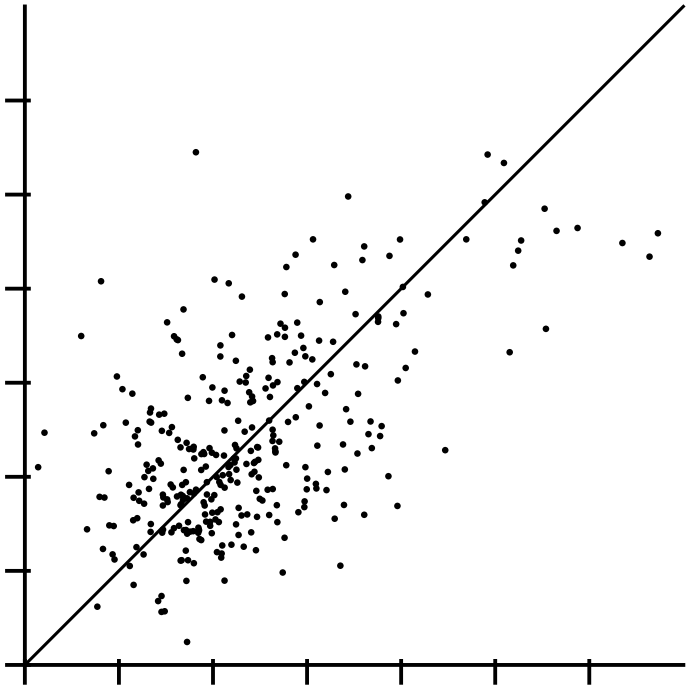
```
(***Note: Values for generating these plots are embedded within the raw data set,
which is too large to upload onto the public data repository***)

v1Color = RGBColor["#ff1f5b"];

lpColor = RGBColor["#009ade"];

lmColor = RGBColor["#f28522"];

controlColor = Black;

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

dateMouseListControl = {{"012122", "Mouse22550"}, {"012822", "Mouse22549"},
    {"121621", "Mouse22525"}, {"121721", "Mouse22599"}, {"011122", "Mouse22598"},
    {"032923", "Mouse23149"}, {"033023", "Mouse23128"}, {"033123", "Mouse23149"},
    {"070323", "Mouse23149"}, {"070423", "Mouse23128"}, {"070723", "Mouse23128"}};

(***V1 axons, eOPN3***)

dateMouseListV1axons =
  {{"012722", "Mouse22504"}, {"121821", "Mouse22485"}, {"062723", "Mouse23154"},
   {"062723", "Mouse23182"}, {"063023", "Mouse23154"}, {"063023", "Mouse23182"}};

(***LP axons, eOPN3***)

dateMouseListLPaxons =
  {{"050123", "Mouse23133"}, {"050123", "Mouse23142"}, {"050323", "Mouse23133"},
   {"050323", "Mouse23142"}, {"051823", "Mouse23198"}, {"052623", "Mouse23198"},
   {"052623", "Mouse23105"}, {"062923", "Mouse23139"}, {"070223", "Mouse23139"}};

(***LM axons, eOPN3***)

dateMouseListLMaxons =
  {{"062623", "Mouse23152"}, {"062823", "Mouse23152"}, {"062923", "Mouse23190"},
   {"070123", "Mouse23190"}, {"070723", "Mouse23666"}, {"071223", "Mouse23666"}};

pairedROIsListControl =
  Table[ToExpression /@ Import[StringJoin["S:/Imaging/Garrett/FMB208_2PRig/",
      dateMouseListControl[[n, 1]], "/", dateMouseListControl[[n, 2]],
      "/PairedAnalysis/", dateMouseListControl[[n, 1]], "_", dateMouseListControl[[n, 2]],
      "_pairedROIsPupil.txt"], "List"], {n, 1, Length[dateMouseListControl]}];

pairedROIsListV1axons =
  Table[ToExpression /@ Import[StringJoin["S:/Imaging/Garrett/FMB208_2PRig/",
      dateMouseListV1axons[[n, 1]], "/", dateMouseListV1axons[[n, 2]],
      "/PairedAnalysis/", dateMouseListV1axons[[n, 1]], "_", dateMouseListV1axons[[n, 2]],
      "_pairedROIsPupil.txt"], "List"], {n, 1, Length[dateMouseListV1axons]}];

pairedROIsListLPaxons =
  Table[ToExpression /@ Import[StringJoin["S:/Imaging/Garrett/FMB208_2PRig/",
      dateMouseListLPaxons[[n, 1]], "/", dateMouseListLPaxons[[n, 2]],
      "/PairedAnalysis/", dateMouseListLPaxons[[n, 1]], "_", dateMouseListLPaxons[[n, 2]],
      "_pairedROIsPupil.txt"], "List"], {n, 1, Length[dateMouseListLPaxons]}];
```

```
In[•]:= pairedROIsListLMaxons =
          Table[ToExpression /@ Import[StringJoin["S:/Imaging/Garrett/FMB208_2PRig/",
              dateMouseListLMaxons[[n, 1]], "/", dateMouseListLMaxons[[n, 2]],
              "/PairedAnalysis/", dateMouseListLMaxons[[n, 1]], "_", dateMouseListLMaxons[[n, 2]],
              "_pairedROIsPupil.txt"], "List"], {n, 1, Length[dateMouseListLMaxons]}];

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

In[•]:= pairedPupilModIndexSummaryValsControl =
          ToExpression /@ Flatten[Table[Table[ToExpression /@ Import[StringJoin[
                    "S:/Imaging/Garrett/FMB208_2PRig/", dateMouseListControl[[n, 1]], "/",
                    dateMouseListControl[[n, 2]], "/", "/PairedAnalysis/", dateMouseListControl[[
                     n, 1]], "_", dateMouseListControl[[n, 2]], "_", "pupilModPaired_ROI",
                    ToString[roi], ".txt"], "List"], {roi, pairedROIsListControl[[n]]}],
                {n, 1, Length[dateMouseListControl]}], 1][[All, 2]];

In[•]:= pairedPupilModIndexSummaryValsV1axons =
          ToExpression /@ Flatten[Table[Table[ToExpression /@ Import[StringJoin[
                    "S:/Imaging/Garrett/FMB208_2PRig/", dateMouseListV1axons[[n, 1]], "/",
                    dateMouseListV1axons[[n, 2]], "/", "/PairedAnalysis/", dateMouseListV1axons[[
                     n, 1]], "_", dateMouseListV1axons[[n, 2]], "_", "pupilModPaired_ROI",
                    ToString[roi], ".txt"], "List"], {roi, pairedROIsListV1axons[[n]]}],
                {n, 1, Length[dateMouseListV1axons]}], 1][[All, 2]];

In[•]:= pairedPupilModIndexSummaryValsLPaxons =
          ToExpression /@ Flatten[Table[Table[ToExpression /@ Import[StringJoin[
                    "S:/Imaging/Garrett/FMB208_2PRig/", dateMouseListLPaxons[[n, 1]], "/",
                    dateMouseListLPaxons[[n, 2]], "/", "/PairedAnalysis/", dateMouseListLPaxons[[
                     n, 1]], "_", dateMouseListLPaxons[[n, 2]], "_", "pupilModPaired_ROI",
                    ToString[roi], ".txt"], "List"], {roi, pairedROIsListLPaxons[[n]]}],
                {n, 1, Length[dateMouseListLPaxons]}], 1][[All, 2]];

In[•]:= pairedPupilModIndexSummaryValsLMaxons =
          ToExpression /@ Flatten[Table[Table[ToExpression /@ Import[StringJoin[
                    "S:/Imaging/Garrett/FMB208_2PRig/", dateMouseListLMaxons[[n, 1]], "/",
                    dateMouseListLMaxons[[n, 2]], "/", "/PairedAnalysis/", dateMouseListLMaxons[[
                     n, 1]], "_", dateMouseListLMaxons[[n, 2]], "_", "pupilModPaired_ROI",
                    ToString[roi], ".txt"], "List"], {roi, pairedROIsListLMaxons[[n]]}],
                {n, 1, Length[dateMouseListLMaxons]}], 1][[All, 2]];

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

In[•]:= diffsPupilControl = Table[(pairedPupilModIndexSummaryValsControl[[n, 2]] -
              pairedPupilModIndexSummaryValsControl[[n, 1]]),
            {n, 1, Length[pairedPupilModIndexSummaryValsControl]}];

In[•]:= diffsPupilV1axons = Table[(pairedPupilModIndexSummaryValsV1axons[[n, 2]] -
              pairedPupilModIndexSummaryValsV1axons[[n, 1]]),
            {n, 1, Length[pairedPupilModIndexSummaryValsV1axons]}];

In[•]:= diffsPupilLPaxons = Table[(pairedPupilModIndexSummaryValsLPaxons[[n, 2]] -
              pairedPupilModIndexSummaryValsLPaxons[[n, 1]]),
            {n, 1, Length[pairedPupilModIndexSummaryValsLPaxons]}];
```

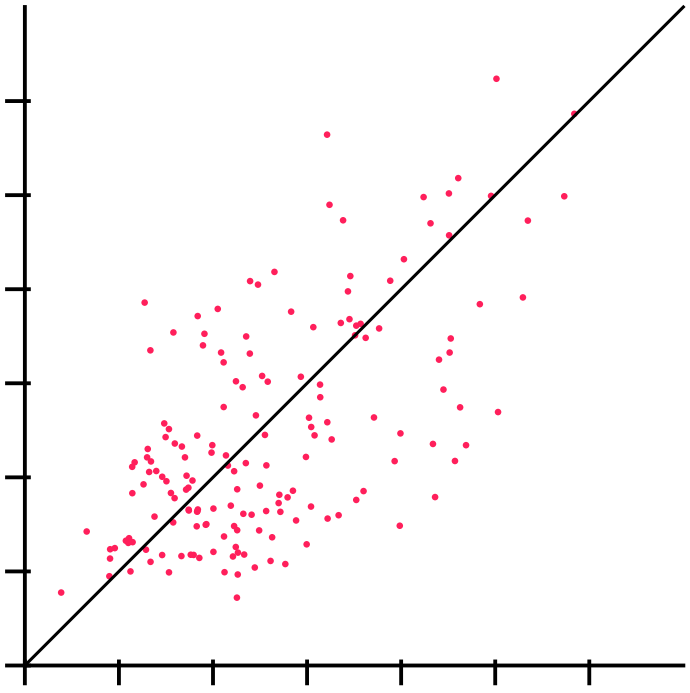
```
In[ ]:= diffsPupilLMaxons = Table[(pairedPupilModIndexSummaryValsLMaxons[[n, 2]] -
          pairedPupilModIndexSummaryValsLMaxons[[n, 1]]),
        {n, 1, Length[pairedPupilModIndexSummaryValsLMaxons]}];

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

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

In[ ]:= controlPupilModPairsPlotPts =
        Partition[Riffle[{0.4, 0.6} , #], 2] & /@ pairedPupilModIndexSummaryValsControl;

In[ ]:= allPupilModsControlDark = pairedPupilModIndexSummaryValsControl[[All, 1]];

In[ ]:= allPupilModsControlLED = pairedPupilModIndexSummaryValsControl[[All, 2]];

In[ ]:= bin = 2 * InterquartileRange[allPupilModsControlDark] *
          (Length[allPupilModsControlDark] ^ (-1 / 3))
Out[ ]= 0.0350628

In[ ]:= minVal = Min[Join[allPupilModsControlDark, allPupilModsControlLED]];

In[ ]:= maxVal = Max[Join[allPupilModsControlDark, allPupilModsControlLED]];

In[ ]:= Show[ListPlot[pairedPupilModIndexSummaryValsControl,
          PlotRange → {{-0.1, 0.6}, {-0.1, 0.6}}, AspectRatio → 1,
          FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0],
          PlotStyle → {controlColor, PointSize[0.01]}, FrameTicks →
           {{LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
            {LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
          Axes → False, TicksStyle → Thick, FrameStyle → Thick,
          Frame → {{True, None}, {True, None}}], Plot[x, {x, -0.1, 0.6}, PlotStyle → Black]]
```

Out[ ]=



```
In[•]:= pupilModIndicesControl = Table[(pairedPupilModIndexSummaryValsControl[[n, 2]] -
          pairedPupilModIndexSummaryValsControl[[n, 1]]) /
        (pairedPupilModIndexSummaryValsControl[[n, 2]] +
          pairedPupilModIndexSummaryValsControl[[n, 1]]),
       {n, 1, Length[pairedPupilModIndexSummaryValsControl]}];

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

In[•]:= v1AxonsPupilModPairsPlotPts =
  Partition[Riffle[{0.4, 0.6} , #], 2] & /@ pairedPupilModIndexSummaryValsV1axons;

In[•]:= allPupilModsV1axonsDark = pairedPupilModIndexSummaryValsV1axons[[All, 1]];

In[•]:= allPupilModsV1axonsLED = pairedPupilModIndexSummaryValsV1axons[[All, 2]];

In[•]:= minVal = Min[Join[allPupilModsV1axonsDark, allPupilModsV1axonsLED]];

In[•]:= maxVal = Max[Join[allPupilModsV1axonsDark, allPupilModsV1axonsLED]];

In[•]:= Show[ListPlot[pairedPupilModIndexSummaryValsV1axons,
  PlotRange → {{-0.1, 0.6}, {-0.1, 0.6}}, AspectRatio → 1,
  FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0],
  PlotStyle → {v1Color, PointSize[0.01]}, FrameTicks →
   {{LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
    {LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
  Axes → False, TicksStyle → Thick, FrameStyle → Thick,
  Frame → {{True, None}, {True, None}}], Plot[x, {x, -0.1, 0.6}, PlotStyle → Black]]
```

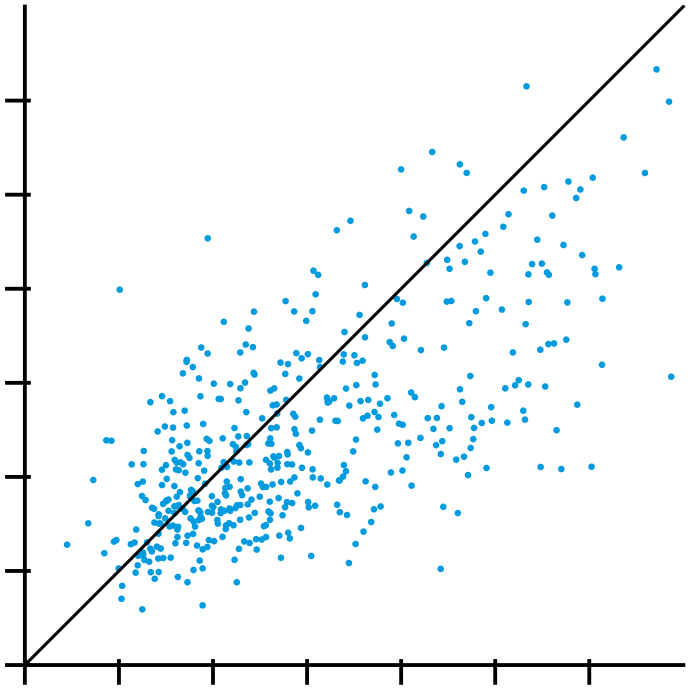
Out[•]=



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

In[•]:= lpAxonsPupilModPairsPlotPts =
  Partition[Riffle[{0.4, 0.6} , #], 2] & /@ pairedPupilModIndexSummaryValsLPaxons;
```

```
In[ ]:= allPupilModsLPaxonsDark = pairedPupilModIndexSummaryValsLPaxons[[All, 1]];

In[ ]:= allPupilModsLPaxonsLED = pairedPupilModIndexSummaryValsLPaxons[[All, 2]];

In[ ]:= minVal = Min[Join[allPupilModsLPaxonsDark, allPupilModsLPaxonsLED]];

In[ ]:= maxVal = Max[Join[allPupilModsLPaxonsDark, allPupilModsLPaxonsLED]];

In[ ]:= Show[ListPlot[pairedPupilModIndexSummaryValsLPaxons,
    PlotRange → {{-0.1, 0.6}, {-0.1, 0.6}}, AspectRatio → 1,
    FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0],
    PlotStyle → {lpColor, PointSize[0.01]}, FrameTicks →
     {{LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
      {LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None}},
    Axes → False, TicksStyle → Thick, FrameStyle → Thick,
    Frame → {{True, None}, {True, None}}], Plot[x, {x, -0.1, 0.6}, PlotStyle → Black]]
```

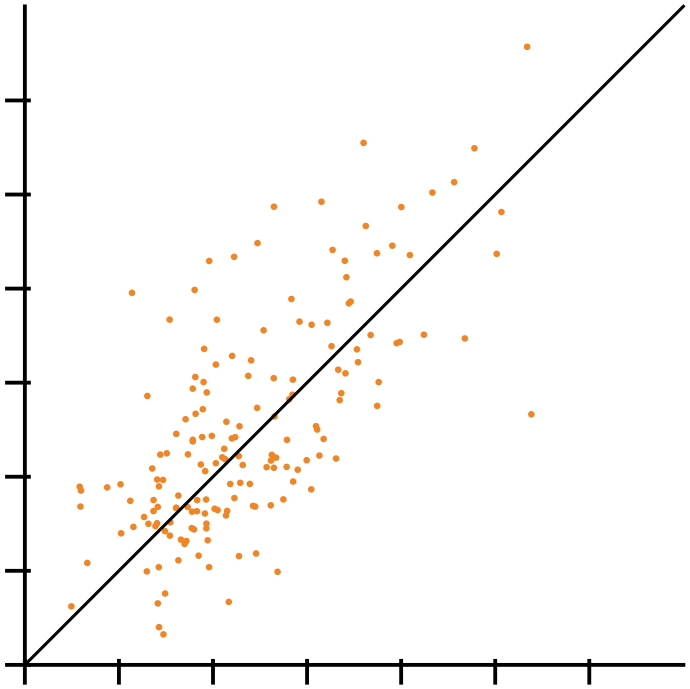
Out[ ]=



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

In[ ]:= lmAxonsPupilModPairsPlotPts =
    Partition[Riffle[{0.4, 0.6} , #], 2] & /@ pairedPupilModIndexSummaryValsLMaxons;

In[ ]:= allPupilModsLMaxonsDark = pairedPupilModIndexSummaryValsLMaxons[[All, 1]];

In[ ]:= allPupilModsLMaxonsLED = pairedPupilModIndexSummaryValsLMaxons[[All, 2]];

In[ ]:= minVal = Min[Join[allPupilModsLMaxonsDark, allPupilModsLMaxonsLED]];

In[ ]:= maxVal = Max[Join[allPupilModsLMaxonsDark, allPupilModsLMaxonsLED]];
```

```
In[•]:= Show[ListPlot[pairedPupilModIndexSummaryValsLMaxons,
   PlotRange → {{-0.1, 0.6}, {-0.1, 0.6}}, AspectRatio → 1,
   FrameTicksStyle -> Directive[FontOpacity -> 0, FontSize -> 0],
   PlotStyle → {lmColor, PointSize[0.01]}, FrameTicks →
    {{LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTicklength → {0, 0}], None},
     {LinTicks[-0.1, 0.6, MajorTickLength → {0, .03}, MinorTicklength → {0, 0}], None}},
   Axes → False, TicksStyle → Thick, FrameStyle → Thick,
   Frame → {{True, None}, {True, None}}], Plot[x, {x, -0.1, 0.6}, PlotStyle → Black]]
```

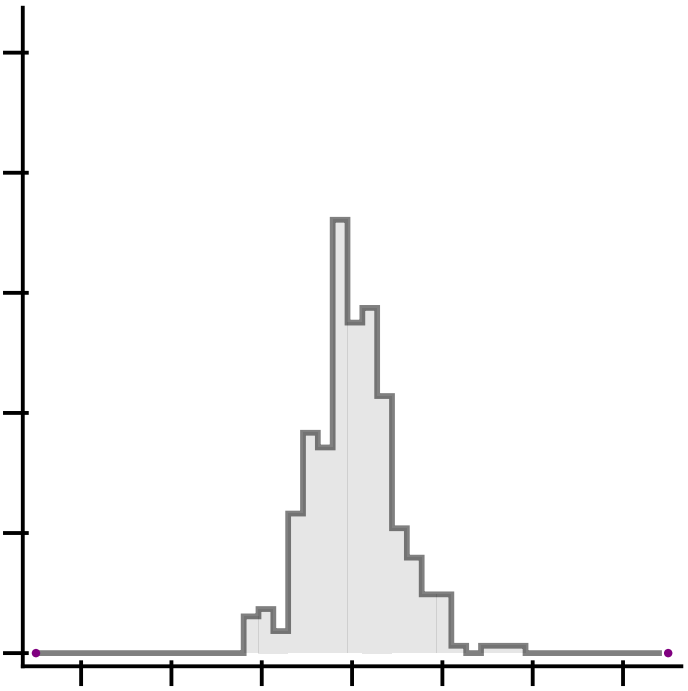
Out[•]=



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

In[•]:= (************)

In[•]:= bin = 2 * InterquartileRange[diffsPupilControl] * (Length[diffsPupilControl] ^ (-1 / 3))

Out[•]= 0.0328515

In[•]:= hfn = ($MachineEpsilon + #2) / Total[#2] &;

In[•]:= h = Histogram[{diffsPupilControl}, {-0.7, 0.7, bin}, hfn,
    ChartStyle → (Directive[#, AbsoluteThickness[3]] & /@ {controlColor}),
    PerformanceGoal → "Speed", PlotRange → {{-0.7, 0.7}, {0, 0.255}}];

In[•]:= h2 = Histogram[{diffsPupilControl}, {-0.7, 0.7, bin}, hfn,
    ChartStyle → {{controlColor}, Directive[Opacity[0.1], EdgeForm[]]},
    PlotRange → {{-0.7, 0.7}, {0, 0.255}}];

In[•]:= hline = h /. rec : {({{_Rectangle}} | {}) ..} :→
     Line[Flatten[rec, 2] /. _[{x_, y_}, {X_, Y_}, ___] :→ Sequence[{x, Y}, {X, Y}]];
```

In[ ]:=
```
histModIndexControl = Show[hline, h2, ListPlot[{{-0.7, 0}, {0.7, 0}}, PlotStyle → Purple],
  PlotRange → {{-0.7, 0.7}, {0, 0.255}}, FrameTicks →
   {{LinTicks[0, 0.255, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
    {LinTicks[-0.7, 0.7, 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[ ]:=
```
bin = 2 * InterquartileRange[diffsPupilV1axons] * (Length[diffsPupilV1axons] ^ (-1 / 3))
```

Out[ ]=
```
0.052342
```

In[ ]:=
```
hfn = ($MachineEpsilon + #2) / Total[#2] &;
```

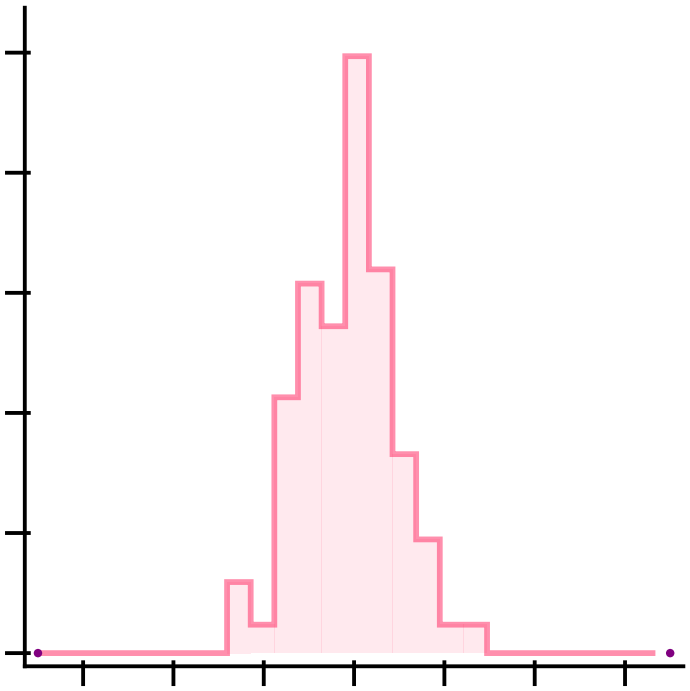
In[ ]:=
```
h = Histogram[{diffsPupilV1axons}, {-0.7, 0.7, bin}, hfn,
   ChartStyle → (Directive[#, AbsoluteThickness[3]] & /@ {v1Color}),
   PerformanceGoal → "Speed", PlotRange → {{-0.7, 0.7}, {0, 0.255}}];
```

In[ ]:=
```
h2 = Histogram[{diffsPupilV1axons}, {-0.7, 0.7, bin},
   hfn, ChartStyle → {{v1Color}, Directive[Opacity[0.1], EdgeForm[]]},
   PlotRange → {{-0.7, 0.7}, {0, 0.255}}];
```

In[ ]:=
```
hline = h /. rec : {({{_Rectangle}} | {}) ..} :>
    Line[Flatten[rec, 2] /. _[{x_, y_}, {X_, Y_}, ___] :> Sequence[{x, Y}, {X, Y}]];
```

In[ ]:=
```
histModIndexV1axons = Show[hline, h2, ListPlot[{{-0.7, 0}, {0.7, 0}}, PlotStyle → Purple],
  PlotRange → {{-0.7, 0.7}, {0, 0.255}}, FrameTicks →
   {{LinTicks[0, 0.255, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
    {LinTicks[-0.7, 0.7, 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[ ]:=
```
bin = 2 * InterquartileRange[diffsPupilLPaxons] * (Length[diffsPupilLPaxons] ^ (-1 / 3))
```

Out[ ]=
```
0.031856
```

In[ ]:=
```
hfn = ($MachineEpsilon + #2) / Total[#2] &;
```

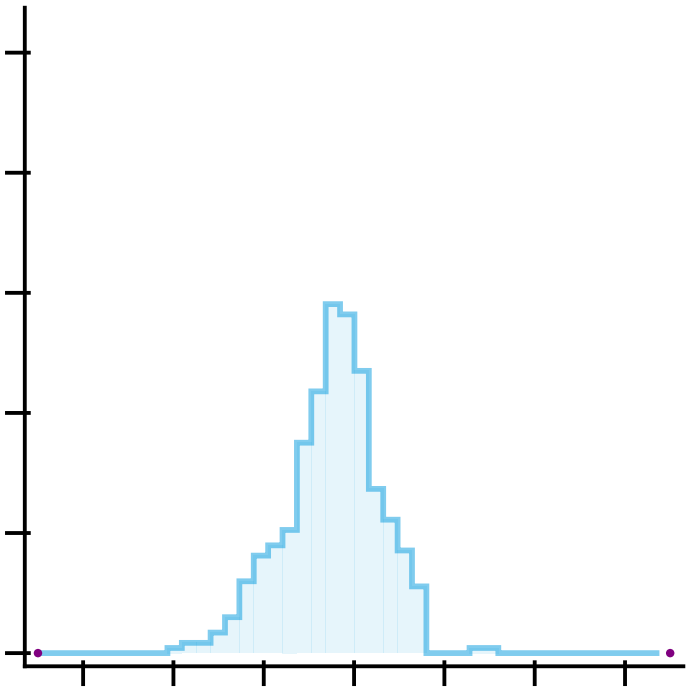
In[ ]:=
```
h = Histogram[{diffsPupilLPaxons}, {-0.7, 0.7, bin}, hfn,
   ChartStyle → (Directive[#, AbsoluteThickness[3]] & /@ {lpColor}),
   PerformanceGoal → "Speed", PlotRange → {{-0.7, 0.7}, {0, 0.255}}];
```

In[ ]:=
```
h2 = Histogram[{diffsPupilLPaxons}, {-0.7, 0.7, bin},
   hfn, ChartStyle → {{lpColor}, Directive[Opacity[0.1], EdgeForm[]]},
   PlotRange → {{-0.7, 0.7}, {0, 0.255}}];
```

In[ ]:=
```
hline = h /. rec : {({{_Rectangle}} | {}) ..} :>
    Line[Flatten[rec, 2] /. _[{x_, y_}, {X_, Y_}, ___] :> Sequence[{x, Y}, {X, Y}]];
```

In[ ]:=
```
histModIndexLPaxons = Show[hline, h2, ListPlot[{{-0.7, 0}, {0.7, 0}}, PlotStyle → Purple],
  PlotRange → {{-0.7, 0.7}, {0, 0.255}}, FrameTicks →
   {{LinTicks[0, 0.255, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
    {LinTicks[-0.7, 0.7, 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[ ]:=
```
bin = 2 * InterquartileRange[diffsPupilLMaxons] * (Length[diffsPupilLMaxons] ^ (-1 / 3))
```

Out[ ]=
```
0.0422579
```

In[ ]:=
```
hfn = ($MachineEpsilon + #2) / Total[#2] &;
```

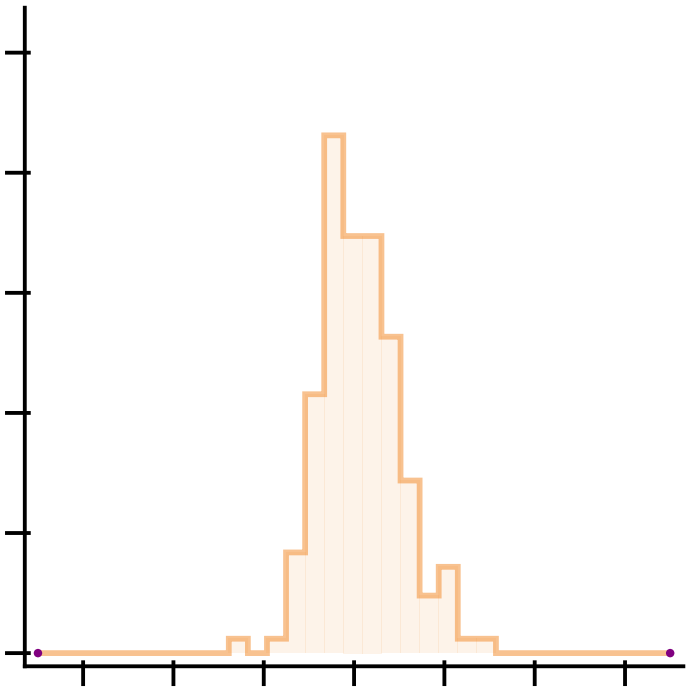
In[ ]:=
```
h = Histogram[{diffsPupilLMaxons}, {-0.7, 0.7, bin}, hfn,
   ChartStyle → (Directive[#, AbsoluteThickness[3]] & /@ {lmColor}),
   PerformanceGoal → "Speed", PlotRange → {{-0.7, 0.7}, {0, 0.255}}];
```

In[ ]:=
```
h2 = Histogram[{diffsPupilLMaxons}, {-0.7, 0.7, bin},
   hfn, ChartStyle → {{lmColor}, Directive[Opacity[0.1], EdgeForm[]]},
   PlotRange → {{-0.7, 0.7}, {0, 0.255}}];
```

In[ ]:=
```
hline = h /. rec : {({{_Rectangle}} | {}) ..} :→
    Line[Flatten[rec, 2] /. _[{x_, y_}, {X_, Y_}, ___] :→ Sequence[{x, Y}, {X, Y}]];
```

In[ ]:=
```
histModIndexLMaxons = Show[hline, h2, ListPlot[{{-0.7, 0}, {0.7, 0}}, PlotStyle → Purple],
  PlotRange → {{-0.7, 0.7}, {0, 0.255}}, FrameTicks →
   {{LinTicks[0, 0.255, MajorTickLength → {0, .03}, MinorTickLength → {0, 0}], None},
    {LinTicks[-0.7, 0.7, 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[ ]:=
```
controlCharts = Show[BoxWhiskerChart[diffsPupilControl,
    {{"Whiskers", Directive[Darker@controlColor, Thick]},
     {"Fences", Directive[Darker@controlColor, Thick]}, {"MedianMarker",
      Directive[Darker@controlColor, Thickness[0.009]]}}, PlotRange → {All, {-0.4, 0.4}},
   ChartStyle → Directive[controlColor, Opacity[0.3]], Frame → False],
  DistributionChart[diffsPupilControl, PlotRange → {All, {-0.4, 0.4}},
   ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], controlColor],
   Frame → False], FrameTicks →
   {{LinTicks[-0.4, 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]];
```

```
In[•]:= v1AxonCharts = Show[
          BoxWhiskerChart[diffsPupilV1axons, {{"Whiskers", Directive[Darker@v1Color, Thick]},
            {"Fences", Directive[Darker@v1Color, Thick]}, {"MedianMarker",
             Directive[Darker@v1Color, Thickness[0.009]]}}, PlotRange → {All, {-0.4, 0.4}},
           ChartStyle → Directive[v1Color, Opacity[0.3]], Frame → False],
          DistributionChart[diffsPupilV1axons, PlotRange → {All, {-0.4, 0.4}},
           ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], v1Color], Frame → False],
          FrameTicks → {{LinTicks[-0.4, 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]];

In[•]:= lpAxonCharts = Show[
          BoxWhiskerChart[diffsPupilLPaxons, {{"Whiskers", Directive[Darker@lpColor, Thick]},
            {"Fences", Directive[Darker@lpColor, Thick]}, {"MedianMarker",
             Directive[Darker@lpColor, Thickness[0.009]]}}, PlotRange → {All, {-0.4, 0.4}},
           ChartStyle → Directive[lpColor, Opacity[0.3]], Frame → False],
          DistributionChart[diffsPupilLPaxons, PlotRange → {All, {-0.4, 0.4}},
           ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], lpColor], Frame → False],
          FrameTicks → {{LinTicks[-0.4, 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]];

In[•]:= lmAxonCharts = Show[
          BoxWhiskerChart[diffsPupilLMaxons, {{"Whiskers", Directive[Darker@lmColor, Thick]},
            {"Fences", Directive[Darker@lmColor, Thick]}, {"MedianMarker",
             Directive[Darker@lmColor, Thickness[0.009]]}}, PlotRange → {All, {-0.4, 0.4}},
           ChartStyle → Directive[lmColor, Opacity[0.3]], Frame → False],
          DistributionChart[diffsPupilLMaxons, PlotRange → {All, {-0.4, 0.4}},
           ChartStyle → Directive[EdgeForm[Transparent], Opacity[0.2], lmColor], Frame → False],
          FrameTicks → {{LinTicks[-0.4, 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]];

In[•]:= transp =
         Show[BoxWhiskerChart[diffsPupilControl, {{"Whiskers", Directive[Transparent, Thick]},
            {"Fences", Directive[Transparent, Thick]},
            {"MedianMarker", Directive[Transparent, Thickness[0.009]]}},
           PlotRange → {All, {-0.4, 0.4}}, ChartStyle → Transparent, Frame → False],
          DistributionChart[diffsPupilControl, PlotRange → {All, {-0.4, 0.4}}, ChartStyle →
            Directive[EdgeForm[Transparent], Opacity[0.2], Transparent], Frame → False],
          FrameTicks → {{LinTicks[-0.4, 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[{controlCharts, v1AxonCharts, lmAxonCharts, lpAxonCharts, transp},
 Spacings → {{-280, -280, -280, -280, -480}}]
```

Out[ ]=