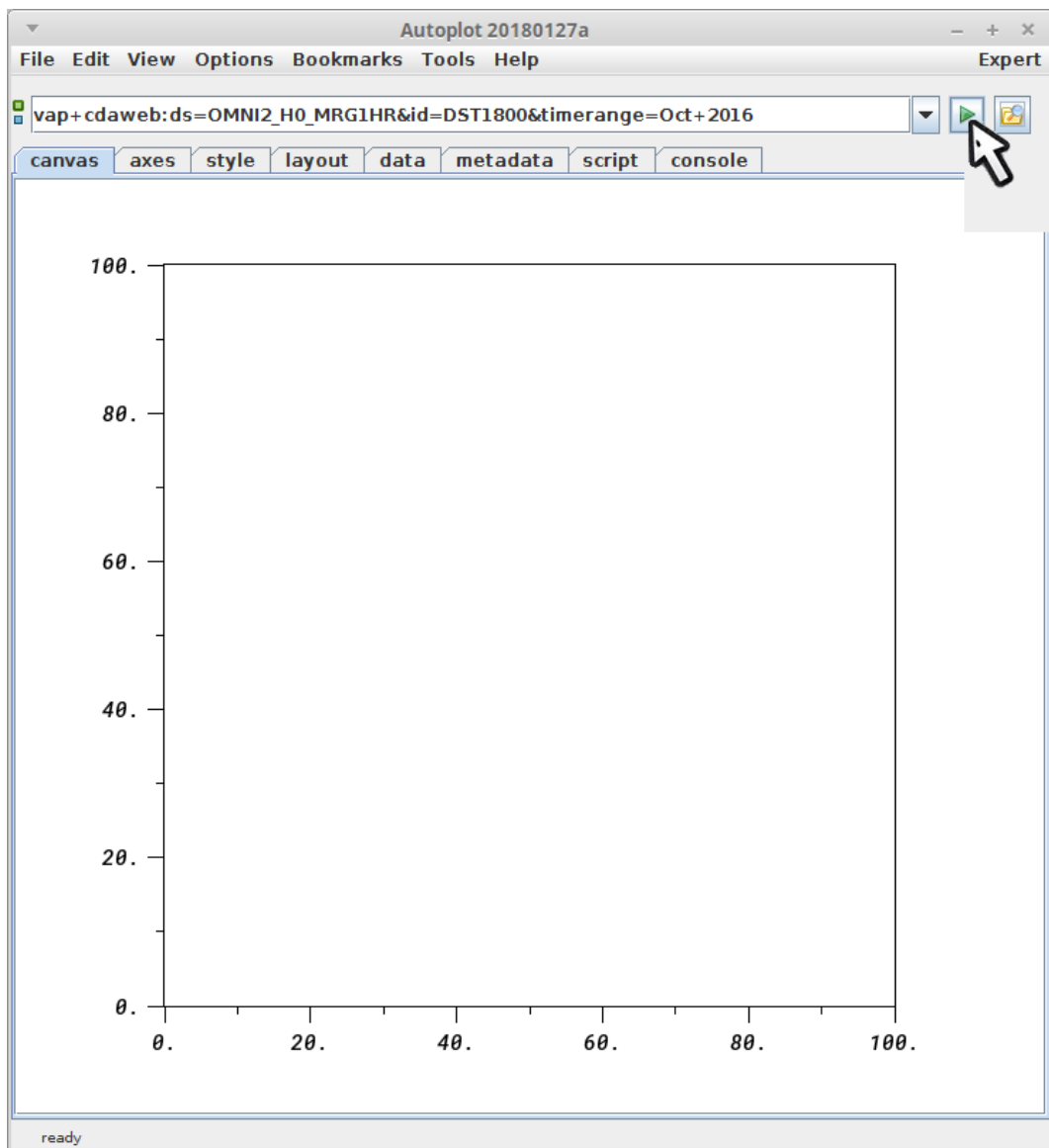
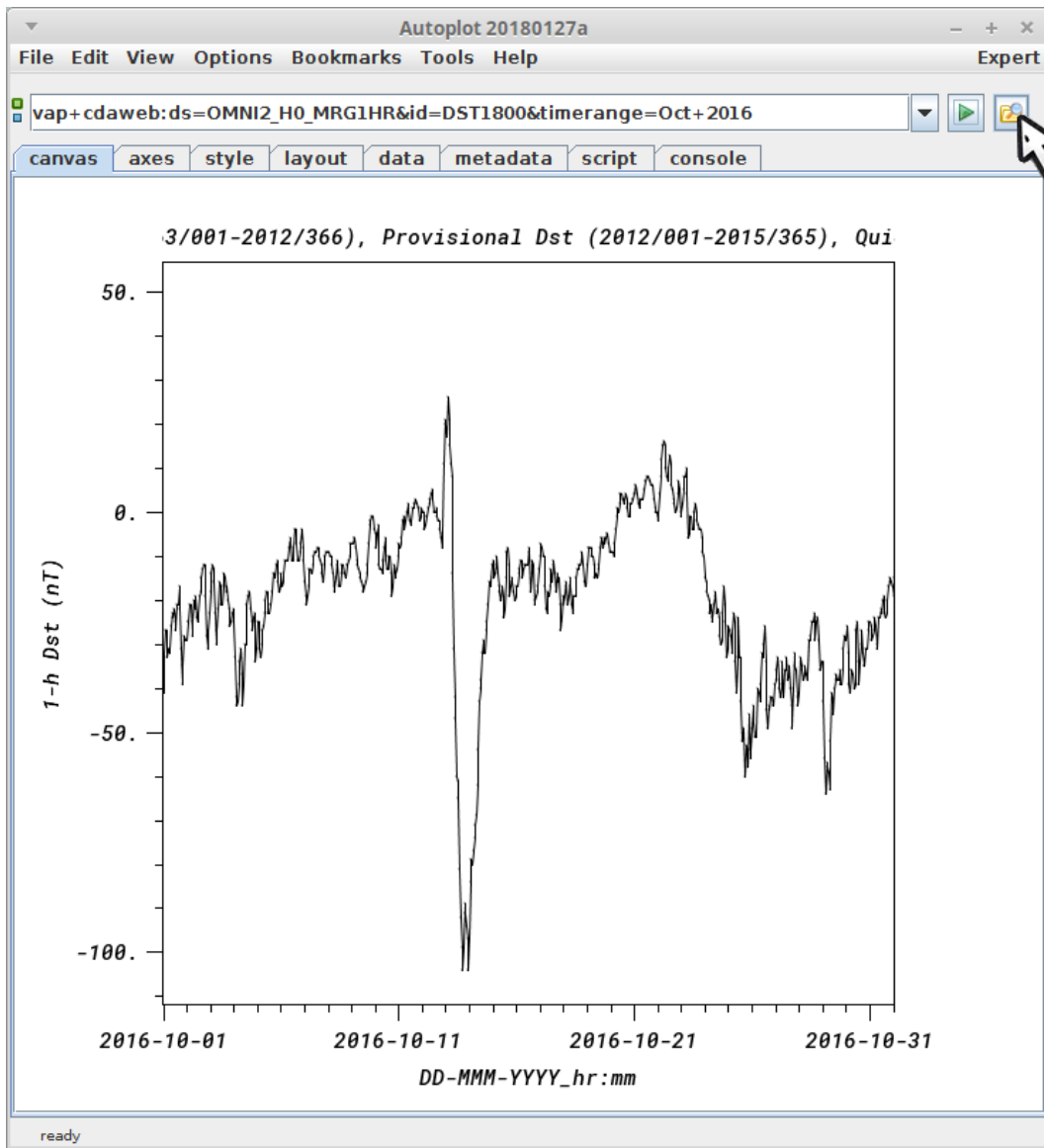


1. plot DST in the top panel



2. Enter the editor for DST, to add a second panel.



3. add the second panel.

Autoplot 20180127a

File Edit View Options Bookmarks Tools Help Expert

vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016

Editing URI vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016

Dataset: OMNI2_H0_MRG1HR Pick...

OMNI Combined, Definitive, Hourly IMF and Plasma Data, and Energetic Proton Fluxes, Time-Shifted to the Nose of the Earth's Bow Shock, plus Solar and Magnetic Indices - J.H. King, N. Papitashvili (ADNET, NASA GSFC)

Select CDF Variable (of 53) X Y

- SIGMA-By1800
- SIGMA-Bz1800
- T1800
- N1800**
- V1800
- PHI-V1800
- THETA-V1800
- Ratio1800
- Pressure1800
- SIGMA-T1800

Advanced

Load subset of the data:

Only load data where:

YR .eq 0

N1800(Epoch_1800)
IAU IP Ion number density (per cc)

CDF data type is CDF_REAL4

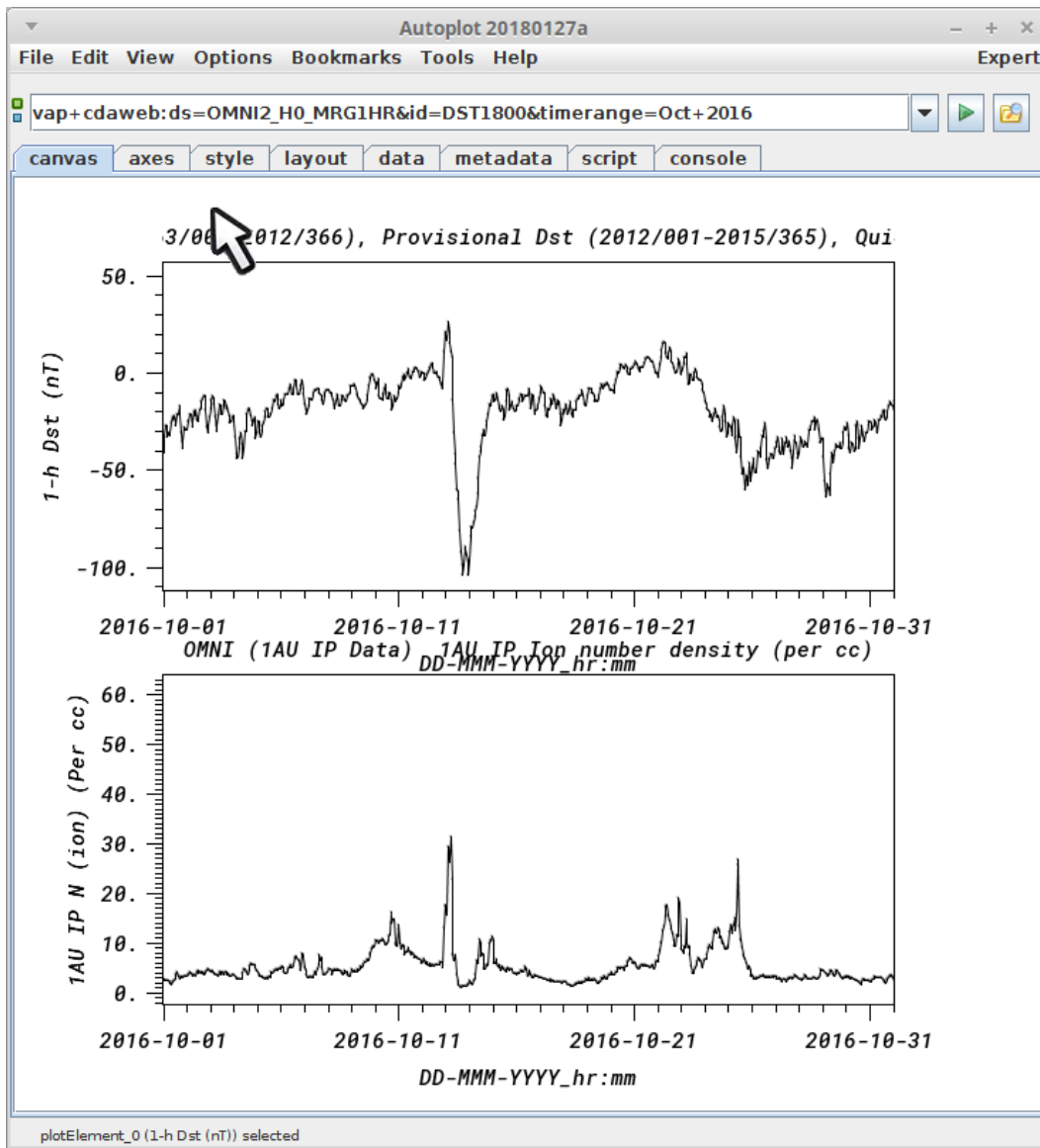
Time Range: Oct 2016 Example Time Ranges
1963-01-01 00:00:00 to 2017-12-31 23:00:00 availability

Cancel Overplot Plot Below Plot

2016-10-01 2016-10-11 2016-10-21 2016-10-31
DD-MMM-YYYY_hr:mm

ready

4. Note the x-axis of the top collides with the bottom one, so turn it off.



5. Clear the axis label.

The screenshot shows the 'Autoplot 20180127a' application window. The 'axes' tab is active, displaying configuration options for the plot's axes and legend. The URL bar contains 'vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016'. The X-axis label is set to 'DD-MMM-YYYY_hr:mm' and the Y-axis label is '1-h Dst (nT)'. The plot title is 'OMNI (1AU IP Data) Dst - 1-hour Dst index (1963/001-2012/36)'. The legend label is '1-h Dst (nT)'. The colorbar label is empty, and the range is '0.0 to 100.0'. A mouse cursor is pointing at the X-axis label field.

Autoplot 20180127a

File Edit View Options Bookmarks Tools Help Expert

vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016

canvas axes style layout data metadata script console

X Axis [?]
Label: DD-MMM-YYYY_hr:mm
Oct 2016
 Log Show Labels

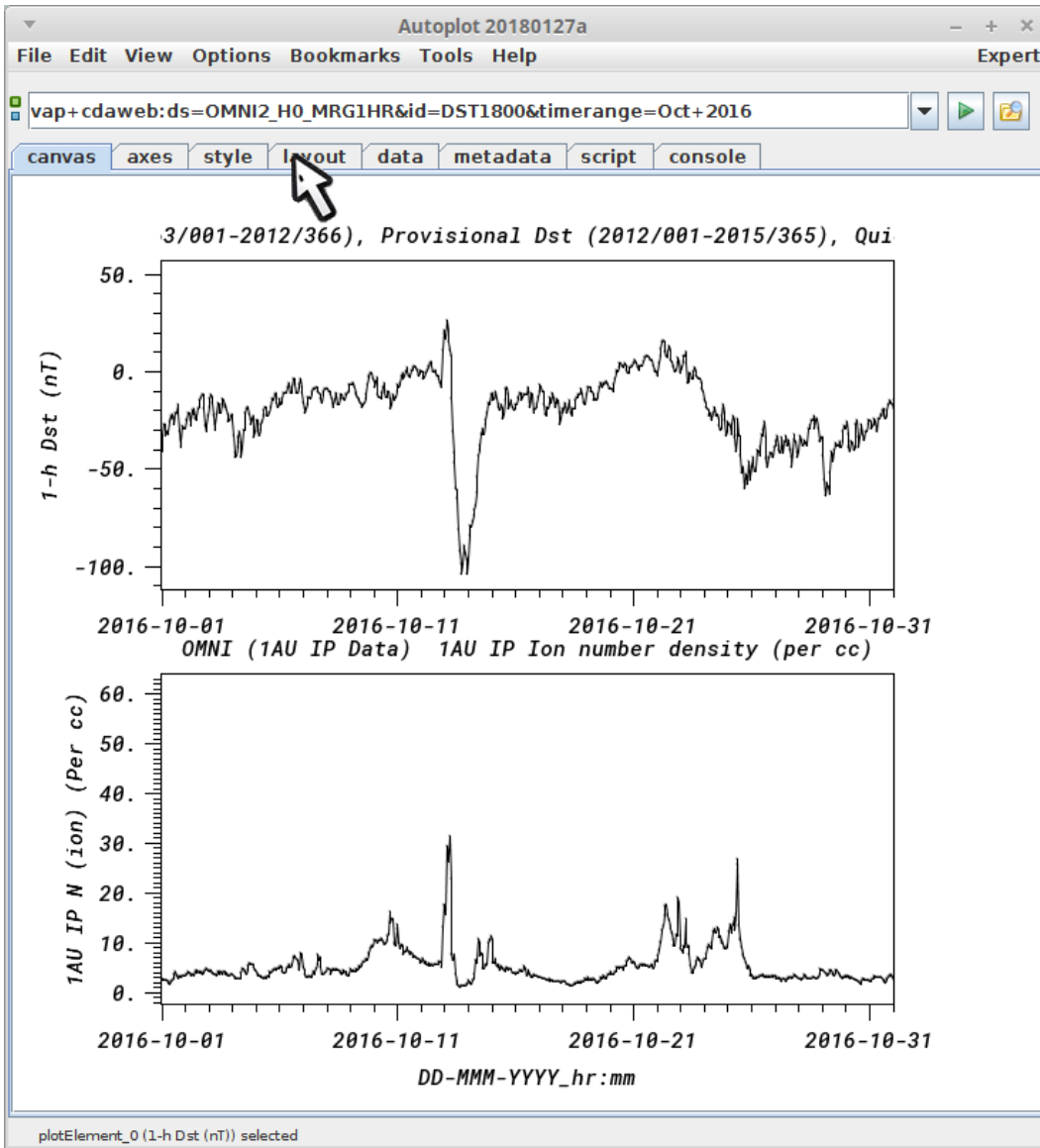
Y Axis [?]
Label: 1-h Dst (nT)
-111.65 to 56.650 nT
 Log Isotropic

Plot [?]
 Title: OMNI (1AU IP Data) Dst - 1-hour Dst index (1963/001-2012/36)
 Legend Label: 1-h Dst (nT)
Oct 2016

Colorbar [?]
Label:
0.0 to 100.0
 Log Visible

plotElement_0 (1-h Dst (nT)) selected

6. In the layout tab, we are going to select the two plots and then add a "hidden plot", which can be used to mark the events.



7. Select the two plots by drawing a box around them.

The screenshot shows the Autoplot 20180127a application window. At the top, there is a menu bar with 'File', 'Edit', 'View', 'Options', 'Bookmarks', 'Tools', and 'Help'. Below the menu bar is a toolbar with a dropdown menu, a play button, and a save button. The main address bar contains the URL: 'vap+cdaweb:ds=OMNIZ_H0_MRG1HR&id=DST1800&timerange=Oct+2016'. Below the address bar are tabs for 'canvas', 'axes', 'style', 'layout', 'data', 'metadata', 'script', and 'console'. The 'layout' tab is active.

The main workspace is divided into several panels:

- Plots [?]**: Contains two line plots. The top plot is titled 'DST (1-h Dst) (nT)' and the bottom plot is titled 'OMNIZ (1AU IP Data) 1AU IP Ion number density (per cc)'. Both plots show data from October 2016. A blue rectangular selection box is drawn around both plots, and a mouse cursor is pointing at the bottom right corner of this box.
- Plot Elements [?]**: Lists two elements: 'plotElement_0 (1-h Dst (nT))' and 'plotElement_1 (1AU IP N (ion) (Per cc))'.
- Bindings [?]**: Contains two entries: 'app_0.timeRange to axis_0.range (app_0)' and 'app_0.timeRange to axis_1.range (app_0)'. Below this panel are buttons: 'Taller', 'Same H...', 'Add Plots...', 'Shorter', 'Fix Layout', and 'Delete Pl...'.
- Data Sources**: Lists two sources: 'data_0 (vap+cdaweb:ds=OMNIZ_H0_MRG1HR&id=DST1800&...' and 'data_1 (vap+cdaweb:ds=OMNIZ_H0_MRG1HR&id=N1800&tin...'.

At the bottom of the window, there is a status bar that reads: 'select plots by drawing a box.'

8. Then right-click (or control-click) to add a hidden plot.

The screenshot shows the Autoplot 20180127a application window. The title bar reads "Autoplot 20180127a" and the menu bar includes "File", "Edit", "View", "Options", "Bookmarks", "Tools", "Help", and "Expert". The address bar contains the URL "vap+cdaweb:ds=OMNIZ_H0_MRG1HR&id=DST1800&timerange=Oct+2016". Below the address bar are tabs for "canvas", "axes", "style", "layout", "data", "metadata", "script", and "console".

The main interface is divided into several panels:

- Plots [?]**: Contains two line plots. The top plot is titled "1-h Dst (nT)" and the bottom plot is titled "OMNIZ (1AU IP Data) 1AU IP Ion number density (per cc)". A context menu is open over the bottom plot, with options: "Plot", "Canvas", "Plot Size", "Swap Position", and "Add Hidden Plot...". A mouse cursor is pointing at the "Add Hidden Plot..." option.
- Plot Elements [?]**: Lists "plotElement_0 (1-h Dst (nT))" and "plotElement_1 (1AU IP N (ion) (Per cc))".
- plot_0**: A control panel with buttons: "Taller", "Same H...", "Add Plots...", "Shorter", "Fix Layout", and "Delete Pl...".
- Bindings [?]**: Shows "app_0.timeRange to axis_0.range (app_0)" and "app_0.timeRange to axis_1.range (app_0)".
- Data Sources**: Lists "data_0 (vap+cdaweb:ds=OMNIZ_H0_MRG1HR&id=DST1800&)" and "data_1 (vap+cdaweb:ds=OMNIZ_H0_MRG1HR&id=N1800&tin)".

At the bottom of the window, a status bar reads "select plots by drawing a box."

9. A popup asks which bindings should be added.

The screenshot shows the Autoplot 20180127a application interface. The main window has a menu bar (File, Edit, View, Options, Bookmarks, Tools, Help) and a toolbar with a search icon, a play icon, and a save icon. The address bar contains the URL: `vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016`. Below the address bar are tabs for `canvas`, `axes`, `style`, `layout`, `data`, `metadata`, `script`, and `console`. The `layout` tab is active, showing a `Plots [?]` panel with two line plots. The top plot is titled `1-h Dst (nT)` and the bottom plot is titled `OMNI2 (1AU IP Data) 1AU IP Ion number density (per cc)`. A blue selection box is drawn around the top plot. To the right is a `Plot Elements [?]` panel listing `plotElement_0 (1-h Dst (nT))` and `plotElement_1 (1AU IP N (ion) (Per cc))`. Below the plots are `plot_0` controls with buttons for `Taller`, `Same I`, `Shorter`, and `Fix Lay`. At the bottom left is a `Bindings [?]` panel with entries like `app_0.timeRange to xaxis_0`. A dialog box titled `Add hidden plot for binding` is centered over the main window. It contains the text `Add a hidden plot and from selected plots bind:` and a list of options: `X Axis` (checked), `Y Axis` (unchecked), `Z Axis (color bar)` (unchecked), `Condense X-Axis Labels` (checked), and `Condense Color Bars` (unchecked). `OK` and `Cancel` buttons are at the bottom of the dialog, with a mouse cursor pointing at the `OK` button. The bottom of the main window has the text `select plots by drawing a box.`

10. Click on the empty data source ("data_2"), which is where we'll put the events bars.

The screenshot shows the Autoplot 20180127a application window. The title bar reads "Autoplot 20180127a" and the menu bar includes "File", "Edit", "View", "Options", "Bookmarks", "Tools", and "Help". The "Expert" mode is selected. The address bar contains the URL: `vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016`. The interface is divided into several panels:

- Plots [?]**: Contains two vertically stacked line plots. The top plot is labeled "1-h Dst (nT)" and the bottom plot is labeled "1AU IP N (ion) (Per cc)". Both plots show data from October 1, 2016, to October 31, 2016.
- Plot Elements [?]**: Lists three elements: `plotElement_0 (1-h Dst (nT))`, `plotElement_1 (1AU IP N (ion) (Per cc))`, and `plotElement_2 (inactive)`.
- Bindings [?]**: Contains a list of bindings for the application: `app_0.timeRange to axis_1.range (app_0)`, `app_0.timeRange to plot_2.context (app_0)`, `app_0.timeRange to axis_2.range (app_0)`, `axis_2.log to axis_0.log (axis_2)`, `axis_2.log to axis_1.log (axis_2)`, and `app_0.timeRange to axis_0.range (app_0)`.
- Data Sources**: A list of data sources with radio buttons. The first two are selected: `data_0 (vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016)` and `data_1 (vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=N1800&timerange=Oct+2016)`. The third, `data_2 ()`, is currently unselected and has a mouse cursor pointing to it.

At the bottom left of the window, the status bar shows "ready".

1.1. Select an in-line URI with two events. This could also be the name of an events file.

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File Edit View Options Bookmarks Tools Help Expert

vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&timerange=Oct+2016
vap+inline:2016-10-12T12:00Z,2016-10-14T12:00Z&RENDER_TYPE=eventsBar
vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=N1800&timerange=Oct+2016
vap+inline:2016-10-12T12:00Z&RENDER_TYPE=eventsBar
script:http://autoplot.org/data/tools/startScreenShots.jy?
vap+inline:2016-10-11T00:00Z,2016-10-12T00:00Z&RENDER_TYPE=eventsBar
vap+inline:2016-11-01T00:00Z&RENDER_TYPE=eventsBar
vap+csv:file:///home/jbf/foo.csv

plot_2

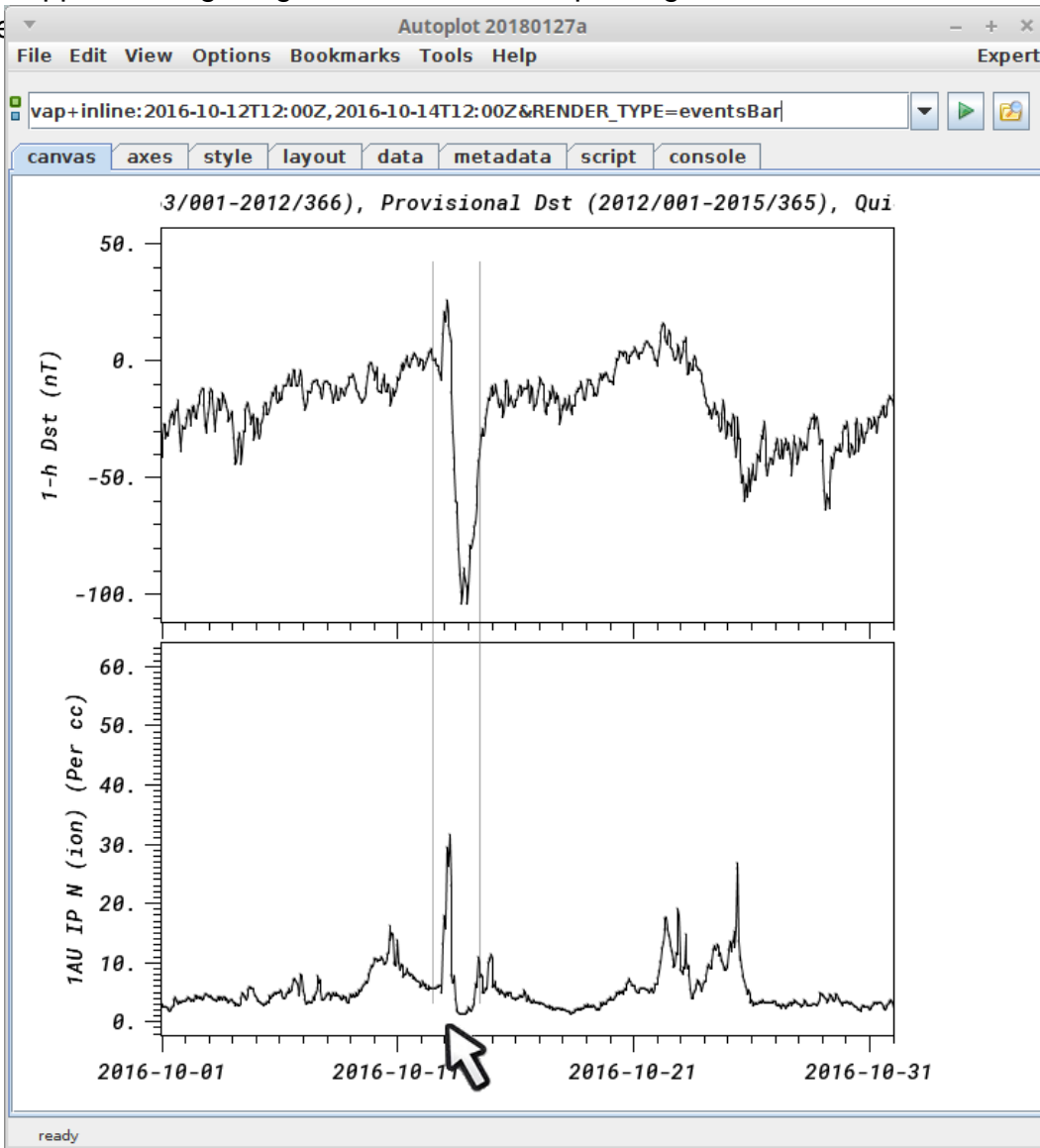
Taller Same H... Add Plots...
Shorter Fix Layout Delete Pl...

Bindings [?]
app_0.timeRange to axis_1.range (app_0)
app_0.timeRange to plot_2.context (app_0)
app_0.timeRange to axis_2.range (app_0)
axis_2.log to axis_0.log (axis_2)
axis_2.log to axis_1.log (axis_2)
app_0.timeRange to axis_0.range (app_0)

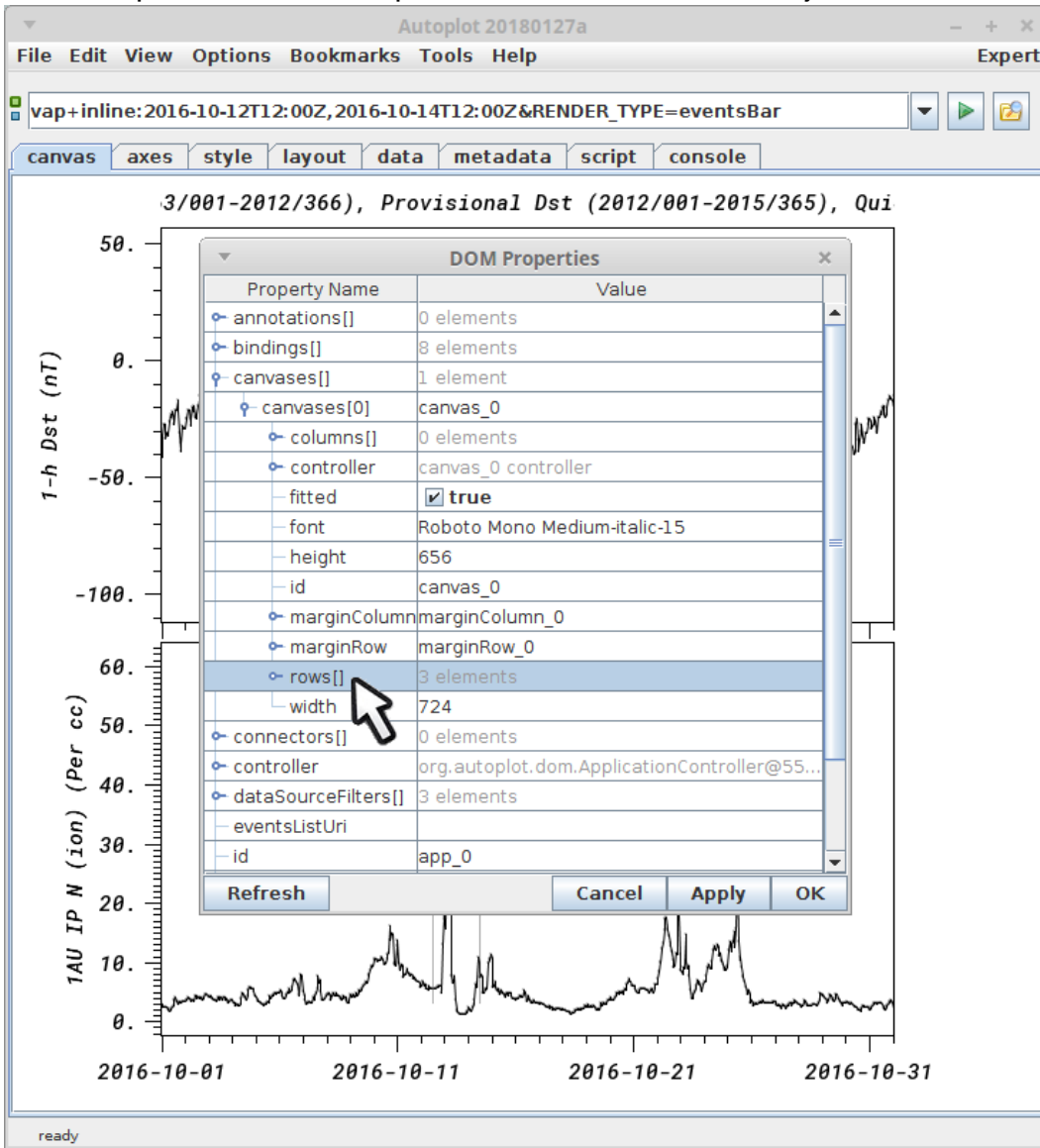
Data Sources
data_0 (vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=DST1800&
data_1 (vap+cdaweb:ds=OMNI2_H0_MRG1HR&id=N1800&tir
data_2 ()

plotElement_2 (inactive) selected

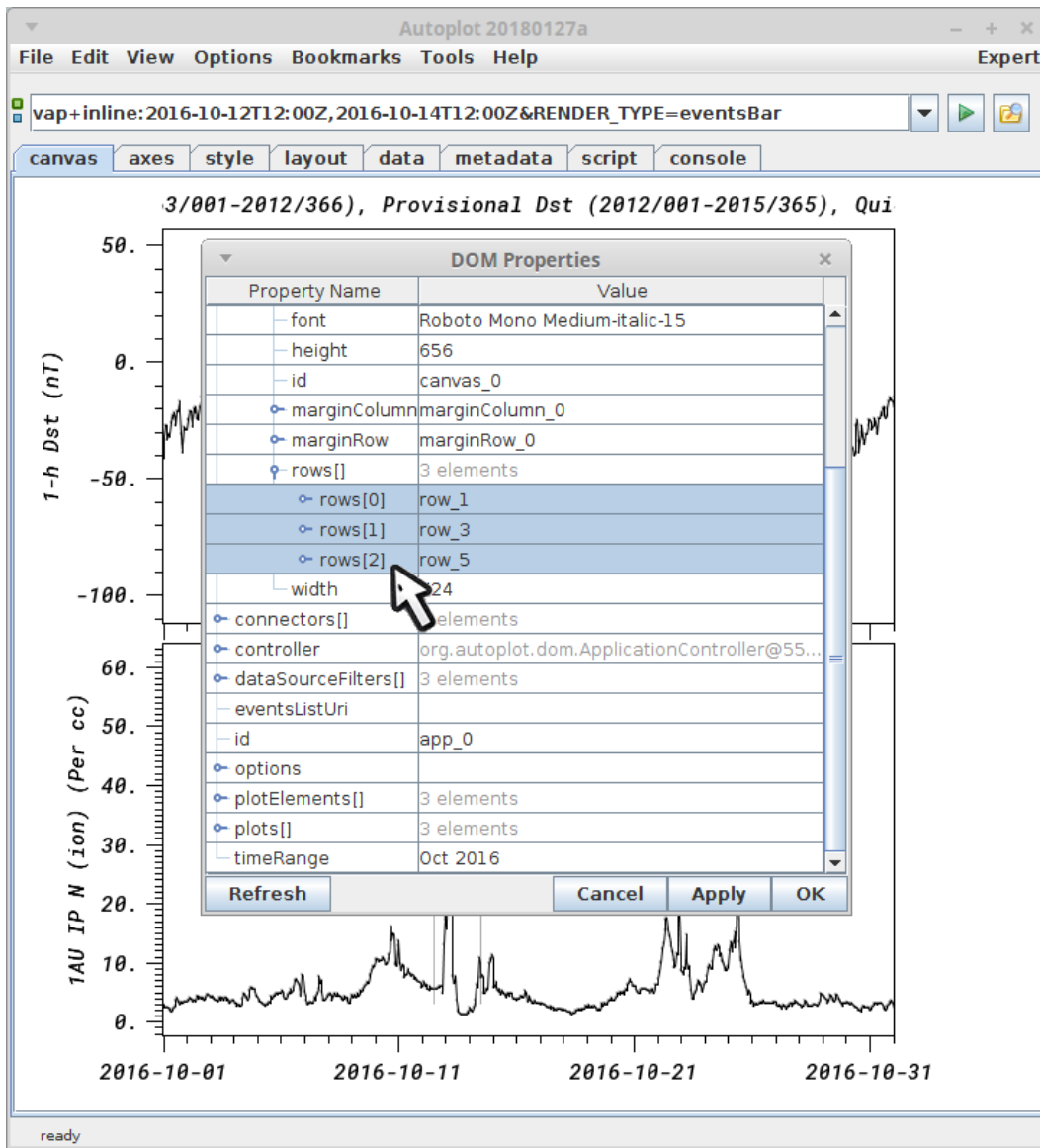
12. This works, but notice that there's a gap at the top and bottom of the bars. This odd feature of the hidden plot was to support its original goal, where several spectrograms would share a color bar. This behavior will probably change



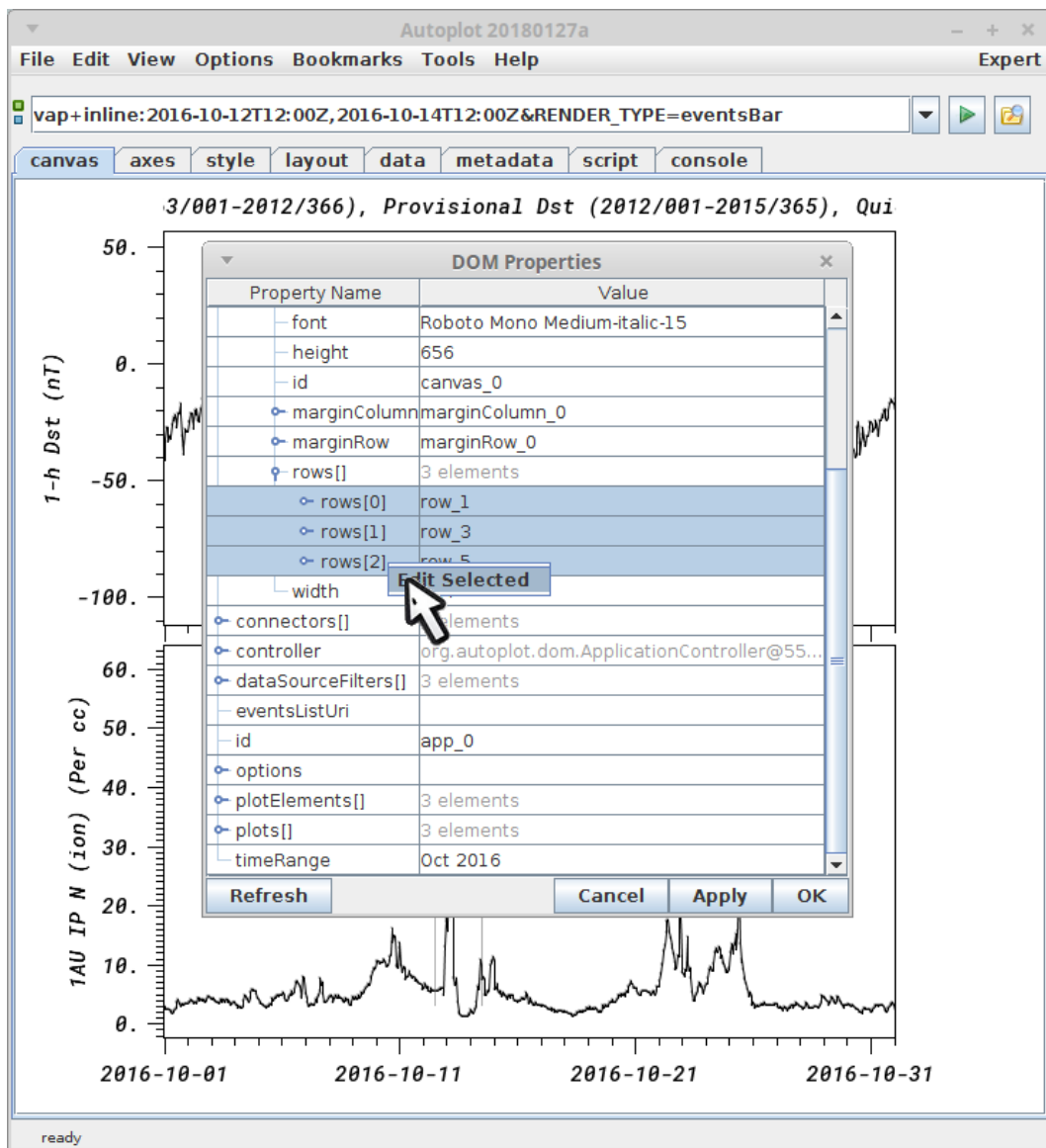
13. Under canvases, select the three "rows" on the one canvas. (Note there is always one canvas, years ago support for multiple canvases was planned, but we found it was just as effective to allow multiple applications.)



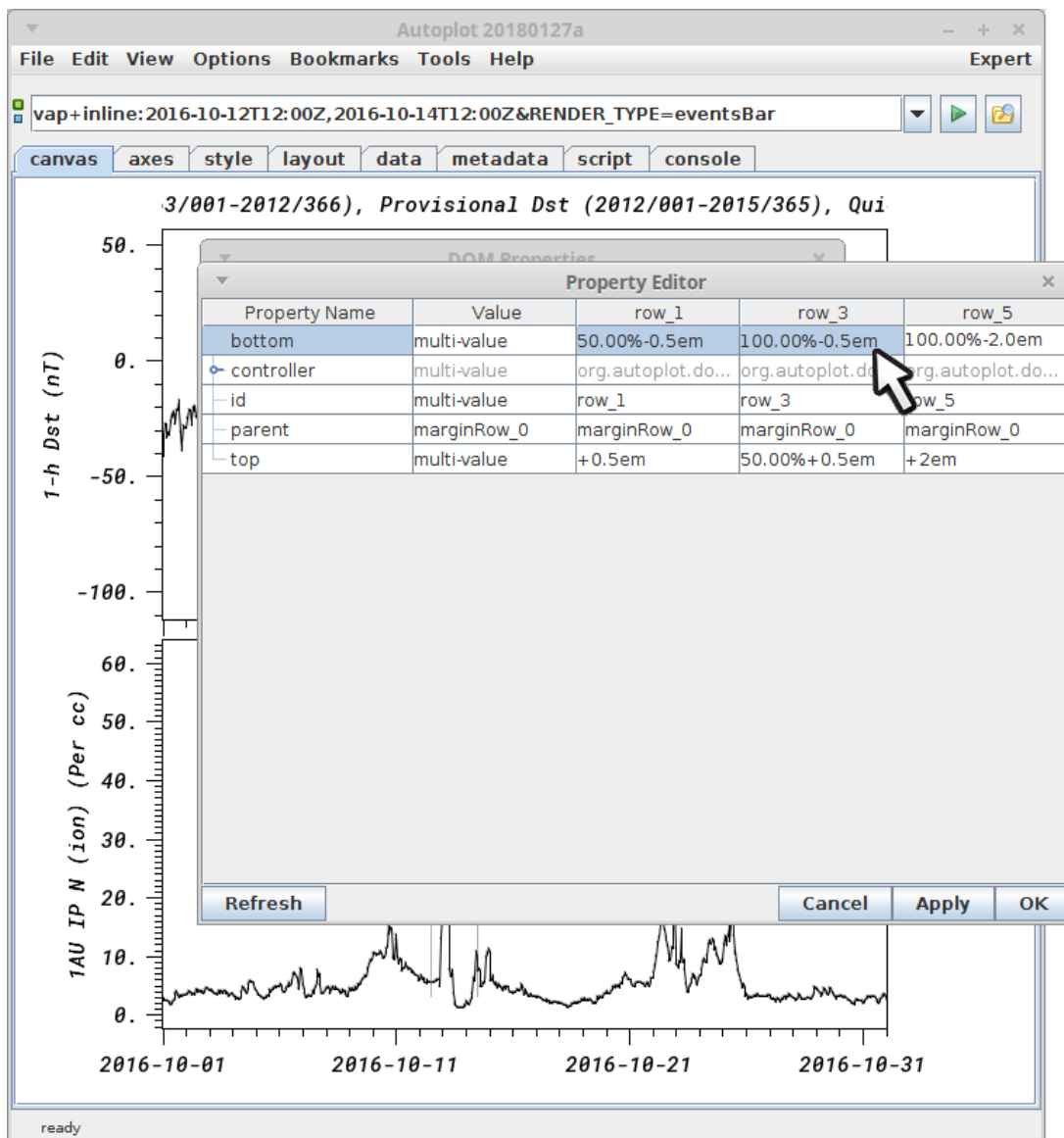
14. Select the three rows.



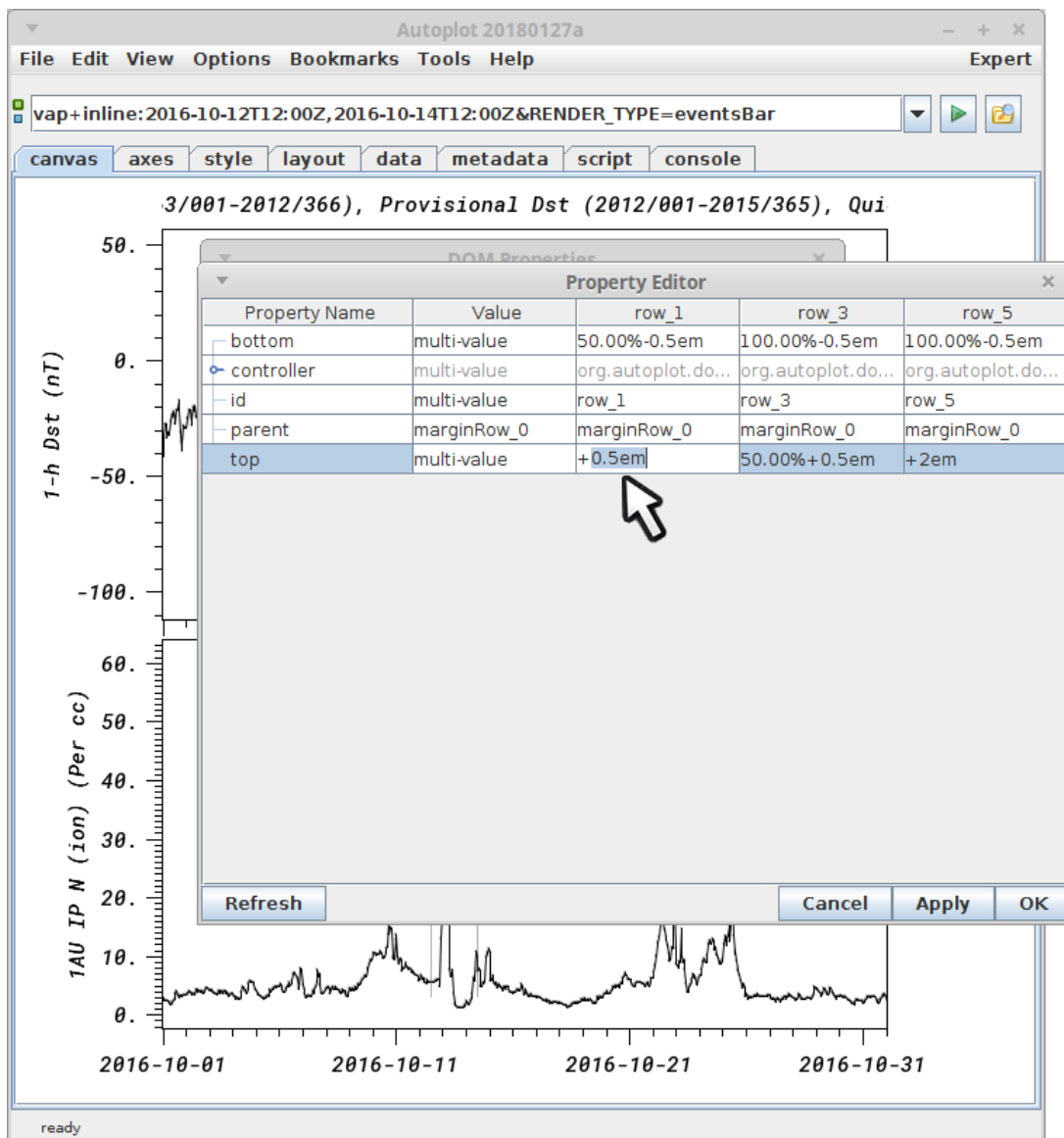
15. right-click (control-click) to edit them...



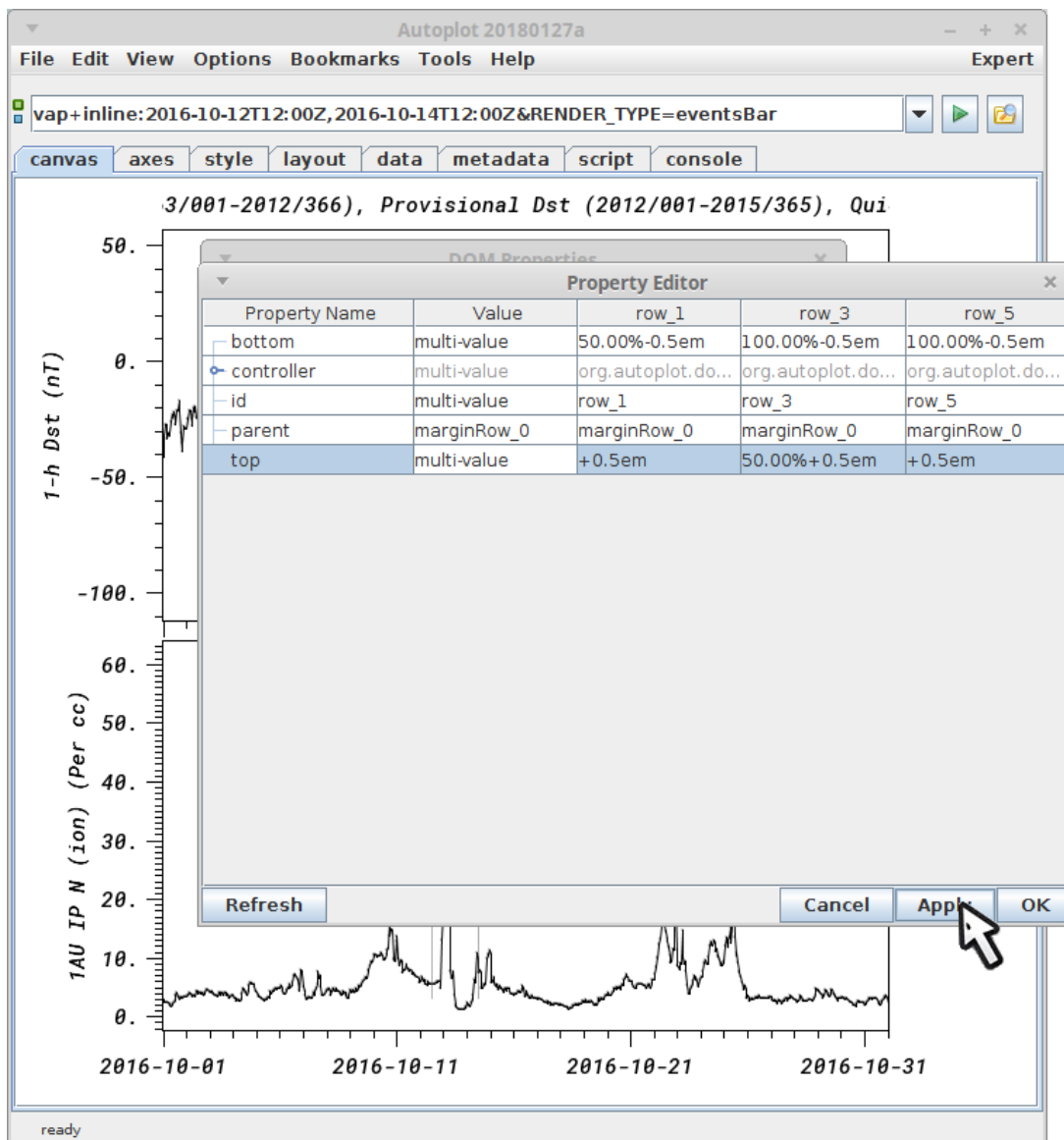
16. "row_5" is the events bar row. We need to make its bottom the same as row_3's and top the same as row_1's.



17. Cut-n-paste these control strings around...



18. And apply...



19. Now everything lines up. Note, the "fix layout" doesn't understand (currently) that this plot is special, and will undo this change. Also adding new plots may break things, so you want to add the event bars last.

