```
In[ ]:= v1Color = RGBColor["#ff1f5b"];

In[ ]:= lpColor = RGBColor["#009ade"];

In[ ]:= lmColor = RGBColor["#f28522"];

In[ ]:= controlColor = Black;

       (**************Clock times are lists of times when "Dark"
        session ended and "LED" session began*******************)

       (****Control****)

In[ ]:= dateMouseListControl =
         {{"011622", "Mouse22550"}, {"011822", "Mouse22550"}, {"012322", "Mouse22549"},
          {"012622", "Mouse22549"}, {"021022", "Mouse22549"}, {"010522", "Mouse22599"},
          {"021022", "Mouse22599"}, {"021422", "Mouse22599"}, {"033122", "Mouse22544"},
          {"040122", "Mouse22562"}, {"040322", "Mouse22544"}, {"040322", "Mouse22562"},
          {"032923", "Mouse23149"}, {"033023", "Mouse23128"}, {"033123", "Mouse23149"}};

In[ ]:= controlClockTimes =
         {{"12:48 PM", "2:19 PM"}, {"11:41 AM", "2:09 PM"}, {"11:59 AM", "2:29 PM"},
          {"10:58 AM", "12:45 PM"}, {"11:24 AM", "1:43 PM"}, {"10:53 AM", "12:57 PM"},
          {"10:22 AM", "12:40 PM"}, {"11:32 AM", "1:47 PM"}, {"11:37 AM", "1:45 PM"},
          {"2:13 PM", "4:14 PM"}, {"11:51 AM", "1:56 PM"}, {"12:46 PM", "2:48 PM"},
          {"12:36 PM", "2:29 PM"}, {"10:01 AM", "12:17 PM"}, {"10:27 AM", "12:19 PM"}};

In[ ]:= controlMinutes = Table[QuantityMagnitude[
           UnitConvert[Differences[Interpreter["Time"] /@ controlClockTimes[[n]]][[1]],
            "Minutes"]], {n, 1, Length[controlClockTimes]}];

       (****V1 eOPN3****)

In[ ]:= dateMouseListV1axons = {{"112221", "Mouse22485"}, {"112321", "Mouse22485"},
          {"120321", "Mouse22485"}, {"120821", "Mouse22517"}, {"121321", "Mouse22485"},
          {"010122", "Mouse22547"}, {"011222", "Mouse22501"}, {"011622", "Mouse22504"},
          {"011822", "Mouse22504"}, {"012322", "Mouse22575"}, {"012722", "Mouse22575"},
          {"013122", "Mouse22504"}, {"021022", "Mouse22504"}, {"021222", "Mouse22575"},
          {"032222", "Mouse22506"}, {"032622", "Mouse22506"}, {"040422", "Mouse22506"}};

In[ ]:= v1ClockTimes = {{"11:17 AM", "1:03 PM"}, {"12:49 PM", "2:25 PM"},
          {"10:09 AM", "11:35 AM"}, {"11:51 AM", "1:39 PM"}, {"10:28 AM", "12:43 PM"},
          {"11:55 AM", "2:25 PM"}, {"10:47 AM", "12:44 PM"}, {"11:22 AM", "1:39 PM"},
          {"10:39 AM", "1:20 PM"}, {"10:47 AM", "1:18 PM"}, {"1:56 PM", "3:47 PM"},
          {"3:40 PM", "5:08 PM"}, {"11:24 AM", "1:43 PM"}, {"1:17 PM", "3:12 PM"},
          {"11:43 AM", "1:44 PM"}, {"1:50 PM", "4:14 PM"}, {"1:57 PM", "4:04 PM"}};

In[ ]:= v1Minutes = Table[QuantityMagnitude[
           UnitConvert[Differences[Interpreter["Time"] /@ v1ClockTimes[[n]]][[1]], "Minutes"]],
          {n, 1, Length[v1ClockTimes]}];

       (****LP eOPN3****)
```

```
In[ ]:= dateMouseListLPaxons =
          {{"020122", "Mouse22413"}, {"020922", "Mouse22413"}, {"021422", "Mouse22413"},
           {"012622", "Mouse22514"}, {"012822", "Mouse22514"}, {"020122", "Mouse22514"},
           {"021122", "Mouse22519"}, {"021122", "Mouse22535"}, {"021522", "Mouse22535"},
           {"021722", "Mouse22519"}, {"030122", "Mouse22513"}, {"030222", "Mouse22521"},
           {"030722", "Mouse22513"}, {"030822", "Mouse22521"}, {"030822", "Mouse22519"},
           {"031522", "Mouse22513"}, {"031522", "Mouse22521"}, {"031922", "Mouse22521"},
           {"032022", "Mouse22519"}, {"032222", "Mouse22513"}, {"040622", "Mouse22513"}};
```

```
In[ ]:= lpClockTimes = {{"1:56 PM", "3:57 PM"}, {"11:27 AM", "1:07 PM"}, {"12:30 PM", "2:50 PM"},
           {"11:50 AM", "1:56 PM"}, {"1:45 PM", "3:30 PM"}, {"12:45 PM", "2:44 PM"},
           {"2:42 PM", "4:37 PM"}, {"1:38 PM", "3:33 PM"}, {"12:05 PM", "2:09 PM"},
           {"2:13 PM", "4:10 PM"}, {"12:28 PM", "2:08 PM"}, {"11:11 AM", "1:07 PM"},
           {"11:15 AM", "1:02 PM"}, {"1:33 PM", "3:38 PM"}, {"12:15 PM", "2:29 PM"},
           {"11:03 AM", "1:09 PM"}, {"11:59 AM", "2:09 PM"}, {"2:42 PM", "4:42 PM"},
           {"1:43 PM", "3:59 PM"}, {"12:41 PM", "2:47 PM"}, {"11:00 AM", "1:08 PM"}};
```

```
In[ ]:= lpMinutes = Table[QuantityMagnitude[
          UnitConvert[Differences[Interpreter["Time"] /@ lpClockTimes[[n]]][[1]], "Minutes"]],
          {n, 1, Length[lpClockTimes]}];
```

```
(****LM eOPN3****)
```

```
In[ ]:= dateMouseListLMaxons = {{"022022", "Mouse22563"},
           {"022222", "Mouse22563"}, {"031722", "Mouse22539"}, {"031722", "Mouse22570"},
           {"032022", "Mouse22539"}, {"032022", "Mouse22570"}, {"032322", "Mouse22539"},
           {"032522", "Mouse22539"}, {"041022", "Mouse22407"}, {"041522", "Mouse22407"}};
```

```
In[ ]:= lmClockTimes = {{"11:56 AM", "1:38 PM"},
           {"12:32 PM", "2:21 PM"}, {"2:44 PM", "5:00 PM"}, {"3:39 PM", "5:59 PM"},
           {"11:45 AM", "1:56 PM"}, {"12:41 PM", "3:02 PM"}, {"10:16 AM", "12:27 PM"},
           {"11:05 AM", "1:11 PM"}, {"12:56 PM", "2:51 PM"}, {"11:03 AM", "1:06 PM"}};
```

```
In[ ]:= lmMinutes = Table[QuantityMagnitude[
          UnitConvert[Differences[Interpreter["Time"] /@ lmClockTimes[[n]]][[1]], "Minutes"]],
          {n, 1, Length[lmClockTimes]}];
```

```
(**************************************)
```

```
In[ ]:= controlCharts = Show[
          BoxWhiskerChart[controlMinutes, {{"Whiskers", Directive[Darker@controlColor, Thick]},
            {"Fences", Directive[Darker@controlColor, Thick]}, {"MedianMarker",
             Directive[Darker@controlColor, Thickness[0.009]]}}, PlotRange → {All, {0, 162}},
           ChartStyle → Directive[controlColor, Opacity[0.3]], Frame → False],
          DistributionChart[controlMinutes, PlotRange → {All, {0, 162}}, ChartStyle →
            Directive[EdgeForm[Transparent], Opacity[0.2], controlColor], Frame → False],
          FrameTicks → {{LinTicks[0, 162, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}],
             None}, {None, None}}, Axes → False, TicksStyle → Thick,
          FrameStyle → Directive[Transparent, Thick], Frame → {{True, None}, {None, None}},
          FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];
```

```
In[ ]:=  v1AxonCharts =
    Show[BoxWhiskerChart[v1Minutes, {{"Whiskers", Directive[Darker@v1Color, Thick]},
        {"Fences", Directive[Darker@v1Color, Thick]},
        {"MedianMarker", Directive[Darker@v1Color, Thickness[0.009]]}},
       PlotRange → {All, {0, 162}}, ChartStyle → Directive[v1Color, Opacity[0.3]],
       Frame → False], DistributionChart[v1Minutes, PlotRange → {All, {0, 162}},
       ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], v1Color], Frame → False],
      FrameTicks → {{LinTicks[0, 162, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}],
         None}, {None, None}}, Axes → False, TicksStyle → Thick,
      FrameStyle → Directive[Transparent, Thick], Frame → {{True, None}, {None, None}},
      FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

In[ ]:=  lmAxonCharts =
    Show[BoxWhiskerChart[lmMinutes, {{"Whiskers", Directive[Darker@lmColor, Thick]},
        {"Fences", Directive[Darker@lmColor, Thick]},
        {"MedianMarker", Directive[Darker@lmColor, Thickness[0.009]]}},
       PlotRange → {All, {0, 162}}, ChartStyle → Directive[lmColor, Opacity[0.3]],
       Frame → False], DistributionChart[lmMinutes, PlotRange → {All, {0, 162}},
       ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], lmColor], Frame → False],
      FrameTicks → {{LinTicks[0, 162, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}],
         None}, {None, None}}, Axes → False, TicksStyle → Thick,
      FrameStyle → Directive[Transparent, Thick], Frame → {{True, None}, {None, None}},
      FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

In[ ]:=  lpAxonCharts =
    Show[BoxWhiskerChart[lpMinutes, {{"Whiskers", Directive[Darker@lpColor, Thick]},
        {"Fences", Directive[Darker@lpColor, Thick]},
        {"MedianMarker", Directive[Darker@lpColor, Thickness[0.009]]}},
       PlotRange → {All, {0, 162}}, ChartStyle → Directive[lpColor, Opacity[0.3]],
       Frame → False], DistributionChart[lpMinutes, PlotRange → {All, {0, 162}},
       ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], lpColor], Frame → False],
      FrameTicks → {{LinTicks[0, 162, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}],
         None}, {None, None}}, Axes → False, TicksStyle → Thick,
      FrameStyle → Directive[Transparent, Thick], Frame → {{True, None}, {None, None}},
      FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];

    transp =
     Show[BoxWhiskerChart[controlMinutes, {{"Whiskers", Directive[Transparent, Thick]},
        {"Fences", Directive[Transparent, Thick]},
        {"MedianMarker", Directive[Transparent, Thickness[0.009]]}},
       PlotRange → {All, {0, 162}}, ChartStyle → Transparent, Frame → False],
      DistributionChart[controlMinutes, PlotRange → {All, {0, 162}}, ChartStyle →
        Directive[EdgeForm[Transparent], Opacity[0.2], Transparent], Frame → False],
      FrameTicks → {{LinTicks[0, 162, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}],
         None}, {None, None}}, Axes → False, TicksStyle → Thick,
      FrameStyle → Directive[Black, Thick], Frame → {{True, None}, {None, None}},
      FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]];
```

In[ ]:= `GraphicsRow[{controlCharts, v1AxonCharts, lmAxonCharts, lpAxonCharts, transp},`
`    Spacings → {{-280, -280, -280, -280, -480}}]`

Out[ ]=