

```

dateMouseSessionListV1 =
  {"071820", "Mouse21019", "Session1"}, {"080820", "Mouse21019", "Session2"},
  {"081120", "Mouse21019", "Session1"}, {"082520", "Mouse21020", "Session3"},
  {"072520", "Mouse21036", "Session2"}, {"080920", "Mouse21036", "Session1"},
  {"081120", "Mouse21036", "Session1"}, {"081320", "Mouse21036", "Session2"},
  {"071920", "Mouse21062", "Session2"}, {"080620", "Mouse21062", "Session1"},
  {"091320", "Mouse21068", "Session1"}, {"092720", "Mouse21068", "Session1"},
  {"092920", "Mouse21068", "Session1"}, {"091620", "Mouse23336", "Session1"},
  {"092220", "Mouse23336", "Session1"}, {"111220", "Mouse23385", "Session2"},
  {"111820", "Mouse23385", "Session1"}, {"121420", "Mouse23312", "Session2"},
  {"010621", "Mouse23332", "Session1"}, {"010821", "Mouse23332", "Session2"},
  {"011321", "Mouse23332", "Session1"}, {"011821", "Mouse23332", "Session1"},
  {"010921", "Mouse23305", "Session2"}, {"011121", "Mouse23305", "Session2"},
  {"030821", "Mouse23321", "Session1"}, {"031121", "Mouse23321", "Session2"},
  {"031621", "Mouse23321", "Session2"}, {"031921", "Mouse23321", "Session2"},
  {"030721", "Mouse23324", "Session2"}, {"031621", "Mouse23324", "Session2"};

```

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dateMouseSessionListV2m =
  {"090320", "Mouse21011", "Session3"}, {"090820", "Mouse21011", "Session2"},
  {"092620", "Mouse21011", "Session1"}, {"091520", "Mouse21069", "Session2"},
  {"090320", "Mouse21076", "Session2"}, {"090520", "Mouse21076", "Session1"},
  {"112020", "Mouse23383", "Session2"}, {"112120", "Mouse23383", "Session2"},
  {"112220", "Mouse23386", "Session1"}, {"120520", "Mouse23383", "Session2"},
  {"010121", "Mouse23382", "Session1"}, {"011521", "Mouse23390", "Session2"},
  {"011821", "Mouse23390", "Session2"}, {"021221", "Mouse23359", "Session2"},
  {"021821", "Mouse23310", "Session1"}, {"030221", "Mouse23310", "Session1"},
  {"031121", "Mouse23310", "Session1"}, {"021721", "Mouse23338", "Session1"},
  {"022621", "Mouse23338", "Session1"}, {"030221", "Mouse23338", "Session1"},
  {"031521", "Mouse23338", "Session2"}, {"031921", "Mouse23338", "Session1"},
  {"072421", "Mouse21151", "Session2"}, {"080121", "Mouse22481", "Session1"},
  {"072521", "Mouse21133", "Session1"}, {"072121", "Mouse21170", "Session1"};

```

(***Preferred spatial frequency***)

```

prefSFsV1 = Flatten[ToExpression /@ Import[
  "F:/FigureGeneration/Figures2/Figures2Data/CellBodies/V1/ValuesForPlotting/
  prefSFs_V1.txt", "List"]];

prefSFsV2m = Flatten[ToExpression /@ Import[
  "F:/FigureGeneration/Figures2/Figures2Data/CellBodies/V2m/ValuesForPlotting/
  prefSFs_V2m.txt", "List"]];

```

```

v1Charts =
  Show[ListLogPlot[Partition[Riffle[Table[RandomReal[{0.55, 0.85}], {Length[prefSFsV1]}],
    prefSFsV1], 2], PlotStyle → Transparent,
    PlotMarkers → Graphics[{Transparent, Circle[]}, ImageSize → 5.5],
    PlotRange → {{-0.63, 2}, {0.01, 0.33}}, Axes → False], BoxWhiskerChart[prefSFsV1,
    {"Whiskers", Directive[Blue, Thick]}, {"Fences", Directive[Blue, Thick]},
    {"MedianMarker", Directive[Blue, Thickness[0.009]}]],
    ChartStyle → Directive[Blue, Opacity[0.3]], Frame → False,
    ScalingFunctions → "Log"], DistributionChart[prefSFsV1,
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Blue],
    Frame → False, ScalingFunctions → "Log"], FrameTicks →
    {{LinTicks[0.01, 0.34, 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]];

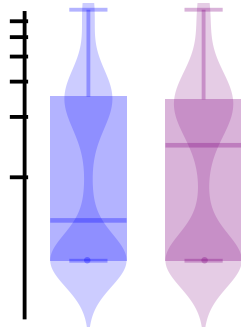
pmCharts = Show[
  ListLogPlot[Partition[Riffle[Table[RandomReal[{0.55, 0.85}], {Length[prefSFsV2m]}],
    prefSFsV2m], 2], PlotStyle → Transparent,
    PlotMarkers → Graphics[{Transparent, Circle[]}, ImageSize → 5.5],
    PlotRange → {{-0.63, 2}, {0.01, 0.33}}, Axes → False], BoxWhiskerChart[prefSFsV2m,
    {"Whiskers", Directive[Purple, Thick]}, {"Fences", Directive[Purple, Thick]},
    {"MedianMarker", Directive[Purple, Thickness[0.009]}]],
    ChartStyle → Directive[Purple, Opacity[0.3]], Frame → False,
    ScalingFunctions → "Log"], DistributionChart[prefSFsV2m,
    ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Purple],
    Frame → False, ScalingFunctions → "Log"], FrameTicks →
    {{LinTicks[0.01, 0.34, 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[
  ListLogPlot[Partition[Riffle[Table[RandomReal[{0.55, 0.85}], {Length[prefSFsV2m]}],
    prefSFsV2m], 2], PlotStyle → Transparent,
    PlotMarkers → Graphics[{Transparent, Circle[]}, ImageSize → 5.5],
    PlotRange → {{-0.63, 2}, {0.01, 0.33}}, FrameTicks →
    {{LinTicks[0.01, 0.34, 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]],
  BoxWhiskerChart[prefSFsV2m, {"Whiskers", Directive[Transparent, Thick]},
    {"Fences", Directive[Transparent, Thick]},
    {"MedianMarker", Directive[Transparent, Thickness[0.009]}]],
  ChartStyle → Transparent, Frame → False, ScalingFunctions → "Log"], DistributionChart[
  prefSFsV2m, ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Transparent],
  Frame → False, ScalingFunctions → "Log"]];

```

```
In[ ]:= GraphicsRow[{v1Charts, pmCharts, transp}, Spacings -> {{-280, -280, -320}}]
```

```
Out[ ]:=
```



```
(***Preferred speed***)
```

```
prefSpeedsV1 = Flatten[ToExpression /@ Import[
  "F:/FigureGeneration/Figures2/Figures2Data/CellBodies/V1/ValuesForPlotting/
  prefSpeeds_V1.txt", "List"]];

prefSpeedsV2m = Flatten[ToExpression /@ Import[
  "F:/FigureGeneration/Figures2/Figures2Data/CellBodies/V2m/ValuesForPlotting/
  prefSpeeds_V2m.txt", "List"]];

v1Charts = Show[
  ListLogPlot[Partition[Riffle[Table[RandomReal[{0.55, 0.85}], {Length[prefSpeedsV1]}],
    prefSpeedsV1], 2], PlotStyle -> Transparent,
  PlotMarkers -> Graphics[{Transparent, Circle[]}, ImageSize -> 5.5],
  PlotRange -> {{-0.63, 2}, {0, 1500}}, Axes -> False], BoxWhiskerChart[prefSpeedsV1,
  {"Whiskers", Directive[Blue, Thick]}, {"Fences", Directive[Blue, Thick]},
  {"MedianMarker", Directive[Blue, Thickness[0.009]}],
  ChartStyle -> Directive[Blue, Opacity[0.3]], Frame -> False,
  ScalingFunctions -> "Log"], DistributionChart[prefSpeedsV1,
  ChartStyle -> Directive[EdgeForm[Transparent], Opacity[0.2], Blue],
  Frame -> False, ScalingFunctions -> "Log", FrameTicks ->
  {{LinTicks[0, 1500, 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[
  ListLogPlot[Partition[Riffle[Table[RandomReal[{0.55, 0.85}], {Length[prefSpeedsV2m]}],
    prefSpeedsV2m], 2], PlotStyle → Transparent,
  PlotMarkers → Graphics[{Transparent, Circle[]}, ImageSize → 5.5],
  PlotRange → {{-0.63, 2}, {0, 1500}}, Axes → False], BoxWhiskerChart[prefSpeedsV2m,
  {"Whiskers", Directive[Purple, Thick]}, {"Fences", Directive[Purple, Thick]},
  {"MedianMarker", Directive[Purple, Thickness[0.009]}]},
  ChartStyle → Directive[Purple, Opacity[0.3]], Frame → False,
  ScalingFunctions → "Log"], DistributionChart[prefSpeedsV2m,
  ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Purple],
  Frame → False, ScalingFunctions → "Log"], FrameTicks →
  {{LinTicks[0, 1500, 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[
  ListLogPlot[Partition[Riffle[Table[RandomReal[{0.55, 0.85}], {Length[prefSpeedsV2m]}],
    prefSpeedsV2m], 2], PlotStyle → Transparent,
  PlotMarkers → Graphics[{Transparent, Circle[]}, ImageSize → 5.5],
  PlotRange → {{-0.63, 2}, {0, 1500}}, FrameTicks →
  {{LinTicks[0, 1500, 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]], ListLogPlot[Partition[
  Partition[Riffle[Table[-0.6, {Length[Range[5, 720, 55]]}], Range[5, 720, 55]], 2], 1],
  PlotStyle → Black, PlotRange → {{-0.63, 2}, {0, 1500}}, Axes → False],
  BoxWhiskerChart[prefSpeedsV2m, {"Whiskers", Directive[Transparent, Thick]},
  {"Fences", Directive[Transparent, Thick]},
  {"MedianMarker", Directive[Transparent, Thickness[0.009]}]},
  ChartStyle → Transparent, Frame → False, ScalingFunctions → "Log"],
  DistributionChart[prefSpeedsV2m,
  ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], Transparent],
  Frame → False, ScalingFunctions → "Log"]];

In[ ]:= GraphicsRow[{v1Charts, pmCharts, transp}, Spacings → {{-280, -280, -320}}]

```

Out[]:=

