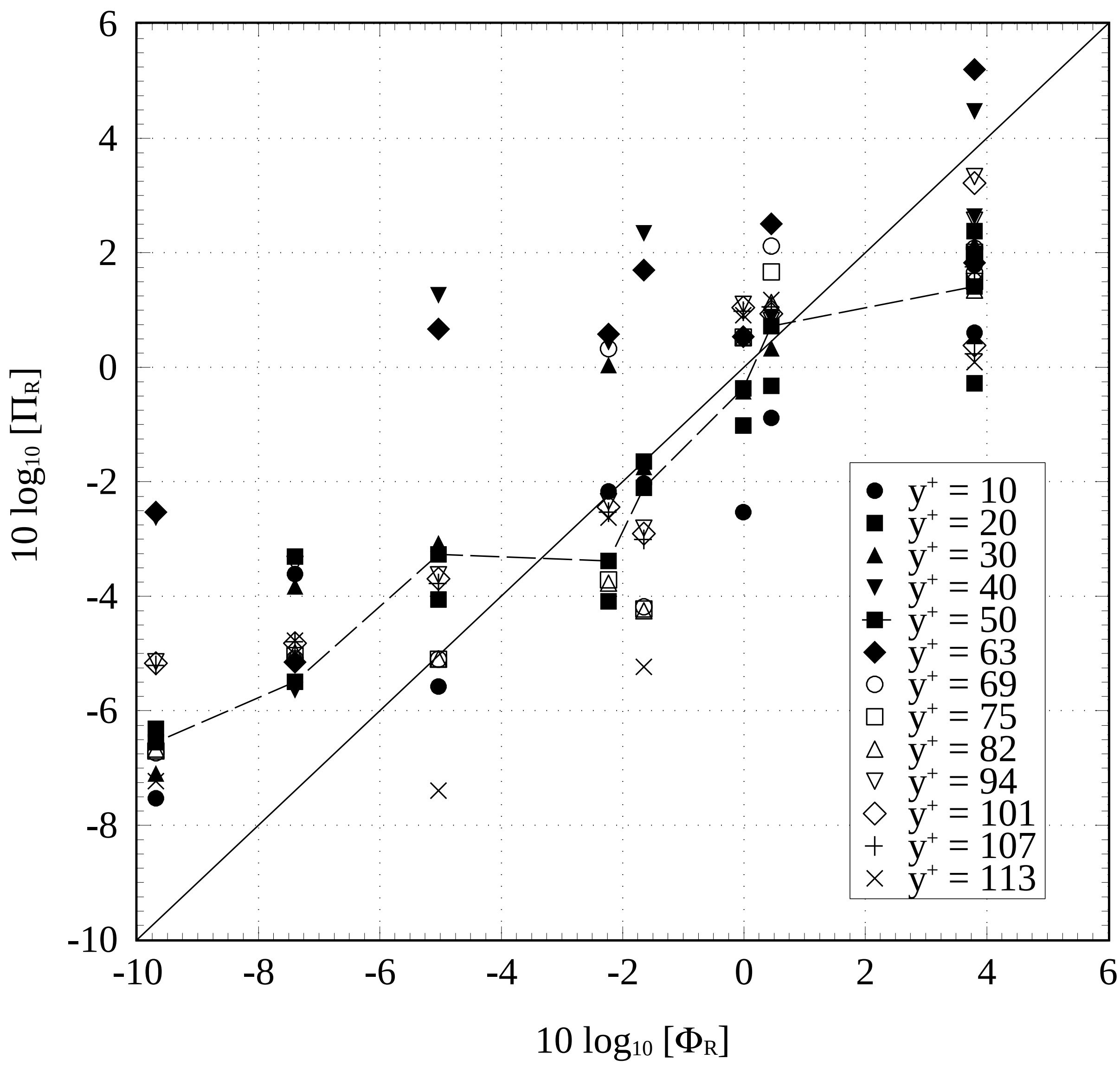


**Figure 85.** The *Poisson ratio* ($\Pi_R$) evaluated at the $y^+$ locations given in the legend at all of measurement stations in the $Re_\theta = 23200$ flow as a function of the *spectral ratio* ($\Phi_R$). The dashed lines connects the values of $\Pi_R$ evaluated at $y^+ = 50$ at all of the measurement stations. The solid line shows one-to-one correlation.

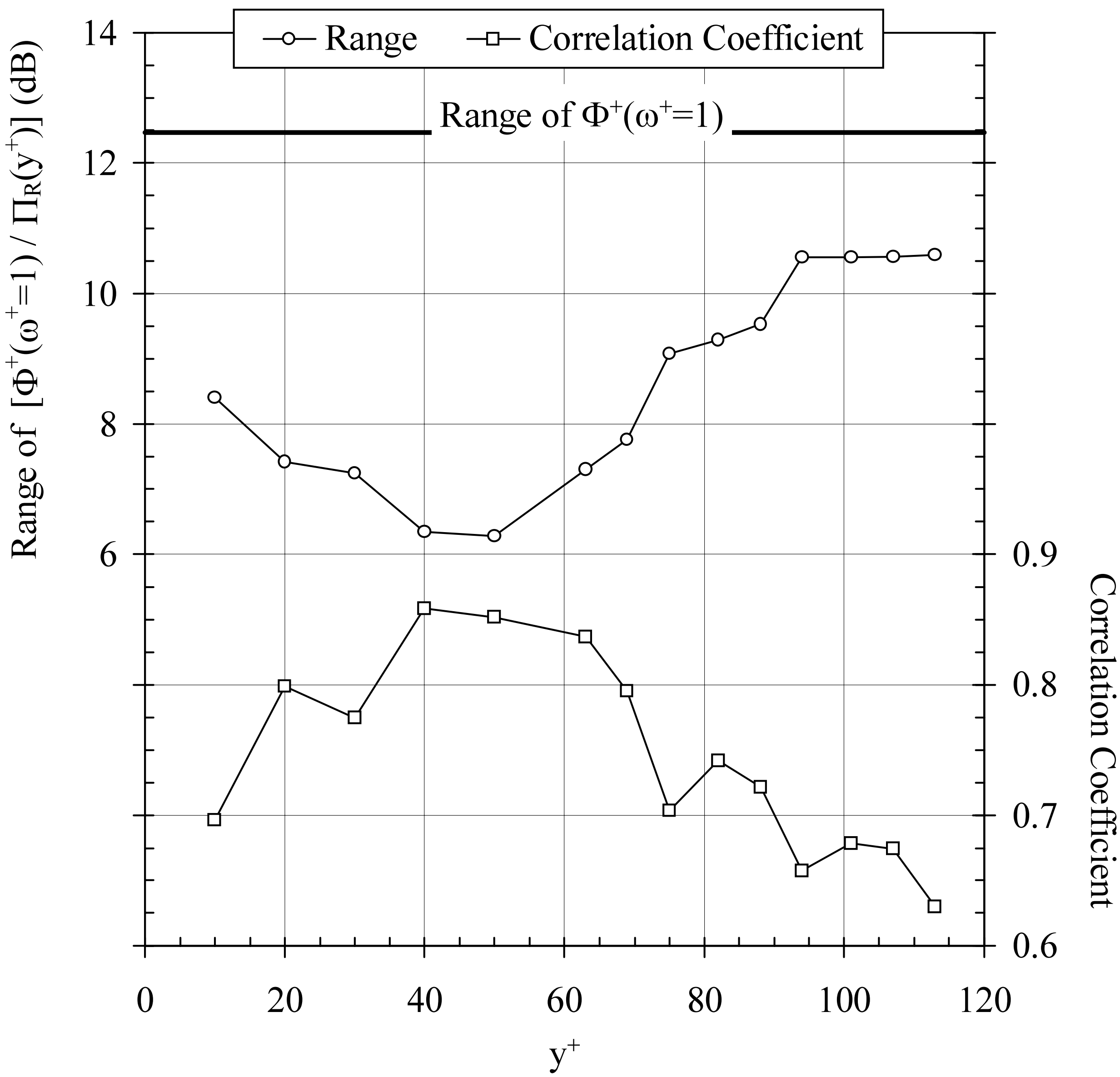


**Figure 86.** The "best fit" parameters used to measure the degree of high frequency spectral collapse with $\Pi_R$ evaluated at various $y^+$ locations within the $Re_\theta = 5940$ flow — (1) The correlation coefficient between $\Phi_R / \Pi_R(y^+)$ and $y^+$, and (2) The range of spectral values ($\Phi^+ / \Pi_R$) at $\omega^+ = 1$ among the measurement stations. The solid line shows the range of $\Phi^+$ at $\omega^+ = 1$ among the measurement stations *without* $\Pi_R$ applied.

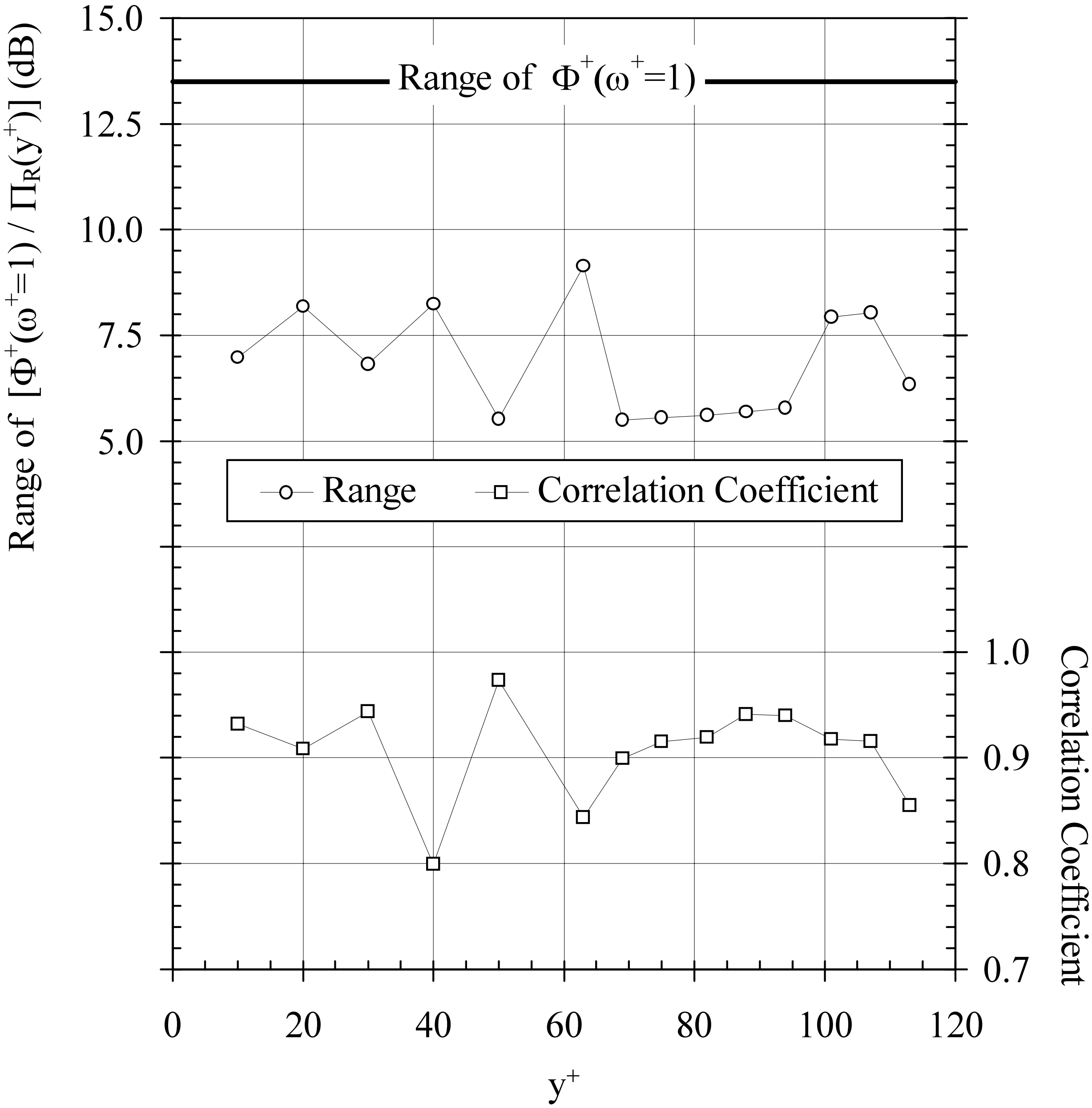


**Figure 87.** The "best fit" parameters used to measure the degree of high frequency spectral collapse with $\Pi_R$ evaluated at various $y^+$ locations within the $Re_\theta = 23200$ flow — (1) The correlation coefficient between $\Phi_R / \Pi_R(y^+)$ and $y^+$, and (2) The range of spectral values ($\Phi^+/ \Pi_R$) at $\omega^+ = 1$ among the measurement stations. The solid line shows the range of $\Phi^+$ at $\omega^+ = 1$ among the measurement stations *without* $\Pi_R$ applied.

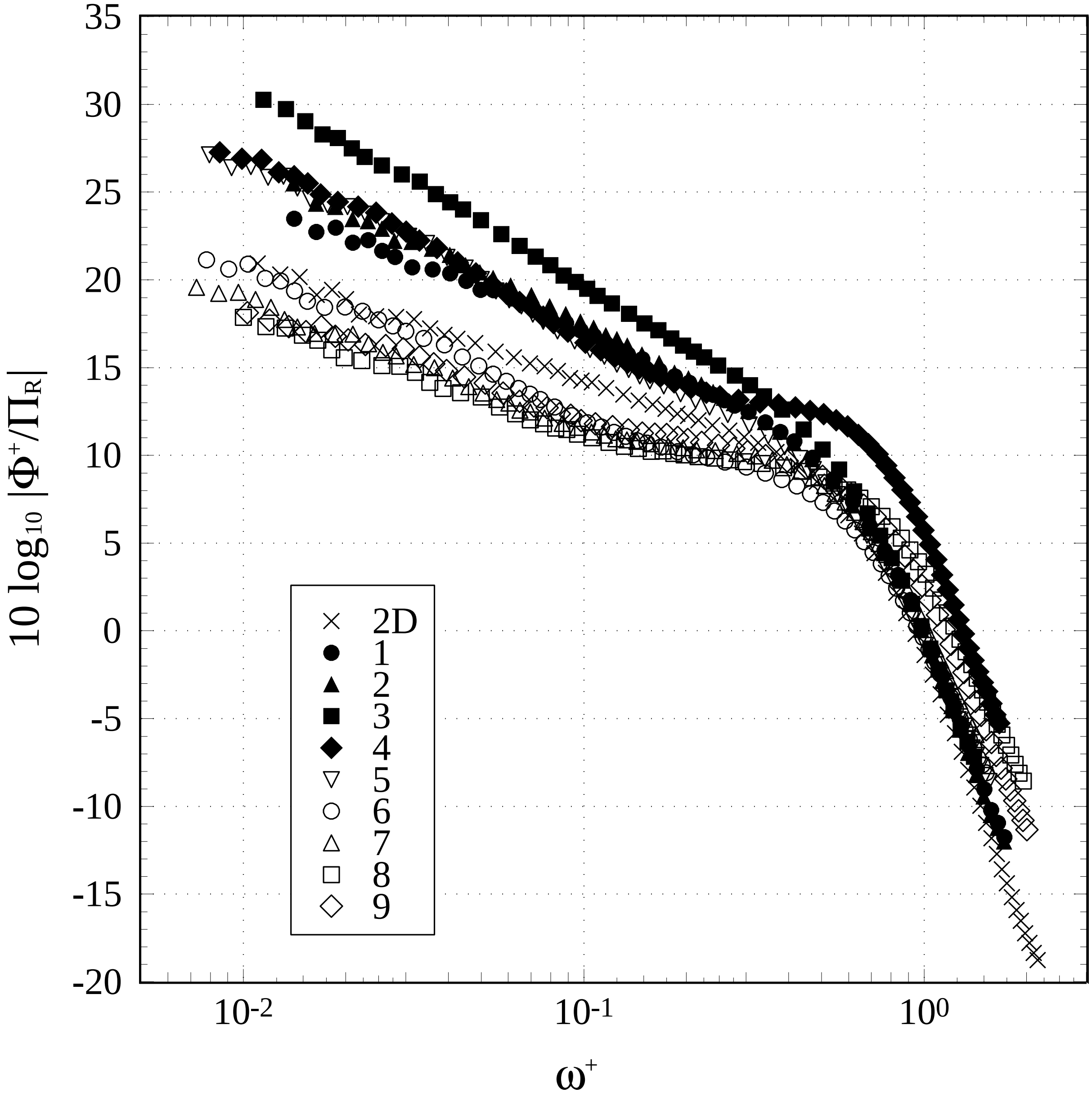


**Figure 88.** Spectral power density of $p$ ($Re_\theta$ = 7300 (2-D); 5940 (3-D)) normalized using $\tau_W$ as the pressure scale, $\nu/u_\tau^2$ as the time scale, and $\Pi_R$ evaluated at $y^+$ = 50. The numbers in the legend denote the measurement station. Note that $\Pi_R$ = 1 for 2-D flow.

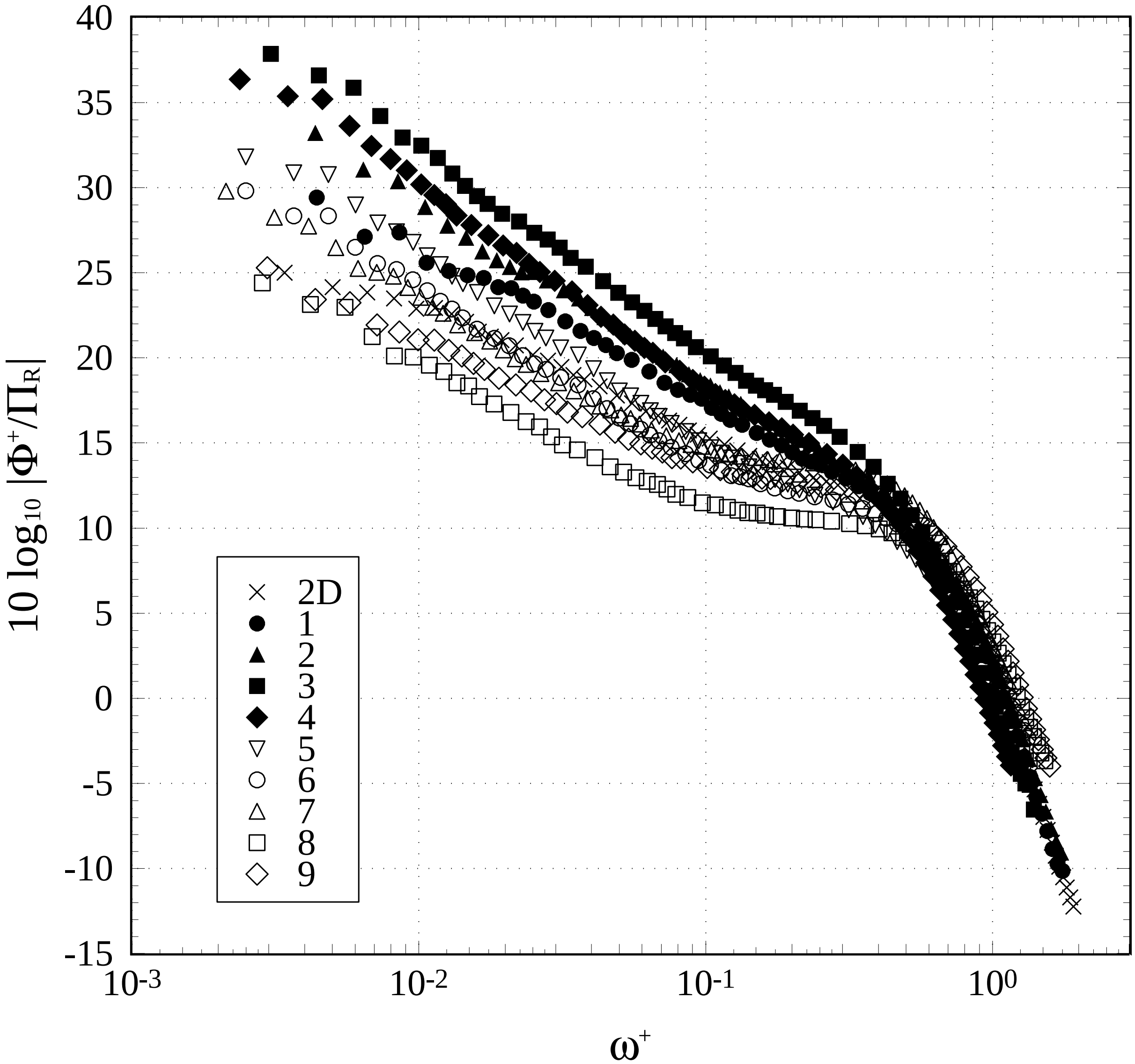


**Figure 89.** Spectral power density of $p$ ($Re_\theta$ = 23400 (2-D); 23200 (3-D)) normalized using $\tau_W$ as the pressure scale, $\nu/u_\tau^2$ as the time scale, and $\Pi_R$ evaluated at $y^+ = 50$. The numbers in the legend denote the measurement station. Note that $\Pi_R = 1$ for 2-D flow.

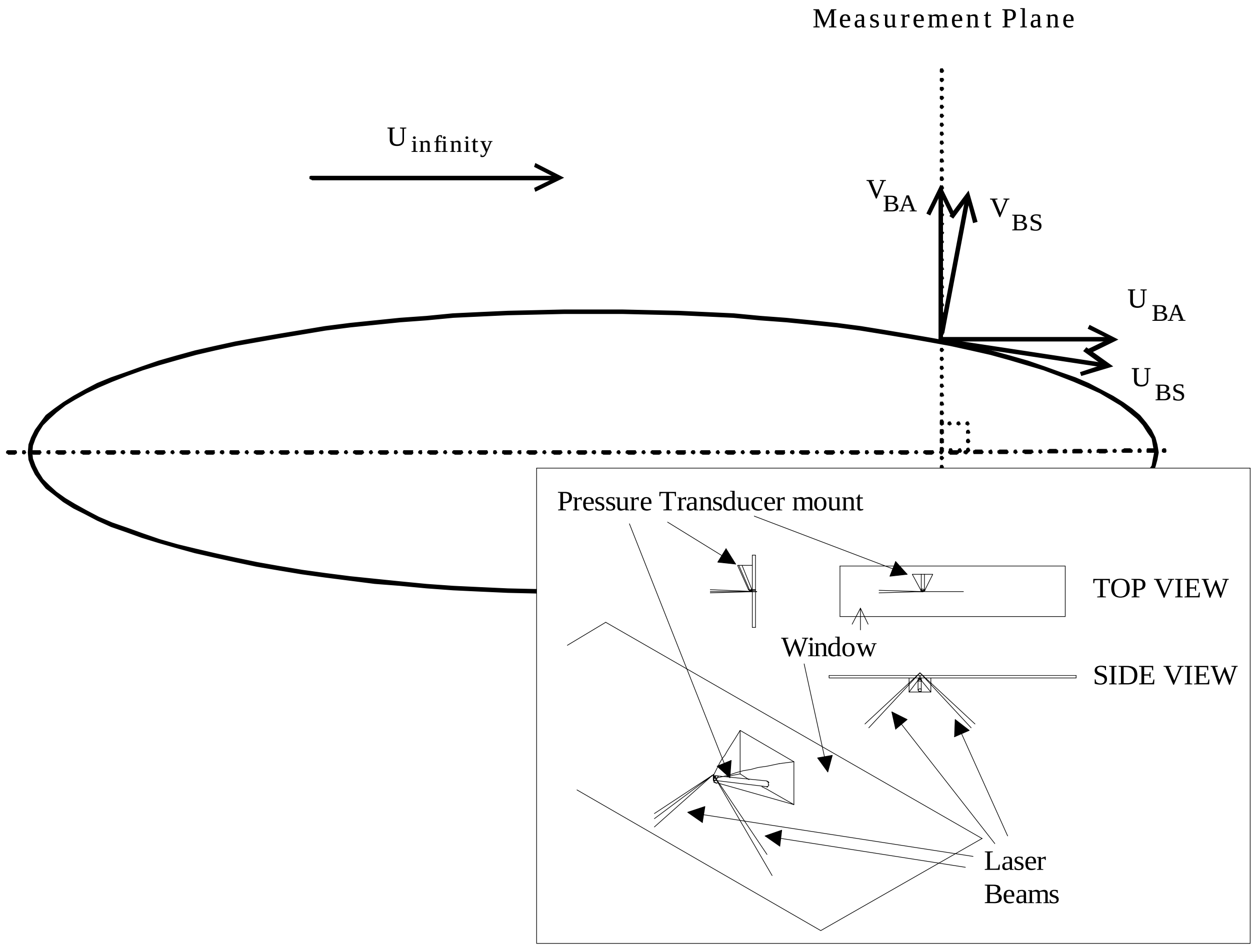


**Figure 90.** Relationship between Body Axis (BA) coordinate system and Body Surface (BS) coordinate system. Insert : Schematics of pinhole and cylindrical pressure transducer mount attached to double-convex curvature LDV window.

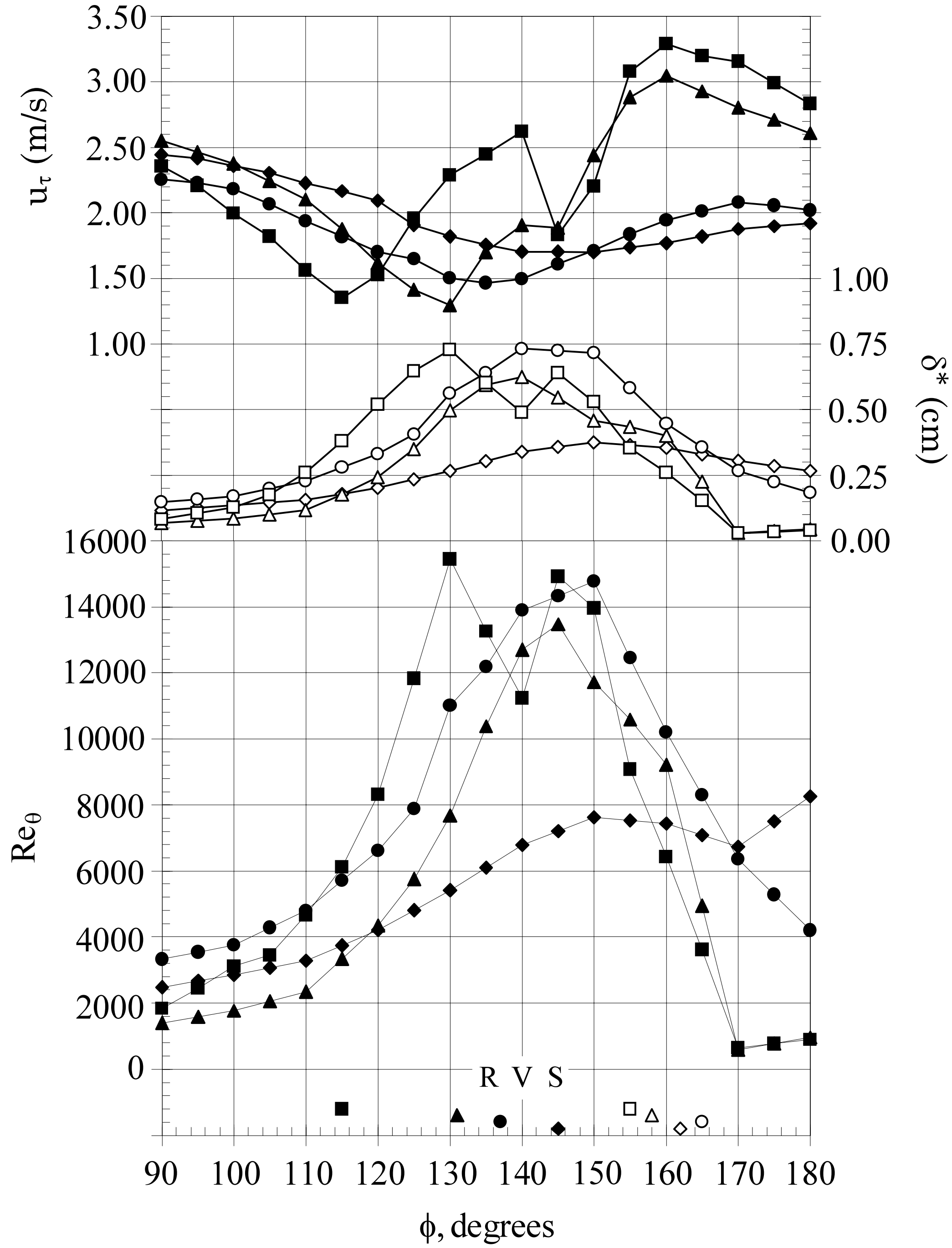


**Figure 91.** . Variation of displacement thickness ($\delta^*$), friction velocity ($u_\tau$), and Reynolds number ($Re_\theta$) with $\phi$ position: ◇, $\alpha$ = 10°, $x/L$ = 0.600; ○, $\alpha$ = 10°, $x/L$ = 0.772; Δ , $\alpha$ = 20°, $x/L$ = 0.600; □, $\alpha$ = 20°, $x/L$ = 0.772. The solid symbols immediately above the $\phi$-axis denote the location of primary separation (Wetzel *et al*., 1998). The open symbols immediately above the $\phi$-axis denote the approximate location of the shed vortex core. The letters R, V, and S denote the location of reattachment, secondary vortex core, and secondary separation, respectively, for $\alpha$ = 20°, $x/L$ = 0.772.