

Vizualizace

Grace – 2D plotting tool

<http://plasma-gate.weizmann.ac.il/Grace/>

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Grace

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Latest news:

- [Grace-5.1.22 released](#) 21/05/08
- [Grace-5.1.21 released](#) 17/02/07
- [Grace-5.1.20 released](#) 04/06/06
- [German translations](#) 17/05/06
- [Grace-5.1.19 released](#) 27/11/05
- [Read more...](#)

[Introduction](#)

Grace is a WYSIWYG 2D plotting tool for the X Window System and M*tif. Grace runs on practically any version of Unix-like OS. As well, it has been successfully ported to VMS, OS/2, and Win9*/NT/2000/XP (some minor functionality may be missing, though).

Grace is a descendant of [ACE/gr](#), also known as **Xmgr**.

Done

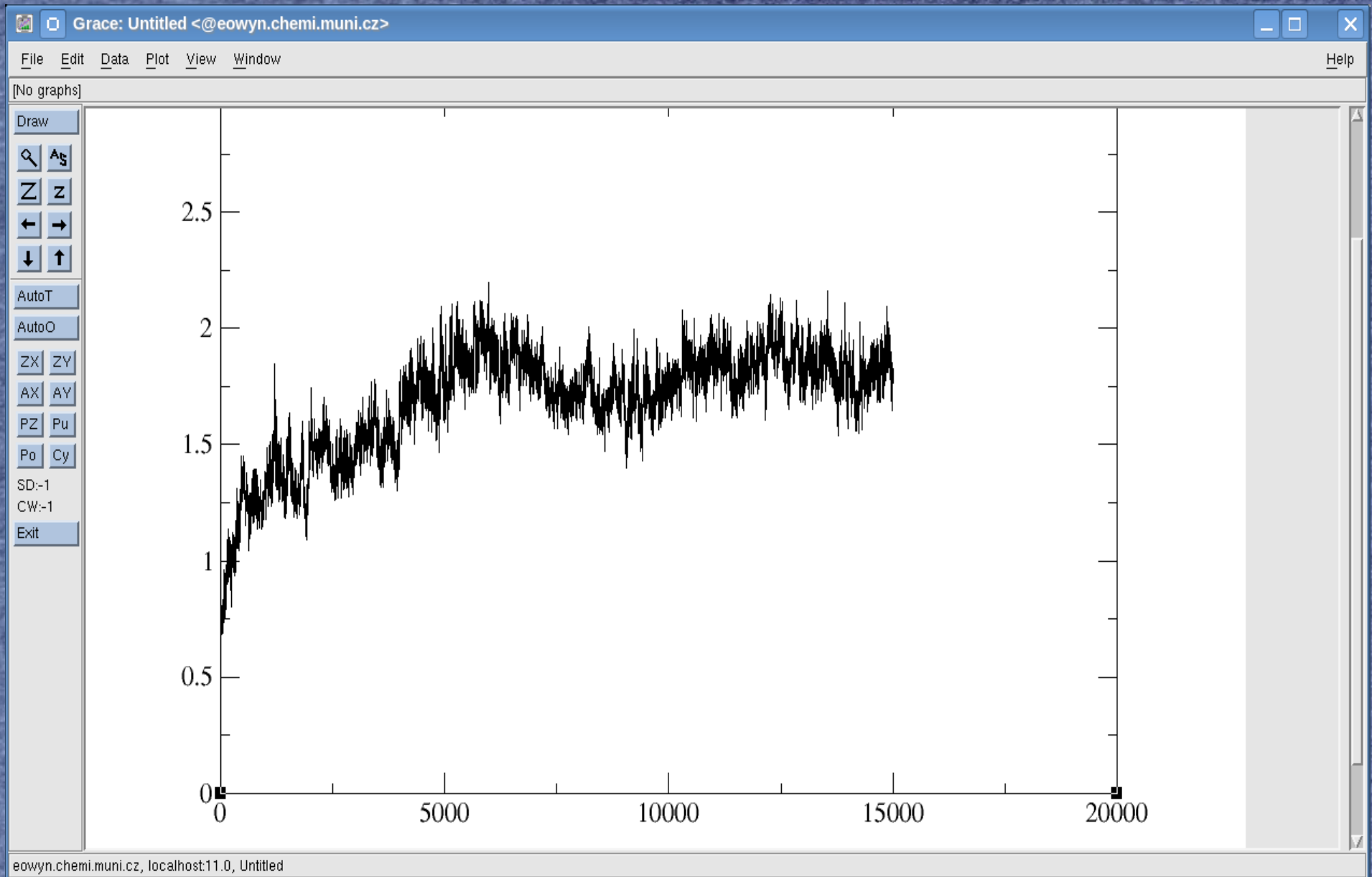
Vlastnosti GRACE

- Obecné vlastnosti
 - WYSIWYG design
 - Přesná kontrola kreslení grafů
 - Dobré grafické rozhraní = snadné ovládání
 - Možnost tvorby grafů v kvalitě pro publikace
- Možnosti výstupů
 - Vektorové výstupy (EPS, PS, PDF, SVG)
 - Bitmapové výstupy (PNG, PNM, JPEG)

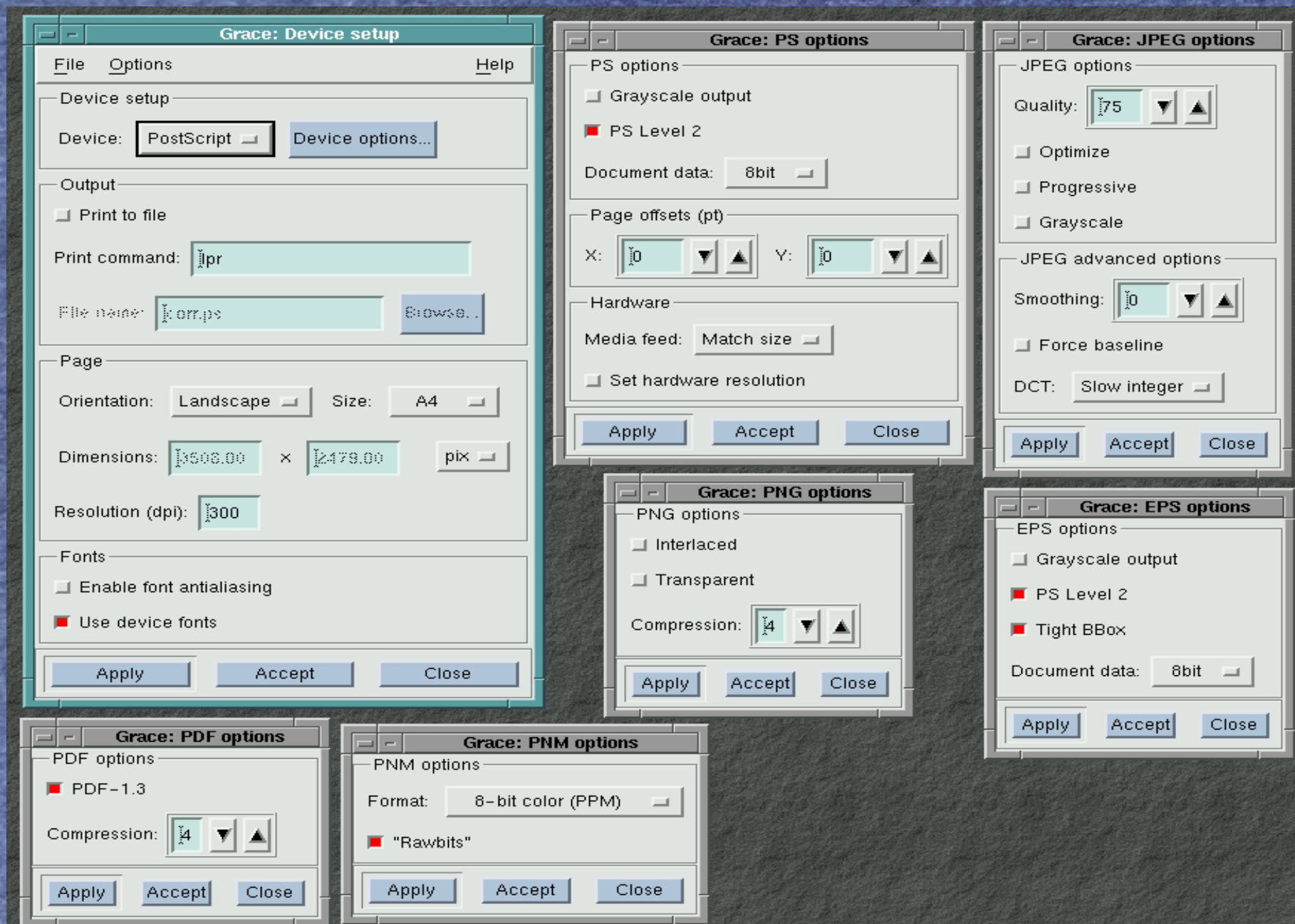
Vlastnosti GRACE

- Velká flexibilita grafů
 - Neomezený počet grafů a křivek v každém grafu
 - Předdefinované čáry a symboly
 - Více než 256 barev
 - Možnost dodávání popisek včetně horního a dolního indexu
- Možnost prokládání dat křivkami
- Transformace dat
- “Neomezený” limit dat
- Programovatelnost aplikace / úpravy dle uživatele

xmgrace soubor.dat



Nastavení výstupů



Nastavení vlastností grafu

Grace: Graph Appearance

File Edit Help

Graph:

- G0 (shown, 4 sets)
- G1 (shown, 4 sets)

Main Titles Frame Leg. box Legends Special

Presentation

Type: XY graph Stacked chart

Titles

Title: Correlations between field components

Subtitle:

Viewport

Xmin: 0.283025 Xmax: 1.202857

Ymin: 0.105998 Ymax: 0.847981

Display options

Display legend Flip XY (N/I)

Apply Accept Close

Grace: Axes

Edit: X axis Active

Start: 4 Stop: 513

Scale: Logarithmic Invert axis

Main Axis label & bar Tick labels Tick marks Special

Axis label

Label string: Chunk size

Tick properties

Major spacing: 2 Minor ticks: 1

Format: General Precision: 5

Display options

Display tick labels Display axis bar

Display tick marks

Axis placement

Zero axis Offsets - Left/bottom: 0.00 Right/top: 0.00

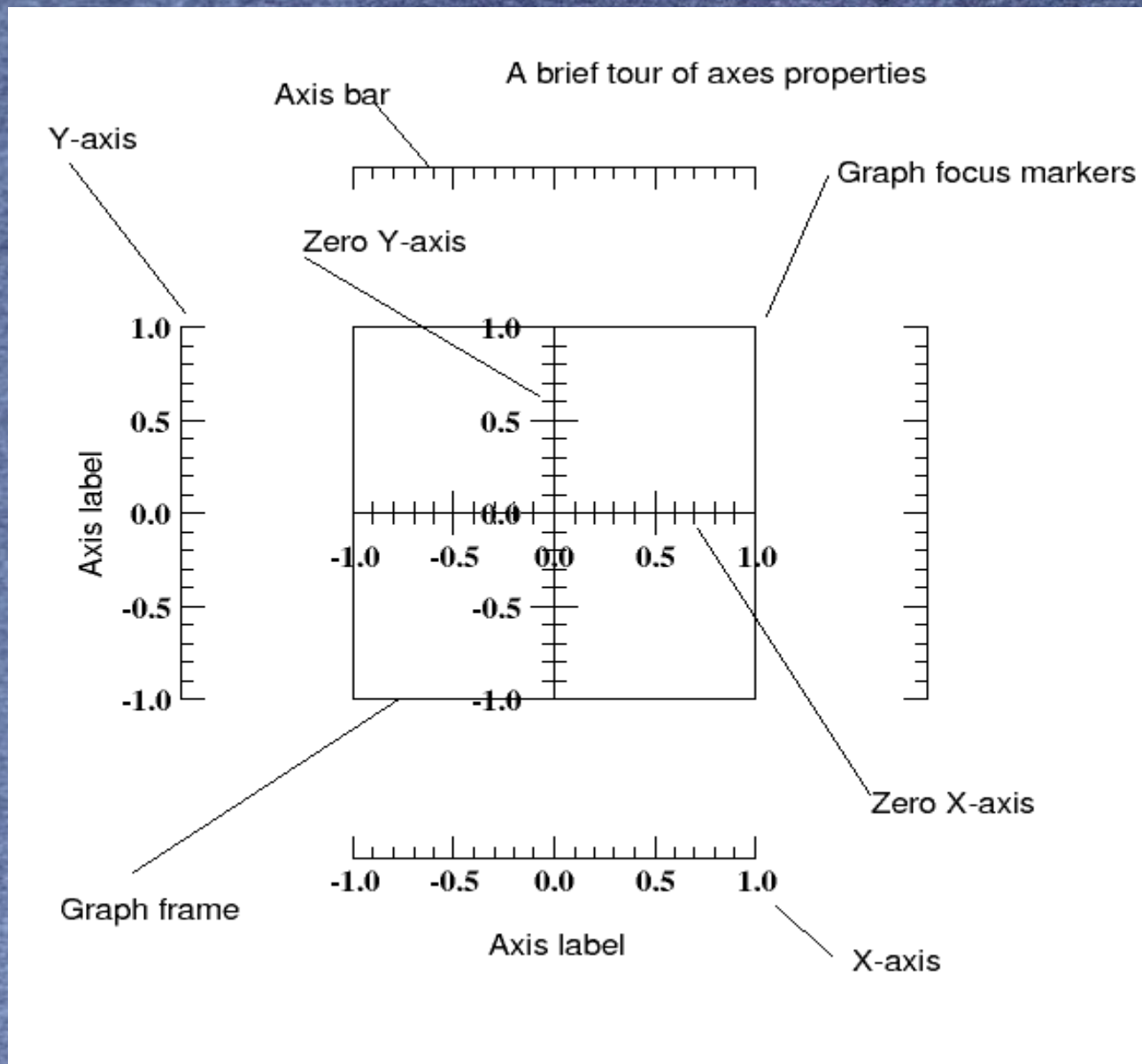
Tick label properties

Font: Times-Roman Color: black

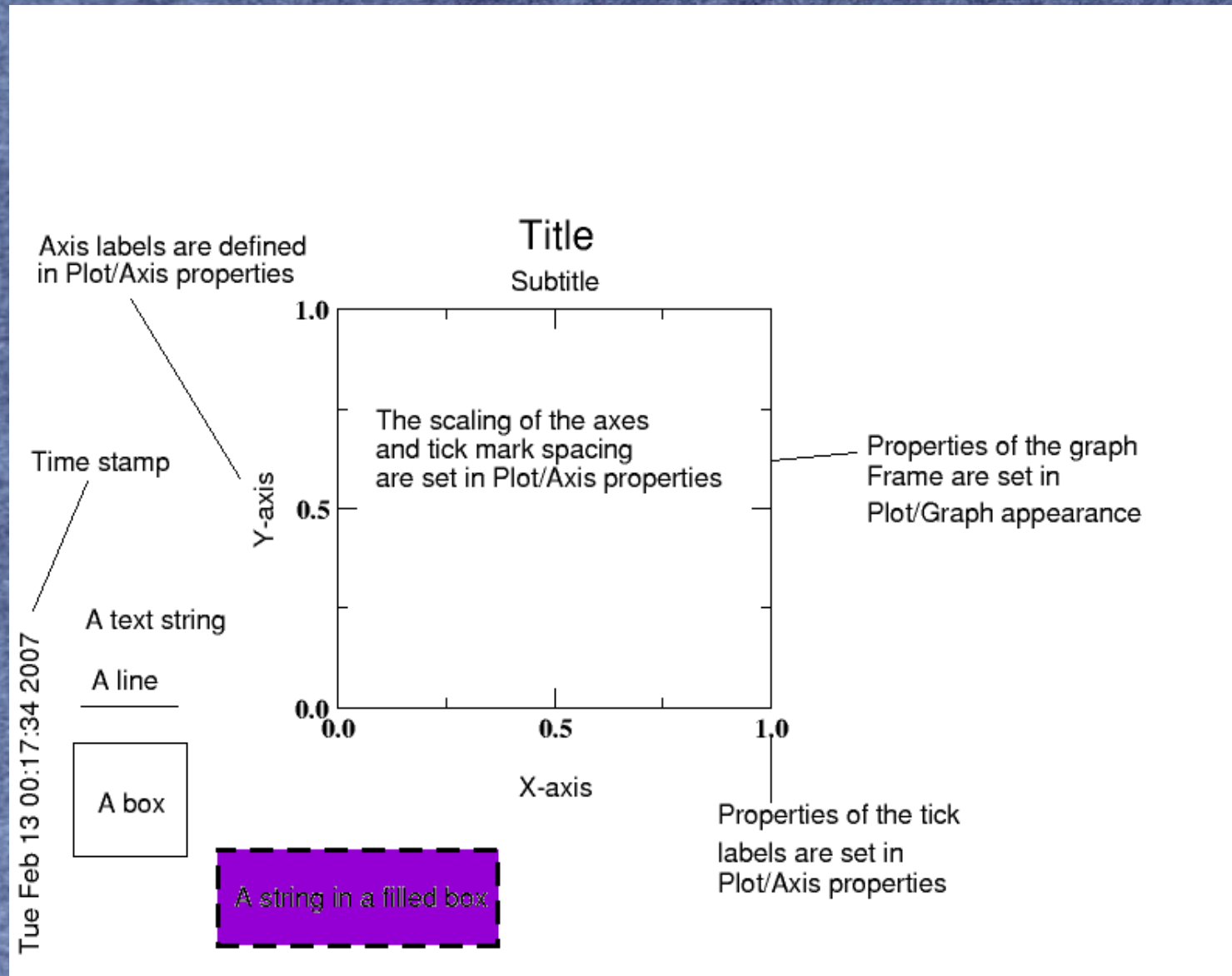
Apply to: Current axis

Apply Accept Close

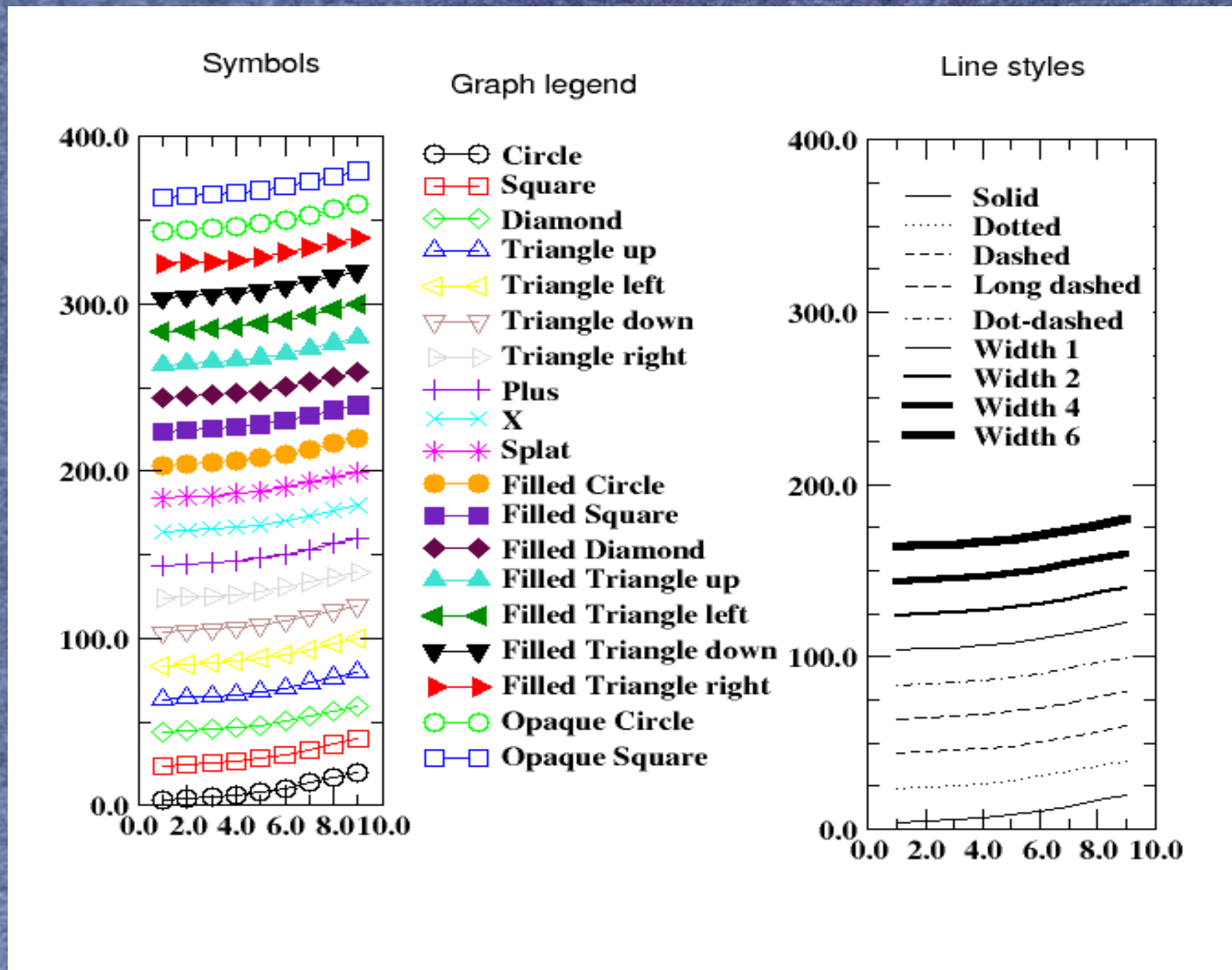
Co můžu nastavit u vlastností os



Co můžu nastavit u vlastností grafu



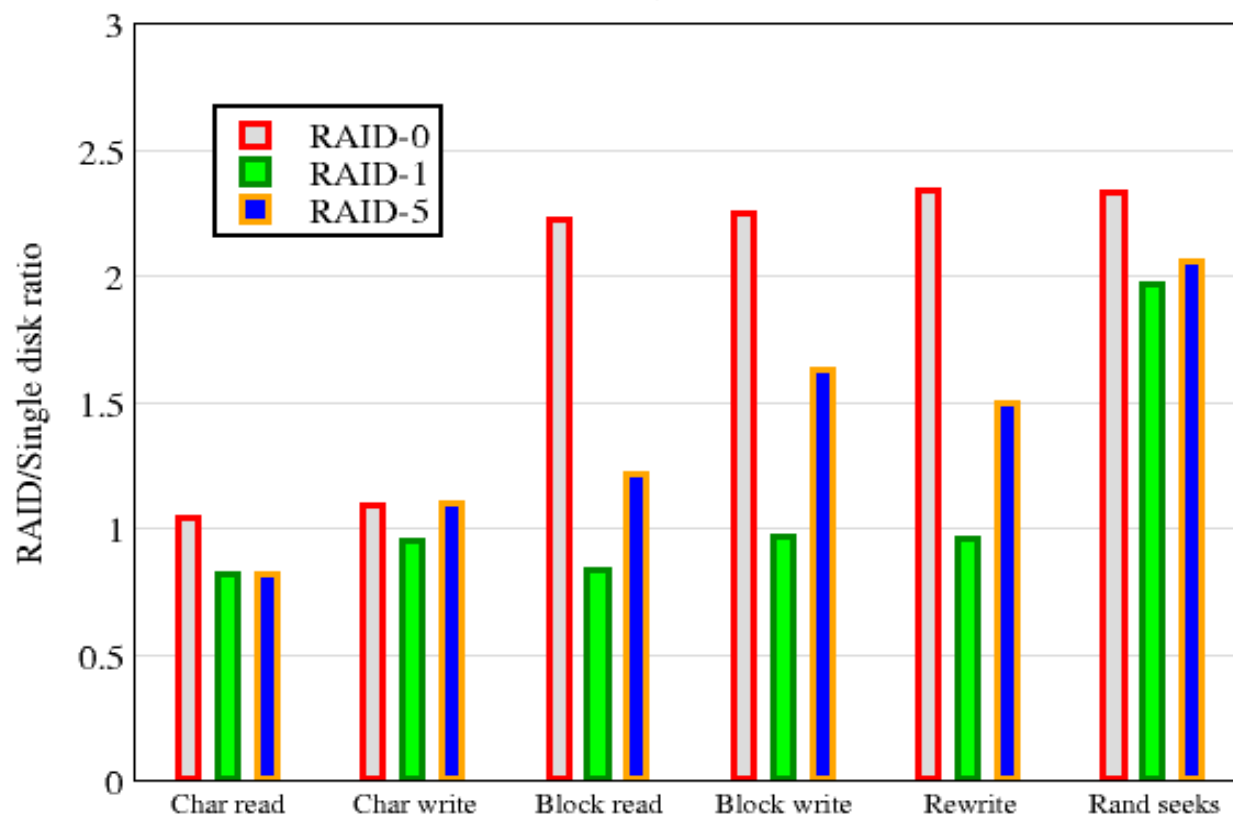
Předdefinované druhy čar a bodů



Sloupcový graf

Software RAID performance (3 disks)

file size: 800MB; ext2fs block size: 4k



A bar chart. Notice the usage of custom tick labels on the X axis.

(See Plot/Axis properties/Special)

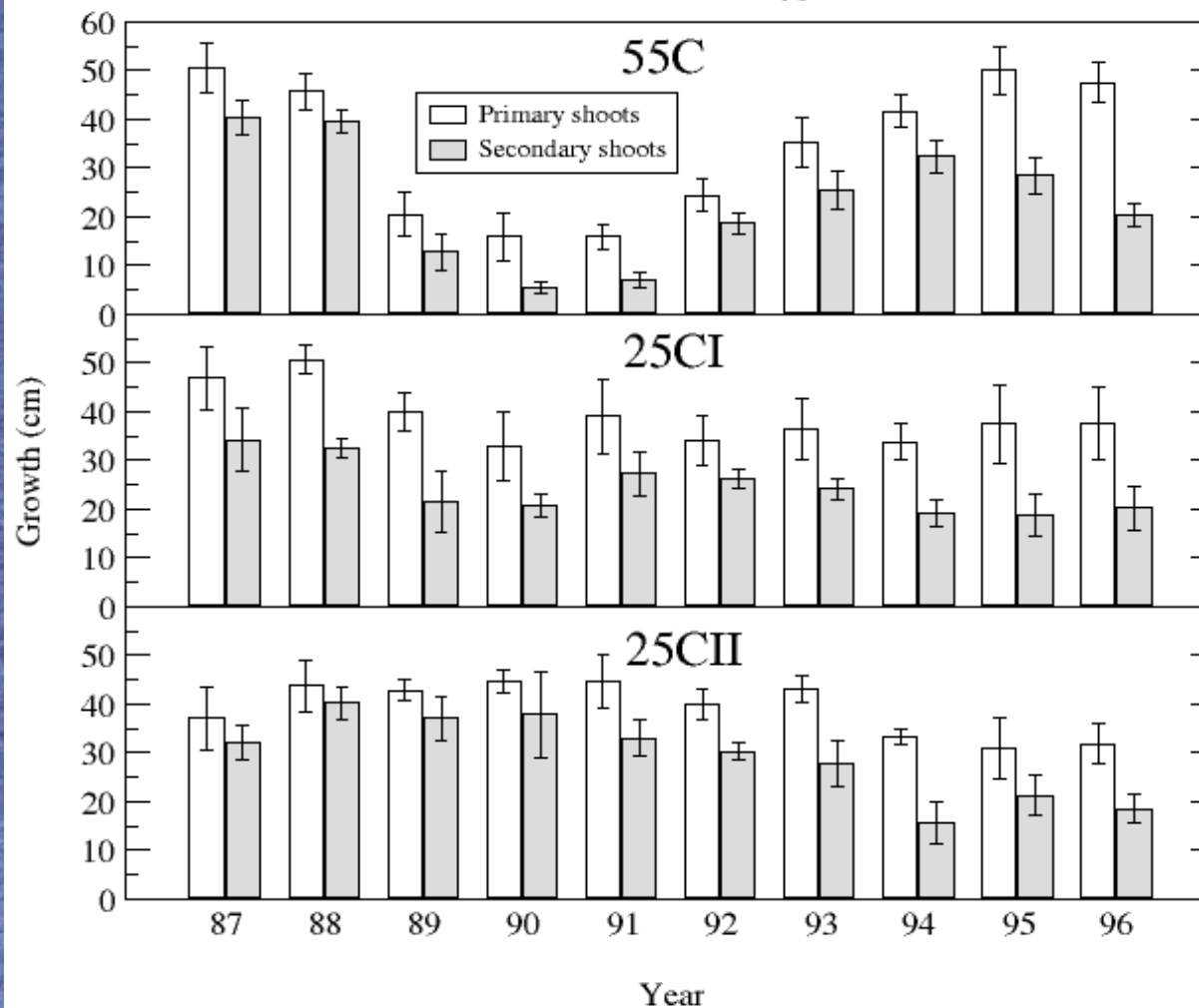
Single disk benchmark

```

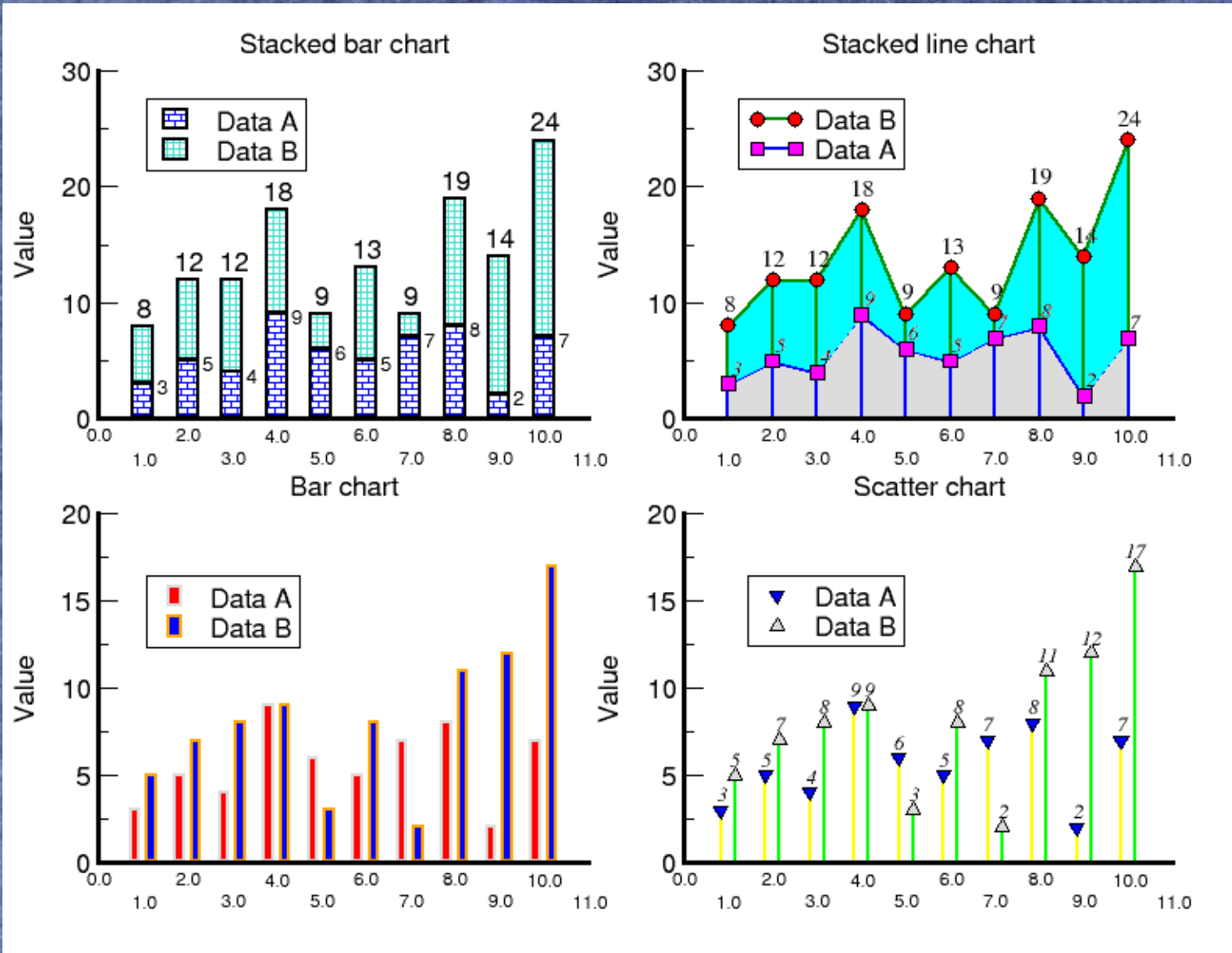
-----Sequential Output-----  ---Sequential Input---  --Random--
K/sec %CPU K/sec %CPU K/sec %CPU K/sec %CPU K/sec %CPU
-Per Char- --Block-- -Rewrite-- -Per Char- --Block-- --Seeks--
12881 94.5 15140 17.8 5414 13.6 7249 84.6 13858 14.0 96.7 1.5
    
```

Sloupcový graf

Mean yearly growth of beech tree shoots
(sets of the **BarDY** type)



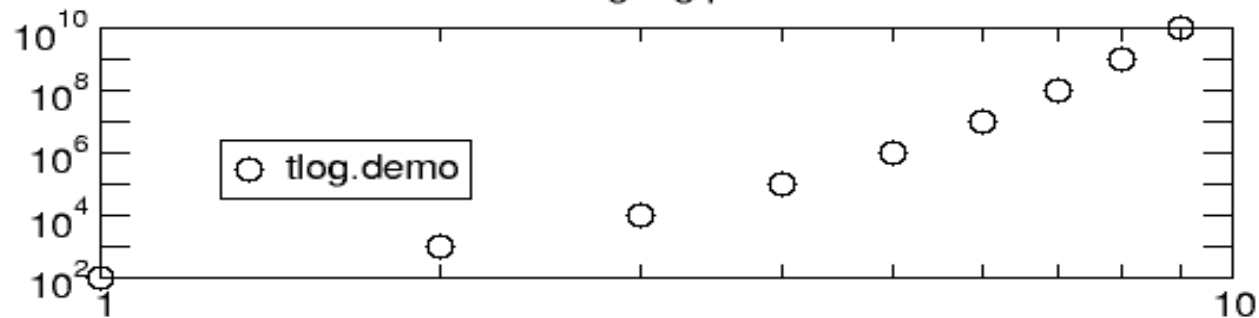
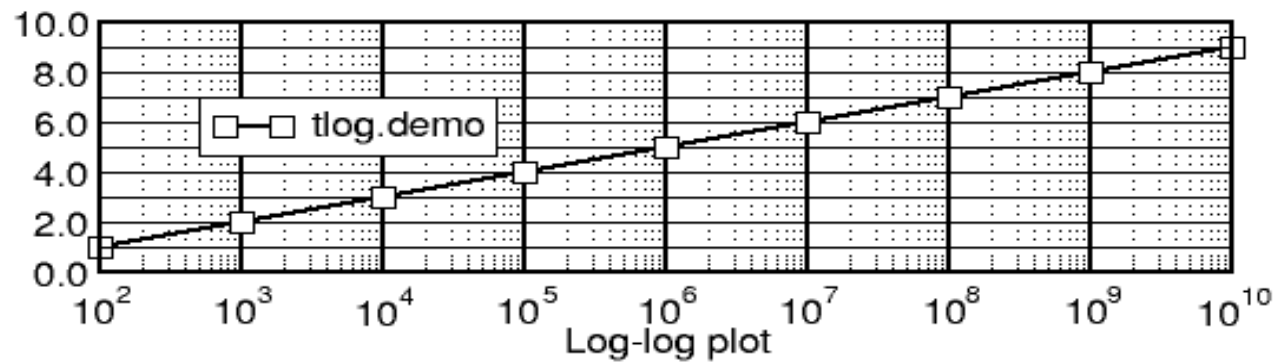
Typy grafů



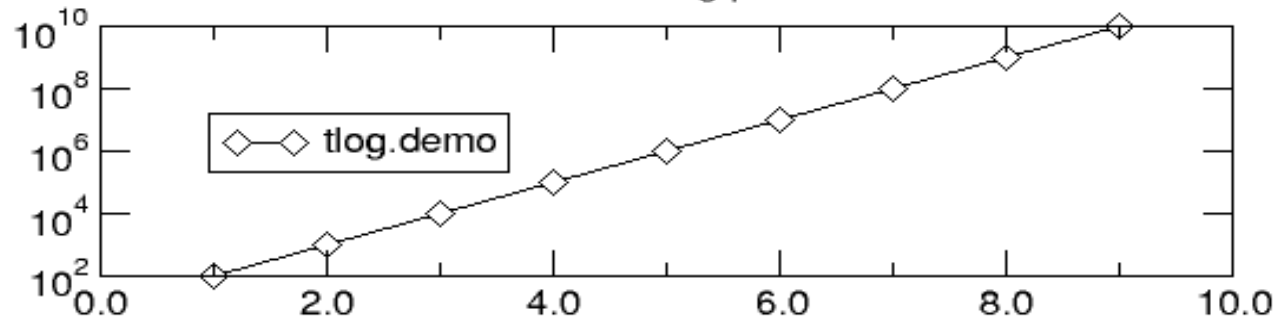
Log. graf

Test of log plots

log-linear plot

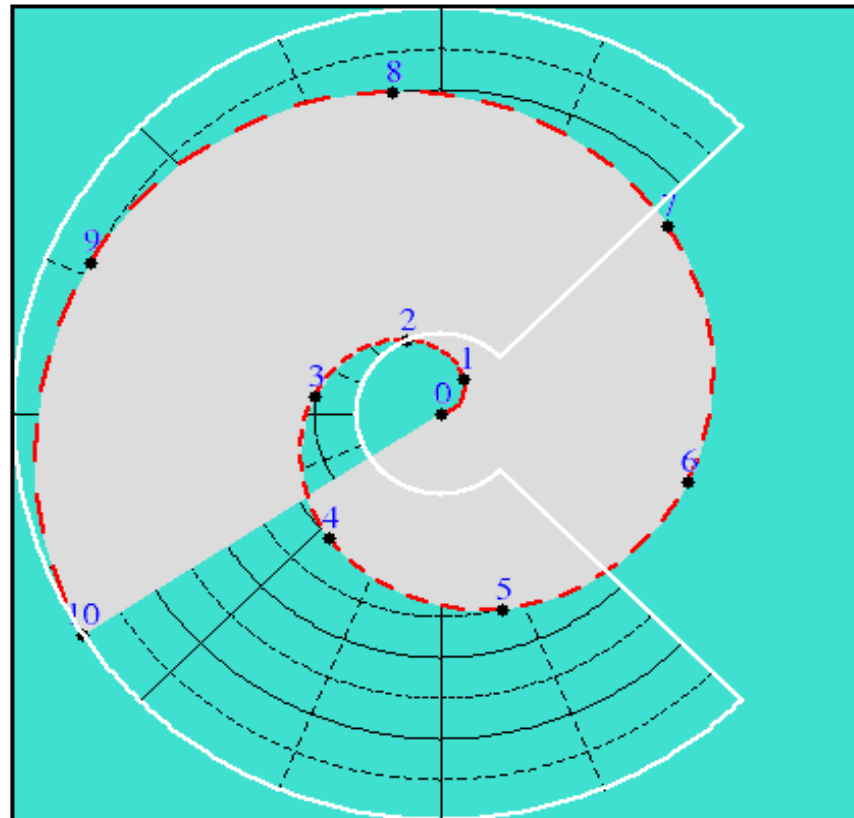


Linear-log plot

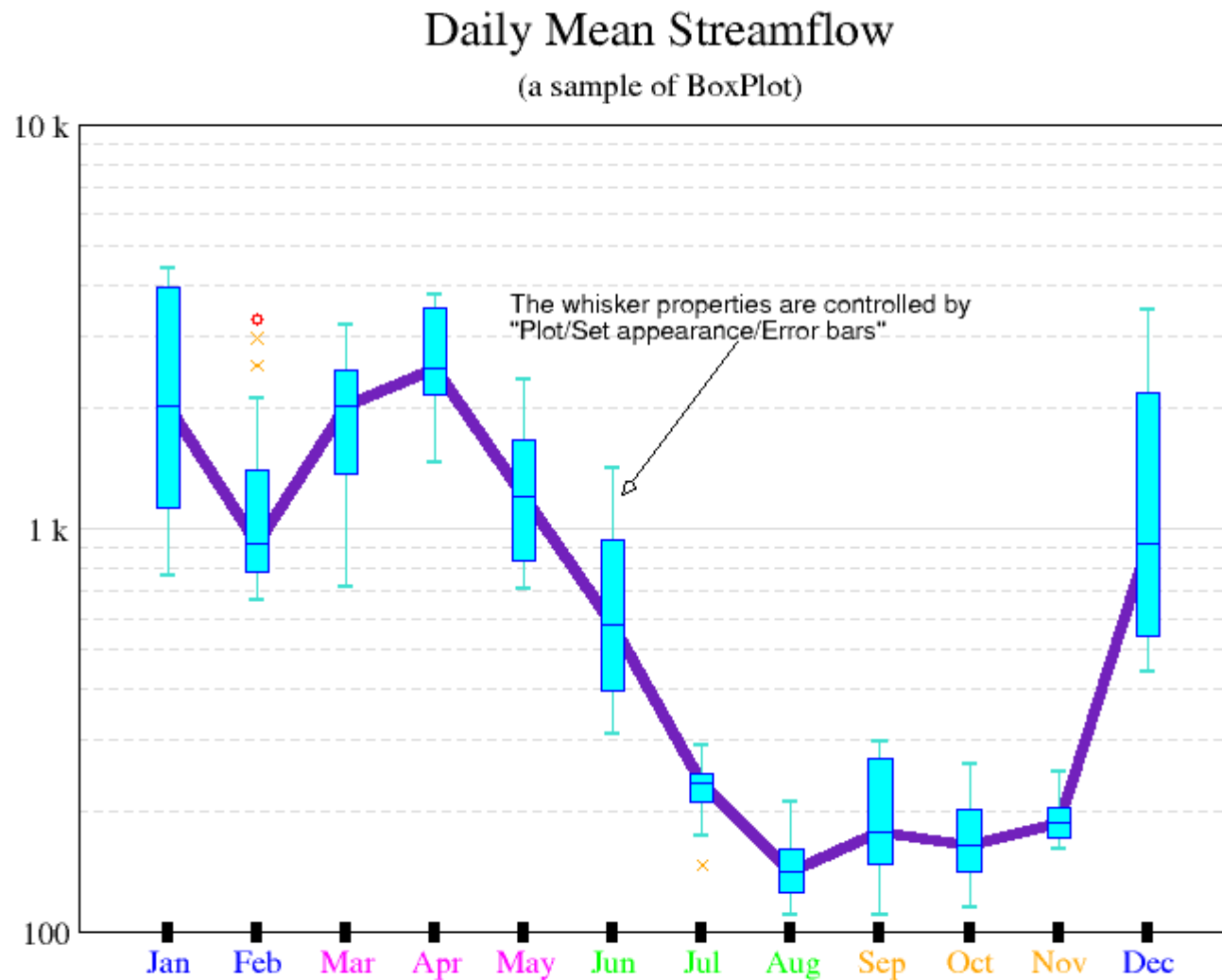


Graf s polárními souřadnicemi

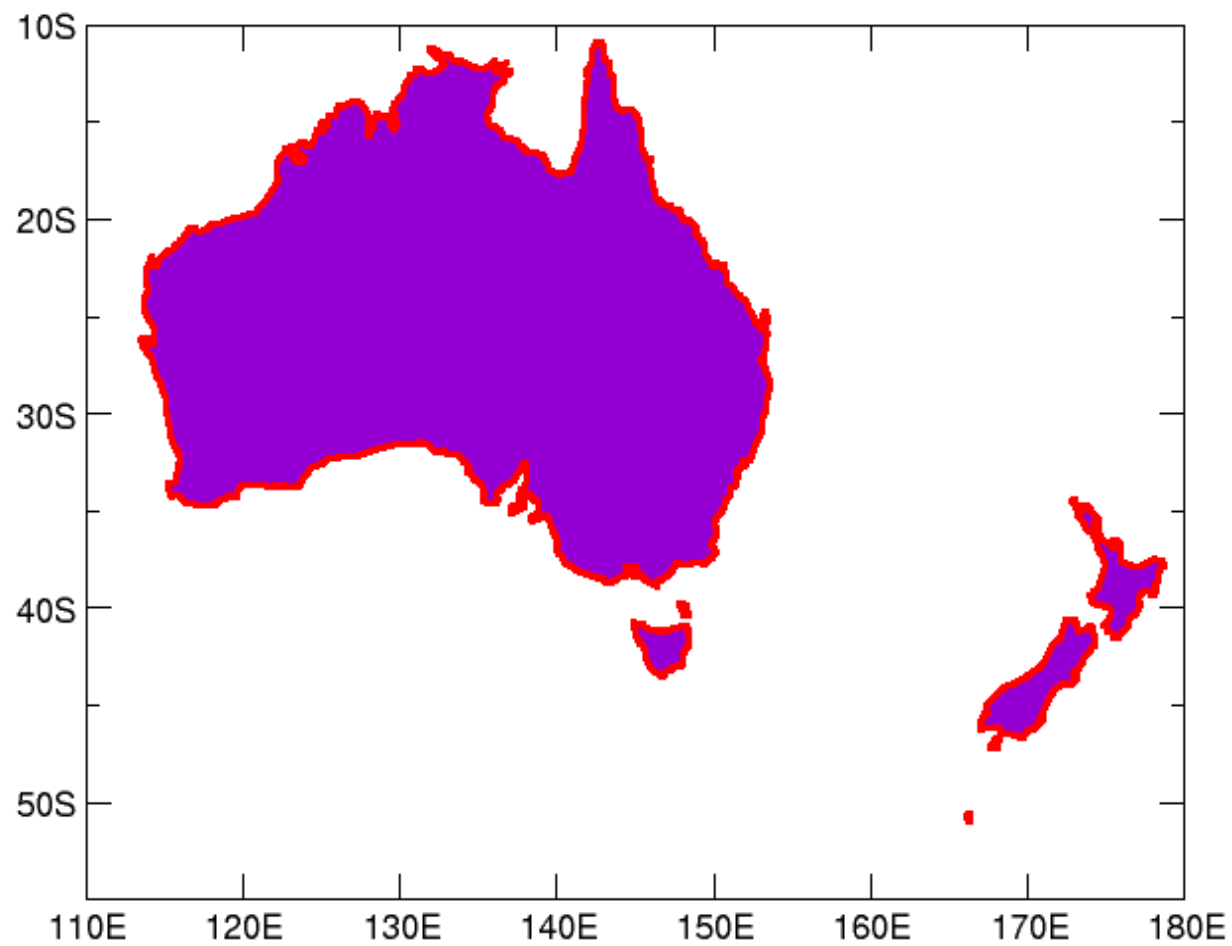
A polar plot



Časová osa x



A něco navíc ...



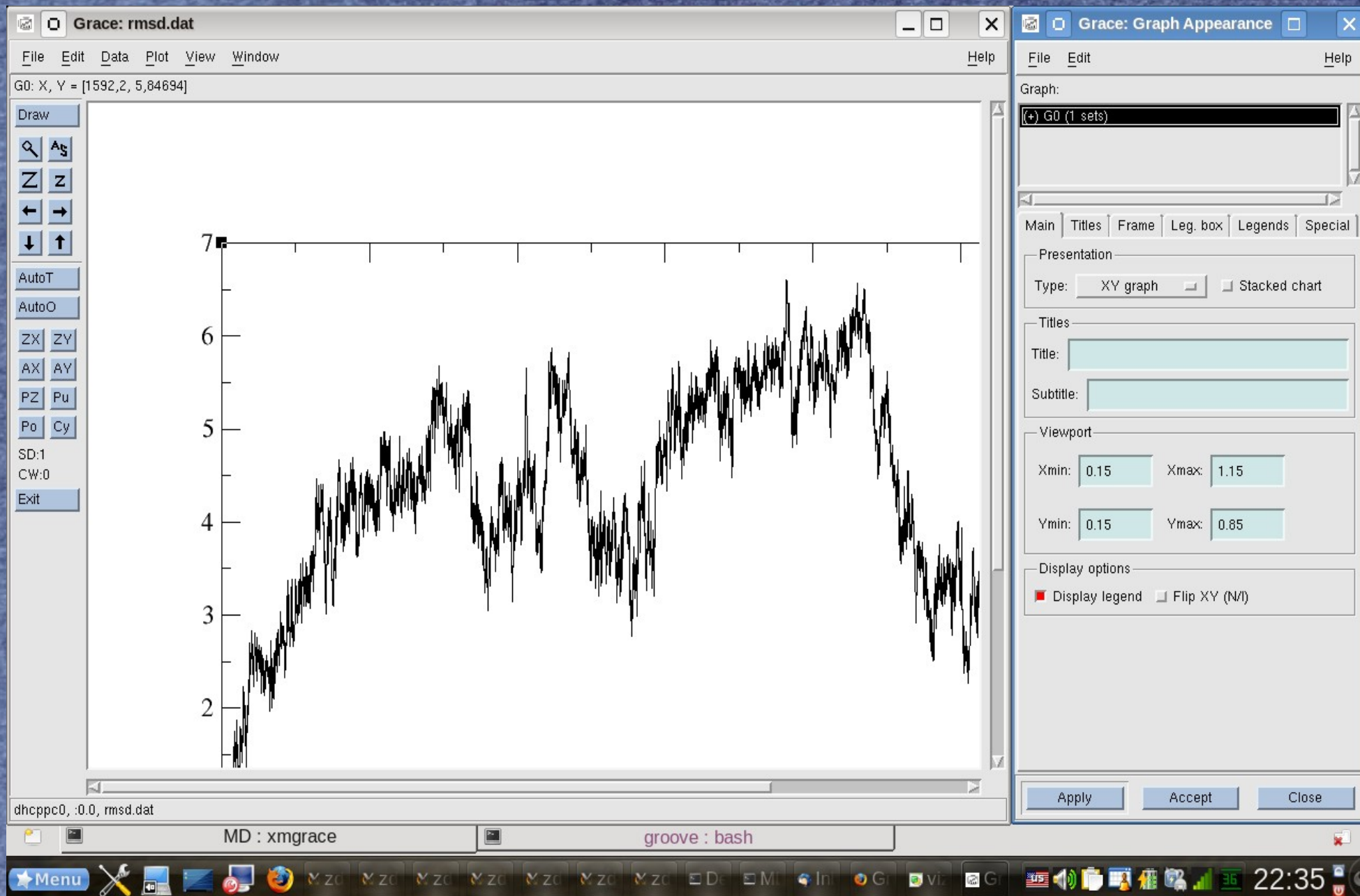
Praktické příklady

xmgrace rmsd.dat

Nebo

xmgrace
-Data/Import/

Xmgrace rmsd.dat



Xmgrace

The image shows the Xmgrace software interface. The main window, titled "Grace: Untitled", displays a plot with a y-axis ranging from 0.2 to 1.0. The plot area is currently empty. The menu bar includes File, Edit, Data, Plot, View, and Window. The status bar at the bottom shows "dhcpc0, :0.0, Untitled" and "MD : xmgrace".

A "Grace: Read sets" dialog box is open on the right side of the screen. It contains the following fields and controls:

- Filter:** `/home/zdenek/Fischer/smycka1/MD/*.dat`
- Directories:** `/home/zdenek/Fischer/smycka1/MD/`, `/home/zdenek/Fischer/smycka1/MD/..`, `/home/zdenek/Fischer/smycka1/MD/Rozbij`
- Files:** `d2.dat`, `d3.dat`, `d4.dat`, `d5.dat`, `d6.dat`, `d7.dat`, `d8.dat`, `rmsd.dat`
- Show hidden files
- Chdir to:** `Cwd` (with a "Set as cwd" button)
- Read to graph:** `(+) G0 (0 sets)`
- Load as:** `Block data` (highlighted with a red circle)
- Set to:** `xy`
- Data source:** `Block` (with a "Pipe" option)
- Autoscale on read:** `XY`
- Selection:** `/home/zdenek/Fischer/smycka1/MD/rmsd.dat`
- Buttons: `OK`, `Filter`, `Cancel`, `Help`

The taskbar at the bottom shows a Linux desktop environment with a menu button, system icons, and a clock displaying 22:39.

Přidání titulku grafu

The image shows the Grace software interface with a graph and its appearance settings. The main window, titled "Grace: rmsd.dat", displays a line graph of a noisy signal. The y-axis ranges from 2 to 7. The graph is titled "G0: X, Y = [1592,2, 5,84694]".

The "Grace: Graph Appearance" dialog box is open on the right, showing the "Titles" tab. The "Title:" field is highlighted with a red oval, indicating the process of adding a title to the graph. The "Subtitle:" field is also visible. The "Viewport" section shows the current X and Y ranges: Xmin: 0.15, Xmax: 1.15, Ymin: 0.15, Ymax: 0.85. The "Display options" section includes checkboxes for "Display legend" and "Flip XY (N/I)".

The bottom of the screen shows the Linux desktop environment with a taskbar containing various application icons and a system tray with the time 22:35.

Změna popisu os

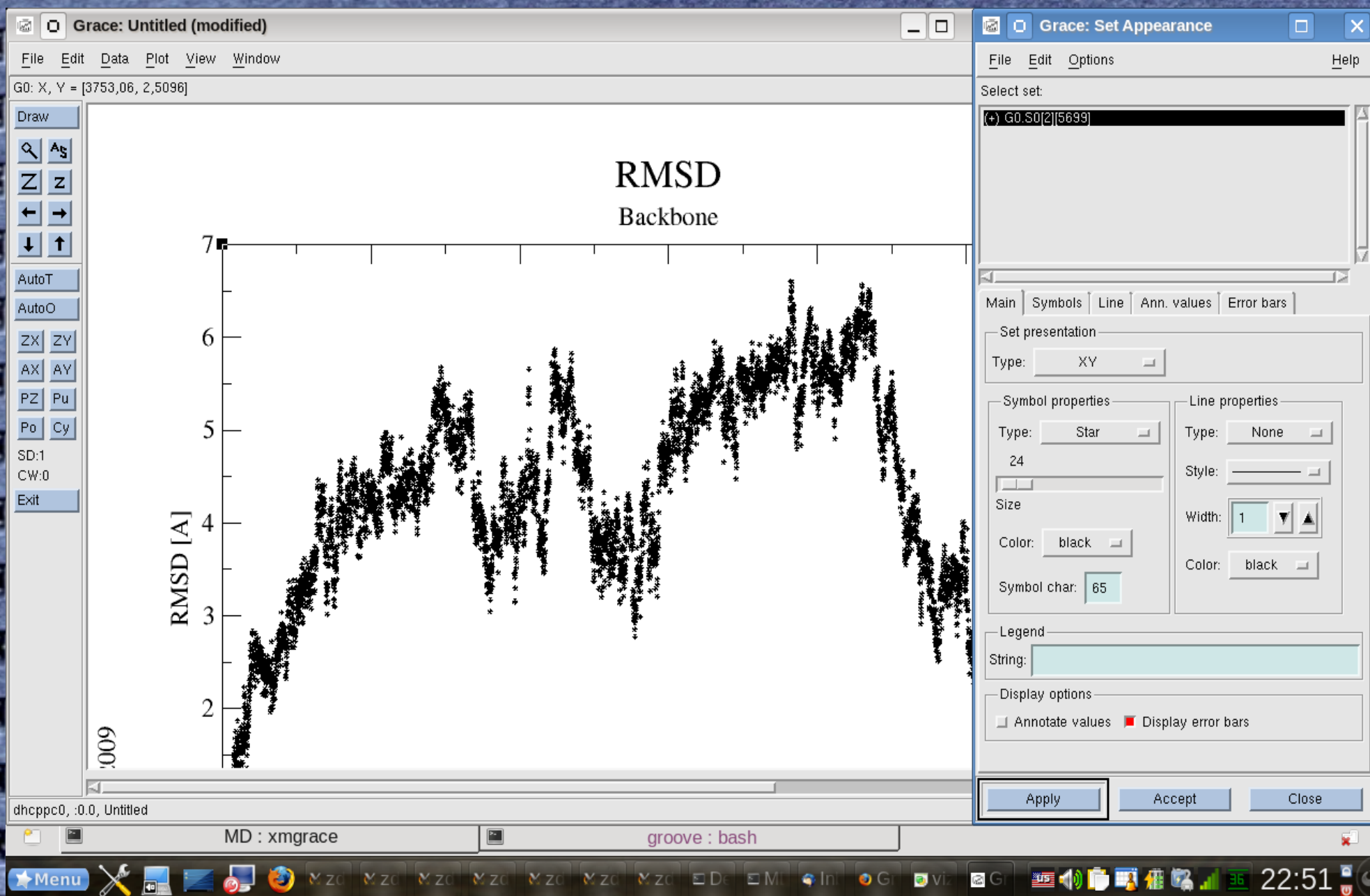
The image shows a screenshot of the Grace software interface. The main window, titled "Grace: Untitled (modified)", displays a plot of a noisy signal. The y-axis is labeled from 2 to 7. The plot area shows a signal that fluctuates between approximately 2 and 7, with a general upward trend. The signal is highly oscillatory, with many small peaks and troughs. The plot area is surrounded by a toolbar with various drawing and navigation tools, including a search icon, zoom in/out, pan, and a set of axes (ZX, ZY, AX, AY, PZ, Pu, Po, Cy). The status bar at the bottom of the main window shows "dhcpcpc0, :0.0, Untitled".

Overlaid on the right side of the main window is the "Grace: Axes" configuration dialog. The dialog is titled "Grace: Axes" and has a close button (X) in the top right corner. It contains several sections for configuring the X-axis:

- Edit:** A dropdown menu set to "X axis" and a red "Active" checkbox.
- Start:** A text input field containing "0".
- Stop:** A text input field containing "6000".
- Scale:** A dropdown menu set to "Linear" and an unchecked "Invert axis" checkbox.
- Axis label & bar:** A section with an "Axis label" label and a text input field for the "Label string".
- Tick properties:** A section with "Major spacing" set to "1000" and "Minor ticks" set to "1" (with up/down arrows). It also has a "Format" dropdown set to "General" and a "Precision" dropdown set to "5".
- Display options:** A section with three checkboxes: "Display tick labels" (checked), "Display axis bar" (checked), and "Display tick marks" (checked).
- Axis placement:** A section with an unchecked "Zero axis" checkbox and two text input fields for "Offsets - Normal" (set to "0.0000") and "Opposite" (set to "0.0000").
- Tick label properties:** A section with a "Font" dropdown set to "Times-Roman" and a "Color" dropdown set to "black".
- Apply to:** A dropdown menu set to "Current axis".
- Buttons:** "Apply", "Accept", and "Close" buttons at the bottom.

The taskbar at the bottom of the screen shows several open windows: "MD : xmgrace" and "groove : bash". The system tray on the right shows the date and time as "22:45".

Bodový graf



Výpočet průměrů po úsecích

