Project Engineering and Design
for ePIC pfRICH cylindrical vessel outer shell

C-J. Naïm
on behalf of the Stony Brook team

Center for Frontiers in Nuclear Science

pfRICH meeting

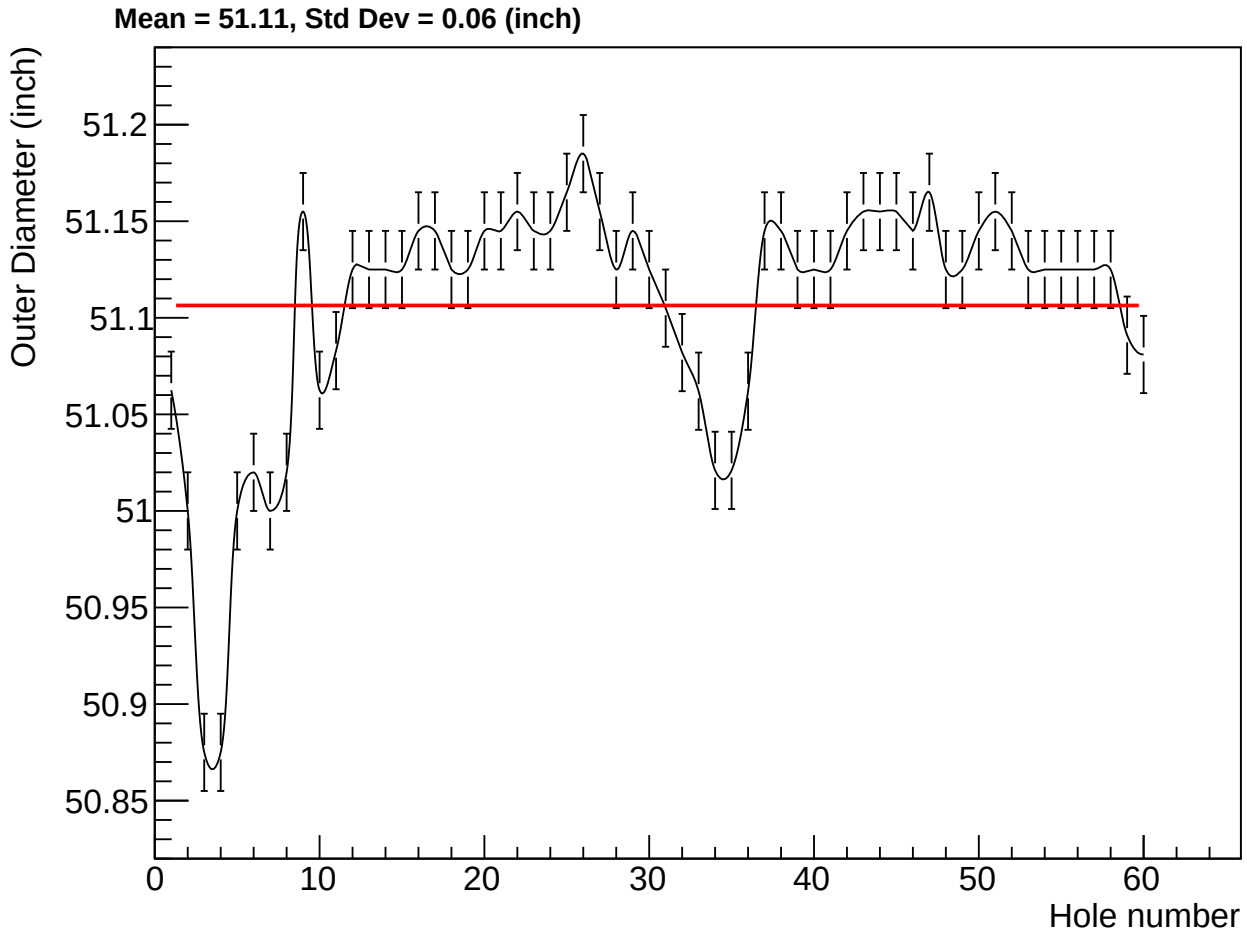
Brookhaven National Laboratory

Center for Frontiers in Nuclear Science

Component Circularity and Tolerance

- **Goal:** Ensure circularity of each component (foam and end-ring) and quantify tolerance for future reference.
  Video Link
- **Foam Diameter Variation:** Maximum of 0.5 mm, matching the deviation observed in the TPC.
- **Next Steps:**
  - Improve alignment of the shaft and motor line.
  - Redo the video to check the "roundness" of the foam.
  - Cut foam to achieve 90% of the expected thickness.

End Ring Choice in the video



1 Inch Fraction Measurement

- **Total Circumference of the 1 inch fraction:**
  3952.87 mm $\pm$ 2.5 mm.
- **Corresponding Diameter:**
  1258.2 mm $\pm$ 0.8 mm.
- **Nominal Diameter of Inner End Ring:**
  1260.544 mm.
- **Final Diameter:**
  1260.544 mm - 0.5 mm (carbon fiber sheet) - glue.