

Intermediate Lab

PHYS 3870

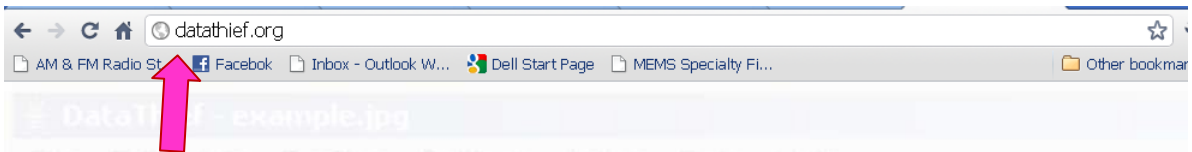
CONVEYING INFORMATION

Gathering Information

References: [PHYS 3870 Web Site](#)
[USU Library](#)



Acquiring DataThief



Go to Datathief.com

Welcome to DataThief

Description



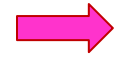
What is DataThief III

DataThief III is a program to extract (reverse engineer) data points from a graph. Typically, you scan a graph from a publication, load it into DataThief, and save the resulting coordinates, so you can use them in calculations or graphs that include your own data.

What is new in DataThief III?

- It is written in Java, it runs on Windows, Unix, MacOS...
- It is capable of tracing any more or less continuous line, even when the line crosses itself.
- It can convert data from numeric format to any other format, for instance dates.
- It is shareware. If you use DataThief, [please buy the shareware registration key from KAGI](#).

Download



Download and installation

Installation is slightly different for various platforms (and for various browsers): But on all platforms you will need a Java Runtime Environment (JRE).

Windows

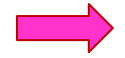
You can download a JRE from <http://java.sun.com>
The current version is JRE 6.0

Once you have a JRE, you download Datahief.jar, but take care that the file is saved as Datathief.jar; my windows (XP) offers to save the file as Datathief.zip.

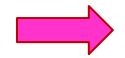
[Datathief.jar](#)

You can start DataThief by double clicking Datathief.jar

Click here



Manual

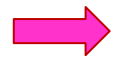


The manual

Even though the aim has been to create an easy to use tool, DataThief III has many possibilities that are hard to understand without the manual. So we urge you to download it.

[DatathiefManual.pdf](#)

Examples



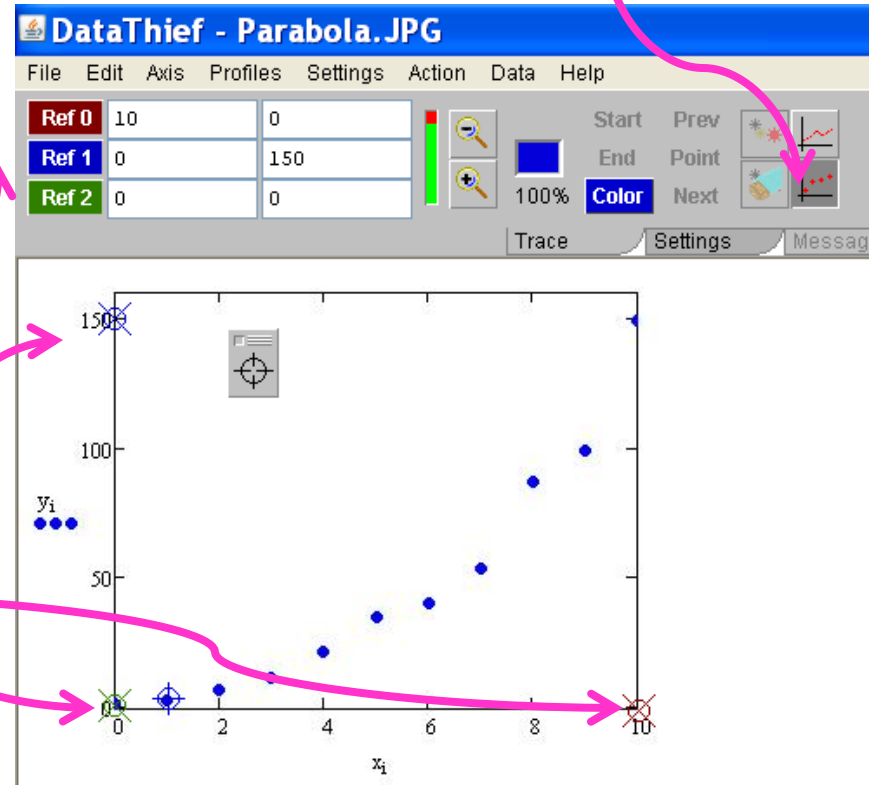
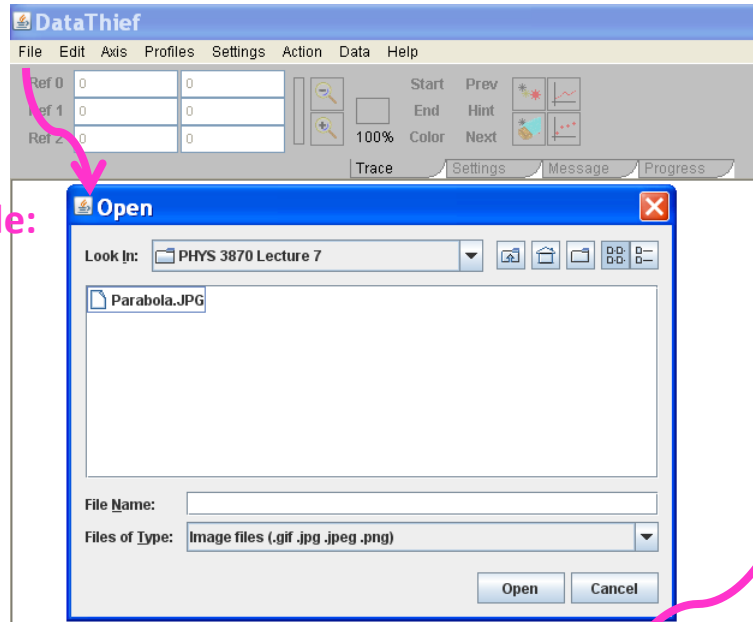
Examples

The graphs that are used as examples in the manual are

The first example

[example.jpg](#)

DataThief in Action



Tag 3
axis
points:

Setting DataThief

The screenshot shows the DataThief software interface with the following components:

- File Menu:** Open... (Ctrl+O), Save (Ctrl+S), Save as... (Ctrl+Shift+S), **Export data... (Ctrl+E)**, Quit (Ctrl+Q).
- Graph:** A scatter plot with data points and crosshairs. The x-axis is labeled x_i and the y-axis is labeled y_i . A pink arrow points to a data point with the text "Tag data points by dragging crosshairs".
- Axis Settings Dialog:** A list of axis types with "00 lin X - lin Y" selected. The list includes:
 - 00 lin X - lin Y
 - 10 lin X - Log Y
 - 11 Log X - Lin Y
 - 12 Log X - Log Y
 - 20 Polar lin rad
 - 21 Polar lin deg
 - 22 Polar log rad
 - 23 Polar log degThe dialog also has an "Edit axes" button. A pink arrow points to the dialog with the text "Select axes type".

Reading DataThief Txt Files

Read into Excel
as comma
delimited text

The screenshot shows the Microsoft Excel interface with the 'Text Import Wizard - Step 1 of 3' dialog box open. The wizard is configured to import data from a text file as 'Delimited'. The preview shows the following data:

1	#DataThief E:\3870Fall2010\3870 Lectures F2010\PHYS 3870 Lecture 7\Parabola.JPG Tuesday 12-Oct-2010 10:09:54 PM
2	1.9536, 7.1207
3	2.9139, 11.3503
4	3.9735, 21.6538
5	5, 34.6413

The background spreadsheet shows the following data in columns A and B:

	A	B
1	#DataThief E:\3870Fall2010\3870 Lectures F2010\PHYS 3870 Lecture 7\Parabola.JPG Tuesday 12-Oct-2010 10:09:54 PM	
2	1.9536	7.1207
3	2.9139	11.3503
4	3.9735	21.6538
5	5	34.6413
6	5.9933	39.5502
7	2.22E-16	0.6726
8	6.9868	55.2215
9	7.9801	89.0543
10	8.9735	100.0171
11	9.9007	151.9979