

VICTR Lab - Stereotype Threat Graph, Female

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```
library(dplyr)

## 
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
## 
##     filter, lag

## The following objects are masked from 'package:base':
## 
##     intersect, setdiff, setequal, union

library(ggplot2)

#Women's Ankle Monitor(b) Data

AP378 = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/AP378 Test Data/AP378")

secs_df = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/AP378 Test Data/AP378")
secs_df = na.omit(secs_df)
secs_df = secs_df %>%
  filter(Observed.Sec > Real.Sec) %>%
  select("ID", "Real.Sec")

AP378$ID = as.numeric(gsub("[^0-9]", "", AP378$ID)) #change the ID to a regular number

main_df = AP378 %>%
  left_join(secs_df, by = "ID") %>% # Join to get the Real.Sec column
  group_by(ID) %>%
  filter(row_number() <= Real.Sec) %>% # Filter rows based on Real.Sec
  ungroup() %>%
  select(-Real.Sec)

main_df

## # A tibble: 139,001 x 5
##       Seconds Y.axis X.axis Z.axis     ID
##      <dbl>   <dbl> <dbl> <dbl> <dbl>
```

```

##      <int> <int> <int> <int> <dbl>
## 1     0     0     0     0     1
## 2     1     0     0     0     1
## 3     2     0     0     0     1
## 4     3     0     0     0     1
## 5     4     0     0     0     1
## 6     5     0     7     0     1
## 7     6     0     0     0     1
## 8     7     0     0     0     1
## 9     8     0     0     0     1
## 10    9     0     0     0     1
## # i 138,991 more rows

write.csv(main_df, file = "main.csv")

#Gives me a data with the right amount of seconds

masterfile = read.csv("/Users/joshuawei/Downloads/VICTR Lab/Stereotype Threat Analysis/AP378 Test Data/")

masterfile <- masterfile %>%
  select("ID...1", "Cond") %>%
  rename(ID = "ID...1")

everything_df = left_join(main_df, masterfile, by= "ID")

#Adds the Conditions into the dataset per ID

everything_df = everything_df %>%
  filter(Seconds <= 1440)

#2 IDs made it to 1440 seconds (Level 6)

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

#X axis

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

summary_df = everything_df %>%
  group_by(Seconds, Cond) %>%
  summarise(mean = mean(X.axis),
            sd = sd(X.axis),
            .groups = "drop")
summary_df

## # A tibble: 4,301 x 4
##       Seconds Cond      mean      sd
##       <int> <chr>    <dbl>   <dbl>
## 1        0 Control  36.5 114.
## 2        0 Lift    27.7  50.3
## 3        0 Threat   35.3  64.1

```

```

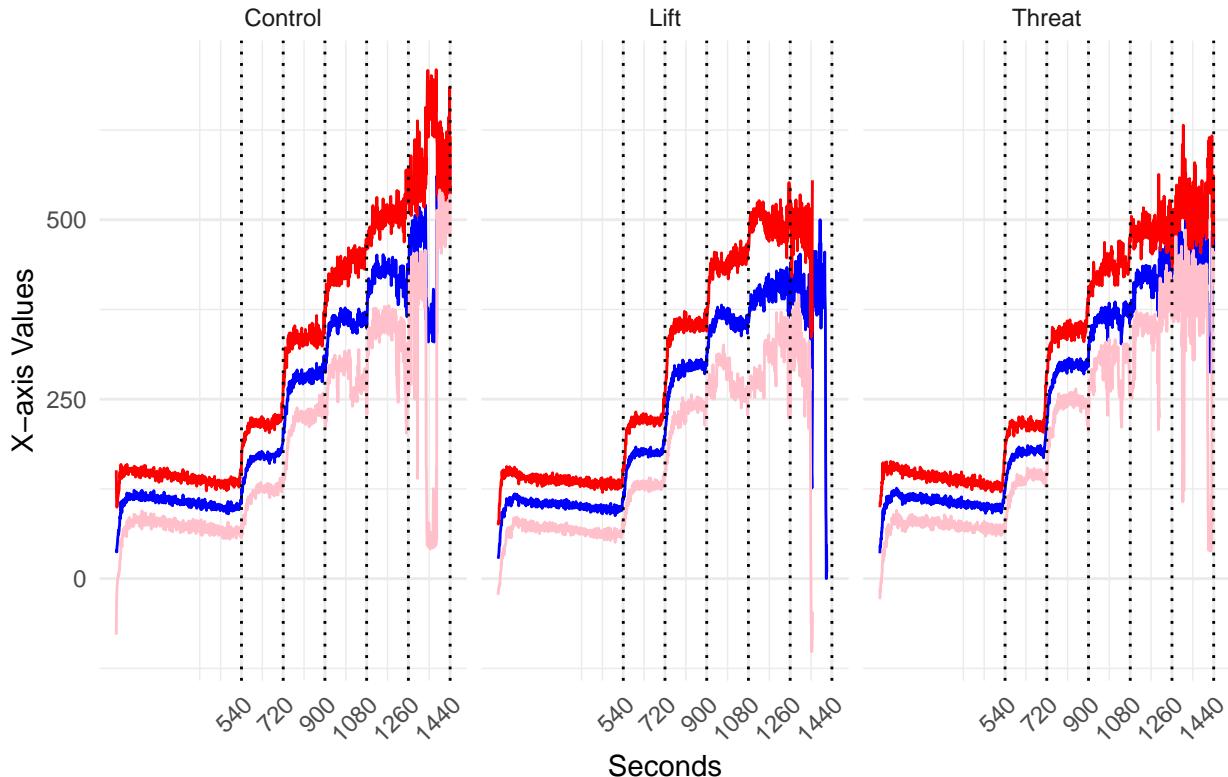
## 4      1 Control  39.8 73.0
## 5      1 Lift     29.0 46.9
## 6      1 Threat    45.9 60.4
## 7      2 Control  37.3 62.7
## 8      2 Lift     31.7 47.9
## 9      2 Threat    44.3 62.3
## 10     3 Control  43.6 56.0
## # i 4,291 more rows

ggplot(summary_df) +
  geom_line(aes(x = Seconds, y = mean), color = "blue") +
  geom_line(aes(x = Seconds, y = mean + sd), color = "red") + #one sd above the mean
  geom_line(aes(x = Seconds, y = mean - sd), color = "pink") + #one sd below the mean
  labs(title = "Mean and Standard Deviation over Time",
       x = "Seconds",
       y = "X-axis Values") +
  theme_minimal() +
  facet_wrap(~Cond) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(min(summary_df$Seconds), max(summary_df$Seconds)),
    breaks = bruce_levels) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

Warning: Removed 6 rows containing missing values ('geom_vline()').

Mean and Standard Deviation over Time



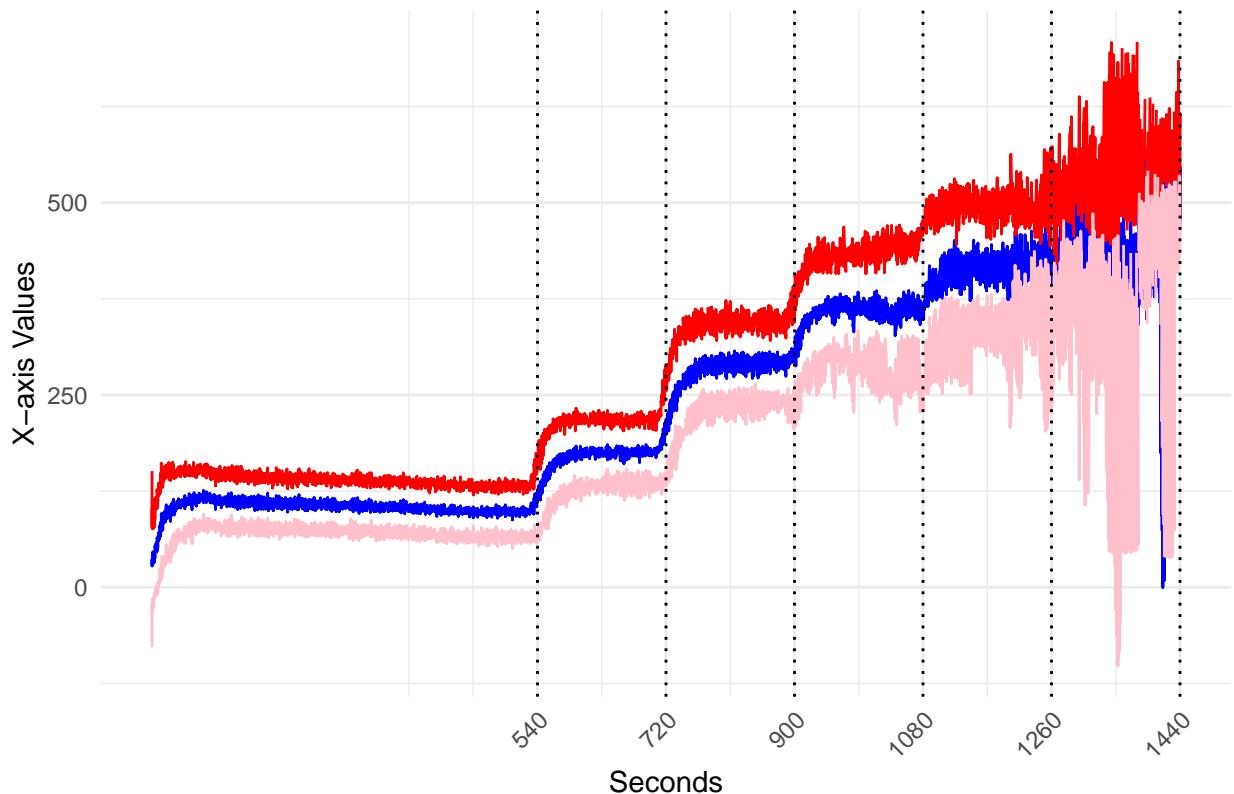
```

ggplot(summary_df) +
  geom_line(aes(x = Seconds, y = mean), color = "blue") +
  geom_line(aes(x = Seconds, y = mean + sd), color = "red") + #one sd above the mean
  geom_line(aes(x = Seconds, y = mean - sd), color = "pink") + #one sd below the mean
  labs(title = "Mean and Standard Deviation over Time",
       x = "Seconds",
       y = "X-axis Values") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(min(summary_df$Seconds), max(summary_df$Seconds)),
    breaks = bruce_levels) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

Warning: Removed 2 rows containing missing values ('geom_vline()').

Mean and Standard Deviation over Time



```

#Y axis

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

summary_df = everything_df %>%
  group_by(Seconds, Cond) %>%
  summarise(mean = mean(Y.axis),

```

```

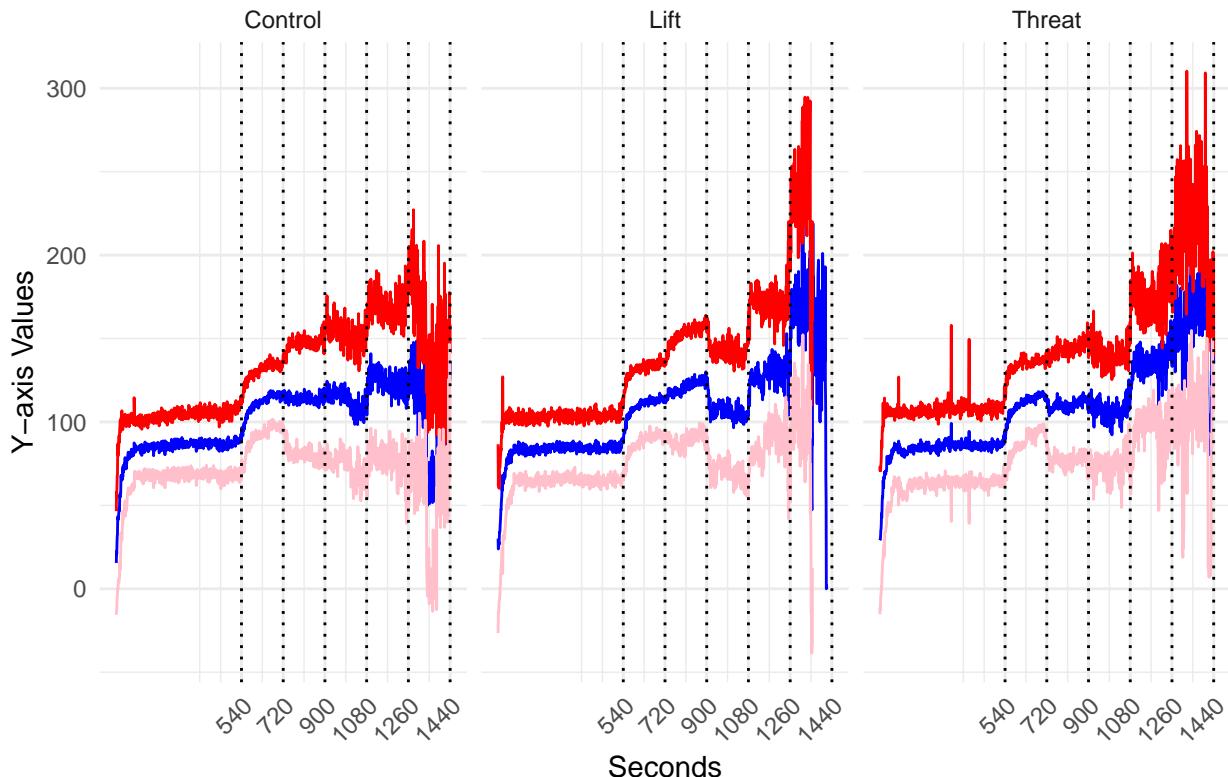
    sd = sd(Y.axis),
    .groups = "drop")

ggplot(summary_df) +
  geom_line(aes(x = Seconds, y = mean), color = "blue") +
  geom_line(aes(x = Seconds, y = mean + sd), color = "red") + #one sd above the mean
  geom_line(aes(x = Seconds, y = mean - sd), color = "pink") + #one sd below the mean
  labs(title = "Mean and Standard Deviation over Time",
       x = "Seconds",
       y = "Y-axis Values") +
  theme_minimal() +
  facet_wrap(~Cond) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(min(summary_df$Seconds), max(summary_df$Seconds)),
    breaks = bruce_levels) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

Warning: Removed 6 rows containing missing values ('geom_vline()'').

Mean and Standard Deviation over Time



```

ggplot(summary_df) +
  geom_line(aes(x = Seconds, y = mean), color = "blue") +
  geom_line(aes(x = Seconds, y = mean + sd), color = "red") + #one sd above the mean
  geom_line(aes(x = Seconds, y = mean - sd), color = "pink") + #one sd below the mean

```

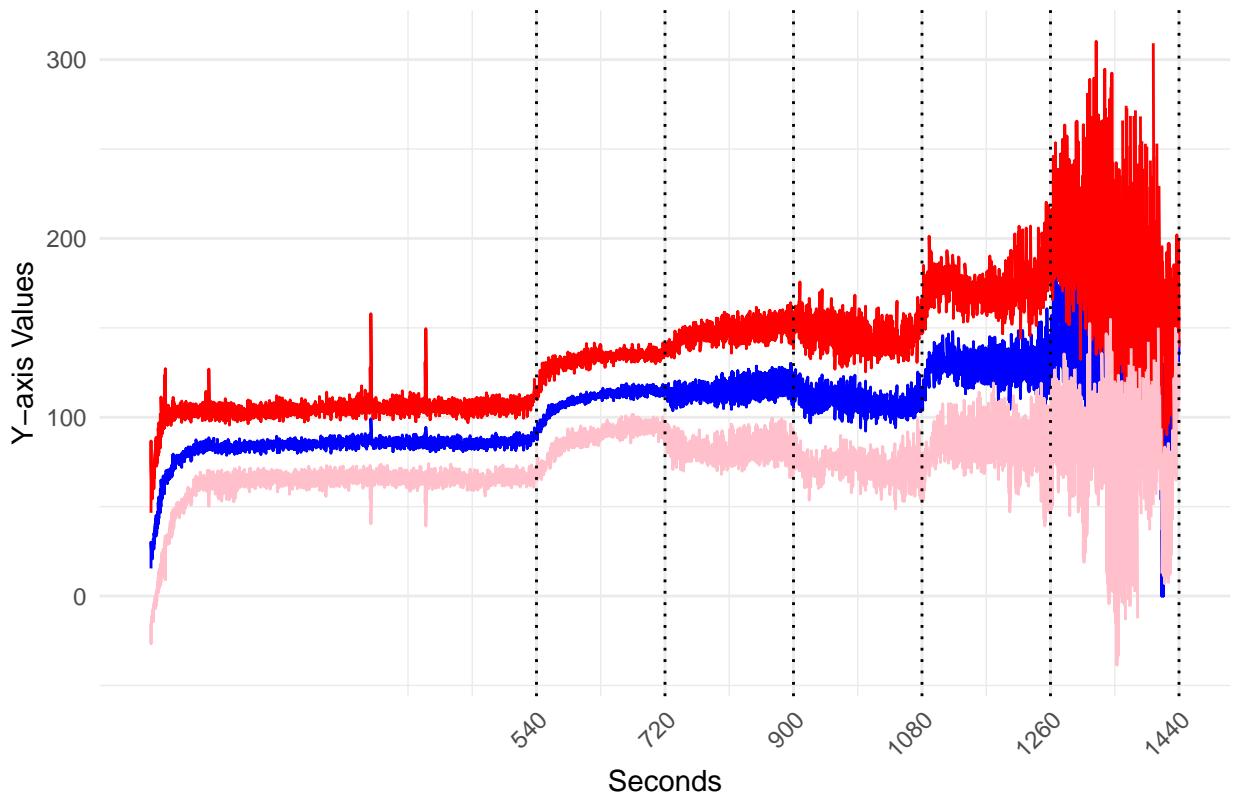
```

  labs(title = "Mean and Standard Deviation over Time",
       x = "Seconds",
       y = "Y-axis Values") +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(min(summary_df$Seconds), max(summary_df$Seconds)),
    breaks = bruce_levels) +
  theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

Warning: Removed 2 rows containing missing values ('geom_vline()').

Mean and Standard Deviation over Time



```

#Z axis

bruce_levels = c(540, 720, 900, 1080, 1260, 1440, 1620, 1800)

summary_df = everything_df %>%
  group_by(Seconds, Cond) %>%
  summarise(mean = mean(Z.axis),
            sd = sd(Z.axis),
            .groups = "drop")

ggplot(summary_df) +

```

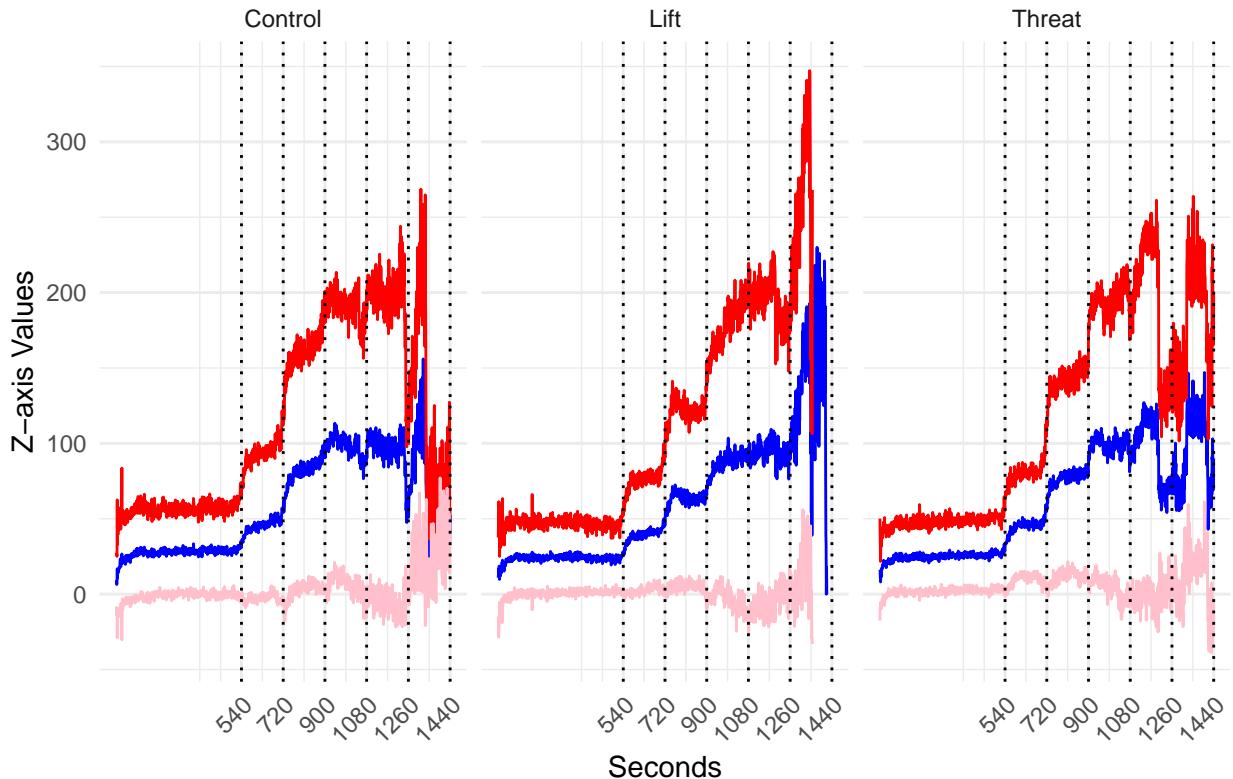
```

geom_line(aes(x = Seconds, y = mean), color = "blue") +
geom_line(aes(x = Seconds, y = mean + sd), color = "red") + #one sd above the mean
geom_line(aes(x = Seconds, y = mean - sd), color = "pink") + #one sd below the mean
labs(title = "Mean and Standard Deviation over Time",
x = "Seconds",
y = "Z-axis Values") +
theme_minimal() +
facet_wrap(~Cond) +
geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
scale_x_continuous(
limits = c(min(summary_df$Seconds), max(summary_df$Seconds)),
breaks = bruce_levels) +
theme(axis.text.x = element_text(angle = 45, hjust = 1))

```

Warning: Removed 6 rows containing missing values ('geom_vline()').

Mean and Standard Deviation over Time



```

ggplot(summary_df) +
geom_line(aes(x = Seconds, y = mean), color = "blue") +
geom_line(aes(x = Seconds, y = mean + sd), color = "red") + #one sd above the mean
geom_line(aes(x = Seconds, y = mean - sd), color = "pink") + #one sd below the mean
labs(title = "Mean and Standard Deviation over Time",
x = "Seconds",
y = "Z-axis Values") +
theme_minimal() +

```

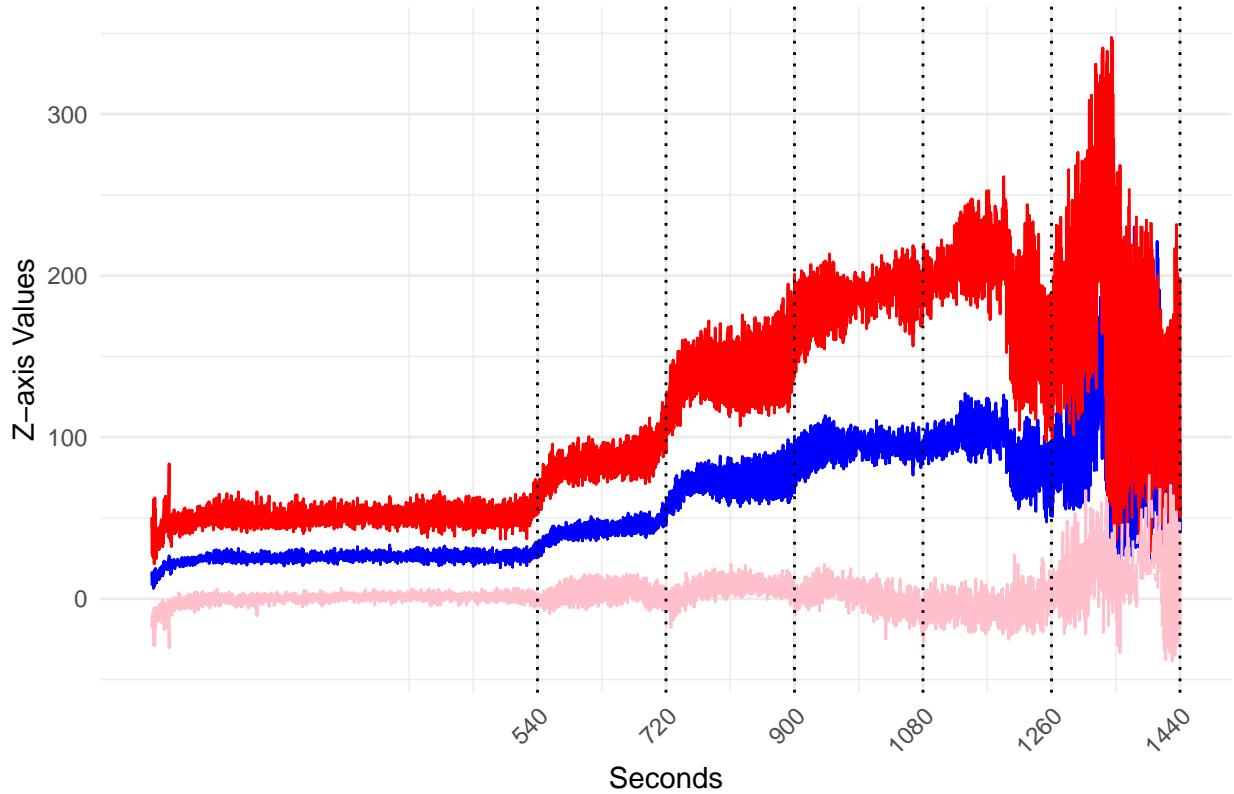
```

geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
scale_x_continuous(
  limits = c(min(summary_df$Seconds), max(summary_df$Seconds)),
  breaks = bruce_levels) +
theme(axis.text.x = element_text(angle = 45, hjust = 1))

## Warning: Removed 2 rows containing missing values ('geom_vline()').

```

Mean and Standard Deviation over Time



```

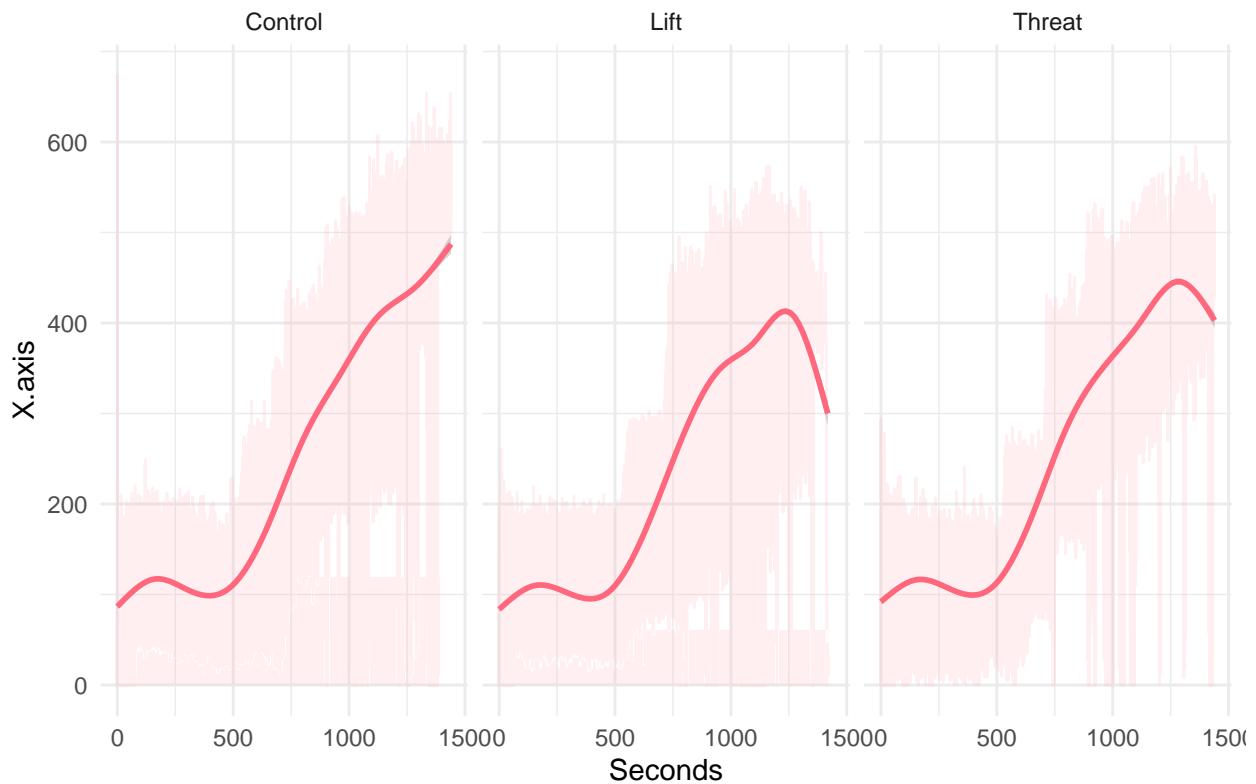
#X Graph

everything_df %>%
ggplot(aes(x = Seconds, y = X.axis)) +
geom_line(position = position_jitter(width = 0.2), alpha = 0.2, color = "#FFB3BA") +
geom_smooth(se = TRUE, linetype = "solid", color = "#FF677D") +
facet_wrap(~Cond) +
labs(title = "Scatter Plot of X.axis by Seconds",
x = "Seconds",
y = "X.axis") +
theme_minimal()

## `geom_smooth()` using method = 'gam' and formula = 'y ~ s(x, bs = "cs")'

```

Scatter Plot of X.axis by Seconds

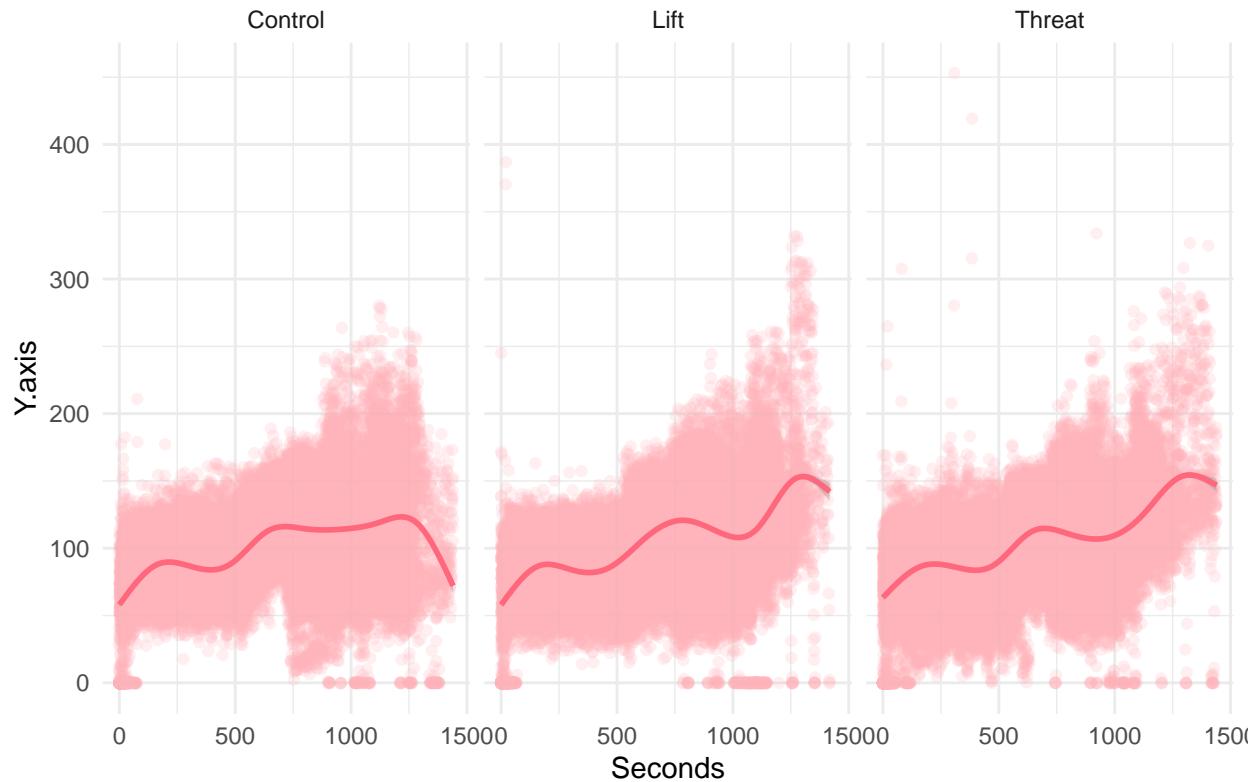


```
#Y Graph

everything_df %>%
  ggplot(aes(x = Seconds, y = Y.axis)) +
  geom_point(position = position_jitter(width = 0.2), alpha = 0.2, color = "#FFB3BA") +
  geom_smooth(se = TRUE, linetype = "solid", color = "#FF677D") +
  facet_wrap(~Cond) +
  labs(title = "Scatter Plot of Y.axis by Seconds",
       x = "Seconds",
       y = "Y.axis") +
  theme_minimal()
```

```
## `geom_smooth()` using method = 'gam' and formula = 'y ~ s(x, bs = "cs")'
```

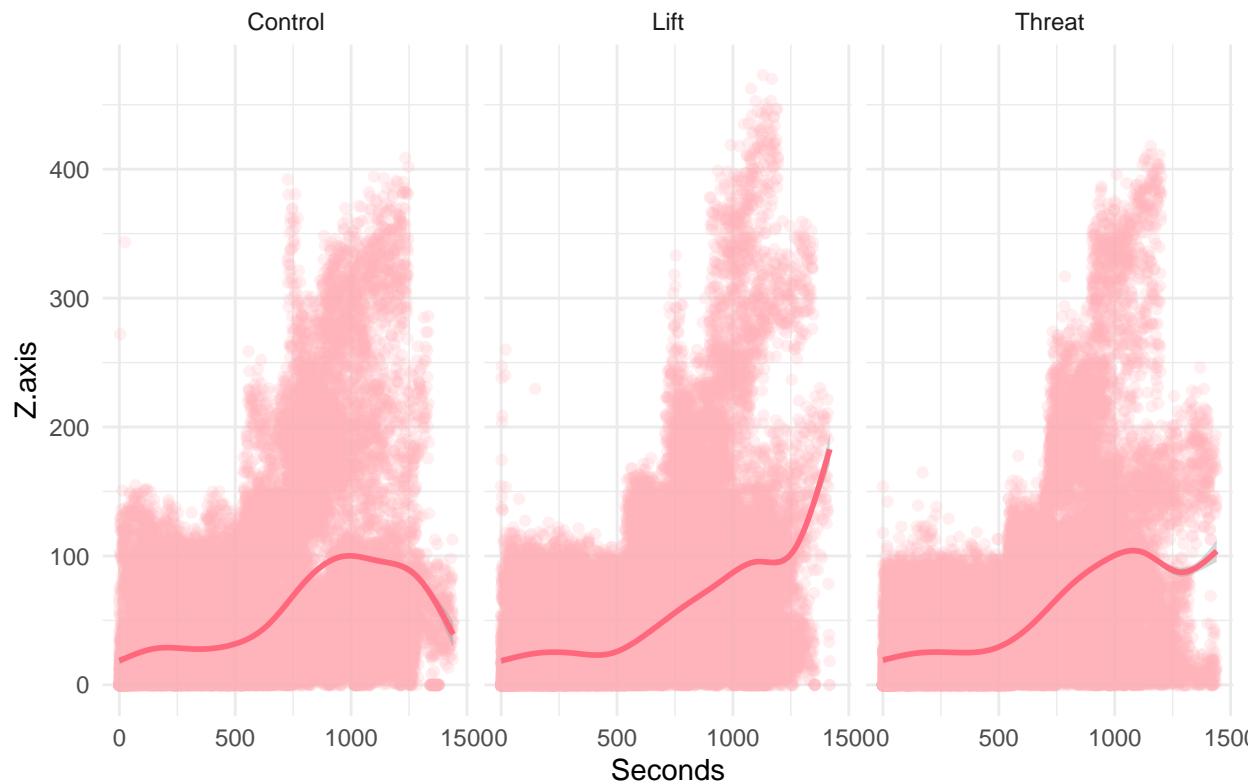
Scatter Plot of Y.axis by Seconds



```
#Z Graph  
everything_df %>%  
  ggplot(aes(x = Seconds, y = Z.axis)) +  
  geom_point(position = position_jitter(width = 0.2), alpha = 0.2, color = "#FFB3BA") +  
  geom_smooth(se = TRUE, linetype = "solid", color = "#FF677D") +  
  facet_wrap(~Cond) +  
  labs(title = "Scatter Plot of Z.axis by Seconds",  
       x = "Seconds",  
       y = "Z.axis") +  
  theme_minimal()
```

```
## `geom_smooth()` using method = 'gam' and formula = 'y ~ s(x, bs = "cs")'
```

Scatter Plot of Z.axis by Seconds



#X-AXIS

```

condition_colors = c("Control" = "blue", "Lift" = "green", "Threat" = "red")

mean_df = everything_df %>%
  filter(Cond != "") %>%
  group_by(Seconds, Cond) %>%
  summarise(mean = mean(X.axis),
    .groups = "drop")

unique_counts = function(seconds_range) { #function to give me total amount of people in each graph on
  everything_df %>%
    filter(seconds_range[1] <= Seconds, Seconds <= seconds_range[2]) %>%
    summarise(unique_ids = n_distinct(ID)) %>%
    pull(unique_ids)
}

unique_ids_labels <- function(start_seconds, end_seconds) { #amount of people per condition as a graph
  everything_df %>%
    filter(Seconds >= start_seconds & Seconds <= end_seconds) %>%
    group_by(Cond) %>%
    summarise(unique_IDs = n_distinct(ID),
      .groups = "drop") %>%
    mutate(label = paste(Cond, "(n =", unique_IDs, ")")) %>%
    pull(label)
}

```

```

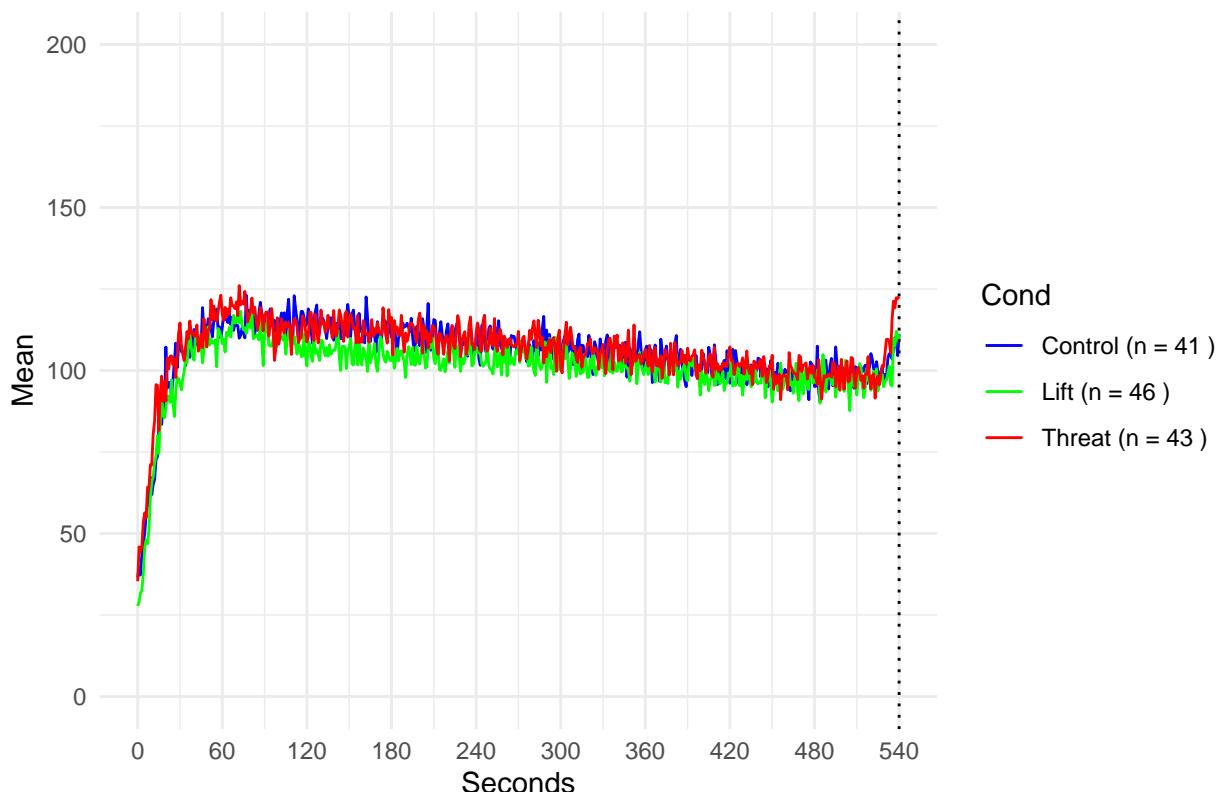
}

#Bruce 1
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("X axis - Bruce Level 1, n = ",unique_counts(c(0,540)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(0,200)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(0,540),
    breaks = c(0,60,120,180,240,300,360,420,480,540)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(0,540))

```

Warning: Removed 7 rows containing missing values ('geom_vline()').

X axis – Bruce Level 1, n = 130



```

#Bruce 2
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +

```

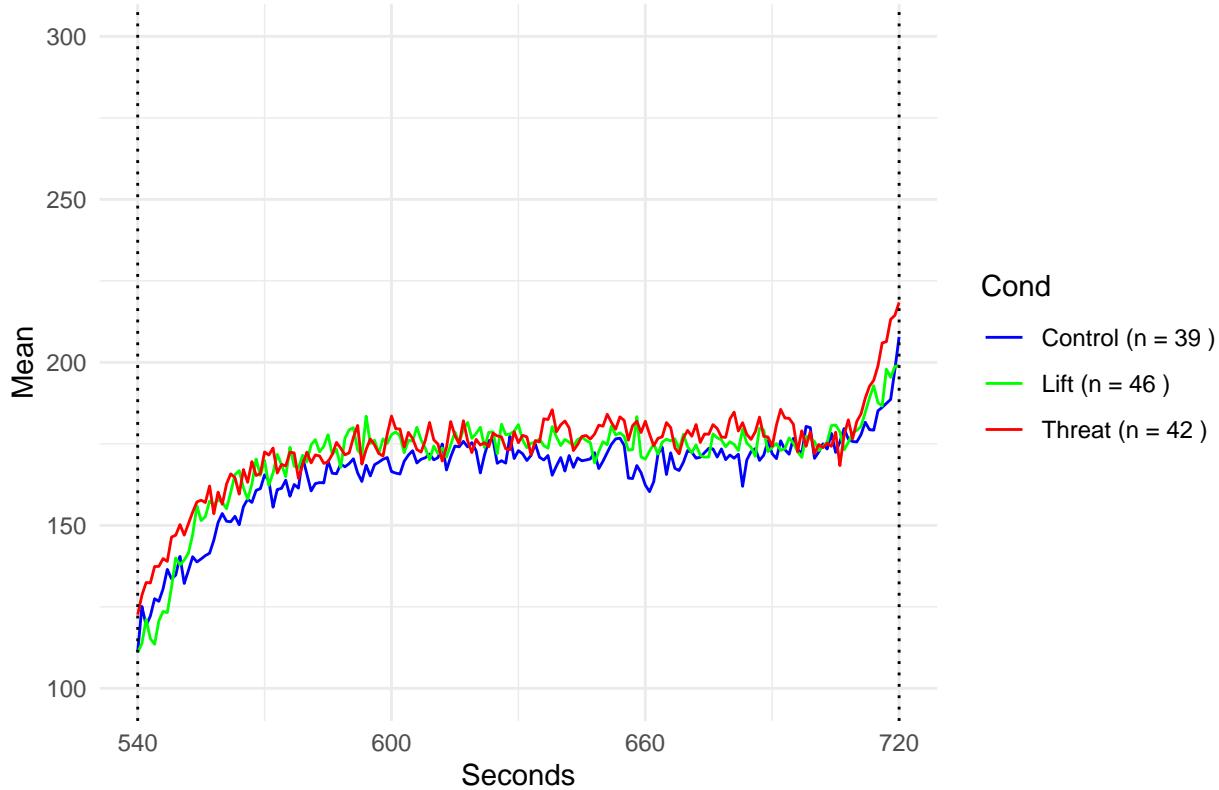
```

  labs(x = "Seconds",
       y = "Mean",
       title = paste("X axis - Bruce Level 2, n = ",unique_counts(c(540,720)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(100,300)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(540,720),
    breaks = c(540,600,660,720)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(540,720))

```

Warning: Removed 6 rows containing missing values ('geom_vline()'').

X axis – Bruce Level 2, n = 127



```

#Bruce 3
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("X axis - Bruce Level 3, n = ",unique_counts(c(720,900)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(150,350)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(

```

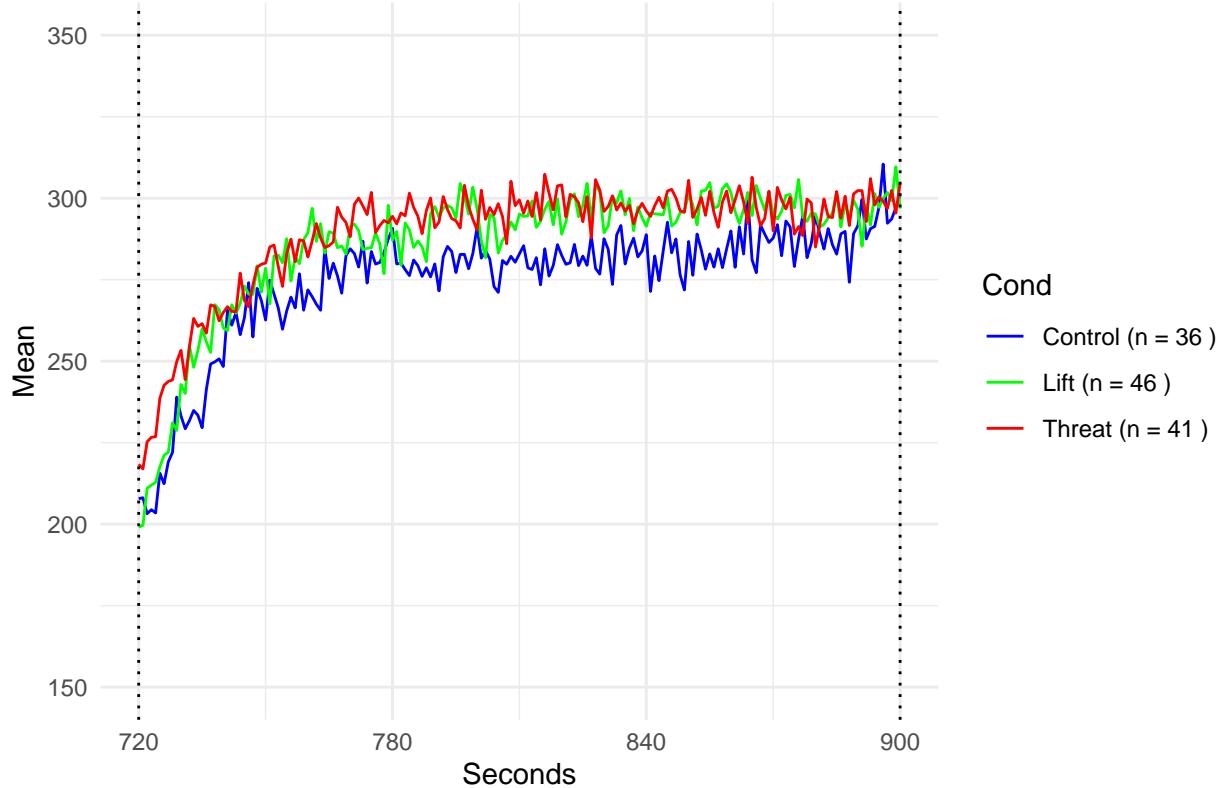
```

limits = c(720, 900),
breaks = c(720,780,840,900)) +
scale_color_manual(values = condition_colors,
labels = unique_ids_labels(720,900))

## Warning: Removed 6 rows containing missing values ('geom_vline()').

```

X axis – Bruce Level 3, n = 123



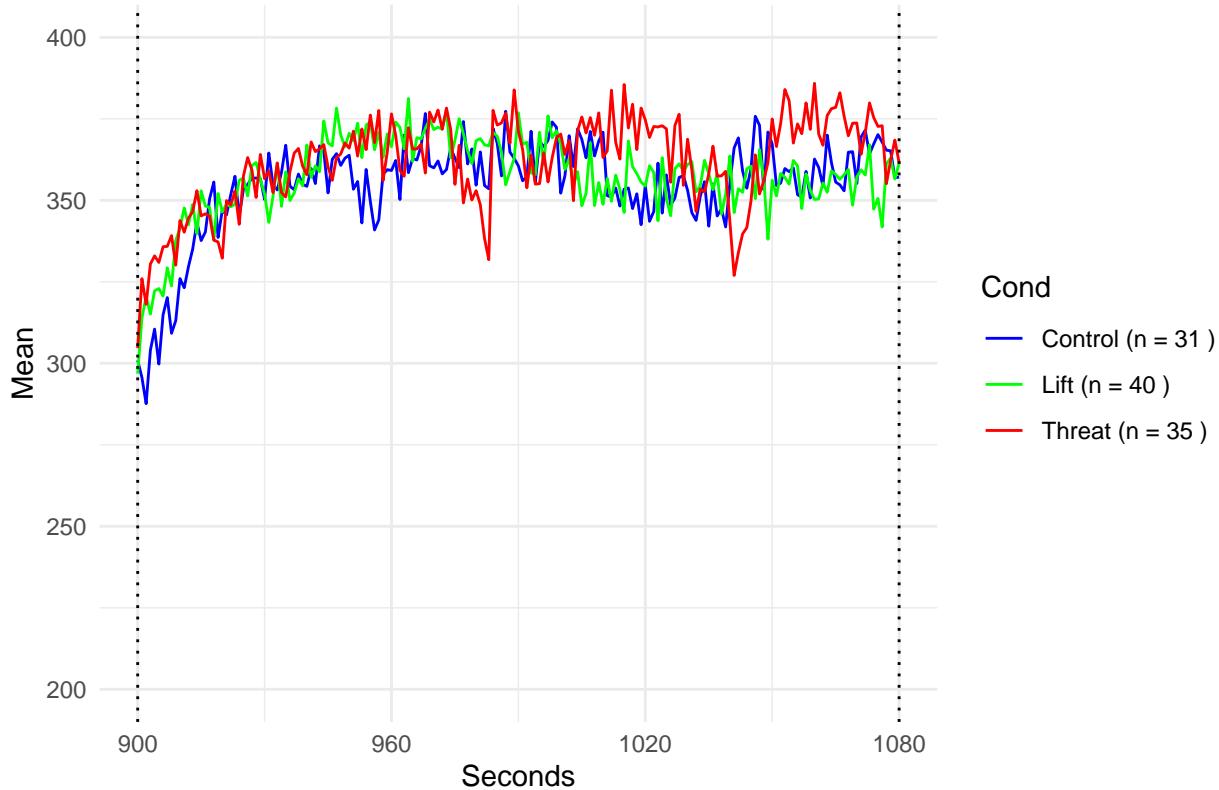
```

#Bruce 4
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("X axis - Bruce Level 4, n = ",unique_counts(c(900,1080)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(200,400)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(900,1080),
    breaks = c(900,960,1020,1080)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(900,1080))

```

```
## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

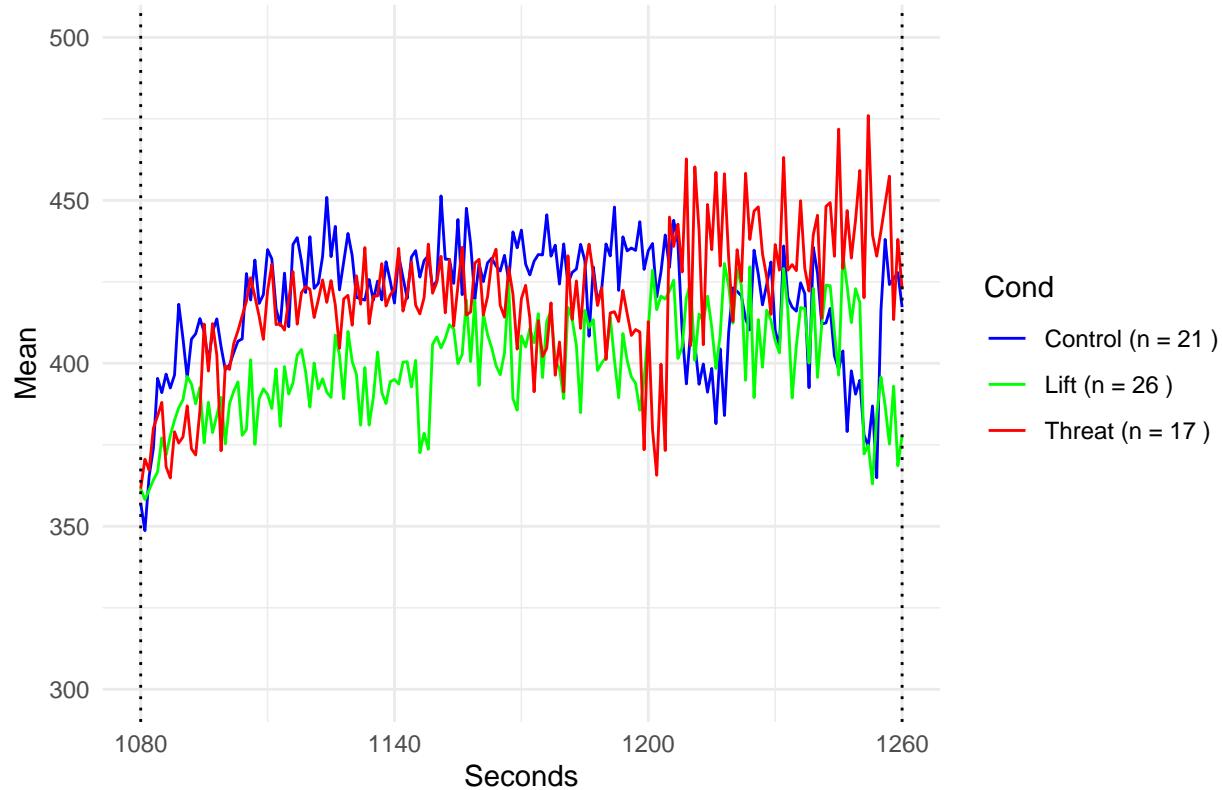
X axis – Bruce Level 4, n = 106



```
#Bruce 5
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("X axis - Bruce Level 5, n = ",unique_counts(c(1080,1260)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(300,500)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(1080,1260),
    breaks = c(1080,1140,1200,1260)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(1080,1260))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

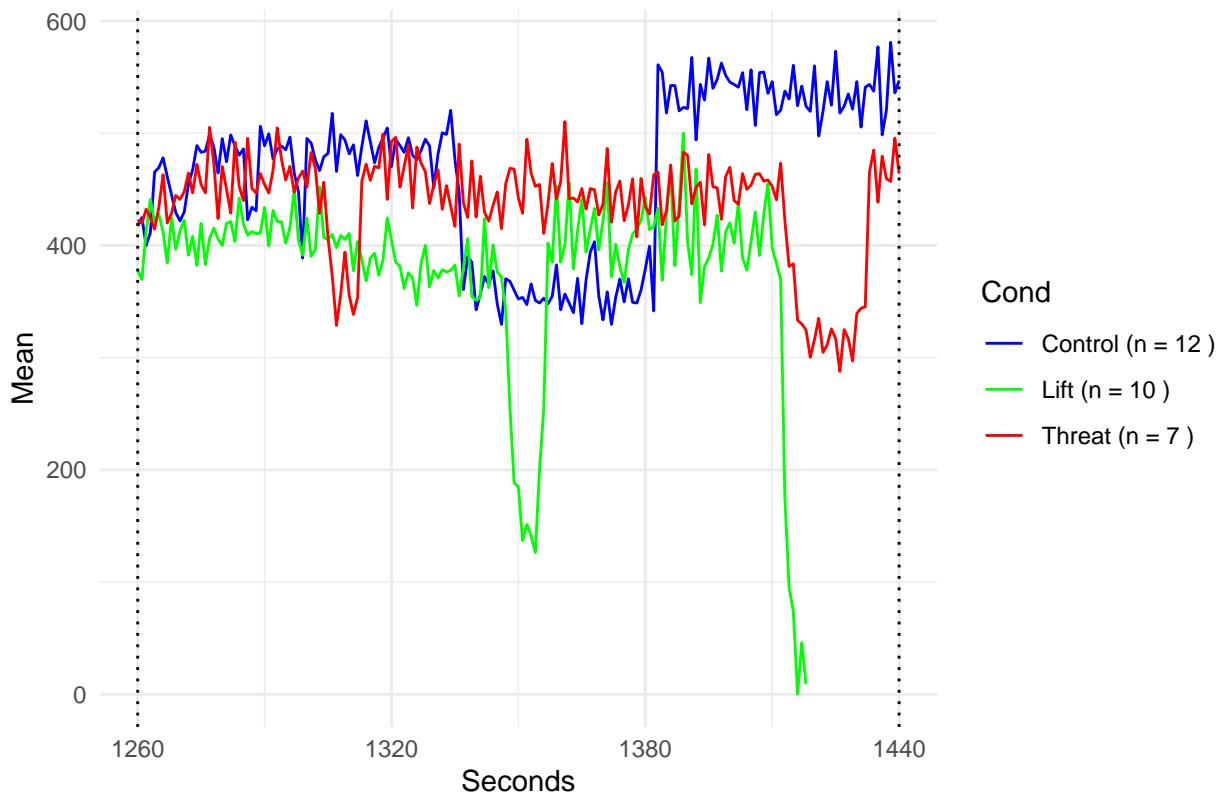
X axis – Bruce Level 5, n = 64



```
#Bruce 6
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("X axis - Bruce Level 6, n = ",unique_counts(c(1260,1440)))) +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(1260,1440),
    breaks = c(1260,1320,1380,1440)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(1260,1440))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

X axis – Bruce Level 6, n = 29



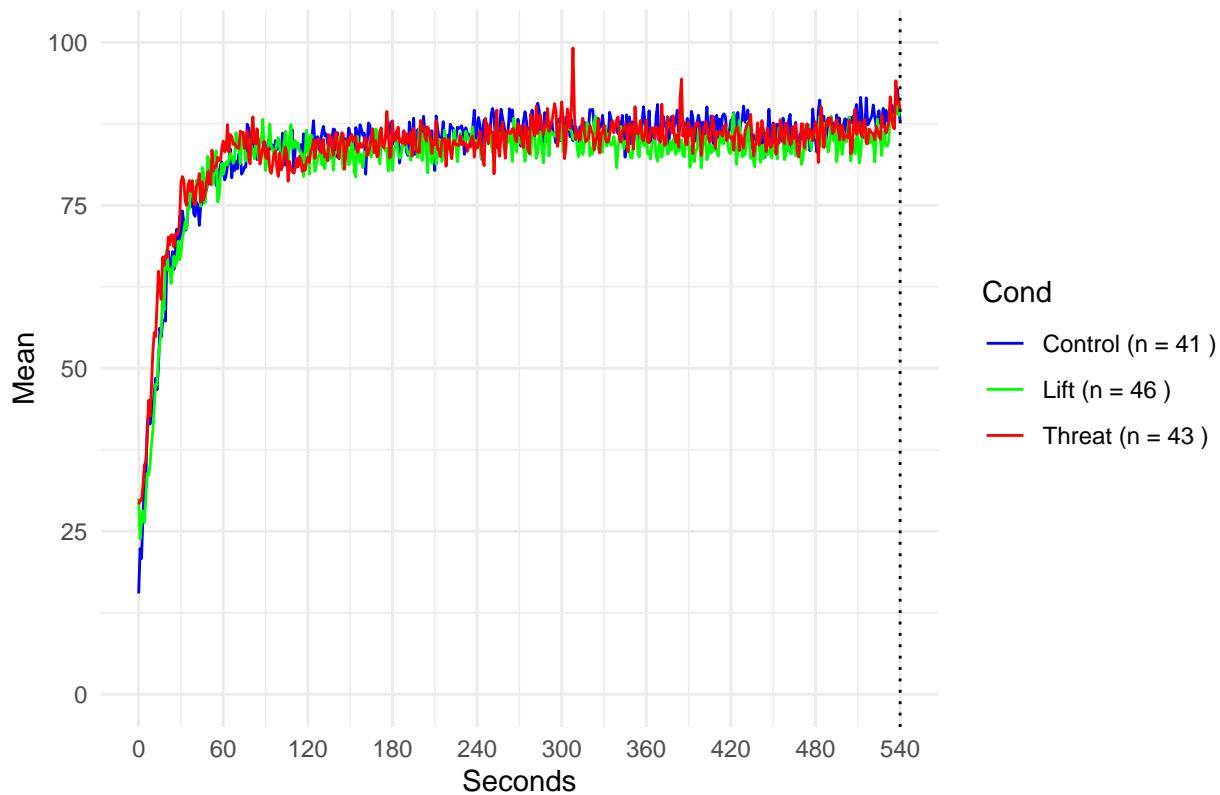
#Y-AXIS

```
mean_df = everything_df %>%
  group_by(Seconds, Cond) %>%
  summarise(mean = mean(Y.axis),
            .groups = "drop")

#Bruce 1
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Y axis - Bruce Level 1, n = ",unique_counts(c(0,540)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(0,100)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(0,540),
    breaks = c(0,60,120,180,240,300,360,420,480,540)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(0,540))
```

Warning: Removed 7 rows containing missing values ('geom_vline()'').

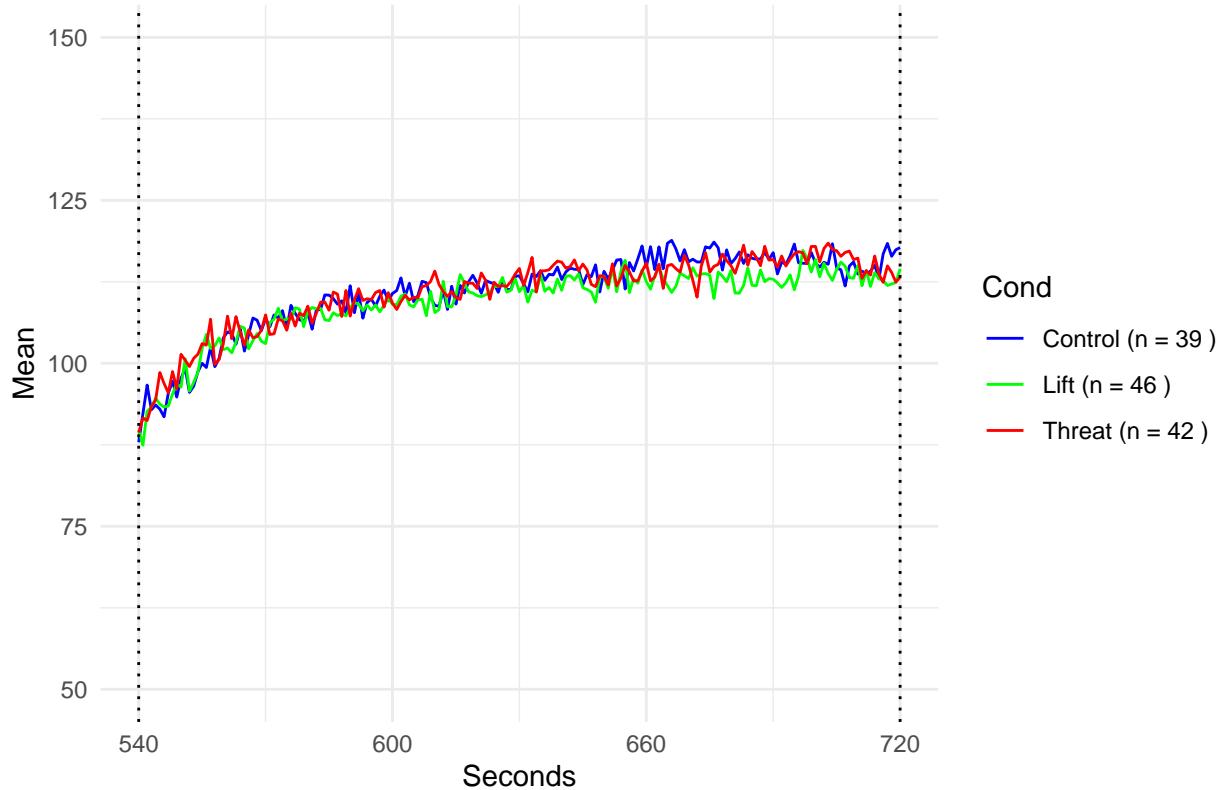
Y axis – Bruce Level 1, n = 130



```
#Bruce 2
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Y axis - Bruce Level 2, n = ",unique_counts(c(540,720)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(50,150)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(540,720),
    breaks = c(540,600,660,720)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(540,720))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

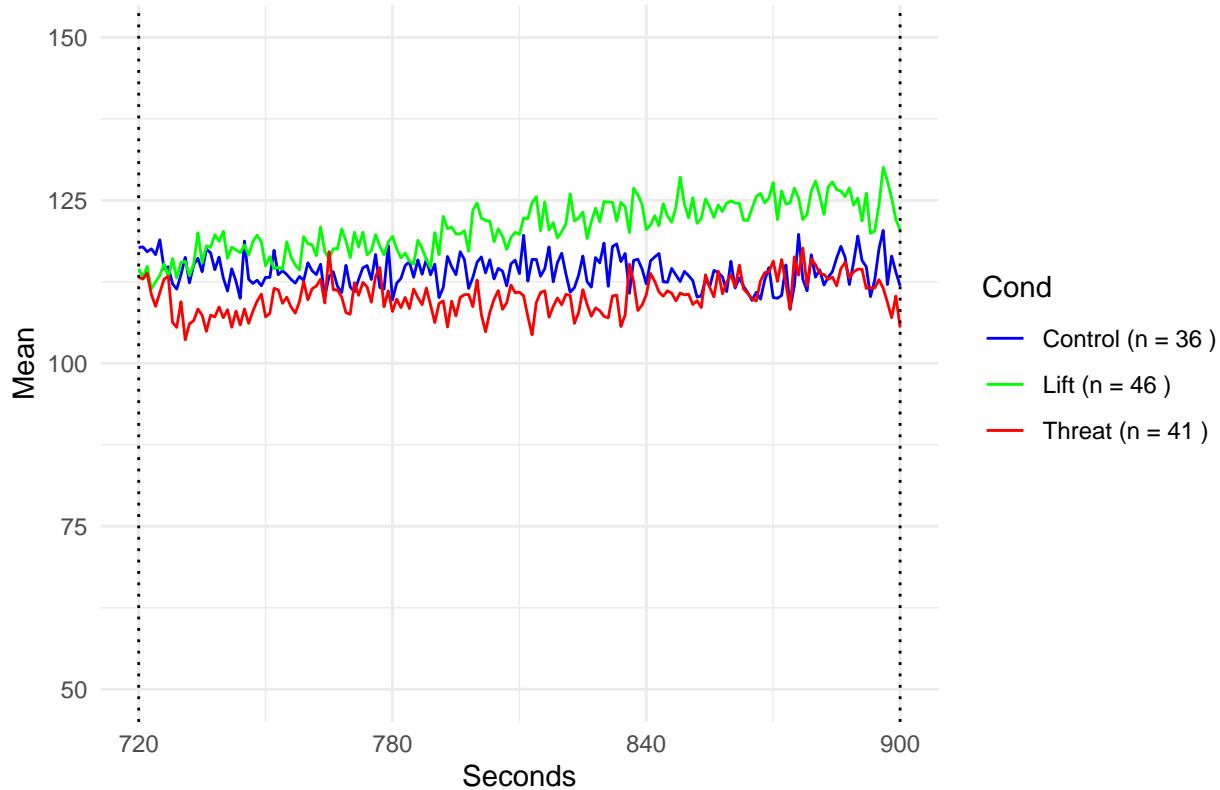
Y axis – Bruce Level 2, n = 127



```
#Bruce 3
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Y axis - Bruce Level 3, n = ",unique_counts(c(720,900)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(50,150)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(720, 900),
    breaks = c(720,780,840,900)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(720,900))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

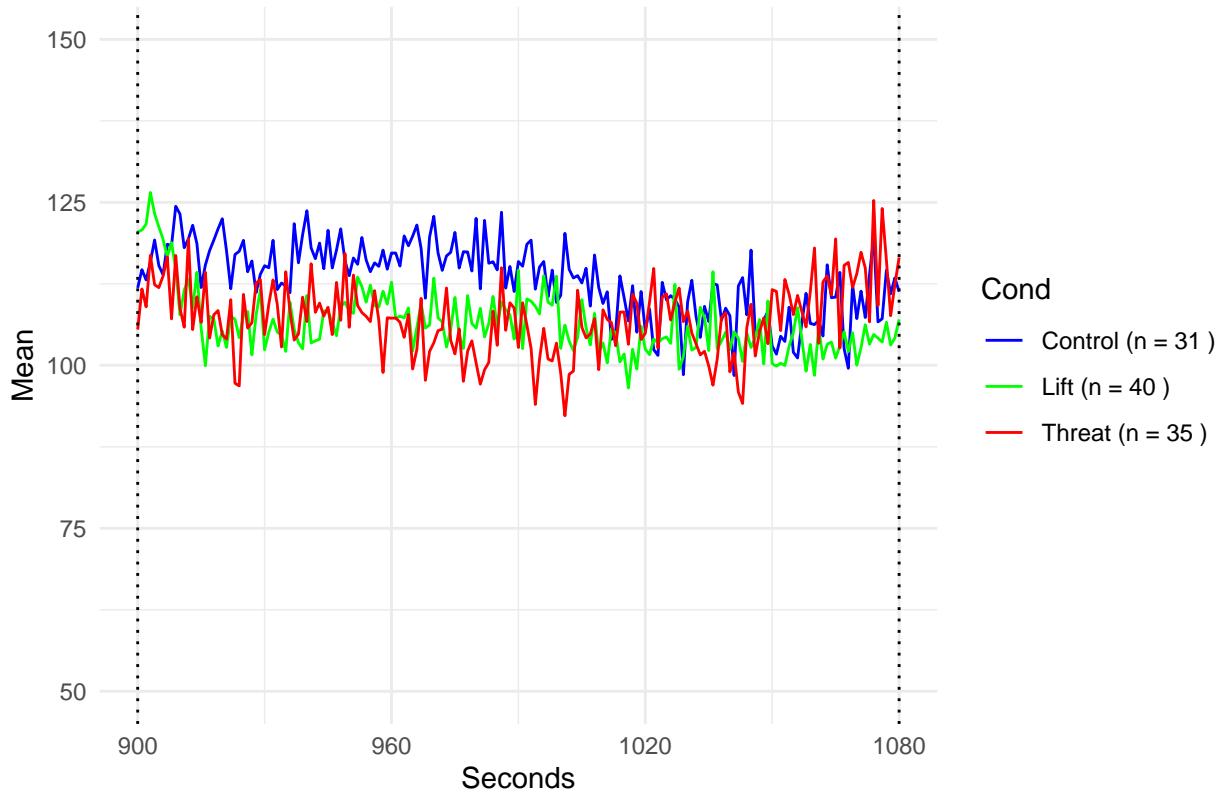
Y axis – Bruce Level 3, n = 123



```
#Bruce 4
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Y axis - Bruce Level 4, n = ",unique_counts(c(900,1080)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(50,150)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(900,1080),
    breaks = c(900,960,1020,1080)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(900,1080))
```

```
## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

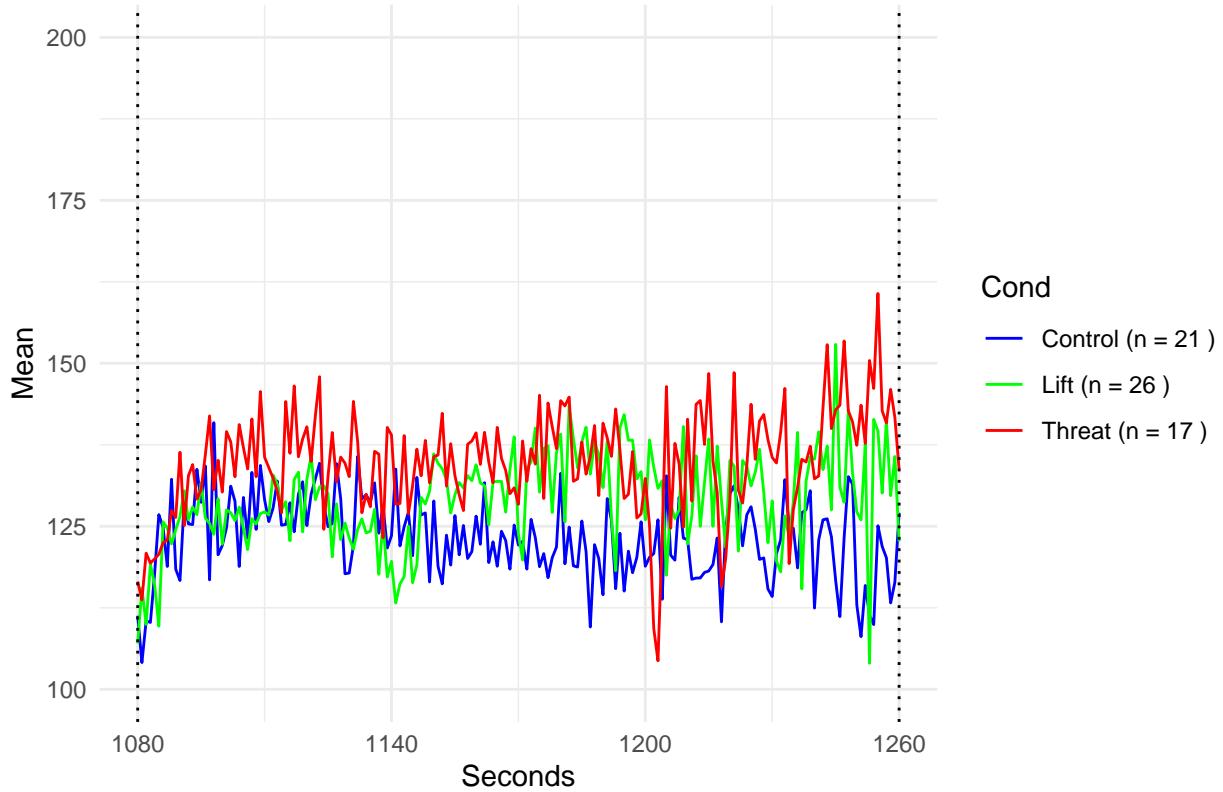
Y axis – Bruce Level 4, n = 106



```
#Bruce 5
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Y axis - Bruce Level 5, n = ",unique_counts(c(1080,1260)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(100,200)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(1080,1260),
    breaks = c(1080,1140,1200,1260)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(1080,1260))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

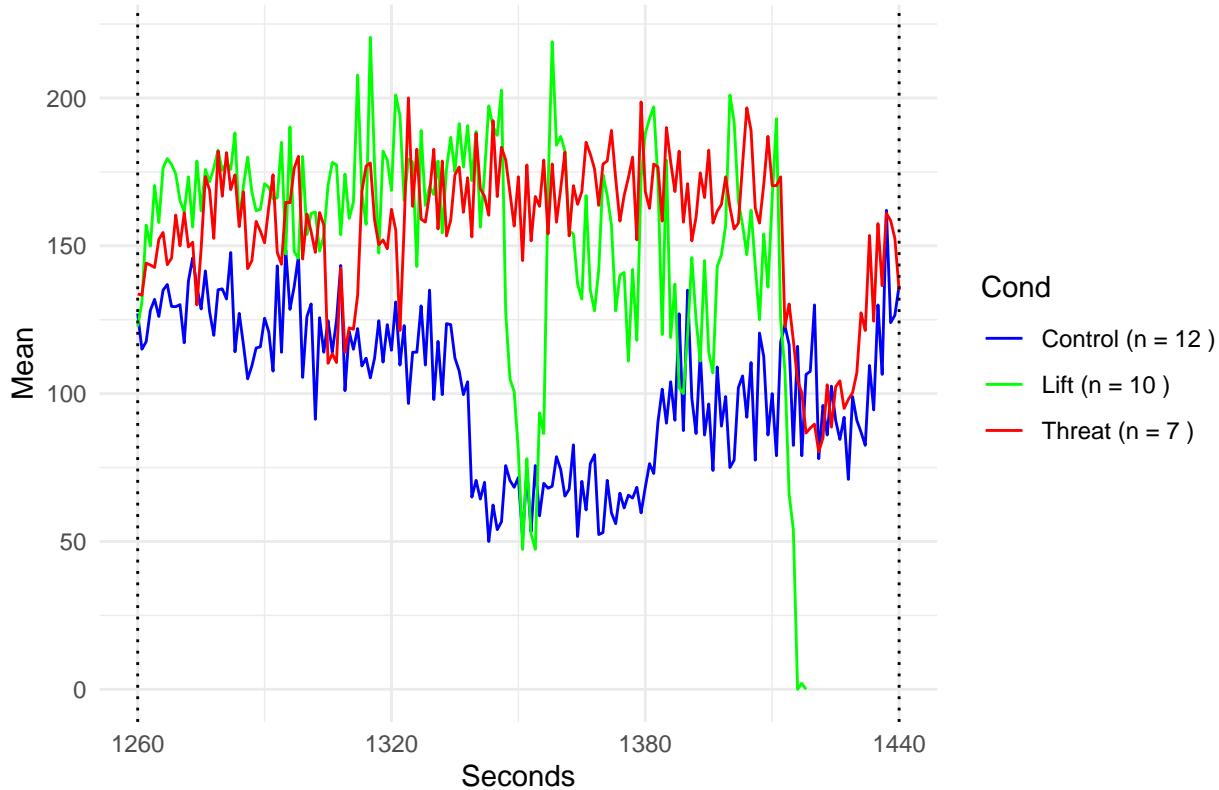
Y axis – Bruce Level 5, n = 64



```
#Bruce 6
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Y axis - Bruce Level 6, n = ",unique_counts(c(1260,1440)))) +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(1260,1440),
    breaks = c(1260,1320,1380,1440)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(1260,1440))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

Y axis – Bruce Level 6, n = 29



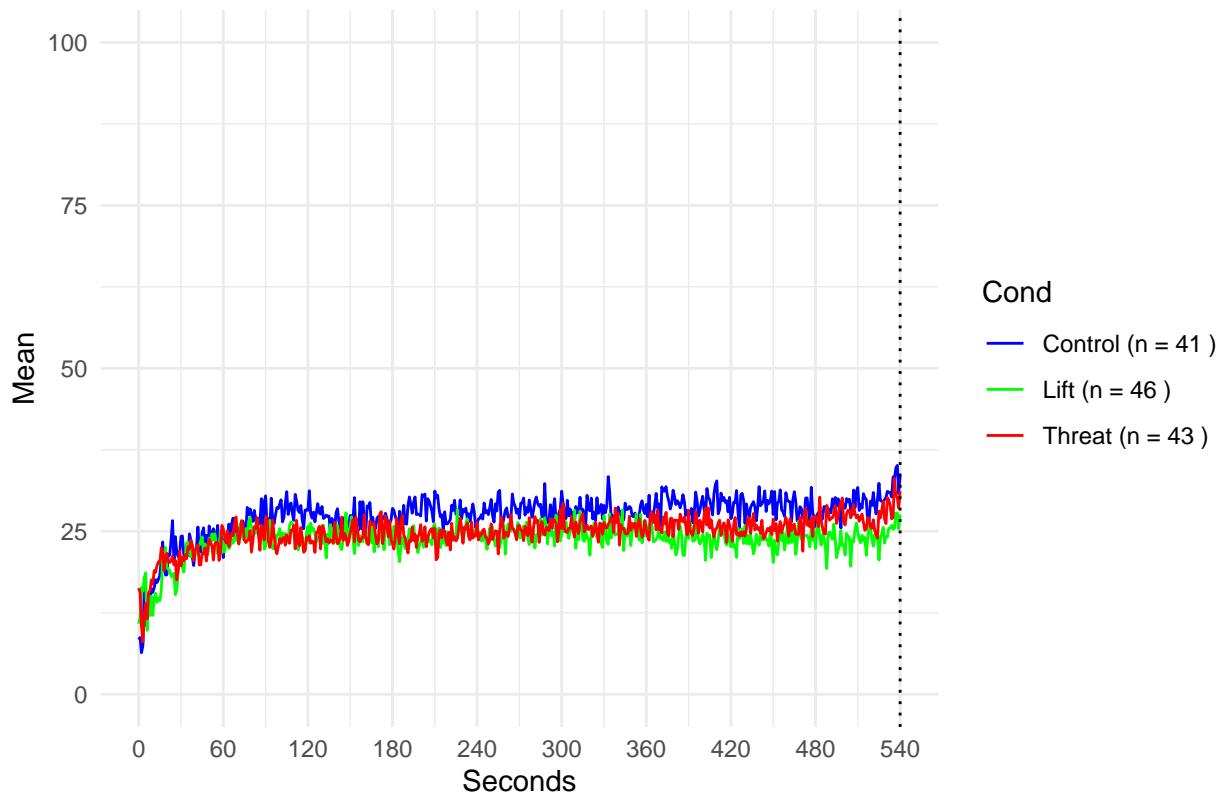
#Z-AXIS

```
mean_df = everything_df %>%
  group_by(Seconds, Cond) %>%
  summarise(mean = mean(Z.axis),
            .groups = "drop")

#Bruce 1
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Z axis - Bruce Level 1, n = ",unique_counts(c(0,540)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(0,100)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(0,540),
    breaks = c(0,60,120,180,240,300,360,420,480,540)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(0,540))
```

Warning: Removed 7 rows containing missing values ('geom_vline()'').

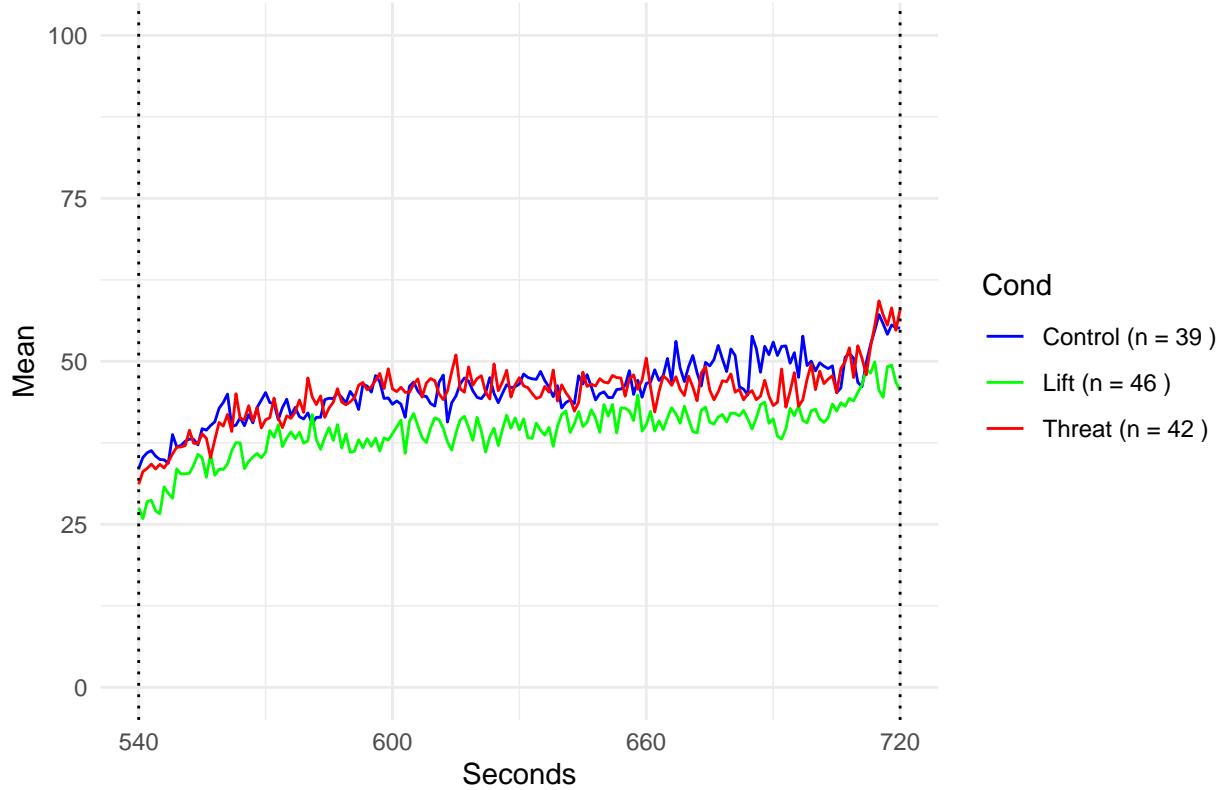
Z axis – Bruce Level 1, n = 130



```
#Bruce 2
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Z axis - Bruce Level 2, n = ",unique_counts(c(540,720)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(0,100)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(540,720),
    breaks = c(540,600,660,720)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(540,720))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

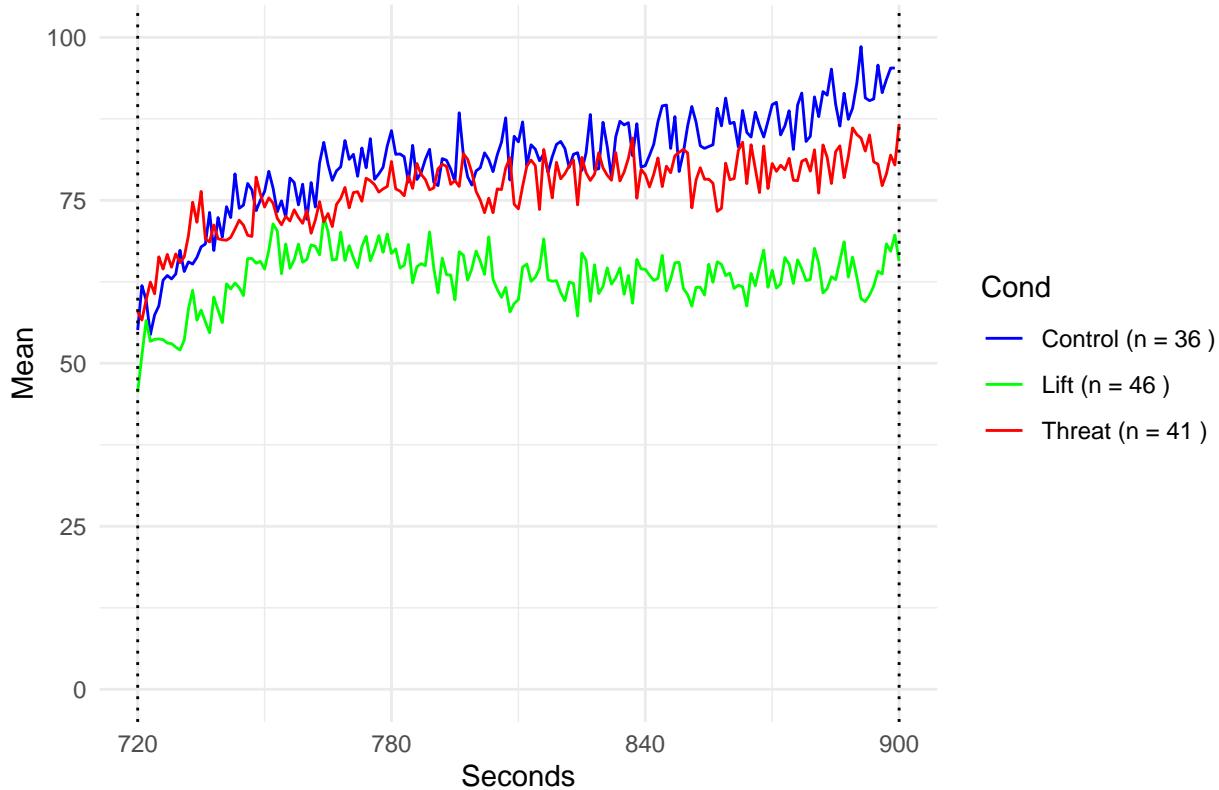
Z axis – Bruce Level 2, n = 127



```
#Bruce 3
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Z axis - Bruce Level 3, n = ",unique_counts(c(720,900)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(0,100)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(720, 900),
    breaks = c(720,780,840,900)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(720,900))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

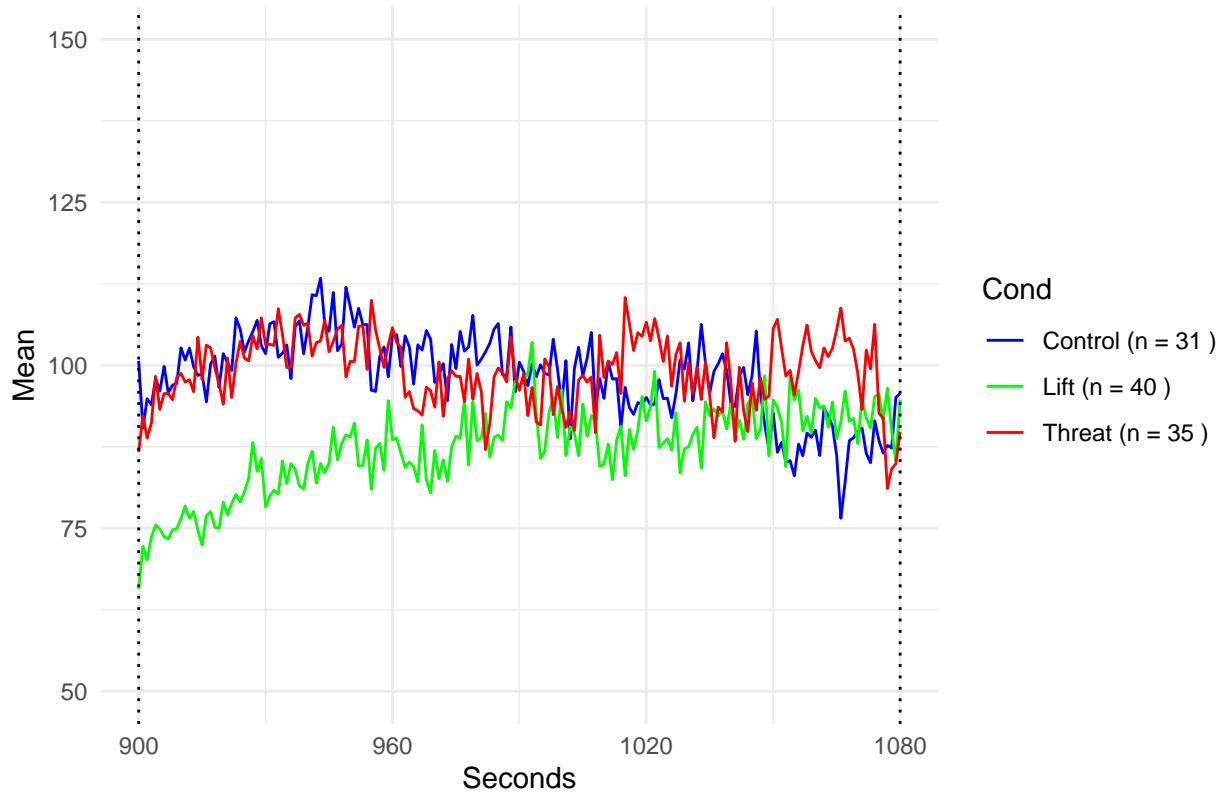
Z axis – Bruce Level 3, n = 123



```
#Bruce 4
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Z axis - Bruce Level 4, n = ",unique_counts(c(900,1080)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(50,150)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(900,1080),
    breaks = c(900,960,1020,1080)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(900,1080))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

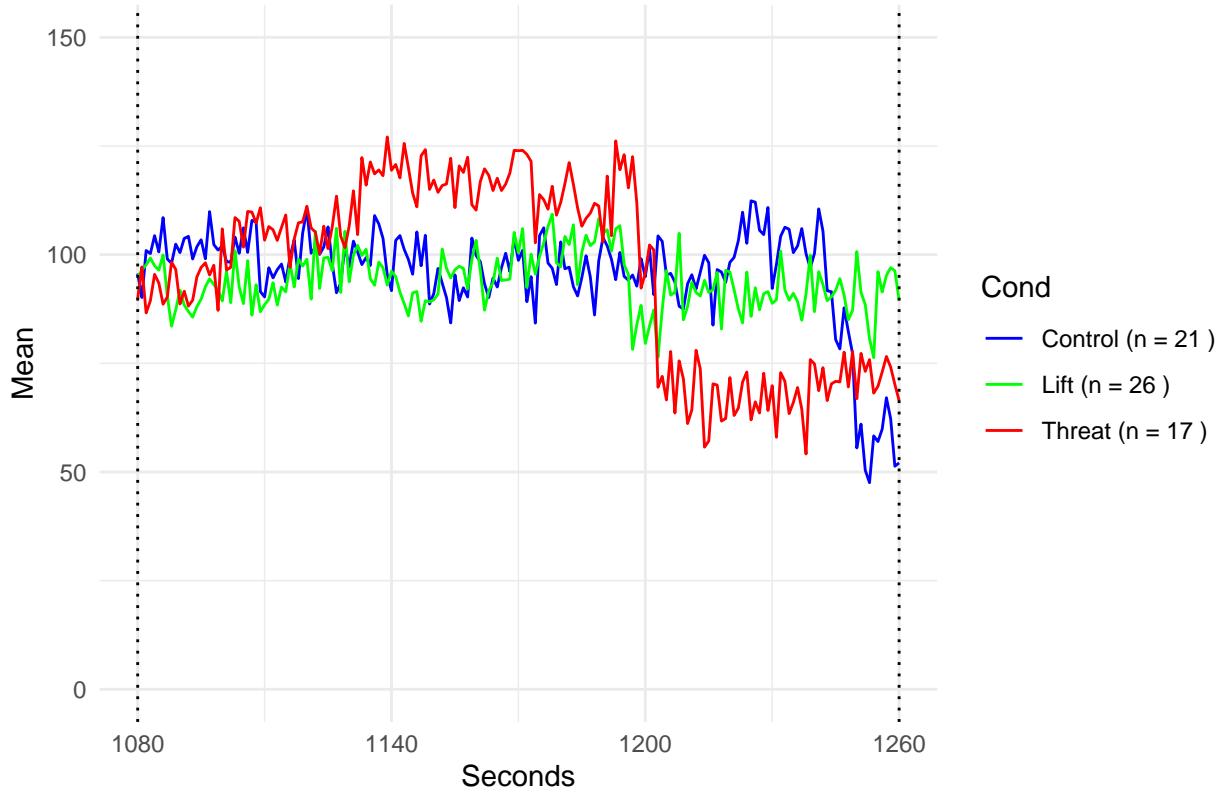
Z axis – Bruce Level 4, n = 106



```
#Bruce 5
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Z axis - Bruce Level 5, n = ",unique_counts(c(1080,1260)))) +
  theme_minimal() +
  scale_y_continuous(limits = c(0,150)) +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(1080,1260),
    breaks = c(1080,1140,1200,1260)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(1080,1260))

## Warning: Removed 6 rows containing missing values ('geom_vline()'').
```

Z axis – Bruce Level 5, n = 64



```
#Bruce 6
ggplot(mean_df, mapping = aes(x = Seconds, y = mean, color = Cond)) +
  geom_line(na.rm = TRUE) +
  labs(x = "Seconds",
       y = "Mean",
       title = paste("Z axis - Bruce Level 6, n = ",unique_counts(c(1260,1440)))) +
  theme_minimal() +
  geom_vline(xintercept = bruce_levels, color = "black", linetype = "dotted") +
  scale_x_continuous(
    limits = c(1260,1440),
    breaks = c(1260,1320,1380,1440)) +
  scale_color_manual(values = condition_colors,
                     labels = unique_ids_labels(1260,1440))

## Warning: Removed 6 rows containing missing values ('geom_vline()').
```

Z axis – Bruce Level 6, n = 29

