

Instructions for Installing Programs and Data Files

for the Second Edition of *CPSUP*

28 February 2023

CPSUP references 382 Lawrence-generated programs and data files. These files are provided in two equivalent zipped files that are downloadable from the section **Download Program and Data Files** at the URL psrc.aapt.org/curricula/cpsup.

Properly installed in the user's system, these files will be distributed in the directory *CPSUP* with subdirectories as shown in Table 1. *CPSUP* is a (first-level) subdirectory of a directory chosen by the user, call it $\$USERCHOSEDIR$. It can be installed anywhere in your system but all authorized users must have both read and execute but not write access to all the files in this subdirectory. In *CPSUP*, the full path to the directory $\$USERCHOSEDIR/CPSUP$ is referred to as $\$HEAD$.¹ To install these files in a Windows system,²

1. Download one of the two zipped files identified as **Files for CPSUP**. Once downloaded, the files will be named (*CPSUPx.zip* and *CPSUPx.7z*), where *x* will be a number. The file can be stored anywhere, probably most conveniently in the **Downloads** folder, and may be deleted once the installation is complete.
2. Create the directory $\$USERCHOSEDIR$ or, if the directory to be used exists already, make sure there is not already in it a subdirectory named *CPSUP*.
3. Right-click on the file *CPSUPx.zip* or the file *CPSUPx.7z*.
4. In the window that opens, move the cursor to 7-Zip and select "Extract files..."
5. In the pop-up window that appears,
 - In the box labeled "Extract to;" adjust the folder to be $\$USERCHOSEDIR$. The full path must be provided. Clicking on the (unlabeled) icon "." to the right of the this box brings up a window in which you can browse to find the directory $\$USERCHOSEDIR$ and then click "OK" in that window.
 - Leave the unlabeled check-box unchecked.
 - Select "Full pathnames" in the box labeled "Path mode."
 - Leave the check-box labeled "Eliminate duplication of root folder" unchecked.
 - Select "Ask before overwrite" in the box labeled "Overwrite mode." If you are using an existing folder as the destination, this choice is a precaution; if you are using a newly created folder, which will be initially empty, the choice does no harm.
 - Leave the box labeled "Password" empty and the check-box labeled "Restore file security" unchecked.
 - Left-click on the button labeled "OK".
6. (optional) Delete the files *CPSUPx.zip* and *CPSUPx.7z*.

¹In the LINUX system in the Lawrence University Department of Physics, *CPSUP* is a (first-level) subdirectory in the directory */apps* on the server for a multi-client network; the directory $\$USERCHOSEDIR$ is */apps* and is NFS-mounted on all satellite nodes, and $\$HEAD = /USERCHOSEDIR/CPSUP = /apps/CPSUP$. Users at the local site must be informed of the actual directory $\$HEAD$ in a locally produced *Local Guide*. The source and formatted files for the Lawrence *Local Guide* are included elsewhere in this site and can be edited to produce a version appropriate to the user's site.

²Specifically Windows 10. Procedures will be similar on other systems.

Table 1: Directory structure for Lawrence-supplied files to accompany *CPSUP*.

<code>\$USERCHOSENDIR/CPSUP = \$HEAD</code>	
<code>cc</code>	39 files
<code>data</code>	2 files
<code>fortran</code>	38 files
<code>idl</code>	53 files
<code>lsode</code>	46 files
<code>maple</code>	2 files
<code>mathematica</code>	2 files
<code>matlab</code>	48 files
<code>maxima</code>	3 files
<code>mudpack</code>	16 files
<code>octave</code>	49 files
<code>python</code>	60 files
<code>tex</code>	24 files
<code>CPSUPfiles.xlsx</code>	Single EXCEL spreadsheet
<code>README-FILES.pdf</code>	Formatted installation instructions
<code>README-FILES.tex</code>	Source file for installation instructions

Once these steps have been executed, the directory `$USERCHOSENDIR` will have a subdirectory named `CPSUP`, which itself will contain the subsubdirectories as laid out in Table 1. The directory `$USERSHOSENDIR/CPSUP` will also contain the EXCEL file `CPSUPfiles.xlsx`³ and the files `README-FILES.tex` and `README-FILES.pdf`.⁴

You may wish to

7. Delete any subsubdirectories in `$HEAD/CPSUP` that relate to programs you will not be using in your environment.
8. *Copy*—not *move*—the files in `$HEAD/CPSUP/idl` into the directory `$IDLHEAD/lib/lu` so that IDL will be automatically able to find these files when specified without a full path.⁵
9. Copy files for each program into a directory in the search path for that program (or add the directory `$HEAD/CPSUP/ProgramName` to the default search path in that program).
10. Make sure all files have read and execute permission for all authorized users.

³This file lists all of the files in the distribution. Each file is identified by the program and by the chapter in which it is introduced. Each pair of columns is sorted alphabetically by file name but, using the sort feature of EXCEL, can alternatively be sorted by chapter.

⁴These two files contain the L^AT_EX source code and the formatted file for these installation instructions.

⁵Here, `$IDLHEAD` is the directory at the head of the IDL distribution in your system.