

# DAPHNE in Run 2B

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ICEBERG PD Meeting

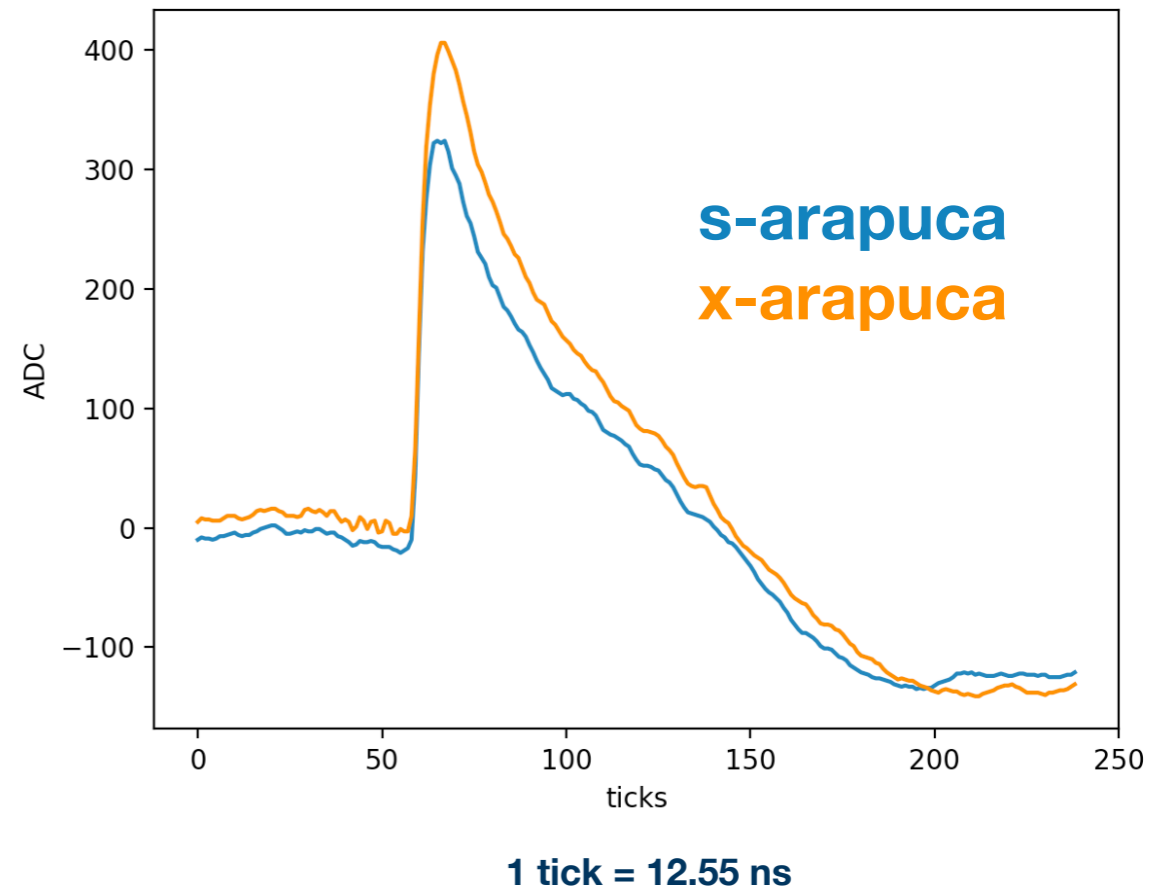
September 30, 2019

# DAPHNE

- Big thanks to everyone who has been trained to take data with DAPHNE and to those remote who have volunteered to look at data!
- The DAPHNE run log can be found [here](#).
- DAQ instructions for DAPHNE can be found [here](#).
  - In-person training is required to operate the PD system.

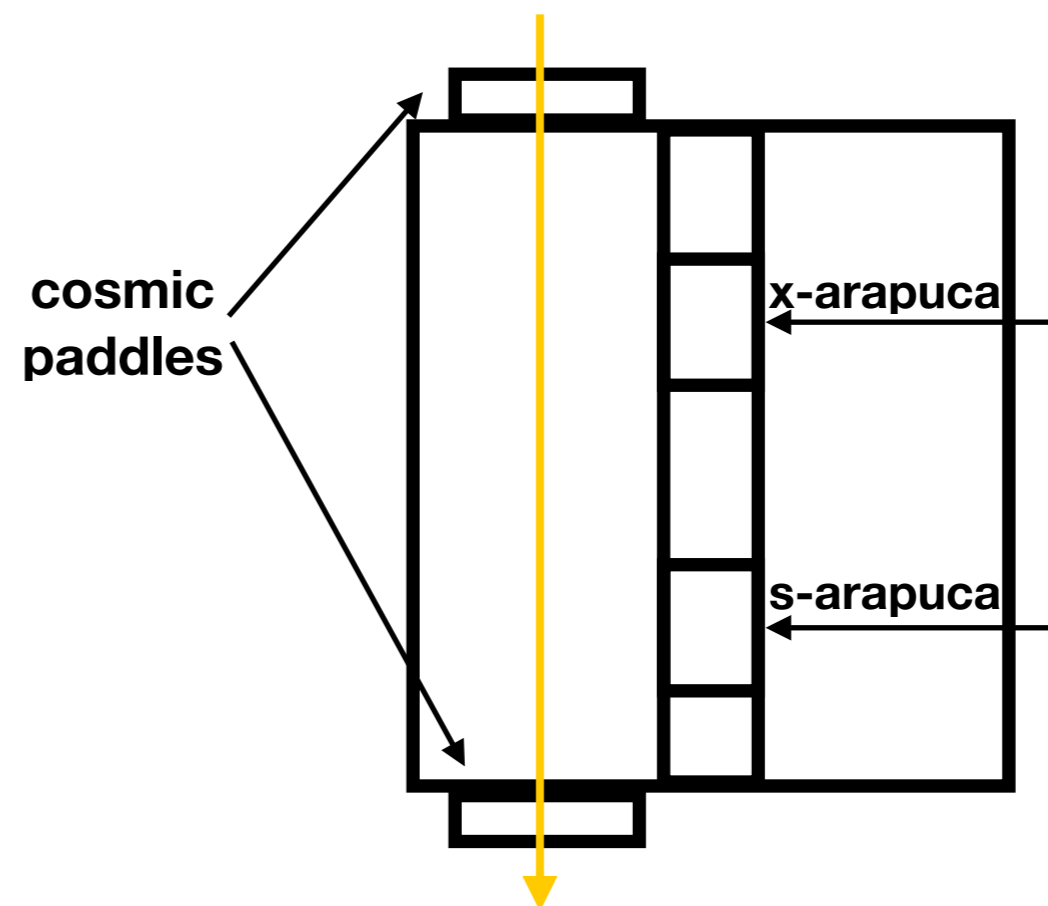
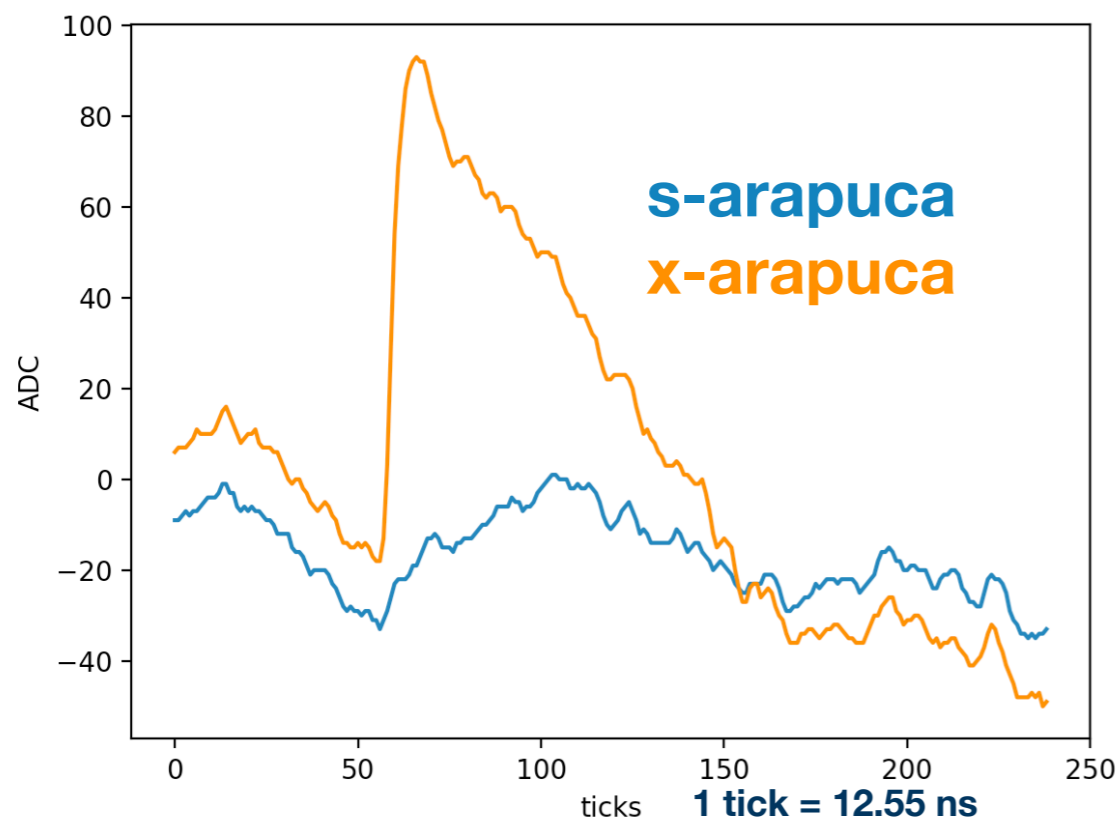
# first cold tests

- In the initial tests of the PD system, we saw no signals coming from the s-arapuca.
- This was traced to a finicky connection at the flange and has been resolved.
- Should be kept in mind during future runs.



# cosmic paddle placement

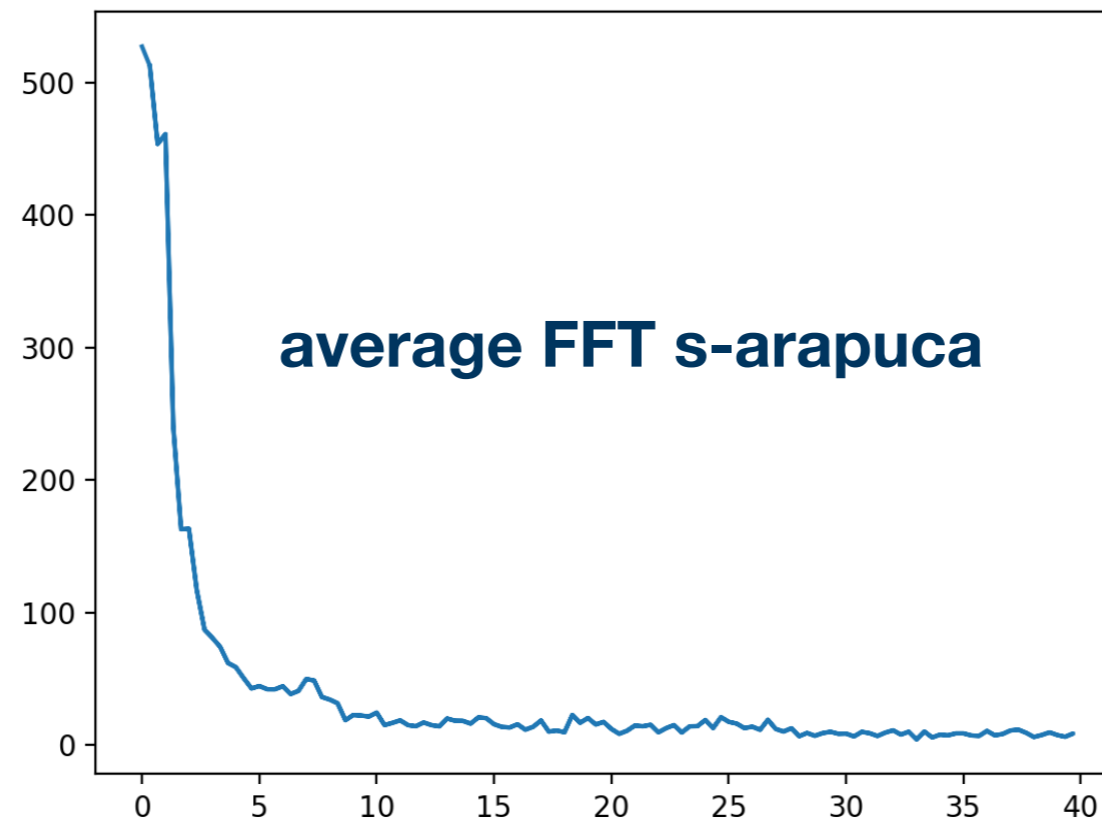
- We still regularly see events where the s-arapuca signal is suppressed.
- It appears as though the bottom cosmic paddle is slightly shifted away from the desired position and we're likely still getting tracks that pass behind the s-arapuca.



# wednesday 9/25 - friday 9/27

- There was cryogenic work happening during the end of last week, but we did acquire several hours of data using only the top cosmic paddle as a trigger.
  - Scanned a range of warm electronics gains. We think we have enough data to demonstrate that DAPHNE is operating at an appropriate gain setting (thanks to Matt for doing this!)
- On Friday: took data immediately prior to the very first SSP run (more from Bishu next) so we can compare waveforms and noise levels between the two systems.
- The internal filter system was turned on Friday afternoon and it was requested that we leave the PD off over the weekend.

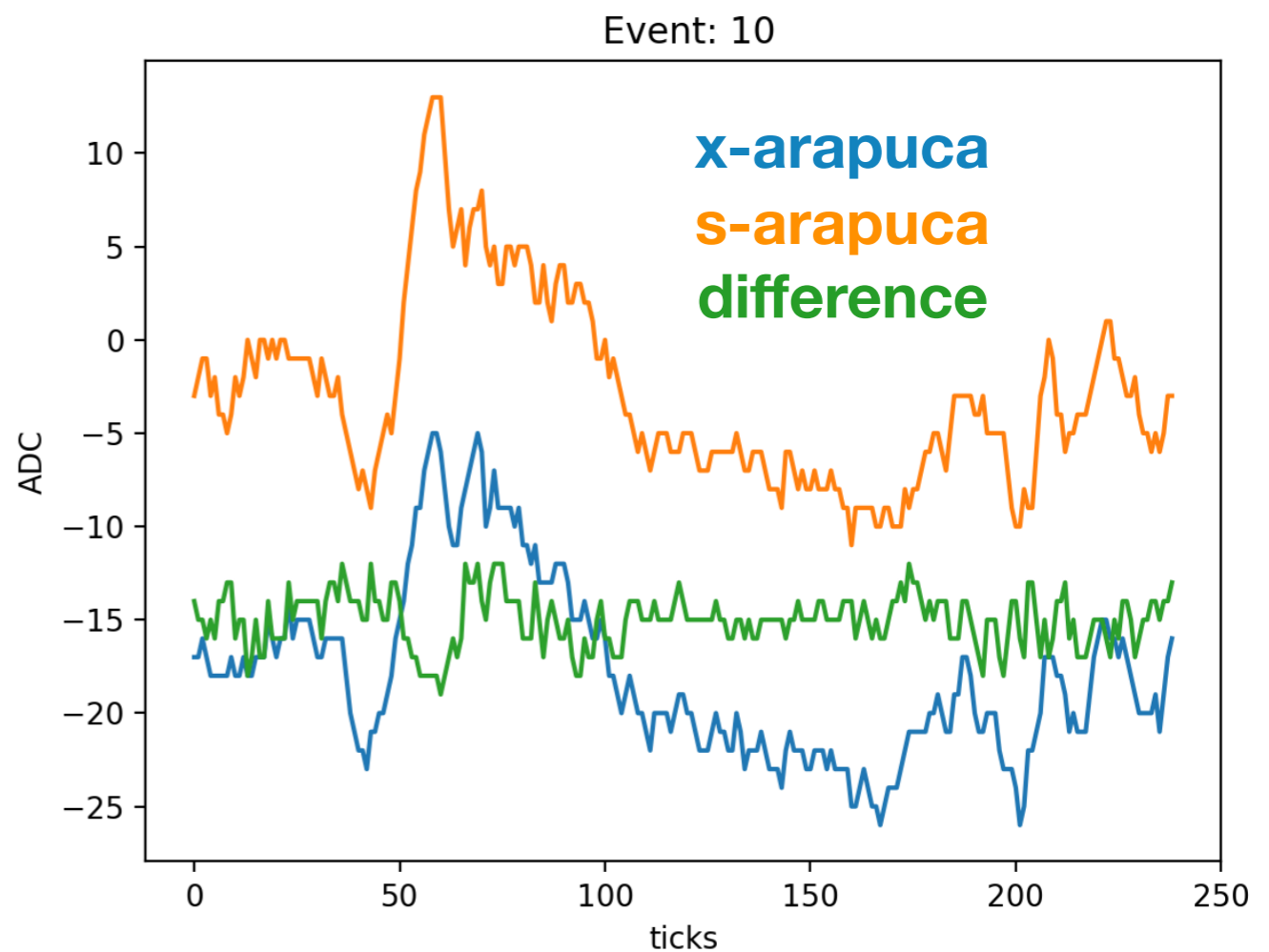
# noise



**more low frequency noise observed than normal, but there was a lot of activity around the cryostat and it still wasn't completely full.**

# noise II

- The low frequency noise is correlated between channels.
- By subtracting one channel from another, we can better isolate warm electronics noise.
- Still in the process of studying this data, but first impressions suggest we're operating at an appropriate gain setting.



# summary

- Getting more people involved with DAPHNE data analysis and data taking.
- Preliminary data taken last week may be sufficient to demonstrate DAPHNE is operating at an appropriate gain setting.
- We have additional data scanning sipm voltage in 1 V steps.
- Looking forward to comparing our noise levels and waveforms to SSP data.