Radon Emanation Analysis Notes: Run 733

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First Analysis

Plots will be stored at $RNDATA/Run_733/B

Visual Inspection of Raw Data   Upon first inspection, a pattern of periodic gain shifts is apparent in the data. Appeas to have ~24h period. It is obvious where the files were overwritten due to run 734.

Hours Removed: [(0,3), (90,105), (164,172), (290,292)]

Gain Correction Settings: [(G, 0, 509,875), (1000, 5.3, 90, 2)]

Note: The first three hours of this run were overwritten by run 734. This casued a loss of data for those three hours and also resulted in anomalous data outcomes for the real time and live time in the fourth bin (aka the first data bin of this run). To alleviate this, the first three hours were deleted and a BASH script was written that renamed the SPE files to start again at hour 4 (hour zero of available data).

Second Analysis

Plots will be stored at $RNDATA/Run_733/C

Hours Removed: [(86,101), (148,172), (286,288)]

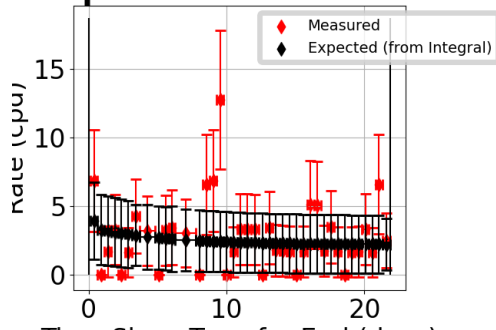**Gain Correction Settings:**   [(G,0,483,875), (1000,5.3,90,2)]

NLL Settings: [(0.001,10.0,0.001,10.0,0.001), (0,20230915 16:55,20231013 13:03,20231013 18:03)]
   No Background Runs

Analysis of Plot Data

Rate vs Time shows anomalous bins near the 10-day mark; 18 day mark. However, Po-210 does not follow the same pattern. The measured values follow the expected trend otherwise. The spike occurs in both variable Polonium isotopes around the 10-day mark, so it can be assumed that there may have been noise taht interfered with the data taking in that area. However, only the Po-218 shows a spike at day 18, so that could be noise or po-210 leakage.

compared to Measured 214 I

compared to Measured 218 I