

Model CP data from Test 662 (Juncture Flow with Symmetric Wing) are provided here.  
August 2022

New variables calculated:

- Datafiles contain “cpz” as part of filename and “CPZ” as part of the Zone title.
- The “CPZ” variables were calculated to include the total pressure deficit in the test section. The current implementation of the 14x22 tunnel calibration does not account for this deficit. New equations were added to account for this deficit (based on data from Test 508 which is what the current 14x22 tunnel calibration is based on). These equations were modified so that the tunnel reference conditions are all referenced to tunnel station 17.75 feet for an empty tunnel.
- Taking total pressure deficit into account causes a change to the static pressure calculation which in turn affects the Cp calculations. This shifts Cps  $\sim +0.018$ . Accounting for this deficit causes a minimal effect on other tunnel conditions, i.e. Mach, dynamic pressure, velocity, Reynolds number.

Tunnel incidence angles: -10.0, -7.5, -5.0, -2.5, 0.0, 2.5, 5.0, 7.5, 10.0

- Data obtained for upright alpha sweeps (runs 332, 333, 334, 348, 349, 350). Data obtained for inverted alpha sweeps (runs 338, 340, 341).
- Where applicable, data from right side and left side were combined to calculate Cp mean and 2-sigma (some rows are only on the right side).
- Angles of -5.0, -2.5, 0.0, 2.5, 5.0 degrees also have the upright and inverted runs combined to calculate Cp mean and 2-sigma.
- Angles of -10.0, -7.5, 7.5, 10 degrees have a separate file for upright runs and a separate file for inverted runs. The model could not be positioned in the center of the tunnel for both the upright and inverted cases for these angles. So, data is provided separately.

Tunnel incidence angle: 1 degree

- Data was obtained only during LDV portion of the test while the model was upright.
- Data from right side and left side were combined for Cp mean and 2-sigma calculations.

Individual data are also provided in the data files. A “999” indicates that the particular data point/orifice is not used.

Files:

- README-Test662Alpha\*\_cpz.txt - README file giving details for incidence angle \* deg
- Test662Alpha\*\_cpz.dat - Data file for incidence angle \* deg
- Plots\*deg\_cpz.pdf - PDF file containing plots for incidence angle \* deg  
(intended to just give a quick overall look at the data)

“combined” – upright and inverted runs are combined

“upright” – upright runs only

“inverted” – inverted runs only