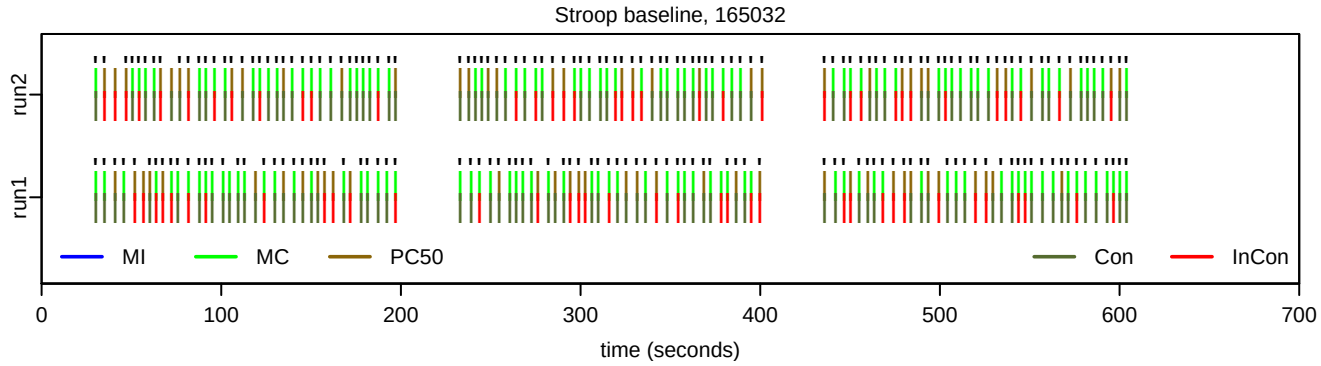
165032_Stroop_singleNEUROIMAGING.rnw
compiled November 27, 2018
This file summarizes 165032's behavioral performance on the DMCC Stroop task, NEUROIMAGING version.

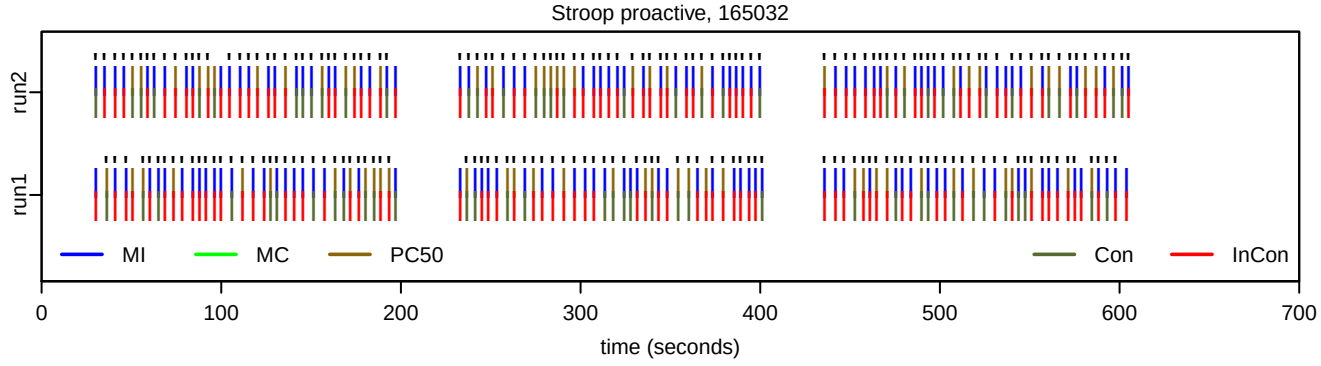
Quality Control: expected stimuli and responses?

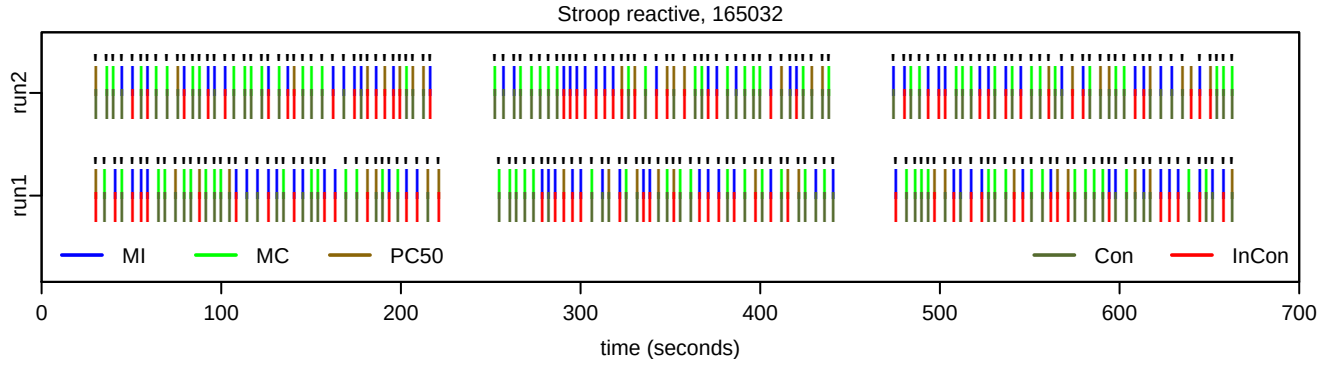
The first block of code reads in the eprime output files (e-recovery or .csv), and then checks whether the expected number and types of trials was present in each run and block. Unless a run was known to end early, any error messages printed below should be investigated.

```
## [1] "Found an error in the Stroop trial counting or color matching? FALSE"
```

These plots show the time and type of every trial. If accuracy is available, black tick marks indicate correct trials. The trial types should be mixed within blocks, and errors should be approximately equal across the runs. There are many more Congruent trials (olive green lines in second row) than InCongruent (red lines) in baseline, but more InCongruent (red) in proactive. There are no blue (MI) trials in baseline, and no green (MC) in proactive. Brown (PC50) lines occur in all runs. The reactive runs are longer than baseline and proactive.

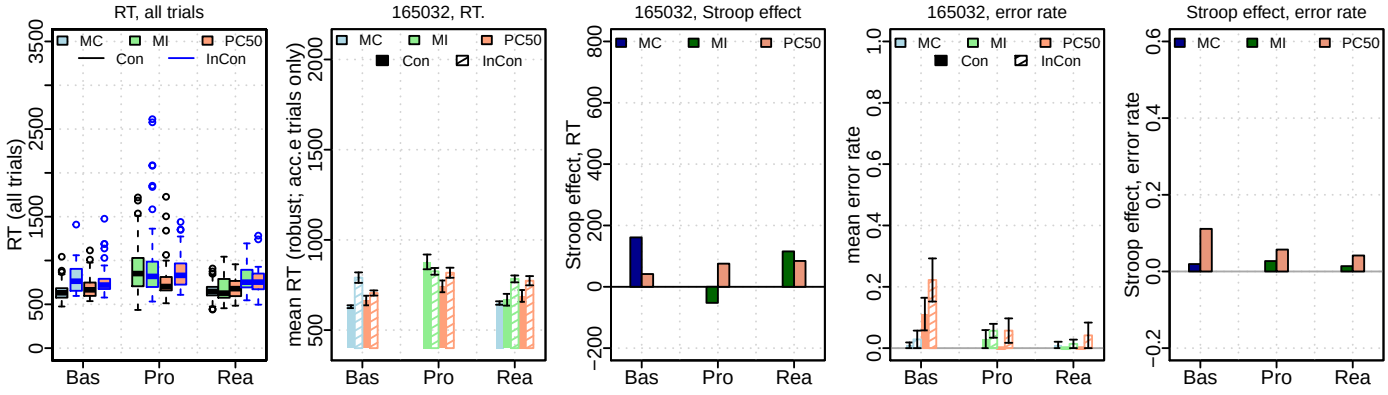






Single-subject statistics for 165032

The Stroop effect is incongruent - congruent (and hopefully positive). For PC50, we hope that the difference will be smaller for Pro than Rea or Bas We also hope for a smaller effect in MI (Pro, Rea) than MC (Bas).
The boxplots show the range of reaction times detected by the matlab code. Boxes should be present in all sessions, and all approximately the same size. If the boxplots are very flat (more like lines) for a session, the matlab code likely failed, and the recordings should be investigated. Numbers printed below the boxplots are the number of NAs. A few (less than 5) in a run are ok; more should be investigated.
Robust statistics for RT? TRUE (Robust statistics never used for error rate, since typically very few errors.)




```
## [1] mean (robust) RT estimates
##      session trial.type lwpc.type num.trials silence.mean silence.sem
## 1   baseline        Con        MC        107     629.7931    7.745964
## 2   baseline        Con      PC50         32     663.9231   26.488939
## 3   baseline      InCon        MC         34     790.8571   28.980836
## 4   baseline      InCon      PC50         28     705.6667   14.306321
## 5  proactive        Con        MI         33     878.0556   40.817084
## 6  proactive        Con      PC50         35     742.5172   32.553782
## 7  proactive      InCon        MI        100     825.6750   18.559185
## 8  proactive      InCon      PC50         33     817.9815   27.842291
## 9   reactive        Con        MC         95     650.0519    9.554712
## 10  reactive        Con        MI         24     668.2750   32.557928
## 11  reactive        Con      PC50         24     689.5000   32.625972
## 12  reactive      InCon        MI         71     783.7281   19.016429
## 13  reactive      InCon      PC50         23     773.8421   25.530157
## [1]
## [1] mean performance estimates
##      session trial.type lwpc.type total.num.trials num.haveACC    ERR.mean     ERR.sem
## 1   baseline        Con        MC              108         108 0.009259259 0.009259259
## 2   baseline        Con      PC50               36          36 0.111111111 0.053121272
## 3   baseline      InCon        MC               36          35 0.028571429 0.028571429
## 4   baseline      InCon      PC50               36          36 0.222222222 0.070272837
## 5  proactive        Con        MI               36          34 0.029411765 0.029411765
## 6  proactive        Con      PC50               36          35 0.000000000 0.000000000
## 7  proactive      InCon        MI              108         106 0.056603774 0.022551483
## 8  proactive      InCon      PC50               36          35 0.057142857 0.039807460
## 9   reactive        Con        MC               96          96 0.010416667 0.010416667
## 10  reactive        Con        MI               24          24 0.000000000 0.000000000
## 11  reactive        Con      PC50               24          24 0.000000000 0.000000000
## 12  reactive      InCon        MI               72          72 0.013888889 0.013888889
## 13  reactive      InCon      PC50               24          24 0.041666667 0.041666667
```

Stroop derived measures for 165032

Calculated from the mean RT and error rates in the above tables.

```
## [1] Stroop effect (InCon - Con)
##     session lwpc.type   RT.diff   ERR.diff
## 1  baseline        MC 161.06404 0.01931217
## 2  baseline      PC50  41.74359 0.11111111
## 3 proactive        MI -52.38056 0.02719201
## 4 proactive      PC50  75.46424 0.05714286
## 5  reactive        MI 115.45307 0.01388889
## 6  reactive      PC50  84.34211 0.04166667
## [1]
## [1] "Congruency cost, Pro-Bas ERR: -0.111"
## [1] "Congruency cost, Rea-Bas ERR: -0.111"
## [1] "Congruency cost, Pro-Bas RT: 78.594"
## [1] "Congruency cost, Rea-Bas RT: 25.577"
## [1]
## [1] "Transfer cost, Bas ERR: 0.194"
## [1] "Transfer cost, Pro ERR: 0.001"
## [1] "Transfer cost, Rea ERR: 0.028"
## [1] "Transfer cost, Bas RT: -85.19"
## [1] "Transfer cost, Pro RT: -7.694"
## [1] "Transfer cost, Rea RT: -9.886"
```