Option II – QTC (external TDC)

Preamplifiers (2 identical) linear amp/shaper

Gated Integrator Buffer Discriminator 2

Gate Gain stage Discriminator 1

Threshold Hysteresis HITSUM Output

A Channel

Outputs to TDC (QTC – width encodes charge)

Integration time: (400ns?)

Rundown time for 12 bit res using 300ps TDC is ~ 1.2us

Custom CMOS IC (shaded area)