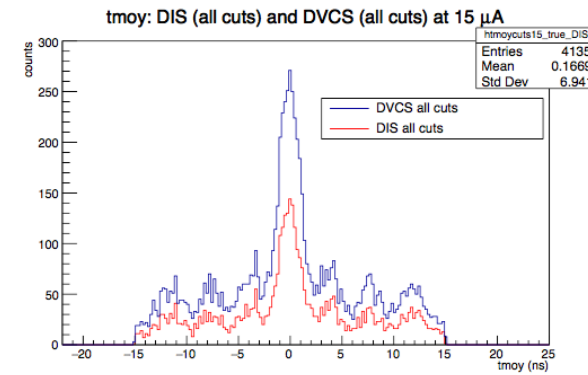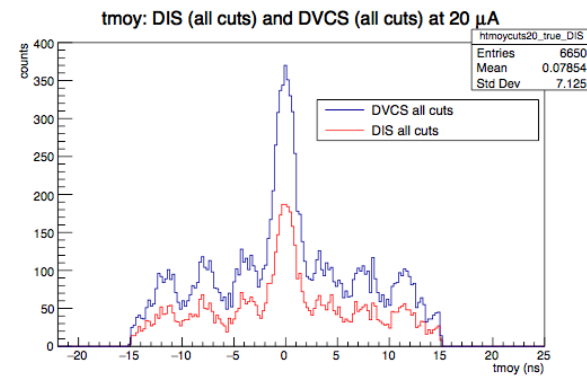Figure 3: tmoy spectra with DIS and DVCS cuts overlayed for 10, 15, 20 μA.

$$Real\ Coincidences = Integral\ over\ main\ coincidence\ peak\ or\ Total - Integral\ over\ accidental\ 4ns\ peak$$
$$(4)$$

$$Integral\ over\ main\ coincidence\ peak\ or\ Total = Signal + Background \quad (5)$$

$$Signal/Total = \frac{Real\ Coincidences}{Integral\ over\ main\ coincidence\ peak}$$

Current (μA)	S2m&&Cer LT	Rate: no cuts	DIS Normalized Rate	DVCS Normalized Rate	DIS $\frac{signal}{total}$	DVCS Normalized Rate corrected
10.61	0.985	9.27	3.422	5.212	0.7889	4.111
15.32	0.976	10.26	3.450	5.615	0.7470	4.194
20.53	0.965	11.26	3.449	5.936	0.6507	3.863

Table 2: Table summarizing the different rates and results from our studies so far. DIS rates had tracking (ntr) & TDC & Cer & trigPatW&0x00080 cuts applied, DVCS rates had tracking (ntr) & TDC & Cer & trigPatW&0x00100 cuts applied. Rates were normalized with the S2m && Cer livetime and have units ($\frac{Hz}{\mu A}$). The DIS signal/total ratios result from taking into account the DIS accidental rates and then applied to get the DVCS corrected rates.

$$DIS\ signal\ to\ total\ ratio\ for\ each\ \mu A = \frac{Real\ Coincidences}{Integral\ over\ main\ coincidence\ peak} \quad (7)$$

$$DVCS\ normalized\ rate\ corrected = \frac{DVCS\ rate\ (Hz) \times DIS\ signal\ to\ total\ ratio}{I\ (\mu A) \times S2M\&\&Cer\ LT} \quad (8)$$

$$DVCS\ corrected\ normalized\ rate\ at\ 10\ \mu A = \frac{54.47\ \frac{Hz}{\mu A} \times 0.7889}{10.61\ \mu A \times 0.985} = 4.111\ \frac{Hz}{\mu A} \quad (9)$$

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