Solutions to separated and quasi-laminarized pressure gradient boundary layers via similarity analysis RIKI MINORU HOPKINS, RAUL BAYOAN CAL, Portland State University — Numerical solutions have been found through a characteric equation. This equation was first obtained via similarity analysis of the equations of motion. The equations are analyzed for limiting pressure gradient cases, namely quasi-laminarization and separation. It is also found that the profiles for the laminar case and experimental data for a quasi-laminarized case do not collapse thus showing the effects and remnants of turbulence. The experimental data considered was first reported by Warnack and Fernholz as well as Jones et al. The equation contains two key parameters which are the pressure parameter as obtained via similarity analysis as well as the Pohlhausen parameter. Further investigation is done for the skin friction coefficient.

Raul Bayoan Cal
Portland State University

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