PMT _____ **HV board** _____ **HV module** _____

Data directory name _____

Your name _____

Gain calibration   Date _____ Time _____ Room temperature _____

   Settings

      ☐ Helmholtz coil   X 18.0 V   Y 12.0 V

      ■ Low voltage _____

      ■ Current when $V_{\mathrm{ctrl}} = 3.5$ V _____

      ☐ Filter   1 % + 0.1 %

      ☐ Intensity   5.8

      ☐ Frequency   100 Hz

      ☐ Resolution   500 ps

      ■ Horizontal range (MUST include -100 ns $- \sim 150$ ns) _____

      ☐ Trigger   low enough

      ■ Scan control voltages (   ) (   ) (   ) (   )

   Analyses

     Gain scan

         ■ Gate start time _____
         ■ V_{ctrl} @1e7 gain _____

     V_{ctrl} @1e7 gain

         ■ SPE mean charge _____
         ■ SPE peak height _____

Linearity & afterpulse   Date _____ Time _____ Room temperature _____

   Settings

      ☐ Helmholtz coil   X 18.0 V   Y 12.0 V

      ■ Low voltage _____

      ■ Control voltage (MUST V_{ctrl} @1e7 gain) _____

      ■ Current _____

      ☐ Intensity   14

      ☐ Frequency   10 Hz

      ☐ Resolution   1 ns

      ☐ Horizontal range -20 μs $- 20$ μs

   Analyses

      ■

2D scan   Date _____ Time _____ Room temperature _____

Settings

☐ Helmholtz coil   X 18.0 V   Y 12.0 V

■ Low voltage _____

■ Control voltage (MUST V_{ctrl} @1e7 gain) _____

■ Current _____

☐ Filter   1 % + 1 %

☐ Intensity   8.5 (Pulse height should $\sim$ 600 mV)

☐ Frequency   100 Hz

☐ Resolution   500 ps

■ Horizontal range (MUST include -100 ns $- \sim 150$ ns) _____

■ #waveforms at each point _____

Analyses

■

Dark rate

Put into freezer   Date _____ Time _____

Start taking data   Date _____ Time _____ Freezer temperature (MUST $\sim -30\,°\text{C}$) _____

Take out from freezer   Date _____ Time _____ Freezer temperature _____

Settings

■ Black tape   Yes   No

■ Low voltage _____

■ Control voltage (MUST V_{ctrl} @1e7 gain) _____

■ Current _____

☐ Resolution   2 ns

☐ Horizontal range   -20 ms – 20 ms

☐ Vertical range   2 mV/div

☐ Trigger   2 mV

Analyses

■ #files (MUST $\geq$ 500) _____

■ Gaussian fitting range _____

■ SPE mean charge _____

■ Dark rate for 0.25 PE threshold and 100 ns deadtime _____

☐ Put the json file into database

☐ Print out the plots