# quick-start guide version 3

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## software installation

The software can be downloaded from `http://ncnr.nist.gov/equipment/he3nsf/data_redux.html` http://ncnr.nist. . 64 bit versions are available for Linux , Windows and Darwin(MAC) platforms. The software is in a ZIP file, which contains a standalone executable, *pbcor64* (add *.exe* for Windows) and help files as PDFs.

The Windows distribution also includes the Visual-C run time library msvcr120.dll appropriate for the version 3 build. Most Windows7 computers will not have this library unless VC is installed. With admin priveleges copy this dll into the Windows/System32 folder. This should allow pbcor64.exe to run. If there is still a problem running the executable, download the VC redistribution package from `https://www.microsoft.com/en-us/download/details.aspx?id=40784` https://www.microsoft.com/en-us/download/details.aspx?id=40784

The Linux and Darwin distributions include two folders that contain binary packages that get loaded by pbcor64, and are required for pbcor64 to start. If you start pbcor, and it gives an error dialog saying it can't load libraries Tclpbs or Bltxs, then you will need to put the included package folders into the /usr/local/lib directory. If for some reason you cannot do this, but can put the folders in some other directory which supports executable shared libraries (has exec privilege) then you need to identify this folder by settinng the environment variable, pbcorDir=YourLibraryFolderPath.

## quick start procedure

The following are the basic steps to use the software to correct polarized beam data on BT7 or MACS for polarization efficiency and transport.

- Start the pbcor executable from the unzip location.
- In the FILE menu click on "select data directory" and navigate the file tree to your data directory
- The data directory must contain the He3-cell-files supplied by support staff for the analysis.
- From the "File Selector" read data files you want to correct. The basic information from each file gets displayed. Separate files into groups of polarized beam points. For example, vertical and horizontal field mode data should be corrected in different groups.
- If available, subtract a constant fast background.
- Select the experiment configuration-file (He3-cellFile), monochromator/filter and beam-monitor options, tolerances, and cross-section constraints. You must constrain any missing flip-states (or set them as zero). Tolerance is important as it determines the grouping into polarized beam datapoints (where all coordinates are equivalent by tolerance except for the spin-flip state).
- Make sure you are in the group you want to solve and press the SOLVE button. You may see a dialog warning that some polarized-beam datapoints could not be completed (missing flip-states). If this is not what you expect, you may have to adjust tolerances.
- This calculates the solution in *.p and *.m files as well as in native file format *.pbcor files. The solution is also plotted.
- In the FILE menu click on "save session".