

1 Project Description

The purpose of this project is to study the interference effects of the Horizontal tail plane (HTP) and the Vertical Tail Plane (VTP) with respect to the complete aircraft. In particular the influence of stall manoeuvres on flight performance with respect to the tail plane is assessed. The numerical approach involves solving the Reynolds Averaged Navier Stokes equations (RANS) on a complete transport aircraft (Airbus A320). An important outcome of this project is to predict the maximum lift coefficient, C_{lmax} and the corresponding angle of attack, α . In order to proceed with the tasks, an efficient numerical simulation approach is required. This can be accomplished by the use of the state of the art flow solver DLR TAU code in accordance with advanced turbulence models such as the Reynolds Stress models (RSM).