

## **Appendix 3.2 – EXPERIMENTAL RESULTS FROM DLR GÖTTINGEN**

by

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This Appendix is related to Chapter 19 and contains a description of the electronically available data set (test case 4.5) which was obtained on NASA's  $\frac{3}{4}$  scale  $65^\circ$  delta wing model (VFE-2 model No. 1) with medium radius leading edges in the transonic wind tunnel in Göttingen (DNW-TWG) at a Mach number of  $M = 0.4$ , a mean aerodynamic chord based Reynolds number of  $R_{mac} = 3$  million and an angle of attack of  $\alpha = 13.3^\circ$ . The data is written in an ASCII format using a TecPlot<sup>®</sup> readable header. Not available data points are marked in the files with 999.999.

### **A3.2.1 SURFACE PRESSURE DISTRIBUTIONS**

#### **Measured with Pressure Sensitive Paint**

$C_p$  distributions on the pressure and suction side

File: Tecplot 360 Layout [psp.lay](#) (Original data set see [psp\\_rleM04R3A13.plt](#))

#### **Obtained by PSI Modules**

$C_p$  distributions at the chord stations  $x/c_r = 0.2, 0.4, 0.6, 0.8$  and  $0.95$

File: Tecplot 360 Layout [psi.lay](#) (Original data set see [psi\\_rleM04R3A13.plt](#))

### **A3.2.2 FLOW VELOCITY VECTOR FIELDS**

#### **Measured with Particle Image Velocimetry (Stereo-PIV)**

3d velocity vectors in planes perpendicular to the model axis at the chord stations  $x/c_r = 0.35, 0.4, 0.5, 0.6, 0.7, 0.8$  and  $0.9$ .

Files: Tecplot 360 Layout [piv.lay](#)

(Original data set see: [piv35\\_rleM04R3A13.plt](#)

[piv40\\_rleM04R3A13.plt](#)

[piv50\\_rleM04R3A13.plt](#)

[piv60\\_rleM04R3A13.plt](#)

[piv70\\_rleM04R3A13.plt](#)

[piv80\\_rleM04R3A13.plt](#)

[piv90\\_rleM04R3A13.plt](#)

The exact values of the Mach and Reynolds number are given in the header of the file [psi\\_rleM04R3A13.plt](#).

