

spatialExample

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```
library(rgl)
library(projectR)
library(psych)
library(fields)
library(CoGAPS)
library(magick)
library(BiocParallel)
source('./utils.R')

# Fix rgl crashing issue
Sys.setenv(LIBGL_ALWAYS_SOFTWARE=1)
```

Overview

Data Import

```
# Read Raw data
raw.data = read.csv("dge_raw.txt", sep = "\t", header = F)
raw.data.genes = raw.data$V1
raw.data$V1 = NULL

print(grep("", raw.data.genes, value = T, fixed = T))

## [1] "beta'COP" "PP2A-B"

raw.data.genes = gsub("", "", raw.data.genes, fixed = T)
raw.data = as.matrix(raw.data)
rownames(raw.data) = raw.data.genes

# Read Normalized data
normalized.data = read.csv("dge_normalized.txt", sep = "\t")

print(grep("", rownames(normalized.data), value = T, fixed = T))

## [1] "beta'COP" "PP2A-B"

normalized.data.genes<-gsub("", "", rownames(normalized.data), fixed = T)
normalized.data <- as.matrix(normalized.data)
rownames(normalized.data) <- normalized.data.genes

# In situ data
insitu.matrix = read.csv("binarized_bdtnp.csv", check.names=F)
insitu.genes_orig <- colnames(insitu.matrix)

missingGenes = insitu.genes_orig[which(!insitu.genes_orig %in% normalized.data.genes)]
```

```

print(missingGenes)

## character(0)

insitu.genes = gsub(".", "-", insitu.genes_orig, fixed = T)
insitu.genes = gsub("-spl-", "(spl)", insitu.genes, fixed = T)
stopifnot(all(insitu.genes %in% raw.data.genes))
stopifnot(all(insitu.genes %in% normalized.data.genes))
insitu.matrix = as.matrix(insitu.matrix)
colnames(insitu.matrix) = insitu.genes

# Geometry data
geometry <- read.csv("geometry.txt", sep = " ")
geometry.inv <- geometry
geometry.inv$ycoord <- -(geometry.inv$ycoord)
full.geometry <- rbind(geometry, geometry.inv)
xlim <- c(-max(abs(geometry)), max(abs(geometry)))
ylim <- xlim
zlim <- ylim

# Visualize the geometry
plot3d(full.geometry, xlim = xlim, ylim = ylim, zlim = zlim)

```

CoGAPS on Gene expression data

```

# This can take few hours to run depending on the machine
nPat <- 20
runParams <- new("CogapsParams", nPatterns = nPat, seed = 123, nIterations = 50000)
dataCogaps <- CoGAPS(normalized.data, params = runParams, nThreads = 10)

```

projectR on the cogapsResults

```

nPat <- 20
# importing the pre-computed cogaps result
dataCogaps <- readRDS('drosophilaNormalizedData20result2.rds')
projPosCgps <- projectR(t(insitu.matrix), loadings = dataCogaps, full = T)

## [1] "84 row names matched between data and loadings"
## [1] "Updated dimension of data: 84 3039"

```

Visualize and save the patterns

Remove eval = FALSE to visualize all patterns

```

for(x in 1:nPat) {
  i <- x
  pp.plot <- c(projPosCgps[[1]][i, ], projPosCgps[[1]][i, ])
  par3d(windowRect = c(0, 50, 800, 800))

  plot3d(
    full.geometry,
    xlim = xlim,
    ylim = ylim,
    zlim = zlim,

```

```

        col = myColorRamp(palette = inferno(100), pp.plot),
        size = 10,
        box = F,
        axes = F,
        xlab = "",
        ylab = "",
        zlab = "",
        aspect = T
    )
    bgplot3d(suppressWarnings (
        image.plot(
            legend.only = TRUE,
            nlevel = 100,
            zlim = c(min(pp.plot), max(pp.plot)),
            legend.args = list(text = 'Projected pattern'),
            col = inferno(100)
        )
    ))
    snapshot3d(
        filename = paste0(
            "./plots/png/cpgs",
            as.character(nPat),
            "Pattern",
            as.character(i),
            ".png"
        ),
        fmt = "png"
    )
    movie3d(
        spin3d(axis = c(1, 1, 1), rpm = 5),
        duration = 10,
        movie = paste0("cpgs", as.character(nPat), "Pattern", as.character(i)),
        dir = "./plots",
        convert = TRUE
    )
    while (rgl.cur() > 0) {
        rgl.close()
    }
}

```

```

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cpgs20Pattern1.png' for
## writing

```

```

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

```

```

## Writing 'cpgs20Pattern1000.png'
Writing 'cpgs20Pattern1001.png'
Writing 'cpgs20Pattern1002.png'
Writing 'cpgs20Pattern1003.png'
Writing 'cpgs20Pattern1004.png'
Writing 'cpgs20Pattern1005.png'
Writing 'cpgs20Pattern1006.png'
Writing 'cpgs20Pattern1007.png'
Writing 'cpgs20Pattern1008.png'

```

Writing 'cgps20Pattern1009.png'
Writing 'cgps20Pattern1010.png'
Writing 'cgps20Pattern1011.png'
Writing 'cgps20Pattern1012.png'
Writing 'cgps20Pattern1013.png'
Writing 'cgps20Pattern1014.png'
Writing 'cgps20Pattern1015.png'
Writing 'cgps20Pattern1016.png'
Writing 'cgps20Pattern1017.png'
Writing 'cgps20Pattern1018.png'
Writing 'cgps20Pattern1019.png'
Writing 'cgps20Pattern1020.png'
Writing 'cgps20Pattern1021.png'
Writing 'cgps20Pattern1022.png'
Writing 'cgps20Pattern1023.png'
Writing 'cgps20Pattern1024.png'
Writing 'cgps20Pattern1025.png'
Writing 'cgps20Pattern1026.png'
Writing 'cgps20Pattern1027.png'
Writing 'cgps20Pattern1028.png'
Writing 'cgps20Pattern1029.png'
Writing 'cgps20Pattern1030.png'
Writing 'cgps20Pattern1031.png'
Writing 'cgps20Pattern1032.png'
Writing 'cgps20Pattern1033.png'
Writing 'cgps20Pattern1034.png'
Writing 'cgps20Pattern1035.png'
Writing 'cgps20Pattern1036.png'
Writing 'cgps20Pattern1037.png'
Writing 'cgps20Pattern1038.png'
Writing 'cgps20Pattern1039.png'
Writing 'cgps20Pattern1040.png'
Writing 'cgps20Pattern1041.png'
Writing 'cgps20Pattern1042.png'
Writing 'cgps20Pattern1043.png'
Writing 'cgps20Pattern1044.png'
Writing 'cgps20Pattern1045.png'
Writing 'cgps20Pattern1046.png'
Writing 'cgps20Pattern1047.png'
Writing 'cgps20Pattern1048.png'
Writing 'cgps20Pattern1049.png'
Writing 'cgps20Pattern1050.png'
Writing 'cgps20Pattern1051.png'
Writing 'cgps20Pattern1052.png'
Writing 'cgps20Pattern1053.png'
Writing 'cgps20Pattern1054.png'
Writing 'cgps20Pattern1055.png'
Writing 'cgps20Pattern1056.png'
Writing 'cgps20Pattern1057.png'
Writing 'cgps20Pattern1058.png'
Writing 'cgps20Pattern1059.png'
Writing 'cgps20Pattern1060.png'
Writing 'cgps20Pattern1061.png'
Writing 'cgps20Pattern1062.png'

```

Writing 'cgps20Pattern1063.png'
Writing 'cgps20Pattern1064.png'
Writing 'cgps20Pattern1065.png'
Writing 'cgps20Pattern1066.png'
Writing 'cgps20Pattern1067.png'
Writing 'cgps20Pattern1068.png'
Writing 'cgps20Pattern1069.png'
Writing 'cgps20Pattern1070.png'
Writing 'cgps20Pattern1071.png'
Writing 'cgps20Pattern1072.png'
Writing 'cgps20Pattern1073.png'
Writing 'cgps20Pattern1074.png'
Writing 'cgps20Pattern1075.png'
Writing 'cgps20Pattern1076.png'
Writing 'cgps20Pattern1077.png'
Writing 'cgps20Pattern1078.png'
Writing 'cgps20Pattern1079.png'
Writing 'cgps20Pattern1080.png'
Writing 'cgps20Pattern1081.png'
Writing 'cgps20Pattern1082.png'
Writing 'cgps20Pattern1083.png'
Writing 'cgps20Pattern1084.png'
Writing 'cgps20Pattern1085.png'
Writing 'cgps20Pattern1086.png'
Writing 'cgps20Pattern1087.png'
Writing 'cgps20Pattern1088.png'
Writing 'cgps20Pattern1089.png'
Writing 'cgps20Pattern1090.png'
Writing 'cgps20Pattern1091.png'
Writing 'cgps20Pattern1092.png'
Writing 'cgps20Pattern1093.png'
Writing 'cgps20Pattern1094.png'
Writing 'cgps20Pattern1095.png'
Writing 'cgps20Pattern1096.png'
Writing 'cgps20Pattern1097.png'
Writing 'cgps20Pattern1098.png'
Writing 'cgps20Pattern1099.png'
Writing 'cgps20Pattern1100.png'
## Will create: ./plots/cgps20Pattern1.gif
## Executing: 'magick -delay 1x10 cgps20Pattern1*.png cgps20Pattern1.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern2.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern2000.png'
Writing 'cgps20Pattern2001.png'
Writing 'cgps20Pattern2002.png'
Writing 'cgps20Pattern2003.png'
Writing 'cgps20Pattern2004.png'
Writing 'cgps20Pattern2005.png'
Writing 'cgps20Pattern2006.png'

```

Writing 'cgps20Pattern2007.png'
Writing 'cgps20Pattern2008.png'
Writing 'cgps20Pattern2009.png'
Writing 'cgps20Pattern2010.png'
Writing 'cgps20Pattern2011.png'
Writing 'cgps20Pattern2012.png'
Writing 'cgps20Pattern2013.png'
Writing 'cgps20Pattern2014.png'
Writing 'cgps20Pattern2015.png'
Writing 'cgps20Pattern2016.png'
Writing 'cgps20Pattern2017.png'
Writing 'cgps20Pattern2018.png'
Writing 'cgps20Pattern2019.png'
Writing 'cgps20Pattern2020.png'
Writing 'cgps20Pattern2021.png'
Writing 'cgps20Pattern2022.png'
Writing 'cgps20Pattern2023.png'
Writing 'cgps20Pattern2024.png'
Writing 'cgps20Pattern2025.png'
Writing 'cgps20Pattern2026.png'
Writing 'cgps20Pattern2027.png'
Writing 'cgps20Pattern2028.png'
Writing 'cgps20Pattern2029.png'
Writing 'cgps20Pattern2030.png'
Writing 'cgps20Pattern2031.png'
Writing 'cgps20Pattern2032.png'
Writing 'cgps20Pattern2033.png'
Writing 'cgps20Pattern2034.png'
Writing 'cgps20Pattern2035.png'
Writing 'cgps20Pattern2036.png'
Writing 'cgps20Pattern2037.png'
Writing 'cgps20Pattern2038.png'
Writing 'cgps20Pattern2039.png'
Writing 'cgps20Pattern2040.png'
Writing 'cgps20Pattern2041.png'
Writing 'cgps20Pattern2042.png'
Writing 'cgps20Pattern2043.png'
Writing 'cgps20Pattern2044.png'
Writing 'cgps20Pattern2045.png'
Writing 'cgps20Pattern2046.png'
Writing 'cgps20Pattern2047.png'
Writing 'cgps20Pattern2048.png'
Writing 'cgps20Pattern2049.png'
Writing 'cgps20Pattern2050.png'
Writing 'cgps20Pattern2051.png'
Writing 'cgps20Pattern2052.png'
Writing 'cgps20Pattern2053.png'
Writing 'cgps20Pattern2054.png'
Writing 'cgps20Pattern2055.png'
Writing 'cgps20Pattern2056.png'
Writing 'cgps20Pattern2057.png'
Writing 'cgps20Pattern2058.png'
Writing 'cgps20Pattern2059.png'
Writing 'cgps20Pattern2060.png'

```

Writing 'cgps20Pattern2061.png'
Writing 'cgps20Pattern2062.png'
Writing 'cgps20Pattern2063.png'
Writing 'cgps20Pattern2064.png'
Writing 'cgps20Pattern2065.png'
Writing 'cgps20Pattern2066.png'
Writing 'cgps20Pattern2067.png'
Writing 'cgps20Pattern2068.png'
Writing 'cgps20Pattern2069.png'
Writing 'cgps20Pattern2070.png'
Writing 'cgps20Pattern2071.png'
Writing 'cgps20Pattern2072.png'
Writing 'cgps20Pattern2073.png'
Writing 'cgps20Pattern2074.png'
Writing 'cgps20Pattern2075.png'
Writing 'cgps20Pattern2076.png'
Writing 'cgps20Pattern2077.png'
Writing 'cgps20Pattern2078.png'
Writing 'cgps20Pattern2079.png'
Writing 'cgps20Pattern2080.png'
Writing 'cgps20Pattern2081.png'
Writing 'cgps20Pattern2082.png'
Writing 'cgps20Pattern2083.png'
Writing 'cgps20Pattern2084.png'
Writing 'cgps20Pattern2085.png'
Writing 'cgps20Pattern2086.png'
Writing 'cgps20Pattern2087.png'
Writing 'cgps20Pattern2088.png'
Writing 'cgps20Pattern2089.png'
Writing 'cgps20Pattern2090.png'
Writing 'cgps20Pattern2091.png'
Writing 'cgps20Pattern2092.png'
Writing 'cgps20Pattern2093.png'
Writing 'cgps20Pattern2094.png'
Writing 'cgps20Pattern2095.png'
Writing 'cgps20Pattern2096.png'
Writing 'cgps20Pattern2097.png'
Writing 'cgps20Pattern2098.png'
Writing 'cgps20Pattern2099.png'
Writing 'cgps20Pattern2100.png'
## Will create: ./plots/cgps20Pattern2.gif
## Executing: 'magick -delay 1x10 cgps20Pattern2*.png cgps20Pattern2.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern3.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern3000.png'
Writing 'cgps20Pattern3001.png'
Writing 'cgps20Pattern3002.png'
Writing 'cgps20Pattern3003.png'
Writing 'cgps20Pattern3004.png'

```

Writing 'cgps20Pattern3005.png'
Writing 'cgps20Pattern3006.png'
Writing 'cgps20Pattern3007.png'
Writing 'cgps20Pattern3008.png'
Writing 'cgps20Pattern3009.png'
Writing 'cgps20Pattern3010.png'
Writing 'cgps20Pattern3011.png'
Writing 'cgps20Pattern3012.png'
Writing 'cgps20Pattern3013.png'
Writing 'cgps20Pattern3014.png'
Writing 'cgps20Pattern3015.png'
Writing 'cgps20Pattern3016.png'
Writing 'cgps20Pattern3017.png'
Writing 'cgps20Pattern3018.png'
Writing 'cgps20Pattern3019.png'
Writing 'cgps20Pattern3020.png'
Writing 'cgps20Pattern3021.png'
Writing 'cgps20Pattern3022.png'
Writing 'cgps20Pattern3023.png'
Writing 'cgps20Pattern3024.png'
Writing 'cgps20Pattern3025.png'
Writing 'cgps20Pattern3026.png'
Writing 'cgps20Pattern3027.png'
Writing 'cgps20Pattern3028.png'
Writing 'cgps20Pattern3029.png'
Writing 'cgps20Pattern3030.png'
Writing 'cgps20Pattern3031.png'
Writing 'cgps20Pattern3032.png'
Writing 'cgps20Pattern3033.png'
Writing 'cgps20Pattern3034.png'
Writing 'cgps20Pattern3035.png'
Writing 'cgps20Pattern3036.png'
Writing 'cgps20Pattern3037.png'
Writing 'cgps20Pattern3038.png'
Writing 'cgps20Pattern3039.png'
Writing 'cgps20Pattern3040.png'
Writing 'cgps20Pattern3041.png'
Writing 'cgps20Pattern3042.png'
Writing 'cgps20Pattern3043.png'
Writing 'cgps20Pattern3044.png'
Writing 'cgps20Pattern3045.png'
Writing 'cgps20Pattern3046.png'
Writing 'cgps20Pattern3047.png'
Writing 'cgps20Pattern3048.png'
Writing 'cgps20Pattern3049.png'
Writing 'cgps20Pattern3050.png'
Writing 'cgps20Pattern3051.png'
Writing 'cgps20Pattern3052.png'
Writing 'cgps20Pattern3053.png'
Writing 'cgps20Pattern3054.png'
Writing 'cgps20Pattern3055.png'
Writing 'cgps20Pattern3056.png'
Writing 'cgps20Pattern3057.png'
Writing 'cgps20Pattern3058.png'


```

Writing 'cgps20Pattern3059.png'
Writing 'cgps20Pattern3060.png'
Writing 'cgps20Pattern3061.png'
Writing 'cgps20Pattern3062.png'
Writing 'cgps20Pattern3063.png'
Writing 'cgps20Pattern3064.png'
Writing 'cgps20Pattern3065.png'
Writing 'cgps20Pattern3066.png'
Writing 'cgps20Pattern3067.png'
Writing 'cgps20Pattern3068.png'
Writing 'cgps20Pattern3069.png'
Writing 'cgps20Pattern3070.png'
Writing 'cgps20Pattern3071.png'
Writing 'cgps20Pattern3072.png'
Writing 'cgps20Pattern3073.png'
Writing 'cgps20Pattern3074.png'
Writing 'cgps20Pattern3075.png'
Writing 'cgps20Pattern3076.png'
Writing 'cgps20Pattern3077.png'
Writing 'cgps20Pattern3078.png'
Writing 'cgps20Pattern3079.png'
Writing 'cgps20Pattern3080.png'
Writing 'cgps20Pattern3081.png'
Writing 'cgps20Pattern3082.png'
Writing 'cgps20Pattern3083.png'
Writing 'cgps20Pattern3084.png'
Writing 'cgps20Pattern3085.png'
Writing 'cgps20Pattern3086.png'
Writing 'cgps20Pattern3087.png'
Writing 'cgps20Pattern3088.png'
Writing 'cgps20Pattern3089.png'
Writing 'cgps20Pattern3090.png'
Writing 'cgps20Pattern3091.png'
Writing 'cgps20Pattern3092.png'
Writing 'cgps20Pattern3093.png'
Writing 'cgps20Pattern3094.png'
Writing 'cgps20Pattern3095.png'
Writing 'cgps20Pattern3096.png'
Writing 'cgps20Pattern3097.png'
Writing 'cgps20Pattern3098.png'
Writing 'cgps20Pattern3099.png'
Writing 'cgps20Pattern3100.png'
## Will create: ./plots/cgps20Pattern3.gif
## Executing: 'magick -delay 1x10 cgps20Pattern3*.png cgps20Pattern3.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern4.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern4000.png'
Writing 'cgps20Pattern4001.png'
Writing 'cgps20Pattern4002.png'

```

Writing 'cgps20Pattern4003.png'
Writing 'cgps20Pattern4004.png'
Writing 'cgps20Pattern4005.png'
Writing 'cgps20Pattern4006.png'
Writing 'cgps20Pattern4007.png'
Writing 'cgps20Pattern4008.png'
Writing 'cgps20Pattern4009.png'
Writing 'cgps20Pattern4010.png'
Writing 'cgps20Pattern4011.png'
Writing 'cgps20Pattern4012.png'
Writing 'cgps20Pattern4013.png'
Writing 'cgps20Pattern4014.png'
Writing 'cgps20Pattern4015.png'
Writing 'cgps20Pattern4016.png'
Writing 'cgps20Pattern4017.png'
Writing 'cgps20Pattern4018.png'
Writing 'cgps20Pattern4019.png'
Writing 'cgps20Pattern4020.png'
Writing 'cgps20Pattern4021.png'
Writing 'cgps20Pattern4022.png'
Writing 'cgps20Pattern4023.png'
Writing 'cgps20Pattern4024.png'
Writing 'cgps20Pattern4025.png'
Writing 'cgps20Pattern4026.png'
Writing 'cgps20Pattern4027.png'
Writing 'cgps20Pattern4028.png'
Writing 'cgps20Pattern4029.png'
Writing 'cgps20Pattern4030.png'
Writing 'cgps20Pattern4031.png'
Writing 'cgps20Pattern4032.png'
Writing 'cgps20Pattern4033.png'
Writing 'cgps20Pattern4034.png'
Writing 'cgps20Pattern4035.png'
Writing 'cgps20Pattern4036.png'
Writing 'cgps20Pattern4037.png'
Writing 'cgps20Pattern4038.png'
Writing 'cgps20Pattern4039.png'
Writing 'cgps20Pattern4040.png'
Writing 'cgps20Pattern4041.png'
Writing 'cgps20Pattern4042.png'
Writing 'cgps20Pattern4043.png'
Writing 'cgps20Pattern4044.png'
Writing 'cgps20Pattern4045.png'
Writing 'cgps20Pattern4046.png'
Writing 'cgps20Pattern4047.png'
Writing 'cgps20Pattern4048.png'
Writing 'cgps20Pattern4049.png'
Writing 'cgps20Pattern4050.png'
Writing 'cgps20Pattern4051.png'
Writing 'cgps20Pattern4052.png'
Writing 'cgps20Pattern4053.png'
Writing 'cgps20Pattern4054.png'
Writing 'cgps20Pattern4055.png'
Writing 'cgps20Pattern4056.png'

```

Writing 'cgps20Pattern4057.png'
Writing 'cgps20Pattern4058.png'
Writing 'cgps20Pattern4059.png'
Writing 'cgps20Pattern4060.png'
Writing 'cgps20Pattern4061.png'
Writing 'cgps20Pattern4062.png'
Writing 'cgps20Pattern4063.png'
Writing 'cgps20Pattern4064.png'
Writing 'cgps20Pattern4065.png'
Writing 'cgps20Pattern4066.png'
Writing 'cgps20Pattern4067.png'
Writing 'cgps20Pattern4068.png'
Writing 'cgps20Pattern4069.png'
Writing 'cgps20Pattern4070.png'
Writing 'cgps20Pattern4071.png'
Writing 'cgps20Pattern4072.png'
Writing 'cgps20Pattern4073.png'
Writing 'cgps20Pattern4074.png'
Writing 'cgps20Pattern4075.png'
Writing 'cgps20Pattern4076.png'
Writing 'cgps20Pattern4077.png'
Writing 'cgps20Pattern4078.png'
Writing 'cgps20Pattern4079.png'
Writing 'cgps20Pattern4080.png'
Writing 'cgps20Pattern4081.png'
Writing 'cgps20Pattern4082.png'
Writing 'cgps20Pattern4083.png'
Writing 'cgps20Pattern4084.png'
Writing 'cgps20Pattern4085.png'
Writing 'cgps20Pattern4086.png'
Writing 'cgps20Pattern4087.png'
Writing 'cgps20Pattern4088.png'
Writing 'cgps20Pattern4089.png'
Writing 'cgps20Pattern4090.png'
Writing 'cgps20Pattern4091.png'
Writing 'cgps20Pattern4092.png'
Writing 'cgps20Pattern4093.png'
Writing 'cgps20Pattern4094.png'
Writing 'cgps20Pattern4095.png'
Writing 'cgps20Pattern4096.png'
Writing 'cgps20Pattern4097.png'
Writing 'cgps20Pattern4098.png'
Writing 'cgps20Pattern4099.png'
Writing 'cgps20Pattern4100.png'
## Will create: ./plots/cgps20Pattern4.gif
## Executing: 'magick -delay 1x10 cgps20Pattern4*.png cgps20Pattern4.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cpgs20Pattern5.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed
## Writing 'cgps20Pattern5000.png'

```

Writing 'cgps20Pattern5001.png'
Writing 'cgps20Pattern5002.png'
Writing 'cgps20Pattern5003.png'
Writing 'cgps20Pattern5004.png'
Writing 'cgps20Pattern5005.png'
Writing 'cgps20Pattern5006.png'
Writing 'cgps20Pattern5007.png'
Writing 'cgps20Pattern5008.png'
Writing 'cgps20Pattern5009.png'
Writing 'cgps20Pattern5010.png'
Writing 'cgps20Pattern5011.png'
Writing 'cgps20Pattern5012.png'
Writing 'cgps20Pattern5013.png'
Writing 'cgps20Pattern5014.png'
Writing 'cgps20Pattern5015.png'
Writing 'cgps20Pattern5016.png'
Writing 'cgps20Pattern5017.png'
Writing 'cgps20Pattern5018.png'
Writing 'cgps20Pattern5019.png'
Writing 'cgps20Pattern5020.png'
Writing 'cgps20Pattern5021.png'
Writing 'cgps20Pattern5022.png'
Writing 'cgps20Pattern5023.png'
Writing 'cgps20Pattern5024.png'
Writing 'cgps20Pattern5025.png'
Writing 'cgps20Pattern5026.png'
Writing 'cgps20Pattern5027.png'
Writing 'cgps20Pattern5028.png'
Writing 'cgps20Pattern5029.png'
Writing 'cgps20Pattern5030.png'
Writing 'cgps20Pattern5031.png'
Writing 'cgps20Pattern5032.png'
Writing 'cgps20Pattern5033.png'
Writing 'cgps20Pattern5034.png'
Writing 'cgps20Pattern5035.png'
Writing 'cgps20Pattern5036.png'
Writing 'cgps20Pattern5037.png'
Writing 'cgps20Pattern5038.png'
Writing 'cgps20Pattern5039.png'
Writing 'cgps20Pattern5040.png'
Writing 'cgps20Pattern5041.png'
Writing 'cgps20Pattern5042.png'
Writing 'cgps20Pattern5043.png'
Writing 'cgps20Pattern5044.png'
Writing 'cgps20Pattern5045.png'
Writing 'cgps20Pattern5046.png'
Writing 'cgps20Pattern5047.png'
Writing 'cgps20Pattern5048.png'
Writing 'cgps20Pattern5049.png'
Writing 'cgps20Pattern5050.png'
Writing 'cgps20Pattern5051.png'
Writing 'cgps20Pattern5052.png'
Writing 'cgps20Pattern5053.png'
Writing 'cgps20Pattern5054.png'

```

Writing 'cgps20Pattern5055.png'
Writing 'cgps20Pattern5056.png'
Writing 'cgps20Pattern5057.png'
Writing 'cgps20Pattern5058.png'
Writing 'cgps20Pattern5059.png'
Writing 'cgps20Pattern5060.png'
Writing 'cgps20Pattern5061.png'
Writing 'cgps20Pattern5062.png'
Writing 'cgps20Pattern5063.png'
Writing 'cgps20Pattern5064.png'
Writing 'cgps20Pattern5065.png'
Writing 'cgps20Pattern5066.png'
Writing 'cgps20Pattern5067.png'
Writing 'cgps20Pattern5068.png'
Writing 'cgps20Pattern5069.png'
Writing 'cgps20Pattern5070.png'
Writing 'cgps20Pattern5071.png'
Writing 'cgps20Pattern5072.png'
Writing 'cgps20Pattern5073.png'
Writing 'cgps20Pattern5074.png'
Writing 'cgps20Pattern5075.png'
Writing 'cgps20Pattern5076.png'
Writing 'cgps20Pattern5077.png'
Writing 'cgps20Pattern5078.png'
Writing 'cgps20Pattern5079.png'
Writing 'cgps20Pattern5080.png'
Writing 'cgps20Pattern5081.png'
Writing 'cgps20Pattern5082.png'
Writing 'cgps20Pattern5083.png'
Writing 'cgps20Pattern5084.png'
Writing 'cgps20Pattern5085.png'
Writing 'cgps20Pattern5086.png'
Writing 'cgps20Pattern5087.png'
Writing 'cgps20Pattern5088.png'
Writing 'cgps20Pattern5089.png'
Writing 'cgps20Pattern5090.png'
Writing 'cgps20Pattern5091.png'
Writing 'cgps20Pattern5092.png'
Writing 'cgps20Pattern5093.png'
Writing 'cgps20Pattern5094.png'
Writing 'cgps20Pattern5095.png'
Writing 'cgps20Pattern5096.png'
Writing 'cgps20Pattern5097.png'
Writing 'cgps20Pattern5098.png'
Writing 'cgps20Pattern5099.png'
Writing 'cgps20Pattern5100.png'
## Will create: ./plots/cgps20Pattern5.gif
## Executing: 'magick -delay 1x10 cgps20Pattern5*.png cgps20Pattern5.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cpgs20Pattern6.png' for
## writing

```

```
## Warning in rgl.snapshot(...): 'rgl.snapshot' failed
```

```
## Writing 'cgps20Pattern6000.png'
```

```
Writing 'cgps20Pattern6001.png'  
Writing 'cgps20Pattern6002.png'  
Writing 'cgps20Pattern6003.png'  
Writing 'cgps20Pattern6004.png'  
Writing 'cgps20Pattern6005.png'  
Writing 'cgps20Pattern6006.png'  
Writing 'cgps20Pattern6007.png'  
Writing 'cgps20Pattern6008.png'  
Writing 'cgps20Pattern6009.png'  
Writing 'cgps20Pattern6010.png'  
Writing 'cgps20Pattern6011.png'  
Writing 'cgps20Pattern6012.png'  
Writing 'cgps20Pattern6013.png'  
Writing 'cgps20Pattern6014.png'  
Writing 'cgps20Pattern6015.png'  
Writing 'cgps20Pattern6016.png'  
Writing 'cgps20Pattern6017.png'  
Writing 'cgps20Pattern6018.png'  
Writing 'cgps20Pattern6019.png'  
Writing 'cgps20Pattern6020.png'  
Writing 'cgps20Pattern6021.png'  
Writing 'cgps20Pattern6022.png'  
Writing 'cgps20Pattern6023.png'  
Writing 'cgps20Pattern6024.png'  
Writing 'cgps20Pattern6025.png'  
Writing 'cgps20Pattern6026.png'  
Writing 'cgps20Pattern6027.png'  
Writing 'cgps20Pattern6028.png'  
Writing 'cgps20Pattern6029.png'  
Writing 'cgps20Pattern6030.png'  
Writing 'cgps20Pattern6031.png'  
Writing 'cgps20Pattern6032.png'  
Writing 'cgps20Pattern6033.png'  
Writing 'cgps20Pattern6034.png'  
Writing 'cgps20Pattern6035.png'  
Writing 'cgps20Pattern6036.png'  
Writing 'cgps20Pattern6037.png'  
Writing 'cgps20Pattern6038.png'  
Writing 'cgps20Pattern6039.png'  
Writing 'cgps20Pattern6040.png'  
Writing 'cgps20Pattern6041.png'  
Writing 'cgps20Pattern6042.png'  
Writing 'cgps20Pattern6043.png'  
Writing 'cgps20Pattern6044.png'  
Writing 'cgps20Pattern6045.png'  
Writing 'cgps20Pattern6046.png'  
Writing 'cgps20Pattern6047.png'  
Writing 'cgps20Pattern6048.png'  
Writing 'cgps20Pattern6049.png'  
Writing 'cgps20Pattern6050.png'  
Writing 'cgps20Pattern6051.png'
```

```
Writing 'cgps20Pattern6052.png'
Writing 'cgps20Pattern6053.png'
Writing 'cgps20Pattern6054.png'
Writing 'cgps20Pattern6055.png'
Writing 'cgps20Pattern6056.png'
Writing 'cgps20Pattern6057.png'
Writing 'cgps20Pattern6058.png'
Writing 'cgps20Pattern6059.png'
Writing 'cgps20Pattern6060.png'
Writing 'cgps20Pattern6061.png'
Writing 'cgps20Pattern6062.png'
Writing 'cgps20Pattern6063.png'
Writing 'cgps20Pattern6064.png'
Writing 'cgps20Pattern6065.png'
Writing 'cgps20Pattern6066.png'
Writing 'cgps20Pattern6067.png'
Writing 'cgps20Pattern6068.png'
Writing 'cgps20Pattern6069.png'
Writing 'cgps20Pattern6070.png'
Writing 'cgps20Pattern6071.png'
Writing 'cgps20Pattern6072.png'
Writing 'cgps20Pattern6073.png'
Writing 'cgps20Pattern6074.png'
Writing 'cgps20Pattern6075.png'
Writing 'cgps20Pattern6076.png'
Writing 'cgps20Pattern6077.png'
Writing 'cgps20Pattern6078.png'
Writing 'cgps20Pattern6079.png'
Writing 'cgps20Pattern6080.png'
Writing 'cgps20Pattern6081.png'
Writing 'cgps20Pattern6082.png'
Writing 'cgps20Pattern6083.png'
Writing 'cgps20Pattern6084.png'
Writing 'cgps20Pattern6085.png'
Writing 'cgps20Pattern6086.png'
Writing 'cgps20Pattern6087.png'
Writing 'cgps20Pattern6088.png'
Writing 'cgps20Pattern6089.png'
Writing 'cgps20Pattern6090.png'
Writing 'cgps20Pattern6091.png'
Writing 'cgps20Pattern6092.png'
Writing 'cgps20Pattern6093.png'
Writing 'cgps20Pattern6094.png'
Writing 'cgps20Pattern6095.png'
Writing 'cgps20Pattern6096.png'
Writing 'cgps20Pattern6097.png'
Writing 'cgps20Pattern6098.png'
Writing 'cgps20Pattern6099.png'
Writing 'cgps20Pattern6100.png'
## Will create: ./plots/cgps20Pattern6.gif
## Executing: 'magick -delay 1x10 cgps20Pattern6*.png cgps20Pattern6.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
```

```
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern7.png' for  
## writing
```

```
## Warning in rgl.snapshot(...): 'rgl.snapshot' failed
```

```
## Writing 'cgps20Pattern7000.png'
```

```
Writing 'cgps20Pattern7001.png'  
Writing 'cgps20Pattern7002.png'  
Writing 'cgps20Pattern7003.png'  
Writing 'cgps20Pattern7004.png'  
Writing 'cgps20Pattern7005.png'  
Writing 'cgps20Pattern7006.png'  
Writing 'cgps20Pattern7007.png'  
Writing 'cgps20Pattern7008.png'  
Writing 'cgps20Pattern7009.png'  
Writing 'cgps20Pattern7010.png'  
Writing 'cgps20Pattern7011.png'  
Writing 'cgps20Pattern7012.png'  
Writing 'cgps20Pattern7013.png'  
Writing 'cgps20Pattern7014.png'  
Writing 'cgps20Pattern7015.png'  
Writing 'cgps20Pattern7016.png'  
Writing 'cgps20Pattern7017.png'  
Writing 'cgps20Pattern7018.png'  
Writing 'cgps20Pattern7019.png'  
Writing 'cgps20Pattern7020.png'  
Writing 'cgps20Pattern7021.png'  
Writing 'cgps20Pattern7022.png'  
Writing 'cgps20Pattern7023.png'  
Writing 'cgps20Pattern7024.png'  
Writing 'cgps20Pattern7025.png'  
Writing 'cgps20Pattern7026.png'  
Writing 'cgps20Pattern7027.png'  
Writing 'cgps20Pattern7028.png'  
Writing 'cgps20Pattern7029.png'  
Writing 'cgps20Pattern7030.png'  
Writing 'cgps20Pattern7031.png'  
Writing 'cgps20Pattern7032.png'  
Writing 'cgps20Pattern7033.png'  
Writing 'cgps20Pattern7034.png'  
Writing 'cgps20Pattern7035.png'  
Writing 'cgps20Pattern7036.png'  
Writing 'cgps20Pattern7037.png'  
Writing 'cgps20Pattern7038.png'  
Writing 'cgps20Pattern7039.png'  
Writing 'cgps20Pattern7040.png'  
Writing 'cgps20Pattern7041.png'  
Writing 'cgps20Pattern7042.png'  
Writing 'cgps20Pattern7043.png'  
Writing 'cgps20Pattern7044.png'  
Writing 'cgps20Pattern7045.png'  
Writing 'cgps20Pattern7046.png'  
Writing 'cgps20Pattern7047.png'  
Writing 'cgps20Pattern7048.png'
```



```
Writing 'cgps20Pattern7049.png'
Writing 'cgps20Pattern7050.png'
Writing 'cgps20Pattern7051.png'
Writing 'cgps20Pattern7052.png'
Writing 'cgps20Pattern7053.png'
Writing 'cgps20Pattern7054.png'
Writing 'cgps20Pattern7055.png'
Writing 'cgps20Pattern7056.png'
Writing 'cgps20Pattern7057.png'
Writing 'cgps20Pattern7058.png'
Writing 'cgps20Pattern7059.png'
Writing 'cgps20Pattern7060.png'
Writing 'cgps20Pattern7061.png'
Writing 'cgps20Pattern7062.png'
Writing 'cgps20Pattern7063.png'
Writing 'cgps20Pattern7064.png'
Writing 'cgps20Pattern7065.png'
Writing 'cgps20Pattern7066.png'
Writing 'cgps20Pattern7067.png'
Writing 'cgps20Pattern7068.png'
Writing 'cgps20Pattern7069.png'
Writing 'cgps20Pattern7070.png'
Writing 'cgps20Pattern7071.png'
Writing 'cgps20Pattern7072.png'
Writing 'cgps20Pattern7073.png'
Writing 'cgps20Pattern7074.png'
Writing 'cgps20Pattern7075.png'
Writing 'cgps20Pattern7076.png'
Writing 'cgps20Pattern7077.png'
Writing 'cgps20Pattern7078.png'
Writing 'cgps20Pattern7079.png'
Writing 'cgps20Pattern7080.png'
Writing 'cgps20Pattern7081.png'
Writing 'cgps20Pattern7082.png'
Writing 'cgps20Pattern7083.png'
Writing 'cgps20Pattern7084.png'
Writing 'cgps20Pattern7085.png'
Writing 'cgps20Pattern7086.png'
Writing 'cgps20Pattern7087.png'
Writing 'cgps20Pattern7088.png'
Writing 'cgps20Pattern7089.png'
Writing 'cgps20Pattern7090.png'
Writing 'cgps20Pattern7091.png'
Writing 'cgps20Pattern7092.png'
Writing 'cgps20Pattern7093.png'
Writing 'cgps20Pattern7094.png'
Writing 'cgps20Pattern7095.png'
Writing 'cgps20Pattern7096.png'
Writing 'cgps20Pattern7097.png'
Writing 'cgps20Pattern7098.png'
Writing 'cgps20Pattern7099.png'
Writing 'cgps20Pattern7100.png'
## Will create: ./plots/cgps20Pattern7.gif
## Executing: 'magick -delay 1x10 cgps20Pattern7*.png cgps20Pattern7.gif'
```

```

## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern8.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern8000.png'
Writing 'cgps20Pattern8001.png'
Writing 'cgps20Pattern8002.png'
Writing 'cgps20Pattern8003.png'
Writing 'cgps20Pattern8004.png'
Writing 'cgps20Pattern8005.png'
Writing 'cgps20Pattern8006.png'
Writing 'cgps20Pattern8007.png'
Writing 'cgps20Pattern8008.png'
Writing 'cgps20Pattern8009.png'
Writing 'cgps20Pattern8010.png'
Writing 'cgps20Pattern8011.png'
Writing 'cgps20Pattern8012.png'
Writing 'cgps20Pattern8013.png'
Writing 'cgps20Pattern8014.png'
Writing 'cgps20Pattern8015.png'
Writing 'cgps20Pattern8016.png'
Writing 'cgps20Pattern8017.png'
Writing 'cgps20Pattern8018.png'
Writing 'cgps20Pattern8019.png'
Writing 'cgps20Pattern8020.png'
Writing 'cgps20Pattern8021.png'
Writing 'cgps20Pattern8022.png'
Writing 'cgps20Pattern8023.png'
Writing 'cgps20Pattern8024.png'
Writing 'cgps20Pattern8025.png'
Writing 'cgps20Pattern8026.png'
Writing 'cgps20Pattern8027.png'
Writing 'cgps20Pattern8028.png'
Writing 'cgps20Pattern8029.png'
Writing 'cgps20Pattern8030.png'
Writing 'cgps20Pattern8031.png'
Writing 'cgps20Pattern8032.png'
Writing 'cgps20Pattern8033.png'
Writing 'cgps20Pattern8034.png'
Writing 'cgps20Pattern8035.png'
Writing 'cgps20Pattern8036.png'
Writing 'cgps20Pattern8037.png'
Writing 'cgps20Pattern8038.png'
Writing 'cgps20Pattern8039.png'
Writing 'cgps20Pattern8040.png'
Writing 'cgps20Pattern8041.png'
Writing 'cgps20Pattern8042.png'
Writing 'cgps20Pattern8043.png'
Writing 'cgps20Pattern8044.png'
Writing 'cgps20Pattern8045.png'
Writing 'cgps20Pattern8046.png'

```

Writing 'cgps20Pattern8047.png'
Writing 'cgps20Pattern8048.png'
Writing 'cgps20Pattern8049.png'
Writing 'cgps20Pattern8050.png'
Writing 'cgps20Pattern8051.png'
Writing 'cgps20Pattern8052.png'
Writing 'cgps20Pattern8053.png'
Writing 'cgps20Pattern8054.png'
Writing 'cgps20Pattern8055.png'
Writing 'cgps20Pattern8056.png'
Writing 'cgps20Pattern8057.png'
Writing 'cgps20Pattern8058.png'
Writing 'cgps20Pattern8059.png'
Writing 'cgps20Pattern8060.png'
Writing 'cgps20Pattern8061.png'
Writing 'cgps20Pattern8062.png'
Writing 'cgps20Pattern8063.png'
Writing 'cgps20Pattern8064.png'
Writing 'cgps20Pattern8065.png'
Writing 'cgps20Pattern8066.png'
Writing 'cgps20Pattern8067.png'
Writing 'cgps20Pattern8068.png'
Writing 'cgps20Pattern8069.png'
Writing 'cgps20Pattern8070.png'
Writing 'cgps20Pattern8071.png'
Writing 'cgps20Pattern8072.png'
Writing 'cgps20Pattern8073.png'
Writing 'cgps20Pattern8074.png'
Writing 'cgps20Pattern8075.png'
Writing 'cgps20Pattern8076.png'
Writing 'cgps20Pattern8077.png'
Writing 'cgps20Pattern8078.png'
Writing 'cgps20Pattern8079.png'
Writing 'cgps20Pattern8080.png'
Writing 'cgps20Pattern8081.png'
Writing 'cgps20Pattern8082.png'
Writing 'cgps20Pattern8083.png'
Writing 'cgps20Pattern8084.png'
Writing 'cgps20Pattern8085.png'
Writing 'cgps20Pattern8086.png'
Writing 'cgps20Pattern8087.png'
Writing 'cgps20Pattern8088.png'
Writing 'cgps20Pattern8089.png'
Writing 'cgps20Pattern8090.png'
Writing 'cgps20Pattern8091.png'
Writing 'cgps20Pattern8092.png'
Writing 'cgps20Pattern8093.png'
Writing 'cgps20Pattern8094.png'
Writing 'cgps20Pattern8095.png'
Writing 'cgps20Pattern8096.png'
Writing 'cgps20Pattern8097.png'
Writing 'cgps20Pattern8098.png'
Writing 'cgps20Pattern8099.png'
Writing 'cgps20Pattern8100.png'

```

## Will create: ./plots/cgps20Pattern8.gif
## Executing: 'magick -delay 1x10 cgps20Pattern8*.png cgps20Pattern8.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern9.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern9000.png'
Writing 'cgps20Pattern9001.png'
Writing 'cgps20Pattern9002.png'
Writing 'cgps20Pattern9003.png'
Writing 'cgps20Pattern9004.png'
Writing 'cgps20Pattern9005.png'
Writing 'cgps20Pattern9006.png'
Writing 'cgps20Pattern9007.png'
Writing 'cgps20Pattern9008.png'
Writing 'cgps20Pattern9009.png'
Writing 'cgps20Pattern9010.png'
Writing 'cgps20Pattern9011.png'
Writing 'cgps20Pattern9012.png'
Writing 'cgps20Pattern9013.png'
Writing 'cgps20Pattern9014.png'
Writing 'cgps20Pattern9015.png'
Writing 'cgps20Pattern9016.png'
Writing 'cgps20Pattern9017.png'
Writing 'cgps20Pattern9018.png'
Writing 'cgps20Pattern9019.png'
Writing 'cgps20Pattern9020.png'
Writing 'cgps20Pattern9021.png'
Writing 'cgps20Pattern9022.png'
Writing 'cgps20Pattern9023.png'
Writing 'cgps20Pattern9024.png'
Writing 'cgps20Pattern9025.png'
Writing 'cgps20Pattern9026.png'
Writing 'cgps20Pattern9027.png'
Writing 'cgps20Pattern9028.png'
Writing 'cgps20Pattern9029.png'
Writing 'cgps20Pattern9030.png'
Writing 'cgps20Pattern9031.png'
Writing 'cgps20Pattern9032.png'
Writing 'cgps20Pattern9033.png'
Writing 'cgps20Pattern9034.png'
Writing 'cgps20Pattern9035.png'
Writing 'cgps20Pattern9036.png'
Writing 'cgps20Pattern9037.png'
Writing 'cgps20Pattern9038.png'
Writing 'cgps20Pattern9039.png'
Writing 'cgps20Pattern9040.png'
Writing 'cgps20Pattern9041.png'
Writing 'cgps20Pattern9042.png'
Writing 'cgps20Pattern9043.png'
Writing 'cgps20Pattern9044.png'

```

Writing 'cgps20Pattern9045.png'
Writing 'cgps20Pattern9046.png'
Writing 'cgps20Pattern9047.png'
Writing 'cgps20Pattern9048.png'
Writing 'cgps20Pattern9049.png'
Writing 'cgps20Pattern9050.png'
Writing 'cgps20Pattern9051.png'
Writing 'cgps20Pattern9052.png'
Writing 'cgps20Pattern9053.png'
Writing 'cgps20Pattern9054.png'
Writing 'cgps20Pattern9055.png'
Writing 'cgps20Pattern9056.png'
Writing 'cgps20Pattern9057.png'
Writing 'cgps20Pattern9058.png'
Writing 'cgps20Pattern9059.png'
Writing 'cgps20Pattern9060.png'
Writing 'cgps20Pattern9061.png'
Writing 'cgps20Pattern9062.png'
Writing 'cgps20Pattern9063.png'
Writing 'cgps20Pattern9064.png'
Writing 'cgps20Pattern9065.png'
Writing 'cgps20Pattern9066.png'
Writing 'cgps20Pattern9067.png'
Writing 'cgps20Pattern9068.png'
Writing 'cgps20Pattern9069.png'
Writing 'cgps20Pattern9070.png'
Writing 'cgps20Pattern9071.png'
Writing 'cgps20Pattern9072.png'
Writing 'cgps20Pattern9073.png'
Writing 'cgps20Pattern9074.png'
Writing 'cgps20Pattern9075.png'
Writing 'cgps20Pattern9076.png'
Writing 'cgps20Pattern9077.png'
Writing 'cgps20Pattern9078.png'
Writing 'cgps20Pattern9079.png'
Writing 'cgps20Pattern9080.png'
Writing 'cgps20Pattern9081.png'
Writing 'cgps20Pattern9082.png'
Writing 'cgps20Pattern9083.png'
Writing 'cgps20Pattern9084.png'
Writing 'cgps20Pattern9085.png'
Writing 'cgps20Pattern9086.png'
Writing 'cgps20Pattern9087.png'
Writing 'cgps20Pattern9088.png'
Writing 'cgps20Pattern9089.png'
Writing 'cgps20Pattern9090.png'
Writing 'cgps20Pattern9091.png'
Writing 'cgps20Pattern9092.png'
Writing 'cgps20Pattern9093.png'
Writing 'cgps20Pattern9094.png'
Writing 'cgps20Pattern9095.png'
Writing 'cgps20Pattern9096.png'
Writing 'cgps20Pattern9097.png'
Writing 'cgps20Pattern9098.png'

```

Writing 'cgps20Pattern9099.png'
Writing 'cgps20Pattern9100.png'
## Will create: ./plots/cgps20Pattern9.gif
## Executing: 'magick -delay 1x10 cgps20Pattern9*.png cgps20Pattern9.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern10.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern10000.png'
Writing 'cgps20Pattern10001.png'
Writing 'cgps20Pattern10002.png'
Writing 'cgps20Pattern10003.png'
Writing 'cgps20Pattern10004.png'
Writing 'cgps20Pattern10005.png'
Writing 'cgps20Pattern10006.png'
Writing 'cgps20Pattern10007.png'
Writing 'cgps20Pattern10008.png'
Writing 'cgps20Pattern10009.png'
Writing 'cgps20Pattern10010.png'
Writing 'cgps20Pattern10011.png'
Writing 'cgps20Pattern10012.png'
Writing 'cgps20Pattern10013.png'
Writing 'cgps20Pattern10014.png'
Writing 'cgps20Pattern10015.png'
Writing 'cgps20Pattern10016.png'
Writing 'cgps20Pattern10017.png'
Writing 'cgps20Pattern10018.png'
Writing 'cgps20Pattern10019.png'
Writing 'cgps20Pattern10020.png'
Writing 'cgps20Pattern10021.png'
Writing 'cgps20Pattern10022.png'
Writing 'cgps20Pattern10023.png'
Writing 'cgps20Pattern10024.png'
Writing 'cgps20Pattern10025.png'
Writing 'cgps20Pattern10026.png'
Writing 'cgps20Pattern10027.png'
Writing 'cgps20Pattern10028.png'
Writing 'cgps20Pattern10029.png'
Writing 'cgps20Pattern10030.png'
Writing 'cgps20Pattern10031.png'
Writing 'cgps20Pattern10032.png'
Writing 'cgps20Pattern10033.png'
Writing 'cgps20Pattern10034.png'
Writing 'cgps20Pattern10035.png'
Writing 'cgps20Pattern10036.png'
Writing 'cgps20Pattern10037.png'
Writing 'cgps20Pattern10038.png'
Writing 'cgps20Pattern10039.png'
Writing 'cgps20Pattern10040.png'
Writing 'cgps20Pattern10041.png'
Writing 'cgps20Pattern10042.png'

```

Writing 'cgps20Pattern10043.png'
Writing 'cgps20Pattern10044.png'
Writing 'cgps20Pattern10045.png'
Writing 'cgps20Pattern10046.png'
Writing 'cgps20Pattern10047.png'
Writing 'cgps20Pattern10048.png'
Writing 'cgps20Pattern10049.png'
Writing 'cgps20Pattern10050.png'
Writing 'cgps20Pattern10051.png'
Writing 'cgps20Pattern10052.png'
Writing 'cgps20Pattern10053.png'
Writing 'cgps20Pattern10054.png'
Writing 'cgps20Pattern10055.png'
Writing 'cgps20Pattern10056.png'
Writing 'cgps20Pattern10057.png'
Writing 'cgps20Pattern10058.png'
Writing 'cgps20Pattern10059.png'
Writing 'cgps20Pattern10060.png'
Writing 'cgps20Pattern10061.png'
Writing 'cgps20Pattern10062.png'
Writing 'cgps20Pattern10063.png'
Writing 'cgps20Pattern10064.png'
Writing 'cgps20Pattern10065.png'
Writing 'cgps20Pattern10066.png'
Writing 'cgps20Pattern10067.png'
Writing 'cgps20Pattern10068.png'
Writing 'cgps20Pattern10069.png'
Writing 'cgps20Pattern10070.png'
Writing 'cgps20Pattern10071.png'
Writing 'cgps20Pattern10072.png'
Writing 'cgps20Pattern10073.png'
Writing 'cgps20Pattern10074.png'
Writing 'cgps20Pattern10075.png'
Writing 'cgps20Pattern10076.png'
Writing 'cgps20Pattern10077.png'
Writing 'cgps20Pattern10078.png'
Writing 'cgps20Pattern10079.png'
Writing 'cgps20Pattern10080.png'
Writing 'cgps20Pattern10081.png'
Writing 'cgps20Pattern10082.png'
Writing 'cgps20Pattern10083.png'
Writing 'cgps20Pattern10084.png'
Writing 'cgps20Pattern10085.png'
Writing 'cgps20Pattern10086.png'
Writing 'cgps20Pattern10087.png'
Writing 'cgps20Pattern10088.png'
Writing 'cgps20Pattern10089.png'
Writing 'cgps20Pattern10090.png'
Writing 'cgps20Pattern10091.png'
Writing 'cgps20Pattern10092.png'
Writing 'cgps20Pattern10093.png'
Writing 'cgps20Pattern10094.png'
Writing 'cgps20Pattern10095.png'
Writing 'cgps20Pattern10096.png'

```

Writing 'cgps20Pattern10097.png'
Writing 'cgps20Pattern10098.png'
Writing 'cgps20Pattern10099.png'
Writing 'cgps20Pattern10100.png'
## Will create: ./plots/cgps20Pattern10.gif
## Executing: 'magick -delay 1x10 cgps20Pattern10*.png cgps20Pattern10.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern11.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern11000.png'
Writing 'cgps20Pattern11001.png'
Writing 'cgps20Pattern11002.png'
Writing 'cgps20Pattern11003.png'
Writing 'cgps20Pattern11004.png'
Writing 'cgps20Pattern11005.png'
Writing 'cgps20Pattern11006.png'
Writing 'cgps20Pattern11007.png'
Writing 'cgps20Pattern11008.png'
Writing 'cgps20Pattern11009.png'
Writing 'cgps20Pattern11010.png'
Writing 'cgps20Pattern11011.png'
Writing 'cgps20Pattern11012.png'
Writing 'cgps20Pattern11013.png'
Writing 'cgps20Pattern11014.png'
Writing 'cgps20Pattern11015.png'
Writing 'cgps20Pattern11016.png'
Writing 'cgps20Pattern11017.png'
Writing 'cgps20Pattern11018.png'
Writing 'cgps20Pattern11019.png'
Writing 'cgps20Pattern11020.png'
Writing 'cgps20Pattern11021.png'
Writing 'cgps20Pattern11022.png'
Writing 'cgps20Pattern11023.png'
Writing 'cgps20Pattern11024.png'
Writing 'cgps20Pattern11025.png'
Writing 'cgps20Pattern11026.png'
Writing 'cgps20Pattern11027.png'
Writing 'cgps20Pattern11028.png'
Writing 'cgps20Pattern11029.png'
Writing 'cgps20Pattern11030.png'
Writing 'cgps20Pattern11031.png'
Writing 'cgps20Pattern11032.png'
Writing 'cgps20Pattern11033.png'
Writing 'cgps20Pattern11034.png'
Writing 'cgps20Pattern11035.png'
Writing 'cgps20Pattern11036.png'
Writing 'cgps20Pattern11037.png'
Writing 'cgps20Pattern11038.png'
Writing 'cgps20Pattern11039.png'
Writing 'cgps20Pattern11040.png'

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Writing 'cgps20Pattern11041.png'
Writing 'cgps20Pattern11042.png'
Writing 'cgps20Pattern11043.png'
Writing 'cgps20Pattern11044.png'
Writing 'cgps20Pattern11045.png'
Writing 'cgps20Pattern11046.png'
Writing 'cgps20Pattern11047.png'
Writing 'cgps20Pattern11048.png'
Writing 'cgps20Pattern11049.png'
Writing 'cgps20Pattern11050.png'
Writing 'cgps20Pattern11051.png'
Writing 'cgps20Pattern11052.png'
Writing 'cgps20Pattern11053.png'
Writing 'cgps20Pattern11054.png'
Writing 'cgps20Pattern11055.png'
Writing 'cgps20Pattern11056.png'
Writing 'cgps20Pattern11057.png'
Writing 'cgps20Pattern11058.png'
Writing 'cgps20Pattern11059.png'
Writing 'cgps20Pattern11060.png'
Writing 'cgps20Pattern11061.png'
Writing 'cgps20Pattern11062.png'
Writing 'cgps20Pattern11063.png'
Writing 'cgps20Pattern11064.png'
Writing 'cgps20Pattern11065.png'
Writing 'cgps20Pattern11066.png'
Writing 'cgps20Pattern11067.png'
Writing 'cgps20Pattern11068.png'
Writing 'cgps20Pattern11069.png'
Writing 'cgps20Pattern11070.png'
Writing 'cgps20Pattern11071.png'
Writing 'cgps20Pattern11072.png'
Writing 'cgps20Pattern11073.png'
Writing 'cgps20Pattern11074.png'
Writing 'cgps20Pattern11075.png'
Writing 'cgps20Pattern11076.png'
Writing 'cgps20Pattern11077.png'
Writing 'cgps20Pattern11078.png'
Writing 'cgps20Pattern11079.png'
Writing 'cgps20Pattern11080.png'
Writing 'cgps20Pattern11081.png'
Writing 'cgps20Pattern11082.png'
Writing 'cgps20Pattern11083.png'
Writing 'cgps20Pattern11084.png'
Writing 'cgps20Pattern11085.png'
Writing 'cgps20Pattern11086.png'
Writing 'cgps20Pattern11087.png'
Writing 'cgps20Pattern11088.png'
Writing 'cgps20Pattern11089.png'
Writing 'cgps20Pattern11090.png'
Writing 'cgps20Pattern11091.png'
Writing 'cgps20Pattern11092.png'
Writing 'cgps20Pattern11093.png'
Writing 'cgps20Pattern11094.png'

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Writing 'cgps20Pattern11095.png'
Writing 'cgps20Pattern11096.png'
Writing 'cgps20Pattern11097.png'
Writing 'cgps20Pattern11098.png'
Writing 'cgps20Pattern11099.png'
Writing 'cgps20Pattern11100.png'
## Will create: ./plots/cgps20Pattern11.gif
## Executing: 'magick -delay 1x10 cgps20Pattern11*.png cgps20Pattern11.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern12.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern12000.png'
Writing 'cgps20Pattern12001.png'
Writing 'cgps20Pattern12002.png'
Writing 'cgps20Pattern12003.png'
Writing 'cgps20Pattern12004.png'
Writing 'cgps20Pattern12005.png'
Writing 'cgps20Pattern12006.png'
Writing 'cgps20Pattern12007.png'
Writing 'cgps20Pattern12008.png'
Writing 'cgps20Pattern12009.png'
Writing 'cgps20Pattern12010.png'
Writing 'cgps20Pattern12011.png'
Writing 'cgps20Pattern12012.png'
Writing 'cgps20Pattern12013.png'
Writing 'cgps20Pattern12014.png'
Writing 'cgps20Pattern12015.png'
Writing 'cgps20Pattern12016.png'
Writing 'cgps20Pattern12017.png'
Writing 'cgps20Pattern12018.png'
Writing 'cgps20Pattern12019.png'
Writing 'cgps20Pattern12020.png'
Writing 'cgps20Pattern12021.png'
Writing 'cgps20Pattern12022.png'
Writing 'cgps20Pattern12023.png'
Writing 'cgps20Pattern12024.png'
Writing 'cgps20Pattern12025.png'
Writing 'cgps20Pattern12026.png'
Writing 'cgps20Pattern12027.png'
Writing 'cgps20Pattern12028.png'
Writing 'cgps20Pattern12029.png'
Writing 'cgps20Pattern12030.png'
Writing 'cgps20Pattern12031.png'
Writing 'cgps20Pattern12032.png'
Writing 'cgps20Pattern12033.png'
Writing 'cgps20Pattern12034.png'
Writing 'cgps20Pattern12035.png'
Writing 'cgps20Pattern12036.png'
Writing 'cgps20Pattern12037.png'
Writing 'cgps20Pattern12038.png'

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Writing 'cgps20Pattern12039.png'
Writing 'cgps20Pattern12040.png'
Writing 'cgps20Pattern12041.png'
Writing 'cgps20Pattern12042.png'
Writing 'cgps20Pattern12043.png'
Writing 'cgps20Pattern12044.png'
Writing 'cgps20Pattern12045.png'
Writing 'cgps20Pattern12046.png'
Writing 'cgps20Pattern12047.png'
Writing 'cgps20Pattern12048.png'
Writing 'cgps20Pattern12049.png'
Writing 'cgps20Pattern12050.png'
Writing 'cgps20Pattern12051.png'
Writing 'cgps20Pattern12052.png'
Writing 'cgps20Pattern12053.png'
Writing 'cgps20Pattern12054.png'
Writing 'cgps20Pattern12055.png'
Writing 'cgps20Pattern12056.png'
Writing 'cgps20Pattern12057.png'
Writing 'cgps20Pattern12058.png'
Writing 'cgps20Pattern12059.png'
Writing 'cgps20Pattern12060.png'
Writing 'cgps20Pattern12061.png'
Writing 'cgps20Pattern12062.png'
Writing 'cgps20Pattern12063.png'
Writing 'cgps20Pattern12064.png'
Writing 'cgps20Pattern12065.png'
Writing 'cgps20Pattern12066.png'
Writing 'cgps20Pattern12067.png'
Writing 'cgps20Pattern12068.png'
Writing 'cgps20Pattern12069.png'
Writing 'cgps20Pattern12070.png'
Writing 'cgps20Pattern12071.png'
Writing 'cgps20Pattern12072.png'
Writing 'cgps20Pattern12073.png'
Writing 'cgps20Pattern12074.png'
Writing 'cgps20Pattern12075.png'
Writing 'cgps20Pattern12076.png'
Writing 'cgps20Pattern12077.png'
Writing 'cgps20Pattern12078.png'
Writing 'cgps20Pattern12079.png'
Writing 'cgps20Pattern12080.png'
Writing 'cgps20Pattern12081.png'
Writing 'cgps20Pattern12082.png'
Writing 'cgps20Pattern12083.png'
Writing 'cgps20Pattern12084.png'
Writing 'cgps20Pattern12085.png'
Writing 'cgps20Pattern12086.png'
Writing 'cgps20Pattern12087.png'
Writing 'cgps20Pattern12088.png'
Writing 'cgps20Pattern12089.png'
Writing 'cgps20Pattern12090.png'
Writing 'cgps20Pattern12091.png'
Writing 'cgps20Pattern12092.png'

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Writing 'cgps20Pattern12093.png'
Writing 'cgps20Pattern12094.png'
Writing 'cgps20Pattern12095.png'
Writing 'cgps20Pattern12096.png'
Writing 'cgps20Pattern12097.png'
Writing 'cgps20Pattern12098.png'
Writing 'cgps20Pattern12099.png'
Writing 'cgps20Pattern12100.png'
## Will create: ./plots/cgps20Pattern12.gif
## Executing: 'magick -delay 1x10 cgps20Pattern12*.png cgps20Pattern12.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern13.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern13000.png'
Writing 'cgps20Pattern13001.png'
Writing 'cgps20Pattern13002.png'
Writing 'cgps20Pattern13003.png'
Writing 'cgps20Pattern13004.png'
Writing 'cgps20Pattern13005.png'
Writing 'cgps20Pattern13006.png'
Writing 'cgps20Pattern13007.png'
Writing 'cgps20Pattern13008.png'
Writing 'cgps20Pattern13009.png'
Writing 'cgps20Pattern13010.png'
Writing 'cgps20Pattern13011.png'
Writing 'cgps20Pattern13012.png'
Writing 'cgps20Pattern13013.png'
Writing 'cgps20Pattern13014.png'
Writing 'cgps20Pattern13015.png'
Writing 'cgps20Pattern13016.png'
Writing 'cgps20Pattern13017.png'
Writing 'cgps20Pattern13018.png'
Writing 'cgps20Pattern13019.png'
Writing 'cgps20Pattern13020.png'
Writing 'cgps20Pattern13021.png'
Writing 'cgps20Pattern13022.png'
Writing 'cgps20Pattern13023.png'
Writing 'cgps20Pattern13024.png'
Writing 'cgps20Pattern13025.png'
Writing 'cgps20Pattern13026.png'
Writing 'cgps20Pattern13027.png'
Writing 'cgps20Pattern13028.png'
Writing 'cgps20Pattern13029.png'
Writing 'cgps20Pattern13030.png'
Writing 'cgps20Pattern13031.png'
Writing 'cgps20Pattern13032.png'
Writing 'cgps20Pattern13033.png'
Writing 'cgps20Pattern13034.png'
Writing 'cgps20Pattern13035.png'
Writing 'cgps20Pattern13036.png'

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Writing 'cgps20Pattern13037.png'
Writing 'cgps20Pattern13038.png'
Writing 'cgps20Pattern13039.png'
Writing 'cgps20Pattern13040.png'
Writing 'cgps20Pattern13041.png'
Writing 'cgps20Pattern13042.png'
Writing 'cgps20Pattern13043.png'
Writing 'cgps20Pattern13044.png'
Writing 'cgps20Pattern13045.png'
Writing 'cgps20Pattern13046.png'
Writing 'cgps20Pattern13047.png'
Writing 'cgps20Pattern13048.png'
Writing 'cgps20Pattern13049.png'
Writing 'cgps20Pattern13050.png'
Writing 'cgps20Pattern13051.png'
Writing 'cgps20Pattern13052.png'
Writing 'cgps20Pattern13053.png'
Writing 'cgps20Pattern13054.png'
Writing 'cgps20Pattern13055.png'
Writing 'cgps20Pattern13056.png'
Writing 'cgps20Pattern13057.png'
Writing 'cgps20Pattern13058.png'
Writing 'cgps20Pattern13059.png'
Writing 'cgps20Pattern13060.png'
Writing 'cgps20Pattern13061.png'
Writing 'cgps20Pattern13062.png'
Writing 'cgps20Pattern13063.png'
Writing 'cgps20Pattern13064.png'
Writing 'cgps20Pattern13065.png'
Writing 'cgps20Pattern13066.png'
Writing 'cgps20Pattern13067.png'
Writing 'cgps20Pattern13068.png'
Writing 'cgps20Pattern13069.png'
Writing 'cgps20Pattern13070.png'
Writing 'cgps20Pattern13071.png'
Writing 'cgps20Pattern13072.png'
Writing 'cgps20Pattern13073.png'
Writing 'cgps20Pattern13074.png'
Writing 'cgps20Pattern13075.png'
Writing 'cgps20Pattern13076.png'
Writing 'cgps20Pattern13077.png'
Writing 'cgps20Pattern13078.png'
Writing 'cgps20Pattern13079.png'
Writing 'cgps20Pattern13080.png'
Writing 'cgps20Pattern13081.png'
Writing 'cgps20Pattern13082.png'
Writing 'cgps20Pattern13083.png'
Writing 'cgps20Pattern13084.png'
Writing 'cgps20Pattern13085.png'
Writing 'cgps20Pattern13086.png'
Writing 'cgps20Pattern13087.png'
Writing 'cgps20Pattern13088.png'
Writing 'cgps20Pattern13089.png'
Writing 'cgps20Pattern13090.png'

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Writing 'cgps20Pattern13091.png'
Writing 'cgps20Pattern13092.png'
Writing 'cgps20Pattern13093.png'
Writing 'cgps20Pattern13094.png'
Writing 'cgps20Pattern13095.png'
Writing 'cgps20Pattern13096.png'
Writing 'cgps20Pattern13097.png'
Writing 'cgps20Pattern13098.png'
Writing 'cgps20Pattern13099.png'
Writing 'cgps20Pattern13100.png'
## Will create: ./plots/cgps20Pattern13.gif
## Executing: 'magick -delay 1x10 cgps20Pattern13*.png cgps20Pattern13.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern14.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern14000.png'
Writing 'cgps20Pattern14001.png'
Writing 'cgps20Pattern14002.png'
Writing 'cgps20Pattern14003.png'
Writing 'cgps20Pattern14004.png'
Writing 'cgps20Pattern14005.png'
Writing 'cgps20Pattern14006.png'
Writing 'cgps20Pattern14007.png'
Writing 'cgps20Pattern14008.png'
Writing 'cgps20Pattern14009.png'
Writing 'cgps20Pattern14010.png'
Writing 'cgps20Pattern14011.png'
Writing 'cgps20Pattern14012.png'
Writing 'cgps20Pattern14013.png'
Writing 'cgps20Pattern14014.png'
Writing 'cgps20Pattern14015.png'
Writing 'cgps20Pattern14016.png'
Writing 'cgps20Pattern14017.png'
Writing 'cgps20Pattern14018.png'
Writing 'cgps20Pattern14019.png'
Writing 'cgps20Pattern14020.png'
Writing 'cgps20Pattern14021.png'
Writing 'cgps20Pattern14022.png'
Writing 'cgps20Pattern14023.png'
Writing 'cgps20Pattern14024.png'
Writing 'cgps20Pattern14025.png'
Writing 'cgps20Pattern14026.png'
Writing 'cgps20Pattern14027.png'
Writing 'cgps20Pattern14028.png'
Writing 'cgps20Pattern14029.png'
Writing 'cgps20Pattern14030.png'
Writing 'cgps20Pattern14031.png'
Writing 'cgps20Pattern14032.png'
Writing 'cgps20Pattern14033.png'
Writing 'cgps20Pattern14034.png'

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Writing 'cgps20Pattern14035.png'
Writing 'cgps20Pattern14036.png'
Writing 'cgps20Pattern14037.png'
Writing 'cgps20Pattern14038.png'
Writing 'cgps20Pattern14039.png'
Writing 'cgps20Pattern14040.png'
Writing 'cgps20Pattern14041.png'
Writing 'cgps20Pattern14042.png'
Writing 'cgps20Pattern14043.png'
Writing 'cgps20Pattern14044.png'
Writing 'cgps20Pattern14045.png'
Writing 'cgps20Pattern14046.png'
Writing 'cgps20Pattern14047.png'
Writing 'cgps20Pattern14048.png'
Writing 'cgps20Pattern14049.png'
Writing 'cgps20Pattern14050.png'
Writing 'cgps20Pattern14051.png'
Writing 'cgps20Pattern14052.png'
Writing 'cgps20Pattern14053.png'
Writing 'cgps20Pattern14054.png'
Writing 'cgps20Pattern14055.png'
Writing 'cgps20Pattern14056.png'
Writing 'cgps20Pattern14057.png'
Writing 'cgps20Pattern14058.png'
Writing 'cgps20Pattern14059.png'
Writing 'cgps20Pattern14060.png'
Writing 'cgps20Pattern14061.png'
Writing 'cgps20Pattern14062.png'
Writing 'cgps20Pattern14063.png'
Writing 'cgps20Pattern14064.png'
Writing 'cgps20Pattern14065.png'
Writing 'cgps20Pattern14066.png'
Writing 'cgps20Pattern14067.png'
Writing 'cgps20Pattern14068.png'
Writing 'cgps20Pattern14069.png'
Writing 'cgps20Pattern14070.png'
Writing 'cgps20Pattern14071.png'
Writing 'cgps20Pattern14072.png'
Writing 'cgps20Pattern14073.png'
Writing 'cgps20Pattern14074.png'
Writing 'cgps20Pattern14075.png'
Writing 'cgps20Pattern14076.png'
Writing 'cgps20Pattern14077.png'
Writing 'cgps20Pattern14078.png'
Writing 'cgps20Pattern14079.png'
Writing 'cgps20Pattern14080.png'
Writing 'cgps20Pattern14081.png'
Writing 'cgps20Pattern14082.png'
Writing 'cgps20Pattern14083.png'
Writing 'cgps20Pattern14084.png'
Writing 'cgps20Pattern14085.png'
Writing 'cgps20Pattern14086.png'
Writing 'cgps20Pattern14087.png'
Writing 'cgps20Pattern14088.png'

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Writing 'cgps20Pattern14089.png'
Writing 'cgps20Pattern14090.png'
Writing 'cgps20Pattern14091.png'
Writing 'cgps20Pattern14092.png'
Writing 'cgps20Pattern14093.png'
Writing 'cgps20Pattern14094.png'
Writing 'cgps20Pattern14095.png'
Writing 'cgps20Pattern14096.png'
Writing 'cgps20Pattern14097.png'
Writing 'cgps20Pattern14098.png'
Writing 'cgps20Pattern14099.png'
Writing 'cgps20Pattern14100.png'
## Will create: ./plots/cgps20Pattern14.gif
## Executing: 'magick -delay 1x10 cgps20Pattern14*.png cgps20Pattern14.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern15.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern15000.png'
Writing 'cgps20Pattern15001.png'
Writing 'cgps20Pattern15002.png'
Writing 'cgps20Pattern15003.png'
Writing 'cgps20Pattern15004.png'
Writing 'cgps20Pattern15005.png'
Writing 'cgps20Pattern15006.png'
Writing 'cgps20Pattern15007.png'
Writing 'cgps20Pattern15008.png'
Writing 'cgps20Pattern15009.png'
Writing 'cgps20Pattern15010.png'
Writing 'cgps20Pattern15011.png'
Writing 'cgps20Pattern15012.png'
Writing 'cgps20Pattern15013.png'
Writing 'cgps20Pattern15014.png'
Writing 'cgps20Pattern15015.png'
Writing 'cgps20Pattern15016.png'
Writing 'cgps20Pattern15017.png'
Writing 'cgps20Pattern15018.png'
Writing 'cgps20Pattern15019.png'
Writing 'cgps20Pattern15020.png'
Writing 'cgps20Pattern15021.png'
Writing 'cgps20Pattern15022.png'
Writing 'cgps20Pattern15023.png'
Writing 'cgps20Pattern15024.png'
Writing 'cgps20Pattern15025.png'
Writing 'cgps20Pattern15026.png'
Writing 'cgps20Pattern15027.png'
Writing 'cgps20Pattern15028.png'
Writing 'cgps20Pattern15029.png'
Writing 'cgps20Pattern15030.png'
Writing 'cgps20Pattern15031.png'
Writing 'cgps20Pattern15032.png'

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Writing 'cgps20Pattern15033.png'
Writing 'cgps20Pattern15034.png'
Writing 'cgps20Pattern15035.png'
Writing 'cgps20Pattern15036.png'
Writing 'cgps20Pattern15037.png'
Writing 'cgps20Pattern15038.png'
Writing 'cgps20Pattern15039.png'
Writing 'cgps20Pattern15040.png'
Writing 'cgps20Pattern15041.png'
Writing 'cgps20Pattern15042.png'
Writing 'cgps20Pattern15043.png'
Writing 'cgps20Pattern15044.png'
Writing 'cgps20Pattern15045.png'
Writing 'cgps20Pattern15046.png'
Writing 'cgps20Pattern15047.png'
Writing 'cgps20Pattern15048.png'
Writing 'cgps20Pattern15049.png'
Writing 'cgps20Pattern15050.png'
Writing 'cgps20Pattern15051.png'
Writing 'cgps20Pattern15052.png'
Writing 'cgps20Pattern15053.png'
Writing 'cgps20Pattern15054.png'
Writing 'cgps20Pattern15055.png'
Writing 'cgps20Pattern15056.png'
Writing 'cgps20Pattern15057.png'
Writing 'cgps20Pattern15058.png'
Writing 'cgps20Pattern15059.png'
Writing 'cgps20Pattern15060.png'
Writing 'cgps20Pattern15061.png'
Writing 'cgps20Pattern15062.png'
Writing 'cgps20Pattern15063.png'
Writing 'cgps20Pattern15064.png'
Writing 'cgps20Pattern15065.png'
Writing 'cgps20Pattern15066.png'
Writing 'cgps20Pattern15067.png'
Writing 'cgps20Pattern15068.png'
Writing 'cgps20Pattern15069.png'
Writing 'cgps20Pattern15070.png'
Writing 'cgps20Pattern15071.png'
Writing 'cgps20Pattern15072.png'
Writing 'cgps20Pattern15073.png'
Writing 'cgps20Pattern15074.png'
Writing 'cgps20Pattern15075.png'
Writing 'cgps20Pattern15076.png'
Writing 'cgps20Pattern15077.png'
Writing 'cgps20Pattern15078.png'
Writing 'cgps20Pattern15079.png'
Writing 'cgps20Pattern15080.png'
Writing 'cgps20Pattern15081.png'
Writing 'cgps20Pattern15082.png'
Writing 'cgps20Pattern15083.png'
Writing 'cgps20Pattern15084.png'
Writing 'cgps20Pattern15085.png'
Writing 'cgps20Pattern15086.png'

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Writing 'cgps20Pattern15087.png'
Writing 'cgps20Pattern15088.png'
Writing 'cgps20Pattern15089.png'
Writing 'cgps20Pattern15090.png'
Writing 'cgps20Pattern15091.png'
Writing 'cgps20Pattern15092.png'
Writing 'cgps20Pattern15093.png'
Writing 'cgps20Pattern15094.png'
Writing 'cgps20Pattern15095.png'
Writing 'cgps20Pattern15096.png'
Writing 'cgps20Pattern15097.png'
Writing 'cgps20Pattern15098.png'
Writing 'cgps20Pattern15099.png'
Writing 'cgps20Pattern15100.png'
## Will create: ./plots/cgps20Pattern15.gif
## Executing: 'magick -delay 1x10 cgps20Pattern15*.png cgps20Pattern15.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern16.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern16000.png'
Writing 'cgps20Pattern16001.png'
Writing 'cgps20Pattern16002.png'
Writing 'cgps20Pattern16003.png'
Writing 'cgps20Pattern16004.png'
Writing 'cgps20Pattern16005.png'
Writing 'cgps20Pattern16006.png'
Writing 'cgps20Pattern16007.png'
Writing 'cgps20Pattern16008.png'
Writing 'cgps20Pattern16009.png'
Writing 'cgps20Pattern16010.png'
Writing 'cgps20Pattern16011.png'
Writing 'cgps20Pattern16012.png'
Writing 'cgps20Pattern16013.png'
Writing 'cgps20Pattern16014.png'
Writing 'cgps20Pattern16015.png'
Writing 'cgps20Pattern16016.png'
Writing 'cgps20Pattern16017.png'
Writing 'cgps20Pattern16018.png'
Writing 'cgps20Pattern16019.png'
Writing 'cgps20Pattern16020.png'
Writing 'cgps20Pattern16021.png'
Writing 'cgps20Pattern16022.png'
Writing 'cgps20Pattern16023.png'
Writing 'cgps20Pattern16024.png'
Writing 'cgps20Pattern16025.png'
Writing 'cgps20Pattern16026.png'
Writing 'cgps20Pattern16027.png'
Writing 'cgps20Pattern16028.png'
Writing 'cgps20Pattern16029.png'
Writing 'cgps20Pattern16030.png'

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Writing 'cgps20Pattern16031.png'
Writing 'cgps20Pattern16032.png'
Writing 'cgps20Pattern16033.png'
Writing 'cgps20Pattern16034.png'
Writing 'cgps20Pattern16035.png'
Writing 'cgps20Pattern16036.png'
Writing 'cgps20Pattern16037.png'
Writing 'cgps20Pattern16038.png'
Writing 'cgps20Pattern16039.png'
Writing 'cgps20Pattern16040.png'
Writing 'cgps20Pattern16041.png'
Writing 'cgps20Pattern16042.png'
Writing 'cgps20Pattern16043.png'
Writing 'cgps20Pattern16044.png'
Writing 'cgps20Pattern16045.png'
Writing 'cgps20Pattern16046.png'
Writing 'cgps20Pattern16047.png'
Writing 'cgps20Pattern16048.png'
Writing 'cgps20Pattern16049.png'
Writing 'cgps20Pattern16050.png'
Writing 'cgps20Pattern16051.png'
Writing 'cgps20Pattern16052.png'
Writing 'cgps20Pattern16053.png'
Writing 'cgps20Pattern16054.png'
Writing 'cgps20Pattern16055.png'
Writing 'cgps20Pattern16056.png'
Writing 'cgps20Pattern16057.png'
Writing 'cgps20Pattern16058.png'
Writing 'cgps20Pattern16059.png'
Writing 'cgps20Pattern16060.png'
Writing 'cgps20Pattern16061.png'
Writing 'cgps20Pattern16062.png'
Writing 'cgps20Pattern16063.png'
Writing 'cgps20Pattern16064.png'
Writing 'cgps20Pattern16065.png'
Writing 'cgps20Pattern16066.png'
Writing 'cgps20Pattern16067.png'
Writing 'cgps20Pattern16068.png'
Writing 'cgps20Pattern16069.png'
Writing 'cgps20Pattern16070.png'
Writing 'cgps20Pattern16071.png'
Writing 'cgps20Pattern16072.png'
Writing 'cgps20Pattern16073.png'
Writing 'cgps20Pattern16074.png'
Writing 'cgps20Pattern16075.png'
Writing 'cgps20Pattern16076.png'
Writing 'cgps20Pattern16077.png'
Writing 'cgps20Pattern16078.png'
Writing 'cgps20Pattern16079.png'
Writing 'cgps20Pattern16080.png'
Writing 'cgps20Pattern16081.png'
Writing 'cgps20Pattern16082.png'
Writing 'cgps20Pattern16083.png'
Writing 'cgps20Pattern16084.png'

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Writing 'cgps20Pattern16085.png'
Writing 'cgps20Pattern16086.png'
Writing 'cgps20Pattern16087.png'
Writing 'cgps20Pattern16088.png'
Writing 'cgps20Pattern16089.png'
Writing 'cgps20Pattern16090.png'
Writing 'cgps20Pattern16091.png'
Writing 'cgps20Pattern16092.png'
Writing 'cgps20Pattern16093.png'
Writing 'cgps20Pattern16094.png'
Writing 'cgps20Pattern16095.png'
Writing 'cgps20Pattern16096.png'
Writing 'cgps20Pattern16097.png'
Writing 'cgps20Pattern16098.png'
Writing 'cgps20Pattern16099.png'
Writing 'cgps20Pattern16100.png'
## Will create: ./plots/cgps20Pattern16.gif
## Executing: 'magick -delay 1x10 cgps20Pattern16*.png cgps20Pattern16.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern17.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern17000.png'
Writing 'cgps20Pattern17001.png'
Writing 'cgps20Pattern17002.png'
Writing 'cgps20Pattern17003.png'
Writing 'cgps20Pattern17004.png'
Writing 'cgps20Pattern17005.png'
Writing 'cgps20Pattern17006.png'
Writing 'cgps20Pattern17007.png'
Writing 'cgps20Pattern17008.png'
Writing 'cgps20Pattern17009.png'
Writing 'cgps20Pattern17010.png'
Writing 'cgps20Pattern17011.png'
Writing 'cgps20Pattern17012.png'
Writing 'cgps20Pattern17013.png'
Writing 'cgps20Pattern17014.png'
Writing 'cgps20Pattern17015.png'
Writing 'cgps20Pattern17016.png'
Writing 'cgps20Pattern17017.png'
Writing 'cgps20Pattern17018.png'
Writing 'cgps20Pattern17019.png'
Writing 'cgps20Pattern17020.png'
Writing 'cgps20Pattern17021.png'
Writing 'cgps20Pattern17022.png'
Writing 'cgps20Pattern17023.png'
Writing 'cgps20Pattern17024.png'
Writing 'cgps20Pattern17025.png'
Writing 'cgps20Pattern17026.png'
Writing 'cgps20Pattern17027.png'
Writing 'cgps20Pattern17028.png'

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Writing 'cgps20Pattern17029.png'
Writing 'cgps20Pattern17030.png'
Writing 'cgps20Pattern17031.png'
Writing 'cgps20Pattern17032.png'
Writing 'cgps20Pattern17033.png'
Writing 'cgps20Pattern17034.png'
Writing 'cgps20Pattern17035.png'
Writing 'cgps20Pattern17036.png'
Writing 'cgps20Pattern17037.png'
Writing 'cgps20Pattern17038.png'
Writing 'cgps20Pattern17039.png'
Writing 'cgps20Pattern17040.png'
Writing 'cgps20Pattern17041.png'
Writing 'cgps20Pattern17042.png'
Writing 'cgps20Pattern17043.png'
Writing 'cgps20Pattern17044.png'
Writing 'cgps20Pattern17045.png'
Writing 'cgps20Pattern17046.png'
Writing 'cgps20Pattern17047.png'
Writing 'cgps20Pattern17048.png'
Writing 'cgps20Pattern17049.png'
Writing 'cgps20Pattern17050.png'
Writing 'cgps20Pattern17051.png'
Writing 'cgps20Pattern17052.png'
Writing 'cgps20Pattern17053.png'
Writing 'cgps20Pattern17054.png'
Writing 'cgps20Pattern17055.png'
Writing 'cgps20Pattern17056.png'
Writing 'cgps20Pattern17057.png'
Writing 'cgps20Pattern17058.png'
Writing 'cgps20Pattern17059.png'
Writing 'cgps20Pattern17060.png'
Writing 'cgps20Pattern17061.png'
Writing 'cgps20Pattern17062.png'
Writing 'cgps20Pattern17063.png'
Writing 'cgps20Pattern17064.png'
Writing 'cgps20Pattern17065.png'
Writing 'cgps20Pattern17066.png'
Writing 'cgps20Pattern17067.png'
Writing 'cgps20Pattern17068.png'
Writing 'cgps20Pattern17069.png'
Writing 'cgps20Pattern17070.png'
Writing 'cgps20Pattern17071.png'
Writing 'cgps20Pattern17072.png'
Writing 'cgps20Pattern17073.png'
Writing 'cgps20Pattern17074.png'
Writing 'cgps20Pattern17075.png'
Writing 'cgps20Pattern17076.png'
Writing 'cgps20Pattern17077.png'
Writing 'cgps20Pattern17078.png'
Writing 'cgps20Pattern17079.png'
Writing 'cgps20Pattern17080.png'
Writing 'cgps20Pattern17081.png'
Writing 'cgps20Pattern17082.png'

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Writing 'cgps20Pattern17083.png'
Writing 'cgps20Pattern17084.png'
Writing 'cgps20Pattern17085.png'
Writing 'cgps20Pattern17086.png'
Writing 'cgps20Pattern17087.png'
Writing 'cgps20Pattern17088.png'
Writing 'cgps20Pattern17089.png'
Writing 'cgps20Pattern17090.png'
Writing 'cgps20Pattern17091.png'
Writing 'cgps20Pattern17092.png'
Writing 'cgps20Pattern17093.png'
Writing 'cgps20Pattern17094.png'
Writing 'cgps20Pattern17095.png'
Writing 'cgps20Pattern17096.png'
Writing 'cgps20Pattern17097.png'
Writing 'cgps20Pattern17098.png'
Writing 'cgps20Pattern17099.png'
Writing 'cgps20Pattern17100.png'
## Will create: ./plots/cgps20Pattern17.gif
## Executing: 'magick -delay 1x10 cgps20Pattern17*.png cgps20Pattern17.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern18.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern18000.png'
Writing 'cgps20Pattern18001.png'
Writing 'cgps20Pattern18002.png'
Writing 'cgps20Pattern18003.png'
Writing 'cgps20Pattern18004.png'
Writing 'cgps20Pattern18005.png'
Writing 'cgps20Pattern18006.png'
Writing 'cgps20Pattern18007.png'
Writing 'cgps20Pattern18008.png'
Writing 'cgps20Pattern18009.png'
Writing 'cgps20Pattern18010.png'
Writing 'cgps20Pattern18011.png'
Writing 'cgps20Pattern18012.png'
Writing 'cgps20Pattern18013.png'
Writing 'cgps20Pattern18014.png'
Writing 'cgps20Pattern18015.png'
Writing 'cgps20Pattern18016.png'
Writing 'cgps20Pattern18017.png'
Writing 'cgps20Pattern18018.png'
Writing 'cgps20Pattern18019.png'
Writing 'cgps20Pattern18020.png'
Writing 'cgps20Pattern18021.png'
Writing 'cgps20Pattern18022.png'
Writing 'cgps20Pattern18023.png'
Writing 'cgps20Pattern18024.png'
Writing 'cgps20Pattern18025.png'
Writing 'cgps20Pattern18026.png'

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Writing 'cgps20Pattern18027.png'
Writing 'cgps20Pattern18028.png'
Writing 'cgps20Pattern18029.png'
Writing 'cgps20Pattern18030.png'
Writing 'cgps20Pattern18031.png'
Writing 'cgps20Pattern18032.png'
Writing 'cgps20Pattern18033.png'
Writing 'cgps20Pattern18034.png'
Writing 'cgps20Pattern18035.png'
Writing 'cgps20Pattern18036.png'
Writing 'cgps20Pattern18037.png'
Writing 'cgps20Pattern18038.png'
Writing 'cgps20Pattern18039.png'
Writing 'cgps20Pattern18040.png'
Writing 'cgps20Pattern18041.png'
Writing 'cgps20Pattern18042.png'
Writing 'cgps20Pattern18043.png'
Writing 'cgps20Pattern18044.png'
Writing 'cgps20Pattern18045.png'
Writing 'cgps20Pattern18046.png'
Writing 'cgps20Pattern18047.png'
Writing 'cgps20Pattern18048.png'
Writing 'cgps20Pattern18049.png'
Writing 'cgps20Pattern18050.png'
Writing 'cgps20Pattern18051.png'
Writing 'cgps20Pattern18052.png'
Writing 'cgps20Pattern18053.png'
Writing 'cgps20Pattern18054.png'
Writing 'cgps20Pattern18055.png'
Writing 'cgps20Pattern18056.png'
Writing 'cgps20Pattern18057.png'
Writing 'cgps20Pattern18058.png'
Writing 'cgps20Pattern18059.png'
Writing 'cgps20Pattern18060.png'
Writing 'cgps20Pattern18061.png'
Writing 'cgps20Pattern18062.png'
Writing 'cgps20Pattern18063.png'
Writing 'cgps20Pattern18064.png'
Writing 'cgps20Pattern18065.png'
Writing 'cgps20Pattern18066.png'
Writing 'cgps20Pattern18067.png'
Writing 'cgps20Pattern18068.png'
Writing 'cgps20Pattern18069.png'
Writing 'cgps20Pattern18070.png'
Writing 'cgps20Pattern18071.png'
Writing 'cgps20Pattern18072.png'
Writing 'cgps20Pattern18073.png'
Writing 'cgps20Pattern18074.png'
Writing 'cgps20Pattern18075.png'
Writing 'cgps20Pattern18076.png'
Writing 'cgps20Pattern18077.png'
Writing 'cgps20Pattern18078.png'
Writing 'cgps20Pattern18079.png'
Writing 'cgps20Pattern18080.png'

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Writing 'cgps20Pattern18081.png'
Writing 'cgps20Pattern18082.png'
Writing 'cgps20Pattern18083.png'
Writing 'cgps20Pattern18084.png'
Writing 'cgps20Pattern18085.png'
Writing 'cgps20Pattern18086.png'
Writing 'cgps20Pattern18087.png'
Writing 'cgps20Pattern18088.png'
Writing 'cgps20Pattern18089.png'
Writing 'cgps20Pattern18090.png'
Writing 'cgps20Pattern18091.png'
Writing 'cgps20Pattern18092.png'
Writing 'cgps20Pattern18093.png'
Writing 'cgps20Pattern18094.png'
Writing 'cgps20Pattern18095.png'
Writing 'cgps20Pattern18096.png'
Writing 'cgps20Pattern18097.png'
Writing 'cgps20Pattern18098.png'
Writing 'cgps20Pattern18099.png'
Writing 'cgps20Pattern18100.png'
## Will create: ./plots/cgps20Pattern18.gif
## Executing: 'magick -delay 1x10 cgps20Pattern18*.png cgps20Pattern18.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern19.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern19000.png'
Writing 'cgps20Pattern19001.png'
Writing 'cgps20Pattern19002.png'
Writing 'cgps20Pattern19003.png'
Writing 'cgps20Pattern19004.png'
Writing 'cgps20Pattern19005.png'
Writing 'cgps20Pattern19006.png'
Writing 'cgps20Pattern19007.png'
Writing 'cgps20Pattern19008.png'
Writing 'cgps20Pattern19009.png'
Writing 'cgps20Pattern19010.png'
Writing 'cgps20Pattern19011.png'
Writing 'cgps20Pattern19012.png'
Writing 'cgps20Pattern19013.png'
Writing 'cgps20Pattern19014.png'
Writing 'cgps20Pattern19015.png'
Writing 'cgps20Pattern19016.png'
Writing 'cgps20Pattern19017.png'
Writing 'cgps20Pattern19018.png'
Writing 'cgps20Pattern19019.png'
Writing 'cgps20Pattern19020.png'
Writing 'cgps20Pattern19021.png'
Writing 'cgps20Pattern19022.png'
Writing 'cgps20Pattern19023.png'
Writing 'cgps20Pattern19024.png'

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Writing 'cgps20Pattern19025.png'
Writing 'cgps20Pattern19026.png'
Writing 'cgps20Pattern19027.png'
Writing 'cgps20Pattern19028.png'
Writing 'cgps20Pattern19029.png'
Writing 'cgps20Pattern19030.png'
Writing 'cgps20Pattern19031.png'
Writing 'cgps20Pattern19032.png'
Writing 'cgps20Pattern19033.png'
Writing 'cgps20Pattern19034.png'
Writing 'cgps20Pattern19035.png'
Writing 'cgps20Pattern19036.png'
Writing 'cgps20Pattern19037.png'
Writing 'cgps20Pattern19038.png'
Writing 'cgps20Pattern19039.png'
Writing 'cgps20Pattern19040.png'
Writing 'cgps20Pattern19041.png'
Writing 'cgps20Pattern19042.png'
Writing 'cgps20Pattern19043.png'
Writing 'cgps20Pattern19044.png'
Writing 'cgps20Pattern19045.png'
Writing 'cgps20Pattern19046.png'
Writing 'cgps20Pattern19047.png'
Writing 'cgps20Pattern19048.png'
Writing 'cgps20Pattern19049.png'
Writing 'cgps20Pattern19050.png'
Writing 'cgps20Pattern19051.png'
Writing 'cgps20Pattern19052.png'
Writing 'cgps20Pattern19053.png'
Writing 'cgps20Pattern19054.png'
Writing 'cgps20Pattern19055.png'
Writing 'cgps20Pattern19056.png'
Writing 'cgps20Pattern19057.png'
Writing 'cgps20Pattern19058.png'
Writing 'cgps20Pattern19059.png'
Writing 'cgps20Pattern19060.png'
Writing 'cgps20Pattern19061.png'
Writing 'cgps20Pattern19062.png'
Writing 'cgps20Pattern19063.png'
Writing 'cgps20Pattern19064.png'
Writing 'cgps20Pattern19065.png'
Writing 'cgps20Pattern19066.png'
Writing 'cgps20Pattern19067.png'
Writing 'cgps20Pattern19068.png'
Writing 'cgps20Pattern19069.png'
Writing 'cgps20Pattern19070.png'
Writing 'cgps20Pattern19071.png'
Writing 'cgps20Pattern19072.png'
Writing 'cgps20Pattern19073.png'
Writing 'cgps20Pattern19074.png'
Writing 'cgps20Pattern19075.png'
Writing 'cgps20Pattern19076.png'
Writing 'cgps20Pattern19077.png'
Writing 'cgps20Pattern19078.png'

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Writing 'cgps20Pattern19079.png'
Writing 'cgps20Pattern19080.png'
Writing 'cgps20Pattern19081.png'
Writing 'cgps20Pattern19082.png'
Writing 'cgps20Pattern19083.png'
Writing 'cgps20Pattern19084.png'
Writing 'cgps20Pattern19085.png'
Writing 'cgps20Pattern19086.png'
Writing 'cgps20Pattern19087.png'
Writing 'cgps20Pattern19088.png'
Writing 'cgps20Pattern19089.png'
Writing 'cgps20Pattern19090.png'
Writing 'cgps20Pattern19091.png'
Writing 'cgps20Pattern19092.png'
Writing 'cgps20Pattern19093.png'
Writing 'cgps20Pattern19094.png'
Writing 'cgps20Pattern19095.png'
Writing 'cgps20Pattern19096.png'
Writing 'cgps20Pattern19097.png'
Writing 'cgps20Pattern19098.png'
Writing 'cgps20Pattern19099.png'
Writing 'cgps20Pattern19100.png'
## Will create: ./plots/cgps20Pattern19.gif
## Executing: 'magick -delay 1x10 cgps20Pattern19*.png cgps20Pattern19.gif'
## Deleting frames

## Warning in rgl.snapshot(...): RGL: Pixmap save: unable to open file 'D:
## \Projects\Fertiglab\projectRSpatialExample\plots\png\cgps20Pattern20.png' for
## writing

## Warning in rgl.snapshot(...): 'rgl.snapshot' failed

## Writing 'cgps20Pattern20000.png'
Writing 'cgps20Pattern20001.png'
Writing 'cgps20Pattern20002.png'
Writing 'cgps20Pattern20003.png'
Writing 'cgps20Pattern20004.png'
Writing 'cgps20Pattern20005.png'
Writing 'cgps20Pattern20006.png'
Writing 'cgps20Pattern20007.png'
Writing 'cgps20Pattern20008.png'
Writing 'cgps20Pattern20009.png'
Writing 'cgps20Pattern20010.png'
Writing 'cgps20Pattern20011.png'
Writing 'cgps20Pattern20012.png'
Writing 'cgps20Pattern20013.png'
Writing 'cgps20Pattern20014.png'
Writing 'cgps20Pattern20015.png'
Writing 'cgps20Pattern20016.png'
Writing 'cgps20Pattern20017.png'
Writing 'cgps20Pattern20018.png'
Writing 'cgps20Pattern20019.png'
Writing 'cgps20Pattern20020.png'
Writing 'cgps20Pattern20021.png'
Writing 'cgps20Pattern20022.png'

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Writing 'cgps20Pattern20023.png'
Writing 'cgps20Pattern20024.png'
Writing 'cgps20Pattern20025.png'
Writing 'cgps20Pattern20026.png'
Writing 'cgps20Pattern20027.png'
Writing 'cgps20Pattern20028.png'
Writing 'cgps20Pattern20029.png'
Writing 'cgps20Pattern20030.png'
Writing 'cgps20Pattern20031.png'
Writing 'cgps20Pattern20032.png'
Writing 'cgps20Pattern20033.png'
Writing 'cgps20Pattern20034.png'
Writing 'cgps20Pattern20035.png'
Writing 'cgps20Pattern20036.png'
Writing 'cgps20Pattern20037.png'
Writing 'cgps20Pattern20038.png'
Writing 'cgps20Pattern20039.png'
Writing 'cgps20Pattern20040.png'
Writing 'cgps20Pattern20041.png'
Writing 'cgps20Pattern20042.png'
Writing 'cgps20Pattern20043.png'
Writing 'cgps20Pattern20044.png'
Writing 'cgps20Pattern20045.png'
Writing 'cgps20Pattern20046.png'
Writing 'cgps20Pattern20047.png'
Writing 'cgps20Pattern20048.png'
Writing 'cgps20Pattern20049.png'
Writing 'cgps20Pattern20050.png'
Writing 'cgps20Pattern20051.png'
Writing 'cgps20Pattern20052.png'
Writing 'cgps20Pattern20053.png'
Writing 'cgps20Pattern20054.png'
Writing 'cgps20Pattern20055.png'
Writing 'cgps20Pattern20056.png'
Writing 'cgps20Pattern20057.png'
Writing 'cgps20Pattern20058.png'
Writing 'cgps20Pattern20059.png'
Writing 'cgps20Pattern20060.png'
Writing 'cgps20Pattern20061.png'
Writing 'cgps20Pattern20062.png'
Writing 'cgps20Pattern20063.png'
Writing 'cgps20Pattern20064.png'
Writing 'cgps20Pattern20065.png'
Writing 'cgps20Pattern20066.png'
Writing 'cgps20Pattern20067.png'
Writing 'cgps20Pattern20068.png'
Writing 'cgps20Pattern20069.png'
Writing 'cgps20Pattern20070.png'
Writing 'cgps20Pattern20071.png'
Writing 'cgps20Pattern20072.png'
Writing 'cgps20Pattern20073.png'
Writing 'cgps20Pattern20074.png'
Writing 'cgps20Pattern20075.png'
Writing 'cgps20Pattern20076.png'

```
Writing 'cgps20Pattern20077.png'
Writing 'cgps20Pattern20078.png'
Writing 'cgps20Pattern20079.png'
Writing 'cgps20Pattern20080.png'
Writing 'cgps20Pattern20081.png'
Writing 'cgps20Pattern20082.png'
Writing 'cgps20Pattern20083.png'
Writing 'cgps20Pattern20084.png'
Writing 'cgps20Pattern20085.png'
Writing 'cgps20Pattern20086.png'
Writing 'cgps20Pattern20087.png'
Writing 'cgps20Pattern20088.png'
Writing 'cgps20Pattern20089.png'
Writing 'cgps20Pattern20090.png'
Writing 'cgps20Pattern20091.png'
Writing 'cgps20Pattern20092.png'
Writing 'cgps20Pattern20093.png'
Writing 'cgps20Pattern20094.png'
Writing 'cgps20Pattern20095.png'
Writing 'cgps20Pattern20096.png'
Writing 'cgps20Pattern20097.png'
Writing 'cgps20Pattern20098.png'
Writing 'cgps20Pattern20099.png'
Writing 'cgps20Pattern20100.png'
## Will create: ./plots/cgps20Pattern20.gif
## Executing: 'magick -delay 1x10 cgps20Pattern20*.png cgps20Pattern20.gif'
## Deleting frames
```