Notes for Princeton body-of-revolution data

Two zip files of data are now available: Bow and Midbody.

Each file contains data for three body sizes: Large, Medium, Small, as described in each file, and in the principal reference work,

L. Ding, T. Saxton-Fox, M. Hultmark, and A. J. Smits

“Effects of pressure gradients and streamline curvature on the statistics of a turbulent pipe flow.” In 11th International Symposium on Turbulence and Shear Flow Phenomena, Southampton, UK, 2019.

This reference is available on the web site as file ONR\_TBLs\_in\_PGs\_4a\_Princeton.

Each data file has a header that gives the flow parameters, followed by columns listing the mean and turbulence data.

The data are given in pipe (cylindrical) coordinates, where x is the streamwise coordinate measured from the tip of the bow), y is the wall-normal coordinate measured from the pipe wall (y=R-r). The streamwise turbulence intensity is $<u\_x^2>, the wall-normal turbulence intensity is $<u\_r^2>, and Reynolds shear stress is $<u\_x u\_r>.

If you have questions, please contact

Lex Smits at [asmits@princeton.edu](mailto:asmits@princeton.edu), or

Liuyang Ding at [liuyangd@princeton.edu](mailto:liuyangd@princeton.edu).