

```
ln[ ]:= v1Color = Blue;
```

```
ln[ ]:= v2mColor = Purple;
```

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

```
dateMouseSessionListV1 = {{ "030921", "Mouse23324", "Session4"},  
  { "031621", "Mouse23324", "Session2"}, { "032021", "Mouse23324", "Session4"},  
  { "030821", "Mouse23321", "Session1"}, { "031121", "Mouse23321", "Session2"},  
  { "031621", "Mouse23321", "Session2"}, { "031921", "Mouse23321", "Session2"},  
  { "010621", "Mouse23332", "Session1"}, { "010821", "Mouse23332", "Session2"},  
  { "011321", "Mouse23332", "Session1"}, { "011821", "Mouse23332", "Session1"},  
  { "010921", "Mouse23305", "Session2"}, { "011121", "Mouse23305", "Session2"},  
  { "121020", "Mouse23312", "Session4"}, { "121420", "Mouse23312", "Session2"};}
```

```
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"};}
```

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

```
(*****Generate plots in Figure S3C*****)
```

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

```
meanDFFwhiskCCV1 = ToExpression /@ Import [  
  "F:/FigureGeneration/FigureS2/FigureS2Data/CellBodies/V1/ValuesForPlotting/  
  meanDFFwhiskCrossCorr_V1.txt", "List"];
```

```
semDFFwhiskCCV1 = ToExpression /@ Import [  
  "F:/FigureGeneration/FigureS2/FigureS2Data/CellBodies/V1/ValuesForPlotting/  
  semDFFwhiskCrossCorr_V1.txt", "List"];
```

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

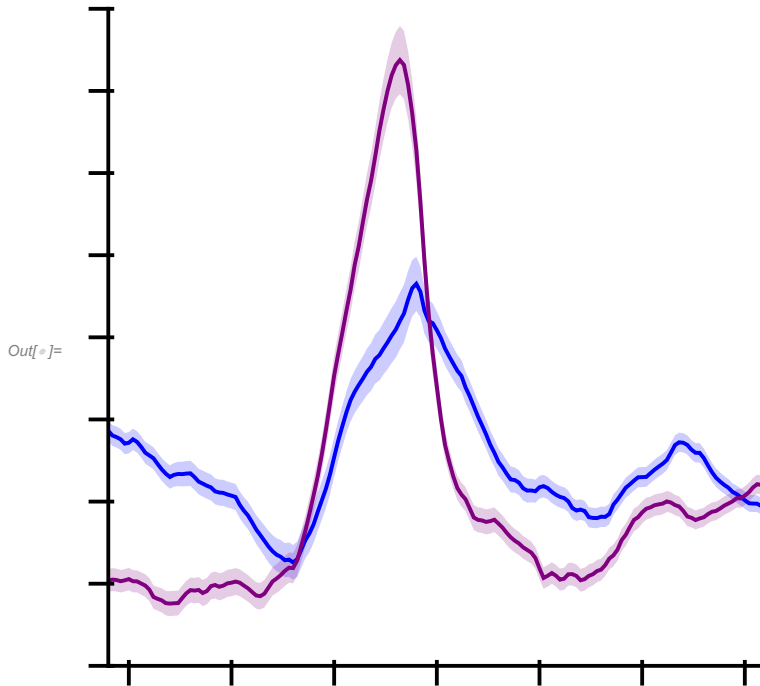
```
meanDFFwhiskCCV2m = ToExpression /@ Import [  
  "F:/FigureGeneration/FigureS2/FigureS2Data/CellBodies/V2m/ValuesForPlotting/  
  meanDFFwhiskCrossCorr_V2m.txt", "List"];
```

```
semDFFwhiskCCV2m = ToExpression /@ Import [  
  "F:/FigureGeneration/FigureS2/FigureS2Data/CellBodies/V2m/ValuesForPlotting/  
  semDFFwhiskCrossCorr_V2m.txt", "List"];
```

```

In[ ]:= ListLinePlot[{Part[#, 2] & /@meanDFFwhiskCCV1,
  Part[#, 2] & /@meanDFFwhiskCCV1 + (Part[#, 2] & /@semDFFwhiskCCV1),
  Part[#, 2] & /@meanDFFwhiskCCV1 - (Part[#, 2] & /@semDFFwhiskCCV1),
  Part[#, 2] & /@meanDFFwhiskCCV2m,
  Part[#, 2] & /@meanDFFwhiskCCV2m + (Part[#, 2] & /@semDFFwhiskCCV2m),
  Part[#, 2] & /@meanDFFwhiskCCV2m - (Part[#, 2] & /@semDFFwhiskCCV2m)}, Filling ->
  {1 -> {{2}, Directive[Opacity[0.2], Blue]}, 1 -> {{3}, Directive[Opacity[0.2], Blue]},
  4 -> {{5}, Directive[Opacity[0.2], Purple]}, 4 -> {{6}, Directive[Opacity[0.2], Purple]}}},
PlotStyle -> {{Blue, Thickness[0.006]}, Transparent, Transparent,
  {Purple, Thickness[0.006]}, Transparent, Transparent},
DataRange -> {-8, 8}, PlotRange -> {{-8, 8}, {-0.02, 0.06}}, FrameTicks ->
  {{LinTicks[-0.02, 0.06, 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]

```



```

(*****
(*****Generate plots in Figure S3D*****
(*****

```

```

meanDFFwhiskOnV2m = ToExpression /@ Import[
  "F:/FigureGeneration/FiguresS2/FiguresS2Data/CellBodies/V2m/ValuesForPlotting/
  meanDFFzTraceWhiskOnset_V2m.txt", "List"];

```

```

semDFFwhiskOnV2m = ToExpression /@ Import[
  "F:/FigureGeneration/FiguresS2/FiguresS2Data/CellBodies/V2m/ValuesForPlotting/
  semDFFzTraceWhiskOnset_V2m.txt", "List"];

```

```

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

```

```
meanDFFwhiskOnV1 = ToExpression /@ Import[
  "F:/FigureGeneration/FiguresS2/FiguresS2Data/CellBodies/V1/ValuesForPlotting/
  meanDFFzTraceWhiskOnset_V1.txt", "List"];

```

```
semDFFwhiskOnV1 = ToExpression /@ Import[
  "F:/FigureGeneration/FiguresS2/FiguresS2Data/CellBodies/V1/ValuesForPlotting/
  semDFFzTraceWhiskOnset_V1.txt", "List"];

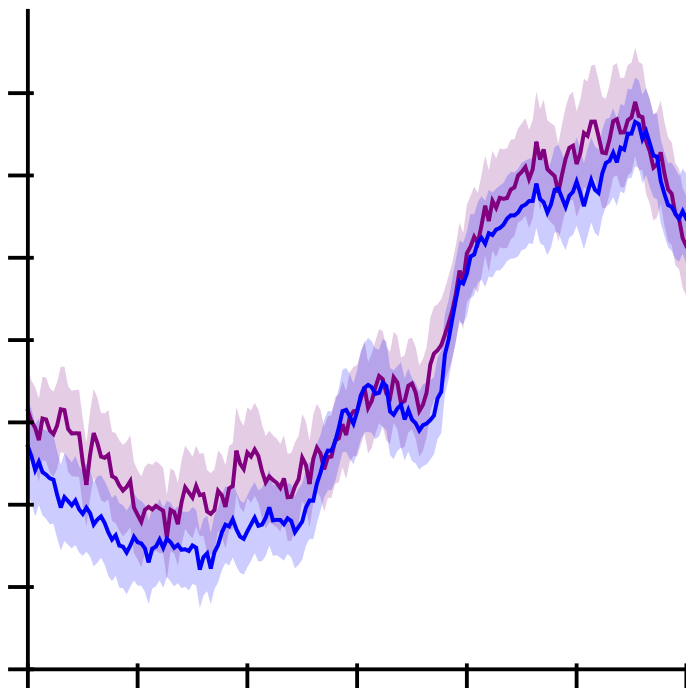
```

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

```
In[ ]:= ListLinePlot[{Part[#, 2] & /@ meanDFFwhiskOnV2m,
  Part[#, 2] & /@ meanDFFwhiskOnV2m + (Part[#, 2] & /@ semDFFwhiskOnV2m),
  Part[#, 2] & /@ meanDFFwhiskOnV2m - (Part[#, 2] & /@ semDFFwhiskOnV2m),
  Part[#, 2] & /@ meanDFFwhiskOnV1,
  Part[#, 2] & /@ meanDFFwhiskOnV1 + (Part[#, 2] & /@ semDFFwhiskOnV1),
  Part[#, 2] & /@ meanDFFwhiskOnV1 - (Part[#, 2] & /@ semDFFwhiskOnV1)},
  Filling -> {1 -> {{2}, Directive[Opacity[0.2], v2mColor]}},
  1 -> {{3}, Directive[Opacity[0.2], v2mColor]}}, 4 ->
  {{5}, Directive[Opacity[0.2], v1Color]}}, 4 -> {{6}, Directive[Opacity[0.2], v1Color]}},
  PlotStyle -> {{v2mColor, Thickness[0.006]}, Transparent, Transparent,
  {v1Color, Thickness[0.006]}, Transparent, Transparent},
  DataRange -> {-3, 3}, PlotRange -> {{-3, 3}, {-0.2, 0.6}}, FrameTicks ->
  {{LinTicks[-0.2, 0.6, 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[]:=



```

(*****Generate plots in Figure S3E*****)
(*****Generate plots in Figure S3E*****)

peakCCValsV1 = ToExpression /@ Import[
  "F:/FigureGeneration/FigureS2/FigureS2Data/CellBodies/V1/ValuesForPlotting/
  peakDFFwhiskCC_V1.txt", "List"];

peakCCValsV2m = ToExpression /@ Import[
  "F:/FigureGeneration/FigureS2/FigureS2Data/CellBodies/V2m/ValuesForPlotting/
  peakDFFwhiskCC_V2m.txt", "List"];

v1Charts =
  Show[BoxWhiskerChart[peakCCValsV1, {"Whiskers", Directive[Blue, Thick]}, {"Fences",
    Directive[Blue, Thick]}, {"MedianMarker", Directive[Blue, Thickness[0.009]}],
    PlotRange → {All, {-0.05, 0.4}}, ChartStyle → Directive[Blue, Opacity[0.3]],
    Frame → False], DistributionChart[peakCCValsV1, PlotRange → {All, {-0.05, 0.4}},
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Blue], Frame → False],
    FrameTicks → {{LinTicks[-0.05, 0.4, 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]];

pmCharts = Show[BoxWhiskerChart[peakCCValsV2m,
  {"Whiskers", Directive[Purple, Thick]}, {"Fences", Directive[Purple, Thick]},
  {"MedianMarker", Directive[Purple, Thickness[0.009]}],
  PlotRange → {All, {-0.05, 0.4}}, ChartStyle → Directive[Purple, Opacity[0.3]],
  Frame → False], DistributionChart[peakCCValsV2m, PlotRange → {All, {-0.05, 0.4}},
  ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Purple], Frame → False],
  FrameTicks → {{LinTicks[-0.05, 0.4, 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[peakCCValsV2m, {"Whiskers", Directive[Transparent, Thick]},
    {"Fences", Directive[Transparent, Thick]},
    {"MedianMarker", Directive[Transparent, Thickness[0.009]}],
    PlotRange → {All, {-0.05, 0.4}}, ChartStyle → Transparent, Frame → False],
    DistributionChart[peakCCValsV2m, PlotRange → {All, {-0.05, 0.4}},
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Transparent],
    Frame → False], FrameTicks →
    {{LinTicks[-0.05, 0.4, 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[{v1Charts, pmCharts, transp}, Spacings → {{-280, -280, -320}}]
```

Out[]:=

