Age.Months 1.0104878  
## Genotype:Sex:Age.Months 1.0104878  
## TestSite:Genotype:Sex:Age.Months 1.0104878  
## Stimulus.Length 0.8367890  
## TestSite:Stimulus.Length 0.8367890  
## Genotype:Stimulus.Length 0.8367890  
## Sex:Stimulus.Length 0.8367890  
## TestSite:Genotype:Stimulus.Length 0.8367890  
## TestSite:Sex:Stimulus.Length 0.8367890  
## Genotype:Sex:Stimulus.Length 0.8367890  
## TestSite:Genotype:Sex:Stimulus.Length 0.8367890  
## Age.Months:Stimulus.Length 0.8566246  
## TestSite:Age.Months:Stimulus.Length 0.8566246  
## Genotype:Age.Months:Stimulus.Length 0.8566246  
## Sex:Age.Months:Stimulus.Length 0.8566246  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.8566246  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8566246  
## Genotype:Sex:Age.Months:Stimulus.Length 0.8566246  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.8566246  
## Pr(>F[HF])  
## Age.Months 0.006302109177120353289414111941368901170790195465  
## TestSite:Age.Months 0.381165295133079840006473659741459414362907409668  
## Genotype:Age.Months 0.108057315092643088649815297230816213414072990417  
## Sex:Age.Months 0.940243708555750346000934314361074939370155334473  
## TestSite:Genotype:Age.Months 0.969690870383330905113439257547724992036819458008  
## TestSite:Sex:Age.Months 0.054109013101219349817228021493065170943737030029  
## Genotype:Sex:Age.Months 0.413842537396474141608848640316864475607872009277  
## TestSite:Genotype:Sex:Age.Months 0.027900140587319325474746634085931873414665460587  
## Stimulus.Length 0.000000000000000000000000000000000000000005063034  
## TestSite:Stimulus.Length 0.225580494647790341655735346648725681006908416748  
## Genotype:Stimulus.Length 0.649536933479029965354811793076805770397186279297  
## Sex:Stimulus.Length 0.009832907589049063104558179304603982018306851387  
## TestSite:Genotype:Stimulus.Length 0.438709518564142753049850398383568972349166870117  
## TestSite:Sex:Stimulus.Length 0.611504020172445095226976263802498579025268554687  
## Genotype:Sex:Stimulus.Length 0.843202534662000235954337767907418310642242431641  
## TestSite:Genotype:Sex:Stimulus.Length 0.510401010814027666917525039025349542498588562012  
## Age.Months:Stimulus.Length 0.117544117569786596422254376648197649046778678894  
## TestSite:Age.Months:Stimulus.Length 0.664490289856281668434689891000743955373764038086  
## Genotype:Age.Months:Stimulus.Length 0.315292217386688777835956898343283683061599731445  
## Sex:Age.Months:Stimulus.Length 0.298451526165345648600180084031308069825172424316  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.127391180190554120787993497287970967590808868408  
## TestSite:Sex:Age.Months:Stimulus.Length 0.807207010450708195570257430517813190817832946777  
## Genotype:Sex:Age.Months:Stimulus.Length 0.525903576238891168337374892871594056487083435059  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.259521957983835926953020134533289819955825805664

#### 5xFAD Mice

summary(probe.anova$TG5x$CorrectLat, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 1042.09 1 7.7375  
## TestSite 2.47 1 7.7375  
## Genotype 3.83 1 7.7375  
## Sex 1.42 1 7.7375  
## TestSite:Genotype 1.29 1 7.7375  
## TestSite:Sex 0.04 1 7.7375  
## Genotype:Sex 0.36 1 7.7375  
## TestSite:Genotype:Sex 0.37 1 7.7375  
## Age.Months 0.64 2 4.5067  
## TestSite:Age.Months 0.65 2 4.5067  
## Genotype:Age.Months 0.05 2 4.5067  
## Sex:Age.Months 0.03 2 4.5067  
## TestSite:Genotype:Age.Months 0.09 2 4.5067  
## TestSite:Sex:Age.Months 0.45 2 4.5067  
## Genotype:Sex:Age.Months 0.01 2 4.5067  
## TestSite:Genotype:Sex:Age.Months 0.05 2 4.5067  
## Stimulus.Length 3.95 3 3.2001  
## TestSite:Stimulus.Length 0.27 3 3.2001  
## Genotype:Stimulus.Length 0.02 3 3.2001  
## Sex:Stimulus.Length 0.05 3 3.2001  
## TestSite:Genotype:Stimulus.Length 0.05 3 3.2001  
## TestSite:Sex:Stimulus.Length 0.10 3 3.2001  
## Genotype:Sex:Stimulus.Length 0.14 3 3.2001  
## TestSite:Genotype:Sex:Stimulus.Length 0.20 3 3.2001  
## Age.Months:Stimulus.Length 0.18 6 5.2508  
## TestSite:Age.Months:Stimulus.Length 0.06 6 5.2508  
## Genotype:Age.Months:Stimulus.Length 0.04 6 5.2508  
## Sex:Age.Months:Stimulus.Length 0.14 6 5.2508  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.09 6 5.2508  
## TestSite:Sex:Age.Months:Stimulus.Length 0.02 6 5.2508  
## Genotype:Sex:Age.Months:Stimulus.Length 0.06 6 5.2508  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.14 6 5.2508  
## den Df F  
## (Intercept) 64 8619.5649  
## TestSite 64 20.3906  
## Genotype 64 31.6425  
## Sex 64 11.7193  
## TestSite:Genotype 64 10.6499  
## TestSite:Sex 64 0.3215  
## Genotype:Sex 64 3.0020  
## TestSite:Genotype:Sex 64 3.0344  
## Age.Months 128 9.1563  
## TestSite:Age.Months 128 9.1724  
## Genotype:Age.Months 128 0.6723  
## Sex:Age.Months 128 0.4860  
## TestSite:Genotype:Age.Months 128 1.2283  
## TestSite:Sex:Age.Months 128 6.3391  
## Genotype:Sex:Age.Months 128 0.1132  
## TestSite:Genotype:Sex:Age.Months 128 0.6598  
## Stimulus.Length 192 79.0949  
## TestSite:Stimulus.Length 192 5.3087  
## Genotype:Stimulus.Length 192 0.4762  
## Sex:Stimulus.Length 192 1.0610  
## TestSite:Genotype:Stimulus.Length 192 1.0665  
## TestSite:Sex:Stimulus.Length 192 2.0040  
## Genotype:Sex:Stimulus.Length 192 2.8978  
## TestSite:Genotype:Sex:Stimulus.Length 192 3.9257  
## Age.Months:Stimulus.Length 384 2.1775  
## TestSite:Age.Months:Stimulus.Length 384 0.6904  
## Genotype:Age.Months:Stimulus.Length 384 0.4605  
## Sex:Age.Months:Stimulus.Length 384 1.7048  
## TestSite:Genotype:Age.Months:Stimulus.Length 384 1.0462  
## TestSite:Sex:Age.Months:Stimulus.Length 384 0.2650  
## Genotype:Sex:Age.Months:Stimulus.Length 384 0.7116  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 384 1.7564  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.0000277488 \*\*\*  
## Genotype 0.0000004384 \*\*\*  
## Sex 0.0010836 \*\*   
## TestSite:Genotype 0.0017684 \*\*   
## TestSite:Sex 0.5726960   
## Genotype:Sex 0.0879766 .   
## TestSite:Genotype:Sex 0.0863223 .   
## Age.Months 0.0001920 \*\*\*  
## TestSite:Age.Months 0.0001894 \*\*\*  
## Genotype:Age.Months 0.5123097   
## Sex:Age.Months 0.6161889   
## TestSite:Genotype:Age.Months 0.2962180   
## TestSite:Sex:Age.Months 0.0023710 \*\*   
## Genotype:Sex:Age.Months 0.8930363   
## TestSite:Genotype:Sex:Age.Months 0.5187176   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.0015484 \*\*   
## Genotype:Stimulus.Length 0.6991934   
## Sex:Stimulus.Length 0.3668491   
## TestSite:Genotype:Stimulus.Length 0.3645031   
## TestSite:Sex:Stimulus.Length 0.1148125   
## Genotype:Sex:Stimulus.Length 0.0363325 \*   
## TestSite:Genotype:Sex:Stimulus.Length 0.0094836 \*\*   
## Age.Months:Stimulus.Length 0.0444137 \*   
## TestSite:Age.Months:Stimulus.Length 0.6574914   
## Genotype:Age.Months:Stimulus.Length 0.8374342   
## Sex:Age.Months:Stimulus.Length 0.1185934   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.3948326   
## TestSite:Sex:Age.Months:Stimulus.Length 0.9529278   
## Genotype:Sex:Age.Months:Stimulus.Length 0.6404543   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.1069144   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.87467 0.0147240  
## TestSite:Age.Months 0.87467 0.0147240  
## Genotype:Age.Months 0.87467 0.0147240  
## Sex:Age.Months 0.87467 0.0147240  
## TestSite:Genotype:Age.Months 0.87467 0.0147240  
## TestSite:Sex:Age.Months 0.87467 0.0147240  
## Genotype:Sex:Age.Months 0.87467 0.0147240  
## TestSite:Genotype:Sex:Age.Months 0.87467 0.0147240  
## Stimulus.Length 0.74948 0.0028427  
## TestSite:Stimulus.Length 0.74948 0.0028427  
## Genotype:Stimulus.Length 0.74948 0.0028427  
## Sex:Stimulus.Length 0.74948 0.0028427  
## TestSite:Genotype:Stimulus.Length 0.74948 0.0028427  
## TestSite:Sex:Stimulus.Length 0.74948 0.0028427  
## Genotype:Sex:Stimulus.Length 0.74948 0.0028427  
## TestSite:Genotype:Sex:Stimulus.Length 0.74948 0.0028427  
## Age.Months:Stimulus.Length 0.45591 0.0003640  
## TestSite:Age.Months:Stimulus.Length 0.45591 0.0003640  
## Genotype:Age.Months:Stimulus.Length 0.45591 0.0003640  
## Sex:Age.Months:Stimulus.Length 0.45591 0.0003640  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.45591 0.0003640  
## TestSite:Sex:Age.Months:Stimulus.Length 0.45591 0.0003640  
## Genotype:Sex:Age.Months:Stimulus.Length 0.45591 0.0003640  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.45591 0.0003640  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.88862  
## TestSite:Age.Months 0.88862  
## Genotype:Age.Months 0.88862  
## Sex:Age.Months 0.88862  
## TestSite:Genotype:Age.Months 0.88862  
## TestSite:Sex:Age.Months 0.88862  
## Genotype:Sex:Age.Months 0.88862  
## TestSite:Genotype:Sex:Age.Months 0.88862  
## Stimulus.Length 0.85194  
## TestSite:Stimulus.Length 0.85194  
## Genotype:Stimulus.Length 0.85194  
## Sex:Stimulus.Length 0.85194  
## TestSite:Genotype:Stimulus.Length 0.85194  
## TestSite:Sex:Stimulus.Length 0.85194  
## Genotype:Sex:Stimulus.Length 0.85194  
## TestSite:Genotype:Sex:Stimulus.Length 0.85194  
## Age.Months:Stimulus.Length 0.81603  
## TestSite:Age.Months:Stimulus.Length 0.81603  
## Genotype:Age.Months:Stimulus.Length 0.81603  
## Sex:Age.Months:Stimulus.Length 0.81603  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.81603  
## TestSite:Sex:Age.Months:Stimulus.Length 0.81603  
## Genotype:Sex:Age.Months:Stimulus.Length 0.81603  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.81603  
## Pr(>F[GG])   
## Age.Months 0.0003666 \*\*\*  
## TestSite:Age.Months 0.0003620 \*\*\*  
## Genotype:Age.Months 0.4956791   
## Sex:Age.Months 0.5940865   
## TestSite:Genotype:Age.Months 0.2935258   
## TestSite:Sex:Age.Months 0.0035317 \*\*   
## Genotype:Sex:Age.Months 0.8707682   
## TestSite:Genotype:Sex:Age.Months 0.5017098   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.0028379 \*\*   
## Genotype:Stimulus.Length 0.6687977   
## Sex:Stimulus.Length 0.3604650   
## TestSite:Genotype:Stimulus.Length 0.3583187   
## TestSite:Sex:Stimulus.Length 0.1251549   
## Genotype:Sex:Stimulus.Length 0.0449652 \*   
## TestSite:Genotype:Sex:Stimulus.Length 0.0137983 \*   
## Age.Months:Stimulus.Length 0.0578593 .   
## TestSite:Age.Months:Stimulus.Length 0.6279865   
## Genotype:Age.Months:Stimulus.Length 0.8017803   
## Sex:Age.Months:Stimulus.Length 0.1346502   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.3898843   
## TestSite:Sex:Age.Months:Stimulus.Length 0.9292594   
## Genotype:Sex:Age.Months:Stimulus.Length 0.6122144   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.1230832   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.9122164  
## TestSite:Age.Months 0.9122164  
## Genotype:Age.Months 0.9122164  
## Sex:Age.Months 0.9122164  
## TestSite:Genotype:Age.Months 0.9122164  
## TestSite:Sex:Age.Months 0.9122164  
## Genotype:Sex:Age.Months 0.9122164  
## TestSite:Genotype:Sex:Age.Months 0.9122164  
## Stimulus.Length 0.8903877  
## TestSite:Stimulus.Length 0.8903877  
## Genotype:Stimulus.Length 0.8903877  
## Sex:Stimulus.Length 0.8903877  
## TestSite:Genotype:Stimulus.Length 0.8903877  
## TestSite:Sex:Stimulus.Length 0.8903877  
## Genotype:Sex:Stimulus.Length 0.8903877  
## TestSite:Genotype:Sex:Stimulus.Length 0.8903877  
## Age.Months:Stimulus.Length 0.8917916  
## TestSite:Age.Months:Stimulus.Length 0.8917916  
## Genotype:Age.Months:Stimulus.Length 0.8917916  
## Sex:Age.Months:Stimulus.Length 0.8917916  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.8917916  
## TestSite:Sex:Age.Months:Stimulus.Length 0.8917916  
## Genotype:Sex:Age.Months:Stimulus.Length 0.8917916  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.8917916  
## Pr(>F[HF])  
## Age.Months 0.000319603141310837118947013602010543  
## TestSite:Age.Months 0.000315484937845392156459400911927560  
## Genotype:Age.Months 0.499364851682183474856913107942091301  
## Sex:Age.Months 0.598983934789304894863448680553119630  
## TestSite:Genotype:Age.Months 0.294176729594887664820390682507422753  
## TestSite:Sex:Age.Months 0.003245388874991010294546178727159713  
## Genotype:Sex:Age.Months 0.875889998784507239903973641048651189  
## TestSite:Genotype:Sex:Age.Months 0.505478224737816894673869683174416423  
## Stimulus.Length 0.000000000000000000000000000005548241  
## TestSite:Stimulus.Length 0.002423669096650521177088721813674965  
## Genotype:Stimulus.Length 0.677181992434725765761527327413205057  
## Sex:Stimulus.Length 0.362304317011841903184432567286421545  
## TestSite:Genotype:Stimulus.Length 0.360104401010712060759999531001085415  
## TestSite:Sex:Stimulus.Length 0.122396763226287952353033006147597916  
## Genotype:Sex:Stimulus.Length 0.042538590576072128623952295356502873  
## TestSite:Genotype:Sex:Stimulus.Length 0.012514378490915405162109408365722629  
## Age.Months:Stimulus.Length 0.051860313466385761504984230896297959  
## TestSite:Age.Months:Stimulus.Length 0.640804990718786049441746399679686874  
## Genotype:Age.Months:Stimulus.Length 0.817589654932715292900979875412303954  
## Sex:Age.Months:Stimulus.Length 0.127768832064235754453207505321188364  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.392179921607961334828473809466231614  
## TestSite:Sex:Age.Months:Stimulus.Length 0.940291927036774444204070277919527143  
## Genotype:Sex:Age.Months:Stimulus.Length 0.624477544055521027743793638364877552  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.116122861971483554155426531906414311

#### 3xTG Mice

summary(probe.anova$TG3x$CorrectLat, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 973.54 1 5.5152  
## TestSite 0.40 1 5.5152  
## Genotype 0.90 1 5.5152  
## Sex 0.00 1 5.5152  
## TestSite:Genotype 0.18 1 5.5152  
## TestSite:Sex 0.01 1 5.5152  
## Genotype:Sex 0.38 1 5.5152  
## TestSite:Genotype:Sex 0.15 1 5.5152  
## Age.Months 0.07 2 2.6329  
## TestSite:Age.Months 0.04 2 2.6329  
## Genotype:Age.Months 0.16 2 2.6329  
## Sex:Age.Months 0.14 2 2.6329  
## TestSite:Genotype:Age.Months 0.00 2 2.6329  
## TestSite:Sex:Age.Months 0.02 2 2.6329  
## Genotype:Sex:Age.Months 0.04 2 2.6329  
## TestSite:Genotype:Sex:Age.Months 0.03 2 2.6329  
## Stimulus.Length 6.40 3 1.9158  
## TestSite:Stimulus.Length 0.01 3 1.9158  
## Genotype:Stimulus.Length 0.01 3 1.9158  
## Sex:Stimulus.Length 0.01 3 1.9158  
## TestSite:Genotype:Stimulus.Length 0.08 3 1.9158  
## TestSite:Sex:Stimulus.Length 0.02 3 1.9158  
## Genotype:Sex:Stimulus.Length 0.02 3 1.9158  
## TestSite:Genotype:Sex:Stimulus.Length 0.03 3 1.9158  
## Age.Months:Stimulus.Length 0.05 6 3.3919  
## TestSite:Age.Months:Stimulus.Length 0.06 6 3.3919  
## Genotype:Age.Months:Stimulus.Length 0.03 6 3.3919  
## Sex:Age.Months:Stimulus.Length 0.10 6 3.3919  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.05 6 3.3919  
## TestSite:Sex:Age.Months:Stimulus.Length 0.01 6 3.3919  
## Genotype:Sex:Age.Months:Stimulus.Length 0.05 6 3.3919  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.05 6 3.3919  
## den Df F  
## (Intercept) 65 11473.7187  
## TestSite 65 4.6867  
## Genotype 65 10.6358  
## Sex 65 0.0275  
## TestSite:Genotype 65 2.0651  
## TestSite:Sex 65 0.1128  
## Genotype:Sex 65 4.5089  
## TestSite:Genotype:Sex 65 1.7412  
## Age.Months 130 1.7352  
## TestSite:Age.Months 130 1.0732  
## Genotype:Age.Months 130 3.9454  
## Sex:Age.Months 130 3.5154  
## TestSite:Genotype:Age.Months 130 0.0713  
## TestSite:Sex:Age.Months 130 0.3721  
## Genotype:Sex:Age.Months 130 1.0789  
## TestSite:Genotype:Sex:Age.Months 130 0.7747  
## Stimulus.Length 195 216.9880  
## TestSite:Stimulus.Length 195 0.2850  
## Genotype:Stimulus.Length 195 0.4396  
## Sex:Stimulus.Length 195 0.4451  
## TestSite:Genotype:Stimulus.Length 195 2.8831  
## TestSite:Sex:Stimulus.Length 195 0.8172  
## Genotype:Sex:Stimulus.Length 195 0.6600  
## TestSite:Genotype:Sex:Stimulus.Length 195 0.8727  
## Age.Months:Stimulus.Length 390 0.8812  
## TestSite:Age.Months:Stimulus.Length 390 1.0595  
## Genotype:Age.Months:Stimulus.Length 390 0.6253  
## Sex:Age.Months:Stimulus.Length 390 1.9796  
## TestSite:Genotype:Age.Months:Stimulus.Length 390 1.0156  
## TestSite:Sex:Age.Months:Stimulus.Length 390 0.2449  
## Genotype:Sex:Age.Months:Stimulus.Length 390 0.9704  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 390 1.0372  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.034074 \*   
## Genotype 0.001768 \*\*   
## Sex 0.868825   
## TestSite:Genotype 0.155497   
## TestSite:Sex 0.738105   
## Genotype:Sex 0.037530 \*   
## TestSite:Genotype:Sex 0.191611   
## Age.Months 0.180429   
## TestSite:Age.Months 0.344933   
## Genotype:Age.Months 0.021703 \*   
## Sex:Age.Months 0.032595 \*   
## TestSite:Genotype:Age.Months 0.931203   
## TestSite:Sex:Age.Months 0.689986   
## Genotype:Sex:Age.Months 0.342993   
## TestSite:Genotype:Sex:Age.Months 0.462960   
## Stimulus.Length < 0.00000000000000022 \*\*\*  
## TestSite:Stimulus.Length 0.836193   
## Genotype:Stimulus.Length 0.724902   
## Sex:Stimulus.Length 0.721032   
## TestSite:Genotype:Stimulus.Length 0.036992 \*   
## TestSite:Sex:Stimulus.Length 0.485787   
## Genotype:Sex:Stimulus.Length 0.577589   
## TestSite:Genotype:Sex:Stimulus.Length 0.456192   
## Age.Months:Stimulus.Length 0.508594   
## TestSite:Age.Months:Stimulus.Length 0.386387   
## Genotype:Age.Months:Stimulus.Length 0.710055   
## Sex:Age.Months:Stimulus.Length 0.067536 .   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.414567   
## TestSite:Sex:Age.Months:Stimulus.Length 0.961204   
## Genotype:Sex:Age.Months:Stimulus.Length 0.444929   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.400549   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.80726 0.001058  
## TestSite:Age.Months 0.80726 0.001058  
## Genotype:Age.Months 0.80726 0.001058  
## Sex:Age.Months 0.80726 0.001058  
## TestSite:Genotype:Age.Months 0.80726 0.001058  
## TestSite:Sex:Age.Months 0.80726 0.001058  
## Genotype:Sex:Age.Months 0.80726 0.001058  
## TestSite:Genotype:Sex:Age.Months 0.80726 0.001058  
## Stimulus.Length 0.86813 0.108661  
## TestSite:Stimulus.Length 0.86813 0.108661  
## Genotype:Stimulus.Length 0.86813 0.108661  
## Sex:Stimulus.Length 0.86813 0.108661  
## TestSite:Genotype:Stimulus.Length 0.86813 0.108661  
## TestSite:Sex:Stimulus.Length 0.86813 0.108661  
## Genotype:Sex:Stimulus.Length 0.86813 0.108661  
## TestSite:Genotype:Sex:Stimulus.Length 0.86813 0.108661  
## Age.Months:Stimulus.Length 0.59961 0.042368  
## TestSite:Age.Months:Stimulus.Length 0.59961 0.042368  
## Genotype:Age.Months:Stimulus.Length 0.59961 0.042368  
## Sex:Age.Months:Stimulus.Length 0.59961 0.042368  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.59961 0.042368  
## TestSite:Sex:Age.Months:Stimulus.Length 0.59961 0.042368  
## Genotype:Sex:Age.Months:Stimulus.Length 0.59961 0.042368  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.59961 0.042368  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps  
## Age.Months 0.83840  
## TestSite:Age.Months 0.83840  
## Genotype:Age.Months 0.83840  
## Sex:Age.Months 0.83840  
## TestSite:Genotype:Age.Months 0.83840  
## TestSite:Sex:Age.Months 0.83840  
## Genotype:Sex:Age.Months 0.83840  
## TestSite:Genotype:Sex:Age.Months 0.83840  
## Stimulus.Length 0.91009  
## TestSite:Stimulus.Length 0.91009  
## Genotype:Stimulus.Length 0.91009  
## Sex:Stimulus.Length 0.91009  
## TestSite:Genotype:Stimulus.Length 0.91009  
## TestSite:Sex:Stimulus.Length 0.91009  
## Genotype:Sex:Stimulus.Length 0.91009  
## TestSite:Genotype:Sex:Stimulus.Length 0.91009  
## Age.Months:Stimulus.Length 0.87595  
## TestSite:Age.Months:Stimulus.Length 0.87595  
## Genotype:Age.Months:Stimulus.Length 0.87595  
## Sex:Age.Months:Stimulus.Length 0.87595  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.87595  
## TestSite:Sex:Age.Months:Stimulus.Length 0.87595  
## Genotype:Sex:Age.Months:Stimulus.Length 0.87595  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.87595  
## Pr(>F[GG])   
## Age.Months 0.18604   
## TestSite:Age.Months 0.33600   
## Genotype:Age.Months 0.02869 \*   
## Sex:Age.Months 0.04092 \*   
## TestSite:Genotype:Age.Months 0.90279   
## TestSite:Sex:Age.Months 0.65286   
## Genotype:Sex:Age.Months 0.33424   
## TestSite:Genotype:Sex:Age.Months 0.44262   
## Stimulus.Length < 0.0000000000000002 \*\*\*  
## TestSite:Stimulus.Length 0.81773   
## Genotype:Stimulus.Length 0.70652   
## Sex:Stimulus.Length 0.70272   
## TestSite:Genotype:Stimulus.Length 0.04204 \*   
## TestSite:Sex:Stimulus.Length 0.47614   
## Genotype:Sex:Stimulus.Length 0.56377   
## TestSite:Genotype:Sex:Stimulus.Length 0.44800   
## Age.Months:Stimulus.Length 0.49787   
## TestSite:Age.Months:Stimulus.Length 0.38385   
## Genotype:Age.Months:Stimulus.Length 0.68862   
## Sex:Age.Months:Stimulus.Length 0.07748 .   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.41013   
## TestSite:Sex:Age.Months:Stimulus.Length 0.94786   
## Genotype:Sex:Age.Months:Stimulus.Length 0.43844   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.39706   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 0.8580541 1.854066e-01  
## TestSite:Age.Months 0.8580541 3.372282e-01  
## Genotype:Age.Months 0.8580541 2.773444e-02  
## Sex:Age.Months 0.8580541 3.980075e-02  
## TestSite:Genotype:Age.Months 0.8580541 9.068404e-01  
## TestSite:Sex:Age.Months 0.8580541 6.577544e-01  
## Genotype:Sex:Age.Months 0.8580541 3.354525e-01  
## TestSite:Genotype:Sex:Age.Months 0.8580541 4.453060e-01  
## Stimulus.Length 0.9538998 3.800552e-59  
## TestSite:Stimulus.Length 0.9538998 8.270344e-01  
## Genotype:Stimulus.Length 0.9538998 7.157114e-01  
## Sex:Stimulus.Length 0.9538998 7.118738e-01  
## TestSite:Genotype:Stimulus.Length 0.9538998 3.949888e-02  
## TestSite:Sex:Stimulus.Length 0.9538998 4.809558e-01  
## Genotype:Sex:Stimulus.Length 0.9538998 5.706552e-01  
## TestSite:Genotype:Sex:Stimulus.Length 0.9538998 4.520983e-01  
## Age.Months:Stimulus.Length 0.9620915 5.054633e-01  
## TestSite:Age.Months:Stimulus.Length 0.9620915 3.856989e-01  
## Genotype:Age.Months:Stimulus.Length 0.9620915 7.037903e-01  
## Sex:Age.Months:Stimulus.Length 0.9620915 7.041942e-02  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9620915 4.133114e-01  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9620915 9.575641e-01  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9620915 4.430608e-01  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9620915 3.995759e-01

### Reward Collection Latency

This ANOVA was a 4 (Stimulus Length) x 3 (Age) x 2 (Sex) x 2 (Genotype) x 2 (Test Site) Split-Plot design.

#### APP/PS1 Mice

summary(probe.anova$APP$RewardLat, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$APP$RewardLat, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 1223.39 1 9.2266  
## TestSite 1.69 1 9.2266  
## Genotype 0.03 1 9.2266  
## Sex 1.50 1 9.2266  
## TestSite:Genotype 0.17 1 9.2266  
## TestSite:Sex 0.05 1 9.2266  
## Genotype:Sex 1.33 1 9.2266  
## TestSite:Genotype:Sex 0.04 1 9.2266  
## Age.Months 0.07 2 3.2902  
## TestSite:Age.Months 0.31 2 3.2902  
## Genotype:Age.Months 0.11 2 3.2902  
## Sex:Age.Months 0.20 2 3.2902  
## TestSite:Genotype:Age.Months 0.12 2 3.2902  
## TestSite:Sex:Age.Months 0.10 2 3.2902  
## Genotype:Sex:Age.Months 0.08 2 3.2902  
## TestSite:Genotype:Sex:Age.Months 0.08 2 3.2902  
## Stimulus.Length 0.06 3 2.2837  
## TestSite:Stimulus.Length 0.06 3 2.2837  
## Genotype:Stimulus.Length 0.01 3 2.2837  
## Sex:Stimulus.Length 0.02 3 2.2837  
## TestSite:Genotype:Stimulus.Length 0.02 3 2.2837  
## TestSite:Sex:Stimulus.Length 0.10 3 2.2837  
## Genotype:Sex:Stimulus.Length 0.00 3 2.2837  
## TestSite:Genotype:Sex:Stimulus.Length 0.01 3 2.2837  
## Age.Months:Stimulus.Length 0.05 6 4.5448  
## TestSite:Age.Months:Stimulus.Length 0.09 6 4.5448  
## Genotype:Age.Months:Stimulus.Length 0.08 6 4.5448  
## Sex:Age.Months:Stimulus.Length 0.09 6 4.5448  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.07 6 4.5448  
## TestSite:Sex:Age.Months:Stimulus.Length 0.07 6 4.5448  
## Genotype:Sex:Age.Months:Stimulus.Length 0.09 6 4.5448  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.03 6 4.5448  
## den Df F  
## (Intercept) 71 9414.1613  
## TestSite 71 13.0349  
## Genotype 71 0.2533  
## Sex 71 11.5312  
## TestSite:Genotype 71 1.2949  
## TestSite:Sex 71 0.3528  
## Genotype:Sex 71 10.2665  
## TestSite:Genotype:Sex 71 0.2773  
## Age.Months 142 1.5409  
## TestSite:Age.Months 142 6.6444  
## Genotype:Age.Months 142 2.3415  
## Sex:Age.Months 142 4.3611  
## TestSite:Genotype:Age.Months 142 2.6973  
## TestSite:Sex:Age.Months 142 2.1788  
## Genotype:Sex:Age.Months 142 1.6469  
## TestSite:Genotype:Sex:Age.Months 142 1.8104  
## Stimulus.Length 213 2.0074  
## TestSite:Stimulus.Length 213 1.9271  
## Genotype:Stimulus.Length 213 0.4506  
## Sex:Stimulus.Length 213 0.4958  
## TestSite:Genotype:Stimulus.Length 213 0.6072  
## TestSite:Sex:Stimulus.Length 213 3.0959  
## Genotype:Sex:Stimulus.Length 213 0.1470  
## TestSite:Genotype:Sex:Stimulus.Length 213 0.2077  
## Age.Months:Stimulus.Length 426 0.8278  
## TestSite:Age.Months:Stimulus.Length 426 1.3326  
## Genotype:Age.Months:Stimulus.Length 426 1.2261  
## Sex:Age.Months:Stimulus.Length 426 1.4620  
## TestSite:Genotype:Age.Months:Stimulus.Length 426 1.0434  
## TestSite:Sex:Age.Months:Stimulus.Length 426 1.1184  
## Genotype:Sex:Age.Months:Stimulus.Length 426 1.4394  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 426 0.4898  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.000566 \*\*\*  
## Genotype 0.616328   
## Sex 0.001124 \*\*   
## TestSite:Genotype 0.258971   
## TestSite:Sex 0.554423   
## Genotype:Sex 0.002030 \*\*   
## TestSite:Genotype:Sex 0.600116   
## Age.Months 0.217757   
## TestSite:Age.Months 0.001744 \*\*   
## Genotype:Age.Months 0.099889 .   
## Sex:Age.Months 0.014517 \*   
## TestSite:Genotype:Age.Months 0.070843 .   
## TestSite:Sex:Age.Months 0.116950   
## Genotype:Sex:Age.Months 0.196307   
## TestSite:Genotype:Sex:Age.Months 0.167348   
## Stimulus.Length 0.113942   
## TestSite:Stimulus.Length 0.126196   
## Genotype:Stimulus.Length 0.717121   
## Sex:Stimulus.Length 0.685584   
## TestSite:Genotype:Stimulus.Length 0.611020   
## TestSite:Sex:Stimulus.Length 0.027838 \*   
## Genotype:Sex:Stimulus.Length 0.931515   
## TestSite:Genotype:Sex:Stimulus.Length 0.890994   
## Age.Months:Stimulus.Length 0.548787   
## TestSite:Age.Months:Stimulus.Length 0.241144   
## Genotype:Age.Months:Stimulus.Length 0.291605   
## Sex:Age.Months:Stimulus.Length 0.189727   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.396444   
## TestSite:Sex:Age.Months:Stimulus.Length 0.350539   
## Genotype:Sex:Age.Months:Stimulus.Length 0.197987   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.816031   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.99695 0.89856  
## TestSite:Age.Months 0.99695 0.89856  
## Genotype:Age.Months 0.99695 0.89856  
## Sex:Age.Months 0.99695 0.89856  
## TestSite:Genotype:Age.Months 0.99695 0.89856  
## TestSite:Sex:Age.Months 0.99695 0.89856  
## Genotype:Sex:Age.Months 0.99695 0.89856  
## TestSite:Genotype:Sex:Age.Months 0.99695 0.89856  
## Stimulus.Length 0.90377 0.21664  
## TestSite:Stimulus.Length 0.90377 0.21664  
## Genotype:Stimulus.Length 0.90377 0.21664  
## Sex:Stimulus.Length 0.90377 0.21664  
## TestSite:Genotype:Stimulus.Length 0.90377 0.21664  
## TestSite:Sex:Stimulus.Length 0.90377 0.21664  
## Genotype:Sex:Stimulus.Length 0.90377 0.21664  
## TestSite:Genotype:Sex:Stimulus.Length 0.90377 0.21664  
## Age.Months:Stimulus.Length 0.78657 0.68483  
## TestSite:Age.Months:Stimulus.Length 0.78657 0.68483  
## Genotype:Age.Months:Stimulus.Length 0.78657 0.68483  
## Sex:Age.Months:Stimulus.Length 0.78657 0.68483  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.78657 0.68483  
## TestSite:Sex:Age.Months:Stimulus.Length 0.78657 0.68483  
## Genotype:Sex:Age.Months:Stimulus.Length 0.78657 0.68483  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.78657 0.68483  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])   
## Age.Months 0.99696 0.217819   
## TestSite:Age.Months 0.99696 0.001764 \*\*  
## Genotype:Age.Months 0.99696 0.100067   
## Sex:Age.Months 0.99696 0.014607 \*   
## TestSite:Genotype:Age.Months 0.99696 0.071021 .   
## TestSite:Sex:Age.Months 0.99696 0.117120   
## Genotype:Sex:Age.Months 0.99696 0.196399   
## TestSite:Genotype:Sex:Age.Months 0.99696 0.167475   
## Stimulus.Length 0.93564 0.118340   
## TestSite:Stimulus.Length 0.93564 0.130478   
## Genotype:Stimulus.Length 0.93564 0.704246   
## Sex:Stimulus.Length 0.93564 0.673199   
## TestSite:Genotype:Stimulus.Length 0.93564 0.600309   
## TestSite:Sex:Stimulus.Length 0.93564 0.030947 \*   
## Genotype:Sex:Stimulus.Length 0.93564 0.922063   
## TestSite:Genotype:Sex:Stimulus.Length 0.93564 0.879444   
## Age.Months:Stimulus.Length 0.91639 0.540002   
## TestSite:Age.Months:Stimulus.Length 0.91639 0.245455   
## Genotype:Age.Months:Stimulus.Length 0.91639 0.294033   
## Sex:Age.Months:Stimulus.Length 0.91639 0.195595   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.91639 0.394366   
## TestSite:Sex:Age.Months:Stimulus.Length 0.91639 0.350496   
## Genotype:Sex:Age.Months:Stimulus.Length 0.91639 0.203637   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.91639 0.800772   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps Pr(>F[HF])  
## Age.Months 1.0257208 0.217757440  
## TestSite:Age.Months 1.0257208 0.001743874  
## Genotype:Age.Months 1.0257208 0.099888884  
## Sex:Age.Months 1.0257208 0.014516805  
## TestSite:Genotype:Age.Months 1.0257208 0.070843051  
## TestSite:Sex:Age.Months 1.0257208 0.116949715  
## Genotype:Sex:Age.Months 1.0257208 0.196307387  
## TestSite:Genotype:Sex:Age.Months 1.0257208 0.167348421  
## Stimulus.Length 0.9781016 0.115421773  
## TestSite:Stimulus.Length 0.9781016 0.127639815  
## Genotype:Stimulus.Length 0.9781016 0.712841376  
## Sex:Stimulus.Length 0.9781016 0.681462459  
## TestSite:Genotype:Stimulus.Length 0.9781016 0.607450655  
## TestSite:Sex:Stimulus.Length 0.9781016 0.028858117  
## Genotype:Sex:Stimulus.Length 0.9781016 0.928447317  
## TestSite:Genotype:Sex:Stimulus.Length 0.9781016 0.887212478  
## Age.Months:Stimulus.Length 1.0022097 0.548786695  
## TestSite:Age.Months:Stimulus.Length 1.0022097 0.241144204  
## Genotype:Age.Months:Stimulus.Length 1.0022097 0.291604628  
## Sex:Age.Months:Stimulus.Length 1.0022097 0.189727188  
## TestSite:Genotype:Age.Months:Stimulus.Length 1.0022097 0.396444428  
## TestSite:Sex:Age.Months:Stimulus.Length 1.0022097 0.350538993  
## Genotype:Sex:Age.Months:Stimulus.Length 1.0022097 0.197987225  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 1.0022097 0.816031013

#### 5xFAD Mice

summary(probe.anova$TG5x$RewardLat, multivariate=FALSE)

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 1617.20 1 17.5309  
## TestSite 7.16 1 17.5309  
## Genotype 0.16 1 17.5309  
## Sex 0.11 1 17.5309  
## TestSite:Genotype 0.14 1 17.5309  
## TestSite:Sex 5.54 1 17.5309  
## Genotype:Sex 0.15 1 17.5309  
## TestSite:Genotype:Sex 1.31 1 17.5309  
## Age.Months 0.52 2 10.7693  
## TestSite:Age.Months 4.73 2 10.7693  
## Genotype:Age.Months 0.91 2 10.7693  
## Sex:Age.Months 0.23 2 10.7693  
## TestSite:Genotype:Age.Months 0.18 2 10.7693  
## TestSite:Sex:Age.Months 1.88 2 10.7693  
## Genotype:Sex:Age.Months 0.36 2 10.7693  
## TestSite:Genotype:Sex:Age.Months 0.23 2 10.7693  
## Stimulus.Length 0.46 3 3.8726  
## TestSite:Stimulus.Length 0.22 3 3.8726  
## Genotype:Stimulus.Length 0.02 3 3.8726  
## Sex:Stimulus.Length 0.00 3 3.8726  
## TestSite:Genotype:Stimulus.Length 0.02 3 3.8726  
## TestSite:Sex:Stimulus.Length 0.04 3 3.8726  
## Genotype:Sex:Stimulus.Length 0.14 3 3.8726  
## TestSite:Genotype:Sex:Stimulus.Length 0.15 3 3.8726  
## Age.Months:Stimulus.Length 0.09 6 6.9174  
## TestSite:Age.Months:Stimulus.Length 0.06 6 6.9174  
## Genotype:Age.Months:Stimulus.Length 0.13 6 6.9174  
## Sex:Age.Months:Stimulus.Length 0.03 6 6.9174  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.07 6 6.9174  
## TestSite:Sex:Age.Months:Stimulus.Length 0.20 6 6.9174  
## Genotype:Sex:Age.Months:Stimulus.Length 0.30 6 6.9174  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.07 6 6.9174  
## den Df F  
## (Intercept) 65 5996.1646  
## TestSite 65 26.5292  
## Genotype 65 0.6051  
## Sex 65 0.4000  
## TestSite:Genotype 65 0.5174  
## TestSite:Sex 65 20.5353  
## Genotype:Sex 65 0.5513  
## TestSite:Genotype:Sex 65 4.8447  
## Age.Months 130 3.1587  
## TestSite:Age.Months 130 28.5260  
## Genotype:Age.Months 130 5.5120  
## Sex:Age.Months 130 1.4130  
## TestSite:Genotype:Age.Months 130 1.1030  
## TestSite:Sex:Age.Months 130 11.3593  
## Genotype:Sex:Age.Months 130 2.1615  
## TestSite:Genotype:Sex:Age.Months 130 1.3719  
## Stimulus.Length 195 7.7097  
## TestSite:Stimulus.Length 195 3.6869  
## Genotype:Stimulus.Length 195 0.3503  
## Sex:Stimulus.Length 195 0.0323  
## TestSite:Genotype:Stimulus.Length 195 0.3485  
## TestSite:Sex:Stimulus.Length 195 0.7019  
## Genotype:Sex:Stimulus.Length 195 2.2947  
## TestSite:Genotype:Sex:Stimulus.Length 195 2.5102  
## Age.Months:Stimulus.Length 390 0.8373  
## TestSite:Age.Months:Stimulus.Length 390 0.5493  
## Genotype:Age.Months:Stimulus.Length 390 1.1869  
## Sex:Age.Months:Stimulus.Length 390 0.2677  
## TestSite:Genotype:Age.Months:Stimulus.Length 390 0.6207  
## TestSite:Sex:Age.Months:Stimulus.Length 390 1.9093  
## Genotype:Sex:Age.Months:Stimulus.Length 390 2.7828  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 390 0.6715  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.00000261248077 \*\*\*  
## Genotype 0.439456   
## Sex 0.529315   
## TestSite:Genotype 0.474521   
## TestSite:Sex 0.00002570476229 \*\*\*  
## Genotype:Sex 0.460473   
## TestSite:Genotype:Sex 0.031288 \*   
## Age.Months 0.045761 \*   
## TestSite:Age.Months 0.00000000005355 \*\*\*  
## Genotype:Age.Months 0.005038 \*\*   
## Sex:Age.Months 0.247131   
## TestSite:Genotype:Age.Months 0.334967   
## TestSite:Sex:Age.Months 0.00002840218971 \*\*\*  
## Genotype:Sex:Age.Months 0.119275   
## TestSite:Genotype:Sex:Age.Months 0.257263   
## Stimulus.Length 0.00006802136896 \*\*\*  
## TestSite:Stimulus.Length 0.012943 \*   
## Genotype:Stimulus.Length 0.789005   
## Sex:Stimulus.Length 0.992168   
## TestSite:Genotype:Stimulus.Length 0.790311   
## TestSite:Sex:Stimulus.Length 0.551939   
## Genotype:Sex:Stimulus.Length 0.079161 .   
## TestSite:Genotype:Sex:Stimulus.Length 0.059978 .   
## Age.Months:Stimulus.Length 0.541605   
## TestSite:Age.Months:Stimulus.Length 0.770492   
## Genotype:Age.Months:Stimulus.Length 0.312323   
## Sex:Age.Months:Stimulus.Length 0.951784   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.713749   
## TestSite:Sex:Age.Months:Stimulus.Length 0.078186 .   
## Genotype:Sex:Age.Months:Stimulus.Length 0.011612 \*   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.672785   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.90223 0.037171  
## TestSite:Age.Months 0.90223 0.037171  
## Genotype:Age.Months 0.90223 0.037171  
## Sex:Age.Months 0.90223 0.037171  
## TestSite:Genotype:Age.Months 0.90223 0.037171  
## TestSite:Sex:Age.Months 0.90223 0.037171  
## Genotype:Sex:Age.Months 0.90223 0.037171  
## TestSite:Genotype:Sex:Age.Months 0.90223 0.037171  
## Stimulus.Length 0.77077 0.005351  
## TestSite:Stimulus.Length 0.77077 0.005351  
## Genotype:Stimulus.Length 0.77077 0.005351  
## Sex:Stimulus.Length 0.77077 0.005351  
## TestSite:Genotype:Stimulus.Length 0.77077 0.005351  
## TestSite:Sex:Stimulus.Length 0.77077 0.005351  
## Genotype:Sex:Stimulus.Length 0.77077 0.005351  
## TestSite:Genotype:Sex:Stimulus.Length 0.77077 0.005351  
## Age.Months:Stimulus.Length 0.51814 0.003465  
## TestSite:Age.Months:Stimulus.Length 0.51814 0.003465  
## Genotype:Age.Months:Stimulus.Length 0.51814 0.003465  
## Sex:Age.Months:Stimulus.Length 0.51814 0.003465  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.51814 0.003465  
## TestSite:Sex:Age.Months:Stimulus.Length 0.51814 0.003465  
## Genotype:Sex:Age.Months:Stimulus.Length 0.51814 0.003465  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.51814 0.003465  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])  
## Age.Months 0.91094 0.0506843  
## TestSite:Age.Months 0.91094 0.0000000003196  
## Genotype:Age.Months 0.91094 0.0065405  
## Sex:Age.Months 0.91094 0.2474655  
## TestSite:Genotype:Age.Months 0.91094 0.3308864  
## TestSite:Sex:Age.Months 0.91094 0.0000556116122  
## Genotype:Sex:Age.Months 0.91094 0.1242803  
## TestSite:Genotype:Sex:Age.Months 0.91094 0.2571149  
## Stimulus.Length 0.86205 0.0001762  
## TestSite:Stimulus.Length 0.86205 0.0177085  
## Genotype:Stimulus.Length 0.86205 0.7589932  
## Sex:Stimulus.Length 0.86205 0.9861108  
## TestSite:Genotype:Stimulus.Length 0.86205 0.7602983  
## TestSite:Sex:Stimulus.Length 0.86205 0.5319123  
## Genotype:Sex:Stimulus.Length 0.86205 0.0889853  
## TestSite:Genotype:Sex:Stimulus.Length 0.86205 0.0693637  
## Age.Months:Stimulus.Length 0.84015 0.5247426  
## TestSite:Age.Months:Stimulus.Length 0.84015 0.7402292  
## Genotype:Age.Months:Stimulus.Length 0.84015 0.3151815  
## Sex:Age.Months:Stimulus.Length 0.84015 0.9316167  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.84015 0.6854150  
## TestSite:Sex:Age.Months:Stimulus.Length 0.84015 0.0917002  
## Genotype:Sex:Age.Months:Stimulus.Length 0.84015 0.0174204  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.84015 0.6465614  
##   
## Age.Months .   
## TestSite:Age.Months \*\*\*  
## Genotype:Age.Months \*\*   
## Sex:Age.Months   
## TestSite:Genotype:Age.Months   
## TestSite:Sex:Age.Months \*\*\*  
## Genotype:Sex:Age.Months   
## TestSite:Genotype:Sex:Age.Months   
## Stimulus.Length \*\*\*  
## TestSite:Stimulus.Length \*   
## Genotype:Stimulus.Length   
## Sex:Stimulus.Length   
## TestSite:Genotype:Stimulus.Length   
## TestSite:Sex:Stimulus.Length   
## Genotype:Sex:Stimulus.Length .   
## TestSite:Genotype:Sex:Stimulus.Length .   
## Age.Months:Stimulus.Length   
## TestSite:Age.Months:Stimulus.Length   
## Genotype:Age.Months:Stimulus.Length   
## Sex:Age.Months:Stimulus.Length   
## TestSite:Genotype:Age.Months:Stimulus.Length   
## TestSite:Sex:Age.Months:Stimulus.Length .   
## Genotype:Sex:Age.Months:Stimulus.Length \*   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.9357995  
## TestSite:Age.Months 0.9357995  
## Genotype:Age.Months 0.9357995  
## Sex:Age.Months 0.9357995  
## TestSite:Genotype:Age.Months 0.9357995  
## TestSite:Sex:Age.Months 0.9357995  
## Genotype:Sex:Age.Months 0.9357995  
## TestSite:Genotype:Sex:Age.Months 0.9357995  
## Stimulus.Length 0.9008955  
## TestSite:Stimulus.Length 0.9008955  
## Genotype:Stimulus.Length 0.9008955  
## Sex:Stimulus.Length 0.9008955  
## TestSite:Genotype:Stimulus.Length 0.9008955  
## TestSite:Sex:Stimulus.Length 0.9008955  
## Genotype:Sex:Stimulus.Length 0.9008955  
## TestSite:Genotype:Sex:Stimulus.Length 0.9008955  
## Age.Months:Stimulus.Length 0.9192388  
## TestSite:Age.Months:Stimulus.Length 0.9192388  
## Genotype:Age.Months:Stimulus.Length 0.9192388  
## Sex:Age.Months:Stimulus.Length 0.9192388  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.9192388  
## TestSite:Sex:Age.Months:Stimulus.Length 0.9192388  
## Genotype:Sex:Age.Months:Stimulus.Length 0.9192388  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.9192388  
## Pr(>F[HF])  
## Age.Months 0.0492598478689262  
## TestSite:Age.Months 0.0000000001940583  
## Genotype:Age.Months 0.0060804731472027  
## Sex:Age.Months 0.2474167124119867  
## TestSite:Genotype:Age.Months 0.3320960216368755  
## TestSite:Sex:Age.Months 0.0000460928612335  
## Genotype:Sex:Age.Months 0.1228740042556057  
## TestSite:Genotype:Sex:Age.Months 0.2572039757370442  
## Stimulus.Length 0.0001347182135822  
## TestSite:Stimulus.Length 0.0162084188373973  
## Genotype:Stimulus.Length 0.7680050050889792  
## Sex:Stimulus.Length 0.9881904319009067  
## TestSite:Genotype:Stimulus.Length 0.7693120213501098  
## TestSite:Sex:Stimulus.Length 0.5378450591531887  
## Genotype:Sex:Stimulus.Length 0.0861034403371795  
## TestSite:Genotype:Sex:Stimulus.Length 0.0665791779767165  
## Age.Months:Stimulus.Length 0.5334304198620197  
## TestSite:Age.Months:Stimulus.Length 0.7559077660967854  
## Genotype:Age.Months:Stimulus.Length 0.3138691757705268  
## Sex:Age.Months:Stimulus.Length 0.9425516537750922  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.7000295532651366  
## TestSite:Sex:Age.Months:Stimulus.Length 0.0847218307735584  
## Genotype:Sex:Age.Months:Stimulus.Length 0.0142432742667094  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.6600614398586957

#### 3xTG Mice

summary(probe.anova$TG3x$RewardLat, multivariate=FALSE)

## Warning in summary.Anova.mlm(probe.anova$TG3x$RewardLat, multivariate =  
## FALSE): HF eps > 1 treated as 1

##   
## Univariate Type III Repeated-Measures ANOVA Assuming Sphericity  
##   
## SS num Df Error SS  
## (Intercept) 1326.73 1 34.215  
## TestSite 2.46 1 34.215  
## Genotype 26.03 1 34.215  
## Sex 0.39 1 34.215  
## TestSite:Genotype 0.36 1 34.215  
## TestSite:Sex 1.85 1 34.215  
## Genotype:Sex 0.03 1 34.215  
## TestSite:Genotype:Sex 0.92 1 34.215  
## Age.Months 2.20 2 6.550  
## TestSite:Age.Months 1.50 2 6.550  
## Genotype:Age.Months 2.81 2 6.550  
## Sex:Age.Months 0.01 2 6.550  
## TestSite:Genotype:Age.Months 0.14 2 6.550  
## TestSite:Sex:Age.Months 0.08 2 6.550  
## Genotype:Sex:Age.Months 0.16 2 6.550  
## TestSite:Genotype:Sex:Age.Months 0.01 2 6.550  
## Stimulus.Length 0.11 3 2.535  
## TestSite:Stimulus.Length 0.02 3 2.535  
## Genotype:Stimulus.Length 0.03 3 2.535  
## Sex:Stimulus.Length 0.02 3 2.535  
## TestSite:Genotype:Stimulus.Length 0.04 3 2.535  
## TestSite:Sex:Stimulus.Length 0.02 3 2.535  
## Genotype:Sex:Stimulus.Length 0.05 3 2.535  
## TestSite:Genotype:Sex:Stimulus.Length 0.06 3 2.535  
## Age.Months:Stimulus.Length 0.04 6 5.502  
## TestSite:Age.Months:Stimulus.Length 0.06 6 5.502  
## Genotype:Age.Months:Stimulus.Length 0.08 6 5.502  
## Sex:Age.Months:Stimulus.Length 0.10 6 5.502  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.01 6 5.502  
## TestSite:Sex:Age.Months:Stimulus.Length 0.33 6 5.502  
## Genotype:Sex:Age.Months:Stimulus.Length 0.07 6 5.502  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.07 6 5.502  
## den Df F  
## (Intercept) 64 2481.6823  
## TestSite 64 4.5929  
## Genotype 64 48.6869  
## Sex 64 0.7350  
## TestSite:Genotype 64 0.6787  
## TestSite:Sex 64 3.4520  
## Genotype:Sex 64 0.0586  
## TestSite:Genotype:Sex 64 1.7144  
## Age.Months 128 21.4510  
## TestSite:Age.Months 128 14.6600  
## Genotype:Age.Months 128 27.4990  
## Sex:Age.Months 128 0.0722  
## TestSite:Genotype:Age.Months 128 1.3651  
## TestSite:Sex:Age.Months 128 0.7449  
## Genotype:Sex:Age.Months 128 1.5619  
## TestSite:Genotype:Sex:Age.Months 128 0.1196  
## Stimulus.Length 192 2.8176  
## TestSite:Stimulus.Length 192 0.5236  
## Genotype:Stimulus.Length 192 0.7022  
## Sex:Stimulus.Length 192 0.4772  
## TestSite:Genotype:Stimulus.Length 192 1.0796  
## TestSite:Sex:Stimulus.Length 192 0.4834  
## Genotype:Sex:Stimulus.Length 192 1.3042  
## TestSite:Genotype:Sex:Stimulus.Length 192 1.5767  
## Age.Months:Stimulus.Length 384 0.5056  
## TestSite:Age.Months:Stimulus.Length 384 0.6885  
## Genotype:Age.Months:Stimulus.Length 384 0.9100  
## Sex:Age.Months:Stimulus.Length 384 1.1101  
## TestSite:Genotype:Age.Months:Stimulus.Length 384 0.1030  
## TestSite:Sex:Age.Months:Stimulus.Length 384 3.7984  
## Genotype:Sex:Age.Months:Stimulus.Length 384 0.8711  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 384 0.8646  
## Pr(>F)   
## (Intercept) < 0.00000000000000022 \*\*\*  
## TestSite 0.035912 \*   
## Genotype 0.0000000020367 \*\*\*  
## Sex 0.394476   
## TestSite:Genotype 0.413088   
## TestSite:Sex 0.067776 .   
## Genotype:Sex 0.809444   
## TestSite:Genotype:Sex 0.195096   
## Age.Months 0.0000000092392 \*\*\*  
## TestSite:Age.Months 0.0000018504109 \*\*\*  
## Genotype:Age.Months 0.0000000001161 \*\*\*  
## Sex:Age.Months 0.930380   
## TestSite:Genotype:Age.Months 0.259043   
## TestSite:Sex:Age.Months 0.476820   
## Genotype:Sex:Age.Months 0.213703   
## TestSite:Genotype:Sex:Age.Months 0.887385   
## Stimulus.Length 0.040319 \*   
## TestSite:Stimulus.Length 0.666549   
## Genotype:Stimulus.Length 0.551826   
## Sex:Stimulus.Length 0.698532   
## TestSite:Genotype:Stimulus.Length 0.358920   
## TestSite:Sex:Stimulus.Length 0.694176   
## Genotype:Sex:Stimulus.Length 0.274347   
## TestSite:Genotype:Sex:Stimulus.Length 0.196374   
## Age.Months:Stimulus.Length 0.804157   
## TestSite:Age.Months:Stimulus.Length 0.659068   
## Genotype:Age.Months:Stimulus.Length 0.487550   
## Sex:Age.Months:Stimulus.Length 0.355664   
## TestSite:Genotype:Age.Months:Stimulus.Length 0.996044   
## TestSite:Sex:Age.Months:Stimulus.Length 0.001089 \*\*   
## Genotype:Sex:Age.Months:Stimulus.Length 0.516164   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.520999   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
##   
## Mauchly Tests for Sphericity  
##   
## Test statistic p-value  
## Age.Months 0.89861 0.03447  
## TestSite:Age.Months 0.89861 0.03447  
## Genotype:Age.Months 0.89861 0.03447  
## Sex:Age.Months 0.89861 0.03447  
## TestSite:Genotype:Age.Months 0.89861 0.03447  
## TestSite:Sex:Age.Months 0.89861 0.03447  
## Genotype:Sex:Age.Months 0.89861 0.03447  
## TestSite:Genotype:Sex:Age.Months 0.89861 0.03447  
## Stimulus.Length 0.87947 0.15323  
## TestSite:Stimulus.Length 0.87947 0.15323  
## Genotype:Stimulus.Length 0.87947 0.15323  
## Sex:Stimulus.Length 0.87947 0.15323  
## TestSite:Genotype:Stimulus.Length 0.87947 0.15323  
## TestSite:Sex:Stimulus.Length 0.87947 0.15323  
## Genotype:Sex:Stimulus.Length 0.87947 0.15323  
## TestSite:Genotype:Sex:Stimulus.Length 0.87947 0.15323  
## Age.Months:Stimulus.Length 0.77919 0.75272  
## TestSite:Age.Months:Stimulus.Length 0.77919 0.75272  
## Genotype:Age.Months:Stimulus.Length 0.77919 0.75272  
## Sex:Age.Months:Stimulus.Length 0.77919 0.75272  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.77919 0.75272  
## TestSite:Sex:Age.Months:Stimulus.Length 0.77919 0.75272  
## Genotype:Sex:Age.Months:Stimulus.Length 0.77919 0.75272  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.77919 0.75272  
##   
##   
## Greenhouse-Geisser and Huynh-Feldt Corrections  
## for Departure from Sphericity  
##   
## GG eps Pr(>F[GG])  
## Age.Months 0.90794 0.0000000371209  
## TestSite:Age.Months 0.90794 0.0000046821444  
## Genotype:Age.Months 0.90794 0.0000000006871  
## Sex:Age.Months 0.90794 0.915421  
## TestSite:Genotype:Age.Months 0.90794 0.258796  
## TestSite:Sex:Age.Months 0.90794 0.464986  
## Genotype:Sex:Age.Months 0.90794 0.215609  
## TestSite:Genotype:Sex:Age.Months 0.90794 0.868979  
## Stimulus.Length 0.92916 0.044386  
## TestSite:Stimulus.Length 0.92916 0.653286  
## Genotype:Stimulus.Length 0.92916 0.541902  
## Sex:Stimulus.Length 0.92916 0.684621  
## TestSite:Genotype:Stimulus.Length 0.92916 0.356408  
## TestSite:Sex:Stimulus.Length 0.92916 0.680343  
## Genotype:Sex:Stimulus.Length 0.92916 0.275071  
## TestSite:Genotype:Sex:Stimulus.Length 0.92916 0.199630  
## Age.Months:Stimulus.Length 0.92256 0.790061  
## TestSite:Age.Months:Stimulus.Length 0.92256 0.647261  
## Genotype:Age.Months:Stimulus.Length 0.92256 0.481873  
## Sex:Age.Months:Stimulus.Length 0.92256 0.355441  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.92256 0.994361  
## TestSite:Sex:Age.Months:Stimulus.Length 0.92256 0.001554  
## Genotype:Sex:Age.Months:Stimulus.Length 0.92256 0.509335  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.92256 0.513979  
##   
## Age.Months \*\*\*  
## TestSite:Age.Months \*\*\*  
## Genotype:Age.Months \*\*\*  
## Sex:Age.Months   
## TestSite:Genotype:Age.Months   
## TestSite:Sex:Age.Months   
## Genotype:Sex:Age.Months   
## TestSite:Genotype:Sex:Age.Months   
## Stimulus.Length \*   
## TestSite:Stimulus.Length   
## Genotype:Stimulus.Length   
## Sex:Stimulus.Length   
## TestSite:Genotype:Stimulus.Length   
## TestSite:Sex:Stimulus.Length   
## Genotype:Sex:Stimulus.Length   
## TestSite:Genotype:Sex:Stimulus.Length   
## Age.Months:Stimulus.Length   
## TestSite:Age.Months:Stimulus.Length   
## Genotype:Age.Months:Stimulus.Length   
## Sex:Age.Months:Stimulus.Length   
## TestSite:Genotype:Age.Months:Stimulus.Length   
## TestSite:Sex:Age.Months:Stimulus.Length \*\*   
## Genotype:Sex:Age.Months:Stimulus.Length   
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length   
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## HF eps  
## Age.Months 0.9329763  
## TestSite:Age.Months 0.9329763  
## Genotype:Age.Months 0.9329763  
## Sex:Age.Months 0.9329763  
## TestSite:Genotype:Age.Months 0.9329763  
## TestSite:Sex:Age.Months 0.9329763  
## Genotype:Sex:Age.Months 0.9329763  
## TestSite:Genotype:Sex:Age.Months 0.9329763  
## Stimulus.Length 0.9757557  
## TestSite:Stimulus.Length 0.9757557  
## Genotype:Stimulus.Length 0.9757557  
## Sex:Stimulus.Length 0.9757557  
## TestSite:Genotype:Stimulus.Length 0.9757557  
## TestSite:Sex:Stimulus.Length 0.9757557  
## Genotype:Sex:Stimulus.Length 0.9757557  
## TestSite:Genotype:Sex:Stimulus.Length 0.9757557  
## Age.Months:Stimulus.Length 1.0199821  
## TestSite:Age.Months:Stimulus.Length 1.0199821  
## Genotype:Age.Months:Stimulus.Length 1.0199821  
## Sex:Age.Months:Stimulus.Length 1.0199821  
## TestSite:Genotype:Age.Months:Stimulus.Length 1.0199821  
## TestSite:Sex:Age.Months:Stimulus.Length 1.0199821  
## Genotype:Sex:Age.Months:Stimulus.Length 1.0199821  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 1.0199821  
## Pr(>F[HF])  
## Age.Months 0.000000025425447  
## TestSite:Age.Months 0.000003636762023  
## Genotype:Age.Months 0.000000000423603  
## Sex:Age.Months 0.919805837942590  
## TestSite:Genotype:Age.Months 0.258914386109578  
## TestSite:Sex:Age.Months 0.468320001319452  
## Genotype:Sex:Age.Months 0.215125185672616  
## TestSite:Genotype:Sex:Age.Months 0.874300876940237  
## Stimulus.Length 0.041666065899938  
## TestSite:Stimulus.Length 0.662117566904350  
## Genotype:Stimulus.Length 0.548507140921944  
## Sex:Stimulus.Length 0.693889241123741  
## TestSite:Genotype:Stimulus.Length 0.358101230495948  
## TestSite:Sex:Stimulus.Length 0.689558077438979  
## Genotype:Sex:Stimulus.Length 0.274618845221953  
## TestSite:Genotype:Sex:Stimulus.Length 0.197493800811770  
## Age.Months:Stimulus.Length 0.804157246103013  
## TestSite:Age.Months:Stimulus.Length 0.659068193428229  
## Genotype:Age.Months:Stimulus.Length 0.487549898953880  
## Sex:Age.Months:Stimulus.Length 0.355663898138828  
## TestSite:Genotype:Age.Months:Stimulus.Length 0.996043718441438  
## TestSite:Sex:Age.Months:Stimulus.Length 0.001088957985657  
## Genotype:Sex:Age.Months:Stimulus.Length 0.516163723033795  
## TestSite:Genotype:Sex:Age.Months:Stimulus.Length 0.520999226656943