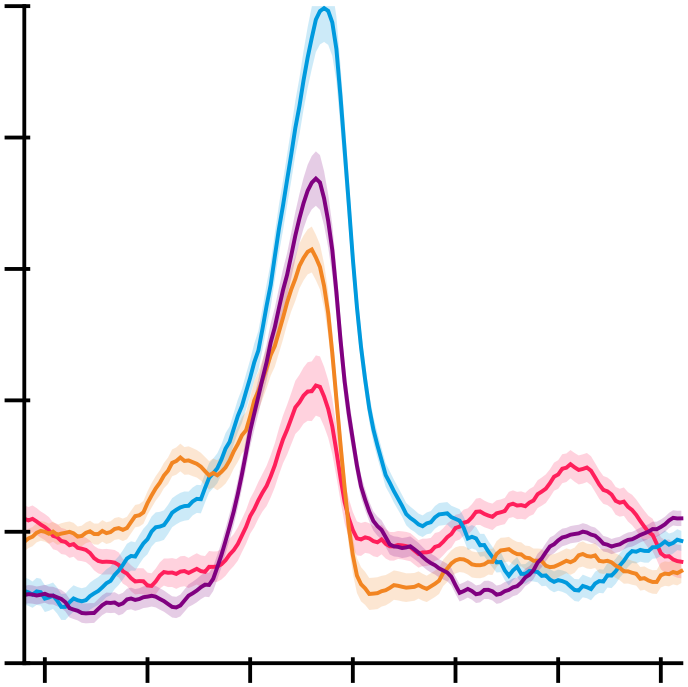
```
v1Color = RGBColor["#ff1f5b"];

lpColor = RGBColor["#009ade"];

lmColor = RGBColor["#f28522"];

v2mColor = Purple;

(**************************)

dateMouseSessionListV2m = {{"021821", "Mouse23310", "Session1"},
    {"030221", "Mouse23310", "Session1"}, {"031121", "Mouse23310", "Session1"},
    {"031921", "Mouse23310", "Session2"}, {"021721", "Mouse23338", "Session1"},
    {"030221", "Mouse23338", "Session1"}, {"031621", "Mouse23338", "Session1"},
    {"031621", "Mouse23338", "Session1"}, {"031821", "Mouse23338", "Session2"},
    {"011721", "Mouse23390", "Session2"}, {"011821", "Mouse23390", "Session2"},
    {"022821", "Mouse23390", "Session1"}, {"021221", "Mouse23359", "Session2"},
    {"010321", "Mouse23382", "Session1"}, {"010621", "Mouse23382", "Session2"}};

dateMouseSessionListV1toV2m =
   {{"020421", "Mouse23329", "Session1"}, {"021321", "Mouse23329", "Session1"},
    {"030121", "Mouse23329", "Session1"}, {"030621", "Mouse23329", "Session1"},
    {"020421", "Mouse23320", "Session1"}, {"121820", "Mouse23365", "Session1"},
    {"122020", "Mouse23365", "Session1"}, {"062622", "Mouse23007", "Session1"}};

dateMouseSessionListLMtoV2m = {{"072022", "Mouse23025", "Session1"},
    {"071222", "Mouse23100", "Session1"}, {"071522", "Mouse23100", "Session1"},
    {"070922", "Mouse23014", "Session1"}, {"071422", "Mouse23014", "Session1"},
    {"070922", "Mouse22518", "Session1"}, {"071122", "Mouse22518", "Session1"}};

dateMouseSessionListLPtoV2m =
   {{"010721", "Mouse23339", "Session1"}, {"010821", "Mouse23339", "Session1"},
    {"011421", "Mouse23339", "Session2"}, {"011221", "Mouse23369", "Session1"},
    {"011521", "Mouse23369", "Session1"}, {"121620", "Mouse23381", "Session2"},
    {"121920", "Mouse23381", "Session1"}, {"120920", "Mouse23384", "Session1"},
    {"121320", "Mouse23384", "Session1"}, {"063022", "Mouse23067", "Session1"},
    {"063022", "Mouse23075", "Session1"}, {"071022", "Mouse23075", "Session1"}};

(**************************)

(*******************************************)
(*******Generate plots in Figure 3D***************)
(*******************************************)

meanDFFwhiskCCV1toV2m = ToExpression /@
    Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/V1toV2m/ValuesForPlotting/
       meanDFFwhiskCrossCorr_V1toV2m.txt", "List"];

semDFFwhiskCCV1toV2m = ToExpression /@
    Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/V1toV2m/ValuesForPlotting/
       semDFFwhiskCrossCorr_V1toV2m.txt", "List"];

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

```
In[ ]:= meanDFFwhiskCCLPtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LPtoV2m/ValuesForPlotting/
            meanDFFwhiskCrossCorr_LPtoV2m.txt", "List"];

In[ ]:= semDFFwhiskCCLPtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LPtoV2m/ValuesForPlotting/
            semDFFwhiskCrossCorr_LPtoV2m.txt", "List"];

In[ ]:= (*********)

In[ ]:= meanDFFwhiskCCLMtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LMtoV2m/ValuesForPlotting/
            meanDFFwhiskCrossCorr_LMtoV2m.txt", "List"];

In[ ]:= semDFFwhiskCCLMtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LMtoV2m/ValuesForPlotting/
            semDFFwhiskCrossCorr_LMtoV2m.txt", "List"];

In[ ]:= (*********)

In[ ]:= meanDFFwhiskCCV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/CellBodies/V2m/ValuesForPlotting/
            meanDFFwhiskCrossCorr_V2m.txt", "List"];

In[ ]:= semDFFwhiskCCV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/CellBodies/V2m/ValuesForPlotting/
            semDFFwhiskCrossCorr_V2m.txt", "List"];
```

In[ ]:=
```
ListLinePlot[{Part[#, 2] & /@ meanDFFwhiskCCV1toV2m,
  Part[#, 2] & /@ meanDFFwhiskCCV1toV2m + (Part[#, 2] & /@ semDFFwhiskCCV1toV2m),
  Part[#, 2] & /@ meanDFFwhiskCCV1toV2m - (Part[#, 2] & /@ semDFFwhiskCCV1toV2m),
  Part[#, 2] & /@ meanDFFwhiskCCLPtoV2m,
  Part[#, 2] & /@ meanDFFwhiskCCLPtoV2m + (Part[#, 2] & /@ semDFFwhiskCCLPtoV2m),
  Part[#, 2] & /@ meanDFFwhiskCCLPtoV2m - (Part[#, 2] & /@ semDFFwhiskCCLPtoV2m),
  Part[#, 2] & /@ meanDFFwhiskCCLMtoV2m,
  Part[#, 2] & /@ meanDFFwhiskCCLMtoV2m + (Part[#, 2] & /@ semDFFwhiskCCLMtoV2m),
  Part[#, 2] & /@ meanDFFwhiskCCLMtoV2m - (Part[#, 2] & /@ semDFFwhiskCCLMtoV2m),
  Part[#, 2] & /@ meanDFFwhiskCCV2m,
  Part[#, 2] & /@ meanDFFwhiskCCV2m + (Part[#, 2] & /@ semDFFwhiskCCV2m),
  Part[#, 2] & /@ meanDFFwhiskCCV2m - (Part[#, 2] & /@ semDFFwhiskCCV2m)},
 Filling → {1 → {{2}, Directive[Opacity[0.2], v1Color]}, 1 →
    {{3}, Directive[Opacity[0.2], v1Color]}, 4 → {{5}, Directive[Opacity[0.2], lpColor]},
   4 → {{6}, Directive[Opacity[0.2], lpColor]}, 7 →
    {{8}, Directive[Opacity[0.2], lmColor]}, 7 → {{9}, Directive[Opacity[0.2], lmColor]},
   10 → {{11}, Directive[Opacity[0.2], v2mColor]},
   10 → {{12}, Directive[Opacity[0.2], v2mColor]}},
 PlotStyle → {{v1Color, Thickness[0.006]}, Transparent, Transparent,
   {lpColor, Thickness[0.006]}, Transparent, Transparent, {lmColor, Thickness[0.006]},
   Transparent, Transparent, {v2mColor, Thickness[0.006]}, Transparent, Transparent},
 DataRange → {-8, 8}, PlotRange → {{-8, 8}, {-0.02, 0.08}}, FrameTicks →
  {{LinTicks[-0.02, 0.08, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
   {LinTicks[-8, 8, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
 Axes → False, TicksStyle → Thick, FrameStyle → Thick,
 Frame → {{True, None}, {True, None}}, AspectRatio → 1,
 FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]]
```

Out[ ]=

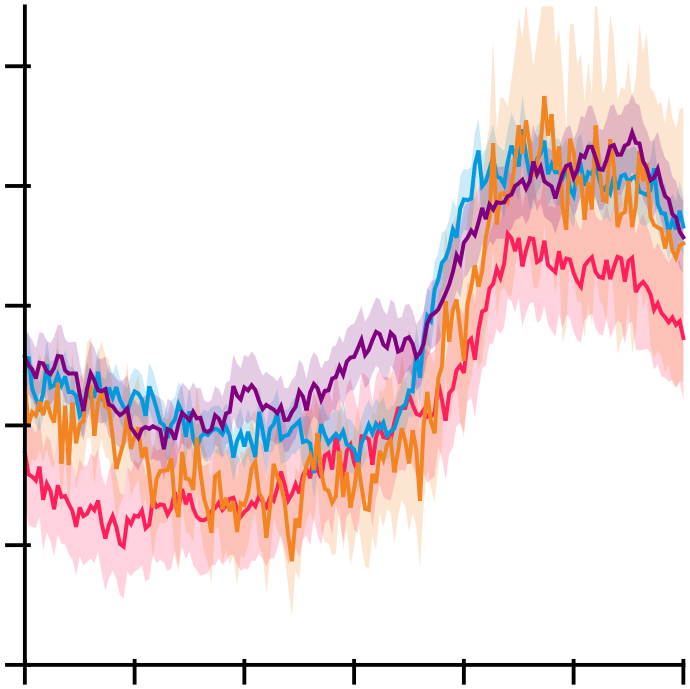


In[ ]:=
```
(*************************************)
```

```
In[ ]:= (*********************************************)
        (*******Generate plots in Figure 3E****************)
        (*********************************************)

In[ ]:= meanDFFwhiskOnV1toV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/V1toV2m/ValuesForPlotting/
            meanDFFzTraceWhiskOnset_V1toV2m_nonDupROIs.txt", "List"];

In[ ]:= semDFFwhiskOnV1toV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/V1toV2m/ValuesForPlotting/
            semDFFzTraceWhiskOnset_V1toV2m_nonDupROIs.txt", "List"];

In[ ]:= (*********)

In[ ]:= meanDFFwhiskOnLPtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LPtoV2m/ValuesForPlotting/
            meanDFFzTraceWhiskOnset_LPtoV2m_nonDupROIs.txt", "List"];

In[ ]:= semDFFwhiskOnLPtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LPtoV2m/ValuesForPlotting/
            semDFFzTraceWhiskOnset_LPtoV2m_nonDupROIs.txt", "List"];

In[ ]:= (*********)

In[ ]:= meanDFFwhiskOnLMtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LMtoV2m/ValuesForPlotting/
            meanDFFzTraceWhiskOnset_LMtoV2m_nonDupROIs.txt", "List"];

In[ ]:= semDFFwhiskOnLMtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LMtoV2m/ValuesForPlotting/
            semDFFzTraceWhiskOnset_LMtoV2m_nonDupROIs.txt", "List"];

In[ ]:= (*********)

In[ ]:= meanDFFwhiskOnV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/CellBodies/V2m/ValuesForPlotting/
            meanDFFzTraceWhiskOnset_V2m.txt", "List"];

In[ ]:= semDFFwhiskOnV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/CellBodies/V2m/ValuesForPlotting/
            semDFFzTraceWhiskOnset_V2m.txt", "List"];
```

In[ ]:=
```
ListLinePlot[{Part[#, 2] & /@ meanDFFwhiskOnV1toV2m,
  Part[#, 2] & /@ meanDFFwhiskOnV1toV2m + (Part[#, 2] & /@ semDFFwhiskOnV1toV2m),
  Part[#, 2] & /@ meanDFFwhiskOnV1toV2m - (Part[#, 2] & /@ semDFFwhiskOnV1toV2m),
  Part[#, 2] & /@ meanDFFwhiskOnLPtoV2m,
  Part[#, 2] & /@ meanDFFwhiskOnLPtoV2m + (Part[#, 2] & /@ semDFFwhiskOnLPtoV2m),
  Part[#, 2] & /@ meanDFFwhiskOnLPtoV2m - (Part[#, 2] & /@ semDFFwhiskOnLPtoV2m),
  Part[#, 2] & /@ meanDFFwhiskOnLMtoV2m,
  Part[#, 2] & /@ meanDFFwhiskOnLMtoV2m + (Part[#, 2] & /@ semDFFwhiskOnLMtoV2m),
  Part[#, 2] & /@ meanDFFwhiskOnLMtoV2m - (Part[#, 2] & /@ semDFFwhiskOnLMtoV2m),
  Part[#, 2] & /@ meanDFFwhiskOnV2m,
  Part[#, 2] & /@ meanDFFwhiskOnV2m + (Part[#, 2] & /@ semDFFwhiskOnV2m),
  Part[#, 2] & /@ meanDFFwhiskOnV2m - (Part[#, 2] & /@ semDFFwhiskOnV2m)},
 Filling → {1 → {{2}, Directive[Opacity[0.2], v1Color]}, 1 →
    {{3}, Directive[Opacity[0.2], v1Color]}, 4 → {{5}, Directive[Opacity[0.2], lpColor]},
   4 → {{6}, Directive[Opacity[0.2], lpColor]}, 7 →
    {{8}, Directive[Opacity[0.2], lmColor]}, 7 → {{9}, Directive[Opacity[0.2], lmColor]},
   10 → {{11}, Directive[Opacity[0.2], v2mColor]},
   10 → {{12}, Directive[Opacity[0.2], v2mColor]}},
 PlotStyle → {{v1Color, Thickness[0.006]}, Transparent, Transparent,
   {lpColor, Thickness[0.006]}, Transparent, Transparent, {lmColor, Thickness[0.006]},
   Transparent, Transparent, {v2mColor, Thickness[0.006]}, Transparent, Transparent},
 DataRange → {-3, 3}, PlotRange → {{-3, 3}, {-0.4, 0.7}}, FrameTicks →
  {{LinTicks[-0.4, 0.7, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
   {LinTicks[-3, 3, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
 Axes → False, TicksStyle → Thick, FrameStyle → Thick,
 Frame → {{True, None}, {True, None}}, AspectRatio → 1,
 FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0]]
```

Out[ ]=



In[ ]:=
```
(*************************************)
```

```
In[•]:= (*********************************************)
        (*******Generate plots in Figure 3F***************)
        (*********************************************)

In[•]:= peakCCValsV1toV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/V1toV2m/ValuesForPlotting/
            peakDFFwhiskCC_V1toV2m.txt", "List"];

In[•]:= peakCCValsLPtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LPtoV2m/ValuesForPlotting/
            peakDFFwhiskCC_LPtoV2m.txt", "List"];

In[•]:= peakCCValsLMtoV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/Axons/LMtoV2m/ValuesForPlotting/
            peakDFFwhiskCC_LMtoV2m.txt", "List"];

In[•]:= peakCCValsV2m = ToExpression /@
          Import["F:/FigureGeneration/Figure3/Fig3Data/CellBodies/V2m/ValuesForPlotting/
            peakDFFwhiskCC_V2m.txt", "List"];

In[•]:= (**********************)

In[•]:= v1AxonCharts = Show[
          BoxWhiskerChart[peakCCValsV1toV2m, {{"Whiskers", Directive[Darker@v1Color, Thick]},
            {"Fences", Directive[Darker@v1Color, Thick]}, {"MedianMarker",
             Directive[Darker@v1Color, Thickness[0.009]]}}, PlotRange → {All, {-0.04, 0.35}},
           ChartStyle → Directive[v1Color, Opacity[0.3]], Frame → False],
          DistributionChart[peakCCValsV1toV2m, PlotRange → {All, {-0.04, 0.35}},
           ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], v1Color], Frame → False],
          FrameTicks → {{LinTicks[-0.04, 0.35, 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[peakCCValsLMtoV2m, {{"Whiskers", Directive[Darker@lmColor, Thick]},
            {"Fences", Directive[Darker@lmColor, Thick]}, {"MedianMarker",
             Directive[Darker@lmColor, Thickness[0.009]]}}, PlotRange → {All, {-0.04, 0.35}},
           ChartStyle → Directive[lmColor, Opacity[0.3]], Frame → False],
          DistributionChart[peakCCValsLMtoV2m, PlotRange → {All, {-0.04, 0.35}},
           ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], lmColor], Frame → False],
          FrameTicks → {{LinTicks[-0.04, 0.35, 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[peakCCValsLPtoV2m, {{"Whiskers", Directive[Darker@lpColor, Thick]},
     {"Fences", Directive[Darker@lpColor, Thick]}, {"MedianMarker",
      Directive[Darker@lpColor, Thickness[0.009]]}}, PlotRange → {All, {-0.04, 0.35}},
    ChartStyle → Directive[lpColor, Opacity[0.3]], Frame → False],
   DistributionChart[peakCCValsLPtoV2m, PlotRange → {All, {-0.04, 0.35}},
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], lpColor], Frame → False],
   FrameTicks → {{LinTicks[-0.04, 0.35, 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[•]:=
```
v2mAxonCharts =
  Show[BoxWhiskerChart[peakCCValsV2m, {{"Whiskers", Directive[Darker@v2mColor, Thick]},
     {"Fences", Directive[Darker@v2mColor, Thick]}, {"MedianMarker",
      Directive[Darker@v2mColor, Thickness[0.009]]}}, PlotRange → {All, {-0.04, 0.35}},
    ChartStyle → Directive[v2mColor, Opacity[0.3]], Frame → False],
   DistributionChart[peakCCValsV2m, PlotRange → {All, {-0.04, 0.35}},
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], v2mColor], Frame → False],
   FrameTicks → {{LinTicks[-0.04, 0.35, 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[•]:=
```
transp =
  Show[BoxWhiskerChart[peakCCValsV2m, {{"Whiskers", Directive[Transparent, Thick]},
     {"Fences", Directive[Transparent, Thick]},
     {"MedianMarker", Directive[Transparent, Thickness[0.009]]}},
    PlotRange → {All, {-0.04, 0.35}}, ChartStyle → Transparent, Frame → False],
   DistributionChart[peakCCValsV2m, PlotRange → {All, {-0.04, 0.35}},
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Transparent],
    Frame → False], FrameTicks →
    {{LinTicks[-0.04, 0.35, 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[{v1AxonCharts, lmAxonCharts, lpAxonCharts, v2mAxonCharts, transp},
 Spacings → {{-280, -280, -280, -280, -480}}]
```

Out[•]=