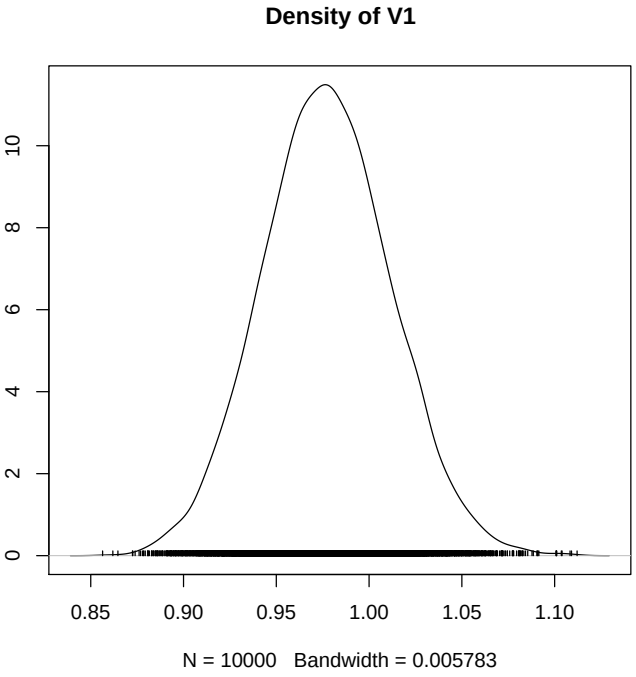
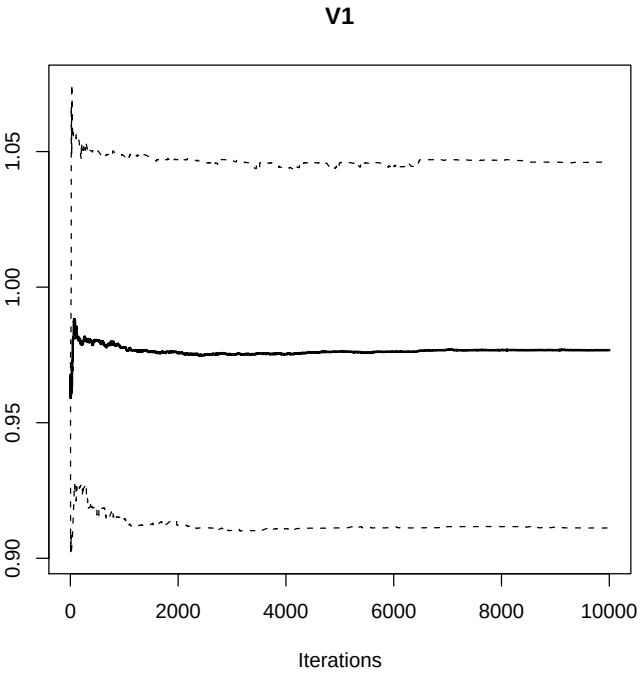
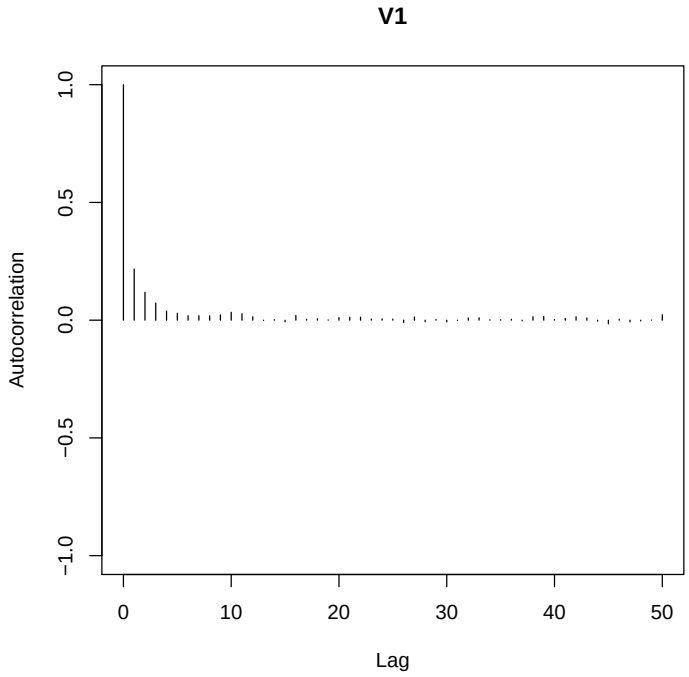
```
> library(coda)
> t4nutims <- read.table("t4nu.txt", sep = ",")
> t4tautims <- read.table("t4taue.txt", sep = ",")
> normnutims <- read.table("normnu.txt", sep = ",")
> normtautims <- read.table("normtaue.txt", sep = ",")
> t10nutims <- read.table("t10nu.txt", sep = ",")
> t10tautims <- read.table("t10taue.txt", sep = ",")
> ndraw <- dim(normnutims)[1]
```

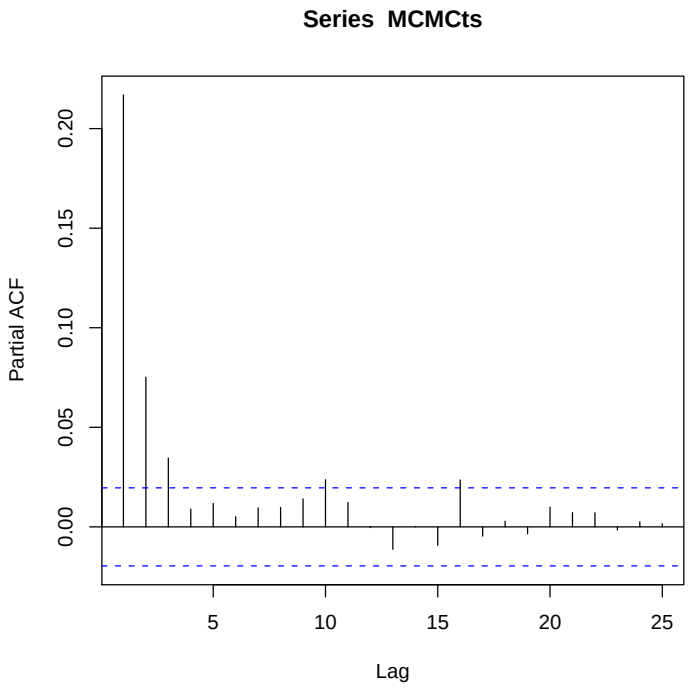
1 Normal Data

```
> MCMCts <- mcmc(data = normtautims, start = 1, end = ndraw, thin = 1)
> summary(MCMCts)

Iterations = 1:10000
Thinning interval = 1
Number of chains = 1
Sample size per chain = 10000

1. Empirical mean and standard deviation for each variable,
   plus standard error of the mean:

          Mean             SD       Naive SE Time-series SE
     0.9772086      0.0345558      0.0003456      0.0005596

2. Quantiles for each variable:

  2.5%    25%    50%    75%  97.5%
0.9111 0.9538 0.9767 1.0000 1.0461

> heidel.diag(MCMCts)

   Stationarity start     p-value
   test         iteration
V1 passed       1         0.501

   Halfwidth Mean  Halfwidth
   test
V1 passed    0.977 0.00110
```


Density of V1
0
2
4
6
8
10
0.85
0.90
0.95
1.00
1.05
1.10
N = 10000 Bandwidth = 0.005783


V1
0.90
0.95
1.00
1.05
0
2000
4000
6000
8000
10000
Iterations






```
> effectiveSize(MCMCts)

      V1
```

```
5164.511
```

```
> raftery.diag(MCMCts, q = 0.05, r = 0.025, 0.95)
```

```
Quantile (q) = 0.05
Accuracy (r) = +/- 0.025
Probability (s) = 0.95

    Burn-in  Total Lower bound  Dependence
    (M)      (N)   (Nmin)       factor (I)
 V1 3        340   292          1.16
```

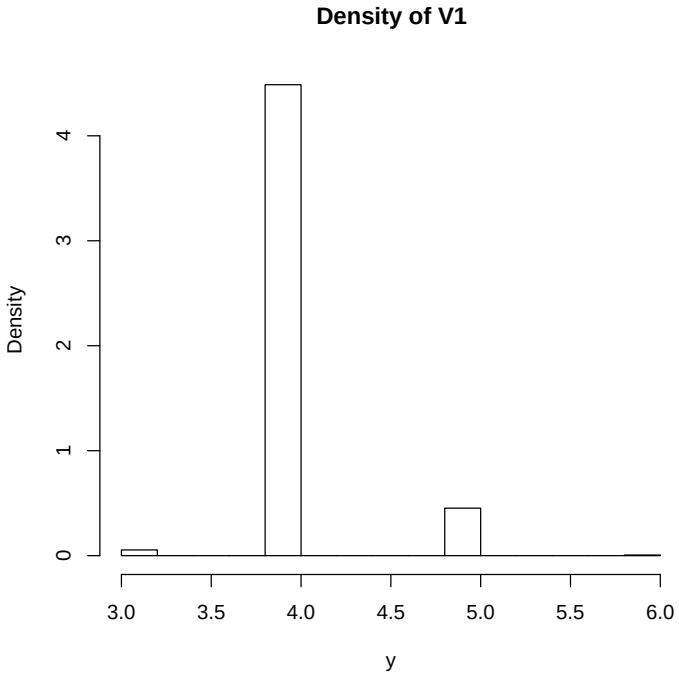
2 t_4 Data

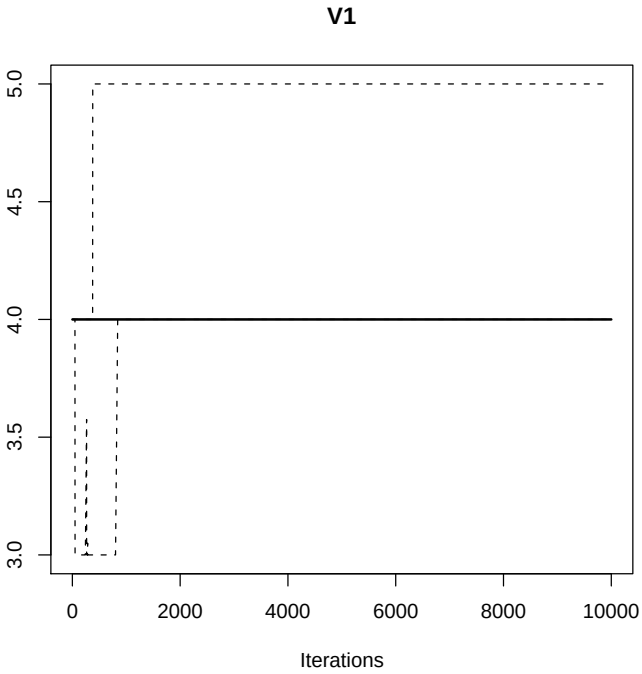
```
> MCMCts <- mcmc(data = t4nutims, start = 1, end = ndraw, thin = 1)
> summary(MCMCts)
```

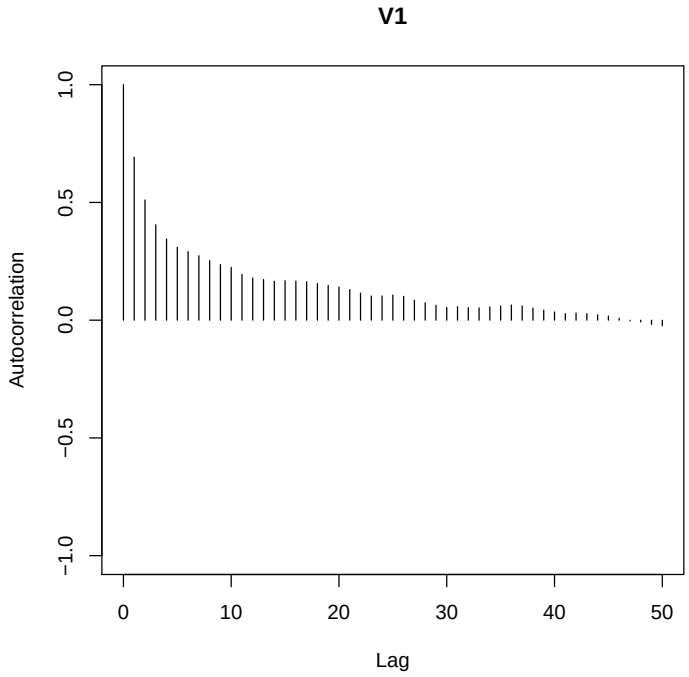
```
Iterations = 1:10000
Thinning interval = 1
Number of chains = 1
Sample size per chain = 10000

1. Empirical mean and standard deviation for each variable,
   plus standard error of the mean:

          Mean             SD       Naive SE Time-series SE
      4.082000       0.315414       0.003154       0.012689

2. Quantiles for each variable:

 2.5%   25%   50%   75% 97.5%
    4     4     4     4     5
```

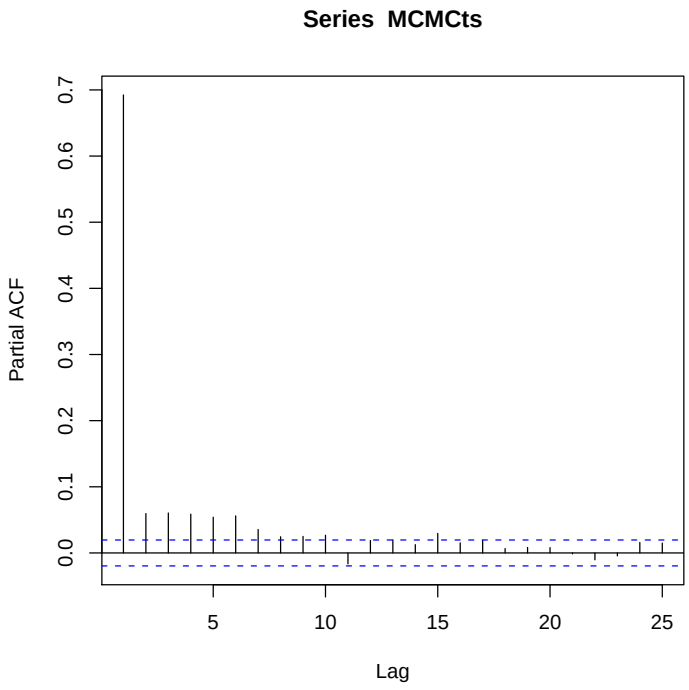
```
> heidel.diag(MCMCts)
```

```
   Stationarity start     p-value
   test         iteration
V1 passed       1         0.193

   Halfwidth Mean Halfwidth
   test
V1 passed    4.08 0.0249
```


Density of V1
Density
0
1
2
3
4
3.0
3.5
4.0
4.5
5.0
5.5
6.0
y


V1
3.0
3.5
4.0
4.5
5.0
0
2000
4000
6000
8000
10000
Iterations






```
> effectiveSize(MCMCts)

      V1
```

```
668.2405
```

```
> raftery.diag(MCMCts, q = 0.5, r = 0.05, 0.95)
```

```
Quantile (q) = 0.5
Accuracy (r) = +/- 0.05
Probability (s) = 0.95

    Burn-in  Total Lower bound  Dependence
    (M)      (N)   (Nmin)       factor (I)
 V1 36       1398  385          3.63
```

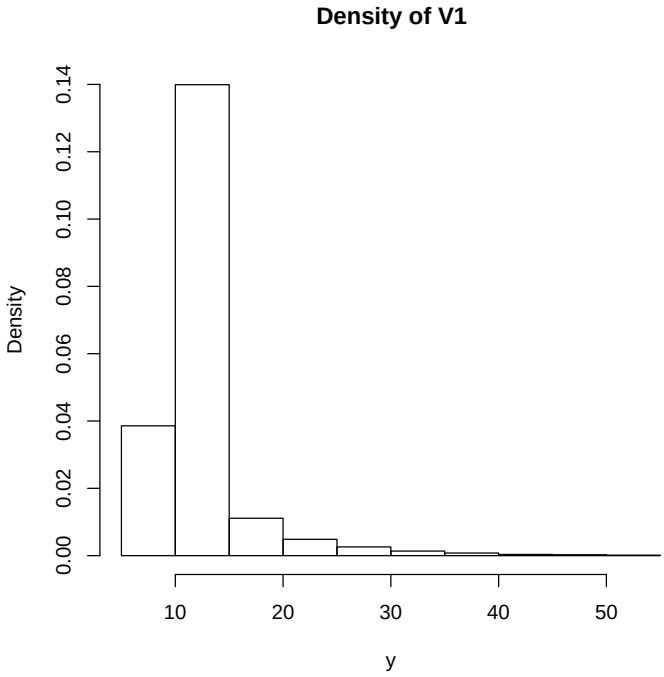
3 t_{10} Data

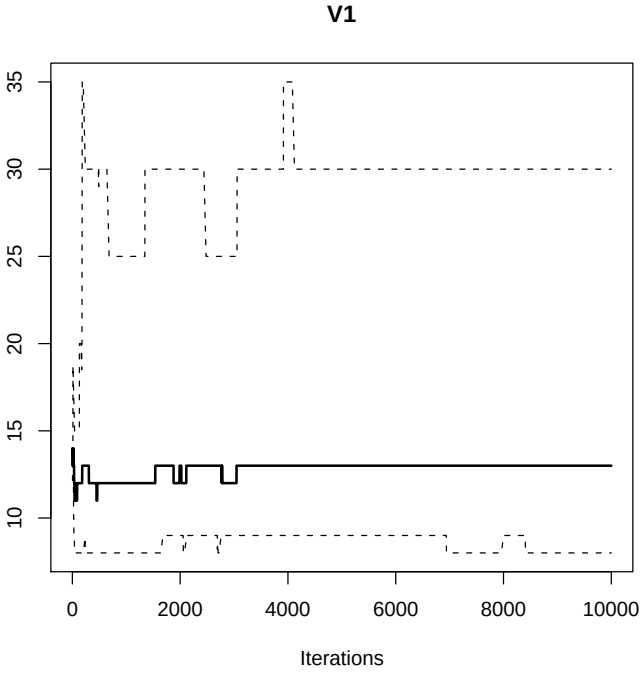
```
> MCMCts <- mcmc(data = t10nutims, start = 1, end = ndraw, thin = 1)
> summary(MCMCts)
```

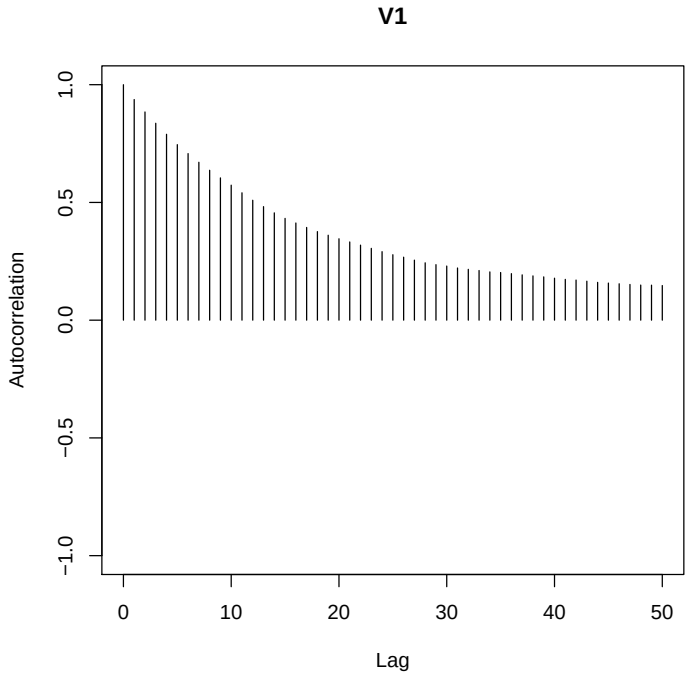
```
Iterations = 1:10000
Thinning interval = 1
Number of chains = 1
Sample size per chain = 10000

1. Empirical mean and standard deviation for each variable,
   plus standard error of the mean:

          Mean             SD       Naive SE Time-series SE
      13.57270        4.98259        0.04983        0.36378

2. Quantiles for each variable:

 2.5%   25%   50%   75% 97.5%
    8    11    13    14    30
```

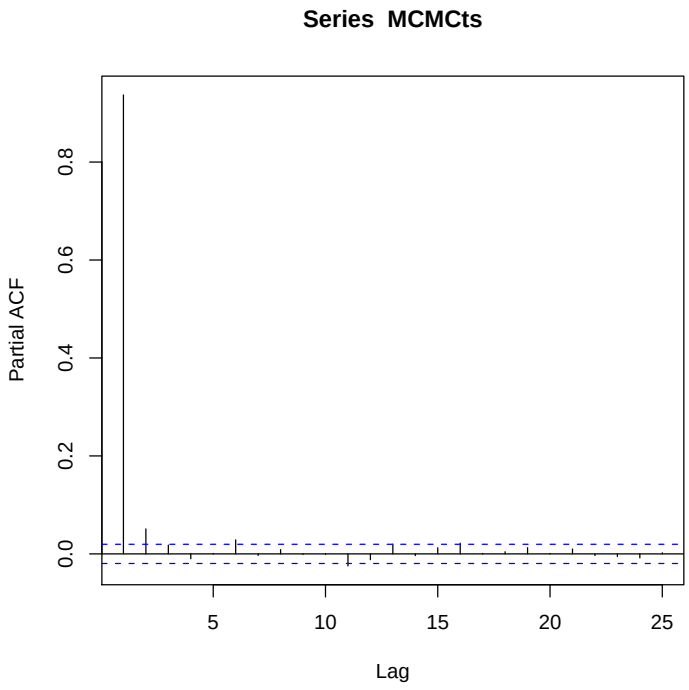
```
> heidel.diag(MCMCts)
```

```
   Stationarity start     p-value
   test         iteration
V1 passed       4001      0.331

   Halfwidth Mean Halfwidth
   test
V1 passed    13.1 0.583
```


Density of V1
Density
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
10
20
30
40
50
y


V1
10
15
20
25
30
35
0
2000
4000
6000
8000
10000
Iterations






```
> effectiveSize(MCMCts)
```

```
      V1
```

```
272.1943

> raftery.diag(MCMCts, q = 0.5, r = 0.05, 0.95)

Quantile (q) = 0.5
Accuracy (r) = +/- 0.05
Probability (s) = 0.95

    Burn-in  Total Lower bound  Dependence
    (M)      (N)   (Nmin)       factor (I)
 V1 64       7176  385          18.6
```