UseCase.0039 (1.0)

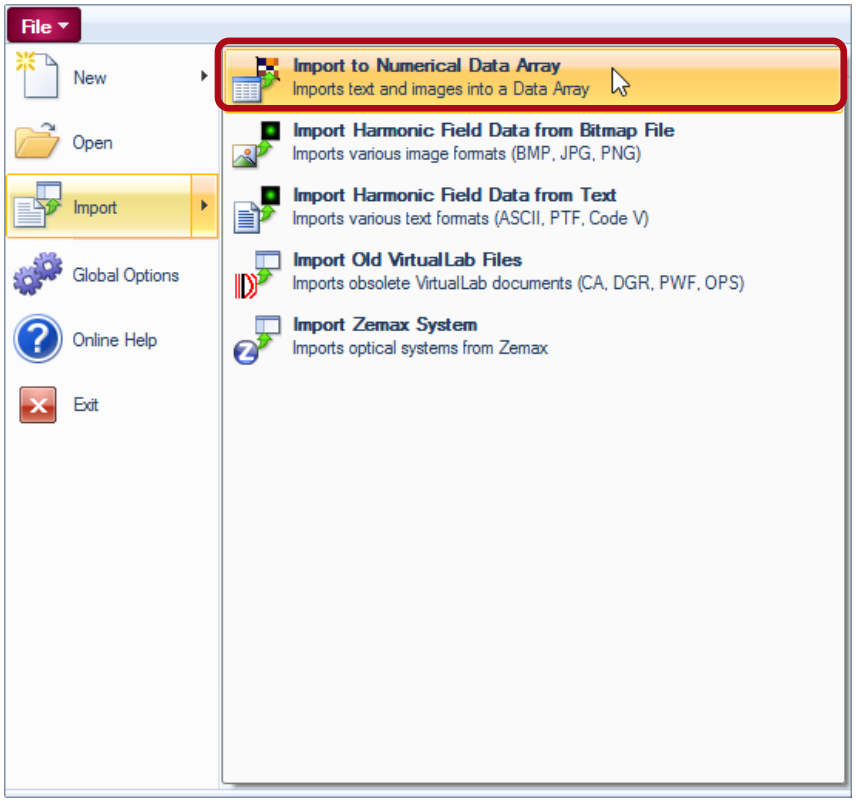
Import of Bitmap- and ASCII-Data

Keywords: import, data array, measurement, image

Description

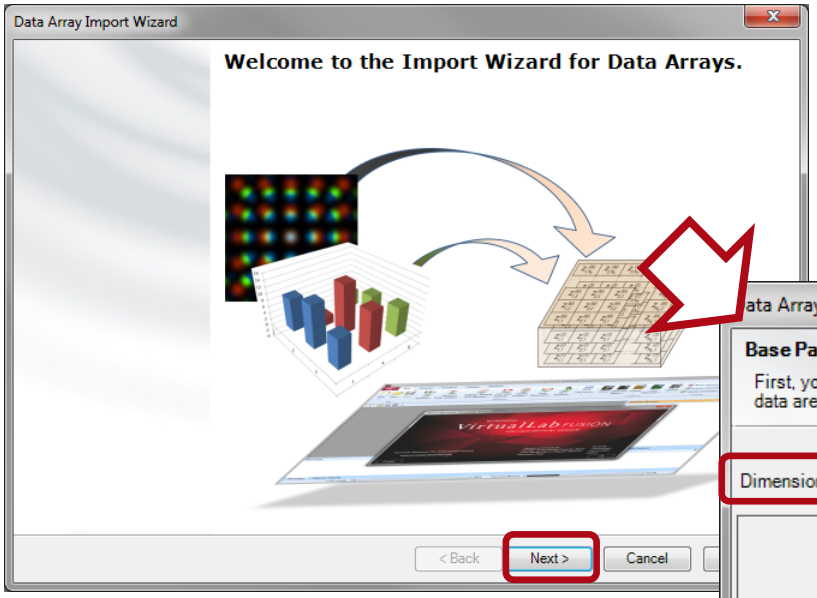
- For several purposes, it is useful to import bitmap data or ASCII data (e.g. originating from measurements).
- This use case explains how to make these kind of data available for further use within VirtualLab.

Opening the Import Wizard

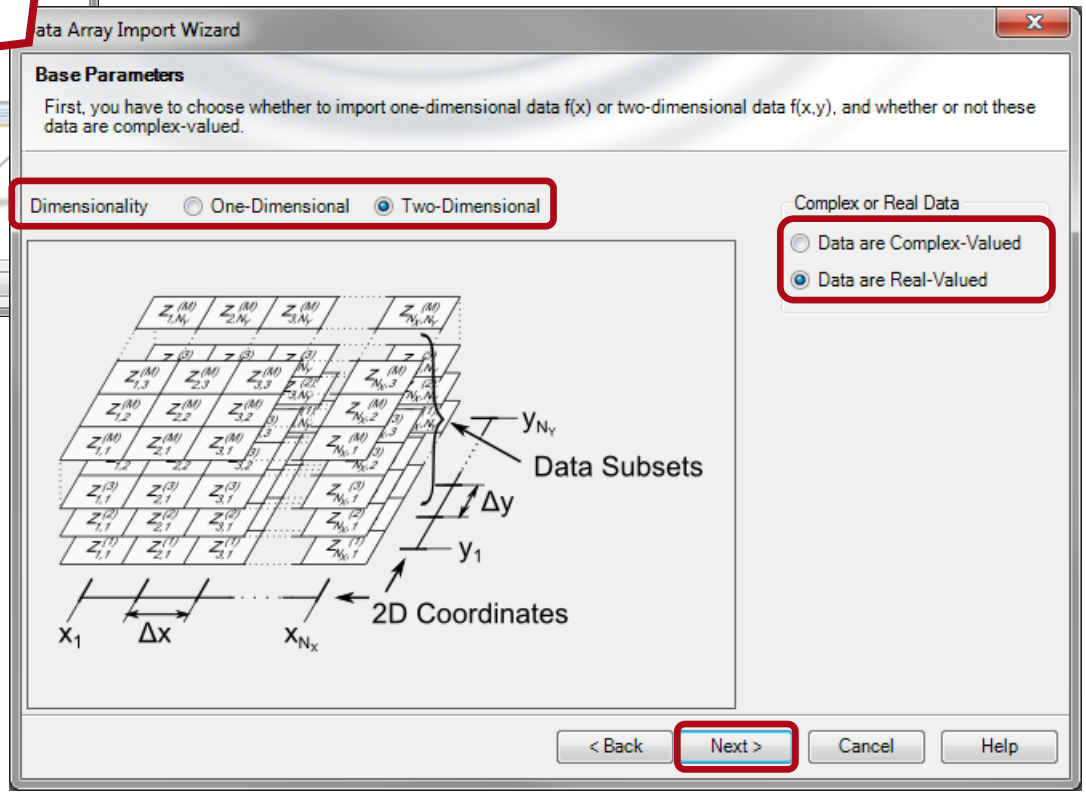


- The most flexible way of handling data in VirtualLab is by using Numerical Data Arrays.
- The import wizard for Numerical Data Arrays is called via the File menu.

1D vs. 2D and Complex vs. Real Valued Data



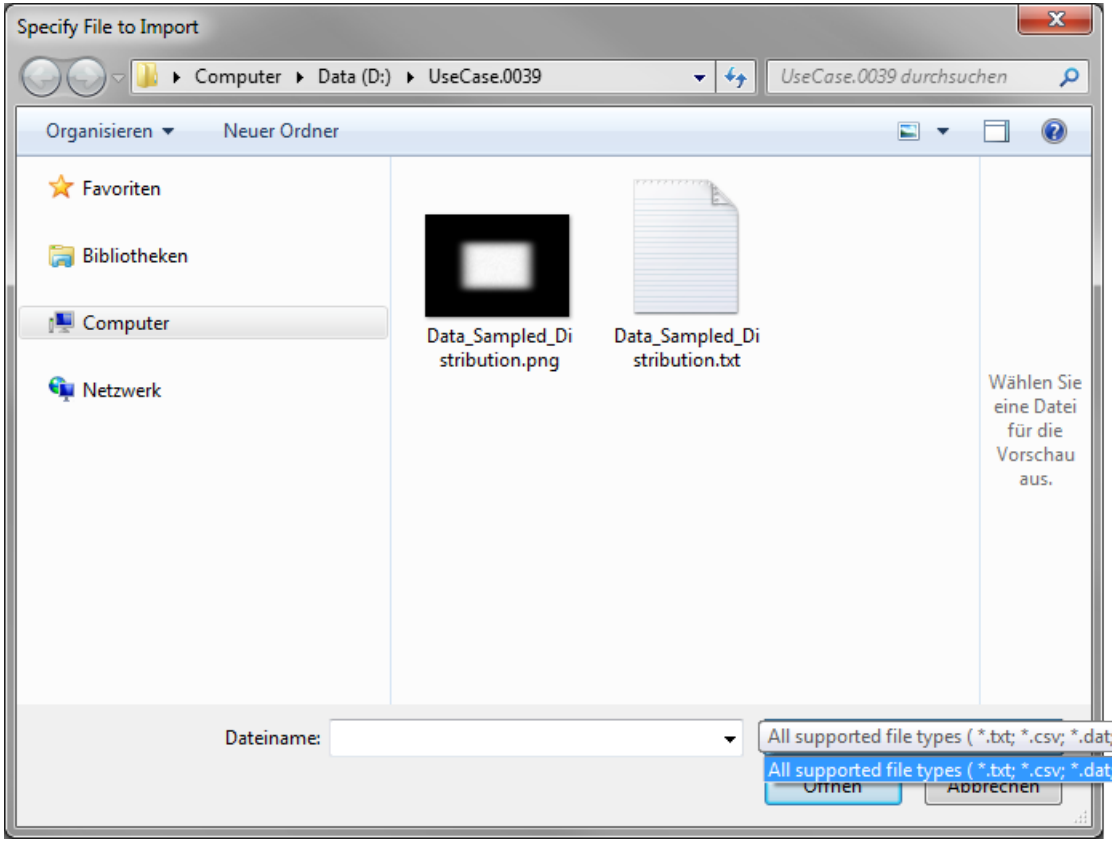
After the welcome…



… in the next page, there has to be specified whether the data are 1D or 2D and whether a complex-valued or a real-valued import is needed.

Actual File Import

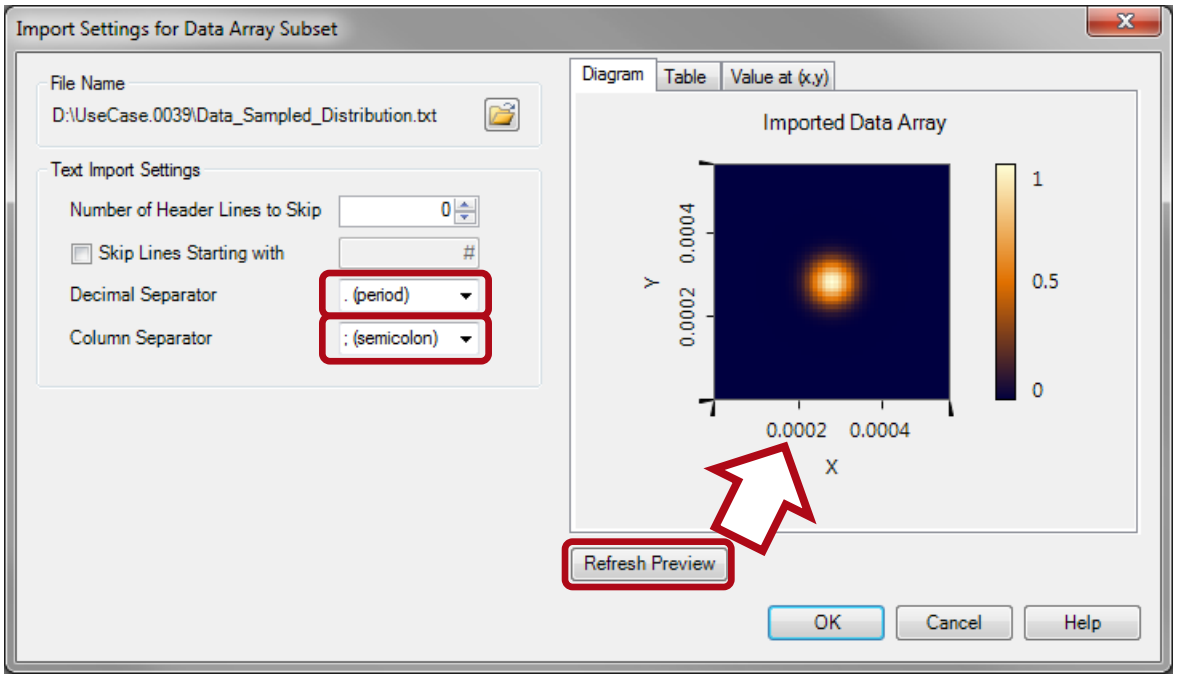
- While switching to the next page, a file open dialog will appear for selecting the data file.

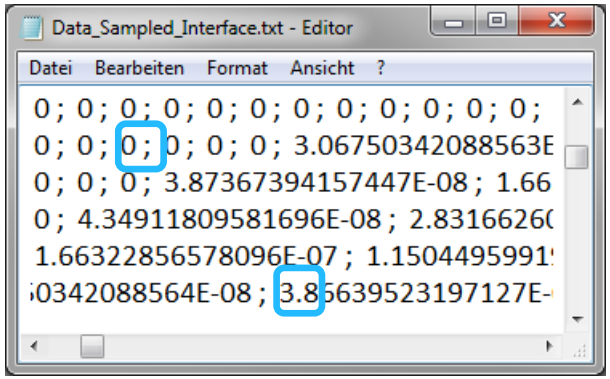


- Several file types containing bitmap data or ASCII data are available for import.

ASCII Import Settings

- After choosing a text file for opening, some more settings for reading the data are to be specified.
- The ASCII separators have to match those in the text file.

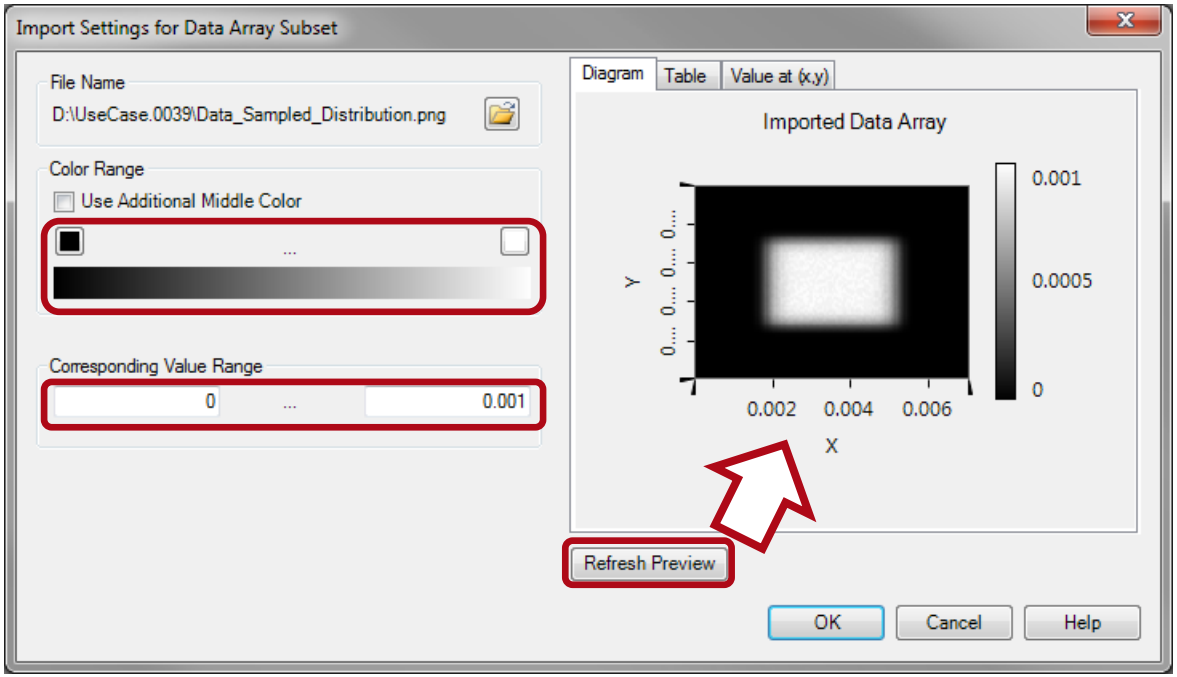




- The preview helps to verify the import result.

Bitmap Import Settings

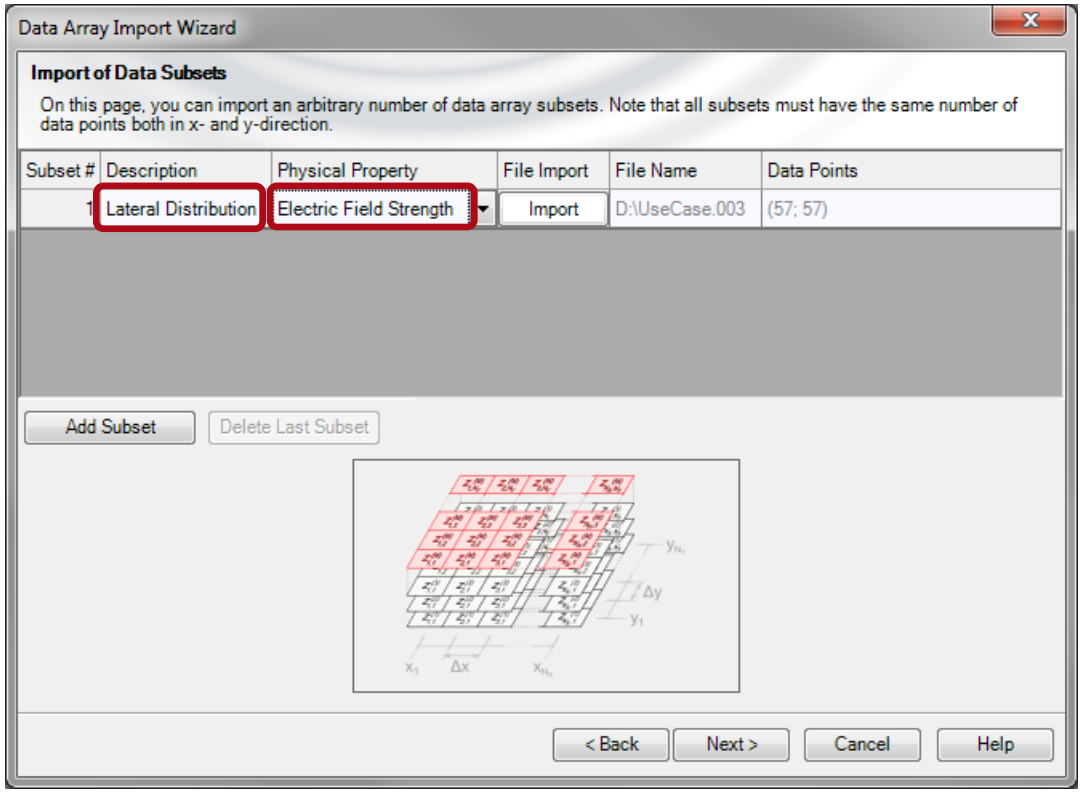
- If bitmap data (e.g. JPG, PNG, BMP) are to be imported, additional settings can be made, too.
- The color range in combination with the value range define the mapping of colors to the imported array values.



- The preview is avaliable too.

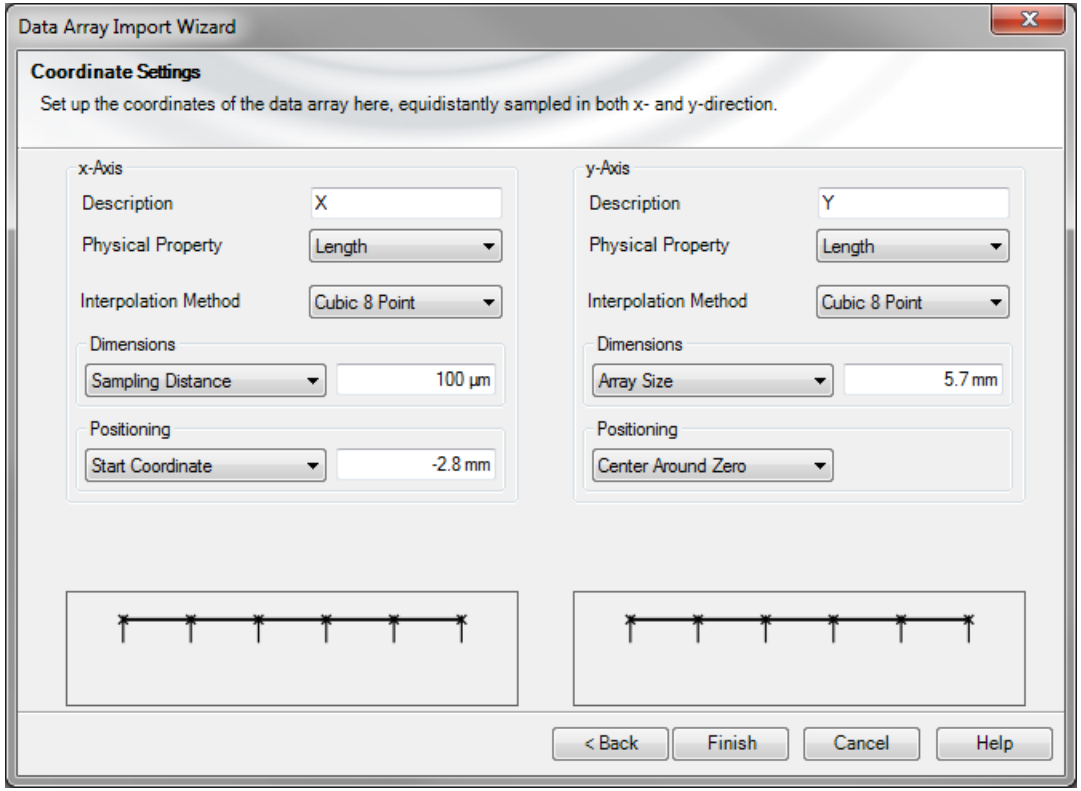
Meaning of the Data

Additional information about the meaning of the imported data can be entered in the current page.



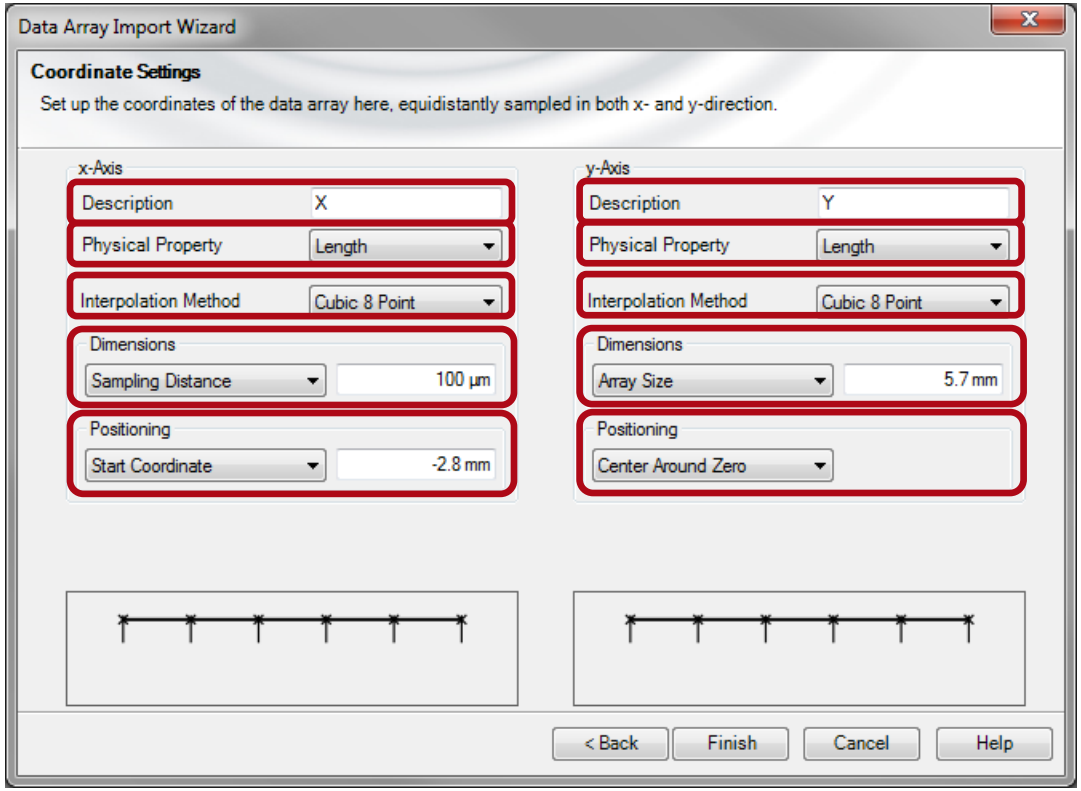
Coordinate Settings I

- Since neither ASCII files nor bitmap files may contain coordinate information for the data points, these have to be specified in a separate wizard page.



Coordinate Settings II

For each of the two axes (in 2D case) or for the one coordinate axis (in 1D case) the following properties can be set:

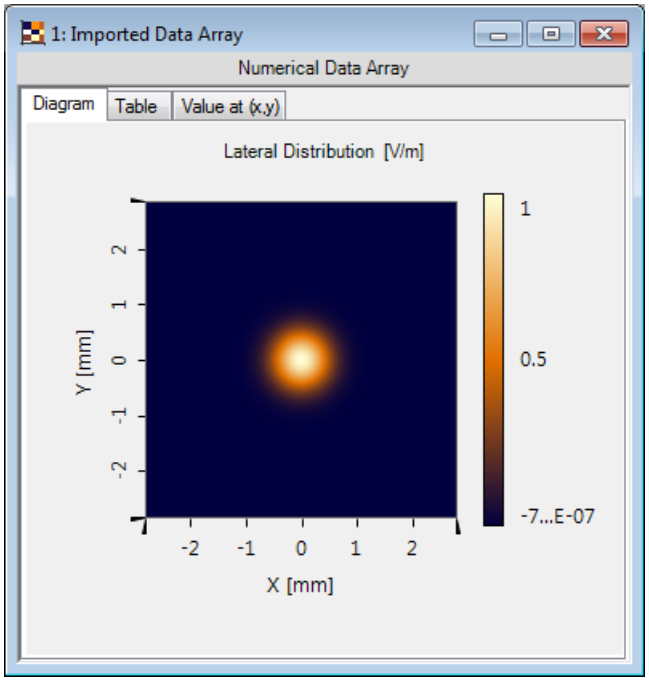


- The label (Description),
- the physical meaning,
- an interpolation method,
- the distance between two adjacent data points or the overall array size,
- the starting coordinate or a flag, indicating that the coordinates shall be centered around zero.

Result

After entering all data and clicking finish, the wizard closes and the imported data is displayed.

Result of ASCII import example:



Result of bitmap import example: