

R Program to Run RtoWINBUGS – This version reads the data from a text file on disk

```
#
# Attempt to Run simple Probit Copying Ernesto's Code
#
library(arm)
setwd("C:/calvo")
#
# %%%%%%%%%%%
# Read in data from STATA output
# %%%%%%%%%%%
#
rcx.file <- "c:/calvo/h106_data.txt"
#
# X[,1] = 1 if bush vote >= 50%
# X[,2] = 1 if Gore vote >= 50%
# X[,3] = Bush Percentage in CD
# X[,4] = Gore Percentage in CD
# X[,5] = Black Percentage in CD
# X[,6] = 1 if Southern State (11 states of Confederacy + OK + KY
# X[,7] = Hispanic Percentage in CD
# X[,8] = Median Family Income (in thousands) in CD
# X[,9] = Percent Owner-Occupied Housing
# X[,10] = DW-NOMINATE 1st Dimension
# X[,11] = DW-NOMINATE 2nd Dimension
#
# Standard fields and their widths
#
rcx.fields <-
c("ybush", "ygore", "bushvote", "gorevote", "black", "south", "hispanic", "income", "owner",
  "dwnom1n", "dwnom2n")
rcx.fieldWidths <- c(9,11,10,10,11,10,11,11,11,11,11)
#
# Input File
#
TT <-
read.fwf(file=rcx.file,widths=rcx.fieldWidths,as.is=TRUE,col.names=rcx.fields)
dim(TT)
nrow <- length(TT[,1])
#ncol <- length(TT[1,])
#data = read.dta("hdmg106_2009_fixed.dta")
#attach(data)

V <- cbind(TT[,1],TT[,5],TT[,6],TT[,7],TT[,8],TT[,9],TT[,10],TT[,11])

N = nrow
K = ncol(V)

data.data = list(N=N,K=K,V=V)

data.inits = function() {list(beta=runif(K,-2,2), delta=runif(N,-1,1))}

data.parameters = c("beta")

wide.sim = bugs(data.data, data.inits,
  data.parameters,"h106_probit_RtoWINBUGS_model.txt", n.chains=4, n.thin=1,
  n.burnin=15000,n.iter=40000, debug=T)

detach(data)
```

Log File From R2WINBUGS

```

display(log)
check(C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/h106_probit_RtoWINBUGS_model.txt)
model is syntactically correct
data(C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/data.txt)
data loaded
compile(4)
model compiled
inits(1,C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/inits1.txt)
chain initialized but other chain(s) contain uninitialized variables
inits(2,C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/inits2.txt)
chain initialized but other chain(s) contain uninitialized variables
inits(3,C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/inits3.txt)
chain initialized but other chain(s) contain uninitialized variables
inits(4,C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/inits4.txt)
model is initialized
gen.inits()
command #Bugs:gen.inits cannot be executed (is greyed out)
thin.updater(1)
update(15000)
set(beta)
set(deviance)
dic.set()
update(25000)
coda(*,C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/coda)
stats(*)

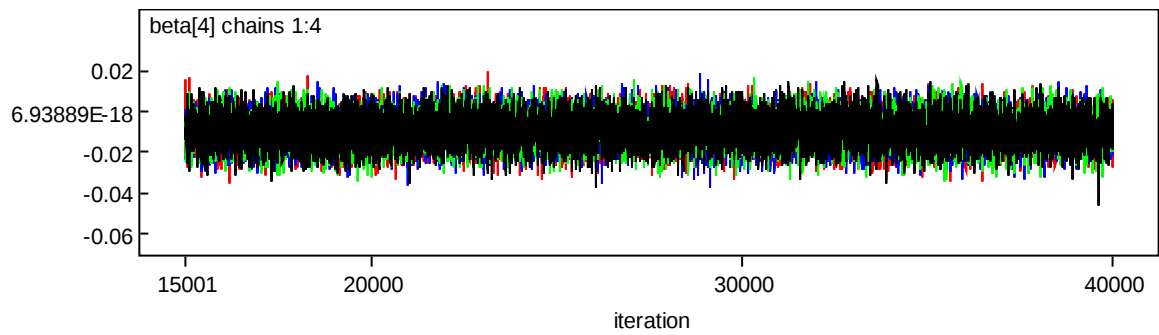
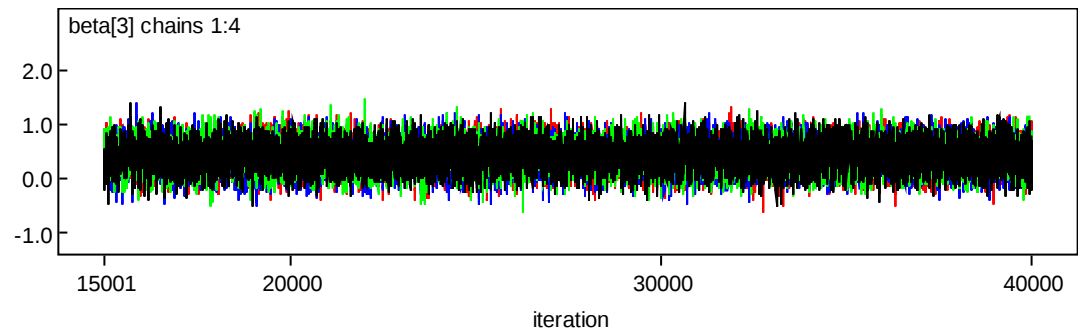
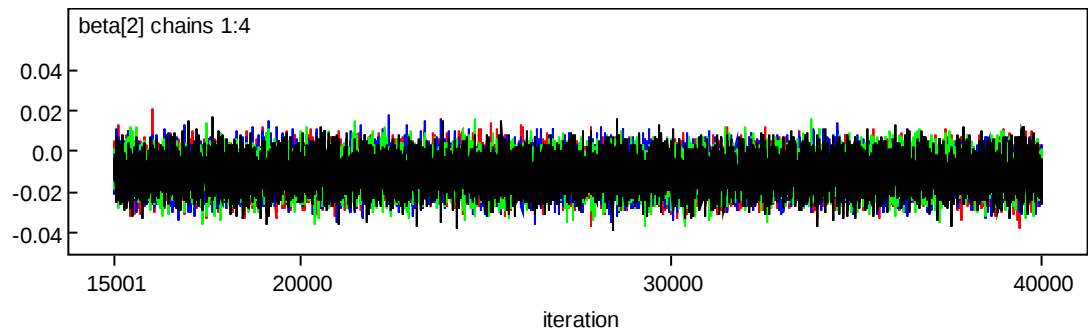
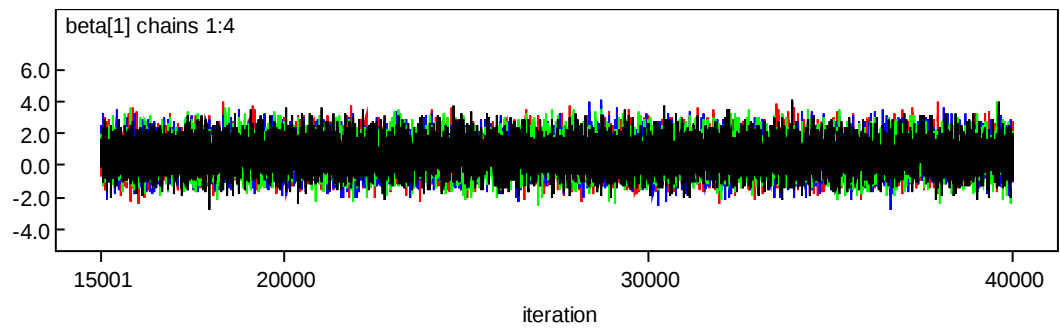
Node statistics
  node      mean      sd      MC error 2.5%      median      97.5%      start      sample
beta[1]    0.6577    0.8384    0.006402 -0.9619    0.6525    2.315    15001    100000
beta[2]   -0.01095    0.006821    4.895E-5 -0.02418   -0.011    0.002577    15001    100000
beta[3]    0.4028    0.2418    0.001864 -0.07036    0.4015    0.8802    15001    100000
beta[4]   -0.009434    0.006907    5.474E-5 -0.02294   -0.009409    0.00423    15001    100000
beta[5]   -0.03236    0.01344    1.075E-4 -0.05859   -0.03236   -0.006079    15001    100000
beta[6]    0.004185    0.01096    8.175E-5 -0.0175    0.004249    0.0253    15001    100000
beta[7]    2.785     0.2339    0.001814  2.326     2.785     3.243    15001    100000
beta[8]    0.9214     0.2409    0.001887  0.4474    0.9223    1.393    15001    100000
deviance   239.8      14.72     0.04829   212.0     239.4     269.5    15001    100000

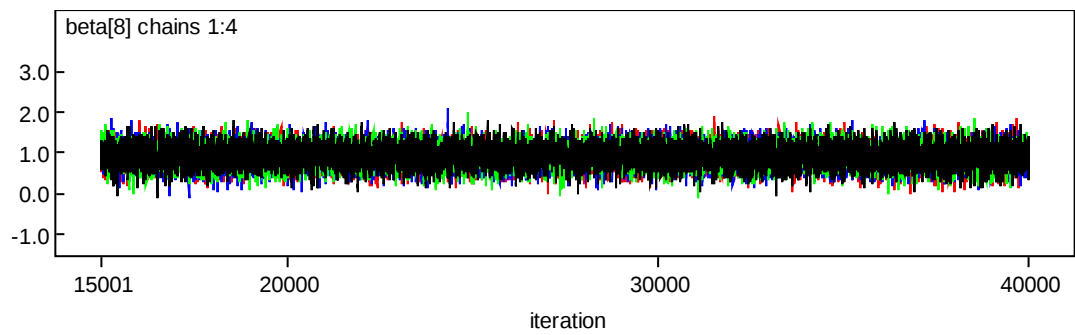
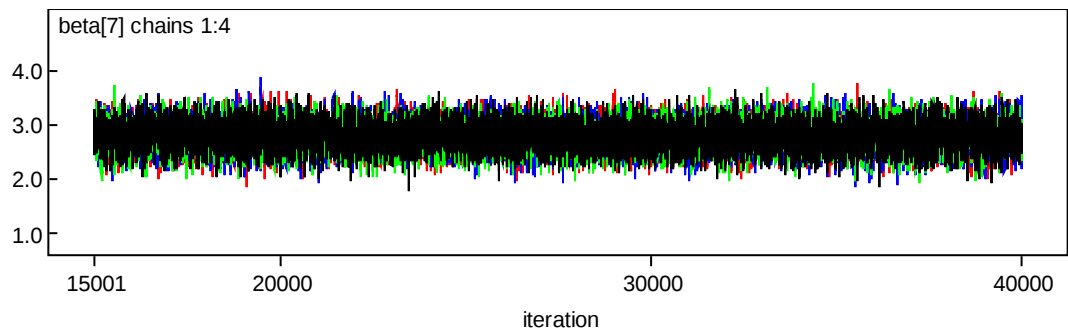
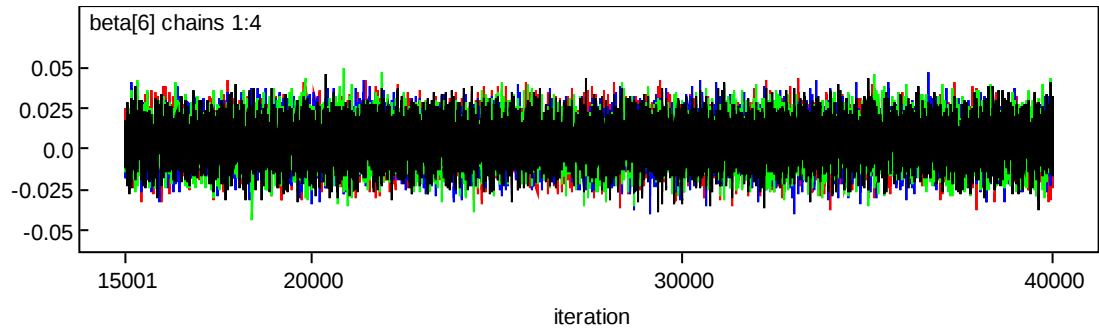
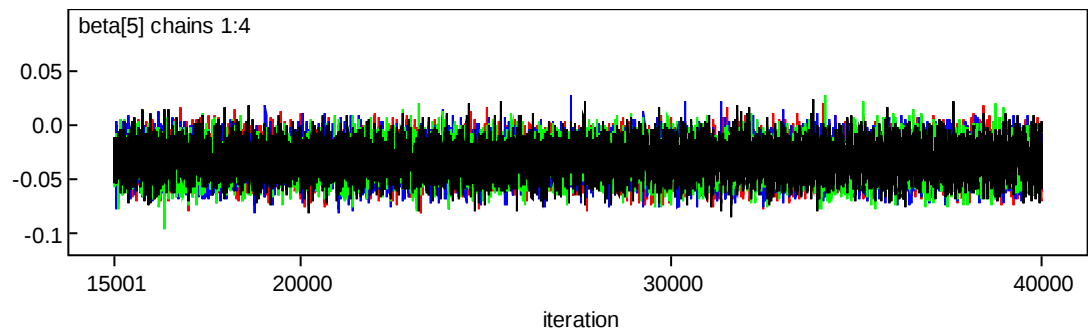
dic.stats()

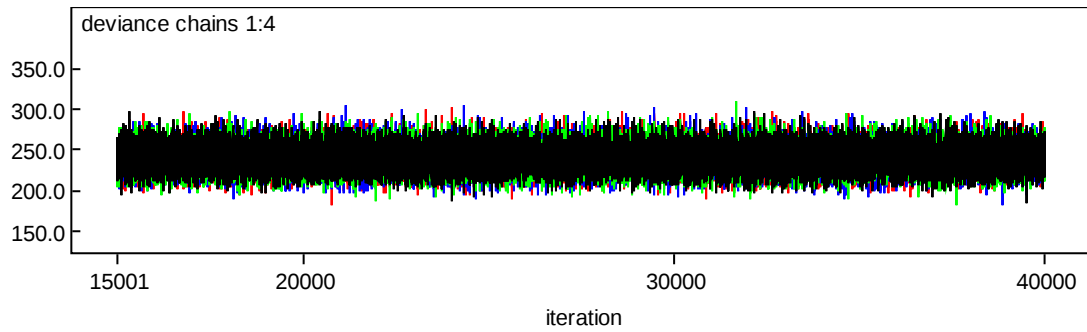
DIC
Dbar = post.mean of -2logL; Dhat = -2LogL at post.mean of stochastic nodes
  Dbar      Dhat      pD      DIC
V      217.913    131.096    86.817    304.729
delta   21.880     19.237     2.643     24.523
total   239.793    150.333    89.460    329.252
history(*,C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/history.odc)

History

```







```
save(C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/log.odc)
save(C:/DOCUME~1/ADMINI~1/LOCALS~1/Temp/RtmpxqqeVs/log.txt)
```

Output Done While WINBUGS is Still Running

Gelman Rubin statistic

