Example of ECLOUD Model Parameter Correlations: Amorphous Carbon

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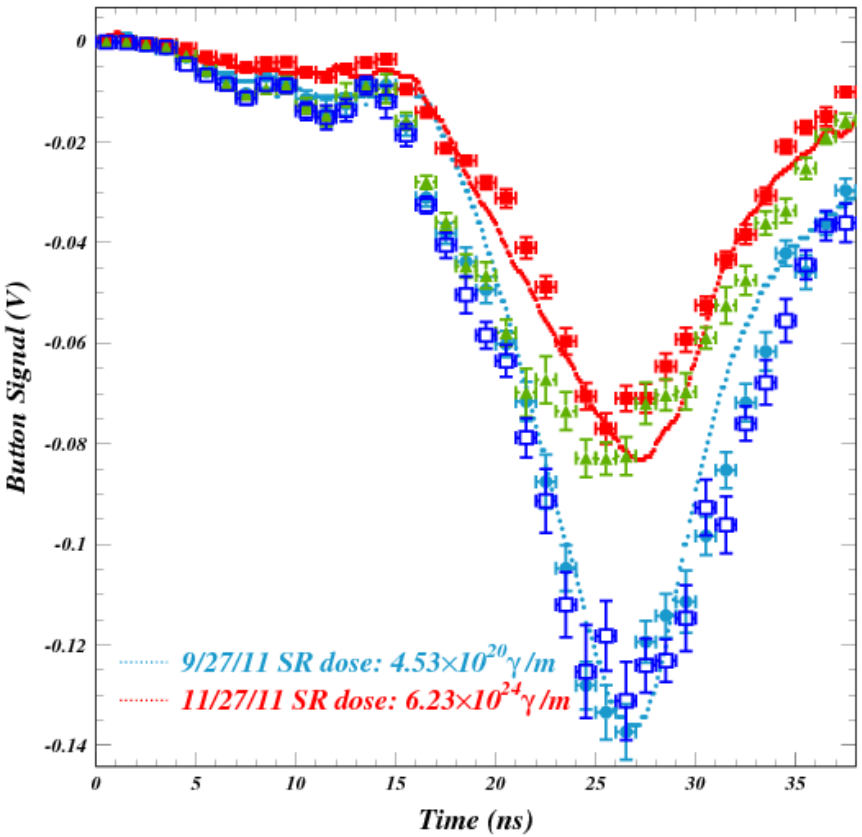
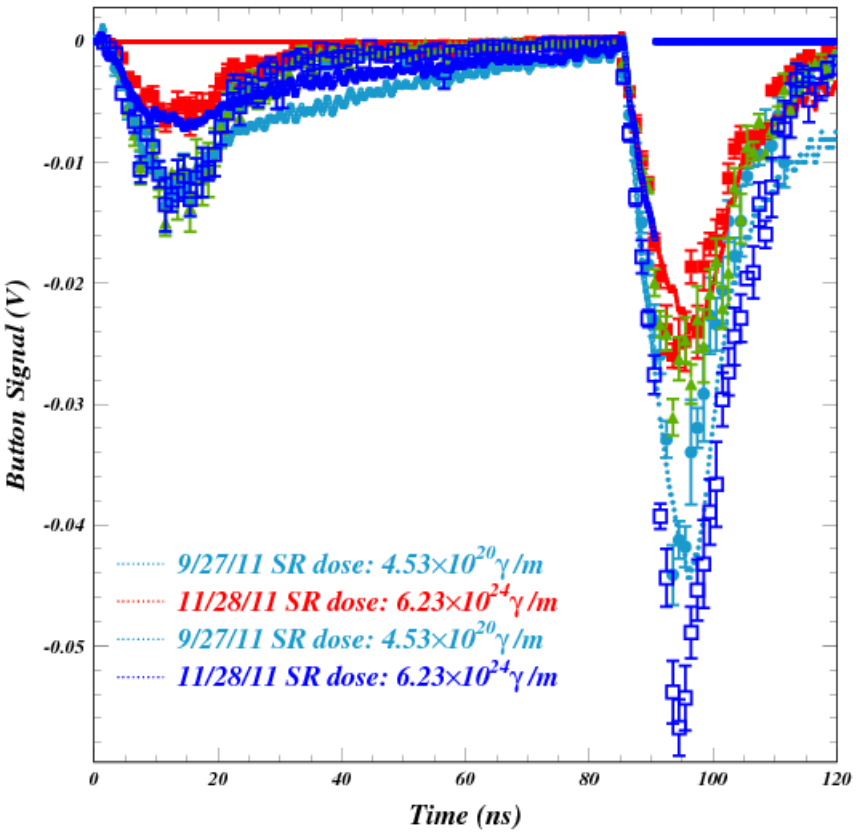
Amorphous Carbon Conditioning Study for IPAC12
5.3 GeV 3 mA e+

Cyan: Accurate model for unconditioned a-C **Red: Reduce QE 50%** **Green: Reduce true secondary yield from 0.75 to 0.4**

Blue: RFA best fit – SEY values TS 0.55 RED 0.2 Elastic 0.29



Blue: Model for unconditioned a-C with elastic yield 0-->0.2



The SPU signal for a second bunch trailing the lead bunch by 84 ns is inconsistent with an elastic yield of 0.2. The model parameters for true secondary yield and elastic yield are uncorrelated in the time-resolved measurements.