In this section we're going to review installation of HYSPLIT on various computer platforms. HYSPLIT is a collection of programs that can be used to calculate trajectories or pollutant dispersion patterns. HYSPLIT can be run from the command line or you can download some auxiliary software from external sources that would complement the HYSPLIT installation and then you would have available to you a graphical user interface, as well as some post processing programs that you can use to manipulate the graphics that HYSPLIT generates.

The, each of the sections in the tutorial, well most of the sections, will have an icon on the top that points you'd to a script, a LINUX script or a Windows batch file that you can run to do that section, or if you want to look at a different way, it is a step-by-step instruction for how to run HYSPLIT from the command line. So in any event let's go on and look at installing HYSPLIT on the Windows PC.

Now as I said, it can be run directly from the command line, but there are other programs that you can install, that you can obtain and install to make it easier to run. And most of these will give you an option for installing either a 32-bit or a 64-bit download. HYSPLIT is only provided for a 64-bit operating system, so therefore we recommend that you only download the 64-bit versions. But if you don't know what operating system you have, you can go to the control panel, and it's a little bit easier to find these things through the icons, and go to the system tab, and you can see here that this particular computer is running windows 10, it is a 64-bit operating system, and it's a

Pentium dual core 3.2 GHz.   It is an older system.   It is the one that will be used for all of the computational examples in this tutorial.

So as I mentioned there is other software available that we recommend you download and we will be using it in the tutorial sections.   So we will be doing really all of the examples through the graphical user interface.   So to run the graphical user interface you really need to have this TCL/TK interpreter.   And they are several available, we recommend this particular one that we are using, and they're currently at version 8.67, and this is available here, so you would just download and follow the installation prompts.   We recommend that you select all the default options rather than installing it into some other custom directories that you may decide.   So this this is the software that supports the graphical user interface.

Now the HYSPLIT post-processing programs generate Postscript files as their native output format and depending upon your platform you may or may not have application software to look at Postscript files.   It is a vector format graphical language and there is a software called Ghostscript that will convert or will read, will let you read the Postscript files and manipulate them.   It is also command-line face but it has a graphical user interface as well and they are currently at version 9.23, and there are as I mentioned 32 and 64-bit available, so you would select most likely the 64-bit version here.   I'm staring at downloaded, which I actually don't want to do.   You would do the download and then do the insulation.

Now in windows to view this Postscript file, it's a little bit more convenient if you have a viewer that has its own graphical user interface and we would recommend Ghostview. And this package works in conjunction with Ghostscript, so Ghostscript should be installed first before you install Ghostview and this will then permit you to click on the Postscript file that HYSPLIT generates and it would open up in the Ghostviewer.   And we would recommend the GSView version 5.

Now there, once you've installed all these, there are optional, you know in a sense up to this point, this'll make your life easier to have all this installed.   Now sort of optionally you can have also ImageMagick, which is software that will convert one graphical format to another graphical format.   So for instance, the PostScript files to other graphical formats, and again it also requires Ghostscript to read the Postscript files, and we would send you here to download and install that.   One recommendation is when you do install ImageMagick that you, when he gets to the point of asking you this question, do install the legacy utilities.   The HYSPLIT graphical user interface is designed to work with the older version of ImageMagick, so that is the simple convert command.   So to make sure you select that option.

Optionally there are other viewers available when you run some of the HYSPLIT post-processing programs, you can convert them to some GIS formats.   For instance Shapefiles, and there are various programs available to

display Shapefiles.   ArcExplorer, for instance, or some other open source packages, in this case MapWindow. Also it's possible to convert the HYSPLIT output, we do provide software to convert it for display in Google Earth. And lastly there is a software package, a GIS package that has been developed, that is intimately linked with HYSPLIT in that it will let you display trajectories and concentration output from HYSPLIT directly as well as the meteorological data that HYSPLIT uses.   So this is a nice package, but we're not going to be addressing it explicitly in the tutorial.   But that is something that you can go through on your own.

And lastly there are a couple items that would make it much easier for you to work the tutorial.   One, HYSPLIT generates a lot of output files, not all of them end in a three digit suffix, so that the operating system may ask you to select a program to open those files with.   So it would be much easier if you had Notepad on your desktop okay, and to get that on your desktop, because then you can just drop the file into the icon to open it, you should go to the Windows directory, and find the program, just under Windows, and it should be Notepad.   Here we go and just right click on that, and you can send, let's try that again, right click on that, and you can send it to the desktop and create the shortcut.   Secondly if you are going to be doing the work from the command line, it would be also good to have the command processor, the command line on the desktop as well.   So you go to the Windows system32 directory and find the command-line application which is CMD, here we go, and also you can do the same thing,

that is send it to the desktop to create a shortcut.

The last thing as I mentioned that not all files that HYSPLIT generates have a three digit suffix, and therefore it's sometimes difficult to distinguish them from other files, if the operating system hides the suffix.   And to make sure that the known file types are shown, you can go ahead and go to the Control Panel, and back into the file explorer options here, and select on View.   What you want to do is uncheck this button here, hide extensions for known file types.   You want to see the three digit extension for all file types and this'll make it easier to recognize differences between files that may have the same base name.

And that is really all that you need to do to install HYSPLIT.   I skipped over the HYSPLIT installation itself, you can download either the trial version or the registered version.   Both will work with the tutorial.   The only difference between the two is that the registered, well I should say the trial version will not work with forecast meteorological data and during the tutorial only archive data, archive meteorological data will be used for the examples.

And this concludes the HYSPLIT installation.