



Jefferson Lab Alignment Group

Data Transmittal

TO: J. Fisher

DATE: 01/20/2023

FROM: Elena Balan

Checked: SEH

#: Z2063 / C005

DETAILS:

M:\align\DATA\SRFCryo\SNSPPU\CM005\FINAL\230119A

The final fiducials coordinate for the SNS cryomodule C005 were surveyed in January 2023. The coordinate system is established as follows: the cavity string defines the beam axis, the primary Bayonet of the return can will control roll, and the upstream coupler defines the origin. Positive Z downstream, positive X beam left, and positive Y up. Consider that the measurements for the fiducials were taken using a 0.5" SMR and a Hubbs nest that has an H value of 0.5000" to the centerline of the sphere.

| Name | X[inch] | Y[inch] | Z[inch] |
|----------|---------|---------|---------|
| SNS_FIDA | 21.372 | -0.048 | 135.743 |
| SNS_FIDB | -0.065 | 21.616 | 135.724 |
| SNS_FIDC | -21.553 | 0.021 | 135.642 |
| SNS_FIDD | 21.457 | 0.080 | 97.767 |
| SNS_FIDE | -0.099 | 21.622 | 97.751 |
| SNS_FIDF | -21.523 | -0.021 | 97.752 |
| SNS_FIDG | 21.474 | 0.016 | 69.333 |
| SNS_FIDH | -0.050 | 21.600 | 69.357 |
| SNS_FIDJ | -21.479 | -0.067 | 69.305 |
| SNS_FIDK | 21.507 | -0.070 | 26.783 |
| SNS_FIDL | -0.024 | 21.584 | 26.720 |
| SNS_FIDM | -21.458 | 0.030 | 26.764 |
| SNS_FIDN | 21.502 | 0.017 | -11.247 |
| SNS_FIDP | -0.012 | 21.545 | -11.255 |
| SNS_FIDR | -21.418 | -0.132 | -11.270 |

| In Vacuum Vessel | | | |
|------------------|---------|---------|---------|
| Name | X[inch] | Y[inch] | Z[inch] |
| US Flange | 0.045 | -0.103 | -53.909 |
| DS Flange | -0.086 | 0.005 | 179.348 |