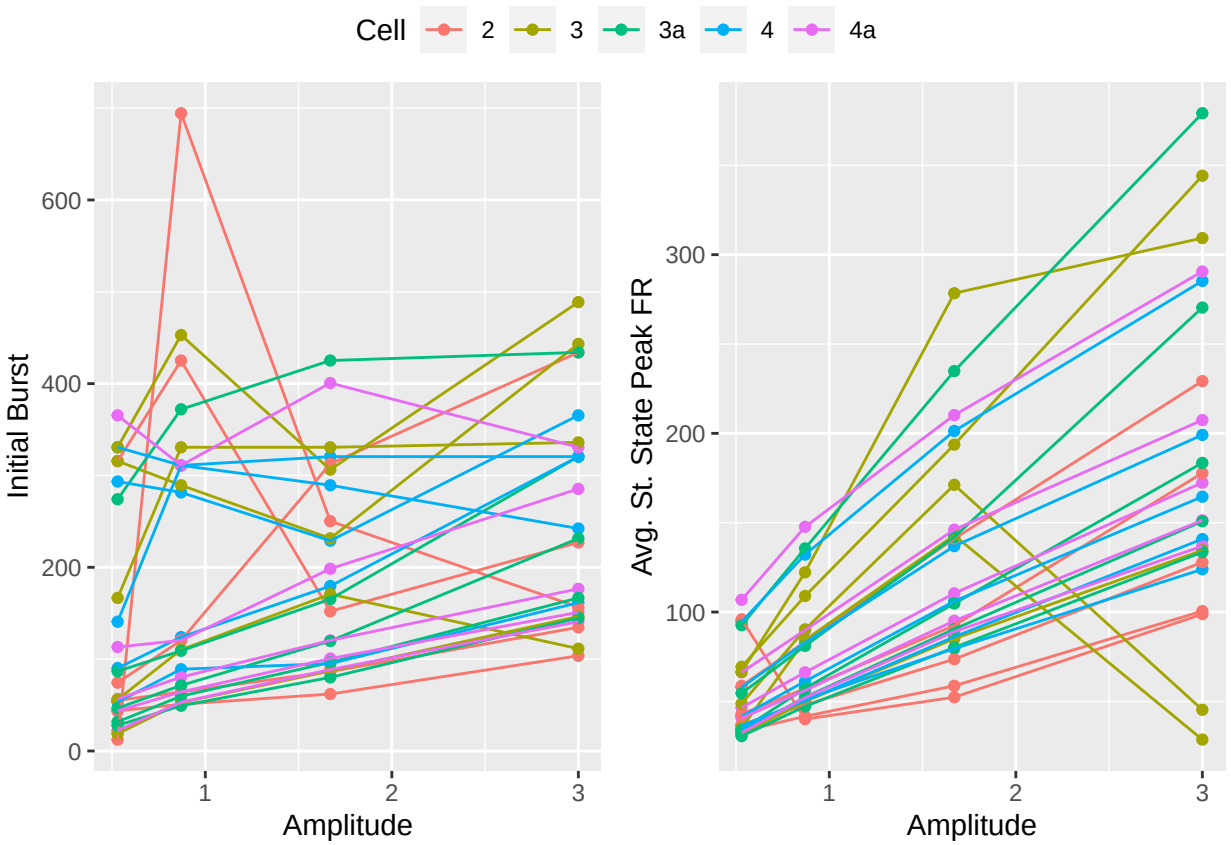
FreqAmp

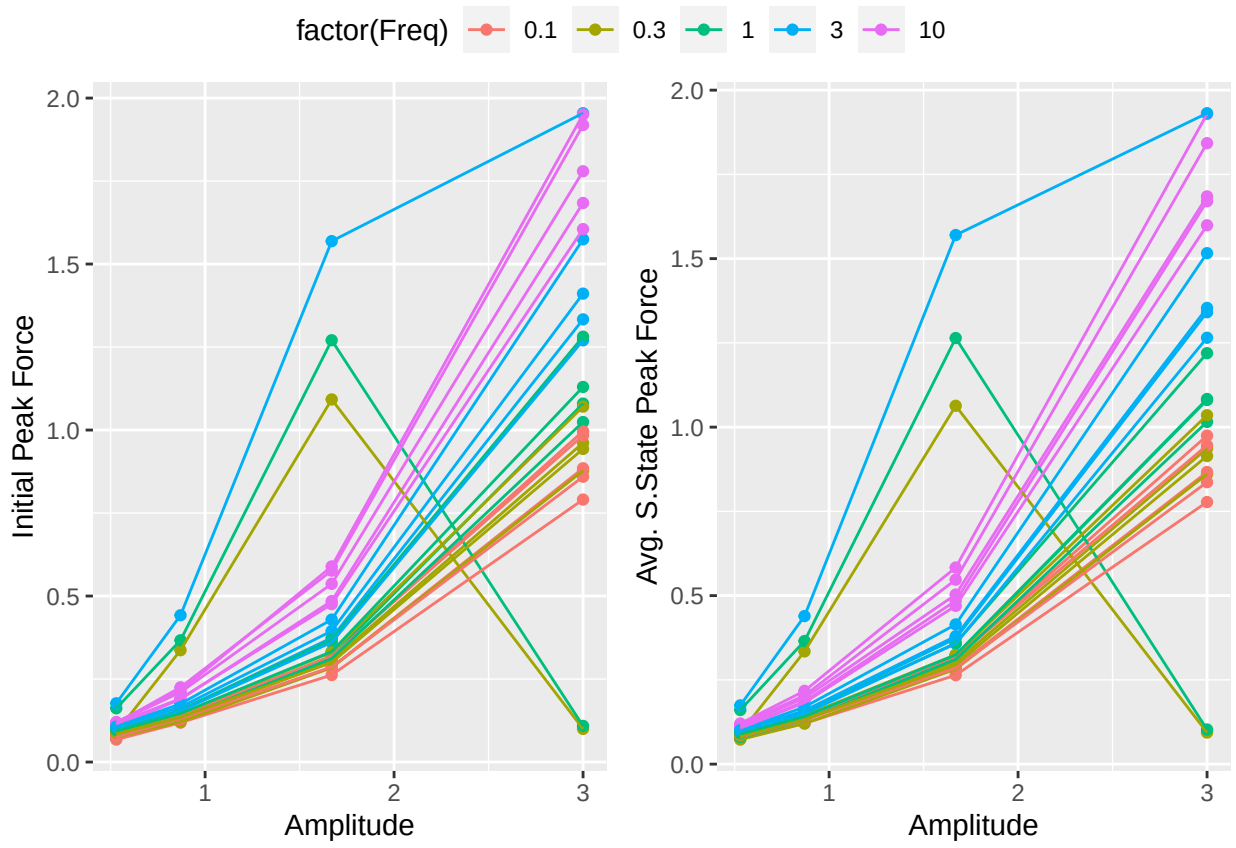
JDS

March 8, 2022

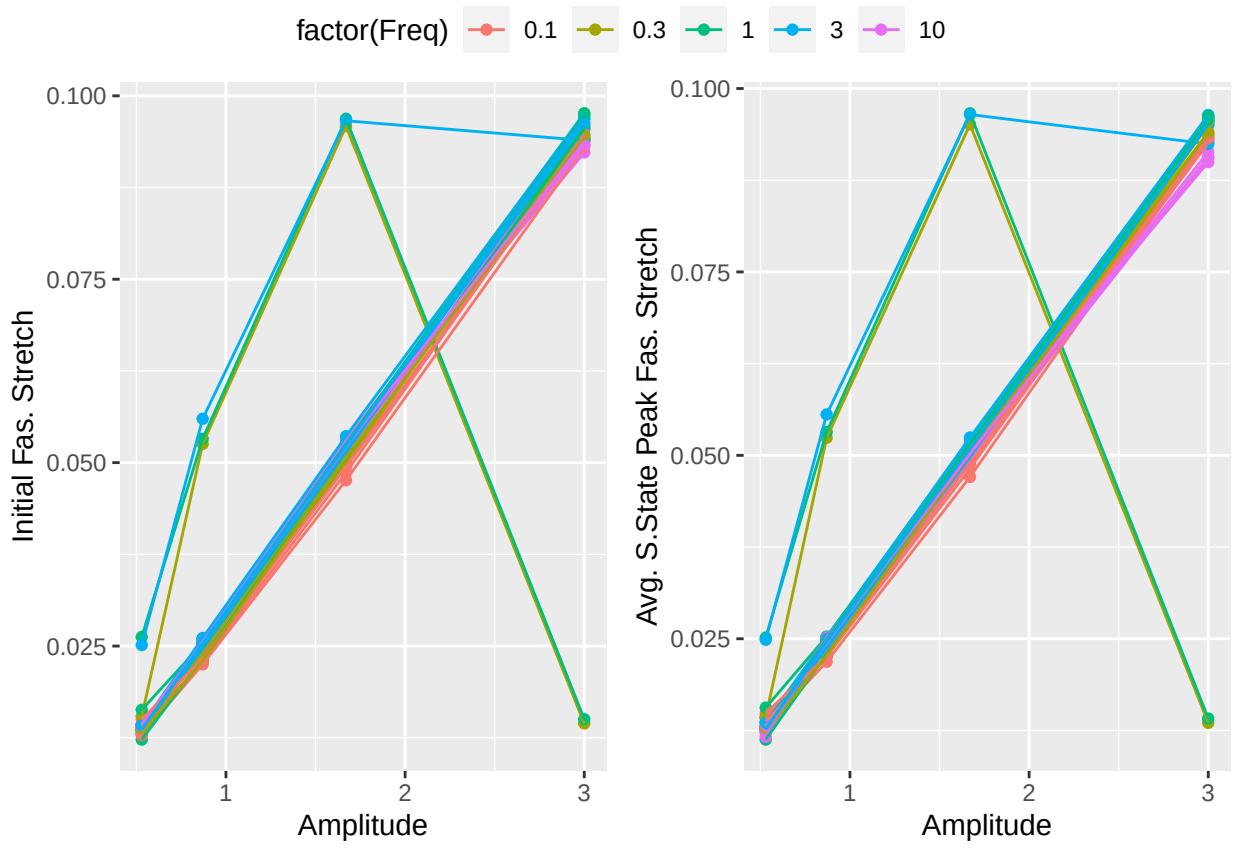
```
grouping = unID
iba_amp = ggplot(data, aes(x = Amp,
                  y = Aff1_ib,
                  color = Cell,
                  group = grouping)) +
  geom_point(aes(color = Cell)) +
  geom_line(aes(color = Cell)) +
  xlab("Amplitude") +
  ylab("Initial Burst")

mifr_amp = ggplot(data, aes(x = Amp,
                  y = Aff1_s,
                  color = Cell,
                  group = grouping)) +
  geom_point(aes(color = Cell)) +
  geom_line(aes(color = Cell)) +
  xlab("Amplitude") +
  ylab("Avg. St. State Peak FR")

ggarrange(iba_amp, mifr_amp, nrow = 1, common.legend = T)
```



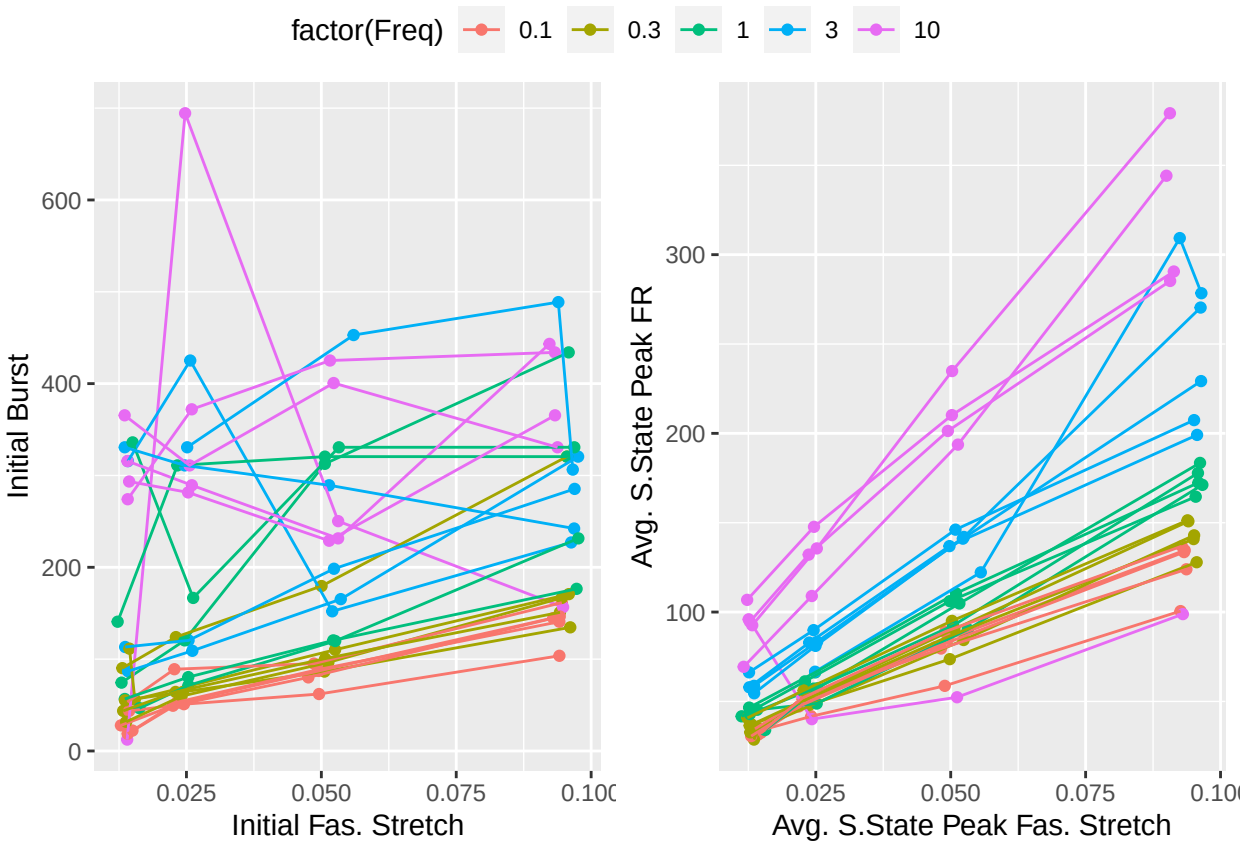

```
iF_amp = ggplot(data, aes(x = Amp,
                  y = Fmt_init,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Amplitude") +
  ylab("Initial Peak Force")

mF_amp = ggplot(data, aes(x = Amp,
                  y = Fmt_s,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Amplitude") +
  ylab("Avg. S.State Peak Force")

ggarrange(iF_amp, mF_amp, nrow = 1, common.legend = T)
```



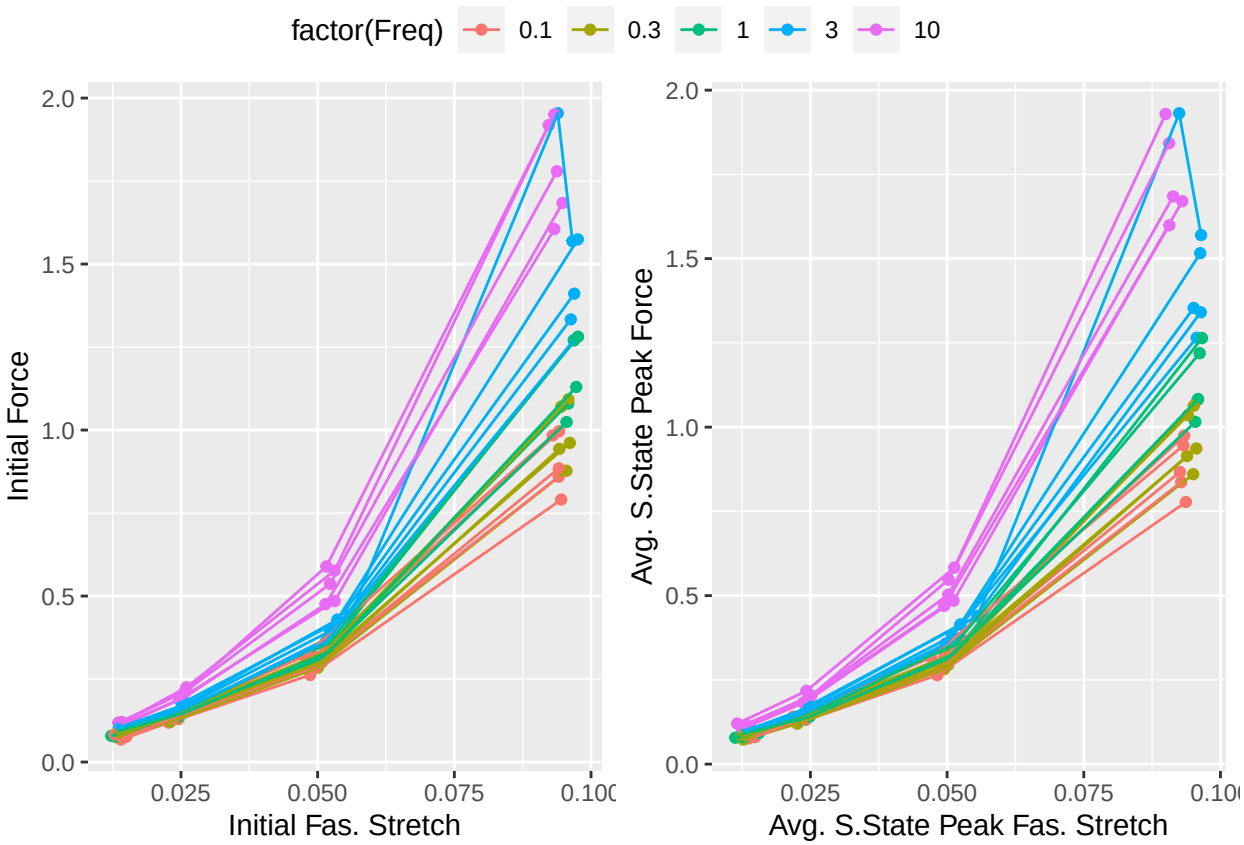

```
iLf_amp = ggplot(data, aes(x = Amp,
                  y = Lf_init,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Amplitude") +
  ylab("Initial Fas. Stretch")

mLf_amp = ggplot(data, aes(x = Amp,
                  y = Lf_s,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Amplitude") +
  ylab("Avg. S.State Peak Fas. Stretch")

ggarrange(iLf_amp, mLf_amp, nrow = 1, common.legend = T)
```



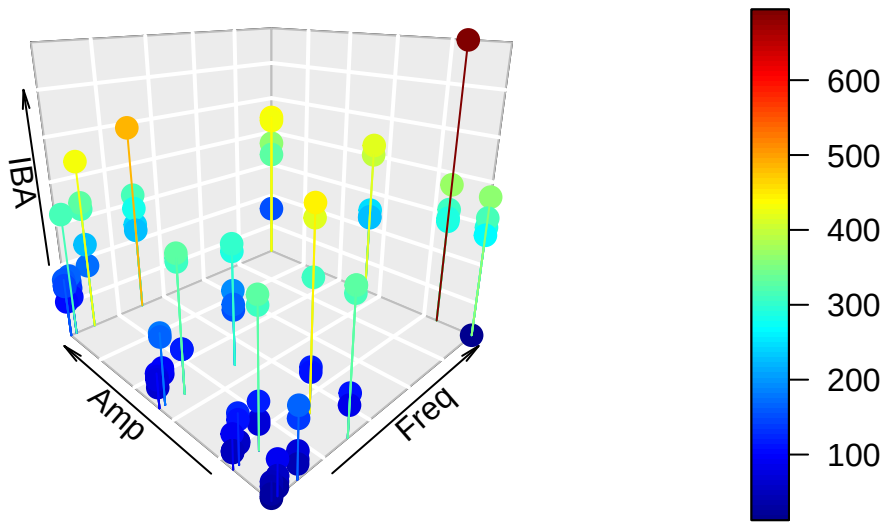

```
iFR_iLf = ggplot(data, aes(x = Lf_init,
                  y = Aff1_ib,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Initial Fas. Stretch") +
  ylab("Initial Burst")

mFR_mLf = ggplot(data, aes(x = Lf_s,
                  y = Aff1_s,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Avg. S.State Peak Fas. Stretch") +
  ylab("Avg. S.State Peak FR")

ggarrange(iFR_iLf, mFR_mLf, nrow = 1, common.legend = T)
```



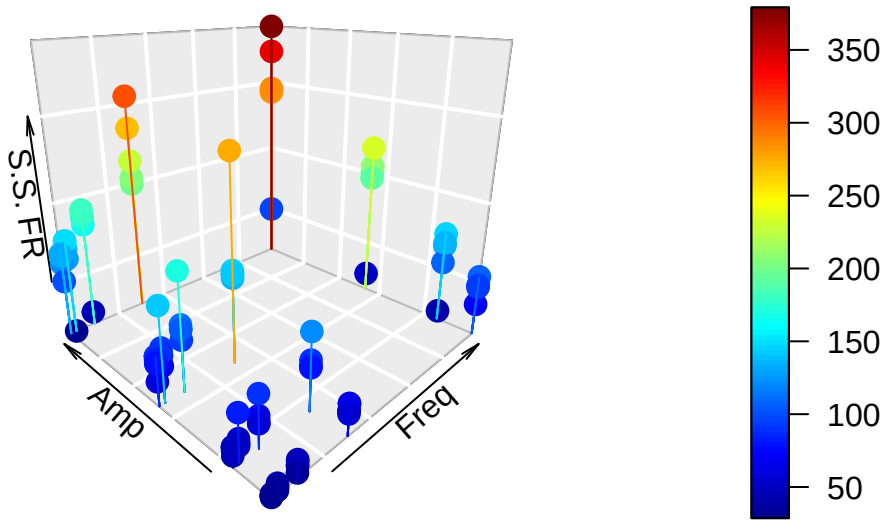

```
iF_iLf = ggplot(data, aes(x = Lf_init,
                  y = Fmt_init,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Initial Fas. Stretch") +
  ylab("Initial Force")

mF_mLf = ggplot(data, aes(x = Lf_s,
                  y = Fmt_s,
                  color = factor(Freq),
                  group = unID)) +
  geom_point(aes(color = factor(Freq))) +
  geom_line(aes(color = factor(Freq))) +
  xlab("Avg. S.State Peak Fas. Stretch") +
  ylab("Avg. S.State Peak Force")

ggarrange(iF_iLf, mF_mLf, nrow = 1, common.legend = T)
```




```
IBAplot = scatter3D(x = data$Freq,
                    y = data$Amp,
                    z = data$Aff1_ib,
                    xlab = "Freq",
                    ylab = "Amp",
                    zlab = "IBA",
                    phi = 20,
                    theta = -45,
                    type = 'h',
                    ticktype = "simple",
                    bty = "g",
                    pch = 19,
                    cex = 1.5)
```




```
ssFRplot = scatter3D(x = data$Freq,
                     y = data$Amp,
                     z = data$Aff1_s,
                     xlab = "Freq",
                     ylab = "Amp",
                     zlab = "S.S. FR",
                     phi = 20,
                     theta = -45,
                     type = 'h',
                     ticktype = "simple",
                     bty = "g",
                     pch = 19,
                     cex = 1.5)
```




```
# Error in match.arg(bty) : 'arg' should be one of "b", "b2", "f", "g", "bl", "bl2", "u", "n"
IBAplot
```

```
##               [,1]        [,2]         [,3]         [,4]
## [1,]  1.428499e-01  0.04885753 -0.134234954  0.134234954
## [2,] -5.725561e-01  0.19582572 -0.538026740  0.538026740
## [3,]  1.269621e-19  0.00275555  0.001002938 -0.001002938
## [4,]  2.891697e-01 -1.56624689 -1.459011873  2.459011873
```

```
ssFRplot
```

```
##               [,1]        [,2]         [,3]         [,4]
## [1,]  1.428499e-01  0.04885753 -0.134234954  0.134234954
## [2,] -5.725561e-01  0.19582572 -0.538026740  0.538026740
## [3,]  2.470378e-19  0.00536164  0.001951477 -0.001951477
## [4,]  2.891697e-01 -1.68556279 -1.502439308  2.502439308
```