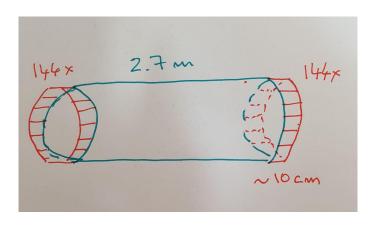
# Updates to the TOF DAQ

Tonko Ljubicic, BNL EPIC DAQ Group Mtg, 14-Sep-2023

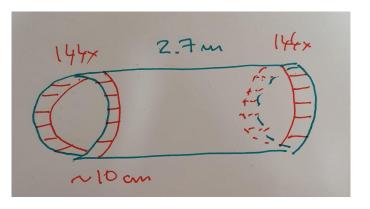
#### Barrel TOF: same but better noise

	Old	New
Ch Count	2.4M	same
ASIC type	EICROC128	same
RDO Count	288	same
Noise	1000 Hz/ch	30 Hz/ch
Power	4 kW	same

### Barrel TOF: possible RDO locations



RDO (red) is outside the 2.7m envelope. RDO is assumed to be ~10cm long



RDO (red) is inside the 2.7m envelope (within the thickness of the barrel)

Currently under investigation

## Endcap TOF

	Old	New
Channel Count	8.9M	5.6M
ASIC type	EICROC1024	same
RDO count	212	212? but waiting for new tiling ⇒ could be less
3 RDO lengths	24,40 & 48 ASIC readout	waiting for new tiling
Noise	1000 Hz	30 Hz
Power	13 kW	~10 kW, needs confirmation

#### Conclusion

- Endcap TOF has significantly less channels than originally estimated
  - and thus will need less power
- Noise is expected to be 30 Hz (or <u>30x less</u> than the the first approximation)
  - the data rate to EPIC DAQ becomes very small
- Currently thinking about the RDO placement for the Barrel TOF