

































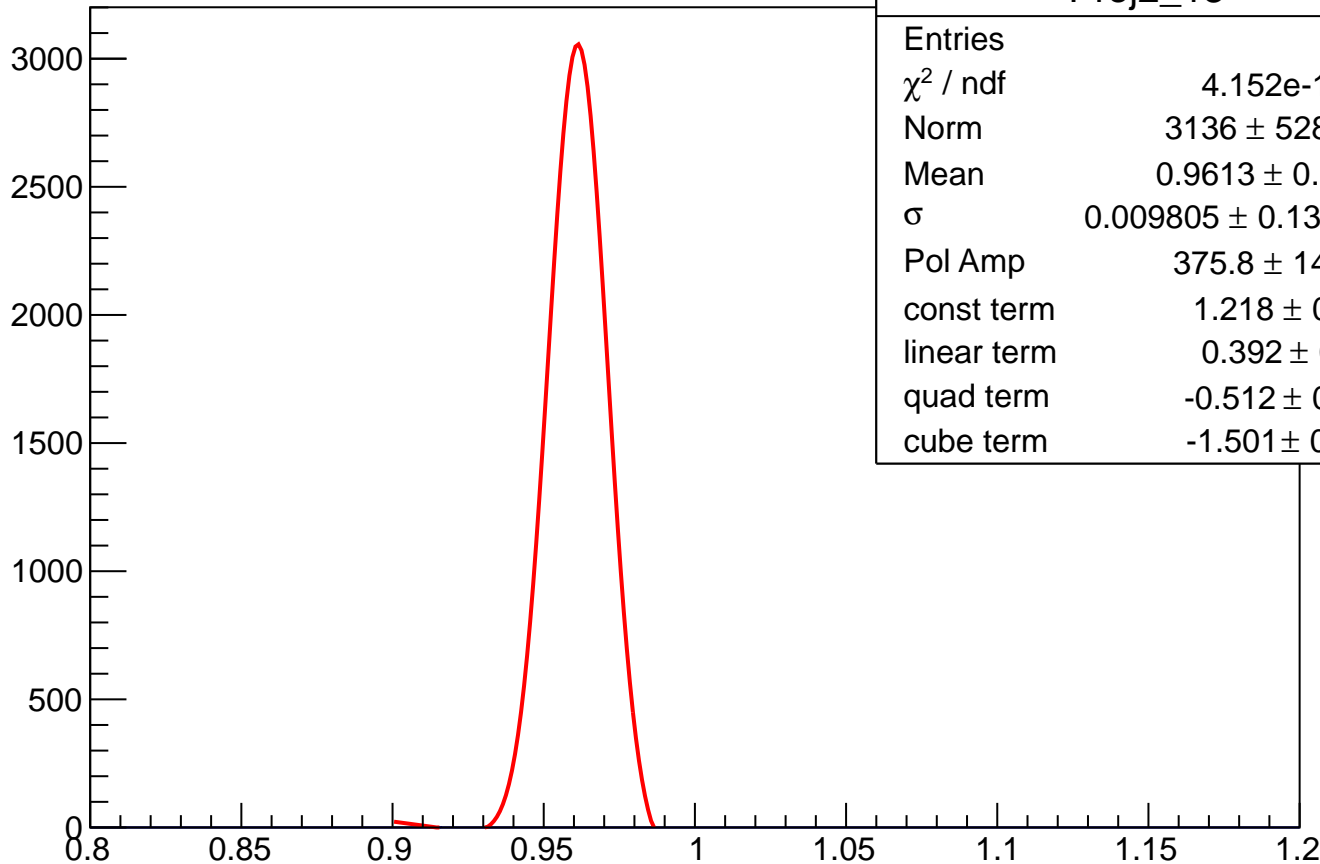








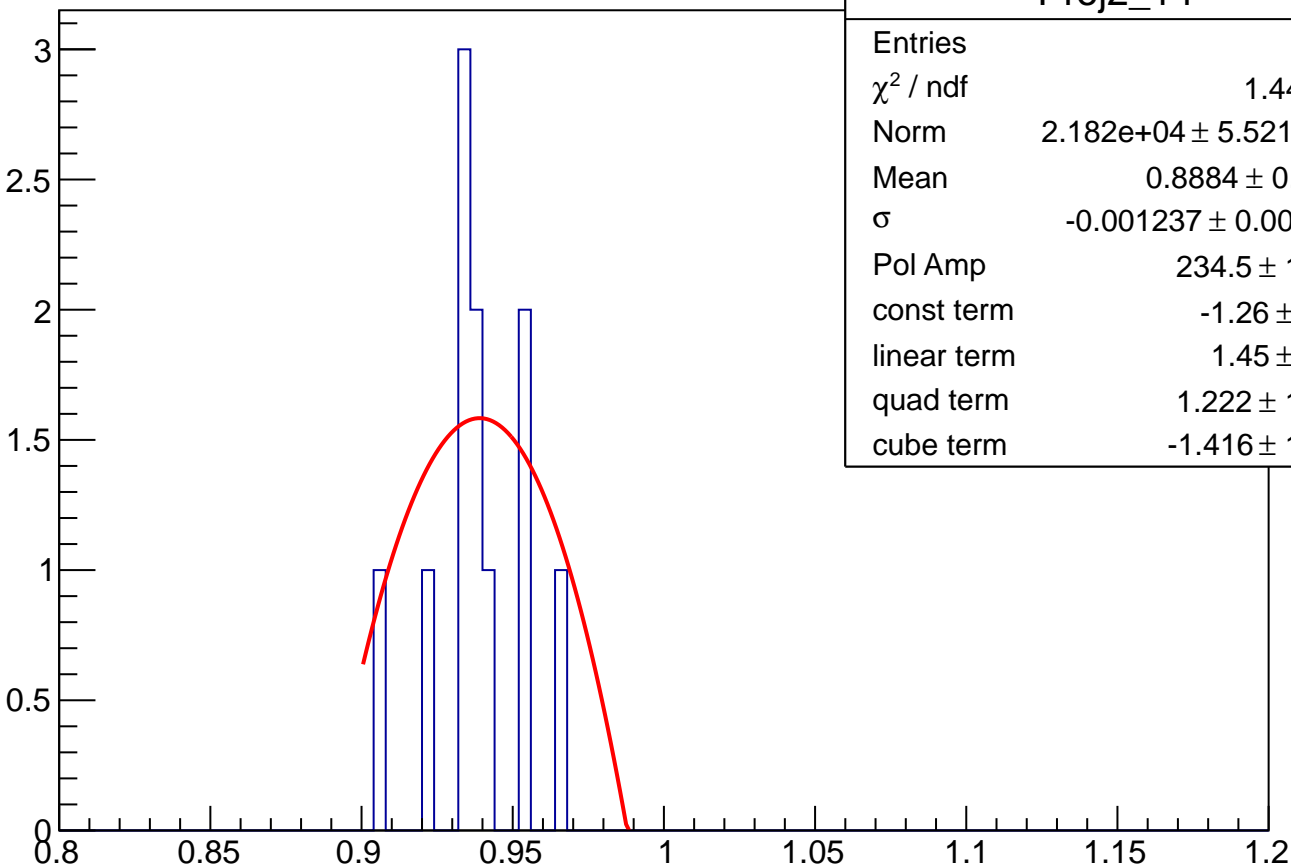
# PhiThetaMassPim



Proj2\_13

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 1                       |
| $\chi^2 / \text{ndf}$ | 4.152e-14 / 0           |
| Norm                  | $3136 \pm 52847.6$      |
| Mean                  | $0.9613 \pm 0.0937$     |
| $\sigma$              | $0.009805 \pm 0.130072$ |
| Pol Amp               | $375.8 \pm 1458.5$      |
| const term            | $1.218 \pm 0.010$       |
| linear term           | $0.392 \pm 0.011$       |
| quad term             | $-0.512 \pm 0.012$      |
| cube term             | $-1.501 \pm 0.013$      |

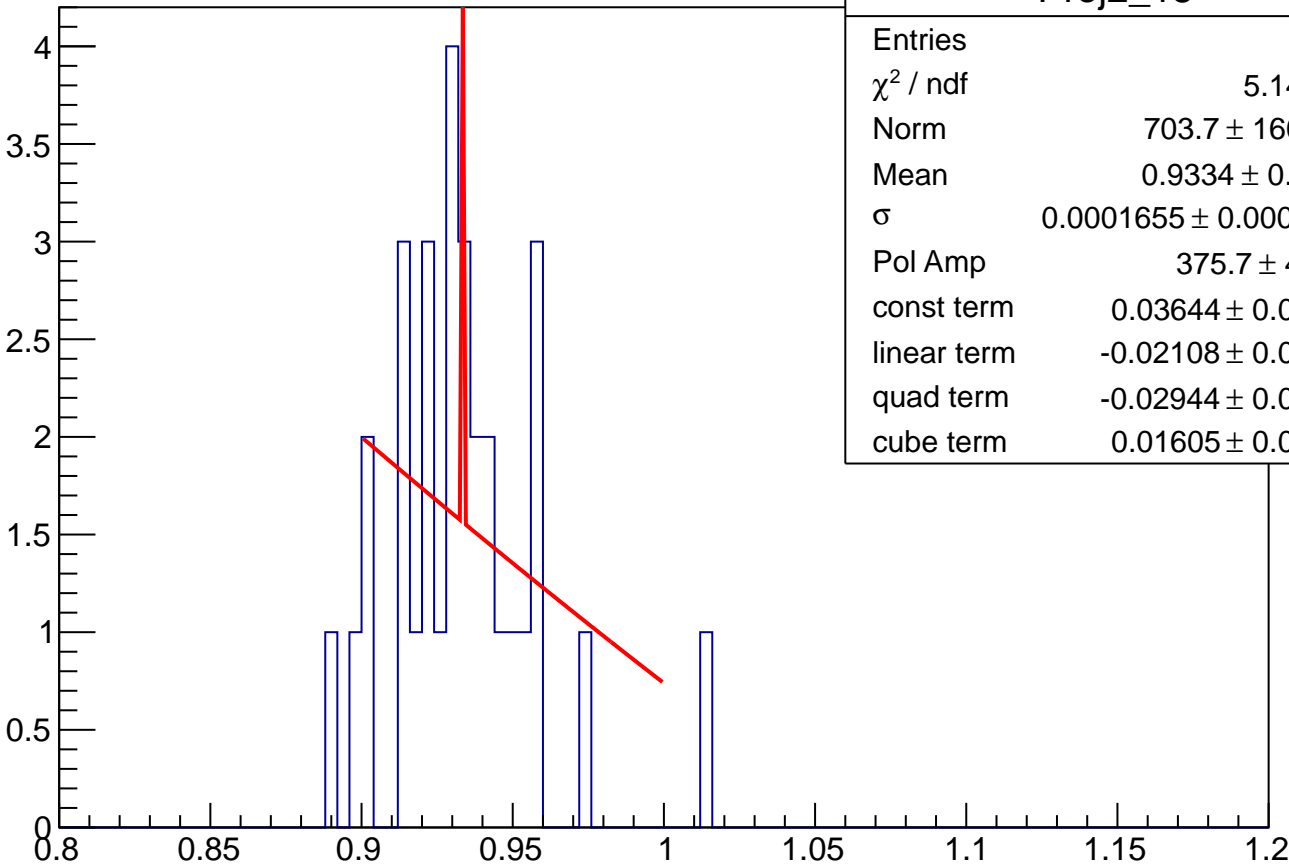
# PhiThetaMassPim



Proj2\_14

|                       |   |
|-----------------------|---|
| Entries               | 11                                      |
| $\chi^2 / \text{ndf}$ | 1.445 / 0                               |
| Norm                  | $2.182\text{e}+04 \pm 5.521\text{e}+04$ |
| Mean                  | $0.8884 \pm 0.0901$                     |
| $\sigma$              | $-0.001237 \pm 0.000000$                |
| Pol Amp               | $234.5 \pm 122.7$                       |
| const term            | $-1.26 \pm 1.54$                        |
| linear term           | $1.45 \pm 1.86$                         |
| quad term             | $1.222 \pm 1.656$                       |
| cube term             | $-1.416 \pm 1.750$                      |

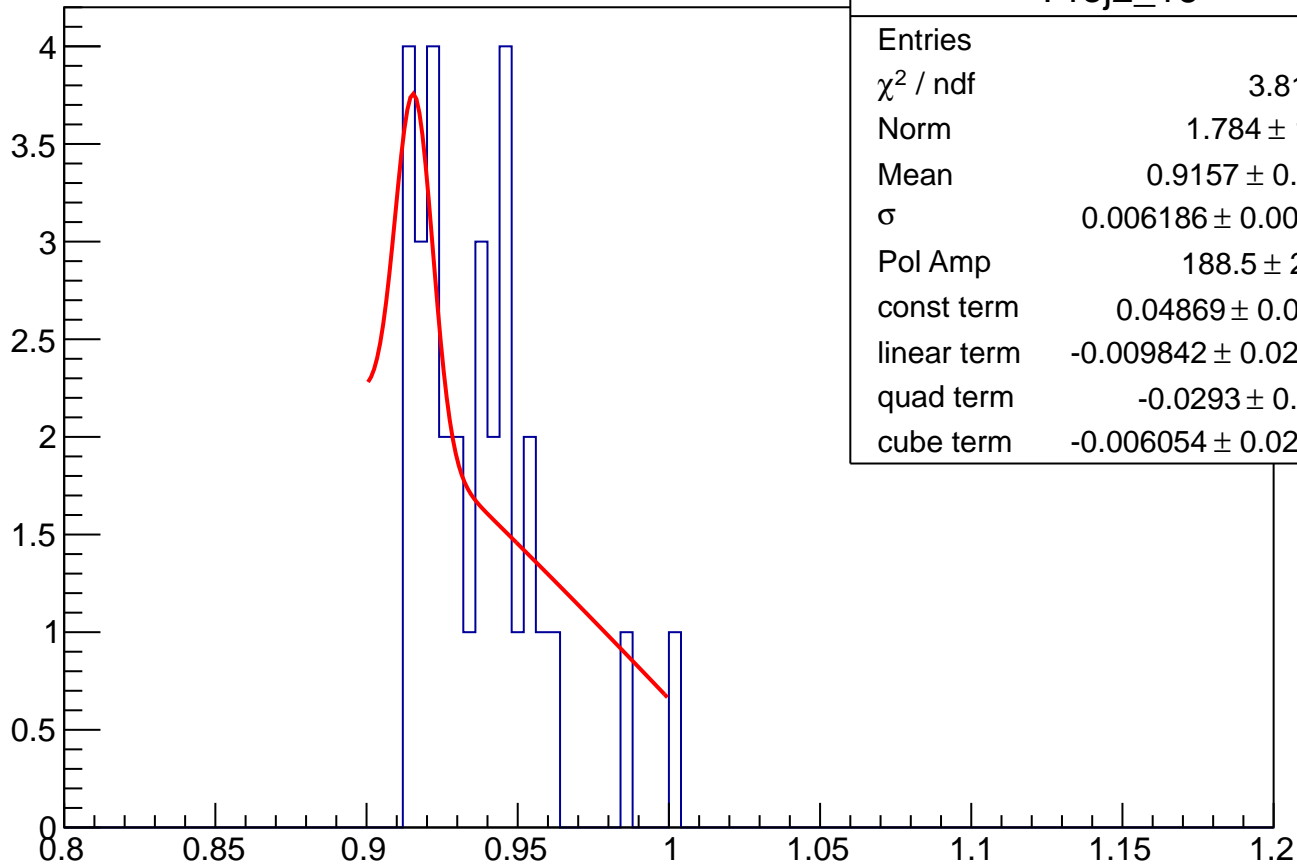
# PhiThetaMassPim



Proj2\_15

|                       |                           |
|-----------------------|---------------------------|
| Entries               | 31                        |
| $\chi^2 / \text{ndf}$ | 5.141 / 6                 |
| Norm                  | $703.7 \pm 16009.3$       |
| Mean                  | $0.9334 \pm 0.0006$       |
| $\sigma$              | $0.0001655 \pm 0.0001700$ |
| Pol Amp               | $375.7 \pm 413.8$         |
| const term            | $0.03644 \pm 0.00840$     |
| linear term           | $-0.02108 \pm 0.00882$    |
| quad term             | $-0.02944 \pm 0.00914$    |
| cube term             | $0.01605 \pm 0.00932$     |

# PhiThetaMassPim

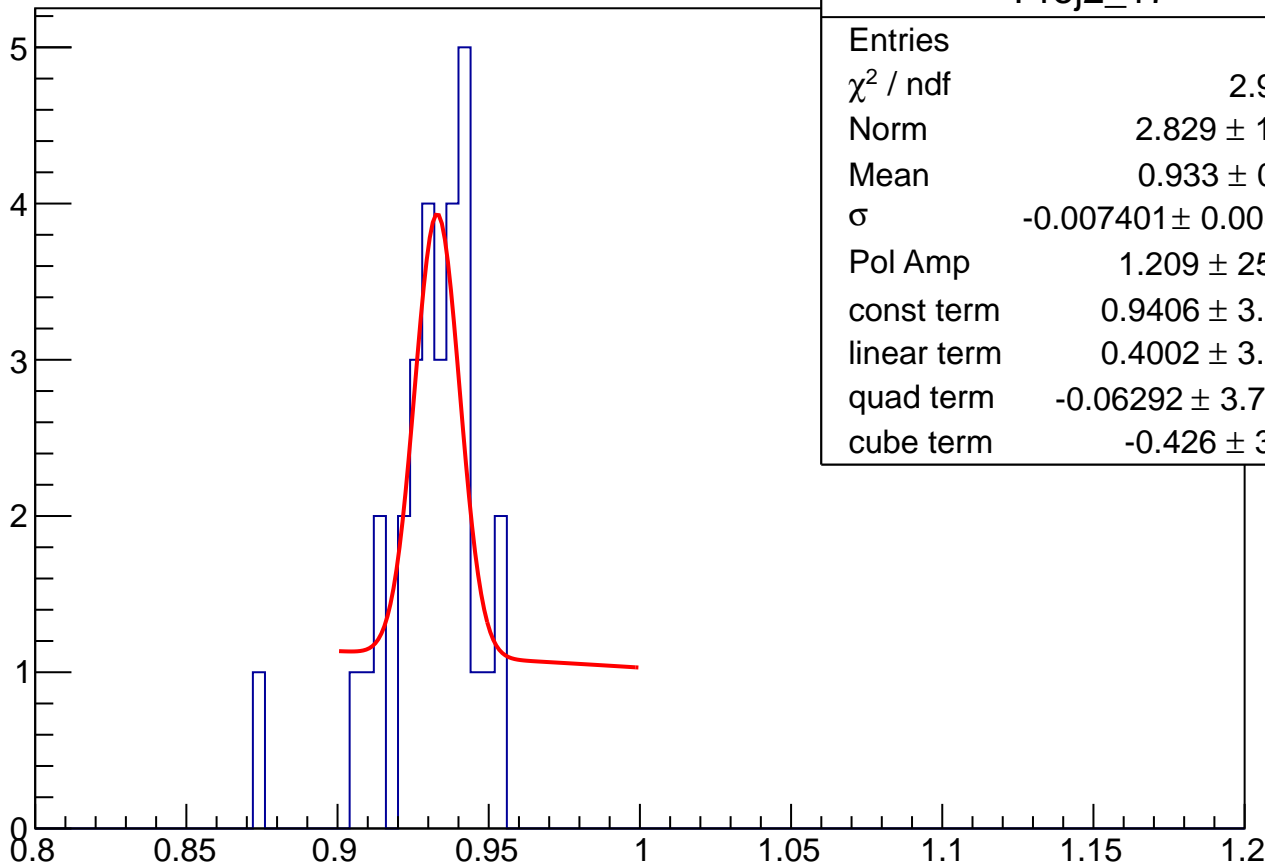


Proj2\_16

|                       |                          |
|-----------------------|--------------------------|
| Entries               | 32                       |
| $\chi^2 / \text{ndf}$ | 3.816 / 6                |
| Norm                  | $1.784 \pm 1.671$        |
| Mean                  | $0.9157 \pm 0.0138$      |
| $\sigma$              | $0.006186 \pm 0.007895$  |
| Pol Amp               | $188.5 \pm 246.7$        |
| const term            | $0.04869 \pm 0.02184$    |
| linear term           | $-0.009842 \pm 0.022713$ |
| quad term             | $-0.0293 \pm 0.0234$     |
| cube term             | $-0.006054 \pm 0.023746$ |

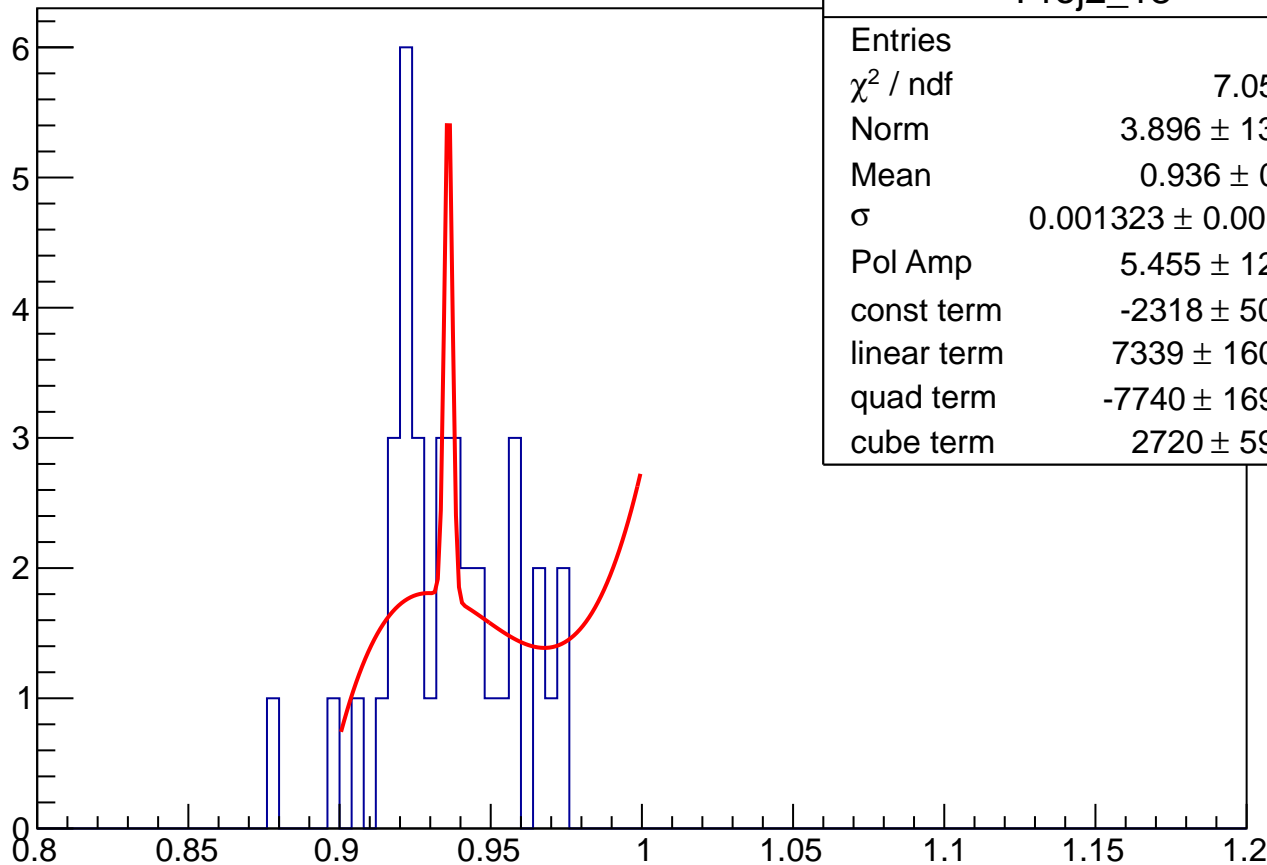
# PhiThetaMassPim

Proj2\_17



# PhiThetaMassPim

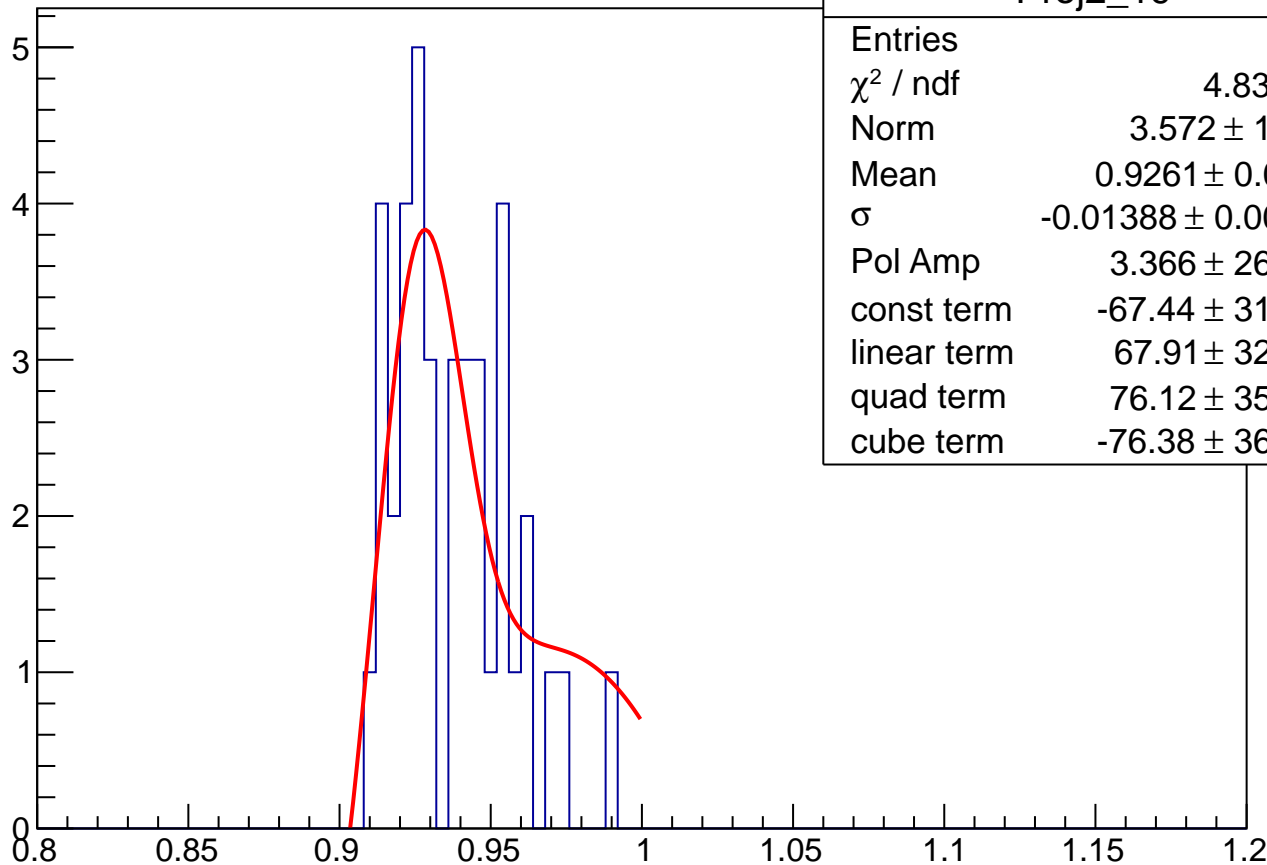
Proj2\_18





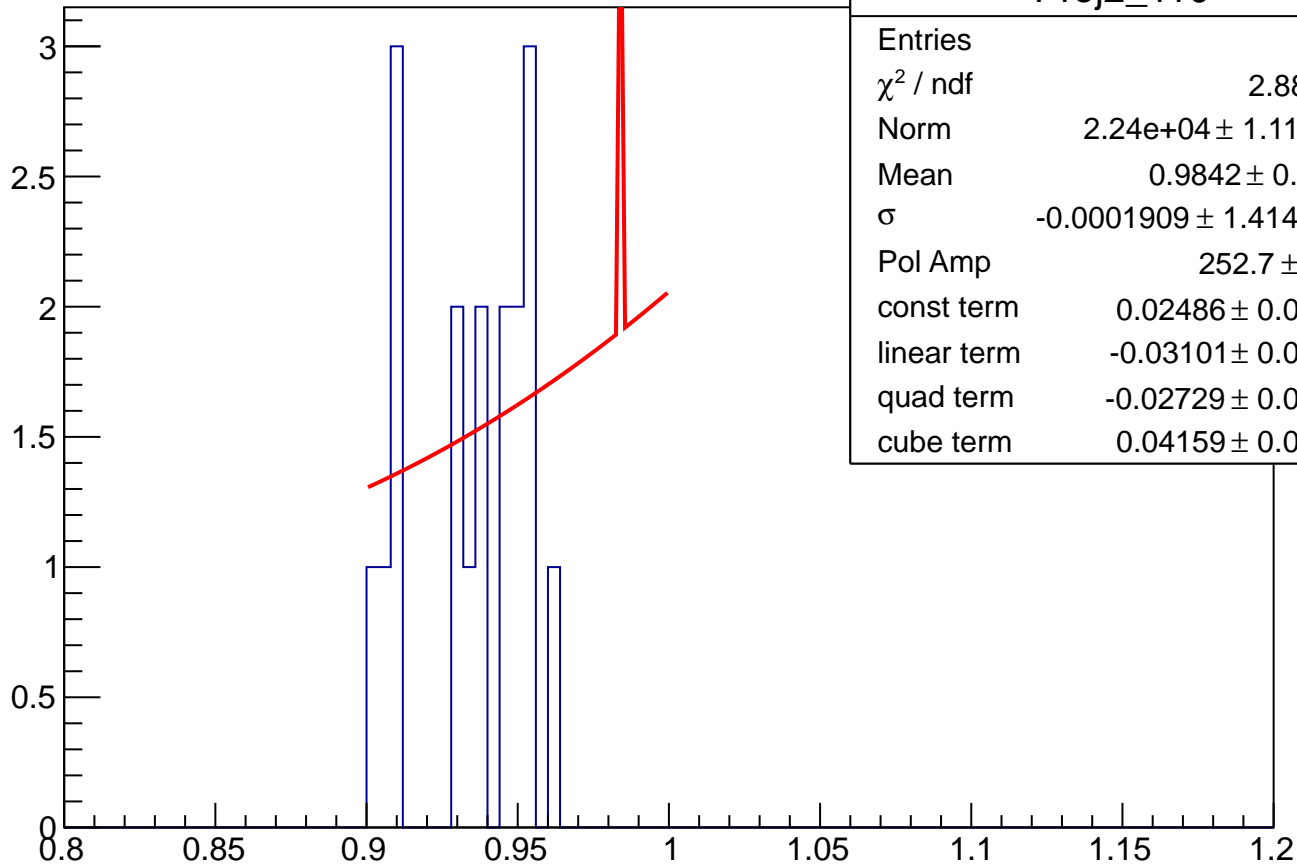
# PhiThetaMassPim

Proj2\_19

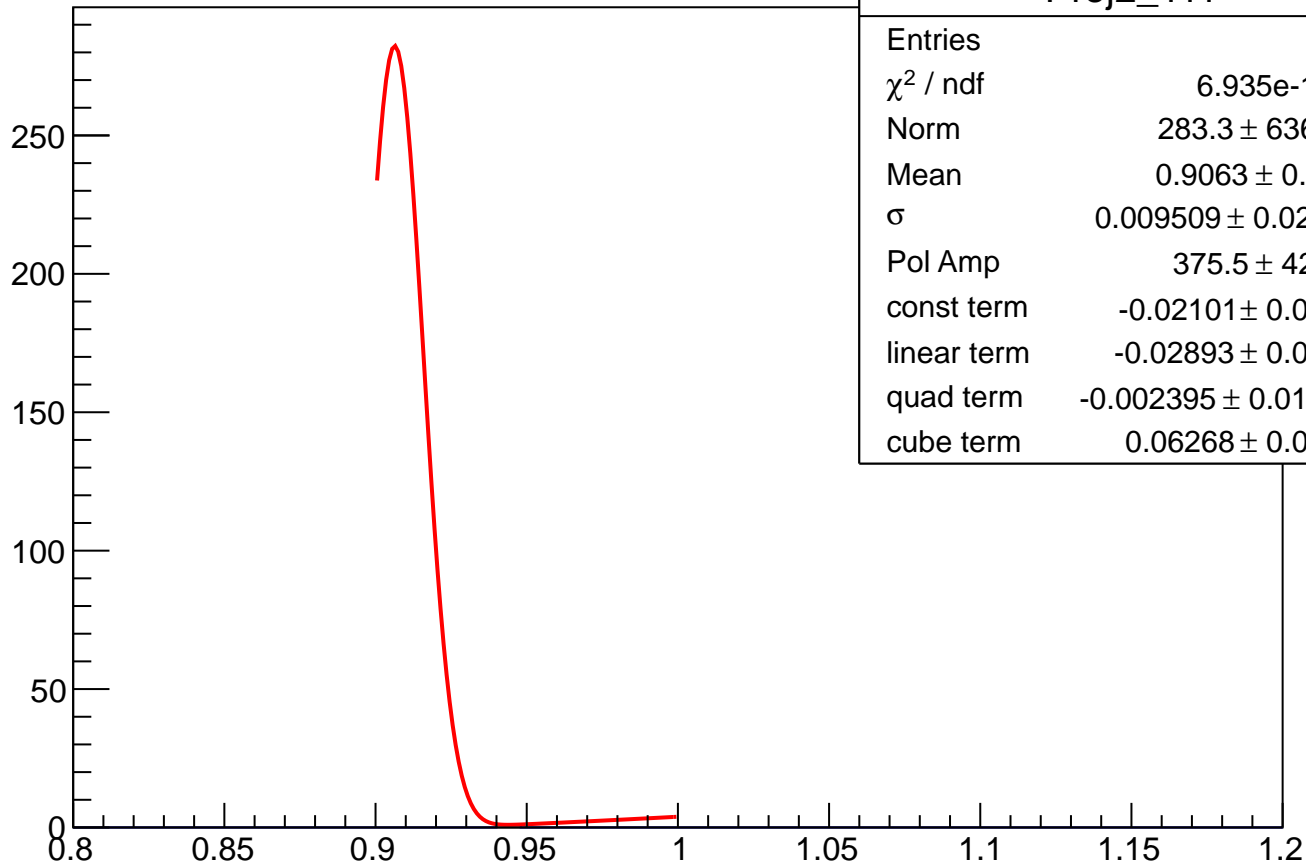


|                       |                        |
|-----------------------|------------------------|
| Entries               | 39                     |
| $\chi^2 / \text{ndf}$ | 4.832 / 8              |
| Norm                  | $3.572 \pm 1.009$      |
| Mean                  | $0.9261 \pm 0.0044$    |
| $\sigma$              | $-0.01388 \pm 0.00454$ |
| Pol Amp               | $3.366 \pm 26.334$     |
| const term            | $-67.44 \pm 318.08$    |
| linear term           | $67.91 \pm 320.49$     |
| quad term             | $76.12 \pm 359.08$     |
| cube term             | $-76.38 \pm 360.66$    |

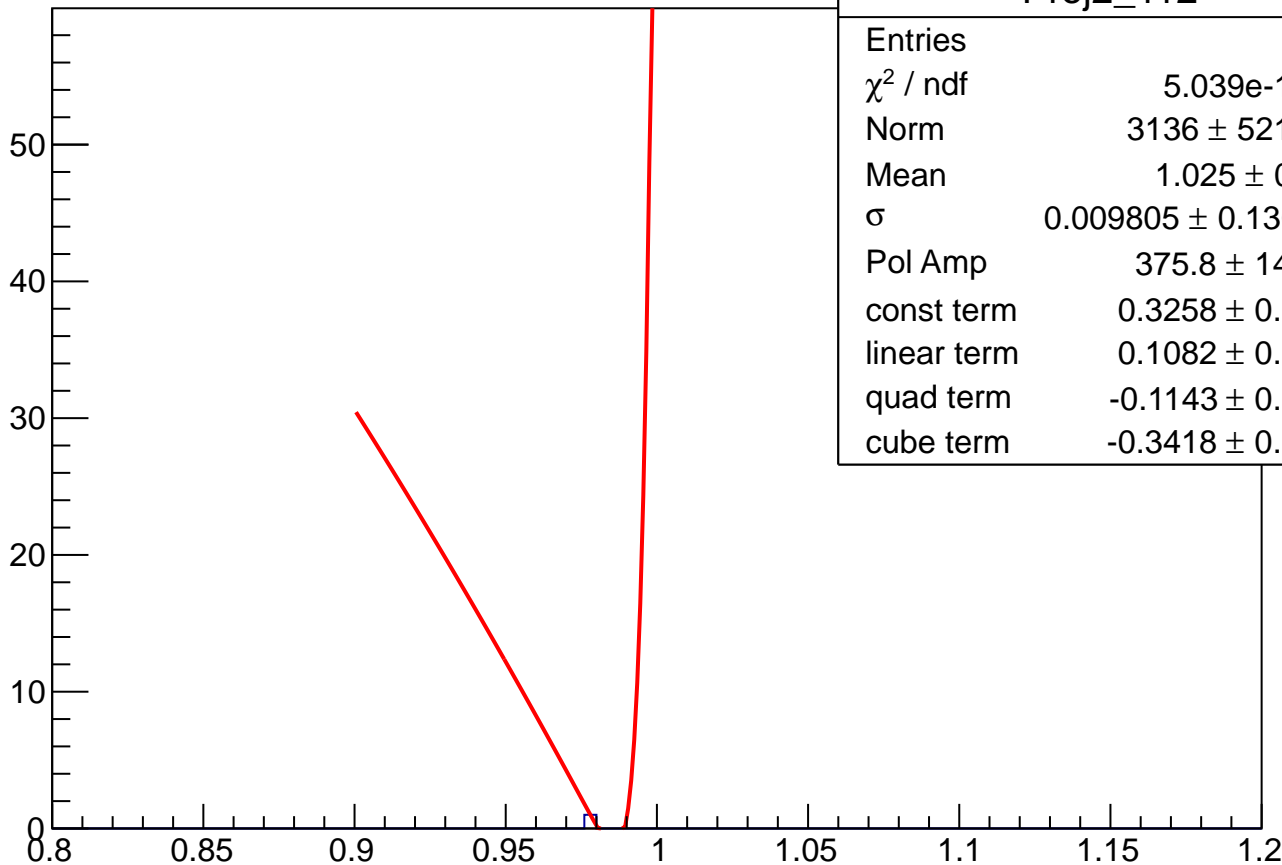
# PhiThetaMassPim



# PhiThetaMassPim



# PhiThetaMassPim



Proj2\_112

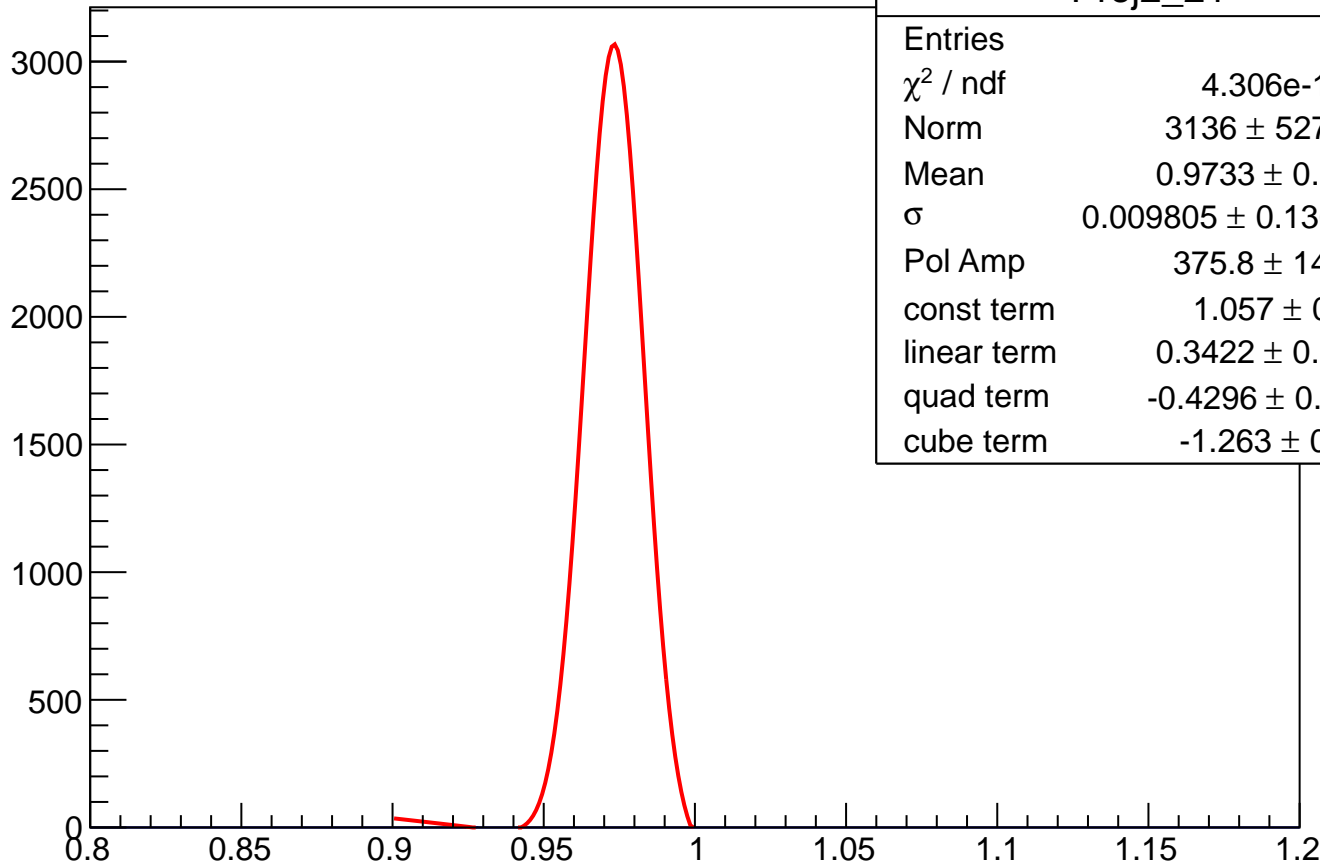
|                       |                         |
|-----------------------|-------------------------|
| Entries               | 1                       |
| $\chi^2 / \text{ndf}$ | 5.039e-14 / 0           |
| Norm                  | $3136 \pm 52175.2$      |
| Mean                  | $1.025 \pm 0.092$       |
| $\sigma$              | $0.009805 \pm 0.130093$ |
| Pol Amp               | $375.8 \pm 1453.3$      |
| const term            | $0.3258 \pm 0.0100$     |
| linear term           | $0.1082 \pm 0.0103$     |
| quad term             | $-0.1143 \pm 0.0105$    |
| cube term             | $-0.3418 \pm 0.0107$    |







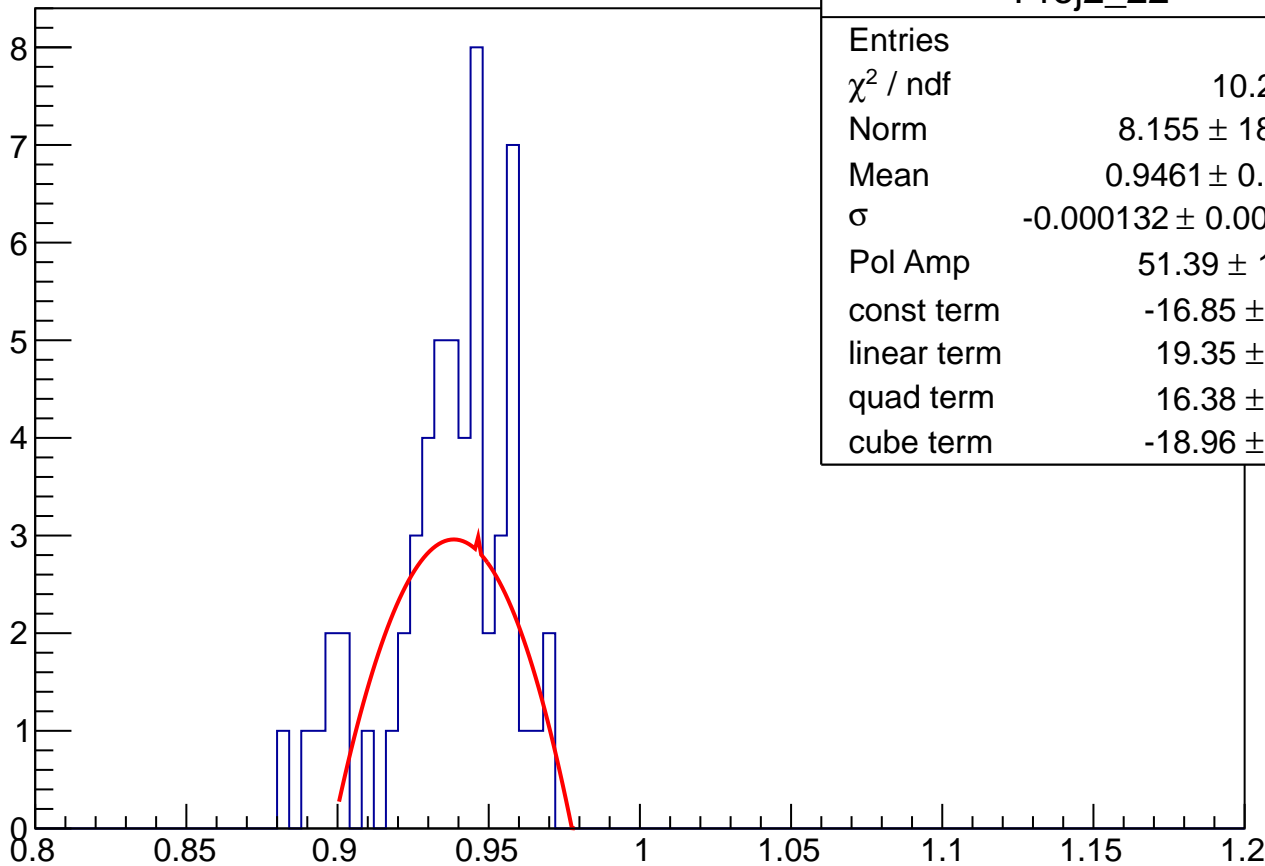
# PhiThetaMassPim



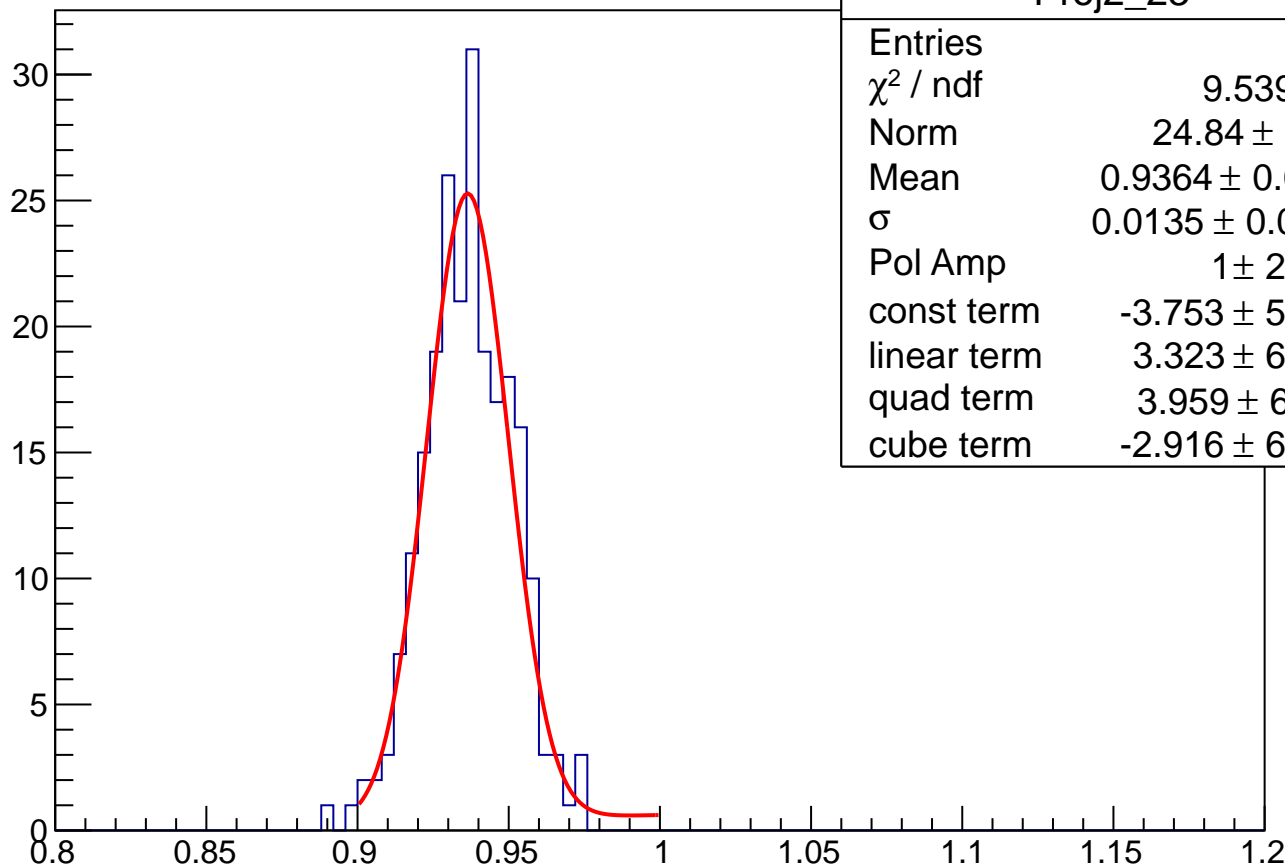


# PhiThetaMassPim

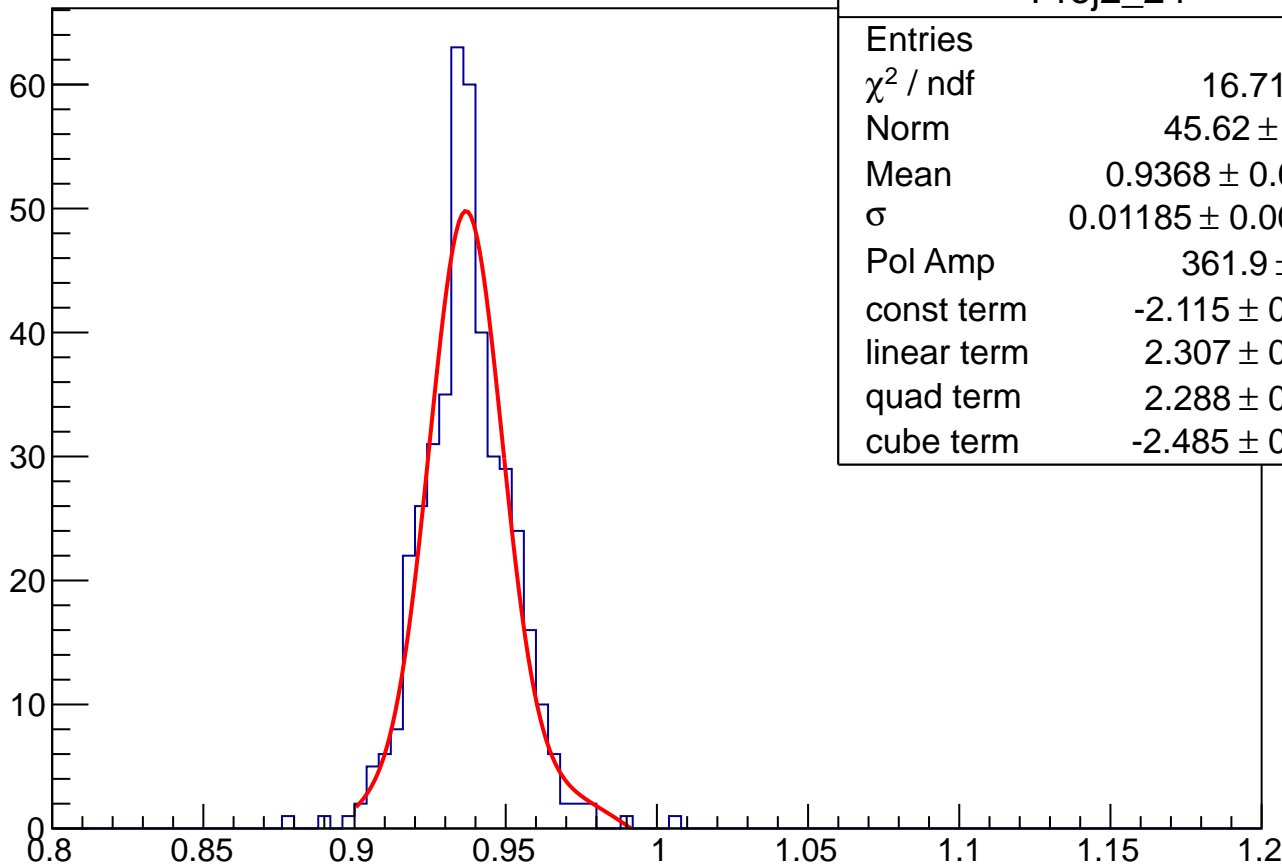
Proj2\_22



# PhiThetaMassPim



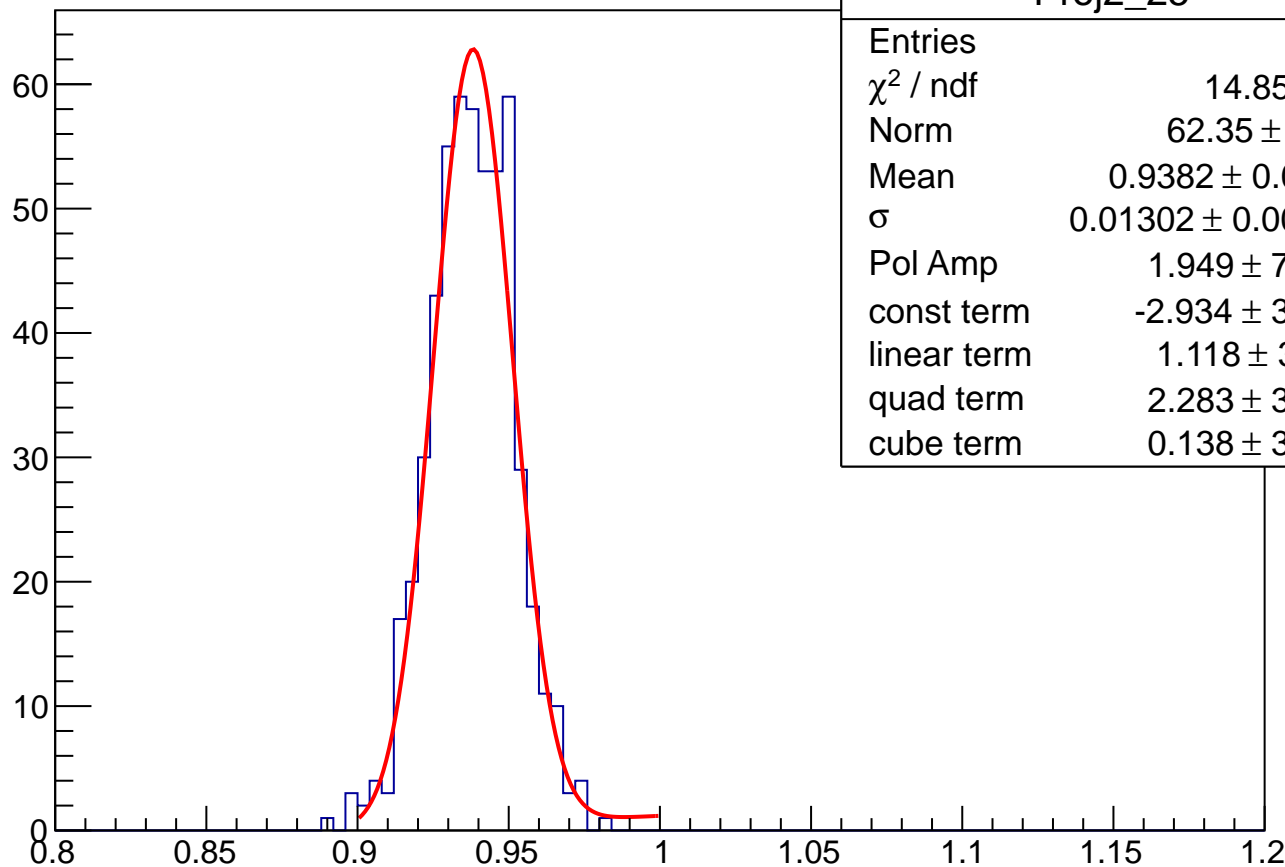
# PhiThetaMassPim



Proj2\_24

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 424                   |
| $\chi^2 / \text{ndf}$ | 16.71 / 13            |
| Norm                  | $45.62 \pm 3.40$      |
| Mean                  | $0.9368 \pm 0.0009$   |
| $\sigma$              | $0.01185 \pm 0.00069$ |
| Pol Amp               | $361.9 \pm 0.8$       |
| const term            | $-2.115 \pm 0.356$    |
| linear term           | $2.307 \pm 0.373$     |
| quad term             | $2.288 \pm 0.377$     |
| cube term             | $-2.485 \pm 0.397$    |

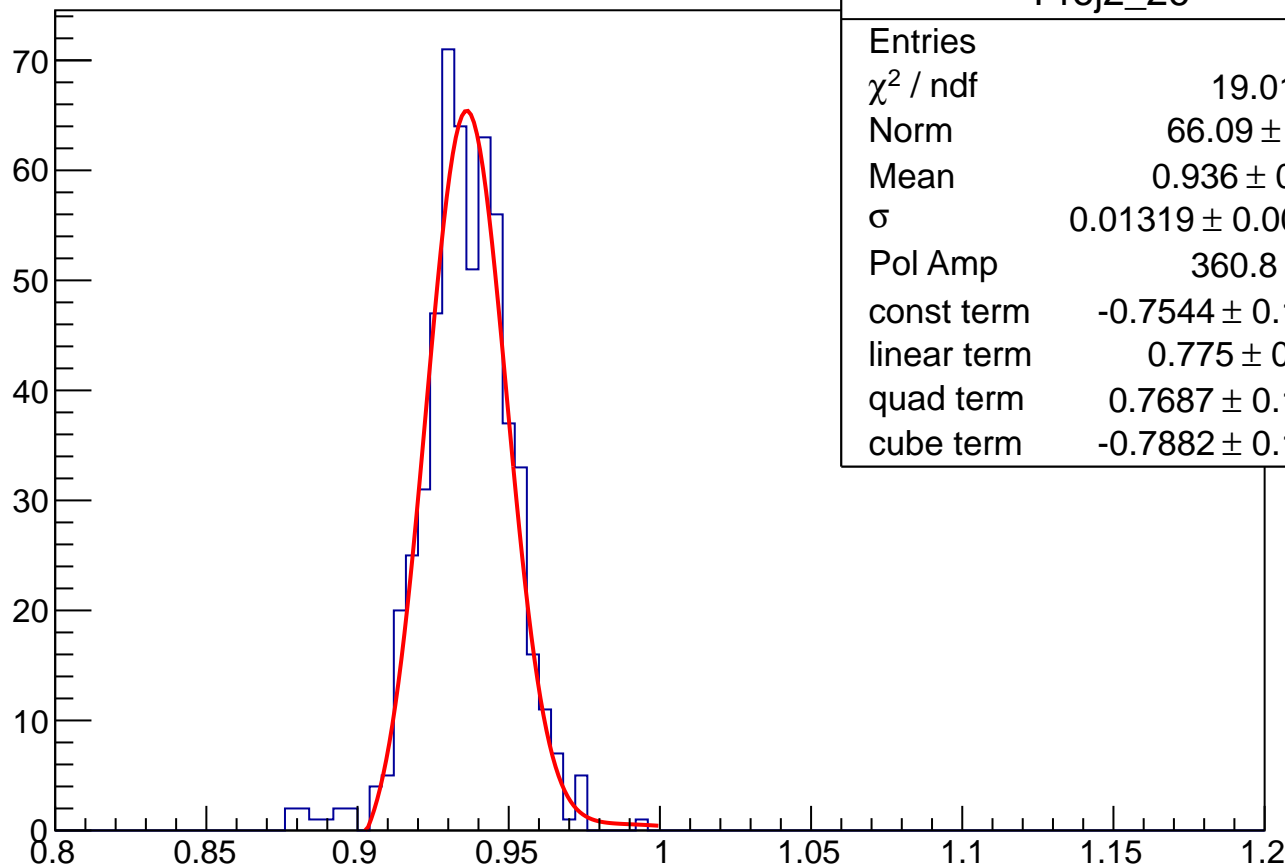
# PhiThetaMassPim



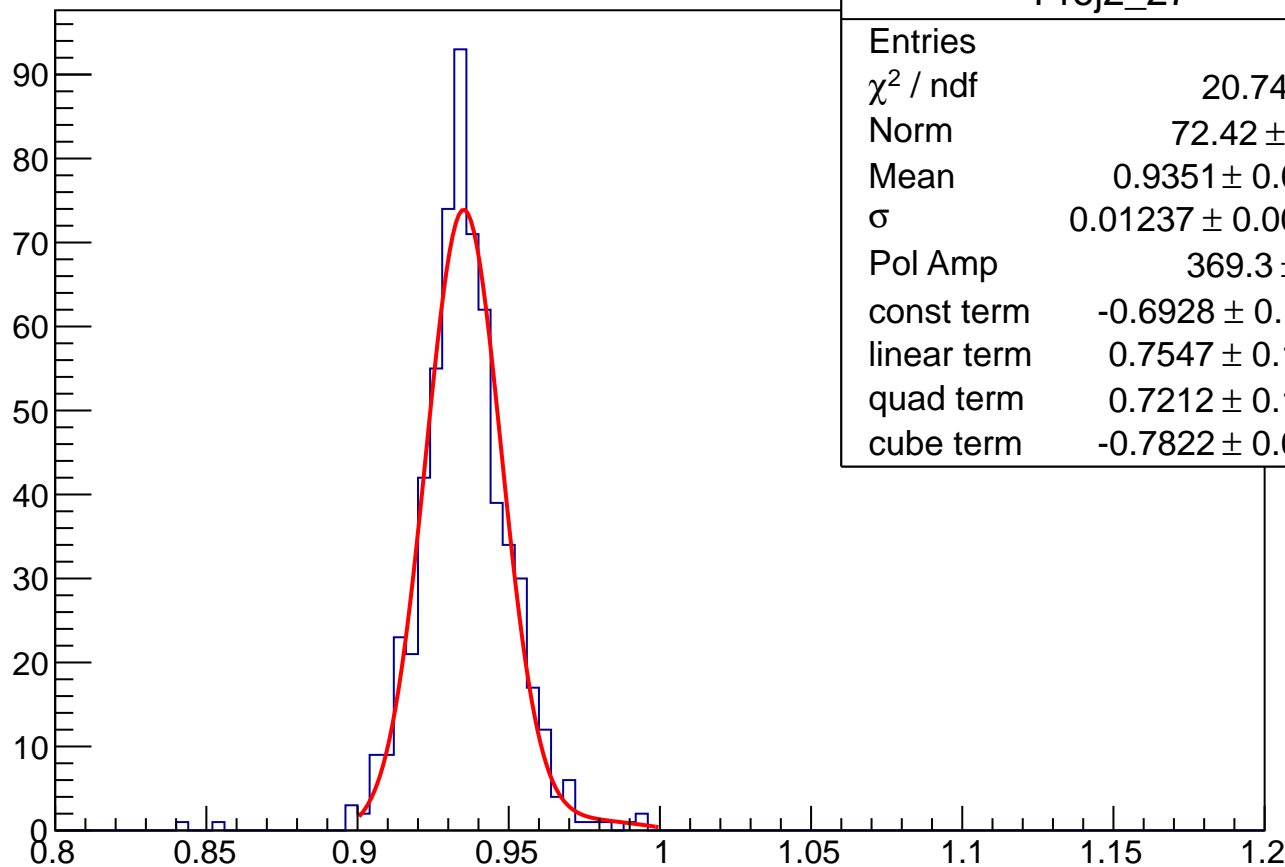
Proj2\_25

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 536                   |
| $\chi^2 / \text{ndf}$ | 14.85 / 12            |
| Norm                  | $62.35 \pm 3.42$      |
| Mean                  | $0.9382 \pm 0.0007$   |
| $\sigma$              | $0.01302 \pm 0.00066$ |
| Pol Amp               | $1.949 \pm 7.333$     |
| const term            | $-2.934 \pm 3.166$    |
| linear term           | $1.118 \pm 3.411$     |
| quad term             | $2.283 \pm 3.663$     |
| cube term             | $0.138 \pm 3.916$     |

# PhiThetaMassPim



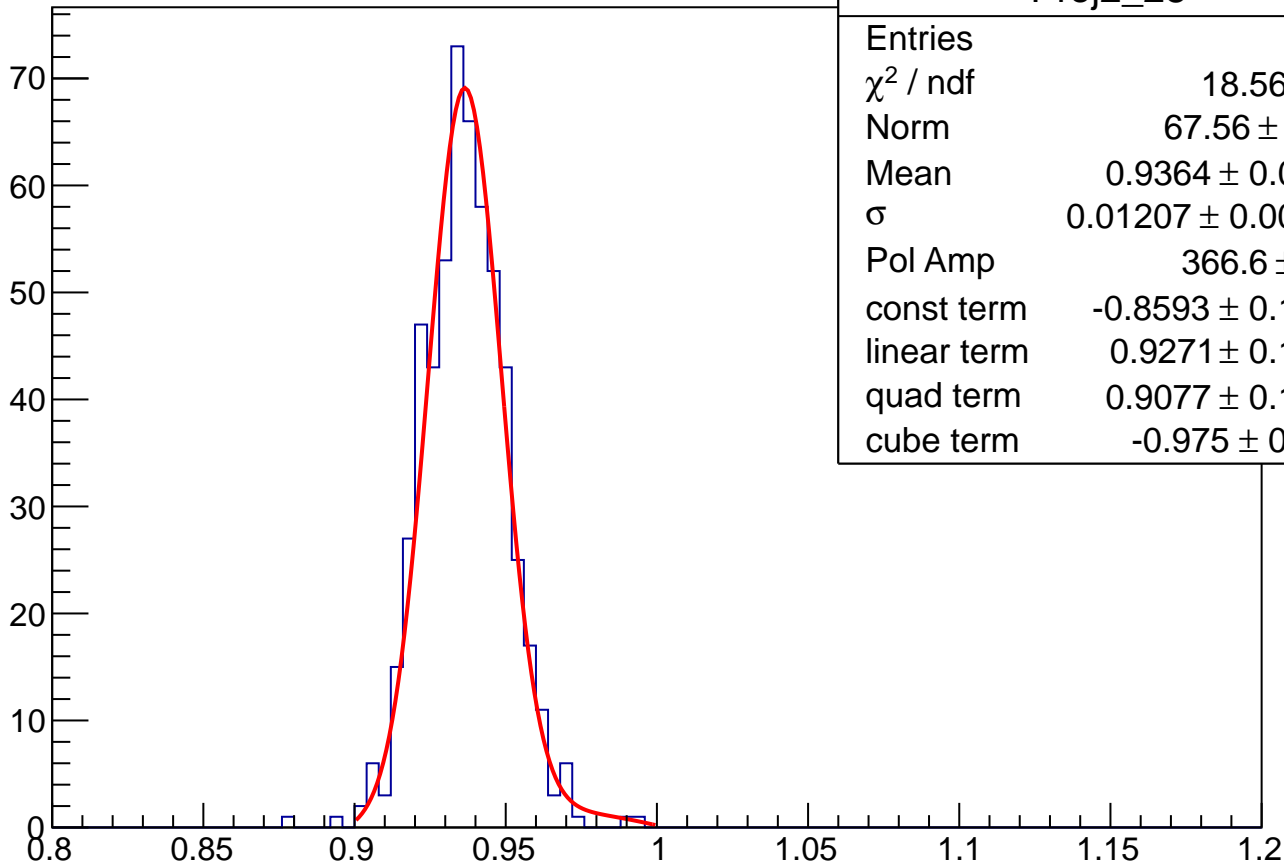
# PhiThetaMassPim



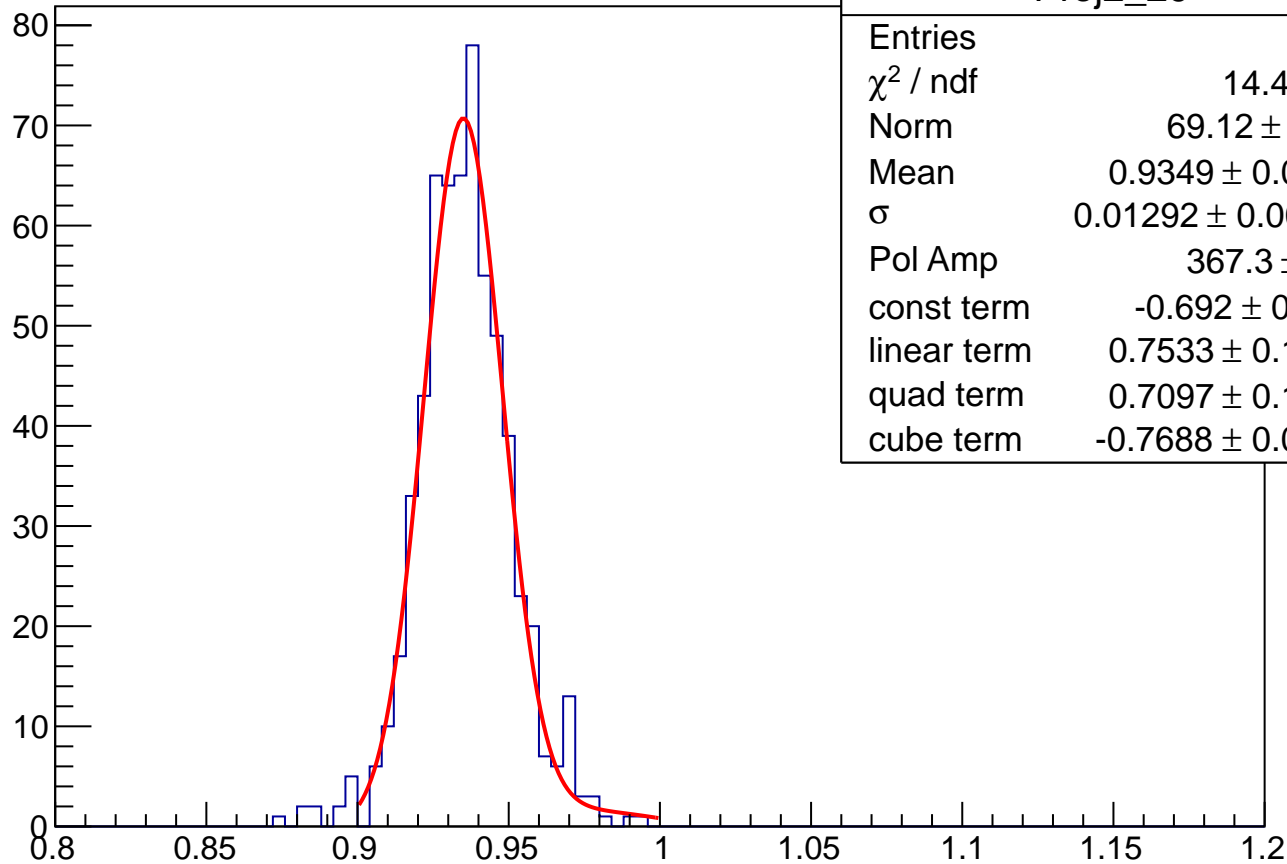
Proj2\_27

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 614                   |
| $\chi^2 / \text{ndf}$ | 20.74 / 15            |
| Norm                  | $72.42 \pm 4.21$      |
| Mean                  | $0.9351 \pm 0.0006$   |
| $\sigma$              | $0.01237 \pm 0.00068$ |
| Pol Amp               | $369.3 \pm 0.4$       |
| const term            | $-0.6928 \pm 0.1105$  |
| linear term           | $0.7547 \pm 0.1024$   |
| quad term             | $0.7212 \pm 0.1055$   |
| cube term             | $-0.7822 \pm 0.0995$  |

# PhiThetaMassPim



# PhiThetaMassPim

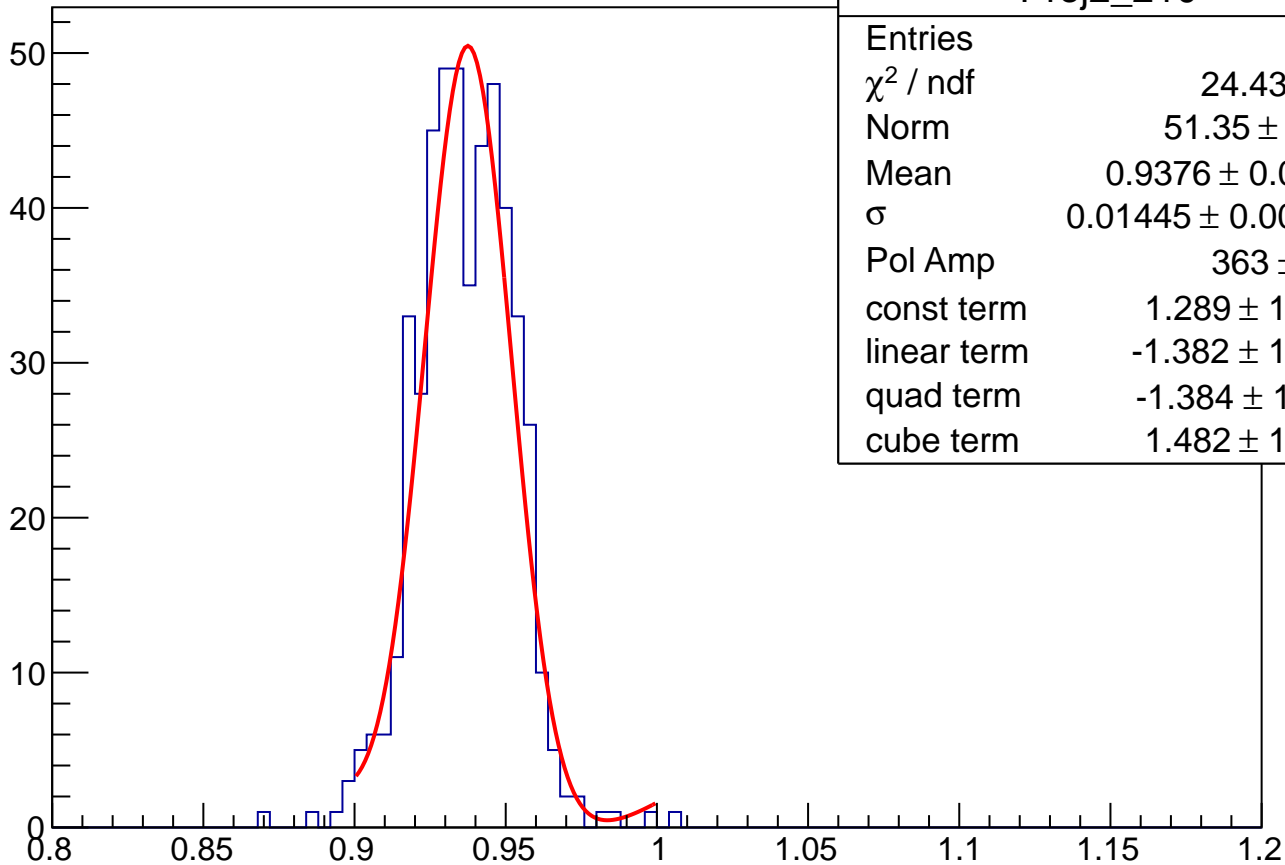


Proj2\_29

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 614                   |
| $\chi^2 / \text{ndf}$ | 14.4 / 14             |
| Norm                  | $69.12 \pm 3.95$      |
| Mean                  | $0.9349 \pm 0.0007$   |
| $\sigma$              | $0.01292 \pm 0.00091$ |
| Pol Amp               | $367.3 \pm 0.6$       |
| const term            | $-0.692 \pm 0.144$    |
| linear term           | $0.7533 \pm 0.1074$   |
| quad term             | $0.7097 \pm 0.1232$   |
| cube term             | $-0.7688 \pm 0.0894$  |



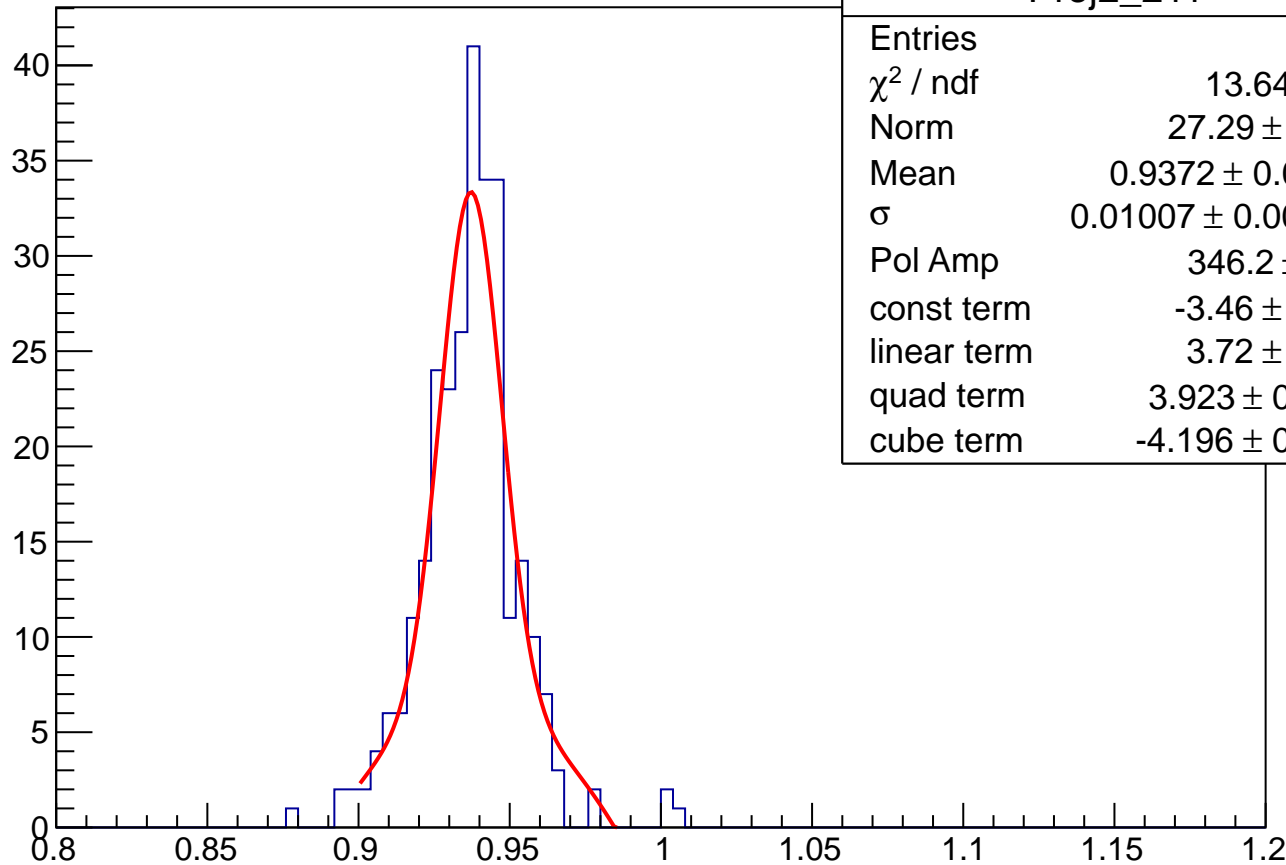
# PhiThetaMassPim



Proj2\_210

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 487                   |
| $\chi^2 / \text{ndf}$ | 24.43 / 14            |
| Norm                  | $51.35 \pm 3.27$      |
| Mean                  | $0.9376 \pm 0.0010$   |
| $\sigma$              | $0.01445 \pm 0.00090$ |
| Pol Amp               | $363 \pm 1.2$         |
| const term            | $1.289 \pm 1.088$     |
| linear term           | $-1.382 \pm 1.180$    |
| quad term             | $-1.384 \pm 1.151$    |
| cube term             | $1.482 \pm 1.245$     |

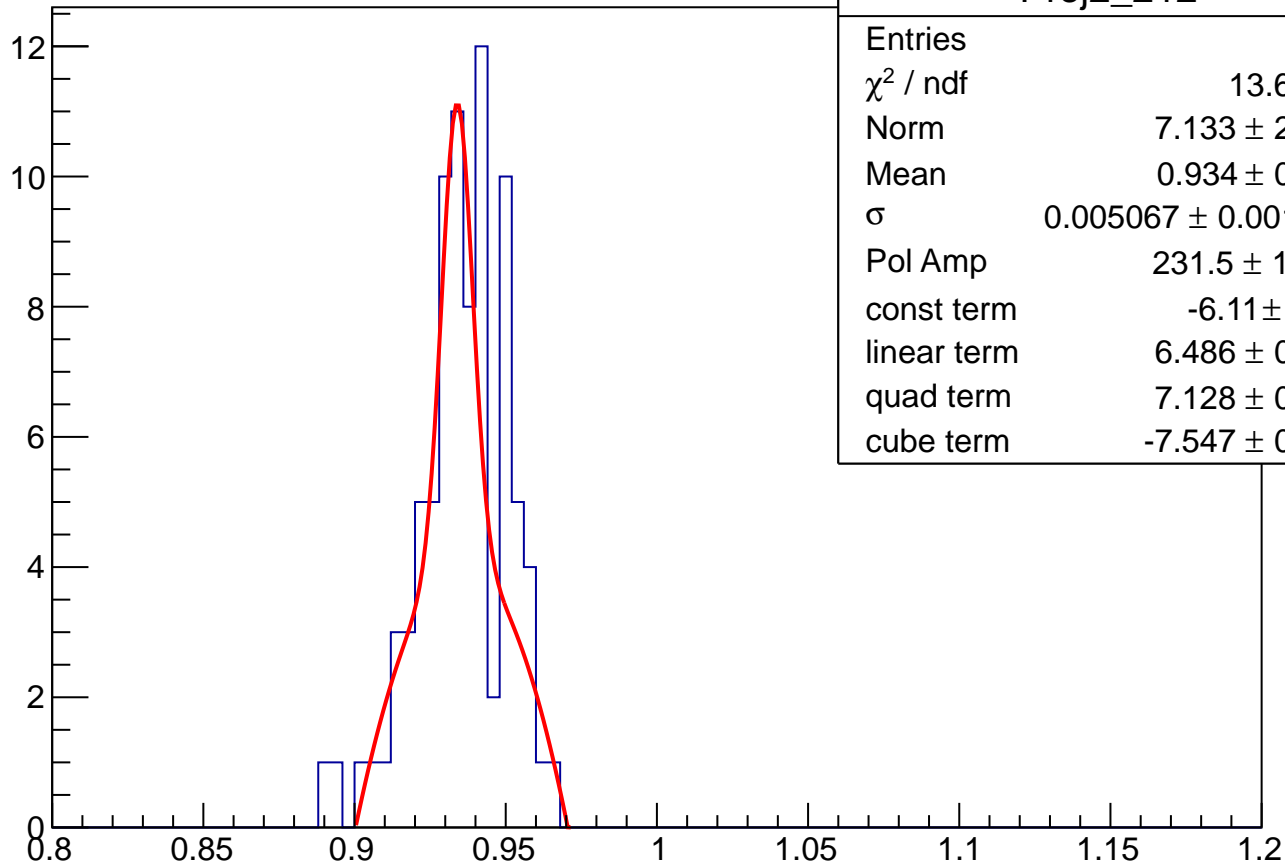
# PhiThetaMassPim



Proj2\_211

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 280                   |
| $\chi^2 / \text{ndf}$ | 13.64 / 10            |
| Norm                  | $27.29 \pm 3.28$      |
| Mean                  | $0.9372 \pm 0.0010$   |
| $\sigma$              | $0.01007 \pm 0.00088$ |
| Pol Amp               | $346.2 \pm 1.6$       |
| const term            | $-3.46 \pm 0.70$      |
| linear term           | $3.72 \pm 0.74$       |
| quad term             | $3.923 \pm 0.785$     |
| cube term             | $-4.196 \pm 0.836$    |

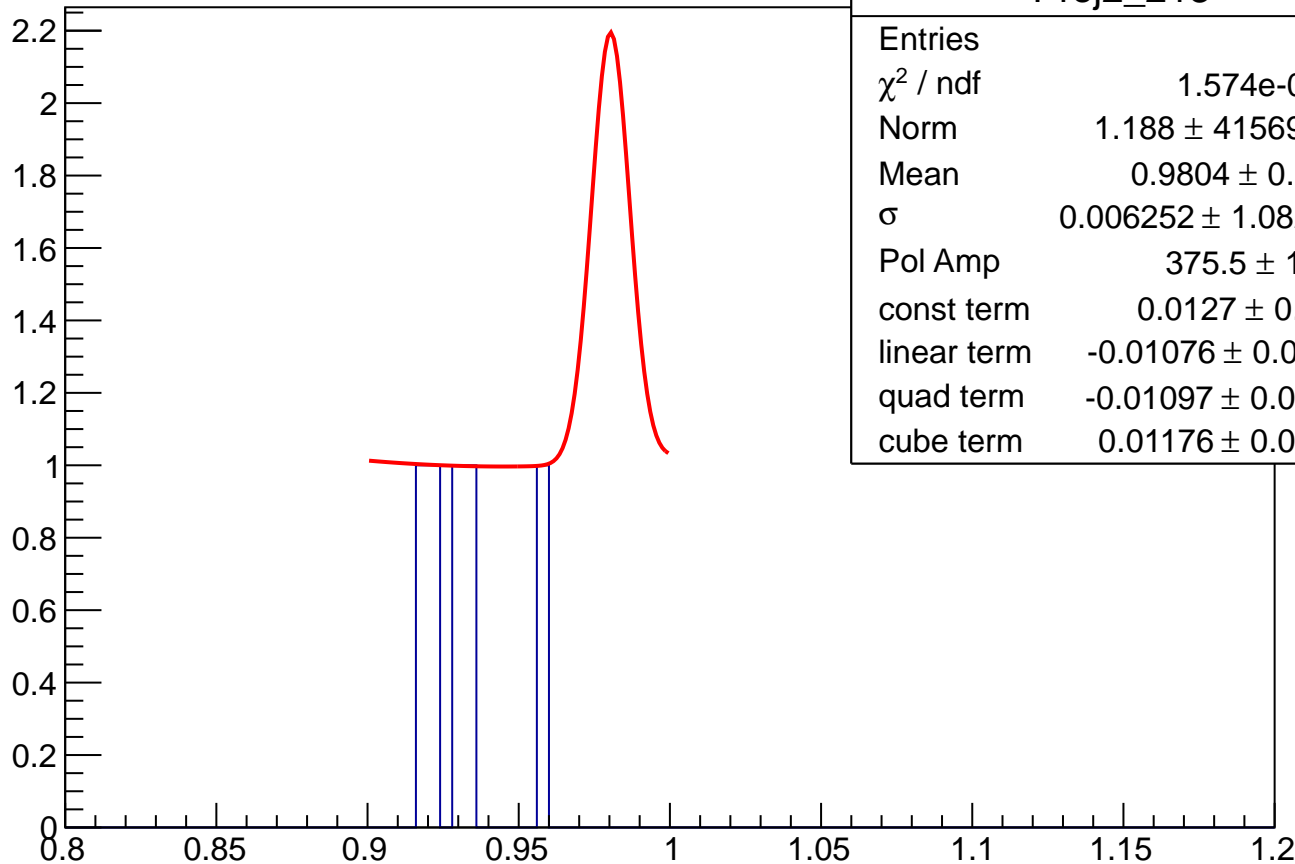
# PhiThetaMassPim



Proj2\_212

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 85                      |
| $\chi^2 / \text{ndf}$ | 13.64 / 9               |
| Norm                  | $7.133 \pm 2.582$       |
| Mean                  | $0.934 \pm 0.002$       |
| $\sigma$              | $0.005067 \pm 0.001734$ |
| Pol Amp               | $231.5 \pm 105.6$       |
| const term            | $-6.11 \pm 0.02$        |
| linear term           | $6.486 \pm 0.020$       |
| quad term             | $7.128 \pm 0.022$       |
| cube term             | $-7.547 \pm 0.020$      |

# PhiThetaMassPim

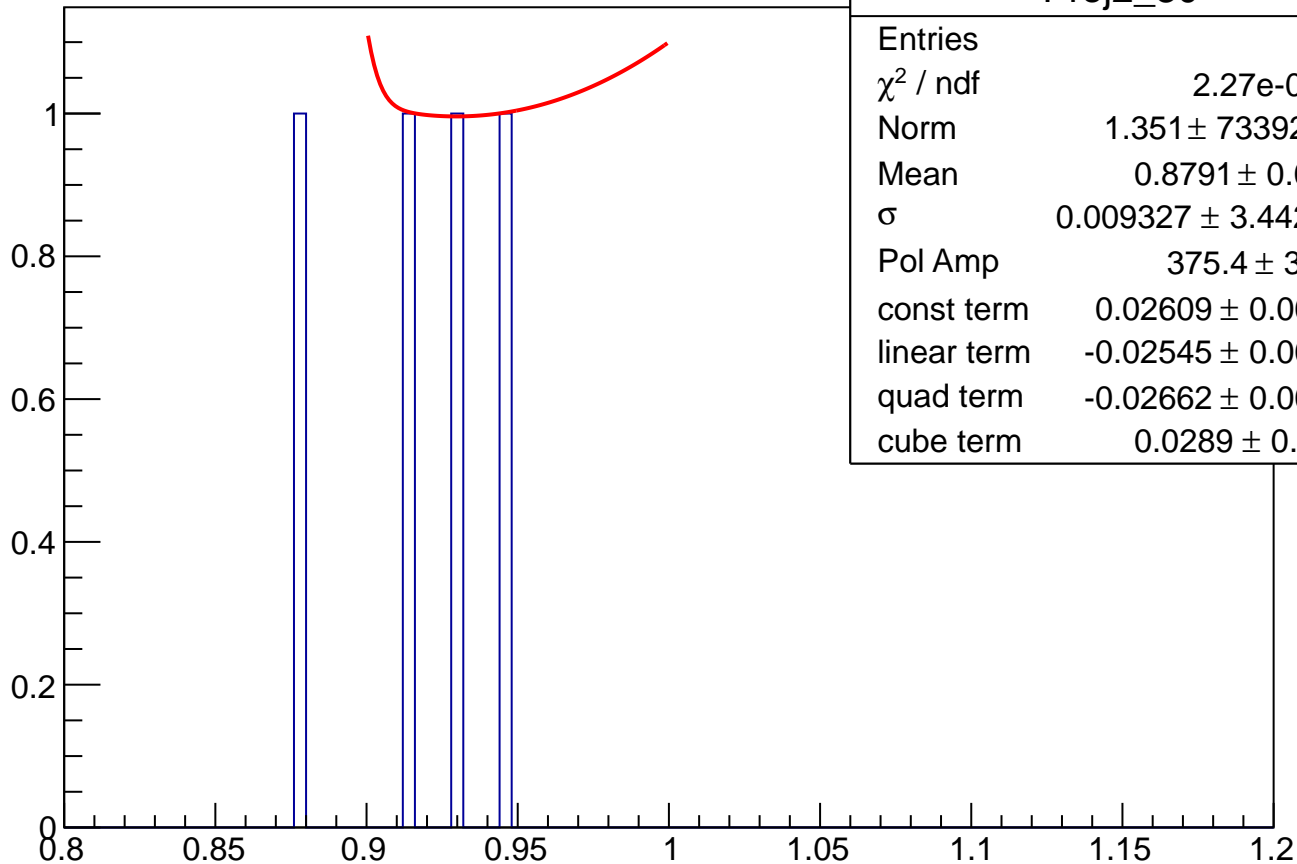


Proj2\_213

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 5                       |
| $\chi^2 / \text{ndf}$ | 1.574e-05 / 0           |
| Norm                  | $1.188 \pm 41569.910$   |
| Mean                  | $0.9804 \pm 0.0979$     |
| $\sigma$              | $0.006252 \pm 1.082076$ |
| Pol Amp               | $375.5 \pm 154.5$       |
| const term            | $0.0127 \pm 0.0011$     |
| linear term           | $-0.01076 \pm 0.00118$  |
| quad term             | $-0.01097 \pm 0.00126$  |
| cube term             | $0.01176 \pm 0.00135$   |



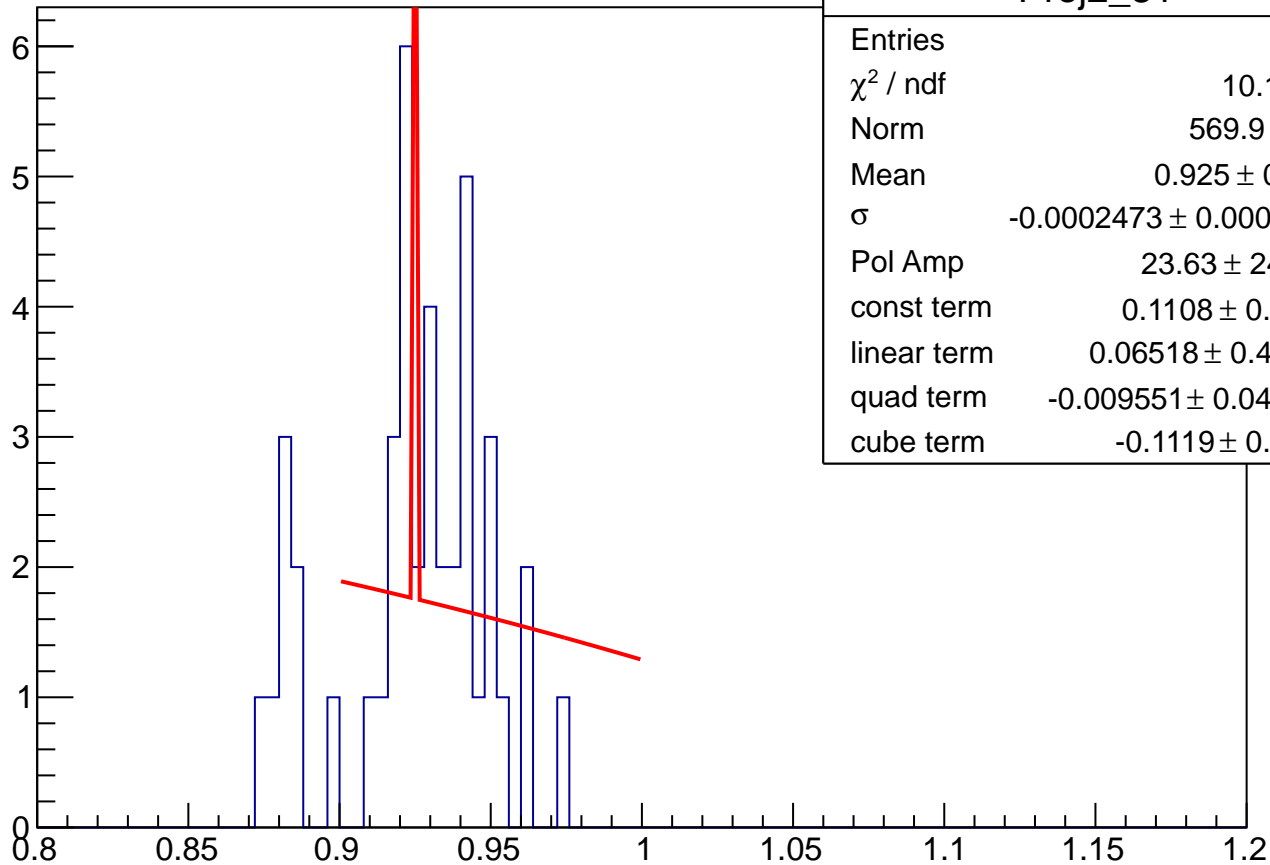
# PhiThetaMassPim



Proj2\_30

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 4                       |
| $\chi^2 / \text{ndf}$ | 2.27e-05 / 0            |
| Norm                  | $1.351 \pm 73392.891$   |
| Mean                  | $0.8791 \pm 0.0914$     |
| $\sigma$              | $0.009327 \pm 3.442085$ |
| Pol Amp               | $375.4 \pm 350.8$       |
| const term            | $0.02609 \pm 0.00249$   |
| linear term           | $-0.02545 \pm 0.00267$  |
| quad term             | $-0.02662 \pm 0.00287$  |
| cube term             | $0.0289 \pm 0.0031$     |

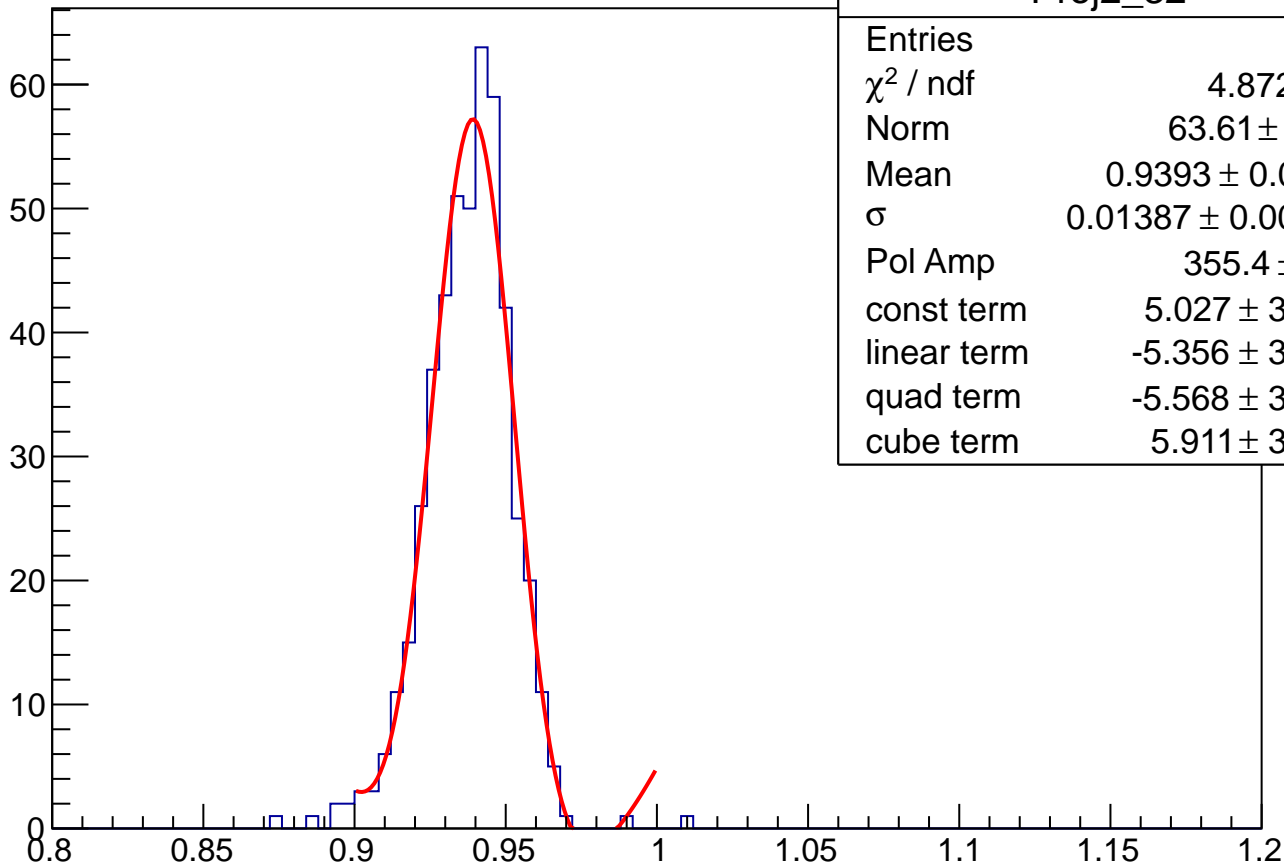
# PhiThetaMassPim



Proj2\_31

|                       |                            |
|-----------------------|----------------------------|
| Entries               | 42                         |
| $\chi^2 / \text{ndf}$ | 10.16 / 6                  |
| Norm                  | $569.9 \pm 2.8$            |
| Mean                  | $0.925 \pm 0.000$          |
| $\sigma$              | $-0.0002473 \pm 0.0000917$ |
| Pol Amp               | $23.63 \pm 240.51$         |
| const term            | $0.1108 \pm 0.6176$        |
| linear term           | $0.06518 \pm 0.44424$      |
| quad term             | $-0.009551 \pm 0.041317$   |
| cube term             | $-0.1119 \pm 0.7408$       |

# PhiThetaMassPim

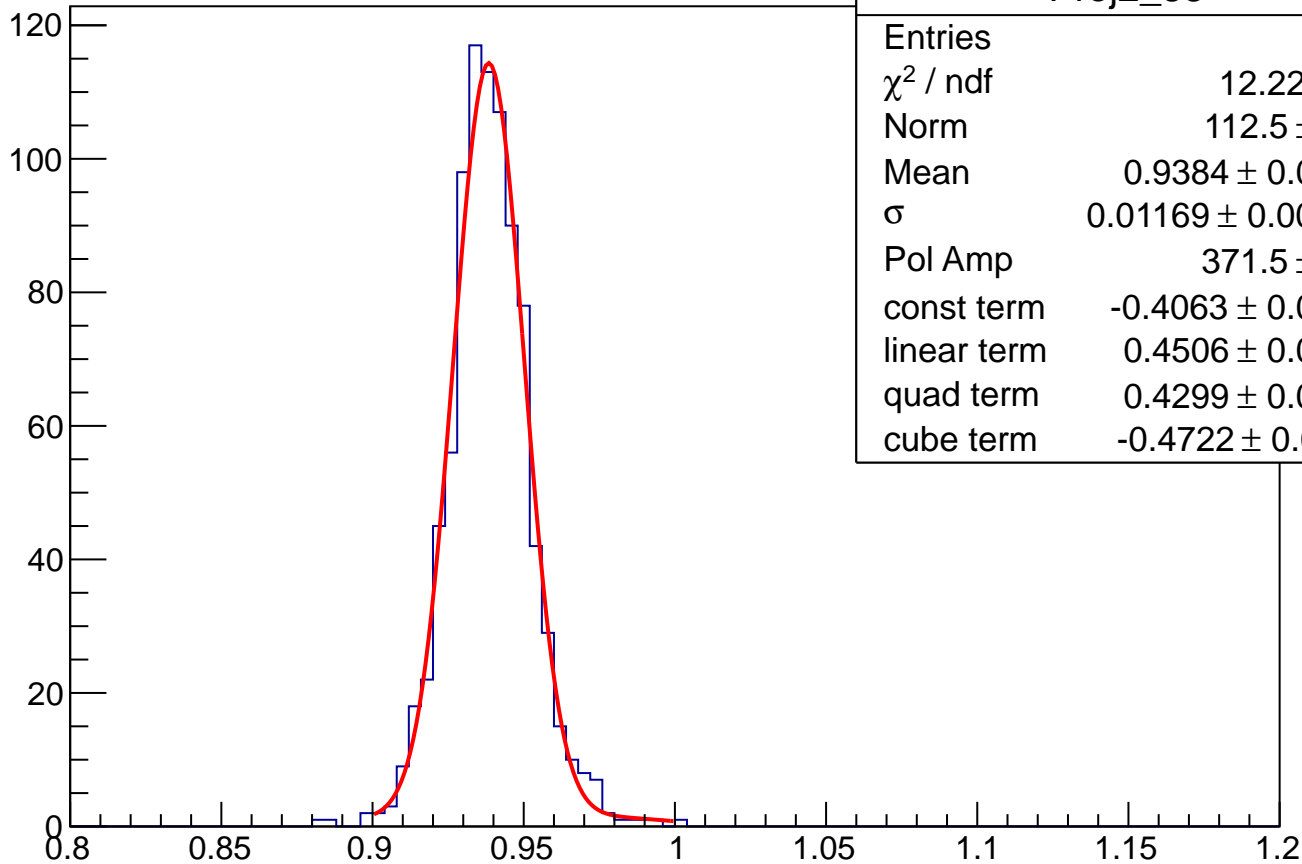


Proj2\_32

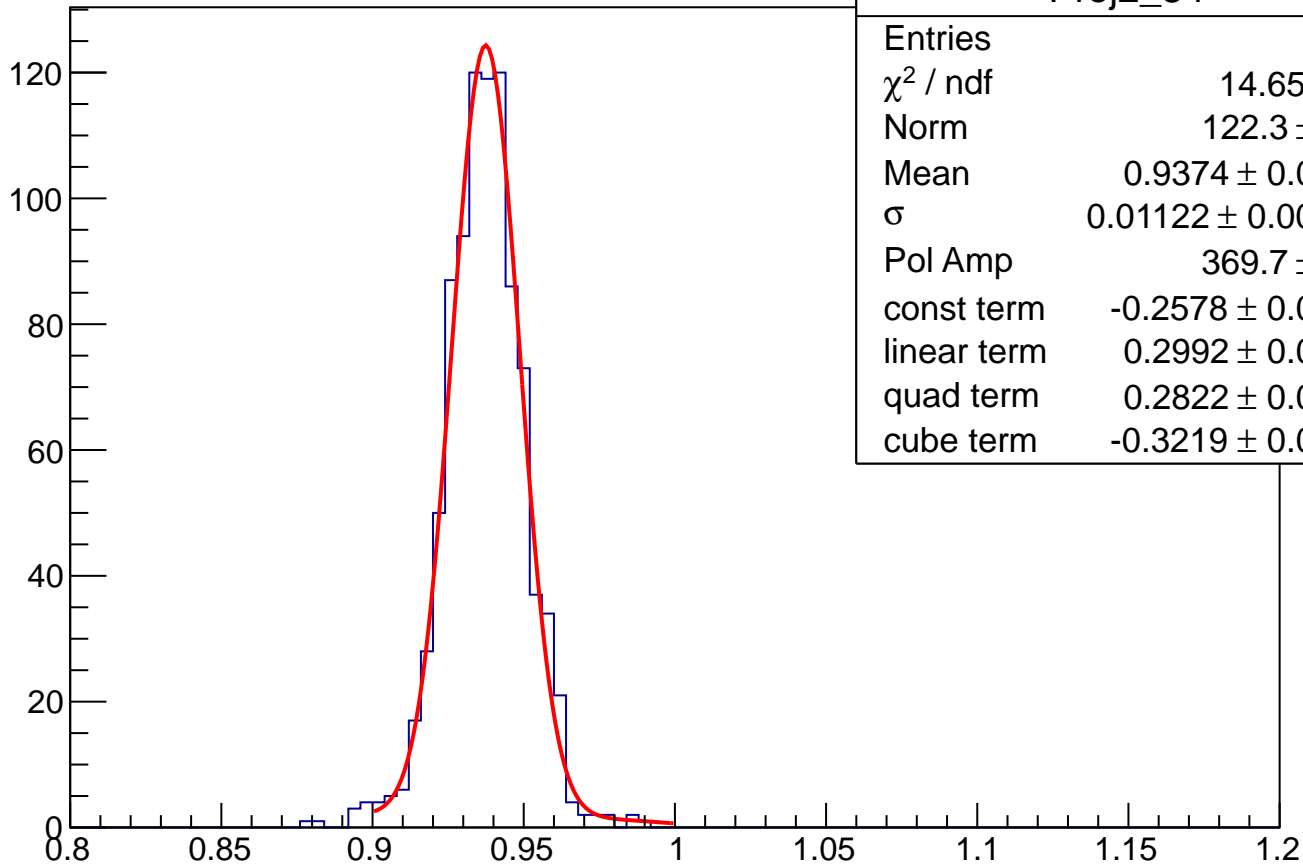
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 479                   |
| $\chi^2 / \text{ndf}$ | 4.872 / 11            |
| Norm                  | $63.61 \pm 4.87$      |
| Mean                  | $0.9393 \pm 0.0007$   |
| $\sigma$              | $0.01387 \pm 0.00134$ |
| Pol Amp               | $355.4 \pm 3.3$       |
| const term            | $5.027 \pm 3.124$     |
| linear term           | $-5.356 \pm 3.360$    |
| quad term             | $-5.568 \pm 3.458$    |
| cube term             | $5.911 \pm 3.702$     |



# PhiThetaMassPim



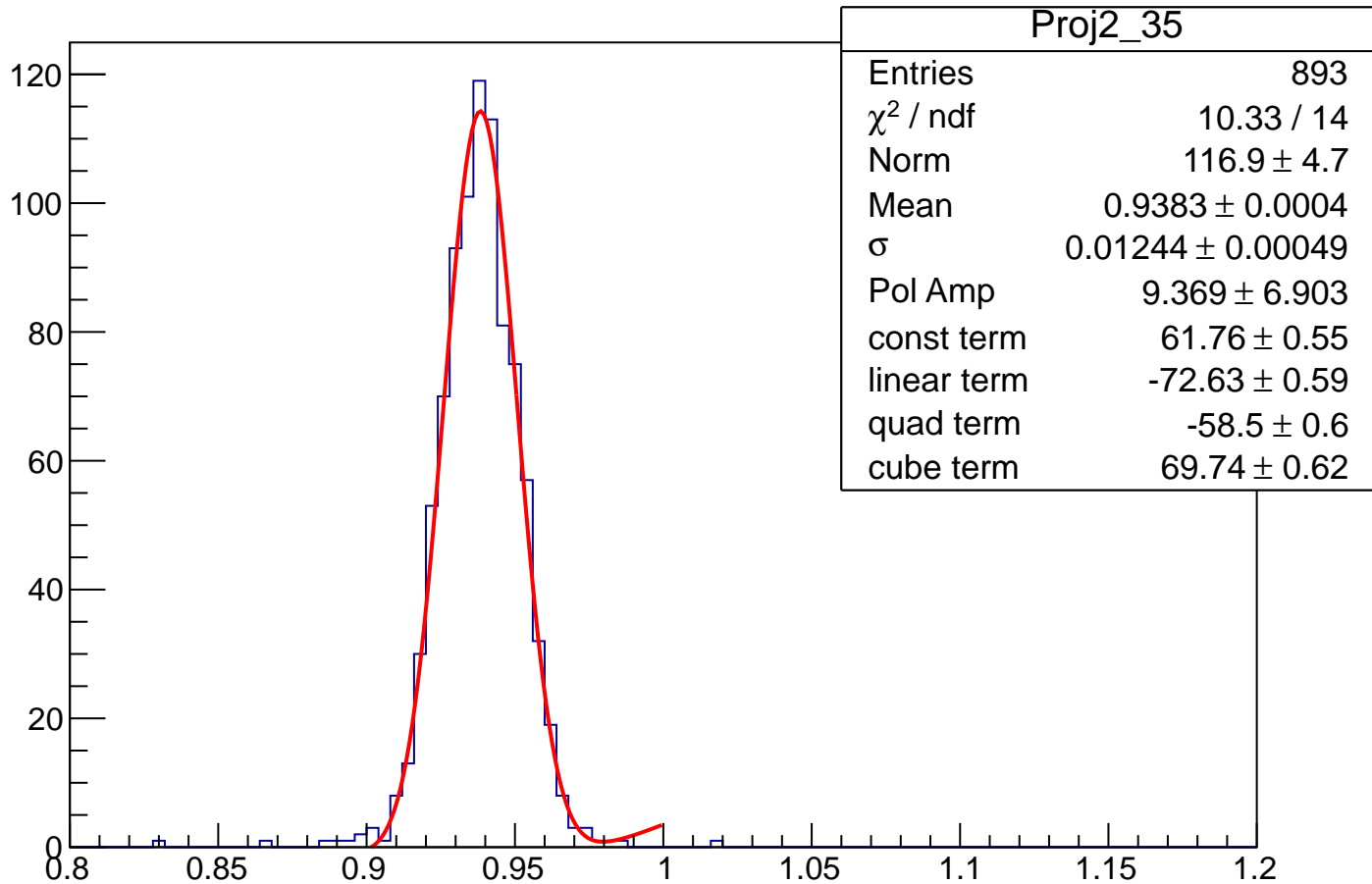
# PhiThetaMassPim



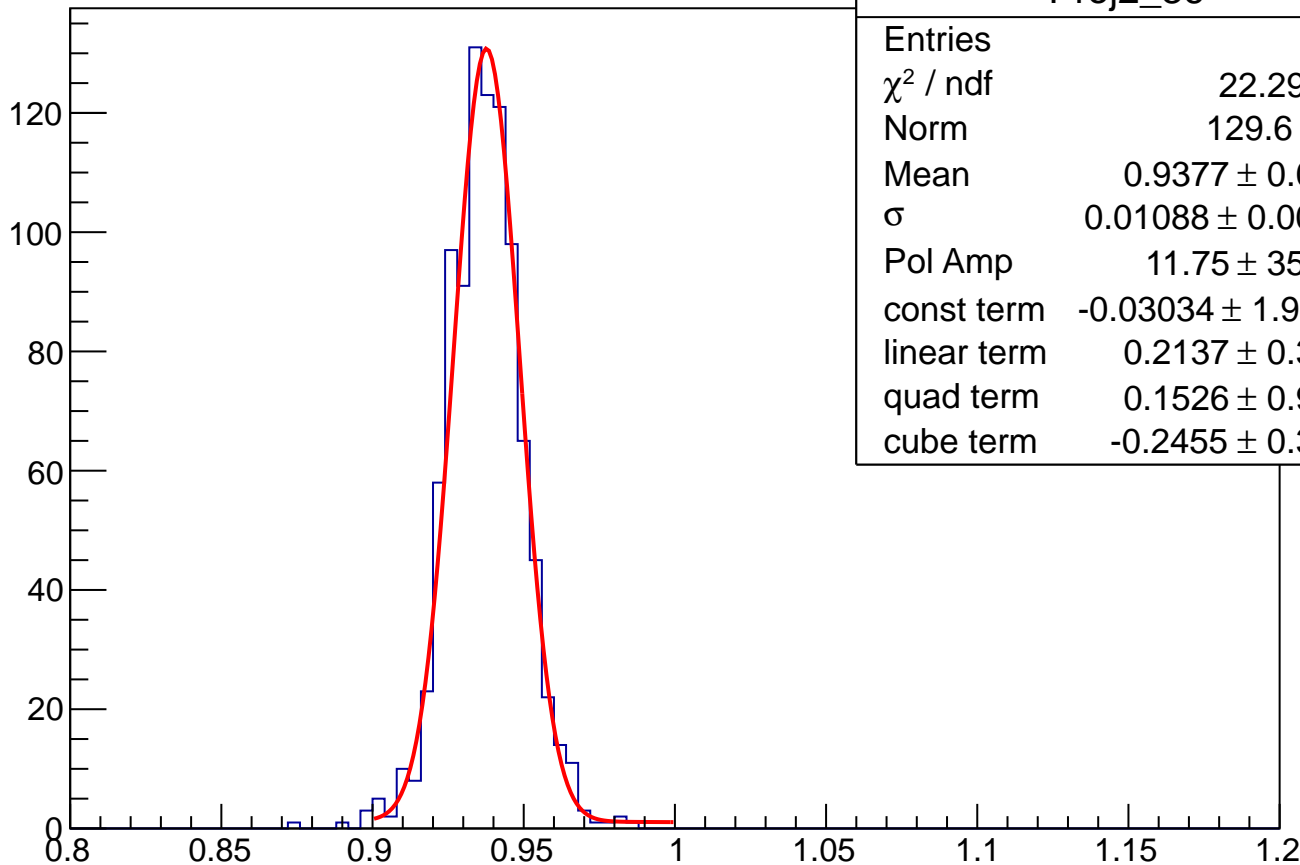
Proj2\_34

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 923                   |
| $\chi^2 / \text{ndf}$ | 14.65 / 14            |
| Norm                  | $122.3 \pm 5.2$       |
| Mean                  | $0.9374 \pm 0.0004$   |
| $\sigma$              | $0.01122 \pm 0.00038$ |
| Pol Amp               | $369.7 \pm 0.3$       |
| const term            | $-0.2578 \pm 0.0490$  |
| linear term           | $0.2992 \pm 0.0437$   |
| quad term             | $0.2822 \pm 0.0454$   |
| cube term             | $-0.3219 \pm 0.0468$  |

# PhiThetaMassPim



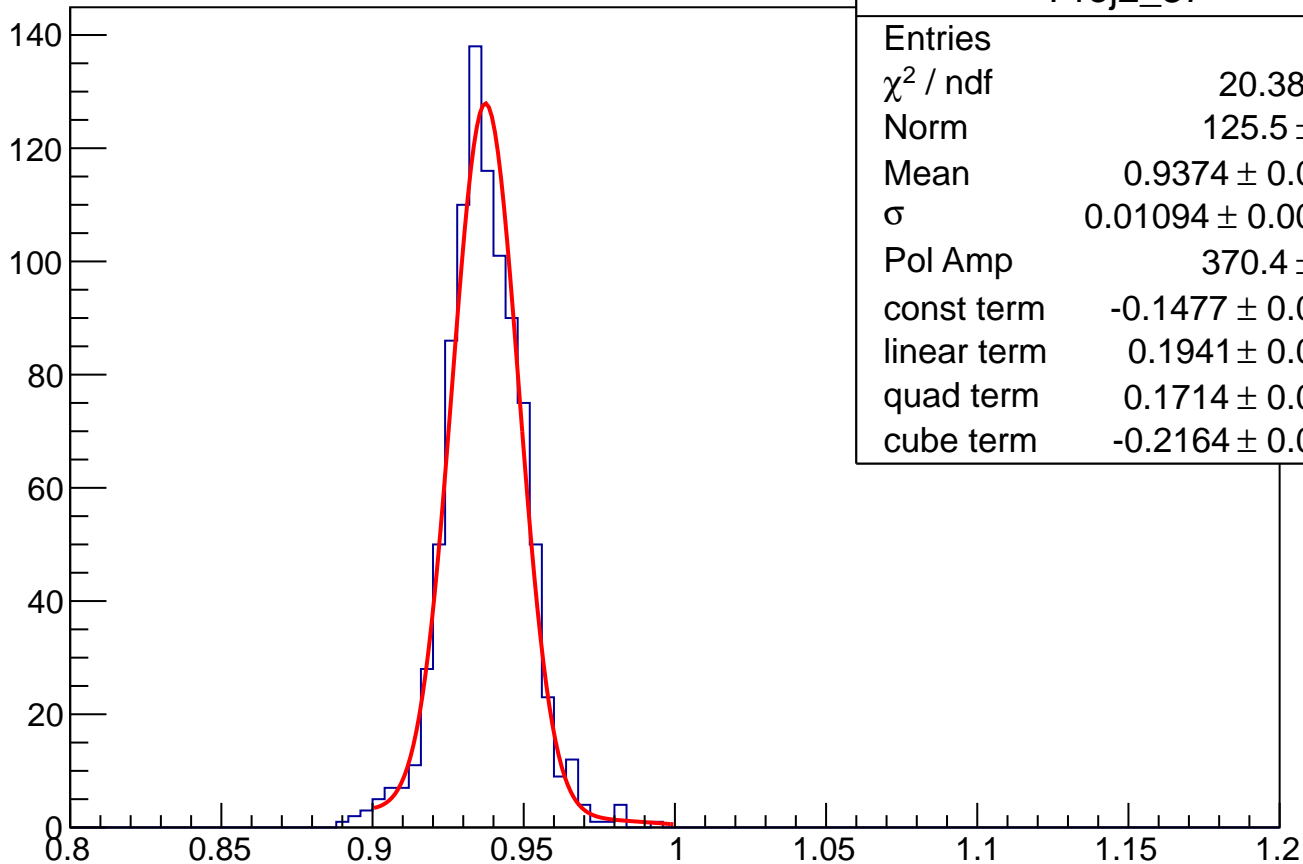
# PhiThetaMassPim



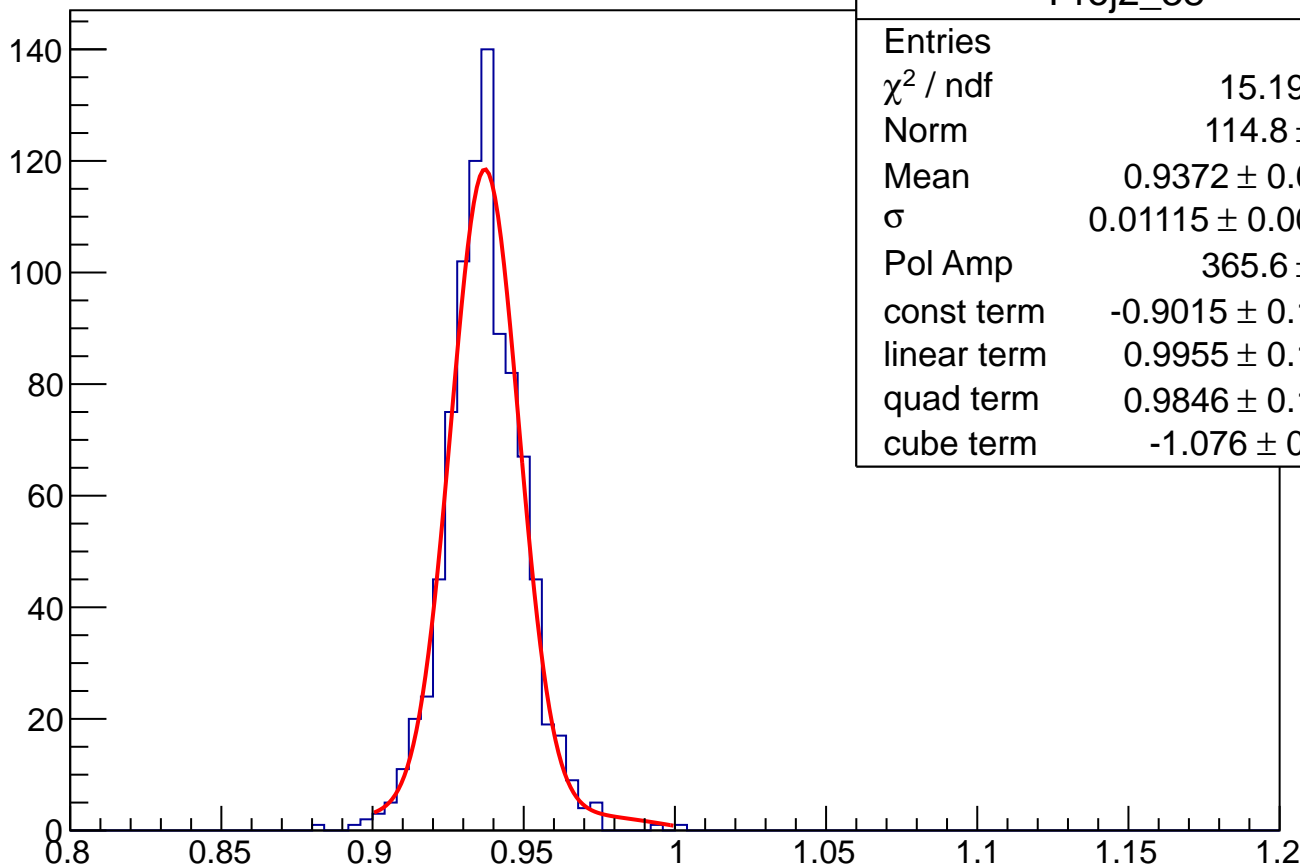
Proj2\_36

|                       |                        |
|-----------------------|------------------------|
| Entries               | 937                    |
| $\chi^2 / \text{ndf}$ | 22.29 / 14             |
| Norm                  | $129.6 \pm 5.1$        |
| Mean                  | $0.9377 \pm 0.0004$    |
| $\sigma$              | $0.01088 \pm 0.00034$  |
| Pol Amp               | $11.75 \pm 354.33$     |
| const term            | $-0.03034 \pm 1.98451$ |
| linear term           | $0.2137 \pm 0.3728$    |
| quad term             | $0.1526 \pm 0.9147$    |
| cube term             | $-0.2455 \pm 0.3805$   |

# PhiThetaMassPim



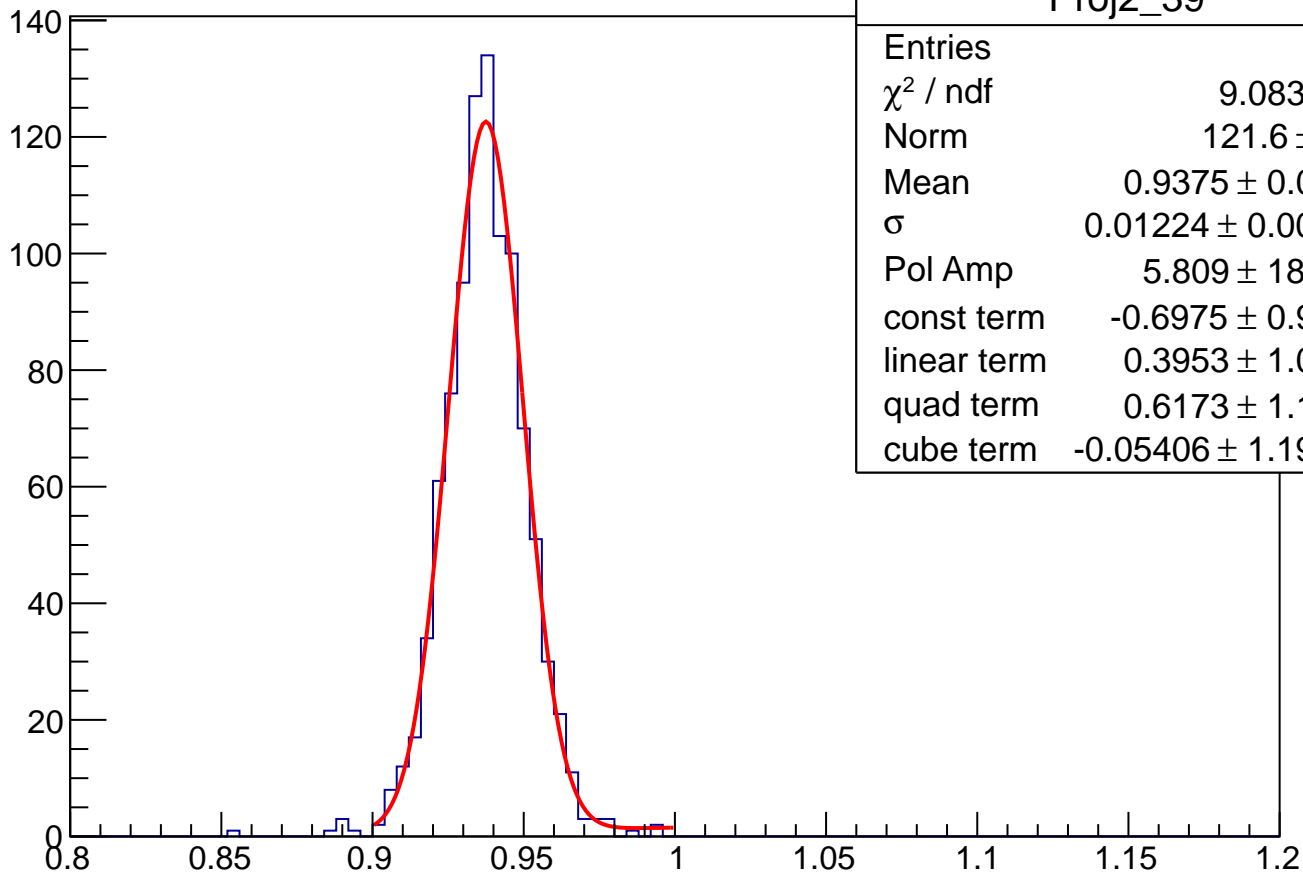
# PhiThetaMassPim



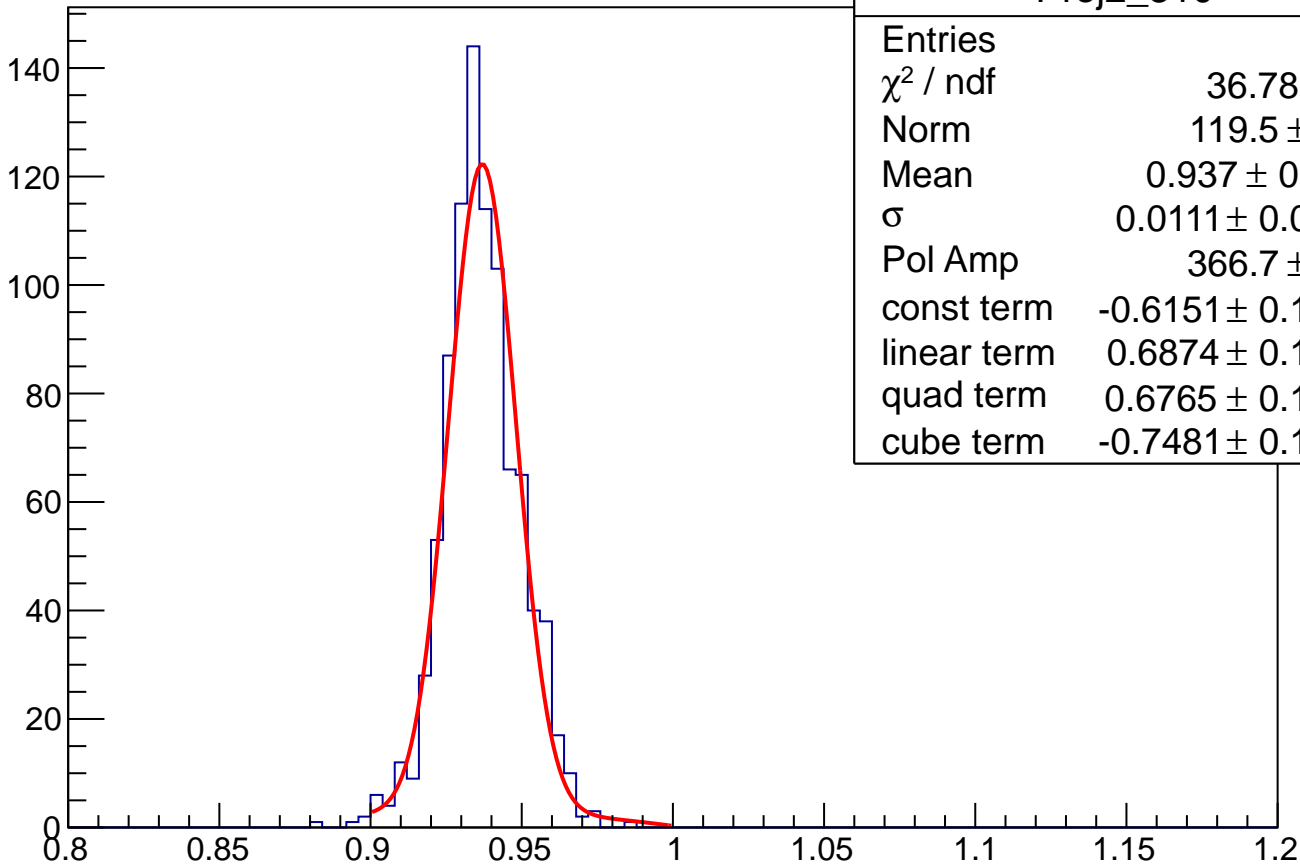
Proj2\_38

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 888                   |
| $\chi^2 / \text{ndf}$ | 15.19 / 12            |
| Norm                  | $114.8 \pm 5.4$       |
| Mean                  | $0.9372 \pm 0.0004$   |
| $\sigma$              | $0.01115 \pm 0.00044$ |
| Pol Amp               | $365.6 \pm 0.4$       |
| const term            | $-0.9015 \pm 0.1313$  |
| linear term           | $0.9955 \pm 0.1319$   |
| quad term             | $0.9846 \pm 0.1357$   |
| cube term             | $-1.076 \pm 0.139$    |

# PhiThetaMassPim



# PhiThetaMassPim

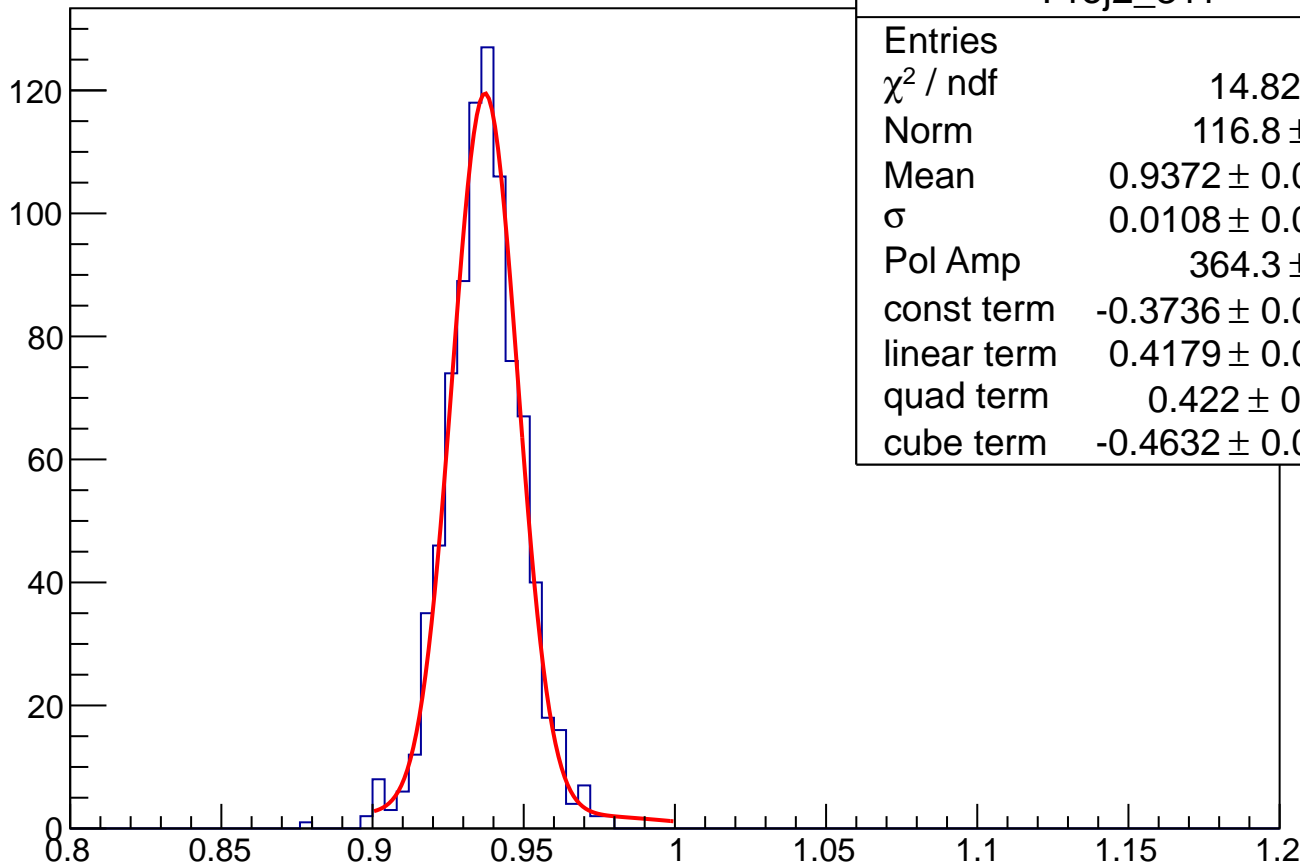


Proj2\_310

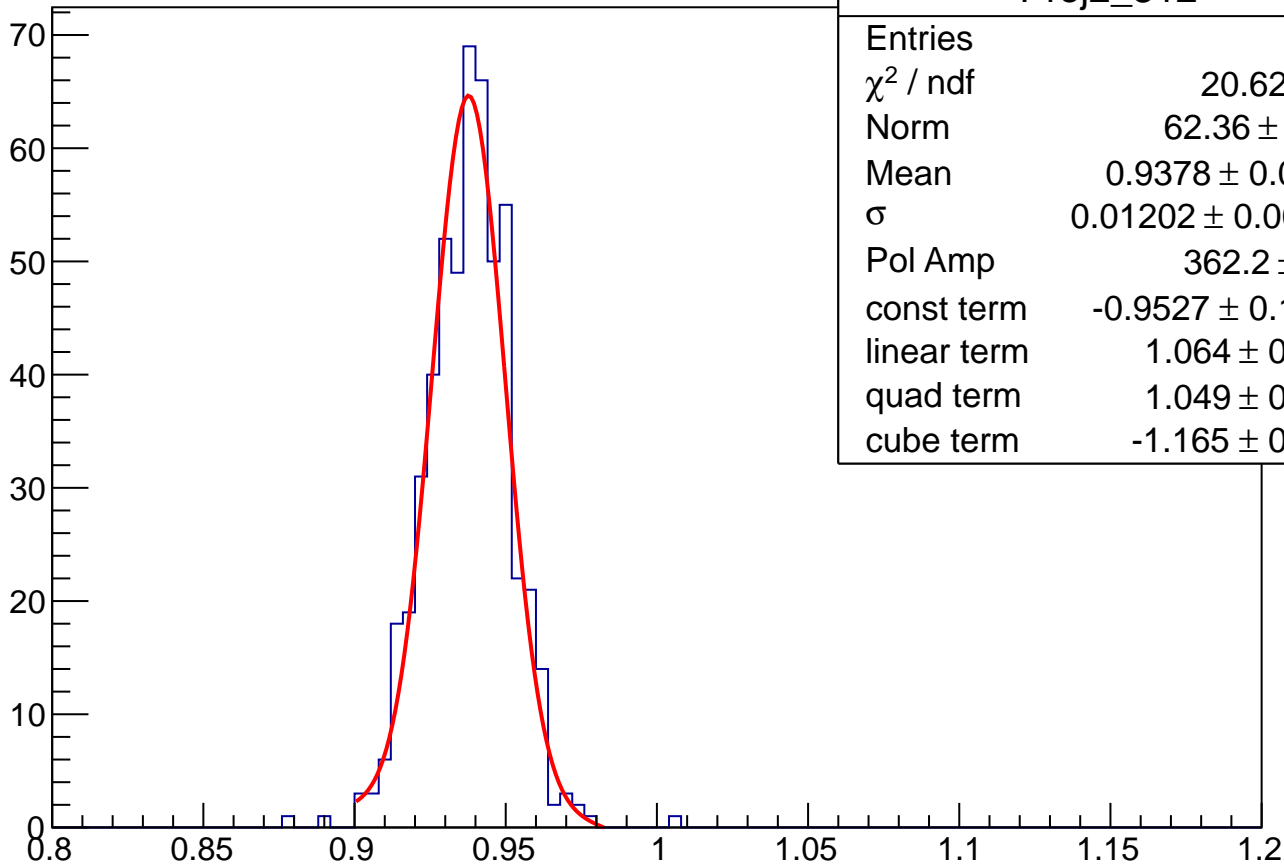
|                       |                      |
|-----------------------|----------------------|
| Entries               | 921                  |
| $\chi^2 / \text{ndf}$ | 36.78 / 12           |
| Norm                  | $119.5 \pm 5.7$      |
| Mean                  | $0.937 \pm 0.000$    |
| $\sigma$              | $0.0111 \pm 0.0004$  |
| Pol Amp               | $366.7 \pm 0.4$      |
| const term            | $-0.6151 \pm 0.1086$ |
| linear term           | $0.6874 \pm 0.1046$  |
| quad term             | $0.6765 \pm 0.1096$  |
| cube term             | $-0.7481 \pm 0.1093$ |



# PhiThetaMassPim



# PhiThetaMassPim

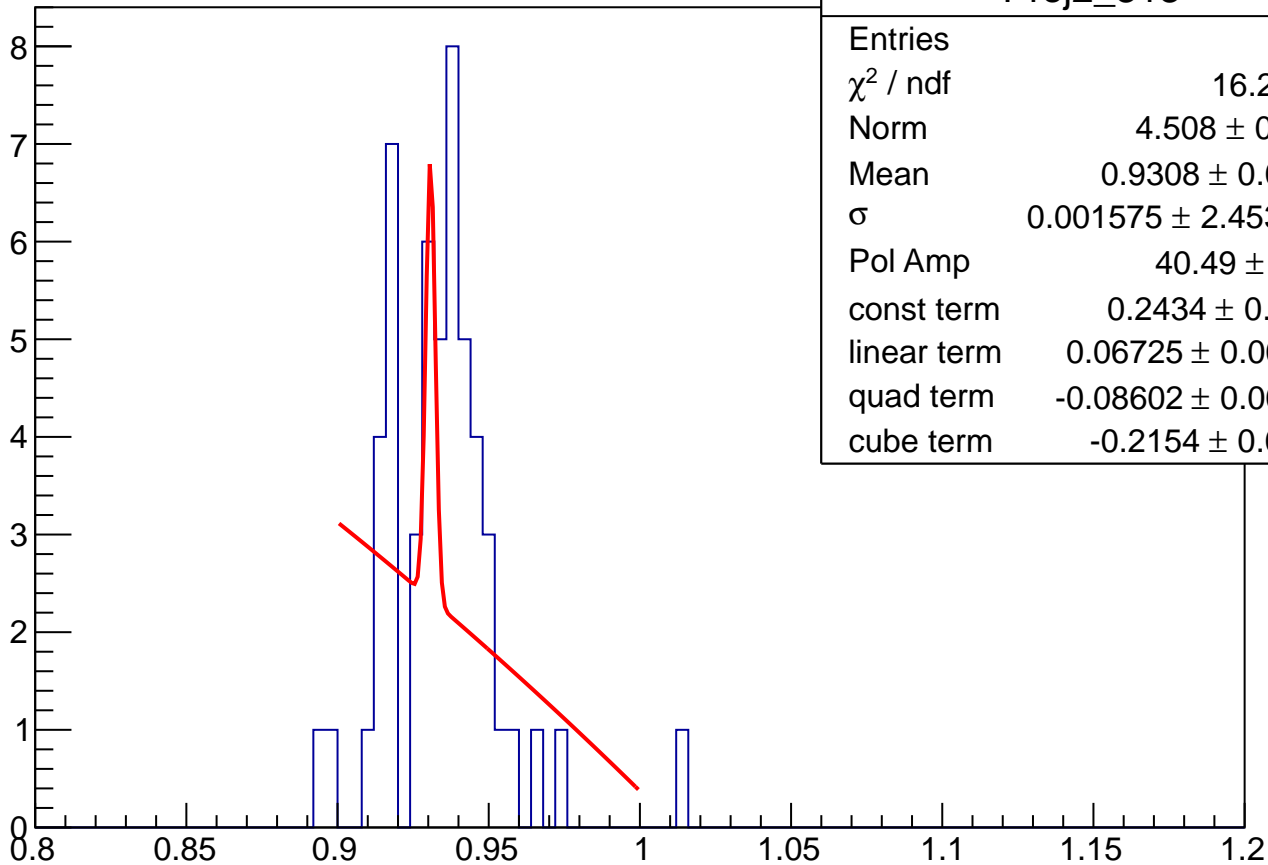


Proj2\_312

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 529                   |
| $\chi^2 / \text{ndf}$ | 20.62 / 12            |
| Norm                  | $62.36 \pm 3.66$      |
| Mean                  | $0.9378 \pm 0.0007$   |
| $\sigma$              | $0.01202 \pm 0.00061$ |
| Pol Amp               | $362.2 \pm 0.7$       |
| const term            | $-0.9527 \pm 0.1614$  |
| linear term           | $1.064 \pm 0.165$     |
| quad term             | $1.049 \pm 0.169$     |
| cube term             | $-1.165 \pm 0.175$    |

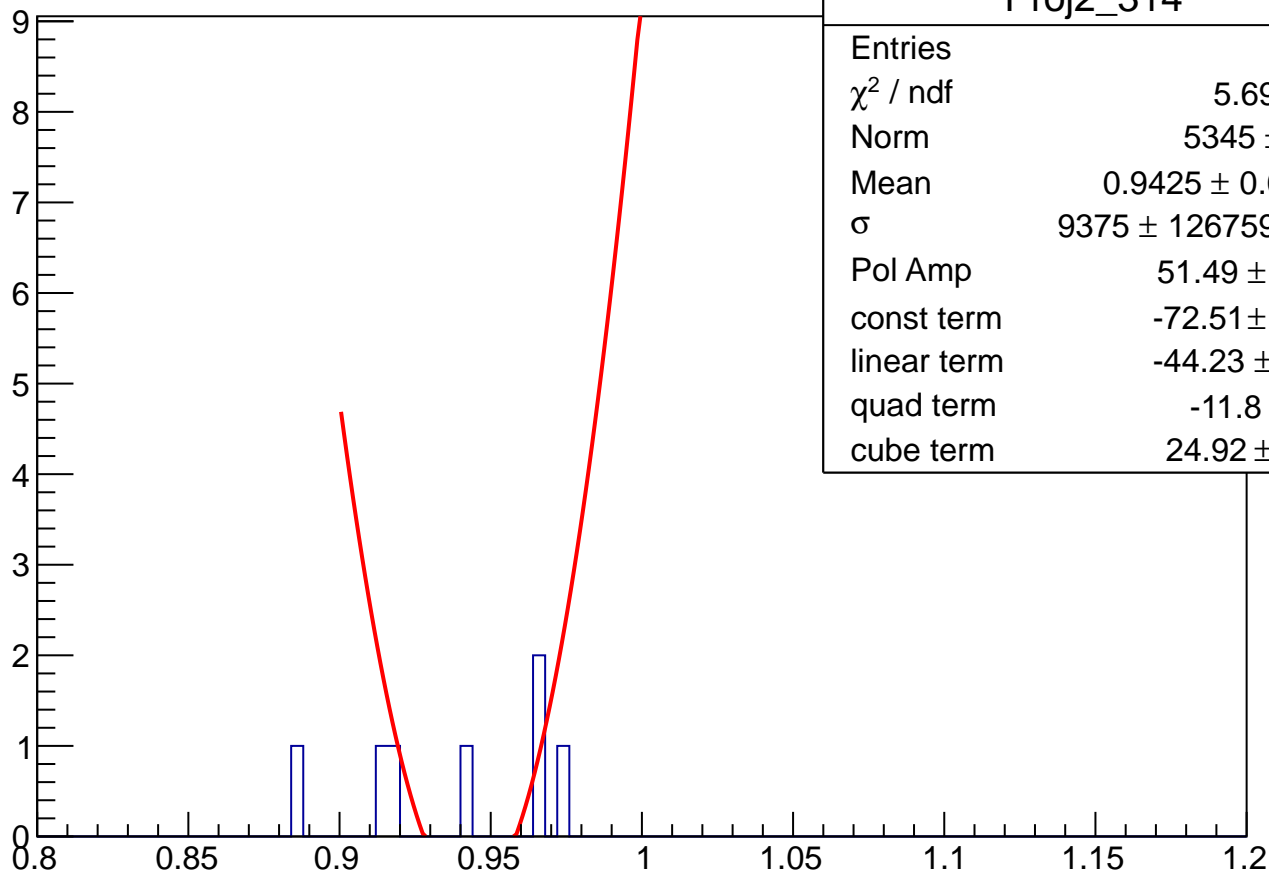
# PhiThetaMassPim

Proj2\_313



|                       |                         |
|-----------------------|-------------------------|
| Entries               | 53                      |
| $\chi^2 / \text{ndf}$ | 16.24 / 6               |
| Norm                  | $4.508 \pm 0.318$       |
| Mean                  | $0.9308 \pm 0.0000$     |
| $\sigma$              | $0.001575 \pm 2.453708$ |
| Pol Amp               | $40.49 \pm 4.28$        |
| const term            | $0.2434 \pm 0.0011$     |
| linear term           | $0.06725 \pm 0.00105$   |
| quad term             | $-0.08602 \pm 0.00098$  |
| cube term             | $-0.2154 \pm 0.0009$    |

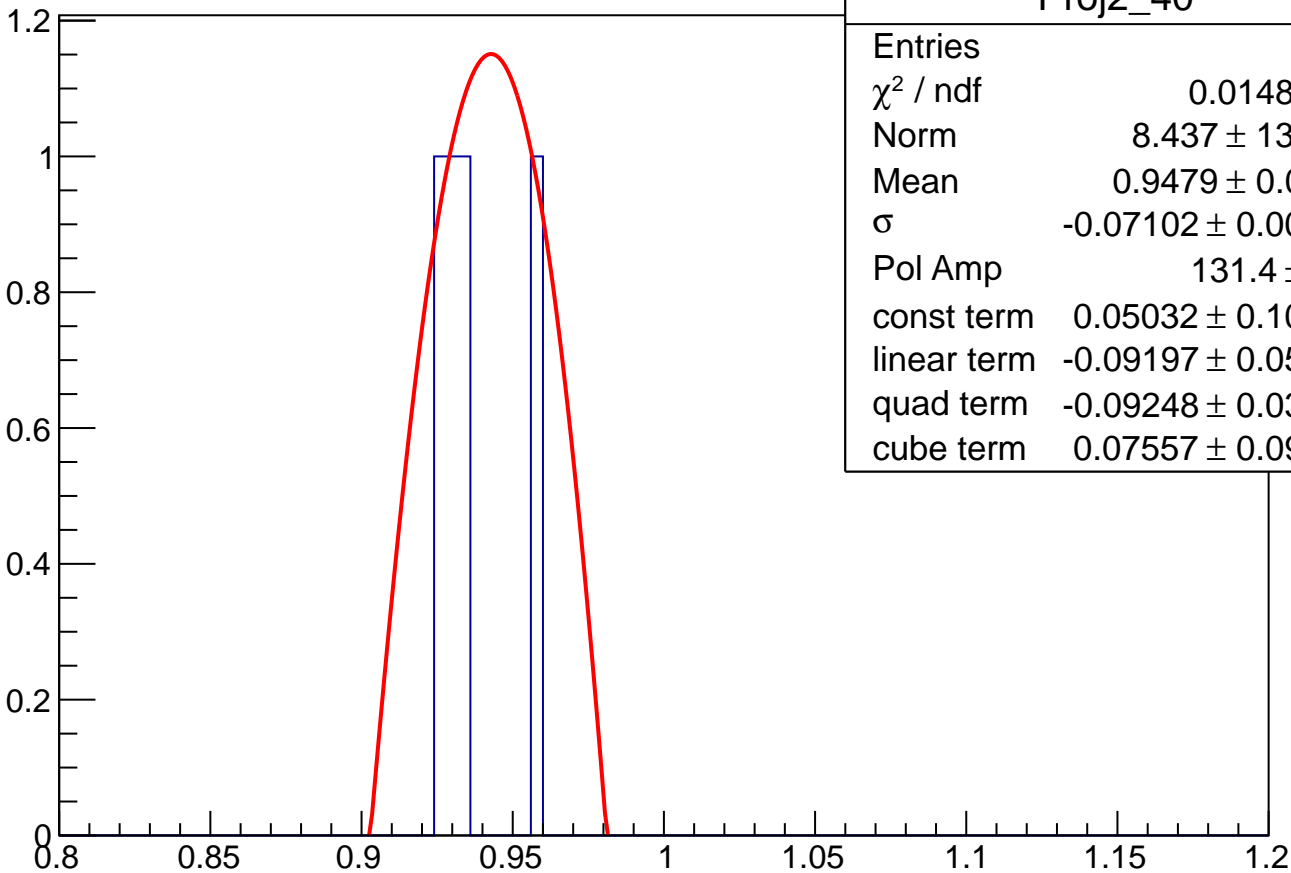
# PhiThetaMassPim



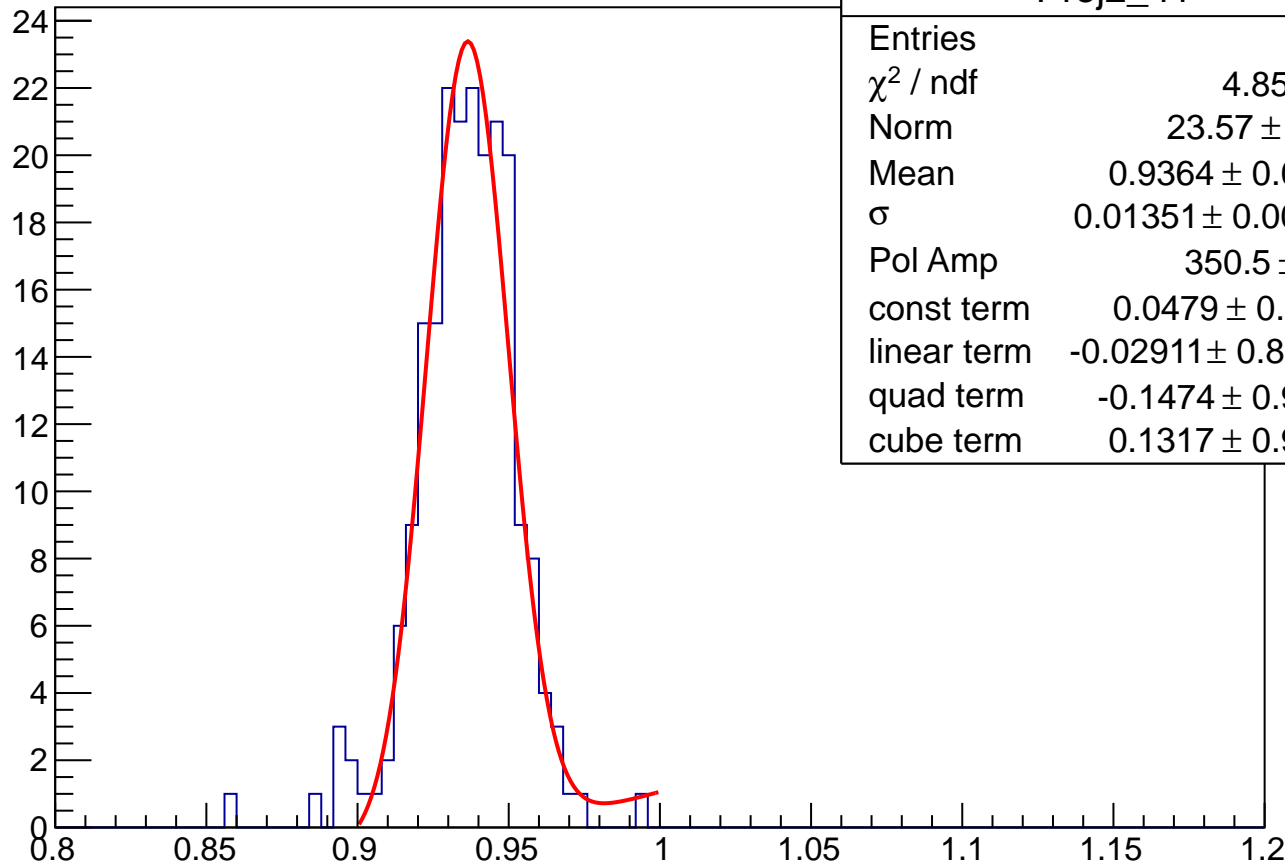
Proj2\_314

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 7                     |
| $\chi^2 / \text{ndf}$ | 5.698 / 0             |
| Norm                  | $5345 \pm 5.3$        |
| Mean                  | $0.9425 \pm 0.0670$   |
| $\sigma$              | $9375 \pm 12675973.0$ |
| Pol Amp               | $51.49 \pm 0.05$      |
| const term            | $-72.51 \pm 0.10$     |
| linear term           | $-44.23 \pm 0.11$     |
| quad term             | $-11.8 \pm 0.1$       |
| cube term             | $24.92 \pm 0.11$      |

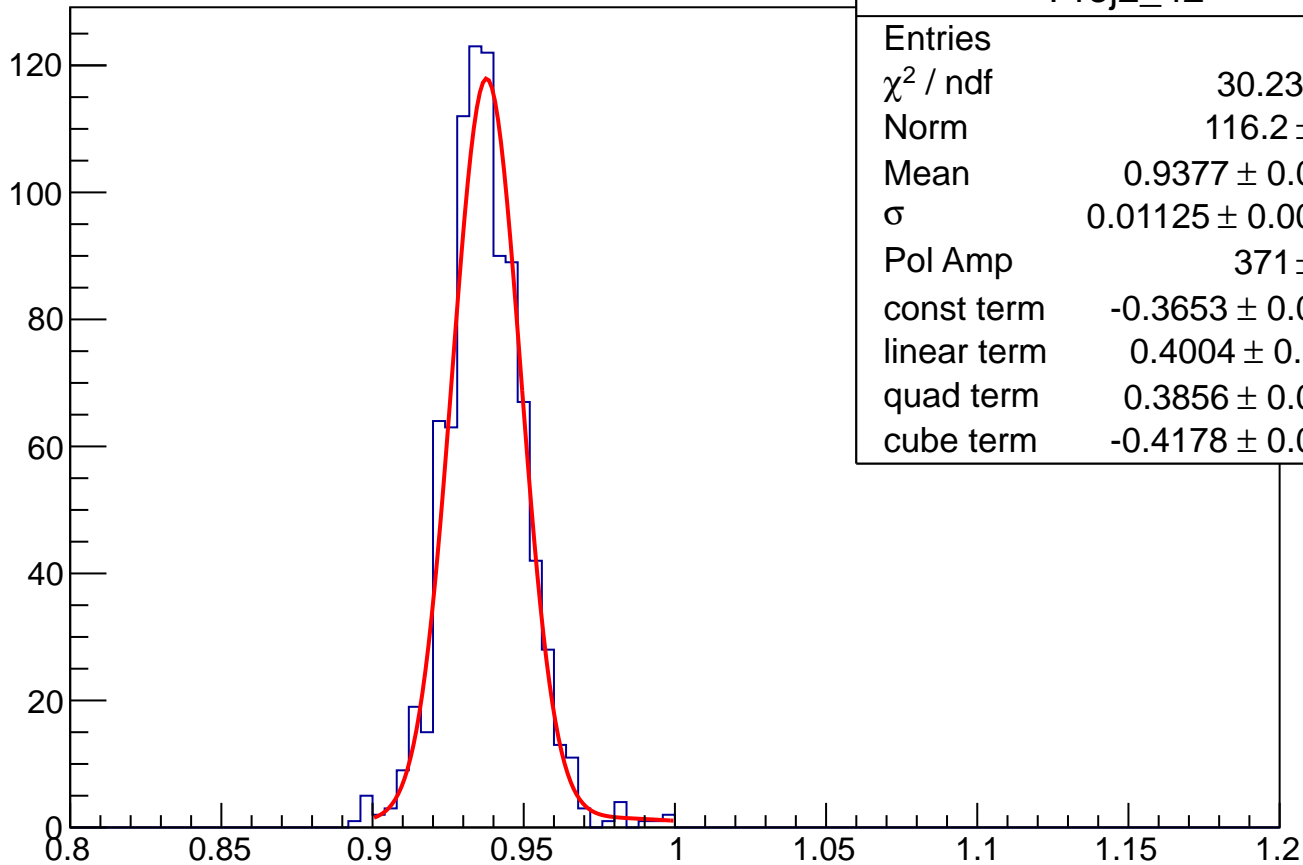
# PhiThetaMassPim



# PhiThetaMassPim



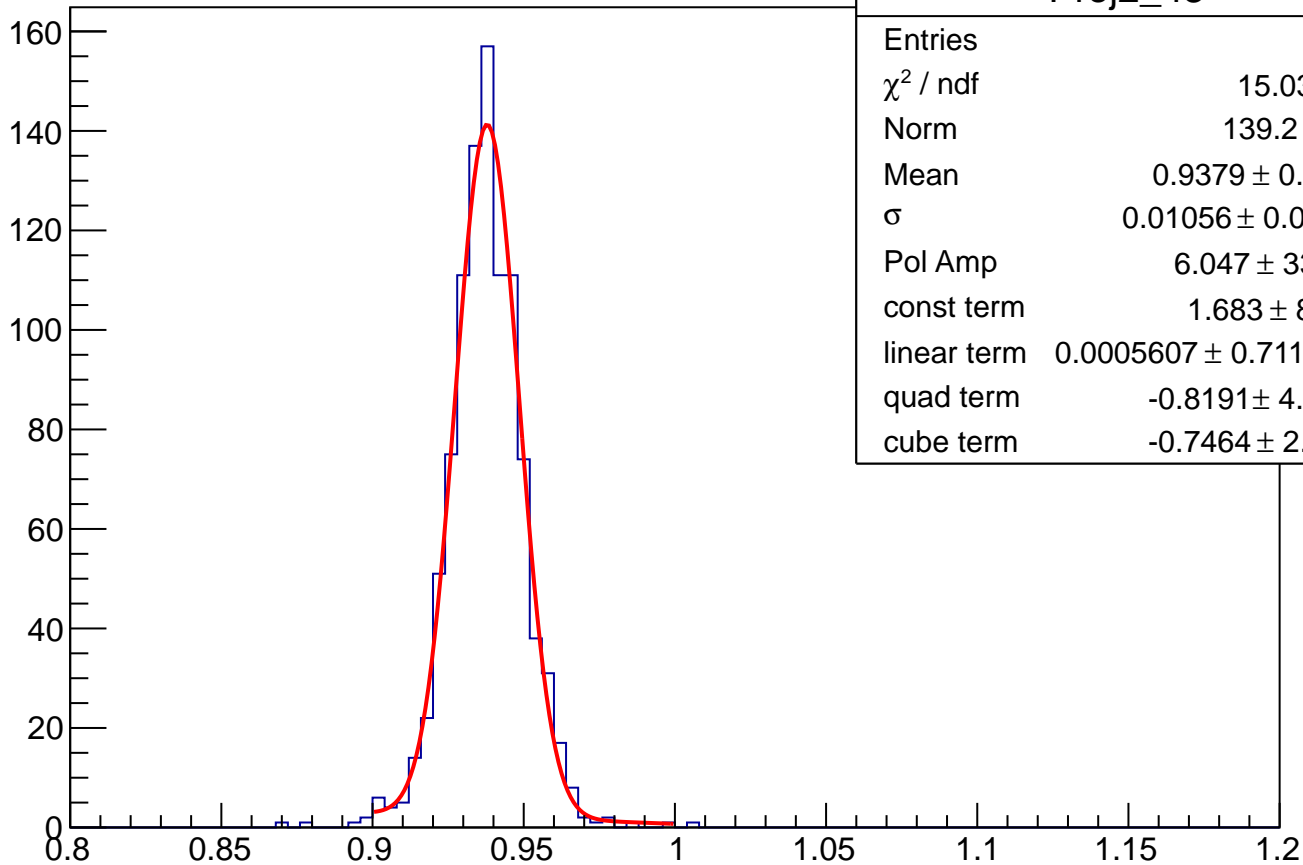
# PhiThetaMassPim



Proj2\_42

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 890                   |
| $\chi^2 / \text{ndf}$ | 30.23 / 15            |
| Norm                  | $116.2 \pm 5.2$       |
| Mean                  | $0.9377 \pm 0.0004$   |
| $\sigma$              | $0.01125 \pm 0.00039$ |
| Pol Amp               | $371 \pm 0.2$         |
| const term            | $-0.3653 \pm 0.0552$  |
| linear term           | $0.4004 \pm 0.0511$   |
| quad term             | $0.3856 \pm 0.0528$   |
| cube term             | $-0.4178 \pm 0.0513$  |

# PhiThetaMassPim

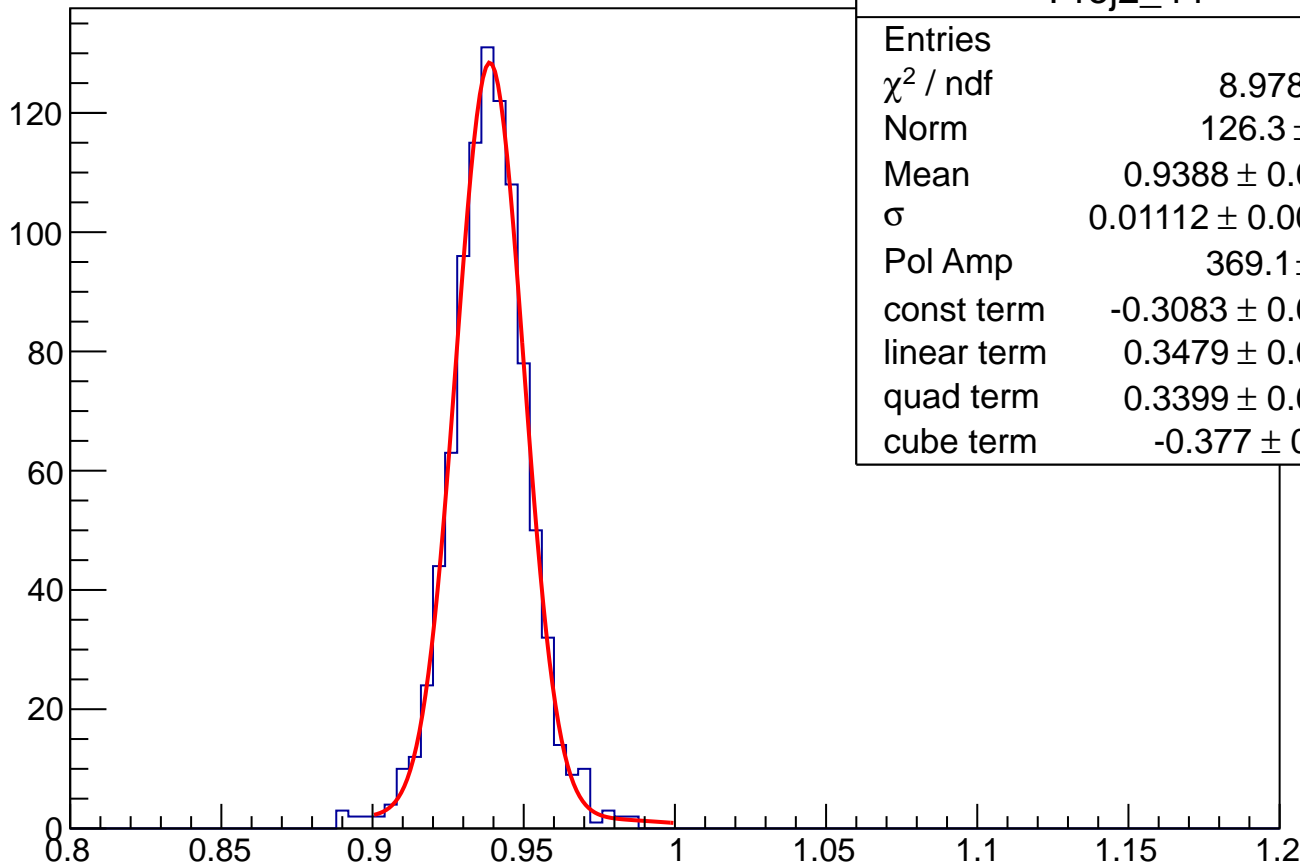


Proj2\_43

|                       |                           |
|-----------------------|---------------------------|
| Entries               | 985                       |
| $\chi^2 / \text{ndf}$ | 15.03 / 14                |
| Norm                  | $139.2 \pm 5.8$           |
| Mean                  | $0.9379 \pm 0.0004$       |
| $\sigma$              | $0.01056 \pm 0.00036$     |
| Pol Amp               | $6.047 \pm 33.101$        |
| const term            | $1.683 \pm 8.184$         |
| linear term           | $0.0005607 \pm 0.7110059$ |
| quad term             | $-0.8191 \pm 4.3567$      |
| cube term             | $-0.7464 \pm 2.7031$      |



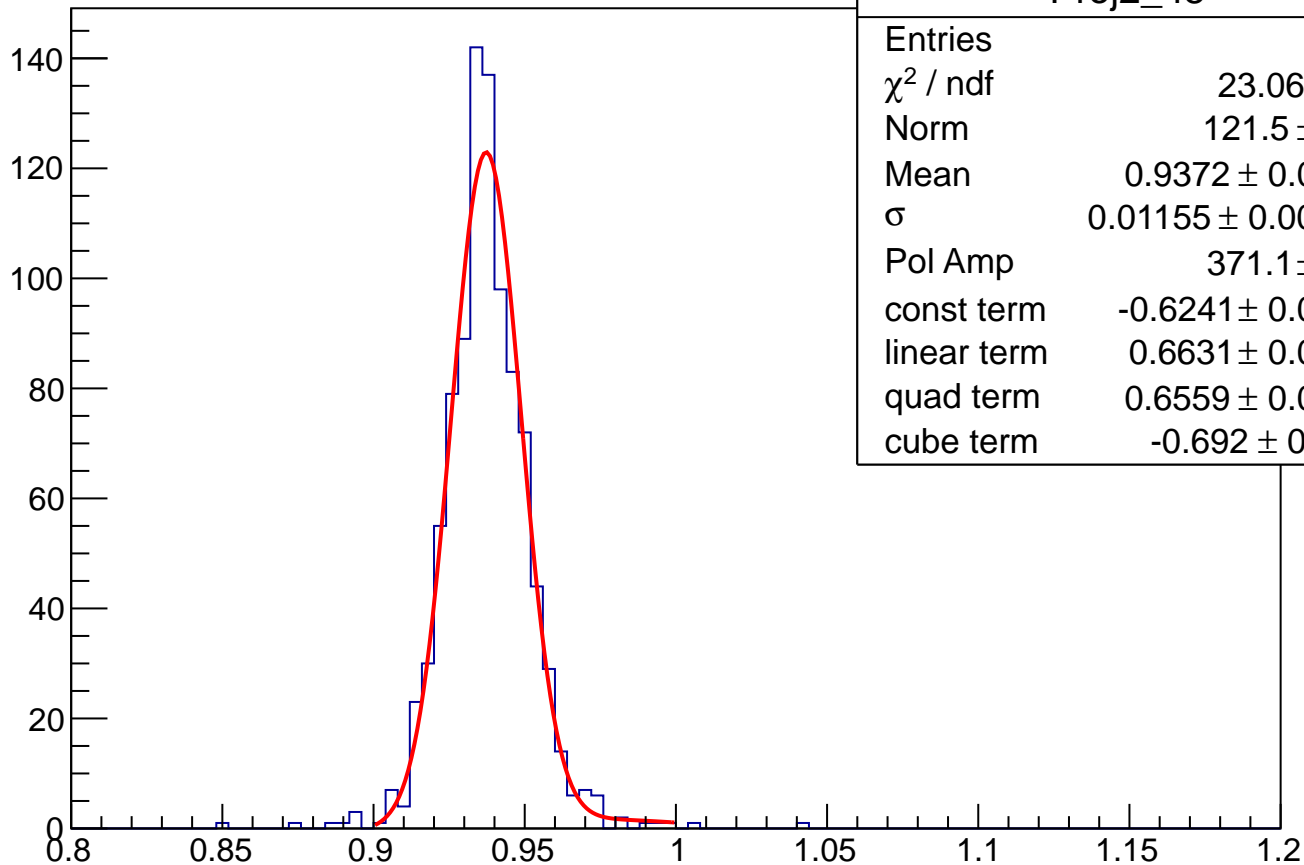
# PhiThetaMassPim



Proj2\_44

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 940                   |
| $\chi^2 / \text{ndf}$ | 8.978 / 14            |
| Norm                  | $126.3 \pm 5.5$       |
| Mean                  | $0.9388 \pm 0.0004$   |
| $\sigma$              | $0.01112 \pm 0.00036$ |
| Pol Amp               | $369.1 \pm 0.3$       |
| const term            | $-0.3083 \pm 0.0497$  |
| linear term           | $0.3479 \pm 0.0470$   |
| quad term             | $0.3399 \pm 0.0487$   |
| cube term             | $-0.377 \pm 0.051$    |

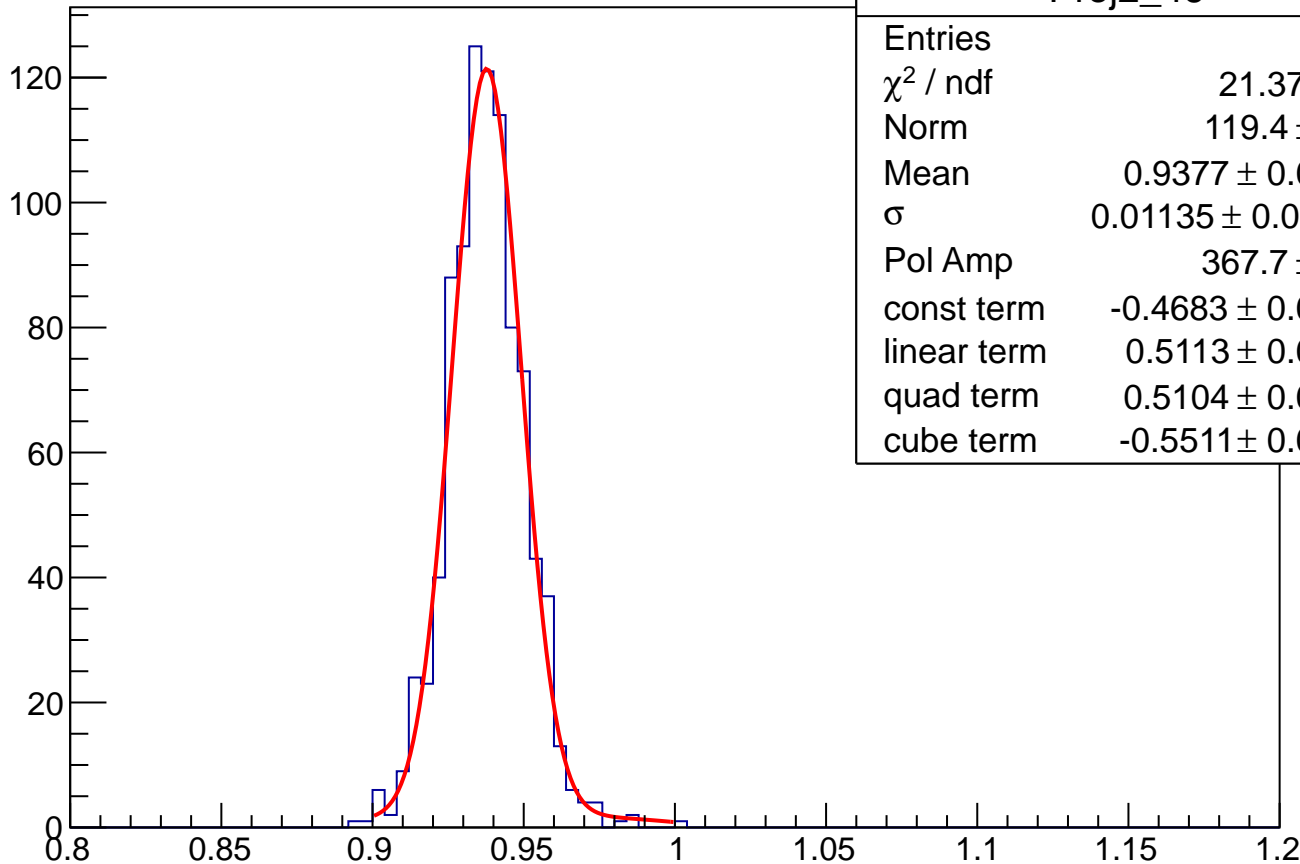
# PhiThetaMassPim



Proj2\_45

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 940                   |
| $\chi^2 / \text{ndf}$ | 23.06 / 15            |
| Norm                  | $121.5 \pm 5.2$       |
| Mean                  | $0.9372 \pm 0.0004$   |
| $\sigma$              | $0.01155 \pm 0.00037$ |
| Pol Amp               | $371.1 \pm 0.2$       |
| const term            | $-0.6241 \pm 0.0805$  |
| linear term           | $0.6631 \pm 0.0796$   |
| quad term             | $0.6559 \pm 0.0810$   |
| cube term             | $-0.692 \pm 0.082$    |

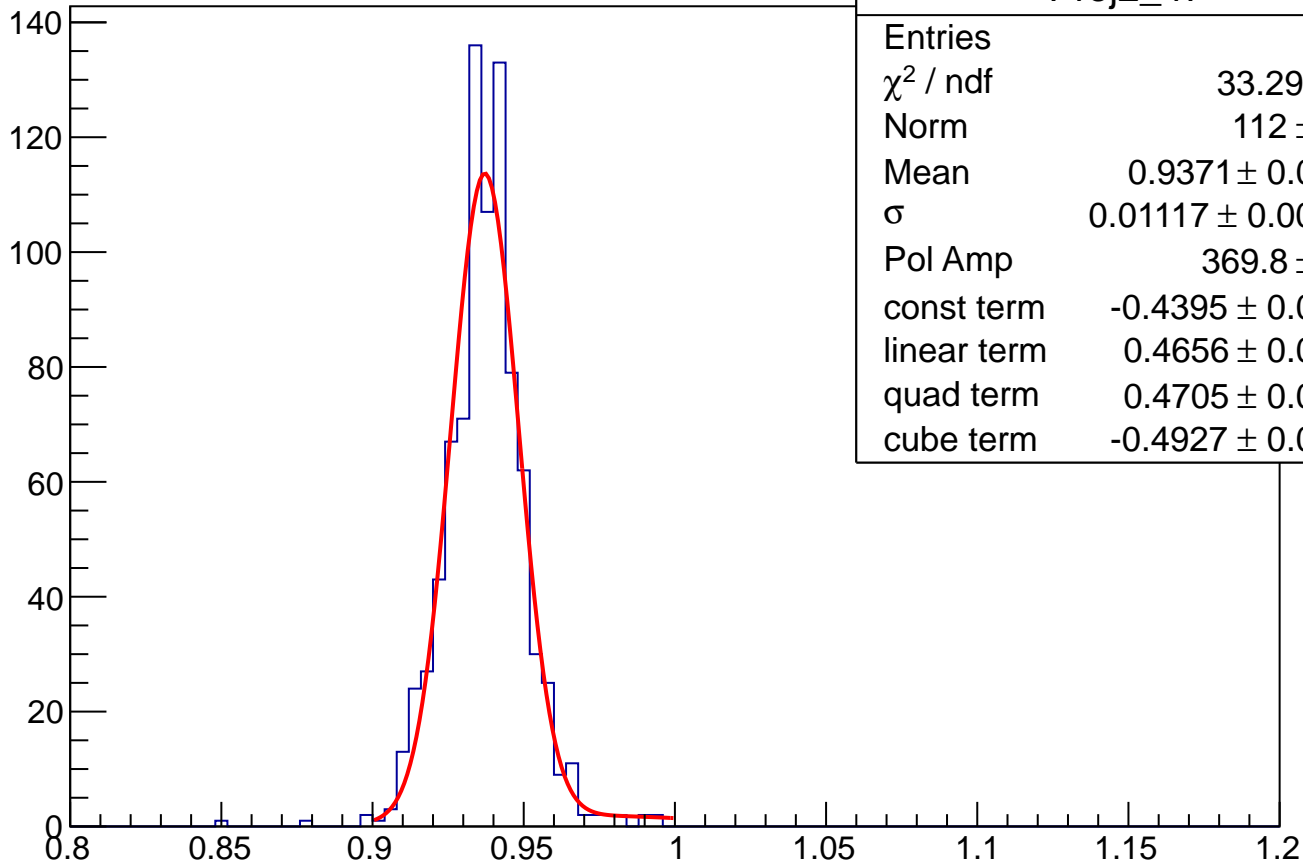
# PhiThetaMassPim



Proj2\_46

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 911                   |
| $\chi^2 / \text{ndf}$ | 21.37 / 13            |
| Norm                  | $119.4 \pm 5.2$       |
| Mean                  | $0.9377 \pm 0.0004$   |
| $\sigma$              | $0.01135 \pm 0.00041$ |
| Pol Amp               | $367.7 \pm 0.4$       |
| const term            | $-0.4683 \pm 0.0734$  |
| linear term           | $0.5113 \pm 0.0666$   |
| quad term             | $0.5104 \pm 0.0717$   |
| cube term             | $-0.5511 \pm 0.0686$  |

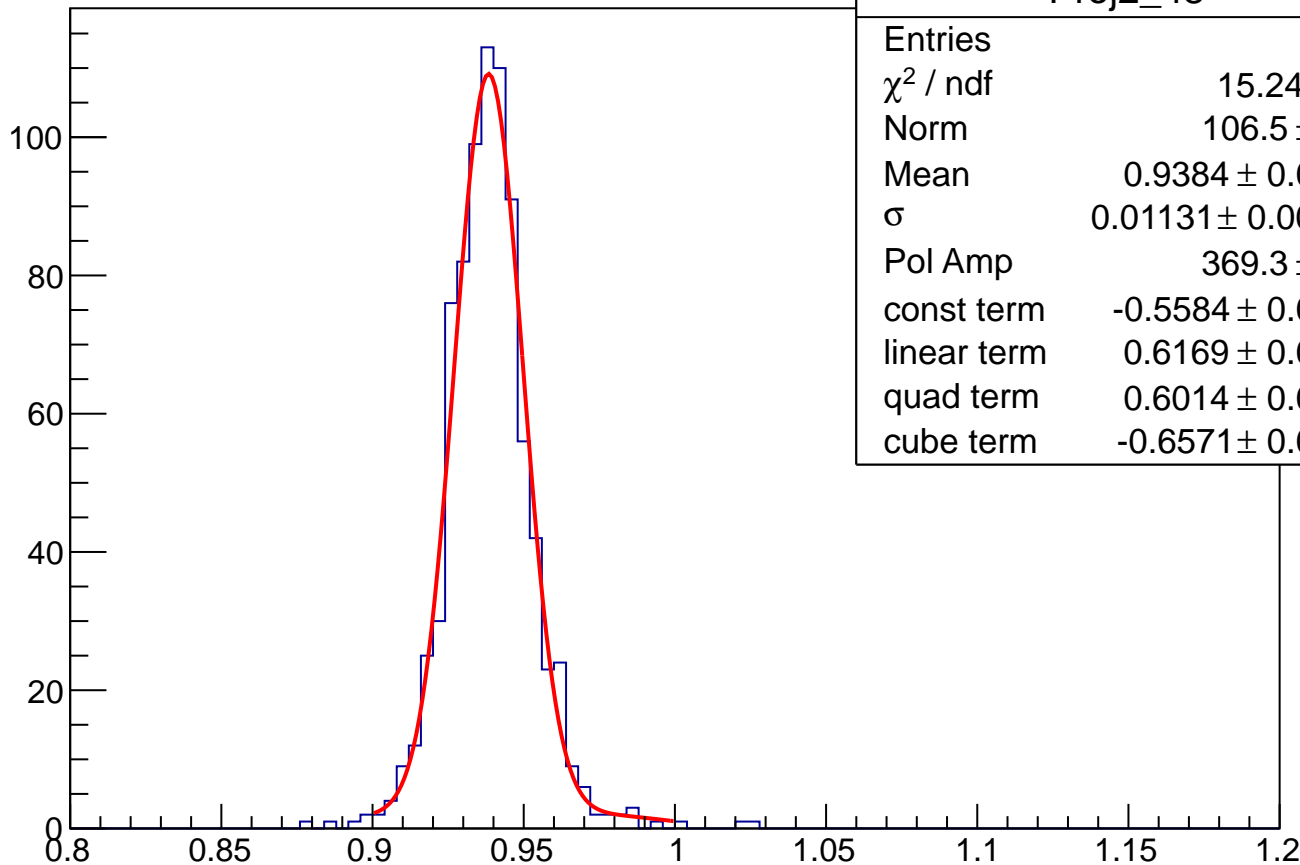
# PhiThetaMassPim



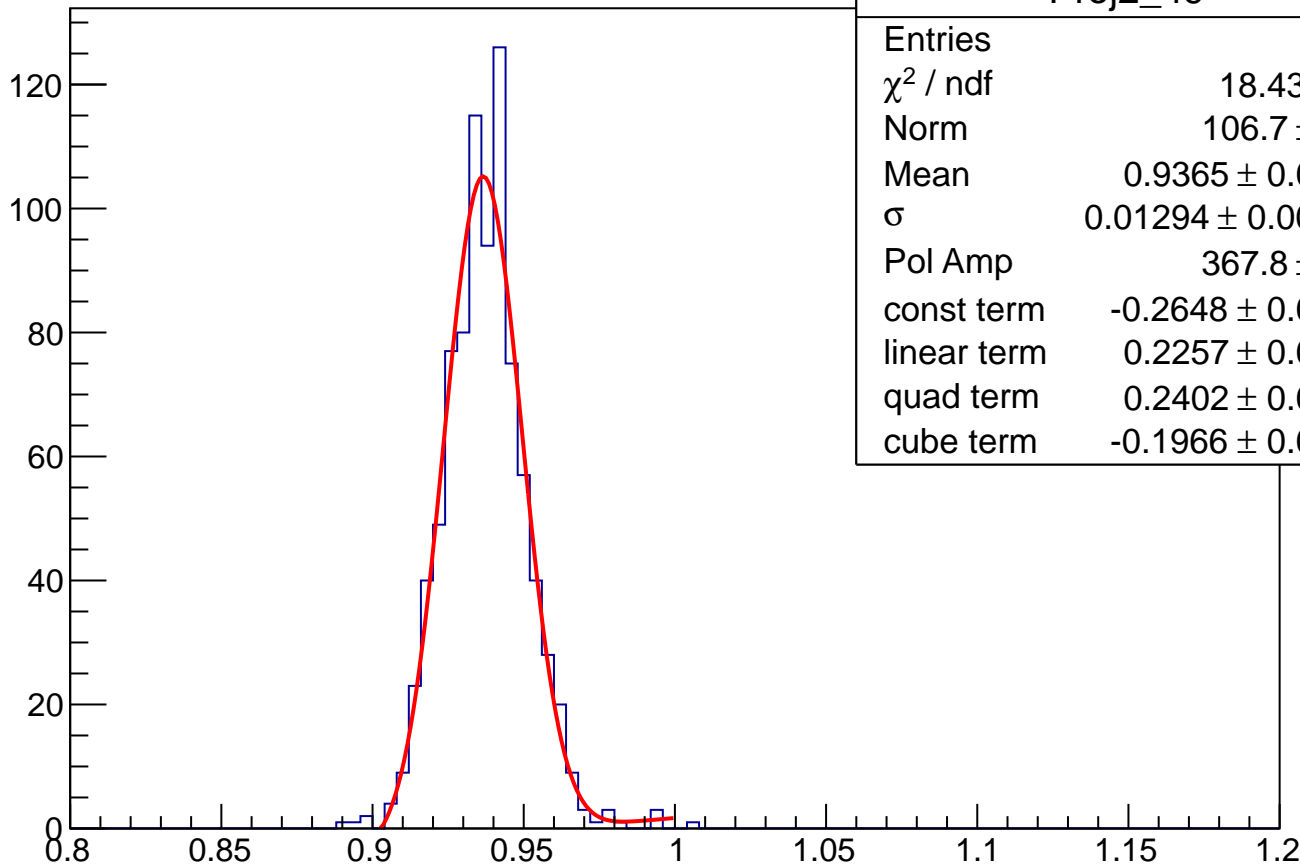
Proj2\_47

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 857                   |
| $\chi^2 / \text{ndf}$ | 33.29 / 15            |
| Norm                  | $112 \pm 5.4$         |
| Mean                  | $0.9371 \pm 0.0005$   |
| $\sigma$              | $0.01117 \pm 0.00043$ |
| Pol Amp               | $369.8 \pm 0.3$       |
| const term            | $-0.4395 \pm 0.0753$  |
| linear term           | $0.4656 \pm 0.0742$   |
| quad term             | $0.4705 \pm 0.0767$   |
| cube term             | $-0.4927 \pm 0.0778$  |

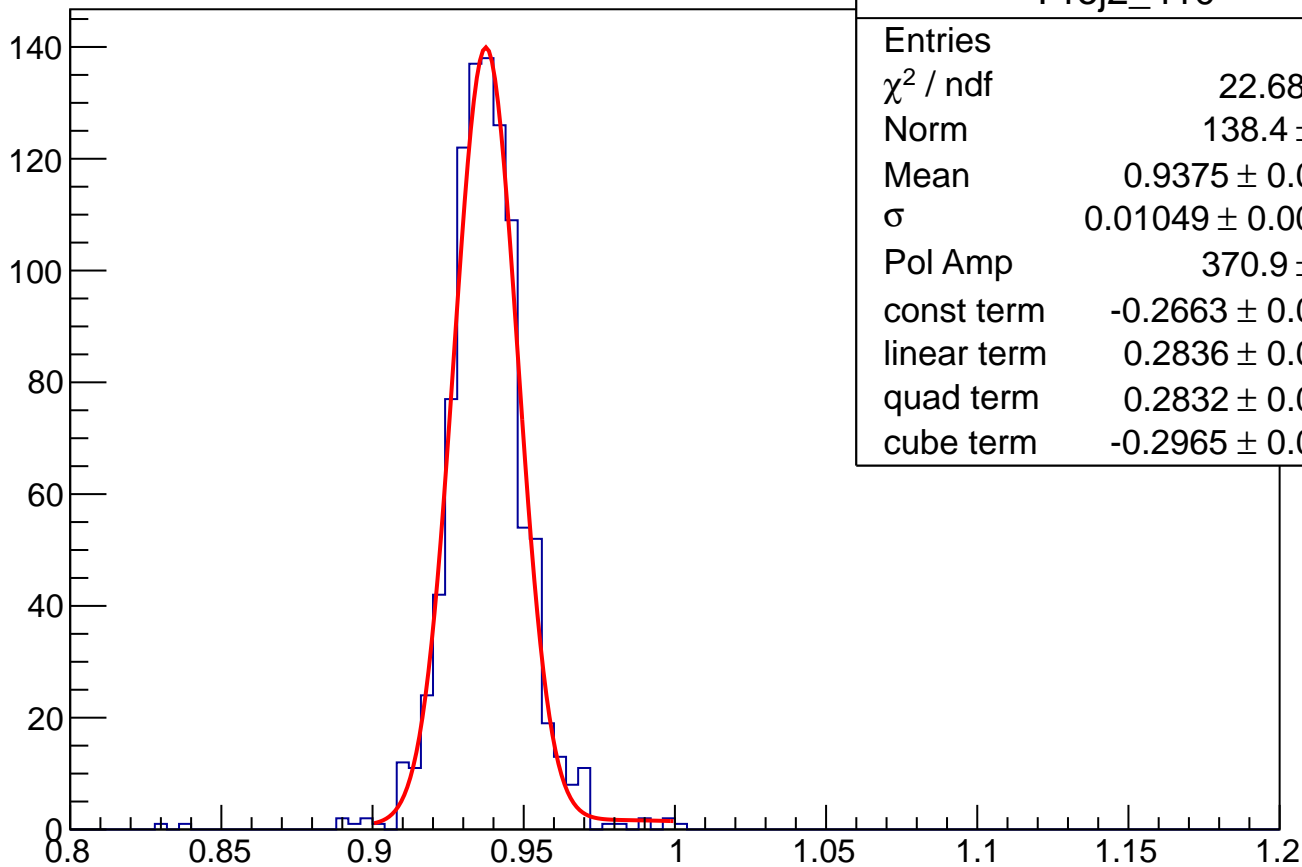
# PhiThetaMassPim



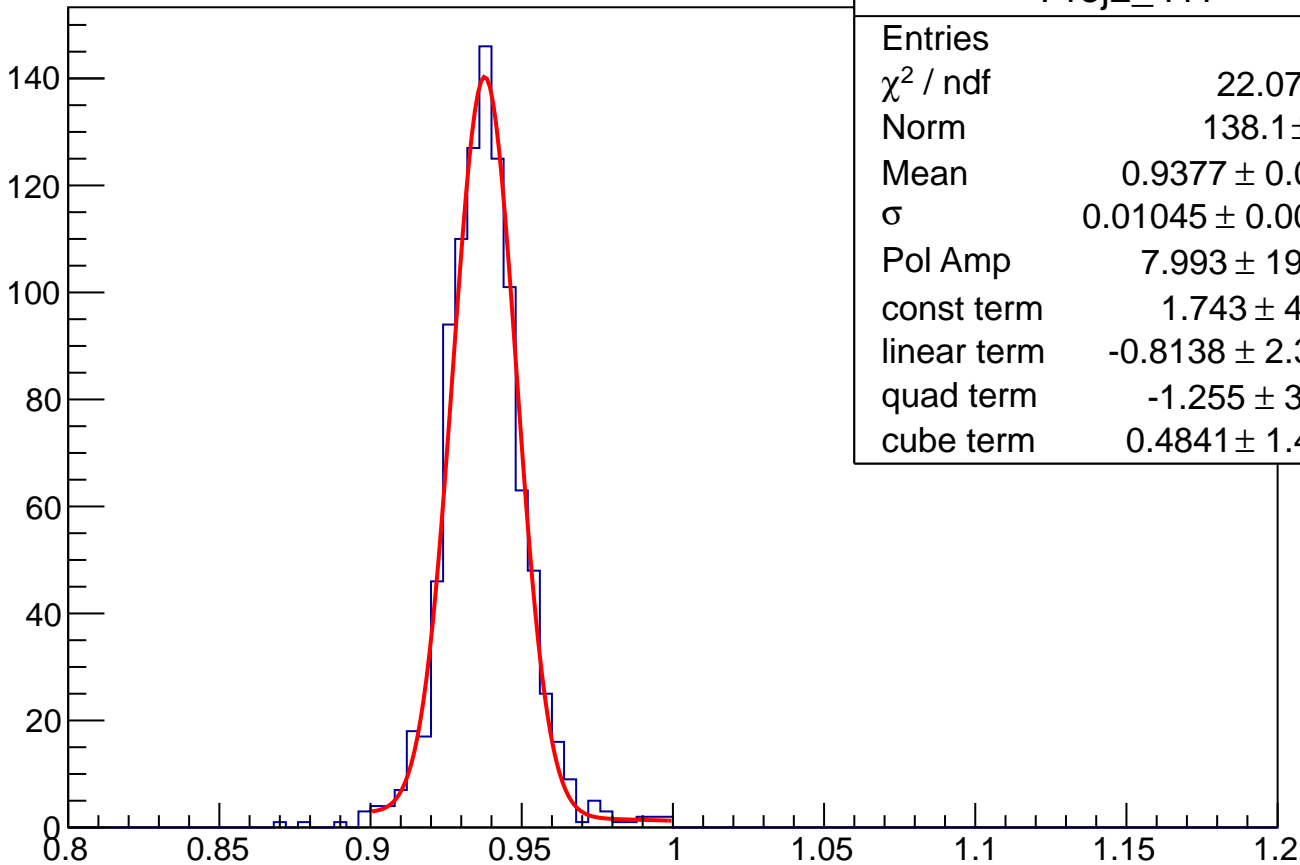
# PhiThetaMassPim



# PhiThetaMassPim



# PhiThetaMassPim

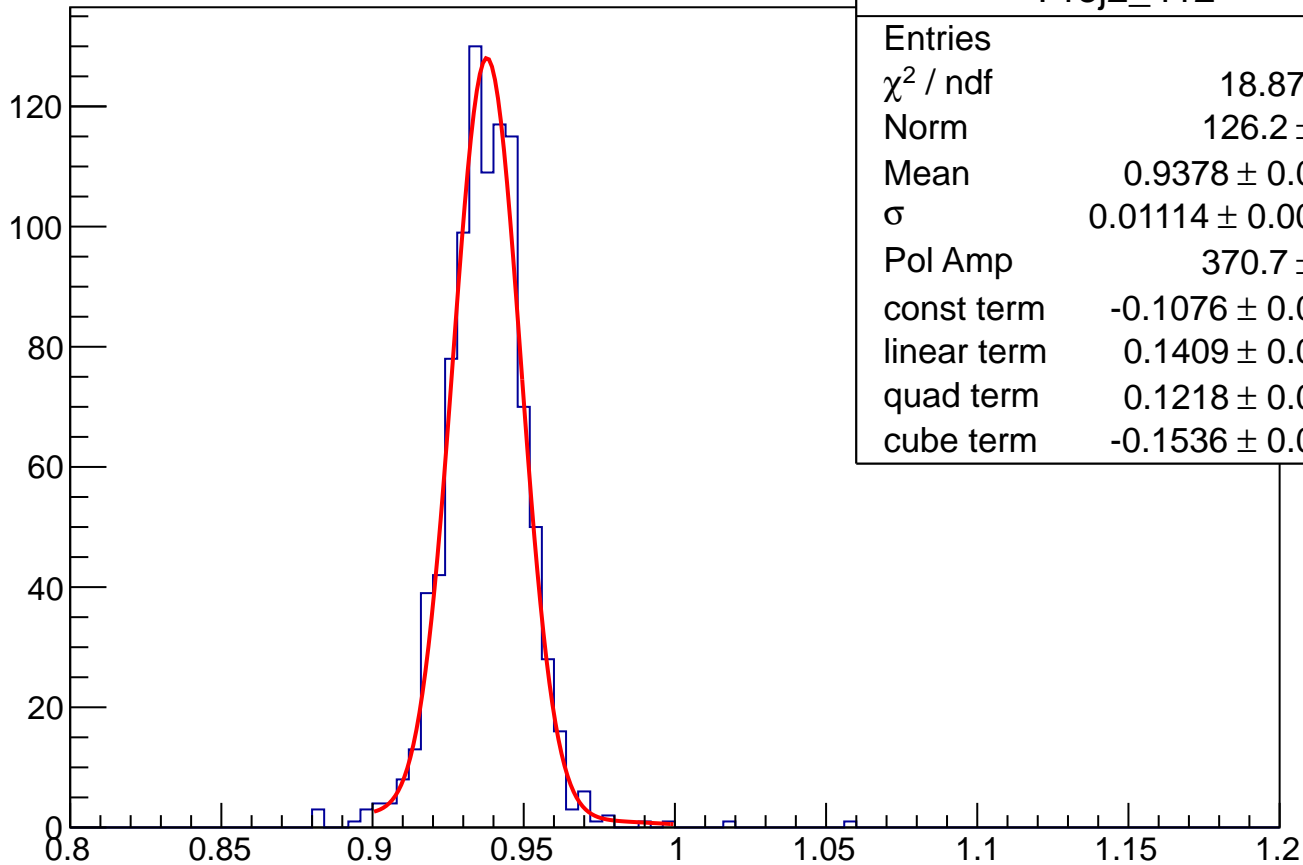


Proj2\_411

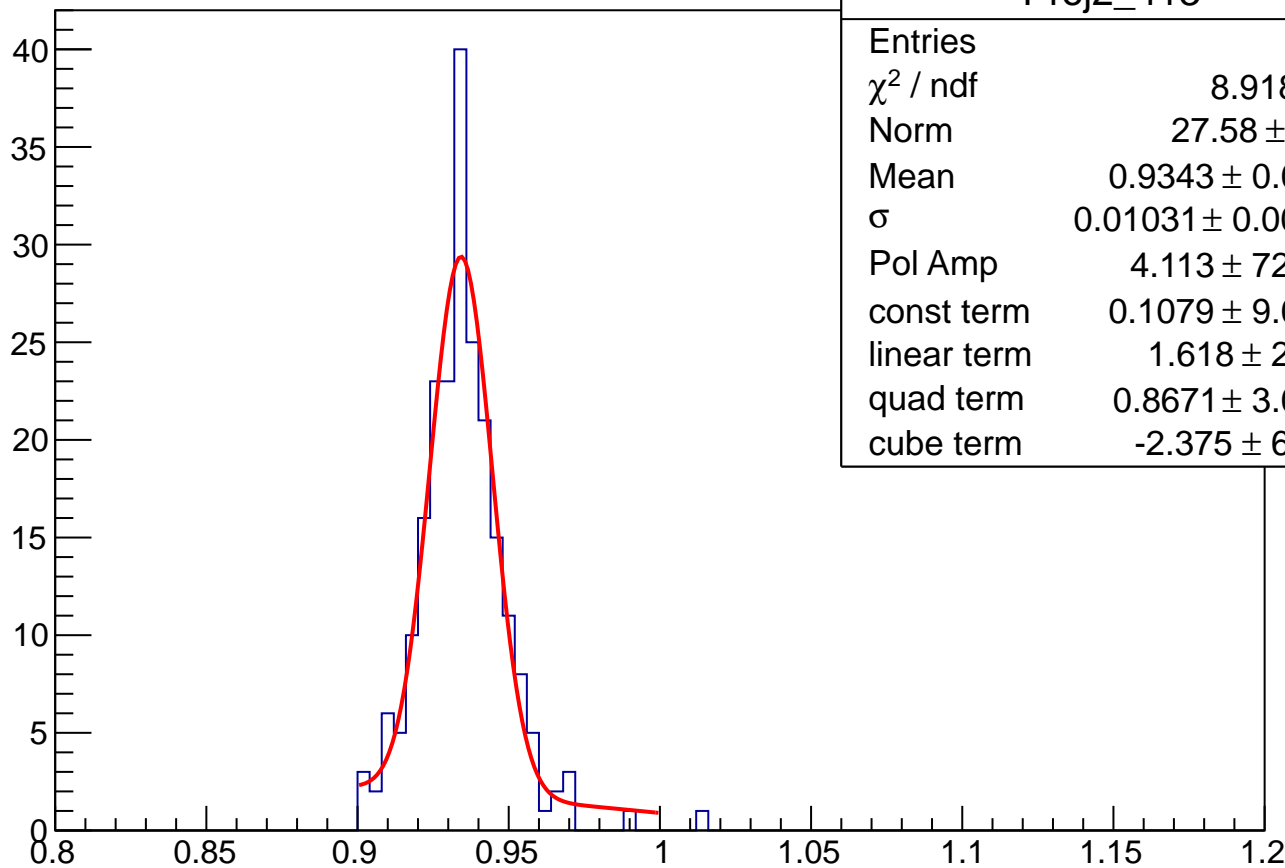
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 983                   |
| $\chi^2 / \text{ndf}$ | 22.07 / 17            |
| Norm                  | $138.1 \pm 5.8$       |
| Mean                  | $0.9377 \pm 0.0004$   |
| $\sigma$              | $0.01045 \pm 0.00033$ |
| Pol Amp               | $7.993 \pm 19.673$    |
| const term            | $1.743 \pm 4.970$     |
| linear term           | $-0.8138 \pm 2.3938$  |
| quad term             | $-1.255 \pm 3.625$    |
| cube term             | $0.4841 \pm 1.4694$   |



# PhiThetaMassPim



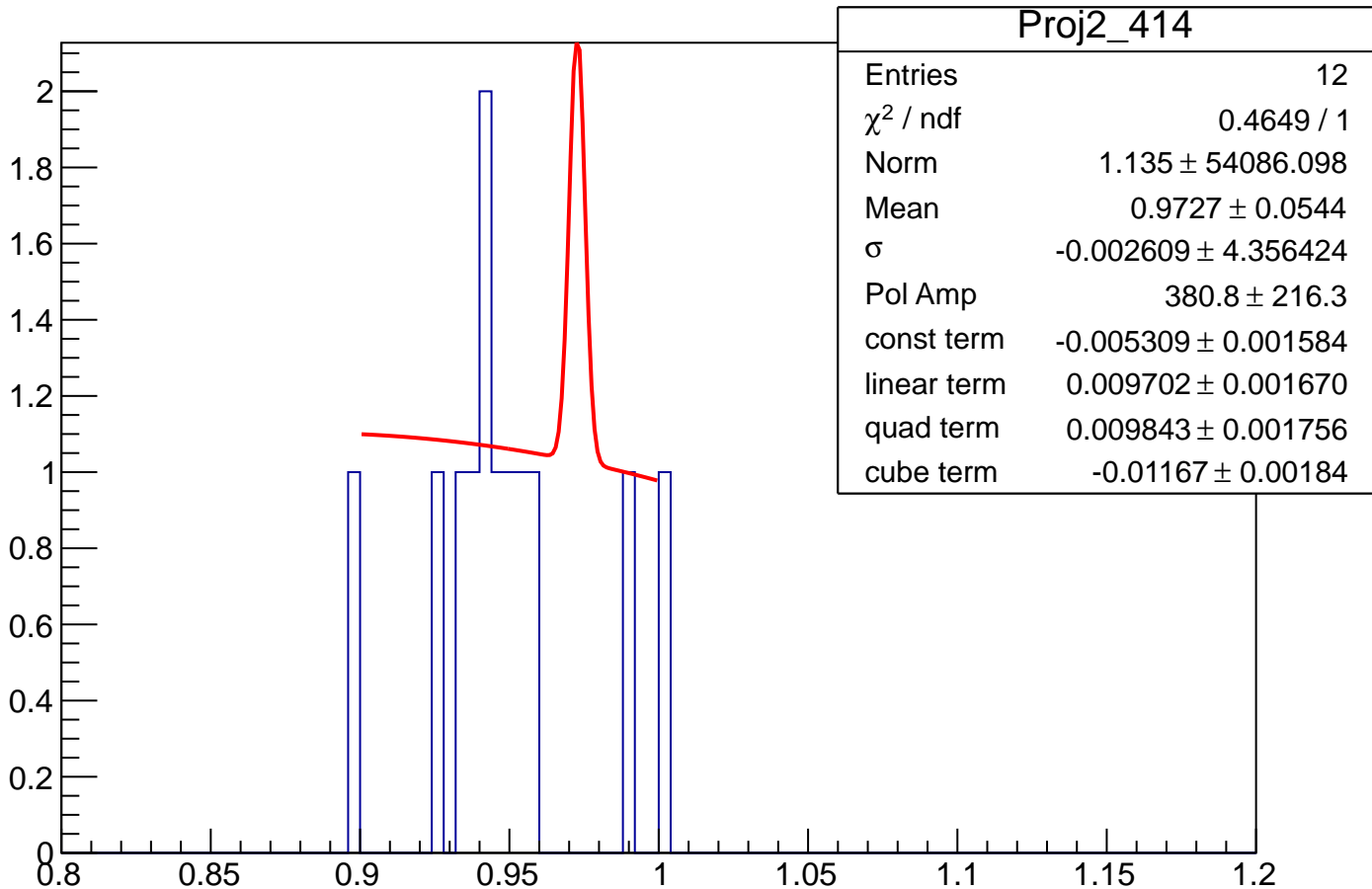
# PhiThetaMassPim



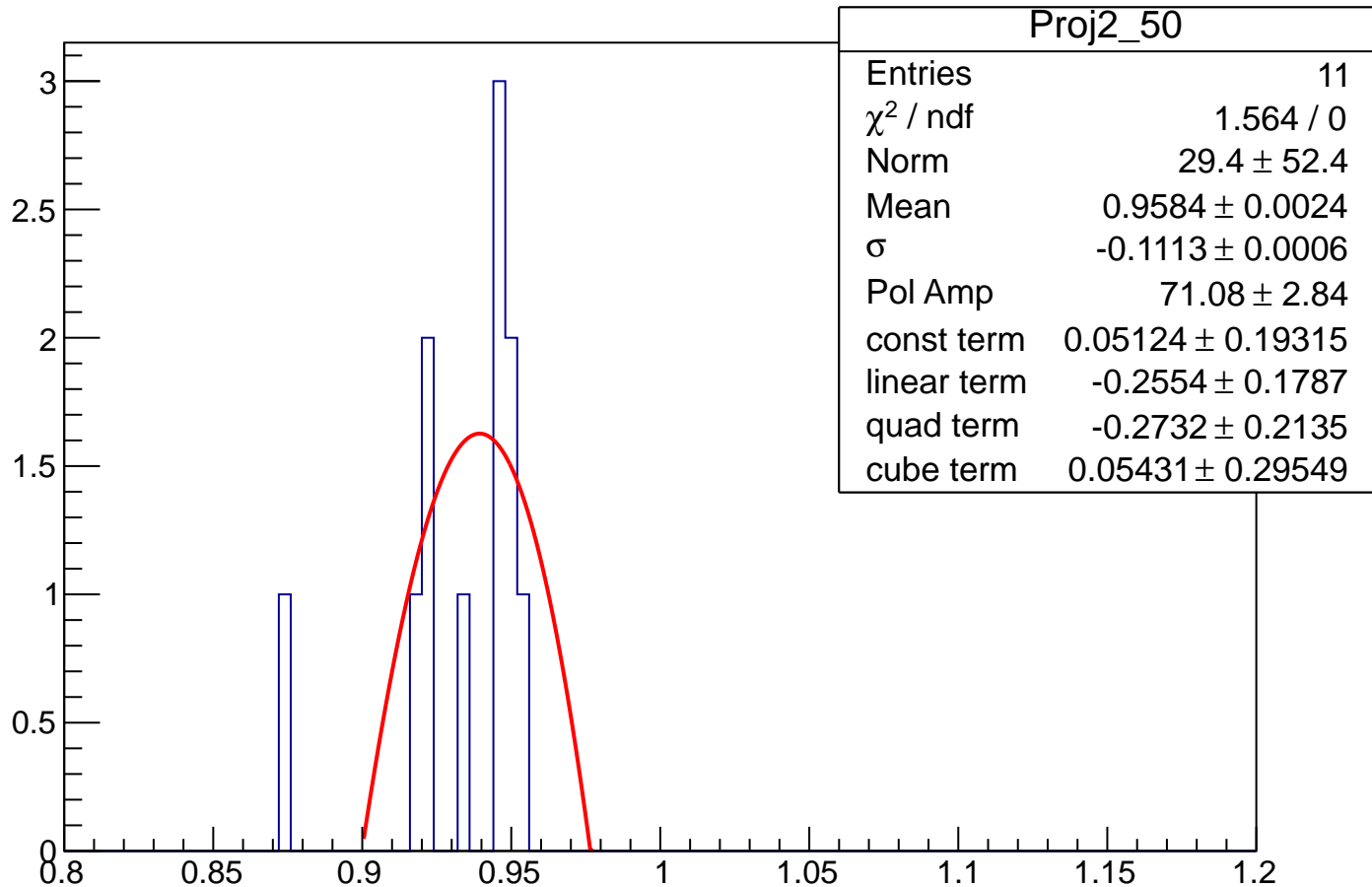
Proj2\_413

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 221                   |
| $\chi^2 / \text{ndf}$ | 8.918 / 11            |
| Norm                  | $27.58 \pm 2.61$      |
| Mean                  | $0.9343 \pm 0.0009$   |
| $\sigma$              | $0.01031 \pm 0.00099$ |
| Pol Amp               | $4.113 \pm 72.480$    |
| const term            | $0.1079 \pm 9.0458$   |
| linear term           | $1.618 \pm 2.244$     |
| quad term             | $0.8671 \pm 3.0916$   |
| cube term             | $-2.375 \pm 6.687$    |

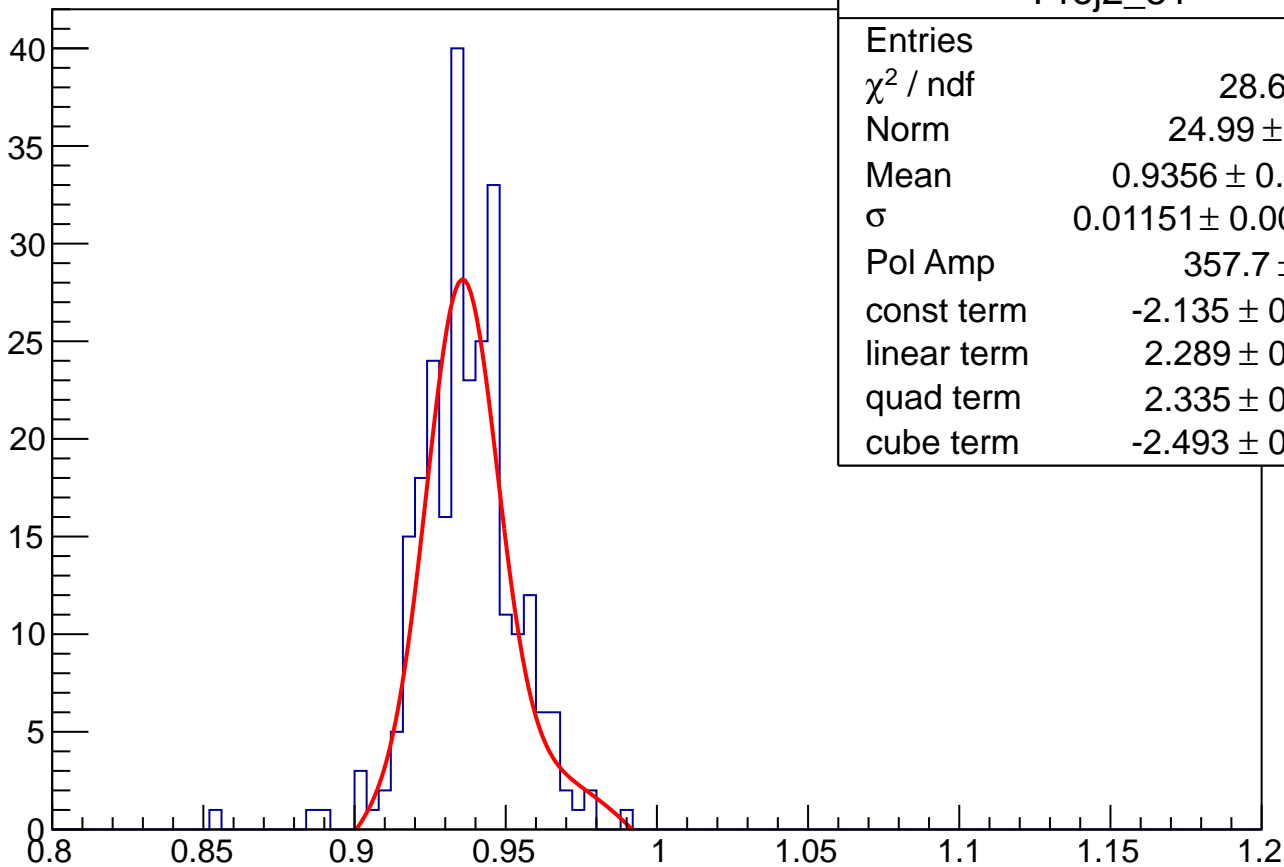
# PhiThetaMassPim



# PhiThetaMassPim



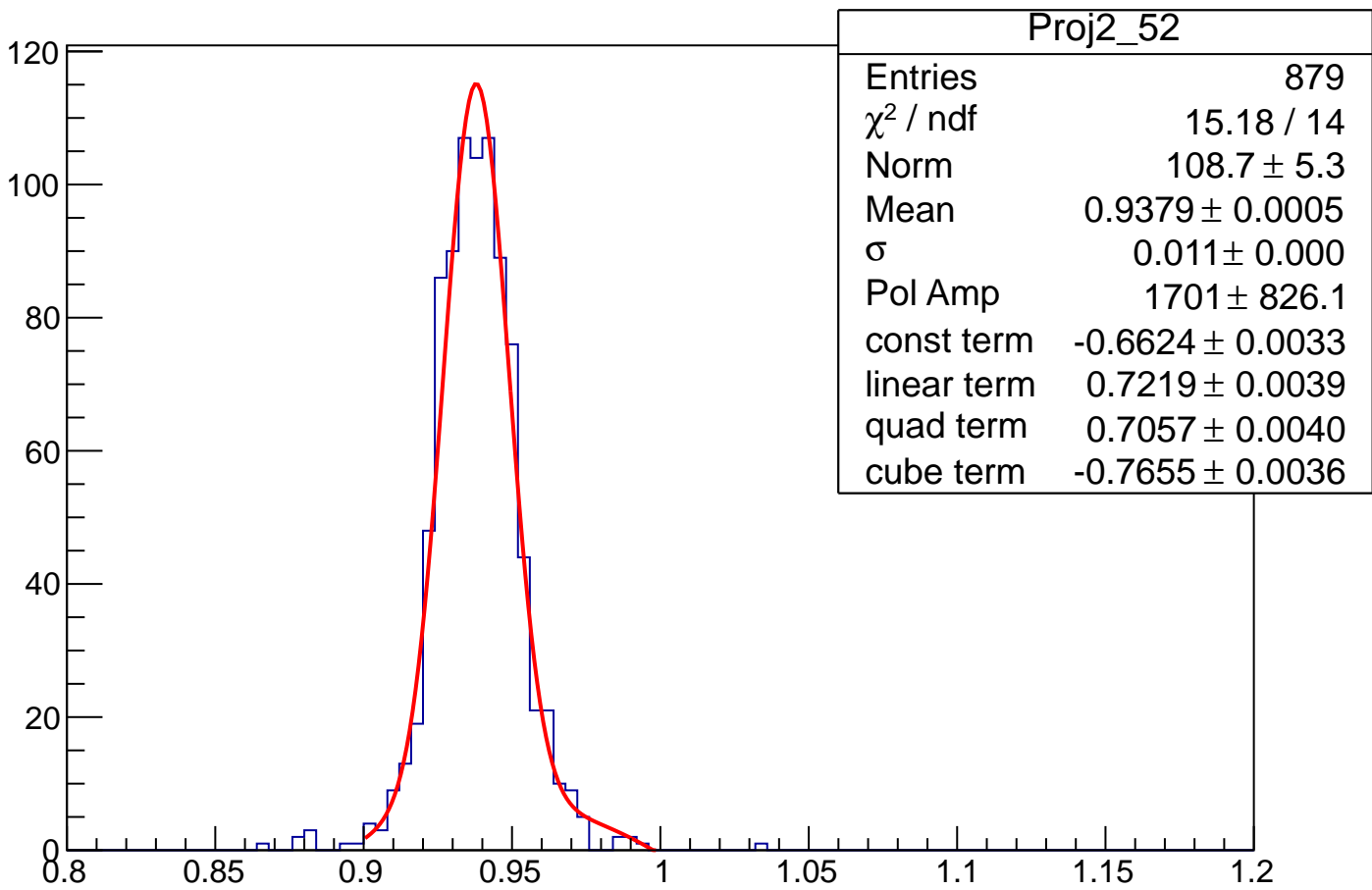
# PhiThetaMassPim



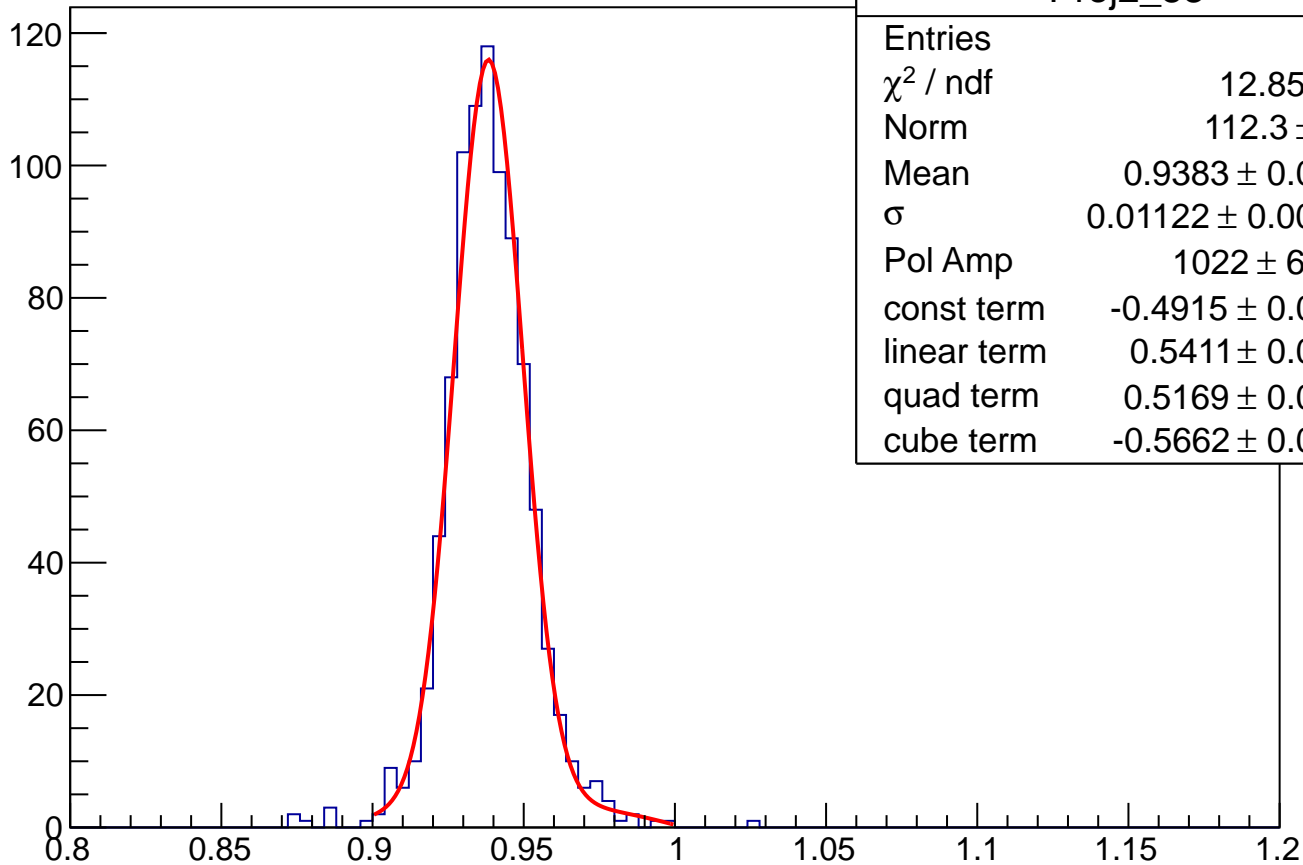
Proj2\_51

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 259                   |
| $\chi^2 / \text{ndf}$ | 28.6 / 13             |
| Norm                  | $24.99 \pm 2.61$      |
| Mean                  | $0.9356 \pm 0.0011$   |
| $\sigma$              | $0.01151 \pm 0.00088$ |
| Pol Amp               | $357.7 \pm 1.7$       |
| const term            | $-2.135 \pm 0.574$    |
| linear term           | $2.289 \pm 0.613$     |
| quad term             | $2.335 \pm 0.633$     |
| cube term             | $-2.493 \pm 0.675$    |

# PhiThetaMassPim



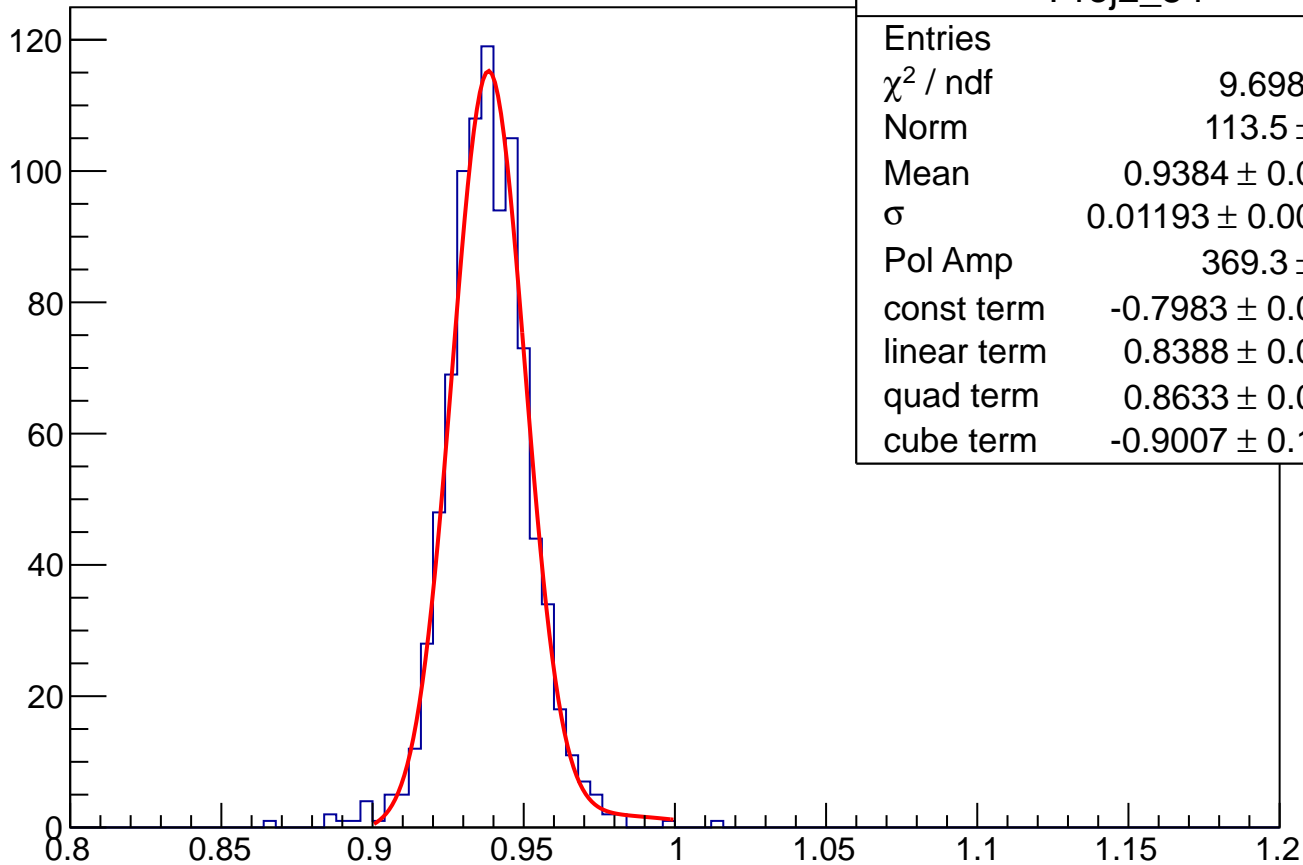
# PhiThetaMassPim



Proj2\_53

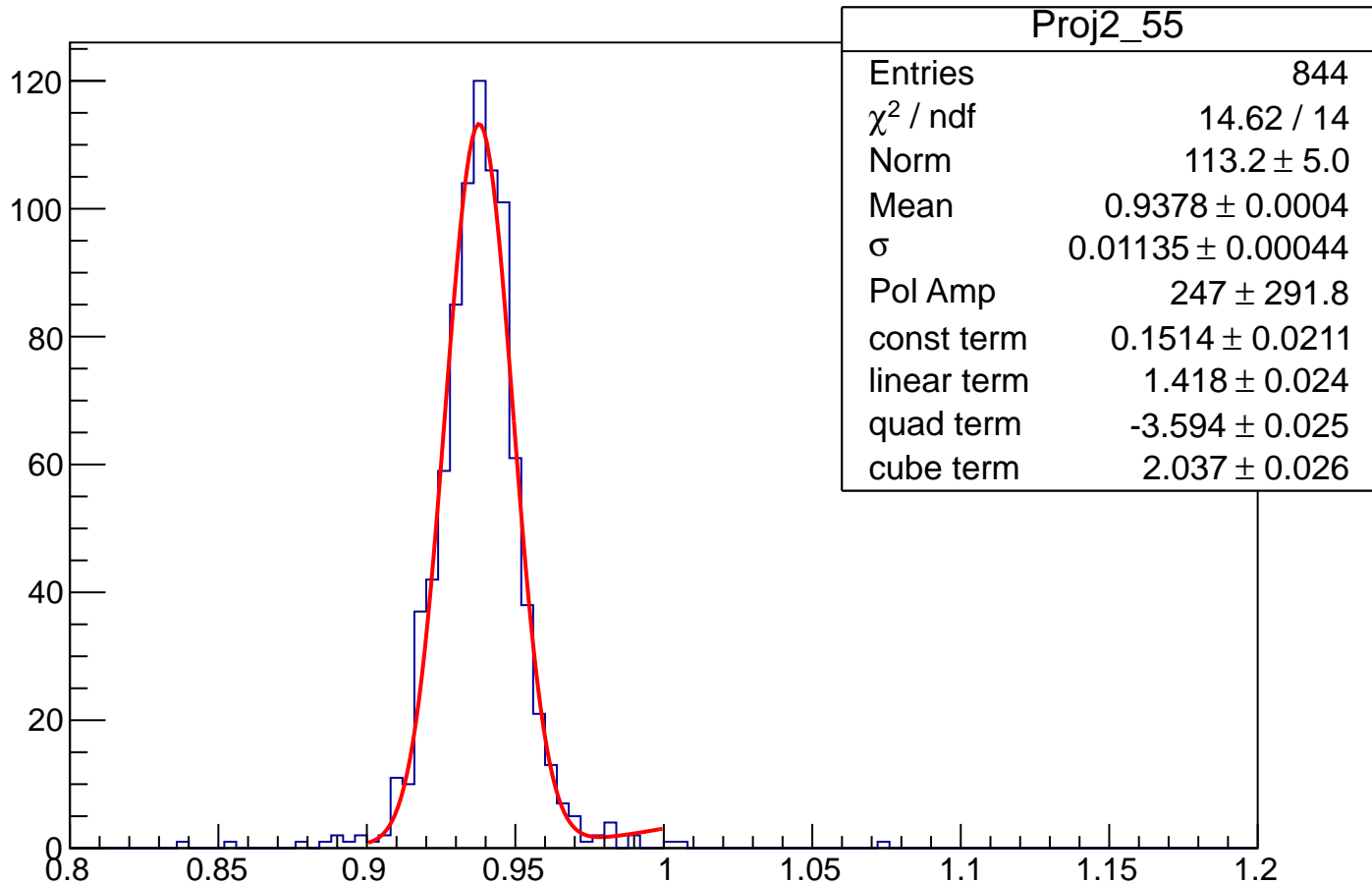
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 879                   |
| $\chi^2 / \text{ndf}$ | 12.85 / 16            |
| Norm                  | $112.3 \pm 5.2$       |
| Mean                  | $0.9383 \pm 0.0005$   |
| $\sigma$              | $0.01122 \pm 0.00043$ |
| Pol Amp               | $1022 \pm 665.0$      |
| const term            | $-0.4915 \pm 0.0045$  |
| linear term           | $0.5411 \pm 0.0052$   |
| quad term             | $0.5169 \pm 0.0053$   |
| cube term             | $-0.5662 \pm 0.0049$  |

# PhiThetaMassPim

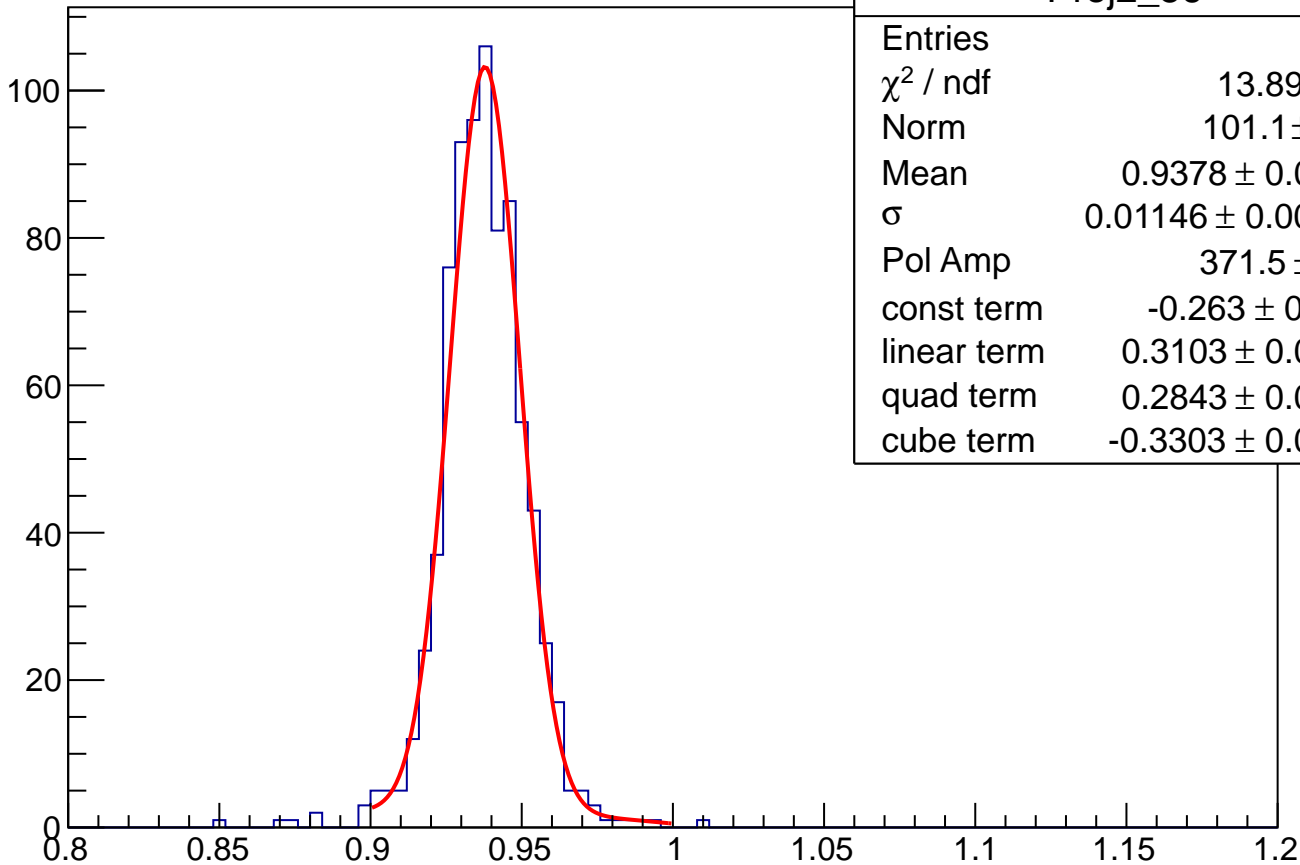




# PhiThetaMassPim



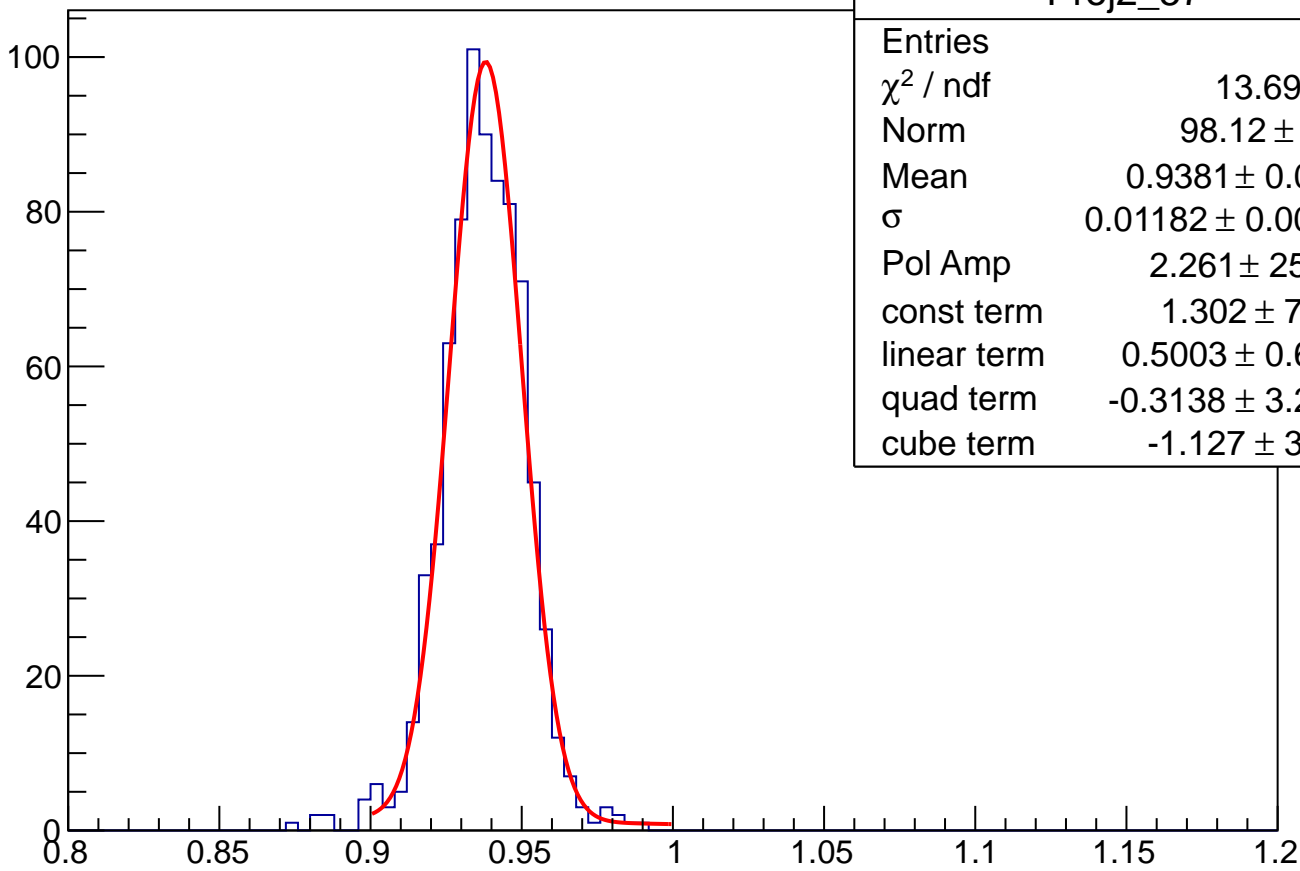
# PhiThetaMassPim



Proj2\_56

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 792                   |
| $\chi^2 / \text{ndf}$ | 13.89 / 16            |
| Norm                  | $101.1 \pm 4.8$       |
| Mean                  | $0.9378 \pm 0.0005$   |
| $\sigma$              | $0.01146 \pm 0.00045$ |
| Pol Amp               | $371.5 \pm 0.2$       |
| const term            | $-0.263 \pm 0.050$    |
| linear term           | $0.3103 \pm 0.0382$   |
| quad term             | $0.2843 \pm 0.0425$   |
| cube term             | $-0.3303 \pm 0.0363$  |

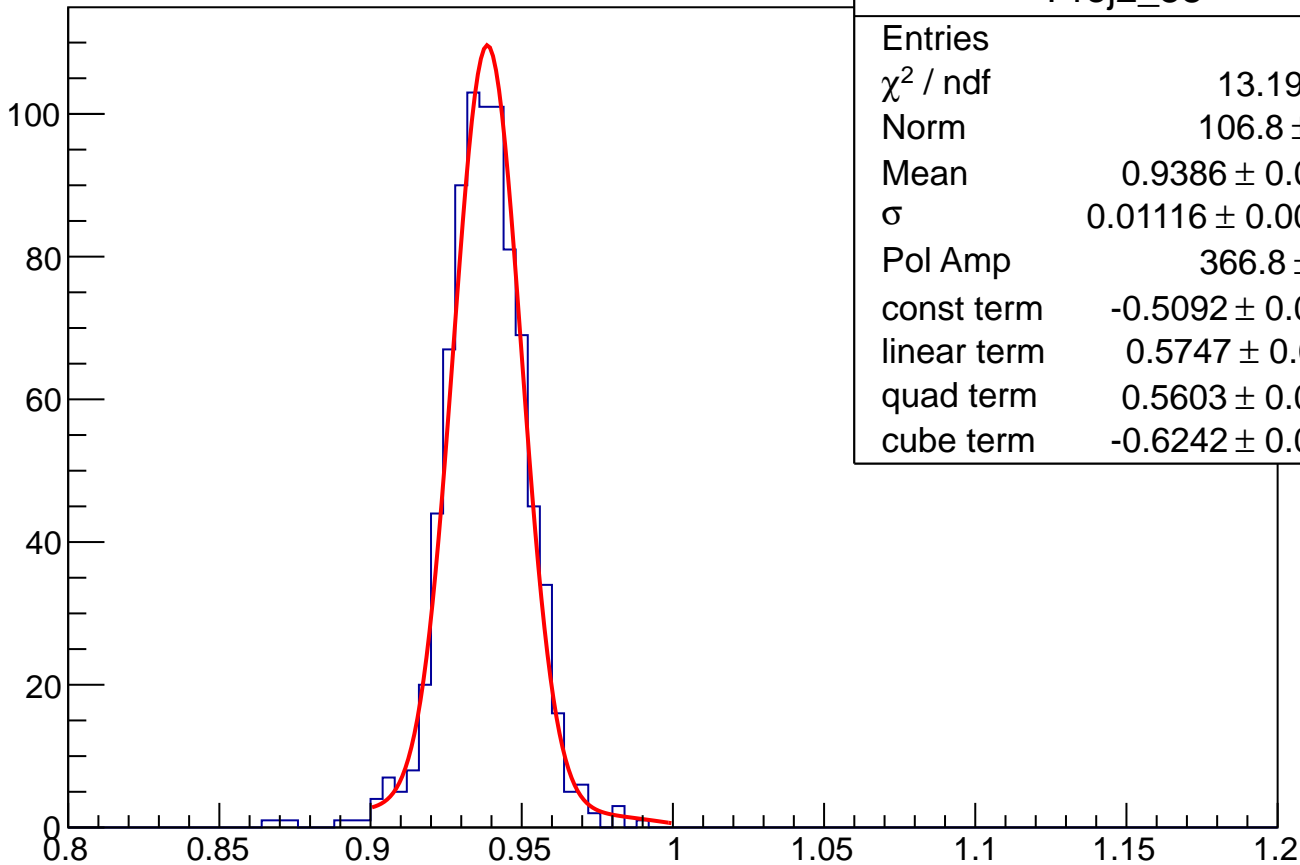
# PhiThetaMassPim



Proj2\_57

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 777                   |
| $\chi^2 / \text{ndf}$ | 13.69 / 15            |
| Norm                  | $98.12 \pm 4.38$      |
| Mean                  | $0.9381 \pm 0.0005$   |
| $\sigma$              | $0.01182 \pm 0.00039$ |
| Pol Amp               | $2.261 \pm 25.091$    |
| const term            | $1.302 \pm 7.918$     |
| linear term           | $0.5003 \pm 0.6536$   |
| quad term             | $-0.3138 \pm 3.2085$  |
| cube term             | $-1.127 \pm 3.564$    |

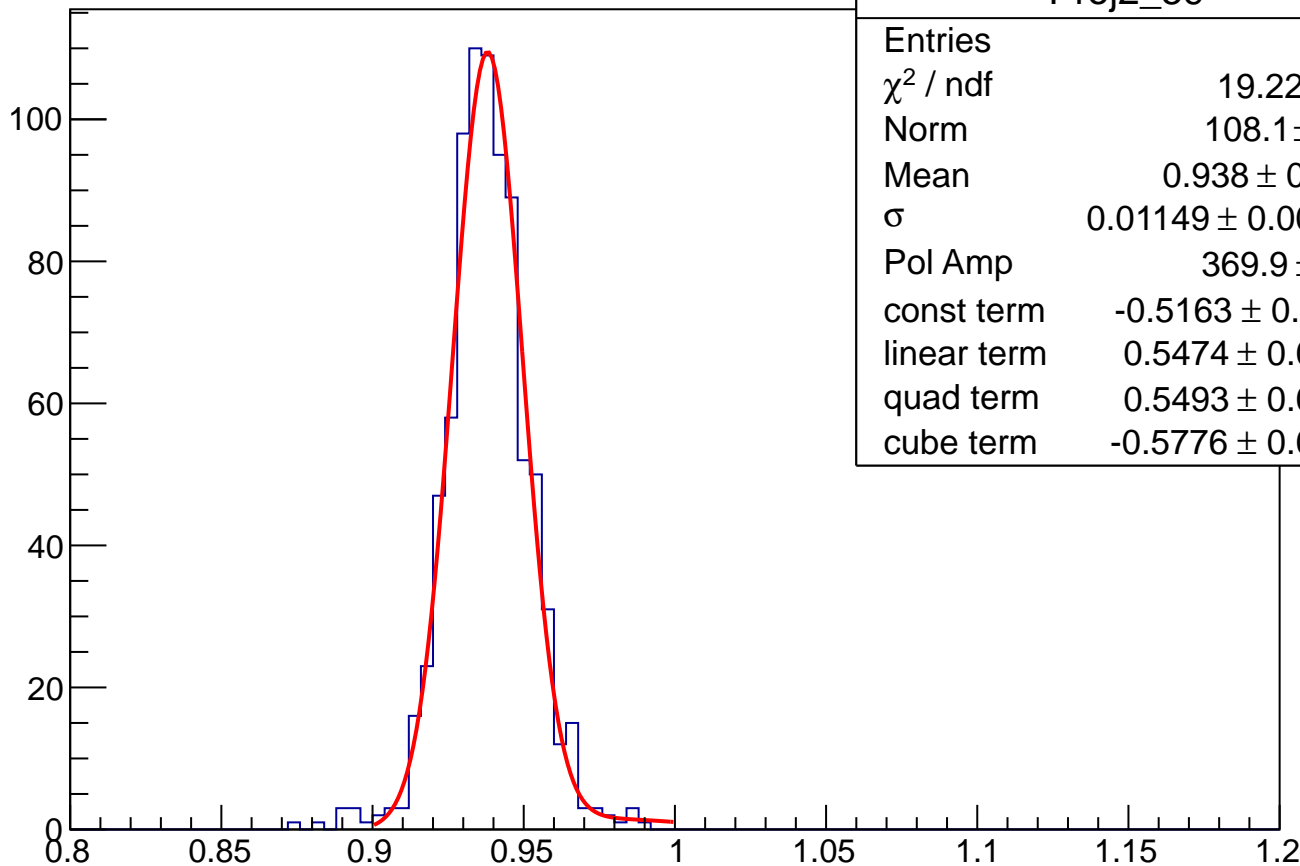
# PhiThetaMassPim



Proj2\_58

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 818                   |
| $\chi^2 / \text{ndf}$ | 13.19 / 13            |
| Norm                  | $106.8 \pm 4.9$       |
| Mean                  | $0.9386 \pm 0.0005$   |
| $\sigma$              | $0.01116 \pm 0.00039$ |
| Pol Amp               | $366.8 \pm 0.4$       |
| const term            | $-0.5092 \pm 0.0820$  |
| linear term           | $0.5747 \pm 0.0761$   |
| quad term             | $0.5603 \pm 0.0804$   |
| cube term             | $-0.6242 \pm 0.0779$  |

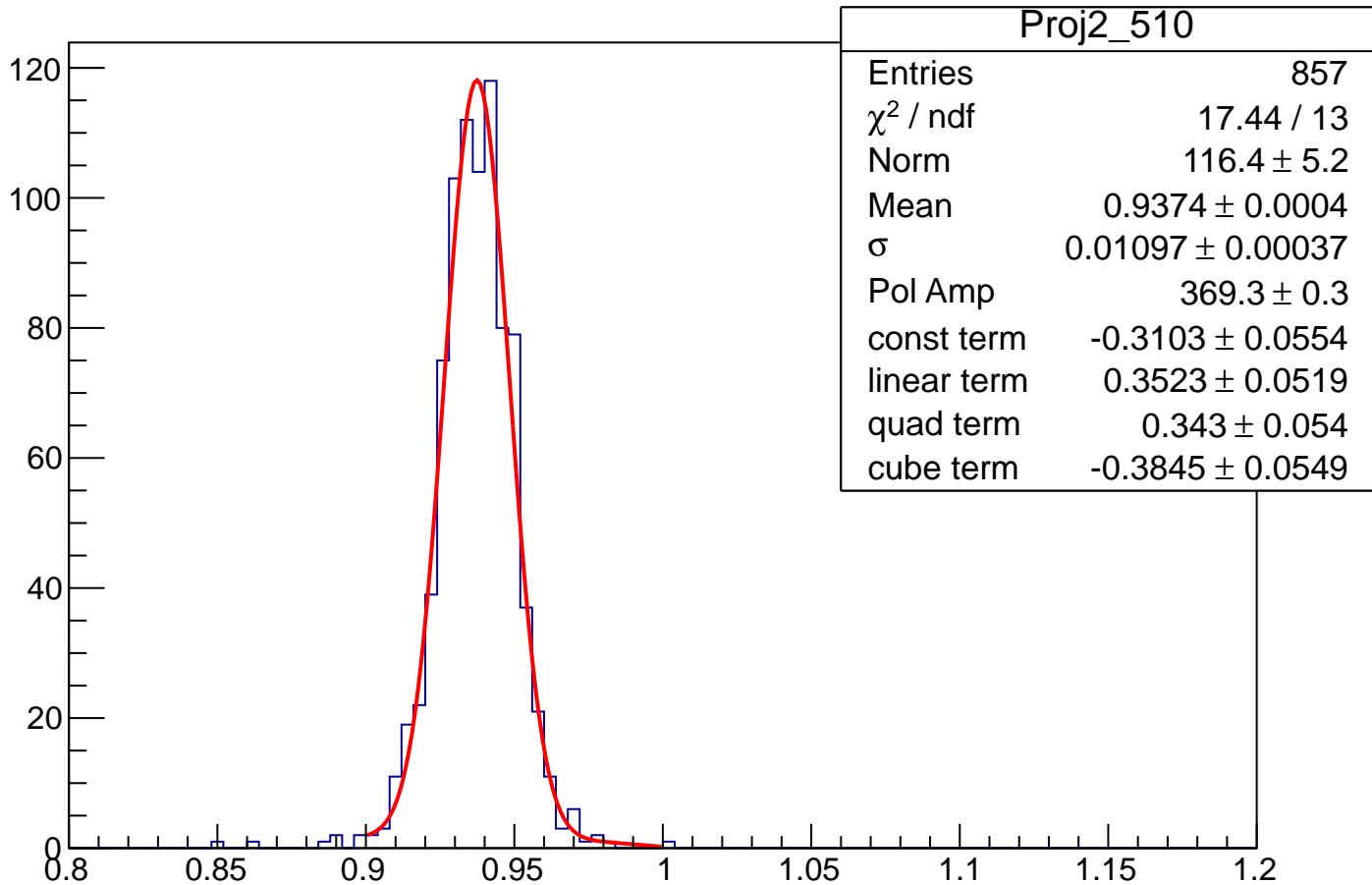
# PhiThetaMassPim



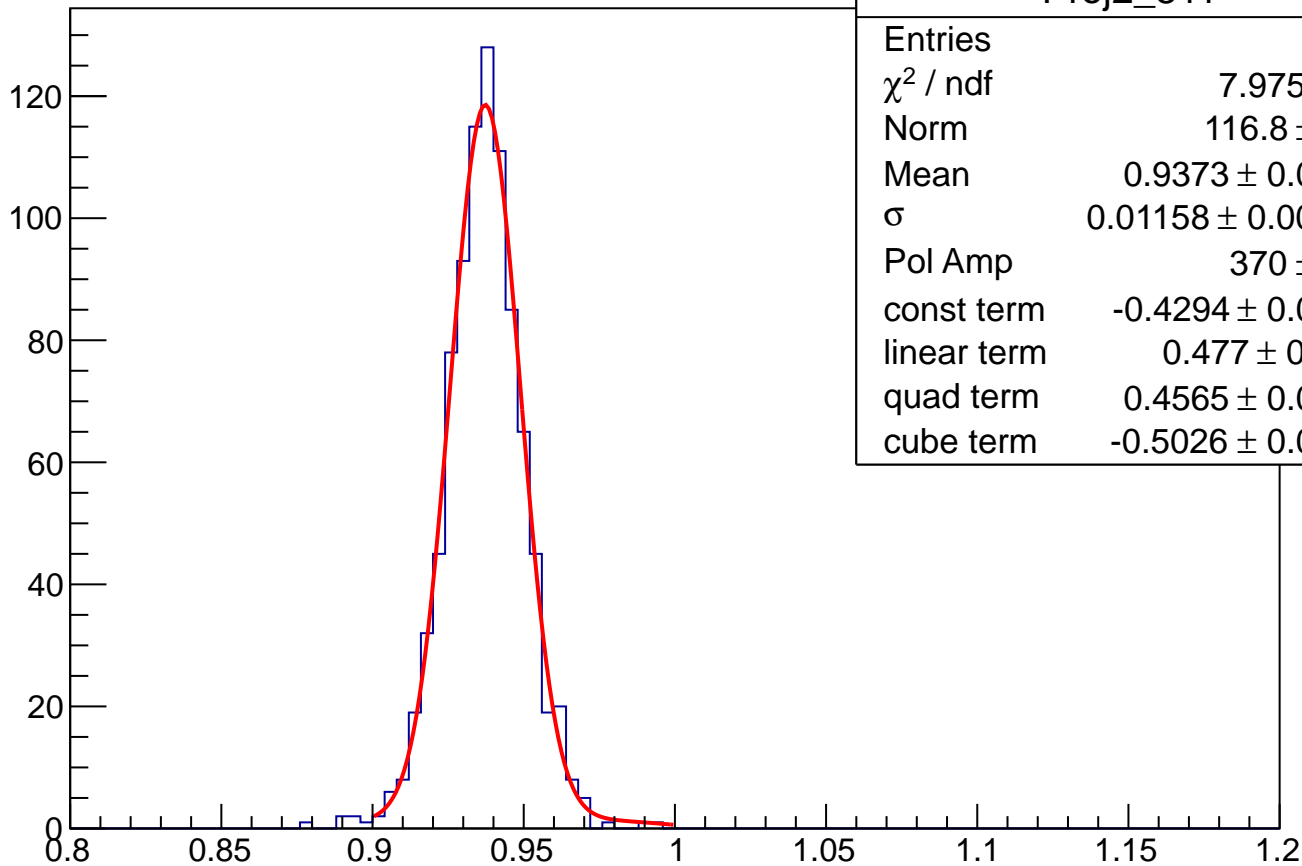
Proj2\_59

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 835                   |
| $\chi^2 / \text{ndf}$ | 19.22 / 15            |
| Norm                  | $108.1 \pm 4.9$       |
| Mean                  | $0.938 \pm 0.000$     |
| $\sigma$              | $0.01149 \pm 0.00040$ |
| Pol Amp               | $369.9 \pm 0.3$       |
| const term            | $-0.5163 \pm 0.0761$  |
| linear term           | $0.5474 \pm 0.0732$   |
| quad term             | $0.5493 \pm 0.0763$   |
| cube term             | $-0.5776 \pm 0.0757$  |

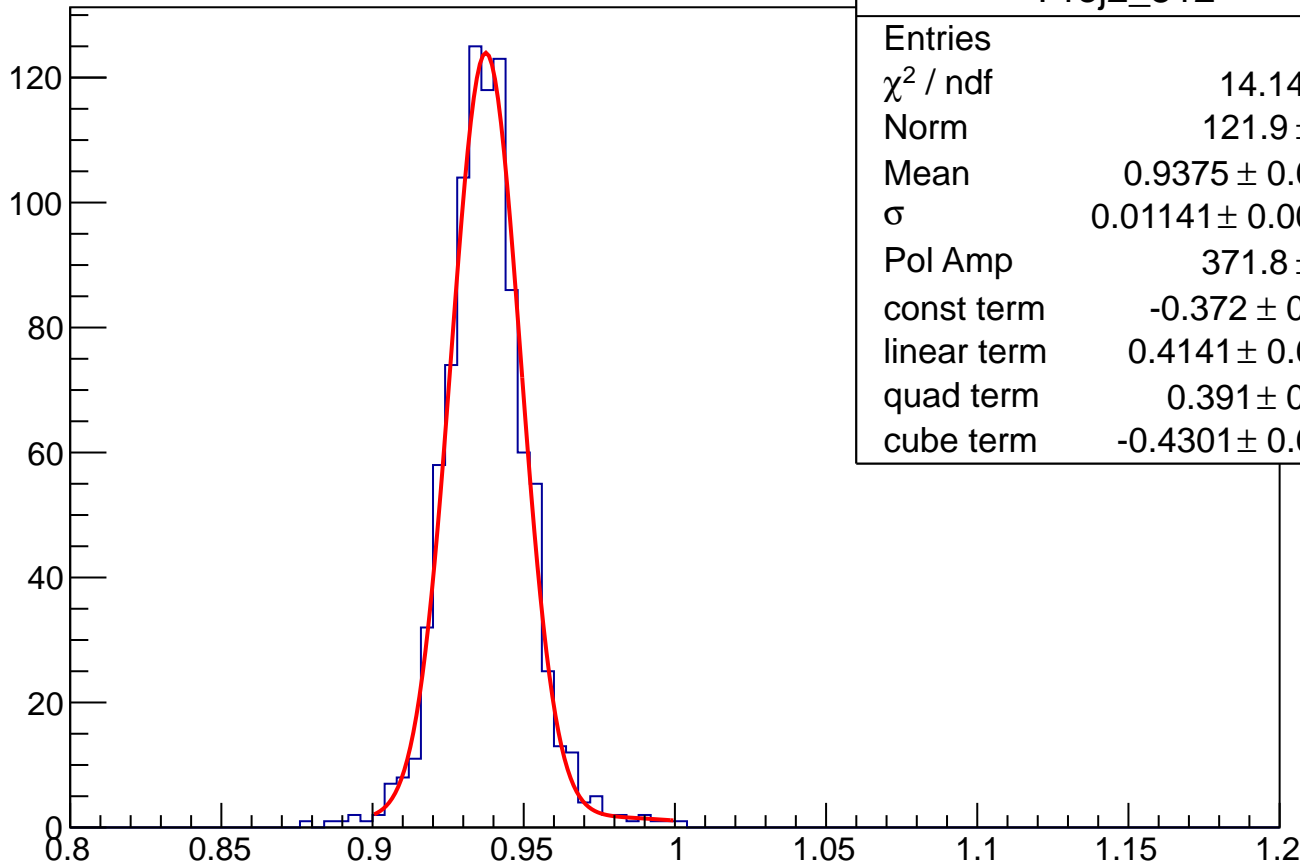
# PhiThetaMassPim



# PhiThetaMassPim



# PhiThetaMassPim

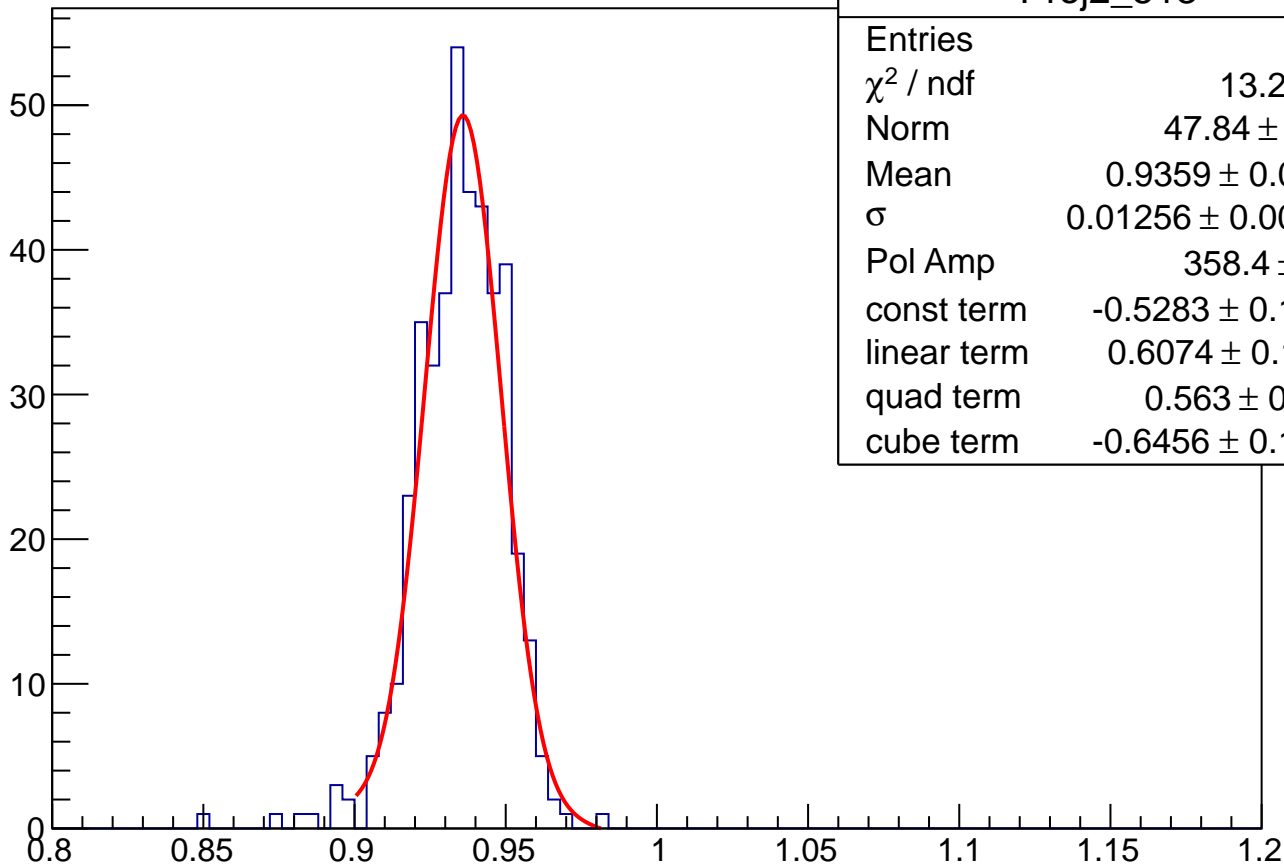


Proj2\_512

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 938                   |
| $\chi^2 / \text{ndf}$ | 14.14 / 17            |
| Norm                  | $121.9 \pm 5.3$       |
| Mean                  | $0.9375 \pm 0.0004$   |
| $\sigma$              | $0.01141 \pm 0.00039$ |
| Pol Amp               | $371.8 \pm 0.2$       |
| const term            | $-0.372 \pm 0.057$    |
| linear term           | $0.4141 \pm 0.0529$   |
| quad term             | $0.391 \pm 0.054$     |
| cube term             | $-0.4301 \pm 0.0529$  |



# PhiThetaMassPim

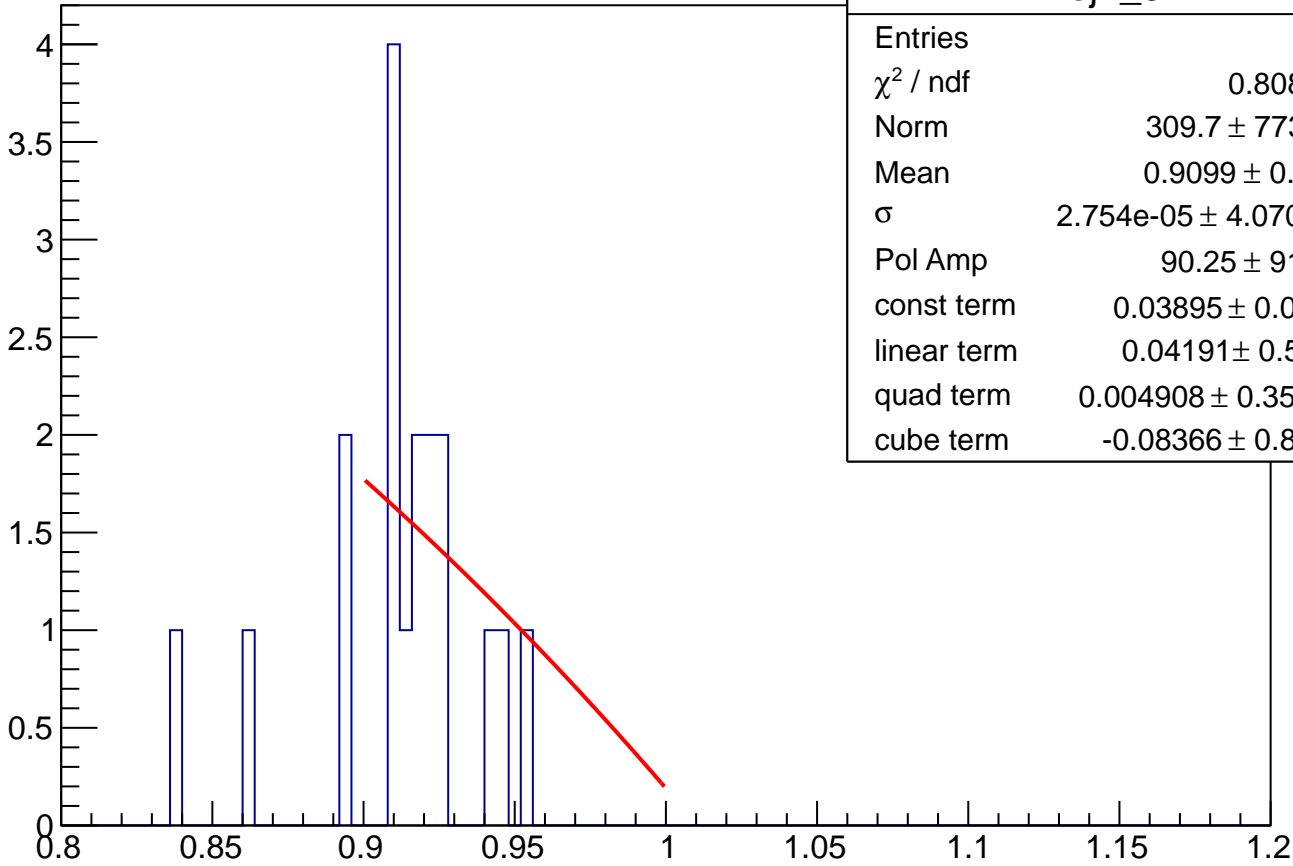


Proj2\_513

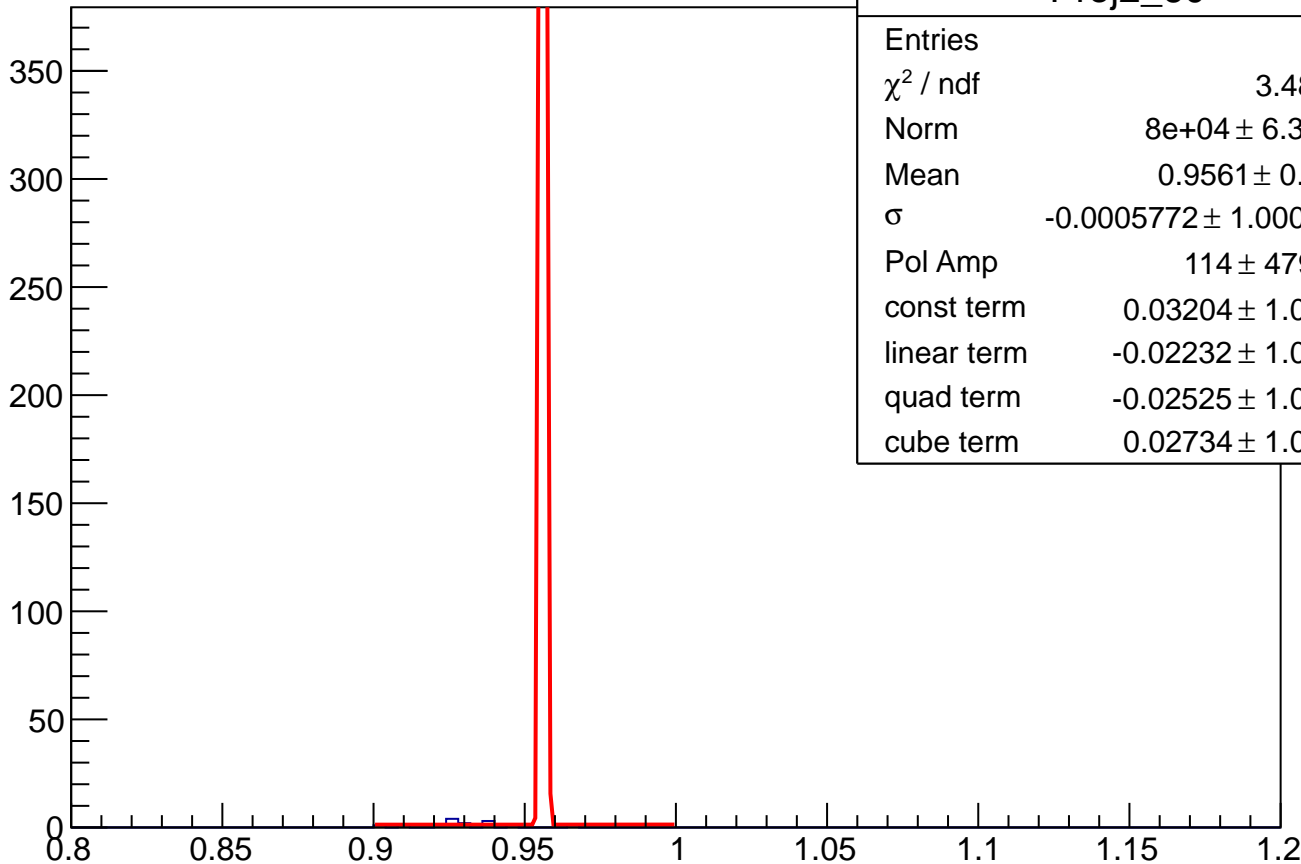
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 417                   |
| $\chi^2 / \text{ndf}$ | 13.2 / 10             |
| Norm                  | $47.84 \pm 3.30$      |
| Mean                  | $0.9359 \pm 0.0010$   |
| $\sigma$              | $0.01256 \pm 0.00097$ |
| Pol Amp               | $358.4 \pm 1.3$       |
| const term            | $-0.5283 \pm 0.1028$  |
| linear term           | $0.6074 \pm 0.1134$   |
| quad term             | $0.563 \pm 0.108$     |
| cube term             | $-0.6456 \pm 0.1336$  |

# PhiThetaMassPim

| Proj2_514             |   |
|-----------------------|---|
| Entries               | 18                                      |
| $\chi^2 / \text{ndf}$ | 0.8083 / 0                              |
| Norm                  | $309.7 \pm 77350.0$                     |
| Mean                  | $0.9099 \pm 0.0018$                     |
| $\sigma$              | $2.754\text{e-}05 \pm 4.070\text{e-}04$ |
| Pol Amp               | $90.25 \pm 912.03$                      |
| const term            | $0.03895 \pm 0.05482$                   |
| linear term           | $0.04191 \pm 0.58231$                   |
| quad term             | $0.004908 \pm 0.353695$                 |
| cube term             | $-0.08366 \pm 0.89174$                  |



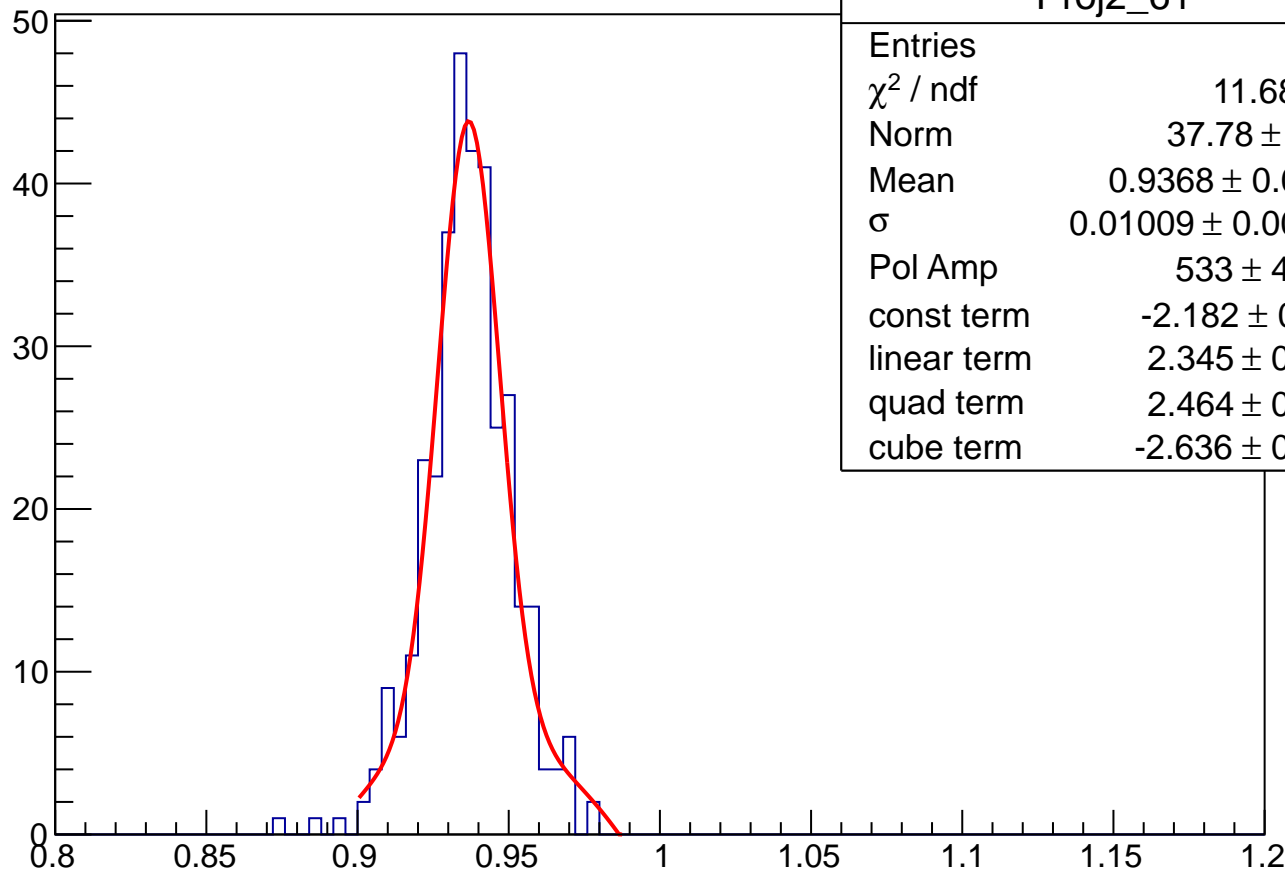
# PhiThetaMassPim



Proj2\_60

|                       |                                   |
|-----------------------|-----------------------------------|
| Entries               | 14                                |
| $\chi^2 / \text{ndf}$ | 3.489 / 0                         |
| Norm                  | $8\text{e}+04 \pm 6.3\text{e}+04$ |
| Mean                  | $0.9561 \pm 0.0740$               |
| $\sigma$              | $-0.0005772 \pm 1.0000005$        |
| Pol Amp               | $114 \pm 47904.7$                 |
| const term            | $0.03204 \pm 1.00024$             |
| linear term           | $-0.02232 \pm 1.00015$            |
| quad term             | $-0.02525 \pm 1.00012$            |
| cube term             | $0.02734 \pm 1.00053$             |

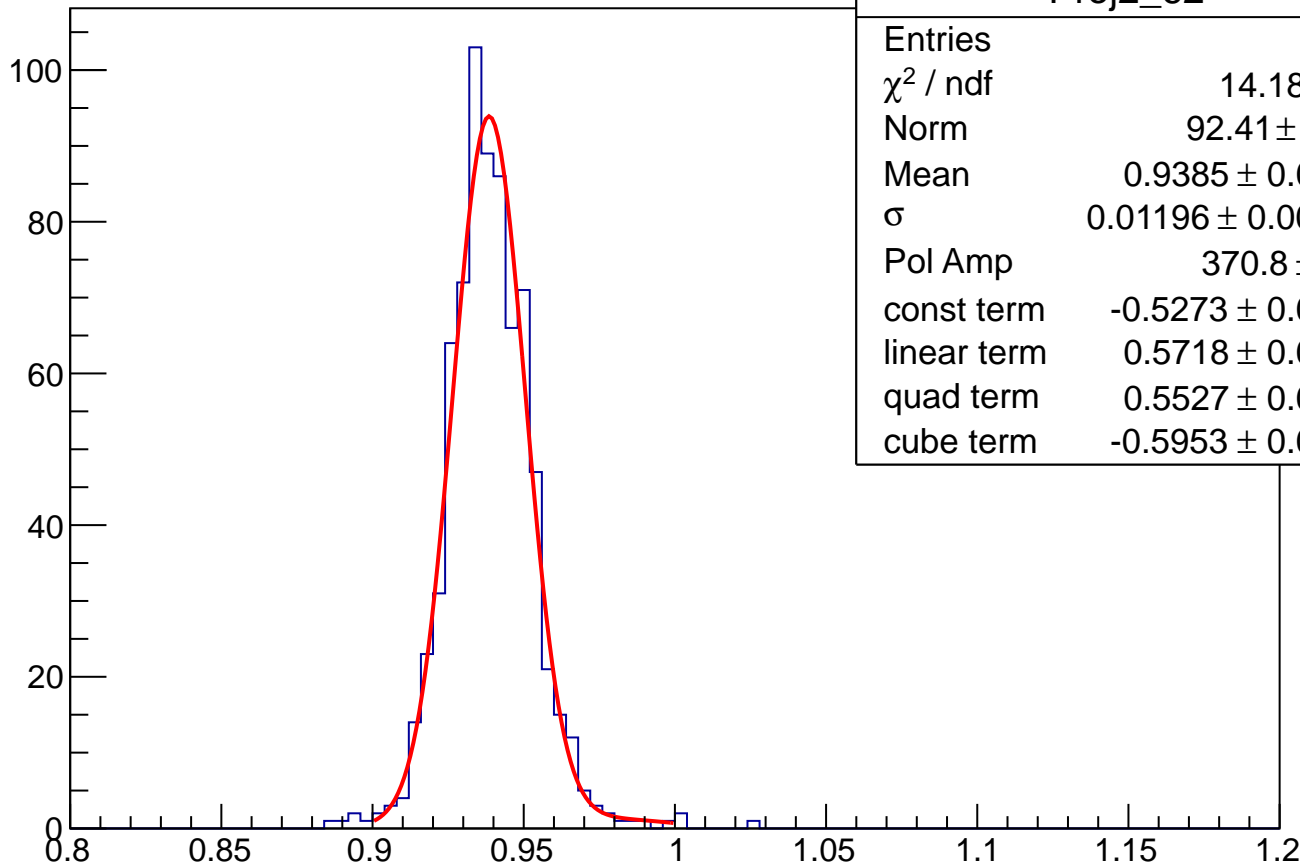
# PhiThetaMassPim



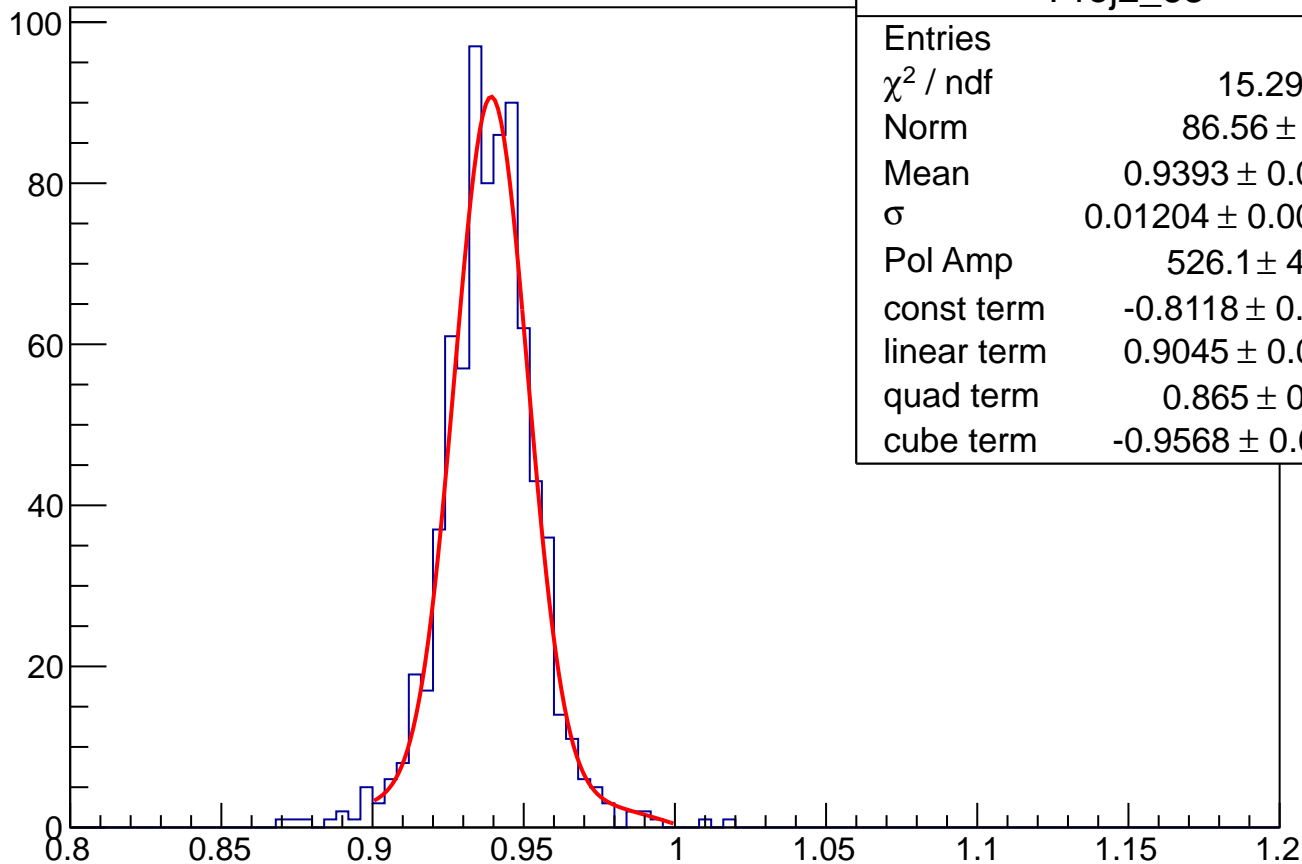
Proj2\_61

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 344                   |
| $\chi^2 / \text{ndf}$ | 11.68 / 11            |
| Norm                  | $37.78 \pm 4.07$      |
| Mean                  | $0.9368 \pm 0.0009$   |
| $\sigma$              | $0.01009 \pm 0.00127$ |
| Pol Amp               | $533 \pm 496.6$       |
| const term            | $-2.182 \pm 0.011$    |
| linear term           | $2.345 \pm 0.014$     |
| quad term             | $2.464 \pm 0.015$     |
| cube term             | $-2.636 \pm 0.013$    |

# PhiThetaMassPim



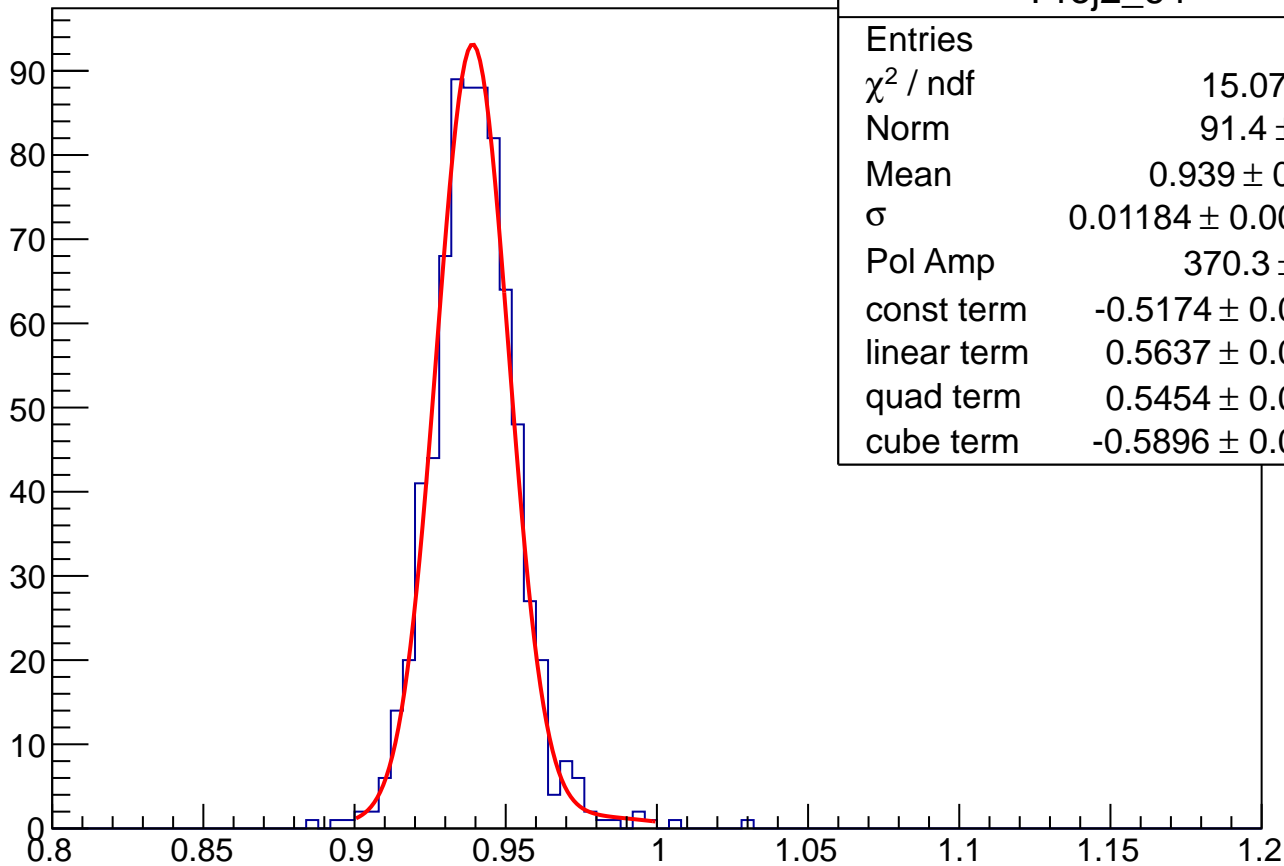
# PhiThetaMassPim



Proj2\_63

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 760                   |
| $\chi^2 / \text{ndf}$ | 15.29 / 15            |
| Norm                  | $86.56 \pm 4.50$      |
| Mean                  | $0.9393 \pm 0.0005$   |
| $\sigma$              | $0.01204 \pm 0.00063$ |
| Pol Amp               | $526.1 \pm 462.8$     |
| const term            | $-0.8118 \pm 0.0111$  |
| linear term           | $0.9045 \pm 0.0120$   |
| quad term             | $0.865 \pm 0.012$     |
| cube term             | $-0.9568 \pm 0.0115$  |

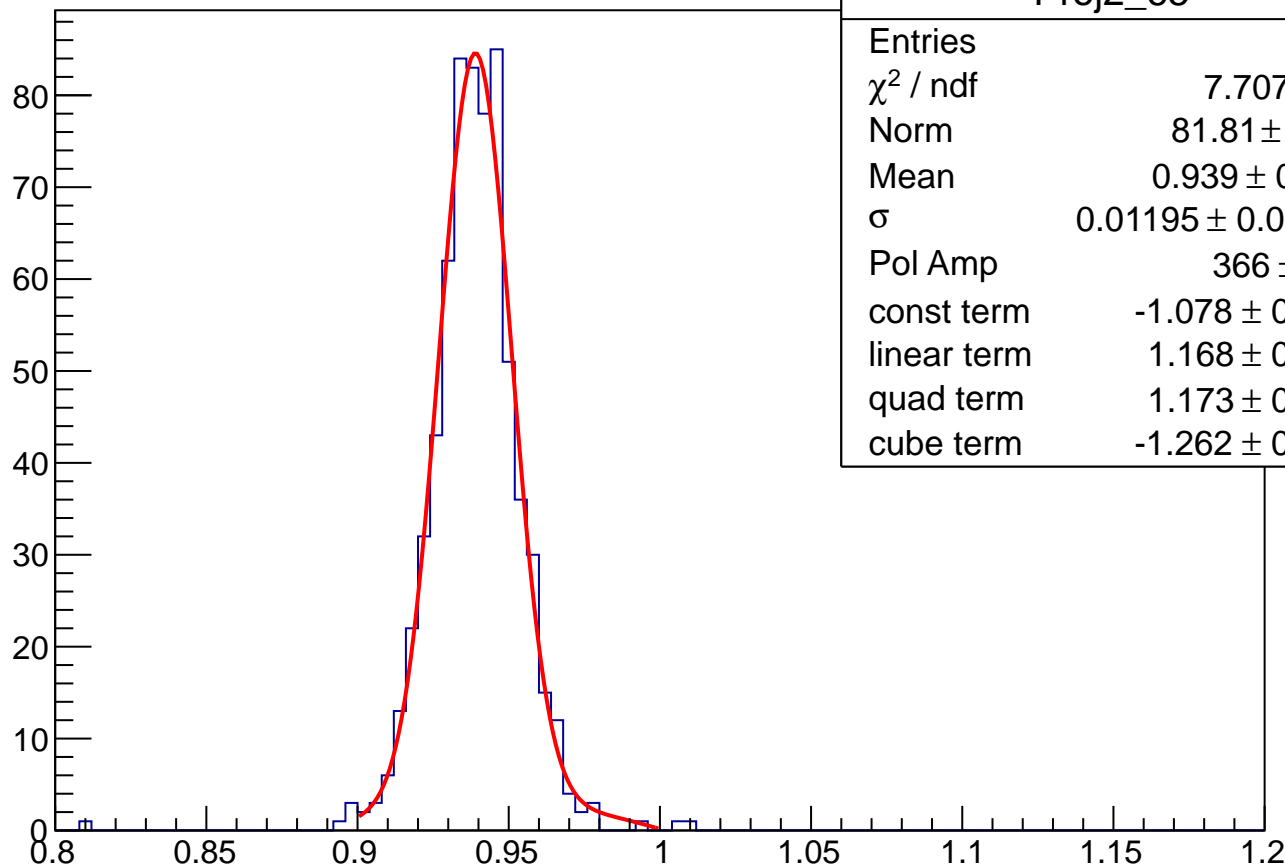
# PhiThetaMassPim



Proj2\_64

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 733                   |
| $\chi^2 / \text{ndf}$ | 15.07 / 16            |
| Norm                  | $91.4 \pm 4.5$        |
| Mean                  | $0.939 \pm 0.001$     |
| $\sigma$              | $0.01184 \pm 0.00044$ |
| Pol Amp               | $370.3 \pm 0.2$       |
| const term            | $-0.5174 \pm 0.0688$  |
| linear term           | $0.5637 \pm 0.0678$   |
| quad term             | $0.5454 \pm 0.0684$   |
| cube term             | $-0.5896 \pm 0.0695$  |

# PhiThetaMassPim

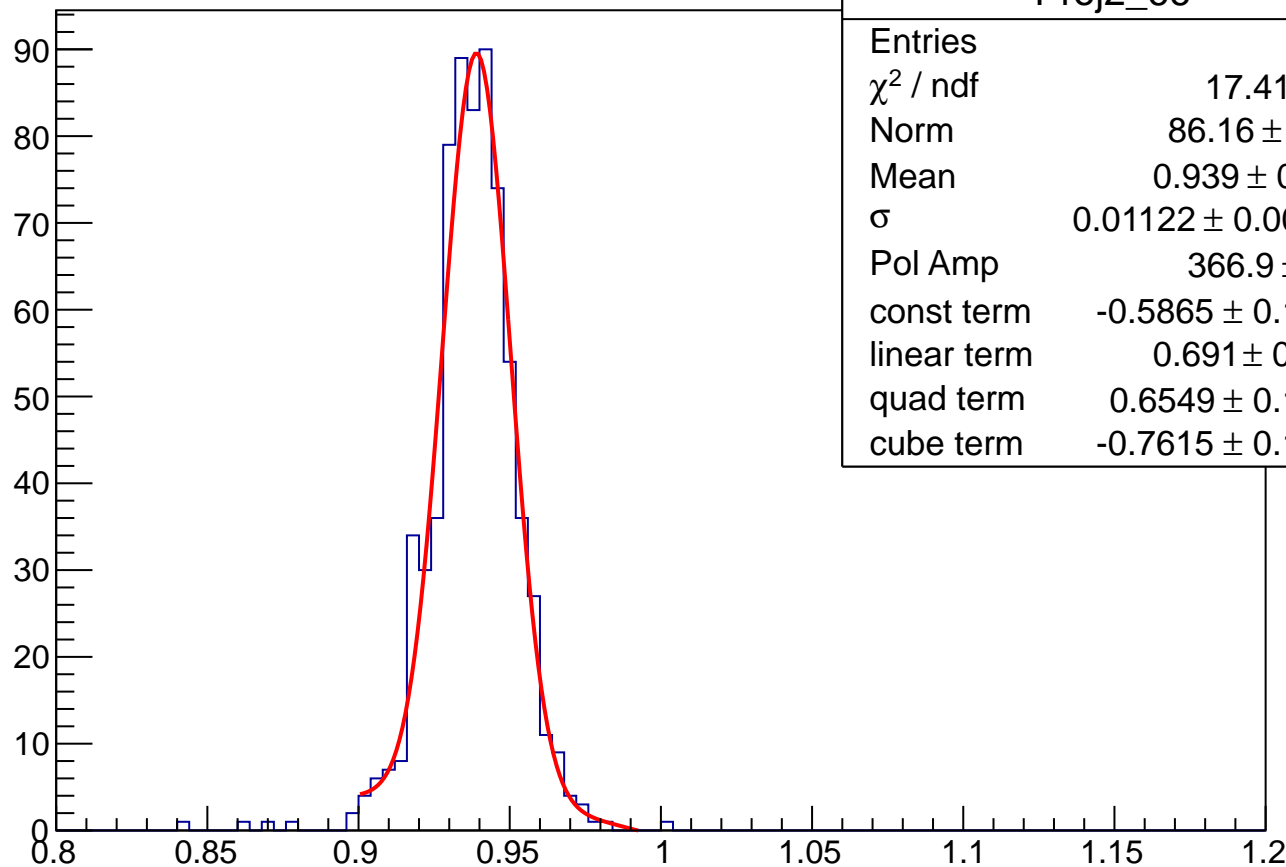


Proj2\_65

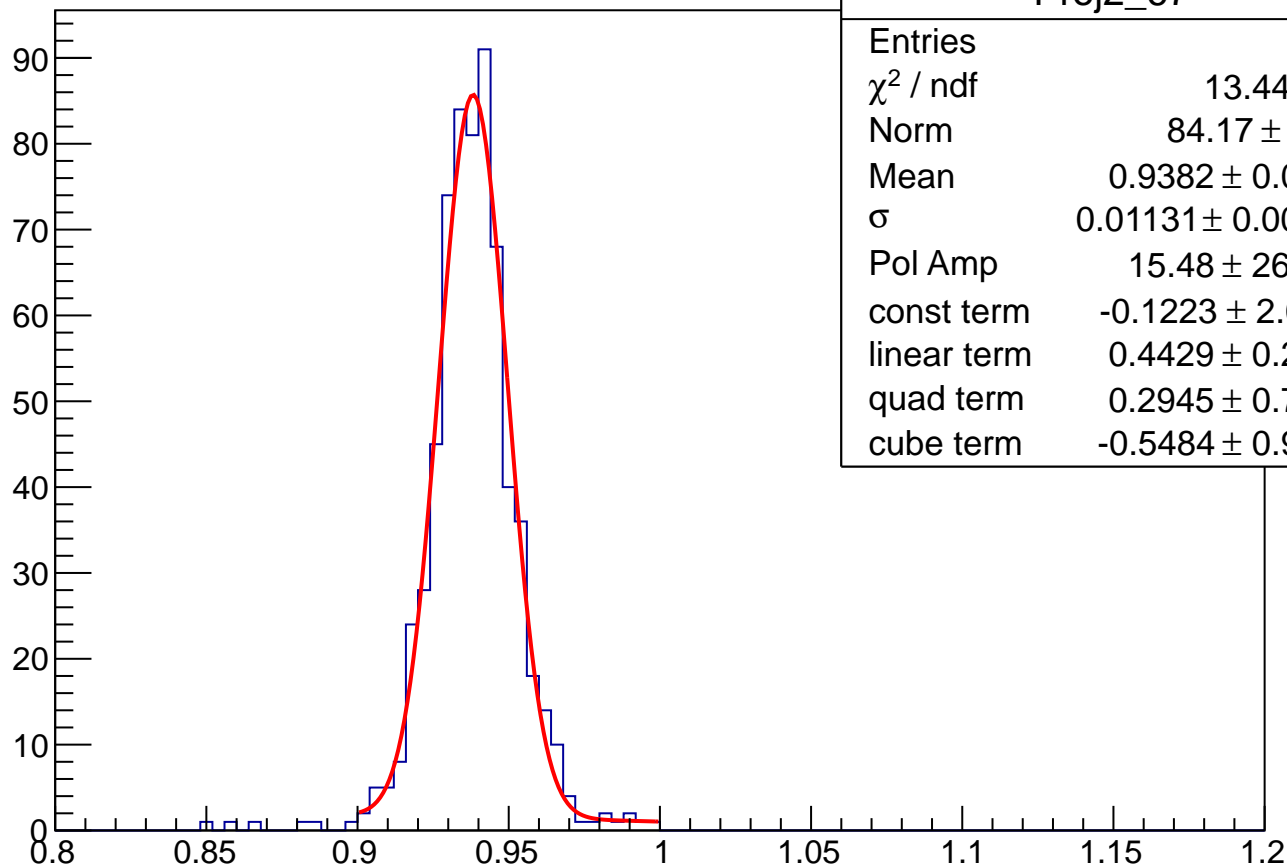
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 674                   |
| $\chi^2 / \text{ndf}$ | 7.707 / 13            |
| Norm                  | $81.81 \pm 4.27$      |
| Mean                  | $0.939 \pm 0.001$     |
| $\sigma$              | $0.01195 \pm 0.00051$ |
| Pol Amp               | $366 \pm 0.5$         |
| const term            | $-1.078 \pm 0.140$    |
| linear term           | $1.168 \pm 0.144$     |
| quad term             | $1.173 \pm 0.148$     |
| cube term             | $-1.262 \pm 0.154$    |



# PhiThetaMassPim



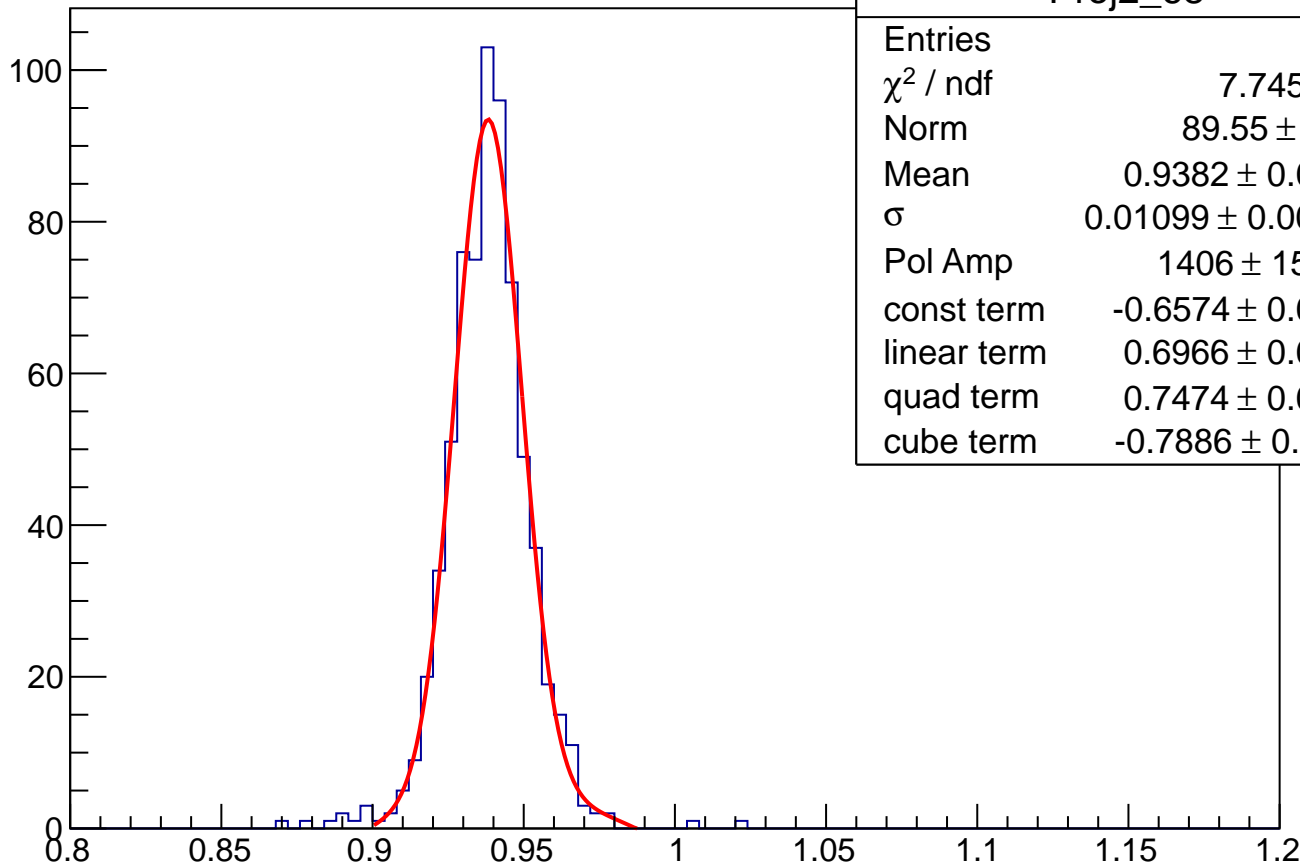
# PhiThetaMassPim



Proj2\_67

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 652                   |
| $\chi^2 / \text{ndf}$ | 13.44 / 17            |
| Norm                  | $84.17 \pm 4.64$      |
| Mean                  | $0.9382 \pm 0.0005$   |
| $\sigma$              | $0.01131 \pm 0.00052$ |
| Pol Amp               | $15.48 \pm 263.24$    |
| const term            | $-0.1223 \pm 2.0261$  |
| linear term           | $0.4429 \pm 0.2274$   |
| quad term             | $0.2945 \pm 0.7812$   |
| cube term             | $-0.5484 \pm 0.9619$  |

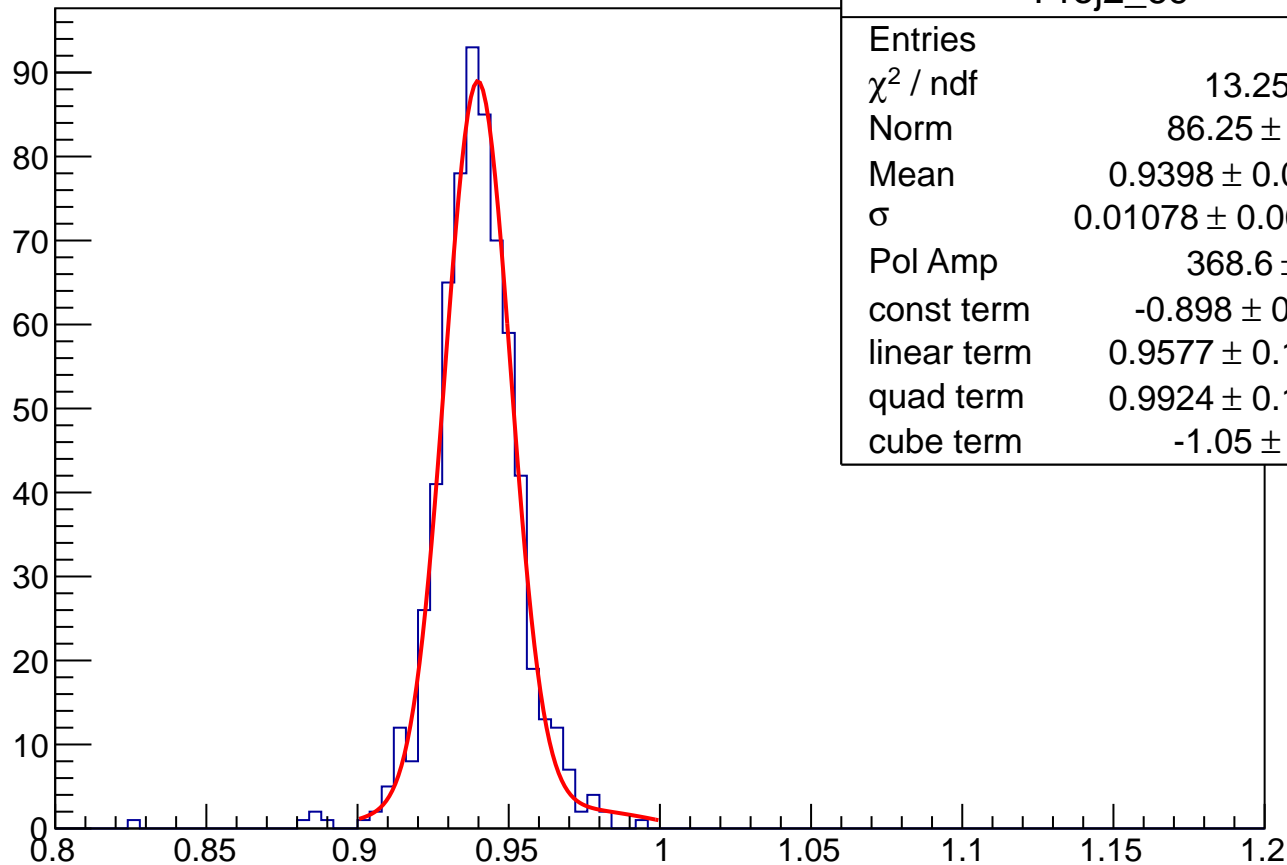
# PhiThetaMassPim



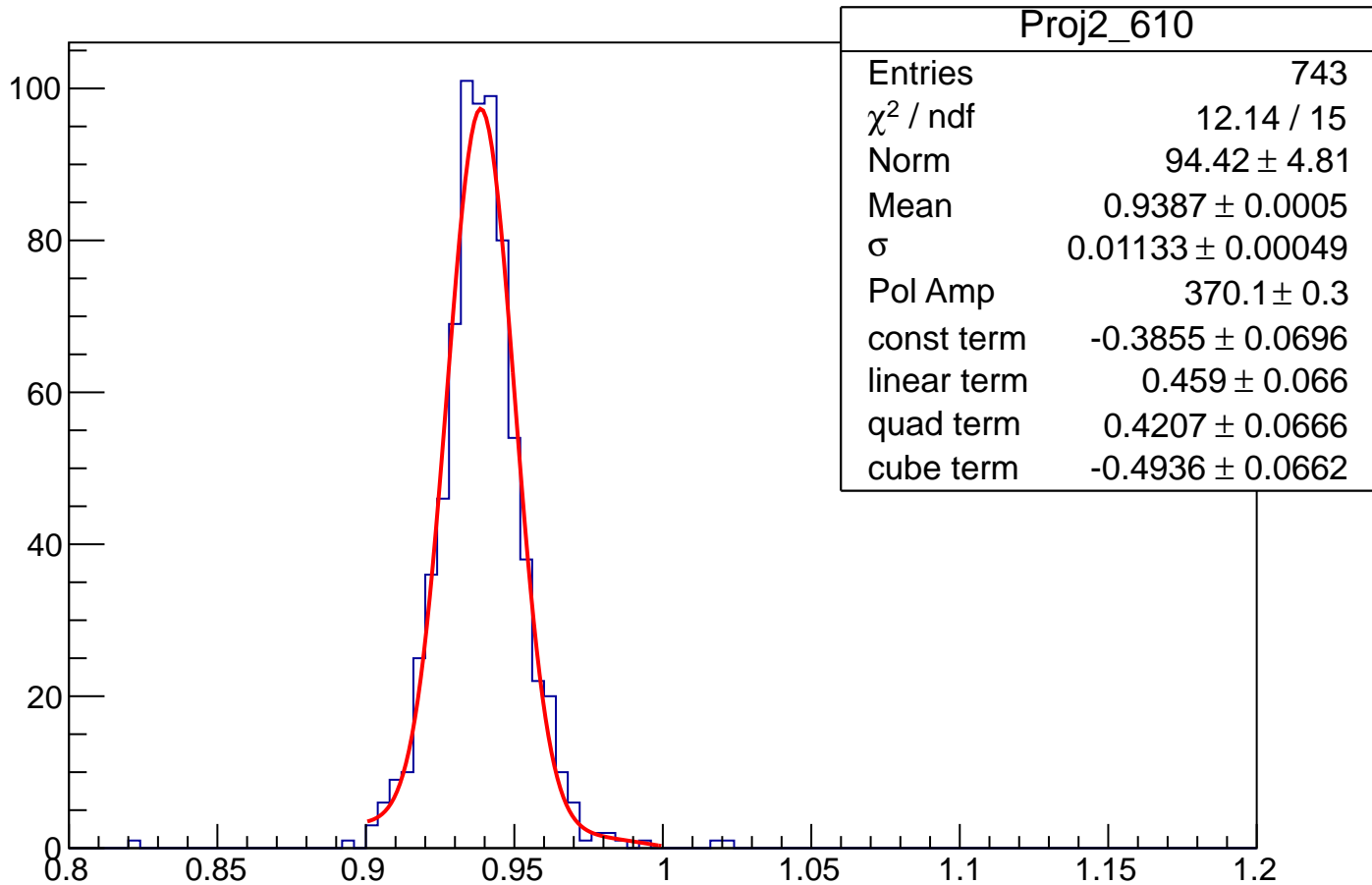
Proj2\_68

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 693                   |
| $\chi^2 / \text{ndf}$ | 7.745 / 12            |
| Norm                  | $89.55 \pm 5.18$      |
| Mean                  | $0.9382 \pm 0.0005$   |
| $\sigma$              | $0.01099 \pm 0.00062$ |
| Pol Amp               | $1406 \pm 1540.1$     |
| const term            | $-0.6574 \pm 0.0040$  |
| linear term           | $0.6966 \pm 0.0046$   |
| quad term             | $0.7474 \pm 0.0050$   |
| cube term             | $-0.7886 \pm 0.0051$  |

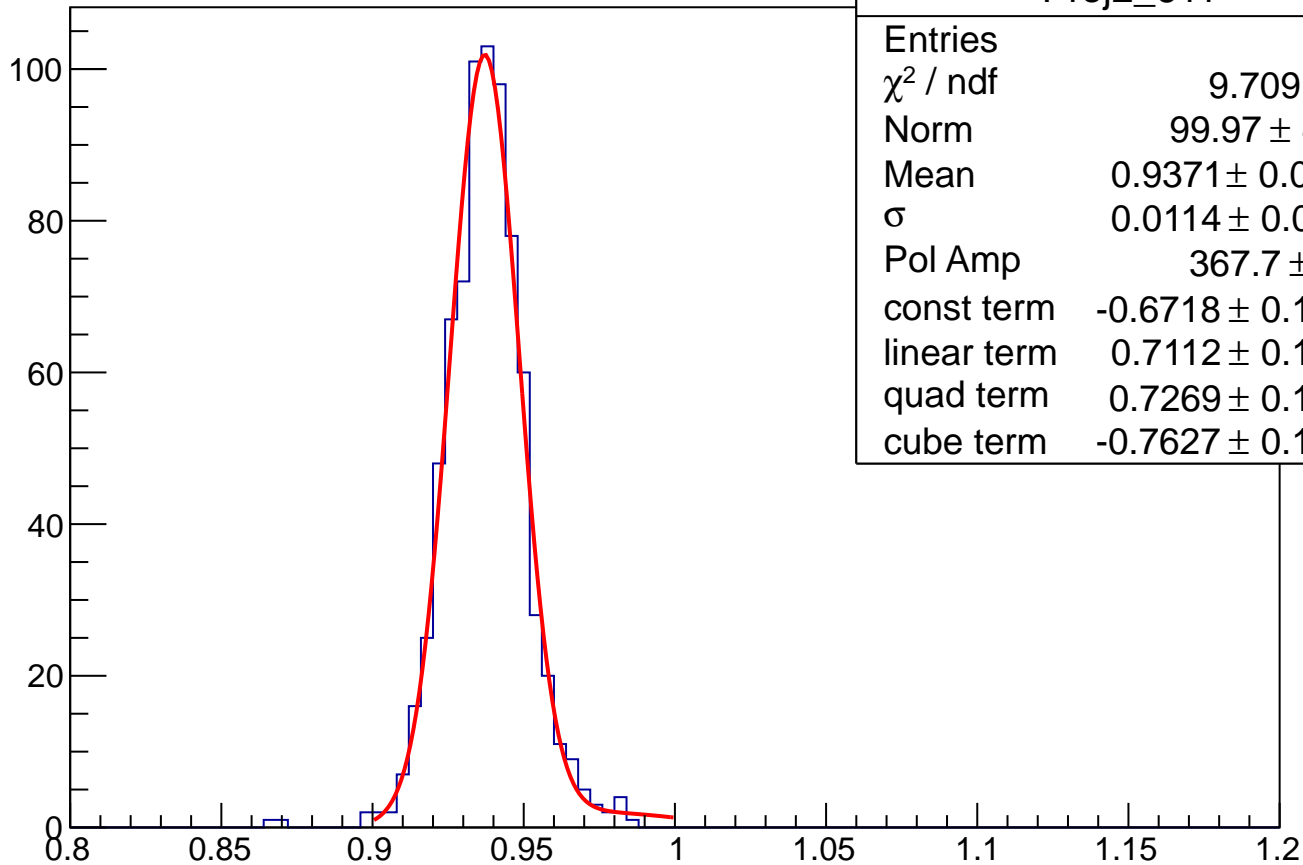
# PhiThetaMassPim



# PhiThetaMassPim



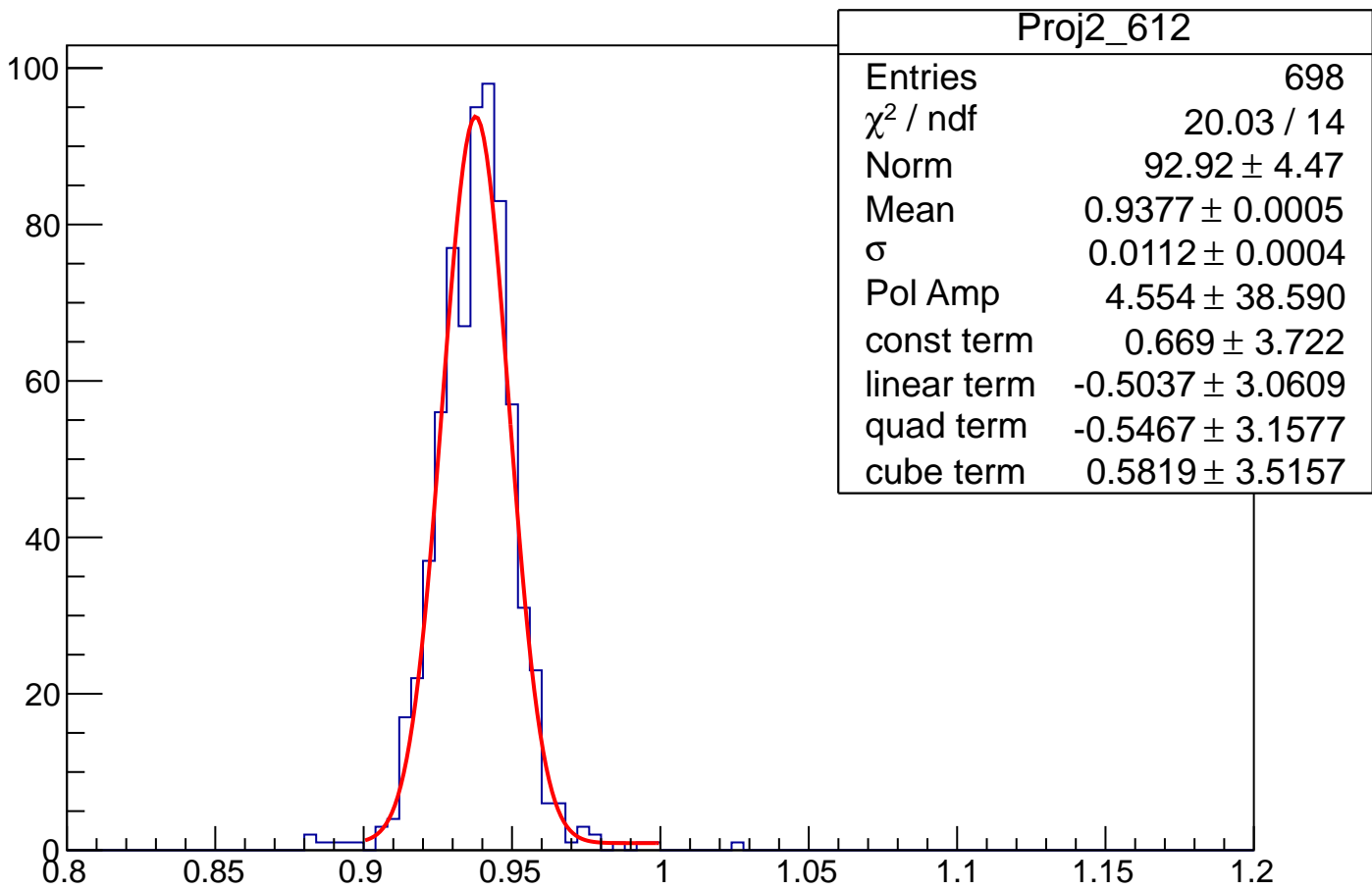
# PhiThetaMassPim



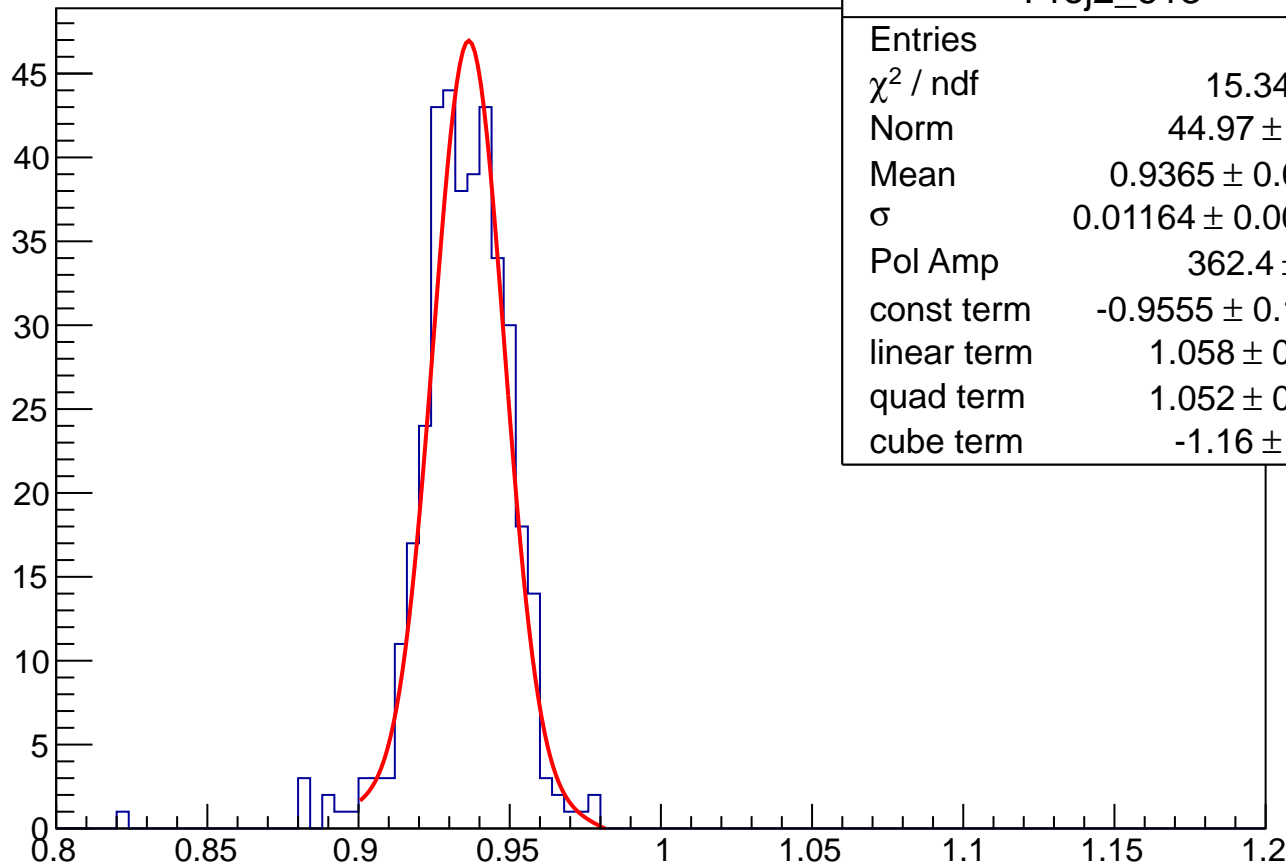
Proj2\_611

|                       |                      |
|-----------------------|----------------------|
| Entries               | 766                  |
| $\chi^2 / \text{ndf}$ | 9.709 / 14           |
| Norm                  | $99.97 \pm 4.84$     |
| Mean                  | $0.9371 \pm 0.0005$  |
| $\sigma$              | $0.0114 \pm 0.0004$  |
| Pol Amp               | $367.7 \pm 0.4$      |
| const term            | $-0.6718 \pm 0.1042$ |
| linear term           | $0.7112 \pm 0.1014$  |
| quad term             | $0.7269 \pm 0.1072$  |
| cube term             | $-0.7627 \pm 0.1063$ |

# PhiThetaMassPim



# PhiThetaMassPim

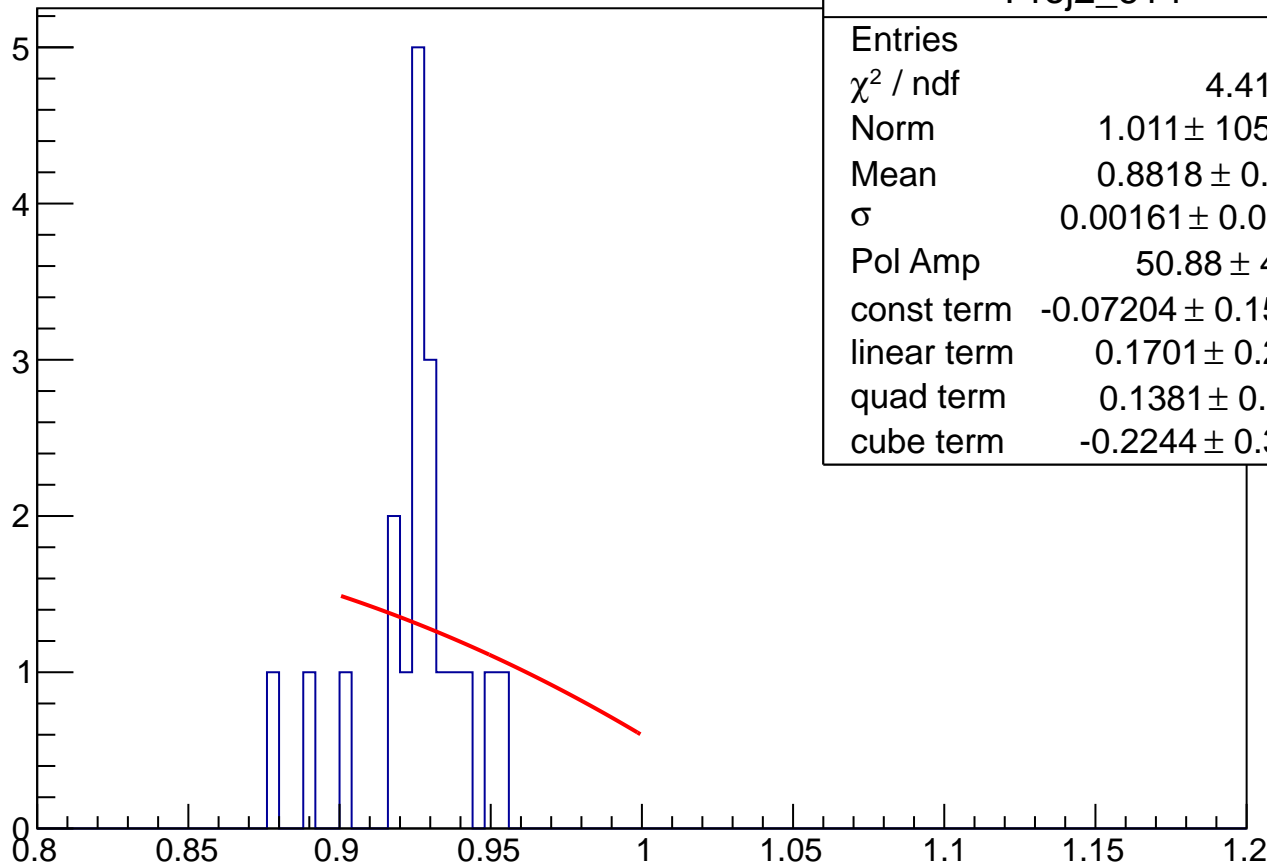


Proj2\_613

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 381                   |
| $\chi^2 / \text{ndf}$ | 15.34 / 12            |
| Norm                  | $44.97 \pm 3.12$      |
| Mean                  | $0.9365 \pm 0.0002$   |
| $\sigma$              | $0.01164 \pm 0.00056$ |
| Pol Amp               | $362.4 \pm 0.7$       |
| const term            | $-0.9555 \pm 0.1649$  |
| linear term           | $1.058 \pm 0.175$     |
| quad term             | $1.052 \pm 0.177$     |
| cube term             | $-1.16 \pm 0.19$      |



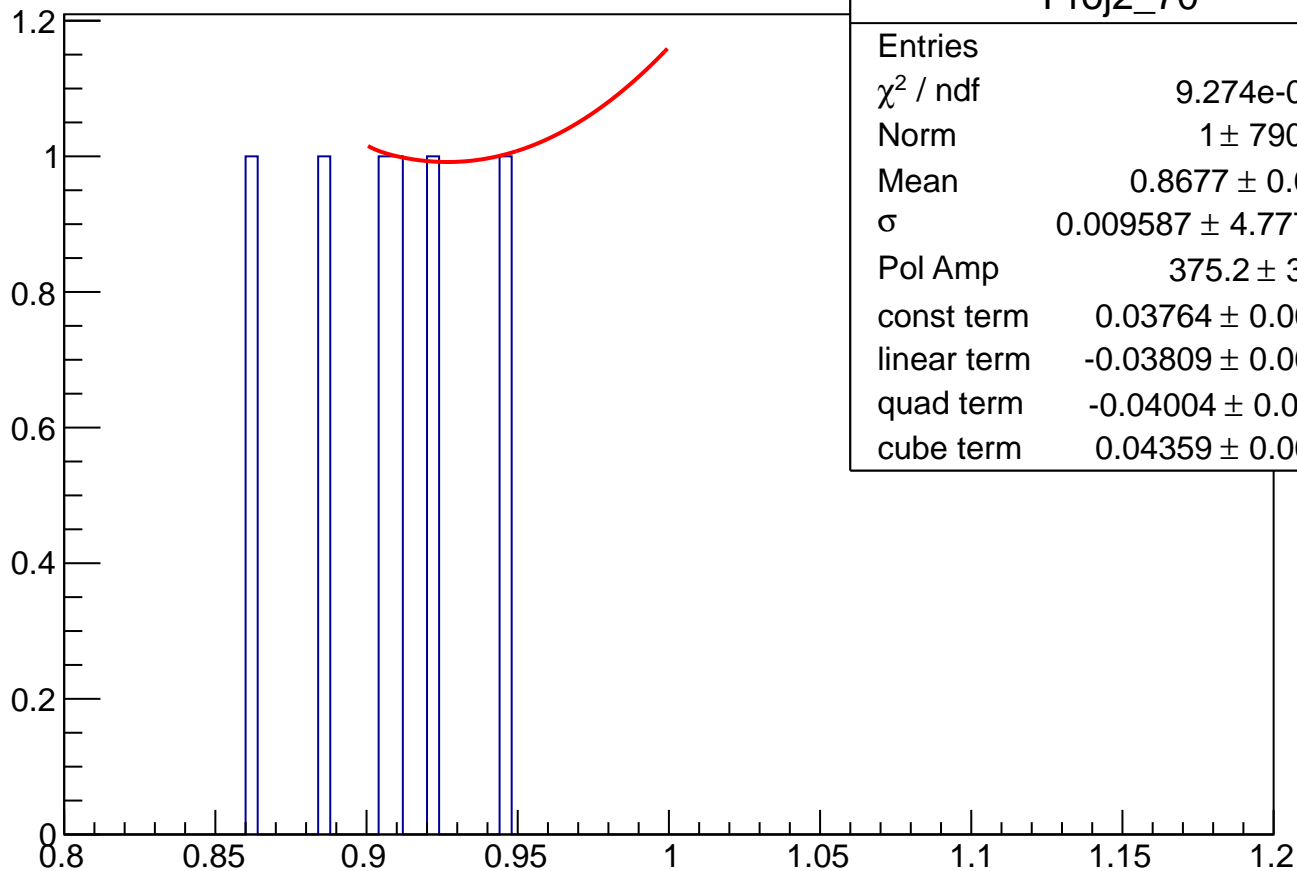
# PhiThetaMassPim



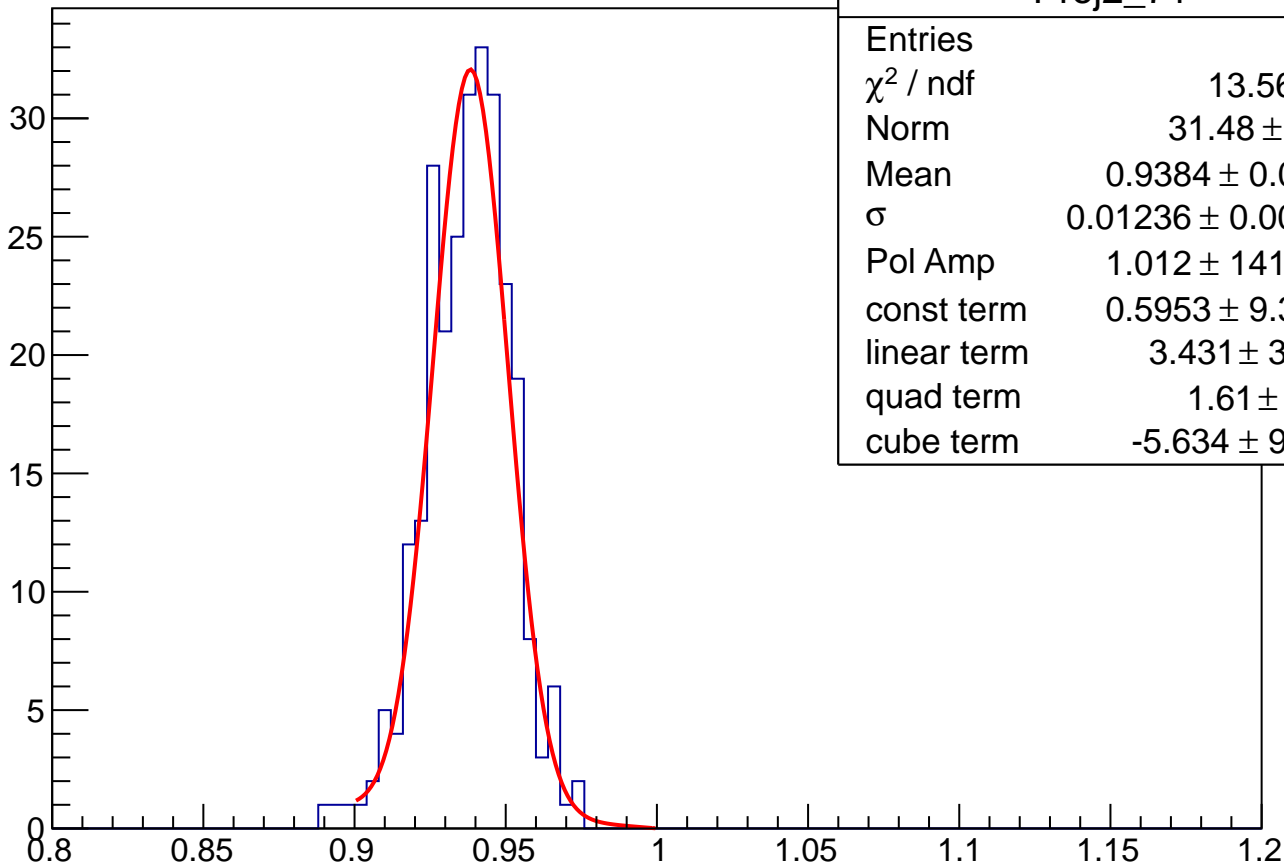
Proj2\_614

|                       |                        |
|-----------------------|------------------------|
| Entries               | 19                     |
| $\chi^2 / \text{ndf}$ | 4.413 / 2              |
| Norm                  | $1.011 \pm 105.712$    |
| Mean                  | $0.8818 \pm 0.0011$    |
| $\sigma$              | $0.00161 \pm 0.00181$  |
| Pol Amp               | $50.88 \pm 43.11$      |
| const term            | $-0.07204 \pm 0.15518$ |
| linear term           | $0.1701 \pm 0.2495$    |
| quad term             | $0.1381 \pm 0.2061$    |
| cube term             | $-0.2244 \pm 0.3559$   |

# PhiThetaMassPim



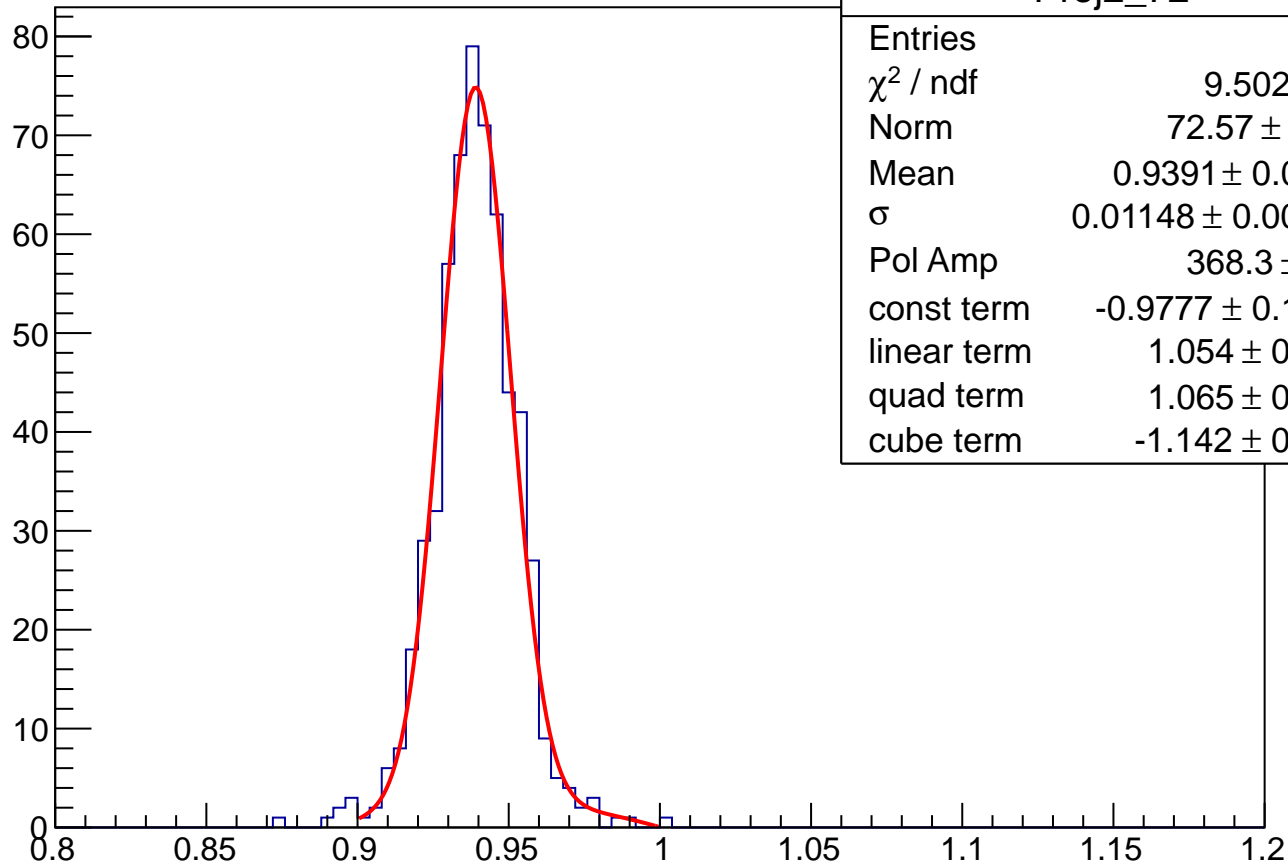
# PhiThetaMassPim



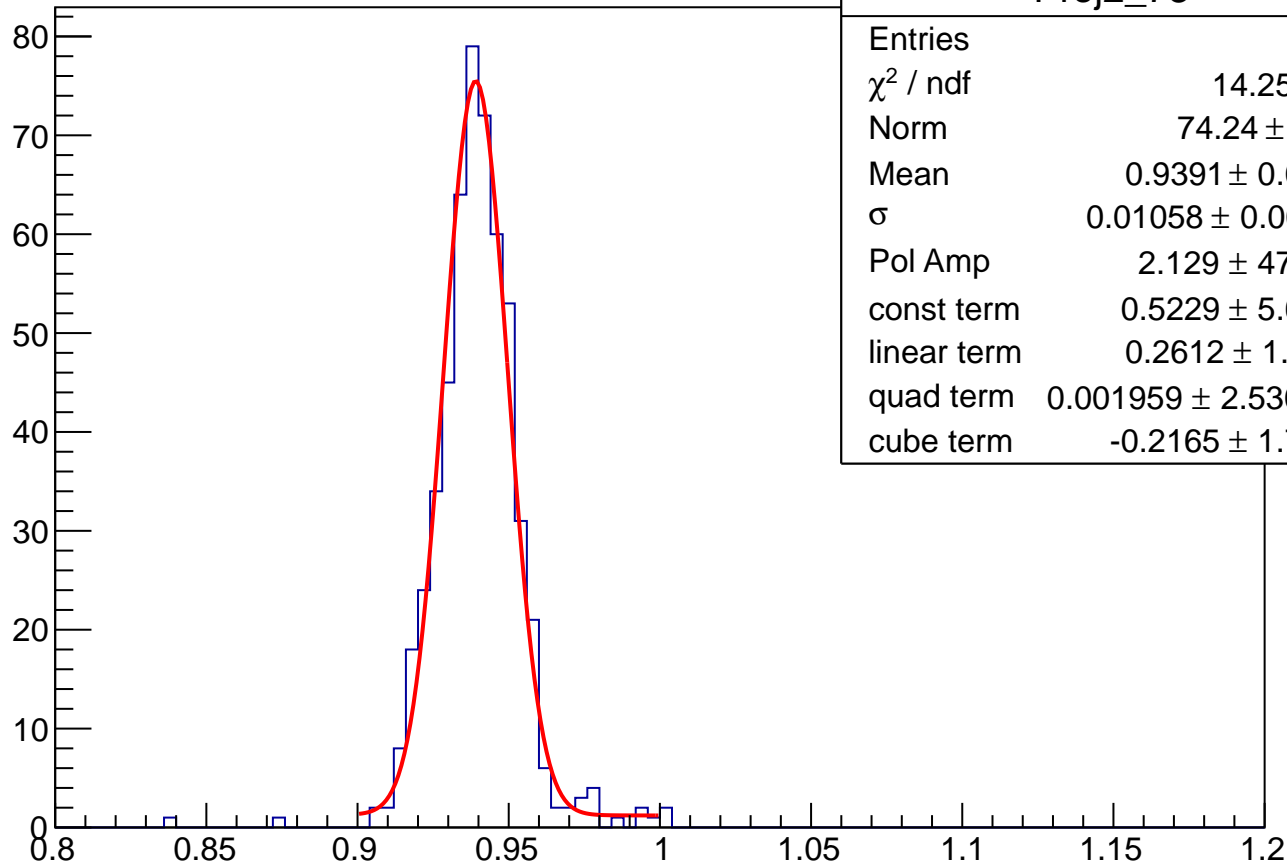
Proj2\_71

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 271                   |
| $\chi^2 / \text{ndf}$ | 13.56 / 11            |
| Norm                  | $31.48 \pm 2.61$      |
| Mean                  | $0.9384 \pm 0.0010$   |
| $\sigma$              | $0.01236 \pm 0.00092$ |
| Pol Amp               | $1.012 \pm 141.243$   |
| const term            | $0.5953 \pm 9.3977$   |
| linear term           | $3.431 \pm 3.393$     |
| quad term             | $1.61 \pm 3.02$       |
| cube term             | $-5.634 \pm 9.720$    |

# PhiThetaMassPim



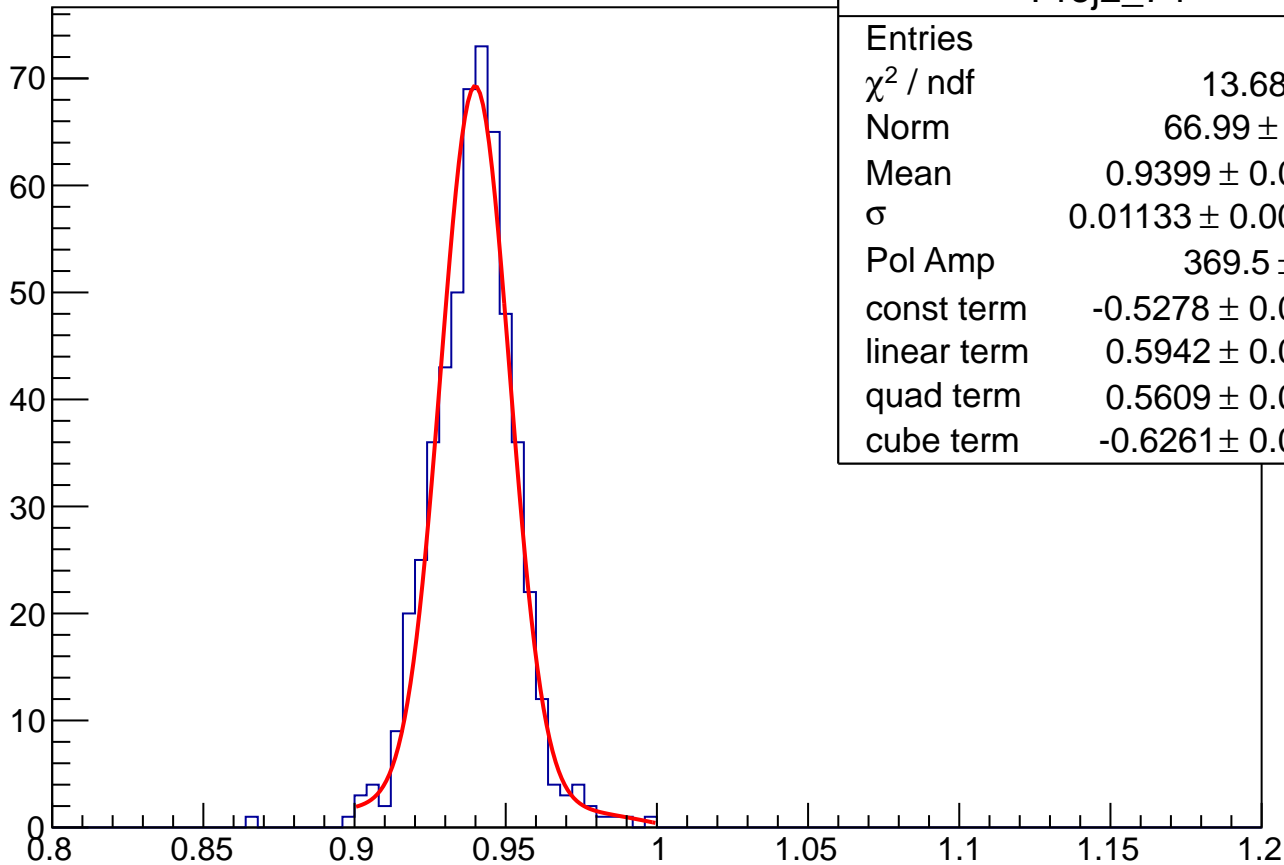
# PhiThetaMassPim



Proj2\_73

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 538                     |
| $\chi^2 / \text{ndf}$ | 14.25 / 14              |
| Norm                  | $74.24 \pm 4.22$        |
| Mean                  | $0.9391 \pm 0.0005$     |
| $\sigma$              | $0.01058 \pm 0.00044$   |
| Pol Amp               | $2.129 \pm 47.674$      |
| const term            | $0.5229 \pm 5.6685$     |
| linear term           | $0.2612 \pm 1.1081$     |
| quad term             | $0.001959 \pm 2.530440$ |
| cube term             | $-0.2165 \pm 1.7417$    |

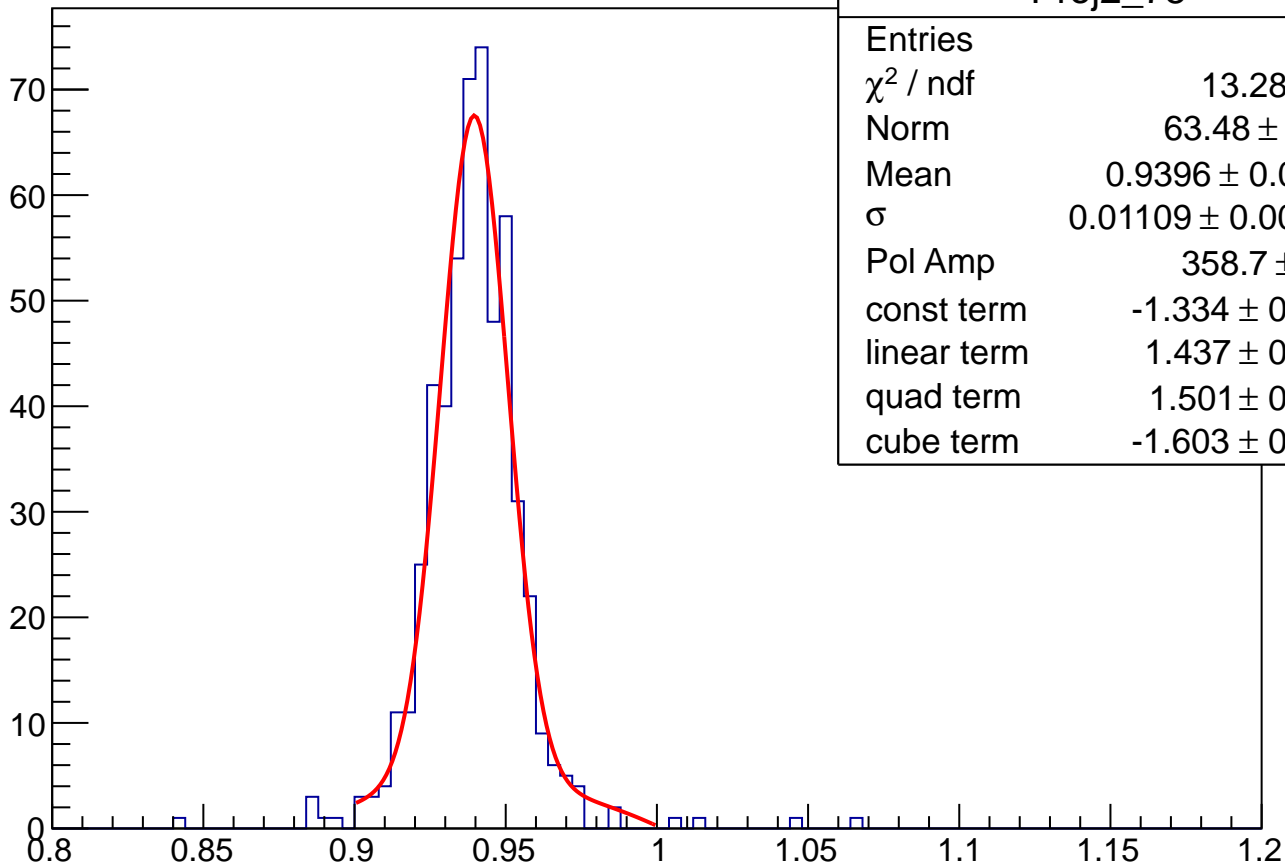
# PhiThetaMassPim



Proj2\_74

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 536                   |
| $\chi^2 / \text{ndf}$ | 13.68 / 16            |
| Norm                  | $66.99 \pm 3.92$      |
| Mean                  | $0.9399 \pm 0.0006$   |
| $\sigma$              | $0.01133 \pm 0.00050$ |
| Pol Amp               | $369.5 \pm 0.3$       |
| const term            | $-0.5278 \pm 0.0843$  |
| linear term           | $0.5942 \pm 0.0856$   |
| quad term             | $0.5609 \pm 0.0843$   |
| cube term             | $-0.6261 \pm 0.0873$  |

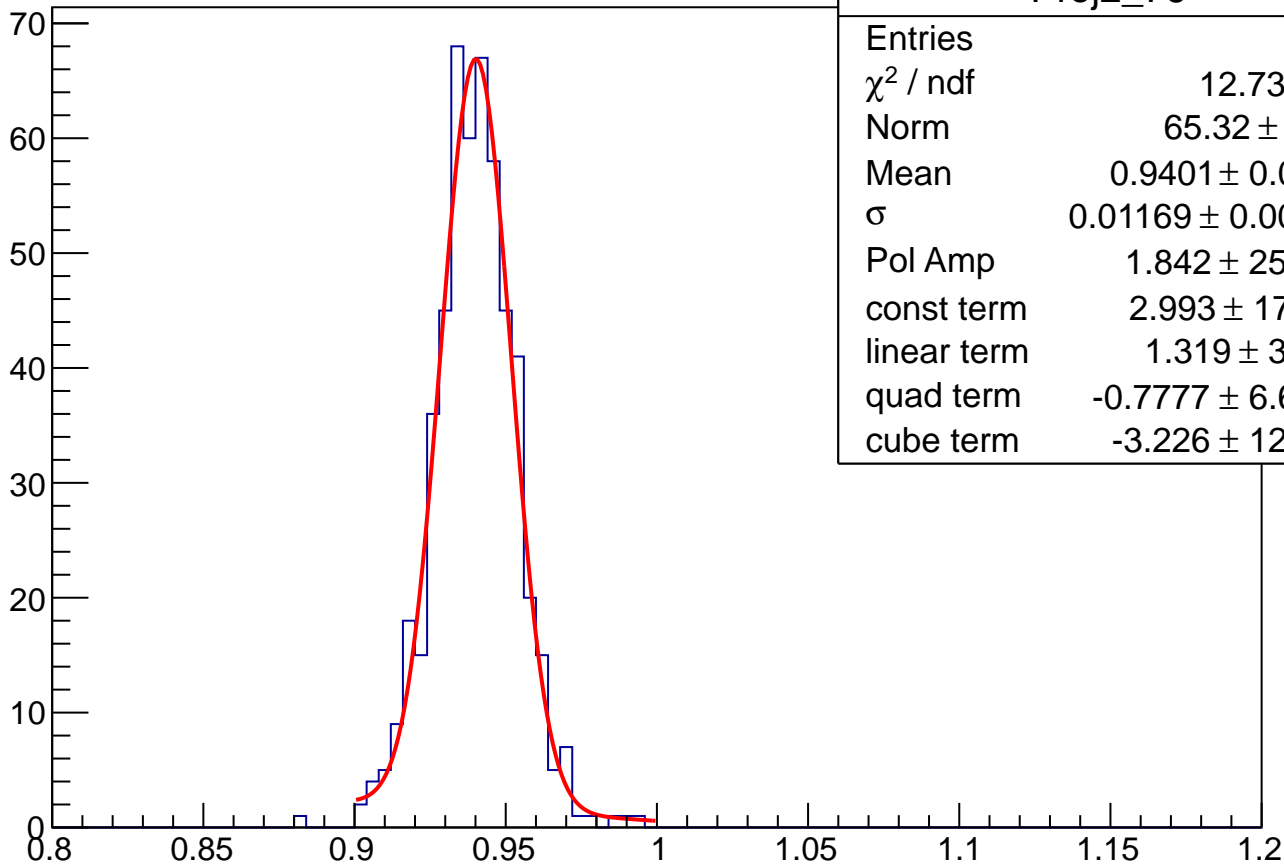
# PhiThetaMassPim



Proj2\_75

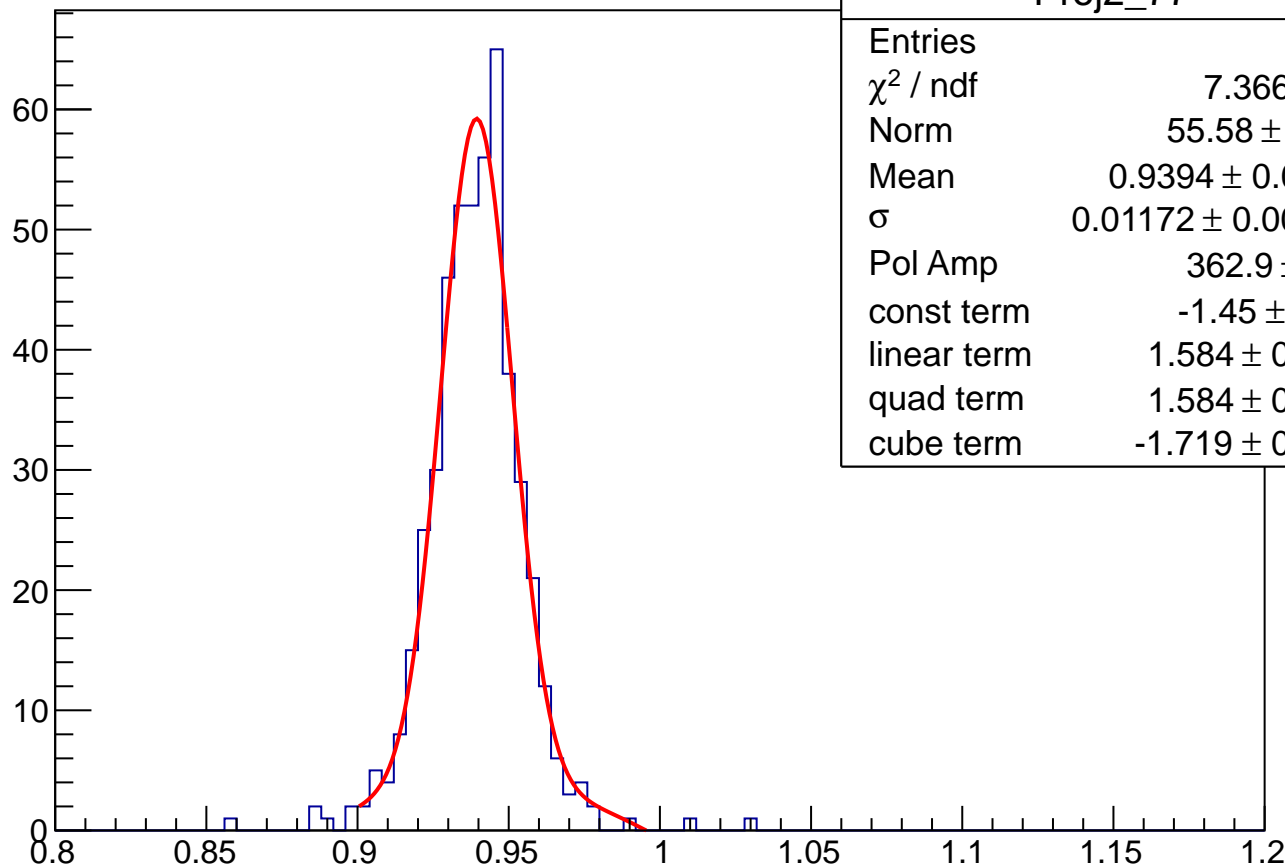
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 533                   |
| $\chi^2 / \text{ndf}$ | 13.28 / 12            |
| Norm                  | $63.48 \pm 4.05$      |
| Mean                  | $0.9396 \pm 0.0007$   |
| $\sigma$              | $0.01109 \pm 0.00054$ |
| Pol Amp               | $358.7 \pm 0.8$       |
| const term            | $-1.334 \pm 0.209$    |
| linear term           | $1.437 \pm 0.219$     |
| quad term             | $1.501 \pm 0.230$     |
| cube term             | $-1.603 \pm 0.244$    |

# PhiThetaMassPim





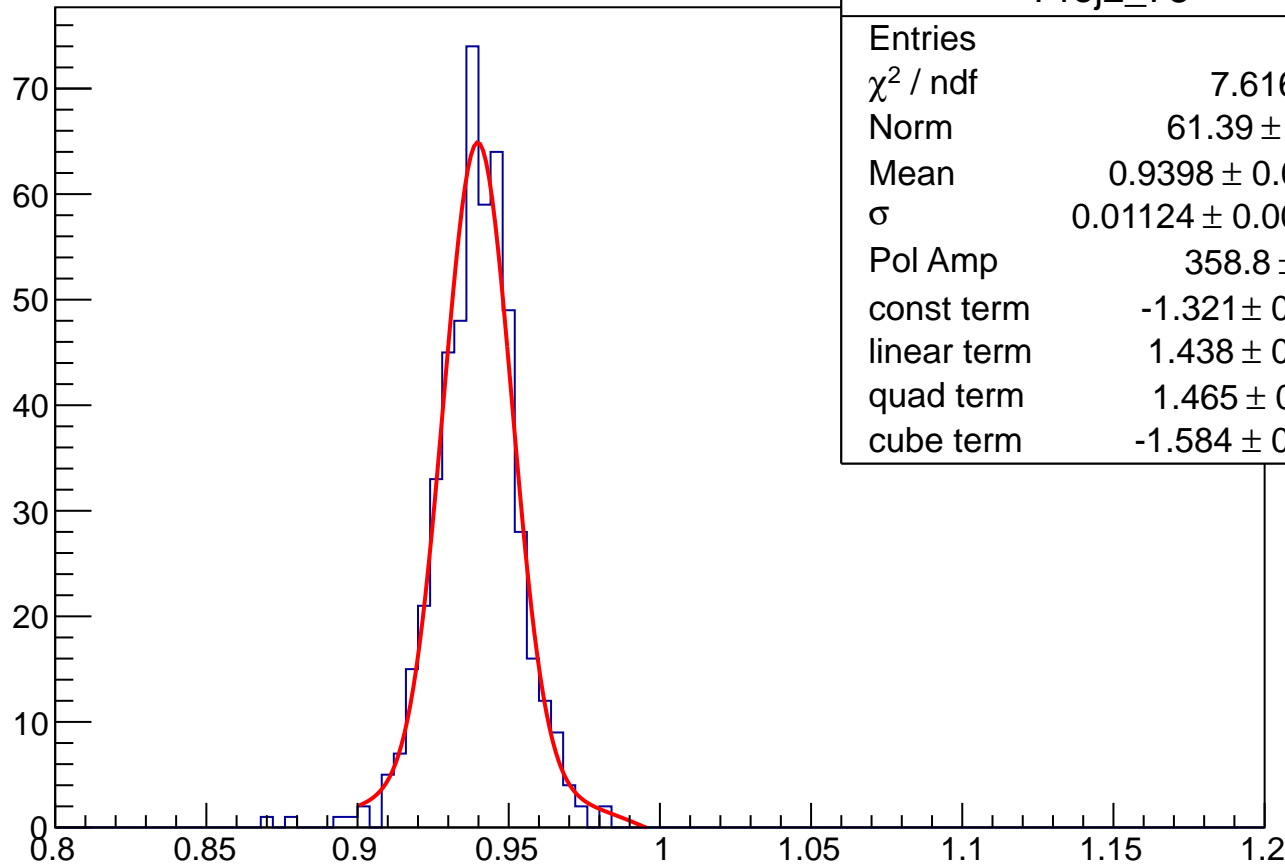
# PhiThetaMassPim



Proj2\_77

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 484                   |
| $\chi^2 / \text{ndf}$ | 7.366 / 13            |
| Norm                  | $55.58 \pm 3.66$      |
| Mean                  | $0.9394 \pm 0.0007$   |
| $\sigma$              | $0.01172 \pm 0.00058$ |
| Pol Amp               | $362.9 \pm 0.7$       |
| const term            | $-1.45 \pm 0.21$      |
| linear term           | $1.584 \pm 0.218$     |
| quad term             | $1.584 \pm 0.222$     |
| cube term             | $-1.719 \pm 0.234$    |

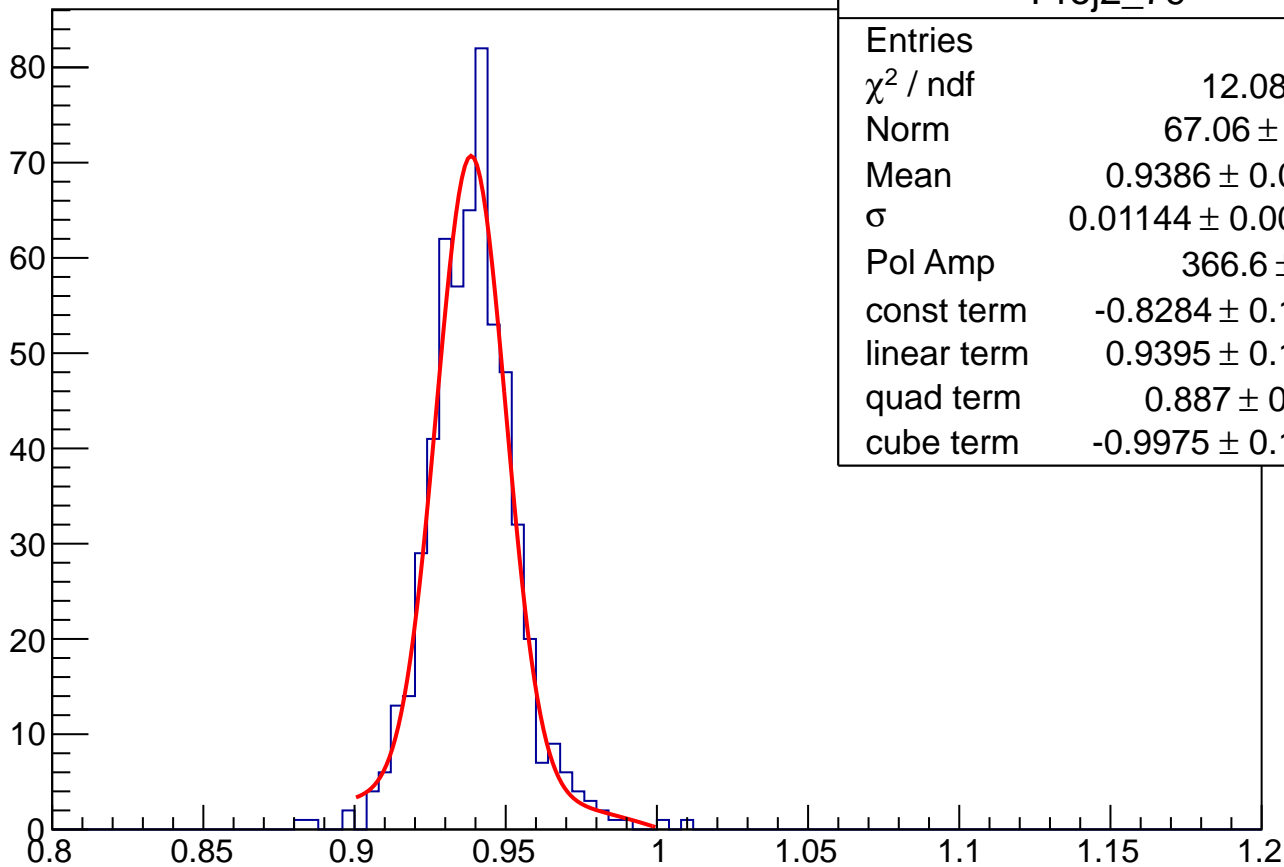
# PhiThetaMassPim



Proj2\_78

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 499                   |
| $\chi^2 / \text{ndf}$ | 7.616 / 11            |
| Norm                  | $61.39 \pm 4.05$      |
| Mean                  | $0.9398 \pm 0.0007$   |
| $\sigma$              | $0.01124 \pm 0.00060$ |
| Pol Amp               | $358.8 \pm 0.9$       |
| const term            | $-1.321 \pm 0.214$    |
| linear term           | $1.438 \pm 0.225$     |
| quad term             | $1.465 \pm 0.231$     |
| cube term             | $-1.584 \pm 0.246$    |

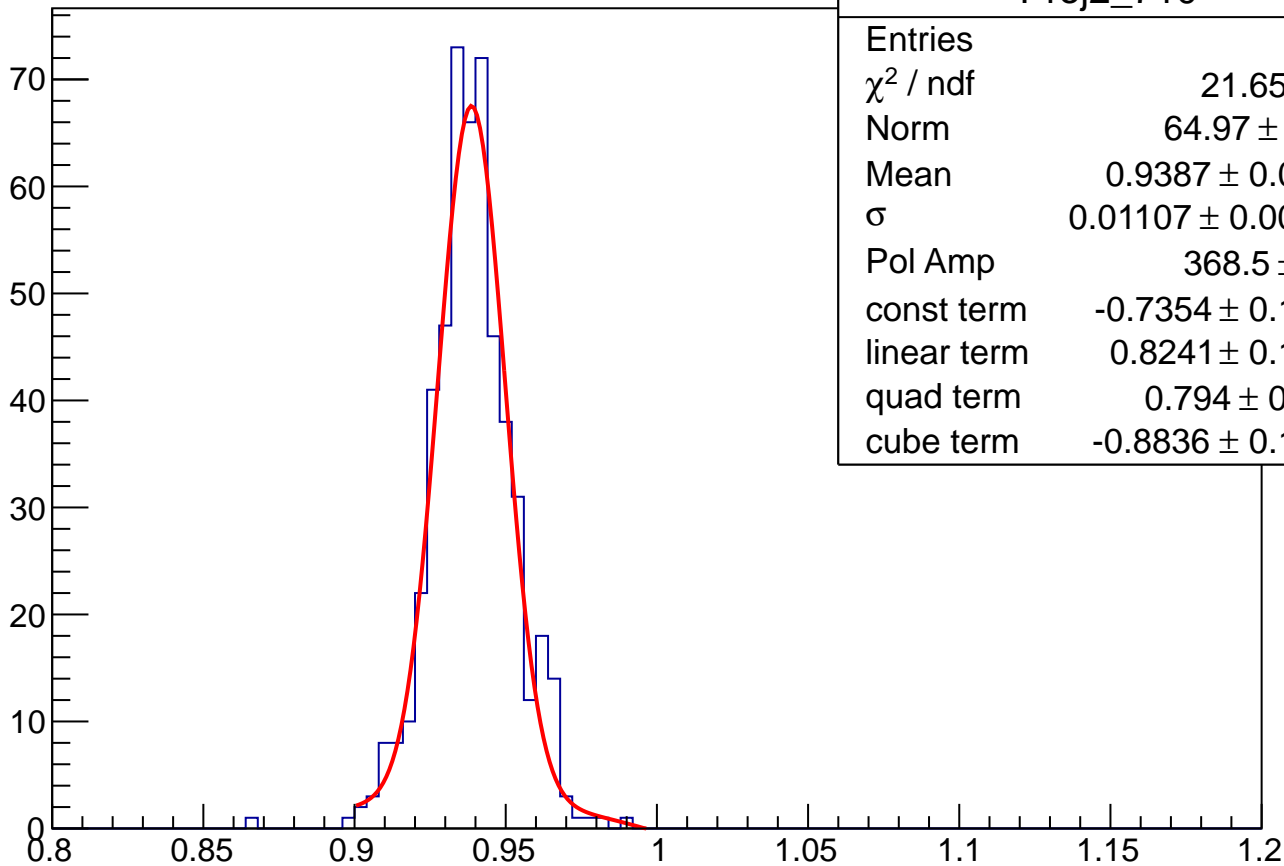
# PhiThetaMassPim



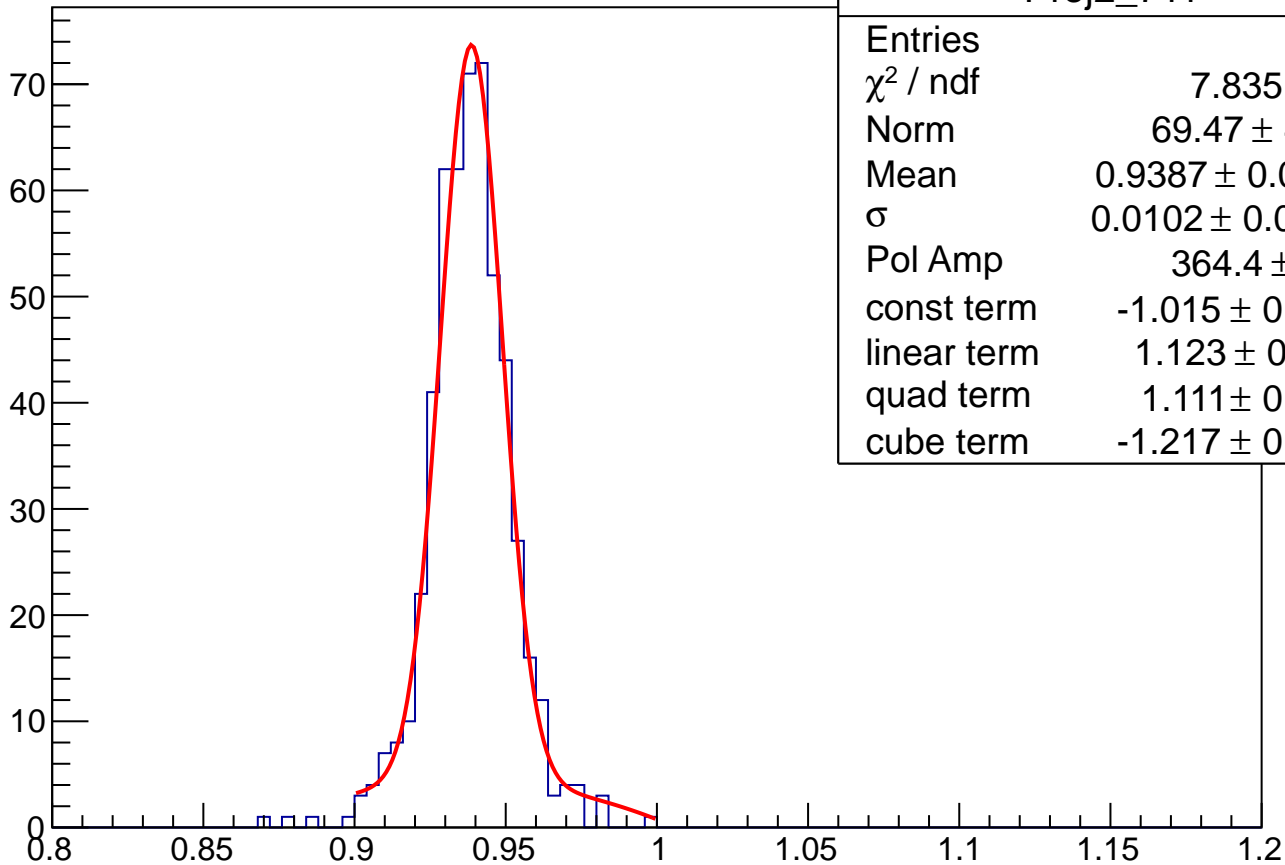
Proj2\_79

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 565                   |
| $\chi^2 / \text{ndf}$ | 12.08 / 14            |
| Norm                  | $67.06 \pm 4.08$      |
| Mean                  | $0.9386 \pm 0.0007$   |
| $\sigma$              | $0.01144 \pm 0.00063$ |
| Pol Amp               | $366.6 \pm 0.5$       |
| const term            | $-0.8284 \pm 0.1489$  |
| linear term           | $0.9395 \pm 0.1415$   |
| quad term             | $0.887 \pm 0.145$     |
| cube term             | $-0.9975 \pm 0.1397$  |

# PhiThetaMassPim



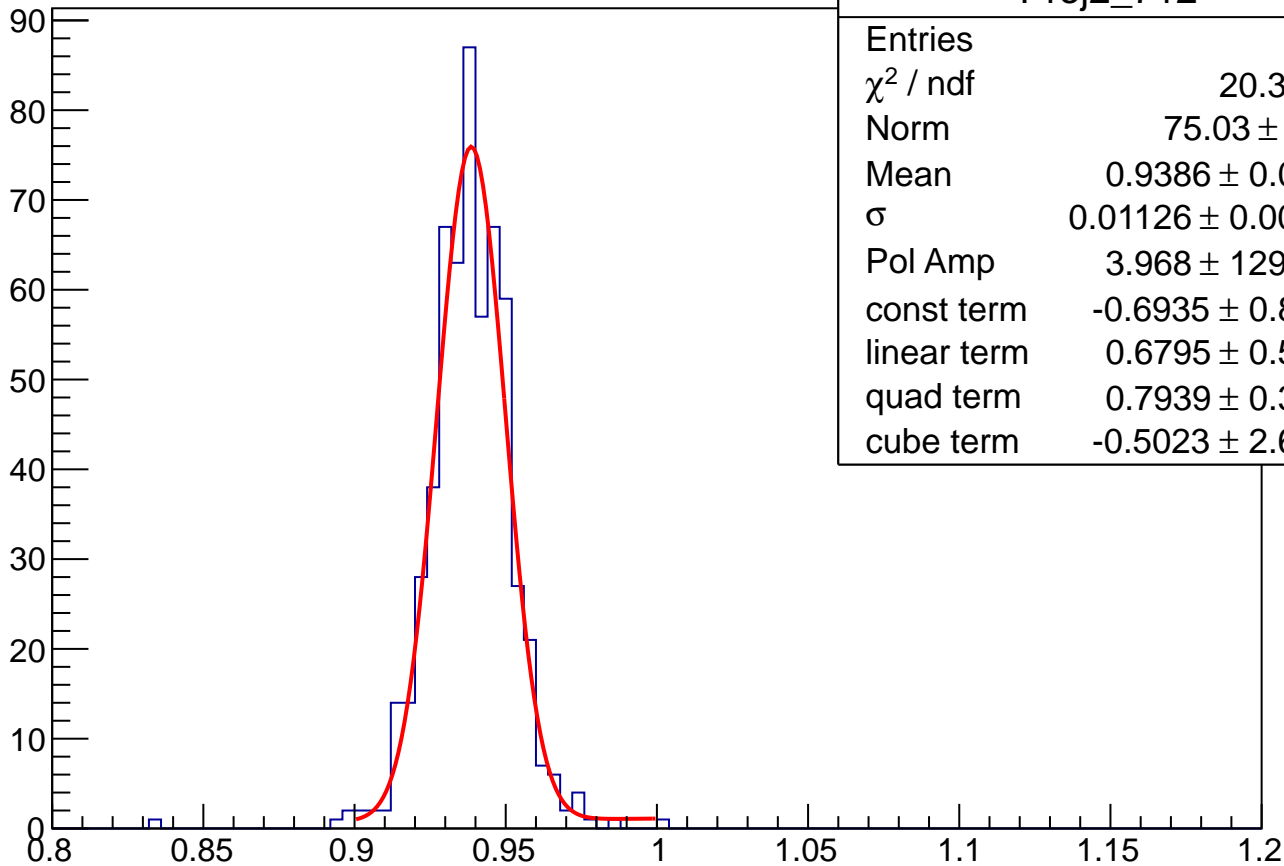
# PhiThetaMassPim



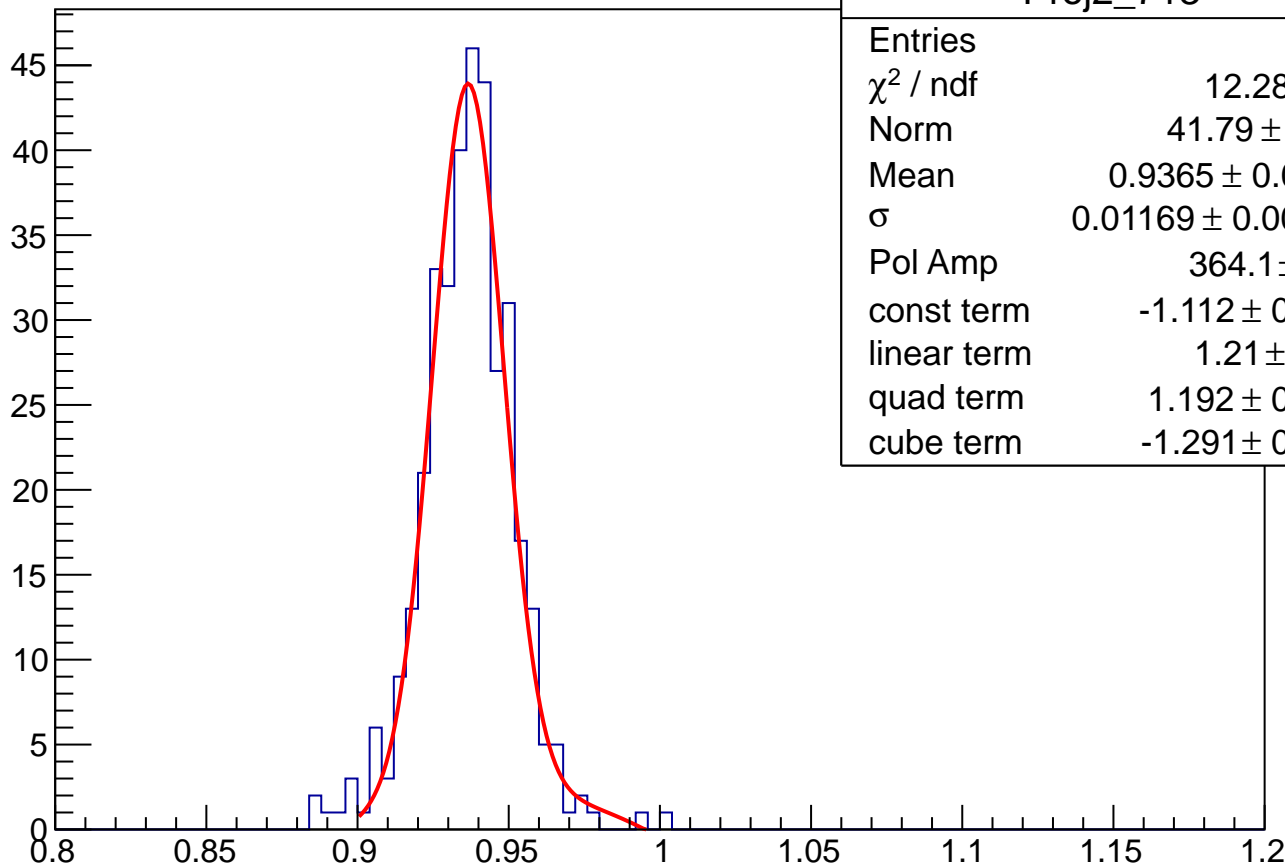
Proj2\_711

|                       |                     |
|-----------------------|---------------------|
| Entries               | 532                 |
| $\chi^2 / \text{ndf}$ | 7.835 / 13          |
| Norm                  | $69.47 \pm 4.30$    |
| Mean                  | $0.9387 \pm 0.0001$ |
| $\sigma$              | $0.0102 \pm 0.0004$ |
| Pol Amp               | $364.4 \pm 0.6$     |
| const term            | $-1.015 \pm 0.193$  |
| linear term           | $1.123 \pm 0.201$   |
| quad term             | $1.111 \pm 0.204$   |
| cube term             | $-1.217 \pm 0.214$  |

# PhiThetaMassPim



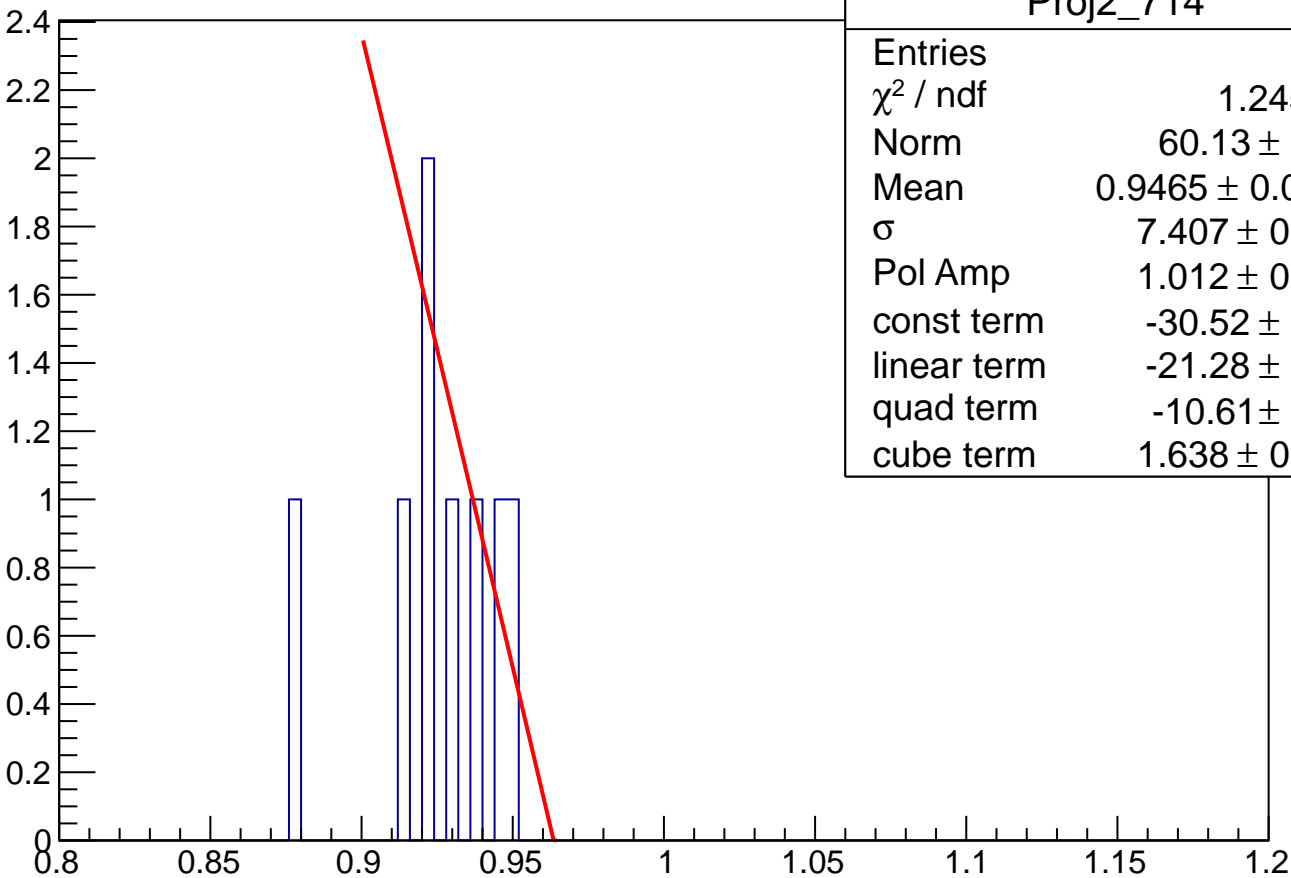
# PhiThetaMassPim



Proj2\_713

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 359                   |
| $\chi^2 / \text{ndf}$ | 12.28 / 13            |
| Norm                  | $41.79 \pm 3.10$      |
| Mean                  | $0.9365 \pm 0.0008$   |
| $\sigma$              | $0.01169 \pm 0.00069$ |
| Pol Amp               | $364.1 \pm 0.9$       |
| const term            | $-1.112 \pm 0.287$    |
| linear term           | $1.21 \pm 0.31$       |
| quad term             | $1.192 \pm 0.314$     |
| cube term             | $-1.291 \pm 0.339$    |

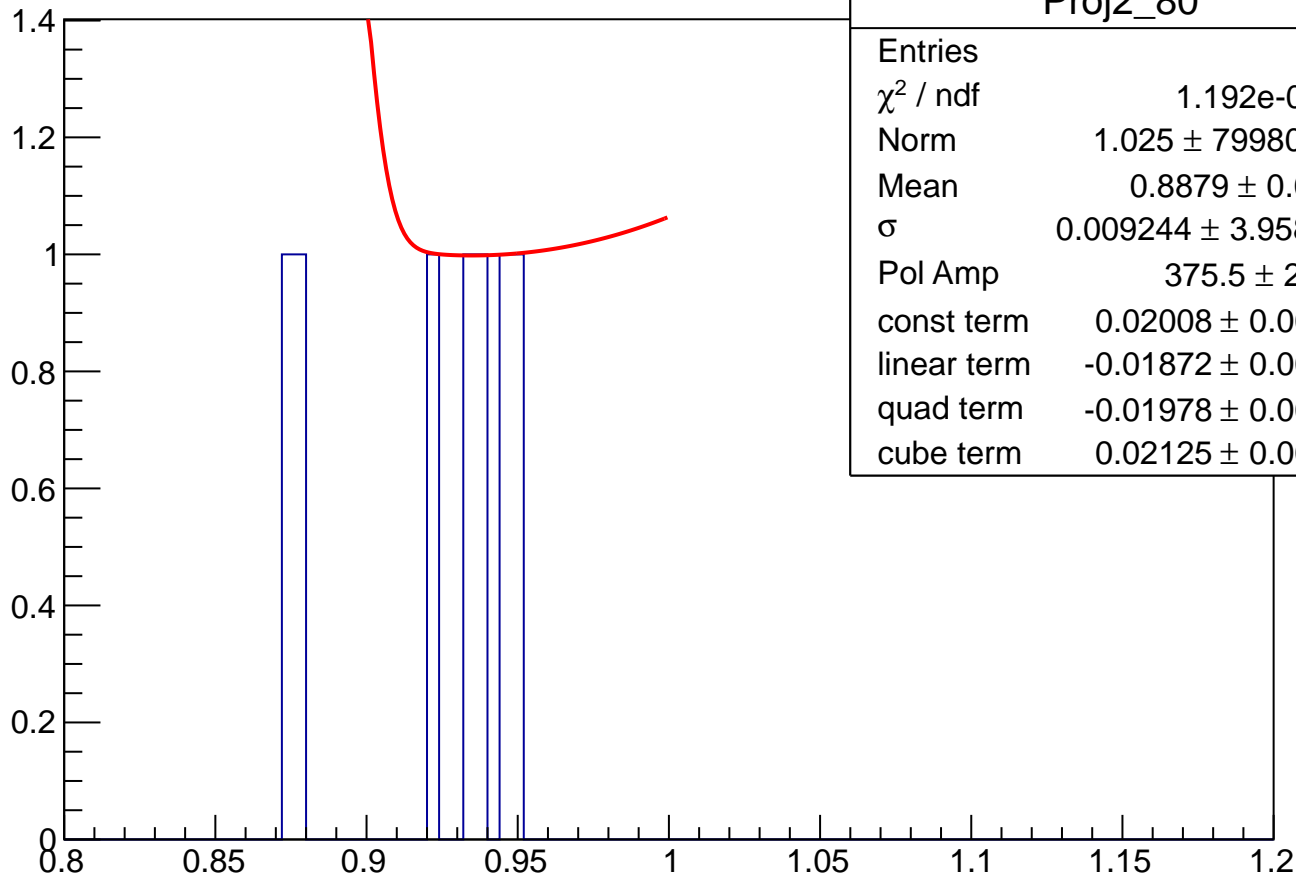
# PhiThetaMassPim



| Proj2_714             |                     |
|-----------------------|---------------------|
| Entries               | 8                   |
| $\chi^2 / \text{ndf}$ | 1.245 / 0           |
| Norm                  | $60.13 \pm 3.10$    |
| Mean                  | $0.9465 \pm 0.0740$ |
| $\sigma$              | $7.407 \pm 0.073$   |
| Pol Amp               | $1.012 \pm 0.082$   |
| const term            | $-30.52 \pm 0.30$   |
| linear term           | $-21.28 \pm 0.00$   |
| quad term             | $-10.61 \pm 0.34$   |
| cube term             | $1.638 \pm 0.726$   |



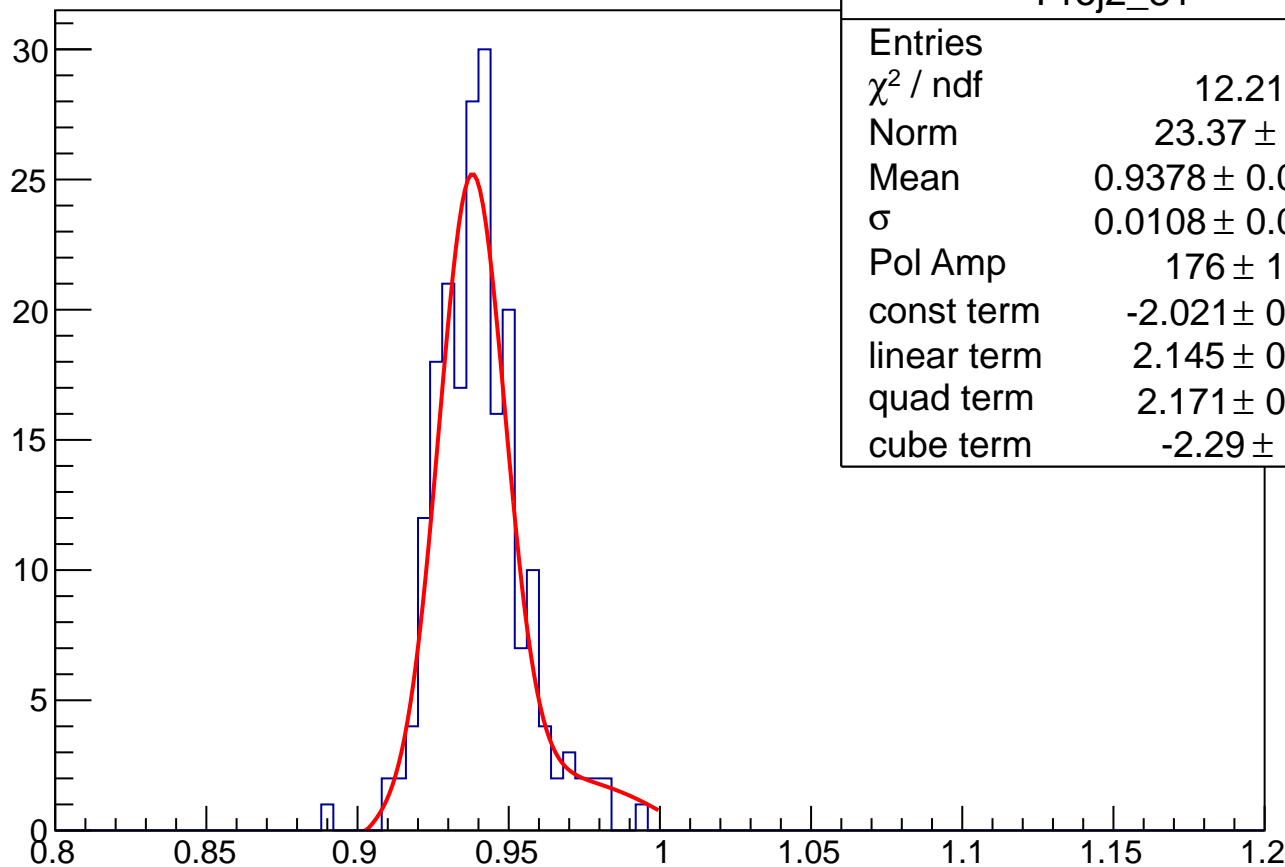
# PhiThetaMassPim



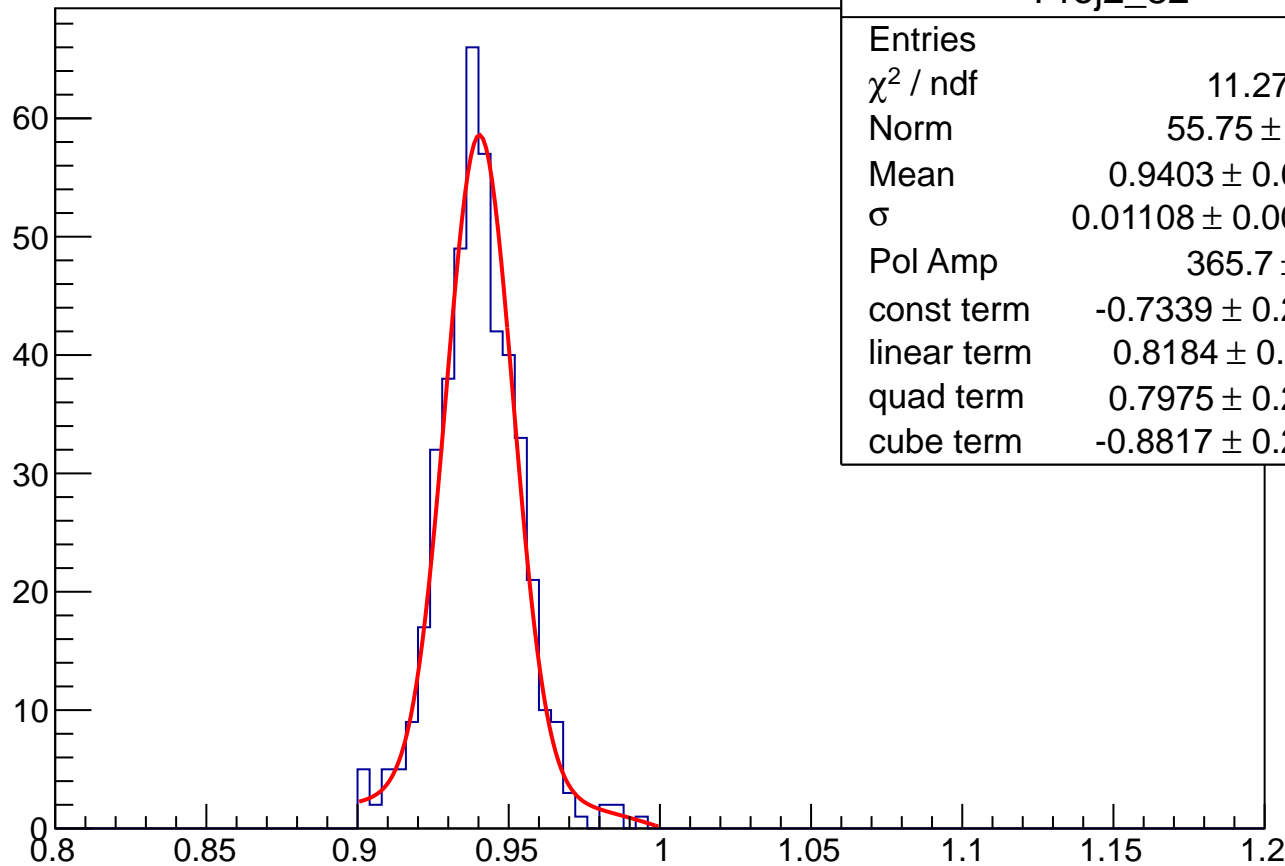
Proj2\_80

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 7                       |
| $\chi^2 / \text{ndf}$ | 1.192e-05 / 0           |
| Norm                  | $1.025 \pm 79980.000$   |
| Mean                  | $0.8879 \pm 0.0907$     |
| $\sigma$              | $0.009244 \pm 3.958168$ |
| Pol Amp               | $375.5 \pm 245.3$       |
| const term            | $0.02008 \pm 0.00174$   |
| linear term           | $-0.01872 \pm 0.00185$  |
| quad term             | $-0.01978 \pm 0.00197$  |
| cube term             | $0.02125 \pm 0.00210$   |

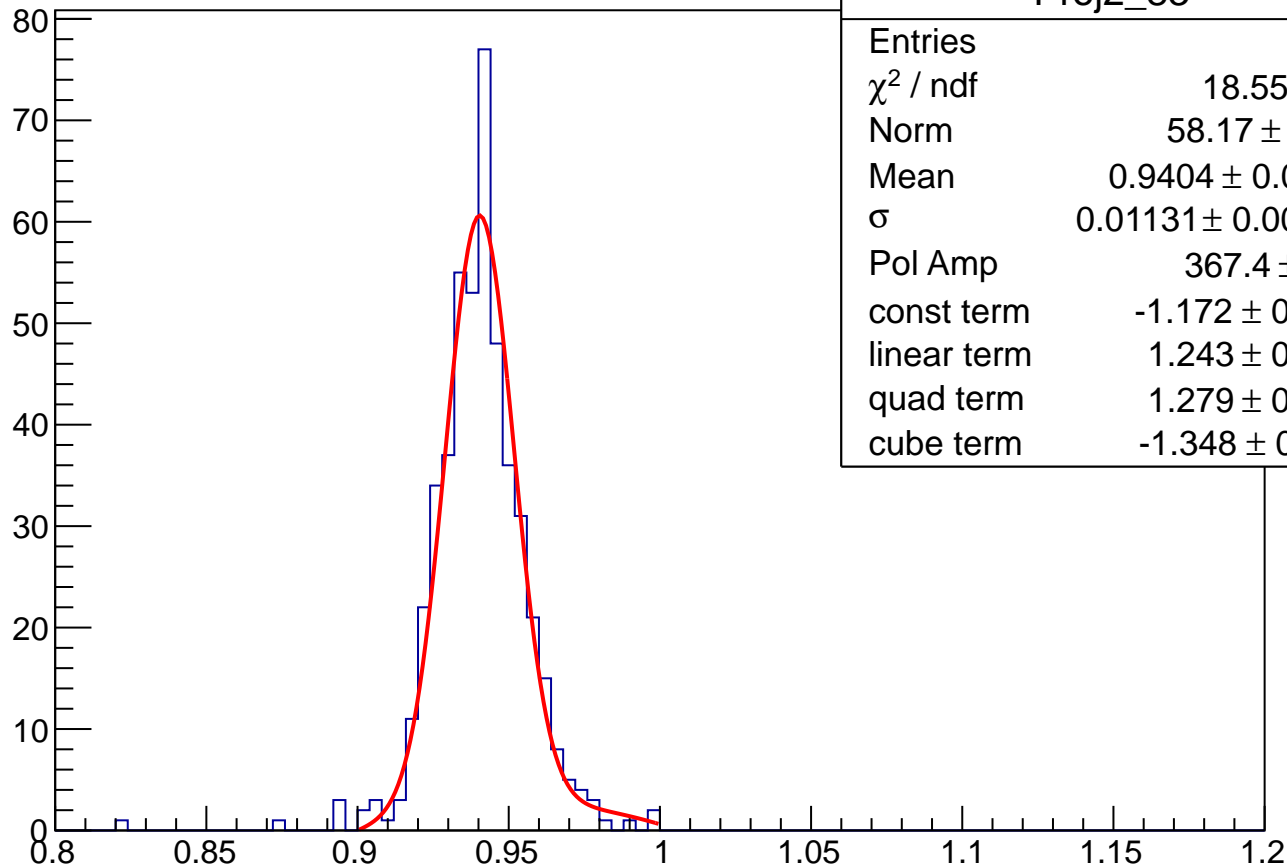
# PhiThetaMassPim



# PhiThetaMassPim



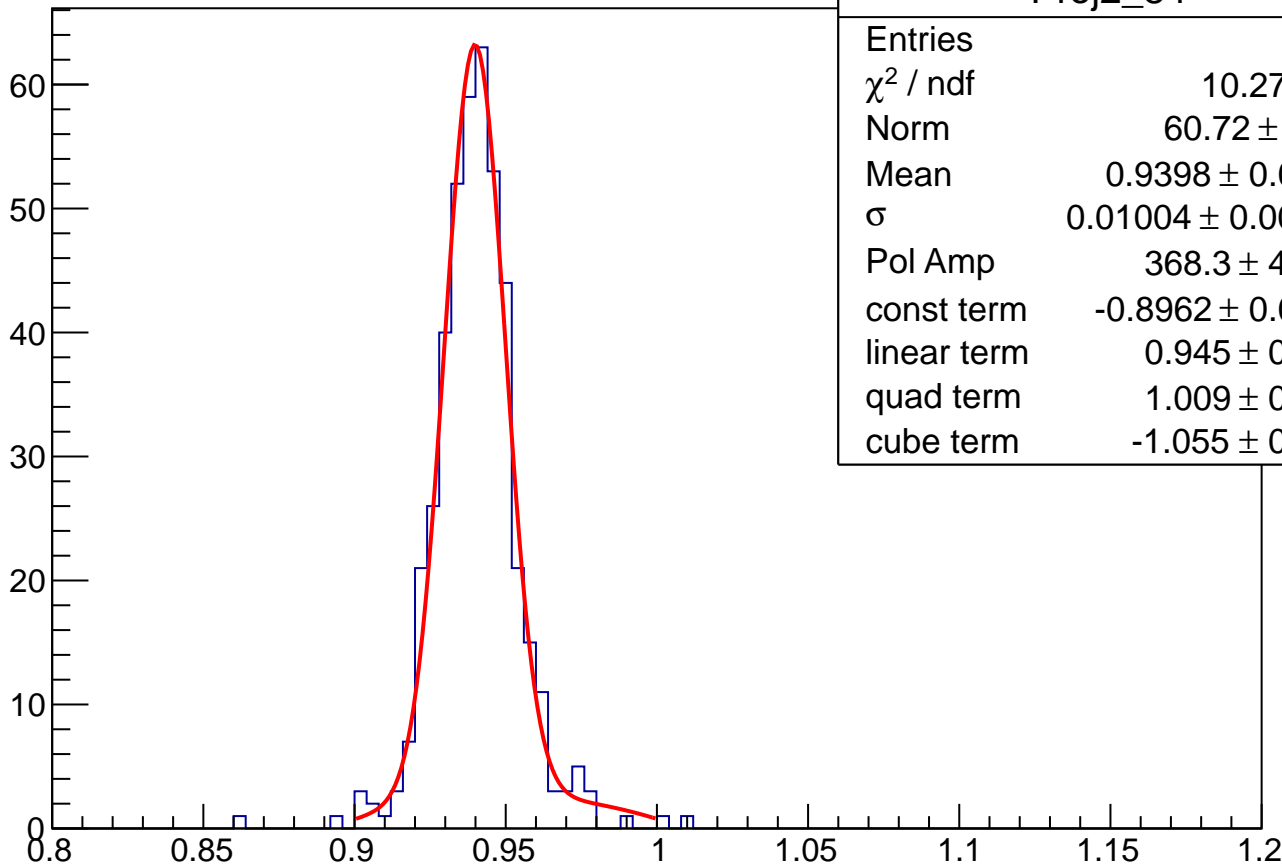
# PhiThetaMassPim



Proj2\_83

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 478                   |
| $\chi^2 / \text{ndf}$ | 18.55 / 15            |
| Norm                  | $58.17 \pm 3.73$      |
| Mean                  | $0.9404 \pm 0.0007$   |
| $\sigma$              | $0.01131 \pm 0.00052$ |
| Pol Amp               | $367.4 \pm 0.5$       |
| const term            | $-1.172 \pm 0.198$    |
| linear term           | $1.243 \pm 0.205$     |
| quad term             | $1.279 \pm 0.212$     |
| cube term             | $-1.348 \pm 0.221$    |

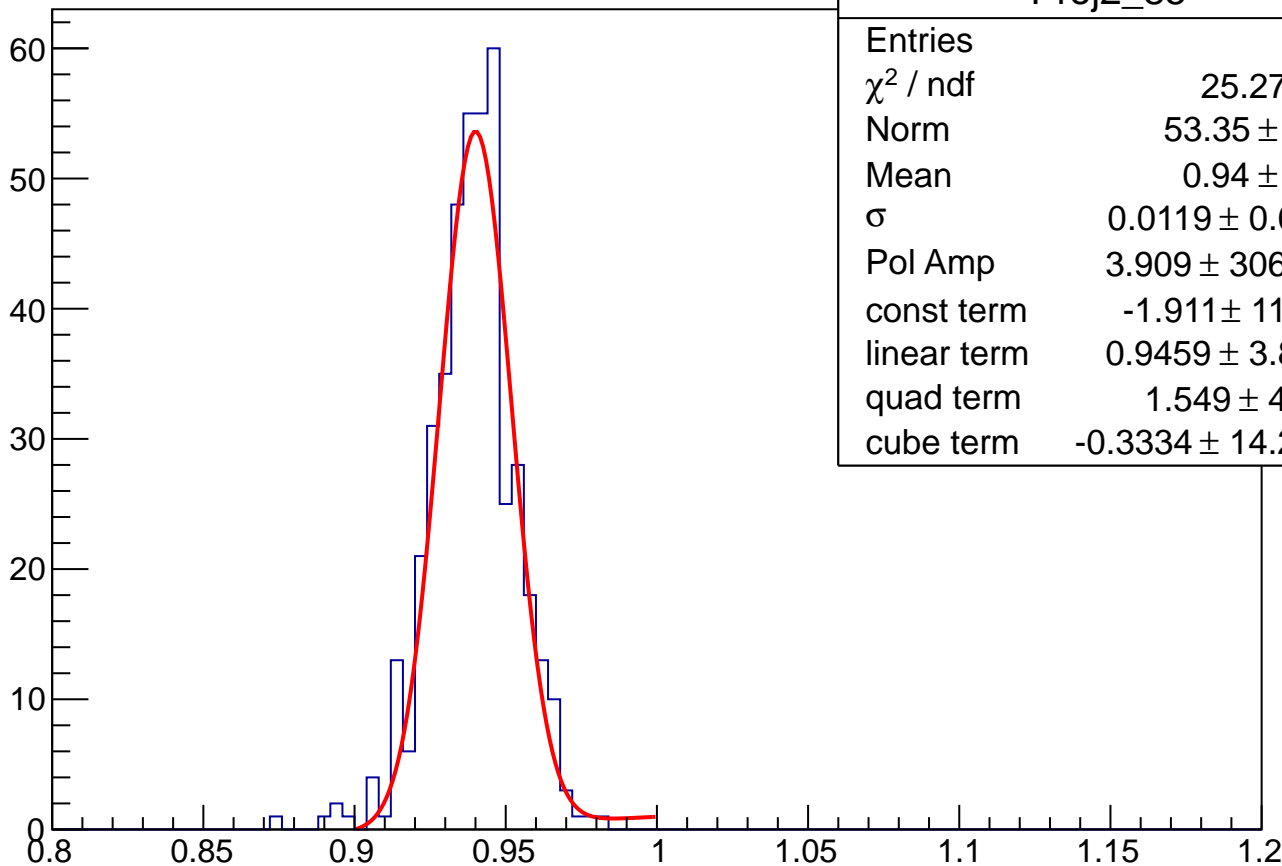
# PhiThetaMassPim



Proj2\_84

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 440                   |
| $\chi^2 / \text{ndf}$ | 10.27 / 13            |
| Norm                  | $60.72 \pm 4.02$      |
| Mean                  | $0.9398 \pm 0.0006$   |
| $\sigma$              | $0.01004 \pm 0.00057$ |
| Pol Amp               | $368.3 \pm 480.0$     |
| const term            | $-0.8962 \pm 0.0120$  |
| linear term           | $0.945 \pm 0.015$     |
| quad term             | $1.009 \pm 0.016$     |
| cube term             | $-1.055 \pm 0.015$    |

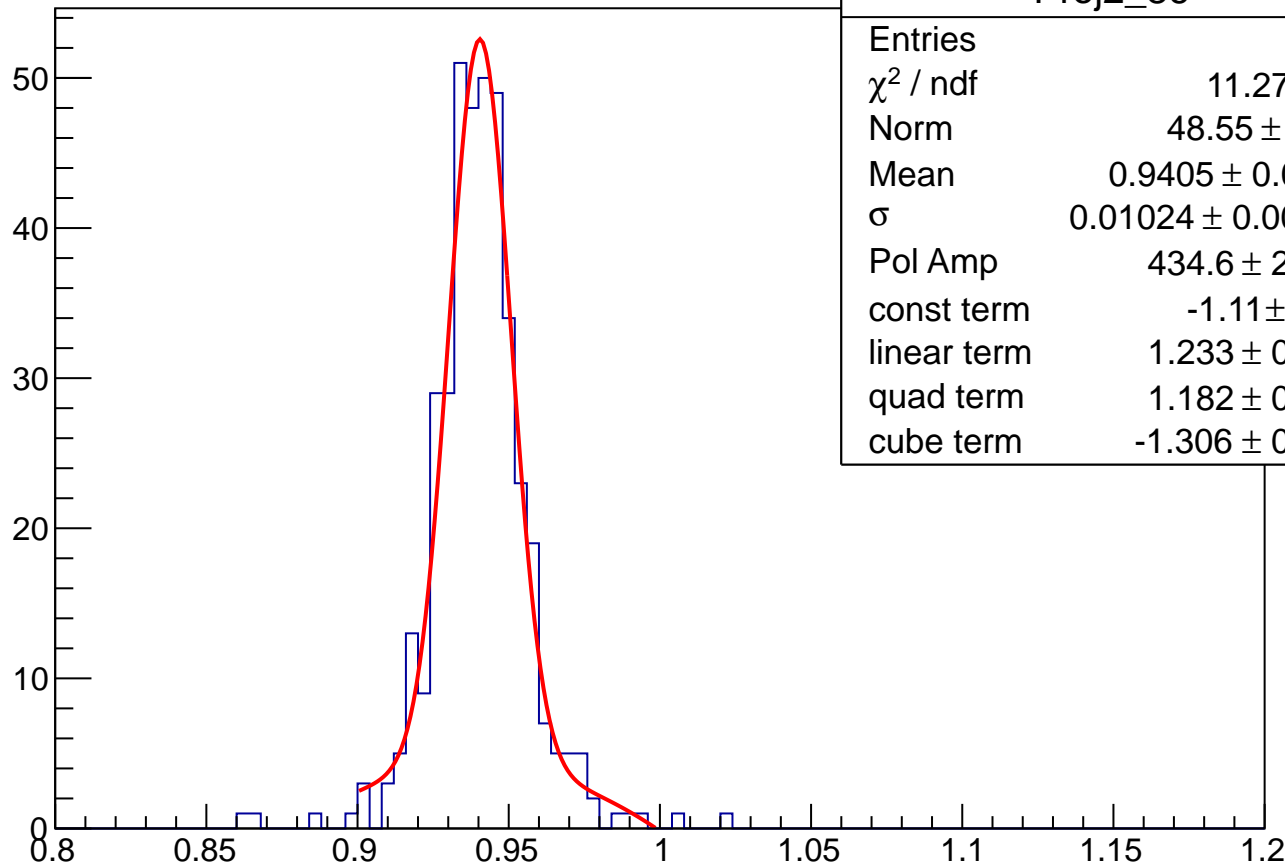
# PhiThetaMassPim



Proj2\_85

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 434                   |
| $\chi^2 / \text{ndf}$ | 25.27 / 12            |
| Norm                  | $53.35 \pm 3.44$      |
| Mean                  | $0.94 \pm 0.00$       |
| $\sigma$              | $0.0119 \pm 0.0007$   |
| Pol Amp               | $3.909 \pm 306.266$   |
| const term            | $-1.911 \pm 11.278$   |
| linear term           | $0.9459 \pm 3.8878$   |
| quad term             | $1.549 \pm 4.646$     |
| cube term             | $-0.3334 \pm 14.2328$ |

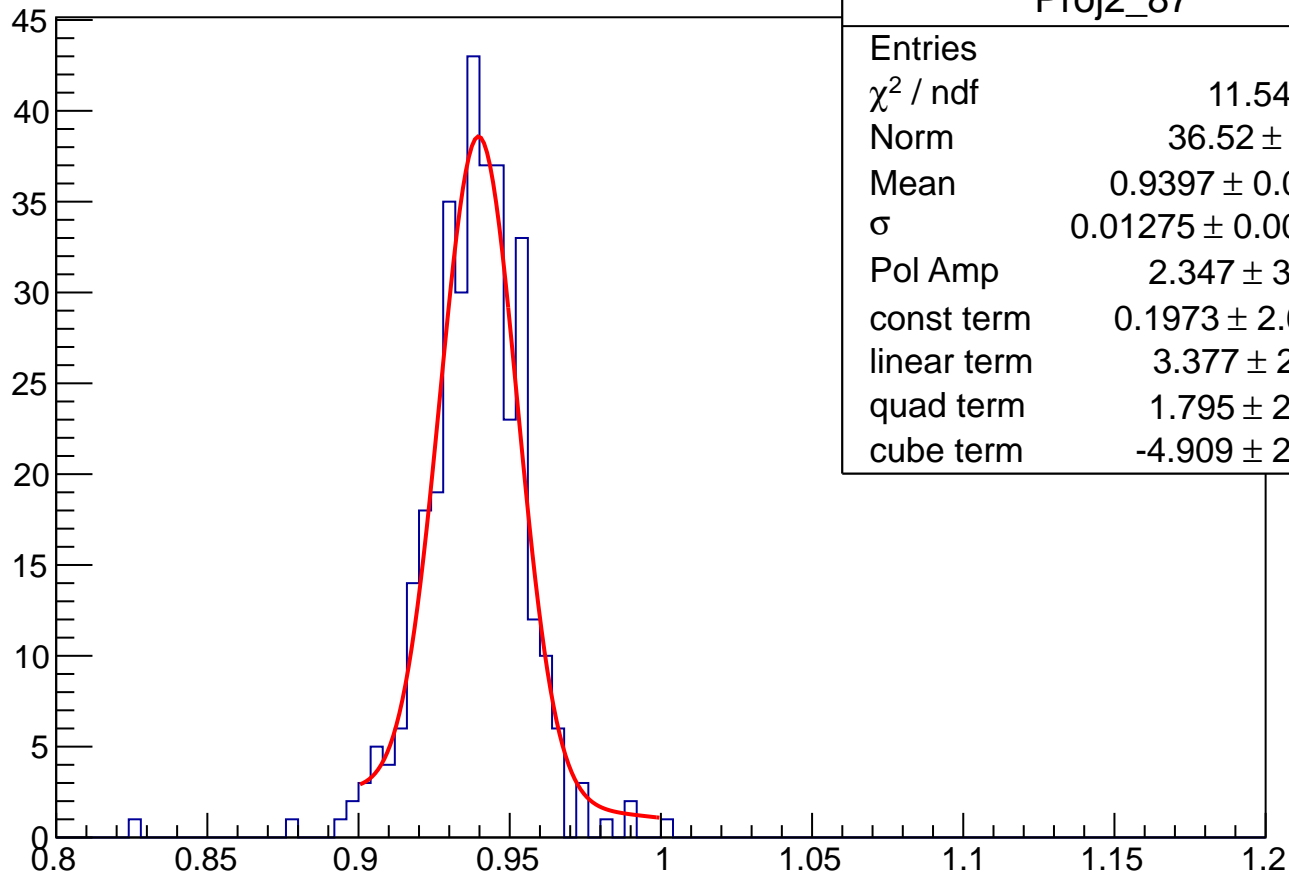
# PhiThetaMassPim



Proj2\_86

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 398                   |
| $\chi^2 / \text{ndf}$ | 11.27 / 14            |
| Norm                  | $48.55 \pm 3.73$      |
| Mean                  | $0.9405 \pm 0.0007$   |
| $\sigma$              | $0.01024 \pm 0.00076$ |
| Pol Amp               | $434.6 \pm 268.9$     |
| const term            | $-1.11 \pm 0.01$      |
| linear term           | $1.233 \pm 0.012$     |
| quad term             | $1.182 \pm 0.012$     |
| cube term             | $-1.306 \pm 0.012$    |

# PhiThetaMassPim

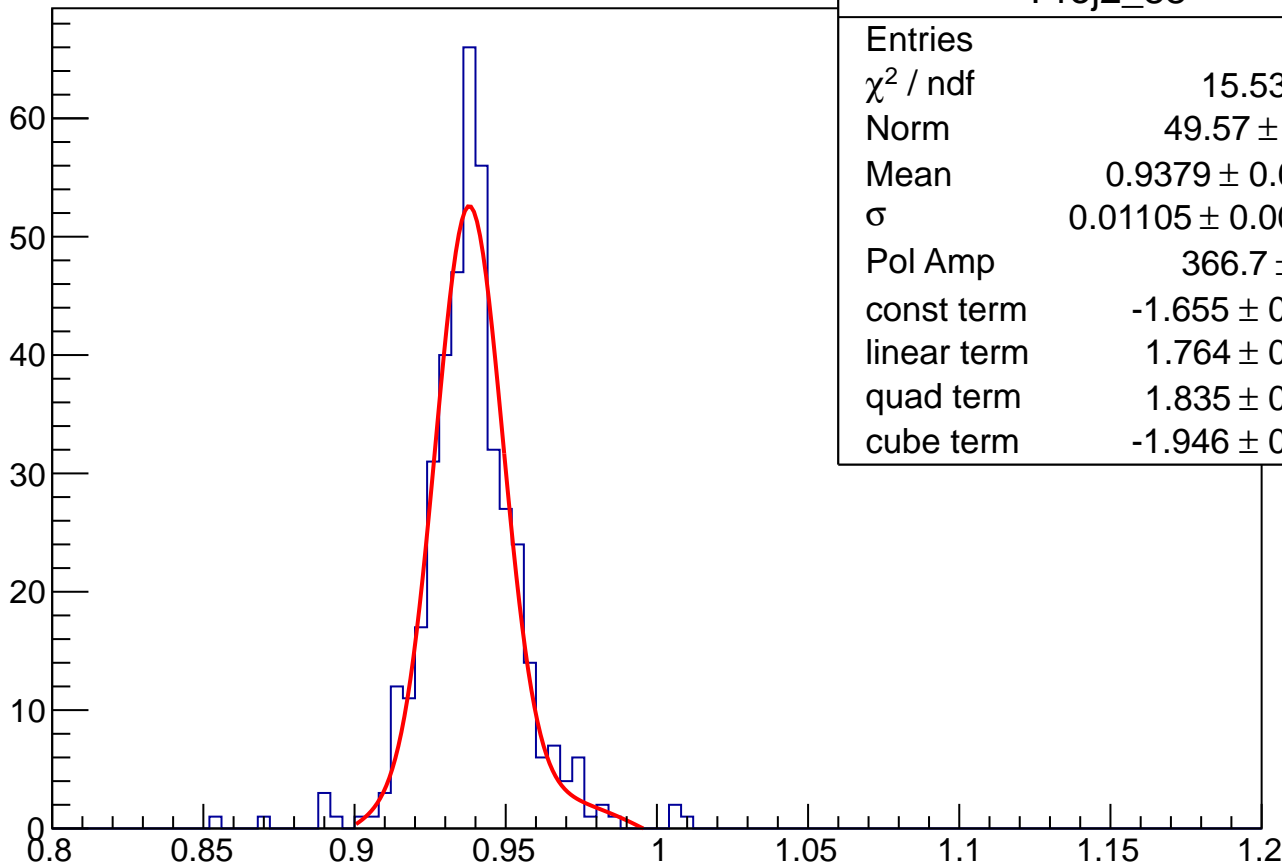


Proj2\_87

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 347                   |
| $\chi^2 / \text{ndf}$ | 11.54 / 12            |
| Norm                  | $36.52 \pm 2.84$      |
| Mean                  | $0.9397 \pm 0.0010$   |
| $\sigma$              | $0.01275 \pm 0.00100$ |
| Pol Amp               | $2.347 \pm 3.300$     |
| const term            | $0.1973 \pm 2.6631$   |
| linear term           | $3.377 \pm 2.741$     |
| quad term             | $1.795 \pm 2.773$     |
| cube term             | $-4.909 \pm 2.763$    |



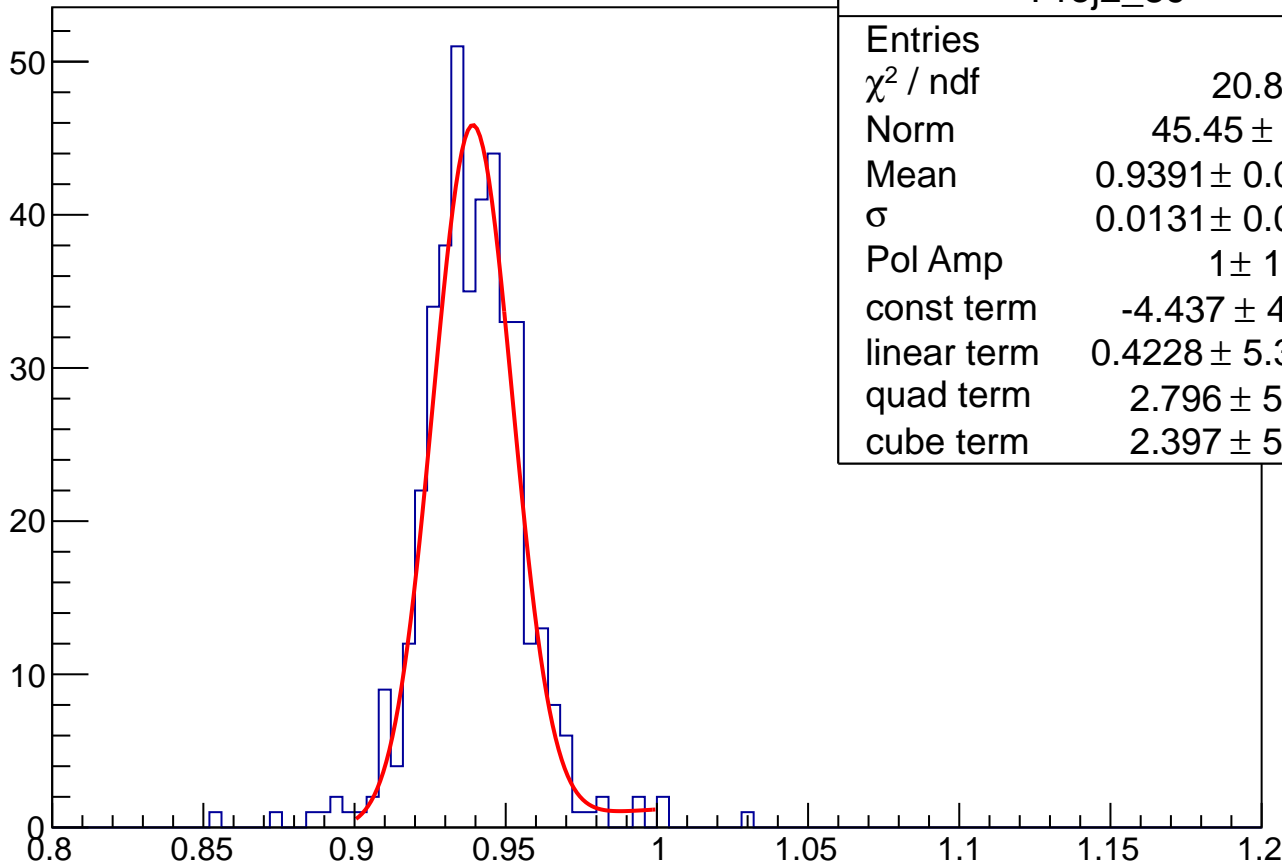
# PhiThetaMassPim



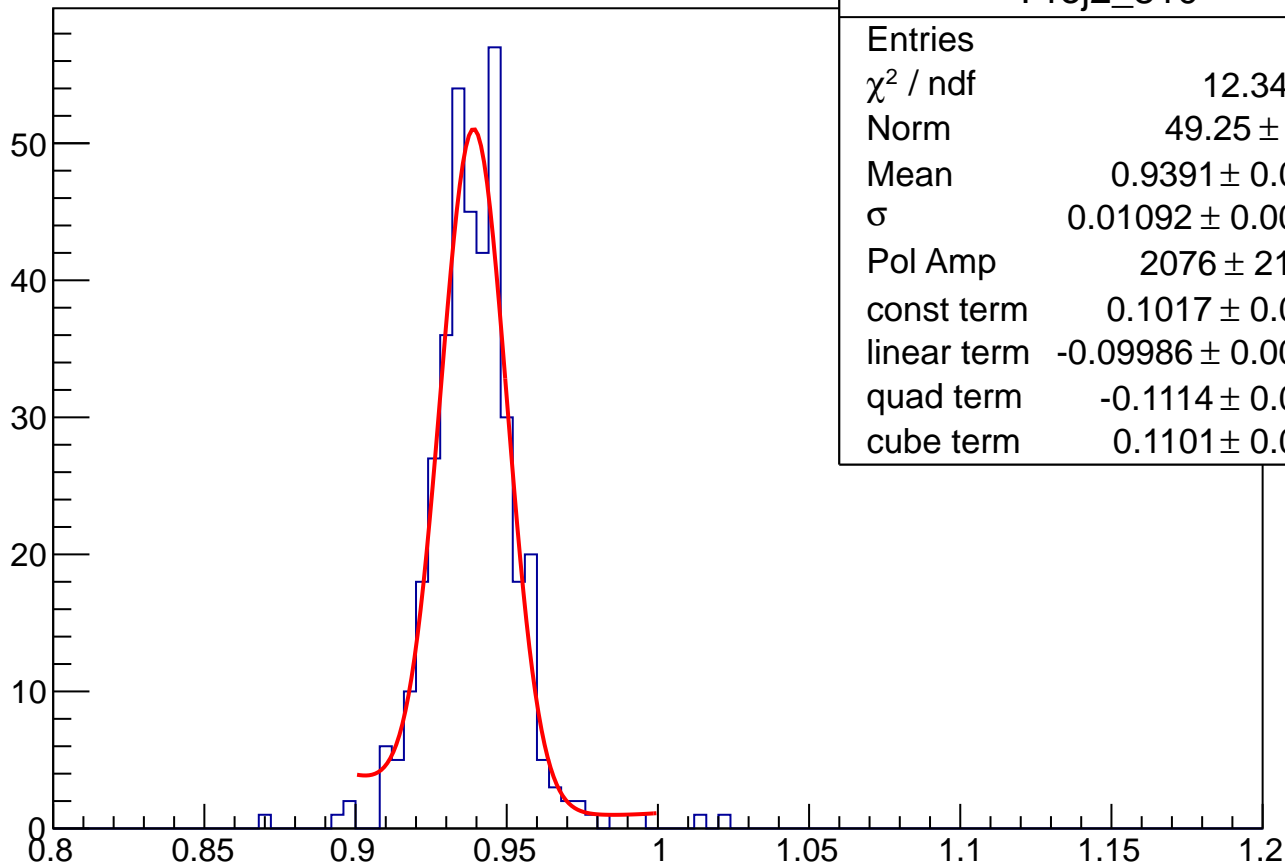
Proj2\_88

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 418                   |
| $\chi^2 / \text{ndf}$ | 15.53 / 14            |
| Norm                  | $49.57 \pm 3.68$      |
| Mean                  | $0.9379 \pm 0.0007$   |
| $\sigma$              | $0.01105 \pm 0.00058$ |
| Pol Amp               | $366.7 \pm 0.5$       |
| const term            | $-1.655 \pm 0.305$    |
| linear term           | $1.764 \pm 0.322$     |
| quad term             | $1.835 \pm 0.336$     |
| cube term             | $-1.946 \pm 0.355$    |

# PhiThetaMassPim



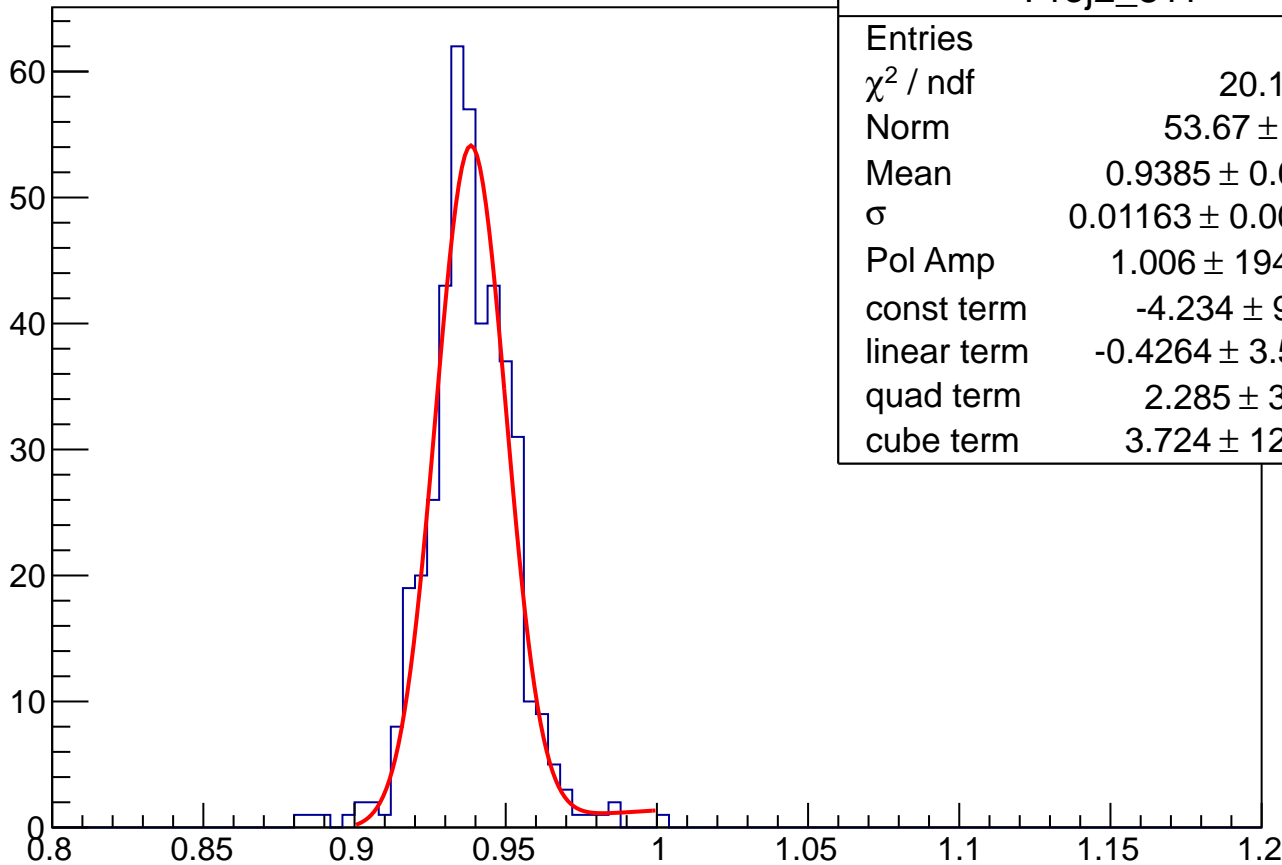
# PhiThetaMassPim



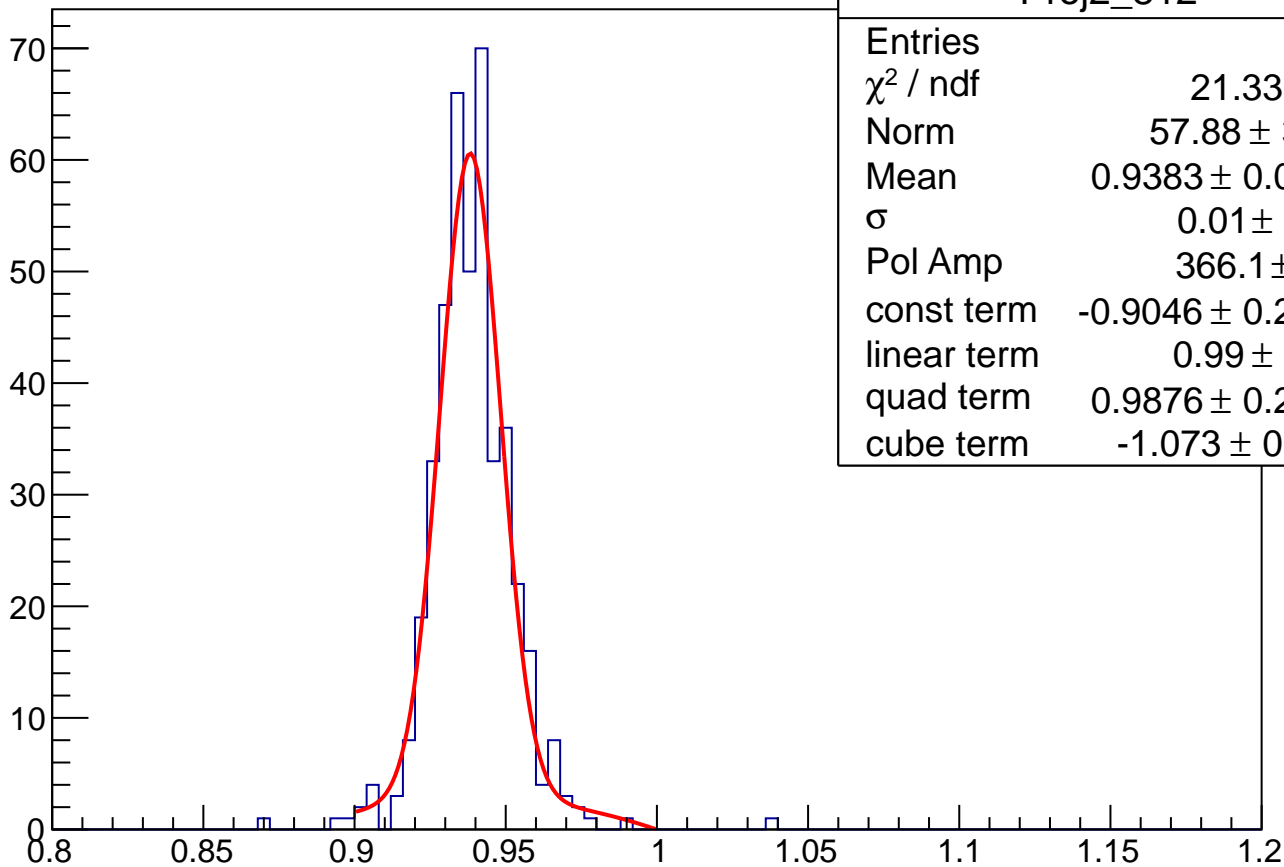
Proj2\_810

|                       |                        |
|-----------------------|------------------------|
| Entries               | 390                    |
| $\chi^2 / \text{ndf}$ | 12.34 / 13             |
| Norm                  | $49.25 \pm 3.43$       |
| Mean                  | $0.9391 \pm 0.0008$    |
| $\sigma$              | $0.01092 \pm 0.00069$  |
| Pol Amp               | $2076 \pm 2149.1$      |
| const term            | $0.1017 \pm 0.0023$    |
| linear term           | $-0.09986 \pm 0.00234$ |
| quad term             | $-0.1114 \pm 0.0024$   |
| cube term             | $0.1101 \pm 0.0024$    |

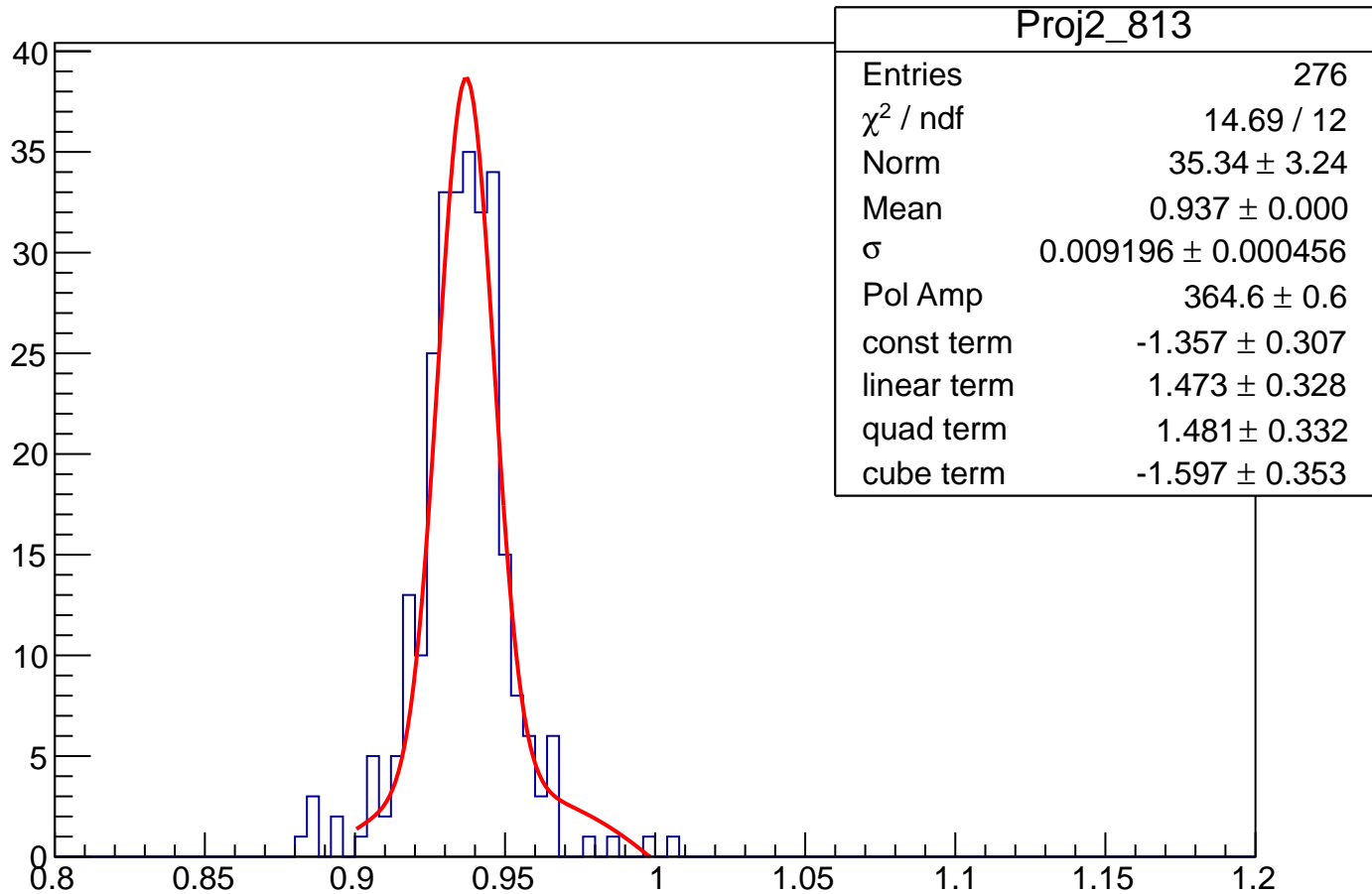
# PhiThetaMassPim



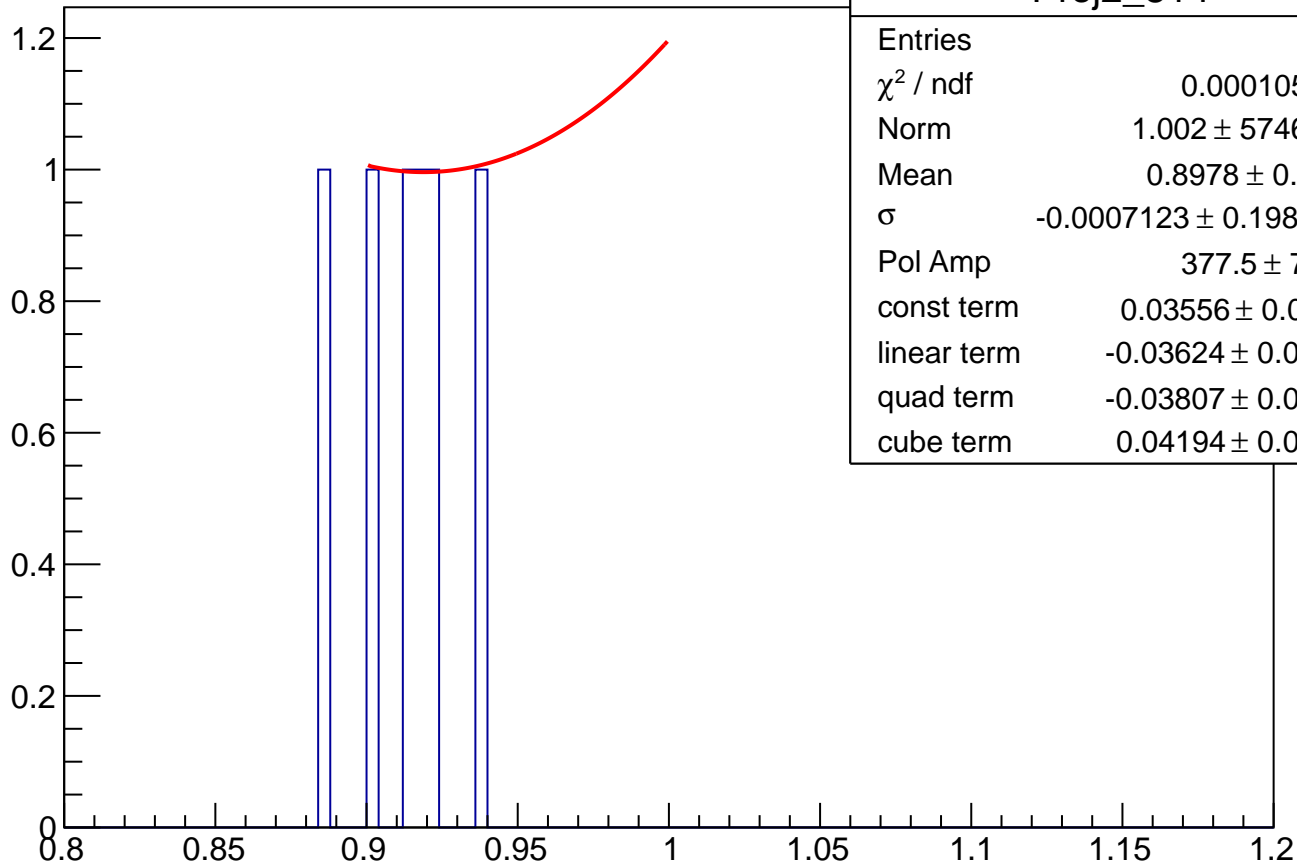
# PhiThetaMassPim



# PhiThetaMassPim



# PhiThetaMassPim



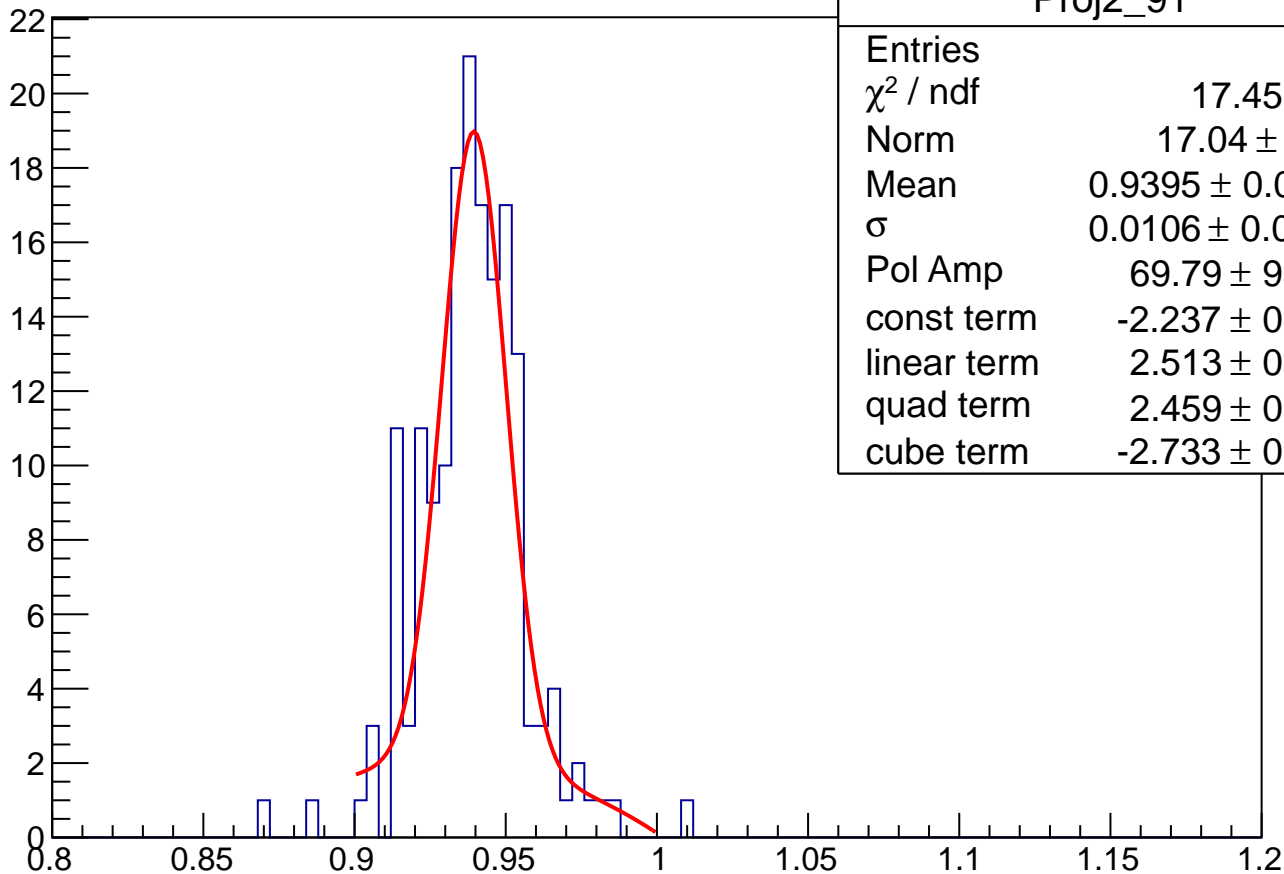
Proj2\_814

|                       |                            |
|-----------------------|----------------------------|
| Entries               | 6                          |
| $\chi^2 / \text{ndf}$ | 0.0001056 / 0              |
| Norm                  | $1.002 \pm 5746.972$       |
| Mean                  | $0.8978 \pm 0.0579$        |
| $\sigma$              | $-0.0007123 \pm 0.1983069$ |
| Pol Amp               | $377.5 \pm 771.8$          |
| const term            | $0.03556 \pm 0.00661$      |
| linear term           | $-0.03624 \pm 0.00592$     |
| quad term             | $-0.03807 \pm 0.00653$     |
| cube term             | $0.04194 \pm 0.00892$      |





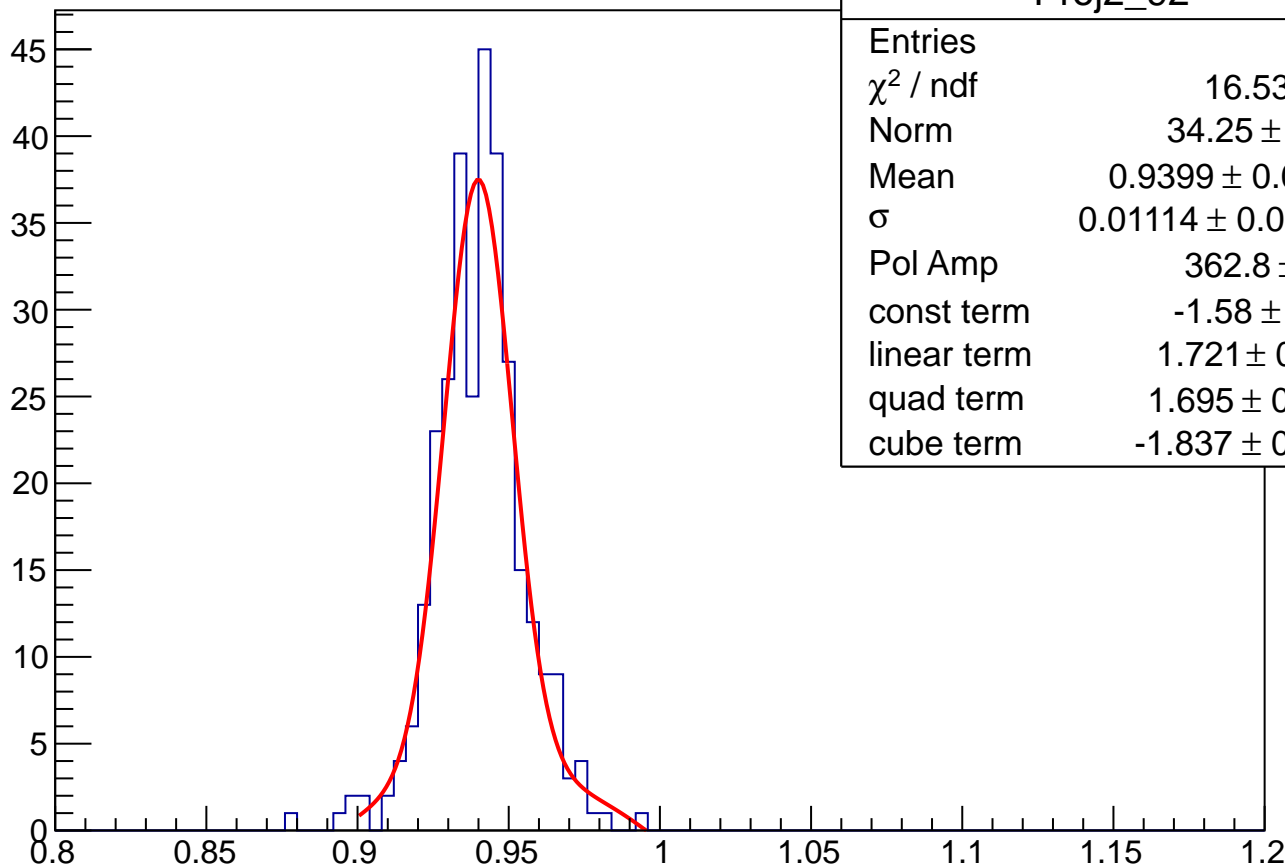
# PhiThetaMassPim



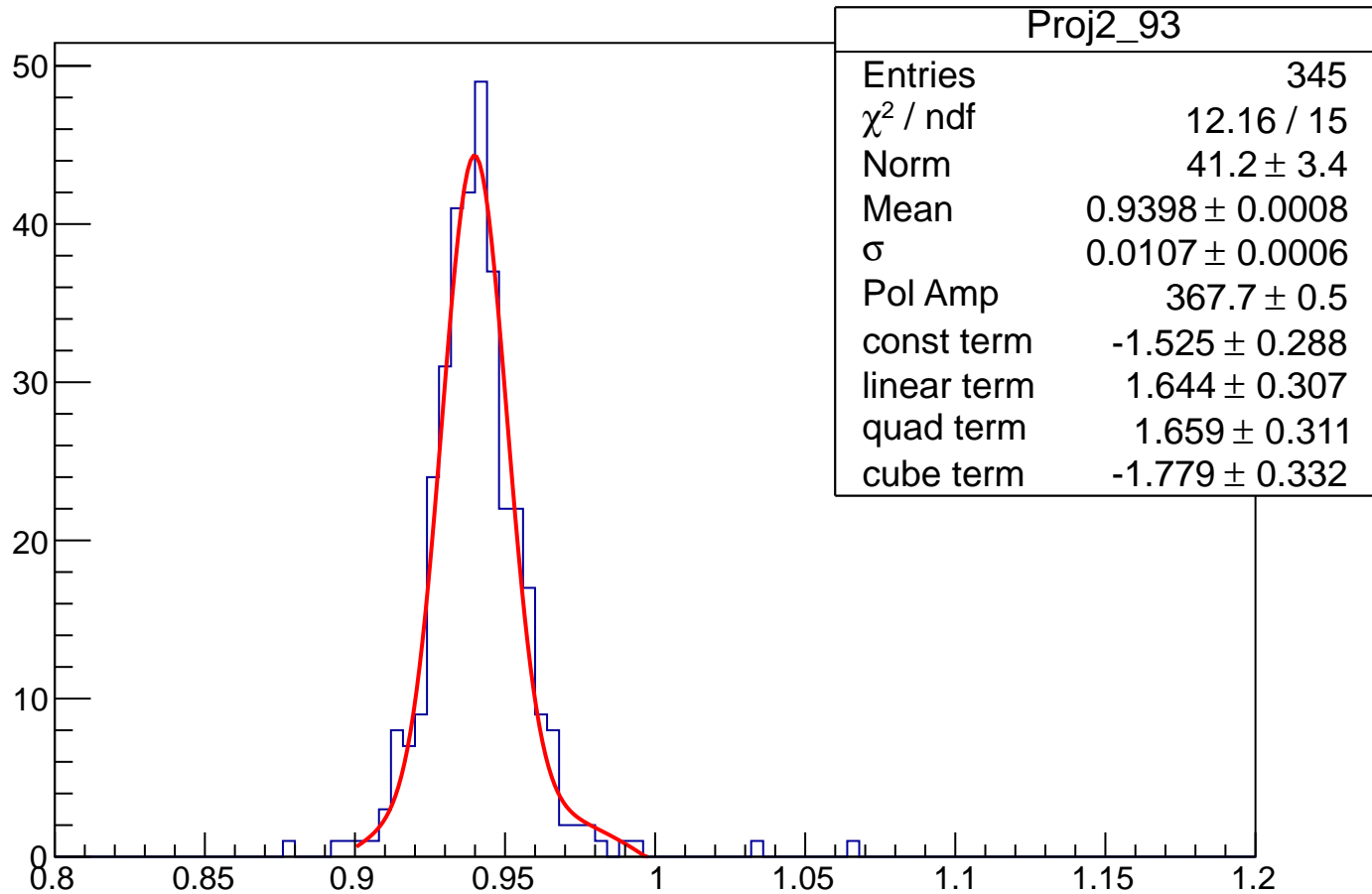
Proj2\_91

|                       |                     |
|-----------------------|---------------------|
| Entries               | 168                 |
| $\chi^2 / \text{ndf}$ | 17.45 / 13          |
| Norm                  | $17.04 \pm 2.31$    |
| Mean                  | $0.9395 \pm 0.0013$ |
| $\sigma$              | $0.0106 \pm 0.0015$ |
| Pol Amp               | $69.79 \pm 93.09$   |
| const term            | $-2.237 \pm 0.060$  |
| linear term           | $2.513 \pm 0.063$   |
| quad term             | $2.459 \pm 0.064$   |
| cube term             | $-2.733 \pm 0.062$  |

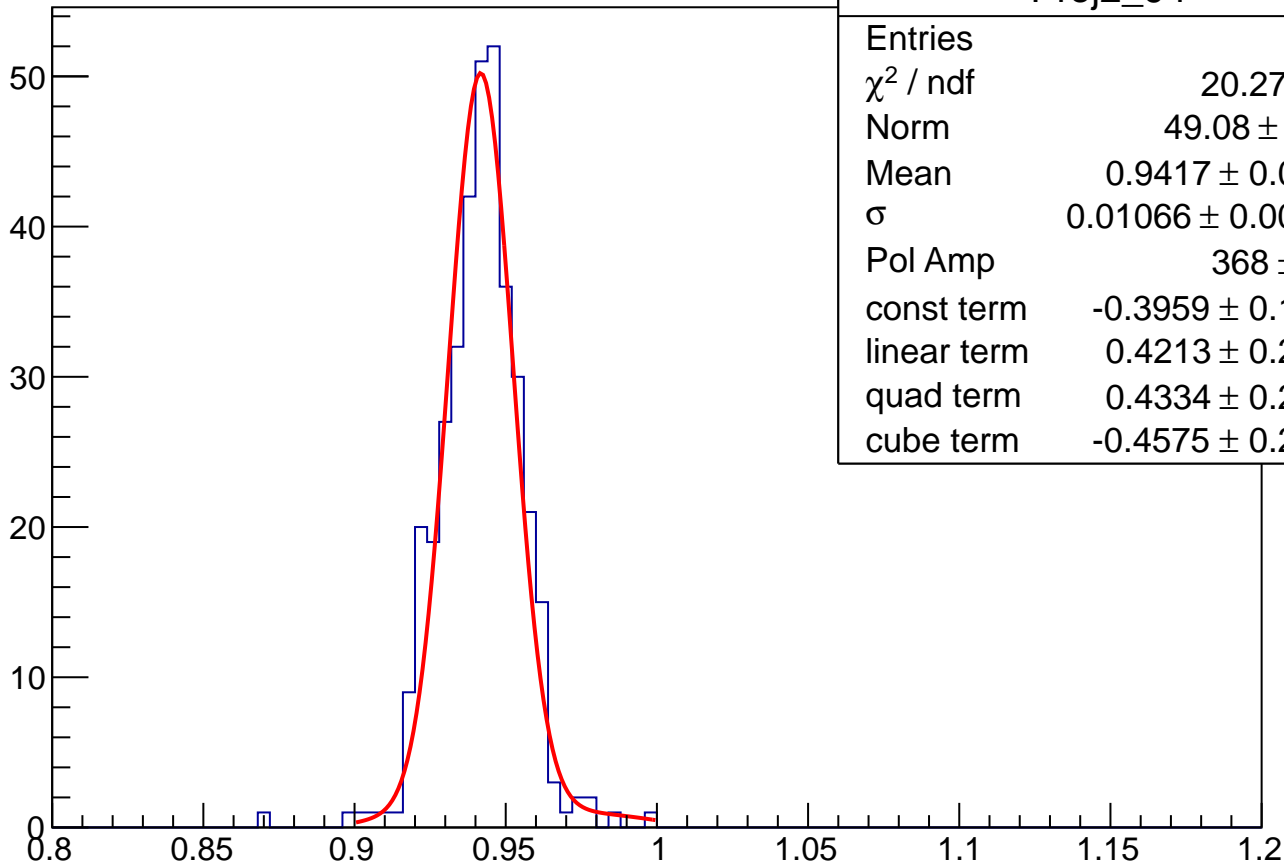
# PhiThetaMassPim



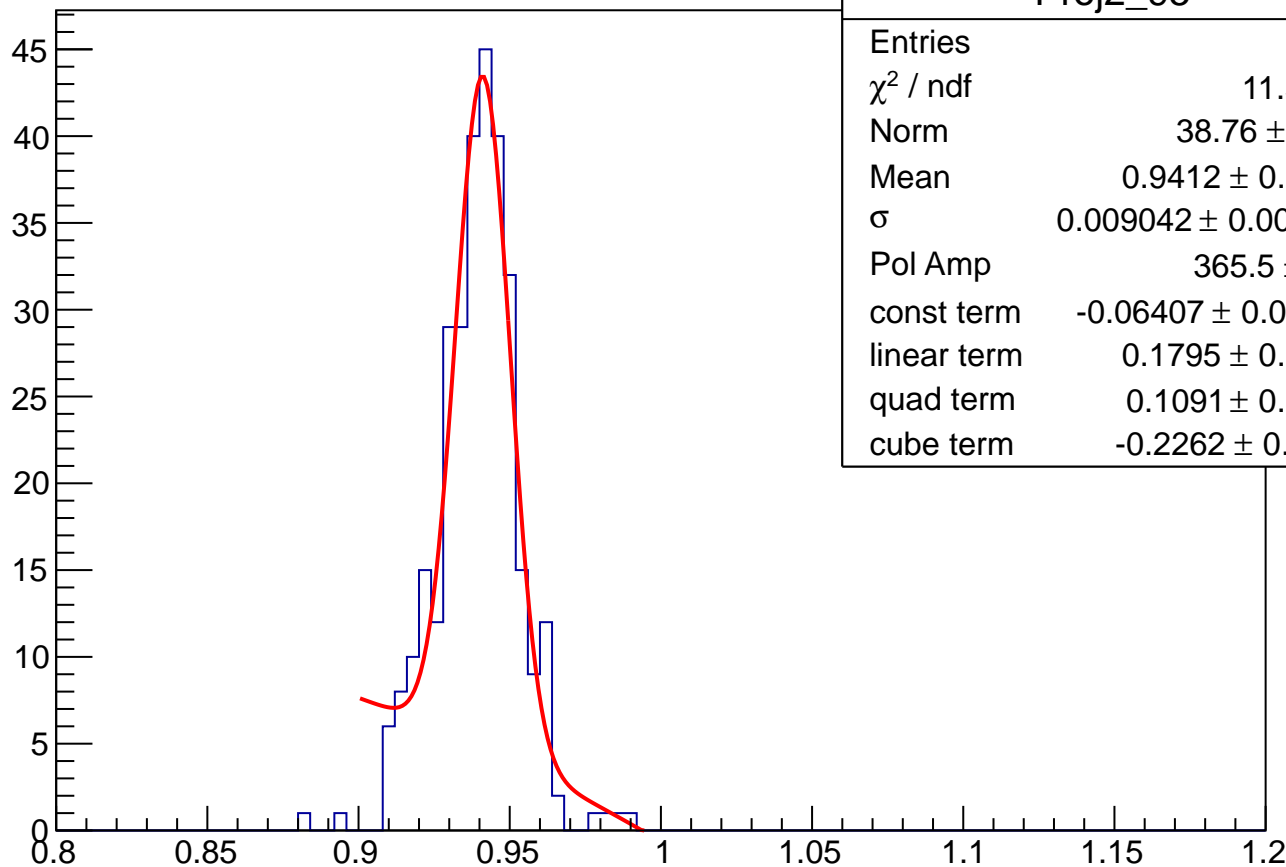
# PhiThetaMassPim



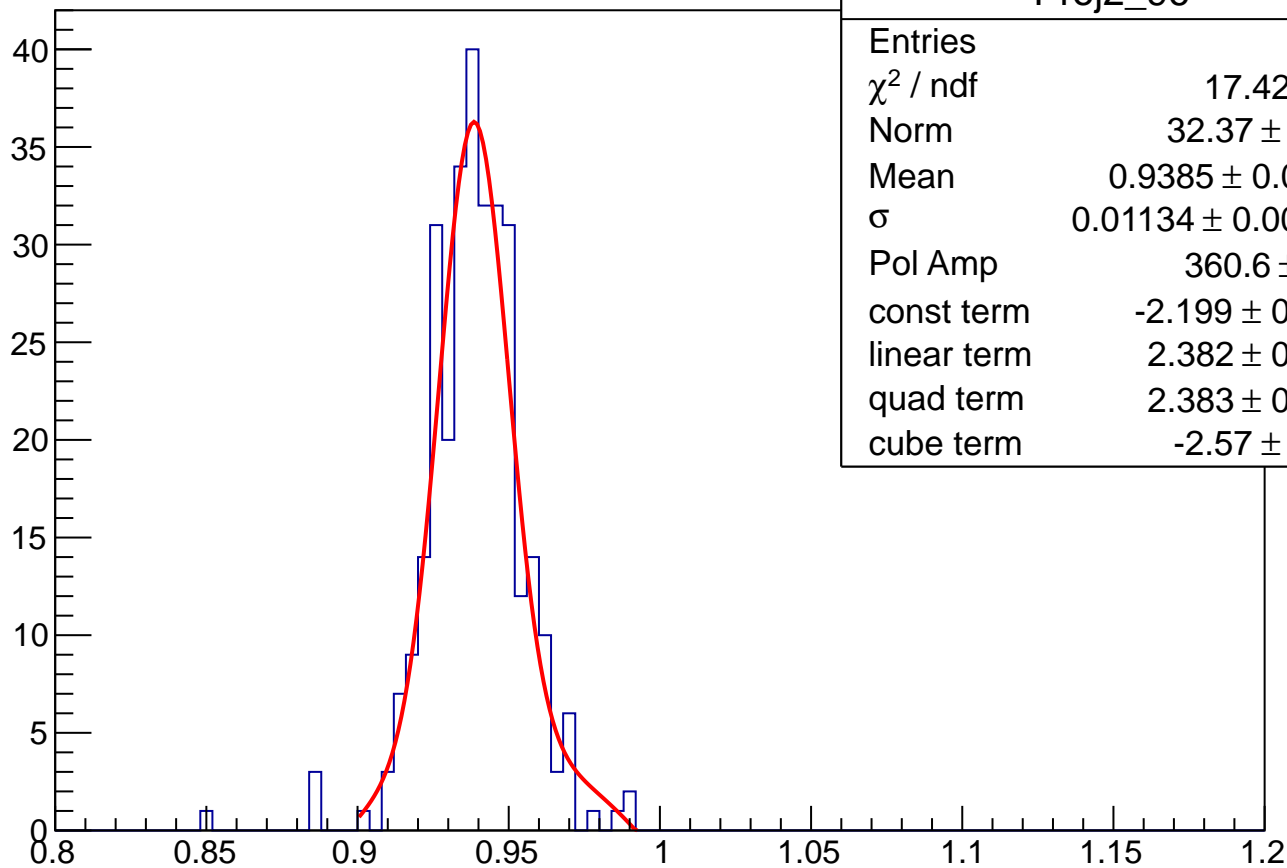
# PhiThetaMassPim



# PhiThetaMassPim



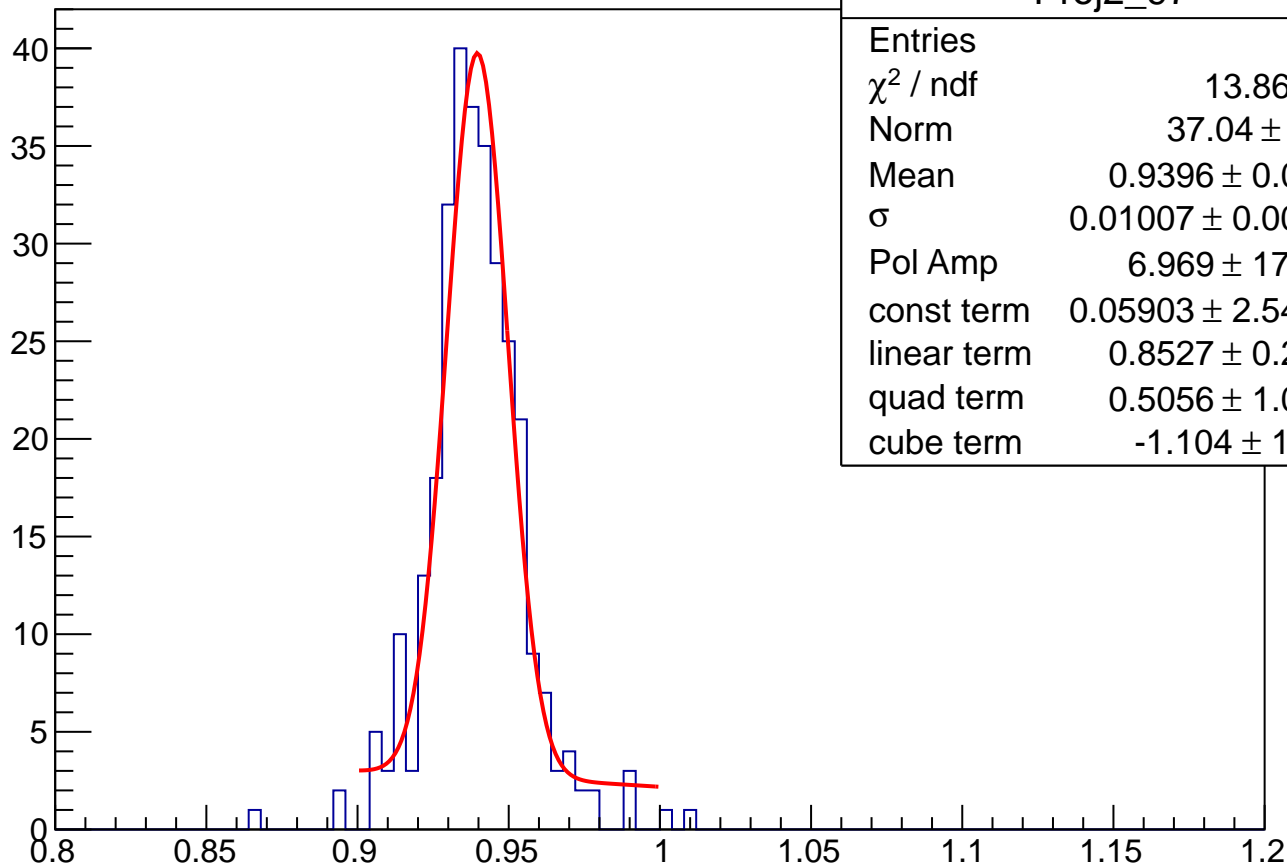
# PhiThetaMassPim



Proj2\_96

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 307                   |
| $\chi^2 / \text{ndf}$ | 17.42 / 12            |
| Norm                  | $32.37 \pm 2.98$      |
| Mean                  | $0.9385 \pm 0.0010$   |
| $\sigma$              | $0.01134 \pm 0.00073$ |
| Pol Amp               | $360.6 \pm 0.9$       |
| const term            | $-2.199 \pm 0.358$    |
| linear term           | $2.382 \pm 0.384$     |
| quad term             | $2.383 \pm 0.388$     |
| cube term             | $-2.57 \pm 0.42$      |

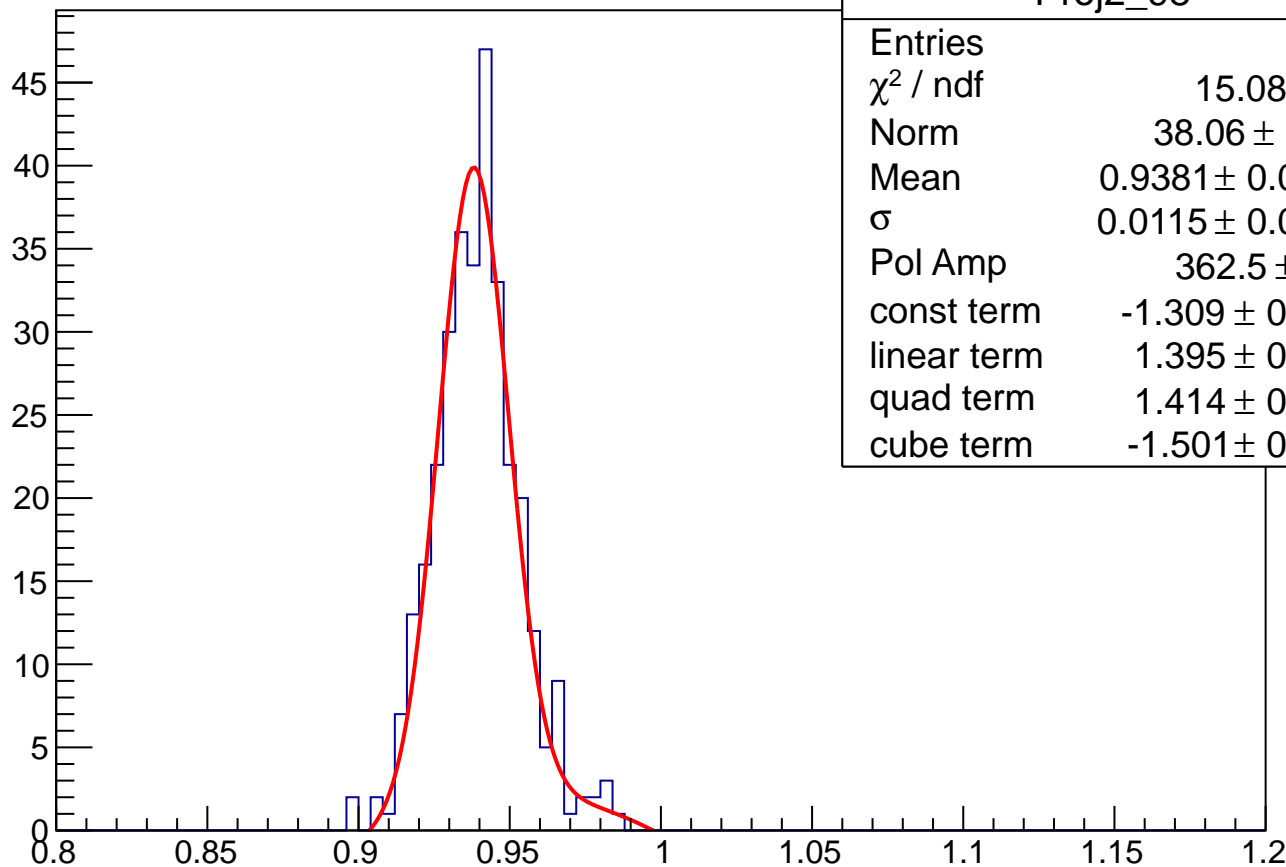
# PhiThetaMassPim



Proj2\_97

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 306                   |
| $\chi^2 / \text{ndf}$ | 13.86 / 12            |
| Norm                  | $37.04 \pm 3.14$      |
| Mean                  | $0.9396 \pm 0.0008$   |
| $\sigma$              | $0.01007 \pm 0.00074$ |
| Pol Amp               | $6.969 \pm 17.725$    |
| const term            | $0.05903 \pm 2.54733$ |
| linear term           | $0.8527 \pm 0.2197$   |
| quad term             | $0.5056 \pm 1.0804$   |
| cube term             | $-1.104 \pm 1.009$    |

# PhiThetaMassPim

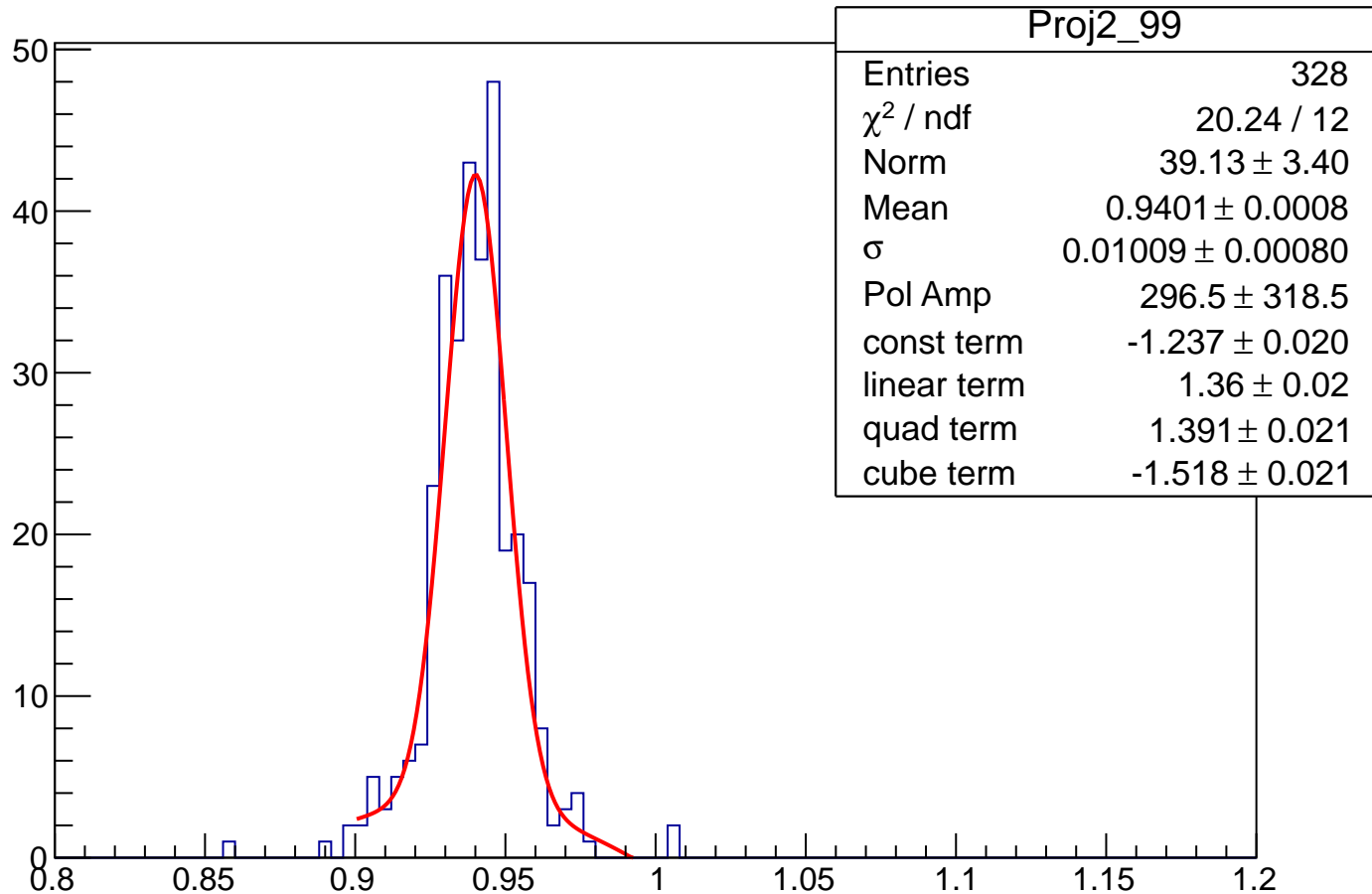


Proj2\_98

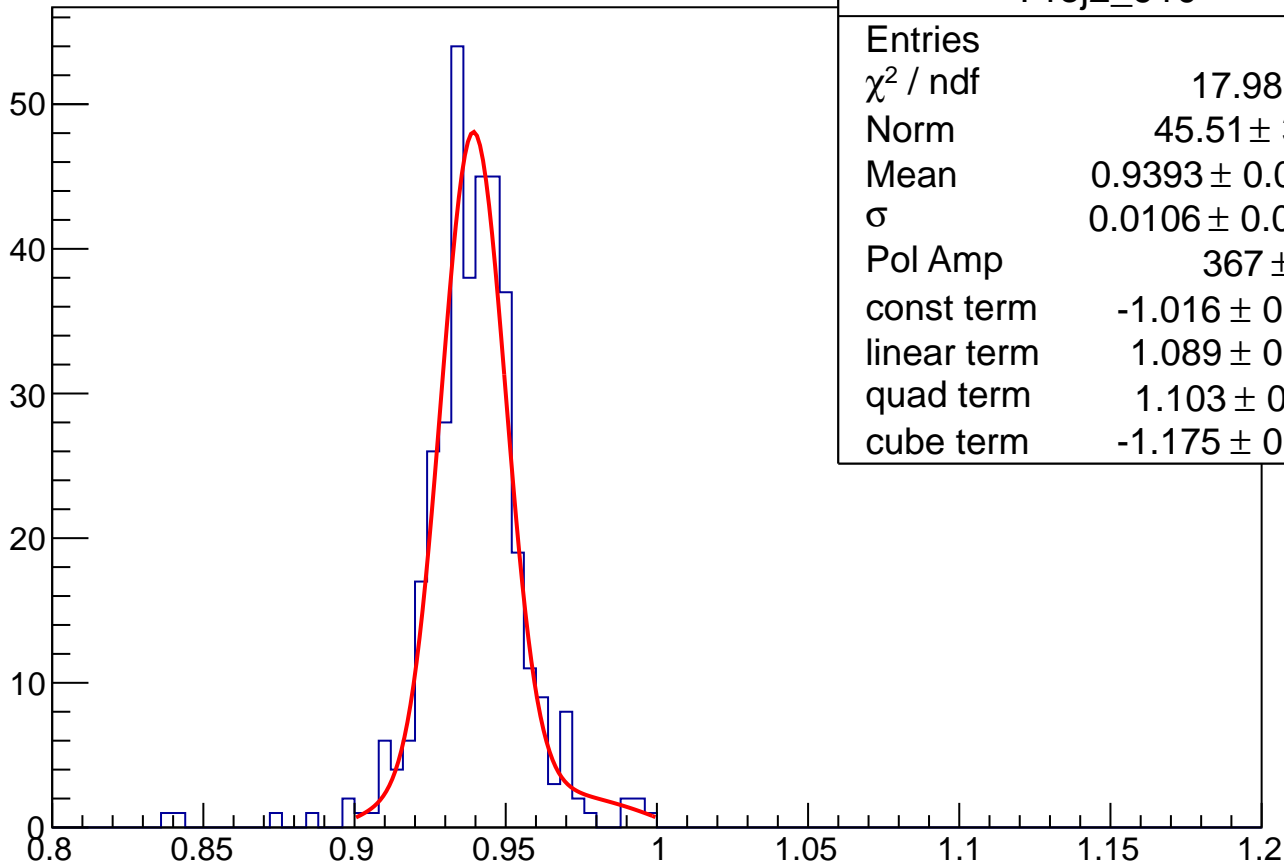
|                       |                     |
|-----------------------|---------------------|
| Entries               | 320                 |
| $\chi^2 / \text{ndf}$ | 15.08 / 13          |
| Norm                  | $38.06 \pm 3.03$    |
| Mean                  | $0.9381 \pm 0.0009$ |
| $\sigma$              | $0.0115 \pm 0.0007$ |
| Pol Amp               | $362.5 \pm 1.0$     |
| const term            | $-1.309 \pm 0.338$  |
| linear term           | $1.395 \pm 0.358$   |
| quad term             | $1.414 \pm 0.366$   |
| cube term             | $-1.501 \pm 0.389$  |



# PhiThetaMassPim



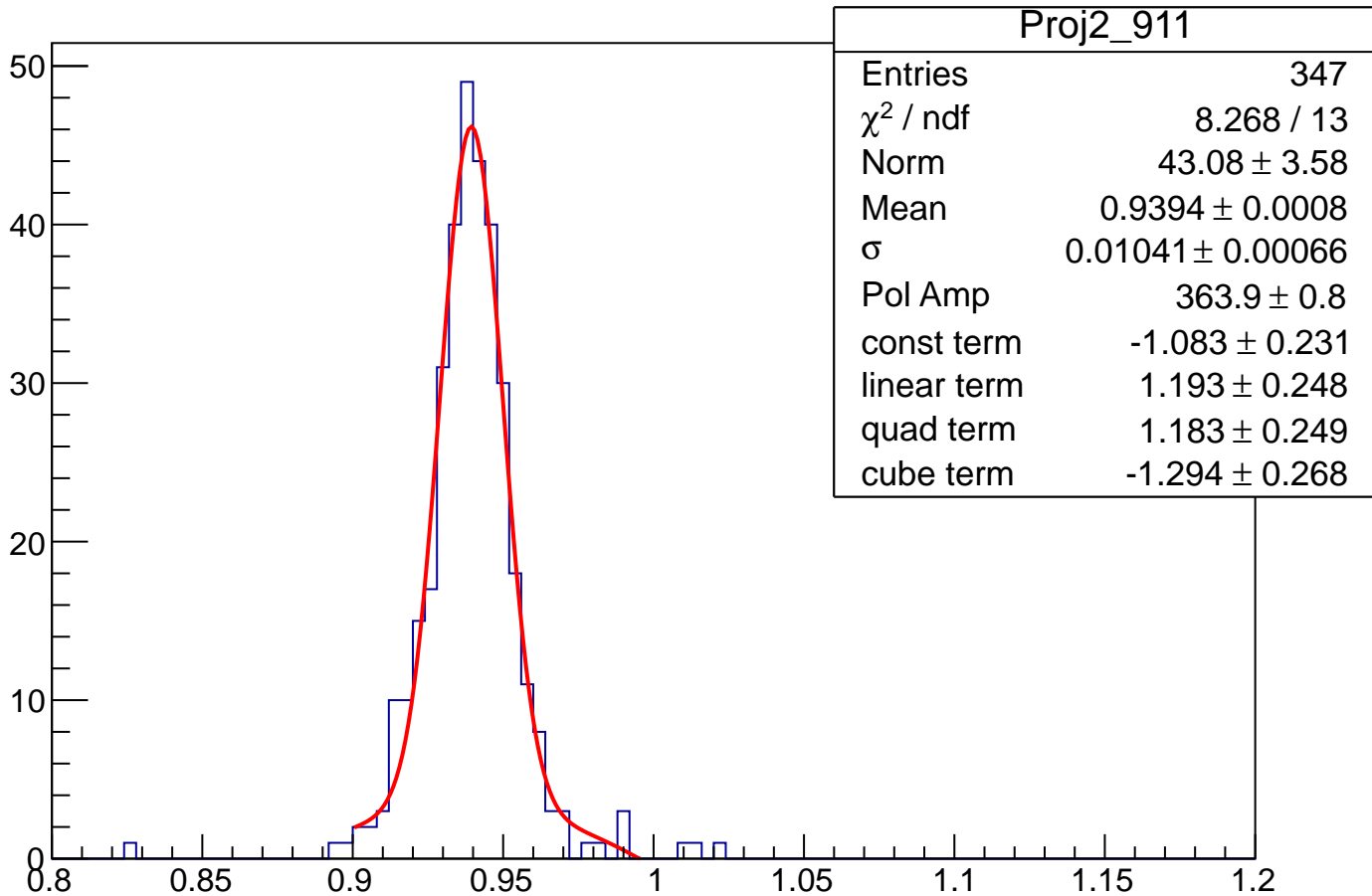
# PhiThetaMassPim



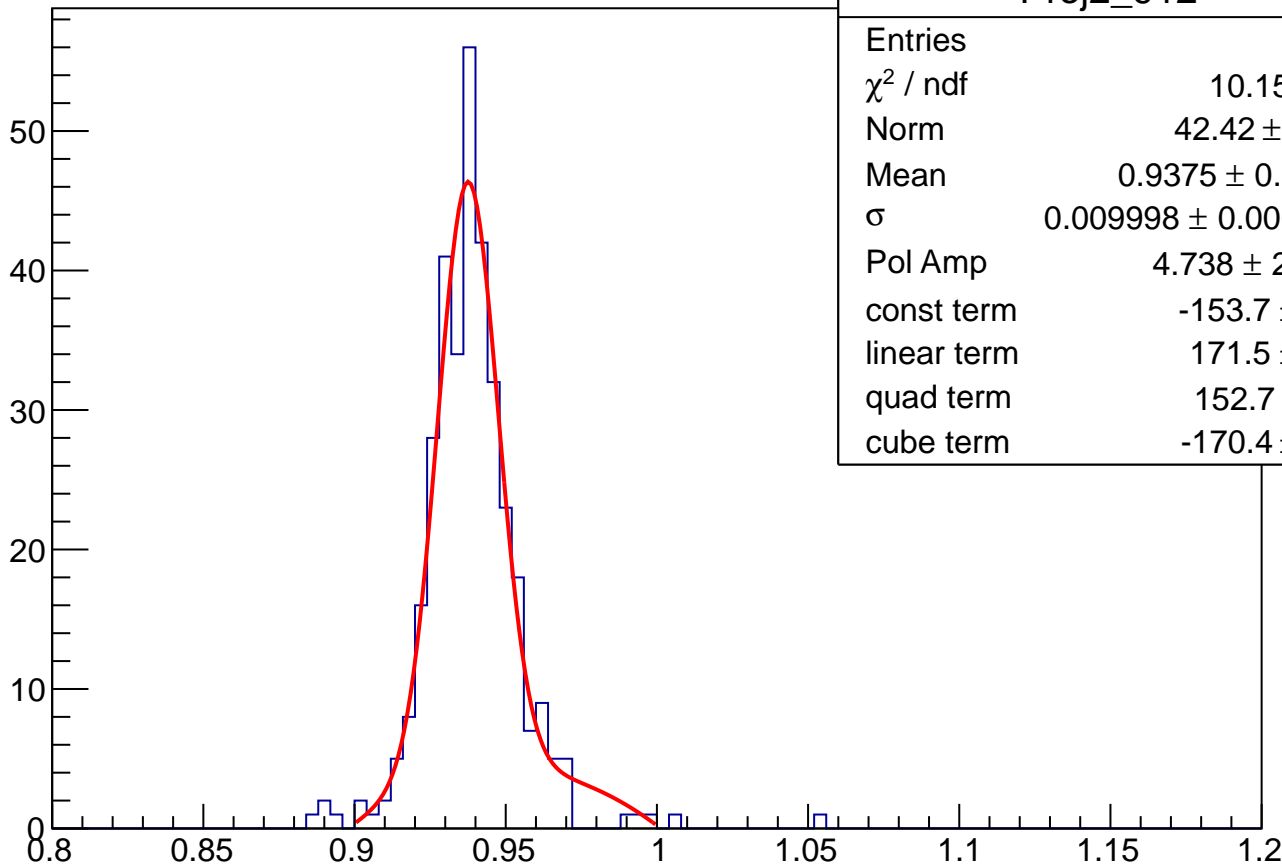
Proj2\_910

|                       |                     |
|-----------------------|---------------------|
| Entries               | 372                 |
| $\chi^2 / \text{ndf}$ | 17.98 / 15          |
| Norm                  | $45.51 \pm 3.43$    |
| Mean                  | $0.9393 \pm 0.0007$ |
| $\sigma$              | $0.0106 \pm 0.0005$ |
| Pol Amp               | $367 \pm 0.6$       |
| const term            | $-1.016 \pm 0.256$  |
| linear term           | $1.089 \pm 0.273$   |
| quad term             | $1.103 \pm 0.281$   |
| cube term             | $-1.175 \pm 0.299$  |

# PhiThetaMassPim



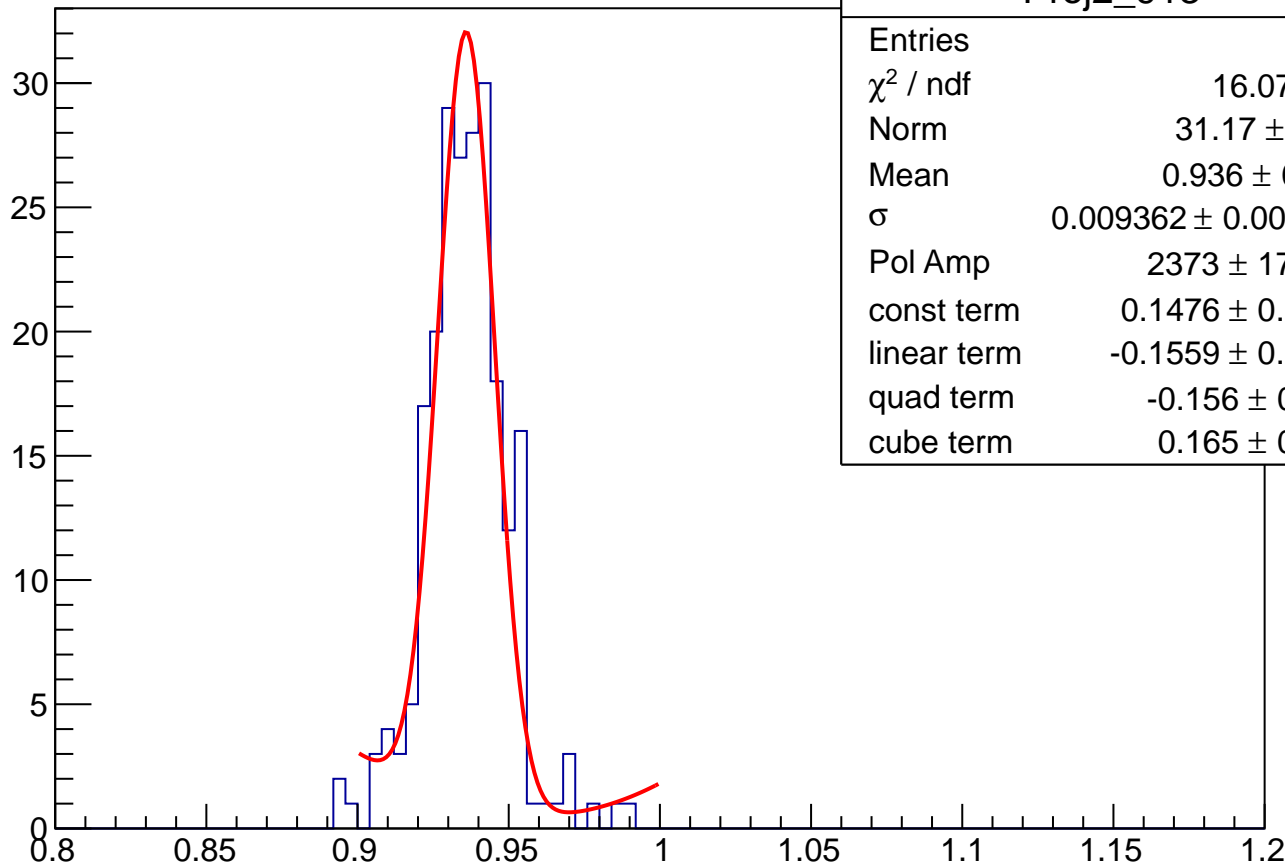
# PhiThetaMassPim



Proj2\_912

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 343                     |
| $\chi^2 / \text{ndf}$ | 10.15 / 13              |
| Norm                  | $42.42 \pm 3.59$        |
| Mean                  | $0.9375 \pm 0.0008$     |
| $\sigma$              | $0.009998 \pm 0.000813$ |
| Pol Amp               | $4.738 \pm 2.636$       |
| const term            | $-153.7 \pm 0.8$        |
| linear term           | $171.5 \pm 1.0$         |
| quad term             | $152.7 \pm 1.1$         |
| cube term             | $-170.4 \pm 0.9$        |

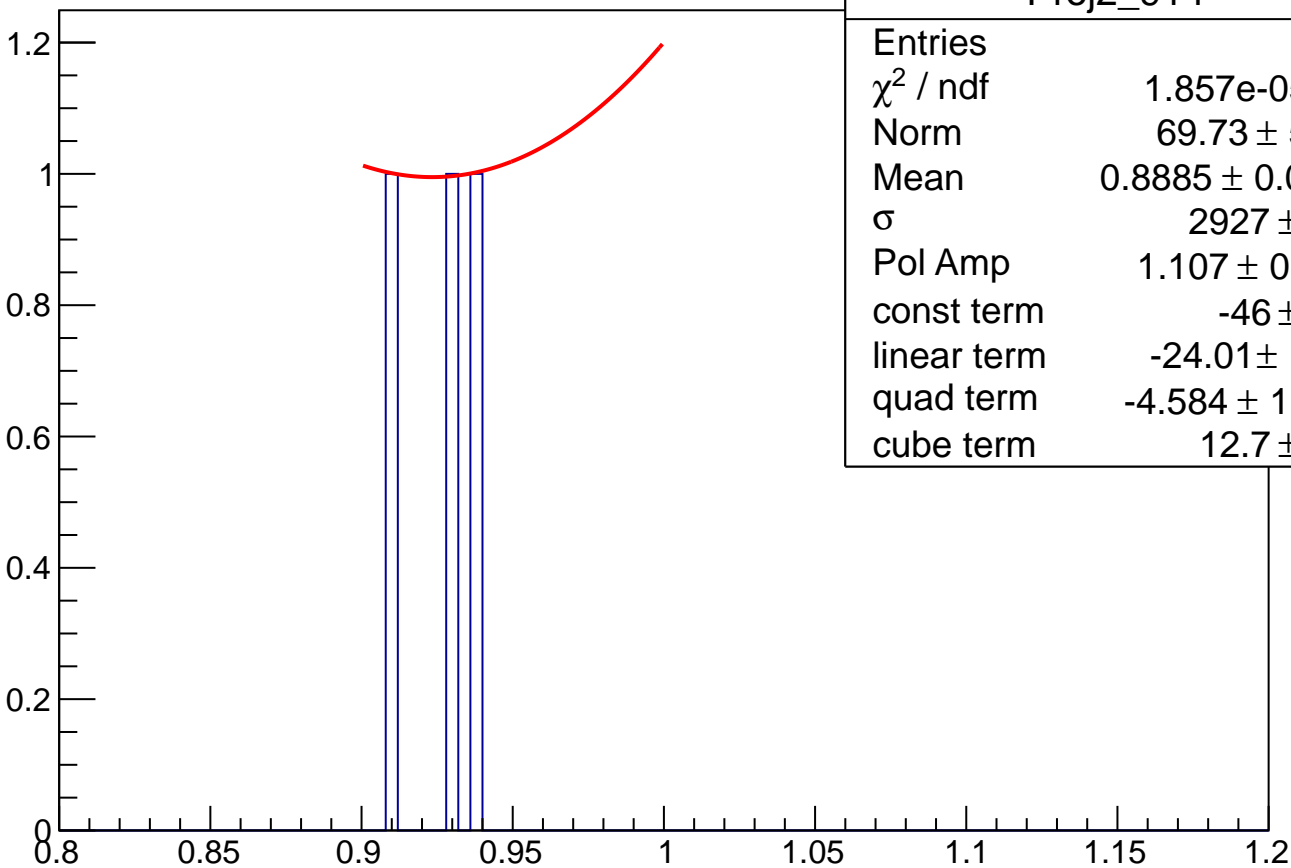
# PhiThetaMassPim



Proj2\_913

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 224                     |
| $\chi^2 / \text{ndf}$ | 16.07 / 12              |
| Norm                  | $31.17 \pm 2.82$        |
| Mean                  | $0.936 \pm 0.001$       |
| $\sigma$              | $0.009362 \pm 0.000622$ |
| Pol Amp               | $2373 \pm 1713.8$       |
| const term            | $0.1476 \pm 0.0017$     |
| linear term           | $-0.1559 \pm 0.0019$    |
| quad term             | $-0.156 \pm 0.002$      |
| cube term             | $0.165 \pm 0.002$       |

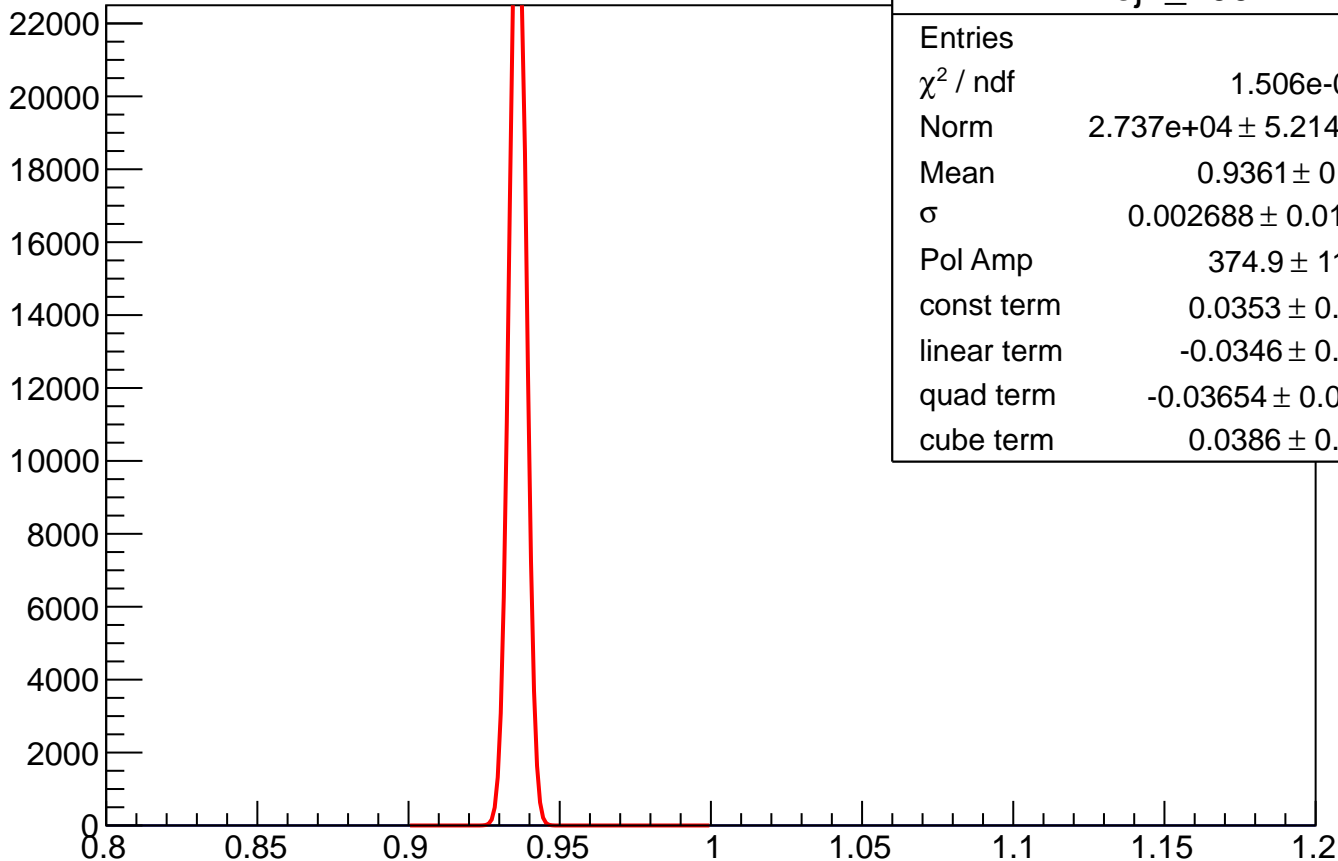
# PhiThetaMassPim



Proj2\_914

|                       |                     |
|-----------------------|---------------------|
| Entries               | 3                   |
| $\chi^2 / \text{ndf}$ | 1.857e-05 / 0       |
| Norm                  | $69.73 \pm 5.66$    |
| Mean                  | $0.8885 \pm 0.0821$ |
| $\sigma$              | $2927 \pm 1.4$      |
| Pol Amp               | $1.107 \pm 0.092$   |
| const term            | $-46 \pm 1.4$       |
| linear term           | $-24.01 \pm 1.37$   |
| quad term             | $-4.584 \pm 1.378$  |
| cube term             | $12.7 \pm 1.4$      |

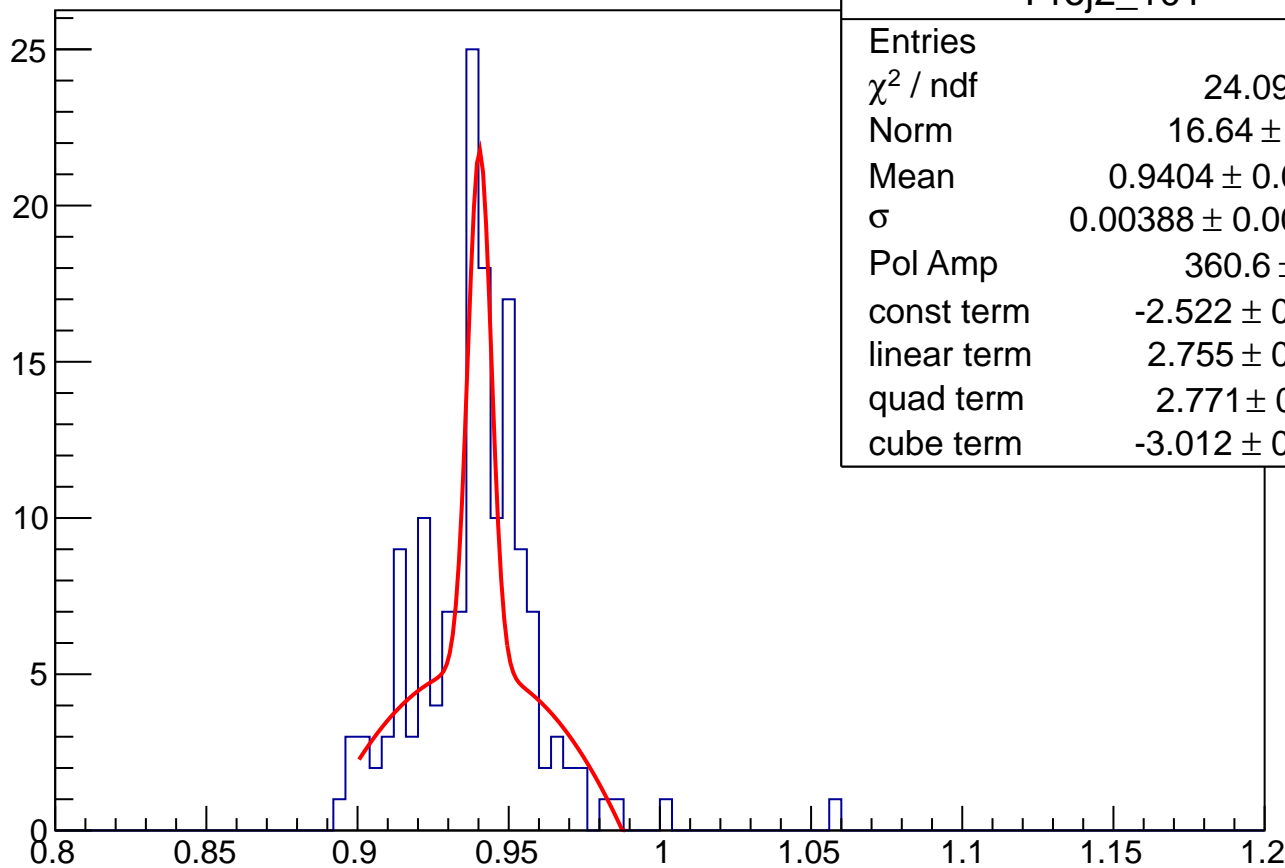
# PhiThetaMassPim



Proj2\_100

|                       |   |
|-----------------------|---|
| Entries               | 3                                       |
| $\chi^2 / \text{ndf}$ | 1.506e-09 / 0                           |
| Norm                  | $2.737\text{e}+04 \pm 5.214\text{e}+04$ |
| Mean                  | $0.9361 \pm 0.0112$                     |
| $\sigma$              | $0.002688 \pm 0.016731$                 |
| Pol Amp               | $374.9 \pm 1109.7$                      |
| const term            | $0.0353 \pm 0.0077$                     |
| linear term           | $-0.0346 \pm 0.0084$                    |
| quad term             | $-0.03654 \pm 0.00905$                  |
| cube term             | $0.0386 \pm 0.0098$                     |

# PhiThetaMassPim

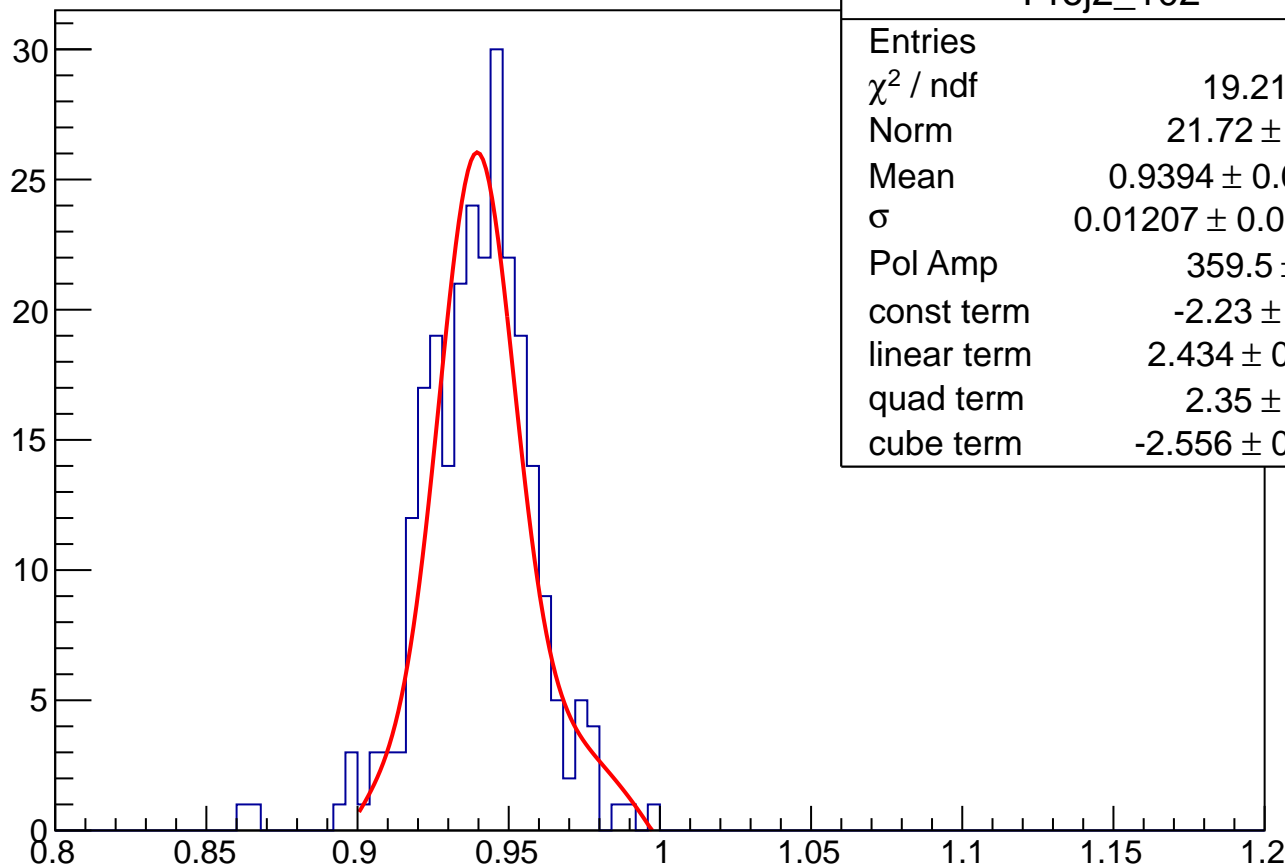


Proj2\_101

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 151                   |
| $\chi^2 / \text{ndf}$ | 24.09 / 13            |
| Norm                  | $16.64 \pm 4.05$      |
| Mean                  | $0.9404 \pm 0.0007$   |
| $\sigma$              | $0.00388 \pm 0.00048$ |
| Pol Amp               | $360.6 \pm 0.9$       |
| const term            | $-2.522 \pm 0.800$    |
| linear term           | $2.755 \pm 0.860$     |
| quad term             | $2.771 \pm 0.871$     |
| cube term             | $-3.012 \pm 0.934$    |



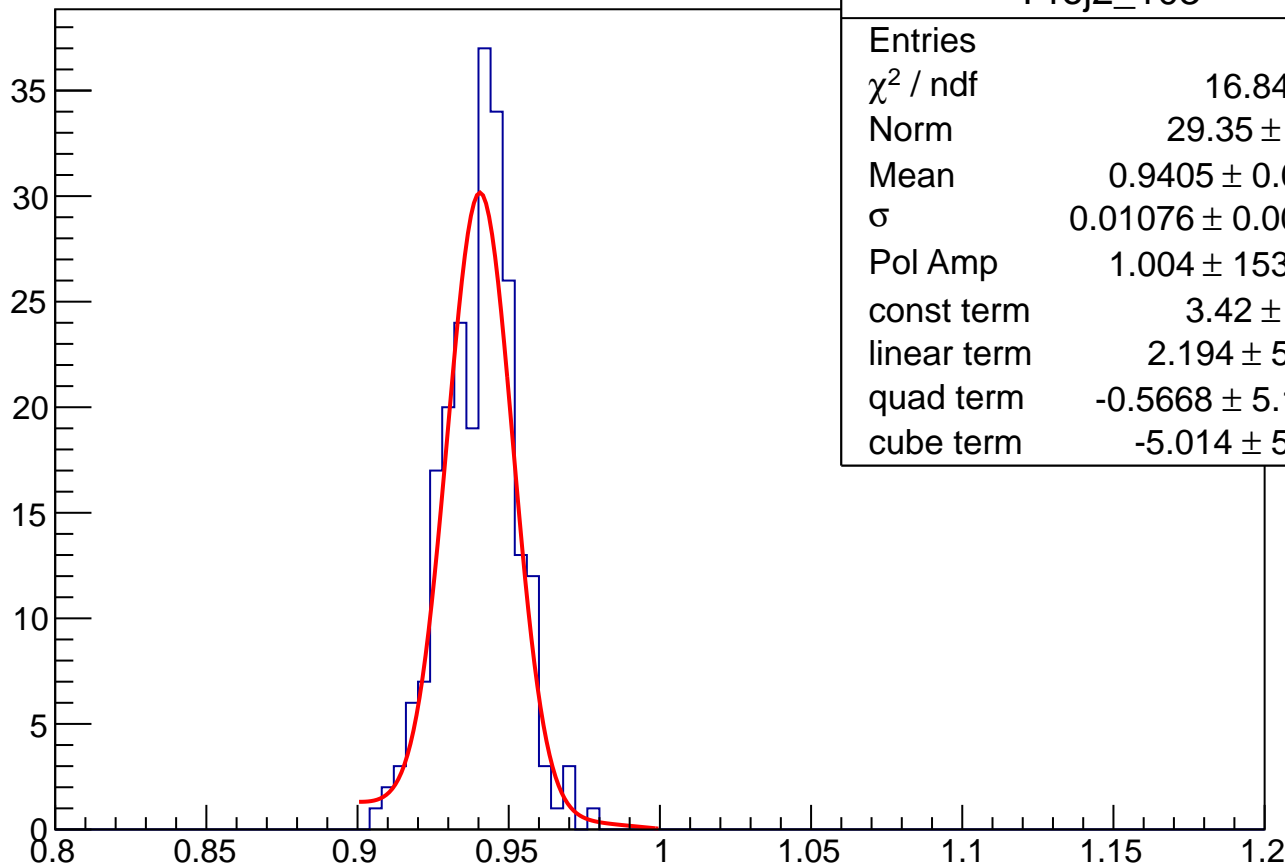
# PhiThetaMassPim



Proj2\_102

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 258                   |
| $\chi^2 / \text{ndf}$ | 19.21 / 15            |
| Norm                  | $21.72 \pm 2.43$      |
| Mean                  | $0.9394 \pm 0.0014$   |
| $\sigma$              | $0.01207 \pm 0.00101$ |
| Pol Amp               | $359.5 \pm 1.6$       |
| const term            | $-2.23 \pm 0.44$      |
| linear term           | $2.434 \pm 0.473$     |
| quad term             | $2.35 \pm 0.48$       |
| cube term             | $-2.556 \pm 0.513$    |

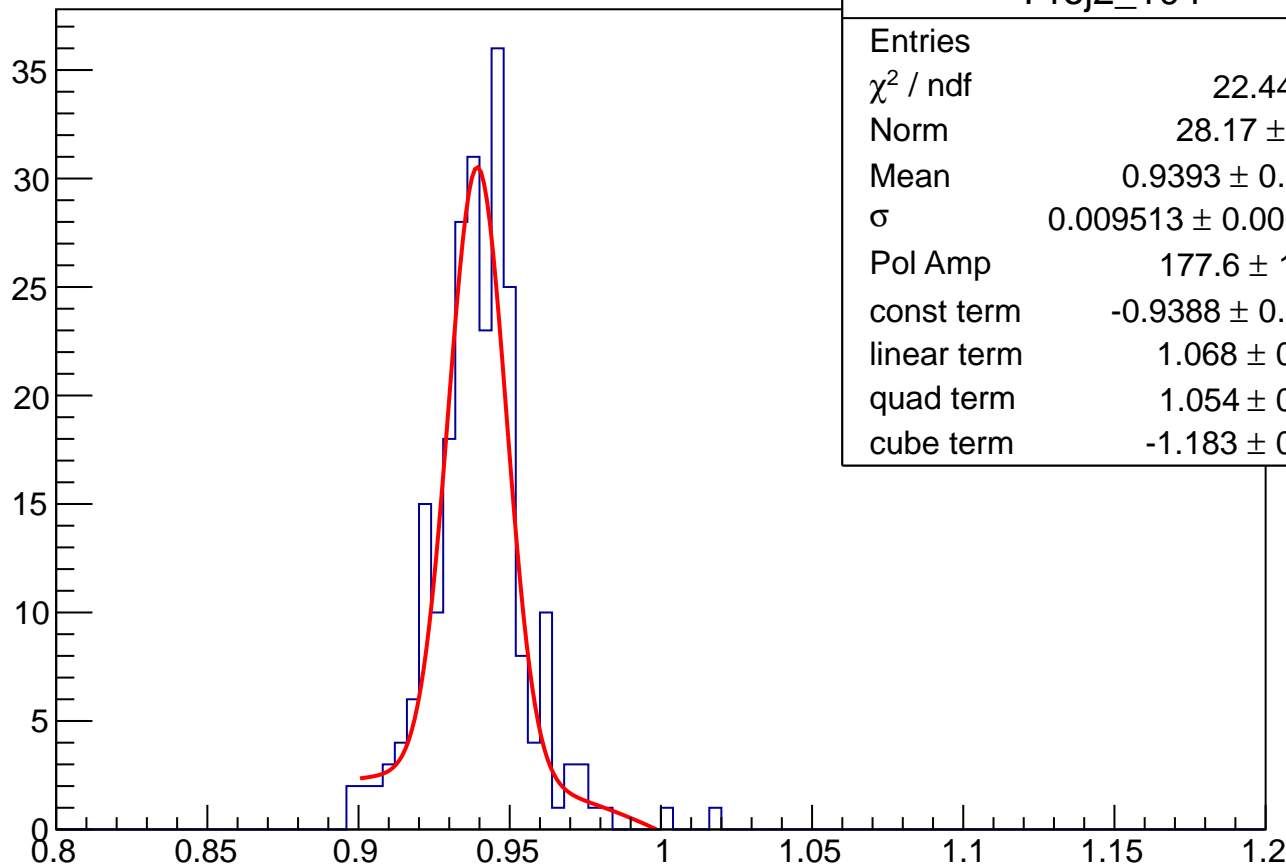
# PhiThetaMassPim



Proj2\_103

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 229                   |
| $\chi^2 / \text{ndf}$ | 16.84 / 10            |
| Norm                  | $29.35 \pm 2.64$      |
| Mean                  | $0.9405 \pm 0.0010$   |
| $\sigma$              | $0.01076 \pm 0.00084$ |
| Pol Amp               | $1.004 \pm 153.845$   |
| const term            | $3.42 \pm 4.97$       |
| linear term           | $2.194 \pm 5.012$     |
| quad term             | $-0.5668 \pm 5.1754$  |
| cube term             | $-5.014 \pm 5.507$    |

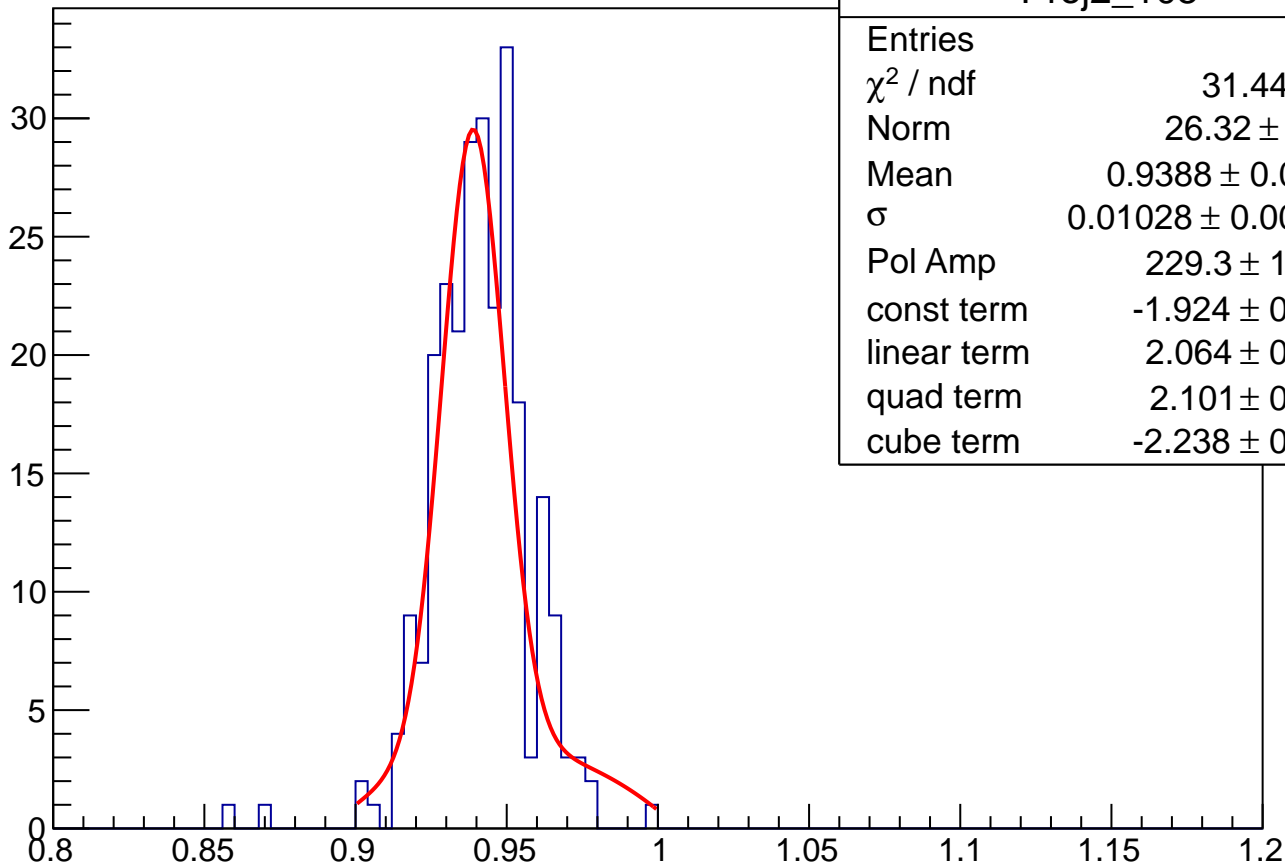
# PhiThetaMassPim



Proj2\_104

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 238                     |
| $\chi^2 / \text{ndf}$ | 22.44 / 13              |
| Norm                  | $28.17 \pm 2.97$        |
| Mean                  | $0.9393 \pm 0.0010$     |
| $\sigma$              | $0.009513 \pm 0.000918$ |
| Pol Amp               | $177.6 \pm 160.0$       |
| const term            | $-0.9388 \pm 0.0269$    |
| linear term           | $1.068 \pm 0.028$       |
| quad term             | $1.054 \pm 0.029$       |
| cube term             | $-1.183 \pm 0.029$      |

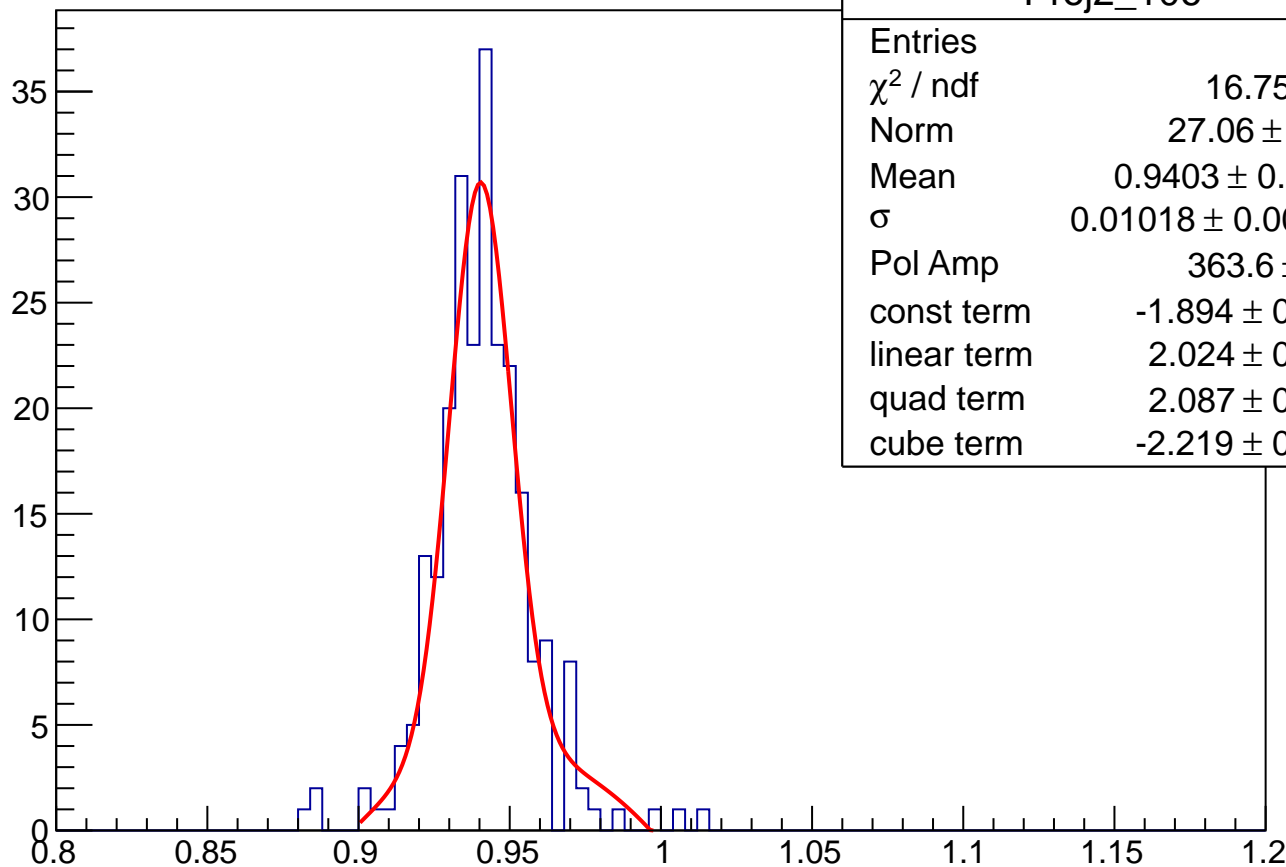
# PhiThetaMassPim



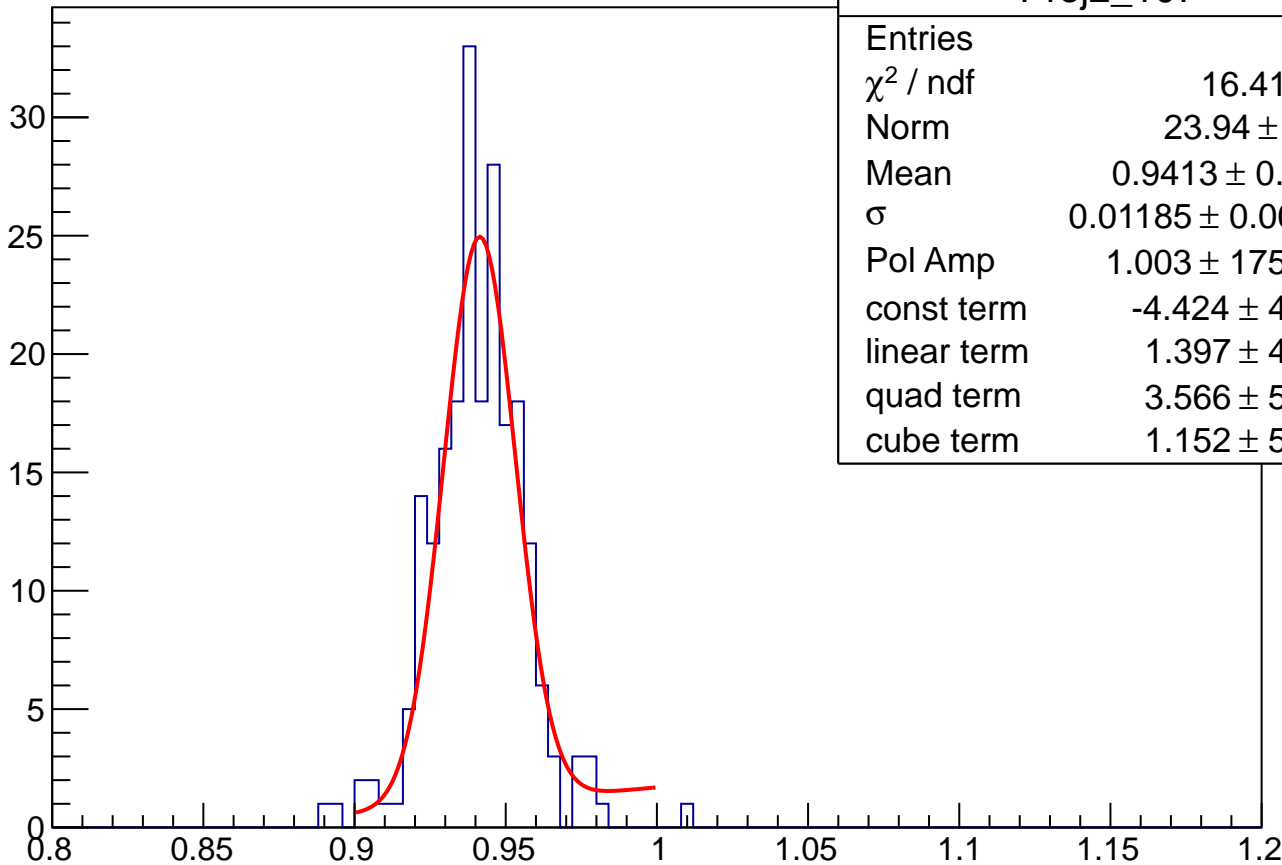
Proj2\_105

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 256                   |
| $\chi^2 / \text{ndf}$ | 31.44 / 12            |
| Norm                  | $26.32 \pm 2.89$      |
| Mean                  | $0.9388 \pm 0.0010$   |
| $\sigma$              | $0.01028 \pm 0.00102$ |
| Pol Amp               | $229.3 \pm 160.2$     |
| const term            | $-1.924 \pm 0.019$    |
| linear term           | $2.064 \pm 0.024$     |
| quad term             | $2.101 \pm 0.025$     |
| cube term             | $-2.238 \pm 0.022$    |

# PhiThetaMassPim



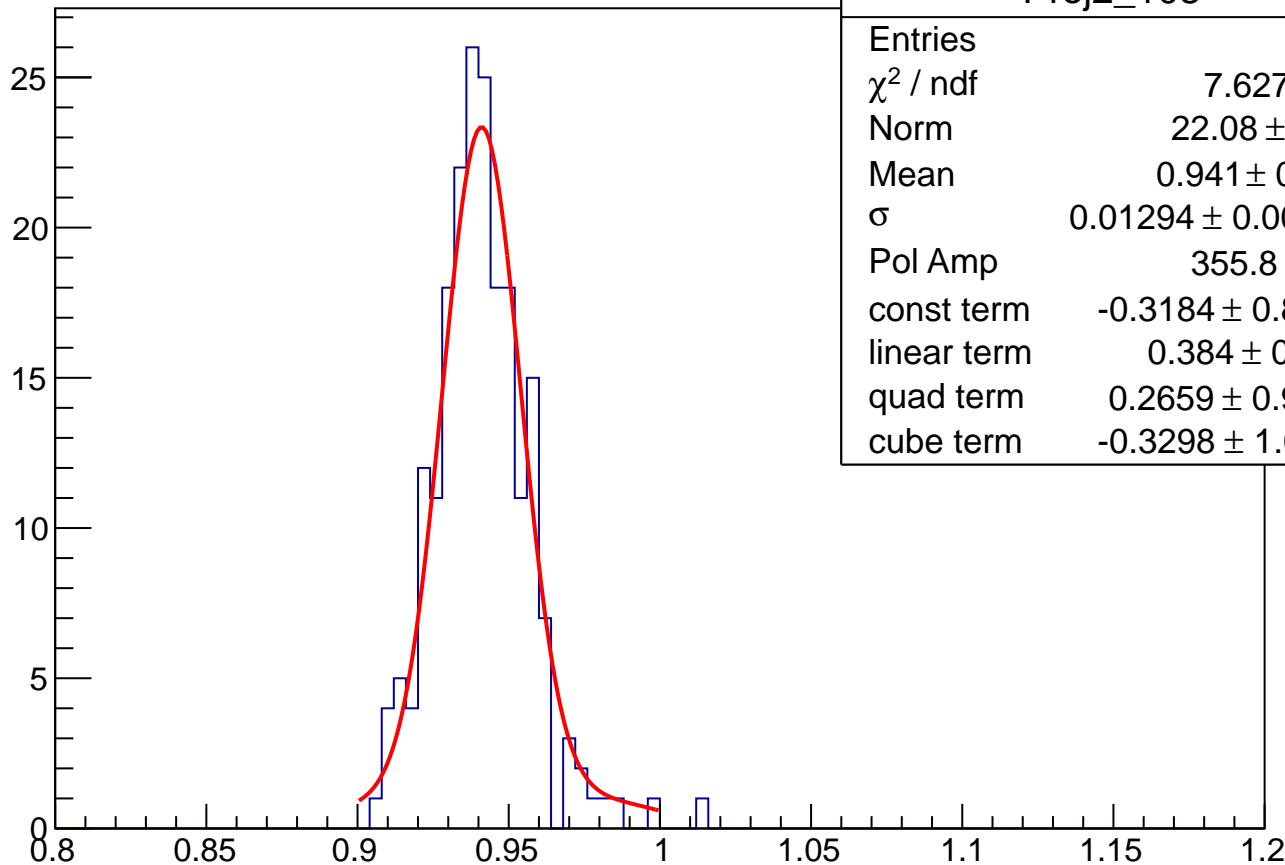
# PhiThetaMassPim



Proj2\_107

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 216                   |
| $\chi^2 / \text{ndf}$ | 16.41 / 12            |
| Norm                  | $23.94 \pm 2.26$      |
| Mean                  | $0.9413 \pm 0.0011$   |
| $\sigma$              | $0.01185 \pm 0.00097$ |
| Pol Amp               | $1.003 \pm 175.033$   |
| const term            | $-4.424 \pm 4.397$    |
| linear term           | $1.397 \pm 4.858$     |
| quad term             | $3.566 \pm 5.315$     |
| cube term             | $1.152 \pm 5.740$     |

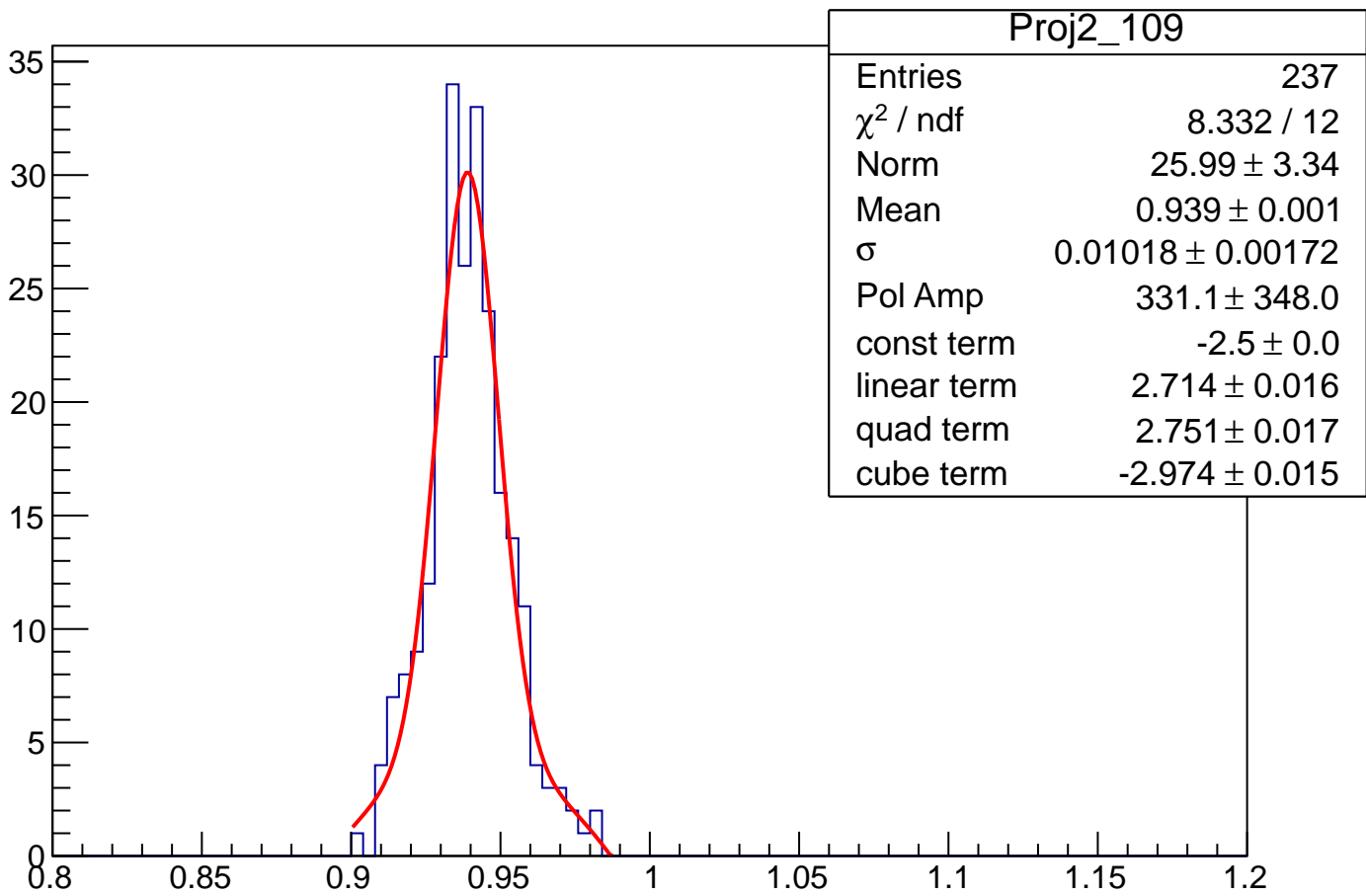
# PhiThetaMassPim



Proj2\_108

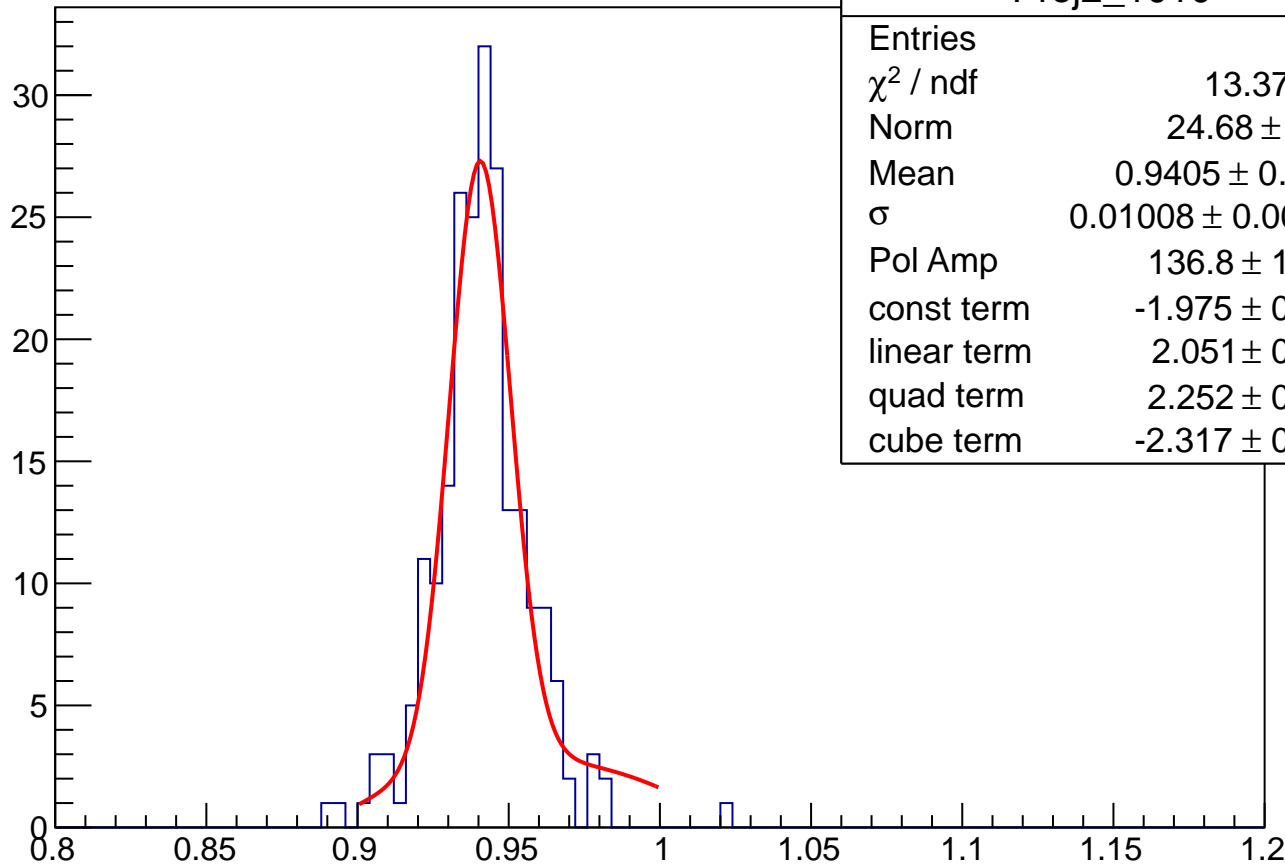
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 207                   |
| $\chi^2 / \text{ndf}$ | 7.627 / 13            |
| Norm                  | $22.08 \pm 2.31$      |
| Mean                  | $0.941 \pm 0.001$     |
| $\sigma$              | $0.01294 \pm 0.00153$ |
| Pol Amp               | $355.8 \pm 3.1$       |
| const term            | $-0.3184 \pm 0.8673$  |
| linear term           | $0.384 \pm 0.927$     |
| quad term             | $0.2659 \pm 0.9500$   |
| cube term             | $-0.3298 \pm 1.0116$  |

# PhiThetaMassPim





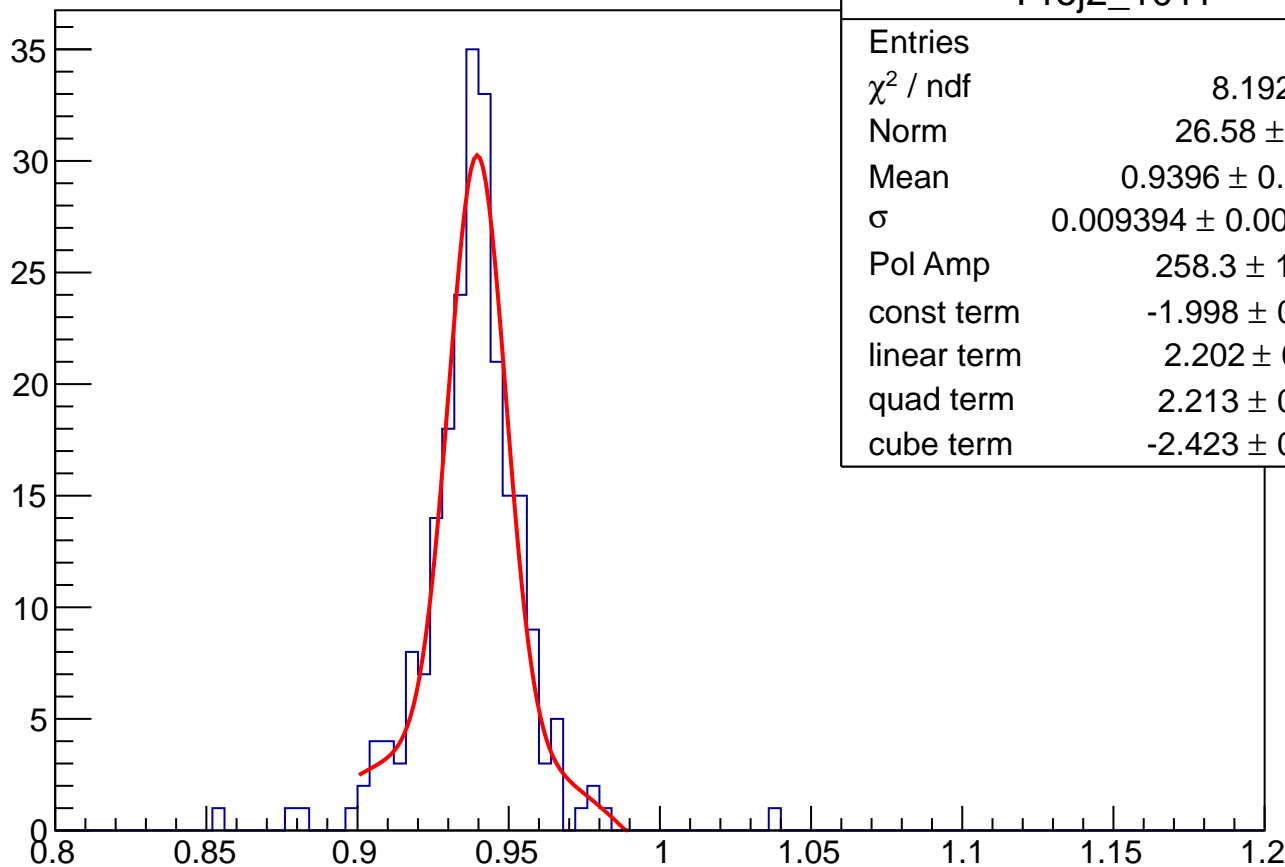
# PhiThetaMassPim



Proj2\_1010

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 218                   |
| $\chi^2 / \text{ndf}$ | 13.37 / 12            |
| Norm                  | $24.68 \pm 2.84$      |
| Mean                  | $0.9405 \pm 0.0011$   |
| $\sigma$              | $0.01008 \pm 0.00122$ |
| Pol Amp               | $136.8 \pm 164.6$     |
| const term            | $-1.975 \pm 0.034$    |
| linear term           | $2.051 \pm 0.039$     |
| quad term             | $2.252 \pm 0.043$     |
| cube term             | $-2.317 \pm 0.046$    |

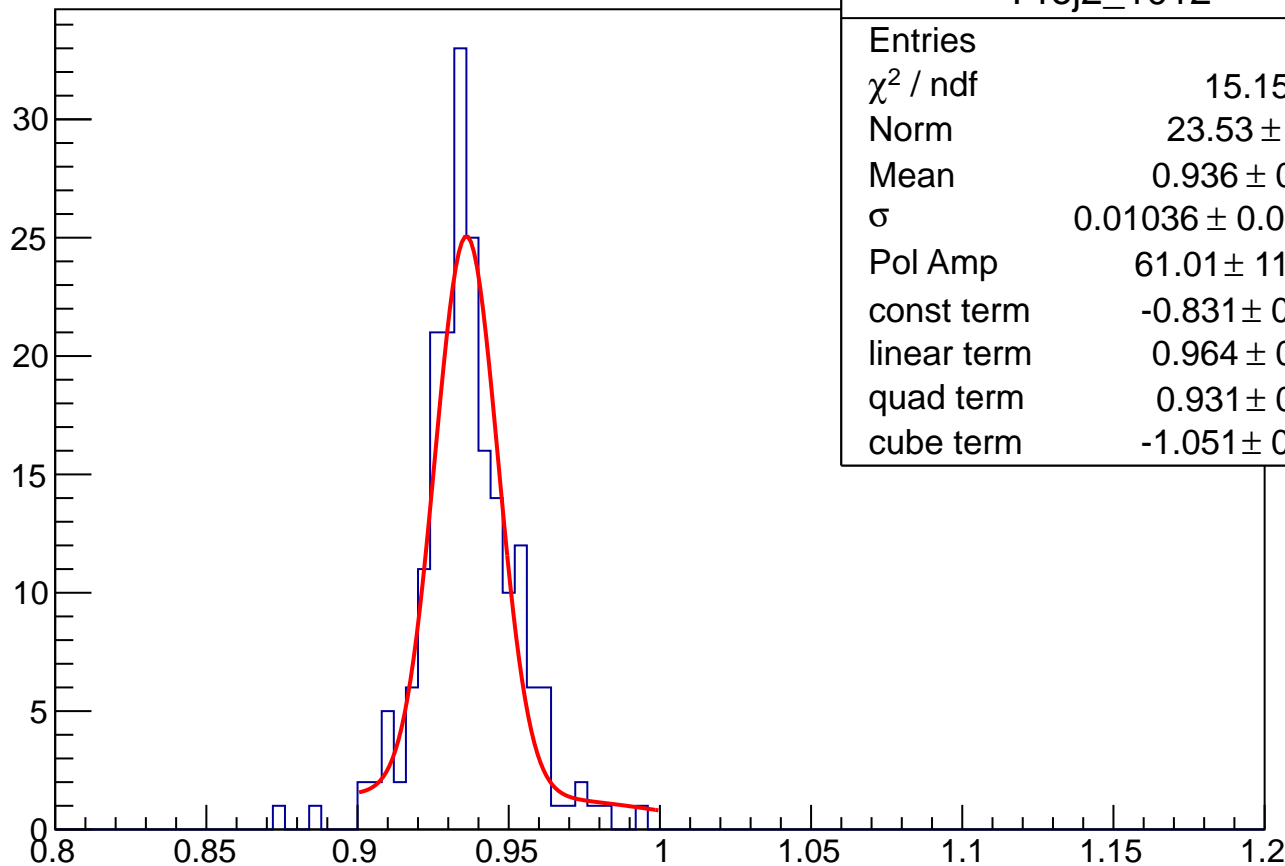
# PhiThetaMassPim



Proj2\_1011

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 229                     |
| $\chi^2 / \text{ndf}$ | 8.192 / 12              |
| Norm                  | $26.58 \pm 3.10$        |
| Mean                  | $0.9396 \pm 0.0010$     |
| $\sigma$              | $0.009394 \pm 0.001177$ |
| Pol Amp               | $258.3 \pm 186.9$       |
| const term            | $-1.998 \pm 0.020$      |
| linear term           | $2.202 \pm 0.021$       |
| quad term             | $2.213 \pm 0.022$       |
| cube term             | $-2.423 \pm 0.022$      |

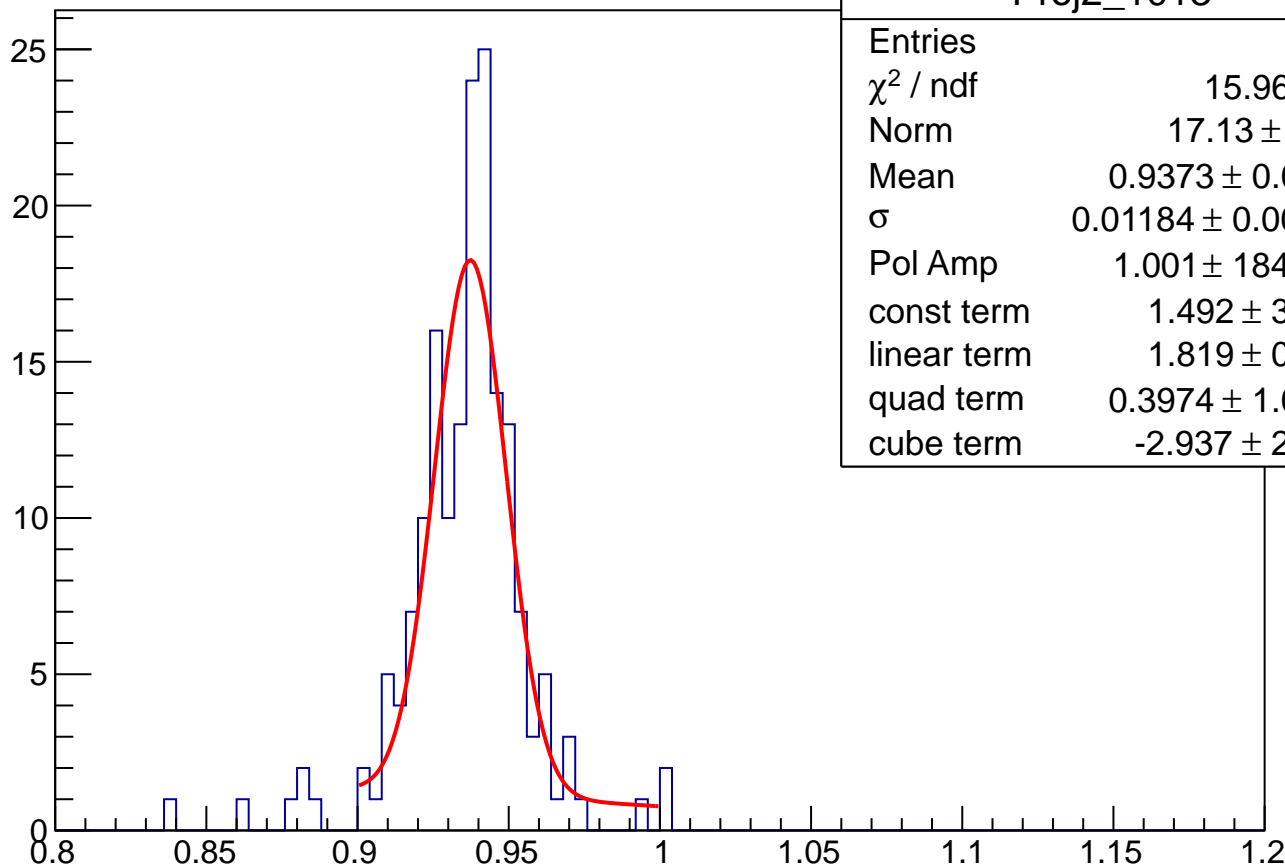
# PhiThetaMassPim



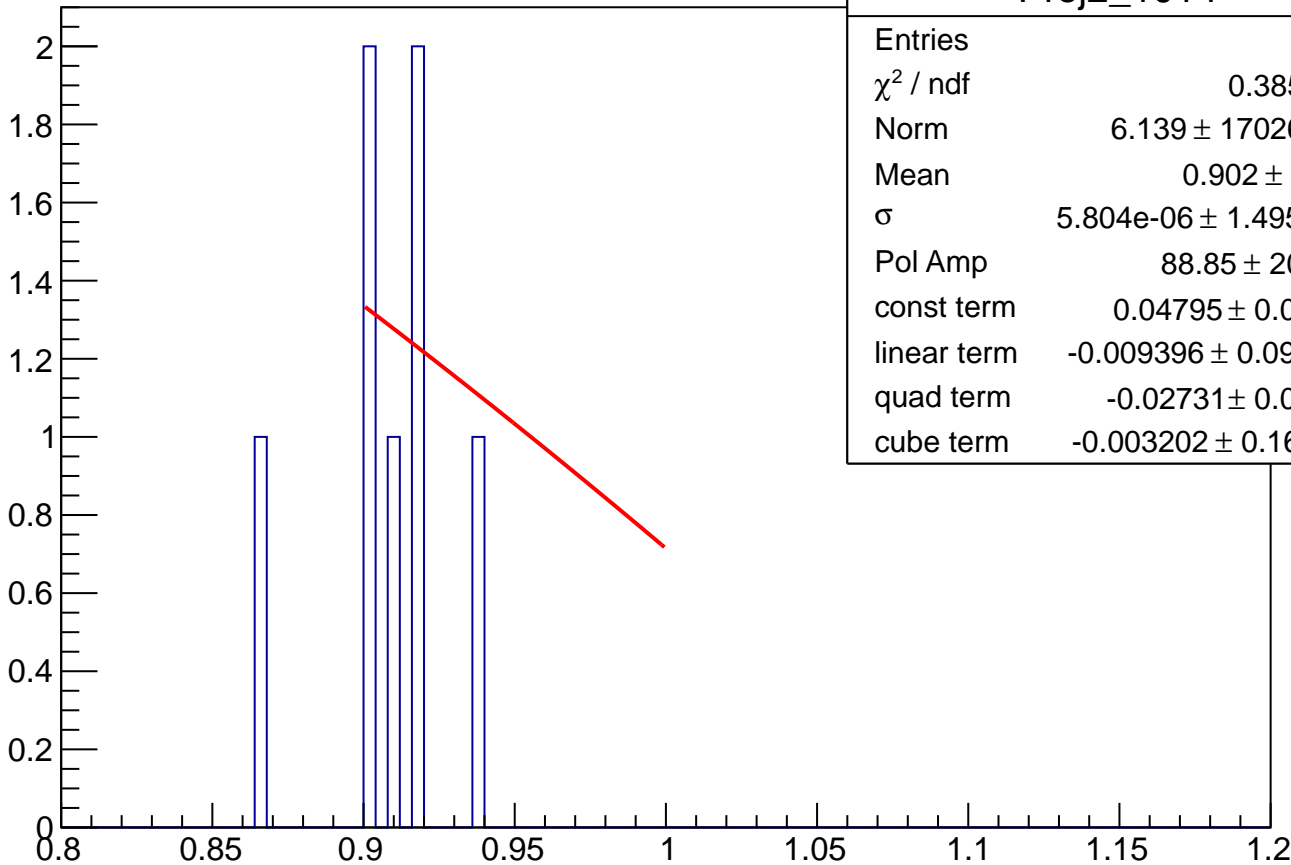
Proj2\_1012

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 201                   |
| $\chi^2 / \text{ndf}$ | 15.15 / 14            |
| Norm                  | $23.53 \pm 2.68$      |
| Mean                  | $0.936 \pm 0.001$     |
| $\sigma$              | $0.01036 \pm 0.00121$ |
| Pol Amp               | $61.01 \pm 117.27$    |
| const term            | $-0.831 \pm 0.068$    |
| linear term           | $0.964 \pm 0.071$     |
| quad term             | $0.931 \pm 0.071$     |
| cube term             | $-1.051 \pm 0.068$    |

# PhiThetaMassPim



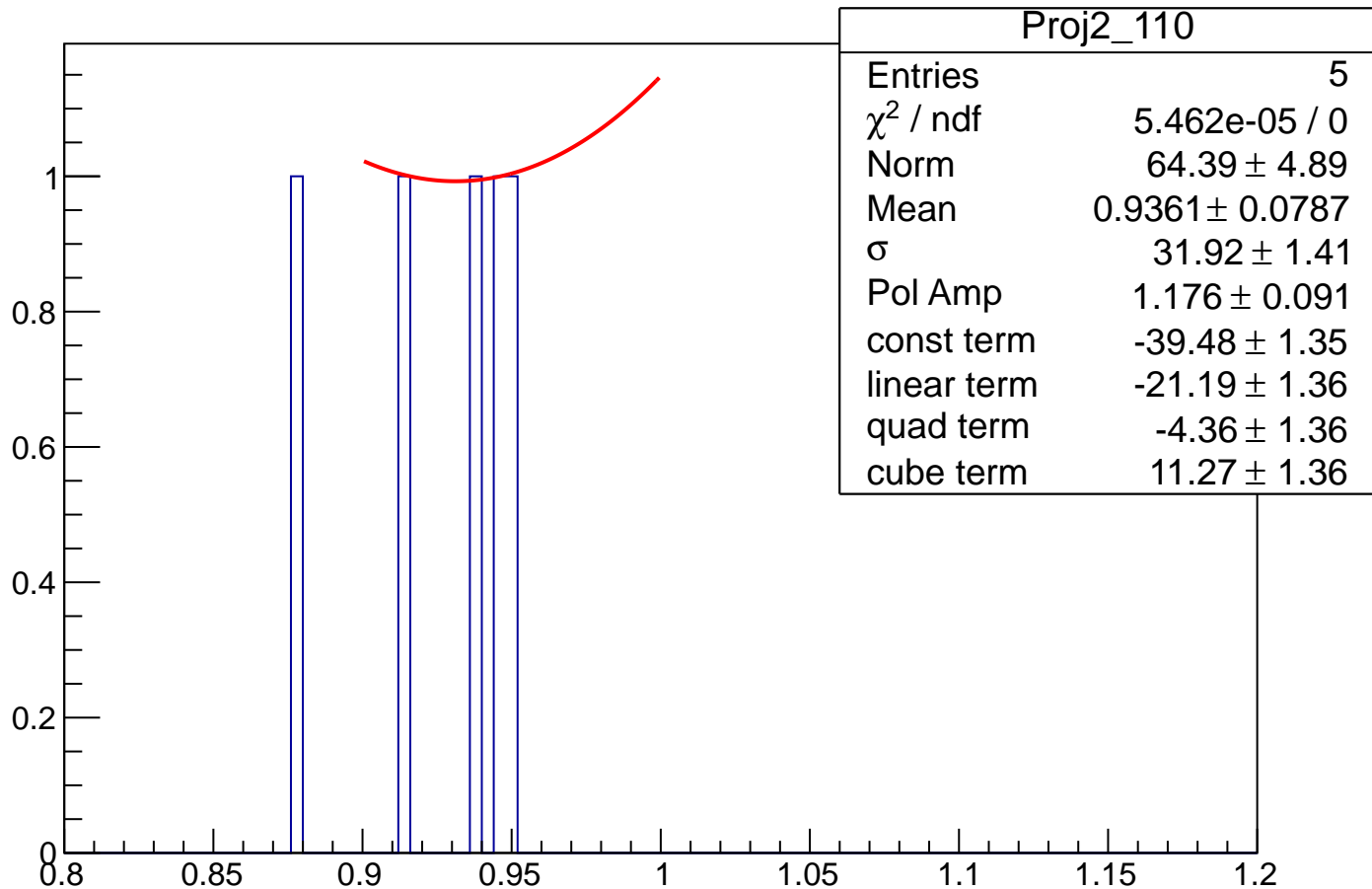
# PhiThetaMassPim



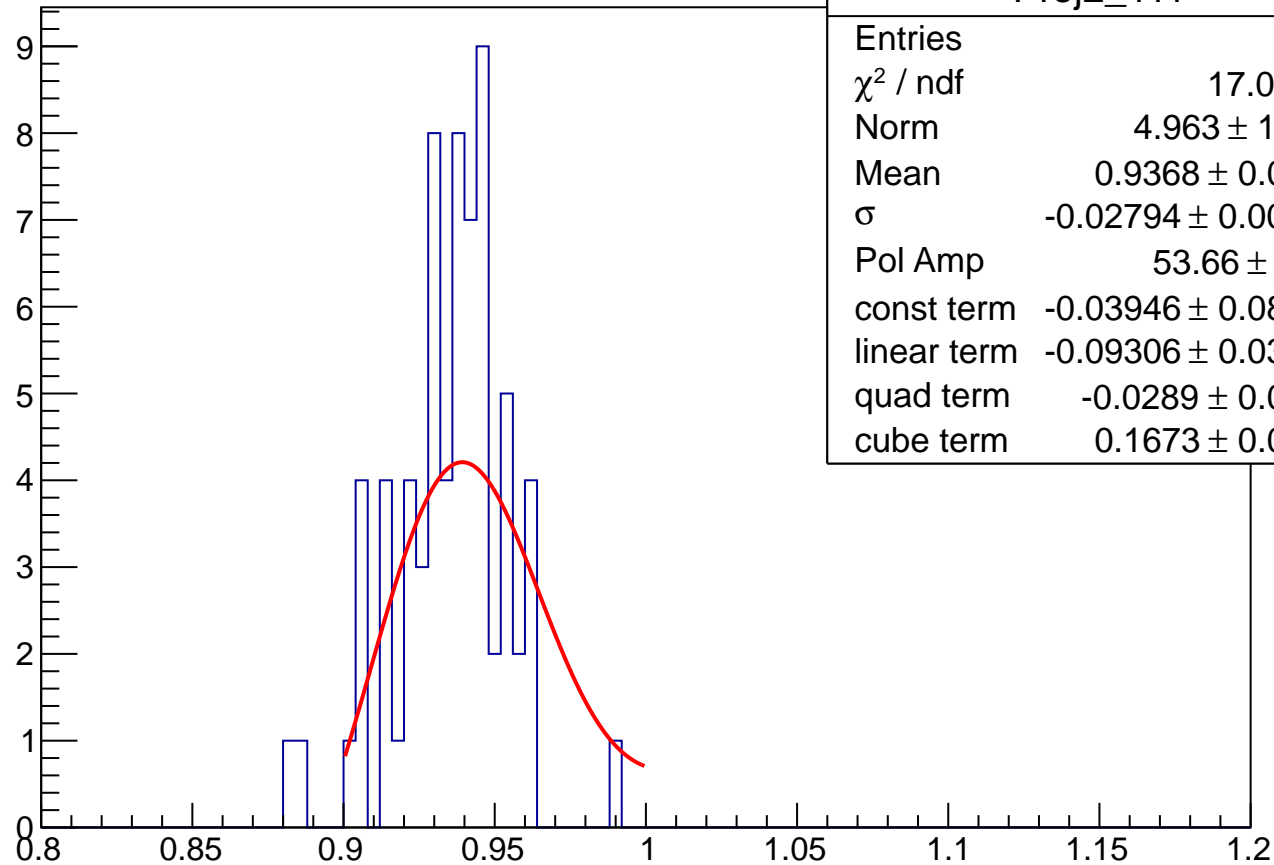
Proj2\_1014

|                       |   |
|-----------------------|---|
| Entries               | 7                                       |
| $\chi^2 / \text{ndf}$ | 0.3854 / 0                              |
| Norm                  | $6.139 \pm 17026.832$                   |
| Mean                  | $0.902 \pm 0.001$                       |
| $\sigma$              | $5.804\text{e-}06 \pm 1.495\text{e-}04$ |
| Pol Amp               | $88.85 \pm 201.86$                      |
| const term            | $0.04795 \pm 0.08970$                   |
| linear term           | $-0.009396 \pm 0.096275$                |
| quad term             | $-0.02731 \pm 0.08139$                  |
| cube term             | $-0.003202 \pm 0.164231$                |

# PhiThetaMassPim



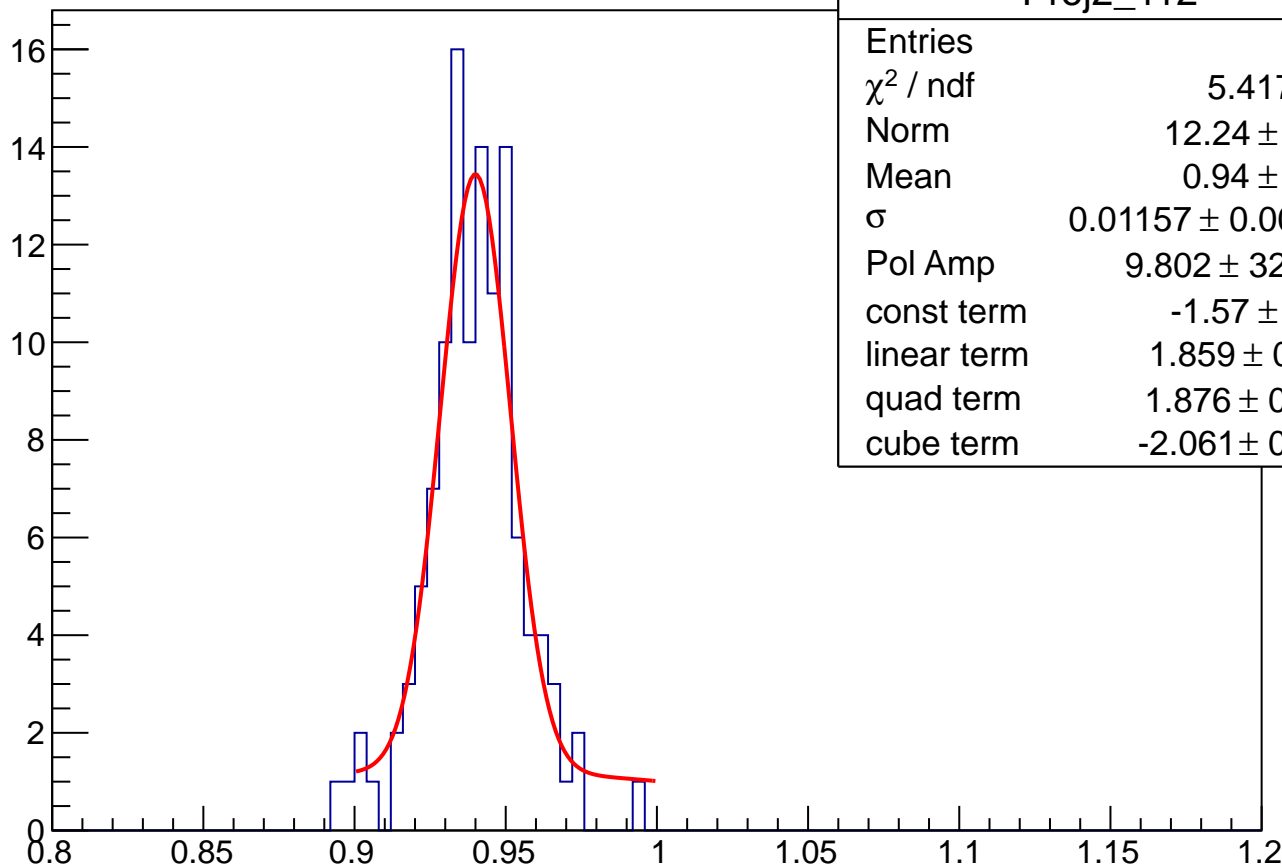
# PhiThetaMassPim



Proj2\_111

|                       |                        |
|-----------------------|------------------------|
| Entries               | 69                     |
| $\chi^2 / \text{ndf}$ | 17.04 / 8              |
| Norm                  | $4.963 \pm 1.632$      |
| Mean                  | $0.9368 \pm 0.0000$    |
| $\sigma$              | $-0.02794 \pm 0.00000$ |
| Pol Amp               | $53.66 \pm 0.08$       |
| const term            | $-0.03946 \pm 0.08468$ |
| linear term           | $-0.09306 \pm 0.03269$ |
| quad term             | $-0.0289 \pm 0.0284$   |
| cube term             | $0.1673 \pm 0.0963$    |

# PhiThetaMassPim

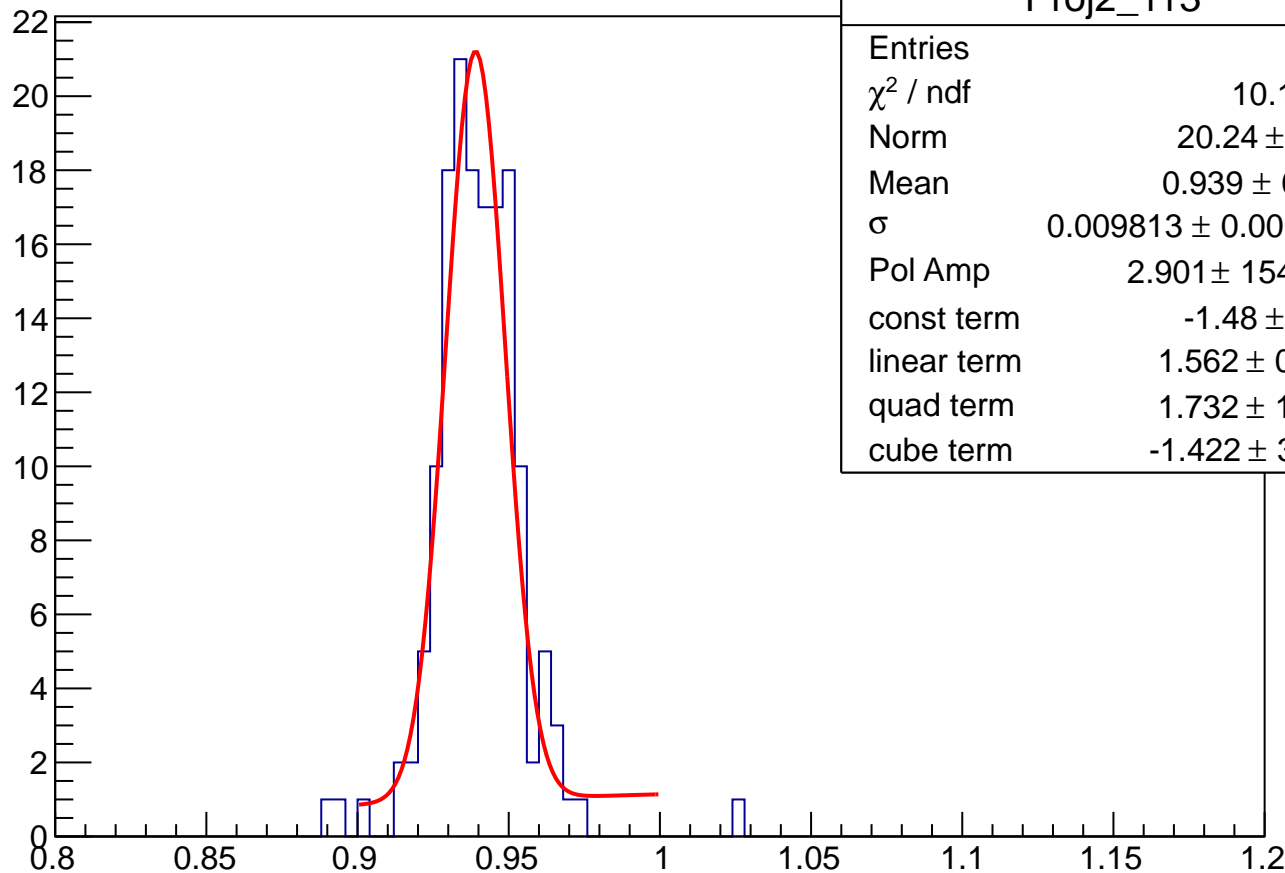


Proj2\_112

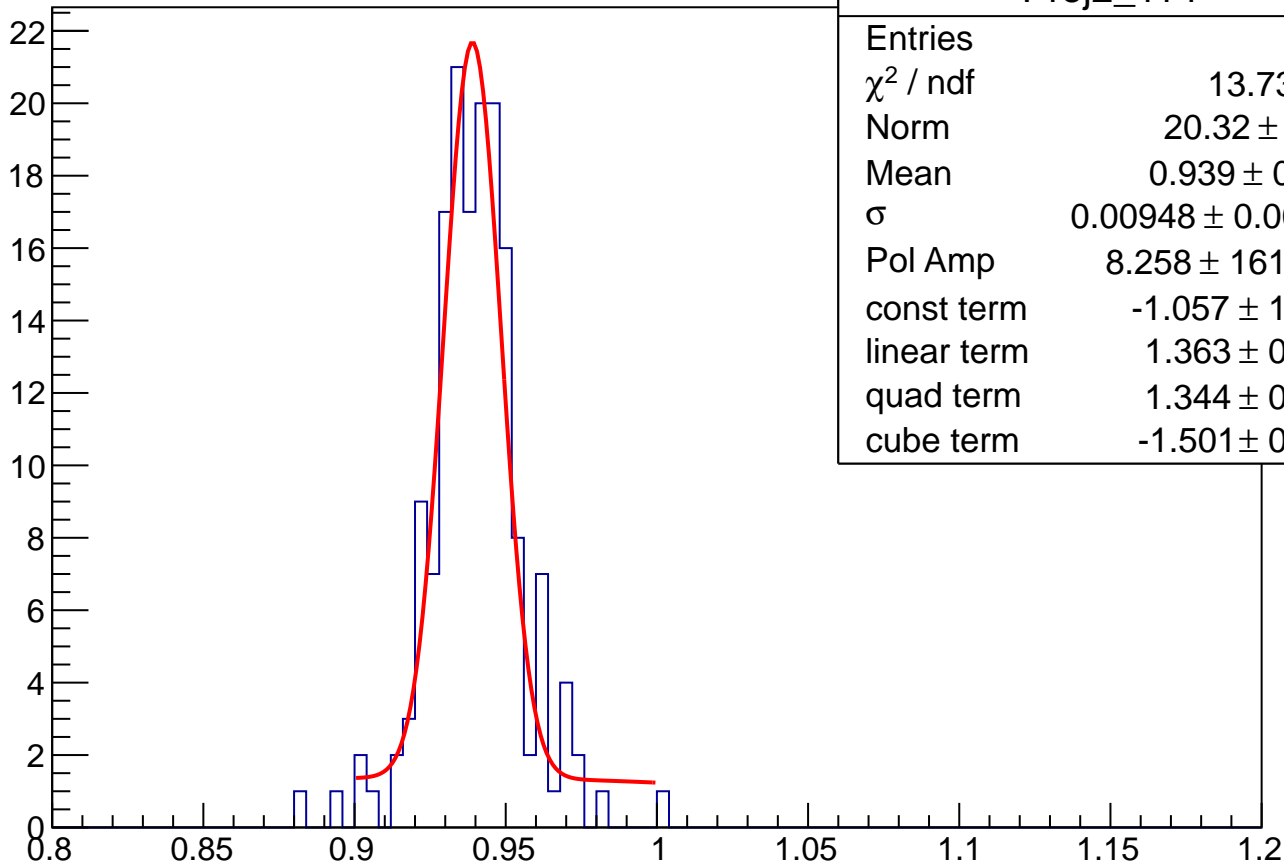
|                       |                       |
|-----------------------|-----------------------|
| Entries               | 118                   |
| $\chi^2 / \text{ndf}$ | 5.417 / 11            |
| Norm                  | $12.24 \pm 1.77$      |
| Mean                  | $0.94 \pm 0.00$       |
| $\sigma$              | $0.01157 \pm 0.00162$ |
| Pol Amp               | $9.802 \pm 32.126$    |
| const term            | $-1.57 \pm 0.43$      |
| linear term           | $1.859 \pm 0.471$     |
| quad term             | $1.876 \pm 0.474$     |
| cube term             | $-2.061 \pm 0.436$    |



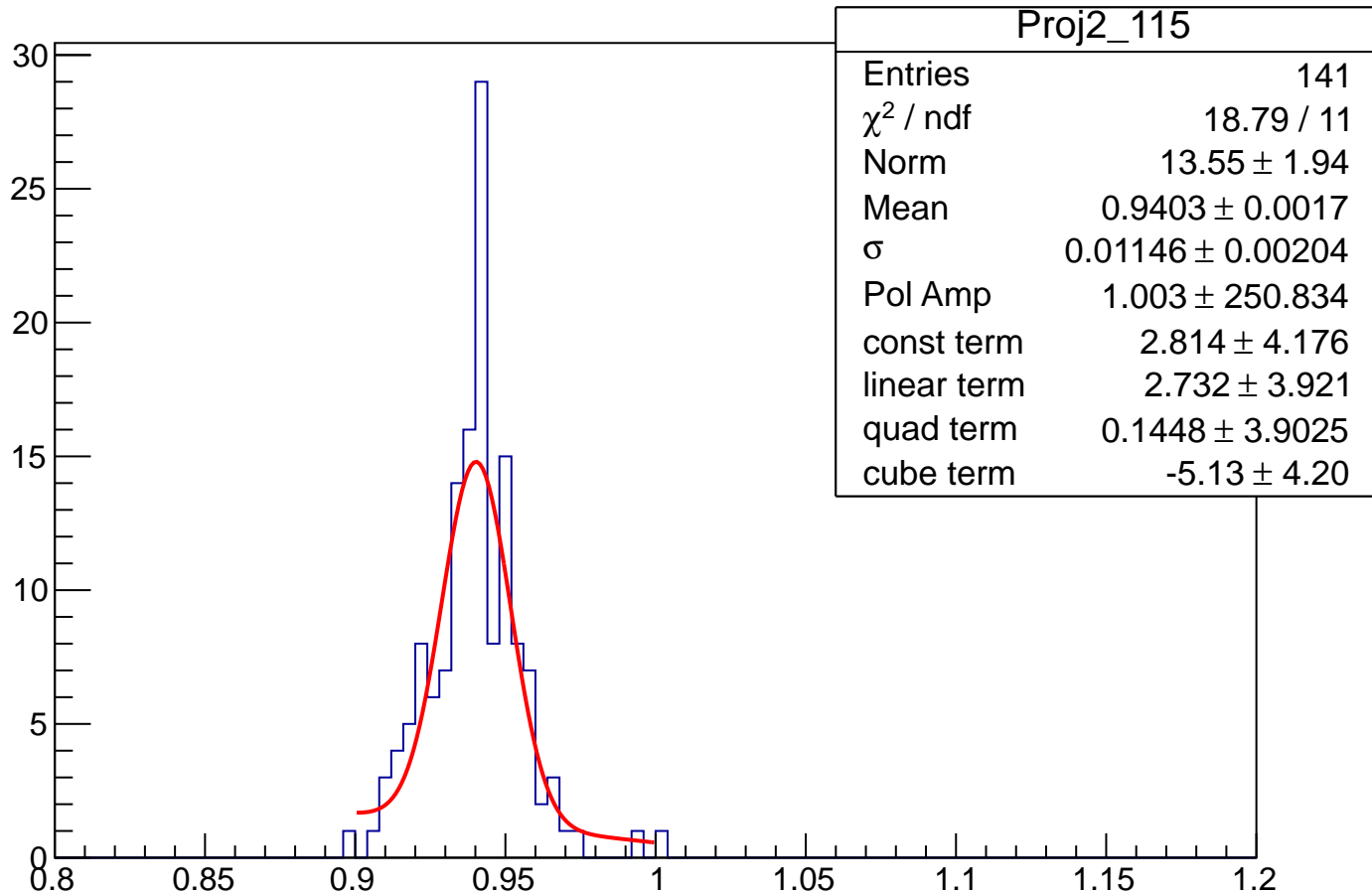
# PhiThetaMassPim



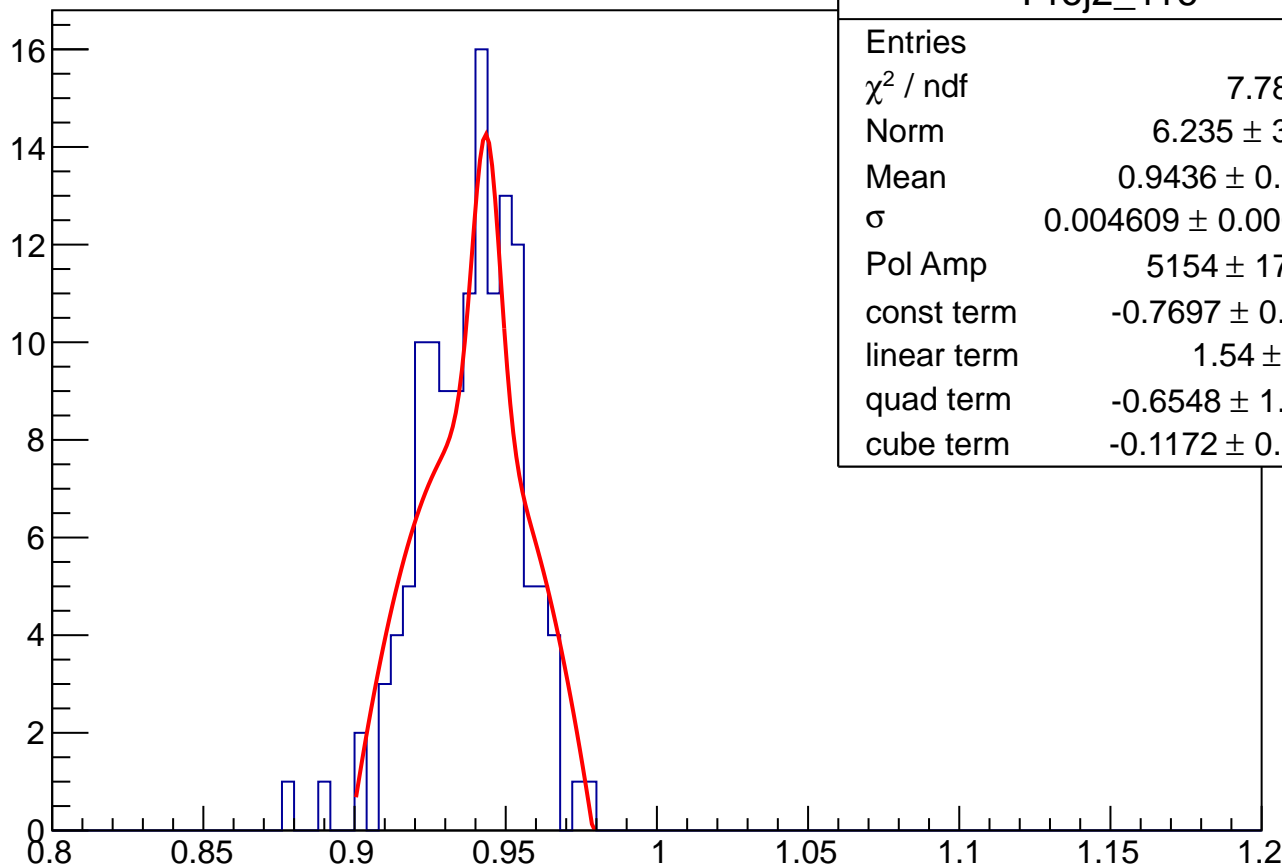
# PhiThetaMassPim



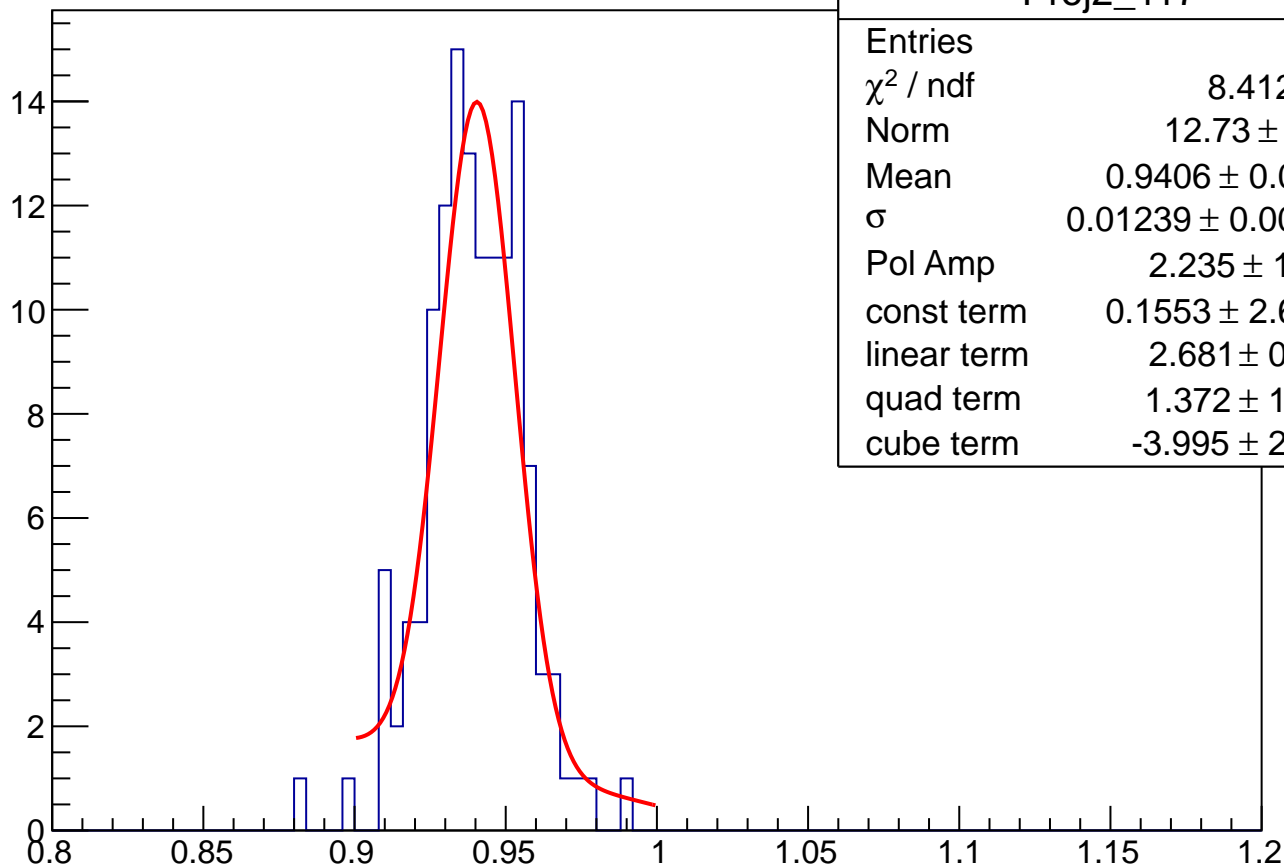
# PhiThetaMassPim



# PhiThetaMassPim



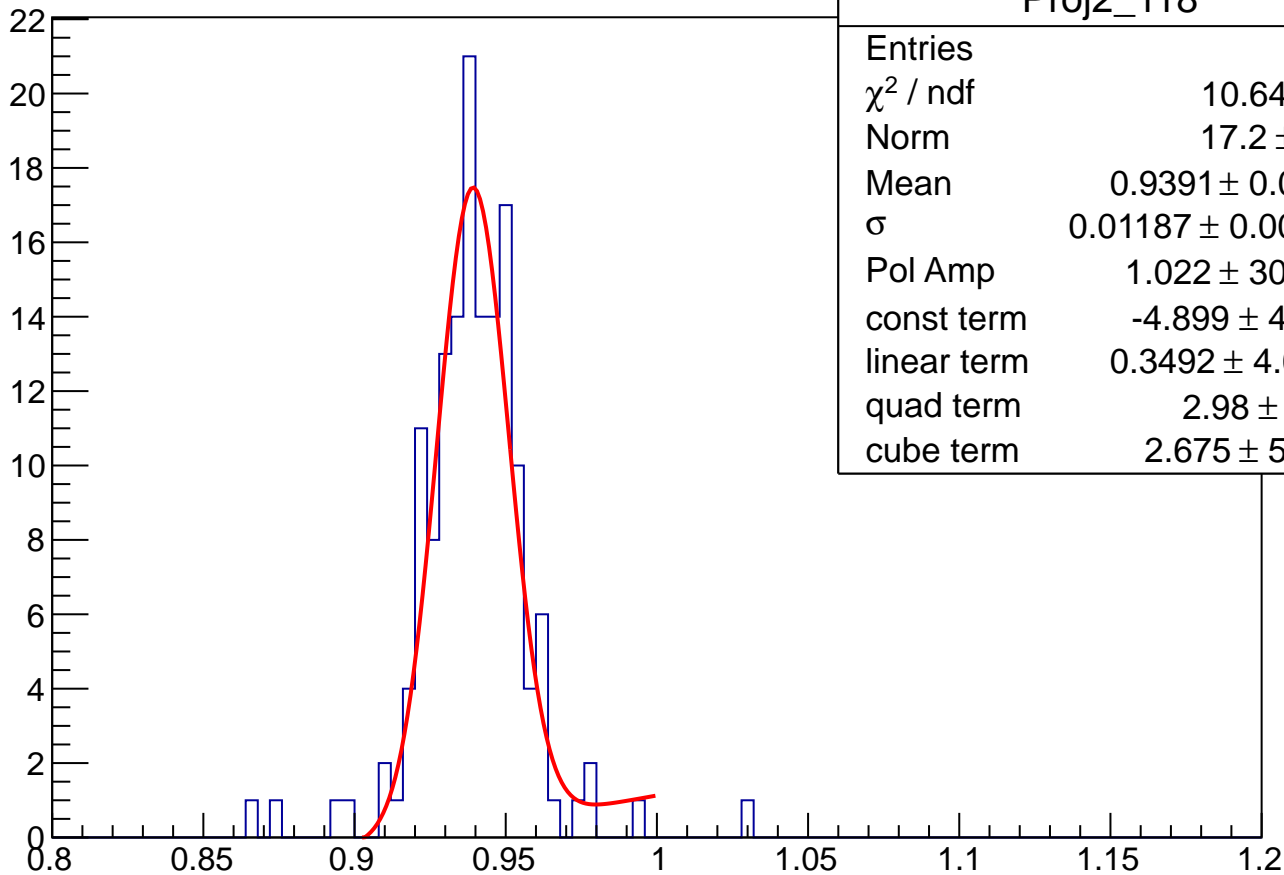
# PhiThetaMassPim



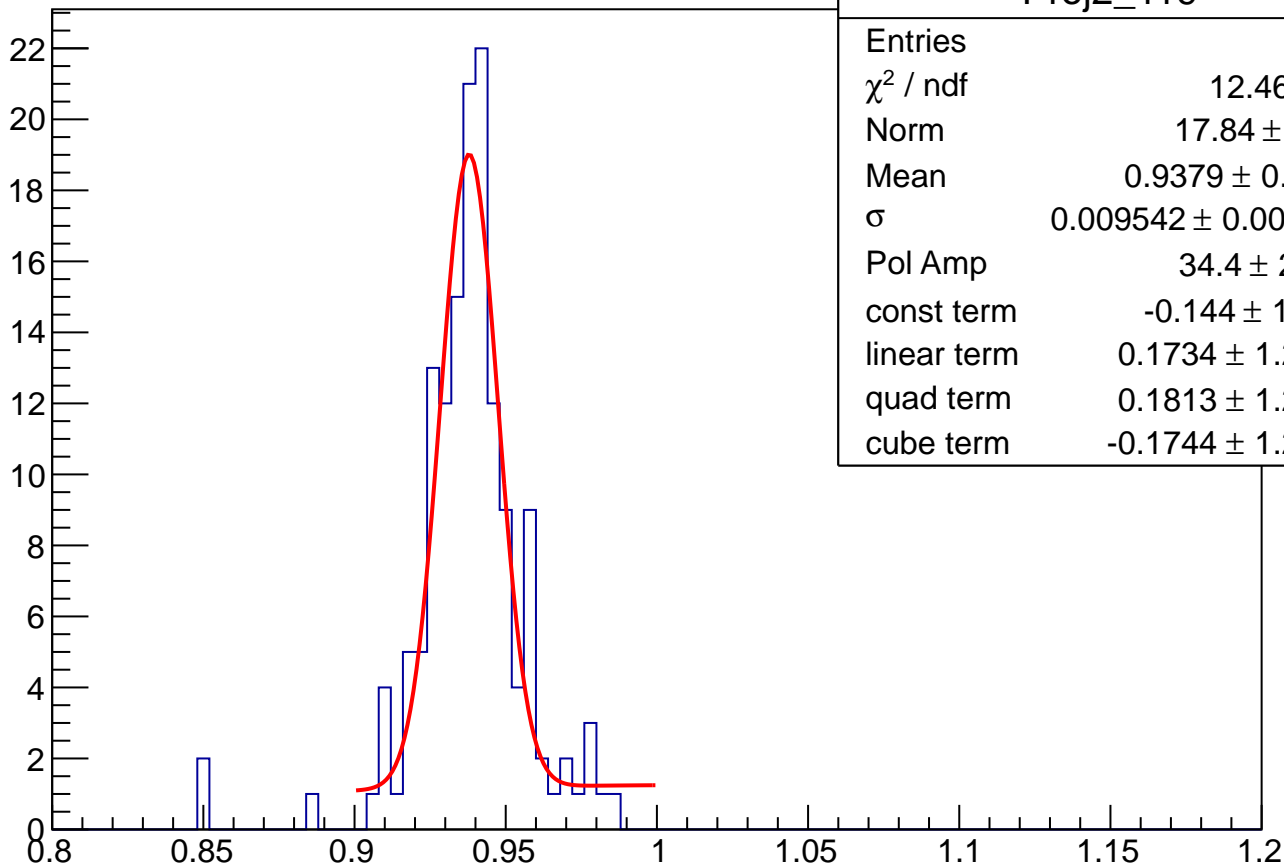
Proj2\_117

|                       |                       |
|-----------------------|-----------------------|
| Entries               | 131                   |
| $\chi^2 / \text{ndf}$ | 8.412 / 11            |
| Norm                  | $12.73 \pm 1.99$      |
| Mean                  | $0.9406 \pm 0.0018$   |
| $\sigma$              | $0.01239 \pm 0.00186$ |
| Pol Amp               | $2.235 \pm 1.951$     |
| const term            | $0.1553 \pm 2.6338$   |
| linear term           | $2.681 \pm 0.790$     |
| quad term             | $1.372 \pm 1.002$     |
| cube term             | $-3.995 \pm 2.730$    |

# PhiThetaMassPim



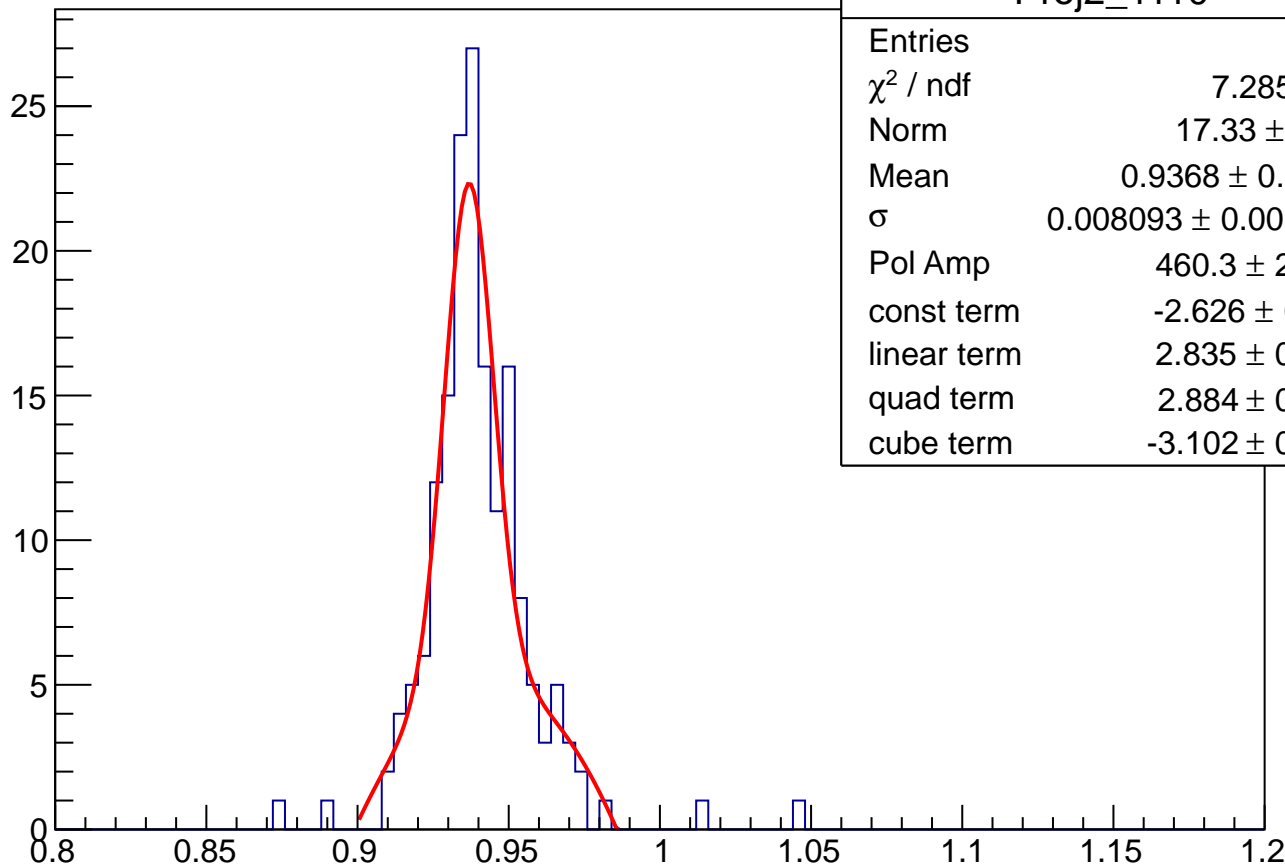
# PhiThetaMassPim



Proj2\_119

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 147                     |
| $\chi^2 / \text{ndf}$ | 12.46 / 13              |
| Norm                  | $17.84 \pm 2.33$        |
| Mean                  | $0.9379 \pm 0.0011$     |
| $\sigma$              | $0.009542 \pm 0.001144$ |
| Pol Amp               | $34.4 \pm 227.1$        |
| const term            | $-0.144 \pm 1.085$      |
| linear term           | $0.1734 \pm 1.2483$     |
| quad term             | $0.1813 \pm 1.2939$     |
| cube term             | $-0.1744 \pm 1.2929$    |

# PhiThetaMassPim

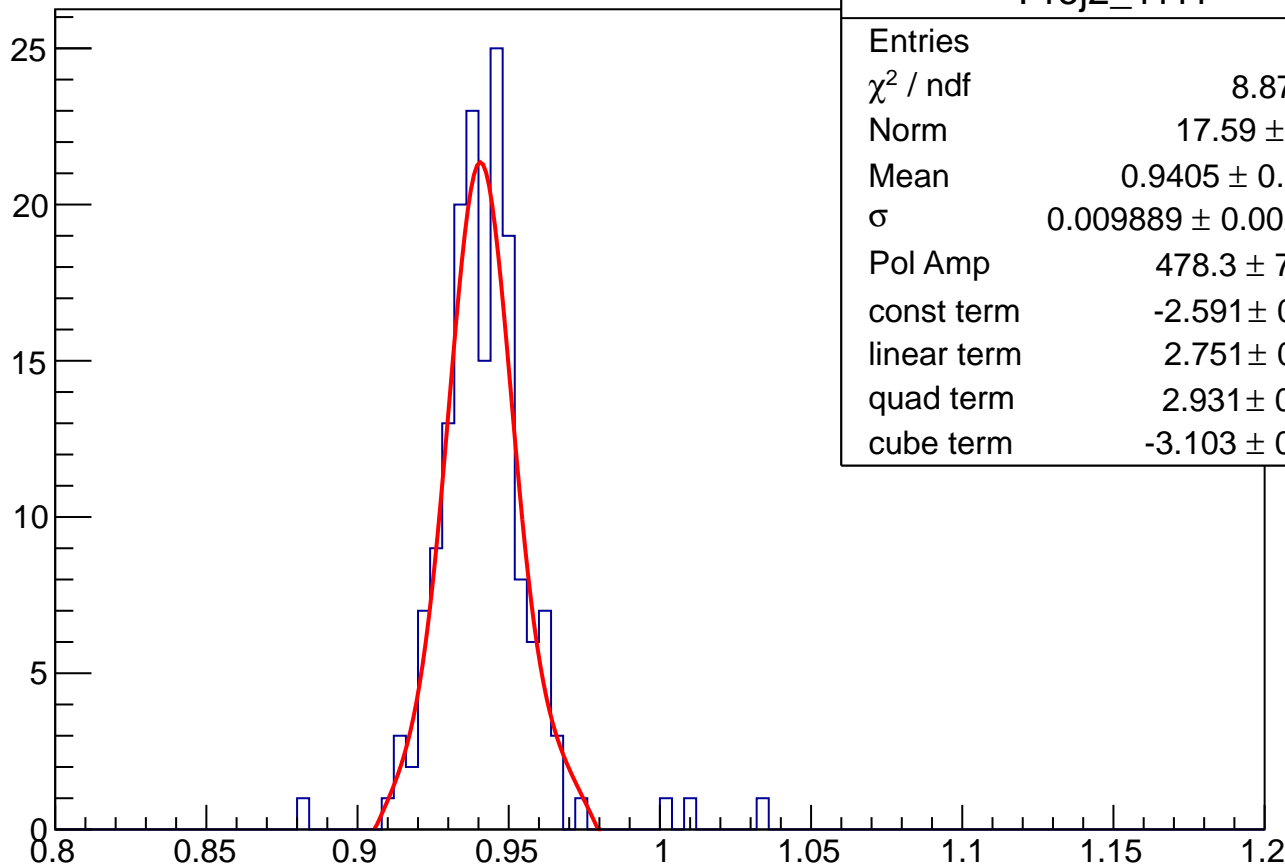


Proj2\_1110

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 169                     |
| $\chi^2 / \text{ndf}$ | 7.285 / 10              |
| Norm                  | $17.33 \pm 3.06$        |
| Mean                  | $0.9368 \pm 0.0014$     |
| $\sigma$              | $0.008093 \pm 0.001934$ |
| Pol Amp               | $460.3 \pm 246.8$       |
| const term            | $-2.626 \pm 0.011$      |
| linear term           | $2.835 \pm 0.013$       |
| quad term             | $2.884 \pm 0.013$       |
| cube term             | $-3.102 \pm 0.013$      |



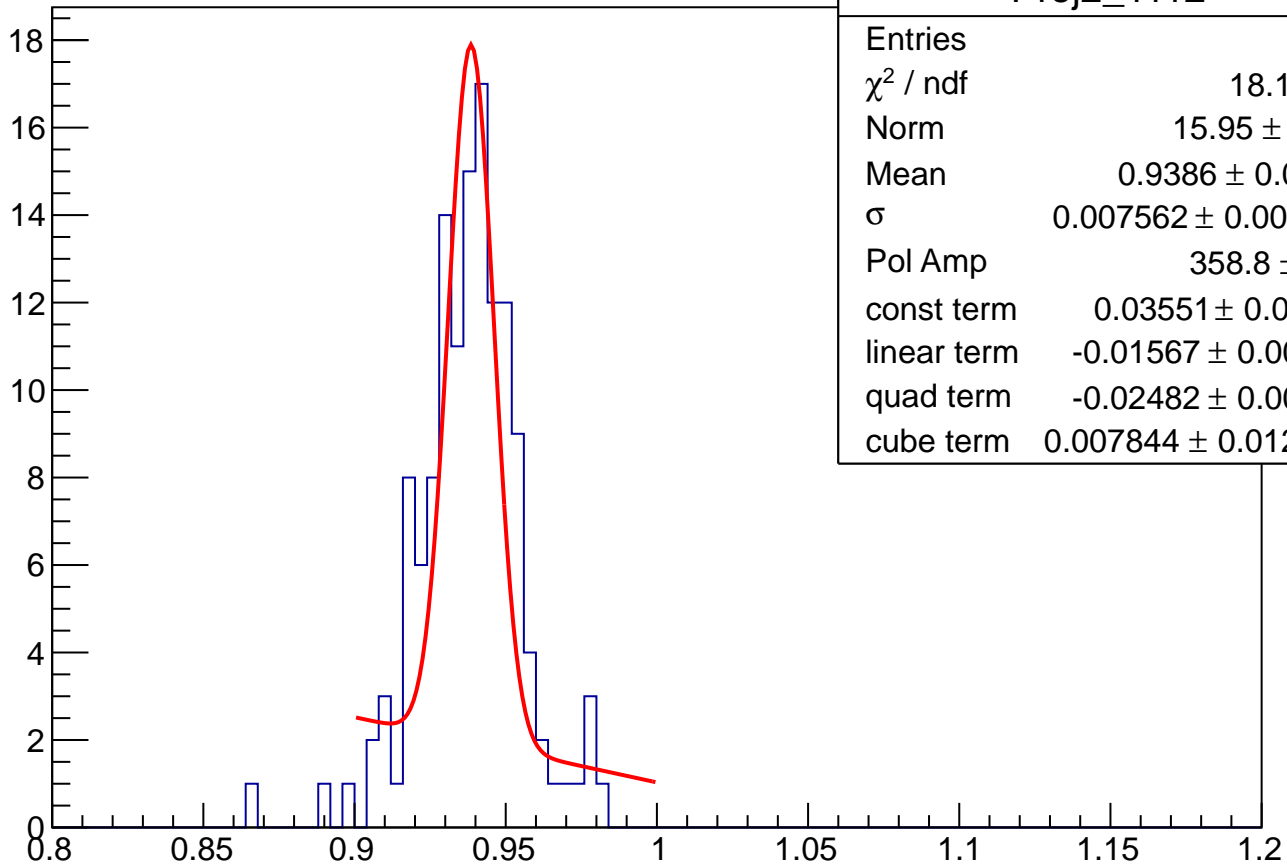
# PhiThetaMassPim



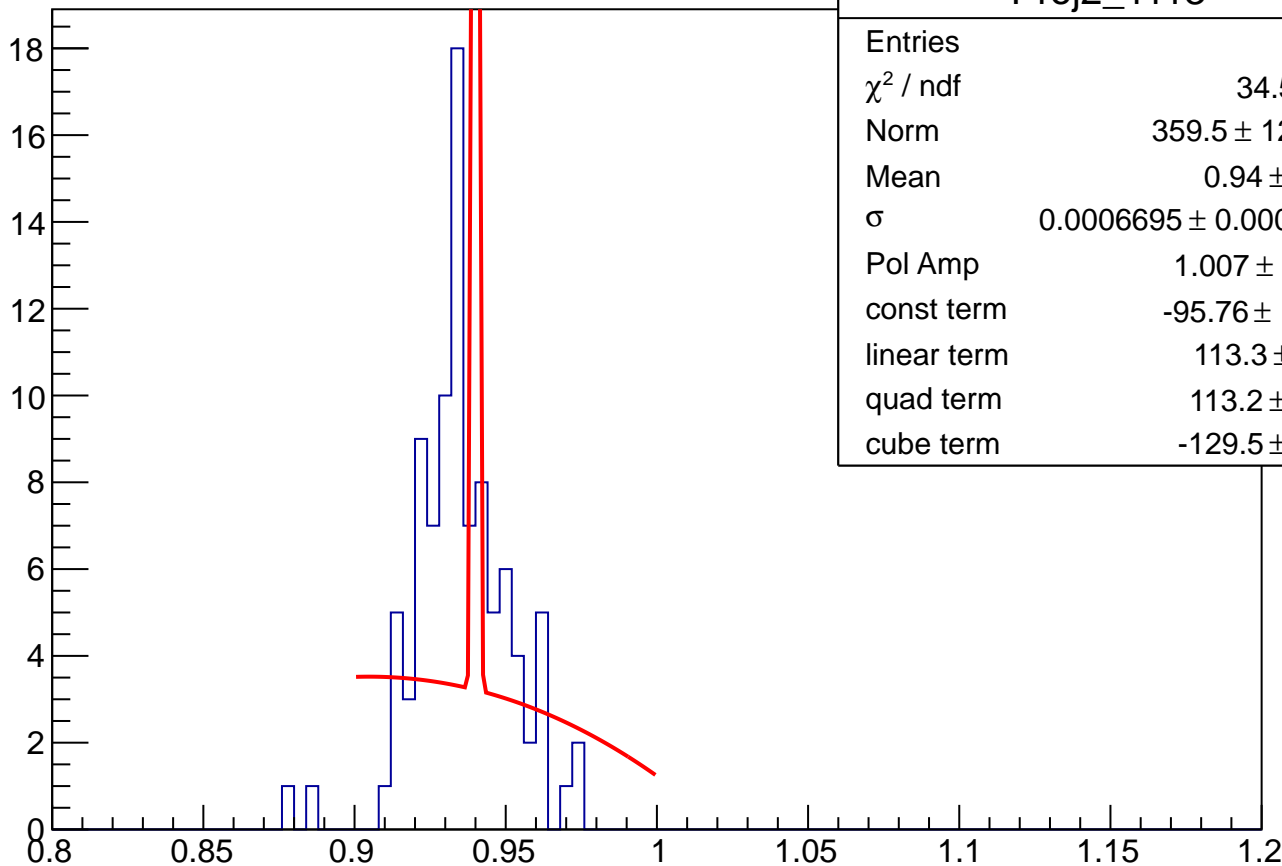
## Proj2\_1111

|                       |                         |
|-----------------------|-------------------------|
| Entries               | 166                     |
| $\chi^2 / \text{ndf}$ | 8.878 / 8               |
| Norm                  | $17.59 \pm 4.37$        |
| Mean                  | $0.9405 \pm 0.0014$     |
| $\sigma$              | $0.009889 \pm 0.002274$ |
| Pol Amp               | $478.3 \pm 707.7$       |
| const term            | $-2.591 \pm 0.010$      |
| linear term           | $2.751 \pm 0.012$       |
| quad term             | $2.931 \pm 0.013$       |
| cube term             | $-3.103 \pm 0.013$      |

# PhiThetaMassPim



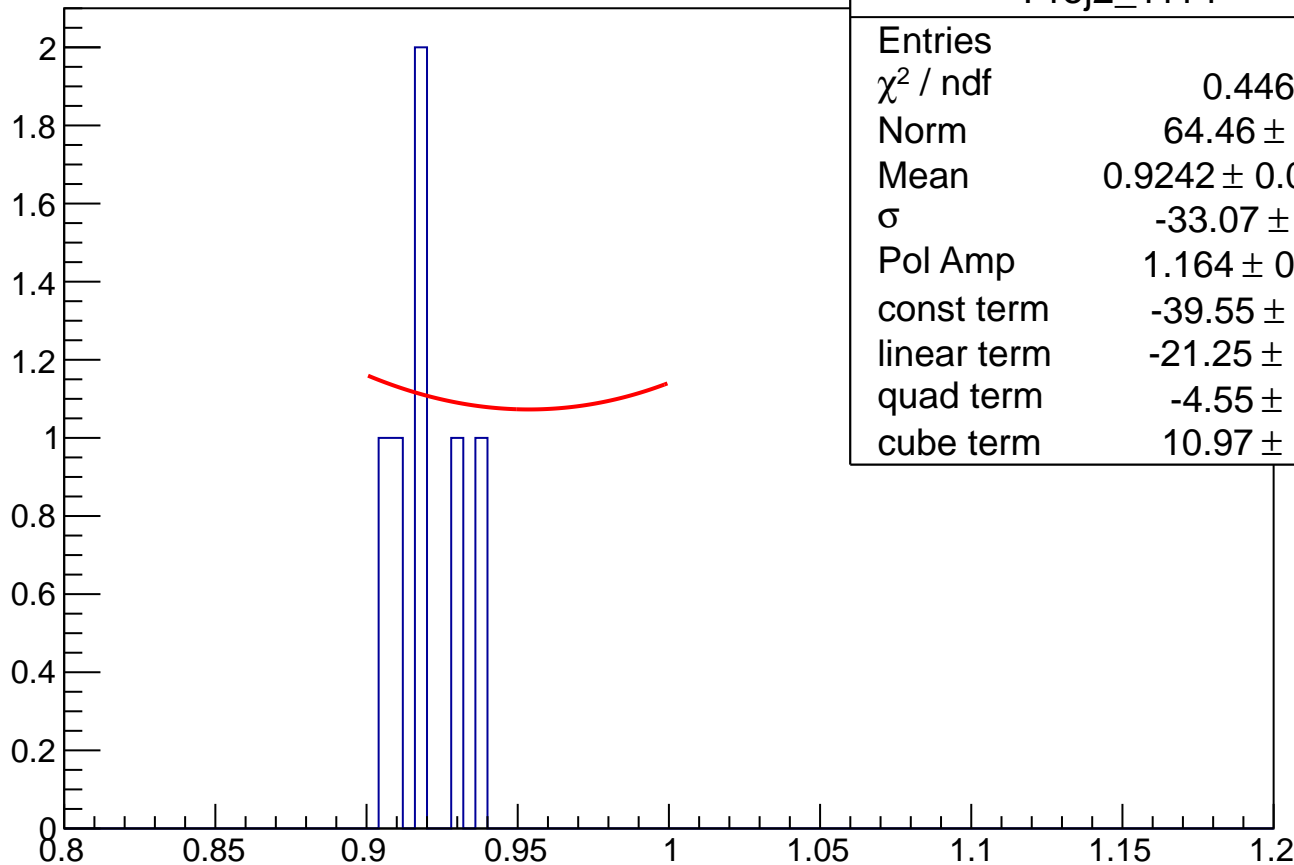
# PhiThetaMassPim



Proj2\_1113

|                       |                           |
|-----------------------|---------------------------|
| Entries               | 95                        |
| $\chi^2 / \text{ndf}$ | 34.57 / 8                 |
| Norm                  | $359.5 \pm 1253.8$        |
| Mean                  | $0.94 \pm 0.00$           |
| $\sigma$              | $0.0006695 \pm 0.0002201$ |
| Pol Amp               | $1.007 \pm 1.471$         |
| const term            | $-95.76 \pm 11.10$        |
| linear term           | $113.3 \pm 16.1$          |
| quad term             | $113.2 \pm 14.2$          |
| cube term             | $-129.5 \pm 21.0$         |

# PhiThetaMassPim



Proj2\_1114

|                       |                     |
|-----------------------|---------------------|
| Entries               | 6                   |
| $\chi^2 / \text{ndf}$ | 0.4464 / 0          |
| Norm                  | $64.46 \pm 4.62$    |
| Mean                  | $0.9242 \pm 0.0763$ |
| $\sigma$              | $-33.07 \pm 1.41$   |
| Pol Amp               | $1.164 \pm 0.085$   |
| const term            | $-39.55 \pm 1.34$   |
| linear term           | $-21.25 \pm 1.35$   |
| quad term             | $-4.55 \pm 1.36$    |
| cube term             | $10.97 \pm 1.36$    |