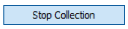
Afterpulse

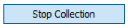
- Entire procedure takes place in the same hour, starting at the top of the hour
- Stop collection with the SigmaMPL software just after the hour mark
  - The **Stop Collection** button 

 is on the **Hardware** tab 

- Place the cover on the laser
- With the **cover on, laser on, shutter on** run collection for approximately 30-35 minutes
- Stop collection and close completely out of SigmaMPL program
- Find file created for the time frame and modify the file name to xxx.**ap**.mpl
  - File will be located in the data folder and named YYYYMMDDHHMM.mpl
  - Where YYYY is year, MM month, DD day, HH hours, and MM minutes
  - Example: 202205190145.mpl would be renamed to 202205190145.ap.mpl
  - Data Folder Path:

    `C:/Program Files (x86)/SigmaMPL/DATA/`

Dark Counts

- Ensure collection is off from the end of afterpulse procedure (SigmaMPL may still be closed at this point)
  - The **Stop Collection** button 

 is on the **Hardware** tab 

- Turn the **shutter off** on the Photonics controller
  - This button is located physically on the controller beneath the Lidar
- Allow the laser to sit for approximately 10 minutes to allow for the residual photons to dissipate
- Open the SigmaMPL software if not currently open 

- With the **cover on, laser on, shutter off** run collection for approximately 10 minutes
  - The **Start Collection** button is on the **Hardware** tab 

- Stop collection and close completely out of the SigmaMPL program
- Find file created for the time frame and modify the file name to xxx.**dc**.mpl
  - File will be located in the data folder and named YYYYMMDDHHMM.mpl
  - Where YYYY is year, MM month, DD day, HH hours, and MM minutes
  - Example: 202205190145.mpl would be renamed to 202205190145.dc.mpl
  - Data Folder Path:

    `C:/Program Files (x86)/SigmaMPL/DATA/`

Completion

- With **cover off, laser on, shutter on** restart normal collection at the top of the hour
- Ensure that data is transferred at 5 minutes after the hour

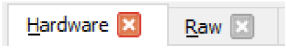
Notes

Afterpulse raw data should show a reading at the lowest level (cover on), with no higher altitude counts.

Dark counts should have no reading at all due to shutter being closed.

Opens the SigmaMPL program

Opens the SigmaMPL directory

If the **Hardware** tab 

is not open it can be opened from the **File** menu by selecting **Real Time Hardware Control**.