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Title of presentation:
Laminar – turbulent transition in adverse pressure gradient

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Abstract:
The authors focused on laminar turbulent transition regarding to the flow separation and stall prediction on turbine blades. Modern blades are designed more loaded to decrease those number and obtain less weight of the drive unit. Developing tools require precise definition of conditions of transition and parameters of boundary layer. The investigation was oriented to study wake induced transition in 2D flow. Experimental investigation was performer to find relationship of boundary layer parameters in advancing pressure gradient flow. The PIV and CTA methods was used to find integrated values like shape factor as well as derivate like shear stress. Authors present results for static reference base flow and phase averaged measurements for time dependent phenomenon.