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Data processed in Dec 2005 - Jan 2006.

This data has been skimmed from PNN2-ntuples with the following cuts: OR of 1/3 skims, BAD_RUN, (BOX2 or boxcuts), RSDedxMAX, RSDedxCL on the PNN2_SKIM set.

With the presence of PNN1box or PNN2box as a cut indicates the following

PNN1 = PNN1 Trigger, layv4pnn1 cut

PNN2 = PNN1+PNN2 Trigger

Tables 1-5 are a summary of the long tables that follow.

The long tables track the events on a cut-by-cut basis. There are 3 columns per data set analyzed. In each column the first number in the cell is the number of events and the number in parenthesis is the rejection. The 1st column is the cuts applied sequentially; the 2nd is the application of only the listed cut; The 3rd is the number of events remaining before this cut is applied and the rejection of the cut.

| <i>rejection (n)</i> | pnn2 |
|----------------------|----------------------|
| <i>Loose Setup</i> | 12533.0 ± 7235.6 (3) |
| <i>TD</i> | 11359.0 ± 8031.7 (2) |
| <i>TD · KIN</i> | 7542.0 ± 7541.5 (1) |

Table 1: **1-Beam Rejection Summary** of Tables 6-8. Each row is a different branch to measure the rejection. First number is the rejection. The number in parenthesis is the number of events remaining that the rejection is based upon. The minimum rejection is used in calculation of the 1-BM background for a conservative estimate.

| <i>Norm. branches</i> | pnn2 |
|-----------------------------|------------------|
| ALL cuts below NORM | 1.0 ± 1.0 |
| <i>PV · TD norm</i> | 49.0 ± 7.0 |
| <i>CkTRS · CkTail rej</i> | 2.9 ± 0.2 |
| <i>BADEX norm</i> | 1.0 ± 1.0 |
| <i>CpiTRS · CpiTail rej</i> | 0.0 ± 0.0 |
| N_K | 26.2 ± 4.1 |
| N_{pi} | 99999.0 ± 2040.8 |

Table 2: **1-Beam Normalization Summary** of Tables 9-13. The ALL-cuts-below row uses the combination of all cuts in the following 4 rows (branches) and is the normalization number used in the calculation of the numbers reported in Table 5 (Total Background). The sum of the last two rows provide a check on the ALL-cuts-below number.

| <i>rejection (n)</i> | pnn2 |
|--|----------------------|
| $Rej_{K-K} : BWTRS \cdot CkTRS \cdot CkTail$ | 29.8 ± 2.2 (173) |
| $Rej_{K-\pi} : BWTRS \cdot CpiTRS \cdot CpiTail$ | 73.7 ± 8.6 (72) |

Table 3: **2-Beam Rejection Summary** of Tables 14-15. First number is the rejection. The number in parenthesis is the number of events remaining that the rejection is based upon. K-K is the case where two Kaons are entering the beam. K-pi is the case where we have a Kaon and a Pion entering.

| <i>Norm. branches</i> | pnn2 |
|---------------------------------------|-----------------|
| $K-K_n : B4TRS \cdot B4CCD$ | 4.0 ± 2.0 |
| $K-K_r : TG \cdot TGKIN \cdot TGPV$ | 4.0 ± 2.0 |
| $K-\pi_n : B4TRS \cdot B4CCD$ | 6.0 ± 2.4 |
| $K-\pi_r : TG \cdot TGKIN \cdot TGPV$ | 29.0 ± 20.1 |
| N_{K-K} | 1.3 ± 0.9 |
| $N_{K-\pi}$ | 0.2 ± 0.2 |

Table 4: **2-Beam Normalization Summary** of Tables 16-19. The 2-BM Normalization has 2 branches that are further bifurcated. $K-K_{r,n}$, $K-\pi_{r,n}$ are the results of the bifurcations, r=rejection, n=normalization, which we used to determine the last two rows. N_{K-K} and $N_{K-\pi}$ are the 2-BM normalization values which are used in combination with Table 3 to give the final background in Table 5.

| <i>Bkgrnd ($\times 10^{-3}$)</i> | k034 | e787 | pnn2 |
|---|-------------------|-------------------|--------------------|
| 1-BM | 3.86 ± 2.36 | 1.66 ± 1.66 | 0.40 ± 0.40 |
| 2-BM KK | 0.983 ± 0.983 | 145.9 ± 145.9 | 139.08 ± 98.89 |
| 2-BM $K\pi$ | 0.106 ± 0.106 | 19.7 ± 19.7 | 8.84 ± 7.20 |
| 2-BM | 1.14 ± 1.14 | 165.6 ± 165.6 | 147.92 ± 99.16 |
| <i>Total</i> | 5.00 ± 2.62 | 167.3 ± 167.3 | 148.32 ± 99.16 |

Table 5: **Total Background.** Scaled to the 3/3 sample. k034 column is the result of e949-pnn1 analysis. e787 is the result of the e787-PNN2 analysis. The other columns are current results that is expanded upon throughout the rest of the tables. The errors are statistical. KB_{live} for k034 is 1.77×10^{12} and for e787 is 1.71×10^{12} . e787 background has been scaled up accordingly for comparison purposes.

Table 6: 1-Beam Rejection. Branch no. 1

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|---------------|---------------------|----------------|------------------|
| $b4abm < 1.0$ | 272948 (0.00) | 1311569 (1.21) | 1303 (434.33) |
| $PNN2box$ | 272948 (1.00) | 0 (1584517.00) | 3 (1.00) |
| $rsdedxmax$ | 272948 (1.00) | 0 (1584517.00) | 3 (1.00) |
| $rsdedxcl$ | 272948 (1.00) | 0 (1584517.00) | 3 (1.00) |
| $rslike$ | 272948 (1.00) | 0 (1584517.00) | 3 (1.00) |
| $rngmom$ | 248782 (1.10) | 552937 (2.87) | 25 (8.33) |
| $pv(nottg)$ | 173225 (1.44) | 708757 (2.24) | 22 (7.33) |
| $bwtrs$ | 148758 (1.16) | 390436 (4.06) | 3 (1.00) |
| $b4trs$ | 133463 (1.11) | 381089 (4.16) | 5 (1.67) |
| $b4ccd$ | 133384 (1.00) | 21013 (75.41) | 3 (1.00) |
| $tgqualt$ | 122757 (1.09) | 127923 (12.39) | 4 (1.33) |
| $timcon$ | 122115 (1.01) | 20466 (77.42) | 3 (1.00) |
| $epitg$ | 121698 (1.00) | 45516 (34.81) | 3 (1.00) |
| $tger$ | 121116 (1.00) | 44684 (35.46) | 3 (1.00) |
| $targf$ | 116726 (1.04) | 236438 (6.70) | 6 (2.00) |
| $ticcon$ | 116724 (1.00) | 338 (4687.92) | 3 (1.00) |
| $dtgttp$ | 116698 (1.00) | 1253 (1264.58) | 3 (1.00) |
| $rtdif$ | 112344 (1.04) | 31388 (50.48) | 3 (1.00) |
| $epimax$ | 107861 (1.04) | 99717 (15.89) | 3 (1.00) |
| drp | 104826 (1.03) | 29517 (53.68) | 3 (1.00) |
| $phivtx1$ | 83381 (1.26) | 355628 (4.46) | 7 (2.33) |
| $eidcon$ | 81519 (1.02) | 68397 (23.17) | 3 (1.00) |
| $opsveto$ | 65092 (1.25) | 517505 (3.06) | 5 (1.67) |
| kic | 58190 (1.12) | 305803 (5.18) | 4 (1.33) |
| $tggeo$ | 50272 (1.16) | 668634 (2.37) | 5 (1.67) |
| $tdedge$ | 46864 (1.07) | 202786 (7.81) | 3 (1.00) |
| $tgzfool$ | 46772 (1.00) | 27454 (57.72) | 3 (1.00) |
| $upvtrs$ | 40675 (1.15) | 99287 (15.96) | 3 (1.00) |
| $rvtrs$ | 40491 (1.00) | 31210 (50.77) | 3 (1.00) |
| $tgtcon$ | 38644 (1.05) | 130506 (12.14) | 11 (3.67) |
| $b4etcon$ | 37599 (1.03) | 46983 (33.73) | 3 (1.00) |
| $DELIC(0.)$ | 3 (12533.00) | 1041427 (1.52) | 37599 (12533.00) |
| Total Rej. | 12533.00 | | |

Table 7: 1-Beam Rejection. Branch no. 2

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|---------------|---------------------|----------------|------------------|
| $b4abm < 1.0$ | 272948 (0.00) | 1311569 (1.21) | 672 (336.00) |
| $PNN2box$ | 272948 (1.00) | 0 (1584517.00) | 2 (1.00) |
| $rsdedxmax$ | 272948 (1.00) | 0 (1584517.00) | 2 (1.00) |
| $rsdedxcl$ | 272948 (1.00) | 0 (1584517.00) | 2 (1.00) |
| $rslike$ | 272948 (1.00) | 0 (1584517.00) | 2 (1.00) |
| $rngmom$ | 248782 (1.10) | 552937 (2.87) | 2 (1.00) |
| $pv(nottg)$ | 173225 (1.44) | 708757 (2.24) | 13 (6.50) |
| $bwtrs$ | 148758 (1.16) | 390436 (4.06) | 2 (1.00) |
| $b4trs$ | 133463 (1.11) | 381089 (4.16) | 3 (1.50) |
| $b4ccd$ | 133384 (1.00) | 21013 (75.41) | 2 (1.00) |
| $tgqualt$ | 122757 (1.09) | 127923 (12.39) | 3 (1.50) |
| $timcon$ | 122115 (1.01) | 20466 (77.42) | 2 (1.00) |
| $epitg$ | 121698 (1.00) | 45516 (34.81) | 2 (1.00) |
| $tger$ | 121116 (1.00) | 44684 (35.46) | 2 (1.00) |
| $targf$ | 116726 (1.04) | 236438 (6.70) | 4 (2.00) |
| $ticcon$ | 116724 (1.00) | 338 (4687.92) | 2 (1.00) |
| $dtgttp$ | 116698 (1.00) | 1253 (1264.58) | 2 (1.00) |
| $rtdif$ | 112344 (1.04) | 31388 (50.48) | 2 (1.00) |
| $epimax$ | 107861 (1.04) | 99717 (15.89) | 2 (1.00) |
| drp | 104826 (1.03) | 29517 (53.68) | 2 (1.00) |
| $phivtx1$ | 83381 (1.26) | 355628 (4.46) | 4 (2.00) |
| $eidcon$ | 81519 (1.02) | 68397 (23.17) | 2 (1.00) |
| $opsveto$ | 65092 (1.25) | 517505 (3.06) | 3 (1.50) |
| kic | 58190 (1.12) | 305803 (5.18) | 2 (1.00) |
| $tggeo$ | 50272 (1.16) | 668634 (2.37) | 2 (1.00) |
| $tdedge$ | 46864 (1.07) | 202786 (7.81) | 2 (1.00) |
| $tgzfool$ | 46772 (1.00) | 27454 (57.72) | 2 (1.00) |
| $upvtrs$ | 40675 (1.15) | 99287 (15.96) | 2 (1.00) |
| $rvtrs$ | 40491 (1.00) | 31210 (50.77) | 2 (1.00) |
| $tgtcon$ | 38644 (1.05) | 130506 (12.14) | 7 (3.50) |
| $b4etcon$ | 37599 (1.03) | 46983 (33.73) | 2 (1.00) |
| pi_flg | 37501 (1.00) | 65019 (24.37) | 2 (1.00) |
| $ev502$ | 30206 (1.24) | 445524 (3.56) | 2 (1.00) |
| $elveto$ | 27727 (1.09) | 429199 (3.69) | 2 (1.00) |
| $tdfool$ | 27658 (1.00) | 323721 (4.89) | 2 (1.00) |
| $tdvarnn02$ | 22718 (1.22) | 641683 (2.47) | 2 (1.00) |
| TD | 22718 (1.00) | 932279 (1.70) | 2 (1.00) |
| $DEL C(0.)$ | 2 (11359.00) | 1041427 (1.52) | 22718 (11359.00) |
| Total Rej. | 11359.00 | | |

Table 8: 1-Beam Rejection. Branch no. 3

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|---------------|----------------|--------------|
| <i>b4abm < 1.0</i> | 272948 (0.00) | 1311569 (1.21) | 349 (349.00) |
| <i>PNN2box</i> | 272948 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxmax</i> | 272948 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxcl</i> | 272948 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rslike</i> | 272948 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rngmom</i> | 248782 (1.10) | 552937 (2.87) | 1 (1.00) |
| <i>pv(nottg)</i> | 173225 (1.44) | 708757 (2.24) | 3 (3.00) |
| <i>bwtrs</i> | 148758 (1.16) | 390436 (4.06) | 1 (1.00) |
| <i>b4trs</i> | 133463 (1.11) | 381089 (4.16) | 1 (1.00) |
| <i>b4ccd</i> | 133384 (1.00) | 21013 (75.41) | 1 (1.00) |
| <i>tgqualt</i> | 122757 (1.09) | 127923 (12.39) | 1 (1.00) |
| <i>timcon</i> | 122115 (1.01) | 20466 (77.42) | 1 (1.00) |
| <i>epitg</i> | 121698 (1.00) | 45516 (34.81) | 1 (1.00) |
| <i>tger</i> | 121116 (1.00) | 44684 (35.46) | 1 (1.00) |
| <i>targf</i> | 116726 (1.04) | 236438 (6.70) | 1 (1.00) |
| <i>ticcon</i> | 116724 (1.00) | 338 (4687.92) | 1 (1.00) |
| <i>dtgttp</i> | 116698 (1.00) | 1253 (1264.58) | 1 (1.00) |
| <i>rtdif</i> | 112344 (1.04) | 31388 (50.48) | 1 (1.00) |
| <i>epimax</i> | 107861 (1.04) | 99717 (15.89) | 1 (1.00) |
| <i>drp</i> | 104826 (1.03) | 29517 (53.68) | 1 (1.00) |
| <i>phivtx1</i> | 83381 (1.26) | 355628 (4.46) | 1 (1.00) |
| <i>iccon</i> | 81519 (1.02) | 68397 (23.17) | 1 (1.00) |
| <i>opsveto</i> | 65092 (1.25) | 517505 (3.06) | 2 (2.00) |
| <i>kic</i> | 58190 (1.12) | 305803 (5.18) | 1 (1.00) |
| <i>tggeo</i> | 50272 (1.16) | 668634 (2.37) | 1 (1.00) |
| <i>tdedge</i> | 46864 (1.07) | 202786 (7.81) | 1 (1.00) |
| <i>tgzfool</i> | 46772 (1.00) | 27454 (57.72) | 1 (1.00) |
| <i>upvtrs</i> | 40675 (1.15) | 99287 (15.96) | 1 (1.00) |
| <i>rvtrs</i> | 40491 (1.00) | 31210 (50.77) | 1 (1.00) |
| <i>tgtcon</i> | 38644 (1.05) | 130506 (12.14) | 3 (3.00) |
| <i>b4etcon</i> | 37599 (1.03) | 46983 (33.73) | 1 (1.00) |
| <i>piflg</i> | 37501 (1.00) | 65019 (24.37) | 1 (1.00) |
| <i>ev502</i> | 30206 (1.24) | 445524 (3.56) | 1 (1.00) |
| <i>elveto</i> | 27727 (1.09) | 429199 (3.69) | 1 (1.00) |
| <i>tdfool</i> | 27658 (1.00) | 323721 (4.89) | 1 (1.00) |
| <i>tdvarnn02</i> | 22718 (1.22) | 641683 (2.47) | 1 (1.00) |
| TD | 22718 (1.00) | 932279 (1.70) | 1 (1.00) |
| <i>PNN2box</i> | 22718 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>icodel14</i> | 22718 (1.00) | 7 (226360.00) | 1 (1.00) |
| <i>cos3d</i> | 21623 (1.05) | 113984 (13.90) | 1 (1.00) |
| <i>layv4</i> | 21623 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>zfrf</i> | 21613 (1.00) | 2646 (598.84) | 1 (1.00) |
| <i>zutout</i> | 21609 (1.00) | 1136 (1394.82) | 1 (1.00) |
| FIDUCIAL | 21609 (1.00) | 116870 (13.56) | 1 (1.00) |
| <i>utcqual</i> | 19022 (1.14) | 315473 (5.02) | 1 (1.00) |
| <i>rsdedxcl</i> | 19022 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------|--------------------|----------------|----------------|
| <i>rsdedxmax</i> | 19022 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rslike</i> | 19022 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rngmom</i> | 19022 (1.00) | 552937 (2.87) | 1 (1.00) |
| <i>prrf1</i> | 18402 (1.03) | 52751 (30.04) | 1 (1.00) |
| <i>prrfz</i> | 17545 (1.05) | 100174 (15.82) | 1 (1.00) |
| PRRF | 17545 (1.00) | 147343 (10.75) | 1 (1.00) |
| <i>rtghi</i> | 17537 (1.00) | 5047 (313.95) | 1 (1.00) |
| <i>etghi</i> | 17366 (1.01) | 36570 (43.33) | 1 (1.00) |
| <i>tgdedx1</i> | 15694 (1.11) | 278471 (5.69) | 1 (1.00) |
| <i>tgdedx2</i> | 15187 (1.03) | 131696 (12.03) | 1 (1.00) |
| tgdedx | 15187 (1.00) | 431460 (3.67) | 1 (1.00) |
| <i>tglike1</i> | 14473 (1.05) | 227393 (6.97) | 1 (1.00) |
| <i>tglike2</i> | 13800 (1.05) | 204863 (7.73) | 1 (1.00) |
| TGLIKE | 13800 (1.00) | 307921 (5.15) | 1 (1.00) |
| <i>tgdb4</i> | 13443 (1.03) | 128445 (12.34) | 1 (1.00) |
| <i>tgdb4tip</i> | 9864 (1.36) | 398757 (3.97) | 1 (1.00) |
| <i>tgdvxtip</i> | 8524 (1.16) | 224201 (7.07) | 1 (1.00) |
| <i>tgdvxpi</i> | 7823 (1.09) | 173035 (9.16) | 1 (1.00) |
| TGB4 | 7823 (1.00) | 601653 (2.63) | 1 (1.00) |
| <i>pigap</i> | 7542 (1.04) | 143669 (11.03) | 1 (1.00) |
| KIN | 7542 (1.00) | 1348115 (1.18) | 1 (1.00) |
| <i>DEL(0.)</i> | 1 (7542.00) | 1041427 (1.52) | 7542 (7542.00) |
| Total Rej. | 7542.00 | | |

Table 9: 1-Beam Normalization. Branch no. 1

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 1 (1.00) |
| <i>PNN2box</i> | 1031580 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>icodel14</i> | 1031580 (1.00) | 7 (226360.00) | 1 (1.00) |
| <i>cos3d</i> | 940558 (1.10) | 113984 (13.90) | 1 (1.00) |
| <i>layv4</i> | 940558 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>zfrf</i> | 939358 (1.00) | 2646 (598.84) | 1 (1.00) |
| <i>zutout</i> | 938837 (1.00) | 1136 (1394.82) | 1 (1.00) |
| FIDUCIAL | 938837 (1.00) | 116870 (13.56) | 1 (1.00) |
| <i>utcqual</i> | 780183 (1.20) | 315473 (5.02) | 1 (1.00) |
| <i>rsdedxcl</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxmax</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rslike</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>tgktim</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rngmom</i> | 780183 (1.00) | 552937 (2.87) | 1 (1.00) |
| <i>prrf1</i> | 759083 (1.03) | 52751 (30.04) | 1 (1.00) |
| <i>prrfz</i> | 717920 (1.06) | 100174 (15.82) | 1 (1.00) |
| PRRF | 717920 (1.00) | 147343 (10.75) | 1 (1.00) |
| <i>rtghi</i> | 716994 (1.00) | 5047 (313.95) | 1 (1.00) |
| <i>etghi</i> | 703834 (1.02) | 36570 (43.33) | 1 (1.00) |
| <i>tgdedx1</i> | 541914 (1.30) | 278471 (5.69) | 1 (1.00) |
| <i>tgdedx2</i> | 492290 (1.10) | 131696 (12.03) | 1 (1.00) |
| tgdedx | 492290 (1.00) | 431460 (3.67) | 1 (1.00) |
| <i>tglike1</i> | 446051 (1.10) | 227393 (6.97) | 1 (1.00) |
| <i>tglike2</i> | 421438 (1.06) | 204863 (7.73) | 1 (1.00) |
| TGLIKE | 421438 (1.00) | 307921 (5.15) | 1 (1.00) |
| <i>tgdb4</i> | 387703 (1.09) | 128445 (12.34) | 1 (1.00) |
| <i>tgdb4tip</i> | 302106 (1.28) | 398757 (3.97) | 1 (1.00) |
| <i>tgdvxtip</i> | 265833 (1.14) | 224201 (7.07) | 1 (1.00) |
| <i>tgdvxpi</i> | 249025 (1.07) | 173035 (9.16) | 1 (1.00) |
| TGB4 | 249025 (1.00) | 601653 (2.63) | 1 (1.00) |
| <i>pigap</i> | 236402 (1.05) | 143669 (11.03) | 1 (1.00) |
| KIN | 236402 (1.00) | 1348115 (1.18) | 1 (1.00) |
| <i>tgpv</i> | 159009 (1.49) | 536772 (2.95) | 1 (1.00) |
| <i>bwtrs</i> | 142064 (1.12) | 390436 (4.06) | 1 (1.00) |
| <i>b4trs</i> | 129494 (1.10) | 381089 (4.16) | 1 (1.00) |
| <i>b4ccd</i> | 128469 (1.01) | 21013 (75.41) | 1 (1.00) |
| <i>tgqualt</i> | 115937 (1.11) | 127923 (12.39) | 1 (1.00) |
| <i>timcon</i> | 115004 (1.01) | 20466 (77.42) | 1 (1.00) |
| <i>epitg</i> | 114847 (1.00) | 45516 (34.81) | 1 (1.00) |
| <i>tger</i> | 114787 (1.00) | 44684 (35.46) | 1 (1.00) |
| <i>targf</i> | 109479 (1.05) | 236438 (6.70) | 1 (1.00) |
| <i>ticcon</i> | 109477 (1.00) | 338 (4687.92) | 1 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------|-------------------|----------------|--------------|
| <i>dtgttp</i> | 109476 (1.00) | 1253 (1264.58) | 1 (1.00) |
| <i>rtdif</i> | 107767 (1.02) | 31388 (50.48) | 1 (1.00) |
| <i>epimax</i> | 105745 (1.02) | 99717 (15.89) | 1 (1.00) |
| <i>drp</i> | 104919 (1.01) | 29517 (53.68) | 1 (1.00) |
| <i>phivtx1</i> | 88735 (1.18) | 355628 (4.46) | 1 (1.00) |
| <i>ecccon</i> | 86815 (1.02) | 68397 (23.17) | 1 (1.00) |
| <i>opsveto</i> | 72762 (1.19) | 517505 (3.06) | 1 (1.00) |
| <i>kic</i> | 65195 (1.12) | 305803 (5.18) | 1 (1.00) |
| <i>tggeo</i> | 53604 (1.22) | 668634 (2.37) | 1 (1.00) |
| <i>tdedge</i> | 52139 (1.03) | 202786 (7.81) | 1 (1.00) |
| <i>tgzfool</i> | 52122 (1.00) | 27454 (57.72) | 1 (1.00) |
| <i>upvtrs</i> | 47895 (1.09) | 99287 (15.96) | 1 (1.00) |
| <i>rvtrs</i> | 47706 (1.00) | 31210 (50.77) | 1 (1.00) |
| <i>tgtcon</i> | 41240 (1.16) | 130506 (12.14) | 2 (2.00) |
| <i>b4etcon</i> | 40444 (1.02) | 46983 (33.73) | 1 (1.00) |
| <i>b4ekz</i> | 16441 (2.46) | 1025577 (1.54) | 1 (1.00) |
| <i>b4ekzic</i> | 16441 (1.00) | 171101 (9.26) | 1 (1.00) |
| <i>b4tim</i> | 11655 (1.41) | 740696 (2.14) | 3 (3.00) |
| <i>tgktim</i> | 11655 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>tgenr</i> | 11524 (1.01) | 207413 (7.64) | 1 (1.00) |
| <i>chi567</i> | 7315 (1.58) | 1057451 (1.50) | 1 (1.00) |
| <i>npitg</i> | 7315 (1.00) | 127923 (12.39) | 1 (1.00) |
| <i>verrng</i> | 6265 (1.17) | 683791 (2.32) | 1 (1.00) |
| <i>chi5max</i> | 6069 (1.03) | 458246 (3.46) | 1 (1.00) |
| <i>angli</i> | 6055 (1.00) | 125736 (12.60) | 1 (1.00) |
| <i>ALLKfit</i> | 5069 (1.19) | 548146 (2.89) | 1 (1.00) |
| <i>tpics</i> | 4636 (1.09) | 201038 (7.88) | 1 (1.00) |
| <i>epionk</i> | 4549 (1.02) | 54267 (29.20) | 1 (1.00) |
| <i>ccd pul</i> | 2186 (2.08) | 428892 (3.69) | 1 (1.00) |
| <i>timkf</i> | 1466 (1.49) | 1093262 (1.45) | 5 (5.00) |
| DELC(0.) | 558 (2.63) | 543090 (2.92) | 21 (21.00) |
| <i>cpitrs</i> | 554 (1.01) | 459935 (3.45) | 2 (2.00) |
| <i>cpitail</i> | 554 (1.00) | 81918 (19.34) | 1 (1.00) |
| <i>b4dedx</i> | 549 (1.01) | 325523 (4.87) | 1 (1.00) |
| <i>cktrs</i> | 234 (2.35) | 663642 (2.39) | 15 (15.00) |
| <i>cktail</i> | 175 (1.34) | 388324 (4.08) | 2 (2.00) |
| <i>PV</i> | 4 (43.75) | 955862 (1.66) | 100 (100.00) |
| <i>pi flg</i> | 4 (1.00) | 65019 (24.37) | 1 (1.00) |
| <i>ev502</i> | 2 (2.00) | 445524 (3.56) | 1 (1.00) |
| <i>elveto</i> | 2 (1.00) | 429199 (3.69) | 1 (1.00) |
| <i>tdfool</i> | 2 (1.00) | 323721 (4.89) | 1 (1.00) |
| <i>tdvarnn02</i> | 1 (2.00) | 641683 (2.47) | 1 (1.00) |
| TD | 1 (1.00) | 932279 (1.70) | 1 (1.00) |
| Total Rej. | 558.00 | | |

Table 10: 1-Beam Normalization. Branch no. 2

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 49 (1.00) |
| <i>PNN2box</i> | 1031580 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>icodel14</i> | 1031580 (1.00) | 7 (226360.00) | 49 (1.00) |
| <i>cos3d</i> | 940558 (1.10) | 113984 (13.90) | 49 (1.00) |
| <i>layv4</i> | 940558 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>zfrf</i> | 939358 (1.00) | 2646 (598.84) | 49 (1.00) |
| <i>zutout</i> | 938837 (1.00) | 1136 (1394.82) | 49 (1.00) |
| FIDUCIAL | 938837 (1.00) | 116870 (13.56) | 49 (1.00) |
| <i>utcqual</i> | 780183 (1.20) | 315473 (5.02) | 49 (1.00) |
| <i>rsdedxcl</i> | 780183 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rsdedxmax</i> | 780183 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rslike</i> | 780183 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>tgktim</i> | 780183 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>rngmom</i> | 780183 (1.00) | 552937 (2.87) | 49 (1.00) |
| <i>prrf1</i> | 759083 (1.03) | 52751 (30.04) | 49 (1.00) |
| <i>prrfz</i> | 717920 (1.06) | 100174 (15.82) | 49 (1.00) |
| PRRF | 717920 (1.00) | 147343 (10.75) | 49 (1.00) |
| <i>rtghi</i> | 716994 (1.00) | 5047 (313.95) | 49 (1.00) |
| <i>etghi</i> | 703834 (1.02) | 36570 (43.33) | 49 (1.00) |
| <i>tgdedx1</i> | 541914 (1.30) | 278471 (5.69) | 49 (1.00) |
| <i>tgdedx2</i> | 492290 (1.10) | 131696 (12.03) | 49 (1.00) |
| tgdedx | 492290 (1.00) | 431460 (3.67) | 49 (1.00) |
| <i>tglike1</i> | 446051 (1.10) | 227393 (6.97) | 49 (1.00) |
| <i>tglike2</i> | 421438 (1.06) | 204863 (7.73) | 49 (1.00) |
| TGLIKE | 421438 (1.00) | 307921 (5.15) | 49 (1.00) |
| <i>tgdb4</i> | 387703 (1.09) | 128445 (12.34) | 49 (1.00) |
| <i>tgdb4tip</i> | 302106 (1.28) | 398757 (3.97) | 49 (1.00) |
| <i>tgdvxtip</i> | 265833 (1.14) | 224201 (7.07) | 49 (1.00) |
| <i>tgdvxpi</i> | 249025 (1.07) | 173035 (9.16) | 49 (1.00) |
| TGB4 | 249025 (1.00) | 601653 (2.63) | 49 (1.00) |
| <i>pigap</i> | 236402 (1.05) | 143669 (11.03) | 49 (1.00) |
| KIN | 236402 (1.00) | 1348115 (1.18) | 49 (1.00) |
| <i>tgpv</i> | 159009 (1.49) | 536772 (2.95) | 49 (1.00) |
| <i>bwtrs</i> | 142064 (1.12) | 390436 (4.06) | 56 (1.14) |
| <i>b4trs</i> | 129494 (1.10) | 381089 (4.16) | 52 (1.06) |
| <i>b4ccd</i> | 128469 (1.01) | 21013 (75.41) | 49 (1.00) |
| <i>tgqualt</i> | 115937 (1.11) | 127923 (12.39) | 49 (1.00) |
| <i>timcon</i> | 115004 (1.01) | 20466 (77.42) | 49 (1.00) |
| <i>epitg</i> | 114847 (1.00) | 45516 (34.81) | 49 (1.00) |
| <i>tger</i> | 114787 (1.00) | 44684 (35.46) | 49 (1.00) |
| <i>targf</i> | 109479 (1.05) | 236438 (6.70) | 49 (1.00) |
| <i>ticcon</i> | 109477 (1.00) | 338 (4687.92) | 49 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-----------------------|-------------------|----------------|-------------|
| <i>dtgttp</i> | 109476 (1.00) | 1253 (1264.58) | 49 (1.00) |
| <i>rtdif</i> | 107767 (1.02) | 31388 (50.48) | 50 (1.02) |
| <i>epimax</i> | 105745 (1.02) | 99717 (15.89) | 49 (1.00) |
| <i>drp</i> | 104919 (1.01) | 29517 (53.68) | 49 (1.00) |
| <i>phivtx1</i> | 88735 (1.18) | 355628 (4.46) | 50 (1.02) |
| <i>ecccon</i> | 86815 (1.02) | 68397 (23.17) | 51 (1.04) |
| <i>opsveto</i> | 72762 (1.19) | 517505 (3.06) | 70 (1.43) |
| <i>kic</i> | 65195 (1.12) | 305803 (5.18) | 50 (1.02) |
| <i>tggeo</i> | 53604 (1.22) | 668634 (2.37) | 58 (1.18) |
| <i>tdedge</i> | 52139 (1.03) | 202786 (7.81) | 49 (1.00) |
| <i>tgzfool</i> | 52122 (1.00) | 27454 (57.72) | 49 (1.00) |
| <i>upvtrs</i> | 47895 (1.09) | 99287 (15.96) | 52 (1.06) |
| <i>rvtrs</i> | 47706 (1.00) | 31210 (50.77) | 49 (1.00) |
| <i>tgtcon</i> | 41240 (1.16) | 130506 (12.14) | 49 (1.00) |
| <i>b4etcon</i> | 40444 (1.02) | 46983 (33.73) | 49 (1.00) |
| <i>b4ekz</i> | 16441 (2.46) | 1025577 (1.54) | 92 (1.88) |
| <i>b4ekzic</i> | 16441 (1.00) | 171101 (9.26) | 49 (1.00) |
| <i>b4tim</i> | 11655 (1.41) | 740696 (2.14) | 51 (1.04) |
| <i>tgktim</i> | 11655 (1.00) | 0 (1584517.00) | 49 (1.00) |
| <i>tgenr</i> | 11524 (1.01) | 207413 (7.64) | 49 (1.00) |
| <i>chi567</i> | 7315 (1.58) | 1057451 (1.50) | 66 (1.35) |
| <i>npitg</i> | 7315 (1.00) | 127923 (12.39) | 49 (1.00) |
| <i>verrng</i> | 6265 (1.17) | 683791 (2.32) | 65 (1.33) |
| <i>chi5max</i> | 6069 (1.03) | 458246 (3.46) | 51 (1.04) |
| <i>angli</i> | 6055 (1.00) | 125736 (12.60) | 49 (1.00) |
| <i>ALLKfit</i> | 5069 (1.19) | 548146 (2.89) | 126 (2.57) |
| <i>tpics</i> | 4636 (1.09) | 201038 (7.88) | 55 (1.12) |
| <i>epionk</i> | 4549 (1.02) | 54267 (29.20) | 49 (1.00) |
| <i>ccdpu</i> | 2186 (2.08) | 428892 (3.69) | 64 (1.31) |
| <i>timkf</i> | 1466 (1.49) | 1093262 (1.45) | 70 (1.43) |
| <i>DELC(0.)</i> | 558 (2.63) | 543090 (2.92) | 50 (1.02) |
| <i>cpitrs</i> | 554 (1.01) | 459935 (3.45) | 49 (1.00) |
| <i>cpitail</i> | 554 (1.00) | 81918 (19.34) | 49 (1.00) |
| <i>b4dedx</i> | 549 (1.01) | 325523 (4.87) | 51 (1.04) |
| <i>cktrs · cktail</i> | 374 (1.47) | 853967 (1.86) | 50 (1.02) |
| <i>PV</i> | 83 (4.51) | 955862 (1.66) | 220 (4.49) |
| <i>pi_flg</i> | 83 (1.00) | 65019 (24.37) | 49 (1.00) |
| <i>ev502</i> | 63 (1.32) | 445524 (3.56) | 49 (1.00) |
| <i>elveto</i> | 58 (1.09) | 429199 (3.69) | 49 (1.00) |
| <i>tdfool</i> | 58 (1.00) | 323721 (4.89) | 49 (1.00) |
| <i>tdvarnn02</i> | 49 (1.18) | 641683 (2.47) | 49 (1.00) |
| TD | 49 (1.00) | 932279 (1.70) | 49 (1.00) |
| Total Rej. | | 7.63 | |

Table 11: 1-Beam Normalization. Branch no. 3

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 174 (1.00) |
| <i>PNN2box</i> | 1031580 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>icodel14</i> | 1031580 (1.00) | 7 (226360.00) | 174 (1.00) |
| <i>cos3d</i> | 940558 (1.10) | 113984 (13.90) | 174 (1.00) |
| <i>layv4</i> | 940558 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>zfrf</i> | 939358 (1.00) | 2646 (598.84) | 174 (1.00) |
| <i>zutout</i> | 938837 (1.00) | 1136 (1394.82) | 174 (1.00) |
| FIDUCIAL | 938837 (1.00) | 116870 (13.56) | 174 (1.00) |
| <i>utcqual</i> | 780183 (1.20) | 315473 (5.02) | 174 (1.00) |
| <i>rsdedxcl</i> | 780183 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rsdedxmax</i> | 780183 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rslike</i> | 780183 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>tgktim</i> | 780183 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>rngmom</i> | 780183 (1.00) | 552937 (2.87) | 174 (1.00) |
| <i>prrf1</i> | 759083 (1.03) | 52751 (30.04) | 174 (1.00) |
| <i>prrfz</i> | 717920 (1.06) | 100174 (15.82) | 174 (1.00) |
| PRRF | 717920 (1.00) | 147343 (10.75) | 174 (1.00) |
| <i>rtghi</i> | 716994 (1.00) | 5047 (313.95) | 174 (1.00) |
| <i>etghi</i> | 703834 (1.02) | 36570 (43.33) | 174 (1.00) |
| <i>tgdedx1</i> | 541914 (1.30) | 278471 (5.69) | 174 (1.00) |
| <i>tgdedx2</i> | 492290 (1.10) | 131696 (12.03) | 174 (1.00) |
| tgdedx | 492290 (1.00) | 431460 (3.67) | 174 (1.00) |
| <i>tglike1</i> | 446051 (1.10) | 227393 (6.97) | 174 (1.00) |
| <i>tglike2</i> | 421438 (1.06) | 204863 (7.73) | 174 (1.00) |
| TGLIKE | 421438 (1.00) | 307921 (5.15) | 174 (1.00) |
| <i>tgdb4</i> | 387703 (1.09) | 128445 (12.34) | 174 (1.00) |
| <i>tgdb4tip</i> | 302106 (1.28) | 398757 (3.97) | 174 (1.00) |
| <i>tgdvxtip</i> | 265833 (1.14) | 224201 (7.07) | 174 (1.00) |
| <i>tgdvxpi</i> | 249025 (1.07) | 173035 (9.16) | 174 (1.00) |
| TGB4 | 249025 (1.00) | 601653 (2.63) | 174 (1.00) |
| <i>pigap</i> | 236402 (1.05) | 143669 (11.03) | 174 (1.00) |
| KIN | 236402 (1.00) | 1348115 (1.18) | 174 (1.00) |
| <i>tgpv</i> | 159009 (1.49) | 536772 (2.95) | 179 (1.03) |
| <i>bwtrs</i> | 142064 (1.12) | 390436 (4.06) | 179 (1.03) |
| <i>b4trs</i> | 129494 (1.10) | 381089 (4.16) | 179 (1.03) |
| <i>b4ccd</i> | 128469 (1.01) | 21013 (75.41) | 176 (1.01) |
| <i>tgqualt</i> | 115937 (1.11) | 127923 (12.39) | 174 (1.00) |
| <i>timcon</i> | 115004 (1.01) | 20466 (77.42) | 174 (1.00) |
| <i>epitg</i> | 114847 (1.00) | 45516 (34.81) | 174 (1.00) |
| <i>tger</i> | 114787 (1.00) | 44684 (35.46) | 174 (1.00) |
| <i>targf</i> | 109479 (1.05) | 236438 (6.70) | 175 (1.01) |
| <i>ticcon</i> | 109477 (1.00) | 338 (4687.92) | 174 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-----------------|-------------------|----------------|-------------|
| <i>dtgttp</i> | 109476 (1.00) | 1253 (1264.58) | 174 (1.00) |
| <i>rtdif</i> | 107767 (1.02) | 31388 (50.48) | 176 (1.01) |
| <i>epimax</i> | 105745 (1.02) | 99717 (15.89) | 175 (1.01) |
| <i>drp</i> | 104919 (1.01) | 29517 (53.68) | 177 (1.02) |
| <i>phivtx1</i> | 88735 (1.18) | 355628 (4.46) | 195 (1.12) |
| <i>ecccon</i> | 86815 (1.02) | 68397 (23.17) | 176 (1.01) |
| <i>opsveto</i> | 72762 (1.19) | 517505 (3.06) | 184 (1.06) |
| <i>kic</i> | 65195 (1.12) | 305803 (5.18) | 174 (1.00) |
| <i>tggeo</i> | 53604 (1.22) | 668634 (2.37) | 202 (1.16) |
| <i>tdedge</i> | 52139 (1.03) | 202786 (7.81) | 177 (1.02) |
| <i>tgzfool</i> | 52122 (1.00) | 27454 (57.72) | 174 (1.00) |
| <i>upvtrs</i> | 47895 (1.09) | 99287 (15.96) | 180 (1.03) |
| <i>rvtrs</i> | 47706 (1.00) | 31210 (50.77) | 174 (1.00) |
| <i>tgtcon</i> | 41240 (1.16) | 130506 (12.14) | 176 (1.01) |
| <i>b4etcon</i> | 40444 (1.02) | 46983 (33.73) | 174 (1.00) |
| <i>b4ekz</i> | 16441 (2.46) | 1025577 (1.54) | 182 (1.05) |
| <i>b4ekzic</i> | 16441 (1.00) | 171101 (9.26) | 174 (1.00) |
| <i>b4tim</i> | 11655 (1.41) | 740696 (2.14) | 174 (1.00) |
| <i>tgktim</i> | 11655 (1.00) | 0 (1584517.00) | 174 (1.00) |
| <i>tgenr</i> | 11524 (1.01) | 207413 (7.64) | 176 (1.01) |
| <i>chi567</i> | 7315 (1.58) | 1057451 (1.50) | 231 (1.33) |
| <i>npitg</i> | 7315 (1.00) | 127923 (12.39) | 174 (1.00) |
| <i>verrng</i> | 6265 (1.17) | 683791 (2.32) | 193 (1.11) |
| <i>chi5max</i> | 6069 (1.03) | 458246 (3.46) | 176 (1.01) |
| <i>angli</i> | 6055 (1.00) | 125736 (12.60) | 174 (1.00) |
| <i>ALLK fit</i> | 5069 (1.19) | 548146 (2.89) | 191 (1.10) |
| <i>tpics</i> | 4636 (1.09) | 201038 (7.88) | 189 (1.09) |
| <i>epionk</i> | 4549 (1.02) | 54267 (29.20) | 174 (1.00) |
| <i>ccd pul</i> | 2186 (2.08) | 428892 (3.69) | 226 (1.30) |
| <i>timkf</i> | 1466 (1.49) | 1093262 (1.45) | 416 (2.39) |
| <i>DELC(0.)</i> | 558 (2.63) | 543090 (2.92) | 1012 (5.82) |
| <i>cpitrs</i> | 554 (1.01) | 459935 (3.45) | 174 (1.00) |
| <i>cpitail</i> | 554 (1.00) | 81918 (19.34) | 174 (1.00) |
| <i>b4dedx</i> | 549 (1.01) | 325523 (4.87) | 175 (1.01) |
| <i>PV · TD</i> | 499 (1.10) | 214709 (7.38) | 175 (1.01) |
| <i>cktrs</i> | 232 (2.15) | 663642 (2.39) | 247 (1.42) |
| <i>cktail</i> | 174 (1.33) | 388324 (4.08) | 232 (1.33) |
| Total Rej. | 2.87 | | |

Table 12: 1-Beam Normalization. Branch no. 4

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 1 (1.00) |
| <i>PNN2box</i> | 1031580 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>icodel14</i> | 1031580 (1.00) | 7 (226360.00) | 1 (1.00) |
| <i>cos3d</i> | 940558 (1.10) | 113984 (13.90) | 1 (1.00) |
| <i>layv4</i> | 940558 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>zfrf</i> | 939358 (1.00) | 2646 (598.84) | 1 (1.00) |
| <i>zutout</i> | 938837 (1.00) | 1136 (1394.82) | 1 (1.00) |
| FIDUCIAL | 938837 (1.00) | 116870 (13.56) | 1 (1.00) |
| <i>utcqual</i> | 780183 (1.20) | 315473 (5.02) | 1 (1.00) |
| <i>rsdedxcl</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rsdedxmax</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rslike</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>tgktim</i> | 780183 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>rngmom</i> | 780183 (1.00) | 552937 (2.87) | 1 (1.00) |
| <i>prrf1</i> | 759083 (1.03) | 52751 (30.04) | 1 (1.00) |
| <i>prrfz</i> | 717920 (1.06) | 100174 (15.82) | 1 (1.00) |
| PRRF | 717920 (1.00) | 147343 (10.75) | 1 (1.00) |
| <i>rtghi</i> | 716994 (1.00) | 5047 (313.95) | 1 (1.00) |
| <i>etghi</i> | 703834 (1.02) | 36570 (43.33) | 1 (1.00) |
| <i>tgdedx1</i> | 541914 (1.30) | 278471 (5.69) | 1 (1.00) |
| <i>tgdedx2</i> | 492290 (1.10) | 131696 (12.03) | 1 (1.00) |
| tgdedx | 492290 (1.00) | 431460 (3.67) | 1 (1.00) |
| <i>tglike1</i> | 446051 (1.10) | 227393 (6.97) | 1 (1.00) |
| <i>tglike2</i> | 421438 (1.06) | 204863 (7.73) | 1 (1.00) |
| TGLIKE | 421438 (1.00) | 307921 (5.15) | 1 (1.00) |
| <i>tgdb4</i> | 387703 (1.09) | 128445 (12.34) | 1 (1.00) |
| <i>tgdb4tip</i> | 302106 (1.28) | 398757 (3.97) | 1 (1.00) |
| <i>tgdvxtip</i> | 265833 (1.14) | 224201 (7.07) | 1 (1.00) |
| <i>tgdvxpi</i> | 249025 (1.07) | 173035 (9.16) | 1 (1.00) |
| TGB4 | 249025 (1.00) | 601653 (2.63) | 1 (1.00) |
| <i>pigap</i> | 236402 (1.05) | 143669 (11.03) | 1 (1.00) |
| KIN | 236402 (1.00) | 1348115 (1.18) | 1 (1.00) |
| <i>tgpv</i> | 159009 (1.49) | 536772 (2.95) | 1 (1.00) |
| <i>bwtrs</i> | 142064 (1.12) | 390436 (4.06) | 1 (1.00) |
| <i>b4trs</i> | 129494 (1.10) | 381089 (4.16) | 1 (1.00) |
| <i>b4ccd</i> | 128469 (1.01) | 21013 (75.41) | 1 (1.00) |
| <i>tgqualt</i> | 115937 (1.11) | 127923 (12.39) | 1 (1.00) |
| <i>timcon</i> | 115004 (1.01) | 20466 (77.42) | 1 (1.00) |
| <i>epitg</i> | 114847 (1.00) | 45516 (34.81) | 1 (1.00) |
| <i>tger</i> | 114787 (1.00) | 44684 (35.46) | 1 (1.00) |
| <i>targf</i> | 109479 (1.05) | 236438 (6.70) | 1 (1.00) |
| <i>ticcon</i> | 109477 (1.00) | 338 (4687.92) | 1 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------|-----------------|----------------|-------------|
| <i>dtgttp</i> | 109476 (1.00) | 1253 (1264.58) | 1 (1.00) |
| <i>rtdif</i> | 107767 (1.02) | 31388 (50.48) | 1 (1.00) |
| <i>epimax</i> | 105745 (1.02) | 99717 (15.89) | 1 (1.00) |
| <i>drp</i> | 104919 (1.01) | 29517 (53.68) | 1 (1.00) |
| <i>phivtx1</i> | 88735 (1.18) | 355628 (4.46) | 1 (1.00) |
| <i>ecccon</i> | 86815 (1.02) | 68397 (23.17) | 1 (1.00) |
| <i>opsveto</i> | 72762 (1.19) | 517505 (3.06) | 2 (2.00) |
| <i>kic</i> | 65195 (1.12) | 305803 (5.18) | 1 (1.00) |
| <i>tggeo</i> | 53604 (1.22) | 668634 (2.37) | 2 (2.00) |
| <i>tdedge</i> | 52139 (1.03) | 202786 (7.81) | 1 (1.00) |
| <i>tgzfool</i> | 52122 (1.00) | 27454 (57.72) | 1 (1.00) |
| <i>upvtrs</i> | 47895 (1.09) | 99287 (15.96) | 1 (1.00) |
| <i>rvtrs</i> | 47706 (1.00) | 31210 (50.77) | 1 (1.00) |
| <i>tgtcon</i> | 41240 (1.16) | 130506 (12.14) | 1 (1.00) |
| <i>b4etcon</i> | 40444 (1.02) | 46983 (33.73) | 1 (1.00) |
| <i>b4ekz</i> | 16441 (2.46) | 1025577 (1.54) | 3 (3.00) |
| <i>b4ekzic</i> | 16441 (1.00) | 171101 (9.26) | 1 (1.00) |
| <i>b4tim</i> | 11655 (1.41) | 740696 (2.14) | 2 (2.00) |
| <i>tgktim</i> | 11655 (1.00) | 0 (1584517.00) | 1 (1.00) |
| <i>tgenr</i> | 11524 (1.01) | 207413 (7.64) | 1 (1.00) |
| <i>chi567</i> | 7315 (1.58) | 1057451 (1.50) | 1 (1.00) |
| <i>npitg</i> | 7315 (1.00) | 127923 (12.39) | 1 (1.00) |
| <i>verrng</i> | 6265 (1.17) | 683791 (2.32) | 1 (1.00) |
| <i>chi5max</i> | 6069 (1.03) | 458246 (3.46) | 1 (1.00) |
| <i>angli</i> | 6055 (1.00) | 125736 (12.60) | 1 (1.00) |
| <i>ALLKfit</i> | 5069 (1.19) | 548146 (2.89) | 1 (1.00) |
| <i>tpics</i> | 4636 (1.09) | 201038 (7.88) | 1 (1.00) |
| <i>epionk</i> | 4549 (1.02) | 54267 (29.20) | 1 (1.00) |
| <i>ccdpu</i> | 2186 (2.08) | 428892 (3.69) | 1 (1.00) |
| <i>timkf</i> | 1466 (1.49) | 1093262 (1.45) | 11 (11.00) |
| <i>DEL(0.)</i> | 558 (2.63) | 543090 (2.92) | 1 (1.00) |
| <i>cktrs</i> | 238 (2.34) | 663642 (2.39) | 1 (1.00) |
| <i>cktail</i> | 178 (1.34) | 388324 (4.08) | 1 (1.00) |
| <i>pv(nottg)</i> | 6 (29.67) | 708757 (2.24) | 1 (1.00) |
| <i>pi_flg</i> | 6 (1.00) | 65019 (24.37) | 1 (1.00) |
| <i>ev502</i> | 4 (1.50) | 445524 (3.56) | 1 (1.00) |
| <i>elveto</i> | 4 (1.00) | 429199 (3.69) | 1 (1.00) |
| <i>tdfool</i> | 4 (1.00) | 323721 (4.89) | 1 (1.00) |
| <i>tdvarnn02</i> | 2 (2.00) | 641683 (2.47) | 1 (1.00) |
| TD | 2 (1.00) | 932279 (1.70) | 1 (1.00) |
| <i>cpitrs · cpitail</i> | 1 (2.00) | 1123340 (1.41) | 2 (2.00) |
| <i>b4dedx</i> | 1 (1.00) | 325523 (4.87) | 1 (1.00) |
| Total Rej. | | 1.00 | |

Table 13: 1-Beam Normalization. Branch no. 5

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 0 (0.00) |
| <i>PNN2box</i> | 1031580 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>icodel14</i> | 1031580 (1.00) | 7 (226360.00) | 0 (0.00) |
| <i>cos3d</i> | 940558 (1.10) | 113984 (13.90) | 0 (0.00) |
| <i>layv4</i> | 940558 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>zfrf</i> | 939358 (1.00) | 2646 (598.84) | 0 (0.00) |
| <i>zutout</i> | 938837 (1.00) | 1136 (1394.82) | 0 (0.00) |
| FIDUCIAL | 938837 (1.00) | 116870 (13.56) | 0 (0.00) |
| <i>utcqual</i> | 780183 (1.20) | 315473 (5.02) | 0 (0.00) |
| <i>rsdedxcl</i> | 780183 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rsdedxmax</i> | 780183 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rslike</i> | 780183 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>tgktim</i> | 780183 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>rngmom</i> | 780183 (1.00) | 552937 (2.87) | 0 (0.00) |
| <i>prrf1</i> | 759083 (1.03) | 52751 (30.04) | 0 (0.00) |
| <i>prrfz</i> | 717920 (1.06) | 100174 (15.82) | 0 (0.00) |
| PRRF | 717920 (1.00) | 147343 (10.75) | 0 (0.00) |
| <i>rtghi</i> | 716994 (1.00) | 5047 (313.95) | 0 (0.00) |
| <i>etghi</i> | 703834 (1.02) | 36570 (43.33) | 0 (0.00) |
| <i>tgdedx1</i> | 541914 (1.30) | 278471 (5.69) | 0 (0.00) |
| <i>tgdedx2</i> | 492290 (1.10) | 131696 (12.03) | 0 (0.00) |
| tgdedx | 492290 (1.00) | 431460 (3.67) | 0 (0.00) |
| <i>tglike1</i> | 446051 (1.10) | 227393 (6.97) | 0 (0.00) |
| <i>tglike2</i> | 421438 (1.06) | 204863 (7.73) | 0 (0.00) |
| TGLIKE | 421438 (1.00) | 307921 (5.15) | 0 (0.00) |
| <i>tgdb4</i> | 387703 (1.09) | 128445 (12.34) | 0 (0.00) |
| <i>tgdb4tip</i> | 302106 (1.28) | 398757 (3.97) | 0 (0.00) |
| <i>tgdvxtip</i> | 265833 (1.14) | 224201 (7.07) | 0 (0.00) |
| <i>tgdvxpi</i> | 249025 (1.07) | 173035 (9.16) | 0 (0.00) |
| TGB4 | 249025 (1.00) | 601653 (2.63) | 0 (0.00) |
| <i>pigap</i> | 236402 (1.05) | 143669 (11.03) | 0 (0.00) |
| KIN | 236402 (1.00) | 1348115 (1.18) | 0 (0.00) |
| <i>tgpv</i> | 159009 (1.49) | 536772 (2.95) | 0 (0.00) |
| <i>bwtrs</i> | 142064 (1.12) | 390436 (4.06) | 0 (0.00) |
| <i>b4trs</i> | 129494 (1.10) | 381089 (4.16) | 0 (0.00) |
| <i>b4ccd</i> | 128469 (1.01) | 21013 (75.41) | 0 (0.00) |
| <i>tgqualt</i> | 115937 (1.11) | 127923 (12.39) | 0 (0.00) |
| <i>timcon</i> | 115004 (1.01) | 20466 (77.42) | 0 (0.00) |
| <i>epitg</i> | 114847 (1.00) | 45516 (34.81) | 0 (0.00) |
| <i>tger</i> | 114787 (1.00) | 44684 (35.46) | 0 (0.00) |
| <i>targf</i> | 109479 (1.05) | 236438 (6.70) | 0 (0.00) |
| <i>ticcon</i> | 109477 (1.00) | 338 (4687.92) | 0 (0.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------|-----------------|----------------|-------------|
| <i>dtgttp</i> | 109476 (1.00) | 1253 (1264.58) | 0 (0.00) |
| <i>rtdif</i> | 107767 (1.02) | 31388 (50.48) | 0 (0.00) |
| <i>epimax</i> | 105745 (1.02) | 99717 (15.89) | 0 (0.00) |
| <i>drp</i> | 104919 (1.01) | 29517 (53.68) | 0 (0.00) |
| <i>phivtx1</i> | 88735 (1.18) | 355628 (4.46) | 0 (0.00) |
| <i>ecccon</i> | 86815 (1.02) | 68397 (23.17) | 0 (0.00) |
| <i>opsveto</i> | 72762 (1.19) | 517505 (3.06) | 0 (0.00) |
| <i>kic</i> | 65195 (1.12) | 305803 (5.18) | 0 (0.00) |
| <i>tggeo</i> | 53604 (1.22) | 668634 (2.37) | 0 (0.00) |
| <i>tdedge</i> | 52139 (1.03) | 202786 (7.81) | 0 (0.00) |
| <i>tgzfool</i> | 52122 (1.00) | 27454 (57.72) | 0 (0.00) |
| <i>upvtrs</i> | 47895 (1.09) | 99287 (15.96) | 0 (0.00) |
| <i>rvtrs</i> | 47706 (1.00) | 31210 (50.77) | 0 (0.00) |
| <i>tgtcon</i> | 41240 (1.16) | 130506 (12.14) | 0 (0.00) |
| <i>b4etcon</i> | 40444 (1.02) | 46983 (33.73) | 0 (0.00) |
| <i>b4ekz</i> | 16441 (2.46) | 1025577 (1.54) | 0 (0.00) |
| <i>b4ekzic</i> | 16441 (1.00) | 171101 (9.26) | 0 (0.00) |
| <i>b4tim</i> | 11655 (1.41) | 740696 (2.14) | 0 (0.00) |
| <i>tgttim</i> | 11655 (1.00) | 0 (1584517.00) | 0 (0.00) |
| <i>tgenr</i> | 11524 (1.01) | 207413 (7.64) | 0 (0.00) |
| <i>chi567</i> | 7315 (1.58) | 1057451 (1.50) | 0 (0.00) |
| <i>npitg</i> | 7315 (1.00) | 127923 (12.39) | 0 (0.00) |
| <i>verrng</i> | 6265 (1.17) | 683791 (2.32) | 0 (0.00) |
| <i>chi5max</i> | 6069 (1.03) | 458246 (3.46) | 0 (0.00) |
| <i>angli</i> | 6055 (1.00) | 125736 (12.60) | 0 (0.00) |
| <i>ALLKfit</i> | 5069 (1.19) | 548146 (2.89) | 0 (0.00) |
| <i>tpics</i> | 4636 (1.09) | 201038 (7.88) | 0 (0.00) |
| <i>epionk</i> | 4549 (1.02) | 54267 (29.20) | 0 (0.00) |
| <i>ccd pul</i> | 2186 (2.08) | 428892 (3.69) | 0 (0.00) |
| <i>timkf</i> | 1466 (1.49) | 1093262 (1.45) | 0 (0.00) |
| <i>DEL C(0.)</i> | 558 (2.63) | 543090 (2.92) | 0 (0.00) |
| <i>cktrs</i> | 238 (2.34) | 663642 (2.39) | 0 (0.00) |
| <i>cktail</i> | 178 (1.34) | 388324 (4.08) | 0 (0.00) |
| <i>pv(nottg)</i> | 6 (29.67) | 708757 (2.24) | 1 (1.00) |
| <i>pi flg</i> | 6 (1.00) | 65019 (24.37) | 0 (0.00) |
| <i>ev502</i> | 4 (1.50) | 445524 (3.56) | 0 (0.00) |
| <i>elveto</i> | 4 (1.00) | 429199 (3.69) | 0 (0.00) |
| <i>tdfool</i> | 4 (1.00) | 323721 (4.89) | 0 (0.00) |
| <i>tdvarnn02</i> | 2 (2.00) | 641683 (2.47) | 0 (0.00) |
| TD | 2 (1.00) | 932279 (1.70) | 0 (0.00) |
| <i>b4dedx</i> | 0 (2.00) | 1258994 (1.26) | 1 (1.00) |
| <i>cpitrs</i> | 0 (0.00) | 459935 (3.45) | 0 (0.00) |
| <i>cpitail</i> | 0 (0.00) | 81918 (19.34) | 0 (0.00) |
| Total Rej. | 0.00 | | |

Table 14: 2-Beam Rejection. Branch no. 1

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------------------|--------------------|----------------|--------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 173 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 173 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 173 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 173 (1.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 179 (1.03) |
| <i>pv(nottg)</i> | 501119 (2.06) | 708757 (2.24) | 1127 (6.51) |
| <i>pi_flg</i> | 498855 (1.00) | 65019 (24.37) | 173 (1.00) |
| <i>ev502</i> | 404521 (1.23) | 445524 (3.56) | 173 (1.00) |
| <i>elveto</i> | 370161 (1.09) | 429199 (3.69) | 173 (1.00) |
| <i>tdfool</i> | 369174 (1.00) | 323721 (4.89) | 173 (1.00) |
| <i>tdvarnn02</i> | 303005 (1.22) | 641683 (2.47) | 173 (1.00) |
| TD | 303005 (1.00) | 932279 (1.70) | 173 (1.00) |
| <i>b4dedx</i> | 181429 (1.67) | 325523 (4.87) | 184 (1.06) |
| <i>tgqualt</i> | 162302 (1.12) | 127923 (12.39) | 173 (1.00) |
| <i>timcon</i> | 160370 (1.01) | 20466 (77.42) | 174 (1.01) |
| <i>DELC(0.)</i> | 48754 (3.29) | 1041427 (1.52) | 201 (1.16) |
| <i>tger</i> | 45939 (1.06) | 44684 (35.46) | 186 (1.08) |
| <i>tgzfool</i> | 45409 (1.01) | 27454 (57.72) | 180 (1.04) |
| <i>upvtrs</i> | 41233 (1.10) | 99287 (15.96) | 178 (1.03) |
| <i>rvtrs</i> | 40530 (1.02) | 31210 (50.77) | 183 (1.06) |
| <i>b4etcon</i> | 39587 (1.02) | 46983 (33.73) | 179 (1.03) |
| <i>b4trs · b4ccd · targf</i> | 17223 (2.30) | 1471818 (1.08) | 2689 (15.54) |
| <i>cpitrs</i> | 7026 (2.45) | 459935 (3.45) | 213 (1.23) |
| <i>cpitail</i> | 7016 (1.00) | 81918 (19.34) | 173 (1.00) |
| $1.1 < b4ars_atc < 5.$ | 5148 (1.36) | 821493 (1.93) | 273 (1.58) |
| <i>bwtrs</i> | 257 (20.03) | 390436 (4.06) | 354 (2.05) |
| <i>cktrs</i> | 179 (1.44) | 663642 (2.39) | 201 (1.16) |
| <i>cktail</i> | 173 (1.03) | 388324 (4.08) | 179 (1.03) |
| Total Rej. | 29.76 | | |

Table 15: 2-Beam Rejection. Branch no. 2

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------------------|--------------------|----------------|--------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 72 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 72 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 72 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 72 (1.00) |
| <i>rngmom</i> | 1031580 (1.54) | 552937 (2.87) | 76 (1.06) |
| <i>pv(nottg)</i> | 501119 (2.06) | 708757 (2.24) | 888 (12.33) |
| <i>pi_flg</i> | 498855 (1.00) | 65019 (24.37) | 72 (1.00) |
| <i>ev502</i> | 404521 (1.23) | 445524 (3.56) | 72 (1.00) |
| <i>elveto</i> | 370161 (1.09) | 429199 (3.69) | 72 (1.00) |
| <i>tdfool</i> | 369174 (1.00) | 323721 (4.89) | 72 (1.00) |
| <i>tdvarnn02</i> | 303005 (1.22) | 641683 (2.47) | 72 (1.00) |
| TD | 303005 (1.00) | 932279 (1.70) | 72 (1.00) |
| <i>b4dedx</i> | 181429 (1.67) | 325523 (4.87) | 78 (1.08) |
| <i>tgqualt</i> | 162302 (1.12) | 127923 (12.39) | 72 (1.00) |
| <i>timcon</i> | 160370 (1.01) | 20466 (77.42) | 72 (1.00) |
| <i>DELC(0.)</i> | 48754 (3.29) | 1041427 (1.52) | 87 (1.21) |
| <i>tger</i> | 45939 (1.06) | 44684 (35.46) | 73 (1.01) |
| <i>tgz fool</i> | 45409 (1.01) | 27454 (57.72) | 72 (1.00) |
| <i>upvtrs</i> | 41233 (1.10) | 99287 (15.96) | 74 (1.03) |
| <i>rvtrs</i> | 40530 (1.02) | 31210 (50.77) | 74 (1.03) |
| <i>b4etcon</i> | 39587 (1.02) | 46983 (33.73) | 72 (1.00) |
| <i>b4trs · b4ccd · targf</i> | 17223 (2.30) | 1471818 (1.08) | 4159 (57.76) |
| <i>cktrs</i> | 10772 (1.60) | 663642 (2.39) | 80 (1.11) |
| <i>cktail</i> | 10586 (1.02) | 388324 (4.08) | 74 (1.03) |
| <i>b4ars_atc < 1.1</i> | 6182 (1.71) | 775481 (2.04) | 158 (2.19) |
| <i>tgz > -7.0</i> | 5307 (1.16) | 266578 (5.94) | 95 (1.32) |
| <i>bwtrs</i> | 140 (37.91) | 390436 (4.06) | 191 (2.65) |
| <i>cpitrs</i> | 72 (1.94) | 459935 (3.45) | 124 (1.72) |
| <i>cpitail</i> | 72 (1.00) | 81918 (19.34) | 72 (1.00) |
| Total Rej. | 73.71 | | |

Table 16: 2-Beam Normalization. Branch no. 1

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 4 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>pv(nottg)</i> | 875760 (1.81) | 708757 (2.24) | 64 (16.00) |
| <i>tgqualt</i> | 808191 (1.08) | 127923 (12.39) | 4 (1.00) |
| <i>timcon</i> | 800014 (1.01) | 20466 (77.42) | 4 (1.00) |
| <i>epitg</i> | 783839 (1.02) | 45516 (34.81) | 4 (1.00) |
| <i>tger</i> | 769148 (1.02) | 44684 (35.46) | 4 (1.00) |
| <i>ticcon</i> | 769119 (1.00) | 338 (4687.92) | 4 (1.00) |
| <i>dtgttp</i> | 769028 (1.00) | 1253 (1264.58) | 4 (1.00) |
| <i>rtdif</i> | 752642 (1.02) | 31388 (50.48) | 4 (1.00) |
| <i>drp</i> | 739082 (1.02) | 29517 (53.68) | 4 (1.00) |
| <i>eiicon</i> | 722017 (1.02) | 68397 (23.17) | 4 (1.00) |
| <i>kic</i> | 630365 (1.15) | 305803 (5.18) | 4 (1.00) |
| <i>tggeo</i> | 533517 (1.18) | 668634 (2.37) | 4 (1.00) |
| <i>tgzfool</i> | 530112 (1.01) | 27454 (57.72) | 4 (1.00) |
| <i>upvtrs</i> | 492758 (1.08) | 99287 (15.96) | 4 (1.00) |
| <i>rvtrs</i> | 488993 (1.01) | 31210 (50.77) | 4 (1.00) |
| <i>tgtcon</i> | 464501 (1.05) | 130506 (12.14) | 4 (1.00) |
| <i>b4etcon</i> | 452033 (1.03) | 46983 (33.73) | 4 (1.00) |
| <i>b4tim</i> | 179831 (2.51) | 740696 (2.14) | 4 (1.00) |
| <i>tgktim</i> | 179831 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>tgenr</i> | 175699 (1.02) | 207413 (7.64) | 4 (1.00) |
| <i>chi567</i> | 64306 (2.73) | 1057451 (1.50) | 5 (1.25) |
| <i>npitg</i> | 64306 (1.00) | 127923 (12.39) | 4 (1.00) |
| <i>verrng</i> | 45719 (1.41) | 683791 (2.32) | 9 (2.25) |
| <i>chi5max</i> | 43843 (1.04) | 458246 (3.46) | 5 (1.25) |
| <i>angli</i> | 43685 (1.00) | 125736 (12.60) | 4 (1.00) |
| <i>ALLK fit</i> | 28742 (1.52) | 548146 (2.89) | 4 (1.00) |
| <i>tpics</i> | 25197 (1.14) | 201038 (7.88) | 4 (1.00) |
| <i>epionk</i> | 24269 (1.04) | 54267 (29.20) | 4 (1.00) |
| <i>ccd pul</i> | 20353 (1.19) | 428892 (3.69) | 11 (2.75) |
| <i>timkf</i> | 13542 (1.50) | 1093262 (1.45) | 4 (1.00) |
| <i>DELIC(0.)</i> | 3006 (4.50) | 1041427 (1.52) | 242 (60.50) |
| <i>b4dedx</i> | 2976 (1.01) | 325523 (4.87) | 4 (1.00) |
| <i>cpitrs</i> | 2787 (1.07) | 459935 (3.45) | 7 (1.75) |
| <i>cpitail</i> | 2787 (1.00) | 81918 (19.34) | 4 (1.00) |
| <i>cktrs · cktail · bwtrs</i> | 675 (4.13) | 706680 (2.24) | 40 (10.00) |
| <i>PNN2box</i> | 675 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>icodel14</i> | 675 (1.00) | 7 (226360.00) | 4 (1.00) |
| <i>cos3d</i> | 662 (1.02) | 113984 (13.90) | 4 (1.00) |
| <i>layv4</i> | 662 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>zfrf</i> | 660 (1.00) | 2646 (598.84) | 4 (1.00) |
| <i>zutout</i> | 659 (1.00) | 1136 (1394.82) | 4 (1.00) |
| FIDUCIAL | 659 (1.00) | 116870 (13.56) | 4 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------|------------------|----------------|-------------|
| <i>utcqual</i> | 536 (1.23) | 315473 (5.02) | 4 (1.00) |
| <i>rsdedxcl</i> | 536 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>rsdedxmax</i> | 536 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>rslike</i> | 536 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>tgktim</i> | 536 (1.00) | 0 (1584517.00) | 4 (1.00) |
| <i>rngmom</i> | 33 (16.24) | 552937 (2.87) | 4 (1.00) |
| <i>prrf1</i> | 32 (1.03) | 52751 (30.04) | 4 (1.00) |
| <i>prrfz</i> | 30 (1.07) | 100174 (15.82) | 4 (1.00) |
| PRRF | 30 (1.00) | 147343 (10.75) | 4 (1.00) |
| <i>rtghi</i> | 30 (1.00) | 5047 (313.95) | 4 (1.00) |
| <i>etghi</i> | 30 (1.00) | 36570 (43.33) | 4 (1.00) |
| <i>tgdedx1</i> | 25 (1.20) | 278471 (5.69) | 4 (1.00) |
| <i>tgdedx2</i> | 25 (1.00) | 131696 (12.03) | 4 (1.00) |
| tgdedx | 25 (1.00) | 431460 (3.67) | 4 (1.00) |
| <i>tglike1</i> | 24 (1.04) | 227393 (6.97) | 4 (1.00) |
| <i>tglike2</i> | 24 (1.00) | 204863 (7.73) | 4 (1.00) |
| TGLIKE | 24 (1.00) | 307921 (5.15) | 4 (1.00) |
| <i>tgdb4</i> | 23 (1.04) | 128445 (12.34) | 4 (1.00) |
| <i>tgdb4tip</i> | 23 (1.00) | 398757 (3.97) | 4 (1.00) |
| <i>tgdvxtip</i> | 22 (1.05) | 224201 (7.07) | 4 (1.00) |
| <i>tgdvxpi</i> | 22 (1.00) | 173035 (9.16) | 4 (1.00) |
| TGB4 | 22 (1.00) | 601653 (2.63) | 4 (1.00) |
| <i>pigap</i> | 21 (1.05) | 143669 (11.03) | 4 (1.00) |
| KIN | 21 (1.00) | 1348115 (1.18) | 4 (1.00) |
| <i>piflg</i> | 21 (1.00) | 65019 (24.37) | 4 (1.00) |
| <i>ev502</i> | 15 (1.40) | 445524 (3.56) | 4 (1.00) |
| <i>elveto</i> | 14 (1.07) | 429199 (3.69) | 4 (1.00) |
| <i>tdfool</i> | 14 (1.00) | 323721 (4.89) | 4 (1.00) |
| <i>tdvarnn02</i> | 12 (1.17) | 641683 (2.47) | 4 (1.00) |
| TD | 12 (1.00) | 932279 (1.70) | 4 (1.00) |
| <i>b4trs</i> | 4 (3.00) | 381089 (4.16) | 12 (3.00) |
| <i>b4ccd</i> | 4 (1.00) | 21013 (75.41) | 4 (1.00) |
| Total Rej. | 3.00 | | |

Table 17: 2-Beam Normalization. Branch no. 2

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>pv(nottg)</i> | 875760 (1.81) | 708757 (2.24) | 45 (15.00) |
| <i>tgqualt</i> | 808191 (1.08) | 127923 (12.39) | 3 (1.00) |
| <i>timcon</i> | 800014 (1.01) | 20466 (77.42) | 3 (1.00) |
| <i>epitg</i> | 783839 (1.02) | 45516 (34.81) | 3 (1.00) |
| <i>tger</i> | 769148 (1.02) | 44684 (35.46) | 3 (1.00) |
| <i>ticcon</i> | 769119 (1.00) | 338 (4687.92) | 3 (1.00) |
| <i>dtgttp</i> | 769028 (1.00) | 1253 (1264.58) | 3 (1.00) |
| <i>rtdif</i> | 752642 (1.02) | 31388 (50.48) | 3 (1.00) |
| <i>drp</i> | 739082 (1.02) | 29517 (53.68) | 3 (1.00) |
| <i>eiicon</i> | 722017 (1.02) | 68397 (23.17) | 3 (1.00) |
| <i>kic</i> | 630365 (1.15) | 305803 (5.18) | 3 (1.00) |
| <i>tggeo</i> | 533517 (1.18) | 668634 (2.37) | 3 (1.00) |
| <i>tgzfool</i> | 530112 (1.01) | 27454 (57.72) | 3 (1.00) |
| <i>upvtrs</i> | 492758 (1.08) | 99287 (15.96) | 3 (1.00) |
| <i>rvtrs</i> | 488993 (1.01) | 31210 (50.77) | 3 (1.00) |
| <i>tgtcon</i> | 464501 (1.05) | 130506 (12.14) | 3 (1.00) |
| <i>b4etcon</i> | 452033 (1.03) | 46983 (33.73) | 3 (1.00) |
| <i>b4tim</i> | 179831 (2.51) | 740696 (2.14) | 3 (1.00) |
| <i>tgktim</i> | 179831 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>tgenr</i> | 175699 (1.02) | 207413 (7.64) | 3 (1.00) |
| <i>chi567</i> | 64306 (2.73) | 1057451 (1.50) | 4 (1.33) |
| <i>npitg</i> | 64306 (1.00) | 127923 (12.39) | 3 (1.00) |
| <i>verrng</i> | 45719 (1.41) | 683791 (2.32) | 3 (1.00) |
| <i>chi5max</i> | 43843 (1.04) | 458246 (3.46) | 4 (1.33) |
| <i>angli</i> | 43685 (1.00) | 125736 (12.60) | 3 (1.00) |
| <i>ALLK fit</i> | 28742 (1.52) | 548146 (2.89) | 4 (1.33) |
| <i>tpics</i> | 25197 (1.14) | 201038 (7.88) | 3 (1.00) |
| <i>epionk</i> | 24269 (1.04) | 54267 (29.20) | 3 (1.00) |
| <i>ccd pul</i> | 20353 (1.19) | 428892 (3.69) | 4 (1.33) |
| <i>timkf</i> | 13542 (1.50) | 1093262 (1.45) | 3 (1.00) |
| <i>DELC(0.)</i> | 3006 (4.50) | 1041427 (1.52) | 62 (20.67) |
| <i>b4dedx</i> | 2976 (1.01) | 325523 (4.87) | 3 (1.00) |
| <i>cpitrs</i> | 2787 (1.07) | 459935 (3.45) | 3 (1.00) |
| <i>cpitail</i> | 2787 (1.00) | 81918 (19.34) | 3 (1.00) |
| <i>cktrs · cktail · bwtrs</i> | 675 (4.13) | 706680 (2.24) | 26 (8.67) |
| <i>PNN2box</i> | 675 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>icodel14</i> | 675 (1.00) | 7 (226360.00) | 3 (1.00) |
| <i>cos3d</i> | 662 (1.02) | 113984 (13.90) | 3 (1.00) |
| <i>layv4</i> | 662 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>zfrf</i> | 660 (1.00) | 2646 (598.84) | 3 (1.00) |
| <i>zutout</i> | 659 (1.00) | 1136 (1394.82) | 3 (1.00) |
| FIDUCIAL | 659 (1.00) | 116870 (13.56) | 3 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|------------------|------------------|----------------|-------------|
| <i>utcqual</i> | 536 (1.23) | 315473 (5.02) | 3 (1.00) |
| <i>rsdedxcl</i> | 536 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rsdedxmax</i> | 536 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rslike</i> | 536 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>tgktim</i> | 536 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rngmom</i> | 33 (16.24) | 552937 (2.87) | 3 (1.00) |
| <i>prrf1</i> | 32 (1.03) | 52751 (30.04) | 3 (1.00) |
| <i>prrfz</i> | 30 (1.07) | 100174 (15.82) | 3 (1.00) |
| PRRF | 30 (1.00) | 147343 (10.75) | 3 (1.00) |
| <i>rtghi</i> | 30 (1.00) | 5047 (313.95) | 3 (1.00) |
| <i>etghi</i> | 30 (1.00) | 36570 (43.33) | 3 (1.00) |
| <i>tgdedx1</i> | 25 (1.20) | 278471 (5.69) | 3 (1.00) |
| <i>tgdedx2</i> | 25 (1.00) | 131696 (12.03) | 3 (1.00) |
| tgdedx | 25 (1.00) | 431460 (3.67) | 3 (1.00) |
| <i>tglike1</i> | 24 (1.04) | 227393 (6.97) | 3 (1.00) |
| <i>tglike2</i> | 24 (1.00) | 204863 (7.73) | 3 (1.00) |
| TGLIKE | 24 (1.00) | 307921 (5.15) | 3 (1.00) |
| <i>tgdb4</i> | 23 (1.04) | 128445 (12.34) | 3 (1.00) |
| <i>tgdb4tip</i> | 23 (1.00) | 398757 (3.97) | 3 (1.00) |
| <i>tgdvxtip</i> | 22 (1.05) | 224201 (7.07) | 3 (1.00) |
| <i>tgdvxpi</i> | 22 (1.00) | 173035 (9.16) | 3 (1.00) |
| TGB4 | 22 (1.00) | 601653 (2.63) | 3 (1.00) |
| <i>pigap</i> | 21 (1.05) | 143669 (11.03) | 3 (1.00) |
| KIN | 21 (1.00) | 1348115 (1.18) | 3 (1.00) |
| <i>piflg</i> | 21 (1.00) | 65019 (24.37) | 3 (1.00) |
| <i>ev502</i> | 15 (1.40) | 445524 (3.56) | 3 (1.00) |
| <i>elveto</i> | 14 (1.07) | 429199 (3.69) | 3 (1.00) |
| <i>tdfool</i> | 14 (1.00) | 323721 (4.89) | 3 (1.00) |
| <i>tdvarnn02</i> | 12 (1.17) | 641683 (2.47) | 3 (1.00) |
| TD | 12 (1.00) | 932279 (1.70) | 3 (1.00) |
| <i>targf</i> | 12 (1.00) | 236438 (6.70) | 3 (1.00) |
| <i>b4ekz</i> | 6 (2.00) | 1025577 (1.54) | 4 (1.33) |
| <i>epimax</i> | 6 (1.00) | 99717 (15.89) | 3 (1.00) |
| <i>phivtx1</i> | 5 (1.20) | 355628 (4.46) | 3 (1.00) |
| <i>opsveto</i> | 3 (1.67) | 517505 (3.06) | 3 (1.00) |
| <i>tdedge</i> | 3 (1.00) | 202786 (7.81) | 3 (1.00) |
| <i>null</i> | 3 (1.00) | 0 (1584517.00) | 3 (1.00) |
| <i>rtghi</i> | 3 (1.00) | 5047 (313.95) | 3 (1.00) |
| <i>etghi</i> | 3 (1.00) | 36570 (43.33) | 3 (1.00) |
| <i>tgdedx1</i> | 3 (1.00) | 278471 (5.69) | 3 (1.00) |
| <i>tgdedx2</i> | 3 (1.00) | 131696 (12.03) | 3 (1.00) |
| tgdedx | 3 (1.00) | 431460 (3.67) | 3 (1.00) |
| <i>tglike1</i> | 3 (1.00) | 227393 (6.97) | 3 (1.00) |
| <i>tglike2</i> | 3 (1.00) | 204863 (7.73) | 3 (1.00) |
| TGLIKE | 3 (1.00) | 307921 (5.15) | 3 (1.00) |
| <i>tgdb4</i> | 3 (1.00) | 128445 (12.34) | 3 (1.00) |

continued on next page

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-----------------|-----------------|----------------|-------------|
| <i>tgdb4tip</i> | 3 (1.00) | 398757 (3.97) | 3 (1.00) |
| <i>tgdvxtip</i> | 3 (1.00) | 224201 (7.07) | 3 (1.00) |
| <i>tgdvxpi</i> | 3 (1.00) | 173035 (9.16) | 3 (1.00) |
| TGB4 | 3 (1.00) | 601653 (2.63) | 3 (1.00) |
| <i>pigap</i> | 3 (1.00) | 143669 (11.03) | 3 (1.00) |
| TGKIN | 3 (1.00) | 960688 (1.65) | 3 (1.00) |
| <i>tgpv</i> | 3 (1.00) | 536772 (2.95) | 3 (1.00) |
| Total Rej. | 4.00 | | |

Table 18: 2-Beam Normalization. Branch no. 3

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 6 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>pv(nottg)</i> | 875760 (1.81) | 708757 (2.24) | 32 (5.33) |
| <i>tgqualt</i> | 808191 (1.08) | 127923 (12.39) | 6 (1.00) |
| <i>timcon</i> | 800014 (1.01) | 20466 (77.42) | 6 (1.00) |
| <i>epitg</i> | 783839 (1.02) | 45516 (34.81) | 6 (1.00) |
| <i>tger</i> | 769148 (1.02) | 44684 (35.46) | 6 (1.00) |
| <i>ticcon</i> | 769119 (1.00) | 338 (4687.92) | 6 (1.00) |
| <i>dtgttp</i> | 769028 (1.00) | 1253 (1264.58) | 6 (1.00) |
| <i>rtdif</i> | 752642 (1.02) | 31388 (50.48) | 6 (1.00) |
| <i>drp</i> | 739082 (1.02) | 29517 (53.68) | 6 (1.00) |
| <i>eidcon</i> | 722017 (1.02) | 68397 (23.17) | 6 (1.00) |
| <i>kic</i> | 630365 (1.15) | 305803 (5.18) | 6 (1.00) |
| <i>tggeo</i> | 533517 (1.18) | 668634 (2.37) | 6 (1.00) |
| <i>tgzfool</i> | 530112 (1.01) | 27454 (57.72) | 6 (1.00) |
| <i>upvtrs</i> | 492758 (1.08) | 99287 (15.96) | 6 (1.00) |
| <i>rvtrs</i> | 488993 (1.01) | 31210 (50.77) | 6 (1.00) |
| <i>tgtcon</i> | 464501 (1.05) | 130506 (12.14) | 6 (1.00) |
| <i>b4etcon</i> | 452033 (1.03) | 46983 (33.73) | 6 (1.00) |
| <i>b4tim</i> | 179831 (2.51) | 740696 (2.14) | 6 (1.00) |
| <i>tgktim</i> | 179831 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>tgenr</i> | 175699 (1.02) | 207413 (7.64) | 6 (1.00) |
| <i>chi567</i> | 64306 (2.73) | 1057451 (1.50) | 8 (1.33) |
| <i>npitg</i> | 64306 (1.00) | 127923 (12.39) | 6 (1.00) |
| <i>verrng</i> | 45719 (1.41) | 683791 (2.32) | 15 (2.50) |
| <i>chi5max</i> | 43843 (1.04) | 458246 (3.46) | 6 (1.00) |
| <i>angli</i> | 43685 (1.00) | 125736 (12.60) | 6 (1.00) |
| <i>ALLK fit</i> | 28742 (1.52) | 548146 (2.89) | 6 (1.00) |
| <i>tpics</i> | 25197 (1.14) | 201038 (7.88) | 6 (1.00) |
| <i>epionk</i> | 24269 (1.04) | 54267 (29.20) | 6 (1.00) |
| <i>ccd pul</i> | 20353 (1.19) | 428892 (3.69) | 15 (2.50) |
| <i>timkf</i> | 13542 (1.50) | 1093262 (1.45) | 6 (1.00) |
| <i>DELC(0.)</i> | 3006 (4.50) | 1041427 (1.52) | 14 (2.33) |
| <i>b4dedx</i> | 2976 (1.01) | 325523 (4.87) | 6 (1.00) |
| <i>cktrs</i> | 2432 (1.22) | 663642 (2.39) | 6 (1.00) |
| <i>cktail</i> | 2376 (1.02) | 388324 (4.08) | 6 (1.00) |
| <i>PNN2box</i> | 2376 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>icodel14</i> | 2376 (1.00) | 7 (226360.00) | 6 (1.00) |
| <i>cos3d</i> | 2290 (1.04) | 113984 (13.90) | 6 (1.00) |
| <i>layv4</i> | 2290 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>zfrf</i> | 2286 (1.00) | 2646 (598.84) | 6 (1.00) |
| <i>zutout</i> | 2284 (1.00) | 1136 (1394.82) | 6 (1.00) |
| FIDUCIAL | 2284 (1.00) | 116870 (13.56) | 6 (1.00) |
| <i>utqual</i> | 1847 (1.24) | 315473 (5.02) | 6 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|---------------------------------|------------------|----------------|-------------|
| <i>rsdedxcl</i> | 1847 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>rsdedxmax</i> | 1847 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>rslike</i> | 1847 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>tgktim</i> | 1847 (1.00) | 0 (1584517.00) | 6 (1.00) |
| <i>rngmom</i> | 247 (7.48) | 552937 (2.87) | 6 (1.00) |
| <i>prrf1</i> | 235 (1.05) | 52751 (30.04) | 6 (1.00) |
| <i>prrfz</i> | 227 (1.04) | 100174 (15.82) | 6 (1.00) |
| PRRF | 227 (1.00) | 147343 (10.75) | 6 (1.00) |
| <i>rtghi</i> | 227 (1.00) | 5047 (313.95) | 6 (1.00) |
| <i>etghi</i> | 227 (1.00) | 36570 (43.33) | 6 (1.00) |
| <i>tgdedx1</i> | 196 (1.16) | 278471 (5.69) | 6 (1.00) |
| <i>tgdedx2</i> | 194 (1.01) | 131696 (12.03) | 6 (1.00) |
| tgdedx | 194 (1.00) | 431460 (3.67) | 6 (1.00) |
| <i>tglike1</i> | 193 (1.01) | 227393 (6.97) | 6 (1.00) |
| <i>tglike2</i> | 193 (1.00) | 204863 (7.73) | 6 (1.00) |
| TGLIKE | 193 (1.00) | 307921 (5.15) | 6 (1.00) |
| <i>tgdb4</i> | 188 (1.03) | 128445 (12.34) | 6 (1.00) |
| <i>tgdb4tip</i> | 165 (1.14) | 398757 (3.97) | 6 (1.00) |
| <i>tgdvxtip</i> | 160 (1.03) | 224201 (7.07) | 6 (1.00) |
| <i>tgdvxpi</i> | 159 (1.01) | 173035 (9.16) | 6 (1.00) |
| TGB4 | 159 (1.00) | 601653 (2.63) | 6 (1.00) |
| <i>pigap</i> | 153 (1.04) | 143669 (11.03) | 6 (1.00) |
| KIN | 153 (1.00) | 1348115 (1.18) | 6 (1.00) |
| <i>piflg</i> | 151 (1.01) | 65019 (24.37) | 6 (1.00) |
| <i>ev502</i> | 129 (1.17) | 445524 (3.56) | 6 (1.00) |
| <i>elveto</i> | 124 (1.04) | 429199 (3.69) | 6 (1.00) |
| <i>tdfool</i> | 124 (1.00) | 323721 (4.89) | 6 (1.00) |
| <i>tdvarnn02</i> | 98 (1.27) | 641683 (2.47) | 6 (1.00) |
| TD | 98 (1.00) | 932279 (1.70) | 6 (1.00) |
| <i>cpitrs · cpitail · bwtrs</i> | 58 (1.69) | 866255 (1.83) | 42 (7.00) |
| <i>b4trs</i> | 7 (8.29) | 381089 (4.16) | 57 (9.50) |
| <i>b4ccd</i> | 6 (1.17) | 21013 (75.41) | 7 (1.17) |
| Total Rej. | 9.67 | | |

Table 19: 2-Beam Normalization. Branch no. 4

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-------------------------------|----------------|----------------|-------------|
| <i>PNN2box</i> | 1584517 (0.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rsdedxmax</i> | 1584517 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rsdedxcl</i> | 1584517 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rslike</i> | 1584517 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>pv(nottg)</i> | 875760 (1.81) | 708757 (2.24) | 16 (8.00) |
| <i>tgqualt</i> | 808191 (1.08) | 127923 (12.39) | 2 (1.00) |
| <i>timcon</i> | 800014 (1.01) | 20466 (77.42) | 2 (1.00) |
| <i>epitg</i> | 783839 (1.02) | 45516 (34.81) | 2 (1.00) |
| <i>tger</i> | 769148 (1.02) | 44684 (35.46) | 2 (1.00) |
| <i>ticcon</i> | 769119 (1.00) | 338 (4687.92) | 2 (1.00) |
| <i>dtgttp</i> | 769028 (1.00) | 1253 (1264.58) | 2 (1.00) |
| <i>rtdif</i> | 752642 (1.02) | 31388 (50.48) | 2 (1.00) |
| <i>drp</i> | 739082 (1.02) | 29517 (53.68) | 2 (1.00) |
| <i>eidcon</i> | 722017 (1.02) | 68397 (23.17) | 2 (1.00) |
| <i>kic</i> | 630365 (1.15) | 305803 (5.18) | 2 (1.00) |
| <i>tggeo</i> | 533517 (1.18) | 668634 (2.37) | 2 (1.00) |
| <i>tgzfool</i> | 530112 (1.01) | 27454 (57.72) | 2 (1.00) |
| <i>upvtrs</i> | 492758 (1.08) | 99287 (15.96) | 2 (1.00) |
| <i>rvtrs</i> | 488993 (1.01) | 31210 (50.77) | 2 (1.00) |
| <i>tgtcon</i> | 464501 (1.05) | 130506 (12.14) | 2 (1.00) |
| <i>b4etcon</i> | 452033 (1.03) | 46983 (33.73) | 2 (1.00) |
| <i>b4tim</i> | 179831 (2.51) | 740696 (2.14) | 2 (1.00) |
| <i>tgktim</i> | 179831 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>tgenr</i> | 175699 (1.02) | 207413 (7.64) | 2 (1.00) |
| <i>chi567</i> | 64306 (2.73) | 1057451 (1.50) | 2 (1.00) |
| <i>npitg</i> | 64306 (1.00) | 127923 (12.39) | 2 (1.00) |
| <i>verrng</i> | 45719 (1.41) | 683791 (2.32) | 2 (1.00) |
| <i>chi5max</i> | 43843 (1.04) | 458246 (3.46) | 2 (1.00) |
| <i>angli</i> | 43685 (1.00) | 125736 (12.60) | 2 (1.00) |
| <i>ALLK fit</i> | 28742 (1.52) | 548146 (2.89) | 3 (1.50) |
| <i>tpics</i> | 25197 (1.14) | 201038 (7.88) | 2 (1.00) |
| <i>epionk</i> | 24269 (1.04) | 54267 (29.20) | 2 (1.00) |
| <i>ccd pul</i> | 20353 (1.19) | 428892 (3.69) | 3 (1.50) |
| <i>timkf</i> | 13542 (1.50) | 1093262 (1.45) | 2 (1.00) |
| <i>DELC(0.)</i> | 3006 (4.50) | 1041427 (1.52) | 3 (1.50) |
| <i>b4dedx</i> | 2976 (1.01) | 325523 (4.87) | 2 (1.00) |
| <i>cktrs</i> | 2432 (1.22) | 663642 (2.39) | 2 (1.00) |
| <i>cktail</i> | 2376 (1.02) | 388324 (4.08) | 2 (1.00) |
| <i>PNN2box</i> | 2376 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>icodel14</i> | 2376 (1.00) | 7 (226360.00) | 2 (1.00) |
| <i>cos3d</i> | 2290 (1.04) | 113984 (13.90) | 2 (1.00) |
| <i>layv4</i> | 2290 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>zfrf</i> | 2286 (1.00) | 2646 (598.84) | 2 (1.00) |
| <i>zutout</i> | 2284 (1.00) | 1136 (1394.82) | 2 (1.00) |
| FIDUCIAL | 2284 (1.00) | 116870 (13.56) | 2 (1.00) |
| <i>utqual</i> | 1847 (1.24) | 315473 (5.02) | 2 (1.00) |
| <i>continued on next page</i> | | | |

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|---------------------------------|------------------|----------------|-------------|
| <i>rsdedxcl</i> | 1847 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rsdedxmax</i> | 1847 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rslike</i> | 1847 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>tgktim</i> | 1847 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rngmom</i> | 247 (7.48) | 552937 (2.87) | 2 (1.00) |
| <i>prrf1</i> | 235 (1.05) | 52751 (30.04) | 2 (1.00) |
| <i>prrfz</i> | 227 (1.04) | 100174 (15.82) | 2 (1.00) |
| PRRF | 227 (1.00) | 147343 (10.75) | 2 (1.00) |
| <i>rtghi</i> | 227 (1.00) | 5047 (313.95) | 2 (1.00) |
| <i>etghi</i> | 227 (1.00) | 36570 (43.33) | 2 (1.00) |
| <i>tgdedx1</i> | 196 (1.16) | 278471 (5.69) | 2 (1.00) |
| <i>tgdedx2</i> | 194 (1.01) | 131696 (12.03) | 2 (1.00) |
| tgdedx | 194 (1.00) | 431460 (3.67) | 2 (1.00) |
| <i>tglike1</i> | 193 (1.01) | 227393 (6.97) | 2 (1.00) |
| <i>tglike2</i> | 193 (1.00) | 204863 (7.73) | 2 (1.00) |
| TGLIKE | 193 (1.00) | 307921 (5.15) | 2 (1.00) |
| <i>tgdb4</i> | 188 (1.03) | 128445 (12.34) | 2 (1.00) |
| <i>tgdb4tip</i> | 165 (1.14) | 398757 (3.97) | 2 (1.00) |
| <i>tgdvxtip</i> | 160 (1.03) | 224201 (7.07) | 2 (1.00) |
| <i>tgdvxpi</i> | 159 (1.01) | 173035 (9.16) | 2 (1.00) |
| TGB4 | 159 (1.00) | 601653 (2.63) | 2 (1.00) |
| <i>pigap</i> | 153 (1.04) | 143669 (11.03) | 2 (1.00) |
| KIN | 153 (1.00) | 1348115 (1.18) | 2 (1.00) |
| <i>piflg</i> | 151 (1.01) | 65019 (24.37) | 2 (1.00) |
| <i>ev502</i> | 129 (1.17) | 445524 (3.56) | 2 (1.00) |
| <i>elveto</i> | 124 (1.04) | 429199 (3.69) | 2 (1.00) |
| <i>tdfool</i> | 124 (1.00) | 323721 (4.89) | 2 (1.00) |
| <i>tdvarnn02</i> | 98 (1.27) | 641683 (2.47) | 2 (1.00) |
| TD | 98 (1.00) | 932279 (1.70) | 2 (1.00) |
| <i>cpitrs · cpitail · bwtrs</i> | 58 (1.69) | 866255 (1.83) | 25 (12.50) |
| <i>targf</i> | 58 (1.00) | 236438 (6.70) | 2 (1.00) |
| <i>b4ekz</i> | 31 (1.87) | 1025577 (1.54) | 3 (1.50) |
| <i>epimax</i> | 31 (1.00) | 99717 (15.89) | 2 (1.00) |
| <i>phivtx1</i> | 15 (2.07) | 355628 (4.46) | 2 (1.00) |
| <i>opsveto</i> | 2 (7.50) | 517505 (3.06) | 4 (2.00) |
| <i>tdedge</i> | 2 (1.00) | 202786 (7.81) | 2 (1.00) |
| <i>null</i> | 2 (1.00) | 0 (1584517.00) | 2 (1.00) |
| <i>rtghi</i> | 2 (1.00) | 5047 (313.95) | 2 (1.00) |
| <i>etghi</i> | 2 (1.00) | 36570 (43.33) | 2 (1.00) |
| <i>tgdedx1</i> | 2 (1.00) | 278471 (5.69) | 2 (1.00) |
| <i>tgdedx2</i> | 2 (1.00) | 131696 (12.03) | 2 (1.00) |
| tgdedx | 2 (1.00) | 431460 (3.67) | 2 (1.00) |
| <i>tglike1</i> | 2 (1.00) | 227393 (6.97) | 2 (1.00) |
| <i>tglike2</i> | 2 (1.00) | 204863 (7.73) | 2 (1.00) |
| TGLIKE | 2 (1.00) | 307921 (5.15) | 2 (1.00) |
| <i>tgdb4</i> | 2 (1.00) | 128445 (12.34) | 2 (1.00) |

continued on next page

| Cuts | pnn2 seq | pnn2 single | pnn2 allbut |
|-----------------|-----------------|----------------|-------------|
| <i>tgdb4tip</i> | 2 (1.00) | 398757 (3.97) | 2 (1.00) |
| <i>tgdvxtip</i> | 2 (1.00) | 224201 (7.07) | 2 (1.00) |
| <i>tgdvxpi</i> | 2 (1.00) | 173035 (9.16) | 2 (1.00) |
| TGB4 | 2 (1.00) | 601653 (2.63) | 2 (1.00) |
| <i>pigap</i> | 2 (1.00) | 143669 (11.03) | 2 (1.00) |
| TGKIN | 2 (1.00) | 960688 (1.65) | 2 (1.00) |
| <i>tgpv</i> | 2 (1.00) | 536772 (2.95) | 2 (1.00) |
| Total Rej. | 29.00 | | |