# Korea Workshop

(2024/11/18 ~11/29)

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# Analysis Plan during INTT workshop

## Analysis topic

- Searching the best value of DAQ0 to cut off a lot of noise

## Current knowledge/status of this topic

- I made a linear function histgram of run data from DAC scan (My state)
- I made a code to be able to make other Run's one by changing written number

## Goal for the workshop

- Making the graph which tells us which value is the best as DAC0’s value
- Leranning about DAC more

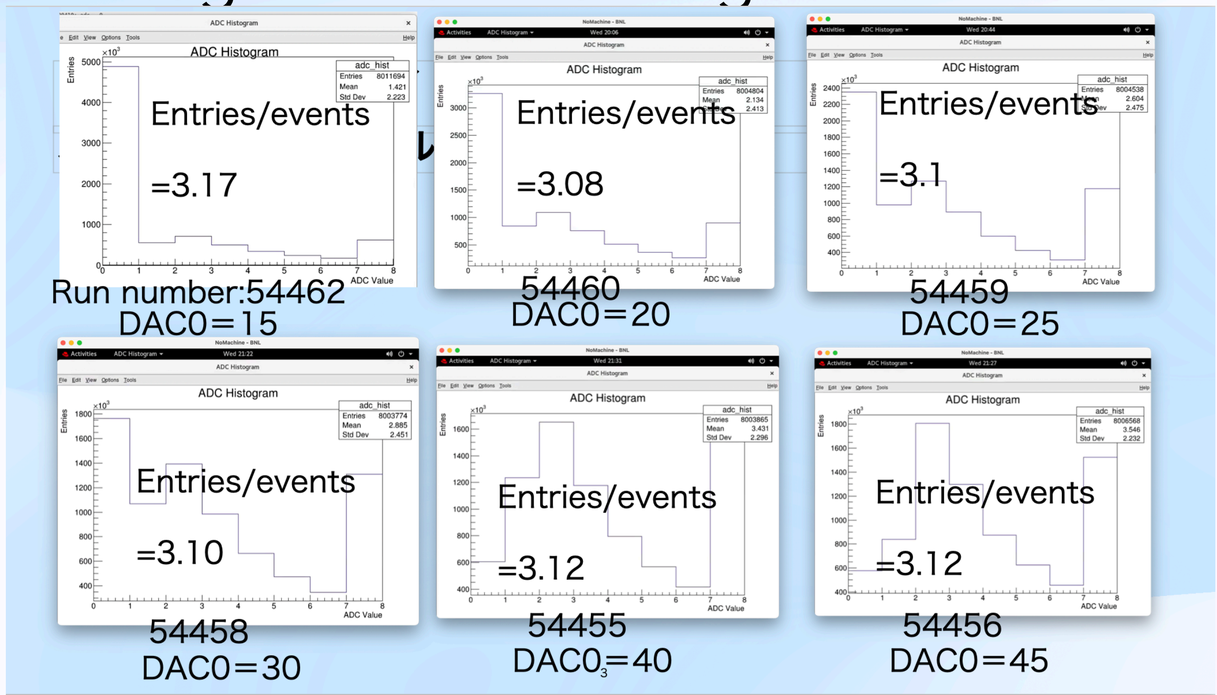
## Milestones to reach to my goal

- Making other linear function histgrams of run data from DAC scan ← I did last week
- Making graph about relation of DAC0’s value and the number of entries per Run data

# Summery of middle presentation
## event number depending on DAC0's minimum value

- [What I did] I made histgram about entries and ADC depending on different DAC0's minimum value

- [result] I found that ADC's histogram form changes at DAC0's minimum value = 30~40.

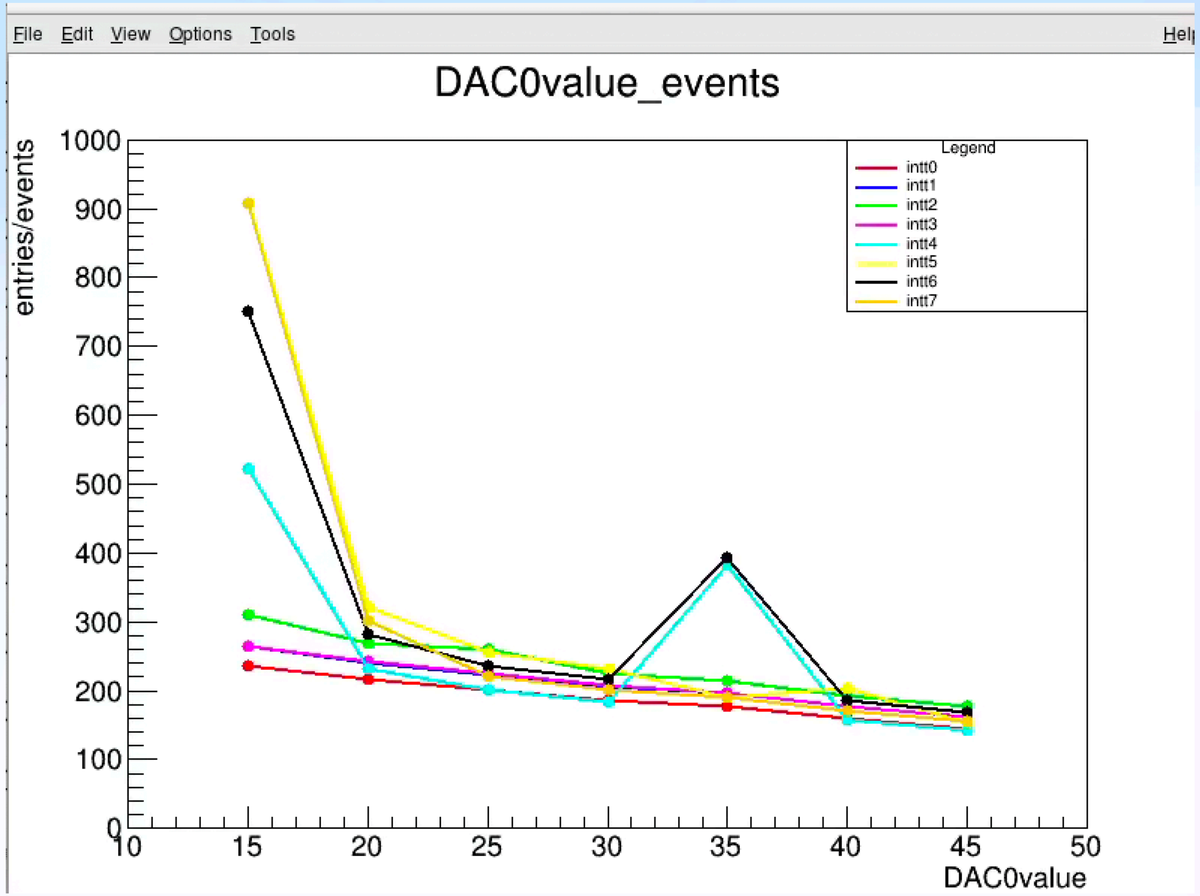


# About what I did this week

- Making graph about relation of DAC0's minimum value and the number of hits per events from intt0~7 data
- I tried to make graph about relation of DAC0's minimum value and the number of hits per events from intt0~7's modules

# Making graph about relation of DAC0's minimum value and the number of entries per events from intt0~7 data

- I found that the number of hits/events decrease by increasing DAC0's minimum value

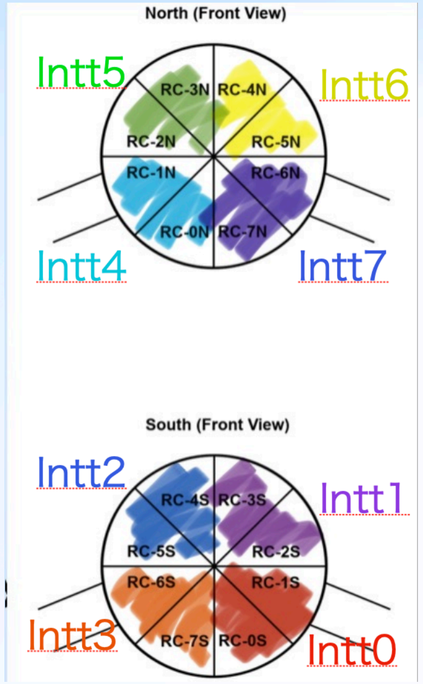


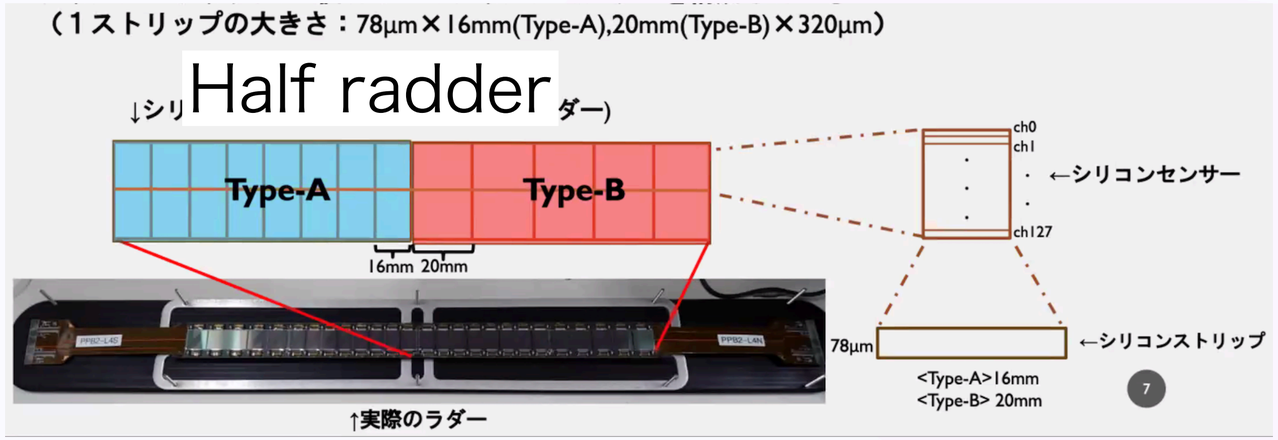
# About what I did this week

- Making graph about relation of DAC0's minimum value and the number of hits per events from intt0~7 data
- I tried to make graph about relation of DAC0's minimum value and the number of hits per events from intt0~7's modules

# What is module?

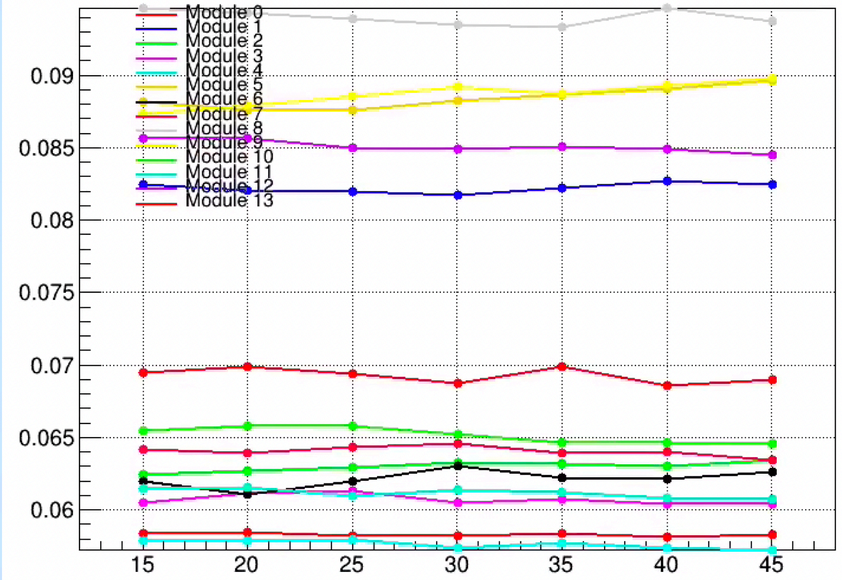
- Intt detecter is consisted by intt0~intt7
- Each intt0~7 has 14 half rather
- Each half radder has 13 modules which is consists by 8 typesA and 5 typeB.



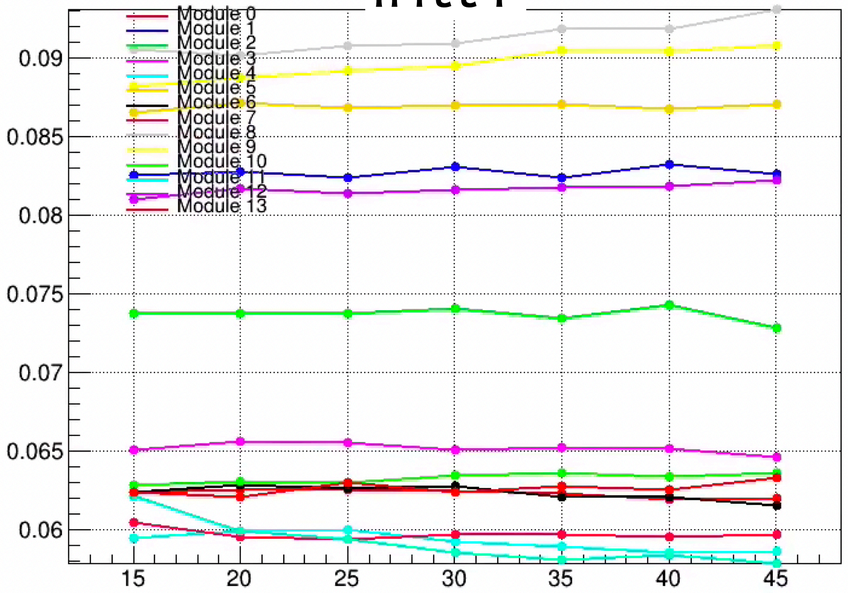



- relation of DAC0's minimum value and the number of hits/events from intt0~7's modules(10,000events)

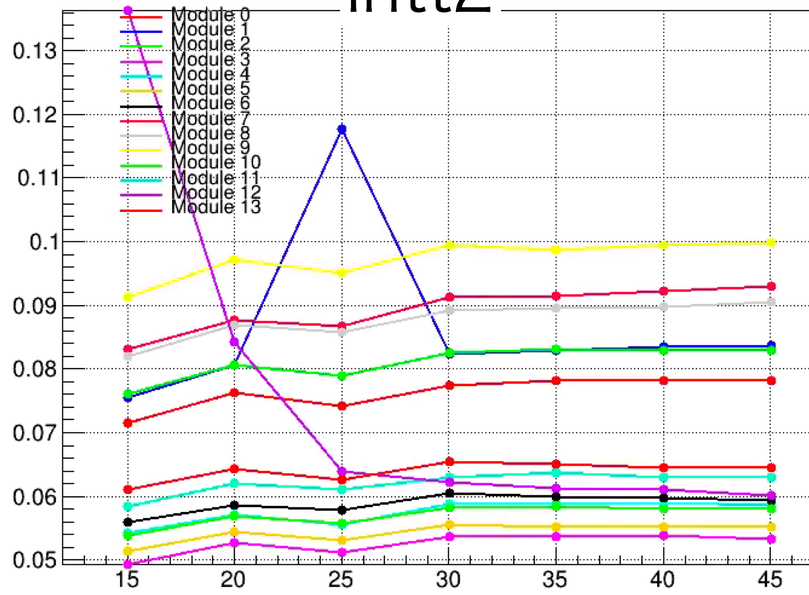
Intt0




Intt1

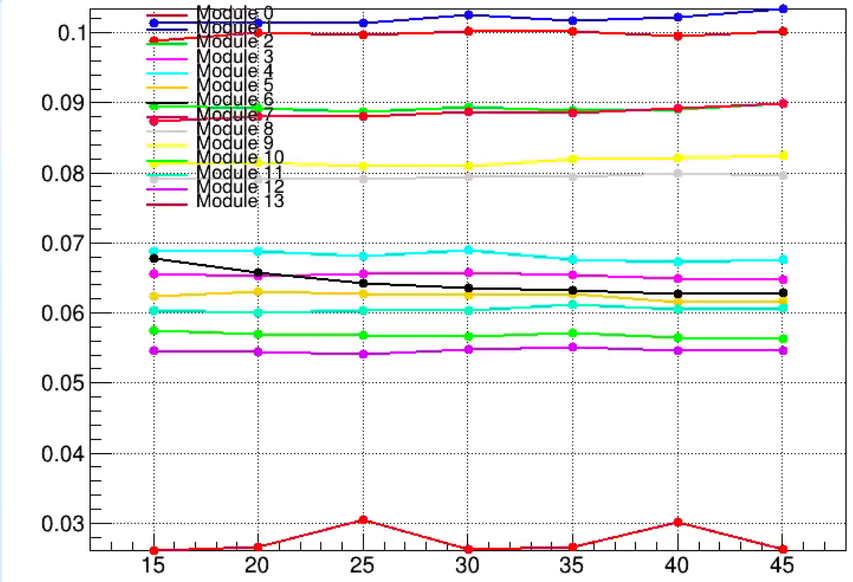



Intt2




File Edit View Options Tools Help

Intt3

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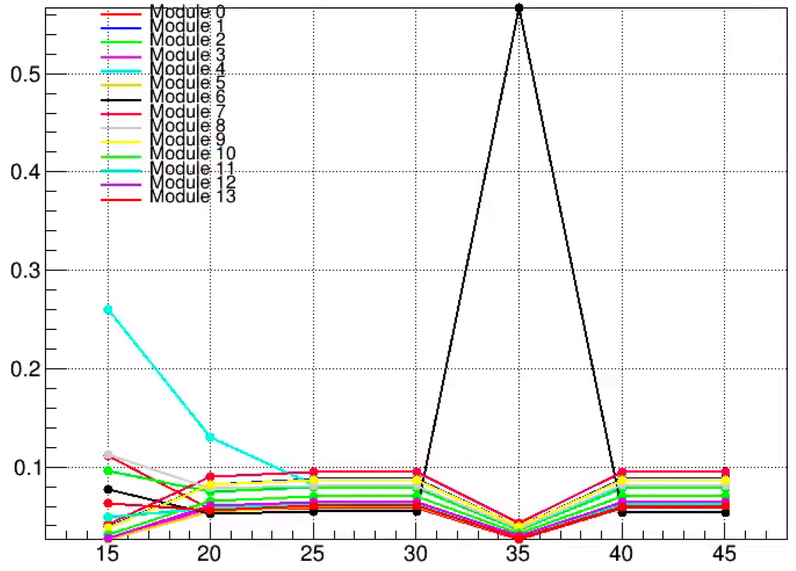
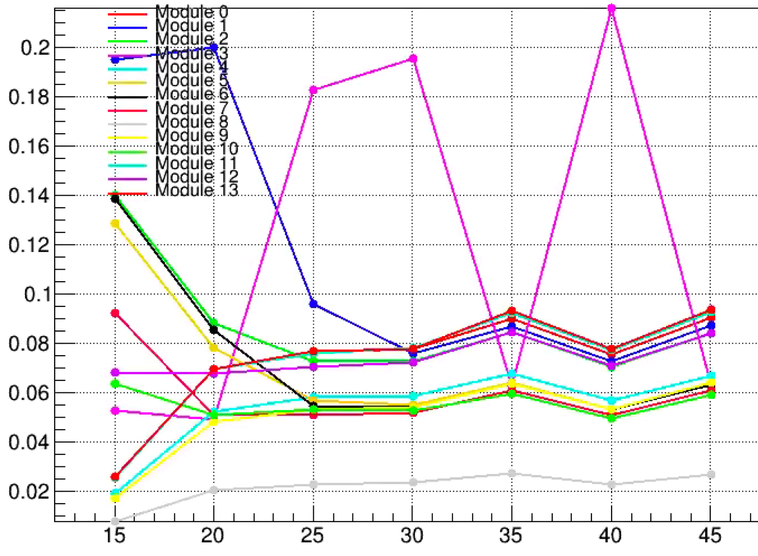
Intt4




Normalized Module Counts vs DAC Value for intt5;DAC Value;Normalized Module Counts

Edit View Options Tools

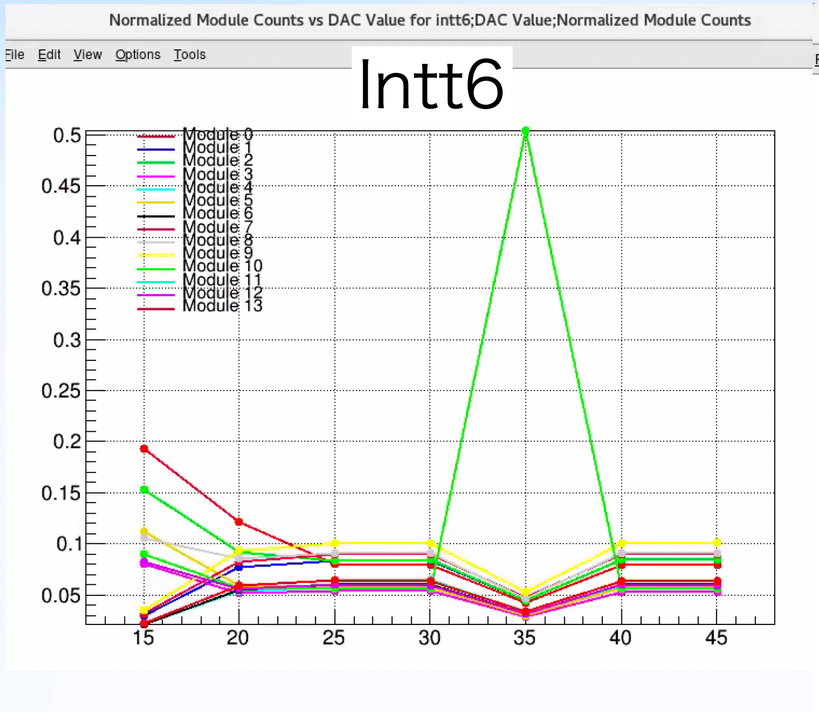
Intt5

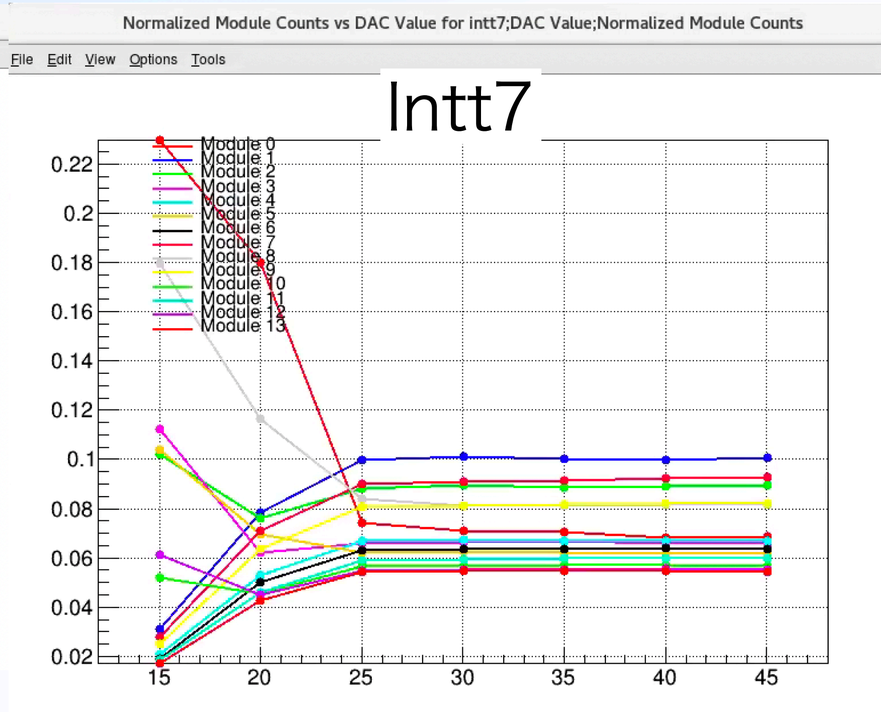


- **I tried to make graph about relation of DAC0's minimum value and the number of hits per events from intt0~7's modules**

  - I found that half of modules increase the number of hits/events from intt77 graph

  - These graph may be incorrect…

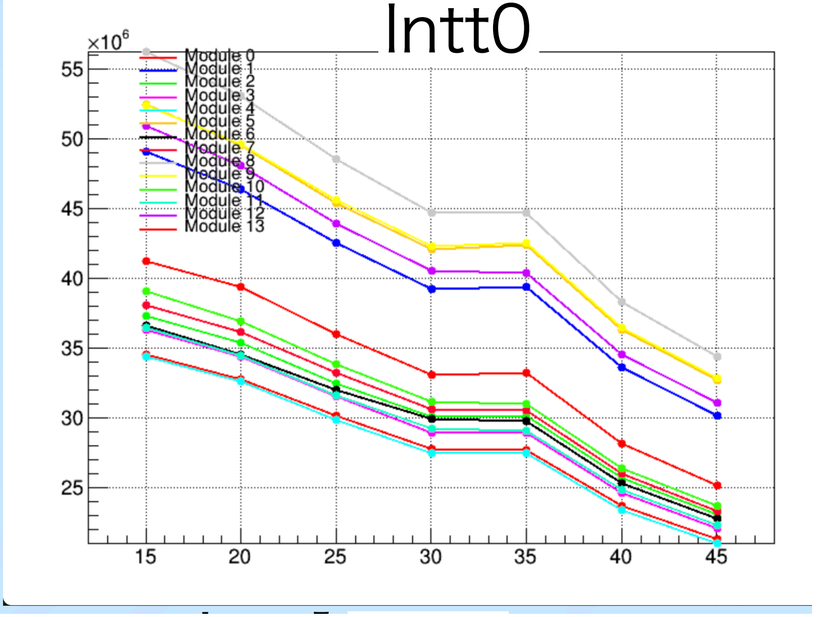


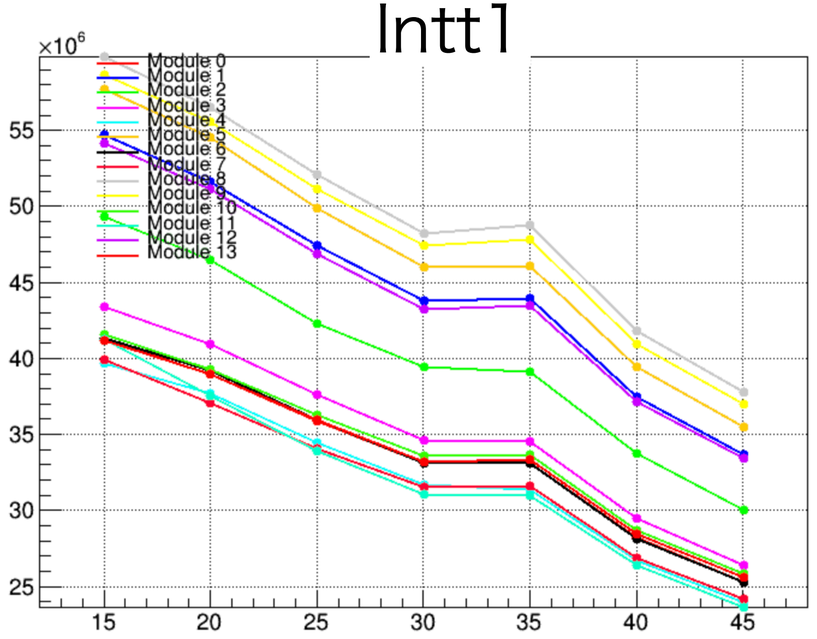
# The graph made in around 2,500,000 events (relation with DAC0's minimum value and the number of hits)

Akitomo made in around 2,500,000 events with my code!

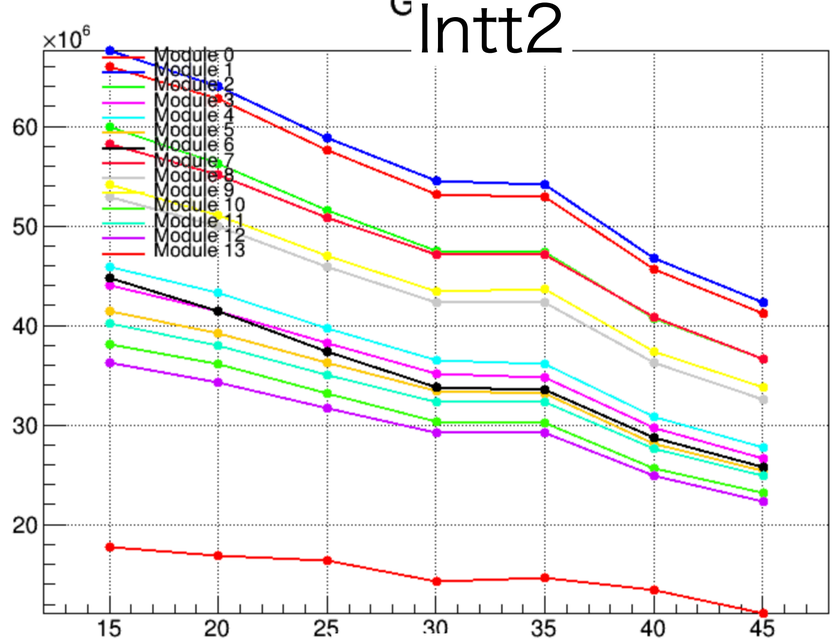
Intt0



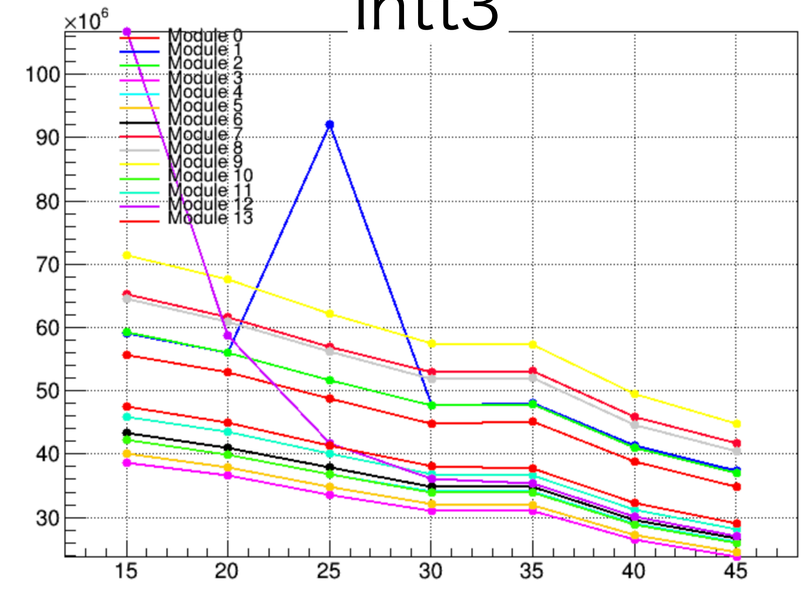

Intt1



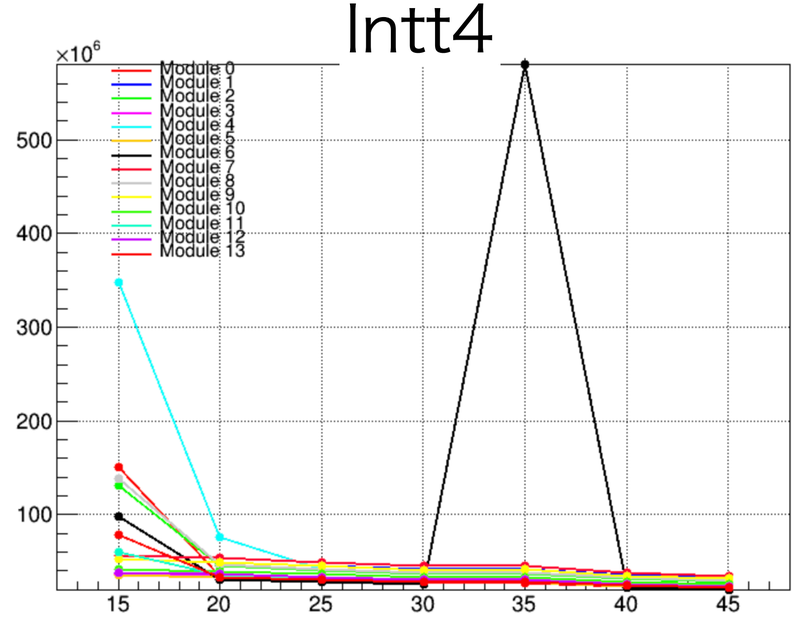

Intt2



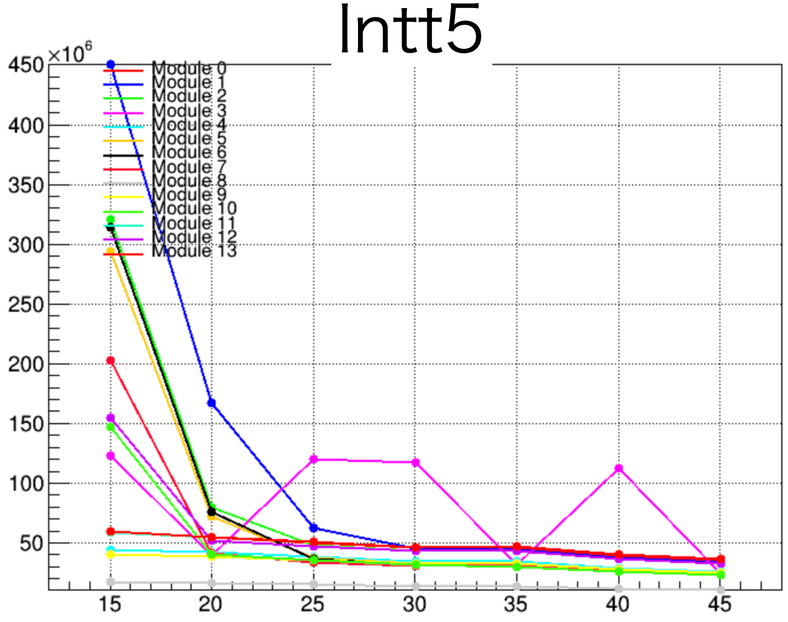

Intt3



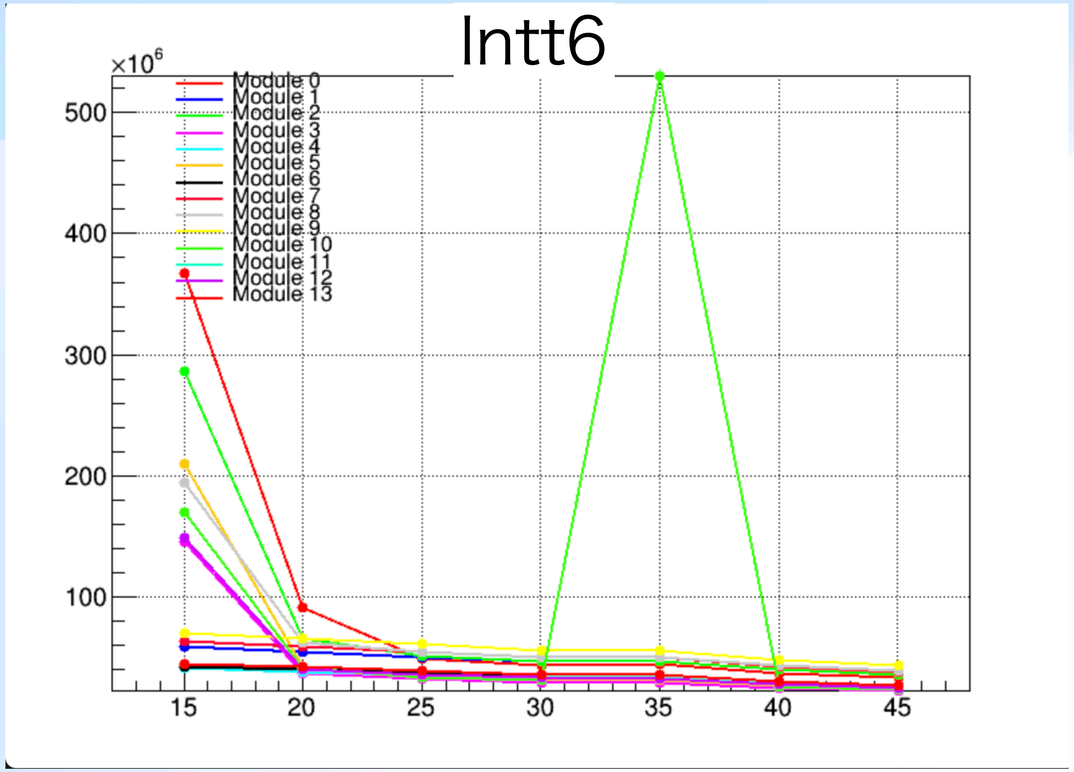

Intt4

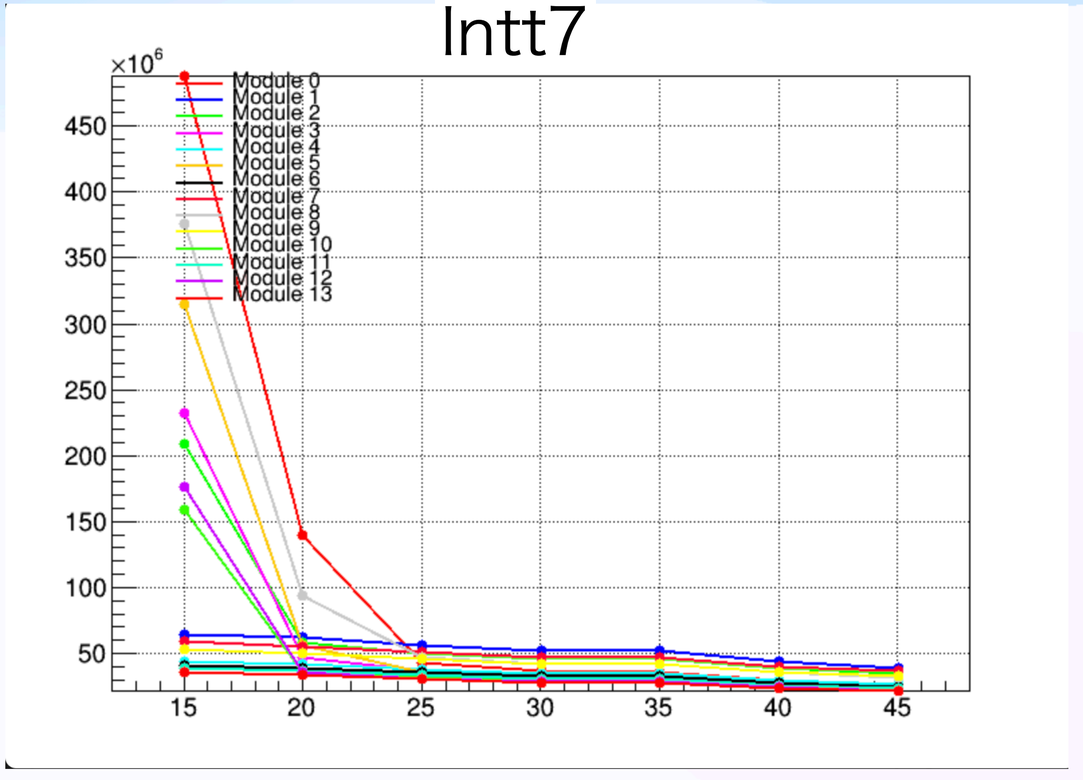



Intt5



- It became more realistic than before
- It seems that most of modules's number of hits decrease
- This graph seem to be correct…

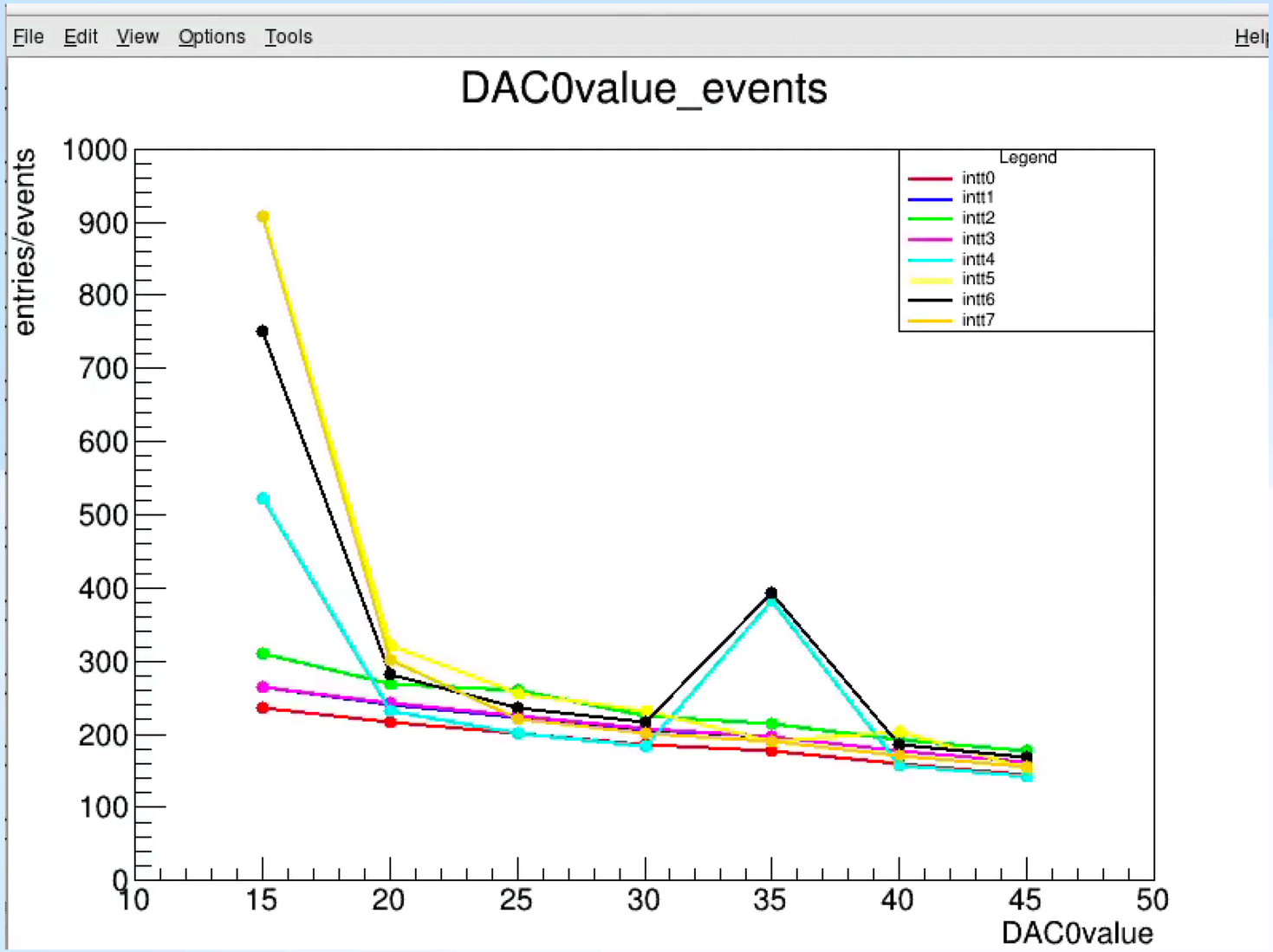


# Next steps

- I will make the graph without hot cannel with Fun4All.

# 2024/11/25（月）～


File Edit View Options Tools
DAC0value_events
entries/events
1000
900
800
700
600
500
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300
200
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35
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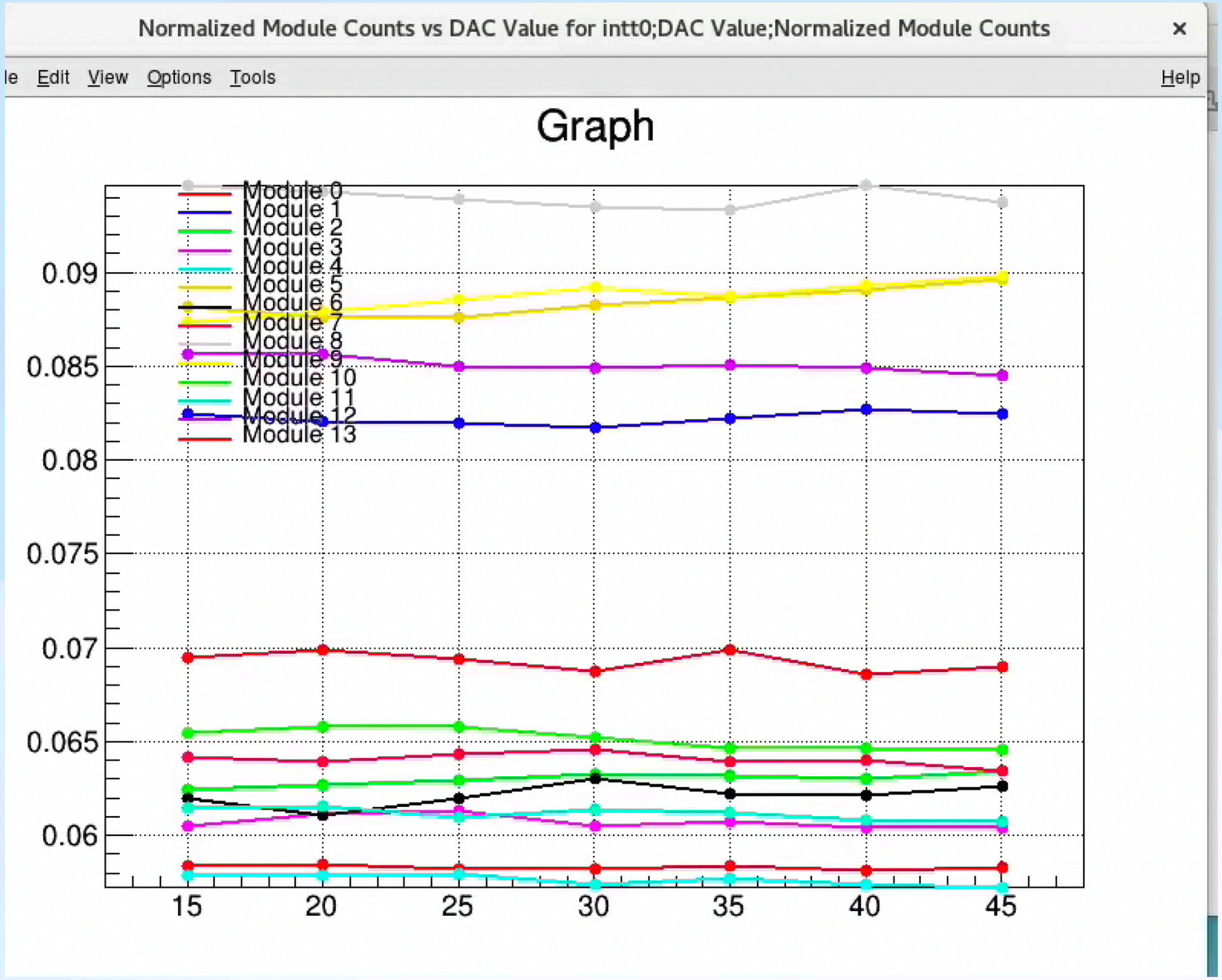
DAC0value
Legend
intt0
intt1
intt2
intt3
intt4
intt5
intt6
intt7


Normalized Module Counts vs DAC Value for intt0;DAC Value;Normalized Module Counts
le Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
Module 12
Module 13
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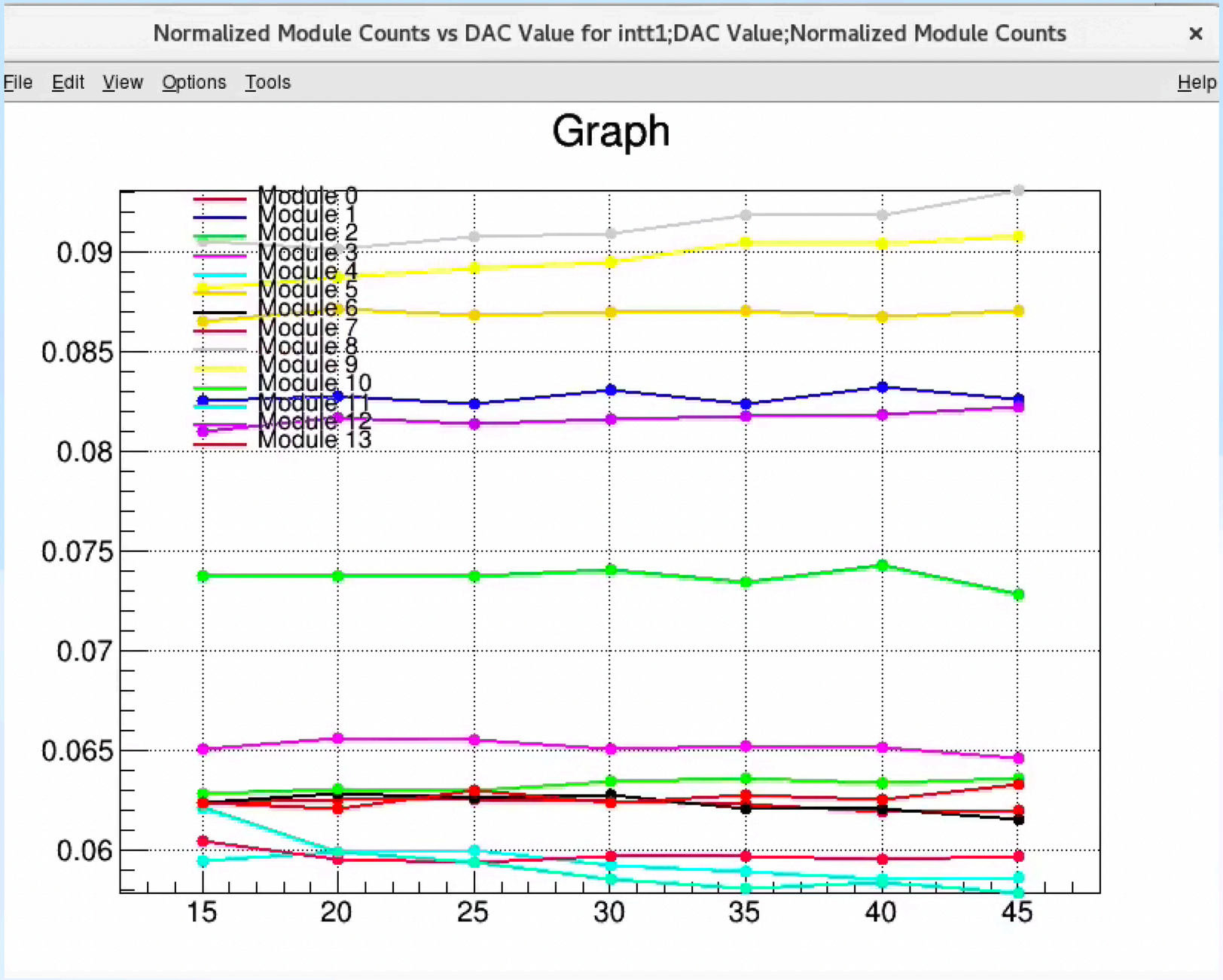
Normalized Module Counts vs DAC Value for intt1;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
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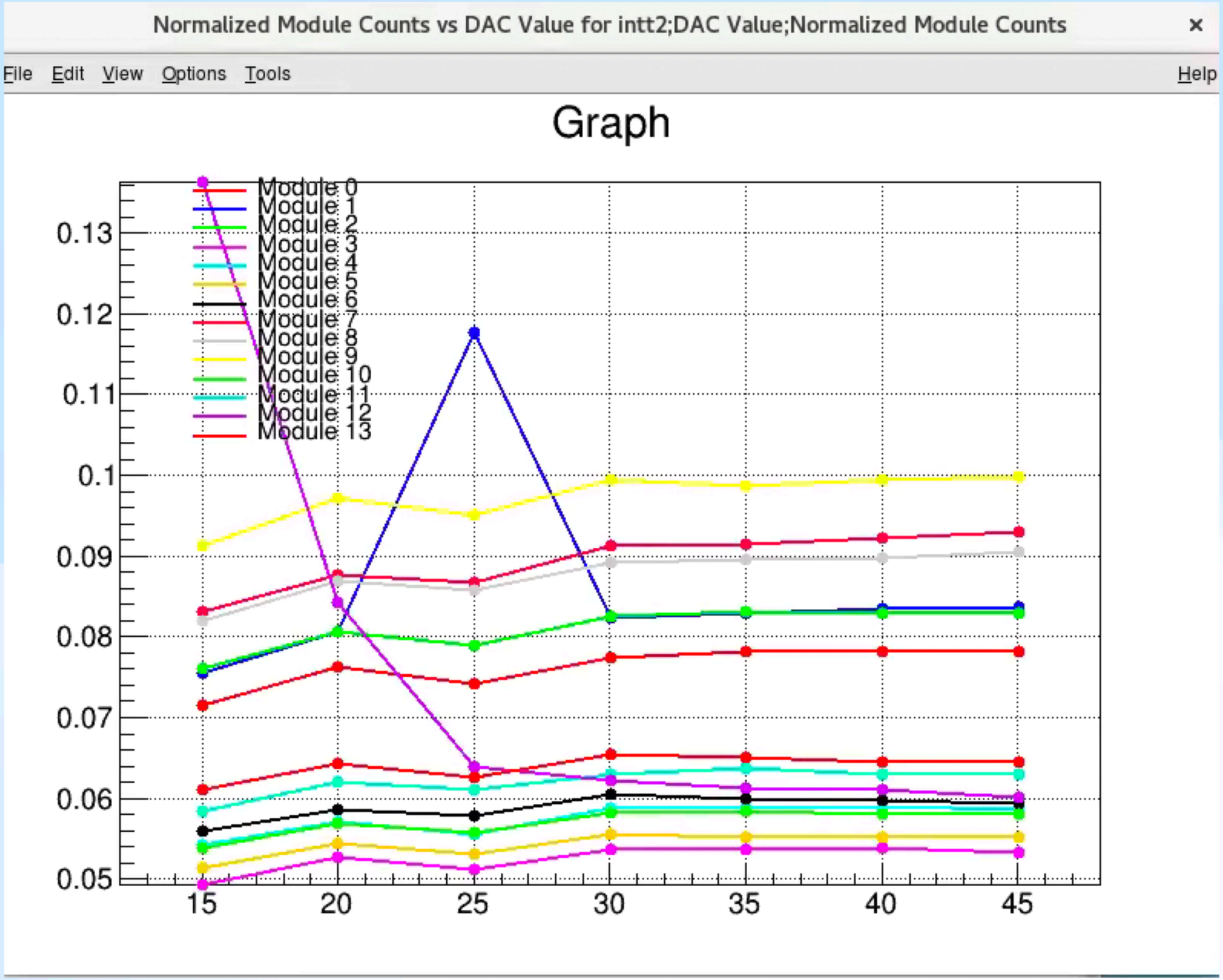
Normalized Module Counts vs DAC Value for intt2;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
Module 12
Module 13
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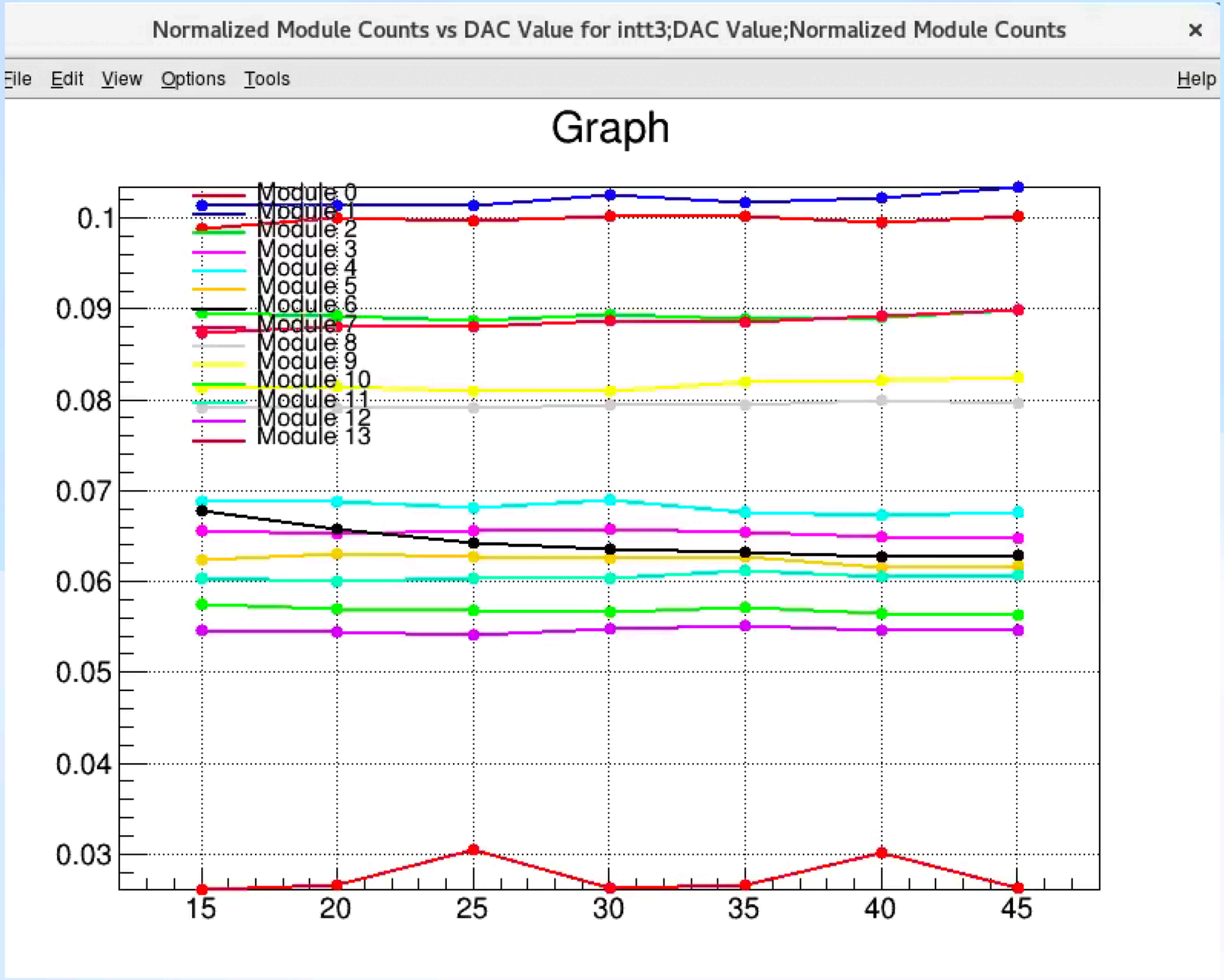
Normalized Module Counts vs DAC Value for intt3;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
Module 12
Module 13
0.1
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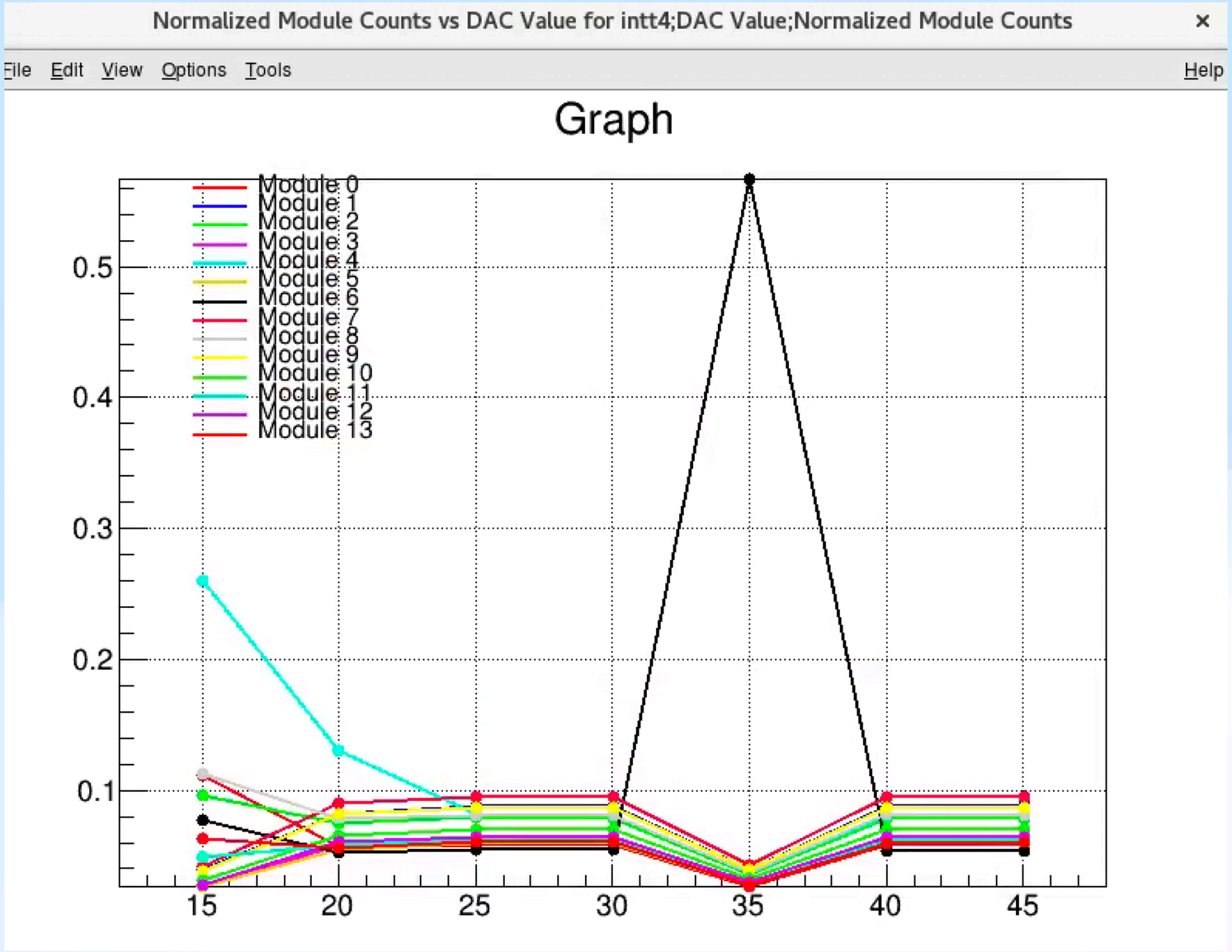
Normalized Module Counts vs DAC Value for intt4;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
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0.2
0.1
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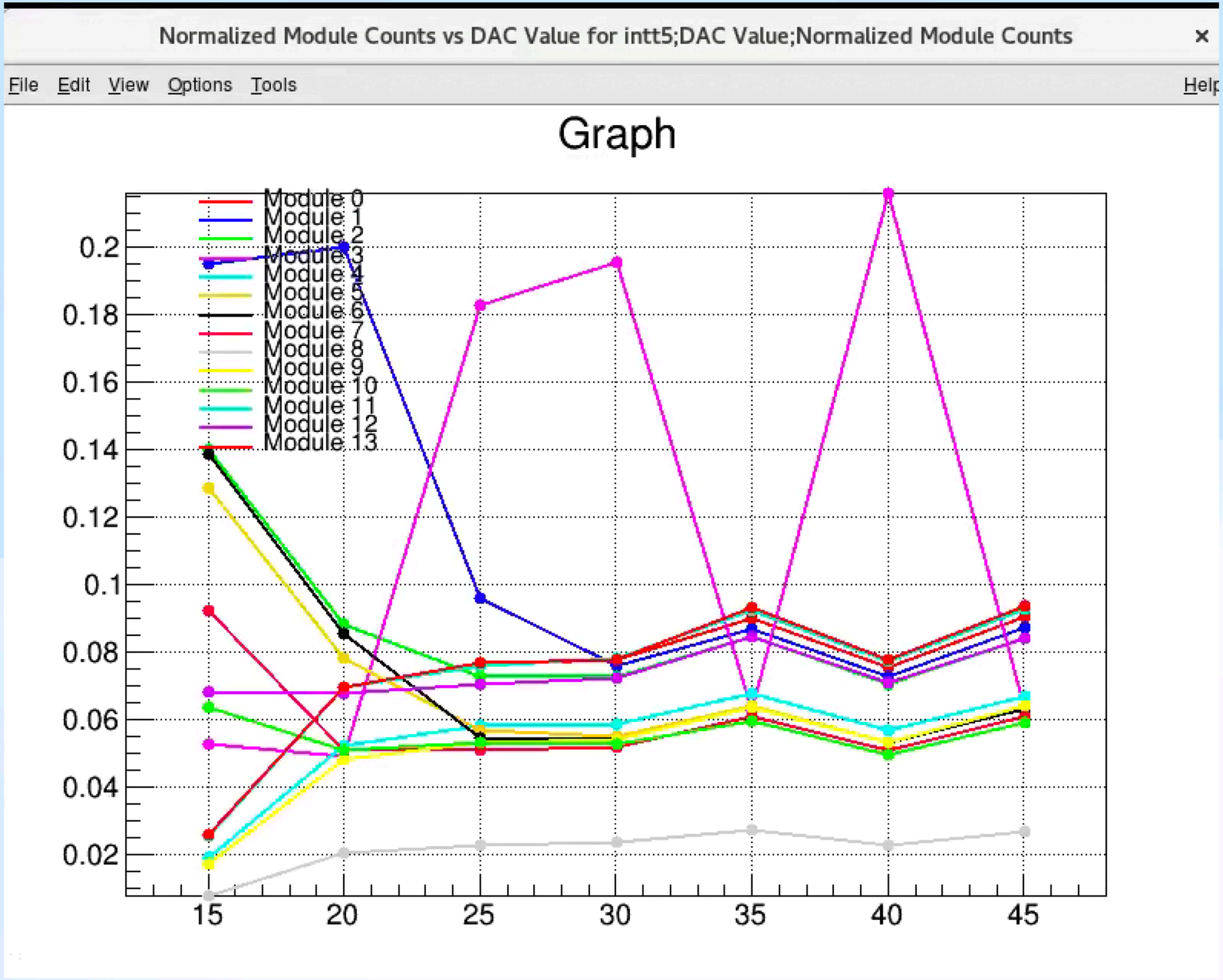
Normalized Module Counts vs DAC Value for intt5;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
Module 12
Module 13
0.2
0.18
0.16
0.14
0.12
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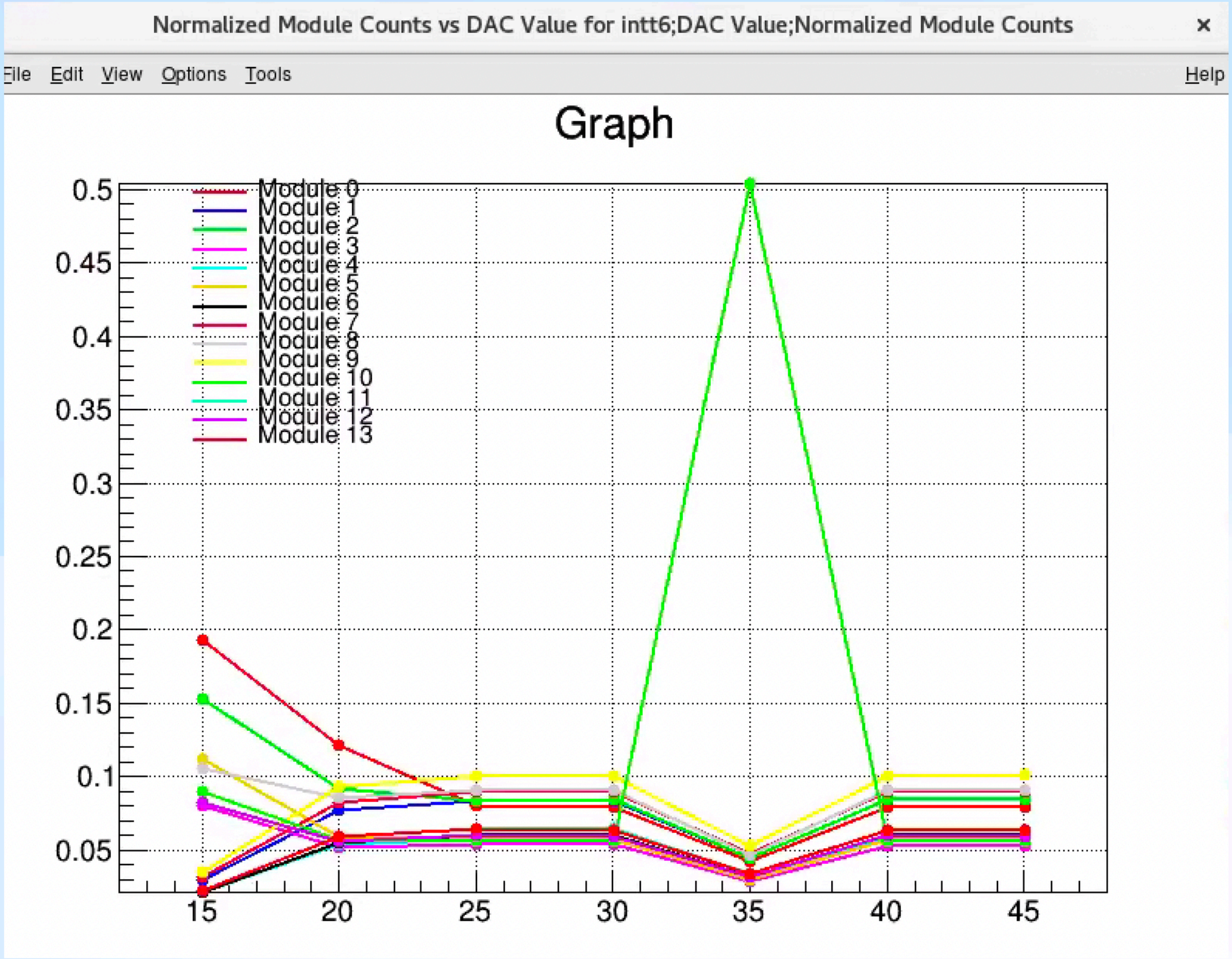
Normalized Module Counts vs DAC Value for intt6;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
Module 12
Module 13
0.5
0.45
0.4
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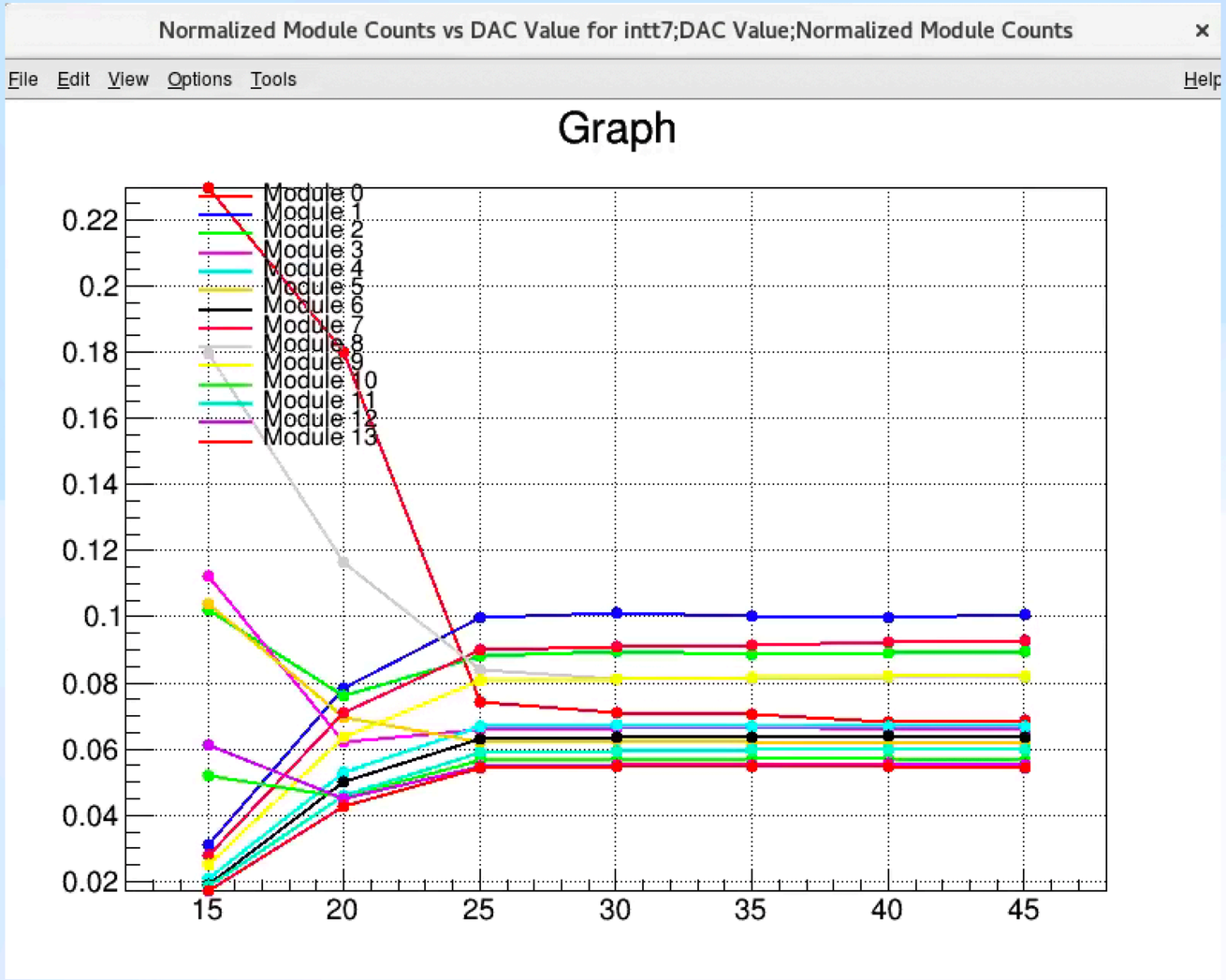
# 11月28日(木)～


Normalized Module Counts vs DAC Value for intt7;DAC Value;Normalized Module Counts
File Edit View Options Tools Help
Graph
Module 0
Module 1
Module 2
Module 3
Module 4
Module 5
Module 6
Module 7
Module 8
Module 9
Module 10
Module 11
Module 12
Module 13
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
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```
Normalized Module Counts for intt7:
Module 0: 0.229707 0.180069 0.0744485 0.0708609 0.0704541 0.0682178 0.0688804
Module 1: 0.0309224 0.0784678 0.0998156 0.101008 0.10012 0.0999755 0.100472
Module 2: 0.101867 0.0761186 0.0882103 0.0893592 0.0887545 0.0891987 0.0897318
Module 3: 0.112334 0.0621825 0.0659451 0.0665279 0.0665898 0.0660559 0.0659833
Module 4: 0.0209798 0.052947 0.0669244 0.0674946 0.0666153 0.0667222 0.06693
Module 5: 0.103843 0.0697679 0.0621616 0.0624375 0.062317 0.0616978 0.0616484
Module 6: 0.0192728 0.050058 0.0632411 0.0636766 0.0635266 0.0638117 0.0635808
Module 7: 0.0279004 0.0709138 0.0902336 0.0908977 0.0913162 0.0924587 0.0930103
Module 8: 0.179418 0.116667 0.0838183 0.0810049 0.0813028 0.0817754 0.0817413
Module 9: 0.0250694 0.063521 0.0806052 0.0809814 0.0818221 0.0822715 0.0821067
Module 10: 0.0520885 0.0454779 0.0564693 0.0563967 0.0569202 0.0572277 0.0567866
Module 11: 0.0183918 0.045983 0.0591405 0.0594153 0.0600709 0.060046 0.0596708
Module 12: 0.0611076 0.0450993 0.0547634 0.0553577 0.0554301 0.0556825 0.0552083
Module 13: 0.0170974 0.0427273 0.0542231 0.0545815 0.0547607 0.0548586 0.054249
```

Calculate

```
Normalized Module Counts for intt7:
Module 0: 0.229707 0.180069 0.0744485 0.0708609 0.0704541 0.0682178 0.0688804
Module 1: 0.0309224 0.0784678 0.0998156 0.101008 0.10012 0.0999755 0.100472
Module 2: 0.101867 0.0761186 0.0882103 0.0893592 0.0887545 0.0891987 0.0897318
Module 3: 0.112334 0.0621825 0.0659451 0.0665279 0.0665898 0.0660559 0.0659833
Module 4: 0.0209798 0.052947 0.0669244 0.0674946 0.0666153 0.0667222 0.06693
Module 5: 0.103843 0.0697679 0.0621616 0.0624375 0.062317 0.0616978 0.0616484
Module 6: 0.0192728 0.050058 0.0632411 0.0636766 0.0635266 0.0638117 0.0635808
Module 7: 0.0279004 0.0709138 0.0902336 0.0908977 0.0913162 0.0924587 0.0930103
Module 8: 0.179418 0.116667 0.0838183 0.0810049 0.0813028 0.0817754 0.0817413
Module 9: 0.0250694 0.063521 0.0806052 0.0809814 0.0818221 0.0822715 0.0821067
Module 10: 0.0520885 0.0454779 0.0564693 0.0563967 0.0569202 0.0572277 0.0567866
Module 11: 0.0183918 0.045983 0.0591405 0.0594153 0.0600709 0.060046 0.0596708
Module 12: 0.0611076 0.0450993 0.0547634 0.0553577 0.0554301 0.0556825 0.0552083
Module 13: 0.0170974 0.0427273 0.0542231 0.0545815 0.0547607 0.0548586 0.054249
```

Cout