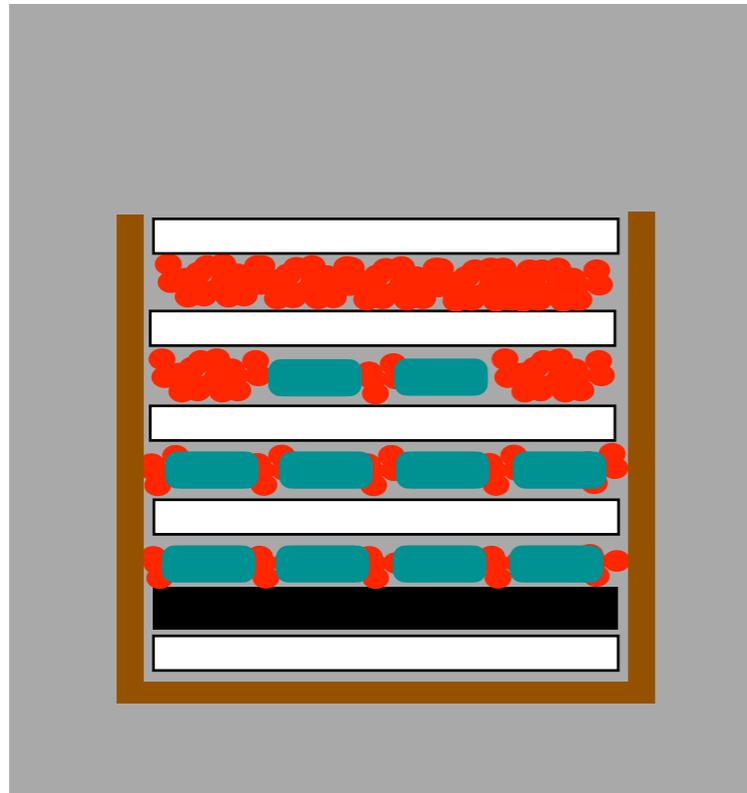


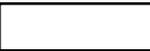
# sPHENIX INTT - progress report

Cheng-Wei Shih,  
National Central University  
2022/8/4



# // BNL transportation box packing



-  Styrofoam board
-  Black foam board
-  Ladder box
-  Packing fill



# // Testbeam - simulation part

- Interface macro : to convert the data format of G4 into the testbeam data format.
- Due to the unexpected problem, the interface code has to be updated.
- Take this opportunity, new feature, noise hit, is introduced.

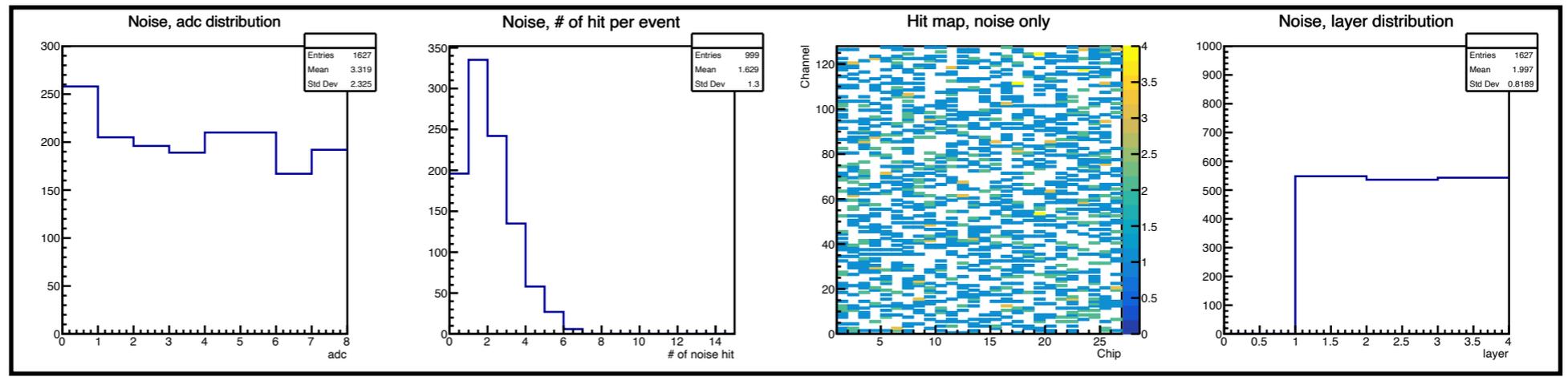
```
*****
* Row * Event_ID * UpandDown * Xpos * Ypos * Zpos * silicon_t * Edep *
*****
* 9520 * 9764 * 1 * 3 * 112 * 1 * 0 * 0.1428955 *
* 9521 * 9764 * 1 * 3 * 113 * 2 * 0 * 0.0949207 *
* 9522 * 9764 * 1 * 3 * 114 * 3 * 0 * 0.0075605 *
* 9523 * 9764 * 1 * 3 * 115 * 3 * 0 * 0.1011829 *
*****
* Row * Event_ID * UpandDown * Xpos * Ypos * Zpos * silicon_t * Edep *
*****
* 12745 * 155 * 1 * 2 * 115 * 1 * 0 * 0.1094525 *
* 12746 * 155 * 1 * 2 * 114 * 2 * 0 * 0.0869490 *
* 12747 * 155 * 1 * 2 * 114 * 3 * 0 * 0.0972999 *
*****
```

```
*****
* Row * Event_ID * sci_ID * sci_edep *
*****
* 11891 * 9764 * 0 * 1.3481186 *
* 11892 * 9764 * 1 * 0.8046928 *
* 11893 * 9764 * 0 * 0.9052805 *
*****
* 11894 * 155 * 0 * 0.6900294 *
* 11895 * 155 * 1 * 0.7952411 *
* 11896 * 155 * 0 * 0.7557370 *
*****
```

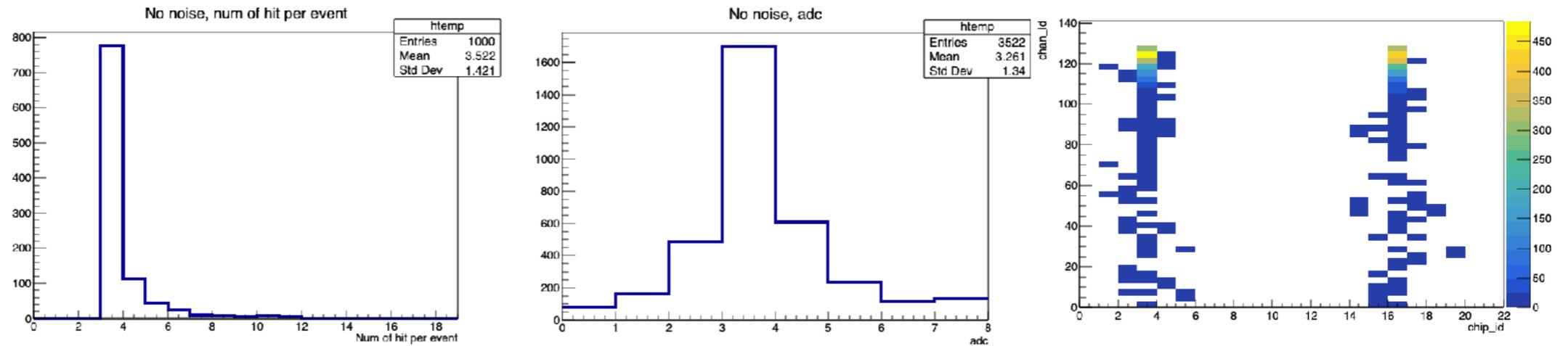
It should be 11894 ~ 11896

# // Testbeam - simulation part

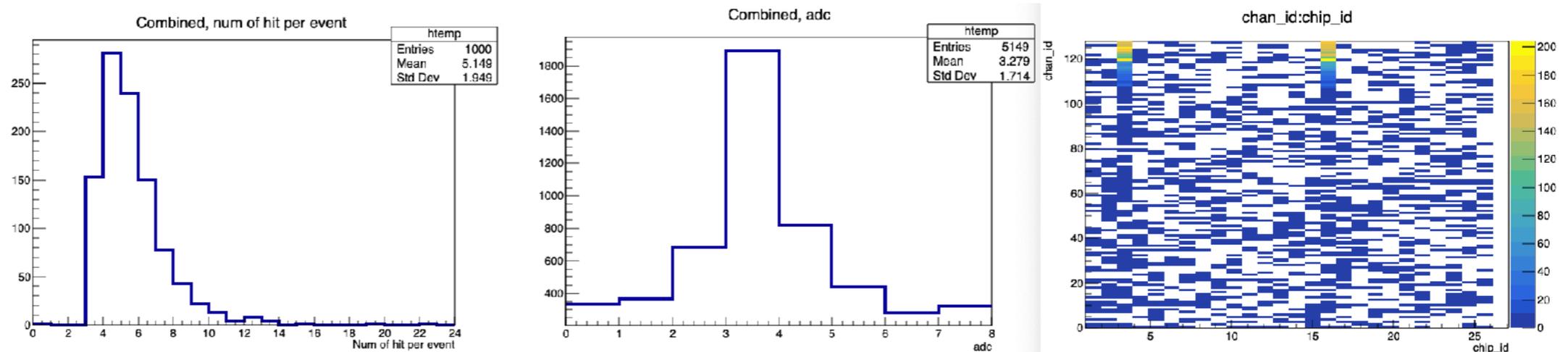
Noise hit distributions



No noise



Combined, noise + data



# // Testbeam simulation - to do

- Fine tune the parameter to make it to be realistic.
  - Generate run 52 MC and compare with the data.
- Estimate the noise level from data.

**Back up**

