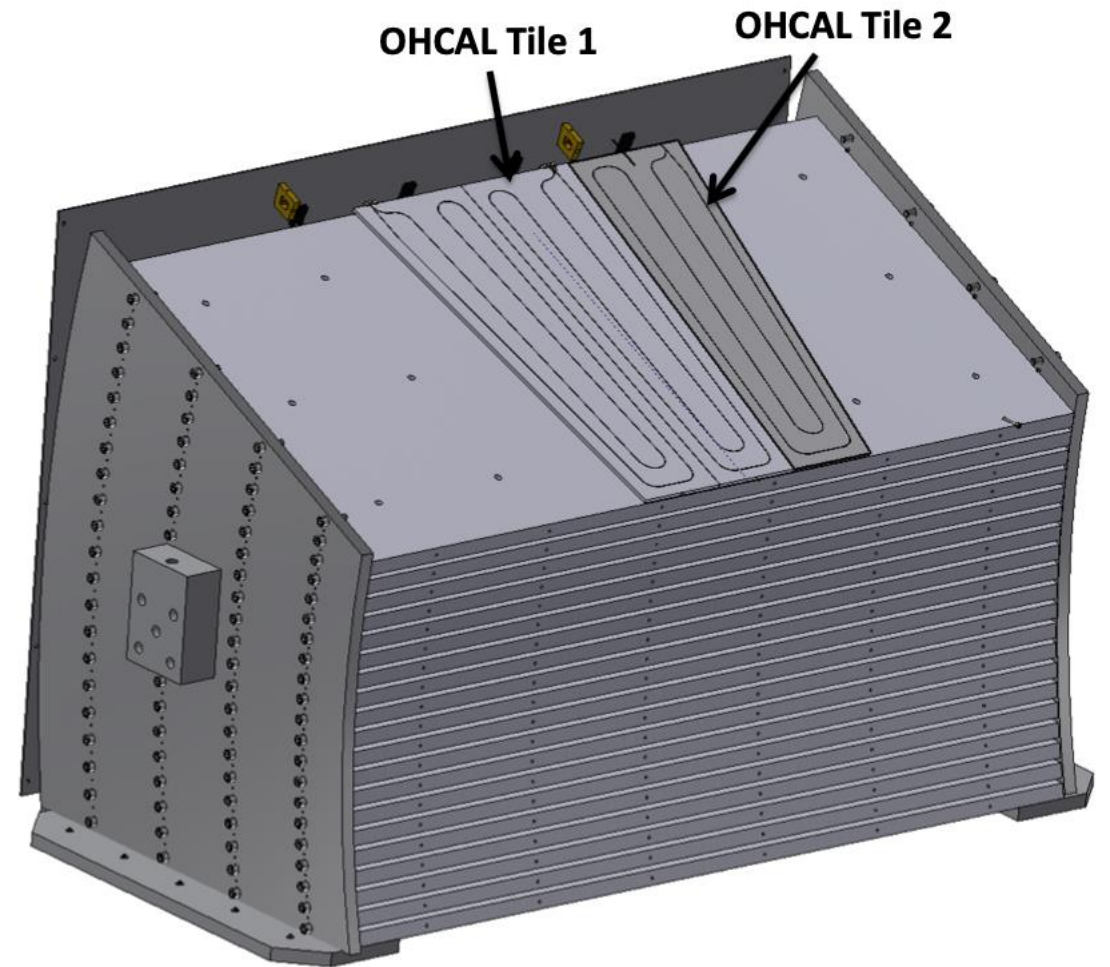


# BHCal Prototype Planning

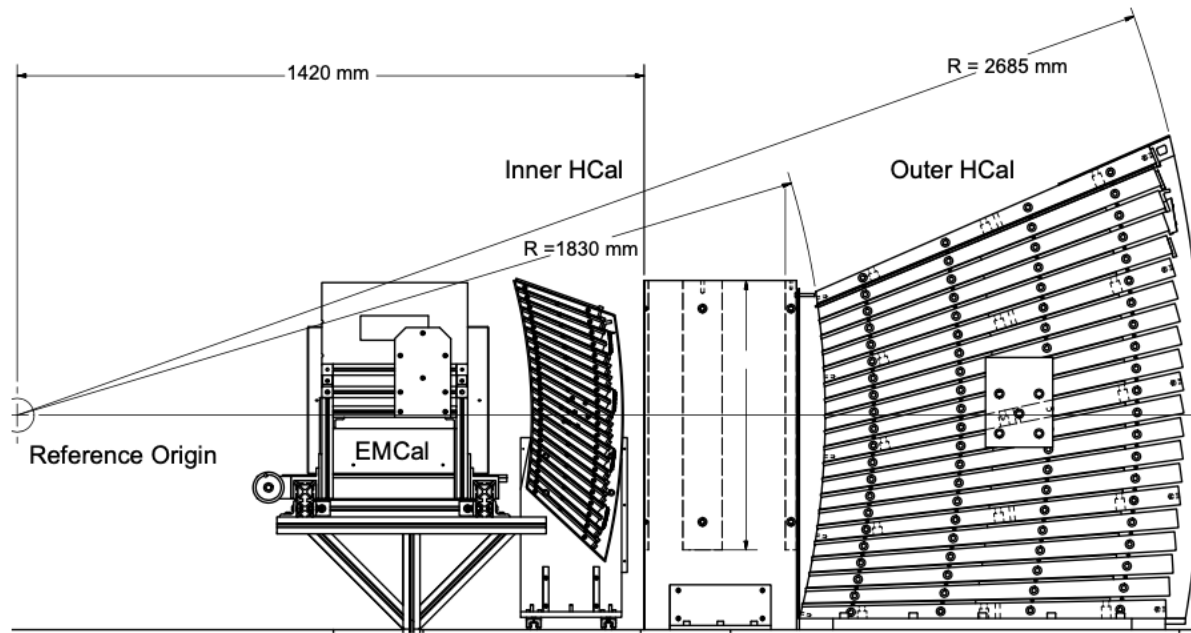
# sPHENIX Prototype



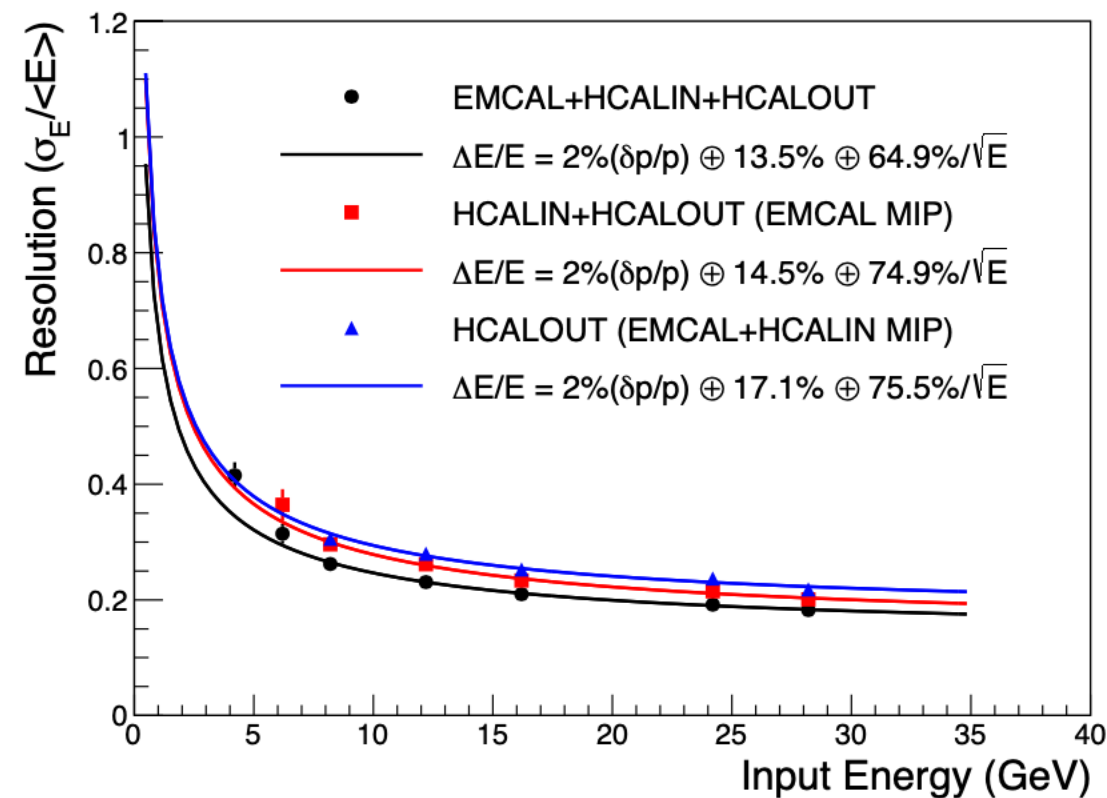
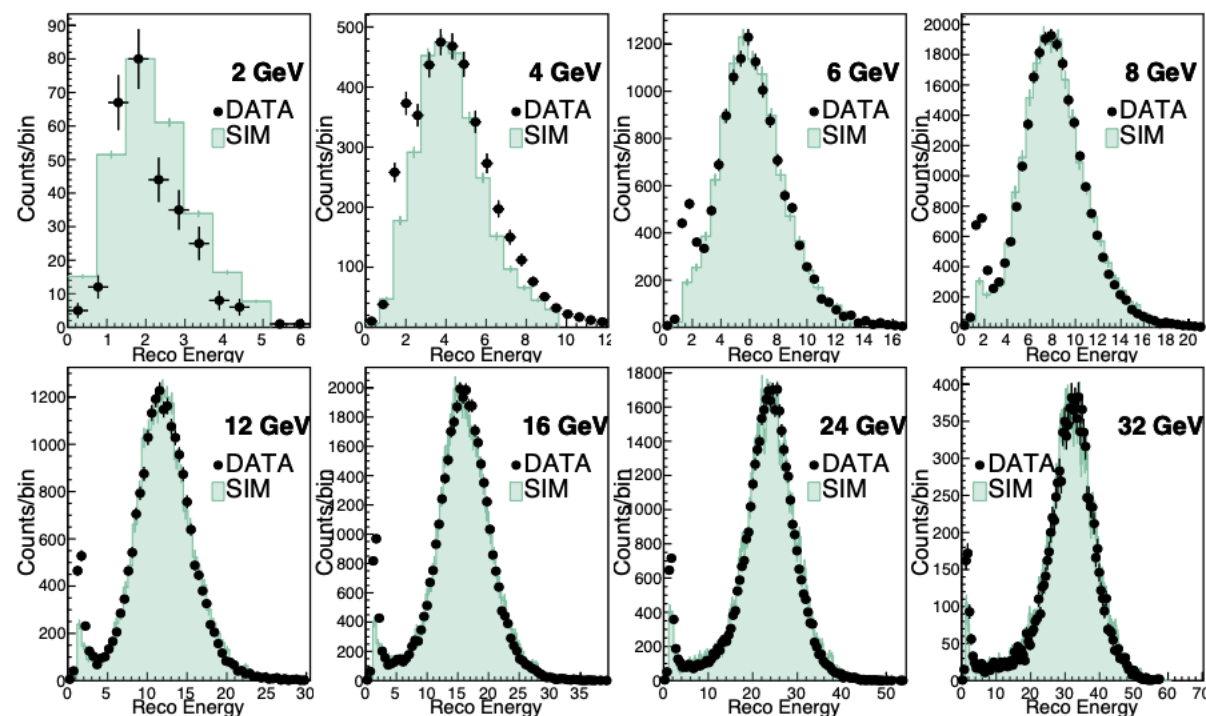
- 4x4 towers
- 80 tiles total



# sPHENIX Prototype Beam Setup



# Key Results



“Design and Beam Test Results for the sPHENIX Electromagnetic and Hadronic Calorimeter Prototypes,”  
IEEE Transactions on Nuclear Science 65, issue 12, December 2018

# ePIC testing

- Have:
  - Steel
  - Spare Tiles
- Need:
  - SiPMs
  - Cables
  - HGCROC

Spare tiles:

|     |    |
|-----|----|
| B21 | 12 |
| B22 | 15 |
| B23 | 23 |
| B24 | 8  |
| B25 | 12 |
| B26 | 13 |
| B27 | 21 |
| B28 | 11 |
| B29 | 7  |
| B30 | 8  |
| B31 | 8  |
| B32 | 5  |

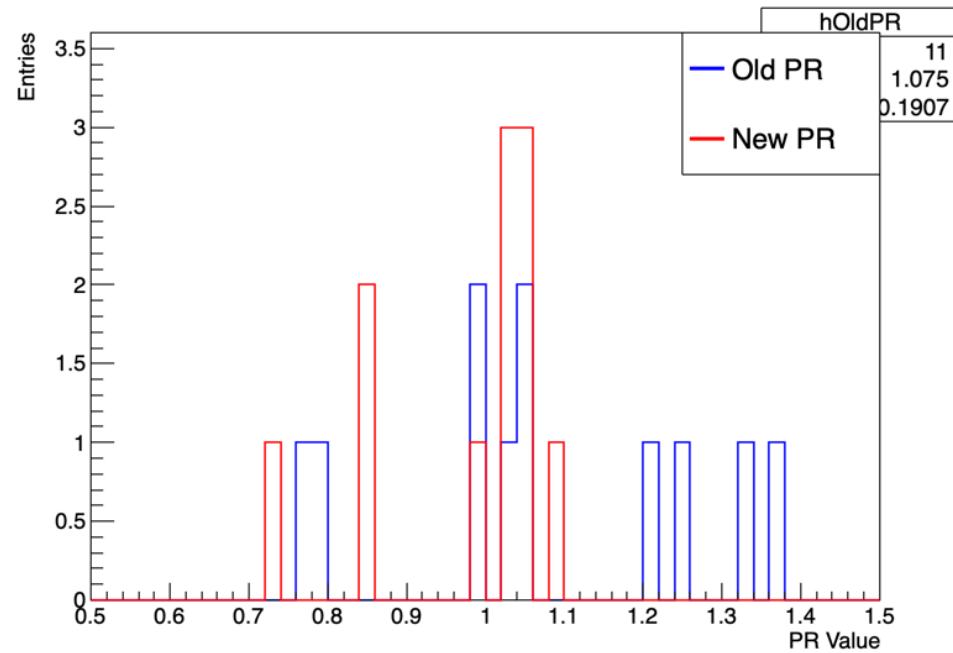
125 Old B25 tiles?



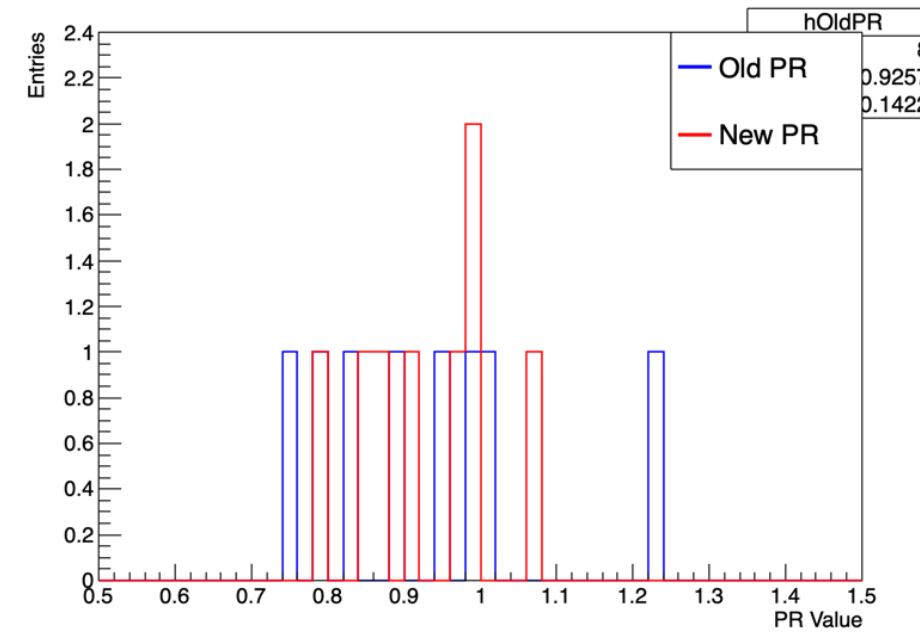


# PR Distributions

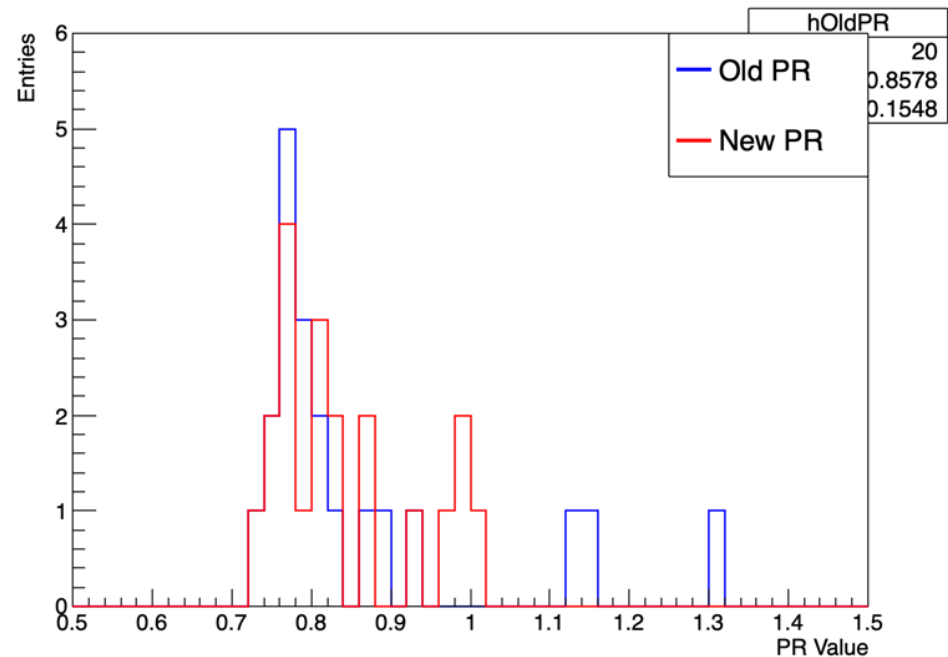
PR Distribution for B21



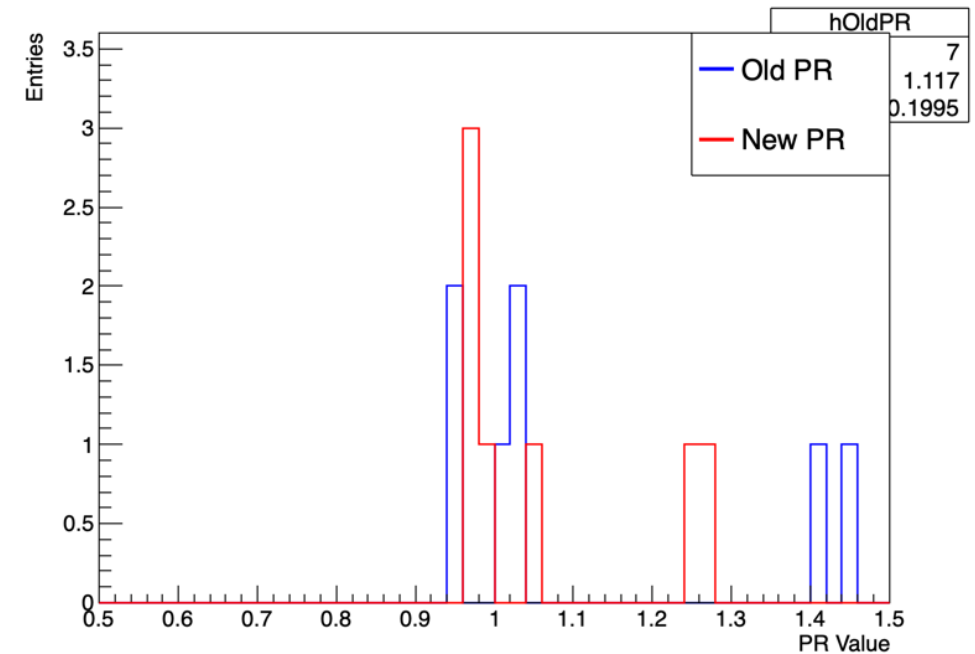
PR Distribution for B22



PR Distribution for B23

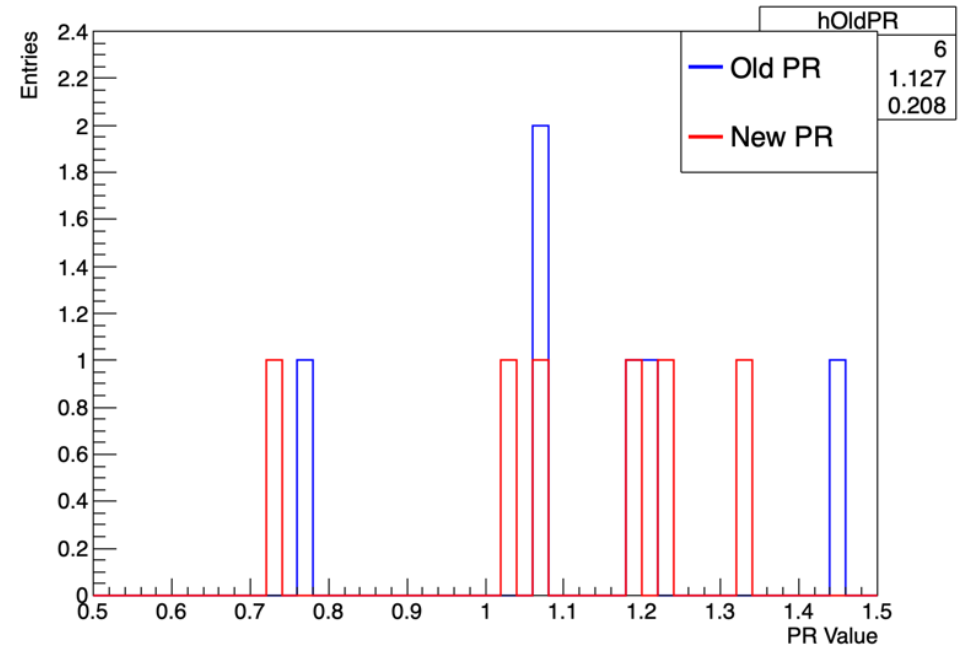


PR Distribution for B24

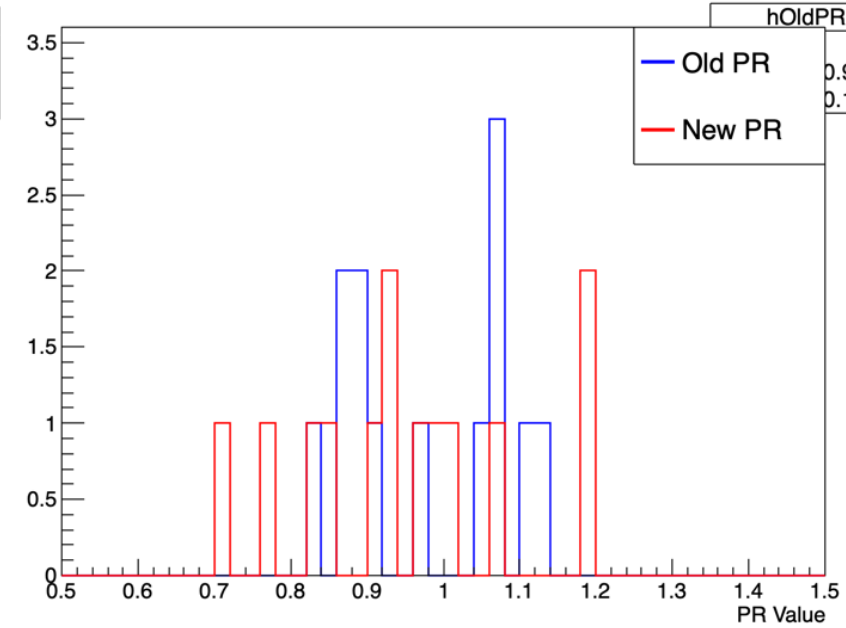


# PR Distributions

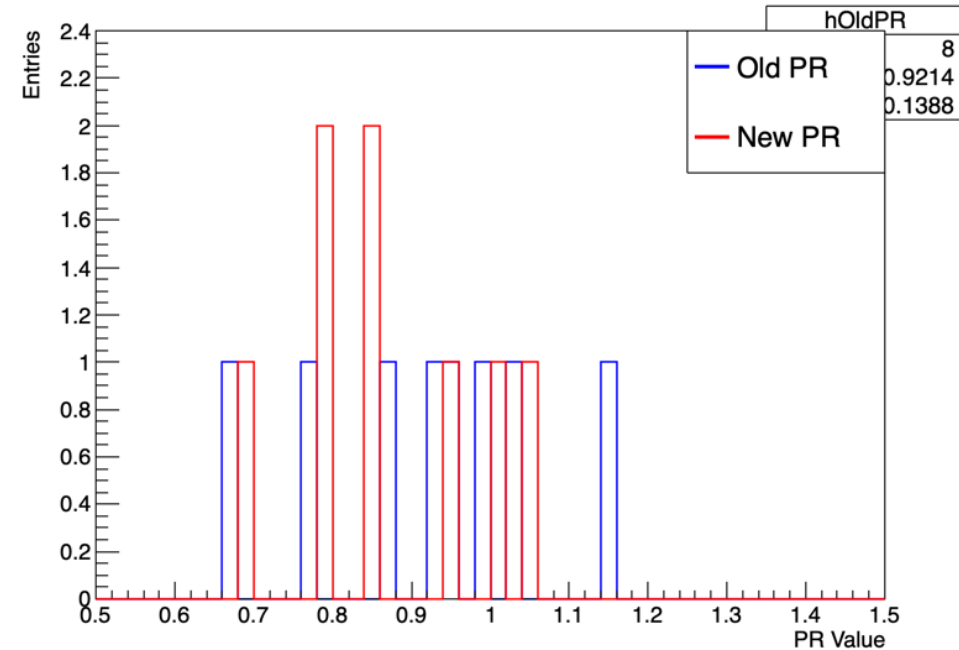
PR Distribution for B25



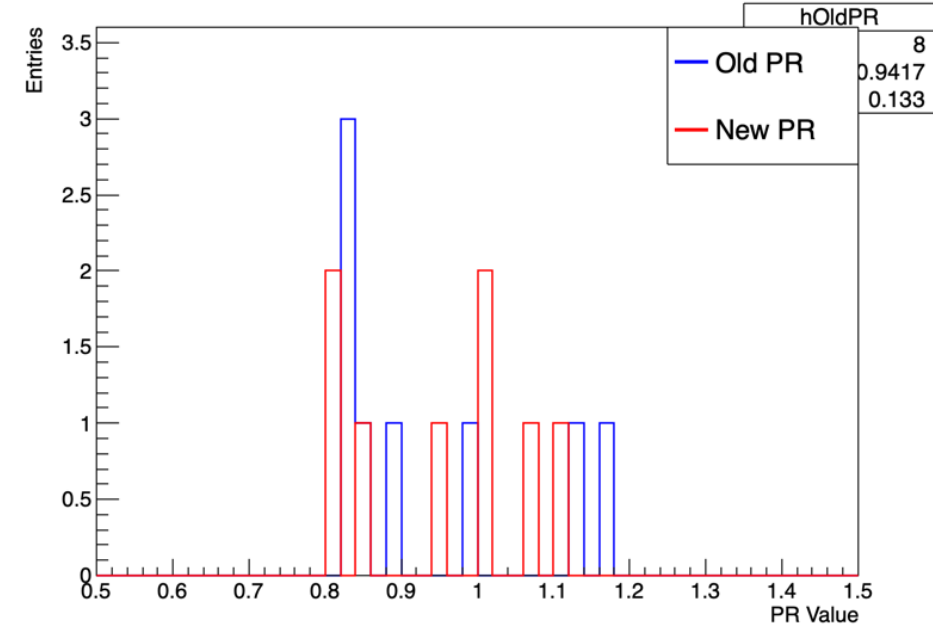
PR Distribution for B26



PR Distribution for B27

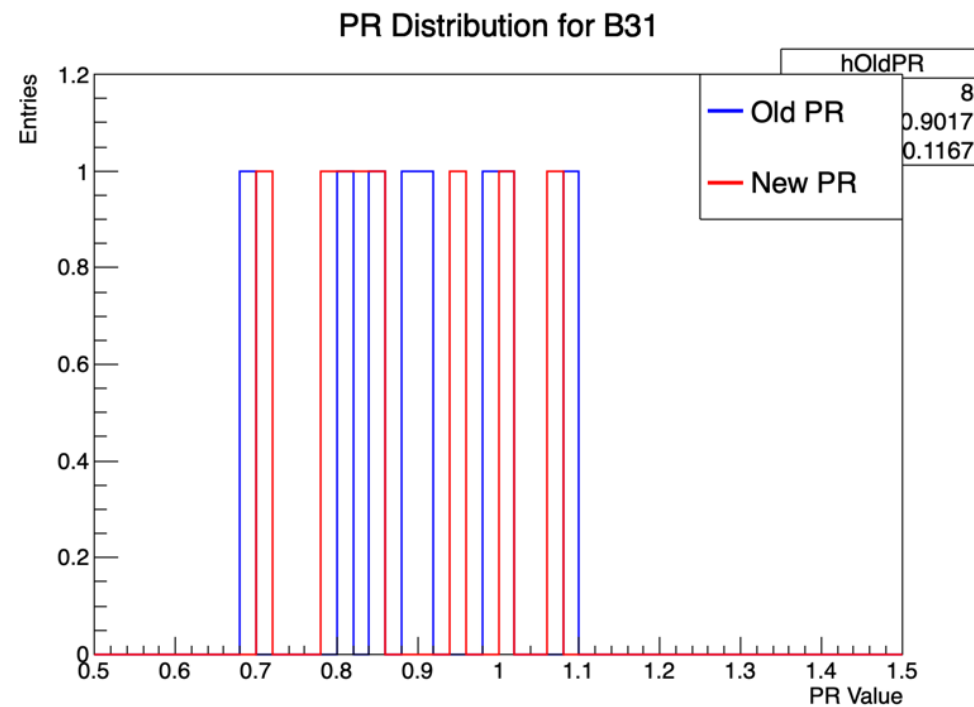
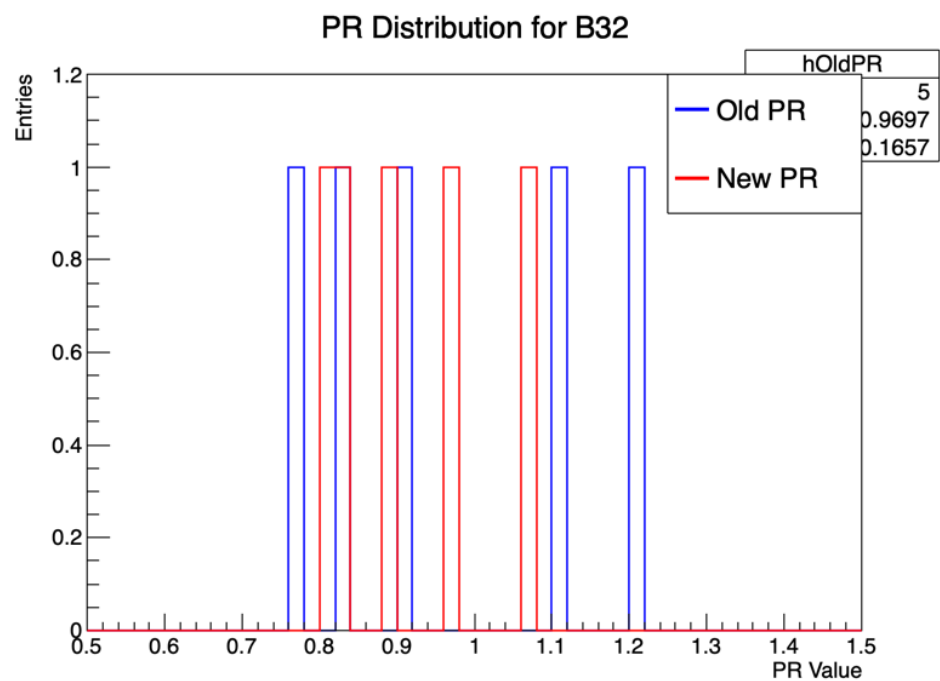
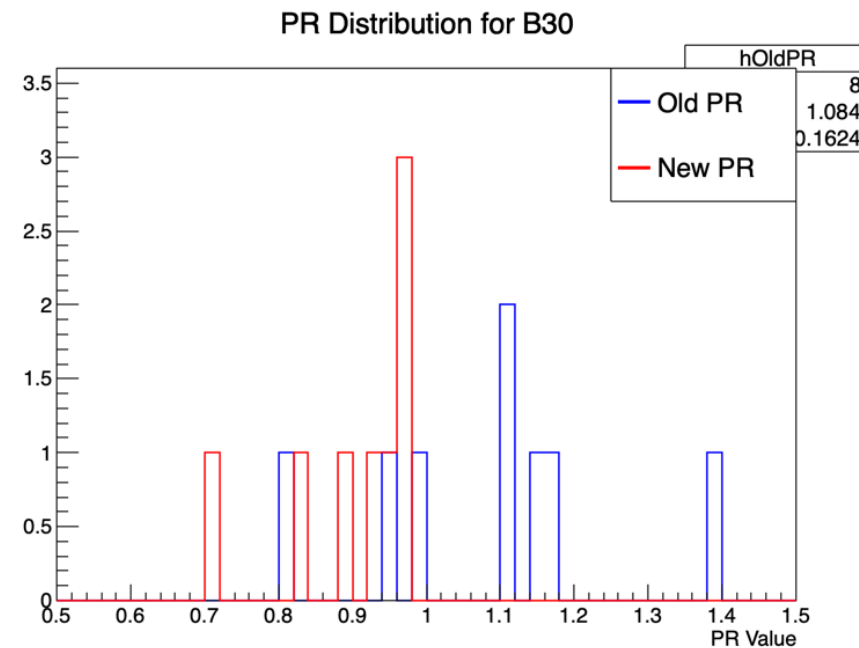
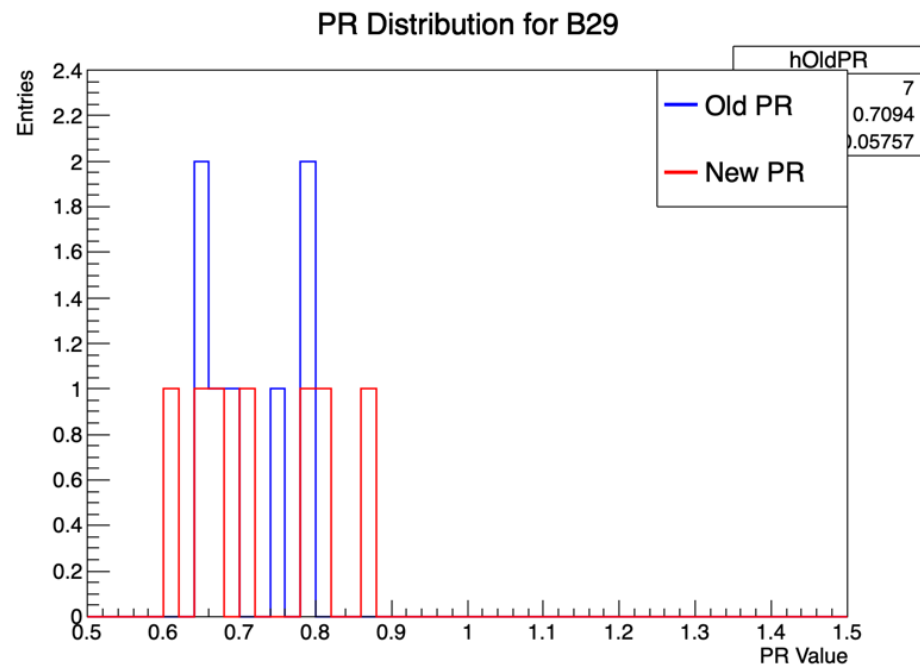


PR Distribution for B28



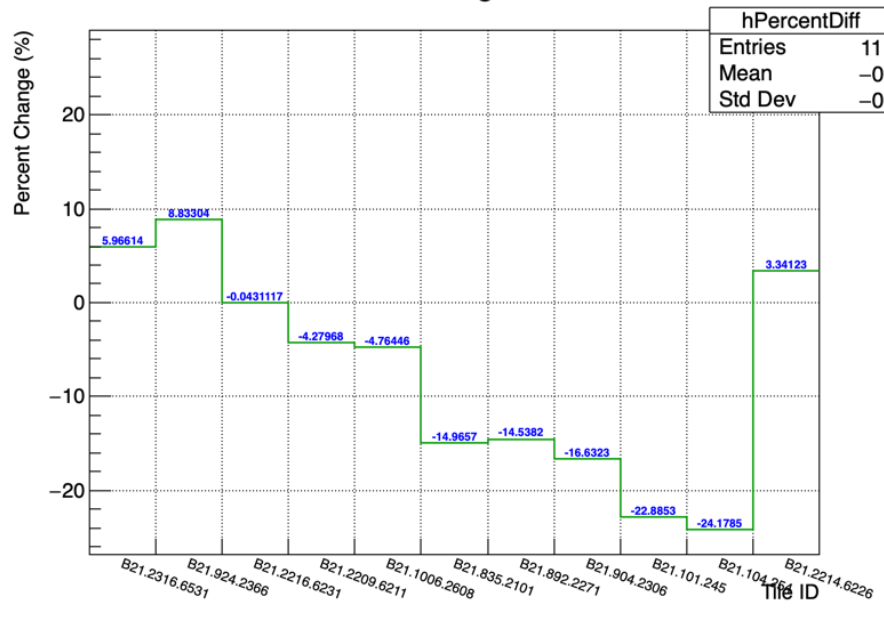


# PR Distributions

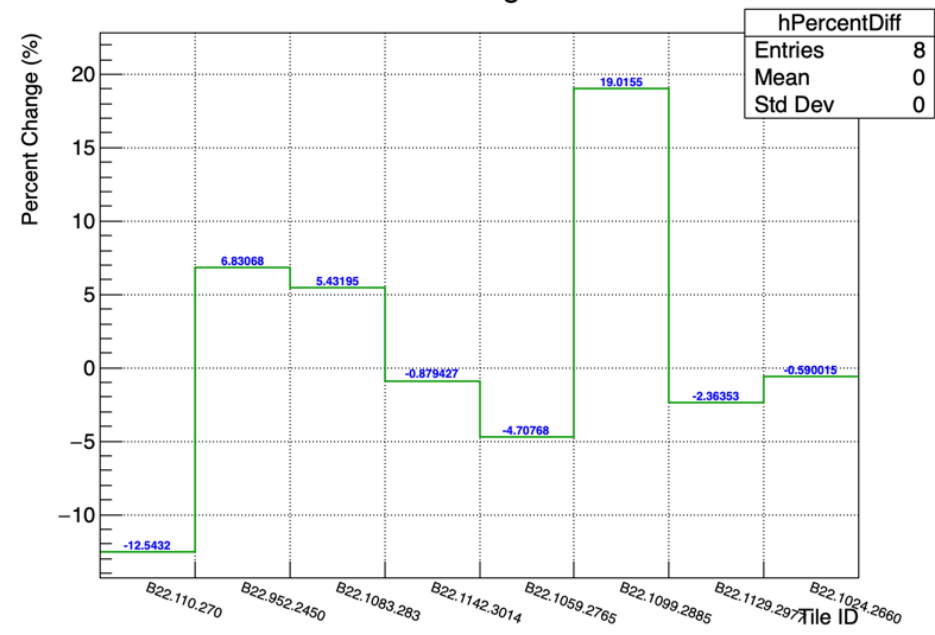


# Percent Change

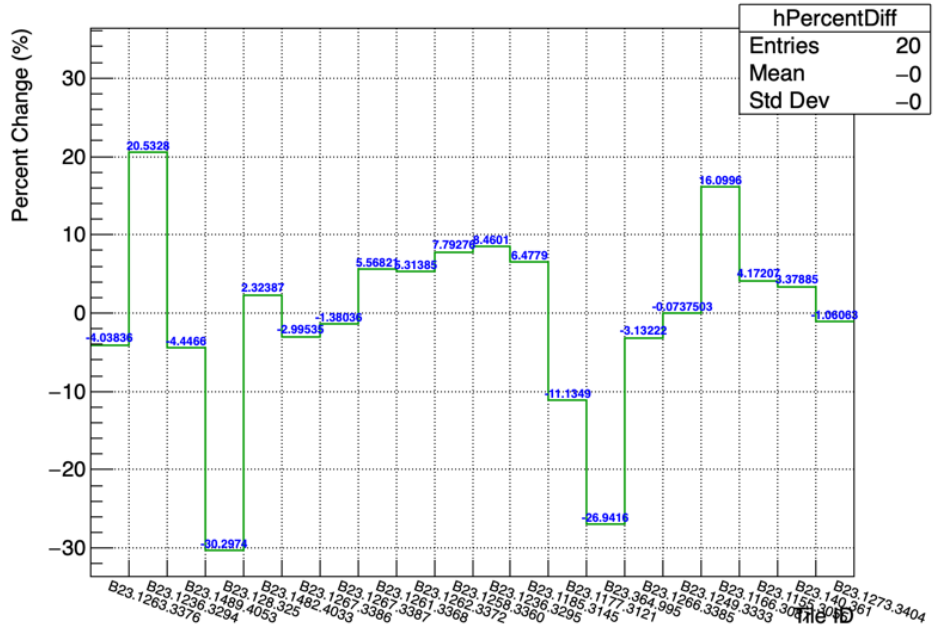
Percent Change for B21



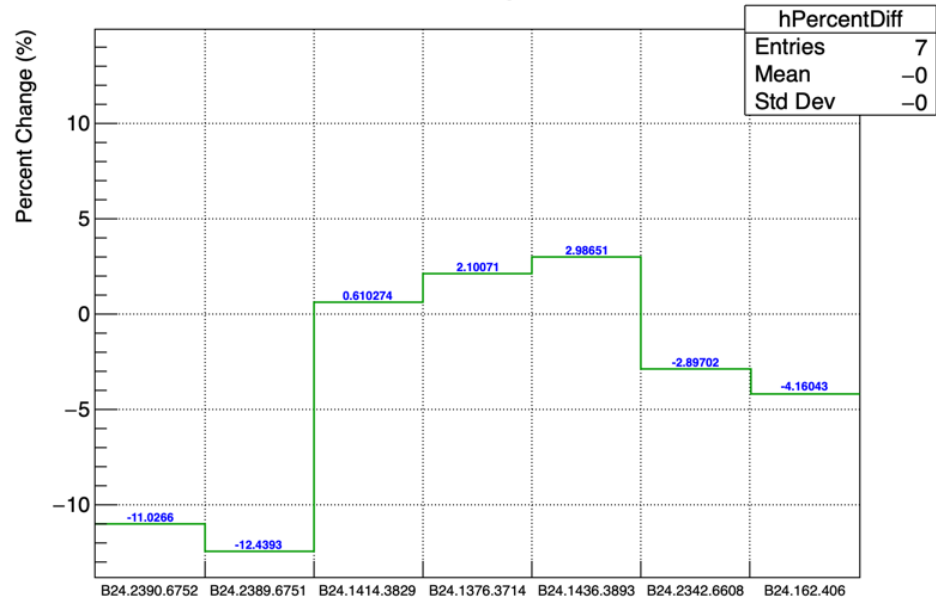
Percent Change for B22



Percent Change for B23

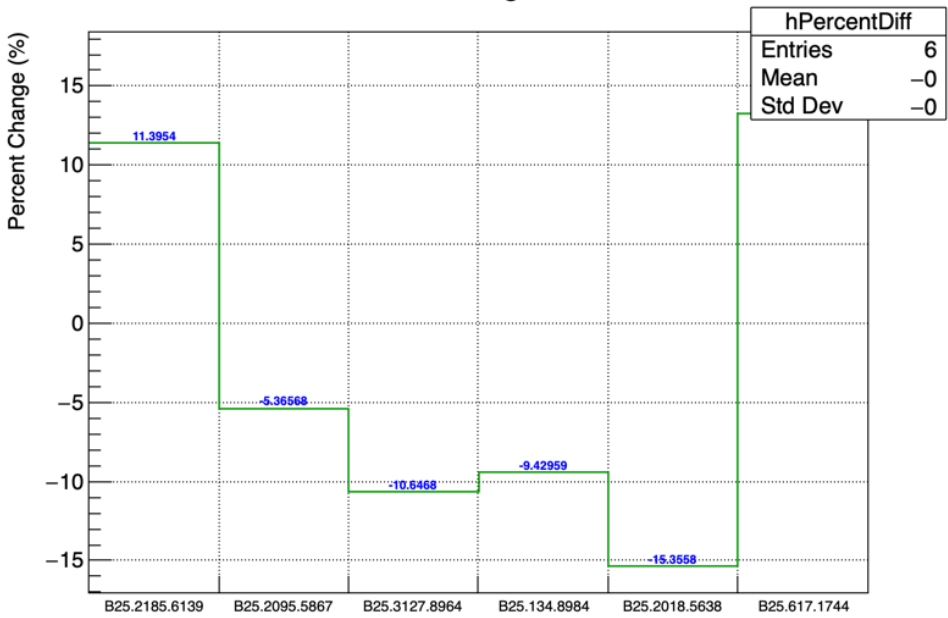


Percent Change for B24

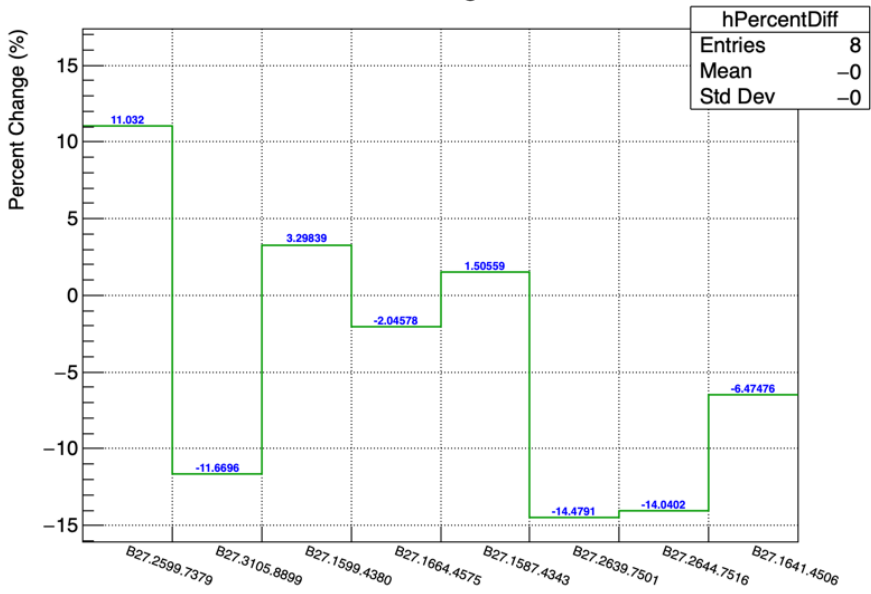


# Percent Change

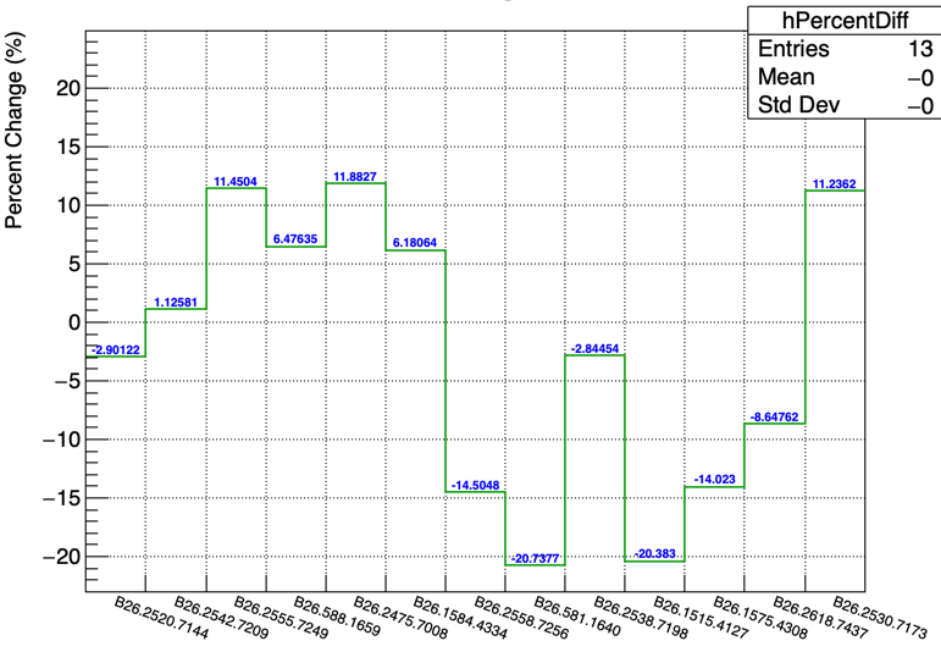
Percent Change for B25



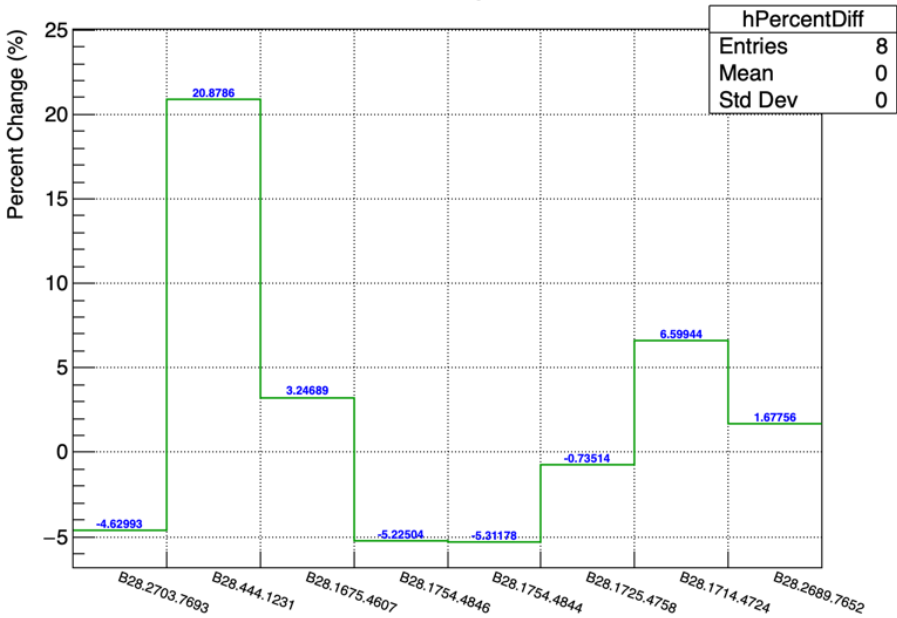
Percent Change for B27



Percent Change for B26

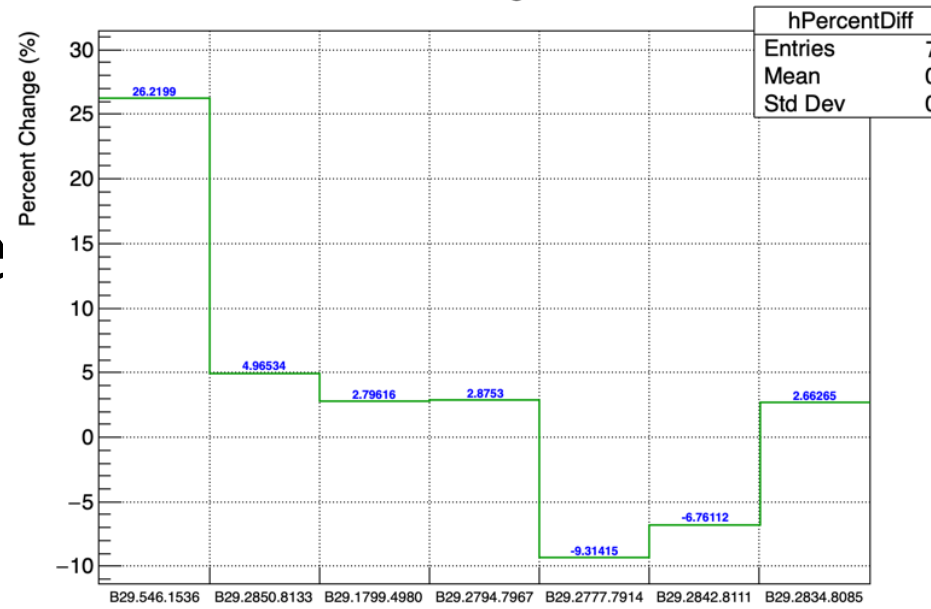


Percent Change for B28

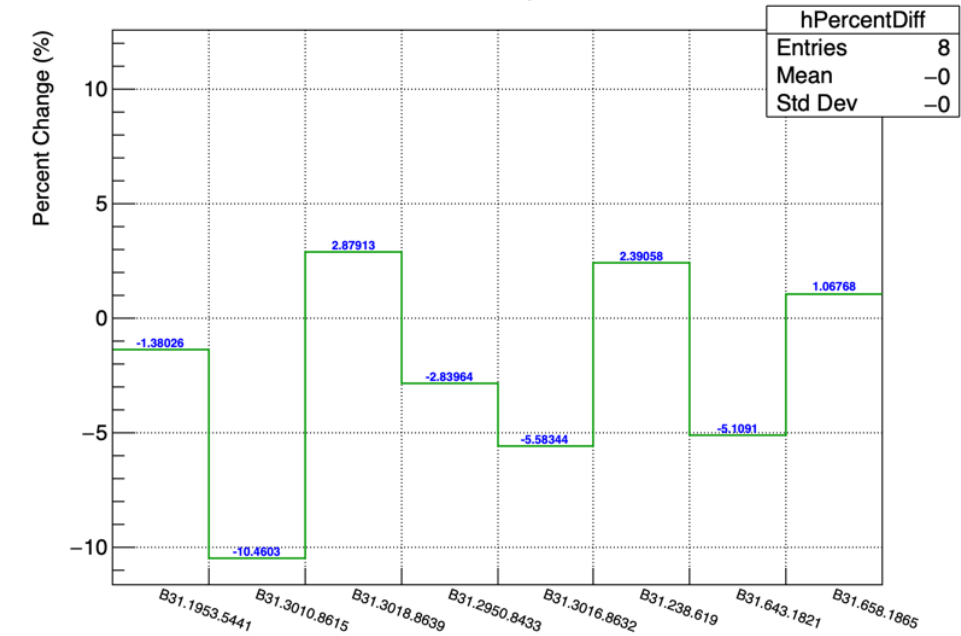


# Percent Change

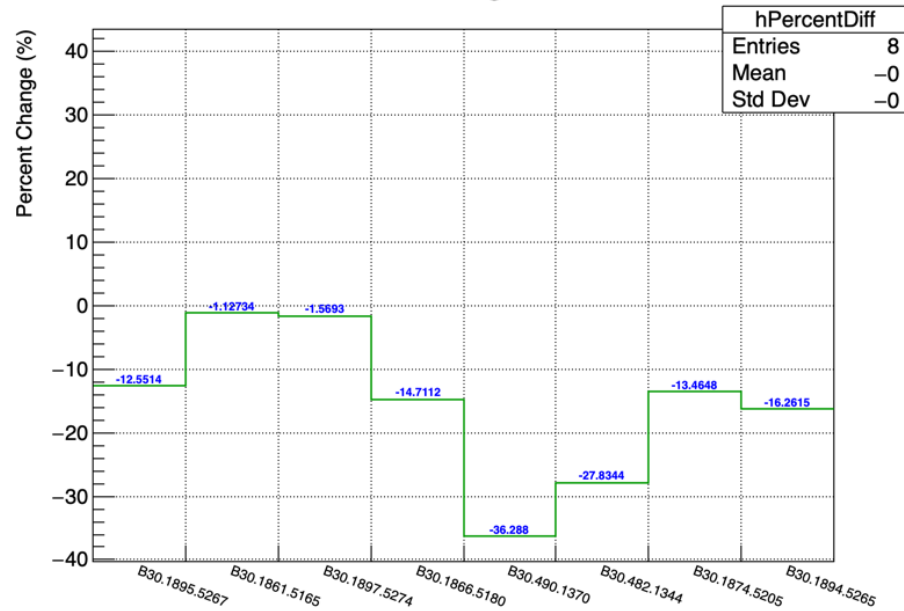
Percent Change for B29



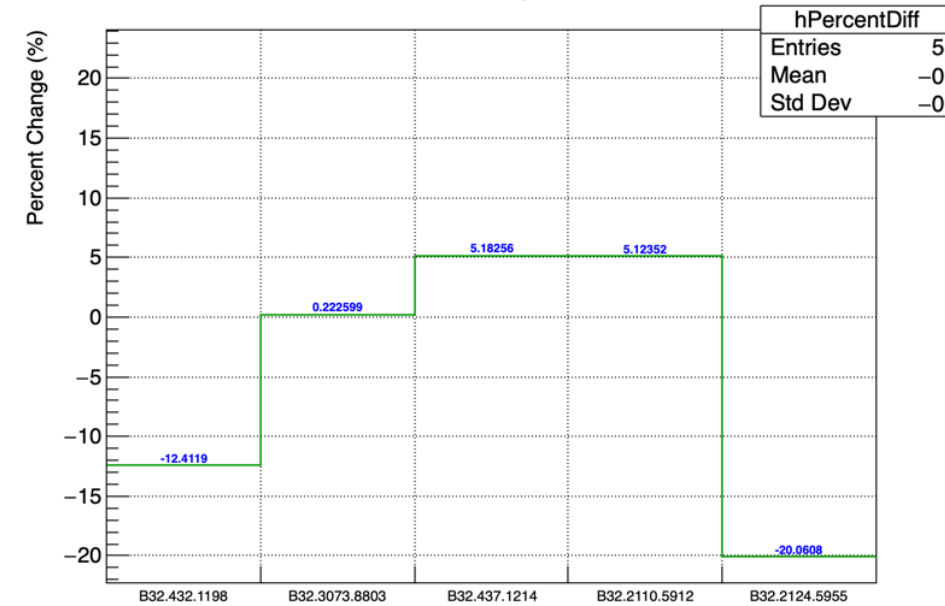
Percent Change for B31



Percent Change for B30

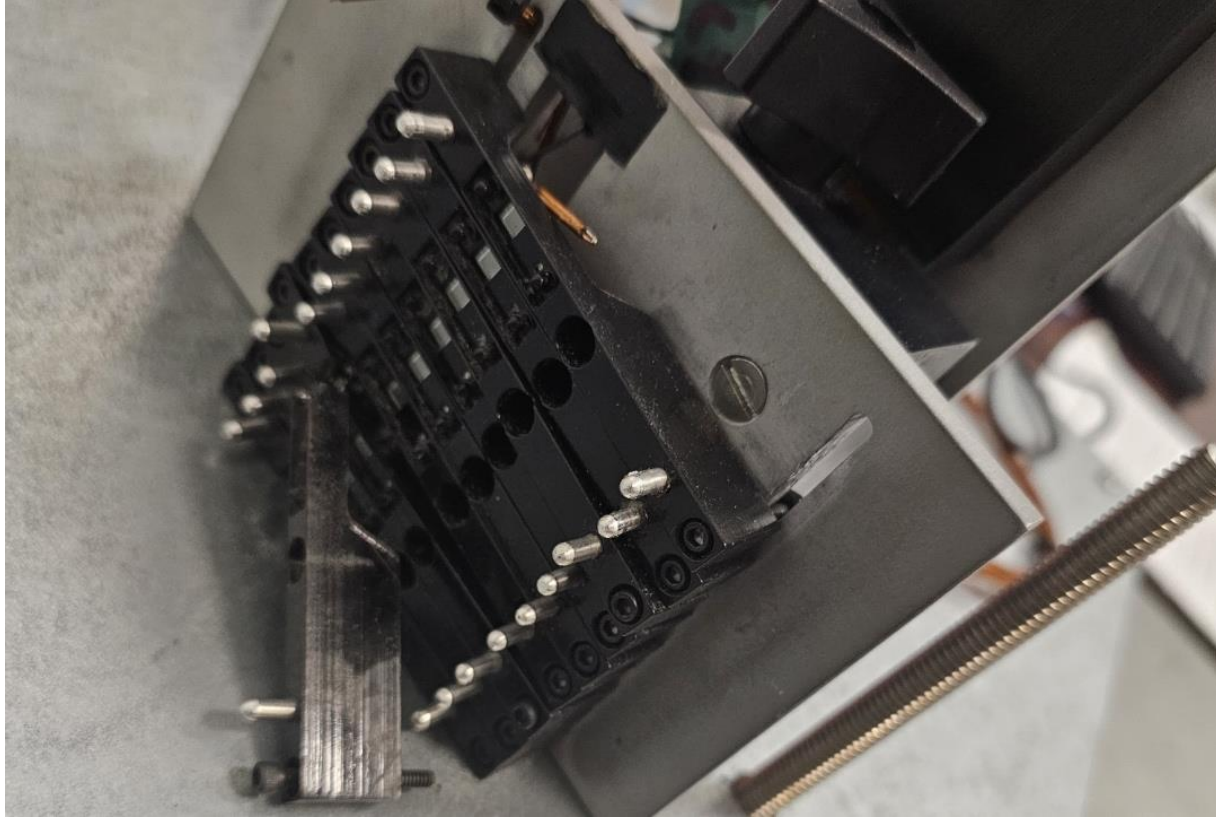


Percent Change for B32





# Broken SiPm: Channel 22



# Conclusion

- PR values for the Spare Tiles from B21 to B32 were tested by Bayal, Muhammad El-Sayed, Kottavai and Jared.
- The current PR values of the spare tiles were compared to their old values, taken prior to being shipped back to GSU
- 56.34% of the tiles have a percent change in PR value greater than 5%, with 22.54% increasing and 33.80% decreasing by more than 5%.
- Tiles may need a re-test before sending them to BNL