

Raspberry Pi Manual

To begin gathering thermocouple data ensure that the Raspberry Pi power switch is on. If you are accessing the Raspberry Pi from a network other than IllinoisNet, a VPN connection to IllinoisNet must be turned on. Then log into Remote Desktop Connection application on your personal computer that comes standard with Windows operating systems (or the Microsoft Remote Desktop Connection application on IOS systems). Type in the Raspberry Pi IP addresses (10.194.147.106) into the computer line and the Raspberry Pi username (pi) into the username line. This will open a screen to login to the Raspberry Pi which has the same username and password (123) credentials. Next, open the terminal of the Raspberry Pi and type "screen" (this will run a screen program allowing the remote desktop to close and still run the data program). Type "python grabserial | ts > ExperimentData.csv" (this will store the serial data in a csv format, the csv file name can be changed in this line to anything). To end the data collection type control C into the same line that started the program. Next, log into the WinSCP application on your personal computer and type in the same IP address and credentials as before to connect to the Raspberry Pi. The files stored on the Raspberry Pi will be shown on the right and your personal computer files will be shown on the left. Any experimental data csv files can then be directly dragged from the right screen (Raspberry Pi) to the left screen (your personal computer). These files can then plotted using the Python codes described below.