**Scans with Philips X’PERT Data Collector**

1. Start **Data Collector** from desktop and log in
2. Click **Instrument->Connect** on the top menu bar to go online with the diffractometer. In the pop dialog box, choose ‘*Configuration1*’ and the diffracted beam optics you are going to use (Rocking Curve or Triple Axes)

Click **OK**

Program will establish communication with instrument and display current positions in a window. The control panel is shown in a window on the left of the display. To change settings of the instrument (position, x-ray power, incident beam optics and diffracted beam optics), click on the appropriete tabs in the window

1. To do manual scans use **MEASURE --> MANUAL SCAN**
2. To do program scan, first edit your program file by go to **FILE -->NEW PROGRAM** (or open for existing programs). Choose scan type (relative is the default, which is the old MRD mode. Scanning range will be defined by current position – ½\*range To current position + ½\*range), set up scanning parameters, then close window and save the program file.
3. Go to **MEASURE -->PROGRAM**, and choose the program file you want to run, select correct folder to store data and enter data filename and other relevant information. ClicK **OK** to start

Many features of the program are self-explanatory. Use the help menu in the program pretty teaches you how to do everything. Feel free to explore by yourself or talk to Youli or Mario if you have a specific question. You should read the manuals that are located near the machine to get more detailed information.

If you are having trouble loggin in, see Youli for help.

**Answers to Frequently Asked Questions (FAQ’s)**

1. **How do I change my password?**

Choose CUSTOMIZE -> USERS

Note: The new X’PERT line of Philips can only be accessed by authorized users. User accounts (username and password) have been established based on current users’ list. You are advised to change your password to prevent unauthorized access.

1. **How do I move the diffractometer to a specific position?**

Click on 'Positions' in the control window and a pop window will appear. In the new pop window you can enter the positions or let computer figure out by choosing a UNIT CELL and type in a HKL. Click APPLY to start moving. OK to close window.

1. **Where are the angular positions displayed?**

All current angular positions and count rate are displayed on a bar at the bottom the window

1. **How do I move the diffractometer to a position marked in a scan?**

With cursor in the plot window, hold down RIGHT mouse button and choose MOVE MODE. Then depress and hold left mouse button, a vertical line appears in the window. Move the line to the position that you want and release mouse button. Diffractometer will move to that position. Or choose the 'Peak Mode' and click on 'Move to' button once peak position is highlighted

1. **How do I change optics from Receiving Slit (Rocking curve)to Triple Axes?**

Click on 'Diffracted Beam Optics' tab in the control window. Select the proper optics, then right click and choose 'Activate'

1. How do I enter miscut corrections and re-calibrate angles?

You can reset current diffractometer angles by choosing Tools --> SAMPLE OFFSETS

1. How do I enter unit cell parameters?

Choose CUSTOMIZE --> UNIT CELLS

1. **How do I control scaling in my scan data plot window?**

Click on the AXES box below the plot window and choose the scaling method you want

1. **Can I interrupt a scan?**

YES. Click on the STOP button on top of the scanning window.

1. **Can I do batch scans?**

YES. Just choose GENERAL BATCH when editing your scan program file. Insert series of programs to run

1. **How do I process and plot my data?**

Data processing and plotting are performed in X’PERT Epitaxy, which can be run in parallel with the Data Collector. Consult the Epitaxy users manual for instructions. Most functions are self-explanatory.

1. **Where are my data stored?**

The data and program files are stored in user folders under c:\X'pert Data. Make sure to select the proper folder for yourself. Create a new folder if one does not exist.

1. **How do I transfer my data to other computers?**

You can use FTP or a USB memory stick. p>