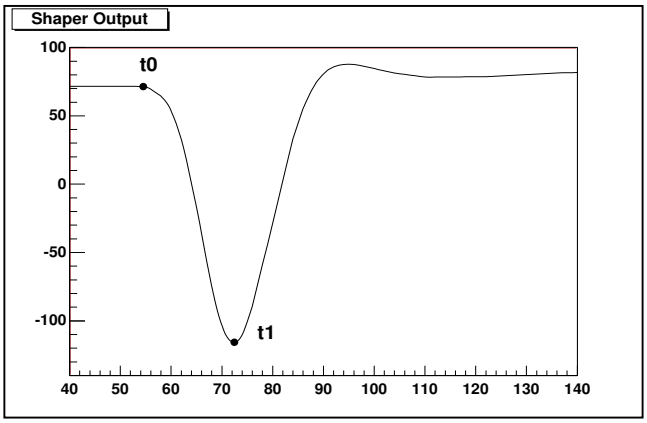
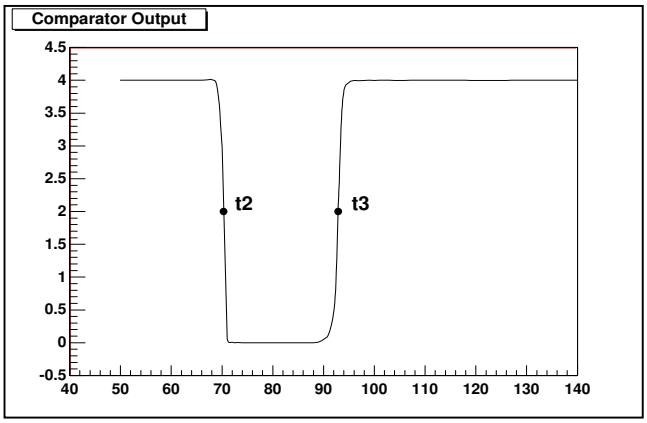
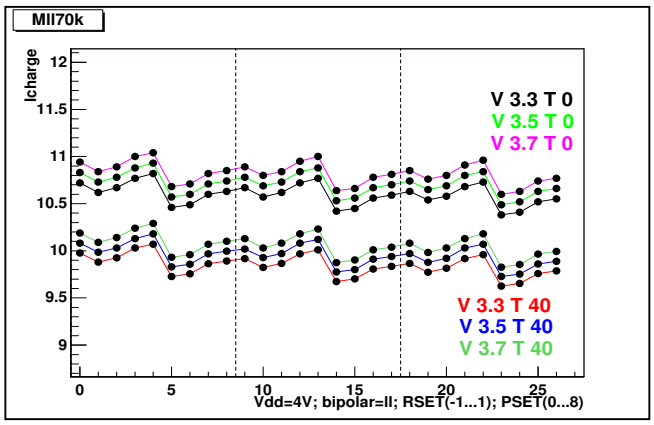
Parametric simulation of the ABCD FE without TRIM DAC's (ABCD2NT)

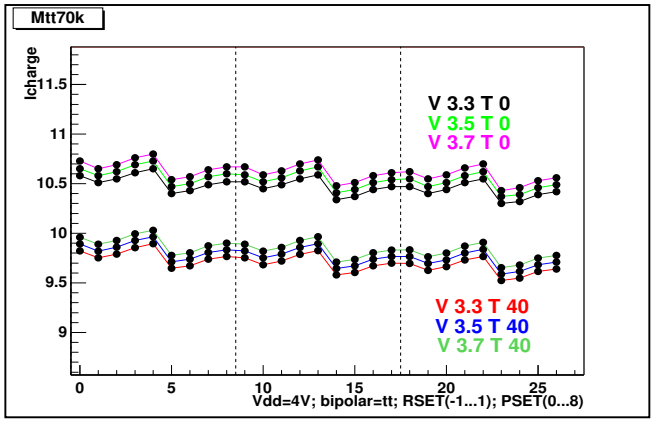
Definition of the peaking time (PkTim), DELAY and WIDTH

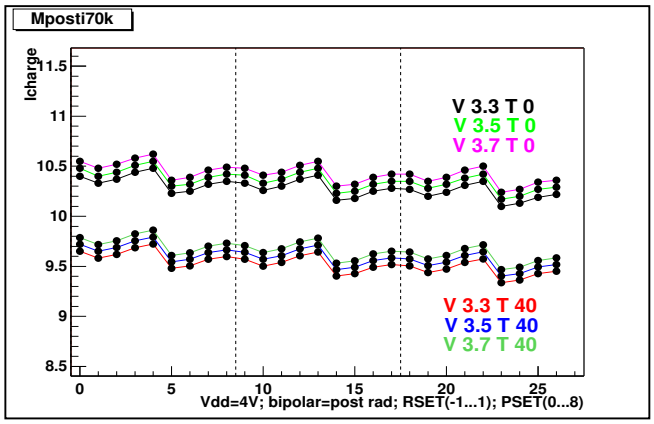


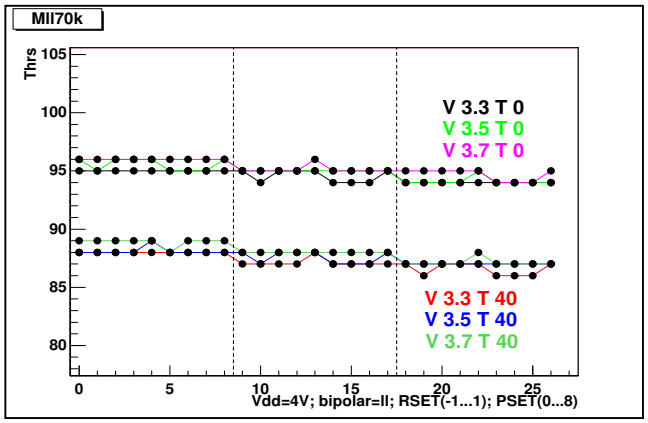


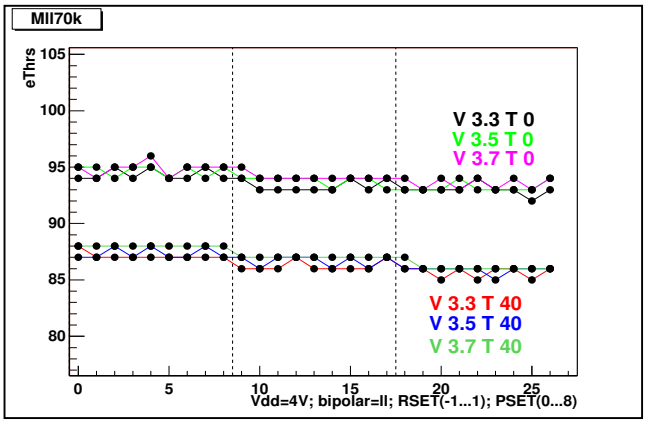
PkTim = t1 - t0
DELAY = t2 - t0
WIDTH = t3 - t2

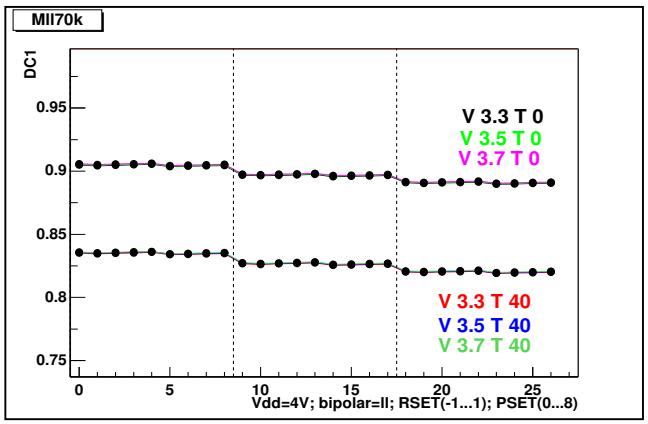

Mll70k
Icharge
12
11.5
11
10.5
10
9.5
9
0
5
10
15
20
25
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=ll; RSET(-1...1); PSET(0...8)

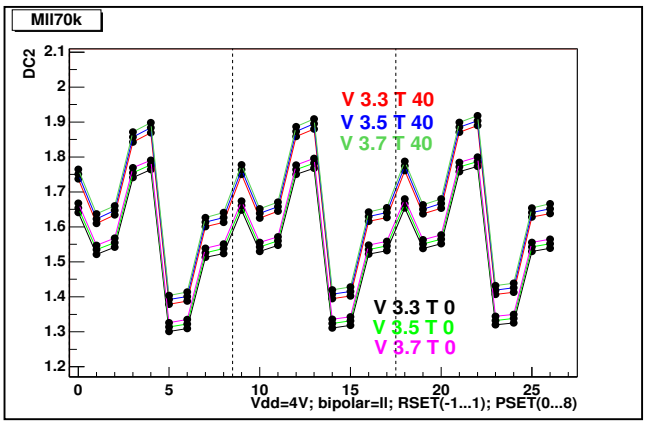

Mtt70k
Icharge
11.5
11
10.5
10
9.5
9
0
5
10
15
20
25
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

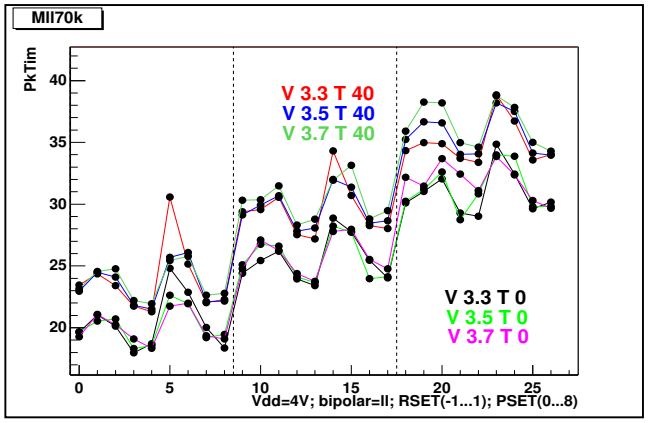

Mposti70k
Icharge
11.5
11
10.5
10
9.5
9
8.5
0
5
10
15
20
25
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

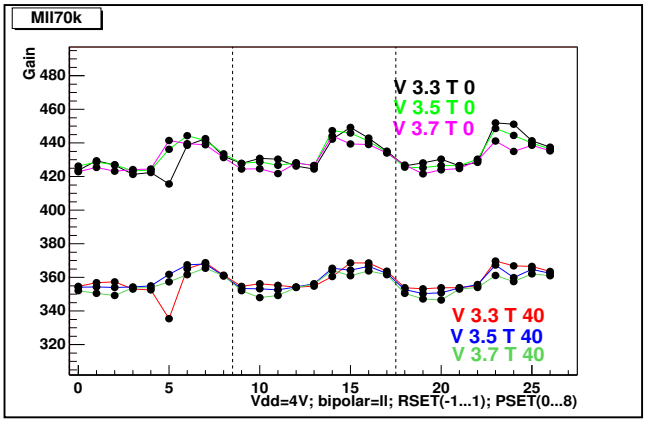

MII70k
Thrs
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

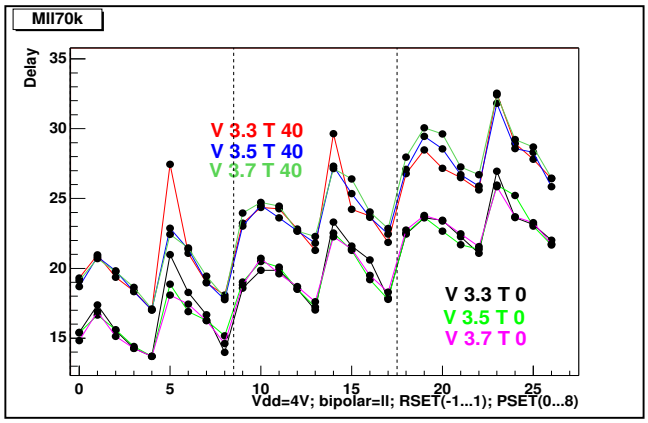

MII70k
eThrs
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

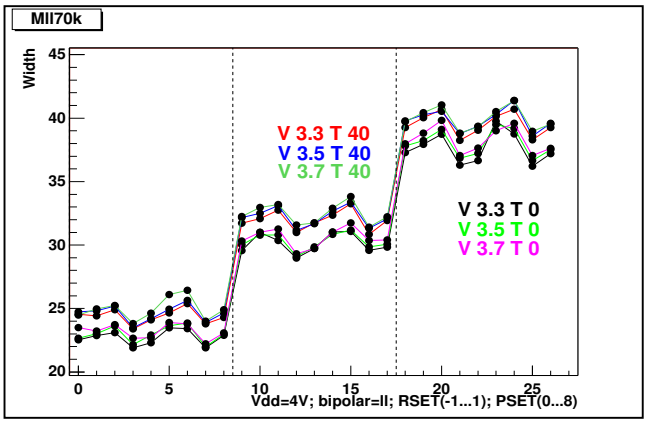

MII70k
DC1
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

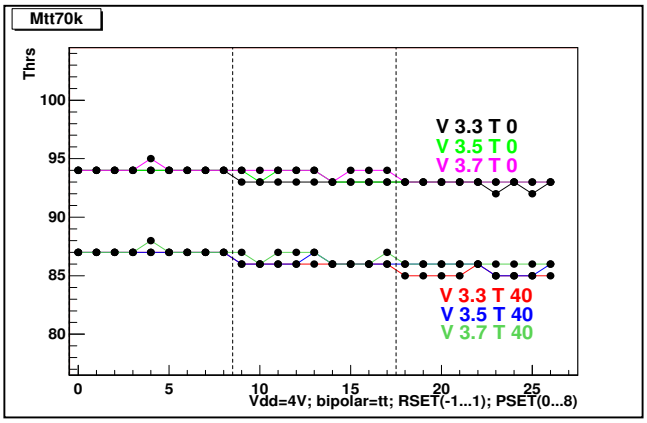

MII70k
DC2
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

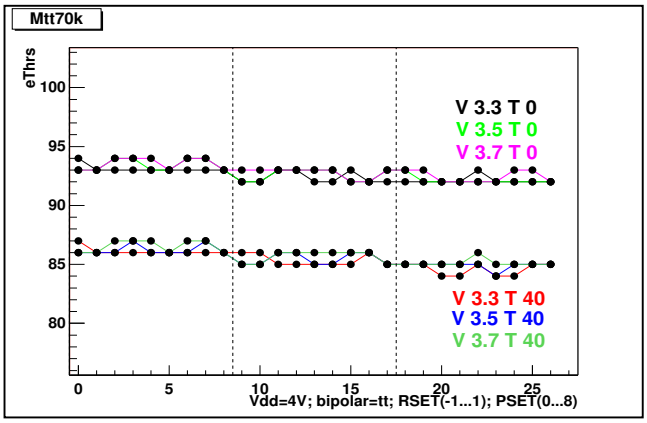

MII70k
PkTim
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

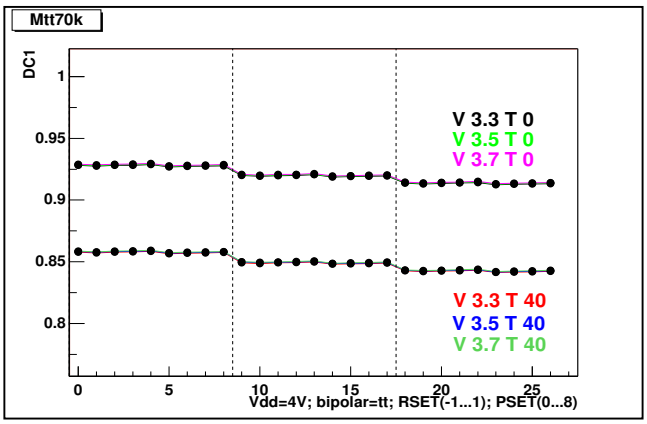

MII70k
Gain
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

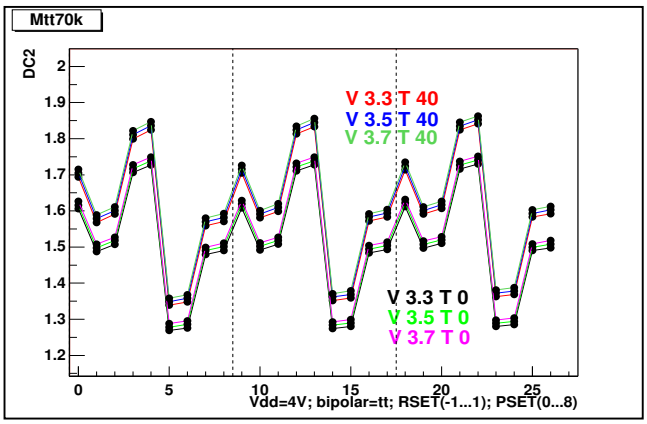

MII70k
Delay
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

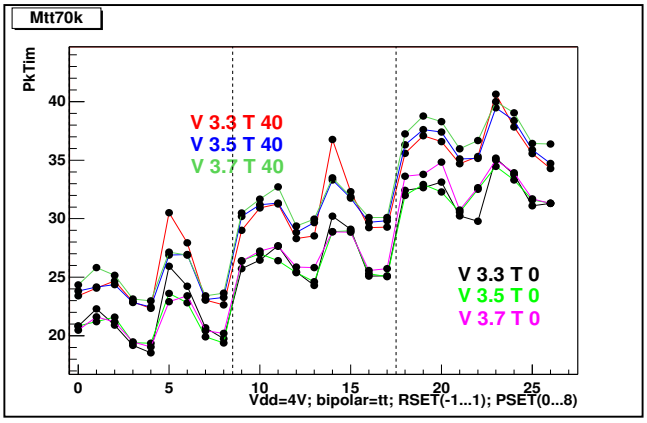

MII70k
Width
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=II; RSET(-1...1); PSET(0...8)

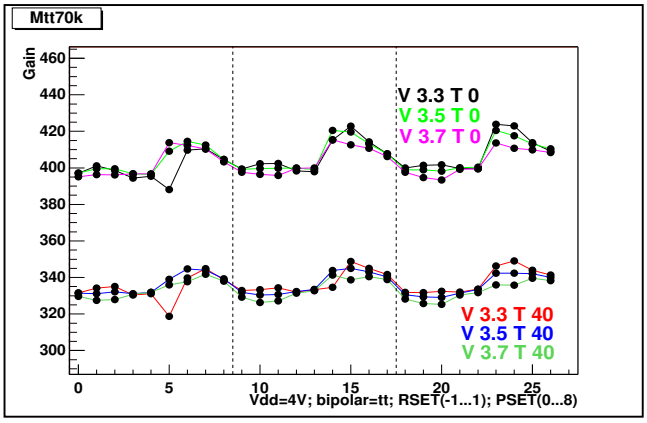

Mtt70k
Thrs
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

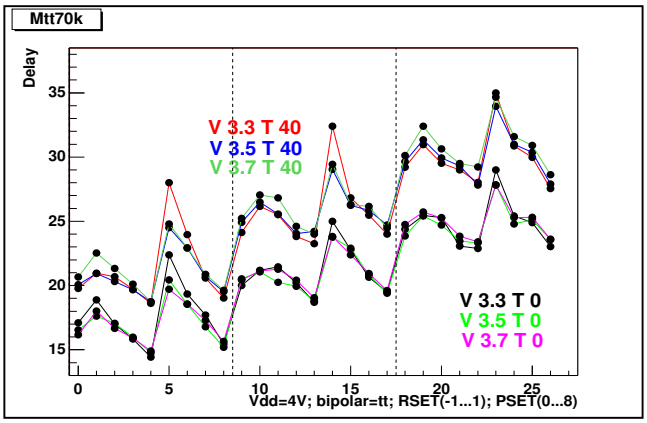

Mtt70k
eThrs
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

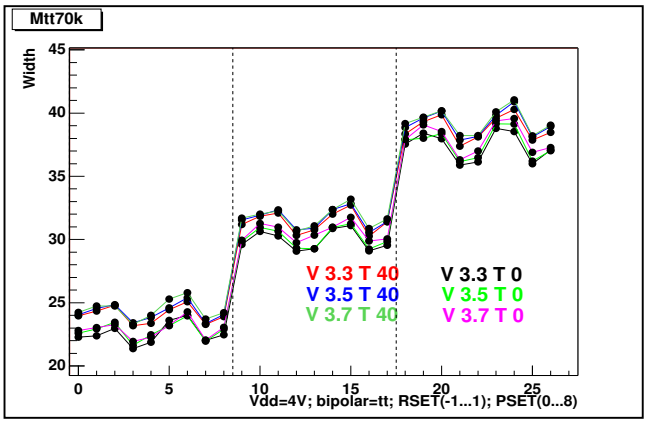

Mtt70k
DC1
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

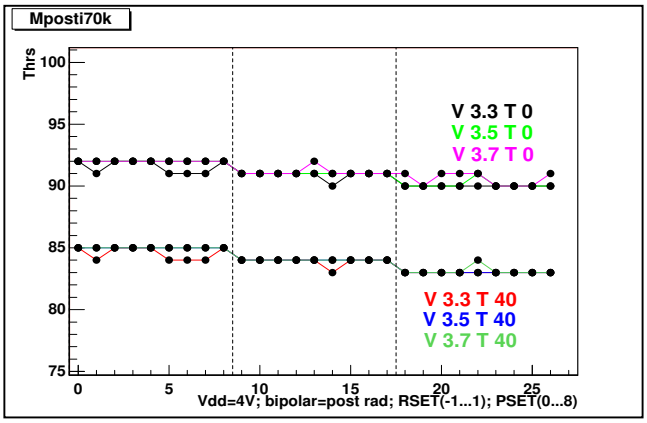

Mtt70k
DC2
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

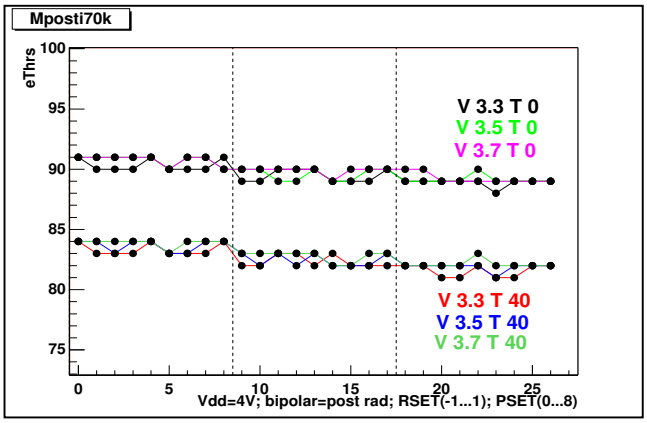

Mtt70k
PkTim
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

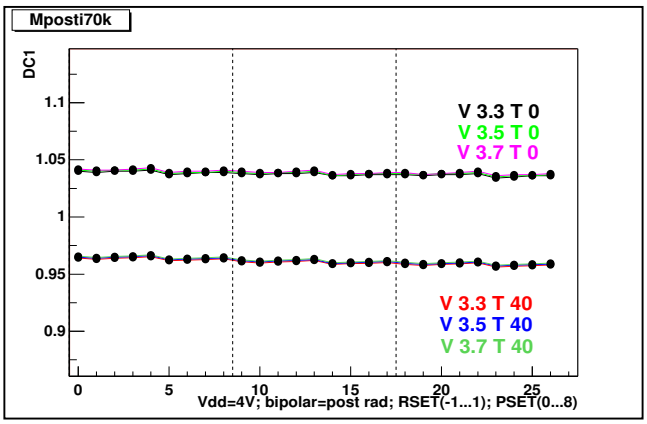

Mtt70k
Gain
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

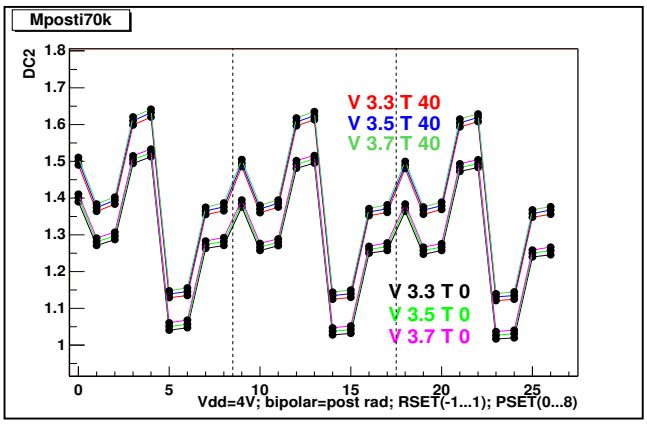

Mtt70k
Delay
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

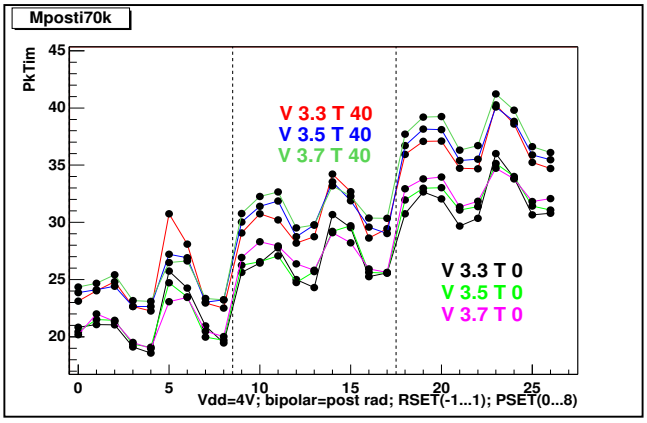

Mtt70k
Width
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=tt; RSET(-1...1); PSET(0...8)

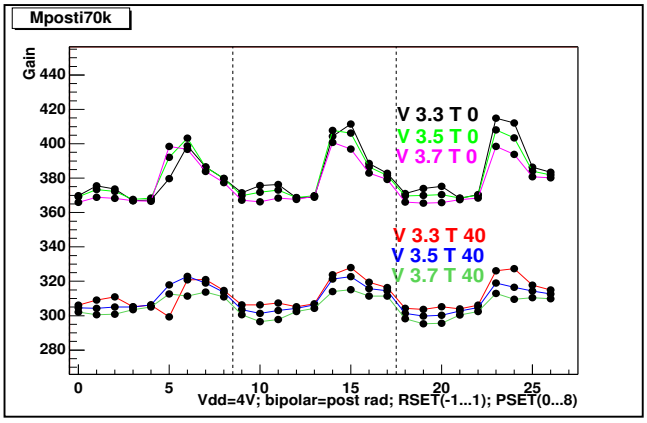

Mposti70k
Thrs
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

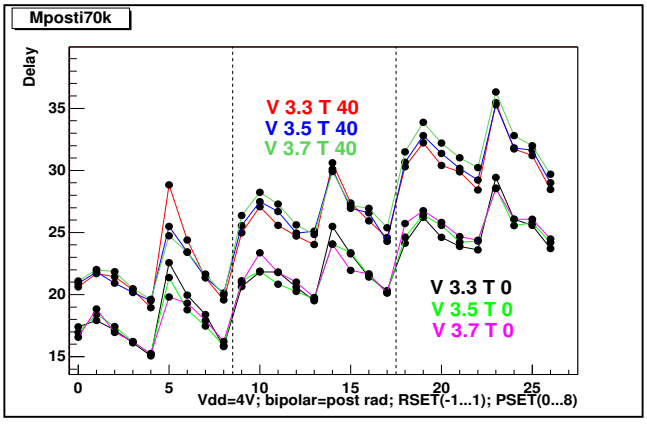

Mposti70k
eThrs
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

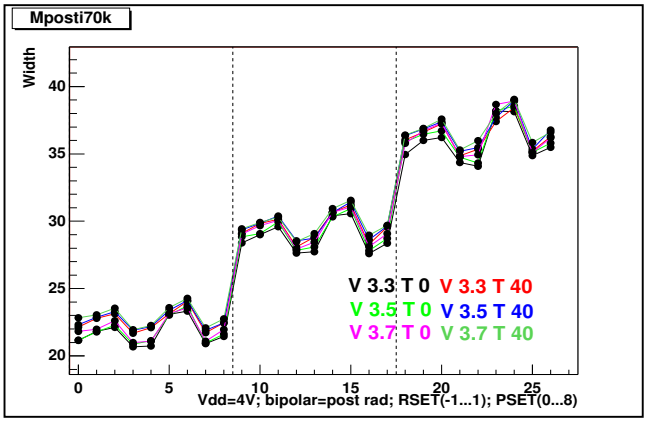

Mposti70k
DC1
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

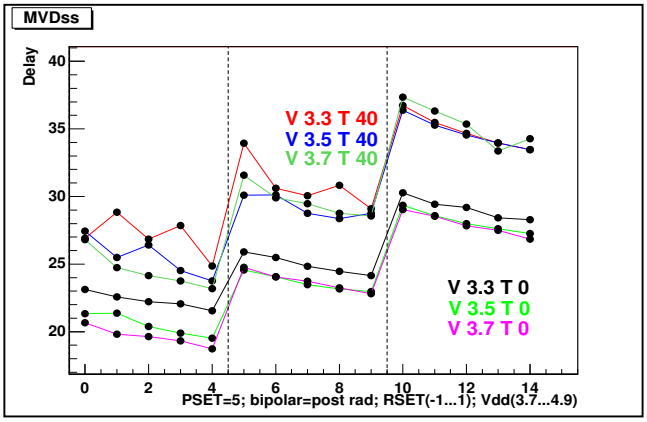

Mposti70k
DC2
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

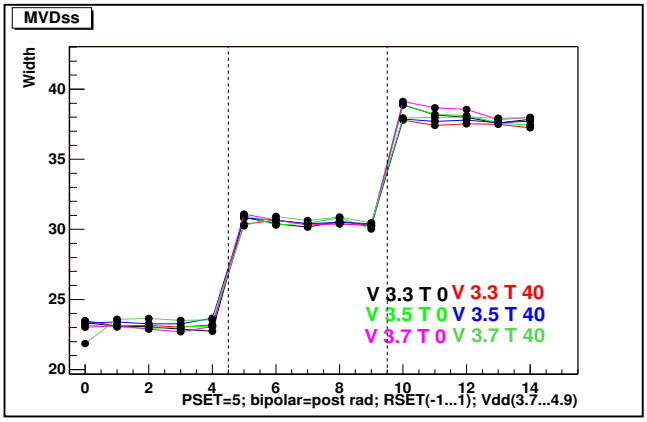

Mposti70k
PkTim
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

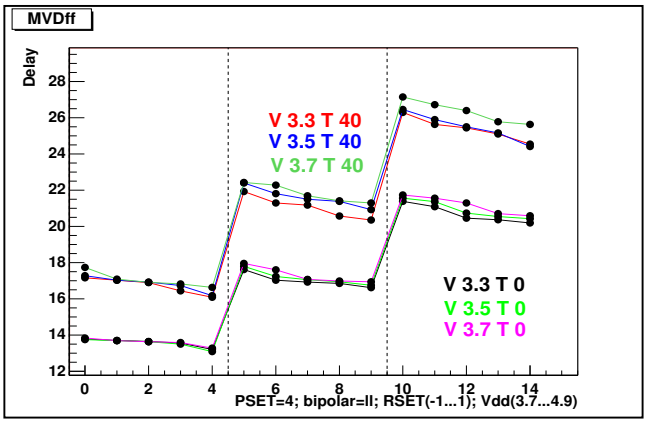

Mposti70k
Gain
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)

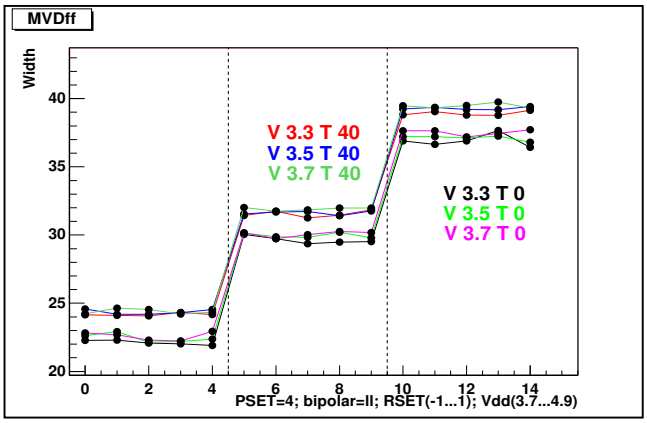

Mposti70k
Delay
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)


Mposti70k
Width
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
Vdd=4V; bipolar=post rad; RSET(-1...1); PSET(0...8)


MVDss
Delay
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
PSET=5; bipolar=post rad; RSET(-1...1); Vdd(3.7...4.9)


MVDss
Width
V 3.3 T 0
V 3.3 T 40
V 3.5 T 0
V 3.5 T 40
V 3.7 T 0
V 3.7 T 40
PSET=5; bipolar=post rad; RSET(-1...1); Vdd(3.7...4.9)


MVDff
Delay
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
PSET=4; bipolar=II; RSET(-1...1); Vdd(3.7...4.9)


MVDff
Width
V 3.3 T 40
V 3.5 T 40
V 3.7 T 40
V 3.3 T 0
V 3.5 T 0
V 3.7 T 0
PSET=4; bipolar=II; RSET(-1...1); Vdd(3.7...4.9)