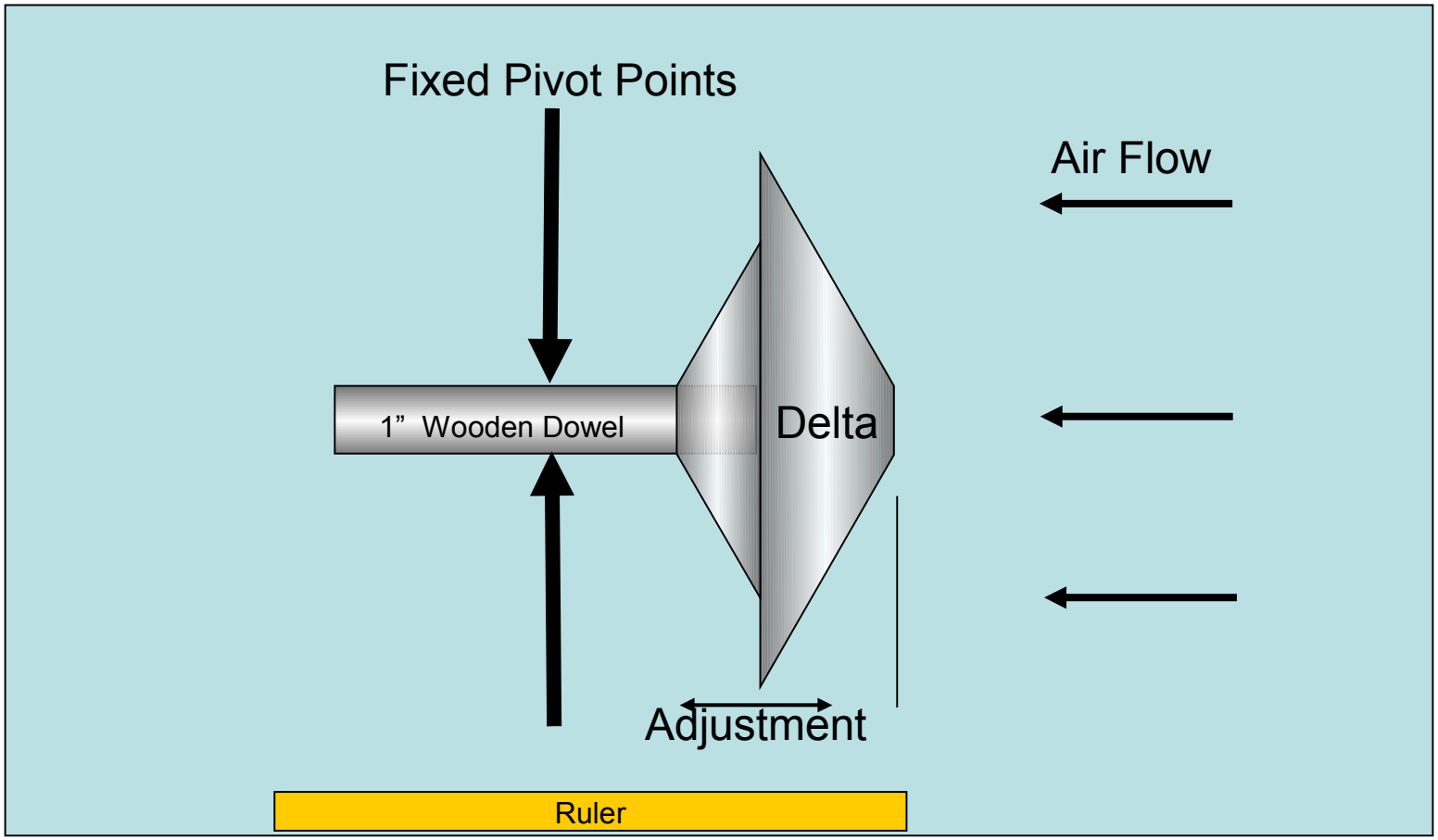
Determining the Center of Pressure of the Delta Flying Saucer

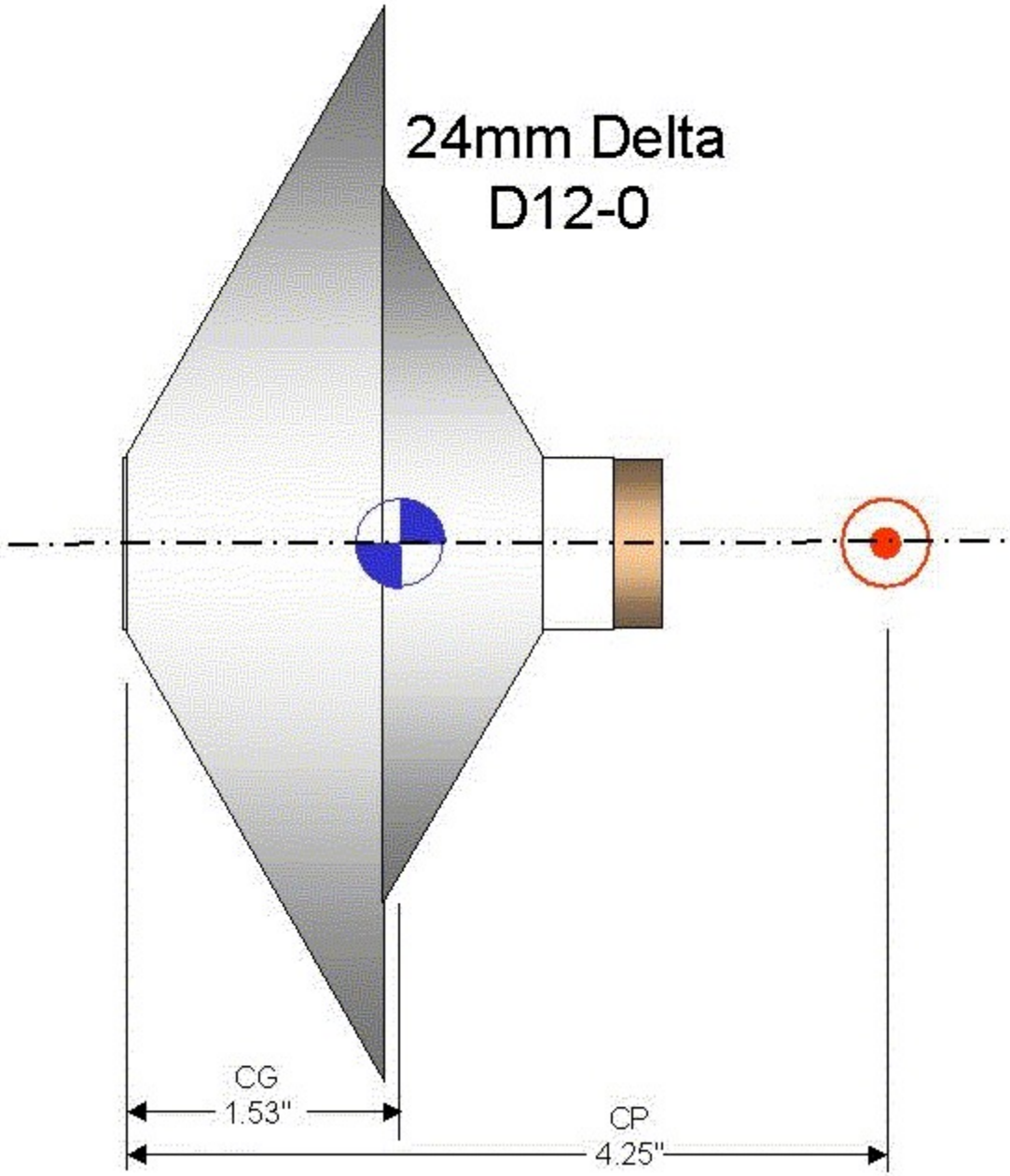
Wind Tunnel Testing

- There was no simulation software readily available to determine the Center of Pressure (CP) of the Delta (Delta) Flying Saucer
- A simple wind tunnel was the most practical way to determine the CP.
- A wind tunnel was constructed in June 2005 and testing was conducted from June 2, 2005 until June 25, 2005
- The CP was measured for angles of attack up to 30 degrees.
- A 6” diameter model of the Delta was used for testing.
- The test was repeated many times and at different wind velocities with the same results.
- Figure 1 shows the general layout of the wind tunnel used to make the measurements.
- Figure 2 shows the measured CP for the tests.

The Wind Tunnel Test Chamber



The position of Delta was adjusted back and forth along the dowel until it would no longer point reliably into the air flow for angles of attack as high a 30 degrees. The distance from the front of the Delta to the pivot points was measured with a ruler to determine the CP.


24mm Delta
D12-0
CG
1.53"
CP
4.25"