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Transonic Wind Tunnel Test of the NASA CRM (Volume1)

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Abstract

A wind tunnel test of a 80% scale copy of the NASA Common Research Model (CRM) was performed in the 2m × 2m transonic wind tunnel of the Japan Aerospace Exploration Agency (JAXA). JAXA consulted with NASA Langley Research Center and committee members of the Drag Prediction Workshop during the wind tunnel model fabrication. The test was conducted at the relatively low Reynolds number of 2.27×10^6 due to limitations in the tunnel's capability, and boundary layer transition was simulated with optimized trip dots. Static pressure distributions and aerodynamic forces were successfully acquired from the test campaign, and the data were compared with those from the NASA National Transonic Facility. Numerical data acquired by JAXA are presented in this paper. This volume includes the results from wind tunnel tests conducted in 2012.

Nomenclature

b	=	wing span
c	=	wing mean aerodynamic cord
C_D	=	drag coefficient
C_{Dac}	=	drag coefficient corrected for angle of attack difference
C_{Dbc}	=	drag coefficient corrected for buoyancy
C_{Dc0}	=	drag coefficient corrected for test section Mach number difference
C_{Dmc}	=	drag coefficient corrected for Mach number difference
$C_{D\_buoyancy}$	=	sum of buoyancy correction amount to be subtracted from drag coefficient
$C_{D\_buoyancy\_probe}$	=	clear tunnel buoyancy correction amount
$C_{D\_buoyancy\_probe\_mc}$	=	clear tunnel buoyancy correction amount corrected for Mach number difference
$C_{D\_buoyancy\_wall}$	=	buoyancy correction amount derived from wall interference correction
$C_{D\_buoyancy\_wall\_mc}$	=	buoyancy correction amount derived from wall interference correction corrected for Mach number difference
C_L	=	lift coefficient

| C_{Lac}	=	lift coefficient corrected for angle of attack difference
C_{Lc0}	=	lift coefficient corrected for test section Mach number difference
C_{Lmc}	=	lift coefficient corrected for Mach number difference
C_m	=	pitching moment coefficient
C_{mmc}	=	pitching moment coefficient corrected for Mach number difference
C_p	=	pressure coefficient
C_{p_center}	=	pressure coefficient along the centerline in the wind tunnel measured by the short centerline probe
M_{pc}	=	plenum chamber Mach number
M_c	=	corrected Mach number
M_{c0}	=	Mach number corrected for test section Mach number difference
P_0	=	stagnation pressure
Pc	=	static pressure corrected for Mach number difference
Pc_0	=	static pressure corrected for test section Mach number difference
P_{pc}	=	plenum chamber pressure
Q	=	dynamic pressure
Q_c	=	dynamic pressure corrected for Mach number difference
Q_{c0}	=	dynamic pressure corrected for test section Mach number difference
Re_c	=	Reynolds number based on aerodynamic cord
S_{Model}	=	model cross sectional area
S_{ref}	=	model reference area
T_0	=	stagnation temperature
X	=	model station
X_{nose}	=	model nose station
X_{tail}	=	model tail station
α	=	angle of attack
α_c	=	corrected angle of attack
η	=	fraction of wing semi-span
ΔM	=	sum of Mach number correction amount
ΔM_d	=	Mach number difference between plenum chamber Mach number and model center
ΔM_{wall}	=	Mach number correction amount derived from wall interference correction
$\Delta \alpha$	=	sum of angle of attack correction amount
$\Delta \alpha_{wall}$	=	angle of attack correction amount derived from wall interference correction
$\Delta \alpha_{upflow}$	=	upflow angle

1.   Introduction

There have been a number of efforts to utilize computational fluid dynamics (CFD) to estimate drag, and due to the interest in this topic, the AIAA has been holding drag prediction workshops (DPW) since 2001[1] [2] [3] [4] . Workshop information can be found at http://aaac.larc.nasa.gov/tsab/cfdlarc/aiaa-dpw/. The NASA Common Research Model (CRM), a hypothetical transport aircraft configuration, was designed for the fourth workshop (DPW-4)[5] and used as the target shape for drag estimation during DPW-4 and DPW-5. To obtain experimental reference data, NASA's Langley Research Center (LaRC) fabricated a wind tunnel model of the CRM and carried out tests on it[6] [7] [8] [9]   at the National Transonic Facility (NTF) and the Ames 11-ft wind tunnel, and has since been conducting further analyses[10] [11] . The Japan Aerospace Exploration Agency (JAXA) is also making efforts to predict aerodynamic characteristics consistently by both CFD and wind tunnel testing. JAXA is now attending the DPW[12] and has also fabricated an 80% scale copy of the NASA CRM wind tunnel model for its JAXA 2m × 2m transonic wind tunnel (JTWT) facility. A set of wind tunnel campaigns to obtain experimental data was planned and conducted[13] [14] [15] . The objectives of these wind tunnel tests were to acquire stable experimental data and to clarify the correlation between CFD results and experimental results from the JTWT and other facilities. In this paper, basic data acquired during the first phase of these JTWT tests are presented and compared with results from the NTF.

2.   Wind Tunnel Model

2.1.   Common Research Model (defined by the AIAA Aerodynamics Committee)

The NASA CRM is a hypothetical aircraft shape which was designed as a target for numerical drag prediction for the DPW-4 as stated above. Its configuration consists of a contemporary supercritical transonic wing and a fuselage representative of a widebody commercial transport aircraft. It has a body, wings and horizontal stabilizers (though no vertical tailplane), and air flows through and around engine nacelles and pylons (Figure 1). The design Mach number and lift coefficient are 0.85 and 0.5, respectively, at a Reynolds number of 40×10^6 . The model's design properties are tabulated in Table 1.

NASA's wind tunnel test model is scaled by 2.7% from the CRM dimensions. Its reference quantities are tabulated in Table 2. Details of the model are explained in the literature[5] and on a web site prepared by LaRC (http://commonresearchmodel.larc.nasa.gov).
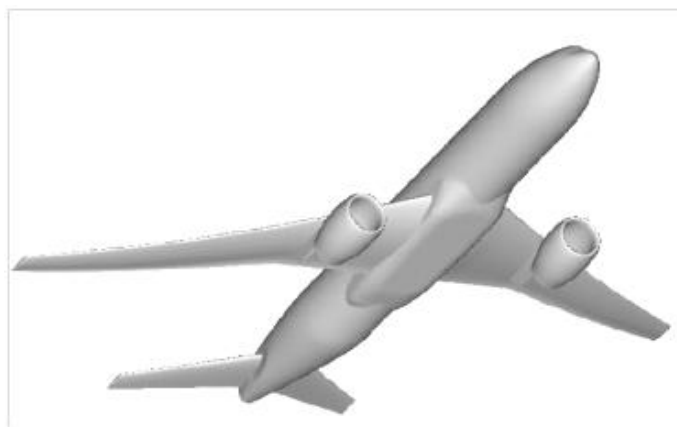
Figure 1: Common Research Model: a hypothetical wide-body transport aircraft configuration[5] .

Table 1: CRM Reference Quantities.

Reference Area	594,720.0 in^2	383.690 m^2
Reference Chord Length	275.80 in	7.0053 m
Span	2,313.50 in	58.7629 m
Taper Ratio	0.275	
25% Chord Sweep	35°	
Aspect Ratio	9.0	

Table 2: NASA Wind Tunnel Model Reference Quantities.

Reference Area	433.5509 in^2	0.279710 m^2
Reference Chord Length	74.466 in	0.18914 m
Span	62.4645 in	1.58659 m

2.2.   JAXA's 80% Scale Model

The JAXA CRM wind tunnel model used in the current investigation is an 80% scale copy of NASA's wind tunnel model, so its size corresponds to 2.16% of the CRM dimensions. The model was sized for the JAXA 2m × 2m transonic wind tunnel (JTWT) such that the ratio of the model to test section size is approximately the same as that for the NTF. Frontal views of the JAXA and NASA models located within

their corresponding wind tunnel test sections (JTWT and NTF) are shown to the same scale in Figure 2, and a photograph of the JAXA model is shown in Figure 3. The surface shape of the JAXA model was fabricated using the publically available STL data. The model is mainly stainless steel and the main wings are made from SUS630 alloy. The horizontal stabilizers (tails) can be set at fixed deflections of -2 / 0 / 2° or can be removed completely. The engine nacelles and the pylons are also removable. Thus, five different configurations can be tested with the model: the wing/body (WB) alone, wing/body/pylon/nacelle (WBPN), wing/body/tail = 0° (WBT0), wing/body/tail = +2° (WBT+2) and wing/body/tail = -2° (WBT-2). All configurations can be supported by a dorsal sting or a straight sting. The surface shape of the JAXA model differs slightly to that of the NASA model in that the "bump" around the neck of the support sting of the NTF (shown in Figure 4) has been deleted. The same seal mechanism to prevent air flowing through the surface hole into which the support sting is inserted was adopted. The JAXA model support sting was newly fabricated copying the shape and the inclination angle of the NTF support sting; however, only the upstream part of the sting shape is reproduced because the JTWT's test section is shorter than that of the NTF. The stings are compared in Figure 5.
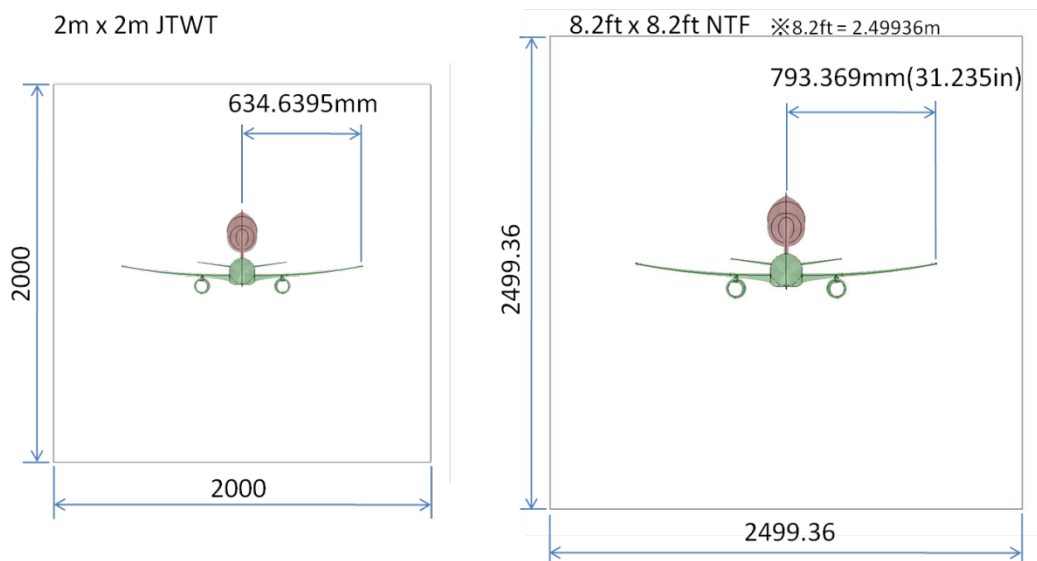
Figure 2. Front Views of the the JAXA (left) and NASA (right) wind tunnel models in the Tunnel Test Sections.
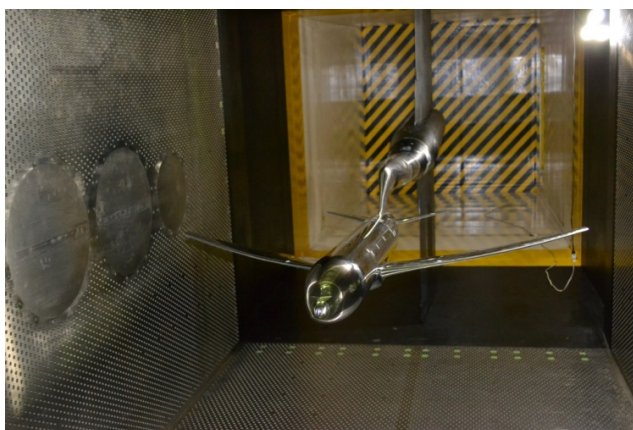
Figure 3. JAXA CRM Model Installed in the JTWT Test Section.

Table 3: JAXA CRM Model Reference Quantities.

Reference Area	0.179014 m^2
Reference Chord	0.15131 m
Span	1.26927 m
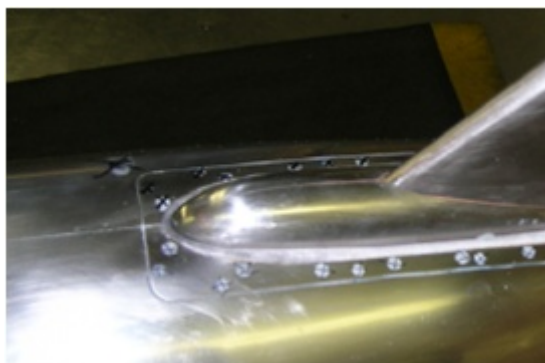
Figure 4: The "Bump" of the NTF Support Sting.
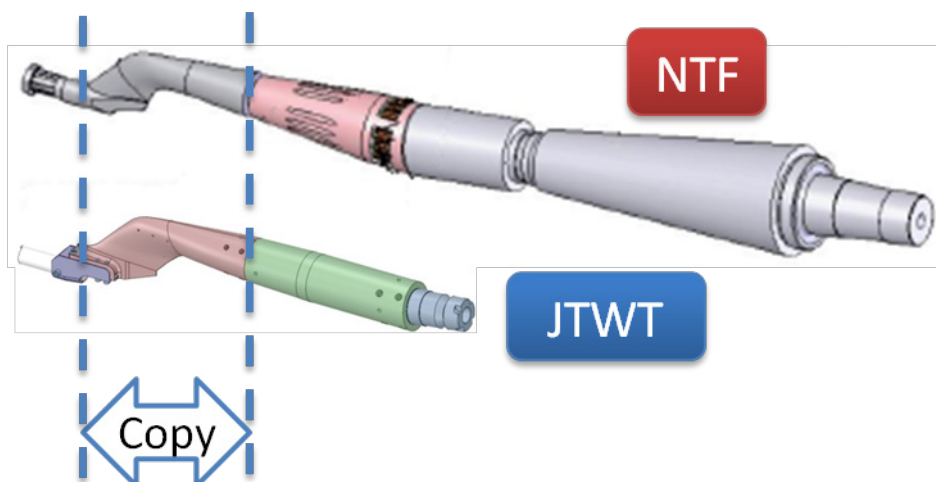
Figure 5: Comparison of NTF and JTWT Support Stings.

The model is equipped with a 6-component force balance, a 1-component accelerometer as an attitude sensor, three 3-component accelerometers measuring model vibration, four unsteady pressure sensors, and four strain gauges attached to the roots of the wings measuring wing bending and torsion. Small blind marker holes with a diameter of 0.5 mm and the depth of 0.2 mm are drilled into the model's surface to measure model deformation.

The balance used in the tests was the TB-M6-04, which is the most frequently used balance in the JTWT. The specification of the balance is given in Table 4.

Table 4: Balance Specification.

Name	TB-M6-04
Type	Moment-type
Diameter	52.6 mm
FX Capacity	670 N
FY Capacity	4000 N
FZ Capacity	8000 N
MX Capacity	226 N-m
MY Capacity	565 N-m
MZ Capacity	226 N-m
Manufactured	March, 2006

The model surface has 370 pressure orifices: 325 orifices on the left and right wings, 12 orifices on fuselage, and 33 orifices on horizontal stabilizers. The wing orifices are arranged on nine spanwise wing stations (η = 0.131, 0.201, 0.283, 0.397, 0.502, 0.603, 0.727, 0.846, and 0.950) as with the NTF model. These are named Section A through Section I sequentially. Additionally, a further spanwise wing station (η = 0.312) on the left lower surface was added to the JAXA model. The pressure orifices are located mainly on the lower surface of the right wing and the upper surface of the left wing. The rows at η = 0.131 of the right wing and at η = 0.502 and 0.727 of the left wing have orifices on both the upper and lower sides. The orifices on the horizontal tailplanes are located at three spanwise stations (η = 0.150, 0.550, 0.950) on the left upper surface and the right lower surface. These are named Section SA through Section SC sequentially. The arrangements of these pressure taps are shown in Figure 6 - Figure 8.

   Pressure taps are also prepared on the surface of the aft fuselage body and the support sting to investigate aerodynamic interactions between them. The locations of the taps were selected by examining pressure distributions estimated by CFD. The arrangements of these pressure taps are shown in Figure 9. To measure surface pressures, five PSI 64-port ESP modules with digital temperature compensation can be installed in the model fuselage, and pressure data are acquired by a System 8400.

The configuration and block diagram of the measurement system to obtain static data are shown in Figure 10.
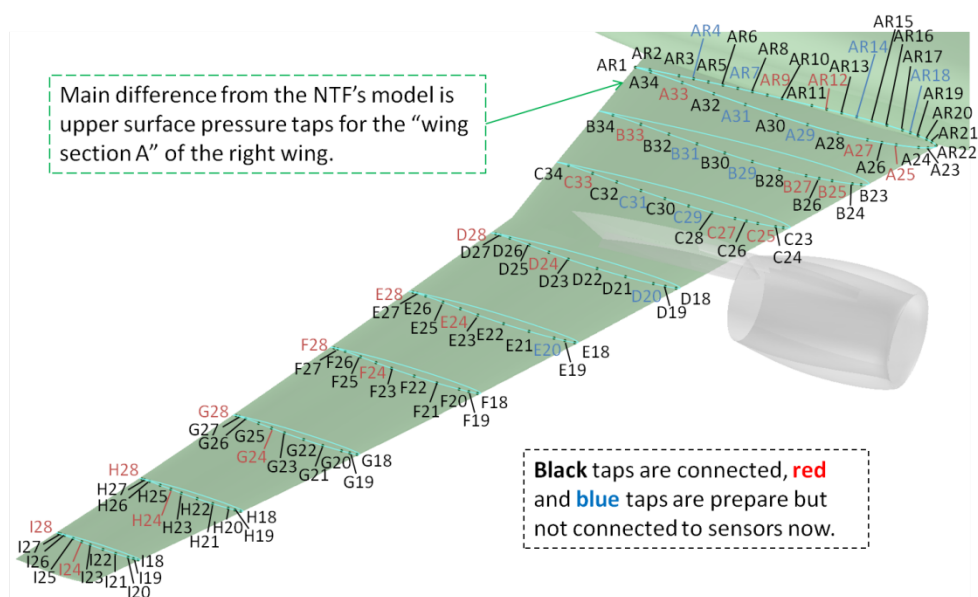
Figure 6: Arrangement of Pressure Taps on Right Wing.
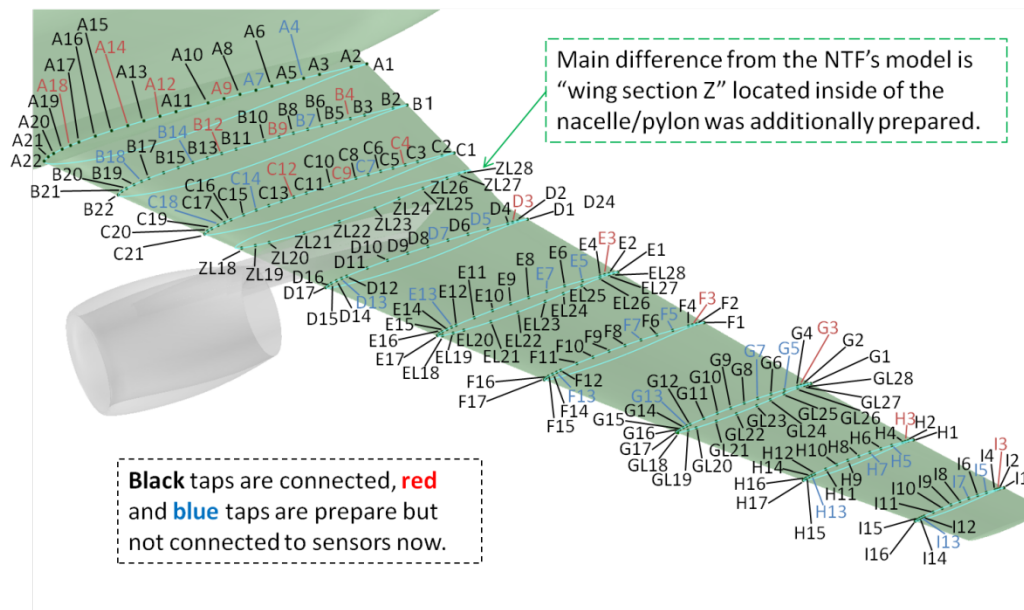
Figure 7: Arrangement of Pressure Taps on Left Wing.
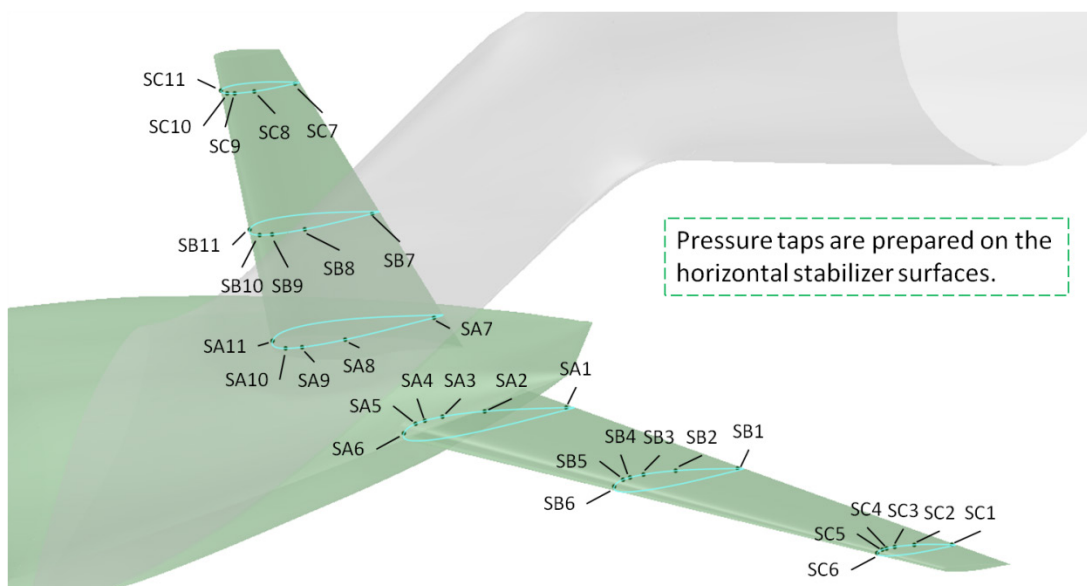
Figure 8: Arrangement of Pressure Taps on Horizontal Stabilizers.
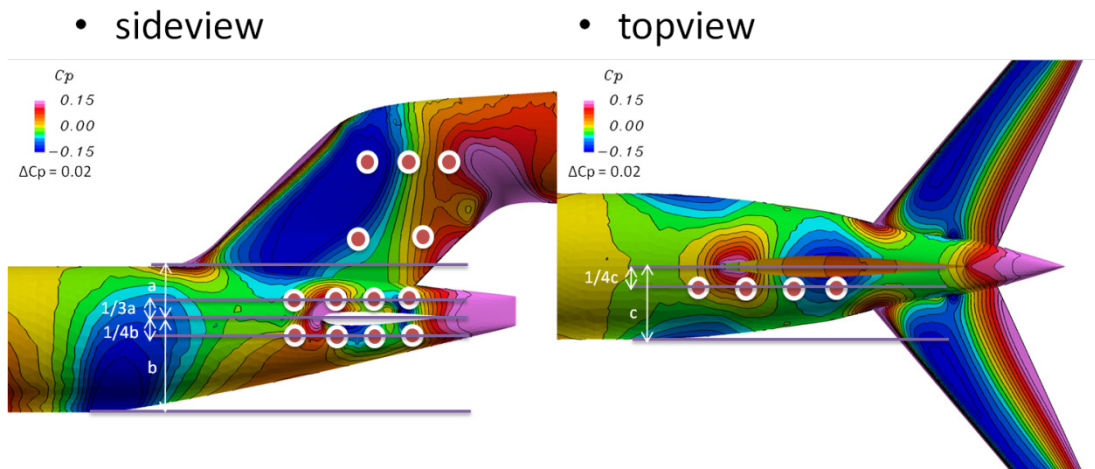
Figure 9: Pressure Tap Positions and Cp Distributions on Aft Body and Dorsal Sting.
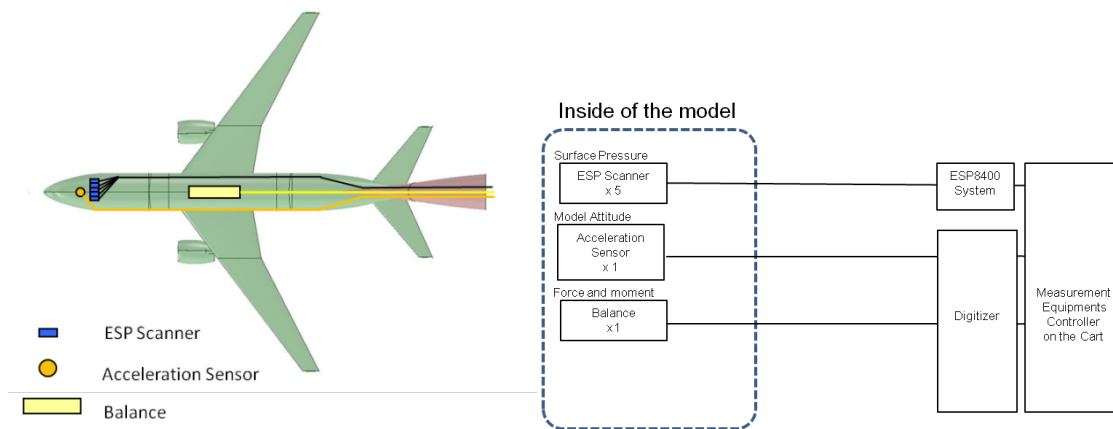
Figure 10: Equipment Configuration (left) and Measurement System for Static Data (right).

The installed 3-component accelerometers are the PCB Piezotronics model 356A32 units. Two are located in the forward fuselage with positional variation and one is located in the aft fuselage to measure model vibrations with greater precision.

The unsteady pressure sensors are Kulite model XCQ-062-10D units with a sleeve length of 0.1". The XCQ-062-10D is a differential pressure sensor with a 10 psi range. (The sensors in the left wing have since been replaced with XCQ-062-25A; all data reported in this paper were acquired with the former sensors.) The sensors are located in the upper surface of the left wing and the lower surface of the right wing, as shown in Figure 11. The positions of the center sensor on the left wing and the sensor on the right wing are the same as for the NASA wind tunnel model.
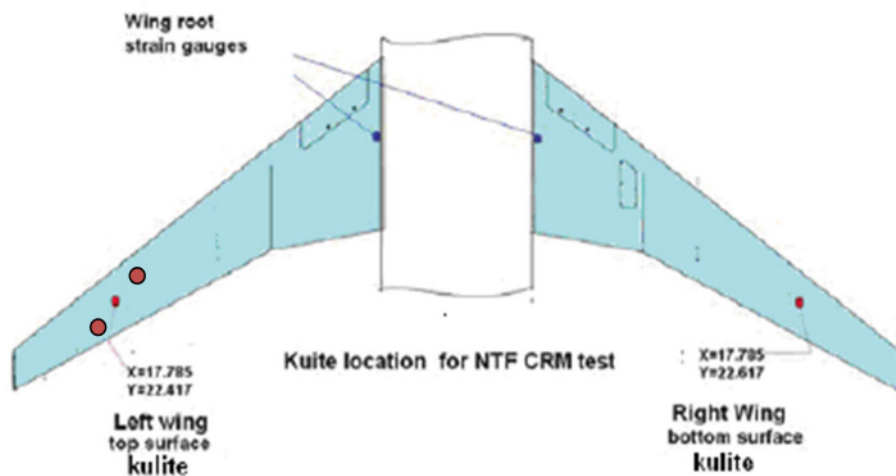
Figure 11: Location of Unsteady Sensors (Overlaid on figure from [7])

Table 5: Coordinates of Kulite Sensors.

Upper	Lower	Left Wing	Right Wing	STA	BL	WL
○		○		905.60	-445.99	122.40
○		○		906.10	-455.51	123.65
○		○		916.89	-465.03	124.60
	○		○	906.10	459.58	115.90

In the roots of the wings, KYOWA ELECTRONIC INSTRUMENTS KFG-1-350-D16-11 strain gauges are bonded both on the upper and the lower sides. These strain gauges are 8-mm diameter two-axis

metallic foil-type gauges to measure wing bending and torsion simultaneously, and are connected to composite thermal drift compensation circuits. The bridge boxes are mounted inside the model's fuselage.

Marker holes were drilled into the surface for model deformation measurement: 60 on the wings, 30 on the fuselage, 48 on the horizontal stabilizers, and 8 on the nacelles and the pylons.

The configuration and block diagram of the measurement system to obtain dynamic data are shown in Figure 12.
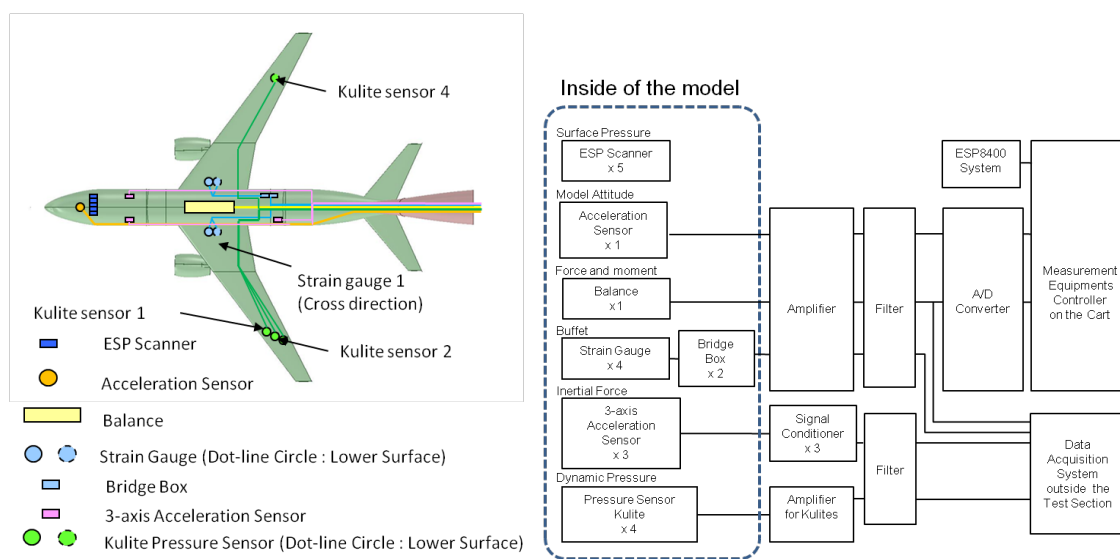
Figure 12: Equipment Configuration (left) and Measurement System for Dynamic Data (right).

3.   Wind Tunnel Test

3.1.   Wind Tunnel

The wind tunnel test of the JAXA CRM model was performed using the JAXA 2m × 2m transonic wind tunnel (JTWT). A bird-eye view drawing of the tunnel is shown below and its specifications are given in Table 6.
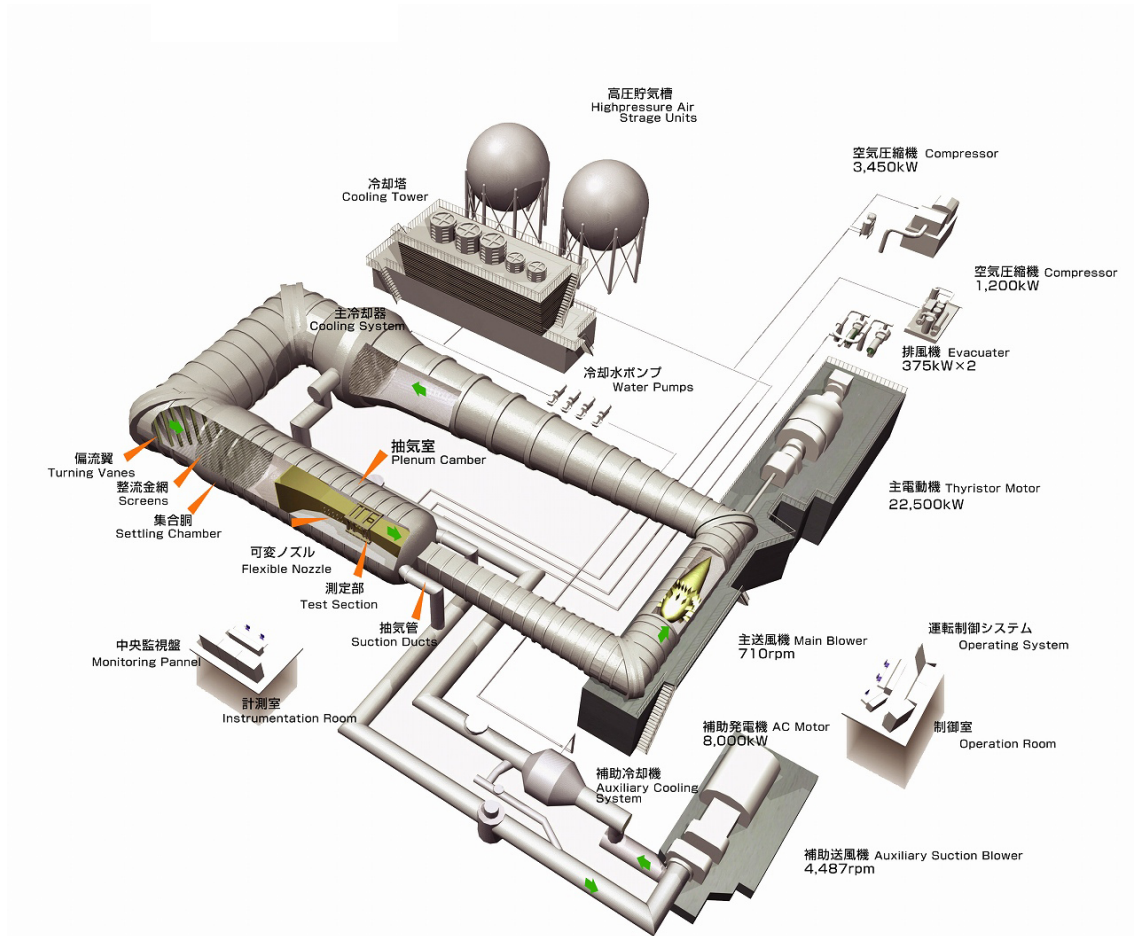
Figure 13: Bird-Eye View of JAXA 2m × 2m Transonic Wind Tunnel.

Table 6: JTWT Specifications

Type	Continuous
Test Section Size	2 m × 2 m × 4.13 m
Mach Number	0.1 - 1.4
Total Pressure	50 - 120 kPa (Coupled operation of the main and the auxiliary blowers)
	50 - 150 kPa (Only with the main blower; up to Mach 0.9)
Test Section Cart	2 full model cart with porous walls
	1 half-model cart with porous walls
	1 full-scale model cart with slotted walls.
Compressor	3,600 kW × 1
	3,450 kW × 1
	(Commonly used for blow-down tunnels)
Main Blower	22,500 kW
Auxiliary Blower	8,000 kW

3.2.   Test Schedule

The wind tunnel data included in this paper were acquired from Run 4124 (pressure measurement) and Run 4222 (force measurement). Run 4124 was performed on 14 Apr, 2012 and the Run 4222 on 22 Nov, 2012.

3.3.   Test Configuration

All wind tunnel tests employed the tunnel's No.4 cart, which is the newest test section with porous walls that can accommodate a full-scale model. The WBT0 (wing/body/tail = 0°) model configuration was selected. The total pressure was set at 120 kPa and the total temperature was controlled to around 50 °C. The resulting nominal Reynolds number was 2.27×10^6, while the NTF wind tunnel tests were performed at 5, 19.8 and 30×10^6.

3.4.   Forced Transition of Boundary Layer

The Reynolds number of the JTWT was too low to allow direct comparison with data at the CRM design point. To allow comparison, aeronautical trip dots of CAD Cut (radius = 0.05", distance = 0.1") were bonded onto the fuselage at 1.5% of its length, and onto the winds and horizontal stabilizers at 10% chord length, to force boundary layer transition. The heights of the trip dots were determined following the method of Braslow *et al*.[16], and are shown in Table 7. The heights were calculated using the conditions with a total pressure of 100 kPa. While these conditions resulted in higher heights than for the proper conditions, the heights were chosen to establish definite boundary layer transition at wide range of Mach numbers. In the table, the "inner wing" is the inboard portion of each wing from the wing-body junction to the "Yehudi break", the point at which the trailing edge bends discontinuously. The "mid-wing" is the inboard portion of the wings from the Yehudi break to the wing tip, and the "outer wing" is the remaining outboard-most part of the wing.

Table 7: Trip Dot Heights.

Body	0.0031 in	0.07874 mm
Inner Wings	0.0039 in	0.09906 mm
Mid-Wings	0.0035 in	0.08890 mm
Outer Wings	0.0031 in	0.07874 mm
Horizontal Stabilizers	0.0031 in	0.07874 mm

3.5. Data Analysis

3.5.1. Static Data

3.5.1.1. *Wall and Buoyancy Corrections*

Fundamental wind tunnel interference correction methods

To correct fundamental wind tunnel interferences, corrections for the test section Mach number at the model center, clear tunnel buoyancy, wall interference, and upflow were calculated following the procedure shown in Figure 14. Details of each correction method are discussed below.

First, the test section Mach number at the model center was calculated from centerline static pressure probe data. Next, clear tunnel buoyancy was also calculated from centerline probe data. Then, corrections for wall interference were calculated with the Mach number and aerodynamic coefficients corrected for test section Mach number. Finally, the upflow angle was calculated from the aerodynamic coefficients and angles of attack.

To apply appropriate corrections to the flow conditions and aerodynamic coefficients measured in the wind tunnel, corrections for Mach number, angle of attack, and buoyancy were summed as shown in the procedure in Figure 14 (right). Firstly, M_{pc} was corrected with the test section Mach number at the model center and the Mach number difference derived from the wall interference correction. Mach number changes affect dynamic pressure, so the measured aerodynamic coefficients were corrected for the consequent change in dynamic pressure. Next, angle of attack was corrected using the upflow angle and the flow angularity derived from the wall interference correction. Accordingly, C_D and C_L were corrected for the subsequent angle of attack change. Finally, in buoyancy correction, C_D was corrected with the clear tunnel buoyancy derived from the centerline probe and the buoyancy derived from the wall interference correction.
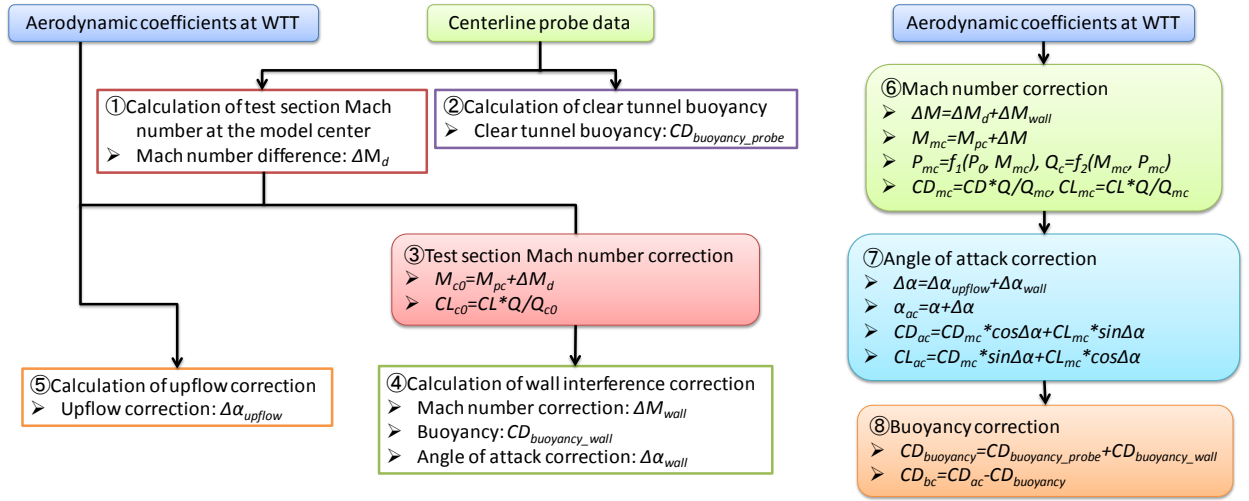
Figure 14: Fundamental Wind Tunnel Interference Corrections.

Test section Mach number correction at the model center

In the JTWT, M_{pc} calculated from P_0 and P_{pc} is conventionally used to control the test section Mach number. To calculate the test section Mach numbers at the model center from M_{pc}, pressure distributions along the test section centerline were measured with a short centerline probe[17]. The probe installed in Cart No.4 is shown in Figure 15, and the pressure distributions are shown in Figure 16. Test section Mach numbers were corrected using the differences between local Mach numbers at the model center measured with the probe and M_{pc}.
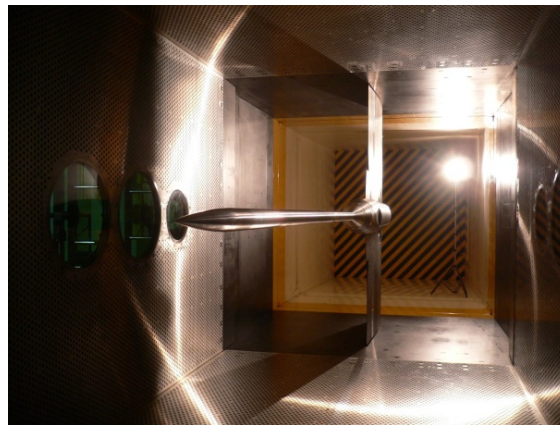
Figure 15. Short centerline probe installed in Cart#4.
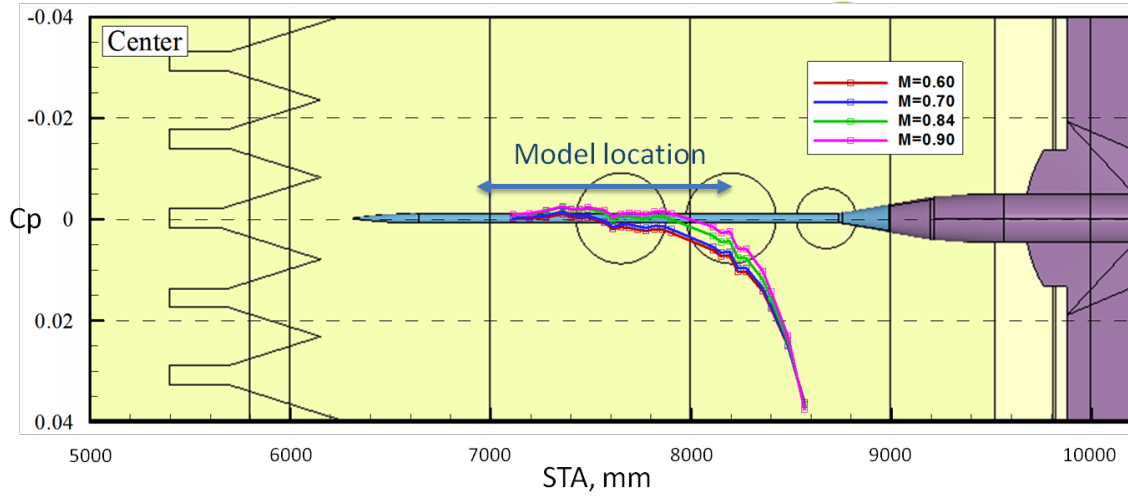
Figure 16. Pressure distributions measured with short centerline probe in Cart #4.

Clear tunnel buoyancy correction

   To correct the effects of sting-strut system interference on the model, the clear tunnel buoyancy at the model location was also corrected using the pressure distributions. The buoyancy correction to be subtracted from C_D is derived as follows:

$$C_{D\_buoyancy} = -\frac{1}{S_{ref}} \int_{x_{nose}}^{x_{tail}} \left(\frac{dC_{p\_center}(X)}{dx} \times S_{Model}(X) \right) dx \qquad (1)$$

This equation gives the buoyancy of the model whole area, which is calculated from pressure distributions on the test section centerline measured by the probe. The buoyancy can be calculated before fabrication of the model and the sting. Thus, the dorsal sting length was designed not to be affected by the buoyancy. Buoyancies of the CRM model are from -4 to -1 drag counts with a Mach number range from 0.7 to 0.87.

Wall interference correction

   To correct wall interference effects, Mokry's method[18] was applied to the data. In this method, airflow in the wind tunnel is represented by the disturbance velocity potential, which is the superposition of the model disturbance potential and the wall interference potential, in a finite-length cylindrical domain. Boundary conditions are obtained from pressure distributions on the upper, lower, and side walls measured at the same time as the aerodynamic forces and moments. From wall interference velocities, changes in Mach numbers and angles of attack distributions are calculated at the model location.

The measured test conditions and aerodynamic data were corrected by the calculated changes. First, aerodynamic forces and moments coefficients were corrected for changes in dynamic pressure and static pressure associated with the Mach number correction. Next, pressure gradients in the freestream direction cause buoyancy forces, so C_D was corrected by Mach number distributions. Moreover, C_L and C_D should be obtained in the directions normal and parallel to the corrected stream velocity vector. The angle corrections to C_L and C_D were applied to obtain data corrected for wall interference. For pressure distributions on the surface of the model, only the dynamic pressure correction was applied.

Measured pressure distributions on the upper, side, and lower test section walls at $M_{pc} = 0.85$ and $\alpha = 3.0$ degrees are shown in Figure 17. These pressures, measured with an empty test section, were subtracted from data measured with the CRM model in the test section. The pressure distribution on the upper wall has a suction peak around the model due to the low pressure above the wing, and another peak at the junction of the sting and the sting pod. Another peak is derived from the subtraction of pressures measured for the empty test section. The pressure distribution on the lower wall becomes greater because the wall interferes with the downwash from the model. From these pressure distributions, Mach number and angle of attack correction distributions around the model are obtained by Mokry's method as shown in Figure 18.
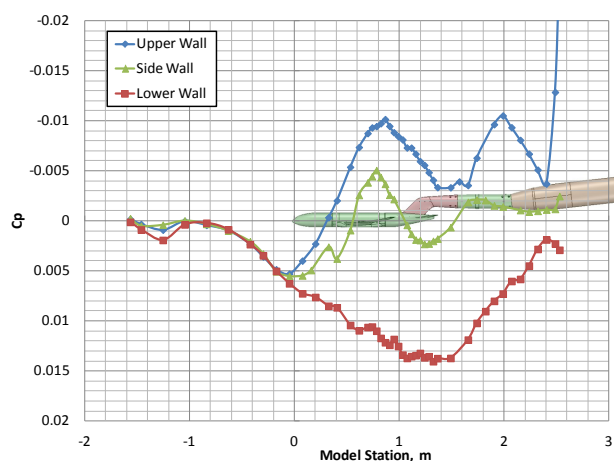
Figure 17: Pressure Distributions on the Upper, Side, and Lower Test Section Walls at an Attack Angle of 3.0 Degrees.
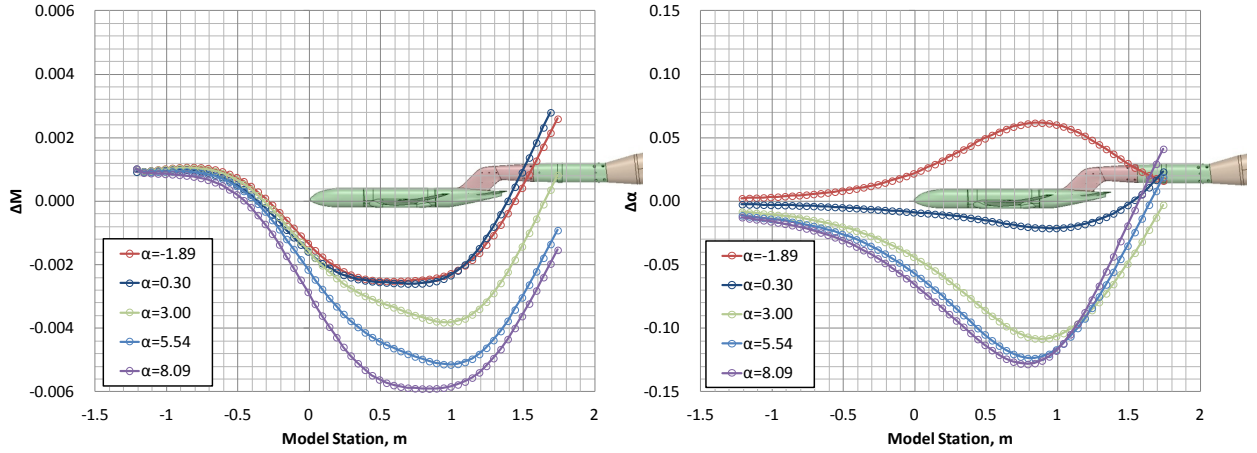
Figure 18: Mach Number and Angle of Attack Correction Distributions Obtained by Wall Interference Correction.

3.5.1.2. *Upflow angle correction*

To correct the flow angularity in the test section, forces and moments were measured with the model inverted. Upflow angles were calculated by the upright and inverted model lift curves against angles of attack through a specific lift coefficient range around $C_L = 0$. The difference in attack angle was 0.08 degrees at $M_{pc} = 0.85$, so the upflow angle was 0.04 degrees.

3.5.1.3. *Reynolds number correction and wing deformation correction*

No Reynolds number corrections and wing deformation correction were applied to the data in this report to show the original data of JTWT while it is better to apply them to make a fair comparison from other data sources. The data with classical Reynolds number correction is shown in another paper[13] by the authors.

3.5.1.4. *Discussions*

The static data including figures and numerical data are presented together in Appendix (Section A).

The JAXA model data obtained using the JTWT were compared with the NASA model data for NTF Test 197. Mach numbers of 0.7, 0.83, 0.85, 0.86 and 0.87 were chosen; these correspond to data for Run numbers 87, 91, 92, 94 and 95, respectively. The Reynolds number was fixed at 5×10^6. Aerodynamic force diagrams are drawn for C_{Lac} vs. C_{Dbc}, C_{Lac} vs. idealized profile drag ($= C_{Dbc} - C_{Lac}^2/(\pi \cdot A)$), and

longitudinal forces (C_{Lac}, C_{Dbc} and C_{mmc}) vs. α_c. C_{Lac}, C_{Dbc} and C_{mmc} are corrected aerodynamic force coefficients and α_c is the corrected angle of attack.

All force data show similar tendencies between JTWT and NTF, but JTWT shows higher drag due to the lower Reynolds number. Additionally, the pitching moment of the JTWT data is lower than that of NTF. At relatively low angles of attack the idealized profile drag does not depend on lift, while the drag rise begins at lower angles of attack as the Mach number increases. This can be explained as the result of wave drag appearance with shock wave production.

The pressure diagrams all show linearly interpolated data for angles of attack of 1, 2 and 3° because data could not be acquired at precisely these inclination angles. The JTWT numerical data are tabulated at the data acquired points with the corrected angles of attack. In the figures, the data of the wings are drawn overlapped in each figure and the figures are placed from the innermost Section A to Section I. The two wind tunnels show the same overall tendency. Generally, the NTF data show shockwaves further downstream, especially over the mid-wing such as at Section E. Additionally, at angles of attack lower than that of the design C_L and with weaker shocks, the pressure distributions show complicated aspects and there is less consistency between two wind tunnels.

To improve the agreement between the wind tunnels and to acquire the exact aerodynamic characteristics of the designed shape at the design conditions, Reynolds number corrections and corrections for model deformation should be applied to the data for future studies.

3.5.2. Unsteady Data

The data sampling rate (f_s) during the tests was 50,000Hz, thus, the Nyquist frequency was 25,000Hz. Then, 19,000Hz was chosen as the cut-off frequency of filters (f_x) instead of 19,700Hz (that is, 2.54 f_s) in accordance with the directions in filter manual (NF Corporation P-86) relating to use for anti-aliasing due to limitations of the filter setting precision.

If buffet phenomena occur, the resulting dynamic bending and torsion moments will be measured by the wing root strain gauges. Several spectrum analyses were executed for the strain gauge and dynamic pressure data. It was expected to observe dynamic flow separation around points where the relationship between lift coefficient and pitching moment coefficient is non-linear (Figure 19). Time-series strain gauge signal data (electrical voltages) were converted to frequency domain spectra by a discrete Fourier

transform (DFT). Power spectral density (PSD) was then estimated by Welch's method[19] to acquire smooth data. Plots of PSDs given by Welch's method for the strain gauge and Kulite sensor data at given angles of attack for M0.85 and M0.70 are shown in Figure 20. Figure 20 (a) and (b) show that the PSDs of both of the strain gauges and the sensors increase as the angle of attack increases from 3.3deg, while Figure 20 (c) and (d) show PSDs increasing at higher angles of attack. Figure 20 (b) indicates a distinct PSD peak at 169Hz, which is not the modal frequency shown in Figure 21.

PSDs estimated by the Yule-Walker Autoregressive (AR) model, a parametric method, are compared with NTF data. The left plot of Figure 22 (a) shows the relationship between the integral of PSDs (S_a) from 0Hz to the maximum frequency of 25,000Hz and angle of attack, while the right plot shows the buffet intensity parameter C_B described by Balakrishna *et al.*[7]. The JTWT data plot indicates an increase of S_a from an angle of attack of around 3 deg at M0.83 and M0.85. The onset angle of the S_a increase is a little higher than observed in the NTF data. In addition, plots of the root-mean-squared (rms) Kulite pressures at given angles of attack are shown in Figure 22 (b). The rms values increase as angle of attack increases to 3 deg, then decreases from 3 deg to 4.5 deg in the M0.85 data. Moreover, the rms values increase at angles of attack greater than 4.5 deg. These features almost correspond to the NTF data, while the angles of extreme values are higher than in the NTF data.

Figure 23 shows contour maps of PSDs data of strain gauges and Kulite sensors with frequency on the horizontal axis and angle of attack on the vertical axis at M0.85, M0.83, M0.81, and M0.70. Several PSD peaks appear. For both the strain gauges and the Kulite sensors, the spectral density of a particular frequency, 169Hz, increases as angle of attack increases from 2.5 deg to 6 deg at M0.85, and from 4.5 deg to 6.5 deg at M0.83. The peaks of 183Hz appear from 3 deg to 3.5 deg at M0.83 and from 4 deg to 6 deg at M0.81. On the other hand, it is considered that strong peaks in the strain gauge data, particularly at high angles of attack, are attributable to modal frequencies of the model, and the peaks in the Kulite sensor data at around 300Hz are due to noise from the blower. Figure 24 shows PSD contour maps for the dynamic balance data at M0.85. In particular, the figures for the drag (Fx), lateral force (Fy), and yawing moment (Mz) data also indicate the peak at 169Hz.
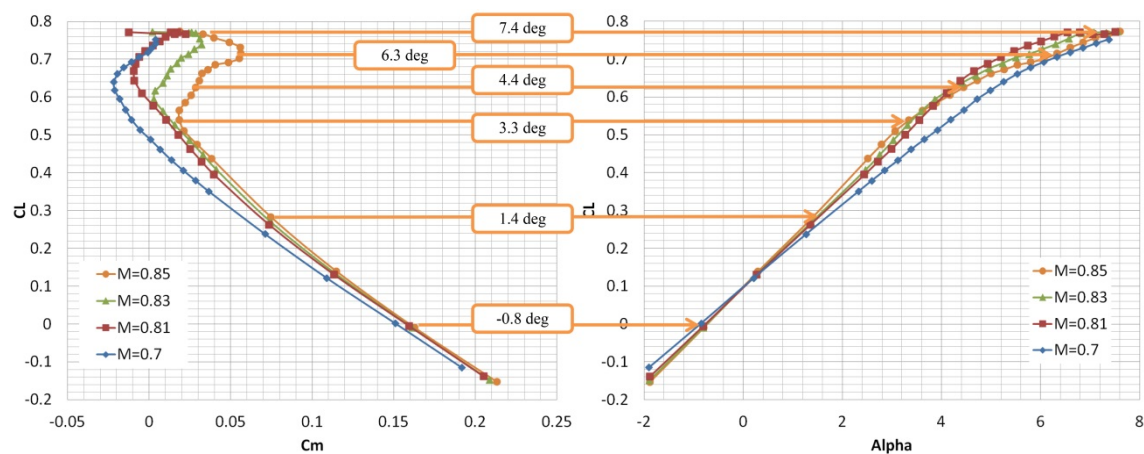
Figure 19: CL vs Cm (left) and CL vs α (right).
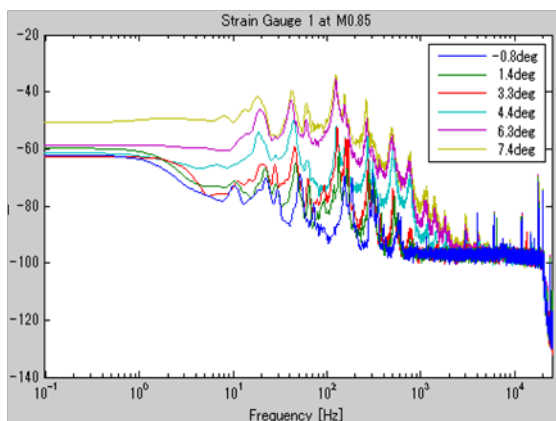
(a) Strain gauge 1 at M0.85
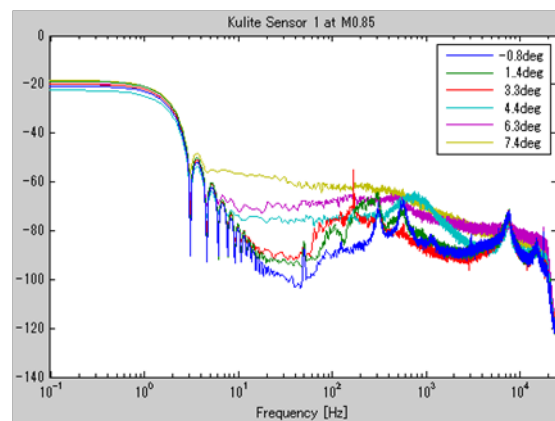
(b) Kulite sensor 1 at M0.85
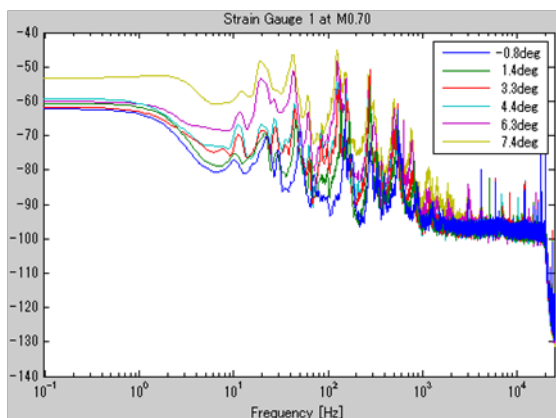
(c) Strain gauge 1 at M0.70
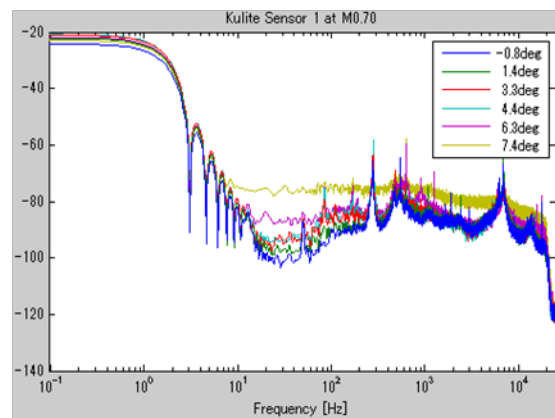
(d) Kulite sensor 1 at M0.70

Figure 20: PSDs by Welch's Method of the Strain Gauge 1 (left) and Kulite Sensor 1 (right).
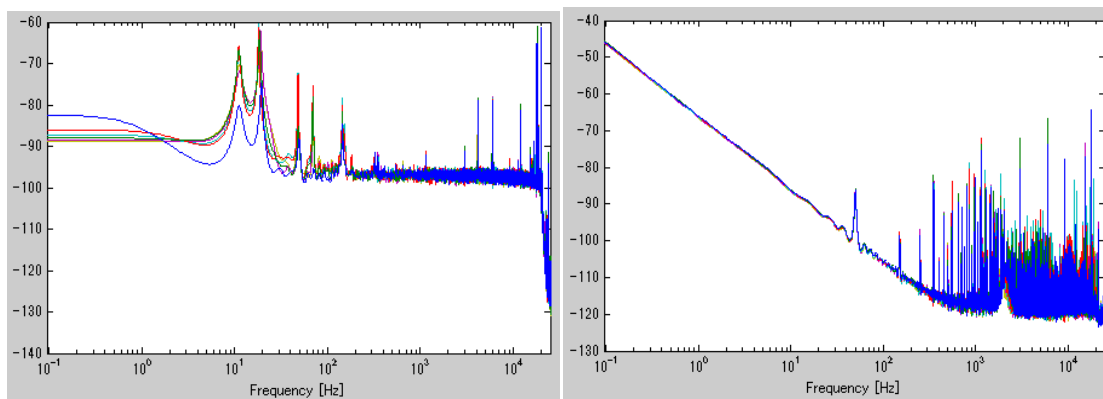
Figure 21: PSDs of No-Wind and Hammering Tests (left: Strain Gauge 1, right: Kulite Sensor 1).
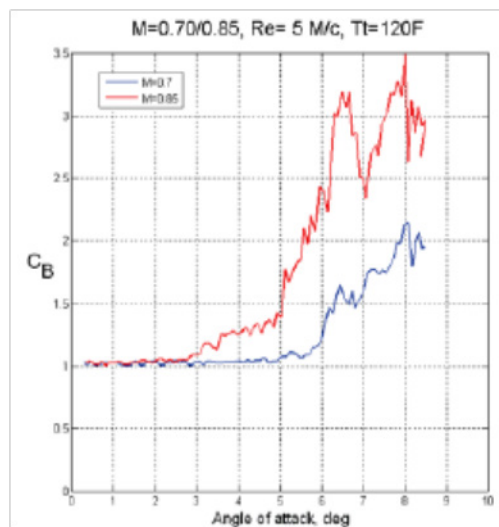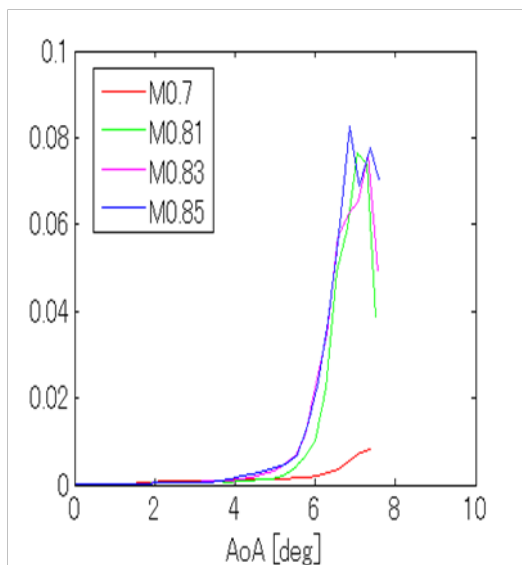
(a) S_α vs α at JTWT (left) and buffet intensity parameter C_B vs α
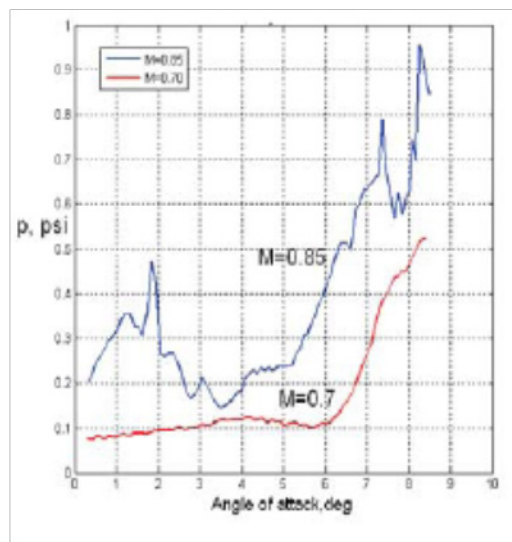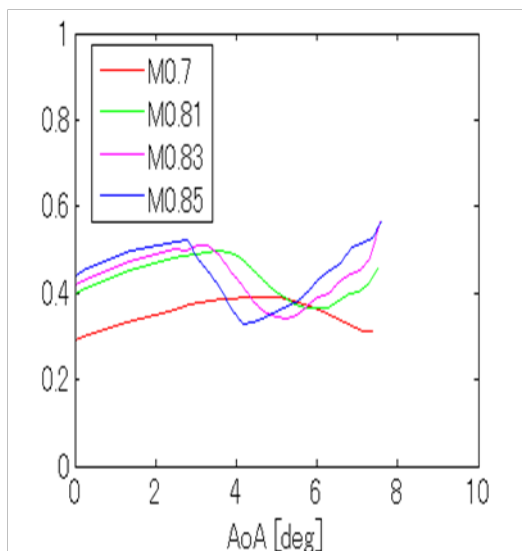
(b) Mean values of Kulite sensor signal at JTWT (left) and rms Kulite pressures at NTF

Figure 22: Comparison between JTWT and NTF.
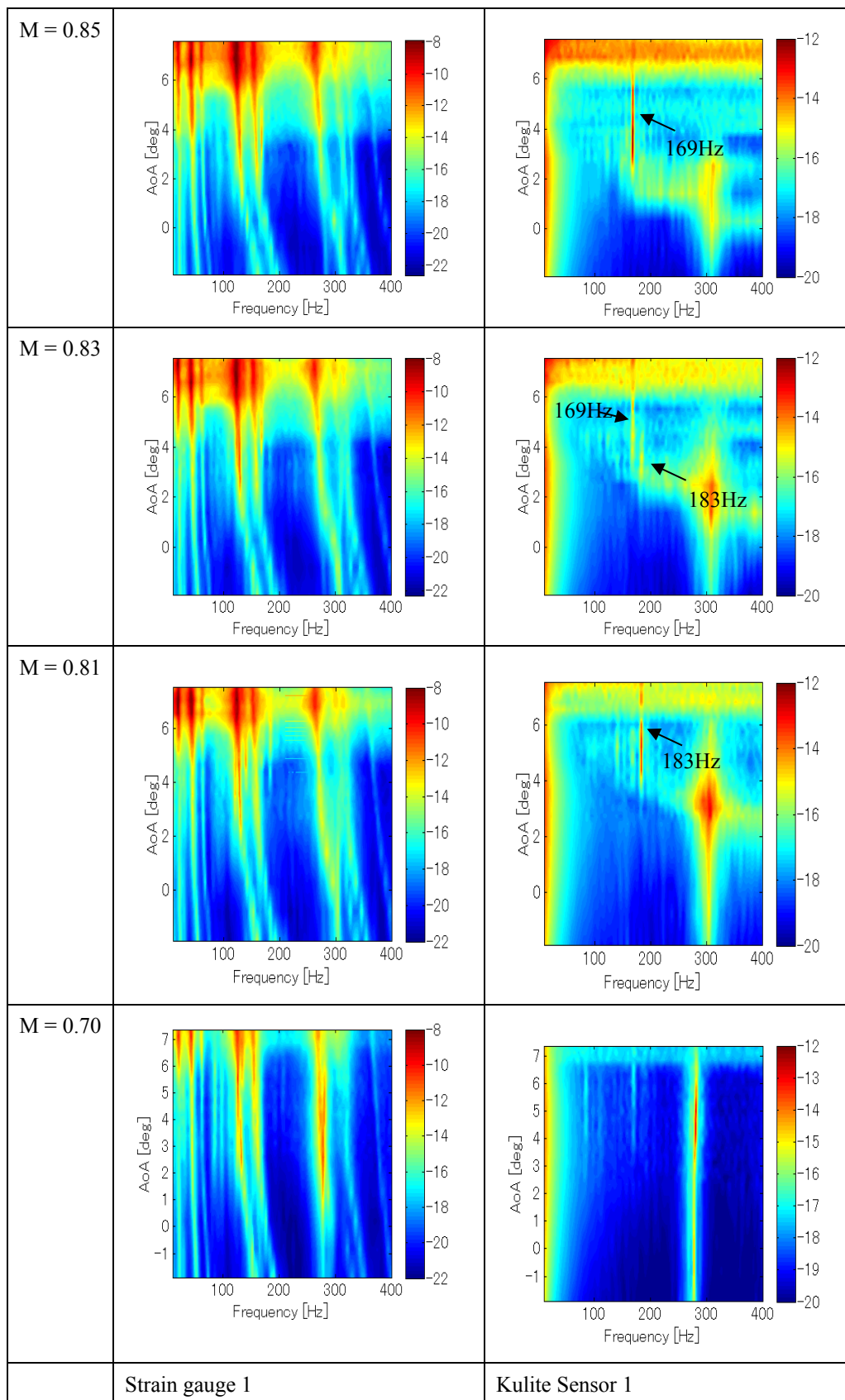
Figure 23: PSD Contour Maps for Strain Gauge 1 and Kulite Sensor 1.
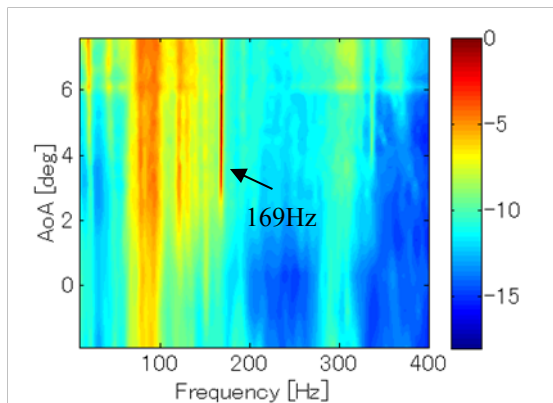
(a) Fx
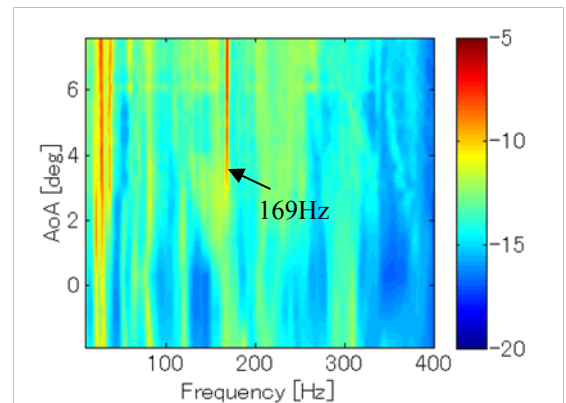
(b) Fy
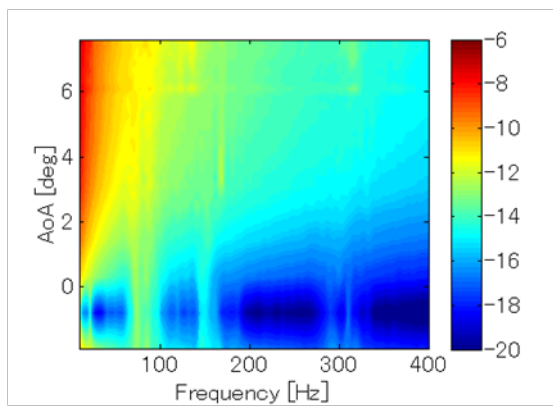
(c) Fz
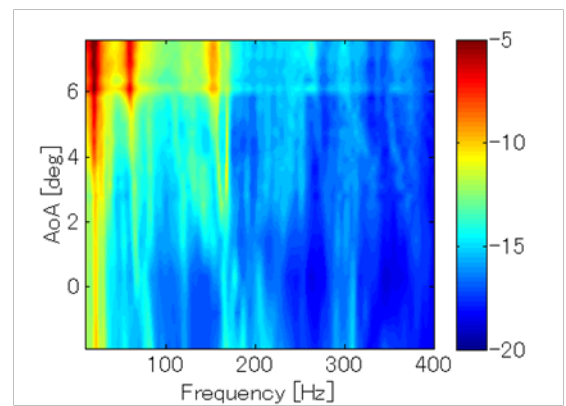
(d) Mx
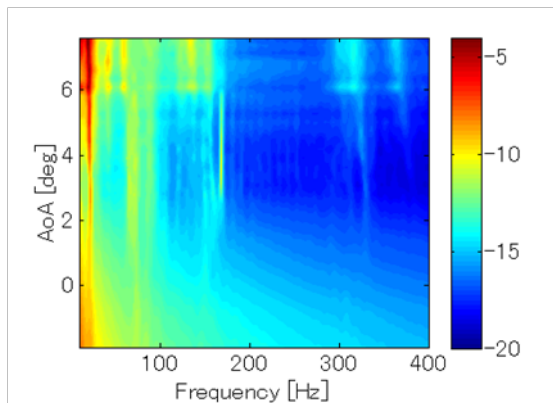
(e) My
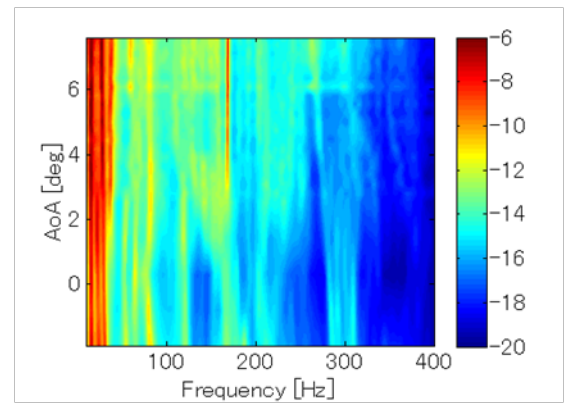
(f) Mz

Figure 24: PSD Contour Maps for Dynamic Balance Data at M0.85.

4. Conclusions

Wind tunnel tests of an 80% scale NASA CRM wind tunnel model were performed using the JAXA 2m ×
2m transonic wind tunnel (JTWT). Static and unsteady aerodynamic characteristics were acquired and
basic comparison was made with NTF data. Although the Reynolds numbers of the wind tunnels are
different, the overall characteristics of the data are the same. In this report, only classical wind tunnel
corrections were applied to the data and Reynolds number and wing deformation correction were not
applied to show original characteristics of the data. Unsteady data analysis revealed prominent peaks in
power spectral density diagrams. However, because the data points are discrete and limited, concrete
conclusions could not be reached. Therefore, unsteady spatial data, such as unsteady pressure sensitive
paint (PSP) measurements, are required to be obtained in future experiments.

5. References

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A   Appendix (Static Data)

A.1.   **FORCE**
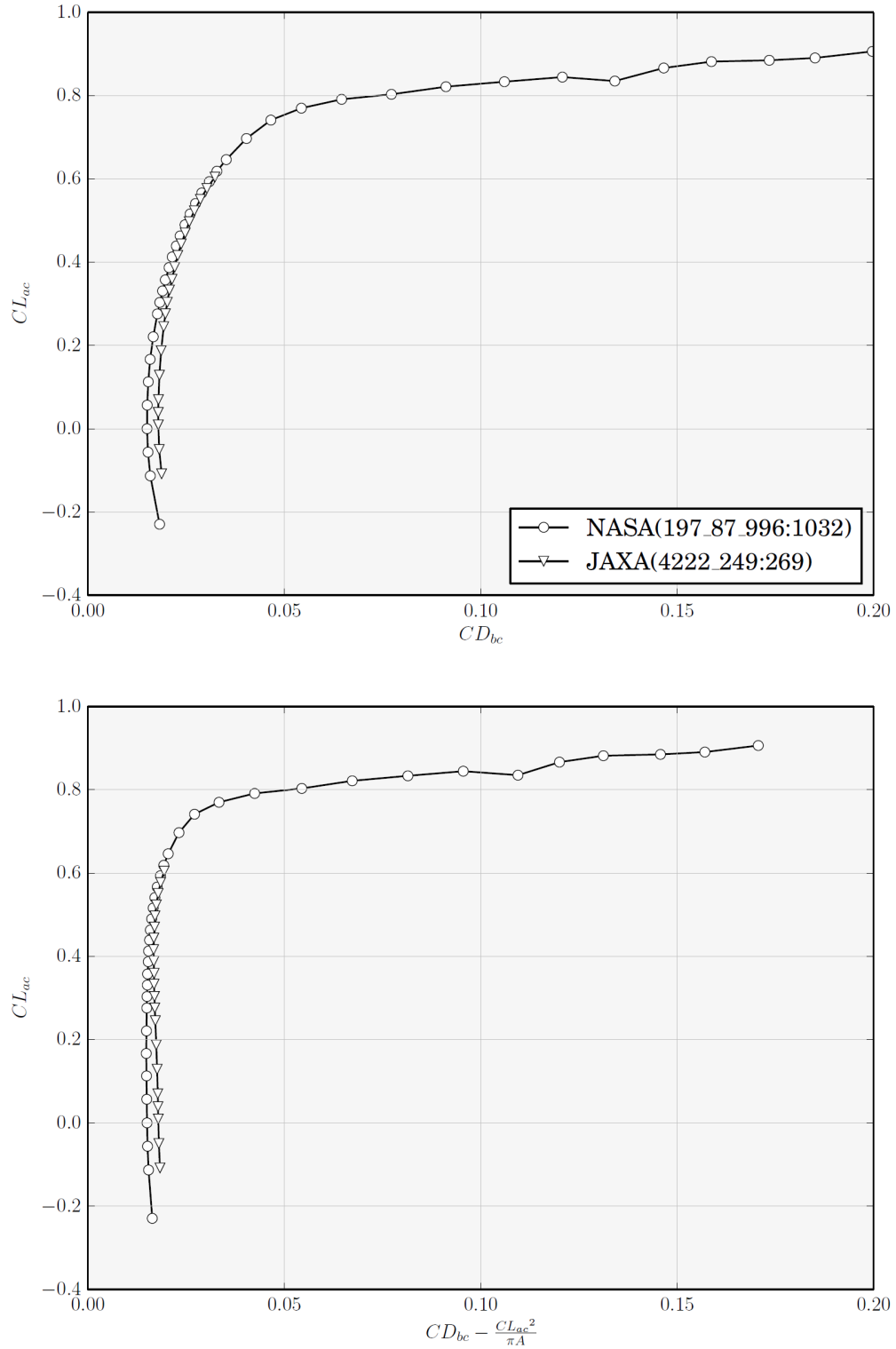
Figure 25: Drag Polar at M = 0.70.
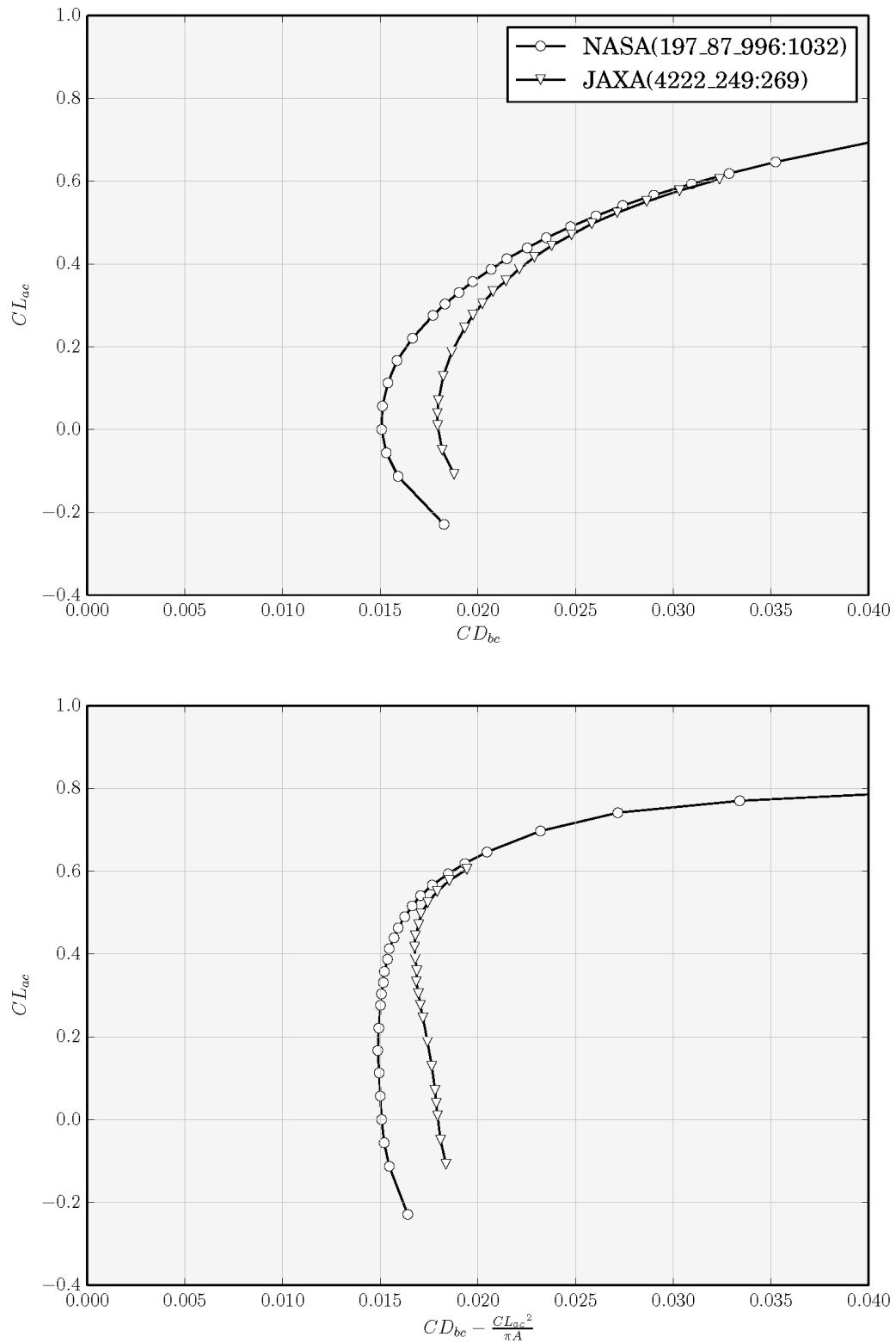
Figure 26: Drag Polar at M = 0.70 (Close-up Image).
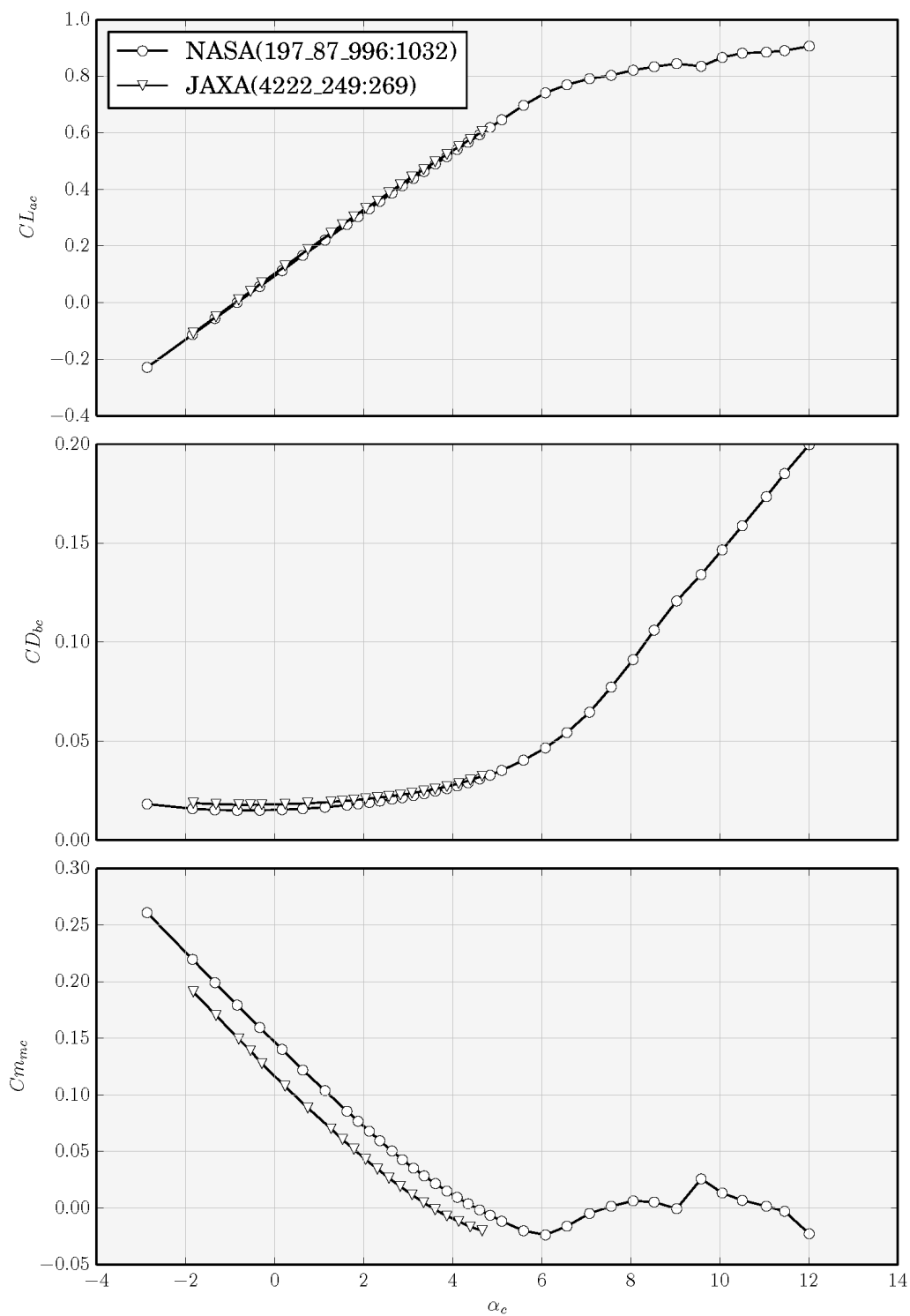
Figure 27: Longitudinal Characteristics at M = 0.70.

Run_numbe	Measureme	Process_nu	M_pc	Re_c	Q	P0	T0	α	CD	CL	Cm	CDf	CLf	ΔM_d	CD_buoyan	CDf_buoya
4222	249	248	0.699975	2.070678	29.68625	120.0579	320.8469	−1.8968	0.01863	−0.10775	0.190685	0.01863	−0.10775	−0.00017	−0.00038	−0.00038
4222	250	249	0.699996	2.072725	29.70178	120.1158	320.724	−1.37092	0.017947	−0.04956	0.169855	0.017947	−0.04956	−0.00017	−0.00038	−0.00038
4222	251	250	0.700242	2.068477	29.70646	120.0767	321.2122	−0.84291	0.017643	0.009475	0.14894	0.017643	0.009475	−0.00017	−0.00038	−0.00038
4222	252	251	0.699813	2.064665	29.6477	119.9401	321.2973	−0.57906	0.017612	0.039055	0.138671	0.017612	0.039055	−0.00017	−0.00038	−0.00038
4222	253	252	0.700002	2.066925	29.67589	120.0095	321.2083	−0.31425	0.017649	0.069926	0.127282	0.017649	0.069926	−0.00017	−0.00038	−0.00038
4222	254	253	0.699942	2.06889	29.68382	120.0559	321.0532	0.213372	0.017868	0.128472	0.107226	0.017868	0.128472	−0.00017	−0.00038	−0.00038
4222	255	254	0.700077	2.068655	29.70239	120.099	321.2017	0.743406	0.018329	0.187038	0.088259	0.018329	0.187038	−0.00017	−0.00038	−0.00038
4222	256	255	0.699494	2.066615	29.65917	120.0618	321.2457	1.273068	0.018998	0.244685	0.069878	0.018998	0.244685	−0.00017	−0.00038	−0.00038
4222	257	256	0.700227	2.067495	29.69772	120.0448	321.2618	1.538384	0.019457	0.275375	0.060388	0.019457	0.275375	−0.00017	−0.00038	−0.00038
4222	258	257	0.700104	2.064414	29.68051	120.0042	321.526	1.802494	0.019949	0.302859	0.051799	0.019949	0.302859	−0.00017	−0.00038	−0.00038
4222	259	258	0.699944	2.064298	29.6654	119.981	321.4565	2.067619	0.020503	0.332179	0.04271	0.020503	0.332179	−0.00017	−0.00038	−0.00038
4222	260	259	0.69967	2.060895	29.63922	119.9397	321.7264	2.330621	0.021153	0.358067	0.034468	0.021153	0.358067	−0.00017	−0.00038	−0.00038
4222	261	260	0.699989	2.063047	29.65348	119.922	321.4953	2.596844	0.02188	0.386865	0.026449	0.02188	0.386865	−0.00017	−0.00038	−0.00038
4222	262	261	0.699327	2.059068	29.6131	119.9148	321.8235	2.861544	0.022711	0.414976	0.019029	0.022711	0.414976	−0.00017	−0.00038	−0.00038
4222	263	262	0.70033	2.062103	29.67801	119.9408	321.7246	3.12816	0.023601	0.442292	0.011657	0.023601	0.442292	−0.00017	−0.00038	−0.00038
4222	264	263	0.700296	2.062027	29.68077	119.9602	321.7671	3.393156	0.024642	0.468696	0.004781	0.024642	0.468696	−0.00017	−0.00038	−0.00038
4222	265	264	0.699615	2.061116	29.64365	119.9704	321.7522	3.659057	0.025773	0.495394	−0.00151	0.025773	0.495394	−0.00017	−0.00038	−0.00038
4222	266	265	0.700046	2.062399	29.67295	119.9874	321.7246	3.924358	0.027054	0.521411	−0.00695	0.027054	0.521411	−0.00017	−0.00038	−0.00038
4222	267	266	0.699752	2.062447	29.66068	120.007	321.6961	4.192045	0.028588	0.548736	−0.01173	0.028588	0.548736	−0.00017	−0.00038	−0.00038
4222	268	267	0.699501	2.062829	29.65669	120.0501	321.6854	4.459341	0.030324	0.574654	−0.01648	0.030324	0.574654	−0.00017	−0.00038	−0.00038
4222	269	268	0.700061	2.065799	29.70034	120.0946	321.5374	4.729334	0.032377	0.601638	−0.01985	0.032377	0.601638	−0.00017	−0.00038	−0.00038

M_c0	P_c0	Q_c0	CD_c0	CL_c0	ΔM_wall	Δα_wall	CD_buoyan	CDf_buoya	Δα_upflo	ΔM	Δα	M_c	P_c	Q_c	α_c	CD_mc
0.699809	86.56786	29.67654	0.018636	−0.10779	−0.00103	0.030813	0.000137	0.000137	0.040328	−0.00119	0.071141	0.698781	86.6472	29.61659	−1.82566	0.018674
0.69983	86.60797	29.69207	0.017953	−0.04957	−0.00089	0.016072	0.000139	0.000139	0.040328	−0.00105	0.0564	0.698943	86.67651	29.64029	−1.31452	0.017984
0.700076	86.5608	29.69677	0.017649	0.009478	−0.00095	0.000539	0.000128	0.000128	0.040328	−0.00112	0.040867	0.699127	86.63409	29.64141	−0.80205	0.017682
0.699647	86.49544	29.63799	0.017618	0.039068	−0.00097	−0.00215	0.000134	0.000134	0.040328	−0.00114	0.038176	0.698677	86.57022	29.58149	−0.54088	0.017651
0.699836	86.53089	29.66615	0.017655	0.069949	−0.00113	−0.01108	0.000124	0.000124	0.040328	−0.0013	0.029244	0.698705	86.61815	29.60023	−0.28501	0.017694
0.699776	86.569	29.67413	0.017874	0.128514	−0.00116	−0.0157	0.000122	0.000122	0.040328	−0.00133	0.024629	0.698616	86.65854	29.60647	0.238001	0.017915
0.699911	86.58963	29.69265	0.018335	0.187099	−0.00122	−0.03606	0.000107	0.000107	0.040328	−0.00139	0.004271	0.698692	86.68379	29.62152	0.747677	0.018379
0.699328	86.60786	29.64945	0.019004	0.244765	−0.00126	−0.04379	0.000097	0.000097	0.040328	−0.00143	−0.00346	0.698066	86.70526	29.57583	1.269609	0.019052
0.700061	86.53897	29.688	0.019463	0.275465	−0.00127	−0.05358	0.000082	0.000082	0.040328	−0.00143	−0.01326	0.698793	86.63687	29.61405	1.525128	0.019512
0.699938	86.51916	29.67078	0.019956	0.302958	−0.00139	−0.05935	0.000063	0.000063	0.040328	−0.00156	−0.01902	0.698545	86.62666	29.58956	1.783476	0.02001
0.699778	86.51481	29.65573	0.02051	0.332287	−0.00142	−0.06118	0.00005	0.00005	0.040328	−0.00159	−0.02085	0.698355	86.6246	29.57276	2.046766	0.020567
0.699504	86.50615	29.62954	0.02116	0.358184	−0.00144	−0.06065	0.000034	0.000034	0.040328	−0.0016	−0.02032	0.698068	86.61689	29.54584	2.310298	0.02122
0.699823	86.4688	29.64377	0.021887	0.386992	−0.00151	−0.06854	0.000019	0.000019	0.040328	−0.00168	−0.02821	0.698309	86.58555	29.55555	2.568637	0.021952
0.699161	86.51471	29.60342	0.022718	0.415112	−0.00141	−0.07753	0.000005	0.000005	0.040328	−0.00158	−0.0372	0.697749	86.62356	29.52112	2.824342	0.022782
0.700164	86.45607	29.66829	0.023609	0.442437	−0.00171	−0.08175	−2.4E−05	−2.4E−05	0.040328	−0.00187	−0.04142	0.698458	86.58766	29.56888	3.086741	0.023688
0.70013	86.47265	29.6711	0.02465	0.468849	−0.00162	−0.08379	−4.4E−05	−4.4E−05	0.040328	−0.00178	−0.04346	0.698312	86.59746	29.57682	3.349692	0.024729
0.699449	86.53255	29.63392	0.025781	0.495557	−0.00158	−0.09385	−5.1E−05	−5.1E−05	0.040328	−0.00174	−0.05352	0.697874	86.65408	29.54206	3.605538	0.025862
0.69988	86.51156	29.66326	0.027063	0.521581	−0.00193	−0.09453	−7.9E−05	−7.9E−05	0.040328	−0.00209	−0.0542	0.697952	86.66033	29.55082	3.870159	0.027166
0.699586	86.54839	29.65096	0.028597	0.548916	−0.00177	−0.09385	−8.2E−05	−8.2E−05	0.040328	−0.00194	−0.05352	0.697817	86.68487	29.54779	4.138527	0.028697
0.699335	86.59887	29.64697	0.030334	0.574842	−0.00207	−0.1031	−0.00011	−0.00011	0.040328	−0.00224	−0.06277	0.697261	86.75897	29.5259	4.396571	0.030458
0.699895	86.58765	29.69062	0.032388	0.601835	−0.00225	−0.10577	−0.00014	−0.00014	0.040328	−0.00241	−0.06544	0.697647	86.76131	29.55936	4.663891	0.032531

CL_mc	CDf_mc	CLf_mc	CY_mc	Cm_mc	CD_ac	CDf_ac	CL_ac	CLf_ac	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_bc	CDf_bc
−0.10801	0.018674	−0.10801	−3.8E−05	0.191133	0.01854	0.01854	−0.10803	−0.10803	−0.00038	−0.00038	0.000137	0.000137	−0.00024	−0.00024	0.018781	0.018781
−0.04966	0.017984	−0.04966	−5.6E−05	0.170207	0.017935	0.017935	−0.04968	−0.04968	−0.00038	−0.00038	0.000139	0.000139	−0.00024	−0.00024	0.018174	0.018174
0.009496	0.017682	0.009496	−0.00012	0.149267	0.017688	0.017688	0.009483	0.009483	−0.00038	−0.00038	0.000129	0.000129	−0.00025	−0.00025	0.017938	0.017938
0.039142	0.017651	0.039142	−0.00027	0.138981	0.017678	0.017678	0.039131	0.039131	−0.00038	−0.00038	0.000134	0.000134	−0.00024	−0.00024	0.017921	0.017921
0.070105	0.017694	0.070105	−7E−06	0.127607	0.01773	0.01773	0.070096	0.070096	−0.00038	−0.00038	0.000125	0.000125	−0.00025	−0.00025	0.017983	0.017983
0.128808	0.017915	0.128808	0.00014	0.107506	0.01797	0.01797	0.1288	0.1288	−0.00038	−0.00038	0.000122	0.000122	−0.00026	−0.00026	0.018226	0.018226
0.187549	0.018379	0.187549	0.000193	0.0885	0.018393	0.018393	0.187547	0.187547	−0.00038	−0.00038	0.000107	0.000107	−0.00027	−0.00027	0.018664	0.018664
0.245374	0.019052	0.245374	0.000395	0.070075	0.019037	0.019037	0.245376	0.245376	−0.00038	−0.00038	0.000097	0.000097	−0.00028	−0.00028	0.019318	0.019318
0.276153	0.019512	0.276153	0.000573	0.060559	0.019448	0.019448	0.276158	0.276158	−0.00038	−0.00038	0.000082	0.000082	−0.0003	−0.0003	0.019745	0.019745
0.30379	0.02001	0.30379	0.000635	0.051958	0.019909	0.019909	0.303796	0.303796	−0.00038	−0.00038	0.000063	0.000063	−0.00032	−0.00032	0.020224	0.020224
0.33322	0.020567	0.33322	0.000712	0.042844	0.020446	0.020446	0.333227	0.333227	−0.00038	−0.00038	0.00005	0.00005	−0.00033	−0.00033	0.020774	0.020774
0.359199	0.02122	0.359199	0.000779	0.034577	0.021092	0.021092	0.359206	0.359206	−0.00038	−0.00038	0.000034	0.000034	−0.00035	−0.00035	0.021437	0.021437
0.388147	0.021952	0.388147	0.000972	0.026537	0.021761	0.021761	0.388158	0.388158	−0.00038	−0.00038	0.000019	0.000019	−0.00036	−0.00036	0.022121	0.022121
0.416269	0.022782	0.416269	0.00109	0.019088	0.022511	0.022511	0.416284	0.416284	−0.00038	−0.00038	0.000005	0.000005	−0.00037	−0.00037	0.022885	0.022885
0.443924	0.023688	0.443924	0.00119	0.0117	0.023367	0.023367	0.443941	0.443941	−0.00038	−0.00038	−2.4E−05	−2.4E−05	−0.0004	−0.0004	0.02377	0.02377
0.470343	0.024729	0.470343	0.00144	0.004798	0.024372	0.024372	0.470362	0.470362	−0.00038	−0.00038	−4.4E−05	−4.4E−05	−0.00042	−0.00042	0.024795	0.024795
0.497098	0.025862	0.497098	0.001471	−0.00151	0.025397	0.025397	0.497122	0.497122	−0.00038	−0.00038	−5.1E−05	−5.1E−05	−0.00043	−0.00043	0.025827	0.025827
0.523566	0.027166	0.523566	0.001599	−0.00698	0.026671	0.026671	0.523591	0.523591	−0.00038	−0.00038	−8E−05	−8E−05	−0.00046	−0.00046	0.027129	0.027129
0.550832	0.028697	0.550832	0.001761	−0.01178	0.028183	0.028183	0.550859	0.550859	−0.00038	−0.00038	−8.3E−05	−8.3E−05	−0.00046	−0.00046	0.028644	0.028644
0.5772	0.030458	0.5772	0.001762	−0.01655	0.029826	0.029826	0.577233	0.577233	−0.00038	−0.00038	−0.00011	−0.00011	−0.00049	−0.00049	0.030319	0.030319
0.604507	0.032531	0.604507	0.002037	−0.01994	0.031841	0.031841	0.604544	0.604544	−0.00038	−0.00038	−0.00014	−0.00014	−0.00052	−0.00052	0.032362	0.032362

Figure 28: Force Data at M = 0.70.
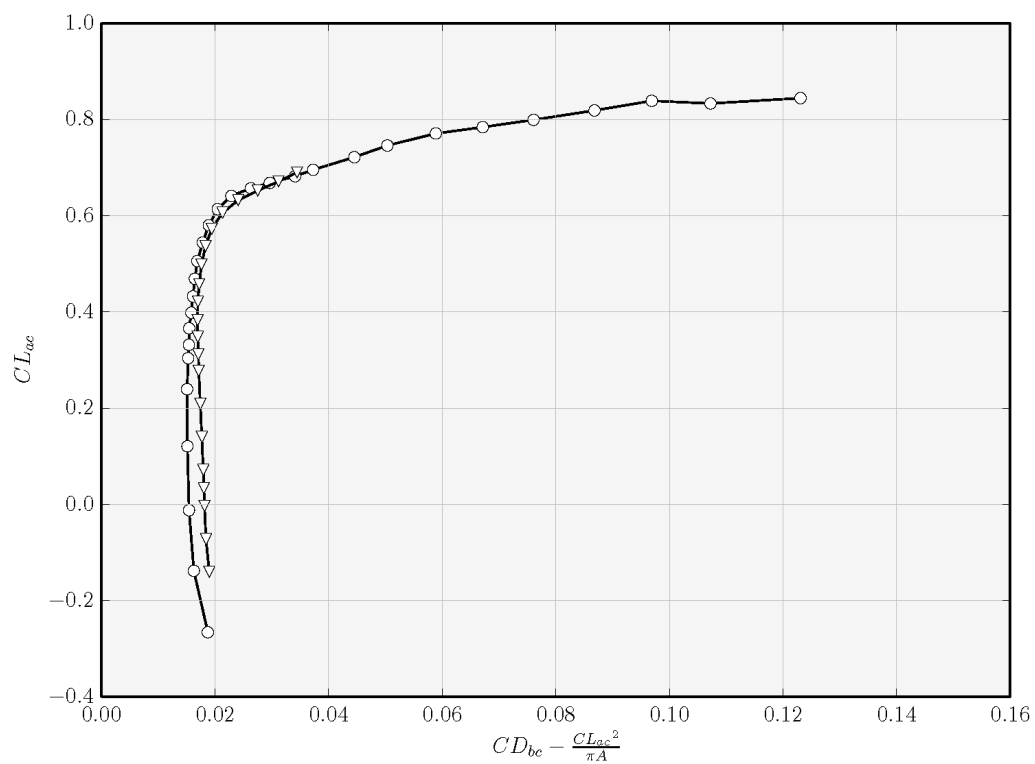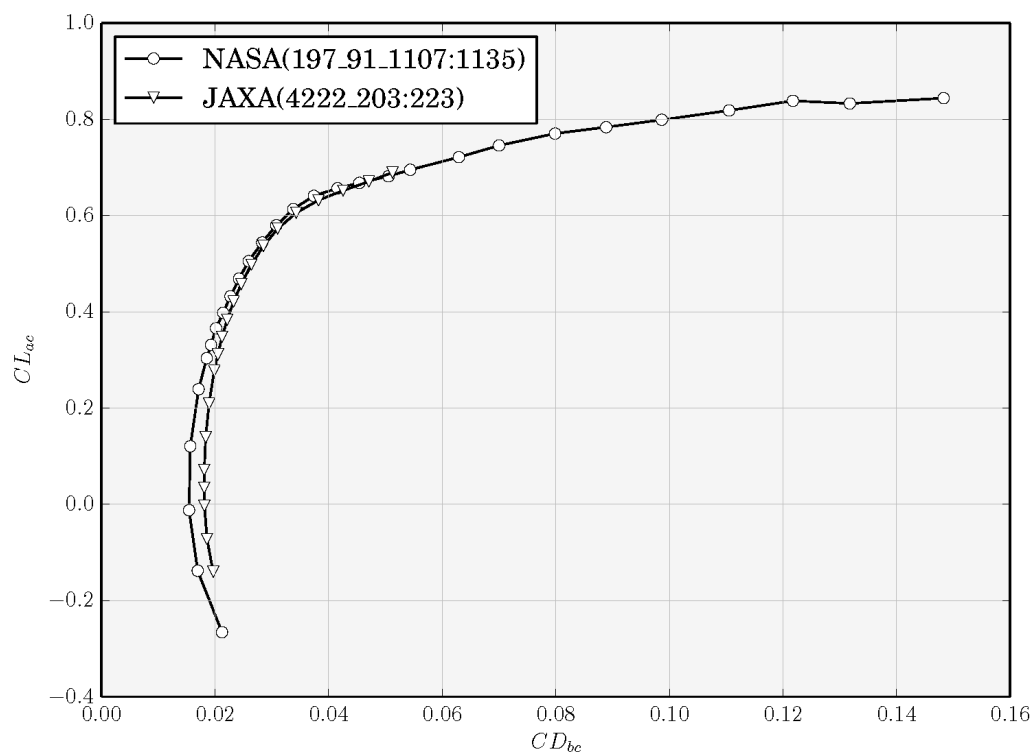
Figure 29: Drag Polar at M = 0.83.
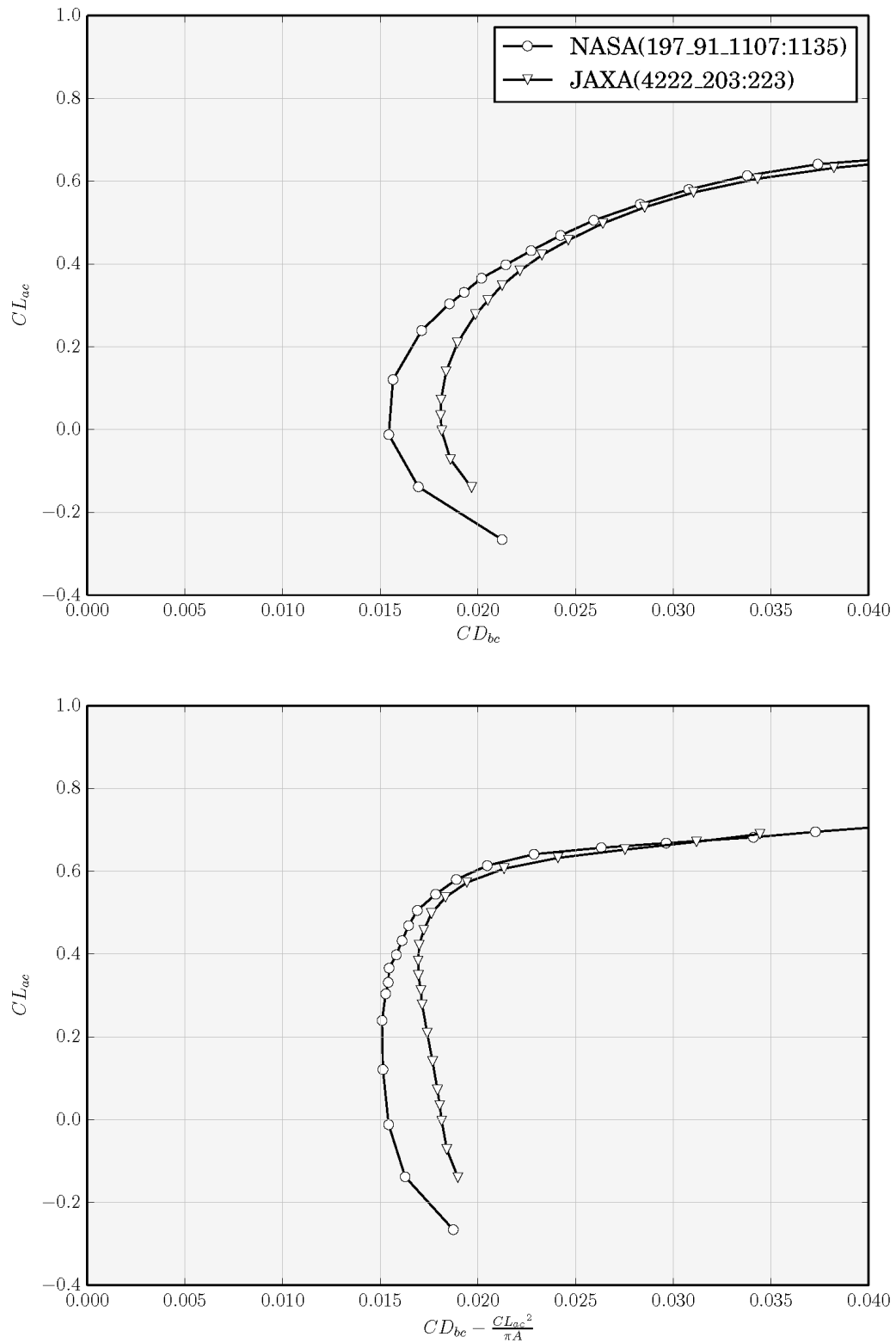
Figure 30: Drag Polar at M = 0.83 (Close-up Image).
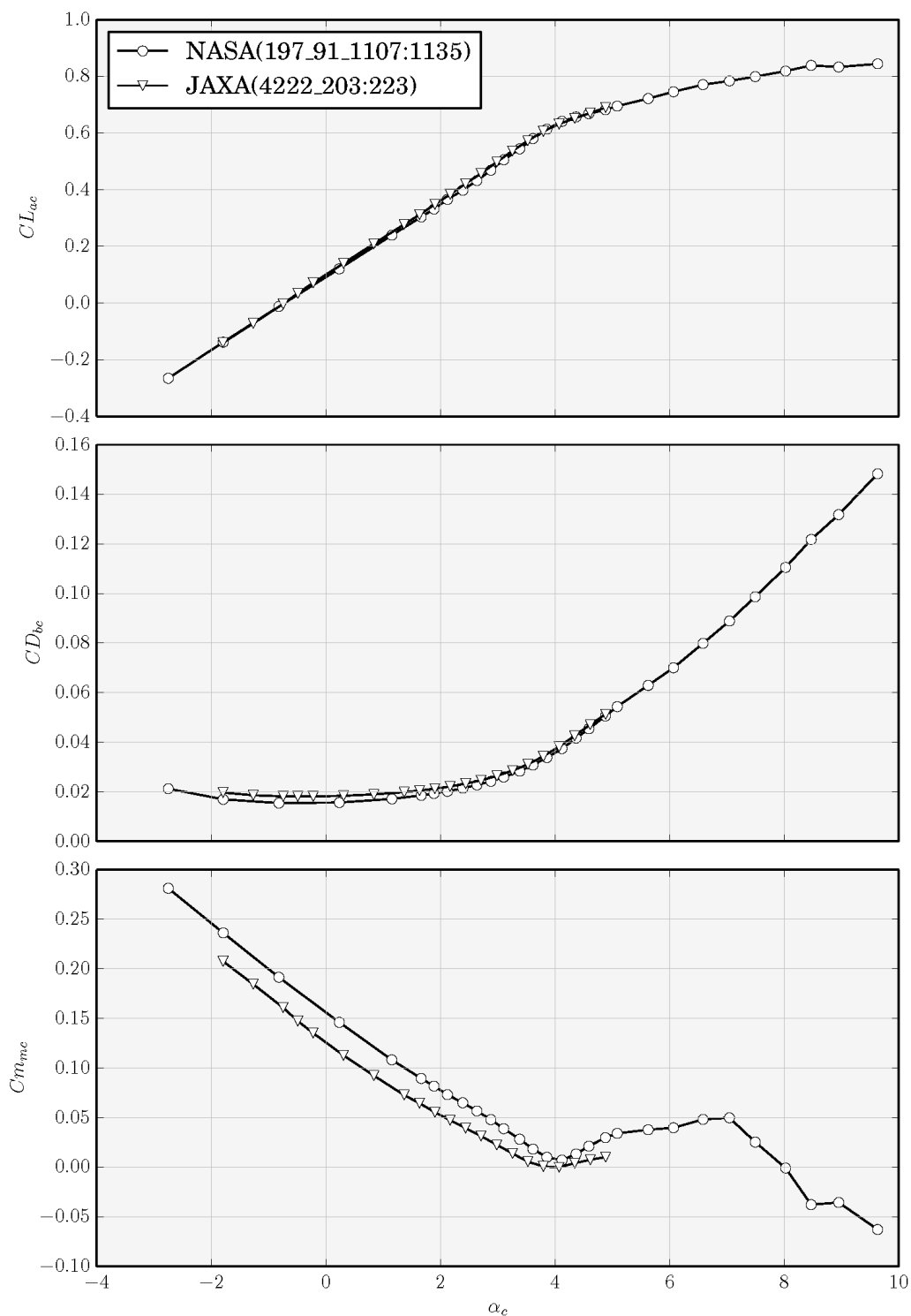
Figure 31: Longitudinal Characteristics at M = 0.83.

| Run_number	Measurement	Process_number	M_pc	Re_c	Q	P0	T0	α	CD	CL	Cm	CDf	CLf	ΔM_d	CD_buoyan	CDf_buoyan
4222	203	202	0.829813	2.232814	36.83705	120.046	324.8039	−1.88425	0.019697	−0.13967	0.207096	0.019697	−0.13967	0.000454	−0.00025	−0.00025
4222	204	203	0.830279	2.236186	36.87222	120.0829	324.5647	−1.34472	0.018525	−0.07201	0.184105	0.018525	−0.07201	0.000454	−0.00025	−0.00025
4222	205	204	0.830276	2.236753	36.87308	120.0861	324.5066	−0.80295	0.017984	−0.00323	0.160553	0.017984	−0.00323	0.000454	−0.00025	−0.00025
4222	206	205	0.829722	2.232481	36.84135	120.0751	324.8905	−0.53207	0.017894	0.034125	0.146948	0.017894	0.034125	0.000454	−0.00025	−0.00025
4222	207	206	0.829733	2.234185	36.84049	120.0704	324.6884	−0.2585	0.017883	0.071144	0.134932	0.017883	0.071144	0.000454	−0.00025	−0.00025
4222	208	207	0.829998	2.23643	36.85154	120.0623	324.4538	0.283683	0.018115	0.139508	0.112482	0.018115	0.139508	0.000454	−0.00025	−0.00025
4222	209	208	0.830015	2.238202	36.85008	120.0547	324.2393	0.829654	0.018687	0.208594	0.092084	0.018687	0.208594	0.000454	−0.00025	−0.00025
4222	210	209	0.829763	2.235548	36.83496	120.0475	324.4893	1.374584	0.019628	0.276696	0.072485	0.019628	0.276696	0.000454	−0.00025	−0.00025
4222	211	210	0.829922	2.235691	36.84163	120.0427	324.4854	1.649386	0.020275	0.310634	0.064217	0.020275	0.310634	0.000454	−0.00025	−0.00025
4222	212	211	0.830006	2.232558	36.84436	120.0376	324.8424	1.925118	0.021029	0.346871	0.055248	0.021029	0.346871	0.000454	−0.00025	−0.00025
4222	213	212	0.830352	2.233346	36.8575	120.0228	324.7704	2.201447	0.021972	0.382029	0.047149	0.021972	0.382029	0.000454	−0.00025	−0.00025
4222	214	213	0.829794	2.234605	36.82755	120.0182	324.5388	2.480267	0.023157	0.419925	0.039229	0.023157	0.419925	0.000454	−0.00025	−0.00025
4222	215	214	0.829516	2.233902	36.81452	120.022	324.5875	2.757227	0.02456	0.455826	0.031188	0.02456	0.455826	0.000454	−0.00025	−0.00025
4222	216	215	0.829784	2.236181	36.8291	120.0248	324.3726	3.037293	0.026351	0.496089	0.022465	0.026351	0.496089	0.000454	−0.00025	−0.00025
4222	217	216	0.829538	2.234915	36.81803	120.0298	324.492	3.315934	0.028534	0.534629	0.013806	0.028534	0.534629	0.000454	−0.00025	−0.00025
4222	218	217	0.829829	2.233832	36.83391	120.0331	324.6631	3.593458	0.031119	0.570044	0.005489	0.031119	0.570044	0.000454	−0.00025	−0.00025
4222	219	218	0.829721	2.230117	36.83379	120.0507	325.1079	3.871088	0.034473	0.603113	0.00079	0.034473	0.603113	0.000454	−0.00025	−0.00025
4222	220	219	0.829575	2.233747	36.82148	120.0349	324.6407	4.145931	0.038376	0.628953	−0.00011	0.038376	0.628953	0.000454	−0.00025	−0.00025
4222	221	220	0.829902	2.234278	36.83656	120.0295	324.6152	4.422536	0.04273	0.648632	0.004024	0.04273	0.648632	0.000454	−0.00025	−0.00025
4222	222	221	0.829883	2.23248	36.83328	120.022	324.801	4.695679	0.047284	0.667302	0.007429	0.047284	0.667302	0.000454	−0.00025	−0.00025
4222	223	222	0.828813	2.226147	36.76733	119.9856	325.2942	4.968405	0.051516	0.686173	0.010135	0.051516	0.686173	0.000454	−0.00025	−0.00025

M_c0	P_c0	Q_c0	CD_c0	CL_c0	ΔM_wall	Δα_wall	CD_buoyan	CDf_buoyan	Δα_upflow	ΔM	Δα	M_c	P_c	Q_c	α_c	CD_mc
0.830267	76.38801	36.8603	0.019685	−0.13958	−0.00242	0.050965	0.000109	0.000109	0.040328	−0.00197	0.091293	0.827848	76.57679	36.7364	−1.79296	0.019751
0.830733	76.37512	36.89546	0.018513	−0.07196	−0.00223	0.036659	0.000131	0.000131	0.040328	−0.00178	0.076987	0.8285	76.5494	36.78115	−1.26774	0.018571
0.83073	76.37736	36.89628	0.017973	−0.00323	−0.00203	0.018311	0.000127	0.000127	0.040328	−0.00158	0.058639	0.828701	76.53572	36.79243	−0.74431	0.018023
0.830176	76.41364	36.86459	0.017883	0.034103	−0.00211	0.004375	0.000126	0.000126	0.040328	−0.00165	0.044703	0.828068	76.57819	36.7566	−0.48736	0.017935
0.830187	76.4098	36.86371	0.017872	0.071099	−0.00234	−0.00266	0.000119	0.000119	0.040328	−0.00189	0.037664	0.827844	76.59271	36.74366	−0.22084	0.01793
0.830452	76.38392	36.87476	0.018104	0.13942	−0.00228	−0.01502	0.000106	0.000106	0.040328	−0.00182	0.025308	0.828174	76.56174	36.75808	0.308991	0.018161
0.830469	76.37777	36.8733	0.018675	0.208463	−0.00227	−0.03091	0.000071	0.000071	0.040328	−0.00182	0.00942	0.828196	76.55522	36.75688	0.839074	0.018734
0.830217	76.39284	36.85819	0.019616	0.276522	−0.00262	−0.04752	0.000038	0.000038	0.040328	−0.00217	−0.00719	0.827593	76.59766	36.72373	1.367394	0.019687
0.830376	76.37742	36.86487	0.020262	0.310438	−0.00265	−0.05295	0.000009	0.000009	0.040328	−0.0022	−0.01262	0.827723	76.58449	36.72896	1.636764	0.020337
0.83046	76.36757	36.86757	0.021016	0.346653	−0.00269	−0.06142	−1.7E−05	−1.7E−05	0.040328	−0.00224	−0.02109	0.827768	76.57764	36.72971	1.904027	0.021095
0.830806	76.33119	36.88072	0.021958	0.381788	−0.00301	−0.07121	−4.5E−05	−4.5E−05	0.040328	−0.00256	−0.03088	0.827795	76.56609	36.72659	2.170564	0.02205
0.830248	76.3718	36.85079	0.023142	0.41966	−0.00291	−0.08041	−7.8E−05	−7.8E−05	0.040328	−0.00246	−0.04008	0.827337	76.59891	36.70168	2.440186	0.023236
0.82997	76.39593	36.83775	0.024545	0.455538	−0.00298	−0.08755	−0.00011	−0.00011	0.040328	−0.00252	−0.04723	0.826994	76.62813	36.68524	2.710002	0.024647
0.830238	76.37678	36.85231	0.026334	0.495777	−0.00316	−0.092	−0.00014	−0.00014	0.040328	−0.0027	−0.05167	0.82708	76.62324	36.69047	2.98562	0.026451
0.829992	76.39912	36.84125	0.028516	0.534292	−0.00347	−0.09812	−0.00017	−0.00017	0.040328	−0.00302	−0.05779	0.826522	76.66989	36.66336	3.258142	0.028654
0.830283	76.37854	36.85715	0.031099	0.569684	−0.00372	−0.10828	−0.0002	−0.0002	0.040328	−0.00326	−0.06795	0.826567	76.66857	36.66664	3.52551	0.031261
0.830175	76.39815	36.85702	0.034451	0.602733	−0.00372	−0.11469	−0.00022	−0.00022	0.040328	−0.00326	−0.07437	0.826458	76.68831	36.6664	3.796722	0.03463
0.830029	76.39954	36.84473	0.038352	0.628556	−0.00388	−0.11494	−0.00023	−0.00023	0.040328	−0.00342	−0.07461	0.826152	76.7021	36.64591	4.071324	0.03856
0.830356	76.37056	36.85978	0.042703	0.648223	−0.00413	−0.11898	−0.00025	−0.00025	0.040328	−0.00368	−0.07866	0.826224	76.69305	36.64792	4.343881	0.04295
0.830337	76.36728	36.85651	0.047254	0.666881	−0.00421	−0.12091	−0.00026	−0.00026	0.040328	−0.00376	−0.08058	0.826128	76.69572	36.64072	4.615096	0.047532
0.829267	76.42755	36.7906	0.051483	0.685739	−0.00413	−0.12592	−0.00026	−0.00026	0.040328	−0.00368	−0.08559	0.825136	76.74983	36.57858	4.882813	0.051782

CL_mc	CDf_mc	CLf_mc	CY_mc	Cm_mc	CD_ac	CDf_ac	CL_ac	CLf_ac	CD_buoyan	CDf_buoyan	CD_buoyan	CDf_buoyan	CD_buoyan	CDf_buoyan	CD_bc	CDf_bc
−0.14005	0.019751	−0.14005	−0.00026	0.207663	0.019528	0.019528	−0.14008	−0.14008	−0.00025	−0.00025	0.00011	0.00011	−0.00014	−0.00014	0.019672	0.019672
−0.07219	0.018571	−0.07219	−0.00016	0.184561	0.018474	0.018474	−0.07221	−0.07221	−0.00025	−0.00025	0.000131	0.000131	−0.00012	−0.00012	0.018596	0.018596
−0.00324	0.018023	−0.00324	−9.1E−05	0.160905	0.01802	0.01802	−0.00326	−0.00326	−0.00025	−0.00025	0.000127	0.000127	−0.00013	−0.00013	0.018146	0.018146
0.034204	0.017935	0.034204	0.000066	0.147287	0.017962	0.017962	0.03419	0.03419	−0.00025	−0.00025	0.000127	0.000127	−0.00013	−0.00013	0.018089	0.018089
0.071331	0.01793	0.071331	0.000157	0.135288	0.017977	0.017977	0.07132	0.07132	−0.00025	−0.00025	0.000119	0.000119	−0.00013	−0.00013	0.018112	0.018112
0.139863	0.018161	0.139863	0.000212	0.112768	0.018223	0.018223	0.139855	0.139855	−0.00025	−0.00025	0.000106	0.000106	−0.00015	−0.00015	0.01837	0.01837
0.209123	0.018734	0.209123	0.00038	0.092318	0.018769	0.018769	0.20912	0.20912	−0.00025	−0.00025	0.000071	0.000071	−0.00018	−0.00018	0.018951	0.018951
0.277534	0.019687	0.277534	0.000748	0.072705	0.019653	0.019653	0.277537	0.277537	−0.00025	−0.00025	0.000038	0.000038	−0.00022	−0.00022	0.019869	0.019869
0.311587	0.020337	0.311587	0.000803	0.064414	0.020269	0.020269	0.311591	0.311591	−0.00025	−0.00025	0.000009	0.000009	−0.00025	−0.00025	0.020513	0.020513
0.347954	0.021095	0.347954	0.001102	0.05542	0.020967	0.020967	0.347961	0.347961	−0.00025	−0.00025	−1.7E−05	−1.7E−05	−0.00027	−0.00027	0.021237	0.021237
0.383391	0.02205	0.383391	0.001244	0.047317	0.021844	0.021844	0.383402	0.383402	−0.00025	−0.00025	−4.5E−05	−4.5E−05	−0.0003	−0.0003	0.022143	0.022143
0.421365	0.023236	0.421365	0.001452	0.039364	0.022942	0.022942	0.421381	0.421381	−0.00025	−0.00025	−7.8E−05	−7.8E−05	−0.00033	−0.00033	0.023273	0.023273
0.457432	0.024647	0.457432	0.001481	0.031298	0.02427	0.02427	0.457452	0.457452	−0.00025	−0.00025	−0.00011	−0.00011	−0.00036	−0.00036	0.024629	0.024629
0.497963	0.026451	0.497963	0.001651	0.02255	0.026001	0.026001	0.497987	0.497987	−0.00025	−0.00025	−0.00014	−0.00014	−0.00039	−0.00039	0.026395	0.026395
0.536884	0.028654	0.536884	0.001864	0.013864	0.028113	0.028113	0.536913	0.536913	−0.00025	−0.00025	−0.00017	−0.00017	−0.00042	−0.00042	0.028537	0.028537
0.572644	0.031261	0.572644	0.002145	0.005514	0.030582	0.030582	0.572681	0.572681	−0.00025	−0.00025	−0.0002	−0.0002	−0.00045	−0.00045	0.031036	0.031036
0.605866	0.03463	0.605866	0.002011	0.000794	0.033844	0.033844	0.605911	0.605911	−0.00025	−0.00025	−0.00022	−0.00022	−0.00048	−0.00048	0.034321	0.034321
0.631966	0.03856	0.631966	0.002437	−0.00011	0.037737	0.037737	0.632016	0.632016	−0.00025	−0.00025	−0.00023	−0.00023	−0.00049	−0.00049	0.038222	0.038222
0.651971	0.04295	0.651971	0.0023	0.004045	0.042055	0.042055	0.652029	0.652029	−0.00025	−0.00025	−0.00025	−0.00025	−0.00051	−0.00051	0.042563	0.042563
0.670809	0.047532	0.670809	0.002386	0.007468	0.046589	0.046589	0.670875	0.670875	−0.00025	−0.00025	−0.00026	−0.00026	−0.00051	−0.00051	0.047103	0.047103
0.689714	0.051782	0.689714	0.002415	0.010187	0.050751	0.050751	0.68979	0.68979	−0.00025	−0.00025	−0.00026	−0.00026	−0.00051	−0.00051	0.051266	0.051266

**Figure 32: Force Data at M = 0.83.**

Figure 33: Drag Polar at M = 0.85.

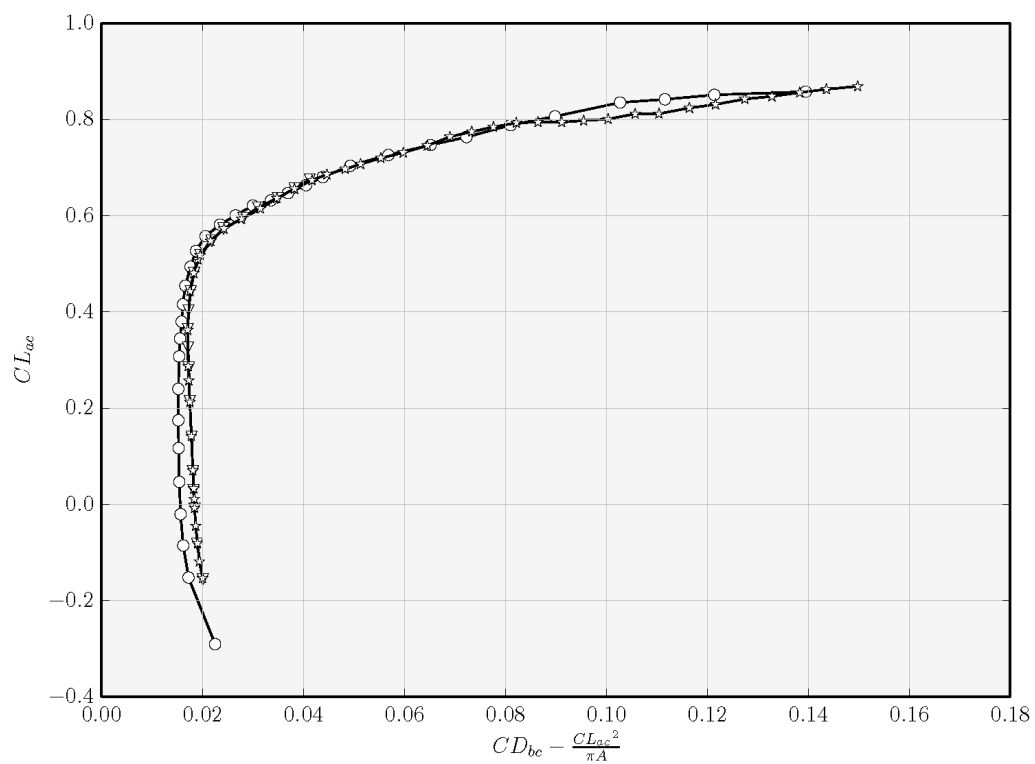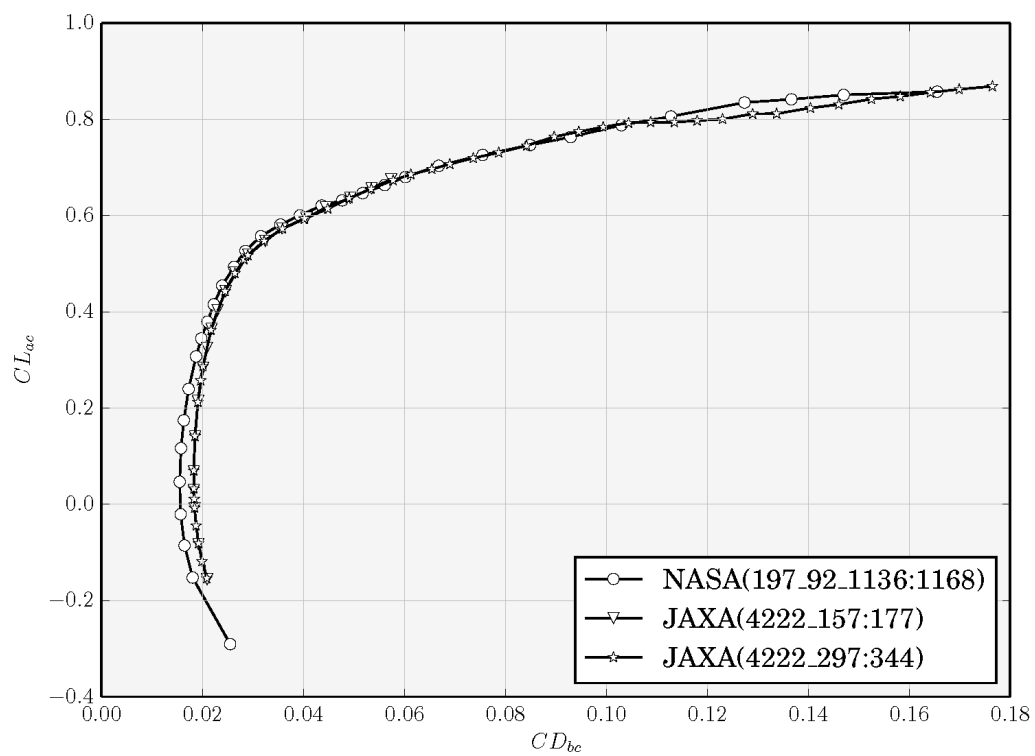**Figure 34: Drag Polar at M = 0.85 (Close-up Image).**

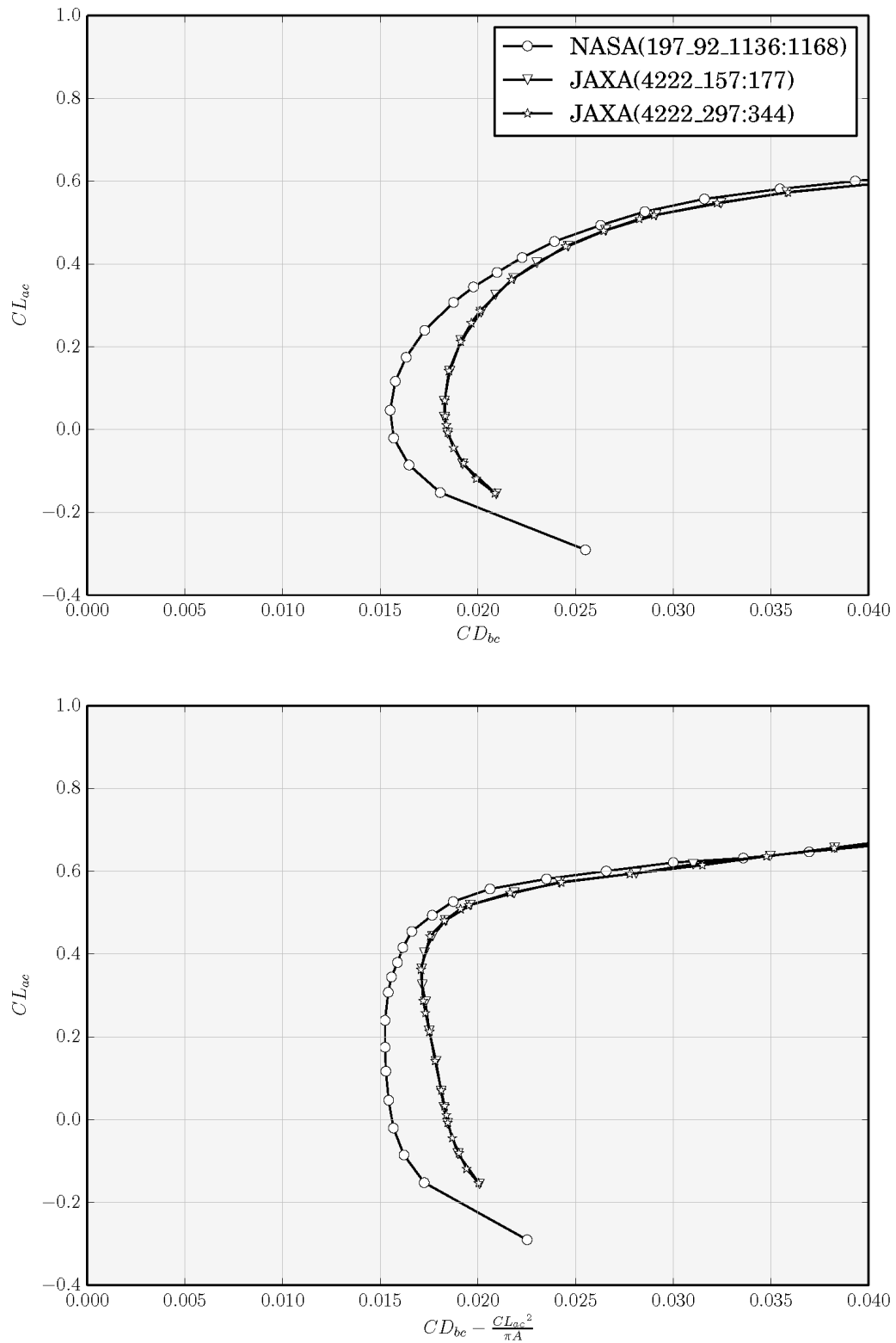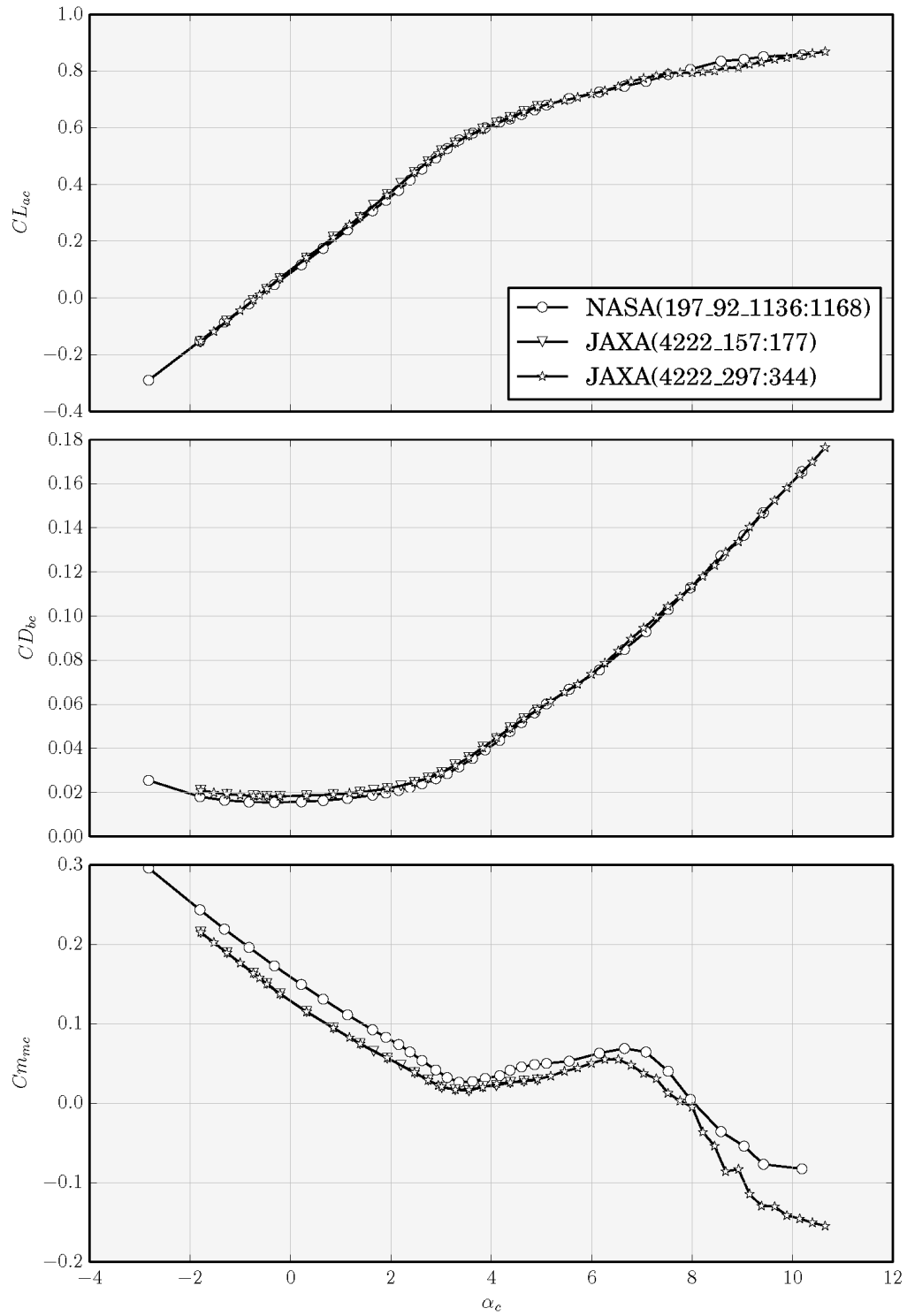**Figure 35: Longitudinal Characteristics at M = 0.85.**

Run_number	Measureme	Process_nu	M_pc	Re_c	Q	P0	T0	α	CD	CL	Cm	CDf	CLf	ΔM_d	CD_buoyan	CDf_buoyan
4222	157	156	0.850498	2.24979	37.85368	119.962	325.5207	−1.88834	0.021039	−0.15498	0.214495	0.021039	−0.15498	0.000542	−0.00021	−0.00021
4222	158	157	0.849881	2.250769	37.8158	119.9391	325.2804	−1.34532	0.019174	−0.08224	0.18892	0.019174	−0.08224	0.000542	−0.00021	−0.00021
4222	159	158	0.850069	2.252506	37.82635	119.9428	325.1171	−0.79947	0.018306	−0.00849	0.163391	0.018306	−0.00849	0.000542	−0.00021	−0.00021
4222	160	159	0.850064	2.250804	37.82707	119.946	325.3151	−0.52574	0.018105	0.029817	0.150369	0.018105	0.029817	0.000542	−0.00021	−0.00021
4222	161	160	0.84979	2.250083	37.81706	119.9574	325.3848	−0.25178	0.018071	0.068549	0.1373	0.018071	0.068549	0.000542	−0.00021	−0.00021
4222	162	161	0.850083	2.249417	37.84154	119.9888	325.5653	0.295149	0.018308	0.140092	0.114982	0.018308	0.140092	0.000542	−0.00021	−0.00021
4222	163	162	0.849901	2.25084	37.83951	120.0111	325.4278	0.847273	0.018896	0.214048	0.094431	0.018896	0.214048	0.000542	−0.00021	−0.00021
4222	164	163	0.849671	2.248073	37.83715	120.0398	325.7713	1.39459	0.019935	0.283011	0.074454	0.019935	0.283011	0.000542	−0.00021	−0.00021
4222	165	164	0.849993	2.254475	37.86849	120.0885	325.1934	1.675952	0.020704	0.324652	0.065088	0.020704	0.324652	0.000542	−0.00021	−0.00021
4222	166	165	0.850008	2.254619	37.87146	120.0956	325.1943	1.956977	0.021665	0.363622	0.056571	0.021665	0.363622	0.000542	−0.00021	−0.00021
4222	167	166	0.849497	2.251336	37.84471	120.0914	325.4885	2.235092	0.022895	0.401847	0.047642	0.022895	0.401847	0.000542	−0.00021	−0.00021
4222	168	167	0.849663	2.249659	37.84215	120.057	325.6271	2.514394	0.024526	0.441321	0.037909	0.024526	0.441321	0.000542	−0.00021	−0.00021
4222	169	168	0.849533	2.249588	37.8259	120.026	325.5524	2.793146	0.026495	0.479408	0.028917	0.026495	0.479408	0.000542	−0.00021	−0.00021
4222	170	169	0.849491	2.247625	37.81635	120.0022	325.7186	3.069956	0.029125	0.51629	0.020016	0.029125	0.51629	0.000542	−0.00021	−0.00021
4222	171	170	0.850217	2.251512	37.84912	119.9918	325.3523	3.346309	0.032514	0.545028	0.016881	0.032514	0.545028	0.000542	−0.00021	−0.00021
4222	172	171	0.849552	2.249537	37.8064	119.9611	325.423	3.622097	0.035874	0.570692	0.015308	0.035874	0.570692	0.000542	−0.00021	−0.00021
4222	173	172	0.850471	2.249883	37.85582	119.973	325.53	3.903451	0.040705	0.592223	0.020648	0.040705	0.592223	0.000542	−0.00021	−0.00021
4222	174	173	0.849251	2.248067	37.78716	119.9476	325.5209	4.176004	0.044604	0.613908	0.022045	0.044604	0.613908	0.000542	−0.00021	−0.00021
4222	175	174	0.850394	2.248807	37.84945	119.965	325.6246	4.453027	0.049415	0.633459	0.025818	0.049415	0.633459	0.000542	−0.00021	−0.00021
4222	176	175	0.849723	2.247173	37.81265	119.954	325.698	4.725754	0.053632	0.653472	0.027314	0.053632	0.653472	0.000542	−0.00021	−0.00021
4222	177	176	0.849829	2.248701	37.82296	119.97	325.5729	4.997723	0.057492	0.671379	0.029062	0.057492	0.671379	0.000542	−0.00021	−0.00021

M_c0	P_c0	Q_c0	CD_c0	CL_c0	ΔM_wall	Δα_wall	CD_buoyan	CDf_buoya	Δα_upflo	ΔM	Δα	M_c	P_c	Q_c	α_c	CD_mc
0.85104	74.71688	37.88056	0.021024	−0.15487	−0.00276	0.061562	0.000095	0.000095	0.040328	−0.00221	0.10189	0.848284	74.9312	37.7436	−1.78645	0.0211
0.850423	74.75058	37.84271	0.01916	−0.08218	−0.00254	0.038714	0.000103	0.000103	0.040328	−0.002	0.079042	0.84788	74.9483	37.71628	−1.26628	0.019225
0.850611	74.73828	37.85321	0.018293	−0.00849	−0.00226	0.020115	0.000101	0.000101	0.040328	−0.00172	0.060443	0.848351	74.91399	37.7409	−0.73903	0.018347
0.850606	74.74066	37.85397	0.018092	0.029796	−0.00249	0.014161	0.0001	0.0001	0.040328	−0.00195	0.05489	0.848113	74.93449	37.73006	−0.47125	0.018152
0.850332	74.7691	37.84398	0.018058	0.0685	−0.00247	0.003863	0.000093	0.000093	0.040328	−0.00193	0.044191	0.847858	74.9615	37.72094	−0.20759	0.018117
0.850625	74.76587	37.86844	0.018295	0.139993	−0.0025	−0.01442	0.000074	0.000074	0.040328	−0.00196	0.025911	0.848121	74.96067	37.74391	0.32106	0.018355
0.850443	74.79393	37.86644	0.018883	0.213896	−0.00259	−0.03359	0.000044	0.000044	0.040328	−0.00205	0.006737	0.847849	74.99574	37.73739	0.85401	0.018947
0.850213	74.82969	37.86405	0.019921	0.28281	−0.00287	−0.04807	0.000004	0.000004	0.040328	−0.00233	−0.00774	0.847339	75.05339	37.72094	1.386848	0.019996
0.850535	74.83498	37.89542	0.020689	0.324421	−0.00283	−0.05808	−0.00003	−0.00003	0.040328	−0.00228	−0.01775	0.847709	75.05497	37.75473	1.658201	0.020766
0.85055	74.83824	37.89841	0.02165	0.363364	−0.00294	−0.06801	−0.00006	−0.00006	0.040328	−0.0024	−0.02768	0.847606	75.06744	37.75183	1.929293	0.021734
0.850039	74.87539	37.87167	0.022879	0.401561	−0.00306	−0.07724	−9.7E−05	−9.7E−05	0.040328	−0.00252	−0.03691	0.846976	75.11388	37.71904	2.198179	0.022971
0.850205	74.84104	37.86908	0.024509	0.441007	−0.00321	−0.08285	−0.00012	−0.00012	0.040328	−0.00267	−0.04252	0.846996	75.09083	37.70923	2.471871	0.024612
0.850075	74.83183	37.85284	0.026476	0.479067	−0.00327	−0.09081	−0.00016	−0.00016	0.040328	−0.00273	−0.05048	0.846805	75.08635	37.68993	2.742665	0.026591
0.850033	74.82028	37.84326	0.029104	0.515923	−0.00352	−0.09841	−0.00019	−0.00019	0.040328	−0.00297	−0.05808	0.846517	75.09385	37.66812	3.011876	0.02924
0.850759	74.7573	37.87602	0.032491	0.544641	−0.00369	−0.10626	−0.00022	−0.00022	0.040328	−0.00315	−0.06594	0.847065	75.04467	37.6922	3.280373	0.032649
0.850094	74.78987	37.83331	0.035848	0.570286	−0.004	−0.10839	−0.00023	−0.00023	0.040328	−0.00346	−0.06775	0.846097	75.10077	37.63422	3.554348	0.036038
0.851013	74.72583	37.88269	0.040676	0.591803	−0.0042	−0.11007	−0.00024	−0.00024	0.040328	−0.00366	−0.06974	0.846813	75.05251	37.67373	3.833714	0.040902
0.849793	74.80485	37.8141	0.044572	0.613471	−0.00416	−0.11417	−0.00025	−0.00025	0.040328	−0.00362	−0.07384	0.845629	75.12875	37.60658	4.102162	0.044818
0.850936	74.72684	37.87635	0.04938	0.633009	−0.00439	−0.11612	−0.00027	−0.00027	0.040328	−0.00385	−0.0758	0.846544	75.06849	37.65775	4.377231	0.049667
0.850265	74.77216	37.83957	0.053594	0.653007	−0.00429	−0.11599	−0.00028	−0.00028	0.040328	−0.00375	−0.07566	0.845975	75.10586	37.62589	4.65009	0.053898
0.850371	74.77389	37.84988	0.057451	0.670901	−0.00495	−0.11871	−0.00029	−0.00029	0.040328	−0.00441	−0.07838	0.845419	75.15912	37.60313	4.919346	0.057828

CL_mc	CDf_mc	CLf_mc	CY_mc	Cm_mc	CD_ac	CDf_ac	CL_ac	CLf_ac	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_bc	CDf_bc
−0.15543	0.0211	−0.15543	−0.00016	0.215121	0.020824	0.020824	−0.15546	−0.15546	−0.00021	−0.00021	0.000096	0.000096	−0.00011	−0.00011	0.020937	0.020937
−0.08245	0.019225	−0.08245	−0.00015	0.189419	0.019111	0.019111	−0.08248	−0.08248	−0.00021	−0.00021	0.000104	0.000104	−0.00011	−0.00011	0.019216	0.019216
−0.00851	0.018347	−0.00851	−0.00013	0.163761	0.018338	0.018338	−0.00853	−0.00853	−0.00021	−0.00021	0.000101	0.000101	−0.00011	−0.00011	0.018446	0.018446
0.029894	0.018152	0.029894	−0.00014	0.150756	0.01818	0.01818	0.029876	0.029876	−0.00021	−0.00021	0.0001	0.0001	−0.00011	−0.00011	0.018289	0.018289
0.068724	0.018117	0.068724	−2.2E−05	0.13765	0.01817	0.01817	0.06871	0.06871	−0.00021	−0.00021	0.000094	0.000094	−0.00012	−0.00012	0.018285	0.018285
0.140454	0.018355	0.140454	0.000207	0.115279	0.018419	0.018419	0.140446	0.140446	−0.00021	−0.00021	0.000074	0.000074	−0.00014	−0.00014	0.018554	0.018554
0.214627	0.018947	0.214627	0.000466	0.094687	0.018972	0.018972	0.214625	0.214625	−0.00021	−0.00021	0.000044	0.000044	−0.00017	−0.00017	0.019137	0.019137
0.283883	0.019996	0.283883	0.000712	0.074683	0.019958	0.019958	0.283886	0.283886	−0.00021	−0.00021	0.000004	0.000004	−0.00021	−0.00021	0.020163	0.020163
0.32563	0.020766	0.32563	0.001065	0.065284	0.020665	0.020665	0.325637	0.325637	−0.00021	−0.00021	−0.00003	−0.00003	−0.00024	−0.00024	0.020905	0.020905
0.364774	0.021734	0.364774	0.001189	0.05675	0.021557	0.021557	0.364785	0.364785	−0.00021	−0.00021	−6.1E−05	−6.1E−05	−0.00027	−0.00027	0.021827	0.021827
0.403186	0.022971	0.403186	0.001236	0.047801	0.022712	0.022712	0.403201	0.403201	−0.00021	−0.00021	−9.7E−05	−9.7E−05	−0.00031	−0.00031	0.023018	0.023018
0.442877	0.024612	0.442877	0.001488	0.038043	0.024284	0.024284	0.442895	0.442895	−0.00021	−0.00021	−0.00012	−0.00012	−0.00033	−0.00033	0.024616	0.024616
0.481137	0.026591	0.481137	0.001575	0.029021	0.026167	0.026167	0.481161	0.481161	−0.00021	−0.00021	−0.00016	−0.00016	−0.00037	−0.00037	0.026534	0.026534
0.518322	0.02924	0.518322	0.001862	0.020095	0.028714	0.028714	0.518351	0.518351	−0.00021	−0.00021	−0.00019	−0.00019	−0.0004	−0.0004	0.029114	0.029114
0.547297	0.032649	0.547297	0.002063	0.016951	0.03202	0.03202	0.547334	0.547334	−0.00021	−0.00021	−0.00022	−0.00022	−0.00043	−0.00043	0.032445	0.032445
0.573303	0.036038	0.573303	0.00218	0.015378	0.03536	0.03536	0.573345	0.573345	−0.00021	−0.00021	−0.00024	−0.00024	−0.00045	−0.00045	0.035805	0.035805
0.595086	0.040902	0.595086	0.002023	0.020748	0.040177	0.040177	0.595135	0.595135	−0.00021	−0.00021	−0.00025	−0.00025	−0.00046	−0.00046	0.040632	0.040632
0.616856	0.044818	0.616856	0.002282	0.022151	0.044023	0.044023	0.616913	0.616913	−0.00021	−0.00021	−0.00025	−0.00025	−0.00048	−0.00048	0.044483	0.044483
0.636684	0.049667	0.636684	0.002027	0.025949	0.048824	0.048824	0.636749	0.636749	−0.00021	−0.00021	−0.00027	−0.00027	−0.00048	−0.00048	0.049303	0.049303
0.656716	0.053898	0.656716	0.002245	0.02745	0.053031	0.053031	0.656786	0.656786	−0.00021	−0.00021	−0.00028	−0.00028	−0.00049	−0.00049	0.053517	0.053517
0.675304	0.057828	0.675304	0.002417	0.029232	0.056904	0.056904	0.675382	0.675382	−0.00021	−0.00021	−0.0003	−0.0003	−0.00051	−0.00051	0.05741	0.05741

Figure 36: Force Data at M = 0.85 (1).

Run_numbe	Measureme	Process_nu	M_pc	Re_c	Q	P0	T0	α	CD	CL	Cm	CDf	CLf	ΔM_d	CD_buoyan	CDf_buoya
4222	297	296	0.849358	2.263104	37.81111	120.0067	323.9688	−1.88612	0.020953	−0.15329	0.214456	0.020953	−0.15329	0.000542	−0.00021	−0.00021
4222	298	297	0.849306	2.260916	37.77479	119.8996	323.9808	−1.6172	0.019924	−0.11845	0.201806	0.019924	−0.11845	0.000542	−0.00021	−0.00021
4222	299	298	0.85029	2.261184	37.83245	119.9274	324.1383	−1.34406	0.019201	−0.08085	0.188715	0.019201	−0.08085	0.000542	−0.00021	−0.00021
4222	300	299	0.849828	2.260582	37.80211	119.904	324.0958	−1.07149	0.018639	−0.04435	0.175865	0.018639	−0.04435	0.000542	−0.00021	−0.00021
4222	301	300	0.850094	2.254898	37.82125	119.9228	324.8086	−0.79934	0.018295	−0.00745	0.163136	0.018295	−0.00745	0.000542	−0.00021	−0.00021
4222	302	301	0.850314	2.257585	37.84545	119.9648	324.6241	−0.6704	0.018208	0.010884	0.157338	0.018208	0.010884	0.000542	−0.00021	−0.00021
4222	303	302	0.850162	2.257399	37.84906	120.0003	324.7	−0.5245	0.018129	0.032418	0.149579	0.018129	0.032418	0.000542	−0.00021	−0.00021
4222	304	303	0.850403	2.258338	37.87514	120.045	324.7206	−0.25049	0.018069	0.06996	0.137324	0.018069	0.06996	0.000542	−0.00021	−0.00021
4222	305	304	0.850014	2.261012	37.86463	120.0729	324.4286	0.296159	0.018258	0.141262	0.114668	0.018258	0.141262	0.000542	−0.00021	−0.00021
4222	306	305	0.84992	2.259374	37.86156	120.078	324.6107	0.845264	0.018848	0.211779	0.094572	0.018848	0.211779	0.000542	−0.00021	−0.00021
4222	307	306	0.850083	2.259023	37.8627	120.0559	324.6248	1.177979	0.019407	0.256709	0.082527	0.019407	0.256709	0.000542	−0.00021	−0.00021
4222	308	307	0.850164	2.261707	37.86262	120.043	324.3072	1.397348	0.019853	0.285932	0.074475	0.019853	0.285932	0.000542	−0.00021	−0.00021
4222	309	308	0.849426	2.257378	37.82189	120.0301	324.6689	1.953863	0.021545	0.361055	0.05672	0.021545	0.361055	0.000542	−0.00021	−0.00021
4222	310	309	0.84964	2.259118	37.83375	120.034	324.5098	2.515567	0.024388	0.441121	0.038604	0.024388	0.441121	0.000542	−0.00021	−0.00021
4222	311	310	0.849542	2.256962	37.83332	120.048	324.7687	2.791974	0.026403	0.478469	0.028694	0.026403	0.478469	0.000542	−0.00021	−0.00021
4222	312	311	0.850208	2.25862	37.86557	120.0454	324.6643	3.003805	0.028286	0.506798	0.022154	0.028286	0.506798	0.000542	−0.00021	−0.00021
4222	313	312	0.849825	2.256937	37.83911	120.0217	324.7532	3.070428	0.029026	0.515658	0.02046	0.029026	0.515658	0.000542	−0.00021	−0.00021
4222	314	313	0.850265	2.255084	37.85598	120.0059	324.9859	3.347453	0.032263	0.544894	0.016851	0.032263	0.544894	0.000542	−0.00021	−0.00021
4222	315	314	0.849596	2.254249	37.81788	119.9906	324.9595	3.624457	0.035939	0.570057	0.011039	0.035939	0.570057	0.000542	−0.00021	−0.00021
4222	316	315	0.850384	2.252171	37.85646	119.9887	325.2934	3.900424	0.040288	0.590281	0.019897	0.040288	0.590281	0.000542	−0.00021	−0.00021
4222	317	316	0.850438	2.254807	37.8591	119.9885	325.003	4.177608	0.04491	0.611438	0.024292	0.04491	0.611438	0.000542	−0.00021	−0.00021
4222	318	317	0.849738	2.254389	37.81836	119.9697	324.9183	4.45164	0.049154	0.632739	0.025793	0.049154	0.632739	0.000542	−0.00021	−0.00021
4222	319	318	0.849965	2.253478	37.83002	119.971	325.0533	4.726513	0.053529	0.652196	0.02822	0.053529	0.652196	0.000542	−0.00021	−0.00021
4222	320	319	0.850064	2.252212	37.84031	119.988	325.2451	4.9982	0.057866	0.66983	0.029923	0.057866	0.66983	0.000542	−0.00021	−0.00021
4222	321	320	0.850337	2.248229	37.85598	119.9947	325.7455	5.265936	0.061427	0.681685	0.033954	0.061427	0.681685	0.000542	−0.00021	−0.00021
4222	322	321	0.850278	2.250745	37.8582	120.011	325.4877	5.535597	0.065535	0.692742	0.039803	0.065535	0.692742	0.000542	−0.00021	−0.00021
4222	323	322	0.849592	2.250131	37.81806	119.9799	325.4261	5.800998	0.069089	0.702734	0.043938	0.069089	0.702734	0.000542	−0.00021	−0.00021
4222	324	323	0.849968	2.248013	37.84092	120.005	325.7433	6.073339	0.073698	0.714944	0.049854	0.073698	0.714944	0.000542	−0.00021	−0.00021
4222	325	324	0.849786	2.248759	37.83069	120.0013	325.627	6.342063	0.07876	0.726607	0.054756	0.07876	0.726607	0.000542	−0.00021	−0.00021
4222	326	325	0.850072	2.249944	37.84856	120.0129	325.5552	6.607154	0.08425	0.740866	0.054655	0.08425	0.740866	0.000542	−0.00021	−0.00021
4222	327	326	0.850106	2.250171	37.85695	120.034	325.5788	6.867972	0.089736	0.758772	0.04745	0.089736	0.758772	0.000542	−0.00021	−0.00021
4222	328	327	0.849692	2.246631	37.83637	120.034	325.9253	7.116568	0.094631	0.76945	0.037089	0.094631	0.76945	0.000542	−0.00021	−0.00021
4222	329	328	0.849963	2.249126	37.84878	120.0307	325.6711	7.36891	0.099409	0.778541	0.030573	0.099409	0.778541	0.000542	−0.00021	−0.00021
4222	330	329	0.850196	2.247946	37.86039	120.0308	325.8356	7.605558	0.104447	0.78732	0.012551	0.104447	0.78732	0.000542	−0.00021	−0.00021
4222	331	330	0.850254	2.246791	37.85921	120.0179	325.9469	7.844834	0.108818	0.788701	0.00287	0.108818	0.788701	0.000542	−0.00021	−0.00021
4222	333	331	0.850731	2.246342	37.87817	120.0029	326.0286	8.086144	0.113428	0.788233	−0.00488	0.113428	0.788233	0.000542	−0.00021	−0.00021
4222	334	332	0.850078	2.245768	37.83847	119.9798	325.9589	8.298772	0.117925	0.791366	−0.03623	0.117925	0.791366	0.000542	−0.00021	−0.00021
4222	335	333	0.850153	2.245027	37.83703	119.9635	326.0182	8.53083	0.122978	0.794836	−0.05349	0.122978	0.794836	0.000542	−0.00021	−0.00021
4222	336	334	0.849787	2.242221	37.8228	119.976	326.3154	8.752663	0.128954	0.805548	−0.08546	0.128954	0.805548	0.000542	−0.00021	−0.00021
4222	337	335	0.849243	2.245375	37.79385	119.97	325.8726	9.006655	0.133618	0.805663	−0.08269	0.133618	0.805663	0.000542	−0.00021	−0.00021
4222	338	336	0.850075	2.244233	37.84432	119.999	326.1734	9.230037	0.140333	0.817329	−0.11374	0.140333	0.817329	0.000542	−0.00021	−0.00021
4222	339	337	0.850061	2.24476	37.84607	120.0066	326.128	9.470555	0.145943	0.824592	−0.12846	0.145943	0.824592	0.000542	−0.00021	−0.00021
4222	340	338	0.85004	2.242001	37.85239	120.03	326.4886	9.731895	0.15242	0.835697	−0.12934	0.15242	0.835697	0.000542	−0.00021	−0.00021
4222	341	339	0.849599	2.243435	37.82905	120.0256	326.2578	9.973627	0.158103	0.840751	−0.14034	0.158013	0.840751	0.000542	−0.00021	−0.00021
4222	342	340	0.849959	2.242664	37.84869	120.0311	326.4048	10.2287	0.163955	0.848675	−0.14434	0.163955	0.848675	0.000542	−0.00021	−0.00021
4222	343	341	0.84968	2.240602	37.83478	120.031	326.6025	10.48025	0.169617	0.855317	−0.14935	0.169617	0.855317	0.000542	−0.00021	−0.00021
4222	344	342	0.850367	2.241687	37.86626	120.0225	326.5515	10.73277	0.176128	0.861293	−0.15342	0.176128	0.861293	0.000542	−0.00021	−0.00021

M_c0	P_c0	Q_c0	CD_c0	CL_c0	ΔM_wall	Δα_wall	CD_buoyan	CDf_buoya	Δα_upflo	ΔM	Δα	M_c	P_c	Q_c	α_c	CD_mc
0.8499	74.83342	37.83807	0.020938	−0.15318	−0.0025	0.05835	0.000079	0.000079	0.040328	−0.00196	0.098678	0.8474	75.02792	37.71361	−1.78744	0.021007
0.849848	74.77068	37.80171	0.01991	−0.11837	−0.00247	0.050936	0.000079	0.000079	0.040328	−0.00193	0.091264	0.847377	74.96278	37.67879	−1.52594	0.019975
0.850832	74.71148	37.8593	0.019187	−0.0808	−0.00252	0.039455	0.000083	0.000083	0.040328	−0.00197	0.079783	0.848316	74.90706	37.7343	−1.26428	0.019251
0.85037	74.73283	37.82901	0.018626	−0.04432	−0.00243	0.028442	0.000087	0.000087	0.040328	−0.00189	0.06877	0.847938	74.92191	37.7081	−1.00272	0.018685
0.850636	74.7239	37.84815	0.018282	−0.00744	−0.00242	0.019659	0.00008	0.00008	0.040328	−0.00188	0.059987	0.848213	74.91226	37.72774	−0.73935	0.01834
0.850856	74.73293	37.87231	0.018195	0.010876	−0.00236	0.014405	0.000085	0.000085	0.040328	−0.00182	0.054733	0.848491	74.91682	37.7548	−0.61566	0.018252
0.850704	74.76687	37.87597	0.018116	0.032395	−0.00253	0.014096	0.000083	0.000083	0.040328	−0.00199	0.054424	0.84817	74.96396	37.74999	−0.47007	0.018177
0.850945	74.77597	37.90205	0.018056	0.06991	−0.00248	0.001228	0.000077	0.000077	0.040328	−0.00193	0.041556	0.848469	74.96863	37.77894	−0.20893	0.018115
0.850556	74.82365	37.89155	0.018245	0.141162	−0.00258	−0.01822	0.000053	0.000053	0.040328	−0.00204	0.022108	0.847978	75.02433	37.76324	0.318267	0.018307
0.850462	74.83412	37.88848	0.018835	0.211629	−0.00258	−0.0307	0.000045	0.000045	0.040328	−0.00204	0.009624	0.847877	75.03534	37.75981	0.854888	0.018899
0.850625	74.80764	37.88959	0.019393	0.256527	−0.00255	−0.04284	−3E−06	−3E−06	0.040328	−0.00201	−0.00251	0.848073	75.00628	37.7626	1.175468	0.019458
0.850706	74.79332	37.88955	0.019839	0.285729	−0.00287	−0.04802	−2.6E−05	−2.6E−05	0.040328	−0.00233	−0.00769	0.847837	75.01661	37.74679	1.389656	0.019914
0.849968	74.84271	37.84882	0.02153	0.360798	−0.00279	−0.06848	−7.9E−05	−7.9E−05	0.040328	−0.00225	−0.02815	0.847179	75.05973	37.70993	1.925711	0.021609
0.850182	74.82849	37.86068	0.024371	0.440807	−0.00329	−0.08631	−0.00016	−0.00016	0.040328	−0.00275	−0.04599	0.846889	75.08476	37.69667	2.469581	0.024477
0.850084	74.84486	37.86024	0.026384	0.478129	−0.00312	−0.09181	−0.00017	−0.00017	0.040328	−0.00258	−0.05145	0.846965	75.08764	37.70486	2.74049	0.026493
0.85075	74.7914	37.8925	0.028266	0.506438	−0.00348	−0.10087	−0.0002	−0.0002	0.040328	−0.00294	−0.06054	0.84727	75.06226	37.71926	2.943262	0.028396
0.850367	74.80645	37.86601	0.029005	0.515292	−0.00341	−0.09935	−0.0002	−0.0002	0.040328	−0.00287	−0.05902	0.846953	75.07215	37.69599	3.011409	0.029136
0.850807	74.76236	37.88286	0.03224	0.544507	−0.0039	−0.10377	−0.00023	−0.00023	0.040328	−0.00336	−0.06344	0.846906	75.06589	37.6887	3.284014	0.032406
0.850138	74.80485	37.84481	0.035913	0.569651	−0.00391	−0.10985	−0.00025	−0.00025	0.040328	−0.00337	−0.06952	0.846227	75.10913	37.64998	3.554937	0.036099
0.850926	74.74239	37.88334	0.040259	0.589862	−0.00433	−0.11105	−0.00026	−0.00026	0.040328	−0.00379	−0.07072	0.846597	75.07915	37.66788	3.8297	0.04049
0.85098	74.73807	37.88595	0.044878	0.611005	−0.00413	−0.11244	−0.00028	−0.00028	0.040328	−0.00359	−0.07211	0.846846	75.05968	37.68023	4.105496	0.045123
0.85028	74.7808	37.84528	0.049119	0.632259	−0.00428	−0.11484	−0.00029	−0.00029	0.040328	−0.00373	−0.07451	0.846005	75.11336	37.63233	4.377126	0.049397
0.850507	74.76392	37.85694	0.053491	0.651732	−0.00436	−0.11652	−0.0003	−0.0003	0.040328	−0.00382	−0.07619	0.84615	75.10283	37.63998	4.650321	0.053799
0.850606	74.76683	37.86723	0.057825	0.669354	−0.00448	−0.11776	−0.00029	−0.00029	0.040328	−0.00394	−0.07743	0.846125	75.11549	37.64404	4.920771	0.058168
0.850879	74.74974	37.88288	0.061383	0.681201	−0.00469	−0.12298	−0.0003	−0.0003	0.040328	−0.00415	−0.08265	0.846192	75.1144	37.6495	5.183286	0.061764
0.85082	74.76451	37.88511	0.065488	0.69225	−0.00478	−0.11944	−0.0003	−0.0003	0.040328	−0.00424	−0.07911	0.846039	75.13654	37.64699	5.456485	0.065903
0.850134	74.80588	37.84497	0.06904	0.702234	−0.00499	−0.12019	−0.00029	−0.00029	0.040328	−0.00445	−0.07986	0.845144	75.19421	37.59655	5.721134	0.069497
0.85051	74.78487	37.86782	0.073646	0.714436	−0.00514	−0.12032	−0.00029	−0.00029	0.040328	−0.0046	−0.07999	0.845373	75.18465	37.61177	5.993351	0.074147
0.850328	74.79671	37.85761	0.078704	0.72609	−0.00492	−0.1208	−0.00029	−0.00029	0.040328	−0.00438	−0.08047	0.845411	75.1793	37.61254	6.261589	0.079217
0.850614	74.78172	37.87548	0.08419	0.740339	−0.00501	−0.12023	−0.00028	−0.00028	0.040328	−0.00447	−0.0799	0.845602	75.17176	37.62573	6.527255	0.084749
0.850648	74.79223	37.88383	0.089672	0.758233	−0.00539	−0.12492	−0.00027	−0.00027	0.040328	−0.00484	−0.08459	0.845262	75.21149	37.6153	6.783379	0.090312
0.850234	74.82447	37.86328	0.094564	0.768903	−0.00521	−0.12498	−0.00027	−0.00027	0.040328	−0.00467	−0.08465	0.845027	75.22978	37.58966	7.031914	0.095217
0.850505	74.80129	37.87569	0.099338	0.777988	−0.00573	−0.12626	−0.00026	−0.00026	0.040328	−0.00519	−0.08593	0.84477	75.24769	37.58966	7.282983	0.100094
0.850738	74.78321	37.88728	0.104373	0.786761	−0.00552	−0.12715	−0.00026	−0.00026	0.040328	−0.00498	−0.08682	0.845217	75.21293	37.61205	7.518739	0.105137
0.850796	74.77067	37.88609	0.108741	0.788141	−0.00558	−0.12691	−0.00023	−0.00023	0.040328	−0.00504	−0.08659	0.845211	75.20531	37.60773	7.758249	0.109546
0.851273	74.72424	37.90504	0.113348	0.787674	−0.00586	−0.12569	−0.00022	−0.00022	0.040328	−0.00532	−0.08537	0.845413	75.18024	37.61313	8.000779	0.114227
0.85062	74.76066	37.86535	0.117841	0.790804	−0.00609	−0.12726	−0.0002	−0.0002	0.040328	−0.00555	−0.08693	0.844527	75.2347	37.56158	8.21184	0.118794
0.850695	74.74466	37.86392	0.122891	0.794272	−0.00573	−0.125	−0.00017	−0.00017	0.040328	−0.00518	−0.08467	0.844969	75.19012	37.57856	8.446159	0.123824
0.850329	74.7809	37.84969	0.128862	0.804976	−0.00581	−0.12679	−0.00016	−0.00016	0.040328	−0.00527	−0.08646	0.84452	75.23286	37.56001	8.666199	0.129856
0.849785	74.8195	37.82079	0.133523	0.805089	−0.00604	−0.12583	−0.00014	−0.00014	0.040328	−0.0055	−0.0855	0.843745	75.28951	37.51928	8.921156	0.134596
0.850617	74.77283	37.87125	0.140233	0.816748	−0.00613	−0.12785	−0.00012	−0.00012	0.040328	−0.00559	−0.08752	0.844487	75.24988	37.56554	9.142518	0.141374
0.850603	74.77865	37.87295	0.145839	0.824007	−0.00616	−0.1293	−9.8E−05	−9.8E−05	0.040328	−0.00562	−0.08898	0.844443	75.25809	37.56571	9.381579	0.147032
0.850582	74.79487	37.87929	0.152312	0.835104	−0.00617	−0.13015	−7.1E−05	−7.1E−05	0.040328	−0.00563	−0.08982	0.844408	75.27547	37.57129	9.642077	0.15356
0.850141	74.82642	37.85598	0.159074	0.840153	−0.00624	−0.12876	−5.5E−05	−5.5E−05	0.040328	−0.0055	−0.08848	0.843665	75.33174	37.53188	9.885191	0.159264
0.850501	74.80187	37.87562	0.163838	0.848072	−0.00663	−0.12793	−2.8E−05	−2.8E−05	0.040328	−0.00609	−0.08761	0.843874	75.31778	37.54486	10.14109	0.165282
0.850222	74.8235	37.86172	0.169496	0.854708	−0.0066	−0.12696	−7E−06	−7E−06	0.040328	−0.00606	−0.08663	0.843622	75.33734	37.53217	10.39362	0.170985
0.850909	74.76475	37.89316	0.176003	0.860682	−0.00674	−0.12547	0.000026	0.000026	0.040328	−0.0062	−0.08514	0.844165	75.28967	37.55676	10.64763	0.177579

CL_mc	CDf_mc	CLf_mc	CY_mc	Cm_mc	CD_ac	CDf_ac	CL_ac	CLf_ac	CD_buoyan	CDf_buoyan	CD_buoyan	CDf_buoyan	CD_buoyan	CDf_buoyan	CD_bc	CDf_bc
−0.15368	0.021007	−0.15368	−0.00018	0.21501	0.020742	0.020742	−0.15372	−0.15372	−0.00021	−0.00021	0.000079	0.000079	−0.00013	−0.00013	0.020872	0.020872
−0.11875	0.019975	−0.11875	−0.00018	0.20232	0.019786	0.019786	−0.11878	−0.11878	−0.00021	−0.00021	0.000079	0.000079	−0.00013	−0.00013	0.019915	0.019915
−0.08106	0.019251	−0.08106	−0.00011	0.189206	0.019138	0.019138	−0.08109	−0.08109	−0.00021	−0.00021	0.000084	0.000084	−0.00013	−0.00013	0.019263	0.019263
−0.04446	0.018685	−0.04446	−0.00023	0.176303	0.018632	0.018632	−0.04449	−0.04449	−0.00021	−0.00021	0.000087	0.000087	−0.00012	−0.00012	0.018754	0.018754
−0.00746	0.01834	−0.00746	−0.00012	0.16354	0.018333	0.018333	−0.00748	−0.00748	−0.00021	−0.00021	0.00008	0.00008	−0.00013	−0.00013	0.018461	0.018461
0.01091	0.018252	0.01091	−8.2E−05	0.157716	0.018262	0.018262	0.010893	0.010893	−0.00021	−0.00021	0.000085	0.000085	−0.00012	−0.00012	0.018386	0.018386
0.032503	0.018177	0.032503	−1.4E−05	0.149972	0.018207	0.018207	0.032486	0.032486	−0.00021	−0.00021	0.000083	0.000083	−0.00013	−0.00013	0.018333	0.018333
0.070138	0.018115	0.070138	0.00012	0.137674	0.018166	0.018166	0.070125	0.070125	−0.00021	−0.00021	0.000077	0.000077	−0.00013	−0.00013	0.018298	0.018298
0.141641	0.018307	0.141641	0.000246	0.114976	0.018362	0.018362	0.141634	0.141634	−0.00021	−0.00021	0.000053	0.000053	−0.00016	−0.00016	0.018517	0.018517
0.21235	0.018899	0.21235	0.000639	0.094827	0.018934	0.018934	0.212346	0.212346	−0.00021	−0.00021	0.000023	0.000023	−0.00019	−0.00019	0.01912	0.01912
0.257389	0.019458	0.257389	0.000719	0.082746	0.019447	0.019447	0.25739	0.25739	−0.00021	−0.00021	−3E−06	−3E−06	−0.00021	−0.00021	0.019659	0.019659
0.286809	0.019914	0.286809	0.000824	0.074704	0.019875	0.019875	0.286812	0.286812	−0.00021	−0.00021	−2.6E−05	−2.6E−05	−0.00024	−0.00024	0.02011	0.02011
0.362127	0.021609	0.362127	0.001271	0.056888	0.021431	0.021431	0.362138	0.362138	−0.00021	−0.00021	−0.00008	−0.00008	−0.00029	−0.00029	0.02172	0.02172
0.442725	0.024477	0.442725	0.001603	0.038744	0.024121	0.024121	0.442745	0.442745	−0.00021	−0.00021	−0.00016	−0.00016	−0.00037	−0.00037	0.024487	0.024487
0.480099	0.026493	0.480099	0.001617	0.028792	0.026062	0.026062	0.480123	0.480123	−0.00021	−0.00021	−0.00017	−0.00017	−0.00038	−0.00038	0.026439	0.026439
0.508764	0.028396	0.508764	0.001865	0.02224	0.027858	0.027858	0.508794	0.508794	−0.00021	−0.00021	−0.0002	−0.0002	−0.00041	−0.00041	0.028263	0.028263
0.517616	0.029136	0.517616	0.001912	0.020538	0.028603	0.028603	0.517646	0.517646	−0.00021	−0.00021	−0.0002	−0.0002	−0.00041	−0.00041	0.029016	0.029016
0.547313	0.032406	0.547313	0.002032	0.016926	0.0318	0.0318	0.547348	0.547348	−0.00021	−0.00021	−0.00023	−0.00023	−0.00044	−0.00044	0.032239	0.032239
0.572599	0.036099	0.572599	0.002208	0.017115	0.035404	0.035404	0.572643	0.572643	−0.00021	−0.00021	−0.00025	−0.00025	−0.00046	−0.00046	0.035865	0.035865
0.593236	0.04049	0.593236	0.0022	0.019997	0.039757	0.039757	0.593286	0.593286	−0.00021	−0.00021	−0.00026	−0.00026	−0.00047	−0.00047	0.040224	0.040224
0.61434	0.045123	0.61434	0.002308	0.024407	0.04435	0.04435	0.614397	0.614397	−0.00021	−0.00021	−0.00028	−0.00028	−0.00049	−0.00049	0.044839	0.044839
0.635867	0.049397	0.635867	0.002346	0.02592	0.04857	0.04857	0.63593	0.63593	−0.00021	−0.00021	−0.00029	−0.00029	−0.0005	−0.0005	0.049071	0.049071
0.655489	0.053799	0.655489	0.002296	0.028362	0.052928	0.052928	0.65556	0.65556	−0.00021	−0.00021	−0.0003	−0.0003	−0.00051	−0.00051	0.053435	0.053435
0.673322	0.058168	0.673322	0.002439	0.030079	0.057258	0.057258	0.6734	0.6734	−0.00021	−0.00021	−0.00029	−0.00029	−0.0005	−0.0005	0.057761	0.057761
0.685424	0.061764	0.685424	0.002378	0.03414	0.060775	0.060775	0.685512	0.685512	−0.00021	−0.00021	−0.0003	−0.0003	−0.00051	−0.00051	0.061287	0.061287
0.696629	0.065903	0.696629	0.002528	0.040026	0.064941	0.064941	0.696719	0.696719	−0.00021	−0.00021	−0.0003	−0.0003	−0.00051	−0.00051	0.065447	0.065447
0.706882	0.069497	0.706882	0.002872	0.044197	0.068511	0.068511	0.706978	0.706978	−0.00021	−0.00021	−0.00029	−0.00029	−0.0005	−0.0005	0.069013	0.069013
0.7193	0.074147	0.7193	0.003151	0.050158	0.073143	0.073143	0.719403	0.719403	−0.00021	−0.00021	−0.00029	−0.00029	−0.0005	−0.0005	0.073647	0.073647
0.730821	0.079217	0.730821	0.002957	0.055074	0.07819	0.07819	0.730932	0.730932	−0.00021	−0.00021	−0.00029	−0.00029	−0.0005	−0.0005	0.07869	0.07869
0.745254	0.084749	0.745254	0.002708	0.054979	0.08371	0.08371	0.745371	0.745371	−0.00021	−0.00021	−0.00029	−0.00029	−0.0005	−0.0005	0.084205	0.084205
0.763647	0.090312	0.763647	0.002598	0.047755	0.089185	0.089185	0.763779	0.763779	−0.00021	−0.00021	−0.00028	−0.00028	−0.00048	−0.00048	0.089669	0.089669
0.774213	0.095217	0.774213	0.003288	0.037319	0.094073	0.094073	0.774353	0.774353	−0.00021	−0.00021	−0.00027	−0.00027	−0.00048	−0.00048	0.094555	0.094555
0.783908	0.100094	0.783908	0.003403	0.030784	0.098919	0.098919	0.784057	0.784057	−0.00021	−0.00021	−0.00026	−0.00026	−0.00047	−0.00047	0.099389	0.099389
0.792518	0.105137	0.792518	0.003535	0.012634	0.103936	0.103936	0.792677	0.792677	−0.00021	−0.00021	−0.00026	−0.00026	−0.00047	−0.00047	0.104407	0.104407
0.793975	0.109546	0.793975	0.00336	0.002889	0.108346	0.108346	0.79414	0.79414	−0.00021	−0.00021	−0.00023	−0.00023	−0.00044	−0.00044	0.108788	0.108788
0.793787	0.114227	0.793787	0.003204	−0.00491	0.113044	0.113044	0.793957	0.793957	−0.00021	−0.00021	−0.00022	−0.00022	−0.00043	−0.00043	0.113473	0.113473
0.7972	0.118794	0.7972	0.003415	−0.0365	0.117585	0.117585	0.797379	0.797379	−0.00021	−0.00021	−0.0002	−0.0002	−0.00041	−0.00041	0.117996	0.117996
0.800303	0.123824	0.800303	0.003468	−0.05386	0.122641	0.122641	0.800485	0.800485	−0.00021	−0.00021	−0.00017	−0.00017	−0.00038	−0.00038	0.123023	0.123023
0.811184	0.129856	0.811184	0.003506	−0.08606	0.128632	0.128632	0.811379	0.811379	−0.00021	−0.00021	−0.00016	−0.00016	−0.00037	−0.00037	0.128999	0.128999
0.811559	0.134596	0.811559	0.003744	−0.0833	0.133385	0.133385	0.811759	0.811759	−0.00021	−0.00021	−0.00014	−0.00014	−0.00035	−0.00035	0.13373	0.13373
0.823395	0.141374	0.823395	0.003036	−0.11459	0.140117	0.140117	0.82361	0.82361	−0.00021	−0.00021	−0.00012	−0.00012	−0.00033	−0.00033	0.140445	0.140445
0.830746	0.147032	0.830746	0.003836	−0.12942	0.145742	0.145742	0.830973	0.830973	−0.00021	−0.00021	−9.9E−05	−9.9E−05	−0.00031	−0.00031	0.146051	0.146051
0.84195	0.15356	0.84195	0.003591	−0.13031	0.15224	0.15224	0.842189	0.842189	−0.00021	−0.00021	−7.1E−05	−7.1E−05	−0.00028	−0.00028	0.152522	0.152522
0.847408	0.159264	0.847408	0.003784	−0.14145	0.157956	0.157956	0.847653	0.847653	−0.00021	−0.00021	−5.6E−05	−5.6E−05	−0.00027	−0.00027	0.158222	0.158222
0.855543	0.165282	0.855543	0.003774	−0.14551	0.163973	0.163973	0.855795	0.855795	−0.00021	−0.00021	−2.8E−05	−2.8E−05	−0.00024	−0.00024	0.164211	0.164211
0.862213	0.170985	0.862213	0.003919	−0.15056	0.169681	0.169681	0.862471	0.862471	−0.00021	−0.00021	−8E−06	−8E−06	−0.00022	−0.00022	0.169898	0.169898
0.868391	0.177579	0.868391	0.003282	−0.15468	0.176289	0.176289	0.868654	0.868654	−0.00021	−0.00021	0.000026	0.000026	−0.00018	−0.00018	0.176473	0.176473

Figure 37: Force Data at M = 0.85 (2).
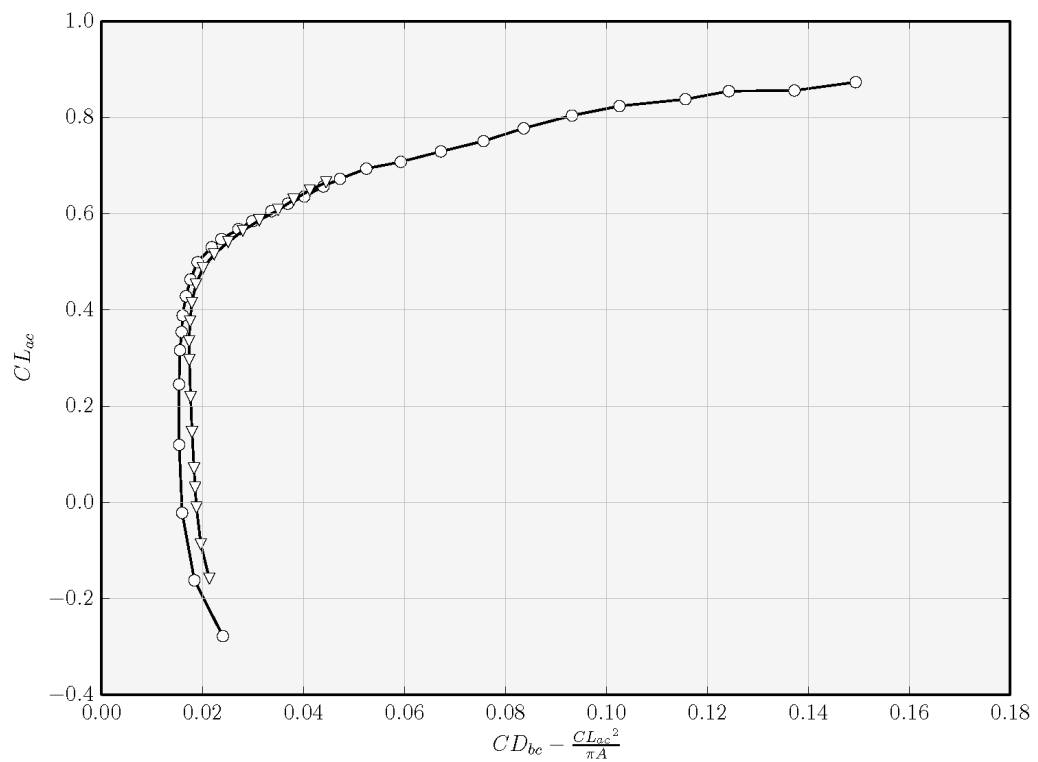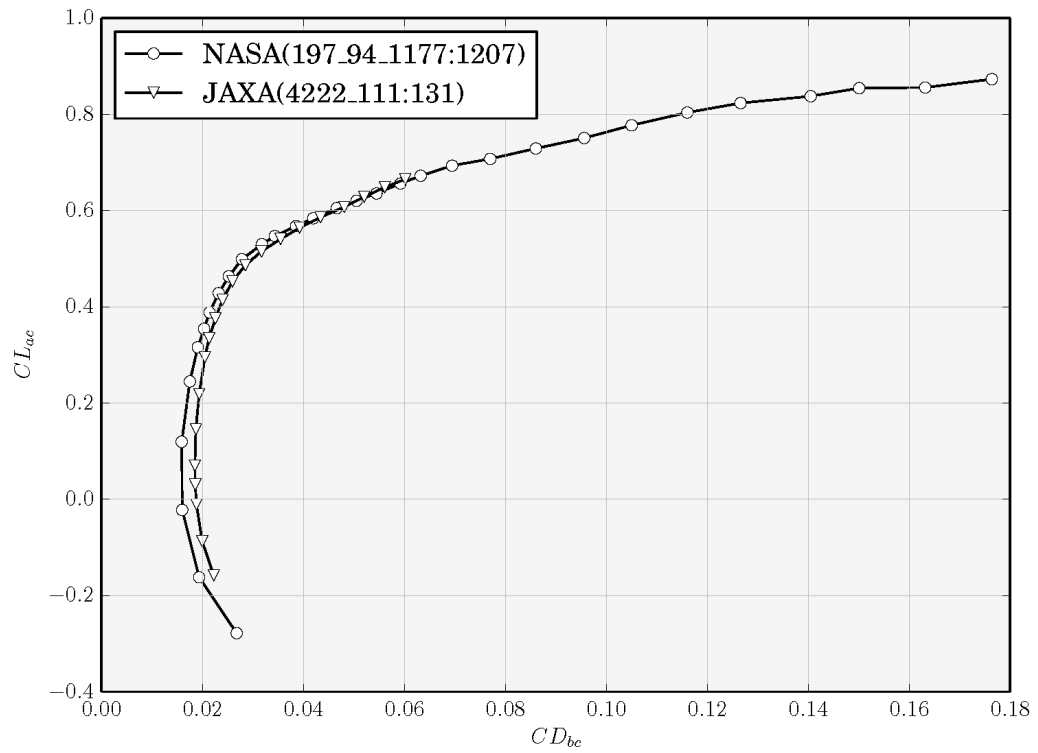
Figure 38: Drag Polar at M = 0.86.
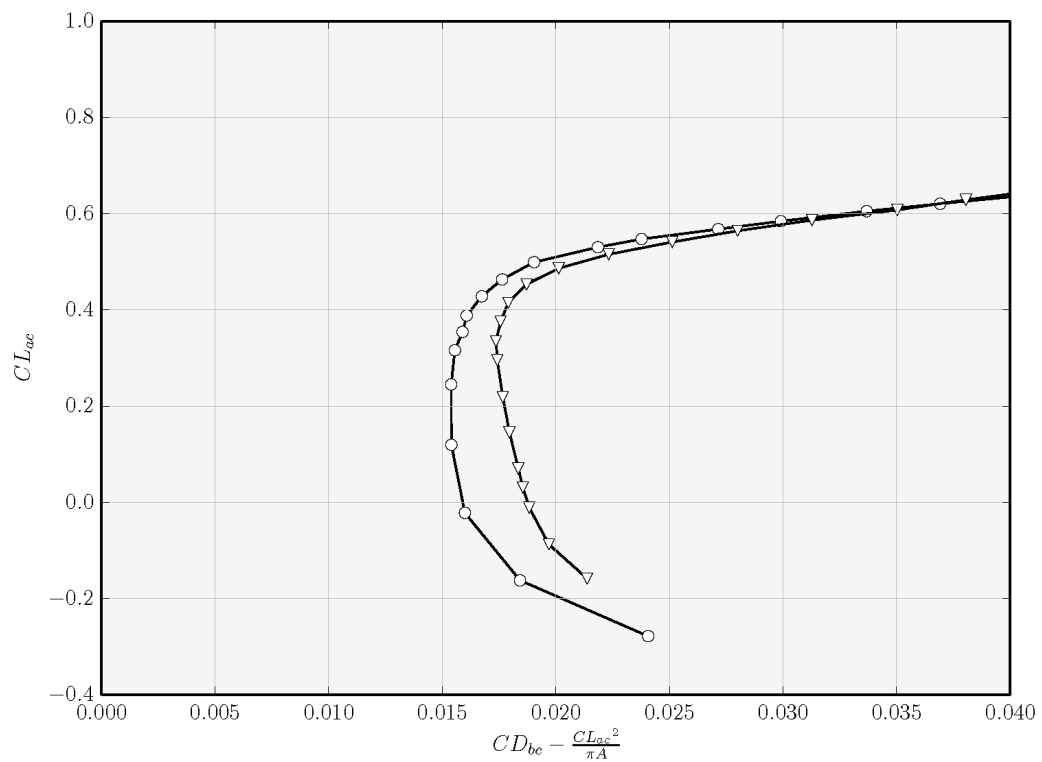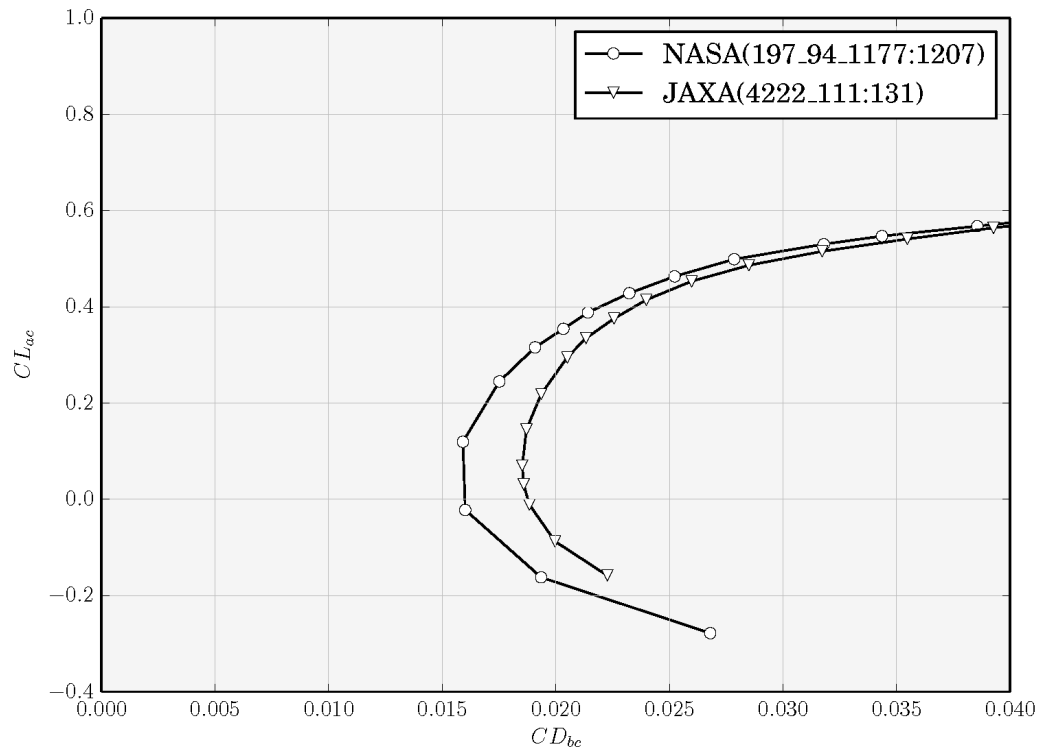
Figure 39: Drag Polar at M = 0.86 (Close-up Image).
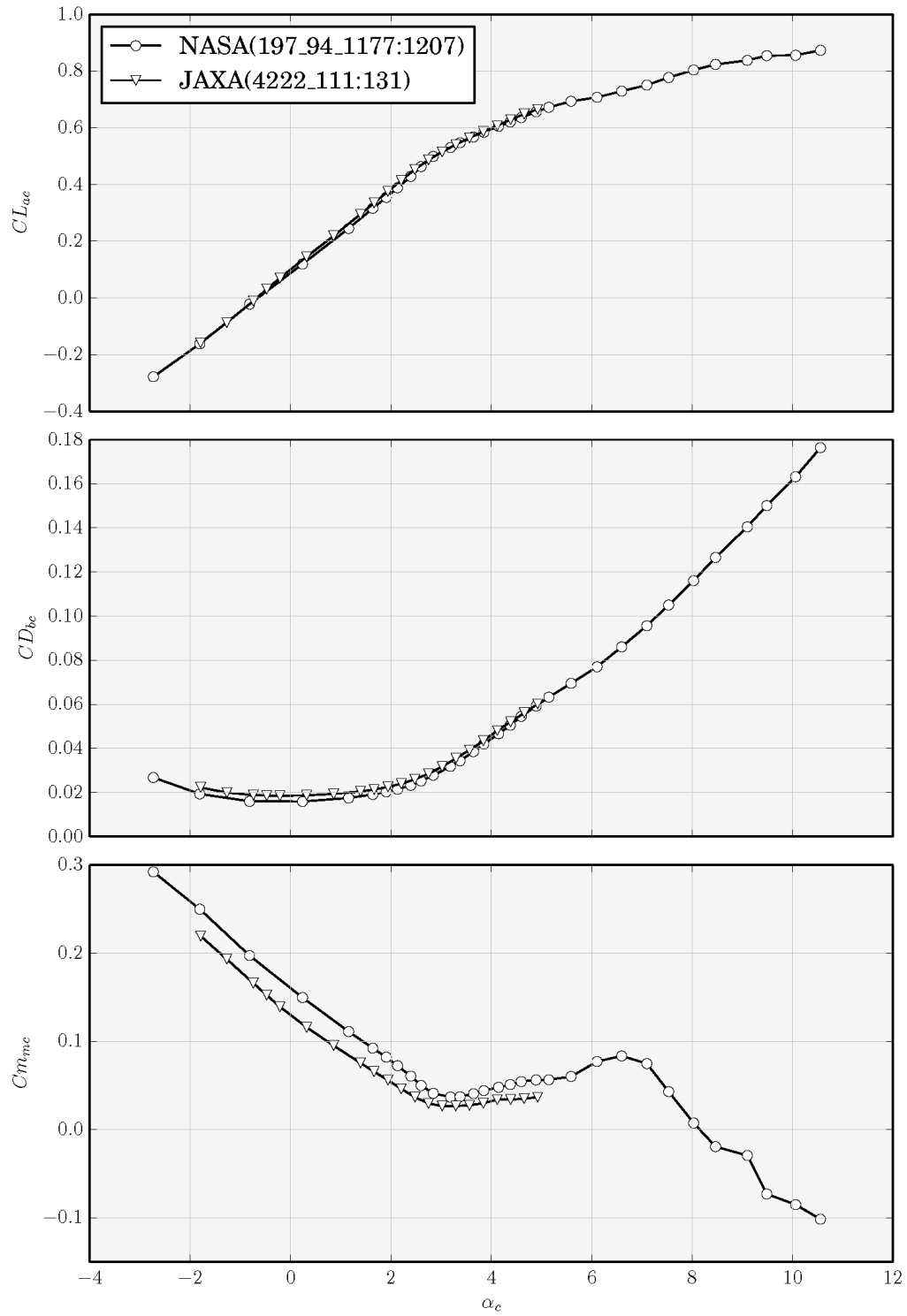
Figure 40: Longitudinal Characteristics at M = 0.86.

Run_number	Measureme	Process_nu	M_pc	Re_c	Q	P0	T0	α	CD	CL	Cm	CDf	CLf	ΔM_d	CD_buoyan	CDf_buoya
4222	111	110	0.859503	2.270281	38.33812	120.0887	324.6464	−1.88511	0.022365	−0.15793	0.218813	0.022365	−0.15793	0.0006	−0.00018	−0.00018
4222	112	111	0.859998	2.269982	38.35404	120.0627	324.6874	−1.34336	0.019922	−0.087	0.192641	0.019922	−0.087	0.0006	−0.00018	−0.00018
4222	113	112	0.860438	2.271276	38.37778	120.0696	324.6128	−0.79619	0.0187	−0.01077	0.16553	0.0187	−0.01077	0.0006	−0.00018	−0.00018
4222	114	113	0.859995	2.270742	38.35411	120.0633	324.6035	−0.51986	0.01841	0.030758	0.15194	0.01841	0.030758	0.0006	−0.00018	−0.00018
4222	115	114	0.860011	2.269516	38.35297	120.0573	324.7297	−0.24485	0.018318	0.069921	0.13879	0.018318	0.069921	0.0006	−0.00018	−0.00018
4222	116	115	0.860126	2.267276	38.35605	120.0493	324.9778	0.305275	0.018475	0.144998	0.115645	0.018475	0.144998	0.0006	−0.00018	−0.00018
4222	117	116	0.85958	2.269594	38.32765	120.0442	324.6387	0.855934	0.019121	0.217985	0.09488	0.019121	0.217985	0.0006	−0.00018	−0.00018
4222	118	117	0.859936	2.268338	38.35109	120.063	324.8638	1.412407	0.020308	0.294237	0.075277	0.020308	0.294237	0.0006	−0.00018	−0.00018
4222	119	118	0.85942	2.267678	38.32051	120.0464	324.8373	1.691669	0.021174	0.333721	0.065337	0.021174	0.333721	0.0006	−0.00018	−0.00018
4222	120	119	0.860379	2.26757	38.37002	120.0544	324.9875	1.973441	0.02242	0.374178	0.055917	0.02242	0.374178	0.0006	−0.00018	−0.00018
4222	121	120	0.859348	2.265937	38.31313	120.0343	324.9977	2.250984	0.02391	0.412848	0.045996	0.02391	0.412848	0.0006	−0.00018	−0.00018
4222	122	121	0.859718	2.267035	38.3332	120.0404	324.9344	2.53073	0.025952	0.451358	0.036586	0.025952	0.451358	0.0006	−0.00018	−0.00018
4222	123	122	0.859813	2.266386	38.33693	120.0374	325.0128	2.806616	0.028511	0.484259	0.029574	0.028511	0.484259	0.0006	−0.00018	−0.00018
4222	124	123	0.86026	2.267097	38.36123	120.0451	325.0057	3.083193	0.03175	0.512941	0.026493	0.03175	0.512941	0.0006	−0.00018	−0.00018
4222	125	124	0.860102	2.263602	38.35126	120.038	325.3627	3.360465	0.035517	0.538334	0.026521	0.035517	0.538334	0.0006	−0.00018	−0.00018
4222	126	125	0.859821	2.263679	38.33308	120.0242	325.2893	3.636908	0.039366	0.561484	0.027379	0.039366	0.561484	0.0006	−0.00018	−0.00018
4222	127	126	0.859335	2.263832	38.30505	120.0109	325.1826	3.913808	0.043506	0.583229	0.029855	0.043506	0.583229	0.0006	−0.00018	−0.00018
4222	128	127	0.859842	2.261642	38.3283	120.006	325.4822	4.191009	0.048152	0.604316	0.03376	0.048152	0.604316	0.0006	−0.00018	−0.00018
4222	129	128	0.859544	2.259152	38.30771	119.9872	325.6848	4.463898	0.052172	0.625111	0.038001	0.052172	0.625111	0.0006	−0.00018	−0.00018
4222	130	129	0.859336	2.258463	38.29798	119.9887	325.7391	4.736084	0.05628	0.644882	0.034933	0.05628	0.644882	0.0006	−0.00018	−0.00018
4222	131	130	0.859651	2.256676	38.30895	119.9747	325.9509	5.006388	0.060326	0.661222	0.036434	0.060326	0.661222	0.0006	−0.00018	−0.00018

M_c0	P_c0	Q_c0	CD_c0	CL_c0	ΔM_wall	Δα_wall	CD_buoyan	CDf_buoya	Δα_upflow	ΔM	Δα	M_c	P_c	Q_c	α_c	CD_mc
0.860103	74.09082	38.36753	0.022348	−0.15781	−0.0028	0.054723	0.000082	0.000082	0.040328	−0.0022	0.095051	0.857308	74.30816	38.23032	−1.79006	0.022428
0.860598	74.03632	38.38345	0.019907	−0.08693	−0.00278	0.034983	0.000085	0.000085	0.040328	−0.00218	0.075311	0.857818	74.25241	38.24712	−1.26805	0.019978
0.861038	74.00634	38.40715	0.018686	−0.01076	−0.00276	0.01631	0.00009	0.00009	0.040328	−0.00216	0.056638	0.858279	74.22076	38.27197	−0.73956	0.018752
0.860595	38.3835	38.3835	0.018396	0.030734	−0.00268	0.00632	0.000082	0.000082	0.040328	−0.00208	0.046648	0.857915	74.2452	38.25211	−0.47321	0.018459
0.860611	74.03197	38.38236	0.018304	0.069867	−0.00285	−0.00521	0.000073	0.000073	0.040328	−0.00225	0.035122	0.857758	74.25371	38.24246	−0.20973	0.018371
0.860726	74.01809	38.38542	0.018461	0.144887	−0.00308	−0.02524	0.000048	0.000048	0.040328	−0.00248	0.015085	0.857649	74.25724	38.23454	0.32036	0.018534
0.86018	74.05734	38.35706	0.019106	0.217818	−0.003	−0.03697	0.000019	0.000019	0.040328	−0.0024	0.003359	0.85718	74.29053	38.20984	0.859293	0.01918
0.860536	74.04131	38.38051	0.020292	0.294011	−0.00329	−0.05768	−3.4E-05	−3.4E-05	0.040328	−0.00269	−0.01736	0.857243	74.29726	38.21896	1.395052	0.020378
0.86002	74.07115	38.34994	0.021158	0.333465	−0.0033	−0.0669	−5.6E-05	−5.6E-05	0.040328	−0.0027	−0.02657	0.856723	74.32742	38.18809	1.6651	0.021247
0.860979	74.00156	38.39941	0.022403	0.373892	−0.00348	−0.07366	−9.1E-05	−9.1E-05	0.040328	−0.00288	−0.03333	0.857499	74.27201	38.2288	1.94011	0.022503
0.859948	74.06931	38.34257	0.023892	0.412531	−0.0035	−0.08444	−0.00012	−0.00012	0.040328	−0.0029	−0.04411	0.856452	74.34102	38.17092	2.206873	0.023999
0.860318	74.04432	38.36262	0.025932	0.451012	−0.00366	−0.09316	−0.00016	−0.00016	0.040328	−0.00306	−0.05283	0.856656	74.3289	38.18291	2.477898	0.026054
0.860413	74.0351	38.36632	0.028489	0.483888	−0.00385	−0.09843	−0.00017	−0.00017	0.040328	−0.00325	−0.0581	0.856564	74.33424	38.17741	2.748519	0.02863
0.86086	74.00507	38.39061	0.031726	0.512548	−0.00409	−0.10302	−0.0002	−0.0002	0.040328	−0.00349	−0.0627	0.856772	74.32277	38.19008	3.020498	0.031892
0.860702	74.013	38.38063	0.03549	0.537922	−0.00424	−0.10637	−0.00023	−0.00023	0.040328	−0.00364	−0.06604	0.856459	74.34271	38.17245	3.294422	0.035683
0.860421	74.02633	38.36249	0.039336	0.561466	−0.00421	−0.11223	−0.00023	−0.00023	0.040328	−0.00361	−0.0719	0.856212	74.35339	38.1559	3.565011	0.039549
0.860442	74.01346	38.35769	0.048115	0.603853	−0.00462	−0.11163	−0.00026	−0.00026	0.040328	−0.00402	−0.0713	0.85582	74.37256	38.13081	4.11971	0.048401
0.860144	74.02502	38.33711	0.052132	0.624632	−0.00487	−0.1205	−0.00026	−0.00026	0.040328	−0.00427	−0.08017	0.855276	74.40326	38.098	4.383724	0.052459
0.859936	74.04206	38.3274	0.056237	0.644387	−0.00481	−0.12031	−0.00027	−0.00027	0.040328	−0.00421	−0.07999	0.855129	74.41558	38.09121	4.656099	0.056586
0.860251	74.00896	38.33833	0.06028	0.660715	−0.00512	−0.12324	−0.00028	−0.00028	0.040328	−0.00451	−0.08291	0.855137	74.40627	38.08716	4.923475	0.060677

CL_mc	CDf_mc	CLf_mc	CY_mc	Cm_mc	CD_ac	CDf_ac	CL_ac	CLf_ac	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_bc	CDf_bc
−0.15838	0.022428	−0.15838	−0.0003	0.21943	0.022165	0.022165	−0.15842	−0.15842	−0.00019	−0.00019	0.000083	0.000083	−0.0001	−0.0001	0.022268	0.022268
−0.08724	0.019978	−0.08724	−0.00014	0.19318	0.019863	0.019863	−0.08727	−0.08727	−0.00019	−0.00019	0.000085	0.000085	−0.0001	−0.0001	0.019963	0.019963
−0.0108	0.018752	−0.0108	−0.00019	0.165988	0.018741	0.018741	−0.01082	−0.01082	−0.00019	−0.00019	0.000091	0.000091	−9.4E-05	−9.4E-05	0.018835	0.018835
0.03084	0.018459	0.03084	−0.00014	0.152345	0.018484	0.018484	0.030825	0.030825	−0.00019	−0.00019	0.000082	0.000082	−0.0001	−0.0001	0.018587	0.018587
0.070123	0.018371	0.070123	−7.6E-05	0.139191	0.018414	0.018414	0.070112	0.070112	−0.00019	−0.00019	0.000074	0.000074	−0.00011	−0.00011	0.018525	0.018525
0.145459	0.018534	0.145459	0.000145	0.116013	0.018572	0.018572	0.145454	0.145454	−0.00019	−0.00019	0.000048	0.000048	−0.00014	−0.00014	0.018709	0.018709
0.218657	0.01918	0.218657	0.000536	0.095173	0.019193	0.019193	0.218656	0.218656	−0.00019	−0.00019	0.000019	0.000019	−0.00017	−0.00017	0.019359	0.019359
0.295254	0.020378	0.295254	0.000844	0.075537	0.020289	0.020289	0.29526	0.29526	−0.00019	−0.00019	−3.4E-05	−3.4E-05	−0.00022	−0.00022	0.020508	0.020508
0.334878	0.021247	0.334878	0.00109	0.065564	0.021092	0.021092	0.334888	0.334888	−0.00019	−0.00019	−5.6E-05	−5.6E-05	−0.00024	−0.00024	0.021334	0.021334
0.37556	0.022503	0.37556	0.0012	0.056124	0.022284	0.022284	0.375573	0.375573	−0.00019	−0.00019	−9.1E-05	−9.1E-05	−0.00028	−0.00028	0.022561	0.022561
0.414386	0.023999	0.414386	0.001386	0.046167	0.02368	0.02368	0.414404	0.414404	−0.00019	−0.00019	−0.00012	−0.00012	−0.0003	−0.0003	0.023982	0.023982
0.453135	0.026054	0.453135	0.00142	0.03673	0.025636	0.025636	0.453158	0.453158	−0.00019	−0.00019	−0.00016	−0.00016	−0.00034	−0.00034	0.025978	0.025978
0.486282	0.02863	0.486282	0.001761	0.029698	0.028137	0.028137	0.486311	0.486311	−0.00019	−0.00019	−0.00017	−0.00017	−0.00036	−0.00036	0.028496	0.028496
0.51524	0.031892	0.51524	0.001732	0.026612	0.031328	0.031328	0.515274	0.515274	−0.00019	−0.00019	−0.00021	−0.00021	−0.00039	−0.00039	0.031718	0.031718
0.540856	0.035683	0.540856	0.001937	0.026645	0.03506	0.03506	0.540896	0.540896	−0.00019	−0.00019	−0.00023	−0.00023	−0.00042	−0.00042	0.035476	0.035476
0.564091	0.039549	0.564091	0.002064	0.027506	0.038841	0.038841	0.56414	0.56414	−0.00019	−0.00019	−0.00024	−0.00024	−0.00042	−0.00042	0.039262	0.039262
0.586226	0.04373	0.586226	0.001961	0.030008	0.042993	0.042993	0.586281	0.586281	−0.00019	−0.00019	−0.00025	−0.00025	−0.00044	−0.00044	0.043432	0.043432
0.607446	0.048401	0.607446	0.001912	0.033935	0.047645	0.047645	0.607506	0.607506	−0.00019	−0.00019	−0.00026	−0.00026	−0.00044	−0.00044	0.048089	0.048089
0.628552	0.052459	0.628552	0.002136	0.033994	0.05158	0.05158	0.628625	0.628625	−0.00019	−0.00019	−0.00026	−0.00026	−0.00045	−0.00045	0.052026	0.052026
0.648383	0.056586	0.648383	0.002166	0.035123	0.05568	0.05568	0.648461	0.648461	−0.00019	−0.00019	−0.00027	−0.00027	−0.00046	−0.00046	0.056135	0.056135
0.665073	0.060677	0.665073	0.002428	0.036646	0.059715	0.059715	0.66516	0.66516	−0.00019	−0.00019	−0.00028	−0.00028	−0.00047	−0.00047	0.06018	0.06018

**Figure 41: Force Data at M = 0.86.**

Figure 42: Drag Polar at M = 0.87.

Figure 43: Drag Polar at M = 0.87 (Close-up Image).

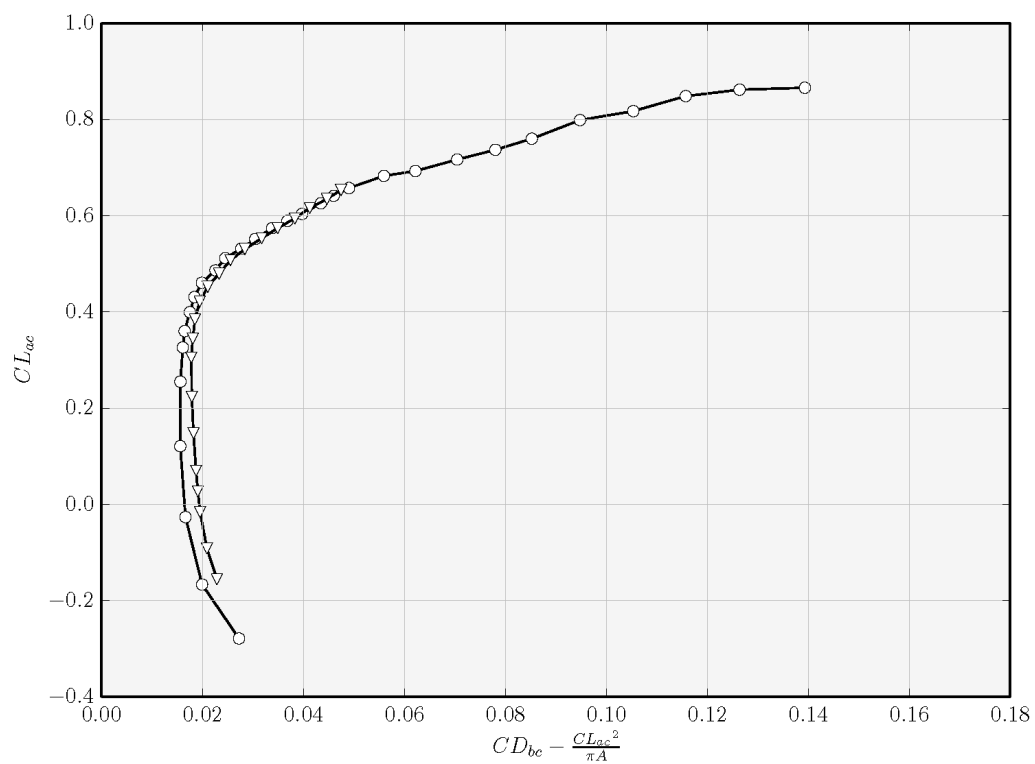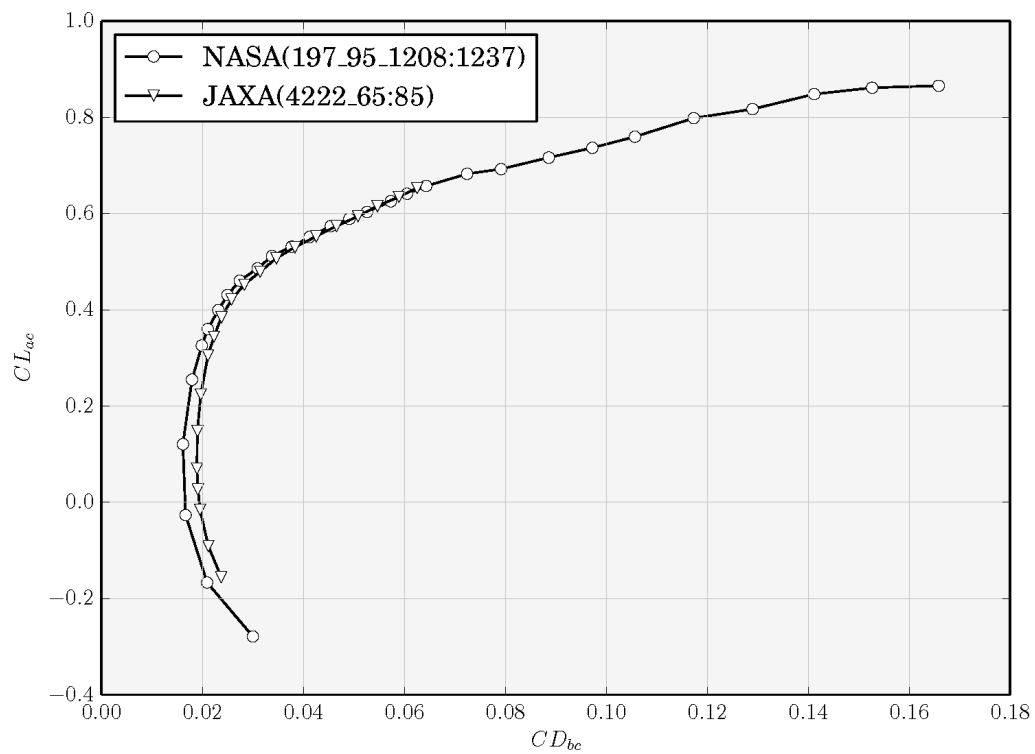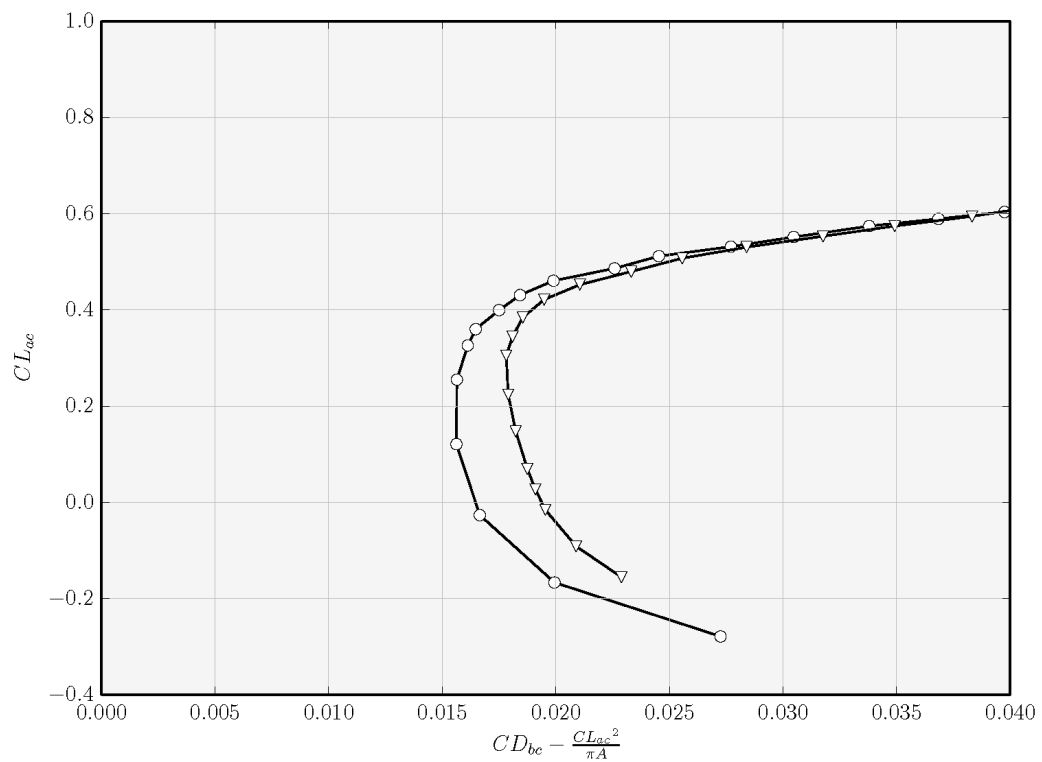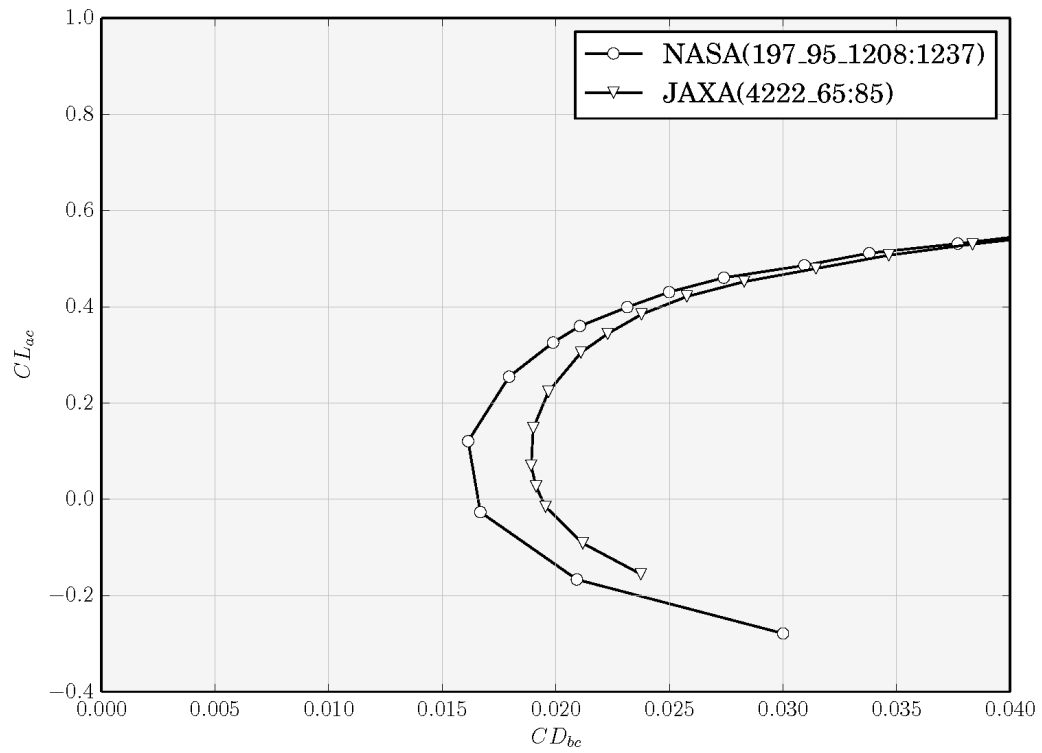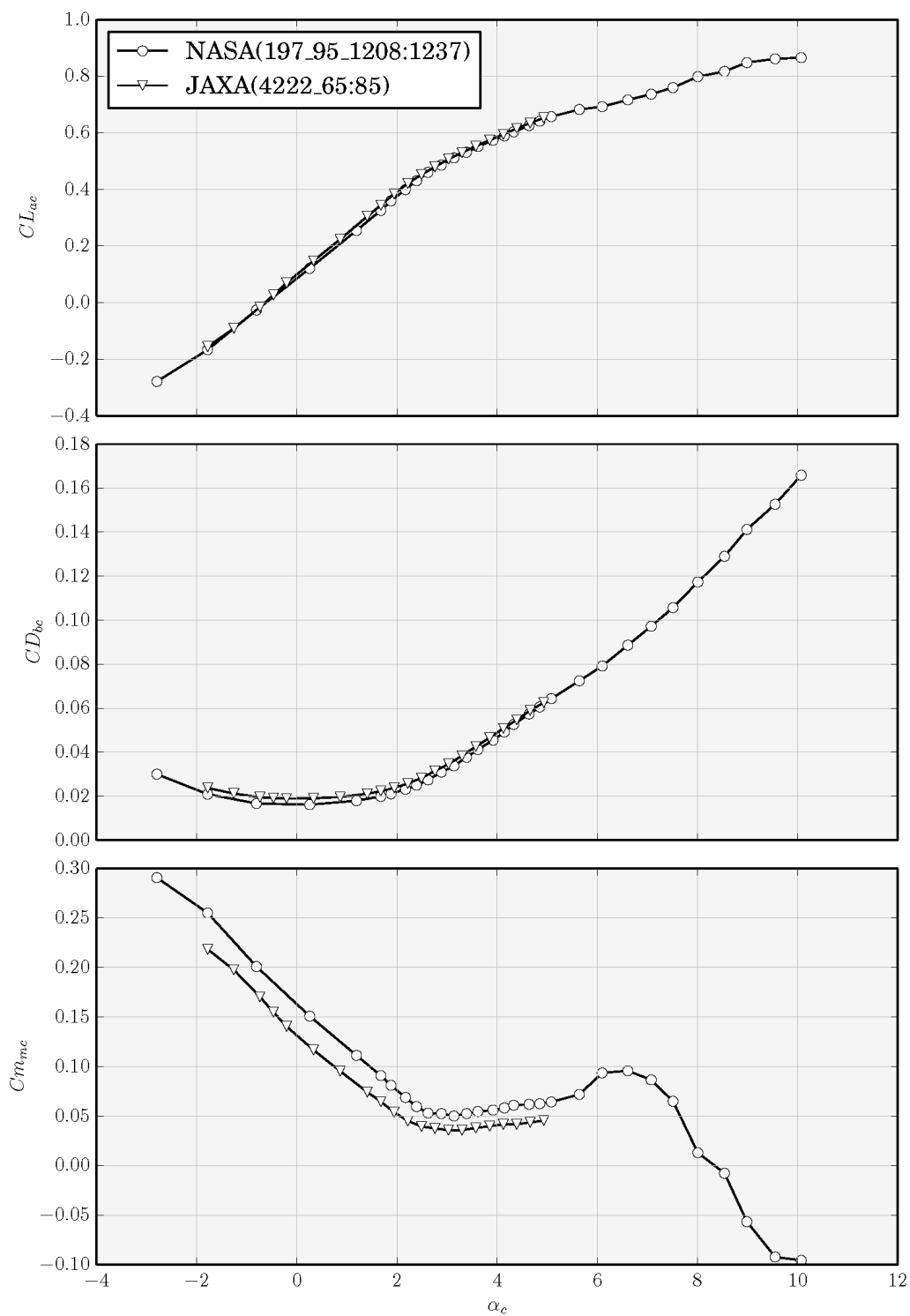**Figure 44: Longitudinal Characteristics at M = 0.87.**

Run_number	Measureme	Process_nu	M_pc	Re_c	Q	P0	T0	α	CD	CL	Cm	CDf	CLf	ΔM_d	CD_buoyan	CDf_buoya
4222	65	64	0.869284	2.289103	38.77421	119.966	323.5105	−1.88092	0.023862	−0.15499	0.217679	0.023862	−0.15499	0.000661	−0.00016	−0.00016
4222	66	65	0.869761	2.28949	38.80449	119.9884	323.573	−1.33996	0.021181	−0.09099	0.197106	0.021181	−0.09099	0.000661	−0.00016	−0.00016
4222	67	66	0.870337	2.285706	38.82527	119.967	324.0153	−0.79394	0.01941	−0.01561	0.169878	0.01941	−0.01561	0.000661	−0.00016	−0.00016
4222	68	67	0.870406	2.288761	38.83345	119.982	323.7178	−0.51773	0.018955	0.0267	0.154474	0.018955	0.0267	0.000661	−0.00016	−0.00016
4222	69	68	0.87036	2.290178	38.83481	119.993	323.5791	−0.24021	0.018712	0.069669	0.140084	0.018712	0.069669	0.000661	−0.00016	−0.00016
4222	70	69	0.869987	2.289501	38.81979	120.0022	323.6279	0.312029	0.018772	0.147182	0.116472	0.018772	0.147182	0.000661	−0.00016	−0.00016
4222	71	70	0.869995	2.287775	38.82427	120.0148	323.8459	0.866902	0.019456	0.223027	0.095092	0.019456	0.223027	0.000661	−0.00016	−0.00016
4222	72	71	0.869563	2.286646	38.79768	119.997	323.8809	1.426072	0.020923	0.30395	0.074053	0.020923	0.30395	0.000661	−0.00016	−0.00016
4222	73	72	0.87057	2.284227	38.836	119.9656	324.2041	1.70629	0.022127	0.342885	0.064383	0.022127	0.342885	0.000661	−0.00016	−0.00016
4222	74	73	0.869993	2.281382	38.79721	119.9315	324.3777	1.985143	0.023678	0.382892	0.053623	0.023678	0.382892	0.000661	−0.00016	−0.00016
4222	75	74	0.86985	2.281459	38.80752	119.9846	324.464	2.263957	0.025708	0.419682	0.045007	0.025708	0.419682	0.000661	−0.00016	−0.00016
4222	76	75	0.870239	2.284303	38.83799	120.0208	324.2722	2.540363	0.028242	0.450283	0.039391	0.028242	0.450283	0.000661	−0.00016	−0.00016
4222	77	76	0.8704	2.284001	38.86292	120.074	324.4372	2.817308	0.031459	0.477425	0.037365	0.031459	0.477425	0.000661	−0.00016	−0.00016
4222	78	77	0.869421	2.281608	38.80774	120.0492	324.5316	3.094274	0.03472	0.504962	0.03568	0.03472	0.504962	0.000661	−0.00016	−0.00016
4222	79	78	0.870107	2.280304	38.81074	119.9562	324.5635	3.368996	0.038414	0.527588	0.03563	0.038414	0.527588	0.000661	−0.00016	−0.00016
4222	80	79	0.870104	2.279275	38.81146	119.959	324.6834	3.64672	0.042657	0.550111	0.037927	0.042657	0.550111	0.000661	−0.00016	−0.00016
4222	81	80	0.869912	2.279393	38.84594	120.0941	324.9323	3.922644	0.046665	0.571174	0.039601	0.046665	0.571174	0.000661	−0.00016	−0.00016
4222	82	81	0.870178	2.280683	38.86254	120.1058	324.8457	4.197036	0.050906	0.591223	0.041566	0.050906	0.591223	0.000661	−0.00016	−0.00016
4222	83	82	0.869968	2.277126	38.81447	119.9886	324.9683	4.46939	0.054808	0.612274	0.041492	0.054808	0.612274	0.000661	−0.00016	−0.00016
4222	84	83	0.870816	2.278005	38.8542	119.9852	324.9661	4.744239	0.059105	0.630964	0.043426	0.059105	0.630964	0.000661	−0.00016	−0.00016
4222	85	84	0.869292	2.274015	38.8124	120.0829	325.4327	5.015343	0.062719	0.649374	0.045195	0.062719	0.649374	0.000661	−0.00016	−0.00016

M_c0	P_c0	Q_c0	CD_c0	CL_c0	ΔM_wall	Δα_wall	CD_buoyan	CDf_buoya	Δα_upflow	ΔM	Δα	M_c	P_c	Q_c	α_c	CD_mc
0.869945	73.25177	38.80607	0.023842	−0.15486	−0.00333	0.061883	0.00008	0.00008	0.040328	−0.00267	0.102211	0.866611	73.51022	38.64504	−1.77871	0.023942
0.870422	73.2285	38.83629	0.021164	−0.09091	−0.00306	0.04149	0.000088	0.000088	0.040328	−0.0024	0.081818	0.867366	73.4654	38.68882	−1.25814	0.021244
0.870998	73.17079	38.85707	0.019394	−0.0156	−0.00306	0.018135	0.000063	0.000063	0.040328	−0.00239	0.058463	0.867943	73.40754	38.70981	−0.73548	0.019468
0.871067	73.1746	38.86524	0.018939	0.026678	−0.00298	0.01116	0.000067	0.000067	0.040328	−0.00232	0.051488	0.868091	73.40526	38.72179	−0.46624	0.01901
0.871021	73.18487	38.8666	0.018697	0.069612	−0.00303	−0.00417	0.000054	0.000054	0.040328	−0.00237	0.036161	0.867987	73.42006	38.72031	−0.20405	0.018767
0.870648	73.21936	38.85161	0.018757	0.147061	−0.00299	−0.01958	0.000033	0.000033	0.040328	−0.00233	0.020751	0.86766	73.45102	38.70745	0.33278	0.018826
0.870656	73.22642	38.85608	0.01944	0.222844	−0.00319	−0.04179	−3E−06	−3E−06	0.040328	−0.00253	−0.00146	0.867465	73.47385	38.70209	0.865441	0.019517
0.870224	73.24908	38.82954	0.020906	0.303666	−0.00324	−0.05896	−5.6E−05	−5.6E−05	0.040328	−0.00257	−0.01863	0.866989	73.49988	38.67335	1.407441	0.02099
0.871231	73.15187	38.86781	0.022109	0.342604	−0.00359	−0.06891	−8.8E−05	−8.8E−05	0.040328	−0.00293	−0.02858	0.867644	73.42981	38.69492	1.677708	0.022208
0.870654	73.17578	38.82903	0.023659	0.382578	−0.00358	−0.08112	−0.00012	−0.00012	0.040328	−0.00292	−0.0408	0.867073	73.45327	38.65628	1.944348	0.023764
0.870511	73.21929	38.83935	0.025687	0.419338	−0.00381	−0.0878	−0.00015	−0.00015	0.040328	−0.00315	−0.04747	0.866704	73.51438	38.65558	2.216488	0.025809
0.8709	73.21121	38.86978	0.028219	0.449915	−0.0041	−0.09162	−0.00017	−0.00017	0.040328	−0.00344	−0.05129	0.866797	73.52932	38.67174	2.489071	0.028363
0.871061	73.23117	38.89476	0.031433	0.477034	−0.00412	−0.09875	−0.00018	−0.00018	0.040328	−0.00346	−0.05842	0.866938	73.551	38.69569	2.758887	0.031595
0.870082	73.29195	38.83958	0.034692	0.504548	−0.00407	−0.10585	−0.00021	−0.00021	0.040328	−0.00341	−0.06552	0.86601	73.6078	38.64273	3.028751	0.034868
0.870768	73.18204	38.84252	0.038383	0.527156	−0.00461	−0.10972	−0.00022	−0.00022	0.040328	−0.00395	−0.06939	0.866162	73.53898	38.62019	3.299602	0.038604
0.870765	73.18399	38.84328	0.042622	0.54966	−0.00461	−0.11158	−0.00023	−0.00023	0.040328	−0.00395	−0.07125	0.866154	73.54138	38.62067	3.575473	0.042868
0.870573	73.28128	38.87777	0.046627	0.570706	−0.00457	−0.11322	−0.00025	−0.00025	0.040328	−0.00391	−0.07289	0.866005	73.63576	38.65692	3.849755	0.046893
0.870839	73.26777	38.89436	0.050864	0.590739	−0.00471	−0.11355	−0.00024	−0.00024	0.040328	−0.00405	−0.07323	0.866127	73.63345	38.6666	4.12381	0.051164
0.870629	73.21254	38.8463	0.054763	0.611772	−0.00501	−0.11943	−0.00026	−0.00026	0.040328	−0.00435	−0.07911	0.865622	73.6007	38.60441	4.390285	0.055106
0.871477	73.14475	38.88597	0.059057	0.630448	−0.00521	−0.12546	−0.00026	−0.00026	0.040328	−0.00454	−0.08513	0.866272	73.5482	38.63481	4.659112	0.059441
0.869953	73.32252	38.84426	0.062668	0.648841	−0.00512	−0.1254	−0.00026	−0.00026	0.040328	−0.00446	−0.08507	0.864833	73.71985	38.5964	4.930274	0.06307

CL_mc	CDf_mc	CLf_mc	CY_mc	Cm_mc	CD_ac	CDf_ac	CL_ac	CLf_ac	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_buoyan	CDf_buoya	CD_bc	CDf_bc
−0.1555	0.023942	−0.1555	−0.00026	0.218407	0.023664	0.023664	−0.15555	−0.15555	−0.00016	−0.00016	0.00008	0.00008	−8.1E−05	−8.1E−05	0.023745	0.023745
−0.09126	0.021244	−0.09126	−0.00014	0.197695	0.021114	0.021114	−0.09129	−0.09129	−0.00016	−0.00016	0.000088	0.000088	−7.3E−05	−7.3E−05	0.021187	0.021187
−0.01566	0.019468	−0.01566	−0.00028	0.170385	0.019452	0.019452	−0.01568	−0.01568	−0.00016	−0.00016	0.000063	0.000063	−9.8E−05	−9.8E−05	0.01955	0.01955
0.026777	0.01901	0.026777	−9.9E−05	0.154919	0.019034	0.019034	0.02676	0.02676	−0.00016	−0.00016	0.000067	0.000067	−9.4E−05	−9.4E−05	0.019128	0.019128
0.069875	0.018767	0.069875	0.000125	0.140498	0.018811	0.018811	0.069863	0.069863	−0.00016	−0.00016	0.000054	0.000054	−0.00011	−0.00011	0.018918	0.018918
0.147609	0.018826	0.147609	0.000352	0.11681	0.01888	0.01888	0.147602	0.147602	−0.00016	−0.00016	0.000033	0.000033	−0.00013	−0.00013	0.019008	0.019008
0.223731	0.019517	0.223731	0.000692	0.095392	0.019512	0.019512	0.223732	0.223732	−0.00016	−0.00016	−3E−06	−3E−06	−0.00016	−0.00016	0.019676	0.019676
0.304892	0.02099	0.304892	0.00122	0.074291	0.020891	0.020891	0.304899	0.304899	−0.00016	−0.00016	−5.6E−05	−5.6E−05	−0.00022	−0.00022	0.021108	0.021108
0.344135	0.022208	0.344135	0.001087	0.064618	0.022036	0.022036	0.344146	0.344146	−0.00016	−0.00016	−8.8E−05	−8.8E−05	−0.00025	−0.00025	0.022285	0.022285
0.384288	0.023764	0.384288	0.001381	0.053818	0.023491	0.023491	0.384305	0.384305	−0.00016	−0.00016	−0.00012	−0.00012	−0.00028	−0.00028	0.023769	0.023769
0.421332	0.025809	0.421332	0.001554	0.045184	0.02546	0.02546	0.421353	0.421353	−0.00016	−0.00016	−0.00015	−0.00015	−0.00031	−0.00031	0.025768	0.025768
0.452219	0.028363	0.452219	0.001563	0.03956	0.027959	0.027959	0.452244	0.452244	−0.00016	−0.00016	−0.00017	−0.00017	−0.00033	−0.00033	0.028292	0.028292
0.479488	0.031595	0.479488	0.001664	0.037526	0.031106	0.031106	0.47952	0.47952	−0.00016	−0.00016	−0.00018	−0.00018	−0.00034	−0.00034	0.03145	0.03145
0.507118	0.034868	0.507118	0.001925	0.035832	0.034288	0.034288	0.507158	0.507158	−0.00016	−0.00016	−0.00021	−0.00021	−0.00037	−0.00037	0.034657	0.034657
0.530191	0.038604	0.530191	0.001957	0.035806	0.037961	0.037961	0.530237	0.530237	−0.00016	−0.00016	−0.00022	−0.00022	−0.00038	−0.00038	0.038344	0.038344
0.552829	0.042868	0.552829	0.002048	0.038114	0.04218	0.04218	0.552881	0.552881	−0.00016	−0.00016	−0.00023	−0.00023	−0.00039	−0.00039	0.042573	0.042573
0.573967	0.046893	0.573967	0.002007	0.039795	0.046163	0.046163	0.574026	0.574026	−0.00016	−0.00016	−0.00025	−0.00025	−0.00041	−0.00041	0.046571	0.046571
0.594219	0.051164	0.594219	0.002065	0.041777	0.050404	0.050404	0.594284	0.594284	−0.00016	−0.00016	−0.00024	−0.00024	−0.00041	−0.00041	0.05081	0.05081
0.615606	0.055106	0.615606	0.002302	0.041718	0.054256	0.054256	0.615681	0.615681	−0.00016	−0.00016	−0.00026	−0.00026	−0.00042	−0.00042	0.054679	0.054679
0.634547	0.059441	0.634547	0.002193	0.043673	0.058498	0.058498	0.634634	0.634634	−0.00016	−0.00016	−0.00026	−0.00026	−0.00043	−0.00043	0.058924	0.058924
0.653008	0.06307	0.653008	0.002425	0.045448	0.0621	0.0621	0.653101	0.653101	−0.00016	−0.00016	−0.00027	−0.00027	−0.00043	−0.00043	0.062527	0.062527

Figure 45: Force Data at M = 0.87.
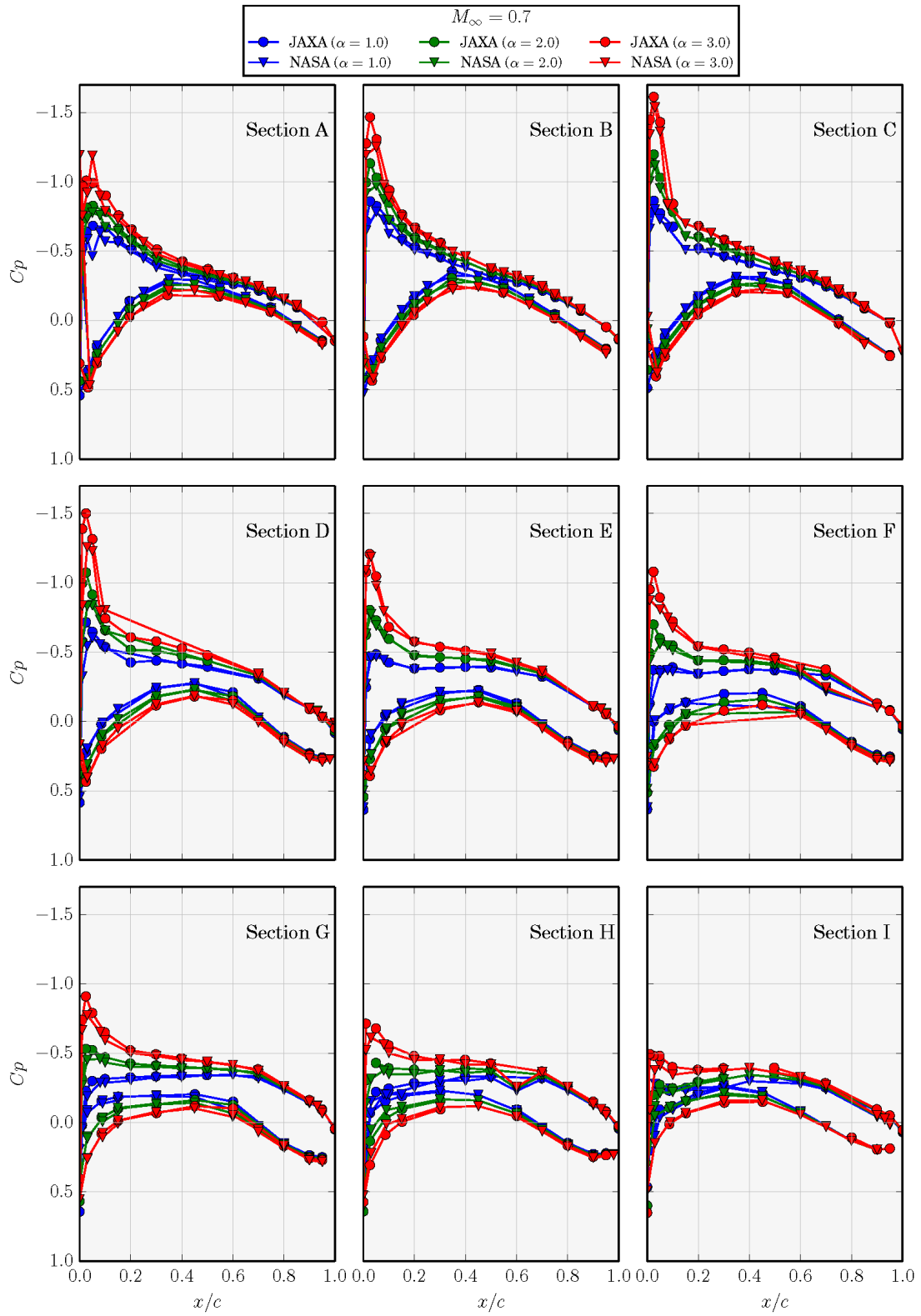
A.2.   PRESSURE

Figure 46: Pressure Distribution on Main Wing at M = 0.7.

Normazlied x	1	0.950507	0.851195	0.751801	0.702104	0.602548	0.50291	0.403232	0.30339	0.203346	0.153201
−1.873091714	0.147301	0.011637	−0.07027	−0.13304	−0.16052	−0.18999	−0.219	−0.23572	−0.2694	−0.32534	−0.34982
−1.349047545	0.147508	0.010351	−0.07529	−0.14156	−0.17078	−0.20333	−0.23527	−0.25556	−0.29375	−0.35728	−0.38708
−0.831591789	0.148105	0.010162	−0.0793	−0.14879	−0.1796	−0.21545	−0.25073	−0.27454	−0.31778	−0.38907	−0.42454
−0.56801315	0.148281	0.010176	−0.08148	−0.1528	−0.18454	−0.22219	−0.25933	−0.28532	−0.33142	−0.4074	−0.44637
−0.291354095	0.148291	0.01006	−0.08375	−0.15695	−0.1895	−0.22889	−0.26774	−0.29568	−0.34423	−0.42445	−0.46648
0.241930526	0.148023	0.009401	−0.08904	−0.16641	−0.20104	−0.24407	−0.28659	−0.31905	−0.37379	−0.46378	−0.51346
0.770782632	0.148066	0.009508	−0.09295	−0.17391	−0.21042	−0.25723	−0.30327	−0.34	−0.40045	−0.49924	−0.55613
1.312116321	0.147965	0.009684	−0.09662	−0.18136	−0.21983	−0.27022	−0.3198	−0.36092	−0.42749	−0.53616	−0.60169
2.347139611	0.148056	0.010233	−0.10283	−0.19436	−0.23639	−0.29416	−0.35085	−0.40041	−0.47802	−0.60767	−0.69192
2.609370714	0.148113	0.010431	−0.10427	−0.19757	−0.24036	−0.30013	−0.35879	−0.41052	−0.49095	−0.62537	−0.71534
2.886579667	0.148167	0.010635	−0.10565	−0.20066	−0.24439	−0.30598	−0.36674	−0.42077	−0.50481	−0.6456	−0.7426
3.223004	0.149323	0.012265	−0.10685	−0.20491	−0.25017	−0.31517	−0.3794	−0.43791	−0.52767	−0.67873	−0.78826

(Angle of attack labels the first column.)

0.102853	0.05218	0.026578	0.01103	0	0.03309	0.067199	0.195246	0.344377	0.545281	0.747405	0.949652
−0.37311	−0.31946	−0.20013	−0.01018	0.723005	0.150021	−0.02212	−0.31351	−0.4154	−0.31542	−0.13733	0.126857
−0.42098	−0.37756	−0.26891	−0.08836	0.704837	0.190438	0.015946	−0.28278	−0.39093	−0.30119	−0.13023	0.129872
−0.46975	−0.43744	−0.34139	−0.1722	0.680154	0.230656	0.054534	−0.25008	−0.36475	−0.28525	−0.12215	0.133461
−0.4984	−0.47265	−0.38453	−0.22158	0.663593	0.252331	0.075569	−0.23269	−0.35004	−0.27664	−0.11776	0.135374
−0.52508	−0.50566	−0.42481	−0.26809	0.646981	0.272333	0.095028	−0.21618	−0.33667	−0.26861	−0.11387	0.136907
−0.58776	−0.58114	−0.51573	−0.37404	0.605745	0.311849	0.133738	−0.18348	−0.31094	−0.25324	−0.106	0.139971
−0.64567	−0.65088	−0.60065	−0.47534	0.561937	0.347493	0.168819	−0.15357	−0.28622	−0.23815	−0.09803	0.143232
−0.70712	−0.72624	−0.69226	−0.58574	0.510929	0.382131	0.203486	−0.12279	−0.26132	−0.22244	−0.08984	0.146623
−0.82299	−0.87706	−0.87406	−0.80673	0.399249	0.443701	0.266923	−0.06542	−0.21426	−0.19206	−0.07352	0.153104
−0.85081	−0.91683	−0.92193	−0.86507	0.36775	0.45838	0.282037	−0.05137	−0.20277	−0.18475	−0.06962	0.154713
−0.88382	−0.96421	−0.97793	−0.9341	0.33184	0.475096	0.299296	−0.03595	−0.19009	−0.17676	−0.06544	0.156301
−0.93329	−1.04334	−1.07027	−1.05024	0.268365	0.501436	0.32765	−0.00883	−0.1669	−0.16117	−0.05641	0.160318

Figure 47: Pressure Coefficient of Section A at M = 0.70.

Normalized x	1	0.95036	0.850897	0.751435	0.701658	0.602058	0.502368	0.402587	0.302669	0.202477	0.152291
−1.87309	0.145069	0.052495	−0.04627	−0.12626	−0.16253	−0.20414	−0.22398	nan	−0.30143	−0.3252	−0.34566
−1.34905	0.144082	0.05132	−0.05096	−0.13446	−0.17248	−0.21746	−0.24067	nan	−0.32795	−0.36024	−0.38597
−0.83159	0.143468	0.051083	−0.05449	−0.14141	−0.18103	−0.22954	−0.25624	nan	−0.35372	−0.39489	−0.427
−0.56801	0.142985	0.050851	−0.05662	−0.14538	−0.18606	−0.23667	−0.26535	nan	−0.36885	−0.41452	−0.45104
−0.29135	0.142328	0.050234	−0.05873	−0.14932	−0.19084	−0.24344	−0.27406	nan	−0.38293	−0.43316	−0.47307
0.241931	0.14059	0.049204	−0.06339	−0.1581	−0.20164	−0.25857	−0.29362	nan	−0.41499	−0.47522	−0.52382
0.770783	0.139398	0.048775	−0.06694	−0.16501	−0.21044	−0.27104	−0.3101	nan	−0.44265	−0.51257	−0.56898
1.312116	0.137798	0.048428	−0.07039	−0.17201	−0.21919	−0.28383	−0.32731	nan	−0.47199	−0.55143	−0.61668
2.34714	0.134153	0.047473	−0.07626	−0.18408	−0.23473	−0.30714	−0.3585	nan	−0.52547	−0.6223	−0.69995
2.609371	0.133029	0.047196	−0.07726	−0.18653	−0.23803	−0.31224	−0.36575	nan	−0.53845	−0.63999	−0.72307
2.88658	0.13137	0.046615	−0.0786	−0.18935	−0.24152	−0.31799	−0.3737	nan	−0.55298	−0.66068	−0.75077
3.223004	0.129933	0.046408	−0.07954	−0.19248	−0.24601	−0.32574	−0.38532	nan	−0.57443	−0.68988	−0.78849

(Angle of attack labels the first column.)

0.102013	0.051507	0.026095	0.010702	0	0.033792	0.068221	0.196921	0.346343	0.546908	0.748383	0.949859
−0.37989	−0.35458	−0.26131	−0.04703	0.625636	0.061174	−0.08293	−0.3401	−0.51456	−0.35665	−0.08461	0.188569
−0.43333	−0.42666	−0.3494	−0.14243	0.612431	0.11027	−0.03958	−0.30562	−0.48661	−0.34119	−0.07815	0.191351
−0.48831	−0.5024	−0.44425	−0.24769	0.587809	0.157751	0.003273	−0.27049	−0.45655	−0.324	−0.07054	0.194311
−0.51969	−0.54653	−0.49987	−0.31027	0.570628	0.183723	0.026676	−0.25015	−0.44052	−0.31488	−0.06651	0.196008
−0.55016	−0.58864	−0.55384	−0.37097	0.551523	0.207973	0.04845	−0.23235	−0.42509	−0.30621	−0.06304	0.19745
−0.62355	−0.68732	−0.67988	−0.51491	0.50037	0.252926	0.090669	−0.19905	−0.39583	−0.28898	−0.05557	0.199792
−0.69387	−0.78077	−0.80073	−0.65152	0.444428	0.292109	0.127722	−0.16926	−0.36798	−0.27295	−0.0483	0.202334
−0.77119	−0.88439	−0.93763	−0.80193	0.375431	0.330067	0.164545	−0.13817	−0.34019	−0.25588	−0.04073	0.205042
−0.89023	−1.10298	−1.23143	−1.09349	0.227709	0.395191	0.231061	−0.07824	−0.2878	−0.22381	−0.02567	0.210068
−0.91356	−1.16613	−1.31747	−1.1542	0.187849	0.410201	0.246704	−0.06349	−0.27484	−0.21559	−0.02206	0.21121
−0.93305	−1.25123	−1.4151	−1.23773	0.142143	0.426433	0.263648	−0.04808	−0.26108	−0.20678	−0.01786	0.212279
−0.95247	−1.41596	−1.57042	−1.35297	0.062649	0.452111	0.292011	−0.02044	−0.23589	−0.19043	−0.00963	0.214667

Figure 48: Pressure Coefficient of Section B at M = 0.70.

Normalized x	1	0.950309	0.850663	0.750965	0.701115	0.601364	0.501507	0.401596	0.301581	0.201406	0.151292
−1.87309	nan	0.021154	−0.061	−0.14629	−0.18703	−0.22616	−0.25099	−0.2766	−0.29069	−0.29193	nan
−1.34905	nan	0.020301	−0.06619	−0.15536	−0.19776	−0.24107	−0.26994	−0.30037	−0.32061	−0.33025	nan
−0.83159	nan	0.020029	−0.07046	−0.16337	−0.20776	−0.25465	−0.28793	−0.32371	−0.34977	−0.36891	nan
−0.56801	nan	0.019897	−0.07282	−0.16782	−0.2134	−0.2628	−0.29821	−0.33717	−0.3667	−0.39107	nan
−0.29135	nan	0.019419	−0.07519	−0.17204	−0.21866	−0.27026	−0.3077	−0.34956	−0.38231	−0.41168	nan
0.241931	nan	0.018569	−0.08048	−0.18178	−0.23079	−0.28742	−0.3297	−0.37753	−0.41852	−0.45914	nan
0.770783	nan	0.018543	−0.08426	−0.18957	−0.2406	−0.30181	−0.34934	−0.4024	−0.45121	−0.50235	nan
1.312116	nan	0.018602	−0.08802	−0.19719	−0.25044	−0.31635	−0.36901	−0.42792	−0.48407	−0.54669	nan
2.34714	nan	0.019393	−0.09314	−0.20889	−0.26591	−0.34171	−0.40483	−0.47548	−0.54603	−0.63203	nan
2.609371	nan	0.019475	−0.09399	−0.21111	−0.26903	−0.34745	−0.41317	−0.48652	−0.56052	−0.65219	nan
2.88658	nan	0.019423	−0.09472	−0.2135	−0.27235	−0.35363	−0.42175	−0.49796	−0.57586	−0.673	nan
3.223004	nan	0.019992	−0.09489	−0.21574	−0.27612	−0.36148	−0.43366	−0.51456	−0.59821	−0.70116	nan

0.101126	0.050854	0.025638	0.010414	0	0.034413	0.069144	0.198499	0.348205	0.548448	0.74922	0.950045
−0.30799	−0.25892	−0.17605	0.028013	0.597683	−0.06811	−0.15507	−0.3815	−0.48212	−0.36393	−0.04571	0.22966
−0.36904	−0.33645	−0.27288	−0.0802	0.611514	−0.00265	−0.10222	−0.34233	−0.45127	−0.34746	−0.03968	0.233345
−0.43078	−0.4188	−0.38058	−0.20173	0.609465	0.05998	−0.0507	−0.30288	−0.41921	−0.32902	−0.03224	0.237452
−0.46519	−0.4665	−0.44317	−0.27346	0.603111	0.093227	−0.02279	−0.28119	−0.40156	−0.31905	−0.02843	0.239441
−0.49652	−0.51151	−0.50285	−0.34437	0.593102	0.124289	0.003419	−0.26113	−0.3853	−0.3096	−0.02489	0.241301
−0.57283	−0.61914	−0.64797	−0.52045	0.558571	0.181782	0.052898	−0.22131	−0.35376	−0.29154	−0.01756	0.24486
−0.64695	−0.72373	−0.79302	−0.69509	0.512243	0.231129	0.09636	−0.18612	−0.32471	−0.27405	−0.01069	0.248136
−0.71811	−0.84125	−0.95895	−0.8879	0.453835	0.278281	0.138907	−0.15083	−0.2947	−0.25582	−0.00319	0.251326
−0.81523	−1.12364	−1.31734	−1.26202	0.306885	0.357437	0.213924	−0.08536	−0.23958	−0.22105	0.010855	0.25499
−0.84087	−1.22577	−1.42287	−1.33583	0.265926	0.375177	0.231153	−0.06893	−0.22604	−0.21239	0.014231	0.255535
−0.85187	−1.35628	−1.54997	−1.41332	0.222062	0.393582	0.2497	−0.05216	−0.21156	−0.20324	0.018013	0.256095
−0.82083	−1.5752	−1.73597	−1.51596	0.139929	0.422516	0.28009	−0.02286	−0.18615	−0.18674	0.02539	0.258224

Figure 49: Pressure Coefficient of Section C at M = 0.70.

Normalized x	1	0.950125	0.900184	0.700354	0.500459	0.400446	0.300433	0.200354	0.100275	0.050203
−1.87309	0.11416	−0.03312	−0.07302	−0.23705	−0.26442	−0.25733	−0.23879	−0.17248	−0.15395	−0.10428
−1.34905	0.109087	−0.03419	−0.07689	−0.2509	−0.28718	−0.2852	−0.27297	−0.21407	−0.21116	−0.18193
−0.83159	0.104124	−0.03446	−0.08012	−0.26339	−0.31031	−0.3124	−0.30704	−0.2571	−0.27467	−0.26916
−0.56801	0.10158	−0.03477	−0.08209	−0.2705	−0.32295	−0.32805	−0.32588	−0.28163	−0.31116	−0.32017
−0.29135	0.098573	−0.03501	−0.08386	−0.27707	−0.33441	−0.34284	−0.34372	−0.30483	−0.34577	−0.36911
0.241931	0.092142	−0.03565	−0.08778	−0.29248	−0.36136	−0.3766	−0.38482	−0.35762	−0.42512	−0.48177
0.770783	0.086509	−0.03551	−0.09049	−0.30499	−0.38532	−0.4059	−0.42254	−0.40566	−0.50222	−0.59431
1.312116	0.080774	−0.0353	−0.09278	−0.31749	−0.40966	−0.43677	−0.46217	−0.45501	−0.58769	−0.71964
2.34714	0.063948	−0.03043	−0.09169	−0.33591	−0.45281	−0.49351	−0.53468	−0.54867	−0.69319	−1.01355
2.609371	0.057525	−0.02914	−0.09037	−0.33849	−0.46201	−0.50636	−0.55157	−0.57166	−0.70938	−1.1178
2.88658	0.051128	−0.02893	−0.08972	−0.34172	−0.47253	−0.52045	−0.56958	−0.59658	−0.72828	−1.23878
3.223004	0.043746	−0.0286	−0.08791	−0.34402	−0.48649	−0.5412	−0.59701	−0.62908	−0.7728	−1.46627

0.025167	0.010093	0	0.024905	0.084808	0.299581	0.4496	0.599685	0.799908	0.900052	0.949928
0.002556	0.233386	0.589164	−0.29021	−0.30795	−0.43983	−0.41654	−0.29341	0.079336	0.194015	0.227621
−0.094	0.130497	0.630998	−0.17737	−0.24246	−0.40263	−0.39124	−0.28001	0.085217	0.201427	0.234368
−0.202	0.010794	0.654036	−0.07577	−0.18011	−0.36457	−0.36437	−0.2649	0.09167	0.208353	0.240884
−0.26875	−0.05988	0.661733	−0.02148	−0.14625	−0.34395	−0.34962	−0.25649	0.095132	0.212154	0.244308
−0.33398	−0.13055	0.662389	0.026074	−0.11579	−0.32528	−0.33647	−0.24887	0.098142	0.215254	0.246878
−0.48611	−0.30598	0.645241	0.117209	−0.05609	−0.28754	−0.30934	−0.23324	0.103831	0.221297	0.252504
−0.64123	−0.49147	0.609272	0.191335	−0.00425	−0.2539	−0.28441	−0.2179	0.109608	0.22653	0.257339
−0.81873	−0.69904	0.551318	0.262196	0.047655	−0.2193	−0.25912	−0.20213	0.115092	0.231788	0.262031
−1.20347	−1.1455	0.38586	0.37381	0.137971	−0.15649	−0.21126	−0.17289	0.125267	0.239833	0.268305
−1.30379	−1.23932	0.337591	0.397798	0.160731	−0.14075	−0.19967	−0.16575	0.127093	0.241256	0.269124
−1.43948	−1.32518	0.286178	0.422093	0.185387	−0.12457	−0.18765	−0.15821	0.128888	0.242671	0.269609
−1.62352	−1.51393	0.183468	0.457726	0.221	−0.09676	−0.16528	−0.14344	0.134077	0.2457	0.271852

Figure 50: Pressure Coefficient of Section D at M = 0.70.

Normalized x	1	0.949879	0.899758	0.699494	0.499376	0.399354	0.299406	0.199457	0.099582	0.049681	0.024804	0.009907
−1.87309	0.093479	−0.05315	−0.08819	−0.24559	−0.2531	−0.22626	−0.18625	−0.12935	−0.04779	0.031349	0.18062	0.427664
−1.34905	0.087975	−0.05508	−0.09301	−0.25996	−0.2767	−0.25502	−0.22012	−0.17107	−0.10246	−0.04136	0.099803	0.346746
−0.83159	0.082681	−0.05604	−0.09685	−0.27388	−0.30039	−0.28491	−0.25509	−0.2147	−0.16735	−0.12842	−0.00893	0.247799
−0.56801	0.079963	−0.05672	−0.09914	−0.28123	−0.31365	−0.30039	−0.27411	−0.23816	−0.20264	−0.17498	−0.06634	0.190649
−0.29135	0.077029	−0.05747	−0.10119	−0.28809	−0.32596	−0.31503	−0.29215	−0.26082	−0.23703	−0.2209	−0.1246	0.130686
0.241931	0.070341	−0.05899	−0.10589	−0.30423	−0.35415	−0.34992	−0.33438	−0.31301	−0.31415	−0.32882	−0.26303	−0.0166
0.770783	0.064785	−0.05925	−0.10878	−0.31749	−0.37852	−0.38066	−0.37222	−0.36086	−0.38948	−0.43427	−0.40203	−0.16908
1.312116	0.059035	−0.05918	−0.11142	−0.33065	−0.40435	−0.41265	−0.41319	−0.41242	−0.47456	−0.55513	−0.5636	−0.35445
2.34714	0.047578	−0.05723	−0.11386	−0.35245	−0.45137	−0.47344	−0.49048	−0.51272	−0.65663	−0.81734	−0.92644	−0.76011
2.609371	0.044168	−0.05566	−0.1131	−0.35607	−0.46139	−0.48711	−0.50805	−0.53622	−0.68767	−0.89098	−1.02537	−0.86612
2.88658	0.039632	−0.05365	−0.11159	−0.35959	−0.47212	−0.50165	−0.52714	−0.56206	−0.68678	−0.97912	−1.13365	−0.99986
3.223004	0.029568	−0.0473	−0.10528	−0.36094	−0.48789	−0.52506	−0.55943	−0.60658	−0.66937	−1.1817	−1.35468	−1.23142

0	0.030234	0.090335	0.150437	0.30058	0.450576	0.600426	0.700301	0.800103	0.899978	0.875028	0.375578
0.403444	−0.56686	−0.42752	−0.3996	−0.39971	−0.35214	−0.19445	−0.01973	0.120873	0.197035	0.187467	−0.38919
0.499248	−0.43802	−0.35813	−0.35145	−0.36451	−0.32953	−0.18345	−0.01352	0.127499	0.20664	0.196852	−0.36109
0.573658	−0.31282	−0.2871	−0.29776	−0.32657	−0.30455	−0.17048	−0.00623	0.134476	0.216336	0.20645	−0.33081
0.602351	−0.25317	−0.25232	−0.27108	−0.30796	−0.29179	−0.16359	−0.00228	0.137916	0.220768	0.210989	−0.31551
0.623245	−0.19813	−0.21992	−0.24614	−0.29048	−0.27945	−0.15712	0.001104	0.140512	0.224332	0.214495	−0.30093
0.648993	−0.08468	−0.15091	−0.19264	−0.25346	−0.25422	−0.14322	0.009273	0.146784	0.232595	0.222713	−0.26884
0.647451	0.009158	−0.09122	−0.14532	−0.21996	−0.23023	−0.12971	0.016774	0.152138	0.238984	0.229274	−0.24049
0.622078	0.0985	−0.03225	−0.09779	−0.18594	−0.2055	−0.11615	0.024678	0.157686	0.245605	0.236041	−0.21117
0.504745	0.243195	0.070189	−0.01332	−0.1238	−0.16071	−0.08972	0.039644	0.16798	0.256504	0.247213	−0.15682
0.464117	0.273144	0.092581	0.005761	−0.10959	−0.15047	−0.08401	0.042971	0.169682	0.258196	0.249029	−0.14447
0.418097	0.302308	0.115236	0.02456	−0.09501	−0.13972	−0.07803	0.046303	0.171293	0.259806	0.250752	−0.13172
0.322257	0.353853	0.157615	0.061891	−0.06685	−0.11785	−0.06486	0.054024	0.174993	0.2627	0.254061	−0.10658

Figure 51: Pressure Coefficient of Section E at M = 0.70.

Normalized x	1	0.949681	0.899527	0.698997	0.498798	0.398823	0.298848	0.199038	0.099229	0.049407
−1.87309	0.089301	−0.07357	−0.09981	−0.24891	−0.22779	−0.20524	−0.15873	−0.09274	−0.02038	0.116301
−1.34905	0.083143	−0.07647	−0.10591	−0.26398	−0.25166	−0.23401	−0.19265	−0.13495	−0.0756	0.048411
−0.83159	0.07754	−0.07791	−0.11071	−0.27861	−0.27594	−0.26396	−0.22771	−0.18019	−0.14167	−0.03167
−0.56801	0.074562	−0.07858	−0.11307	−0.28646	−0.28919	−0.28034	−0.24703	−0.20299	−0.17476	−0.07213
−0.29135	0.071506	−0.0793	−0.11535	−0.29411	−0.3017	−0.29551	−0.26505	−0.2259	−0.20861	−0.11585
0.241931	0.064302	−0.08104	−0.12078	−0.31178	−0.33147	−0.33096	−0.30844	−0.27777	−0.28767	−0.22089
0.770783	0.058343	−0.08158	−0.12479	−0.32577	−0.3572	−0.36217	−0.34684	−0.32342	−0.35797	−0.32193
1.312116	0.052227	−0.08142	−0.12803	−0.33985	−0.38327	−0.39552	−0.38802	−0.37332	−0.43689	−0.43499
2.34714	0.039982	−0.0796	−0.13169	−0.36493	−0.43212	−0.45854	−0.46909	−0.47405	−0.60459	−0.68355
2.609371	0.037128	−0.07866	−0.13189	−0.37008	−0.44336	−0.4731	−0.48793	−0.49804	−0.64657	−0.7503
2.88658	0.033565	−0.0777	−0.13224	−0.37535	−0.45526	−0.48851	−0.50801	−0.52577	−0.69491	−0.83032
3.223004	0.026097	−0.07278	−0.12873	−0.38006	−0.47355	−0.51366	−0.54205	−0.57718	−0.77674	−1.02125

0.024538	0.009699	0	0.025367	0.085551	0.150709	0.300837	0.450883	0.60068	0.80005	0.899859	0.949847
0.249581	0.494549	0.383093	−0.77102	−0.47705	−0.41675	−0.39394	−0.33262	−0.17823	0.111741	0.189779	0.207258
0.168598	0.424361	0.486833	−0.60124	−0.40535	−0.36721	−0.35882	−0.3111	−0.16796	0.119518	0.201936	0.218222
0.07168	0.334376	0.567834	−0.44459	−0.32632	−0.31905	−0.32265	−0.28698	−0.15569	0.126883	0.213142	0.22839
0.016636	0.281668	0.599101	−0.36453	−0.28502	−0.28983	−0.30288	−0.27364	−0.14892	0.130531	0.218108	0.232739
−0.03802	0.227302	0.621604	−0.29279	−0.24731	−0.26255	−0.28483	−0.26178	−0.14281	0.133555	0.222585	0.236809
−0.17285	0.086367	0.650851	−0.15611	−0.17345	−0.2081	−0.24807	−0.238	−0.12976	0.139036	0.230389	0.243954
−0.30686	−0.05637	0.649877	−0.04312	−0.10932	−0.1588	−0.21367	−0.21502	−0.11668	0.144322	0.237797	0.250561
−0.46308	−0.23225	0.611917	0.061281	−0.04724	−0.11073	−0.17939	−0.19196	−0.1036	0.14914	0.244377	0.25644
−0.81895	−0.62576	0.463037	0.232321	0.062144	−0.02321	−0.11864	−0.14736	−0.07773	0.158469	0.255941	0.265746
−0.91171	−0.73348	0.414151	0.270214	0.088153	−0.00218	−0.10257	−0.13651	−0.07111	0.161111	0.258406	0.267661
−1.02055	−0.86345	0.357147	0.306334	0.113623	0.01868	−0.08763	−0.12608	−0.06518	0.16319	0.260548	0.269405
−1.19947	−1.12796	0.240315	0.364475	0.15765	0.055564	−0.06017	−0.10552	−0.05252	0.167724	0.264866	0.272754

Figure 52: Pressure Coefficient of Section F at M = 0.70.

Normalized x	1	0.949487	0.89927	0.698599	0.498323	0.398283	0.298441	0.198599	0.098954	0.049132	0.024369
−1.87309	0.057613	−0.08504	−0.12991	−0.2483	−0.20165	−0.17151	−0.12702	−0.06107	0.048021	0.173904	0.341376
−1.34905	0.058116	−0.08806	−0.136	−0.26429	−0.22582	−0.20022	−0.16091	−0.10468	−0.00689	0.108556	0.266684
−0.83159	0.055572	−0.0899	−0.14103	−0.27977	−0.25037	−0.22975	−0.19593	−0.15156	−0.06718	0.031502	0.182904
−0.56801	0.053389	−0.09065	−0.14338	−0.28792	−0.26349	−0.24559	−0.21446	−0.17604	−0.10059	−0.01146	0.131255
−0.29135	0.050439	−0.09167	−0.14574	−0.29584	−0.27629	−0.26093	−0.23266	−0.19991	−0.13341	−0.05385	0.082054
0.241931	0.05085	−0.09383	−0.15138	−0.31415	−0.30654	−0.29677	−0.27655	−0.25577	−0.21167	−0.15783	−0.04713
0.770783	0.050158	−0.09478	−0.1553	−0.32916	−0.33125	−0.32804	−0.3156	−0.30449	−0.28178	−0.25346	−0.16753
1.312116	0.049078	−0.09518	−0.15857	−0.34369	−0.35708	−0.36058	−0.357	−0.35655	−0.3594	−0.36254	−0.30942
2.34714	0.046775	−0.09349	−0.16206	−0.37035	−0.40769	−0.42565	−0.43921	−0.46068	−0.52758	−0.60453	−0.6427
2.609371	0.046261	−0.09245	−0.16229	−0.37597	−0.41907	−0.44023	−0.45868	−0.48372	−0.56879	−0.66663	−0.73202
2.88658	0.04385	−0.09183	−0.16274	−0.38195	−0.43139	−0.45607	−0.47996	−0.50935	−0.61852	−0.73954	−0.8364
3.223004	0.043352	−0.08826	−0.16081	−0.38978	−0.45131	−0.48274	−0.51678	−0.54442	−0.71072	−0.89023	−1.05506

(Row labels column = Angle of attack)

0.00957	0	0.030485	0.090766	0.150947	0.301204	0.451164	0.600927	0.700572	0.800118	0.849941	0.874901	0.226125
0.568814	0.237459	−0.93835	−0.52207	−0.43959	−0.3684	nan	−0.1455	0.003958	0.12025	0.154728	0.169971	−0.40375
0.510549	0.368969	−0.75881	−0.4649	−0.37863	−0.33676	nan	−0.1372	0.008879	0.130178	0.168938	0.186022	−0.36208
0.43529	0.480579	−0.58876	−0.38872	−0.32349	−0.30021	nan	−0.12519	0.015903	0.138488	0.180019	0.19844	−0.31664
0.388866	0.52904	−0.50851	−0.35022	−0.29763	−0.28147	nan	−0.11932	0.019374	0.14198	0.1846	0.203582	−0.2943
0.342742	0.566816	−0.43845	−0.31265	−0.27052	−0.26393	nan	−0.11358	0.022705	0.145031	0.188362	0.207928	−0.27342
0.215316	0.623602	−0.28593	−0.23117	−0.21523	−0.2255	nan	−0.09988	0.029945	0.151234	0.196257	0.216945	−0.22727
0.087076	0.645549	−0.16795	−0.16445	−0.16494	−0.19297	nan	−0.08797	0.037174	0.156621	0.202497	0.224138	−0.18818
−0.07236	0.636614	−0.05534	−0.0973	−0.11385	−0.16007	nan	−0.0749	0.0446	0.161453	0.208089	0.230667	−0.14837
−0.43585	0.533541	0.133053	0.019252	−0.0278	−0.09709	nan	−0.04889	0.059592	0.170996	0.218546	0.242544	−0.07224
−0.53246	0.492962	0.171189	0.043377	−0.01249	−0.08295	nan	−0.04331	0.06279	0.173044	0.220601	0.244784	−0.05535
−0.65172	0.441279	0.211146	0.069549	0.006056	−0.06811	nan	−0.03709	0.066293	0.175067	0.222805	0.247057	−0.0382
−0.91295	0.32623	0.279829	0.118887	0.044249	−0.03879	nan	−0.0242	0.074549	0.179752	0.227509	0.252195	−0.00644

Figure 53: Pressure Coefficient of Section G at M = 0.70.

Normalized x	1	0.949343	0.899047	0.698106	0.497889	0.397901	0.298034	0.198287	0.098661	0.048969
−1.87309	0.076775	−0.07147	−0.12348	−0.23569	−0.19228	−0.16477	−0.09209	−0.02316	0.104	0.235443
−1.34905	0.070995	−0.07441	−0.12901	−0.25189	−0.21652	−0.19372	−0.128	−0.06503	0.050705	0.170166
−0.83159	0.064912	−0.07661	−0.13381	−0.26656	−0.24095	−0.2235	−0.16371	−0.11109	−0.00676	0.096816
−0.56801	0.061951	−0.07754	−0.1361	−0.27414	−0.25364	−0.239	−0.18209	−0.13555	−0.03804	0.056441
−0.29135	0.058876	−0.07856	−0.13835	−0.28199	−0.26644	−0.25441	−0.1998	−0.15995	−0.07081	0.01381
0.241931	0.052454	−0.08048	−0.14322	−0.29956	−0.29542	−0.28923	−0.23885	−0.21397	−0.1449	−0.08299
0.770783	0.046866	−0.08131	−0.14652	−0.3142	−0.32101	−0.32034	−0.27532	−0.26312	−0.21468	−0.17725
1.312116	0.041273	−0.08153	−0.14898	−0.32822	−0.34725	−0.35154	−0.31388	−0.31345	−0.28794	−0.28105
2.34714	0.030096	−0.08025	−0.15169	−0.35429	−0.39627	−0.41356	−0.3941	−0.41679	−0.44556	−0.50558
2.609371	0.027446	−0.07937	−0.15175	−0.35984	−0.40768	−0.42803	−0.41342	−0.44109	−0.48488	−0.56239
2.88658	0.024488	−0.07887	−0.15194	−0.36565	−0.42013	−0.44393	−0.43455	−0.4657	−0.52904	−0.63443
3.223004	0.020175	−0.07579	−0.14997	−0.37368	−0.44083	−0.47138	−0.47135	−0.50859	−0.61329	−0.7665

(Row labels column = Angle of attack)

0.024243	0.009528	0	0.025691	0.086117	0.151369	0.301652	0.451574	0.601134	0.800145	0.899771	0.949825
nan	0.557594	−0.01869	−0.97435	−0.54587	−0.49165	−0.41804	nan	−0.15483	0.106186	0.171428	0.175817
nan	0.50422	0.160686	−0.79117	−0.53821	−0.428	−0.38447	nan	−0.14677	0.117209	0.18726	0.190181
nan	0.43091	0.329435	−0.59523	−0.43787	−0.38324	−0.34699	nan	−0.13579	0.126156	0.199427	0.200559
nan	0.387495	0.403197	−0.50074	−0.38627	−0.35007	−0.32746	nan	−0.1295	0.129089	0.203412	0.203693
nan	0.340066	0.465759	−0.41431	−0.34239	−0.32021	−0.30896	nan	−0.12389	0.132381	0.208189	0.207439
nan	0.216684	0.569797	−0.25261	−0.25724	−0.26325	−0.27218	nan	−0.1129	0.13862	0.216459	0.213829
nan	0.087906	0.62925	−0.11844	−0.18337	−0.21301	−0.23673	nan	−0.10053	0.144665	0.22403	0.219489
nan	−0.06005	0.656368	0.001372	−0.11325	−0.16187	−0.20177	nan	−0.08815	0.149567	0.230237	0.224119
nan	−0.42961	0.632599	0.200375	0.013543	−0.06489	−0.13585	nan	−0.06318	0.158959	0.241269	0.231987
nan	−0.52435	0.615416	0.245463	0.044542	−0.04027	−0.12075	nan	−0.05691	0.161563	0.243689	0.233513
nan	−0.63469	0.592159	0.283343	0.070933	−0.01971	−0.10607	nan	−0.05105	0.163566	0.245471	0.23455
nan	−0.87012	0.534538	0.351837	0.12139	0.021076	−0.07601	nan	−0.03836	0.168948	0.250277	0.23751

Figure 54: Pressure Coefficient of Section H at M = 0.70.

Normalized x		1	0.949318	0.898935	0.697706	0.497076	0.397211	0.297346	0.197781	0.098366	0.048883
Angle of attack	−1.87309	0.085509	−0.03565	−0.06764	−0.20256	−0.21956	nan	−0.0891	0.001358	0.176217	0.278638
	−1.34905	0.083681	−0.03656	−0.0703	−0.21204	−0.23864	nan	−0.11904	−0.03392	0.133052	0.226358
	−0.83159	0.08035	−0.03785	−0.07312	−0.22041	−0.25726	nan	−0.14805	−0.0718	0.084951	0.165305
	−0.56801	0.078641	−0.03893	−0.07486	−0.22522	−0.26698	nan	−0.16398	−0.09212	0.059113	0.132759
	−0.29135	0.077106	−0.04002	−0.07671	−0.23014	−0.27694	nan	−0.17956	−0.11165	0.03149	0.09922
	0.241931	0.073817	−0.0428	−0.08092	−0.24105	−0.299	nan	−0.21447	−0.15462	−0.03026	0.022525
	0.770783	0.070439	−0.04434	−0.08364	−0.25033	−0.31813	nan	−0.24791	−0.19552	−0.09218	−0.05838
	1.312116	0.066228	−0.04632	−0.08693	−0.25922	−0.33687	nan	−0.28138	−0.23646	−0.15643	−0.1452
	2.34714	0.058629	−0.04974	−0.09279	−0.27538	−0.37347	nan	−0.34895	−0.32252	−0.29443	−0.33754
	2.609371	0.056864	−0.05041	−0.0938	−0.27912	−0.38216	nan	−0.36504	−0.34385	−0.33109	−0.38767
	2.88658	0.054693	−0.0515	−0.09554	−0.28322	−0.39108	nan	−0.38245	−0.36698	−0.37268	−0.44353
	3.223004	0.051158	−0.05179	−0.09672	−0.28902	−0.40555	nan	−0.41355	−0.40915	−0.45599	−0.55365

0.024142	0.009447	0	0.025941	0.08652	0.151897	0.302294	0.452242	0.601739	0.80042	0.899985	0.949918
0.457125	0.627334	−0.84065	nan	−0.65617	−0.51616	−0.40782	−0.28747	nan	0.090207	0.158932	0.159882
0.404489	0.591998	−0.5082	nan	−0.53117	−0.47372	−0.38533	−0.2769	nan	0.098331	0.170487	0.170753
0.339699	0.53903	−0.20485	nan	−0.4359	−0.41785	−0.35731	−0.26128	nan	0.105703	0.182168	0.180743
0.304503	0.506309	−0.06764	nan	−0.41937	−0.38909	−0.34229	−0.25406	nan	0.107669	0.184958	0.182796
0.266589	0.468619	0.058229	nan	−0.39669	−0.35826	−0.32738	−0.24671	nan	0.108424	0.186704	0.184433
0.175694	0.371537	0.273857	nan	−0.32737	−0.3156	−0.29752	−0.23148	nan	0.109393	0.189897	0.186348
0.077211	0.257865	0.422282	nan	−0.25839	−0.27251	−0.26794	−0.2164	nan	0.110017	0.192369	0.187512
−0.03129	0.124308	0.52506	nan	−0.19079	−0.22279	−0.23886	−0.20155	nan	0.109606	0.193295	0.187846
−0.28409	−0.21178	0.63566	nan	−0.06385	−0.12601	−0.17993	−0.17075	nan	0.107946	0.194569	0.187974
−0.35215	−0.30685	0.647358	nan	−0.03329	−0.10254	−0.16517	−0.16252	nan	0.10767	0.194662	0.187624
−0.42913	−0.4167	0.654869	nan	−0.00662	−0.08202	−0.15228	−0.15501	nan	0.107248	0.194545	0.186925
−0.58431	−0.64722	0.643727	nan	0.047031	−0.03989	−0.12551	−0.13805	nan	0.107185	0.194864	0.186053

Figure 55: Pressure Coefficient of Section I at M = 0.70.

Normalized x		0.999658	0.472113	0.208896	0.103849	0.051411	0	0	0.106587	0.212062	0.472455	1
Angle of attack	−1.87309	0.130701	−0.03726	0.026034	0.116923	0.233359	0.43582	0.467349	−0.35691	−0.28853	−0.1178	0.132504
	−1.34905	0.131001	−0.04441	0.014783	0.103013	0.216865	0.436634	0.464488	−0.3337	−0.27429	−0.11268	0.133918
	−0.83159	0.131454	−0.05079	0.003534	0.088226	0.198068	0.436913	0.463627	−0.31135	−0.25957	−0.10666	0.135992
	−0.56801	0.131998	−0.05427	−0.0026	0.080496	0.189001	0.436525	0.461735	−0.29817	−0.25111	−0.1036	0.136909
	−0.29135	0.131845	−0.05788	−0.0086	0.072803	0.17976	0.436372	0.458822	−0.28731	−0.24414	−0.10106	0.13744
	0.241931	0.13196	−0.06506	−0.0208	0.057033	0.160503	0.433883	0.456295	−0.2654	−0.23004	−0.0959	0.138437
	0.770783	0.132252	−0.07095	−0.03119	0.043061	0.143392	0.432163	0.451507	−0.24528	−0.2164	−0.0906	0.139634
	1.312116	0.132669	−0.07682	−0.04129	0.030052	0.126896	0.427913	0.447593	−0.22574	−0.203	−0.08518	0.140901
	2.34714	0.133509	−0.08593	−0.05809	0.007937	0.098969	0.4188	0.435008	−0.1894	−0.17775	−0.07445	0.142657
	2.609371	0.133585	−0.08805	−0.06228	0.00225	0.091308	0.416278	0.432559	−0.18106	−0.17208	−0.07221	0.143042
	2.88658	0.13394	−0.09014	−0.06611	−0.00296	0.084321	0.412514	0.426547	−0.17032	−0.1644	−0.06901	0.143224
	3.223004	0.135063	−0.09204	−0.07091	−0.01016	0.074142	0.404523	0.418393	−0.15363	−0.15249	−0.06325	0.144593

Figure 56: Pressure Coefficient of Section SA at M = 0.70.

Normalized x		0.999776	0.472695	0.20949	0.104297	0.051925	0	0	0.106088	0.211504	0.474597	1
Angle of attack	−1.87309	0.115328	−0.02478	−0.03095	0.028224	0.143012	0.431628	0.393922	−0.88669	−0.48449	−0.23142	0.129643
	−1.34905	0.115128	−0.03327	−0.047	0.005337	0.115424	0.459157	0.424025	−0.8332	−0.46476	−0.22476	0.130219
	−0.83159	0.115526	−0.04129	−0.06394	−0.01967	0.084351	0.488082	0.4543	−0.77434	−0.44449	−0.21707	0.130773
	−0.56801	0.115777	−0.04579	−0.0735	−0.03422	0.066092	0.50367	0.471666	−0.74077	−0.43807	−0.21288	0.130955
	−0.29135	0.115667	−0.04997	−0.08182	−0.04639	0.051072	0.51531	0.486501	−0.7145	−0.43075	−0.20906	0.13094
	0.241931	0.115741	−0.05999	−0.10146	−0.07591	0.013993	0.542667	0.516549	−0.66903	−0.41091	−0.20097	0.131144
	0.770783	0.116218	−0.06818	−0.1182	−0.10168	−0.01881	0.564268	0.540468	−0.62977	−0.39368	−0.1929	0.131845
	1.312116	0.116892	−0.07647	−0.13558	−0.1285	−0.05353	0.583838	0.563942	−0.59161	−0.37913	−0.18469	0.132443
	2.34714	0.118293	−0.09186	−0.16765	−0.17945	−0.12033	0.614826	0.602384	−0.52276	−0.3511	−0.16849	0.134101
	2.609371	0.118683	−0.09555	−0.17548	−0.19193	−0.13661	0.621359	0.610594	−0.50786	−0.34411	−0.16482	0.134371
	2.88658	0.119001	−0.09982	−0.18455	−0.20681	−0.15646	0.629075	0.620404	−0.4891	−0.33494	−0.16022	0.13474
	3.223004	0.120653	−0.10506	−0.19729	−0.22847	−0.1861	0.639362	0.633739	−0.46015	−0.31883	−0.15203	0.136451

Figure 57: Pressure Coefficient of Section SB at M = 0.70.

Normalized x		1	0.47379	0.210775	0.105388	0.052785	0	0	0.105024	0.210229	0.473426	0.999818
Angle of attack	−1.87309	0.084704	−0.07201	−0.05326	0.042494	0.040144	0.422555	0.229323	−0.65017	−0.42616	−0.22211	0.091122
	−1.34905	0.086148	−0.07942	−0.07035	0.015355	0.07051	0.461275	0.290002	−0.59758	−0.41114	−0.21512	0.092195
	−0.83159	0.088448	−0.08609	−0.08884	−0.01329	0.070566	0.497321	0.349252	−0.54742	−0.39219	−0.20689	0.093594
	−0.56801	0.089635	−0.09001	−0.09793	−0.02913	0.06027	0.514782	0.380307	−0.52118	−0.38116	−0.20229	0.094235
	−0.29135	0.090152	−0.10696	−0.04443	0.044811	0.529234	0.406332	−0.49878	−0.37142	−0.19874	0.094697
	0.241931	0.091373	−0.10244	−0.12832	−0.07879	0.021875	0.557265	0.458944	−0.45328	−0.34984	−0.19111	0.095246
	0.770783	0.092489	−0.10962	−0.14427	−0.10958	−0.00696	0.57765	0.499541	−0.41378	−0.32918	−0.1836	0.096066
	1.312116	0.093796	−0.1165	−0.16445	−0.1431	−0.04287	0.592937	0.536323	−0.37409	−0.30756	−0.17577	0.096958
	2.34714	0.096177	−0.12999	−0.20235	−0.20993	−0.11389	0.617081	0.592864	−0.29945	−0.26509	−0.16018	0.09868
	2.609371	0.096741	−0.13353	−0.2122	−0.22737	−0.15379	0.622192	0.604312	−0.28163	−0.25473	−0.15637	0.098971
	2.88658	0.097085	−0.13727	−0.22233	−0.24559	−0.19303	0.626116	0.616221	−0.26251	−0.24359	−0.15244	0.099301
	3.223004	0.09921	−0.14144	−0.23855	−0.27705	−0.23208	0.630465	0.631482	−0.23112	−0.22405	−0.14435	0.1007

Figure 58: Pressure Coefficient of Section SC at M = 0.70.
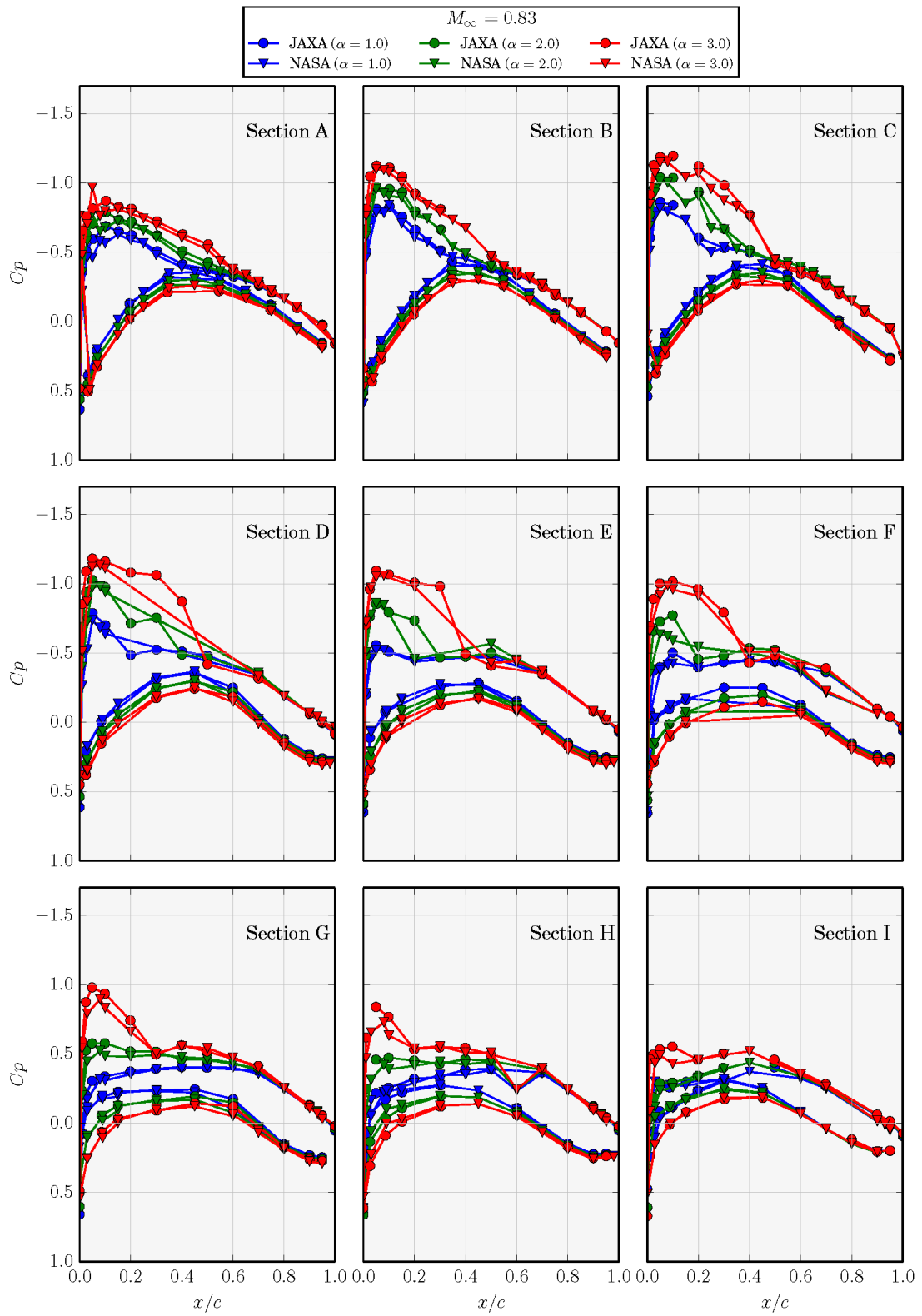
Figure 59: Pressure Distribution on Main Wing at M = 0.83.

Normalized x		1	0.950507	0.851195	0.751801	0.702104	0.602548	0.50291	0.403232	0.30339	0.203346	0.153201
Angle of attack	−1.8627	0.162424	0.022985	−0.0753	−0.15823	−0.19398	−0.22858	−0.25764	−0.27086	−0.30125	−0.35436	−0.37135
	−1.32732	0.161971	0.021674	−0.0812	−0.16896	−0.20732	−0.24676	−0.27982	−0.29716	−0.33252	−0.39522	−0.41726
	−0.79073	0.161425	0.020919	−0.08675	−0.17961	−0.22095	−0.26608	−0.30431	−0.32628	−0.36617	−0.4399	−0.47033
	−0.51836	0.161119	0.020699	−0.0896	−0.1851	−0.22802	−0.27623	−0.31694	−0.34122	−0.38342	−0.46517	−0.4903
	−0.2339	0.161157	0.020927	−0.09201	−0.19033	−0.23496	−0.28632	−0.32988	−0.35793	−0.40213	−0.49513	−0.52607
	0.312484	0.160277	0.020612	−0.09682	−0.20027	−0.24783	−0.30505	−0.3546	−0.38451	−0.4408	−0.55507	−0.58371
	0.853857	0.159628	0.02115	−0.10001	−0.20794	−0.25835	−0.32176	−0.37432	−0.405	−0.48929	−0.60953	−0.64405
	1.427338	0.159933	0.022669	−0.10187	−0.21376	−0.26646	−0.33231	−0.38882	−0.43796	−0.56043	−0.66845	−0.67164
	2.495174	0.161065	0.027141	−0.10011	−0.21494	−0.27003	−0.35071	−0.46068	−0.56869	−0.676	−0.76739	−0.78904
	2.773455	0.160629	0.02833	−0.0995	−0.21577	−0.27247	−0.36335	−0.52123	−0.60841	−0.70434	−0.7945	−0.81117
	3.05753	0.160736	0.030031	−0.09817	−0.21572	−0.27385	−0.37461	−0.56762	−0.6359	−0.72775	−0.82007	−0.83099
	3.550448	0.158874	0.031862	−0.09727	−0.21835	−0.28087	−0.42396	−0.65054	−0.68316	−0.77132	−0.86022	−0.87449

0.102853	0.05218	0.026578	0.01103	0	0.03309	0.067199	0.195246	0.344377	0.545281	0.747405	0.949652
−0.37614	−0.28196	−0.14149	0.058381	0.772966	0.200304	0.019605	−0.29908	−0.48207	−0.4462	−0.16695	0.136853
−0.42964	−0.33862	−0.20761	−0.01335	0.756208	0.237416	0.055753	−0.26844	−0.45752	−0.408	−0.16003	0.139785
−0.48112	−0.3986	−0.27748	−0.0909	0.734339	0.27479	0.092596	−0.23624	−0.42362	−0.38537	−0.15247	0.142944
−0.49667	−0.43082	−0.31484	−0.13331	0.72123	0.294737	0.112175	−0.2195	−0.40709	−0.36894	−0.14841	0.144597
−0.53223	−0.46341	−0.35303	−0.17714	0.706507	0.314829	0.132122	−0.20146	−0.38883	−0.35357	−0.14353	0.146841
−0.61363	−0.52451	−0.42413	−0.25962	0.67652	0.349955	0.167309	−0.17012	−0.35799	−0.32996	−0.13535	0.149726
−0.67369	−0.58124	−0.49118	−0.33987	0.644101	0.382931	0.200512	−0.13992	−0.32804	−0.30704	−0.12605	0.153245
−0.73319	−0.64058	−0.55731	−0.42271	0.608255	0.416098	0.234666	−0.10835	−0.29742	−0.28379	−0.11579	0.157615
−0.83815	−0.76305	−0.69764	−0.59589	0.524687	0.478074	0.299169	−0.04672	−0.23771	−0.23813	−0.09411	0.166775
−0.85762	−0.79311	−0.73333	−0.6316	0.502678	0.493694	0.315162	−0.03177	−0.22453	−0.22913	−0.08975	0.168603
−0.87515	−0.82167	−0.76814	−0.66449	0.478997	0.508511	0.330976	−0.01636	−0.20928	−0.2172	−0.08337	0.171145
−0.90224	−0.87603	−0.83019	−0.71621	0.435804	0.535884	0.360193	0.012116	−0.18246	−0.19734	−0.07285	0.175

Figure 60: Pressure Coefficient of Section A at M = 0.83.

Normalized x		1	0.95036	0.850897	0.751435	0.701658	0.602058	0.502368	0.402587	0.302669	0.202477	0.152291
Angle of attack	−1.8627	0.167551	0.071145	−0.04604	−0.14642	−0.19293	−0.24383	−0.26412	nan	−0.3438	−0.36272	−0.38091
	−1.32732	0.165457	0.07013	−0.05096	−0.15604	−0.20533	−0.26164	−0.28646	nan	−0.37858	−0.4044	−0.42752
	−0.79073	0.163067	0.069395	−0.05559	−0.16559	−0.21776	−0.28034	−0.31067	nan	−0.417	−0.45992	−0.48665
	−0.51836	0.161748	0.068971	−0.05784	−0.17025	−0.22402	−0.28979	−0.32314	nan	−0.43044	−0.47115	−0.52859
	−0.2339	0.16058	0.069037	−0.05963	−0.17468	−0.23006	−0.29937	−0.33549	nan	−0.46128	−0.48592	−0.55872
	0.312484	0.157883	0.068102	−0.06341	−0.18299	−0.24111	−0.31717	−0.35742	nan	−0.48731	−0.55285	−0.64905
	0.853857	0.155854	0.067784	−0.06613	−0.18939	−0.24992	−0.33226	−0.38157	nan	−0.49711	−0.64297	−0.72671
	1.427338	0.155333	0.068492	−0.06743	−0.19458	−0.25789	−0.34531	−0.39005	nan	−0.5654	−0.72125	−0.83862
	2.495174	0.155032	0.070838	−0.06565	−0.19306	−0.25529	−0.34323	−0.40419	nan	−0.7505	−0.85995	−1.01284
	2.773455	0.154773	0.071664	−0.0645	−0.19177	−0.25372	−0.34341	−0.43278	nan	−0.78868	−0.89152	−1.02838
	3.05753	0.154661	0.072955	−0.06269	−0.18982	−0.25164	−0.34373	−0.48338	nan	−0.81727	−0.93107	−1.05159
	3.550448	0.152688	0.074476	−0.06031	−0.187	−0.24831	−0.35302	−0.64991	nan	−0.8739	−1.05767	−1.11347

0.102013	0.051507	0.026095	0.010702	0	0.033792	0.068221	0.196921	0.346343	0.546908	0.748383	0.949859
−0.41212	−0.3617	−0.23751	−0.00038	0.651345	0.100534	−0.04761	−0.33966	−0.63858	−0.49088	−0.09074	0.200281
−0.48942	−0.4391	−0.32329	−0.08834	0.639763	0.144824	−0.00812	−0.30651	−0.60409	−0.44489	−0.08644	0.203445
−0.60751	−0.52551	−0.4181	−0.18406	0.619417	0.188695	0.031819	−0.27251	−0.57244	−0.43562	−0.08136	0.206475
−0.66928	−0.57298	−0.4695	−0.23684	0.605192	0.210487	0.052163	−0.25532	−0.55058	−0.42077	−0.07828	0.207874
−0.72762	−0.62113	−0.52213	−0.29155	0.589359	0.233131	0.073058	−0.23625	−0.52382	−0.40158	−0.07458	0.209711
−0.77867	−0.71012	−0.62012	−0.39085	0.555423	0.272479	0.110183	−0.20577	−0.4821	−0.37782	−0.06819	0.212651
−0.81579	−0.7923	−0.71104	−0.4837	0.519005	0.307316	0.144266	−0.17545	−0.44438	−0.35306	−0.06074	0.215948
−0.87211	−0.87453	−0.80155	−0.57441	0.477808	0.341867	0.178537	−0.14259	−0.40788	−0.32905	−0.05235	0.22014
−1.03051	−1.05672	−0.97218	−0.74414	0.382017	0.406165	0.244071	−0.07902	−0.3371	−0.28137	−0.03395	0.229396
−1.07563	−1.09486	−1.01238	−0.78158	0.35799	0.42156	0.260447	−0.0637	−0.32207	−0.27165	−0.02997	0.231674
−1.1203	−1.13225	−1.05821	−0.82227	0.331197	0.436216	0.276015	−0.04786	−0.30466	−0.25912	−0.02436	0.234203
−1.19569	−1.20263	−1.13266	−0.89052	0.282665	0.462441	0.304229	−0.01924	−0.27435	−0.23806	−0.01512	0.237875

Figure 61: Pressure Coefficient of Section B at M = 0.83.

Angle of attack \ Normalized x	1	0.950309	0.850663	0.750965	0.701115	0.601364	0.501507	0.401596	0.301581	0.201406	0.151292	0.101126	0.050854	0.025638	0.010414	0	0.034413	0.069144	0.198499	0.348205	0.548448	0.74922	0.950045
-1.8627	nan	0.049294	-0.0544	-0.16322	-0.21591	-0.26757	-0.29594	-0.32239	-0.33706	-0.33638	nan	-0.36106	-0.28543	-0.18556	0.034854	0.616671	-0.02964	-0.12888	-0.41166	-0.65968	-0.4489	-0.03748	0.237982
-1.32732	nan	0.048529	-0.05964	-0.17355	-0.22926	-0.28676	-0.32086	-0.35301	-0.37475	-0.38357	nan	-0.44302	-0.37264	-0.28751	-0.07093	0.625695	0.027604	-0.0821	-0.38052	-0.60888	-0.42774	-0.03409	0.2424
-0.79073	nan	0.048113	-0.06418	-0.18322	-0.24209	-0.3067	-0.34653	-0.38628	-0.41535	-0.43651	nan	-0.54045	-0.47384	-0.40387	-0.18891	0.622164	0.084213	-0.03456	-0.34148	-0.54487	-0.41794	-0.02972	0.246946
-0.51836	nan	0.048168	-0.06623	-0.18782	-0.24836	-0.31692	-0.36062	-0.40386	-0.43841	-0.46597	nan	-0.59015	-0.52955	-0.47094	-0.25605	0.615311	0.111912	-0.01072	-0.32032	-0.51414	-0.4107	-0.02693	0.249289
-0.2339	nan	0.048725	-0.06777	-0.19196	-0.25428	-0.32702	-0.37496	-0.42198	-0.49024	-0.50684	nan	-0.64152	-0.59536	-0.54225	-0.33156	0.605358	0.140594	0.014396	-0.29662	-0.48592	-0.39746	-0.0235	0.251993
0.312484	nan	0.047848	-0.07178	-0.20038	-0.26573	-0.34653	-0.401	-0.44093	-0.51804	-0.52907	nan	-0.79917	-0.71014	-0.67022	-0.4615	0.578633	0.188536	0.056967	-0.2561	-0.44858	-0.37497	-0.01793	0.255795
0.853857	nan	0.047673	-0.0742	-0.20646	-0.27433	-0.36251	-0.42428	-0.50046	-0.53829	-0.5252	nan	-0.809	-0.83232	-0.77341	-0.57935	0.547619	0.230996	0.095812	-0.21829	-0.40906	-0.35248	-0.01137	0.260096
1.427338	nan	0.048275	-0.07528	-0.21054	-0.28104	-0.38216	-0.44883	-0.49143	-0.50932	-0.83464	nan	-0.93312	-0.94823	-0.8629	-0.6816	0.515965	0.271375	0.133614	-0.18144	-0.37071	-0.32875	-0.00363	0.264446
2.495174	nan	0.049305	-0.07447	-0.20891	-0.27683	-0.36117	-0.41245	-0.53979	-0.80615	-1.02296	nan	-1.12702	-1.1208	-1.04779	-0.85421	0.434307	0.344586	0.205097	-0.11	-0.29822	-0.28059	0.013538	0.275114
2.773455	nan	0.050665	-0.07169	-0.20315	-0.26865	-0.35039	-0.40571	-0.71356	-0.90155	-1.08648	nan	-1.16638	-1.15682	-1.09384	-0.8888	0.413578	0.361241	0.221292	-0.09398	-0.28267	-0.27074	0.017637	0.277881
3.05753	nan	0.052762	-0.06823	-0.19719	-0.26087	-0.34202	-0.41593	-0.7845	-1.00666	-1.13157	nan	-1.20441	-1.19461	-1.139	-0.92362	0.391043	0.378307	0.238344	-0.07571	-0.26459	-0.25845	0.022723	0.281084
3.550448	nan	0.056398	-0.06211	-0.18644	-0.24684	-0.33704	-0.55335	-0.87397	-1.10373	-1.20386	nan	-1.26751	-1.25889	-1.20953	-0.9828	0.34621	0.407181	0.268295	-0.04506	-0.23409	-0.23728	0.031099	0.285995

Figure 62: Pressure Coefficient of Section C at M = 0.83.

Angle of attack \ Normalized x	1	0.950125	0.900184	0.700354	0.500459	0.400446	0.300433	0.200354	0.100275	0.050203	0.025167	0.010093	0	0.024905	0.084808	0.299581	0.4496	0.599685	0.799908	0.900052	0.949928
-1.8627	0.133488	0.006049	-0.0501	-0.26718	-0.31109	-0.30156	-0.2795	-0.20927	-0.18198	-0.12685	-0.01272	0.222264	0.617291	-0.25763	-0.32106	-0.62376	-0.70706	-0.29754	0.082221	0.177695	0.215092
-1.32732	0.12679	0.006092	-0.05327	-0.28331	-0.3411	-0.33648	-0.32104	-0.25912	-0.25306	-0.21471	-0.11381	0.123735	0.64712	-0.15732	-0.25757	-0.56008	-0.49992	-0.30415	0.090051	0.189218	0.224952
-0.79073	0.11844	0.005478	-0.05643	-0.29971	-0.37287	-0.37591	-0.36672	-0.31662	-0.33565	-0.31976	-0.23732	-2.31E-05	0.665244	-0.05767	-0.19343	-0.49838	-0.46771	-0.29566	0.097102	0.200116	0.234381
-0.51836	0.113939	0.005163	-0.05771	-0.30793	-0.3903	-0.39647	-0.39112	-0.34728	-0.38443	-0.3784	-0.30733	-0.06814	0.670651	-0.01044	-0.16141	-0.45889	-0.45926	-0.28975	0.101146	0.205627	0.23914
-0.2339	0.109321	0.00511	-0.05872	-0.31523	-0.40698	-0.4178	-0.41707	-0.37925	-0.44143	-0.44393	-0.38811	-0.14795	0.66887	0.038581	-0.12742	-0.42146	-0.43429	-0.28301	0.105178	0.211365	0.244115
0.312484	0.100025	0.004717	-0.06049	-0.32885	-0.44087	-0.46394	-0.47132	-0.42721	-0.56654	-0.5712	-0.53962	-0.30494	0.652838	0.119279	-0.06987	-0.3729	-0.39994	-0.27026	0.111179	0.219678	0.251185
0.853857	0.0899	0.004882	-0.06083	-0.33969	-0.47135	-0.49193	-0.52647	-0.518	-0.65305	-0.74398	-0.71179	-0.46662	0.623028	0.189174	-0.01697	-0.32668	-0.3668	-0.2548	0.117394	0.227424	0.257805
1.427338	0.08241	0.004993	-0.06071	-0.3478	-0.51384	-0.56684	-0.52111	-0.39703	-0.84313	-0.92189	-0.84365	-0.59156	0.584588	0.24763	0.031	-0.28308	-0.33285	-0.23734	0.12407	0.234985	0.264479
2.495174	0.079112	0.00035	-0.06532	-0.35279	-0.42982	-0.42179	-0.95628	-0.99074	-1.09052	-1.11836	-1.02218	-0.77411	0.494771	0.342272	0.115296	-0.20611	-0.26849	-0.20085	0.139231	0.250665	0.278355
2.773455	0.080422	-0.00054	-0.06461	-0.33349	-0.39534	-0.60405	-1.024	-1.04404	-1.13149	-1.15368	-1.05845	-0.81439	0.471981	0.362726	0.136041	-0.18976	-0.25545	-0.19268	0.143157	0.254968	0.282244
3.05753	0.082771	-0.00116	-0.06306	-0.3115	-0.42442	-0.94028	-1.07375	-1.09018	-1.17002	-1.18908	-1.09732	-0.86456	0.446042	0.383023	0.158047	-0.17107	-0.2397	-0.18246	0.147736	0.259446	0.286174
3.550448	0.093155	-0.00284	-0.05917	-0.29388	-0.58248	-1.1432	-1.15218	-1.16955	-1.23613	-1.24993	-1.16327	-0.95944	0.392688	0.416762	0.192816	-0.14017	-0.2134	-0.16535	0.155971	0.267447	0.293853

Figure 63: Pressure Coefficient of Section D at M = 0.83.

Normalized x		1	0.949879	0.899758	0.699494	0.499376	0.399354	0.299406	0.199457	0.099582	0.049681	0.024804
Angle of attack	−1.8627	0.11391	−0.01404	−0.06354	−0.26807	−0.29045	−0.2601	−0.2128	−0.14951	−0.04982	0.024319	0.18219
	−1.32732	0.106577	−0.01468	−0.06721	−0.28476	−0.3212	−0.29749	−0.25426	−0.19794	−0.11539	−0.05421	0.094436
	−0.79073	0.098266	−0.01614	−0.07147	−0.30209	−0.35474	−0.33683	−0.29989	−0.25233	−0.18995	−0.14944	−0.01408
	−0.51836	0.093147	−0.01695	−0.07321	−0.31064	−0.37229	−0.35899	−0.32549	−0.28302	−0.23343	−0.20444	−0.07513
	−0.2339	0.088545	−0.01752	−0.07488	−0.31894	−0.38996	−0.38094	−0.35113	−0.31344	−0.2763	−0.26159	−0.14299
	0.312484	0.07932	−0.01854	−0.07755	−0.33352	−0.42435	−0.4247	−0.40263	−0.37446	−0.37241	−0.38127	−0.28567
	0.853857	0.070352	−0.01859	−0.07854	−0.34539	−0.4562	−0.46843	−0.45499	−0.43502	−0.4886	−0.52064	−0.44115
	1.427338	0.061624	−0.01734	−0.07755	−0.35372	−0.49768	−0.48807	−0.50999	−0.53097	−0.57135	−0.66245	−0.62185
	2.495174	0.050337	−0.01932	−0.07901	−0.37314	−0.50655	−0.46089	−0.43124	−0.91348	−0.98817	−1.01952	−0.88712
	2.773455	0.050317	−0.02125	−0.08097	−0.36672	−0.44215	−0.40314	−0.93862	−0.96978	−1.03387	−1.06078	−0.928
	3.05753	0.049576	−0.02031	−0.07807	−0.34634	−0.39966	−0.51783	−0.99204	−1.01847	−1.07727	−1.10246	−0.96906
	3.550448	0.020007	−0.02173	−0.06739	−0.28295	−0.4935	−1.07601	−1.07903	−1.10309	−1.15367	−1.17535	−1.04335

0.009907	0	0.030234	0.090335	0.150437	0.30058	0.450576	0.600426	0.700301	0.800103	0.899978	0.875028	0.375578
0.427533	0.449979	−0.63667	−0.55725	−0.52496	−0.49697	−0.43268	−0.19566	−0.00491	0.113015	0.170004	0.161554	−0.48734
0.350941	0.525719	−0.49548	−0.46148	−0.46716	−0.47389	−0.40261	−0.19066	−0.00149	0.123398	0.185089	0.176346	−0.46982
0.254446	0.589453	−0.35281	−0.36045	−0.37791	−0.4274	−0.37581	−0.18239	0.002888	0.133245	0.199853	0.190859	−0.42513
0.194044	0.615679	−0.27965	−0.31096	−0.34229	−0.39812	−0.35969	−0.17735	0.00545	0.138708	0.20836	0.199303	−0.40197
0.129341	0.635505	−0.21181	−0.2654	−0.30432	−0.36927	−0.34288	−0.17118	0.008692	0.143635	0.215722	0.206679	−0.37956
−0.00733	0.655791	−0.09894	−0.18887	−0.24151	−0.32253	−0.31348	−0.16017	0.01441	0.15133	0.227357	0.218094	−0.34116
−0.15563	0.653682	−0.00063	−0.11997	−0.18375	−0.27803	−0.28377	−0.14697	0.021126	0.158093	0.237503	0.228152	−0.30155
−0.33228	0.632635	0.090447	−0.05487	−0.12906	−0.235	−0.25303	−0.1323	0.028341	0.164537	0.246465	0.237162	−0.26382
−0.61504	0.548513	0.221182	0.048751	−0.03649	−0.15693	−0.19368	−0.10048	0.045966	0.178238	0.261689	0.252862	−0.19237
−0.666	0.528384	0.244369	0.068093	−0.0195	−0.14252	−0.18231	−0.0938	0.050355	0.181329	0.264941	0.2562	−0.1789
−0.71729	0.505412	0.268782	0.089073	−0.00044	−0.12534	−0.16825	−0.08534	0.055765	0.18473	0.268545	0.259839	−0.16291
−0.81125	0.456618	0.312085	0.127141	0.036049	−0.09589	−0.14434	−0.07221	0.061225	0.185413	0.26798	0.260138	−0.13571

Figure 64: Pressure Coefficient of Section E at M = 0.83.

Normalized x		1	0.949681	0.899527	0.698997	0.498798	0.398823	0.298848	0.199038	0.099229	0.049407
Angle of attack	−1.8627	0.108225	−0.03525	−0.07831	−0.2706	−0.25701	−0.22963	−0.17642	−0.10186	−0.02441	0.127136
	−1.32732	0.100337	−0.03753	−0.0843	−0.28895	−0.28806	−0.26599	−0.21703	−0.14916	−0.0857	0.055827
	−0.79073	0.091191	−0.03965	−0.0893	−0.30889	−0.32211	−0.30708	−0.26323	−0.20454	−0.16282	−0.03163
	−0.51836	0.086377	−0.04055	−0.0918	−0.31897	−0.34083	−0.32879	−0.28883	−0.23501	−0.20651	−0.08119
	−0.2339	0.081775	−0.04073	−0.09374	−0.32801	−0.35981	−0.35116	−0.31502	−0.26508	−0.25204	−0.13351
	0.312484	0.072176	−0.04209	−0.09776	−0.34573	−0.39496	−0.39626	−0.36662	−0.32148	−0.34762	−0.24177
	0.853857	0.062933	−0.04211	−0.09954	−0.35942	−0.42845	−0.43993	−0.41923	−0.38006	−0.47046	−0.36287
	1.427338	0.05403	−0.04009	−0.09858	−0.37016	−0.45867	−0.48534	−0.47425	−0.44385	−0.59578	−0.50038
	2.495174	0.034662	−0.03799	−0.09567	−0.37967	−0.58157	−0.5795	−0.48832	−0.46818	−0.92622	−0.92297
	2.773455	0.033936	−0.03932	−0.09734	−0.39433	−0.53562	−0.48684	−0.40213	−0.91406	−0.98183	−0.96994
	3.05753	0.035702	−0.04035	−0.09814	−0.39073	−0.46748	−0.41476	−0.89302	−0.97864	−1.02626	−1.01229
	3.550448	0.03047	−0.03657	−0.08664	−0.33514	−0.40509	−0.82461	−1.04581	−1.06419	−1.09679	−1.09536

0.024538	0.009699	0	0.025367	0.085551	0.150709	0.300837	0.450883	0.60068	0.80005	0.899859	0.949847
0.26611	0.505932	0.436985	−0.94938	−0.69114	−0.5184	−0.47738	−0.38515	−0.17635	0.103976	0.160557	0.180394
0.184608	0.44008	0.515542	−0.70036	−0.50267	−0.48884	−0.44435	−0.36675	−0.17297	0.116491	0.180094	0.199018
0.081392	0.351828	0.585559	−0.49013	−0.38076	−0.39379	−0.39944	−0.34265	−0.166	0.12737	0.19763	0.214971
0.020628	0.296432	0.615593	−0.39822	−0.32872	−0.35453	−0.37523	−0.32857	−0.16117	0.132612	0.206081	0.222402
−0.04261	0.237356	0.637984	−0.30883	−0.27511	−0.31026	−0.3495	−0.31259	−0.15455	0.136984	0.212815	0.22872
−0.17492	0.111498	0.663108	−0.16699	−0.19082	−0.24243	−0.30515	−0.2851	−0.14339	0.144233	0.225002	0.239783
−0.3288	−0.03791	0.664025	−0.04305	−0.11317	−0.17808	−0.26081	−0.25625	−0.13044	0.150715	0.235959	0.249591
−0.50167	−0.20434	0.63053	0.065006	−0.04541	−0.12177	−0.21872	−0.22784	−0.11636	0.157047	0.245507	0.257688
−0.8021	−0.56334	0.501791	0.237186	0.065414	−0.02806	−0.1394	−0.17029	−0.08591	0.168008	0.260128	0.269175
−0.85031	−0.63805	0.472128	0.267346	0.087644	−0.00834	−0.12267	−0.15799	−0.07839	0.171475	0.263595	0.272159
−0.90127	−0.70896	0.437453	0.295797	0.109559	0.009645	−0.10486	−0.14451	−0.07021	0.175491	0.267792	0.276038
−0.99789	−0.8191	0.370543	0.340587	0.145855	0.041795	−0.07953	−0.12617	−0.06154	0.176283	0.27049	0.278353

Figure 65: Pressure Coefficient of Section F at M = 0.83.

Normalized x	1	0.949487	0.89927	0.698599	0.498323	0.398283	0.298441	0.198599	0.098954	0.049132	0.024369
−1.8627	0.098512	−0.05055	−0.11336	−0.27479	−0.22436	−0.18964	−0.13854	−0.06412	0.057351	0.187272	0.355031
−1.32732	0.092276	−0.05056	−0.11719	−0.294	−0.25396	−0.22428	−0.17791	−0.11129	0.001535	0.122333	0.287024
−0.79073	0.083606	−0.05268	−0.12232	−0.31528	−0.28773	−0.26387	−0.22253	−0.16837	−0.06684	0.0405	0.199227
−0.51836	0.078617	−0.05377	−0.12489	−0.32652	−0.30647	−0.28534	−0.2473	−0.19996	−0.10667	−0.00789	0.146047
−0.2339	0.073986	−0.05452	−0.12682	−0.33692	−0.32454	−0.30721	−0.27326	−0.23198	−0.14825	−0.0586	0.088374
0.312484	0.064361	−0.05623	−0.1306	−0.35636	−0.35868	−0.35031	−0.32532	−0.29358	−0.22956	−0.16227	−0.03085
0.853857	0.055216	−0.05669	−0.13241	−0.37298	−0.39171	−0.39372	−0.37811	−0.35613	−0.31291	−0.27318	−0.16296
1.427338	0.047097	−0.05535	−0.13186	−0.38625	−0.42245	−0.43678	−0.43365	−0.41984	−0.4089	−0.39688	−0.31278
2.495174	0.028726	−0.05228	−0.12711	−0.4058	−0.48639	−0.48125	−0.58704	−0.60043	−0.72032	−0.72889	−0.70379
2.773455	0.023005	−0.05243	−0.12586	−0.40922	−0.49372	−0.60685	−0.58513	−0.42814	−0.84175	−0.92715	−0.80988
3.05753	0.020813	−0.05266	−0.12513	−0.4132	−0.52269	−0.54988	−0.47217	−0.82077	−0.95808	−0.99245	−0.88936
3.550448	0.024757	−0.05424	−0.12594	−0.39961	−0.42309	−0.4318	−0.96605	−1.01026	−1.07551	−1.0883	−1.00502

(Left axis label: Angle of attack)

0.00957	0	0.030485	0.090766	0.150947	0.301204	0.451164	0.600927	0.700572	0.800118	0.849941	0.874901	0.226125
0.580704	0.327371	−1.13336	−0.87318	−0.47276	−0.43509	nan	−0.14758	0.015549	0.116971	0.142211	0.153672	−0.49005
0.527086	0.421555	−0.97161	−0.60367	−0.44332	−0.4043	nan	−0.1428	0.017684	0.124373	0.152033	0.164646	−0.46879
0.453315	0.514139	−0.69791	−0.49544	−0.37787	−0.36635	nan	−0.13563	0.02237	0.136658	0.168667	0.183006	−0.38413
0.407918	0.5564	−0.58402	−0.42188	−0.3493	−0.34338	nan	−0.13035	0.025308	0.14215	0.176098	0.191385	−0.35671
0.356274	0.592086	−0.48286	−0.36022	−0.31526	−0.31875	nan	−0.12407	0.028721	0.147195	0.183012	0.198995	−0.3269
0.245043	0.63895	−0.31988	−0.26861	−0.25561	−0.27404	nan	−0.1133	0.034566	0.15509	0.193984	0.211356	−0.27435
0.115137	0.659734	−0.18326	−0.18791	−0.19332	−0.23159	nan	−0.0999	0.040905	0.162126	0.203261	0.222015	−0.22458
−0.03816	0.654424	−0.06289	−0.11083	−0.13534	−0.19134	nan	−0.08669	0.048588	0.168857	0.211985	0.232022	−0.17711
−0.40106	0.559727	0.145816	0.024546	−0.03241	−0.11198	nan	−0.05685	0.063809	0.179908	0.225697	0.247775	−0.08303
−0.51904	0.517872	0.188932	0.053653	−0.01315	−0.09396	nan	−0.05065	0.066877	0.181819	0.227979	0.25054	−0.06202
−0.60821	0.479197	0.22354	0.079077	0.006609	−0.07626	nan	−0.04207	0.071942	0.184723	0.230742	0.253785	−0.04241
−0.75055	0.409317	0.276585	0.120686	0.041496	−0.0479	nan	−0.02802	0.081445	0.190907	0.237083	0.260517	−0.01405

Figure 66: Pressure Coefficient of Section G at M = 0.83.

Normalized x	1	0.949343	0.899047	0.698106	0.497889	0.397901	0.298034	0.198287	0.098661	0.048969
−1.8627	0.091112	−0.04275	−0.11146	−0.26897	−0.21692	−0.18214	−0.09883	−0.02279	0.114693	0.246499
−1.32732	0.089148	−0.03913	−0.11142	−0.28507	−0.24471	−0.21479	−0.13765	−0.06671	0.061559	0.184257
−0.79073	0.080981	−0.04102	−0.11554	−0.30513	−0.27743	−0.25336	−0.1819	−0.12166	−0.00173	0.107511
−0.51836	0.076258	−0.04221	−0.11782	−0.31569	−0.29475	−0.2735	−0.20453	−0.15196	−0.03788	0.062962
−0.2339	0.07149	−0.04272	−0.11929	−0.32609	−0.31334	−0.29505	−0.22789	−0.18312	−0.07711	0.013329
0.312484	0.062727	−0.04414	−0.12176	−0.34527	−0.3485	−0.33578	−0.2739	−0.24233	−0.15355	−0.08199
0.853857	0.054262	−0.04439	−0.12273	−0.36165	−0.38224	−0.37536	−0.3215	−0.30219	−0.23345	−0.187
1.427338	0.046455	−0.04316	−0.12144	−0.37448	−0.41455	−0.41493	−0.3723	−0.36625	−0.31933	−0.30454
2.495174	0.029861	−0.04004	−0.1151	−0.39185	−0.47866	−0.49992	−0.47592	−0.52388	−0.60328	−0.59173
2.773455	0.024085	−0.03967	−0.11297	−0.39561	−0.48788	−0.54113	−0.49985	−0.53854	−0.75453	−0.69101
3.05753	0.020559	−0.03875	−0.11056	−0.39774	−0.49804	−0.5434	−0.55817	−0.53086	−0.76955	−0.87566
3.550448	0.017223	−0.04078	−0.11086	−0.40666	−0.51253	−0.48817	−0.42744	−0.90379	−1.00108	−1.02449

(Left axis label: Angle of attack)

0.024243	0.009528	0	0.025691	0.086117	0.151369	0.301652	0.451574	0.601134	0.800145	0.899771	0.949825
nan	0.564542	0.143238	−1.10737	−0.98174	−0.60046	−0.49714	nan	−0.15031	0.10797	0.165454	0.171453
nan	0.515177	0.256582	−0.95561	−0.71098	−0.4782	−0.46648	nan	−0.14637	0.113713	0.171079	0.177463
nan	0.445528	0.384739	−0.67822	−0.53956	−0.46818	−0.43733	nan	−0.14175	0.122531	0.183532	0.187999
nan	0.401016	0.448899	−0.54827	−0.46121	−0.42897	−0.40685	nan	−0.13798	0.127998	0.191507	0.194706
nan	0.349128	0.508474	−0.43438	−0.39141	−0.38162	−0.3777	nan	−0.13276	0.133205	0.199129	0.20077
nan	0.240537	0.59258	−0.2522	−0.28364	−0.30859	−0.32931	nan	−0.12325	0.141181	0.210795	0.210022
nan	0.113295	0.647076	−0.10553	−0.1937	−0.23907	−0.28404	nan	−0.11272	0.148101	0.220725	0.217465
nan	−0.03897	0.672724	0.023244	−0.10891	−0.17082	−0.23911	nan	−0.09867	0.154892	0.230679	0.225099
nan	−0.4284	0.650033	0.230977	0.031191	−0.05685	−0.15441	nan	−0.07112	0.166564	0.245517	0.23548
nan	−0.53107	0.63159	0.27443	0.062909	−0.03223	−0.1356	nan	−0.06486	0.168374	0.247432	0.236066
nan	−0.64107	0.608796	0.316911	0.096685	−0.00387	−0.11467	nan	−0.05637	0.171722	0.250978	0.238412
nan	−0.81169	0.562103	0.372377	0.141624	0.031088	−0.08183	nan	−0.04237	0.177589	0.256419	0.242222

Figure 67: Pressure Coefficient of Section H at M = 0.83.

Normalized x		1	0.949318	0.898935	0.697706	0.497076	0.397211	0.297346	0.197781	0.098366	0.048883
Angle of attack	−1.8627	0.107883	−0.00801	−0.04989	−0.22838	−0.27304	nan	−0.10504	−0.0003	0.187816	0.283185
	−1.32732	0.107826	−0.00576	−0.04924	−0.23464	−0.29385	nan	−0.13672	−0.03587	0.147347	0.235436
	−0.79073	0.107951	−0.00396	−0.04963	−0.24278	−0.31944	nan	−0.17261	−0.07616	0.098701	0.175712
	−0.51836	0.105782	−0.00474	−0.05101	−0.24702	−0.3332	nan	−0.19328	−0.10064	0.070733	0.141583
	−0.2339	0.103804	−0.00546	−0.05236	−0.25161	−0.34782	nan	−0.21571	−0.12705	0.037489	0.102426
	0.312484	0.099636	−0.00733	−0.05477	−0.25983	−0.37351	nan	−0.25764	−0.17463	−0.0271	0.024771
	0.853857	0.094972	−0.00865	−0.0566	−0.2664	−0.39663	nan	−0.30041	−0.22283	−0.09569	−0.06056
	1.427338	0.090263	−0.00956	−0.05803	−0.27082	−0.41832	nan	−0.34547	−0.27491	−0.17382	−0.15792
	2.495174	0.079727	−0.01223	−0.06124	−0.27918	−0.45506	nan	−0.44593	−0.39887	−0.39486	−0.39958
	2.773455	0.076288	−0.01351	−0.06238	−0.28155	−0.45999	nan	−0.47942	−0.43446	−0.48133	−0.47157
	3.05753	0.073077	−0.01397	−0.06274	−0.28196	−0.45844	nan	−0.50799	−0.46401	−0.56987	−0.54769
	3.550448	0.065376	−0.01515	−0.06373	−0.28365	−0.44843	nan	−0.5765	−0.48863	−0.72038	−0.75617

0.024142	0.009447	0	0.025941	0.08652	0.151897	0.302294	0.452242	0.601739	0.80042	0.899985	0.949918
0.459671	0.630987	−0.48982	nan	−1.15612	−0.97015	−0.41211	−0.26888	nan	0.1173	0.177861	0.177666
0.413287	0.598659	−0.29108	nan	−0.98056	−0.46003	−0.42808	−0.28305	nan	0.117352	0.183265	0.183724
0.3529	0.550834	−0.08693	nan	−0.69775	−0.49201	−0.41382	−0.28354	nan	0.117692	0.184578	0.18556
0.317857	0.519286	0.018024	nan	−0.55385	−0.49399	−0.40772	−0.27995	nan	0.119558	0.188155	0.188813
0.275879	0.478902	0.136751	nan	−0.47223	−0.44256	−0.39154	−0.2745	nan	0.12259	0.192093	0.191448
0.187863	0.387727	0.314688	nan	−0.366	−0.37749	−0.35719	−0.26288	nan	0.124845	0.197629	0.195201
0.088454	0.277004	0.44954	nan	−0.27922	−0.31531	−0.32149	−0.24963	nan	0.125147	0.200735	0.197208
−0.0271	0.140185	0.547537	nan	−0.19407	−0.24734	−0.2814	−0.23364	nan	0.124461	0.20378	0.199484
−0.32568	−0.23777	0.659604	nan	−0.04921	−0.12871	−0.20506	−0.19864	nan	0.120946	0.205983	0.199835
−0.41673	−0.35723	0.668308	nan	−0.01667	−0.10311	−0.18834	−0.19089	nan	0.118971	0.205174	0.198364
−0.51517	−0.48924	0.671894	nan	0.01882	−0.07434	−0.16849	−0.17996	nan	0.117764	0.205238	0.197575
−0.76543	−0.84333	0.652593	nan	0.077831	−0.02586	−0.13607	−0.16092	nan	0.115225	0.203633	0.194158

Figure 68: Pressure Coefficient of Section I at M = 0.83.

Normalized x	0.999658	0.472113	0.208896	0.103849	0.051411	0	0	0.106587	0.212062	0.472455	1
−1.8627	0.140373	−0.05124	0.029578	0.130912	0.240941	0.450992	0.480453	−0.36591	−0.31997	−0.1306	0.143773
−1.32732	0.140129	−0.06011	0.016751	0.116129	0.223992	0.448986	0.475674	−0.34089	−0.30296	−0.12559	0.145376
−0.79073	0.140167	−0.06833	0.004436	0.101145	0.206251	0.445216	0.474212	−0.31634	−0.28546	−0.1198	0.147136
−0.51836	0.140292	−0.07265	−0.0023	0.092955	0.196558	0.445184	0.472572	−0.30385	−0.27669	−0.11713	0.147923
−0.2339	0.140793	−0.07664	−0.0088	0.085115	0.188003	0.443199	0.468679	−0.28996	−0.26673	−0.11391	0.149037
0.312484	0.140957	−0.08375	−0.01998	0.071557	0.172192	0.439016	0.464481	−0.26907	−0.2515	−0.10896	0.150397
0.853857	0.141718	−0.08977	−0.03029	0.058476	0.156891	0.435441	0.457273	−0.24575	−0.2347	−0.10302	0.151625
1.427338	0.14329	−0.09458	−0.03924	0.046644	0.142298	0.431867	0.452044	−0.22519	−0.21951	−0.09672	0.153659
2.495174	0.145344	−0.10185	−0.05448	0.026232	0.116625	0.420058	0.438086	−0.18657	−0.19068	−0.08476	0.156386
2.773455	0.145403	−0.10474	−0.05854	0.021111	0.110252	0.418217	0.433086	−0.17811	−0.18508	−0.08331	0.156361
3.05753	0.145882	−0.10533	−0.06095	0.017338	0.104744	0.413696	0.429856	−0.16846	−0.17751	−0.07983	0.15715
3.550448	0.146779	−0.10658	−0.06534	0.009665	0.092956	0.404958	0.421745	−0.15279	−0.16572	−0.07505	0.158036

Figure 69: Pressure Coefficient of Section SA at M = 0.83.

Normalized x	0.999776	0.472695	0.20949	0.104297	0.051925	0	0	0.106088	0.211504	0.474597	1
−1.8627	0.134282	−0.03959	−0.06191	−0.00387	0.108074	0.528863	0.509014	−1.16393	−0.55464	−0.22752	0.154165
−1.32732	0.134022	−0.04884	−0.07956	−0.02808	0.080383	0.545459	0.523801	−1.12192	−0.46479	−0.22557	0.154094
−0.79073	0.134447	−0.05828	−0.09804	−0.05372	0.050738	0.56213	0.541766	−1.05565	−0.41913	−0.22221	0.154286
−0.51836	0.134694	−0.06313	−0.10764	−0.06709	0.035196	0.570644	0.550824	−0.99521	−0.40947	−0.21986	0.154798
−0.2339	0.135326	−0.06791	−0.11761	−0.08142	0.018687	0.579881	0.561134	−0.91677	−0.38553	−0.21558	0.156218
0.312484	0.136137	−0.07724	−0.13576	−0.10752	−0.01201	0.594383	0.578315	−0.85615	−0.44636	−0.21042	0.156633
0.853857	0.136957	−0.08518	−0.15199	−0.13163	−0.04068	0.607377	0.593049	−0.79246	−0.42779	−0.20452	0.156906
1.427338	0.138741	−0.09221	−0.16796	−0.15628	−0.07009	0.620674	0.607927	−0.74766	−0.41623	−0.19676	0.1583
2.495174	0.141543	−0.10493	−0.19684	−0.20213	−0.12599	0.642133	0.63364	−0.66717	−0.38444	−0.182	0.159913
2.773455	0.14196	−0.10879	−0.20534	−0.21497	−0.14103	0.64785	0.639666	−0.64965	−0.37882	−0.1799	0.159841
3.05753	0.142844	−0.11088	−0.21131	−0.22531	−0.15429	0.652154	0.644862	−0.62729	−0.37156	−0.17578	0.160421
3.550448	0.144104	−0.11455	−0.2212	−0.24242	−0.17582	0.658541	0.65285	−0.59625	−0.36216	−0.16983	0.161357

Figure 70: Pressure Coefficient of Section SB at M = 0.83.

Normalized x	1	0.47379	0.210775	0.105388	0.052785	0	0	0.105024	0.210229	0.473426	0.999818
−1.8627	0.10718	−0.08799	−0.0594	0.040187	0.034348	0.485915	0.343128	−0.85938	−0.43581	−0.20422	0.120114
−1.32732	0.109218	−0.09524	−0.07826	0.013219	0.059218	0.512043	0.379022	−0.78281	−0.41142	−0.20653	0.120103
−0.79073	0.111475	−0.10267	−0.09933	−0.01549	0.062125	0.5391	0.420593	−0.67807	−0.43462	−0.20508	0.120796
−0.51836	0.112672	−0.1065	−0.11012	−0.03285	0.05441	0.552624	0.440905	−0.64564	−0.43468	−0.2036	0.12107
−0.2339	0.113784	−0.11009	−0.12068	−0.04987	0.041605	0.565362	0.462547	−0.61556	−0.42719	−0.20132	0.121634
0.312484	0.115318	−0.11746	−0.14226	−0.08139	0.019616	0.58528	0.501771	−0.56089	−0.40784	−0.1975	0.121993
0.853857	0.116893	−0.12349	−0.16253	−0.10777	−0.00736	0.601988	0.535112	−0.5068	−0.38473	−0.19258	0.122547
1.427338	0.119466	−0.12853	−0.18032	−0.14466	−0.03816	0.615731	0.564255	−0.45652	−0.36181	−0.18658	0.123924
2.495174	0.12277	−0.13778	−0.21657	−0.20395	−0.08895	0.637746	0.609705	−0.36916	−0.31909	−0.17534	0.125297
2.773455	0.123113	−0.14101	−0.22645	−0.22178	−0.12955	0.642913	0.618926	−0.35543	−0.31254	−0.17417	0.125409
3.05753	0.123903	−0.14175	−0.23257	−0.23425	−0.16505	0.646413	0.626179	−0.33996	−0.30336	−0.17077	0.125915
3.550448	0.124613	−0.1432	−0.24131	−0.24988	−0.20122	0.649038	0.633567	−0.32016	−0.29008	−0.16511	0.1261

Figure 71: Pressure Coefficient of Section SC at M = 0.83.
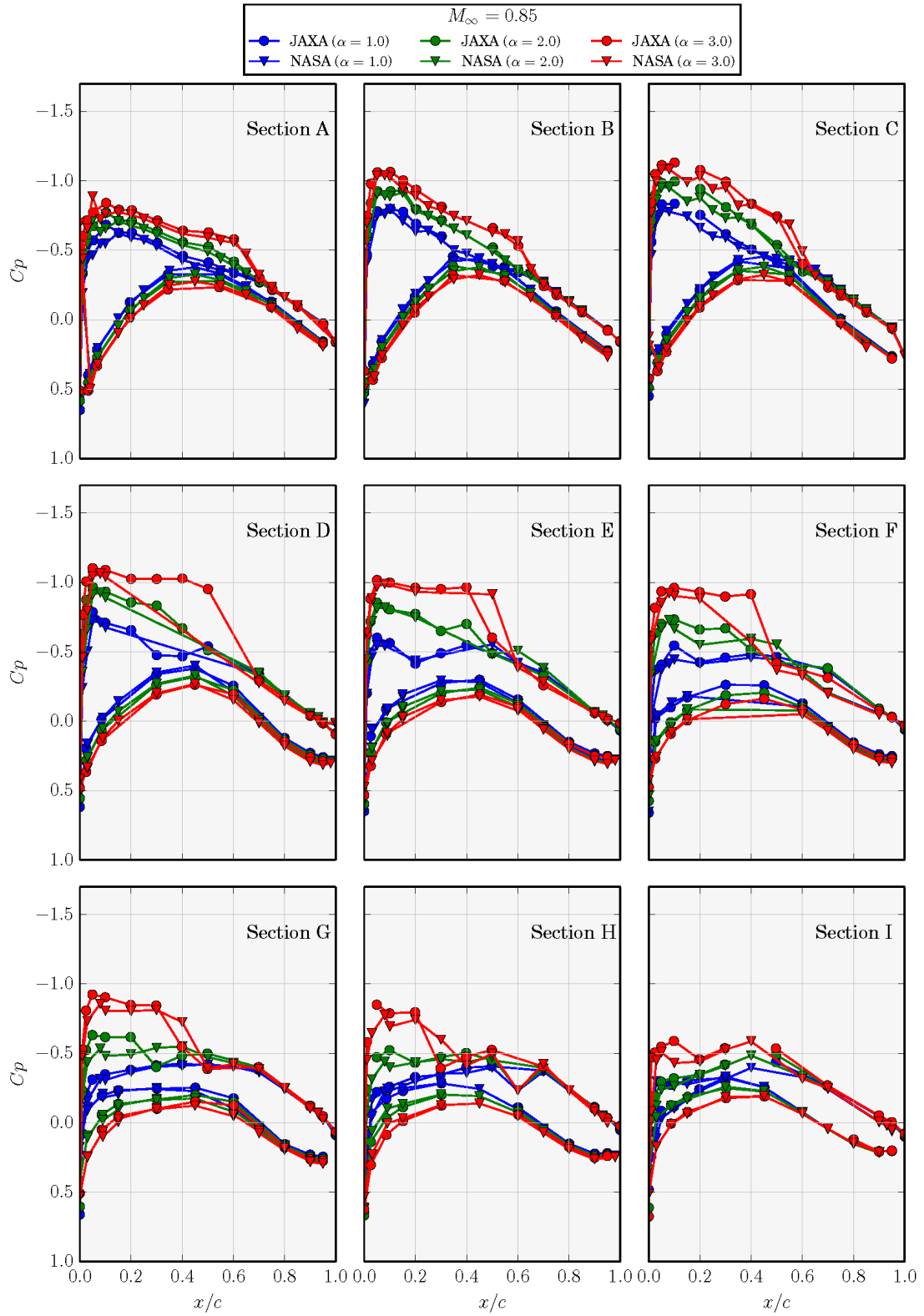
Figure 72: Pressure Distribution on Main Wing at M = 0.85.

Normalized x	1	0.950507	0.851195	0.751801	0.702104	0.602548	0.50291	0.403232	0.30339	0.203346	0.153201
−1.85666	0.164743	0.025707	−0.07633	−0.16544	−0.20397	−0.24077	−0.26968	−0.28128	−0.30857	−0.35986	−0.37207
−1.31653	0.164923	0.024915	−0.08213	−0.17679	−0.21854	−0.26086	−0.29408	−0.3098	−0.34009	−0.40238	−0.421
−0.79247	0.164593	0.024343	−0.08744	−0.18754	−0.23271	−0.28151	−0.31973	−0.34178	−0.37042	−0.45141	−0.46907
−0.66228	0.164317	0.023857	−0.08894	−0.19013	−0.23611	−0.28653	−0.32601	−0.34902	−0.38067	−0.46373	−0.48083
−0.51033	0.164307	0.024255	−0.09011	−0.19309	−0.24032	−0.29267	−0.33595	−0.3558	−0.39793	−0.47695	−0.49615
−0.22104	0.163855	0.023885	−0.09229	−0.19842	−0.2471	−0.30311	−0.3524	−0.36733	−0.41769	−0.51005	−0.52053
0.325804	0.16368	0.025037	−0.09594	−0.20695	−0.25976	−0.32315	−0.37172	−0.39724	−0.4778	−0.56259	−0.58357
0.863492	0.163039	0.025717	−0.09926	−0.21413	−0.26802	−0.33294	−0.40098	−0.44348	−0.53933	−0.61345	−0.61691
1.190617	0.162488	0.026433	−0.0995	−0.21428	−0.26827	−0.33884	−0.42978	−0.47903	−0.57254	−0.6473	−0.63859
1.446287	0.162814	0.027775	−0.09814	−0.21304	−0.26781	−0.34637	−0.45799	−0.50735	−0.59115	−0.66443	−0.66891
2.532733	0.161532	0.034315	−0.09296	−0.21401	−0.27987	−0.48496	−0.5919	−0.60656	−0.68079	−0.75665	−0.75932
2.807781	0.160306	0.036124	−0.09152	−0.2159	−0.2884	−0.54169	−0.61287	−0.62582	−0.69903	−0.77431	−0.77568
3.01201	0.158576	0.036056	−0.09225	−0.2204	−0.30044	−0.58068	−0.6298	−0.64197	−0.71459	−0.78896	−0.79263
3.096519	0.157596	0.035837	−0.09273	−0.2226	−0.30657	−0.59319	−0.63635	−0.64865	−0.72036	−0.79438	−0.7985
3.661631	0.154401	0.03693	−0.09192	−0.23019	−0.33336	−0.63953	−0.6704	−0.68318	−0.75633	−0.83149	−0.83962
4.774311	0.140498	0.029847	−0.09987	−0.26701	−0.44875	−0.70708	−0.73264	−0.74766	−0.82686	−0.8999	−0.9127
5.850242	0.126174	0.015612	−0.10312	−0.24731	−0.38261	−0.75995	−0.78481	−0.81247	−0.89864	−0.97511	−0.9905
7.853164	0.059791	−0.07457	−0.21936	−0.35589	−0.39667	−0.53463	−0.79611	−0.90371	−1.01319	−1.09341	−1.12186
8.500178	−0.05192	−0.21881	−0.39376	−0.5196	−0.57249	−0.58047	−0.66222	−0.69975	−0.84689	−1.10072	−1.16136

0.102853	0.05218	0.026578	0.01103	0	0.03309	0.067199	0.195246	0.344377	0.545281	0.747405	0.949652
−0.37367	−0.26995	−0.12893	0.07177	0.782556	0.209975	0.028718	−0.29014	−0.47293	−0.52438	−0.17552	0.136178
−0.41497	−0.32177	−0.1894	0.006017	0.767612	0.247192	0.064855	−0.26016	−0.45272	−0.48757	−0.16769	0.140547
−0.4721	−0.37856	−0.25585	−0.068	0.747046	0.283383	0.100453	−0.22966	−0.42641	−0.44752	−0.15937	0.144428
−0.49096	−0.39459	−0.27427	−0.08884	0.740495	0.291931	0.108891	−0.22219	−0.42102	−0.432	−0.15732	0.145292
−0.51112	−0.41145	−0.29389	−0.11108	0.733907	0.302985	0.119982	−0.21275	−0.41319	−0.41775	−0.15516	0.146375
−0.54737	−0.44171	−0.32935	−0.15176	0.719889	0.321644	0.138501	−0.19651	−0.39732	−0.3917	−0.15063	0.148097
−0.61036	−0.50022	−0.39803	−0.23202	0.690826	0.357232	0.174367	−0.1643	−0.36419	−0.3641	−0.14127	0.152006
−0.66858	−0.55557	−0.46204	−0.30959	0.660176	0.390049	0.207469	−0.1343	−0.33431	−0.33274	−0.13244	0.15574
−0.70432	−0.59445	−0.50461	−0.36279	0.637883	0.410512	0.228439	−0.11502	−0.3151	−0.31534	−0.12667	0.157824
−0.72458	−0.61587	−0.52873	−0.393	0.624691	0.423597	0.241927	−0.10242	−0.30257	−0.30432	−0.12245	0.159866
−0.8165	−0.73024	−0.66222	−0.55446	0.546215	0.485992	0.306517	−0.04125	−0.242	−0.25333	−0.10027	0.168675
−0.83009	−0.75377	−0.69185	−0.58409	0.525149	0.499981	0.321766	−0.02556	−0.22633	−0.24057	−0.094	0.170638
−0.84121	−0.77447	−0.7155	−0.60555	0.509647	0.511187	0.333374	−0.01481	−0.2166	−0.23332	−0.09106	0.171252
−0.84473	−0.78136	−0.72277	−0.61197	0.505152	0.514723	0.336855	−0.01173	−0.21378	−0.23168	−0.09065	0.17113
−0.86867	−0.83513	−0.78405	−0.6625	0.463178	0.541918	0.365812	0.016342	−0.18635	−0.2103	−0.08072	0.174219
−0.92158	−0.93463	−0.90979	−0.76912	0.379058	0.59053	0.418247	0.068026	−0.13832	−0.17674	−0.06759	0.175144
−0.99176	−1.0315	−1.03291	−0.88515	0.292407	0.633739	0.465527	0.11439	−0.09637	−0.15065	−0.06313	0.170677
−1.09863	−1.2099	−1.22088	−1.09174	0.130524	0.704214	0.545109	0.193993	−0.02665	−0.11357	−0.07619	0.120648
−1.14809	−1.29301	−1.30685	−1.19579	0.05298	0.733245	0.579125	0.227953	0.003326	−0.09669	−0.0802	0.090758

Figure 73: Pressure Coefficient of Section A at M = 0.85.

Normalized x	1	0.95036	0.850897	0.751435	0.701658	0.602058	0.502368	0.402587	0.302669	0.202477	0.152291
−1.85666	0.172683	0.076396	−0.04516	−0.15138	−0.20156	−0.25619	−0.27639	nan	−0.35581	−0.36751	−0.37657
−1.31653	0.170718	0.075704	−0.0498	−0.16114	−0.21467	−0.2759	−0.3007	nan	−0.39336	−0.41108	−0.44516
−0.79247	0.167845	0.075071	−0.05397	−0.17035	−0.22693	−0.2955	−0.32596	nan	−0.4372	−0.45077	−0.50474
−0.66228	0.166904	0.074703	−0.0552	−0.17259	−0.22983	−0.29991	−0.33183	nan	−0.44307	−0.46488	−0.52803
−0.51033	0.166298	0.074763	−0.05605	−0.17501	−0.23338	−0.30653	−0.33626	nan	−0.44778	−0.48808	−0.54951
−0.22104	0.164547	0.074122	−0.0581	−0.17924	−0.23915	−0.31524	−0.35497	nan	−0.45365	−0.52323	−0.59235
0.325804	0.162534	0.074191	−0.0603	−0.18537	−0.24807	−0.33806	−0.37841	nan	−0.49144	−0.60327	−0.66428
0.863492	0.160756	0.073866	−0.06315	−0.19364	−0.25987	−0.3432	−0.37611	nan	−0.57848	−0.672	−0.72445
1.190617	0.159815	0.073584	−0.06429	−0.19427	−0.25861	−0.3394	−0.39218	nan	−0.63168	−0.71531	−0.84878
1.446287	0.159866	0.074353	−0.06301	−0.19165	−0.25455	−0.33691	−0.42224	nan	−0.65961	−0.73946	−0.89535
2.532733	0.158108	0.079172	−0.05435	−0.17978	−0.24104	−0.37702	−0.61376	nan	−0.77099	−0.84996	−0.96976
2.807781	0.156675	0.080387	−0.05187	−0.17675	−0.23907	−0.4569	−0.64232	nan	−0.79501	−0.89409	−0.98593
3.01201	0.15438	0.080038	−0.0516	−0.17714	−0.2419	−0.53527	−0.66144	nan	−0.81455	−0.93763	−1.00389
3.096519	0.153327	0.079744	−0.05182	−0.17756	−0.24356	−0.56569	−0.66909	nan	−0.82305	−0.95683	−1.01026
3.661631	0.149334	0.079762	−0.05032	−0.1788	−0.25243	−0.65358	−0.70588	nan	−0.87386	−1.04267	−1.08544
4.774311	0.136343	0.073215	−0.06086	−0.20623	−0.30512	−0.75342	−0.76893	nan	−0.9515	−1.08231	−1.24064
5.850242	0.117161	0.050752	−0.0779	−0.20202	−0.27593	−0.76101	−0.8288	nan	−1.03785	−1.27864	−1.359
7.853164	−0.00837	−0.09209	−0.26349	−0.42132	−0.50201	−0.63131	−0.74493	nan	−1.156	−1.46198	−1.49531
8.500178	−0.31194	−0.3701	−0.48637	−0.57337	−0.60895	−0.68062	−0.75829	nan	−0.96317	−1.09714	−1.16293

0.102013	0.051507	0.026095	0.010702	0	0.033792	0.068221	0.196921	0.346343	0.546908	0.748383	0.949859
−0.42723	−0.35923	−0.22949	0.009692	0.65727	0.108583	−0.03797	−0.33307	−0.64081	−0.65091	−0.09114	0.200022
−0.52464	−0.43137	−0.30705	−0.0696	0.647249	0.151737	0.000491	−0.29856	−0.60853	−0.59458	−0.08534	0.204418
−0.63813	−0.51347	−0.3961	−0.15958	0.6282	0.192769	0.037979	−0.26642	−0.57142	−0.52948	−0.08004	0.208013
−0.6654	−0.53446	−0.42088	−0.18509	0.621841	0.202735	0.047184	−0.25735	−0.56264	−0.50246	−0.07909	0.208665
−0.68645	−0.55701	−0.44654	−0.21142	0.615248	0.214907	0.058409	−0.24921	−0.5547	−0.48992	−0.07763	0.209761
−0.71151	−0.59859	−0.4941	−0.26021	0.600388	0.236076	0.077773	−0.23271	−0.54124	−0.45536	−0.07523	0.211409
−0.7425	−0.68469	−0.58537	−0.35544	0.569065	0.275288	0.114884	−0.20236	−0.50424	−0.41162	−0.06874	0.215268
−0.782	−0.75947	−0.6713	−0.44196	0.53467	0.310275	0.148944	−0.1729	−0.46502	−0.38807	−0.06197	0.21913
−0.82346	−0.81128	−0.72827	−0.49988	0.510518	0.33233	0.17046	−0.15216	−0.43854	−0.36452	−0.05793	0.22139
−0.84824	−0.84056	−0.76056	−0.53117	0.495378	0.345794	0.183985	−0.14001	−0.42359	−0.35327	−0.05412	0.22344
−0.99938	−1.00745	−0.91624	−0.68875	0.407847	0.408393	0.248524	−0.07765	−0.35032	−0.30066	−0.03621	0.232293
−1.03636	−1.03874	−0.95169	−0.72274	0.38419	0.422673	0.26429	−0.06082	−0.33162	−0.2874	−0.03113	0.234087
−1.06609	−1.0632	−0.98193	−0.74896	0.367645	0.433607	0.275616	−0.05028	−0.32037	−0.2798	−0.02881	0.234585
−1.07582	−1.07167	−0.99211	−0.75812	0.361957	0.437469	0.279464	−0.04696	−0.31712	−0.27827	−0.02855	0.234642
−1.144	−1.13782	−1.06392	−0.82471	0.316536	0.46339	0.306857	−0.01948	−0.2853	−0.25565	−0.02042	0.237244
−1.26258	−1.24877	−1.1687	−0.94413	0.223767	0.50945	0.357366	0.032543	−0.23195	−0.22207	−0.01087	0.2379
−1.36206	−1.34675	−1.26611	−1.07515	0.127225	0.548542	0.401706	0.07855	−0.18712	−0.19798	−0.01222	0.229631
−1.49717	−1.4824	−1.42728	−1.26286	−0.04447	0.608582	0.47348	0.154053	−0.11627	−0.16943	−0.04404	0.13651
−1.24277	−1.31149	−1.32574	−1.32511	−0.12948	0.632489	0.503752	0.186757	−0.08558	−0.15454	−0.0536	0.09762

Figure 74: Pressure Coefficient of Section B at M = 0.85.

Normalized x		1	0.950309	0.850663	0.750965	0.701115	0.601364	0.501507	0.401596	0.301581	0.201406	0.151292
Angle of attack	−1.85666	nan	0.057819	−0.051	−0.16637	−0.22306	−0.27972	−0.30984	−0.33606	−0.35086	−0.34893	nan
	−1.31653	nan	0.057338	−0.05573	−0.17629	−0.23649	−0.30074	−0.33727	−0.36889	−0.38579	−0.39877	nan
	−0.79247	nan	0.057021	−0.05977	−0.18524	−0.24886	−0.32129	−0.36609	−0.40481	−0.43379	−0.46105	nan
	−0.66228	nan	0.056477	−0.0611	−0.18774	−0.25213	−0.32624	−0.36997	−0.41007	−0.44642	−0.48074	nan
	−0.51033	nan	0.056525	−0.06197	−0.18988	−0.2552	−0.33271	−0.38255	−0.40732	−0.47386	−0.48116	nan
	−0.22104	nan	0.055809	−0.06404	−0.19408	−0.26082	−0.34317	−0.3958	−0.44526	−0.50087	−0.47645	nan
	0.325804	nan	0.056176	−0.06605	−0.19992	−0.26924	−0.3528	−0.44204	−0.4708	−0.49519	−0.57038	nan
	0.863492	nan	0.056364	−0.06762	−0.20649	−0.28314	−0.39601	−0.4208	−0.48623	−0.58701	−0.68751	nan
	1.190617	nan	0.055326	−0.07057	−0.21243	−0.2886	−0.37953	−0.40207	−0.53164	−0.65551	−0.84761	nan
	1.446287	nan	0.055267	−0.07066	−0.21035	−0.28231	−0.3626	−0.39249	−0.58385	−0.69435	−0.8668	nan
	2.532733	nan	0.061947	−0.05609	−0.17992	−0.23954	−0.33183	−0.67901	−0.78273	−0.92282	−1.01363	nan
	2.807781	nan	0.064302	−0.05179	−0.17271	−0.2316	−0.35874	−0.71876	−0.81142	−0.98078	−1.05252	nan
	3.01201	nan	0.064212	−0.05104	−0.17121	−0.23155	−0.40259	−0.74552	−0.83579	−0.99413	−1.07983	nan
	3.096519	nan	0.063937	−0.05089	−0.17099	−0.23235	−0.42519	−0.7559	−0.84552	−0.99983	−1.08935	nan
	3.661631	nan	0.064561	−0.04955	−0.17381	−0.24241	−0.50178	−0.80334	−0.90007	−1.09621	−1.1516	nan
	4.774311	nan	0.063296	−0.05795	−0.22021	−0.31277	−0.60659	−0.90437	−1.11581	−1.23451	−1.26022	nan
	5.850242	nan	−0.00512	−0.13485	−0.29365	−0.40215	−0.6274	−0.80567	−1.31366	−1.33352	−1.35022	nan
	7.853164	nan	−0.36597	−0.45537	−0.53409	−0.58299	−0.70241	−0.83314	−0.91942	−0.97345	−1.24498	nan
	8.500178	nan	−0.46264	−0.53955	−0.60468	−0.63463	−0.69184	−0.74433	−0.80382	−0.87998	−0.9479	nan

0.101126	0.050854	0.025638	0.010414		0	0.034413	0.069144	0.198499	0.348205	0.548448	0.74922	0.950045
−0.38247	−0.29097	−0.18685	0.032271		0.618371	−0.01875	−0.11801	−0.40907	−0.65844	−0.7704	−0.03808	0.238013
−0.46967	−0.37635	−0.28261	−0.06513		0.625628	0.035836	−0.07367	−0.36781	−0.62636	−0.69038	−0.02805	0.243355
−0.53562	−0.47777	−0.39741	−0.17769		0.624827	0.088682	−0.02944	−0.33771	−0.58184	−0.53573	−0.0235	0.248133
−0.59475	−0.50547	−0.4278	−0.20901		0.621644	0.100972	−0.01906	−0.33051	−0.56986	−0.48443	−0.0231	0.248909
−0.6884	−0.53384	−0.46001	−0.2423		0.618507	0.115657	−0.00638	−0.32015	−0.55753	−0.45958	−0.02197	0.250164
−0.74222	−0.5816	−0.52137	−0.30744		0.608965	0.141416	0.015951	−0.30103	−0.52844	−0.41903	−0.02053	0.252435
−0.74837	−0.69889	−0.63737	−0.42704		0.586376	0.188057	0.05751	−0.26175	−0.4707	−0.39289	−0.01508	0.257337
−0.80705	−0.80189	−0.72693	−0.53265		0.558169	0.229396	0.095177	−0.22517	−0.4286	−0.37612	−0.00898	0.262038
−0.87511	−0.87218	−0.78302	−0.59734		0.539178	0.254585	0.118518	−0.20192	−0.41022	−0.35989	−0.00525	0.264735
−0.9114	−0.90726	−0.81463	−0.63196		0.527451	0.270109	0.133126	−0.18729	−0.39279	−0.35142	−0.00204	0.266883
−1.07705	−1.05985	−0.98079	−0.78927		0.456424	0.342947	0.20397	−0.11572	−0.31457	−0.30004	0.014232	0.277587
−1.10871	−1.09008	−1.02096	−0.8214		0.437268	0.359146	0.220213	−0.09786	−0.29553	−0.28701	0.018707	0.279519
−1.13278	−1.11423	−1.05084	−0.84485		0.423271	0.370851	0.231568	−0.08596	−0.28414	−0.27975	0.020619	0.279999
−1.14202	−1.12362	−1.06207	−0.85366		0.417972	0.374758	0.235336	−0.08246	−0.28112	−0.2785	0.020772	0.280075
−1.19961	−1.18345	−1.12964	−0.90982		0.378284	0.403847	0.265324	−0.05132	−0.24913	−0.25706	0.027286	0.283479
−1.29557	−1.28755	−1.23255	−1.00789		0.294559	0.453631	0.317537	0.002364	−0.19715	−0.2258	0.033759	0.285751
−1.38761	−1.38277	−1.31919	−1.11791		0.204869	0.494737	0.36192	0.048316	−0.15584	−0.2086	0.020416	0.264423
−1.42893	−1.4766	−1.44672	−1.31644		0.049792	0.555814	0.432412	0.122022	−0.09428	−0.19657	−0.03353	0.138758
−0.96311	−0.98867	−1.0154	−1.02481		−0.01906	0.580697	0.461319	0.153663	−0.06722	−0.18549	−0.04528	0.121589

Figure 75: Pressure Coefficient of Section C at M = 0.85.

Normalized x		1	0.950125	0.900184	0.700354	0.500459	0.400446	0.300433	0.200354	0.100275	0.050203
Angle of attack	−1.85666	0.137874	0.01809	−0.04137	−0.2733	−0.32542	−0.31499	−0.29222	−0.2217	−0.19455	−0.13983
	−1.31653	0.130349	0.016781	−0.0449	−0.28972	−0.35706	−0.35235	−0.33566	−0.27361	−0.26741	−0.22653
	−0.79247	0.121575	0.015662	−0.04784	−0.30531	−0.39035	−0.3923	−0.38066	−0.33431	−0.35485	−0.33022
	−0.66228	0.118746	0.015105	−0.04874	−0.30935	−0.40008	−0.40809	−0.3961	−0.35546	−0.38253	−0.3611
	−0.51033	0.116262	0.01542	−0.04896	−0.31402	−0.40702	−0.41232	−0.418	−0.35079	−0.42135	−0.39005
	−0.22104	0.111031	0.015196	−0.04999	−0.32065	−0.41883	−0.4629	−0.41176	−0.40731	−0.49077	−0.44747
	0.325804	0.100811	0.015948	−0.04982	−0.33092	−0.44284	−0.49347	−0.52433	−0.44188	−0.58814	−0.59268
	0.863492	0.09229	0.01523	−0.0503	−0.32932	−0.55651	−0.49981	−0.4283	−0.60522	−0.65807	−0.75014
	1.190617	0.088015	0.014487	−0.05046	−0.34492	−0.51633	−0.42356	−0.54257	−0.729	−0.77716	−0.83634
	1.446287	0.086703	0.013846	−0.05185	−0.36583	−0.45602	−0.38016	−0.70489	−0.74656	−0.83078	−0.88149
	2.532733	0.087815	0.01354	−0.04537	−0.27728	−0.56525	−0.94907	−0.95656	−0.9613	−1.0328	−1.05058
	2.807781	0.091659	0.014973	−0.04039	−0.2679	−0.79843	−0.997	−0.99804	−0.99826	−1.06617	−1.08066
	3.01201	0.095466	0.015138	−0.03916	−0.29529	−0.96198	−1.02969	−1.02649	−1.02647	−1.09139	−1.10374
	3.096519	0.09719	0.014765	−0.0395	−0.31182	−0.98854	−1.0404	−1.03697	−1.03677	−1.10053	−1.1123
	3.661631	0.11114	0.009584	−0.05352	−0.4369	−1.02402	−1.10415	−1.10154	−1.10371	−1.16056	−1.16922
	4.774311	−0.11308	−0.22371	−0.34624	−0.61117	−0.71842	−1.21245	−1.20881	−1.21831	−1.25917	−1.26221
	5.850242	−0.36361	−0.42152	−0.45848	−0.54427	−0.64852	−0.71028	−0.87032	−1.31092	−1.34746	−1.35761
	7.853164	−0.42731	−0.47024	−0.50187	−0.60835	−0.72243	−0.80499	−0.89886	−0.98529	−1.10748	−1.14219
	8.500178	−0.35469	−0.40062	−0.42245	−0.52392	−0.71257	−0.81946	−0.92403	−1.13514	−1.19801	−1.21987

0.025167	0.010093	0	0.024905	0.084808	0.299581	0.4496	0.599685	0.799908	0.900052	0.949928
−0.02674	0.210111	0.624004	−0.24134	−0.31647	−0.6338	−0.79326	−0.23773	0.051338	0.14285	0.190709
−0.12322	0.113877	0.649795	−0.14655	−0.25248	−0.58508	−0.75004	−0.244	0.082933	0.175818	0.215002
−0.24135	−3.71E−05	0.66458	−0.05297	−0.19157	−0.53129	−0.68503	−0.26922	0.096861	0.194886	0.230204
−0.27728	−0.03548	0.667082	−0.03362	−0.17877	−0.51563	−0.66452	−0.27688	0.098921	0.198005	0.232449
−0.31141	−0.06844	0.668987	−0.00751	−0.16133	−0.50092	−0.63814	−0.281	0.101375	0.201771	0.235686
−0.38162	−0.13837	0.667864	0.036679	−0.13134	−0.47284	−0.53267	−0.28504	0.105203	0.207896	0.240836
−0.54633	−0.30111	0.650912	0.115205	−0.0747	−0.40208	−0.40659	−0.2734	0.112528	0.217471	0.249216
−0.68248	−0.43182	0.625426	0.1788	−0.02598	−0.34837	−0.38988	−0.25945	0.1193	0.226233	0.256806
−0.75757	−0.50419	0.605957	0.21505	0.003398	−0.32191	−0.36453	−0.24984	0.123208	0.231523	0.261307
−0.79457	−0.54353	0.592941	0.236384	0.021388	−0.305	−0.3522	−0.24281	0.126346	0.235089	0.264453
−0.95231	−0.7051	0.517125	0.331239	0.105974	−0.2234	−0.28743	−0.20775	0.142155	0.252794	0.280855
−0.98338	−0.73968	0.496365	0.351609	0.126722	−0.20424	−0.27166	−0.19862	0.145703	0.256647	0.284886
−1.0086	−0.76865	0.481056	0.365592	0.141673	−0.19221	−0.26234	−0.19376	0.147591	0.25943	0.288141
−1.01788	−0.7796	0.475623	0.369831	0.145948	−0.18929	−0.26042	−0.19303	0.147791	0.260088	0.288915
−1.07971	−0.86785	0.430314	0.404713	0.182501	−0.15728	−0.23441	−0.17913	0.152919	0.266077	0.295534
−1.18839	−1.02114	0.337079	0.460299	0.233959	−0.10766	−0.19737	−0.16752	0.142384	0.241364	0.249155
−1.30579	−1.14363	0.241157	0.502273	0.27581	−0.07272	−0.1809	−0.18628	0.082627	0.169872	0.170639
−1.14198	−1.17404	0.063607	0.557966	0.340895	−0.02254	−0.16203	−0.21338	0.036677	0.13344	0.137588
−1.20711	−1.12493	−0.01057	0.577642	0.366708	−0.00143	−0.1483	−0.21187	0.028457	0.125425	0.128913

Figure 76: Pressure Coefficient of Section D at M = 0.85.

Normalized x	1	0.949879	0.899758	0.699494	0.499376	0.399354	0.299406	0.199457	0.099582	0.049681	0.024804
−1.85666	0.115512	−0.00475	−0.05666	−0.2717	−0.30064	−0.27078	−0.22254	−0.15946	−0.05774	0.013405	0.170596
−1.31653	0.108723	−0.00452	−0.0592	−0.28821	−0.33292	−0.30926	−0.26476	−0.20832	−0.12257	−0.06368	0.085043
−0.79247	0.100616	−0.00536	−0.06263	−0.30501	−0.36715	−0.34984	−0.31005	−0.26157	−0.19427	−0.15456	−0.01504
−0.66228	0.09779	−0.00619	−0.06383	−0.30935	−0.37645	−0.36149	−0.32335	−0.27746	−0.21696	−0.18257	−0.04522
−0.51033	0.095302	−0.00604	−0.0643	−0.31345	−0.38726	−0.3732	−0.33721	−0.29374	−0.23867	−0.21023	−0.07537
−0.22104	0.09003	−0.00701	−0.06609	−0.32218	−0.40409	−0.39559	−0.36553	−0.32524	−0.28286	−0.26649	−0.14203
0.325804	0.08048	−0.00737	−0.06739	−0.33444	−0.43316	−0.45818	−0.41769	−0.38315	−0.40307	−0.39418	−0.28641
0.863492	0.069917	−0.00678	−0.06685	−0.3489	−0.42253	−0.53687	−0.49048	−0.46072	−0.50947	−0.54919	−0.45005
1.190617	0.063081	−0.00824	−0.06797	−0.34597	−0.58571	−0.56508	−0.48968	−0.3513	−0.63793	−0.67483	−0.56012
1.446287	0.060182	−0.0078	−0.06684	−0.33902	−0.58769	−0.52633	−0.40894	−0.64907	−0.67119	−0.75033	−0.6158
2.532733	0.051722	−0.00942	−0.06479	−0.31765	−0.39105	−0.8692	−0.88321	−0.89322	−0.93338	−0.95449	−0.81891
2.807781	0.03763	−0.00717	−0.05522	−0.27545	−0.51996	−0.93458	−0.92386	−0.93239	−0.97184	−0.99106	−0.85604
3.01201	0.01199	−0.01934	−0.06027	−0.25736	−0.60703	−0.96746	−0.95369	−0.96231	−1.00044	−1.01852	−0.8833
3.096519	−0.00055	−0.02977	−0.06907	−0.25915	−0.60409	−0.9777	−0.9635	−0.97206	−1.00902	−1.02688	−0.89148
3.661631	−0.11535	−0.15707	−0.19202	−0.33239	−0.48248	−1.04256	−1.02909	−1.04091	−1.07515	−1.09126	−0.95638
4.774311	−0.27571	−0.33051	−0.34178	−0.40569	−0.48794	−0.53324	−1.12721	−1.15185	−1.18261	−1.19461	−1.07254
5.850242	−0.28836	−0.33171	−0.34306	−0.38176	−0.46581	−0.52092	−0.59385	−1.1859	−1.27573	−1.28915	−1.18571
7.853164	−0.31866	−0.36727	−0.3886	−0.48042	−0.57084	−0.62074	−0.72787	−0.823	−0.91371	−0.98603	−1.01651
8.500178	−0.31807	−0.38585	−0.44777	−0.63206	−0.76721	−0.83553	−1.02124	−1.20316	−1.3353	−1.37639	−1.34889

(left row label: Angle of attack)

0.009907	0	0.030234	0.090335	0.150437	0.30058	0.450576	0.600426	0.700301	0.800103	0.899978	0.875028	0.375578
0.416959	0.467935	−0.60855	−0.5449	−0.5288	−0.68049	−0.33901	−0.17234	0.002046	0.098047	0.146619	0.138019	−0.73599
0.342739	0.534024	−0.48629	−0.47866	−0.47238	−0.61497	−0.37693	−0.18642	0.001616	0.118955	0.177281	0.168452	−0.47915
0.25368	0.589273	−0.3615	−0.39811	−0.41269	−0.49779	−0.39532	−0.18147	0.005866	0.130721	0.193991	0.185065	−0.43079
0.224182	0.602622	−0.32394	−0.36934	−0.39814	−0.3693	−0.37902	−0.17977	0.007028	0.134487	0.199534	0.190552	−0.45855
0.194734	0.61398	−0.29051	−0.34464	−0.37906	−0.38952	−0.37514	−0.17746	0.00841	0.137104	0.203201	0.194133	−0.44652
0.132986	0.633202	−0.22552	−0.29128	−0.34393	−0.39594	−0.35883	−0.17263	0.010787	0.142251	0.210947	0.20184	−0.41431
−0.00197	0.653648	−0.10843	−0.20455	−0.25863	−0.34302	−0.32733	−0.16154	0.016861	0.151514	0.225074	0.215725	−0.3617
−0.15735	0.652954	−0.00451	−0.12914	−0.19517	−0.29443	−0.29604	−0.14875	0.023198	0.15898	0.236141	0.226849	−0.31853
−0.26136	0.640037	0.049571	−0.08888	−0.15982	−0.26517	−0.27711	−0.14054	0.027148	0.162814	0.241752	0.232433	−0.29295
−0.31678	0.629314	0.080287	−0.0651	−0.13902	−0.24702	−0.26313	−0.13385	0.030574	0.165916	0.245682	0.236458	−0.27644
−0.54848	0.56532	0.202891	0.033706	−0.0504	−0.17064	−0.20429	−0.10292	0.047718	0.179833	0.261646	0.252969	−0.20544
−0.59564	0.546161	0.228496	0.055608	−0.03028	−0.15342	−0.19101	−0.09631	0.050699	0.180834	0.262484	0.253889	−0.18949
−0.62886	0.532556	0.245122	0.069699	−0.01829	−0.14316	−0.18377	−0.09404	0.050451	0.178352	0.259026	0.251035	−0.18047
−0.63878	0.528241	0.249728	0.073462	−0.01514	−0.14075	−0.18227	−0.09405	0.049371	0.176453	0.256456	0.248802	−0.17832
−0.7192	0.489417	0.29084	0.108684	0.018664	−0.11474	−0.16466	−0.09137	0.042196	0.16075	0.235177	0.230184	−0.15569
−0.87973	0.405066	0.35509	0.16532	0.073627	−0.07893	−0.15054	−0.10872	0.006803	0.117128	0.191692	0.18861	−0.12847
−1.038	0.321071	0.401115	0.206683	0.110131	−0.05952	−0.15399	−0.13433	−0.02038	0.097023	0.184049	0.178187	−0.11984
−0.99515	0.179726	0.468176	0.274646	0.172599	−0.01411	−0.12907	−0.13349	−0.02932	0.08602	0.177883	0.17129	−0.08317
−1.25037	0.10285	0.494033	0.302483	0.199705	0.011462	−0.10459	−0.10838	−0.00401	0.113266	0.204493	0.198235	−0.05809

Figure 77: Pressure Coefficient of Section E at M = 0.85.

Normalized x		1	0.949681	0.899527	0.698997	0.498798	0.398823	0.298848	0.199038	0.099229	0.049407
Angle of attack	−1.85666	0.111153	−0.02766	−0.07359	−0.2751	−0.26448	−0.23609	−0.18213	−0.10701	−0.03095	0.121775
	−1.31653	0.104695	−0.02747	−0.07731	−0.29302	−0.29602	−0.27302	−0.22273	−0.15308	−0.08974	0.055607
	−0.79247	0.094969	−0.02911	−0.08168	−0.31284	−0.33101	−0.31525	−0.26939	−0.20802	−0.16472	−0.02753
	−0.66228	0.09216	−0.03014	−0.08324	−0.31817	−0.34117	−0.32712	−0.28325	−0.224	−0.18804	−0.05327
	−0.51033	0.089404	−0.03022	−0.08424	−0.32321	−0.35178	−0.33962	−0.29702	−0.23968	−0.21055	−0.07828
	−0.22104	0.083907	−0.03136	−0.08665	−0.33253	−0.37327	−0.36411	−0.32467	−0.27139	−0.25968	−0.13229
	0.325804	0.074496	−0.03163	−0.08891	−0.34868	−0.40726	−0.41254	−0.37871	−0.33029	−0.37622	−0.2437
	0.863492	0.064014	−0.03143	−0.08996	−0.36392	−0.47704	−0.45657	−0.43245	−0.40683	−0.52208	−0.37335
	1.190617	0.057433	−0.03172	−0.09048	−0.37006	−0.45184	−0.51951	−0.49438	−0.45157	−0.57881	−0.45395
	1.446287	0.052964	−0.03043	−0.0889	−0.37804	−0.45249	−0.56404	−0.51392	−0.47834	−0.56291	−0.52009
	2.532733	0.042331	−0.03308	−0.09065	−0.38636	−0.40011	−0.47101	−0.81863	−0.83685	−0.89792	−0.87625
	2.807781	0.040299	−0.02957	−0.08303	−0.34688	−0.37033	−0.87489	−0.85472	−0.89626	−0.93482	−0.91046
	3.01201	0.029001	−0.02705	−0.074	−0.31144	−0.42171	−0.91822	−0.90082	−0.9324	−0.96235	−0.93699
	3.096519	0.01929	−0.02753	−0.06989	−0.29766	−0.44016	−0.93004	−0.91461	−0.94256	−0.97079	−0.94521
	3.661631	−0.08409	−0.09986	−0.11804	−0.23436	−0.41248	−0.84449	−0.99971	−1.00883	−1.02928	−1.00878
	4.774311	−0.21551	−0.23766	−0.24662	−0.29839	−0.39355	−0.45112	−0.53666	−1.1013	−1.13484	−1.13656
	5.850242	−0.23246	−0.26087	−0.27626	−0.33892	−0.44058	−0.52016	−0.61965	−1.16834	−1.23964	−1.24174
	7.853164	−0.30948	−0.35149	−0.36817	−0.46091	−0.55416	−0.61033	−0.73273	−0.86819	−1.05076	−1.13555
	8.500178	−0.31024	−0.35151	−0.37728	−0.53622	−0.69452	−0.78549	−0.95537	−1.1211	−1.27208	−1.31694

0.024538	0.009699	0	0.025367	0.085551	0.150709	0.300837	0.450883	0.60068	0.80005	0.899859	0.949847
0.260146	0.4999	0.452893	−0.92681	−0.7364	−0.57636	−0.62932	−0.38752	−0.17312	0.099331	0.152259	0.173157
0.184806	0.440357	0.518944	−0.74167	−0.60095	−0.50484	−0.42717	−0.38496	−0.17105	0.112883	0.171782	0.191434
0.088493	0.360201	0.58359	−0.51276	−0.4191	−0.43611	−0.42126	−0.35623	−0.16579	0.125332	0.191122	0.209427
0.057579	0.332017	0.601048	−0.4666	−0.37804	−0.41697	−0.41317	−0.35055	−0.16422	0.12822	0.195851	0.213726
0.027298	0.304782	0.614717	−0.41178	−0.34492	−0.38365	−0.39548	−0.34323	−0.16203	0.13163	0.201169	0.218425
−0.03736	0.245388	0.637974	−0.3224	−0.28956	−0.33301	−0.36695	−0.32756	−0.1569	0.13637	0.209047	0.225691
−0.17276	0.118282	0.6642	−0.17252	−0.19713	−0.25479	−0.31932	−0.2966	−0.145	0.145193	0.223142	0.238431
−0.33131	−0.0313	0.665319	−0.04906	−0.11839	−0.18806	−0.27364	−0.26723	−0.13282	0.152135	0.23479	0.248939
−0.42637	−0.12625	0.64893	0.023628	−0.07306	−0.1496	−0.24568	−0.24889	−0.1248	0.155512	0.241145	0.254337
−0.51889	−0.20982	0.631654	0.069852	−0.04348	−0.1251	−0.22701	−0.23627	−0.11878	0.158001	0.244824	0.257273
−0.74954	−0.50909	0.517997	0.224075	0.057561	−0.03406	−0.1478	−0.17721	−0.08695	0.171435	0.261899	0.271733
−0.78662	−0.56591	0.491795	0.251514	0.078023	−0.01672	−0.13158	−0.16561	−0.08131	0.172904	0.264291	0.273766
−0.81838	−0.61273	0.473382	0.27005	0.091481	−0.00542	−0.12308	−0.16166	−0.08283	0.168344	0.26132	0.27031
−0.8284	−0.62683	0.467372	0.274564	0.094354	−0.00378	−0.12235	−0.1628	−0.08573	0.164614	0.2583	0.266628
−0.90389	−0.72507	0.412258	0.317124	0.126955	0.022113	−0.10409	−0.15968	−0.10079	0.136911	0.232532	0.235148
−1.065	−0.85395	0.314418	0.378684	0.175204	0.06169	−0.08447	−0.16343	−0.12988	0.094491	0.194825	0.19261
−1.17946	−0.95697	0.226697	0.422679	0.211882	0.093526	−0.06556	−0.1554	−0.13038	0.092858	0.196736	0.194562
−1.13968	−1.0537	0.070888	0.474894	0.261093	0.141877	−0.0376	−0.14462	−0.13698	0.082279	0.19109	0.189177
−1.28482	−1.15308	−0.01731	0.492655	0.280209	0.160878	−0.02331	−0.13776	−0.13981	0.072107	0.182337	0.17971

Figure 78: Pressure Coefficient of Section F at M = 0.85.

Normalized x	1	0.949487	0.89927	0.698599	0.498323	0.398283	0.298441	0.198599	0.098954	0.049132	0.024369
−1.85666	0.088553	−0.04179	−0.10892	−0.28079	−0.22938	−0.19351	−0.14096	−0.06585	0.058503	0.18843	0.355917
−1.31653	0.089713	−0.04088	−0.11169	−0.30005	−0.25957	−0.2286	−0.1804	−0.11202	0.004014	0.125685	0.292434
−0.79247	0.09021	−0.04224	−0.11561	−0.32142	−0.29394	−0.26894	−0.2252	−0.16912	−0.06338	0.046585	0.207281
−0.66228	0.0893	−0.0434	−0.11732	−0.32762	−0.30443	−0.28094	−0.23886	−0.18629	−0.08445	0.020907	0.179356
−0.51033	0.090572	−0.04353	−0.11818	−0.33358	−0.31482	−0.29294	−0.25257	−0.20264	−0.10439	−0.00346	0.153059
−0.22104	0.089526	−0.04539	−0.12084	−0.34439	−0.33402	−0.3167	−0.2806	−0.23687	−0.14824	−0.05663	0.093487
0.325804	0.089581	−0.04607	−0.12282	−0.36199	−0.36845	−0.36262	−0.33471	−0.29902	−0.22866	−0.1588	−0.02345
0.863492	0.089979	−0.04645	−0.12387	−0.37795	−0.40697	−0.41361	−0.39159	−0.36809	−0.31789	−0.27734	−0.16417
1.190617	0.088604	−0.04677	−0.12421	−0.38791	−0.42299	−0.44264	−0.44482	−0.40085	−0.39252	−0.35942	−0.26035
1.446287	0.08497	−0.04617	−0.12331	−0.39471	−0.4552	−0.47813	−0.41688	−0.46136	−0.4724	−0.41852	−0.32918
2.532733	0.062681	−0.04448	−0.11751	−0.40691	−0.54042	−0.48834	−0.38817	−0.76842	−0.75669	−0.83778	−0.71046
2.807781	0.063733	−0.04617	−0.12021	−0.41466	−0.43849	−0.38618	−0.81478	−0.80023	−0.85933	−0.89336	−0.76882
3.01201	0.064534	−0.04705	−0.11977	−0.39895	−0.38481	−0.55824	−0.84646	−0.85138	−0.90651	−0.92587	−0.81063
3.096519	0.065112	−0.04703	−0.11908	−0.3921	−0.37485	−0.67998	−0.85031	−0.87081	−0.91984	−0.93568	−0.82422
3.661631	0.045998	−0.04619	−0.10852	−0.35537	−0.37174	−0.61663	−0.93796	−0.96068	−1.00253	−1.00495	−0.9148
4.774311	−0.08814	−0.1122	−0.13455	−0.29831	−0.38849	−0.44373	−0.84027	−1.08153	−1.11509	−1.11983	−1.02605
5.850242	−0.09177	−0.11272	−0.13232	−0.26981	−0.44629	−0.60323	−1.07197	−1.17664	−1.21027	−1.21765	−1.12874
7.853164	−0.14256	−0.18419	−0.21389	−0.3839	−0.59693	−0.73214	−0.97259	−1.18331	−1.29494	−1.32058	−1.26386
8.500178	−0.32547	−0.37185	−0.38602	−0.44342	−0.50529	−0.55031	−0.64314	−0.84317	−0.93085	−0.95618	−0.96591

(Left column label: Angle of attack)

0.00957	0	0.030485	0.090766	0.150947	0.301204	0.451164	0.600927	0.700572	0.800118	0.849941	0.874901	0.226125
0.580905	0.343623	−1.0853	−0.96666	−0.5927	−0.45967	nan	−0.1491	0.014105	0.113294	0.137369	0.148599	−0.52929
0.530993	0.429784	−0.9999	−0.68173	−0.49162	−0.42546	nan	−0.14301	0.019746	0.121447	0.14673	0.158561	−0.48048
0.460883	0.51598	−0.73772	−0.55045	−0.37681	−0.37308	nan	−0.13731	0.023531	0.133385	0.16281	0.176245	−0.4453
0.437344	0.538811	−0.66711	−0.5204	−0.36425	−0.36518	nan	−0.13496	0.024972	0.137254	0.168114	0.182183	−0.41172
0.414365	0.55863	−0.60641	−0.47863	−0.34945	−0.3572	nan	−0.13241	0.026395	0.140149	0.17192	0.186354	−0.37712
0.36188	0.594203	−0.50179	−0.3898	−0.32596	−0.33558	nan	−0.12708	0.029252	0.145996	0.179926	0.195446	−0.34104
0.253746	0.640562	−0.3312	−0.27883	−0.26574	−0.28678	nan	−0.11496	0.035901	0.155327	0.192384	0.209171	−0.28604
0.118245	0.661816	−0.18454	−0.19151	−0.19928	−0.24017	nan	−0.10167	0.042402	0.163211	0.203116	0.221397	−0.23218
0.020148	0.660607	−0.10553	−0.14101	−0.16165	−0.21347	nan	−0.09376	0.046294	0.167157	0.208698	0.227948	−0.20083
−0.04648	0.654098	−0.05642	−0.10832	−0.1356	−0.19576	nan	−0.08829	0.049612	0.170205	0.212649	0.232476	−0.17994
−0.40939	0.556513	0.14886	0.026769	−0.03312	−0.11354	nan	−0.057	0.065633	0.18193	0.227205	0.24889	−0.08362
−0.48395	0.526919	0.18146	0.050709	−0.01667	−0.09658	nan	−0.0489	0.07088	0.185778	0.231004	0.253005	−0.065
−0.52972	0.50674	0.201582	0.064214	−0.00629	−0.08799	nan	−0.04567	0.072638	0.187239	0.232799	0.255171	−0.05505
−0.54419	0.500196	0.207004	0.067822	−0.00357	−0.08631	nan	−0.0458	0.072357	0.187057	0.232968	0.255354	−0.05276
−0.64966	0.449554	0.247881	0.096864	0.017997	−0.07528	nan	−0.05241	0.064296	0.181249	0.230517	0.255126	−0.03693
−0.80062	0.361533	0.301958	0.137225	0.047679	−0.06535	nan	−0.08148	0.02932	0.146044	0.200365	0.227085	−0.01875
−0.91814	0.27171	0.35175	0.180426	0.096607	−0.03701	nan	−0.0665	0.038133	0.151056	0.204413	0.231021	0.013719
−1.0245	0.101891	0.423508	0.24419	0.14112	0.005271	nan	−0.05956	0.034396	0.141158	0.195859	0.222391	0.063003
−0.91322	0.03538	0.453565	0.274496	0.168695	0.028283	nan	−0.07128	0.005762	0.097988	0.148442	0.173724	0.088667

Figure 79: Pressure Coefficient of Section G at M = 0.85.

Normalized x	1	0.949343	0.899047	0.698106	0.497889	0.397901	0.298034	0.198287	0.098661	0.048969
−1.85666	0.095251	−0.03174	−0.10459	−0.27577	−0.22168	−0.18351	−0.09943	−0.02258	0.116208	0.247422
−1.31653	0.091192	−0.03087	−0.1063	−0.2936	−0.25062	−0.21699	−0.13815	−0.0662	0.064544	0.187389
−0.79247	0.083946	−0.03144	−0.10894	−0.3135	−0.28371	−0.25542	−0.18192	−0.11966	0.003834	0.114082
−0.66228	0.081158	−0.03244	−0.11029	−0.31922	−0.29336	−0.26656	−0.19454	−0.13639	−0.01539	0.09047
−0.51033	0.078573	−0.0328	−0.11104	−0.32555	−0.30373	−0.27845	−0.20734	−0.15322	−0.03508	0.066405
−0.22104	0.073231	−0.03414	−0.11305	−0.33656	−0.32318	−0.30081	−0.23156	−0.18506	−0.07434	0.017827
0.325804	0.064502	−0.03458	−0.11372	−0.35419	−0.35879	−0.34153	−0.27779	−0.24457	−0.15094	−0.07819
0.863492	0.055198	−0.03468	−0.11377	−0.37192	−0.39753	−0.38545	−0.33219	−0.3113	−0.23647	−0.19071
1.190617	0.049318	−0.03512	−0.11377	−0.38004	−0.42099	−0.41214	−0.36762	−0.35424	−0.29158	−0.26574
1.446287	0.045949	−0.03439	−0.11259	−0.38464	−0.43735	−0.42799	−0.39442	−0.38221	−0.32975	−0.31758
2.532733	0.026367	−0.03167	−0.10406	−0.40795	−0.46435	−0.57588	−0.54697	−0.48055	−0.70834	−0.62142
2.807781	0.023587	−0.03129	−0.1011	−0.3851	−0.56008	−0.54235	−0.44574	−0.67629	−0.74104	−0.7789
3.01201	0.022804	−0.03176	−0.10138	−0.40593	−0.52249	−0.47216	−0.39007	−0.80386	−0.79164	−0.85473
3.096519	0.02232	−0.03255	−0.10266	−0.41028	−0.50768	−0.4467	−0.4715	−0.81583	−0.82247	−0.86749
3.661631	0.021286	−0.03305	−0.10246	−0.39506	−0.4491	−0.40828	−0.8558	−0.87027	−0.93252	−0.94797
4.774311	0.00931	−0.0316	−0.0908	−0.35336	−0.45513	−0.52554	−0.97932	−1.01666	−1.04919	−1.05078
5.850242	−0.01524	−0.03786	−0.07773	−0.28399	−0.50409	−0.93817	−1.10023	−1.13131	−1.15752	−1.16627
7.853164	−0.20936	−0.22827	−0.26363	−0.41433	−0.54855	−0.69089	−0.96713	−1.15174	−1.21358	−1.24011
8.500178	−0.22685	−0.24192	−0.27155	−0.41971	−0.53567	−0.60396	−0.69812	−0.92496	−1.05852	−1.09895

(Leftmost column above: Angle of attack)

0.024243	0.009528	0	0.025691	0.086117	0.151369	0.301652	0.451574	0.601134	0.800145	0.899771	0.949825
nan	0.56619	0.18243	−1.04764	−1.00554	−0.89598	−0.54187	nan	−0.14393	0.105964	0.156761	0.164801
nan	0.519527	0.286518	−0.93528	−0.77427	−0.52527	−0.53239	nan	−0.14437	0.111737	0.166719	0.174007
nan	0.454321	0.398185	−0.69755	−0.60855	−0.4591	−0.41939	nan	−0.14117	0.119829	0.178087	0.183719
nan	0.431749	0.430485	−0.62949	−0.56001	−0.45049	−0.43307	nan	−0.14011	0.1227	0.182605	0.18752
nan	0.408183	0.461042	−0.55753	−0.49821	−0.44485	−0.44128	nan	−0.13881	0.125736	0.187134	0.191379
nan	0.35973	0.516225	−0.43819	−0.41177	−0.4095	−0.40703	nan	−0.13503	0.131684	0.195933	0.198513
nan	0.252792	0.598114	−0.25762	−0.29269	−0.32227	−0.34615	nan	−0.1247	0.140921	0.20887	0.208578
nan	0.120143	0.653467	−0.10408	−0.19682	−0.24796	−0.29651	nan	−0.11446	0.148475	0.219989	0.217105
nan	0.024765	0.670634	−0.01957	−0.14178	−0.20271	−0.2663	nan	−0.10692	0.152758	0.226203	0.221661
nan	−0.04562	0.67705	0.02968	−0.1073	−0.17504	−0.24744	nan	−0.10119	0.155748	0.230213	0.224657
nan	−0.42796	0.655877	0.243201	0.039622	−0.05248	−0.15561	nan	−0.07239	0.167815	0.245838	0.235221
nan	−0.52706	0.637595	0.282537	0.069655	−0.02728	−0.13489	nan	−0.06349	0.171447	0.249322	0.237615
nan	−0.58479	0.624114	0.305317	0.088342	−0.01245	−0.1231	nan	−0.05874	0.17335	0.251435	0.23904
nan	−0.60091	0.620233	0.311084	0.093775	−0.00866	−0.12015	nan	−0.05783	0.173763	0.251996	0.239546
nan	−0.71053	0.588041	0.349568	0.125594	0.015337	−0.10144	nan	−0.05163	0.177078	0.256396	0.243393
nan	−0.85356	0.538286	0.398863	0.159785	0.039386	−0.08503	nan	−0.05875	0.171232	0.255914	0.242594
nan	−0.97231	0.475726	0.448436	0.206678	0.080992	−0.05362	nan	−0.05802	0.156652	0.241105	0.221154
nan	−1.08314	0.364339	0.507472	0.273594	0.144812	−0.00062	nan	−0.04732	0.128702	0.197965	0.155339
nan	−1.02258	0.320051	0.52729	0.298228	0.16894	0.016914	nan	−0.04953	0.114839	0.183489	0.138255

Figure 80: Pressure Coefficient of Section H at M = 0.85.

Normalized x	1	0.949318	0.898935	0.697706	0.497076	0.397211	0.297346	0.197781	0.098366	0.048883
−1.85666	0.110187	−0.00307	−0.04562	−0.23299	−0.29113	nan	−0.10893	−0.00124	0.188741	0.282368
−1.31653	0.115048	0.00378	−0.04176	−0.23773	−0.31319	nan	−0.14057	−0.0359	0.14987	0.236897
−0.79247	0.113604	0.004848	−0.04214	−0.24453	−0.34006	nan	−0.17575	−0.0749	0.10351	0.180272
−0.66228	0.112702	0.004335	−0.04301	−0.24662	−0.34741	nan	−0.18668	−0.08591	0.089369	0.16293
−0.51033	0.111708	0.004421	−0.0433	−0.2487	−0.3569	nan	−0.19866	−0.10033	0.073982	0.144273
−0.22104	0.109582	0.003301	−0.04505	−0.25272	−0.37273	nan	−0.22149	−0.12786	0.04151	0.10613
0.325804	0.105972	0.002372	−0.04612	−0.25817	−0.40081	nan	−0.26302	−0.17376	−0.02144	0.031168
0.863492	0.101092	0.00124	−0.04765	−0.26348	−0.42952	nan	−0.31097	−0.2264	−0.0951	−0.05993
1.190617	0.097211	−0.00046	−0.04952	−0.26639	−0.44745	nan	−0.34294	−0.26142	−0.14609	−0.12215
1.446287	0.09538	−0.00067	−0.04973	−0.26712	−0.46121	nan	−0.36334	−0.28551	−0.18344	−0.16668
2.532733	0.084006	−0.0038	−0.05264	−0.27113	−0.51768	nan	−0.47264	−0.40637	−0.45196	−0.42015
2.807781	0.081077	−0.00392	−0.05256	−0.27055	−0.4922	nan	−0.50906	−0.451	−0.54593	−0.48598
3.01201	0.07768	−0.00448	−0.05251	−0.26936	−0.53809	nan	−0.53934	−0.45802	−0.59186	−0.55073
3.096519	0.07636	−0.00472	−0.0527	−0.26827	−0.58403	nan	−0.54169	−0.43969	−0.62491	−0.57351
3.661631	0.071408	−0.00601	−0.05382	−0.26789	−0.59703	nan	−0.45244	−0.55942	−0.71915	−0.75275
4.774311	0.06405	−0.01135	−0.05663	−0.26631	−0.35592	nan	−0.84314	−0.86012	−0.91645	−0.94336
5.850242	0.041289	−0.01003	−0.04685	−0.2037	−0.32503	nan	−1.01742	−1.01126	−1.05927	−1.09817
7.853164	−0.11384	−0.13345	−0.15068	−0.24625	−0.37089	nan	−0.61791	−1.13662	−1.22879	−1.27984
8.500178	−0.0872	−0.11052	−0.13836	−0.28953	−0.45396	nan	−0.89442	−1.10802	−1.24264	−1.30282

(Angle of attack, leftmost data column)

0.024142	0.009447	0	0.025941	0.08652	0.151897	0.302294	0.452242	0.601739	0.80042	0.899985	0.949918
0.457986	0.629506	−0.42902	nan	−1.12205	−1.07937	−0.42027	−0.23107	nan	0.118246	0.179776	0.180613
0.414147	0.599184	−0.24741	nan	−0.99872	−0.78497	−0.50302	−0.26677	nan	0.118369	0.178672	0.181094
0.357439	0.55463	−0.0662	nan	−0.75223	−0.46618	−0.50027	−0.27906	nan	0.120601	0.185523	0.187549
0.339881	0.539207	−0.01626	nan	−0.65222	−0.46839	−0.46505	−0.28045	nan	0.120423	0.186245	0.188134
0.32079	0.521975	0.03719	nan	−0.62179	−0.46327	−0.43238	−0.28044	nan	0.121281	0.188093	0.189906
0.280469	0.483333	0.142621	nan	−0.55037	−0.46624	−0.39477	−0.27913	nan	0.123303	0.192068	0.192938
0.196133	0.396706	0.313648	nan	−0.40131	−0.40298	−0.37422	−0.27054	nan	0.126807	0.199155	0.198503
0.090948	0.280339	0.454491	nan	−0.29559	−0.32217	−0.33451	−0.25842	nan	0.127774	0.203646	0.201644
0.018381	0.196196	0.519426	nan	−0.23953	−0.27907	−0.30848	−0.24983	nan	0.126946	0.205076	0.202476
−0.03442	0.133121	0.557369	nan	−0.20548	−0.25218	−0.29161	−0.24362	nan	0.126745	0.206374	0.203432
−0.34507	−0.25696	0.664644	nan	−0.05042	−0.12435	−0.20779	−0.20625	nan	0.123004	0.209525	0.203625
−0.42819	−0.36751	0.671823	nan	−0.01649	−0.09675	−0.18894	−0.19555	nan	0.122129	0.209386	0.202501
−0.51021	−0.47599	0.67581	nan	0.008024	−0.07737	−0.1771	−0.18917	nan	0.120519	0.208345	0.20057
−0.53783	−0.51299	0.674204	nan	0.015354	−0.07146	−0.17375	−0.18743	nan	0.11982	0.207753	0.199777
−0.70888	−0.75814	0.657187	nan	0.057278	−0.03664	−0.14841	−0.1731	nan	0.118339	0.207213	0.197917
−0.91365	−0.96965	0.636008	nan	0.108131	0.00605	−0.11927	−0.15997	nan	0.112849	0.202913	0.19222
−1.09371	−1.11008	0.602227	nan	0.155389	0.046938	−0.09443	−0.15178	nan	0.09947	0.192396	0.18092
−1.29068	−1.24362	0.537823	nan	0.21646	0.101476	−0.06798	−0.16105	nan	0.024141	0.119125	0.094666
−1.31389	−1.26095	0.510891	nan	0.237515	0.121153	−0.05472	−0.1588	nan	−0.01043	0.081516	0.048178

Figure 81: Pressure Coefficient of Section I at M = 0.85.

Normalized x	0.999658	0.472113	0.208896	0.103849	0.051411	0	0	0.106587	0.212062	0.472455	1
−1.85666	0.141001	−0.05645	0.028448	0.132257	0.24055	0.452299	0.483091	−0.36658	−0.33086	−0.13686	0.1454
−1.31653	0.141308	−0.06517	0.01629	0.118116	0.224486	0.450238	0.478583	−0.34031	−0.31177	−0.13077	0.147112
−0.79247	0.141534	−0.07302	0.005039	0.104725	0.209236	0.448386	0.4732	−0.31506	−0.29284	−0.12456	0.14875
−0.66228	0.141391	−0.0751	0.001488	0.100022	0.203342	0.445469	0.473034	−0.31075	−0.28935	−0.12339	0.149301
−0.51033	0.141706	−0.07735	−0.00173	0.096377	0.199483	0.444497	0.471884	−0.30277	−0.28335	−0.1215	0.149789
−0.22104	0.141657	−0.08157	−0.0087	0.08778	0.189612	0.444631	0.468349	−0.29149	−0.27478	−0.11882	0.150618
0.325804	0.143003	−0.08728	−0.01849	0.07554	0.175257	0.440753	0.464161	−0.26744	−0.25613	−0.11184	0.152846
0.863492	0.143876	−0.09351	−0.02846	0.063105	0.160416	0.436235	0.458418	−0.2454	−0.23992	−0.10635	0.154444
1.190617	0.144192	−0.09731	−0.03508	0.05532	0.151972	0.433061	0.455203	−0.23456	−0.23154	−0.10314	0.155208
1.446287	0.144917	−0.09891	−0.03819	0.050943	0.146333	0.432698	0.452331	−0.22536	−0.22446	−0.10036	0.155945
2.532733	0.1471	−0.10563	−0.0524	0.031767	0.122432	0.422301	0.437824	−0.18813	−0.19611	−0.08922	0.15864
2.807781	0.148035	−0.1055	−0.05378	0.028806	0.117445	0.418223	0.434958	−0.17823	−0.1882	−0.0854	0.159612
3.01201	0.14812	−0.10695	−0.05605	0.025529	0.112691	0.414541	0.432282	−0.1735	−0.18463	−0.08427	0.15961
3.096519	0.147896	−0.10764	−0.05689	0.024707	0.111906	0.414453	0.430825	−0.17191	−0.18402	−0.08452	0.15944
3.661631	0.149249	−0.10679	−0.05839	0.020602	0.104305	0.405079	0.421589	−0.15747	−0.17235	−0.07939	0.160383
4.774311	0.148746	−0.10641	−0.05934	0.01612	0.092473	0.381998	0.402927	−0.14131	−0.15969	−0.07594	0.158972
5.850242	0.148647	−0.10307	−0.05501	0.020068	0.09155	0.35577	0.373325	−0.12323	−0.14442	−0.07085	0.156583
7.853164	0.137735	−0.1244	−0.05262	0.056501	0.164972	0.346526	0.355682	−0.09698	−0.10921	−0.05107	0.151404
8.500178	0.138175	−0.13438	−0.06145	0.051694	0.183768	0.384884	0.372758	−0.10202	−0.10366	−0.03927	0.153707

(Left axis label: Angle of attack)

Figure 82: Pressure Coefficient of Section SA at M = 0.85.

Normalized x	0.999776	0.472695	0.20949	0.104297	0.051925	0	0	0.106088	0.211504	0.474597	1
−1.85666	0.138732	−0.04488	−0.072	−0.01433	0.096732	0.54656	0.528466	−1.11631	−0.75147	−0.2214	0.160498
−1.31653	0.139132	−0.05378	−0.08942	−0.03758	0.070068	0.561626	0.542793	−1.08257	−0.635	−0.21963	0.160319
−0.79247	0.139452	−0.0628	−0.10693	−0.06127	0.043218	0.575569	0.557895	−1.04603	−0.52969	−0.2177	0.160245
−0.66228	0.139189	−0.06479	−0.111	−0.06714	0.036225	0.578039	0.561512	−1.03766	−0.50366	−0.21769	0.16011
−0.51033	0.139661	−0.06765	−0.11674	−0.07505	0.027401	0.583329	0.566034	−1.0249	−0.48065	−0.21661	0.160298
−0.22104	0.139756	−0.0725	−0.12619	−0.08849	0.011631	0.590058	0.573994	−1.0005	−0.44275	−0.21564	0.160024
0.325804	0.141119	−0.08033	−0.14249	−0.11213	−0.01597	0.603197	0.589655	−0.93686	−0.42075	−0.21076	0.161189
0.863492	0.142417	−0.08836	−0.15946	−0.13678	−0.04478	0.615776	0.603259	−0.85483	−0.42464	−0.20589	0.162344
1.190617	0.142675	−0.09371	−0.16995	−0.15231	−0.06284	0.622747	0.611593	−0.80068	−0.43022	−0.20214	0.162456
1.446287	0.143478	−0.09607	−0.17579	−0.161	−0.07322	0.62726	0.61649	−0.78552	−0.42847	−0.19934	0.163057
2.532733	0.145741	−0.1071	−0.20197	−0.20171	−0.12226	0.646642	0.638285	−0.72109	−0.39122	−0.18626	0.164825
2.807781	0.147007	−0.10798	−0.20654	−0.20963	−0.13226	0.650019	0.642058	−0.70439	−0.38242	−0.18178	0.165749
3.01201	0.147156	−0.11021	−0.21159	−0.21708	−0.14126	0.652716	0.644968	−0.69555	−0.37877	−0.18036	0.16566
3.096519	0.147015	−0.11116	−0.21336	−0.21944	−0.14384	0.653704	0.646493	−0.69323	−0.37816	−0.18047	0.165528
3.661631	0.148484	−0.11232	−0.21916	−0.23075	−0.15901	0.657768	0.650283	−0.66286	−0.36792	−0.17485	0.166291
4.774311	0.148327	−0.11337	−0.22615	−0.24449	−0.17763	0.657004	0.651565	−0.62586	−0.35986	−0.17098	0.164892
5.850242	0.147956	−0.10785	−0.22417	−0.24991	−0.18822	0.653363	0.646158	−0.58516	−0.35885	−0.16887	0.162684
7.853164	0.141622	−0.1143	−0.22543	−0.24476	−0.18037	0.637659	0.594556	−0.66404	−0.34631	−0.12862	0.161336
8.500178	0.116711	−0.13233	−0.22542	−0.22302	−0.16541	0.522214	0.522496	−0.60557	−0.28547	−0.09028	0.152227

(Left axis label: Angle of attack)

Figure 83: Pressure Coefficient of Section SB at M = 0.85.

Normalized x	1	0.47379	0.210775	0.105388	0.052785	0	0	0.105024	0.210229	0.473426	0.999818
−1.85666	0.111932	−0.0937	−0.06654	0.033387	0.068404	0.50059	0.365796	−0.9608	−0.49527	−0.19675	0.123373
−1.31653	0.113747	−0.10003	−0.08409	0.009072	0.079123	0.522696	0.398255	−0.87821	−0.40067	−0.19929	0.125498
−0.79247	0.116535	−0.10653	−0.10289	−0.01623	0.073887	0.545863	0.433584	−0.73823	−0.4244	−0.19942	0.126855
−0.66228	0.116927	−0.10797	−0.10727	−0.02349	0.063756	0.550379	0.440899	−0.71304	−0.43085	−0.2	0.126586
−0.51033	0.117717	−0.11019	−0.11288	−0.03262	0.055223	0.557767	0.452468	−0.67912	−0.43845	−0.19977	0.12708
−0.22104	0.118374	−0.11396	−0.12393	−0.0484	0.041355	0.569546	0.471284	−0.65404	−0.43811	−0.19905	0.1273
0.325804	0.12084	−0.11962	−0.14471	−0.07865	0.02191	0.589745	0.508702	−0.58731	−0.42231	−0.19525	0.128373
0.863492	0.122771	−0.12543	−0.16465	−0.10496	−0.00389	0.605571	0.539053	−0.53976	−0.40479	−0.19159	0.12913
1.190617	0.123634	−0.12951	−0.17774	−0.1309	−0.03365	0.614736	0.558444	−0.50884	−0.39212	−0.18974	0.129134
1.446287	0.124728	−0.13101	−0.1842	−0.1437	−0.05629	0.619474	0.568738	−0.49	−0.38173	−0.18768	0.129779
2.532733	0.128058	−0.13896	−0.21705	−0.19762	−0.1021	0.640228	0.60908	−0.40795	−0.33961	−0.17923	0.131019
2.807781	0.129097	−0.13903	−0.22202	−0.20742	−0.12966	0.643097	0.614221	−0.39001	−0.32969	−0.17549	0.131785
3.01201	0.128884	−0.14027	−0.22622	−0.21496	−0.15308	0.645256	0.617387	−0.38224	−0.32604	−0.17438	0.131508
3.096519	0.128703	−0.14086	−0.22777	−0.21739	−0.1678	0.645215	0.617561	−0.38204	−0.32607	−0.17461	0.131222
3.661631	0.128511	−0.13943	−0.22847	−0.22216	−0.18406	0.64413	0.616526	−0.36858	−0.31663	−0.16922	0.130904
4.774311	0.121124	−0.13274	−0.20733	−0.19204	−0.18128	0.614709	0.57135	−0.37897	−0.31449	−0.16314	0.124702
5.850242	0.106693	−0.11881	−0.16176	−0.11731	−0.15006	0.586623	0.501775	−0.50075	−0.34811	−0.16563	0.113373
7.853164	0.075729	−0.13302	−0.24826	−0.28179	−0.18117	0.427088	0.376375	0.095287	0.027798	−0.01854	0.064522
8.500178	0.07053	−0.18054	−0.46746	−0.69551	−0.35853	0.229079	0.307891	0.245335	0.134446	0.031069	0.061009

(Left axis label: Angle of attack)

Figure 84: Pressure Coefficient of Section SC at M = 0.85.
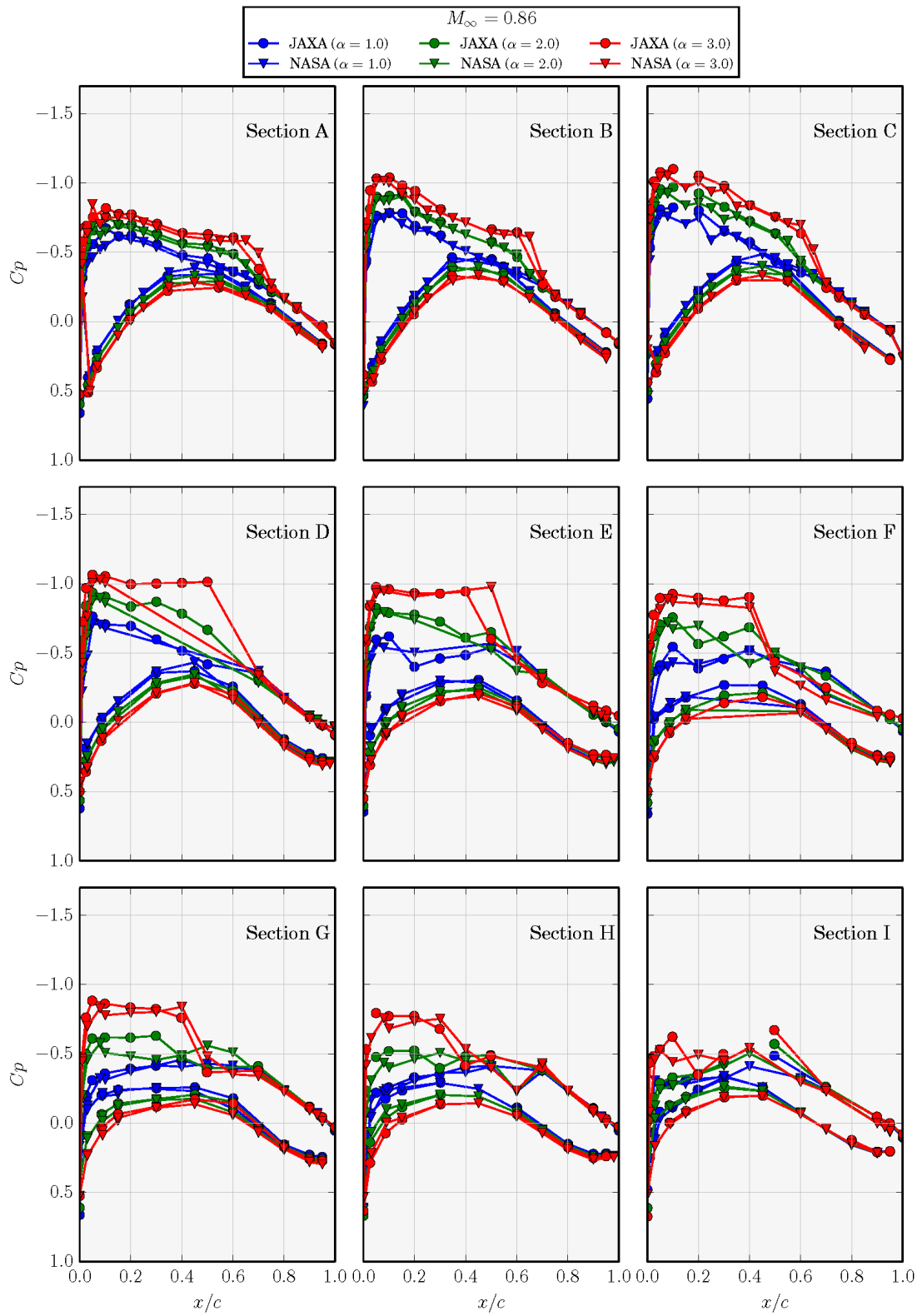
Figure 85: Pressure Distribution on Main Wing at M = 0.86.

Normalized x	1	0.950507	0.851195	0.751801	0.702104	0.602548	0.50291	0.403232	0.30339	0.203346	0.153201
−1.85764	0.1656	0.027627	−0.07649	−0.16909	−0.20975	−0.24754	−0.27634	−0.28643	−0.31251	−0.36251	−0.38018
−1.31901	0.166071	0.027054	−0.08214	−0.18062	−0.22494	−0.26915	−0.30288	−0.31797	−0.3439	−0.40697	−0.41479
−0.79338	0.166391	0.02715	−0.08692	−0.19124	−0.2395	−0.28996	−0.336	−0.34408	−0.38418	−0.45319	−0.46758
−0.50974	0.165868	0.026626	−0.09016	−0.19722	−0.24712	−0.30549	−0.35104	−0.35567	−0.40979	−0.48554	−0.48952
−0.21795	0.165993	0.027144	−0.09176	−0.20126	−0.25352	−0.31877	−0.36142	−0.37634	−0.43923	−0.51392	−0.52288
0.333592	0.164978	0.027406	−0.09613	−0.21147	−0.26655	−0.3296	−0.39576	−0.41659	−0.49505	−0.56269	−0.5688
0.879486	0.16444	0.028808	−0.09657	−0.21201	−0.26766	−0.34745	−0.44111	−0.46808	−0.54804	−0.61331	−0.60289
1.461521	0.16389	0.032269	−0.09334	−0.21038	−0.27036	−0.40686	−0.51031	−0.52434	−0.59278	−0.65803	−0.6636
2.555743	0.159433	0.038014	−0.09064	−0.22432	−0.32175	−0.57193	−0.60075	−0.60705	−0.67443	−0.7438	−0.74188
3.108182	0.153883	0.037754	−0.0933	−0.24394	−0.39386	−0.61492	−0.63718	−0.64621	−0.71226	−0.78103	−0.78414
3.462029	0.146939	0.035334	−0.09905	−0.27391	−0.4966	−0.64606	−0.66961	−0.67755	−0.74596	−0.8146	−0.82162

(Angle of attack rows; continued)

0.102853	0.05218	0.026578	0.01103	0	0.03309	0.067199	0.195246	0.344377	0.545281	0.747405	0.949652
−0.37082	−0.26495	−0.12327	0.077443	0.788115	0.217469	0.036333	−0.28241	−0.47118	−0.53927	−0.18119	0.134306
−0.40797	−0.31697	−0.18383	0.011466	0.77299	0.253038	0.070668	−0.25457	−0.44536	−0.51156	−0.17304	0.139585
−0.4743	−0.37252	−0.24894	−0.06141	0.752375	0.289829	0.106939	−0.22358	−0.42027	−0.47472	−0.1632	0.144938
−0.50913	−0.40099	−0.28201	−0.09894	0.740749	0.307176	0.123958	−0.209	−0.4082	−0.45705	−0.15924	0.146639
−0.54474	−0.43356	−0.32023	−0.1428	0.725764	0.327843	0.14464	−0.19083	−0.39475	−0.42684	−0.15261	0.149477
−0.60199	−0.48761	−0.38382	−0.21722	0.699366	0.361965	0.178752	−0.16075	−0.36623	−0.38012	−0.14499	0.152911
−0.66146	−0.54682	−0.45102	−0.29923	0.666882	0.395424	0.212644	−0.13019	−0.33565	−0.3517	−0.13592	0.156869
−0.71581	−0.60535	−0.51622	−0.38048	0.632777	0.428335	0.24629	−0.09922	−0.30454	−0.31926	−0.12612	0.160989
−0.79616	−0.71167	−0.6425	−0.53217	0.557457	0.489712	0.310396	−0.03799	−0.24327	−0.26283	−0.10443	0.168271
−0.82402	−0.76321	−0.70197	−0.58872	0.517477	0.518012	0.340085	−0.00954	−0.2156	−0.24029	−0.09573	0.16985
−0.84488	−0.81436	−0.76017	−0.63539	0.477133	0.544194	0.367902	0.017676	−0.1897	−0.22102	−0.08855	0.170538

Figure 86: Pressure Coefficient of Section A at M = 0.86.

Normalized x	1	0.95036	0.850897	0.751435	0.701658	0.602058	0.502368	0.402587	0.302669	0.202477	0.152291
−1.85764	0.175592	0.079575	−0.04397	−0.15361	−0.20619	−0.26377	−0.28324	nan	−0.36291	−0.3898	−0.39384
−1.31901	0.173547	0.079137	−0.04834	−0.1632	−0.21918	−0.28432	−0.30861	nan	−0.40464	−0.40718	−0.46157
−0.79338	0.170876	0.079025	−0.0519	−0.17179	−0.23128	−0.30558	−0.33646	nan	−0.43434	−0.47094	−0.52012
−0.50974	0.16901	0.078092	−0.05437	−0.17701	−0.23858	−0.31347	−0.36391	nan	−0.4427	−0.50476	−0.56064
−0.21795	0.167523	0.077976	−0.05574	−0.17997	−0.24194	−0.32365	−0.37841	nan	−0.46568	−0.54439	−0.59593
0.333592	0.164911	0.077319	−0.05882	−0.18883	−0.25631	−0.34011	−0.37664	nan	−0.54	−0.6213	−0.65294
0.879486	0.163047	0.076884	−0.06053	−0.18974	−0.25367	−0.33855	−0.4319	nan	−0.60898	−0.67761	−0.75253
1.461521	0.162226	0.079047	−0.05617	−0.18222	−0.24391	−0.3422	−0.52132	nan	−0.67096	−0.73754	−0.89082
2.555743	0.156548	0.082931	−0.04775	−0.17401	−0.24474	−0.59399	−0.63237	nan	−0.76998	−0.85306	−0.94611
3.108182	0.149459	0.08074	−0.04937	−0.1825	−0.27345	−0.65637	−0.67366	nan	−0.82072	−0.96377	−0.99005
3.462029	0.140644	0.075796	−0.0565	−0.20137	−0.3222	−0.69346	−0.70561	nan	−0.86307	−1.02248	−1.0695

(Angle of attack rows; continued)

0.102013	0.051507	0.026095	0.010702	0	0.033792	0.068221	0.196921	0.346343	0.546908	0.748383	0.949859
−0.44139	−0.35737	−0.22563	0.014235	0.660717	0.116591	−0.03011	−0.32551	−0.63348	−0.67117	−0.09445	0.197878
−0.54507	−0.42895	−0.30327	−0.06508	0.650256	0.157181	0.005829	−0.29412	−0.60612	−0.63715	−0.08628	0.203375
−0.64839	−0.50751	−0.39028	−0.15316	0.631761	0.198832	0.043854	−0.26028	−0.57045	−0.58591	−0.07873	0.208687
−0.67712	−0.54604	−0.4333	−0.1972	0.6201	0.218302	0.061673	−0.24574	−0.55416	−0.56171	−0.07644	0.210356
−0.69545	−0.59253	−0.4837	−0.24915	0.604874	0.241632	0.083175	−0.2274	−0.5348	−0.51351	−0.07299	0.213031
−0.72368	−0.66876	−0.56693	−0.33644	0.57622	0.278483	0.117934	−0.19966	−0.50855	−0.45893	−0.06816	0.216374
−0.76973	−0.74659	−0.65607	−0.42613	0.541117	0.314263	0.152559	−0.17009	−0.47174	−0.40293	−0.06216	0.220406
−0.83565	−0.82452	−0.74185	−0.51168	0.503467	0.349046	0.186873	−0.13809	−0.431	−0.3783	−0.05523	0.224976
−0.97968	−0.97939	−0.88591	−0.65904	0.421253	0.412049	0.251073	−0.07592	−0.35667	−0.31319	−0.03875	0.231937
−1.05443	−1.04412	−0.96264	−0.72982	0.375399	0.440105	0.280782	−0.04659	−0.32383	−0.29009	−0.03237	0.232938
−1.11659	−1.10459	−1.02917	−0.79137	0.332487	0.465684	0.30772	−0.01985	−0.29353	−0.27043	−0.02703	0.23336

Figure 87: Pressure Coefficient of Section B at M = 0.86.

Normalized x		1	0.950309	0.850663	0.750965	0.701115	0.601364	0.501507	0.401596	0.301581	0.201406	0.151292
Angle of attack	−1.85764	nan	0.063633	−0.04796	−0.16756	−0.22645	−0.28726	−0.31835	−0.3432	−0.35689	−0.35728	nan
	−1.31901	nan	0.062977	−0.05247	−0.1772	−0.23981	−0.3088	−0.34593	−0.37442	−0.4189	−0.41675	nan
	−0.79338	nan	0.062662	−0.05611	−0.18539	−0.25145	−0.32716	−0.38386	−0.38563	−0.45692	−0.45486	nan
	−0.50974	nan	0.061808	−0.05832	−0.18966	−0.25742	−0.3477	−0.37849	−0.46567	−0.47696	−0.46886	nan
	−0.21795	nan	0.061285	−0.05999	−0.19382	−0.2637	−0.34624	−0.41114	−0.48204	−0.47781	−0.50429	nan
	0.333592	nan	0.060942	−0.06208	−0.19877	−0.27214	−0.39282	−0.41076	−0.48953	−0.54269	−0.60055	nan
	0.879486	nan	0.059635	−0.06678	−0.20952	−0.28204	−0.35996	−0.40648	−0.55144	−0.63618	−0.7883	nan
	1.461521	nan	0.061028	−0.06154	−0.19328	−0.25682	−0.32764	−0.55995	−0.65874	−0.71431	−0.855	nan
	2.555743	nan	0.067615	−0.04593	−0.16558	−0.22843	−0.53319	−0.71455	−0.79383	−0.94457	−0.99602	nan
	3.108182	nan	0.064045	−0.05027	−0.17528	−0.24829	−0.66151	−0.76732	−0.85123	−0.98729	−1.06865	nan
	3.462029	nan	0.05664	−0.06561	−0.20239	−0.28176	−0.7312	−0.81241	−0.90458	−1.08225	−1.12465	nan

0.101126	0.050854	0.025638	0.010414	0	0.034413	0.069144	0.198499	0.348205	0.548448	0.74922	0.950045
−0.39515	−0.2945	−0.19037	0.033183	0.621262	−0.00955	−0.10935	−0.40246	−0.65611	−0.78902	−0.05989	0.237176
−0.47944	−0.38435	−0.28762	−0.06516	0.627509	0.042231	−0.06748	−0.36503	−0.62215	−0.75173	−0.03375	0.242639
−0.63062	−0.48223	−0.39734	−0.17417	0.62613	0.093965	−0.02403	−0.32851	−0.58513	−0.69244	−0.02025	0.248678
−0.71099	−0.52514	−0.45249	−0.23115	0.619905	0.117626	−0.00392	−0.31523	−0.56369	−0.66052	−0.0179	0.250749
−0.72554	−0.5824	−0.51667	−0.29929	0.611159	0.145405	0.020125	−0.2971	−0.53767	−0.55924	−0.01561	0.25403
−0.72232	−0.68791	−0.61875	−0.40789	0.59023	0.188911	0.05854	−0.26312	−0.49254	−0.4323	−0.01249	0.258078
−0.80391	−0.78869	−0.708	−0.51383	0.562222	0.230317	0.096111	−0.22682	−0.44108	−0.38677	−0.00758	0.262875
−0.89695	−0.88634	−0.79107	−0.60779	0.533834	0.270454	0.133443	−0.18941	−0.39911	−0.36167	−0.00116	0.268073
−1.04723	−1.0255	−0.94289	−0.75376	0.469167	0.342259	0.203465	−0.1181	−0.32331	−0.31235	0.012979	0.275916
−1.11364	−1.09196	−1.02738	−0.82173	0.430952	0.37356	0.234292	−0.0855	−0.29011	−0.29091	0.017858	0.277172
−1.1661	−1.14666	−1.09054	−0.87349	0.393308	0.401585	0.262968	−0.05597	−0.26059	−0.27348	0.021432	0.277618

Figure 88: Pressure Coefficient of Section C at M = 0.86.

Normalized x		1	0.950125	0.900184	0.700354	0.500459	0.400446	0.300433	0.200354	0.100275	0.050203
Angle of attack	−1.85764	0.137699	0.026321	−0.0351	−0.27607	−0.33416	−0.32305	−0.29975	−0.22872	−0.20181	−0.1467
	−1.31901	0.134203	0.026276	−0.03733	−0.2912	−0.36428	−0.36409	−0.34175	−0.28139	−0.27766	−0.23417
	−0.79338	0.124212	0.023633	−0.04111	−0.30689	−0.40267	−0.41994	−0.39809	−0.34452	−0.38416	−0.34116
	−0.50974	0.118411	0.022299	−0.04291	−0.315	−0.44259	−0.42859	−0.41767	−0.39271	−0.44471	−0.393
	−0.21795	0.112725	0.021369	−0.04401	−0.31867	−0.44622	−0.43584	−0.47115	−0.41957	−0.48326	−0.46397
	0.333592	0.101472	0.020953	−0.04453	−0.32666	−0.52496	−0.49966	−0.46688	−0.42208	−0.58273	−0.60203
	0.879486	0.094105	0.021037	−0.04369	−0.35739	−0.42829	−0.48357	−0.54651	−0.68463	−0.67917	−0.73991
	1.461521	0.087882	0.015913	−0.0499	−0.34215	−0.38317	−0.64228	−0.80076	−0.73732	−0.81631	−0.85915
	2.555743	0.080153	0.025151	−0.02867	−0.25977	−0.96104	−0.93162	−0.94128	−0.93773	−0.99942	−1.01326
	3.108182	0.09011	0.020973	−0.03816	−0.37908	−1.02727	−1.02516	−1.01664	−1.0118	−1.06866	−1.07757
	3.462029	0.091298	−0.01297	−0.11646	−0.50584	−1.10351	−1.08198	−1.07483	−1.07124	−1.1228	−1.12884

0.025167	0.010093	0	0.024905	0.084808	0.299581	0.4496	0.599685	0.799908	0.900052	0.949928
−0.03233	0.204359	0.62909	−0.22532	−0.31017	−0.6239	−0.79142	−0.24266	−0.02294	0.071809	0.140389
−0.12979	0.107315	0.651774	−0.13585	−0.24614	−0.5867	−0.75353	−0.23013	0.054131	0.14541	0.193667
−0.25121	−0.00651	0.665071	−0.04631	−0.1864	−0.53498	−0.70651	−0.22861	0.091347	0.184359	0.22242
−0.31326	−0.06953	0.669408	−0.00516	−0.15932	−0.51089	−0.67769	−0.23986	0.099115	0.195114	0.230516
−0.39838	−0.15229	0.666988	0.042729	−0.12685	−0.47827	−0.63834	−0.2625	0.106006	0.205443	0.239388
−0.54084	−0.29254	0.650221	0.112488	−0.07715	−0.42869	−0.53662	−0.27317	0.11299	0.215847	0.247995
−0.66519	−0.41349	0.626988	0.174145	−0.02978	−0.36781	−0.37156	−0.26126	0.120113	0.225501	0.256187
−0.76985	−0.51815	0.597735	0.231255	0.01689	−0.31509	−0.36197	−0.24569	0.127381	0.234877	0.264281
−0.91429	−0.66696	0.529747	0.324962	0.100945	−0.23467	−0.29996	−0.2138	0.140443	0.249949	0.278311
−0.98188	−0.74215	0.489375	0.36367	0.140314	−0.19999	−0.27364	−0.20206	0.143843	0.255697	0.285284
−1.03814	−0.82108	0.44805	0.396804	0.175329	−0.17084	−0.2518	−0.19268	0.145177	0.258041	0.287223

Figure 89: Pressure Coefficient of Section D at M = 0.86.

Normalized x		1	0.949879	0.899758	0.699494	0.499376	0.399354	0.299406	0.199457	0.099582	0.049681	0.024804
Angle of attack	−1.85764	0.109158	−0.01408	−0.06428	−0.27726	−0.30766	−0.27775	−0.22867	−0.1652	−0.06309	0.00614	0.162971
	−1.31901	0.11112	0.002625	−0.05354	−0.28823	−0.33988	−0.31706	−0.2716	−0.21477	−0.12809	−0.07089	0.078205
	−0.79338	0.102216	0.00107	−0.05716	−0.30518	−0.37233	−0.3582	−0.32055	−0.26993	−0.20233	−0.16442	−0.02252
	−0.50974	0.096603	−4.01E−05	−0.05917	−0.31444	−0.39112	−0.38289	−0.34925	−0.30433	−0.24296	−0.21715	−0.08067
	−0.21795	0.091589	−0.00097	−0.06074	−0.32212	−0.40427	−0.42492	−0.37205	−0.32856	−0.29489	−0.27944	−0.15294
	0.333592	0.081144	−0.0016	−0.06184	−0.339	−0.42192	−0.47796	−0.43864	−0.39457	−0.4189	−0.39363	−0.28491
	0.879486	0.069263	−0.00178	−0.06131	−0.32795	−0.56471	−0.51849	−0.42743	−0.32603	−0.60285	−0.56169	−0.45327
	1.461521	0.06299	−0.00291	−0.06233	−0.37912	−0.45038	−0.35905	−0.58831	−0.68705	−0.68624	−0.73486	−0.5959
	2.555743	0.028786	−0.00639	−0.05003	−0.25427	−0.8563	−0.87226	−0.86942	−0.87059	−0.89916	−0.91614	−0.77937
	3.108182	−0.06504	−0.10388	−0.13835	−0.29186	−0.53967	−0.9624	−0.94399	−0.94629	−0.97593	−0.99051	−0.85425
	3.462029	−0.18669	−0.24419	−0.27204	−0.35848	−0.44996	−1.02099	−1.00283	−1.00944	−1.03584	−1.04905	−0.91244

0.009907	0	0.030234	0.090335	0.150437	0.30058	0.450576	0.600426	0.700301	0.800103	0.899978	0.875028	0.375578
0.40967	0.480047	−0.58662	−0.52853	−0.52316	−0.70025	−0.36899	−0.13389	0.002954	0.061	0.098162	0.091037	−0.75214
0.336359	0.541021	−0.47261	−0.47429	−0.46525	−0.62925	−0.32011	−0.16908	0.005284	0.106681	0.158041	0.149207	−0.68803
0.245123	0.593077	−0.35204	−0.39484	−0.41311	−0.55322	−0.36184	−0.17889	0.007412	0.129417	0.190793	0.182063	−0.48584
0.189698	0.615117	−0.28799	−0.35299	−0.38976	−0.51303	−0.38802	−0.17621	0.009405	0.135985	0.20064	0.191708	−0.35306
0.124377	0.633819	−0.22141	−0.29961	−0.3506	−0.34284	−0.36005	−0.17095	0.012754	0.142775	0.210097	0.201195	−0.43318
−0.00121	0.654127	−0.11149	−0.21543	−0.27848	−0.35569	−0.33526	−0.16207	0.017482	0.151082	0.22274	0.213714	−0.38024
−0.15794	0.649678	−0.01082	−0.13768	−0.20323	−0.3032	−0.30264	−0.14918	0.024018	0.159116	0.234481	0.225481	−0.32741
−0.29687	0.630268	0.070503	−0.07448	−0.14811	−0.25621	−0.26969	−0.13428	0.031618	0.166732	0.244944	0.235958	−0.28499
−0.50869	0.574564	0.190228	0.023272	−0.06053	−0.18102	−0.21343	−0.10739	0.044483	0.176114	0.25591	0.247637	−0.216
−0.60061	0.540098	0.238628	0.063593	−0.02466	−0.15193	−0.1946	−0.10456	0.0385	0.163544	0.239312	0.233305	−0.1906

Figure 90: Pressure Coefficient of Section E at M = 0.86.

Normalized x		1	0.949681	0.899527	0.698997	0.498798	0.398823	0.298848	0.199038	0.099229	0.049407
Angle of attack	−1.85764	0.11228	−0.0237	−0.07142	−0.2803	−0.27106	−0.24201	−0.18714	−0.11139	−0.03628	0.116696
	−1.31901	0.106036	−0.02263	−0.07379	−0.2951	−0.30065	−0.27807	−0.22723	−0.15704	−0.095	0.051206
	−0.79338	0.097081	−0.02344	−0.07726	−0.31512	−0.33719	−0.32157	−0.27463	−0.21232	−0.17069	−0.03168
	−0.50974	0.091329	−0.02447	−0.07982	−0.32507	−0.35836	−0.34471	−0.30211	−0.24345	−0.21492	−0.07906
	−0.21795	0.085689	−0.02542	−0.08179	−0.33468	−0.38179	−0.37044	−0.33207	−0.27538	−0.26861	−0.13527
	0.333592	0.075051	−0.02609	−0.08435	−0.3527	−0.43775	−0.42217	−0.38948	−0.34111	−0.40125	−0.24764
	0.879486	0.06488	−0.02623	−0.08499	−0.37214	−0.41018	−0.51576	−0.46292	−0.40651	−0.51751	−0.3686
	1.461521	0.051131	−0.02434	−0.08156	−0.34463	−0.57969	−0.5379	−0.43695	−0.31967	−0.65047	−0.57649
	2.555743	0.039908	−0.02446	−0.07605	−0.32772	−0.41318	−0.83792	−0.80991	−0.81971	−0.86757	−0.84162
	3.108182	−0.04597	−0.06344	−0.08414	−0.23298	−0.44212	−0.92036	−0.89676	−0.91788	−0.94083	−0.91098
	3.462029	−0.14221	−0.15646	−0.16769	−0.24081	−0.37356	−0.50356	−0.97263	−0.97866	−0.99585	−0.96765

0.024538	0.009699	0	0.025367	0.085551	0.150709	0.300837	0.450883	0.60068	0.80005	0.899859	0.949847
0.254503	0.494623	0.464036	−0.89679	−0.72451	−0.56792	−0.68731	−0.36115	−0.16479	0.090518	0.139255	0.16035
0.180054	0.43612	0.525282	−0.74277	−0.62173	−0.51809	−0.58351	−0.38678	−0.17299	0.110225	0.168364	0.188505
0.084263	0.356514	0.585662	−0.51994	−0.46684	−0.48221	−0.4271	−0.35625	−0.1651	0.124248	0.188507	0.206934
0.028131	0.306765	0.613999	−0.42949	−0.38613	−0.41388	−0.41135	−0.34878	−0.16187	0.129712	0.197178	0.214869
−0.03905	0.245088	0.639145	−0.32499	−0.29462	−0.34841	−0.37574	−0.33291	−0.15644	0.137129	0.208664	0.225184
−0.17407	0.120043	0.664208	−0.1781	−0.20209	−0.26323	−0.3274	−0.30384	−0.14616	0.144837	0.221564	0.236956
−0.32452	−0.02371	0.668593	−0.04692	−0.1191	−0.19189	−0.27949	−0.27239	−0.13385	0.152149	0.234441	0.248582
−0.53034	−0.21743	0.627363	0.067991	−0.04525	−0.12806	−0.23053	−0.23991	−0.11927	0.15861	0.24444	0.256569
−0.71308	−0.46906	0.531321	0.21199	0.050009	−0.04148	−0.15646	−0.18603	−0.09341	0.167817	0.259108	0.269137
−0.79049	−0.58022	0.48288	0.26172	0.084882	−0.01345	−0.13595	−0.1812	−0.10667	0.143093	0.237703	0.242823
−0.85682	−0.67542	0.435145	0.300576	0.113302	0.007688	−0.12218	−0.18348	−0.1265	0.113612	0.210746	0.211253

Figure 91: Pressure Coefficient of Section F at M = 0.86.

Normalized x	1	0.949487	0.89927	0.698599	0.498323	0.398283	0.298441	0.198599	0.098954	0.049132	0.024369
−1.85764	0.104405	−0.03629	−0.1054	−0.28419	−0.2328	−0.19686	−0.14364	−0.06723	0.056928	0.186488	0.353788
−1.31901	0.096619	−0.03637	−0.1084	−0.3036	−0.26314	−0.23205	−0.18276	−0.11284	0.003604	0.125869	0.292928
−0.79338	0.088139	−0.03694	−0.11164	−0.32488	−0.29908	−0.27426	−0.22935	−0.17248	−0.06547	0.045036	0.205937
−0.50974	0.082708	−0.03837	−0.11431	−0.33672	−0.3194	−0.29783	−0.256	−0.20427	−0.10386	−0.00161	0.155597
−0.21795	0.07725	−0.03991	−0.11644	−0.34664	−0.3385	−0.32333	−0.28462	−0.23887	−0.14793	−0.05478	0.096342
0.333592	0.066704	−0.04107	−0.11874	−0.36496	−0.37881	−0.37228	−0.3425	−0.30464	−0.23113	−0.16	−0.02282
0.879486	0.056614	−0.04164	−0.11945	−0.38199	−0.4074	−0.44054	−0.39292	−0.37252	−0.3265	−0.28258	−0.16672
1.461521	0.046365	−0.04193	−0.11858	−0.40907	−0.38177	−0.52359	−0.49801	−0.47234	−0.48449	−0.41426	−0.32247
2.555743	0.032666	−0.04273	−0.11739	−0.41219	−0.40855	−0.42793	−0.76725	−0.76718	−0.75683	−0.81398	−0.68352
3.108182	0.027589	−0.04326	−0.11183	−0.37063	−0.35688	−0.84175	−0.83744	−0.85194	−0.88799	−0.90069	−0.78195
3.462029	−0.01738	−0.0589	−0.10328	−0.33285	−0.35992	−0.49556	−0.91578	−0.93059	−0.96292	−0.95981	−0.86299

(Left column label: Angle of attack)

0.00957	0	0.030485	0.090766	0.150947	0.301204	0.451164	0.600927	0.700572	0.800118	0.849941	0.874901	0.226125
0.578839	0.355183	−1.05635	−0.95728	−0.85497	−0.48739	nan	−0.14553	0.017772	0.112992	0.135588	0.145987	−0.45265
0.531246	0.435561	−0.98979	−0.72838	−0.46174	−0.44588	nan	−0.1424	0.02044	0.120406	0.145012	0.156619	−0.52312
0.459999	0.522056	−0.74899	−0.54901	−0.41954	−0.39503	nan	−0.1369	0.025107	0.132916	0.161297	0.174256	−0.43675
0.417319	0.559993	−0.61837	−0.5043	−0.34312	−0.35335	nan	−0.13316	0.027236	0.139158	0.169848	0.183704	−0.42353
0.364981	0.596321	−0.50415	−0.41264	−0.32058	−0.33769	nan	−0.12654	0.030901	0.146129	0.179045	0.193991	−0.34602
0.256123	0.642184	−0.33554	−0.28473	−0.27041	−0.29317	nan	−0.11623	0.036606	0.155388	0.191717	0.208095	−0.29205
0.117557	0.663337	−0.18582	−0.19385	−0.2025	−0.24513	nan	−0.10298	0.042929	0.163322	0.20262	0.220526	−0.23683
−0.0369	0.657032	−0.05756	−0.10957	−0.13817	−0.19948	nan	−0.08964	0.05003	0.17064	0.212647	0.232012	−0.18352
−0.38304	0.563699	0.14038	0.021066	−0.03787	−0.11843	nan	−0.05791	0.066866	0.183739	0.228564	0.249889	−0.08906
−0.50279	0.515678	0.191083	0.05505	−0.01648	−0.10115	nan	−0.05779	0.065139	0.183565	0.230752	0.253447	−0.06716
−0.59301	0.471944	0.227278	0.079011	−0.0003	−0.09646	nan	−0.0771	0.043475	0.164175	0.215404	0.240883	−0.05593

Figure 92: Pressure Coefficient of Section G at M = 0.86.

Normalized x	1	0.949343	0.899047	0.698106	0.497889	0.397901	0.298034	0.198287	0.098661	0.048969
−1.85764	0.097539	−0.0269	−0.10129	−0.27958	−0.2242	−0.18533	−0.10011	−0.02249	0.116828	0.247024
−1.31901	0.093204	−0.02739	−0.10422	−0.29883	−0.25451	−0.22001	−0.13979	−0.06686	0.065107	0.187255
−0.79338	0.086097	−0.02639	−0.10519	−0.31894	−0.2888	−0.25973	−0.18511	−0.12224	0.002659	0.112143
−0.50974	0.080563	−0.02781	−0.10721	−0.33084	−0.30799	−0.28136	−0.20853	−0.15314	−0.0326	0.069065
−0.21795	0.07539	−0.02878	−0.10847	−0.3414	−0.32799	−0.30463	−0.23387	−0.18628	−0.07354	0.018473
0.333592	0.065154	−0.02985	−0.10976	−0.36188	−0.36858	−0.34864	−0.28428	−0.24977	−0.15323	−0.08064
0.879486	0.055771	−0.02997	−0.10922	−0.37657	−0.4084	−0.39058	−0.33976	−0.31646	−0.23715	−0.1924
1.461521	0.045668	−0.02979	−0.10741	−0.39075	−0.43393	−0.45385	−0.40419	−0.38517	−0.33695	−0.32424
2.555743	0.027045	−0.02785	−0.09701	−0.37703	−0.54882	−0.50793	−0.38999	−0.66572	−0.7071	−0.63574
3.108182	0.024096	−0.02963	−0.09999	−0.40863	−0.46793	−0.39381	−0.75103	−0.80016	−0.7881	−0.83305
3.462029	0.020117	−0.02956	−0.09691	−0.38801	−0.45719	−0.41661	−0.84001	−0.82848	−0.88561	−0.89904

(Left column label: Angle of attack)

0.024243	0.009528	0	0.025691	0.086117	0.151369	0.301652	0.451574	0.601134	0.800145	0.899771	0.949825
nan	0.564752	0.198002	−1.016	−0.98479	−0.94497	−0.5201	nan	−0.13909	0.106067	0.155888	0.163371
nan	0.519625	0.298057	−0.91862	−0.82265	−0.60266	−0.54886	nan	−0.14297	0.110157	0.164203	0.171883
nan	0.452686	0.411769	−0.70039	−0.61324	−0.46745	−0.48721	nan	−0.13957	0.118422	0.175307	0.181242
nan	0.41107	0.465486	−0.56587	−0.54642	−0.43552	−0.40512	nan	−0.1386	0.124231	0.1843	0.189038
nan	0.361308	0.520521	−0.43995	−0.42688	−0.41165	−0.42194	nan	−0.1344	0.131131	0.194394	0.19722
nan	0.252616	0.602344	−0.25605	−0.29576	−0.33165	−0.36168	nan	−0.12599	0.140348	0.207588	0.207544
nan	0.121418	0.655973	−0.10063	−0.19624	−0.25109	−0.30247	nan	−0.11524	0.148464	0.219352	0.216551
nan	−0.05061	0.679866	0.03661	−0.10535	−0.17588	−0.25143	nan	−0.10249	0.156066	0.230236	0.224679
nan	−0.42619	0.655856	0.242823	0.039298	−0.05387	−0.15811	nan	−0.07248	0.168796	0.246236	0.235413
nan	−0.55897	0.629071	0.297776	0.081236	−0.01956	−0.13145	nan	−0.06242	0.173627	0.251967	0.239958
nan	−0.64364	0.60738	0.329375	0.107803	−0.00163	−0.1217	nan	−0.06309	0.173741	0.253983	0.241887

Figure 93: Pressure Coefficient of Section H at M = 0.86.

Normalized x	1	0.949318	0.898935	0.697706	0.497076	0.397211	0.297346	0.197781	0.098366	0.048883
−1.85764	0.112779	0.002251	−0.04109	−0.23394	−0.30265	nan	−0.11019	−0.00134	0.189966	0.282423
−1.31901	0.11741	0.00801	−0.03793	−0.23899	−0.3268	nan	−0.14294	−0.03688	0.150482	0.236313
−0.79338	0.11687	0.009903	−0.03765	−0.24471	−0.35583	nan	−0.17843	−0.07577	0.103859	0.179452
−0.50974	0.114992	0.009567	−0.03859	−0.24829	−0.37416	nan	−0.19994	−0.09893	0.076994	0.146708
−0.21795	0.113147	0.008837	−0.03976	−0.25114	−0.38936	nan	−0.2233	−0.12768	0.043551	0.107358
0.333592	0.109059	0.007466	−0.04134	−0.25696	−0.43276	nan	−0.26883	−0.17688	−0.02241	0.029159
0.879486	0.103985	0.006128	−0.04292	−0.2606	−0.47686	nan	−0.31692	−0.22877	−0.0952	−0.06013
1.461521	0.098017	0.004099	−0.04492	−0.26279	−0.52527	nan	−0.36989	−0.28823	−0.18582	−0.16815
2.555743	0.086811	0.000968	−0.04713	−0.26232	−0.61917	nan	−0.49322	−0.42313	−0.47931	−0.41482
3.108182	0.078807	0.000744	−0.04625	−0.24788	−0.684	nan	−0.49943	−0.33078	−0.6589	−0.56092
3.462029	0.075105	−0.00091	−0.04776	−0.25788	−0.63191	nan	−0.39883	−0.6934	−0.69621	−0.68938

(Angle of attack labels the first column of the table above.)

0.024142	0.009447	0	0.025941	0.08652	0.151897	0.302294	0.452242	0.601739	0.80042	0.899985	0.949918
0.457782	0.629149	−0.39923	nan	−1.09735	−1.05755	−0.48169	−0.21197	nan	0.117433	0.180342	0.182216
0.413429	0.598683	−0.22124	nan	−0.99313	−0.91517	−0.4842	−0.25047	nan	0.119782	0.178599	0.181229
0.356415	0.553307	−0.04521	nan	−0.78831	−0.49447	−0.52873	−0.27003	nan	0.121281	0.185601	0.188029
0.323239	0.523898	0.044513	nan	−0.62661	−0.47328	−0.51699	−0.27548	nan	0.12217	0.187765	0.189807
0.281686	0.484189	0.15292	nan	−0.58326	−0.45207	−0.44893	−0.27755	nan	0.12533	0.193315	0.194491
0.194609	0.395206	0.322636	nan	−0.42225	−0.42175	−0.37973	−0.27402	nan	0.128097	0.199951	0.199548
0.091919	0.281817	0.457958	nan	−0.30029	−0.32747	−0.34315	−0.26345	nan	0.12919	0.20499	0.203223
−0.03467	0.133467	0.560295	nan	−0.20448	−0.25312	−0.2962	−0.24909	nan	0.128022	0.208145	0.205327
−0.33674	−0.24703	0.666158	nan	−0.05159	−0.1259	−0.21178	−0.21147	nan	0.124481	0.211159	0.204972
−0.5181	−0.48301	0.675829	nan	0.007447	−0.07816	−0.18012	−0.19434	nan	0.121676	0.209912	0.201824
−0.65867	−0.68078	0.661857	nan	0.042186	−0.04991	−0.16172	−0.18532	nan	0.119615	0.208768	0.199751

Figure 94: Pressure Coefficient of Section I at M = 0.86.

Normalized x	0.999658	0.472113	0.208896	0.103849	0.051411	0	0	0.106587	0.212062	0.472455	1
−1.85764	0.142277	−0.05871	0.028933	0.133903	0.24138	0.453226	0.485	−0.36433	−0.33519	−0.13952	0.146793
−1.31901	0.14212	−0.06765	0.016839	0.119628	0.225046	0.451232	0.479766	−0.34062	−0.31723	−0.13416	0.148131
−0.79338	0.142554	−0.07566	0.005291	0.105535	0.208158	0.445765	0.475588	−0.3154	−0.29742	−0.12726	0.15028
−0.50974	0.142333	−0.08016	−0.00141	0.097463	0.199256	0.444946	0.472019	−0.30381	−0.28898	−0.12509	0.150786
−0.21795	0.143249	−0.08322	−0.00758	0.089796	0.190686	0.443819	0.469325	−0.2887	−0.2764	−0.12017	0.152158
0.333592	0.143839	−0.09048	−0.01817	0.077059	0.175961	0.440378	0.463487	−0.26691	−0.26009	−0.11493	0.153622
0.879486	0.144706	−0.0959	−0.02783	0.064986	0.161487	0.435972	0.459642	−0.2465	−0.2441	−0.10888	0.155606
1.461521	0.145818	−0.10126	−0.03692	0.053991	0.149265	0.432037	0.45274	−0.22703	−0.22897	−0.1034	0.156812
2.555743	0.148515	−0.10658	−0.04919	0.036594	0.126473	0.421092	0.439614	−0.19021	−0.19989	−0.09136	0.16001
3.108182	0.149294	−0.10795	−0.05362	0.029496	0.11673	0.415308	0.431331	−0.17527	−0.18852	−0.08715	0.16064
3.462029	0.149669	−0.10805	−0.05445	0.027173	0.11188	0.40566	0.420812	−0.16408	−0.17994	−0.08424	0.160812

Figure 95: Pressure Coefficient of Section SA at M = 0.86.

Normalized x	0.999776	0.472695	0.20949	0.104297	0.051925	0	0	0.106088	0.211504	0.474597	1
−1.85764	0.141623	−0.04765	−0.07745	−0.0199	0.090628	0.556122	0.539606	−1.08904	−0.94655	−0.21575	0.16457
−1.31901	0.141694	−0.05674	−0.09494	−0.04266	0.064884	0.569445	0.552367	−1.06048	−0.7945	−0.21545	0.163927
−0.79338	0.142505	−0.06545	−0.11259	−0.06674	0.03709	0.582814	0.567297	−1.02481	−0.63666	−0.21409	0.163946
−0.50974	0.142407	−0.0705	−0.12219	−0.07975	0.02242	0.589482	0.574382	−1.00757	−0.58547	−0.21422	0.163607
−0.21795	0.143036	−0.07453	−0.13079	−0.09245	0.007468	0.596552	0.582226	−0.98493	−0.50438	−0.2127	0.163711
0.333592	0.143849	−0.08323	−0.14843	−0.11707	−0.02085	0.60934	0.595691	−0.94115	−0.43575	−0.21014	0.163978
0.879486	0.144881	−0.09067	−0.16417	−0.13957	−0.04711	0.620217	0.608802	−0.88238	−0.40975	−0.20602	0.164824
1.461521	0.145945	−0.09798	−0.17984	−0.16254	−0.07382	0.630875	0.620604	−0.80409	−0.40962	−0.20126	0.165558
2.555743	0.148601	−0.10709	−0.20379	−0.19936	−0.11878	0.647829	0.639703	−0.72963	−0.41714	−0.18791	0.167512
3.108182	0.14931	−0.11018	−0.21234	−0.2132	−0.13597	0.652777	0.64527	−0.71181	−0.39715	−0.18272	0.16783
3.462029	0.149776	−0.11148	−0.21748	−0.22199	−0.14751	0.654653	0.64764	−0.69568	−0.37907	−0.17926	0.167915

Figure 96: Pressure Coefficient of Section SB at M = 0.86.

Normalized x	1	0.47379	0.210775	0.105388	0.052785	0	0	0.105024	0.210229	0.473426	0.999818
−1.85764	0.115111	−0.09708	−0.07193	0.027281	0.062479	0.510098	0.381093	−0.94666	−0.66915	−0.1909	0.126148
−1.31901	0.116794	−0.10322	−0.08865	0.004272	0.072493	0.530204	0.411163	−0.89368	−0.47768	−0.19581	0.127931
−0.79338	0.119592	−0.10891	−0.10623	−0.01921	0.068396	0.550821	0.443609	−0.80197	−0.39334	−0.19641	0.129953
−0.50974	0.12044	−0.11293	−0.11631	−0.035	0.048583	0.561296	0.45858	−0.74343	−0.40127	−0.19648	0.130115
−0.21795	0.121843	−0.11553	−0.12665	−0.04982	0.036193	0.573002	0.478018	−0.64883	−0.42978	−0.19582	0.13086
0.333592	0.123532	−0.12228	−0.1479	−0.0788	0.019445	0.592397	0.512698	−0.58914	−0.42196	−0.19415	0.131376
0.879486	0.125376	−0.12755	−0.1675	−0.10633	−0.00537	0.608091	0.543413	−0.55169	−0.41368	−0.19107	0.132105
1.461521	0.127277	−0.1331	−0.18648	−0.14292	−0.04192	0.621638	0.570416	−0.50744	−0.39392	−0.18824	0.132572
2.555743	0.130796	−0.13895	−0.21547	−0.192	−0.08478	0.640503	0.605845	−0.4335	−0.35296	−0.17968	0.133995
3.108182	0.130562	−0.13961	−0.22156	−0.20326	−0.12065	0.641691	0.609711	−0.41341	−0.34021	−0.17581	0.1335
3.462029	0.129167	−0.13825	−0.21922	−0.2015	−0.14317	0.636893	0.6032	−0.41028	−0.33675	−0.17258	0.132218

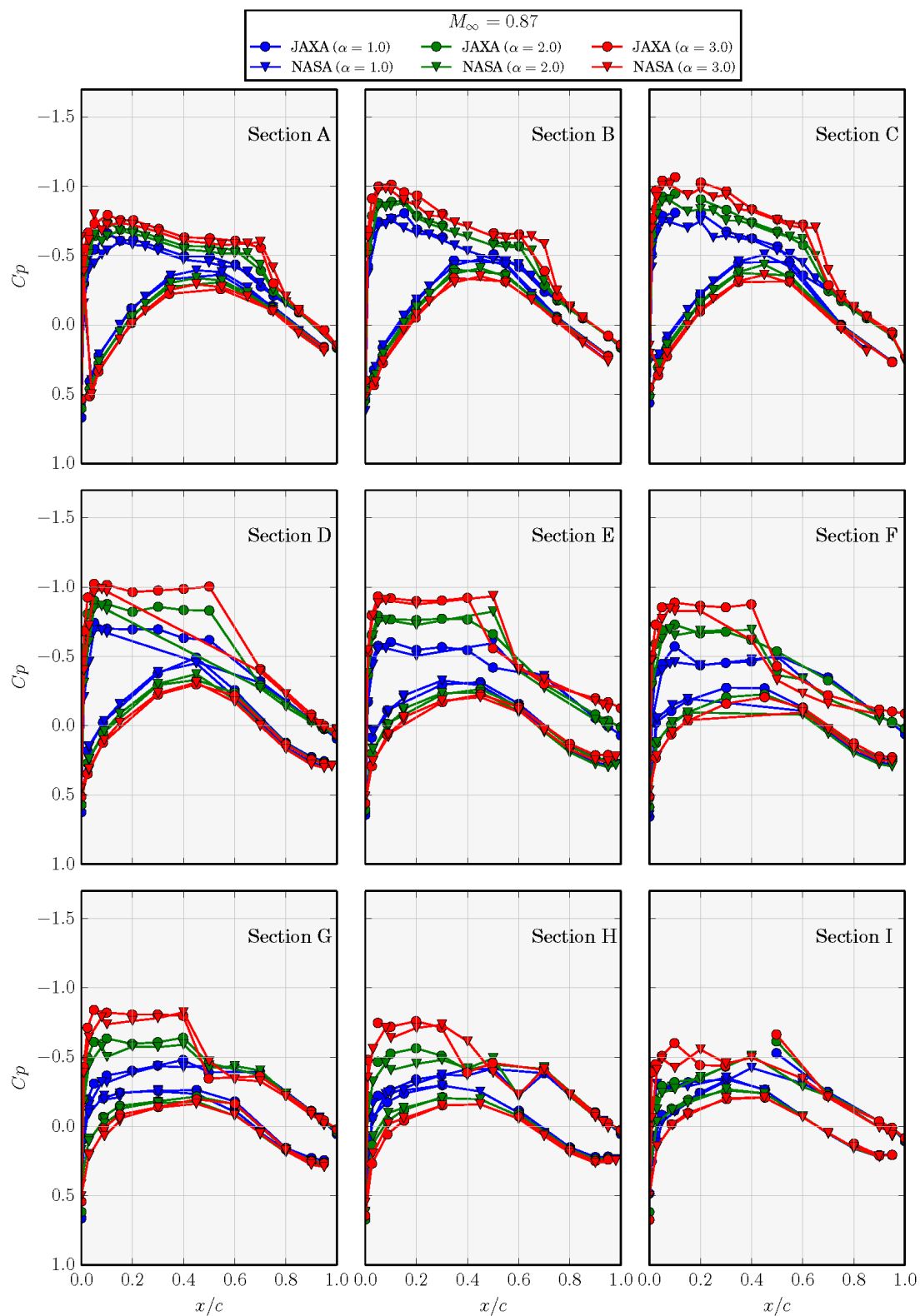**Figure 97: Pressure Coefficient of Section SC at M = 0.86.**

Figure 98: Pressure Distribution on Main Wing at M = 0.87.

Normalized x		1	0.950507	0.851195	0.751801	0.702104	0.602548	0.50291	0.403232	0.30339	0.203346
Angle of attack	−1.85646	0.165239	0.028209	−0.07822	−0.1758	−0.219	−0.25875	−0.28715	−0.2954	−0.31578	−0.36801
	−1.31576	0.166924	0.029291	−0.08169	−0.18513	−0.23256	−0.27868	−0.31428	−0.32362	−0.35248	−0.41189
	−0.78121	0.168023	0.030086	−0.08565	−0.19407	−0.24499	−0.30756	−0.34836	−0.34695	−0.39688	−0.46079
	−0.50694	0.167973	0.030177	−0.08812	−0.20021	−0.25508	−0.32041	−0.35957	−0.3673	−0.42594	−0.48744
	−0.21485	0.16777	0.030587	−0.09062	−0.20657	−0.26417	−0.32603	−0.38294	−0.38791	−0.45502	−0.51499
	0.340799	0.167028	0.031564	−0.09247	−0.20922	−0.26688	−0.35767	−0.42446	−0.43694	−0.50556	−0.56067
	0.896277	0.166038	0.03455	−0.0902	−0.20933	−0.2735	−0.42186	−0.48309	−0.48893	−0.55131	−0.60842
	1.458096	0.164492	0.038138	−0.0876	−0.21332	−0.29434	−0.49595	−0.53095	−0.53194	−0.59051	−0.64936
	2.561401	0.153385	0.039069	−0.09488	−0.27074	−0.4936	−0.58448	−0.6022	−0.60649	−0.66711	−0.72952
	3.119385	0.147011	0.036869	−0.10143	−0.30743	−0.57244	−0.61341	−0.63216	−0.63813	−0.69956	−0.76278
	3.477391	0.137066	0.030762	−0.11419	−0.36624	−0.63677	−0.64096	−0.66171	−0.66759	−0.73275	−0.79401

0.153201	0.102853	0.05218	0.026578	0.01103	0	0.03309	0.067199	0.195246	0.344377	0.545281	0.747405	0.949652
−0.37751	−0.36382	−0.26174	−0.12027	0.08044	0.792864	0.227942	0.04648	−0.27263	−0.46622	−0.54183	−0.19306	0.130531
−0.42103	−0.40905	−0.31167	−0.17907	0.015965	0.777333	0.26207	0.079694	−0.24489	−0.43669	−0.51646	−0.18116	0.137338
−0.46056	−0.47224	−0.36291	−0.23905	−0.05153	0.758286	0.296009	0.113017	−0.21694	−0.41506	−0.4908	−0.16892	0.144222
−0.49331	−0.50501	−0.39135	−0.27201	−0.08879	0.74709	0.314685	0.131503	−0.20131	−0.40242	−0.47625	−0.16381	0.146893
−0.52566	−0.5421	−0.42606	−0.31264	−0.13601	0.731028	0.334528	0.151514	−0.18376	−0.38626	−0.4529	−0.15692	0.150224
−0.56305	−0.59701	−0.47916	−0.37526	−0.20954	0.703957	0.368751	0.185769	−0.15395	−0.36314	−0.41271	−0.14703	0.154624
−0.59877	−0.65019	−0.53445	−0.43688	−0.2853	0.674818	0.401547	0.218784	−0.12447	−0.33455	−0.36785	−0.13895	0.158414
−0.65051	−0.70153	−0.59072	−0.50081	−0.36548	0.64032	0.433493	0.251932	−0.09344	−0.30311	−0.33513	−0.12857	0.16239
−0.7267	−0.7755	−0.69355	−0.62378	−0.51068	0.568257	0.494244	0.314659	−0.0348	−0.24568	−0.27838	−0.11269	0.16532
−0.76463	−0.79846	−0.74048	−0.67718	−0.56137	0.53065	0.520667	0.342861	−0.00684	−0.21758	−0.25265	−0.10335	0.16686
−0.80026	−0.81931	−0.78963	−0.73277	−0.60559	0.493099	0.547504	0.371157	0.020538	−0.19111	−0.23176	−0.0967	0.166243

Figure 99: Pressure Coefficient of Section A at M = 0.87.

Normalized x		1	0.95036	0.850897	0.751435	0.701658	0.602058	0.502368	0.402587	0.302669	0.202477	0.152291
Angle of attack	−1.85646	0.178093	0.082444	−0.04418	−0.15817	−0.214	−0.27573	−0.29386	nan	−0.37337	−0.3751	−0.4091
	−1.31576	0.176687	0.083307	−0.04624	−0.16511	−0.22432	−0.29676	−0.32206	nan	−0.40274	−0.42477	−0.45771
	−0.78121	0.174328	0.08348	−0.04912	−0.17261	−0.2348	−0.31111	−0.36026	nan	−0.4299	−0.48527	−0.53054
	−0.50694	0.172695	0.083157	−0.05082	−0.17605	−0.23975	−0.3314	−0.36389	nan	−0.46194	−0.52096	−0.56278
	−0.21485	0.170753	0.082686	−0.05229	−0.18016	−0.24758	−0.34812	−0.3709	nan	−0.49717	−0.55835	−0.60854
	0.340799	0.168059	0.081805	−0.05508	−0.18499	−0.25024	−0.34441	−0.43321	nan	−0.56215	−0.62004	−0.6452
	0.896277	0.1661	0.083277	−0.05154	−0.17774	−0.24076	−0.39713	−0.4995	nan	−0.62269	−0.67878	−0.79061
	1.458096	0.164054	0.085626	−0.04623	−0.17028	−0.23493	−0.50861	−0.55493	nan	−0.67218	−0.73039	−0.87029
	2.561401	0.149733	0.082192	−0.04776	−0.19145	−0.33643	−0.62966	−0.63852	nan	−0.7662	−0.84689	−0.92392
	3.119385	0.140431	0.076402	−0.05644	−0.21285	−0.40345	−0.66042	−0.66874	nan	−0.81217	−0.95859	−0.9652
	3.477391	0.126065	0.06372	−0.07456	−0.24416	−0.48418	−0.69005	−0.69708	nan	−0.85151	−0.99553	−1.04765

0.102013	0.051507	0.026095	0.010702	0	0.033792	0.068221	0.196921	0.346343	0.546908	0.748383	0.949859
−0.46267	−0.35879	−0.22477	0.015496	0.664079	0.12684	−0.0199	−0.31093	−0.62461	−0.67656	−0.10523	0.193053
−0.56452	−0.42777	−0.29873	−0.06068	0.653704	0.165931	0.015248	−0.28535	−0.59484	−0.64326	−0.09146	0.20021
−0.64247	−0.49772	−0.37867	−0.14167	0.636574	0.203812	0.049672	−0.25448	−0.56651	−0.61124	−0.07927	0.20769
−0.6607	−0.53683	−0.42162	−0.18536	0.625267	0.224916	0.068957	−0.23868	−0.54956	−0.59011	−0.07521	0.2107
−0.67755	−0.58621	−0.47399	−0.23969	0.609249	0.247285	0.0897	−0.22115	−0.53002	−0.56074	−0.07075	0.214066
−0.70576	−0.65691	−0.55435	−0.32406	0.581254	0.28388	0.124003	−0.19363	−0.50146	−0.50646	−0.06511	0.218449
−0.75604	−0.72953	−0.63621	−0.40595	0.54912	0.318788	0.157858	−0.16516	−0.47423	−0.45748	−0.06027	0.222483
−0.81905	−0.80459	−0.71924	−0.48924	0.511536	0.353129	0.19178	−0.13328	−0.43408	−0.39512	−0.05416	0.226404
−0.96036	−0.95296	−0.85706	−0.63103	0.434127	0.414382	0.253701	−0.07474	−0.36479	−0.33636	−0.04401	0.228481
−1.02632	−1.01077	−0.92688	−0.69607	0.391174	0.440762	0.282096	−0.04564	−0.33122	−0.3074	−0.0379	0.22896
−1.08599	−1.06919	−0.99212	−0.75621	0.350977	0.466995	0.309401	−0.01869	−0.29978	−0.28619	−0.0336	0.227332

Figure 100: Pressure Coefficient of Section B at M = 0.87.

Normalized x		1	0.950309	0.850663	0.750965	0.701115	0.601364	0.501507	0.401596	0.301581	0.201406	0.151292
Angle of attack	−1.85646	nan	0.070152	−0.04641	−0.17094	−0.23337	−0.29913	−0.33016	−0.35246	−0.38467	−0.36737	nan
	−1.31576	nan	0.070632	−0.04793	−0.17664	−0.24274	−0.31653	−0.37261	−0.37517	−0.42894	−0.41433	nan
	−0.78121	nan	0.069822	−0.05085	−0.18369	−0.25419	−0.33972	−0.36982	−0.45925	−0.46263	−0.45679	nan
	−0.50694	nan	0.068967	−0.0532	−0.18743	−0.25703	−0.34211	−0.42352	−0.47058	−0.46166	−0.49156	nan
	−0.21485	nan	0.06786	−0.05472	−0.18944	−0.2597	−0.37952	−0.41766	−0.48439	−0.50063	−0.5449	nan
	0.340799	nan	0.066543	−0.05809	−0.19946	−0.27612	−0.34961	−0.46035	−0.53014	−0.58371	−0.61738	nan
	0.896277	nan	0.066969	−0.05509	−0.18557	−0.24885	−0.33373	−0.55492	−0.61053	−0.66111	−0.79721	nan
	1.458096	nan	0.070715	−0.04571	−0.16711	−0.22595	−0.46388	−0.62188	−0.68375	−0.72474	−0.83575	nan
	2.561401	nan	0.063893	−0.0499	−0.17757	−0.26651	−0.6957	−0.72926	−0.79974	−0.93845	−0.97822	nan
	3.119385	nan	0.051342	−0.06959	−0.2017	−0.2928	−0.7325	−0.77037	−0.84521	−0.97323	−1.04086	nan
	3.477391	nan	0.028487	−0.10386	−0.23675	−0.32345	−0.76388	−0.81473	−0.90207	−1.06186	−1.09467	nan

0.101126	0.050854	0.025638	0.010414	0	0.034413	0.069144	0.198499	0.348205	0.548448	0.74922	0.950045
−0.41408	−0.30401	−0.19947	0.025002	0.627323	0.00302	−0.09766	−0.39224	−0.64742	−0.78716	−0.10409	0.23431
−0.48606	−0.38941	−0.2918	−0.06718	0.632778	0.052627	−0.05712	−0.35704	−0.61207	−0.75524	−0.06204	0.240241
−0.67712	−0.47947	−0.39199	−0.16825	0.628089	0.099204	−0.01819	−0.32022	−0.58182	−0.71899	−0.02724	0.247306
−0.69662	−0.52128	−0.44633	−0.22454	0.622499	0.123797	0.002766	−0.30469	−0.56394	−0.69647	−0.01802	0.250536
−0.70306	−0.58078	−0.5089	−0.29078	0.61314	0.150432	0.025775	−0.28963	−0.53875	−0.66198	−0.01106	0.254643
−0.6982	−0.67754	−0.60326	−0.39167	0.593763	0.192994	0.063292	−0.25897	−0.49998	−0.59014	−0.00664	0.260003
−0.79357	−0.77032	−0.68463	−0.48828	0.568262	0.232938	0.099509	−0.22573	−0.45813	−0.47179	−0.00361	0.264432
−0.87934	−0.86154	−0.765	−0.57937	0.540171	0.27228	0.136058	−0.18877	−0.41165	−0.38624	0.001048	0.26869
−1.01958	−0.99416	−0.90889	−0.71982	0.480813	0.340984	0.202578	−0.12211	−0.33766	−0.32594	0.008226	0.269897
−1.07918	−1.05404	−0.98634	−0.78224	0.444641	0.371483	0.23287	−0.08938	−0.30164	−0.30935	0.012408	0.270262
−1.13112	−1.10857	−1.05007	−0.8339	0.409997	0.400387	0.262245	−0.05892	−0.27074	−0.29168	0.014512	0.268758

Figure 101: Pressure Coefficient of Section C at M = 0.87.

Normalized x		1	0.950125	0.900184	0.700354	0.500459	0.400446	0.300433	0.200354	0.100275
Angle of attack	−1.85646	0.112422	0.013836	−0.04239	−0.28575	−0.35067	−0.33948	−0.31081	−0.24068	−0.21563
	−1.31576	0.133395	0.036586	−0.02852	−0.29295	−0.37797	−0.38651	−0.36149	−0.29159	−0.29956
	−0.78121	0.12931	0.036021	−0.03019	−0.30467	−0.43562	−0.39072	−0.41785	−0.37042	−0.40539
	−0.50694	0.122372	0.033375	−0.03253	−0.31653	−0.40983	−0.45927	−0.45383	−0.39127	−0.45094
	−0.21485	0.114022	0.030671	−0.03511	−0.31987	−0.47465	−0.48826	−0.4781	−0.41571	−0.52003
	0.340799	0.103593	0.02775	−0.03743	−0.3268	−0.4433	−0.49563	−0.52249	−0.51269	−0.56854
	0.896277	0.095464	0.02398	−0.04179	−0.33184	−0.59993	−0.6071	−0.67282	−0.68562	−0.67824
	1.458096	0.088548	0.026664	−0.03263	−0.26927	−0.70088	−0.7427	−0.79519	−0.73531	−0.79457
	2.561401	0.053366	0.013118	−0.04199	−0.30947	−0.96661	−0.93062	−0.92315	−0.91216	−0.96529
	3.119385	0.064452	−0.00422	−0.09108	−0.43663	−1.01461	−1.00245	−0.98975	−0.97909	−1.02988
	3.477391	0.009519	−0.11974	−0.25211	−0.53316	−1.08191	−1.05642	−1.04631	−1.03793	−1.08415

0.050203	0.025167	0.010093	0	0.024905	0.084808	0.299581	0.4496	0.599685	0.799908	0.900052	0.949928
−0.16059	−0.04661	0.191233	0.635998	−0.20211	−0.29734	−0.60929	−0.78625	−0.24043	−0.10642	−0.01907	0.059736
−0.24865	−0.14232	0.095448	0.655297	−0.1178	−0.23368	−0.57628	−0.74695	−0.23324	−0.02571	0.066536	0.135269
−0.34375	−0.2558	−0.01129	0.667495	−0.03769	−0.17964	−0.53375	−0.71024	−0.22162	0.06278	0.152464	0.200294
−0.41009	−0.32603	−0.08056	0.670111	0.004422	−0.15159	−0.50981	−0.68818	−0.21301	0.085341	0.176165	0.216959
−0.48356	−0.40869	−0.16075	0.664628	0.048459	−0.12161	−0.48054	−0.65573	−0.21609	0.102614	0.196821	0.232093
−0.60167	−0.53142	−0.28254	0.64988	0.11507	−0.07465	−0.43532	−0.59886	−0.24769	0.114239	0.214143	0.246547
−0.72324	−0.64335	−0.39195	0.629468	0.172238	−0.03125	−0.38838	−0.52516	−0.25783	0.121465	0.224762	0.255551
−0.83091	−0.74012	−0.48907	0.603335	0.227163	0.013853	−0.33263	−0.343	−0.24656	0.12859	0.234333	0.263922
−0.97559	−0.87623	−0.62876	0.542096	0.317041	0.093514	−0.25223	−0.31687	−0.22635	0.133156	0.241936	0.269691
−1.03574	−0.93901	−0.69811	0.504437	0.35454	0.131461	−0.21554	−0.29274	−0.21534	0.135422	0.246067	0.275681
−1.08744	−0.99574	−0.77301	0.46642	0.390003	0.168894	−0.18413	−0.27036	−0.20814	0.133252	0.242811	0.268418

Figure 102: Pressure Coefficient of Section D at M = 0.87.

Normalized x		1	0.949879	0.899758	0.699494	0.499376	0.399354	0.299406	0.199457	0.099582	0.049681	0.024804
Angle of attack	−1.85646	0.081918	−0.05322	−0.09518	−0.29932	−0.32297	−0.29199	−0.24094	−0.17671	−0.07366	−0.0071	0.149215
	−1.31576	0.109808	−2.81E−05	−0.05657	−0.29315	−0.3463	−0.32714	−0.28368	−0.22468	−0.13821	−0.08389	0.064409
	−0.78121	0.105435	0.010399	−0.04851	−0.30327	−0.3874	−0.37312	−0.33709	−0.27428	−0.20993	−0.17554	−0.03239
	−0.50694	0.099113	0.008339	−0.05111	−0.31456	−0.42168	−0.38502	−0.35352	−0.31441	−0.25956	−0.23217	−0.09318
	−0.21485	0.093092	0.006215	−0.05377	−0.3199	−0.41283	−0.42017	−0.39722	−0.34981	−0.31471	−0.29106	−0.16274
	0.340799	0.080981	0.006115	−0.05383	−0.33129	−0.49114	−0.47108	−0.447	−0.42434	−0.44876	−0.4348	−0.31145
	0.896277	0.071806	0.004683	−0.05465	−0.35673	−0.41657	−0.51599	−0.53841	−0.51602	−0.58703	−0.54516	−0.44484
	1.458096	0.065425	7.12E−05	−0.05935	−0.33756	−0.43396	−0.67458	−0.69486	−0.68153	−0.67499	−0.71036	−0.56908
	2.561401	−0.04513	−0.07126	−0.10371	−0.25867	−0.89739	−0.86247	−0.85156	−0.84618	−0.86391	−0.87738	−0.74002
	3.119385	−0.14833	−0.19629	−0.22305	−0.31245	−0.46616	−0.93943	−0.91762	−0.91403	−0.93581	−0.94723	−0.81076
	3.477391	−0.22772	−0.28411	−0.2979	−0.35649	−0.42808	−0.994	−0.97336	−0.97549	−0.99511	−1.00551	−0.86847

0.009907	0	0.030234	0.090335	0.150437	0.30058	0.450576	0.600426	0.700301	0.800103	0.899978	0.875028	0.375578
0.397928	0.495934	−0.55674	−0.51055	−0.50927	−0.69185	−0.37144	−0.10004	−0.02172	0.018142	0.045783	0.039808	−0.74759
0.324056	0.551388	−0.44732	−0.46076	−0.45398	−0.62126	−0.39429	−0.13354	0.007385	0.068589	0.109041	0.100686	−0.69611
0.235705	0.598208	−0.33888	−0.39422	−0.40842	−0.57077	−0.30084	−0.16557	0.009961	0.118854	0.174905	0.165731	−0.63231
0.179313	0.617218	−0.27832	−0.3507	−0.38713	−0.53315	−0.30746	−0.1716	0.011097	0.131963	0.194102	0.184974	−0.59111
0.116607	0.633846	−0.21552	−0.30696	−0.35442	−0.49114	−0.35714	−0.16979	0.014417	0.141505	0.207796	0.198712	−0.35391
−0.01867	0.650396	−0.10844	−0.21907	−0.2919	−0.31933	−0.33975	−0.16056	0.019673	0.151579	0.222229	0.213229	−0.39971
−0.14844	0.646182	−0.02119	−0.15221	−0.22226	−0.31424	−0.30887	−0.14892	0.026017	0.159356	0.233174	0.224164	−0.34038
−0.27067	0.631163	0.059214	−0.08591	−0.15837	−0.26621	−0.27614	−0.13436	0.033728	0.167704	0.244685	0.235636	−0.29381
−0.46774	0.583548	0.174817	0.008655	−0.07493	−0.19775	−0.23076	−0.12117	0.032111	0.16138	0.237688	0.230779	−0.23386
−0.55547	0.552155	0.224231	0.050364	−0.03727	−0.16738	−0.21209	−0.1208	0.022782	0.146156	0.219857	0.214944	−0.2076
−0.62732	0.520116	0.264592	0.084315	−0.00682	−0.14446	−0.20071	−0.12731	0.007819	0.127095	0.202123	0.197665	−0.1893

Figure 103: Pressure Coefficient of Section E at M = 0.87.

Normalized x		1	0.949681	0.899527	0.698997	0.498798	0.398823	0.298848	0.199038	0.099229	0.049407
Angle of attack	−1.85646	0.111408	−0.02392	−0.07557	−0.29847	−0.28917	−0.25771	−0.19971	−0.12194	−0.04783	0.105724
	−1.31576	0.10752	−0.01678	−0.06946	−0.29905	−0.30914	−0.28743	−0.2354	−0.1649	−0.10518	0.041741
	−0.78121	0.099169	−0.0173	−0.07206	−0.31514	−0.33778	−0.32608	−0.28084	−0.21615	−0.17722	−0.03599
	−0.50694	0.093407	−0.01785	−0.07411	−0.32534	−0.37497	−0.34913	−0.30936	−0.24978	−0.22267	−0.08363
	−0.21485	0.087266	−0.01901	−0.0765	−0.33568	−0.38239	−0.39401	−0.33631	−0.28048	−0.28441	−0.1404
	0.340799	0.076183	−0.0198	−0.07843	−0.35714	−0.42318	−0.4494	−0.40078	−0.34477	−0.42721	−0.25625
	0.896277	0.06249	−0.01747	−0.07517	−0.3354	−0.5287	−0.47312	−0.42798	−0.41183	−0.5592	−0.41547
	1.458096	0.05389	−0.01874	−0.07699	−0.40511	−0.42338	−0.416	−0.56394	−0.54246	−0.62868	−0.58125
	2.561401	−0.01339	−0.03529	−0.06072	−0.24706	−0.65399	−0.83172	−0.79621	−0.79569	−0.83419	−0.80387
	3.119385	−0.10786	−0.11985	−0.13242	−0.21245	−0.36694	−0.8886	−0.86979	−0.88441	−0.90315	−0.86884
	3.477391	−0.17382	−0.18979	−0.19754	−0.24917	−0.33956	−0.41331	−0.94032	−0.94494	−0.95653	−0.9235

0.024538	0.009699	0	0.025367	0.085551	0.150709	0.300837	0.450883	0.60068	0.80005	0.899859	0.949847
0.242264	0.484408	0.480065	−0.85681	−0.69679	−0.55601	−0.68295	−0.33467	−0.15058	0.074263	0.117054	0.139135
0.169252	0.426318	0.535867	−0.71784	−0.61862	−0.5233	−0.64152	−0.35468	−0.16833	0.103423	0.158282	0.179265
0.079925	0.352653	0.58832	−0.51687	−0.50155	−0.47884	−0.46629	−0.37648	−0.16664	0.122942	0.185927	0.205131
0.023771	0.30296	0.615075	−0.42399	−0.42183	−0.45306	−0.35382	−0.35264	−0.16092	0.128968	0.194902	0.213425
−0.04314	0.242729	0.638674	−0.32769	−0.31676	−0.37234	−0.40193	−0.33602	−0.15592	0.136873	0.206352	0.223407
−0.18273	0.114154	0.665675	−0.17151	−0.1996	−0.26568	−0.32798	−0.30837	−0.14566	0.145687	0.221198	0.236907
−0.36009	−0.04704	0.66411	−0.03912	−0.11766	−0.19228	−0.2826	−0.27649	−0.13409	0.152449	0.23319	0.247074
−0.51072	−0.2003	0.628667	0.060586	−0.05045	−0.1335	−0.23537	−0.24247	−0.11795	0.160623	0.245066	0.257354
−0.67442	−0.4264	0.546005	0.193799	0.035867	−0.05631	−0.17519	−0.20912	−0.11721	0.146408	0.239448	0.247311
−0.74428	−0.52629	0.500716	0.243093	0.070762	−0.02771	−0.15442	−0.20463	−0.13069	0.122218	0.218159	0.221491
−0.80937	−0.6197	0.458238	0.284818	0.100495	−0.00505	−0.1394	−0.20448	−0.14622	0.100226	0.198483	0.198614

Figure 104: Pressure Coefficient of Section F at M = 0.87.

Angle of attack	1	0.949487	0.89927	0.698599	0.498323	0.398283	0.298441	0.198599	0.098954	0.049132	0.024369	0.00957	0	0.030485	0.090766	0.150947	0.301204	0.451164	0.600927	0.700572	0.800118	0.849941	0.874901	0.226125
−1.85646	0.105285	−0.03136	−0.10315	−0.29221	−0.24377	−0.20834	−0.15494	−0.07683	0.047919	0.177408	0.344067	0.571658	0.375642	−1.02216	−0.92834	−0.85083	−0.4541	nan	−0.14261	0.019526	0.110894	0.132394	0.142557	−0.57018
−1.31576	0.098246	−0.03089	−0.10466	−0.30686	−0.26861	−0.23807	−0.1884	−0.11743	−0.00018	0.121272	0.288179	0.526973	0.447186	−0.96108	−0.73619	−0.64277	−0.50059	nan	−0.14173	0.021506	0.119418	0.143193	0.154559	−0.45234
−0.78121	0.090411	−0.03077	−0.10669	−0.32585	−0.30281	−0.27825	−0.23216	−0.17316	−0.06338	0.048159	0.209915	0.463713	0.524811	−0.76987	−0.54395	−0.46032	−0.38414	nan	−0.1362	0.02631	0.131068	0.157835	0.170329	−0.4806
−0.50694	0.084554	−0.03214	−0.10924	−0.3368	−0.32516	−0.30474	−0.26026	−0.20662	−0.10389	−0.00103	0.156934	0.418447	0.563431	−0.62505	−0.51522	−0.37448	−0.38569	nan	−0.13265	0.028845	0.138485	0.168005	0.181554	−0.42689
−0.21485	0.078288	−0.03388	−0.11156	−0.34814	−0.34583	−0.32912	−0.29304	−0.24377	−0.15042	−0.05688	0.0952	0.364814	0.600527	−0.49834	−0.44824	−0.30939	−0.33294	nan	−0.12683	0.032009	0.145778	0.177894	0.192566	−0.39414
0.340799	0.067371	−0.03541	−0.11349	−0.36908	−0.39099	−0.38605	−0.34626	−0.31203	−0.23527	−0.16506	−0.02759	0.252628	0.644711	−0.32936	−0.28709	−0.27035	−0.29624	nan	−0.11567	0.038102	0.156229	0.191915	0.208181	−0.29303
0.896277	0.057116	−0.03573	−0.11315	−0.40264	−0.3535	−0.47176	−0.43619	−0.39244	−0.32695	−0.27786	−0.15927	0.122976	0.664924	−0.1858	−0.19586	−0.20431	−0.24941	nan	−0.10373	0.043811	0.163734	0.20222	0.219916	−0.24097
1.458096	0.044353	−0.03462	−0.10964	−0.36012	−0.55687	−0.51894	−0.4547	−0.44527	−0.54746	−0.4493	−0.35497	−0.05678	0.656429	−0.04313	−0.10147	−0.13419	−0.19931	nan	−0.08943	0.051051	0.171483	0.213042	0.232446	−0.18199
2.561401	0.034435	−0.03918	−0.11129	−0.385	−0.35172	−0.7661	−0.76728	−0.75188	−0.72697	−0.77666	−0.6426	−0.33913	0.575557	0.120739	0.006024	−0.05122	−0.13456	nan	−0.06763	0.062005	0.181765	0.227067	0.248494	−0.10514
3.119385	0.016107	−0.04392	−0.1065	−0.3565	−0.3448	−0.80752	−0.8196	−0.82388	−0.84728	−0.85878	−0.73276	−0.454	0.532946	0.170911	0.038602	−0.0325	−0.12114	nan	−0.07749	0.050248	0.173476	0.222852	0.246701	−0.08555
3.477391	−0.05407	−0.08032	−0.10913	−0.30989	−0.34624	−0.43378	−0.89068	−0.89862	−0.92227	−0.91652	−0.81248	−0.54152	0.491815	0.20915	0.064107	−0.01538	−0.11372	nan	−0.0959	0.028047	0.151159	0.203004	0.22901	−0.07222

Figure 105: Pressure Coefficient of Section G at M = 0.87.

Angle of attack	1	0.949343	0.899047	0.698106	0.497889	0.397901	0.298034	0.198287	0.098661	0.048969	0.024243	0.009528	0	0.025691	0.086117	0.151369	0.301652	0.451574	0.601134	0.800145	0.899771	0.949825
−1.85646	0.099423	−0.0216	−0.0984	−0.28749	−0.23208	−0.19256	−0.10704	−0.02861	0.110994	0.240016	nan	0.560259	0.224685	−0.97655	−0.95444	−0.93027	−0.49399	nan	−0.13444	0.103787	0.152309	0.160408
−1.31576	0.096508	−0.01917	−0.09798	−0.3036	−0.25929	−0.22379	−0.14265	−0.06885	0.064217	0.185872	nan	0.518159	0.313153	−0.88858	−0.82938	−0.62557	−0.53211	nan	−0.13828	0.106032	0.156569	0.16525
−0.78121	0.088395	−0.02038	−0.10039	−0.32385	−0.29263	−0.26216	−0.18627	−0.12191	0.005277	0.115164	nan	0.455458	0.415533	−0.70607	−0.61546	−0.47308	−0.49707	nan	−0.13756	0.116557	0.171704	0.17838
−0.50694	0.082618	−0.02165	−0.10227	−0.33736	−0.31327	−0.28584	−0.21178	−0.1553	−0.03289	0.069804	nan	0.413854	0.47148	−0.57	−0.56644	−0.43628	−0.48178	nan	−0.13725	0.122991	0.181238	0.186622
−0.21485	0.076643	−0.02293	−0.10362	−0.34799	−0.33603	−0.31069	−0.23874	−0.18995	−0.07518	0.016895	nan	0.360358	0.526558	−0.43456	−0.45727	−0.40066	−0.38211	nan	−0.13437	0.130142	0.19198	0.195499
0.340799	0.066328	−0.02414	−0.10444	−0.36466	−0.37705	−0.35291	−0.29083	−0.25426	−0.15533	−0.08301	nan	0.251028	0.606329	−0.24974	−0.29531	−0.34068	−0.37253	nan	−0.12592	0.140718	0.207015	0.207288
0.896277	0.055884	−0.02435	−0.1036	−0.38234	−0.41317	−0.40999	−0.35373	−0.32112	−0.23782	−0.19689	nan	0.118193	0.65868	−0.09119	−0.19206	−0.25234	−0.30898	nan	−0.11625	0.148524	0.218542	0.215905
1.458096	0.045978	−0.02369	−0.09988	−0.39127	−0.42573	−0.42624	−0.43304	−0.42264	−0.37024	−0.32844	nan	−0.04916	0.680513	0.044561	−0.10038	−0.17314	−0.25219	nan	−0.1019	0.157139	0.23058	0.224938
2.561401	0.027738	−0.02426	−0.09351	−0.44063	−0.46974	−0.3898	−0.59123	−0.71141	−0.68667	−0.61088	nan	−0.39132	0.662427	0.228619	0.027069	−0.06596	−0.17048	nan	−0.07724	0.16825	0.245058	0.234836
3.119385	0.024964	−0.02546	−0.0945	−0.39915	−0.45478	−0.38918	−0.74739	−0.77357	−0.72873	−0.78489	nan	−0.50445	0.63997	0.279134	0.065606	−0.03605	−0.14794	nan	−0.06982	0.172468	0.250773	0.239685
3.477391	0.019558	−0.02495	−0.08931	−0.37969	−0.46327	−0.43	−0.81692	−0.79749	−0.84353	−0.85394	nan	−0.5909	0.616537	0.312664	0.09178	−0.01635	−0.13879	nan	−0.07277	0.171249	0.252046	0.240939

Figure 106: Pressure Coefficient of Section H at M = 0.87.

Normalized x		1	0.949318	0.898935	0.697706	0.497076	0.397211	0.297346	0.197781	0.098366	0.048883
Angle of attack	−1.85646	0.11612	0.008162	−0.03637	−0.23561	−0.32224	nan	−0.11561	−0.00575	0.186083	0.277119
	−1.31576	0.119954	0.013112	−0.03315	−0.23827	−0.34745	nan	−0.14603	−0.03822	0.14973	0.234356
	−0.78121	0.120432	0.015813	−0.0324	−0.24305	−0.37733	nan	−0.17956	−0.07557	0.1057	0.18065
	−0.50694	0.118737	0.015487	−0.03313	−0.24606	−0.40299	nan	−0.20219	−0.10093	0.077593	0.146362
	−0.21485	0.116711	0.014861	−0.03432	−0.24879	−0.42679	nan	−0.22645	−0.12906	0.044051	0.107178
	0.340799	0.112795	0.013425	−0.03561	−0.25172	−0.46977	nan	−0.27205	−0.1784	−0.02211	0.028805
	0.896277	0.107312	0.012164	−0.03688	−0.25152	−0.5206	nan	−0.32027	−0.23167	−0.09732	−0.06312
	1.458096	0.101675	0.01037	−0.03838	−0.24872	−0.5683	nan	−0.37876	−0.29384	−0.19293	−0.17301
	2.561401	0.08847	0.008839	−0.03718	−0.22176	−0.66215	nan	−0.48651	−0.40618	−0.45092	−0.41763
	3.119385	0.083086	0.008092	−0.0376	−0.21831	−0.66493	nan	−0.42493	−0.45251	−0.6432	−0.5339
	3.477391	0.079949	0.005657	−0.04044	−0.24473	−0.61789	nan	−0.52568	−0.67946	−0.67451	−0.62144

0.024142	0.009447	0	0.025941	0.08652	0.151897	0.302294	0.452242	0.601739	0.80042	0.899985	0.949918
0.452517	0.626263	−0.34664	nan	−1.0693	−1.02626	−0.58921	−0.21169	nan	0.115668	0.176875	0.181481
0.410921	0.59668	−0.18903	nan	−0.97375	−0.91272	−0.48783	−0.23115	nan	0.121763	0.17809	0.181316
0.357411	0.554031	−0.02996	nan	−0.78577	−0.58371	−0.53865	−0.25649	nan	0.122807	0.184381	0.187533
0.322718	0.523399	0.061867	nan	−0.64013	−0.50864	−0.54145	−0.26449	nan	0.124135	0.186971	0.189548
0.281605	0.484181	0.165146	nan	−0.59439	−0.46	−0.49852	−0.27319	nan	0.126635	0.192202	0.194148
0.194269	0.394657	0.329702	nan	−0.43174	−0.42007	−0.38483	−0.27465	nan	0.13007	0.200211	0.200231
0.089238	0.278986	0.464848	nan	−0.30554	−0.33479	−0.34942	−0.26927	nan	0.13077	0.20517	0.203944
−0.03919	0.128061	0.566635	nan	−0.19938	−0.25077	−0.29857	−0.25382	nan	0.129968	0.209246	0.206887
−0.3416	−0.25012	0.669906	nan	−0.05521	−0.131	−0.22176	−0.22196	nan	0.125303	0.211996	0.206277
−0.47681	−0.42807	0.675202	nan	−0.00515	−0.08907	−0.19084	−0.20469	nan	0.123709	0.211695	0.204165
−0.6086	−0.60641	0.664843	nan	0.028148	−0.06229	−0.17378	−0.19712	nan	0.121349	0.210703	0.202275

Figure 107: Pressure Coefficient of Section I at M = 0.87.

Normalized x	0.999658	0.472113	0.208896	0.103849	0.051411	0	0	0.106587	0.212062	0.472455	1
−1.85646	0.142956	−0.06369	0.025962	0.132427	0.239586	0.455102	0.484174	−0.35838	−0.33642	−0.14209	0.147594
−1.31576	0.143187	−0.07116	0.015789	0.120467	0.225699	0.45099	0.481927	−0.33715	−0.32004	−0.13698	0.149528
−0.78121	0.143727	−0.07867	0.004955	0.10712	0.209799	0.448225	0.477119	−0.31405	−0.30111	−0.13028	0.151623
−0.50694	0.143697	−0.08332	−0.00176	0.099105	0.200594	0.446962	0.473135	−0.30134	−0.29197	−0.12766	0.152398
−0.21485	0.144107	−0.08685	−0.00775	0.091795	0.192444	0.443568	0.471033	−0.28722	−0.2801	−0.12323	0.153567
0.340799	0.145023	−0.09317	−0.01804	0.079038	0.177522	0.440012	0.464544	−0.26472	−0.26178	−0.11649	0.155134
0.896277	0.145762	−0.09933	−0.02749	0.067385	0.16405	0.437244	0.458401	−0.24598	−0.24754	−0.11189	0.156598
1.458096	0.147187	−0.10286	−0.03466	0.058207	0.153444	0.432442	0.453533	−0.22768	−0.23241	−0.10539	0.158621
2.561401	0.149194	−0.10833	−0.04654	0.041656	0.132184	0.421012	0.43964	−0.19455	−0.20622	−0.09577	0.160759
3.119385	0.150623	−0.10744	−0.0482	0.037256	0.124479	0.415492	0.433575	−0.18055	−0.19473	−0.09051	0.162119
3.477391	0.151327	−0.10702	−0.04906	0.034959	0.119887	0.406289	0.421137	−0.16819	−0.18448	−0.08691	0.162152

(Left axis label: Angle of attack)

Figure 108: Pressure Coefficient of Section SA at M = 0.87.

Normalized x	0.999776	0.472695	0.20949	0.104297	0.051925	0	0	0.106088	0.211504	0.474597	1
−1.85646	0.144396	−0.0522	−0.08651	−0.02914	0.080156	0.566749	0.549377	−1.05922	−0.98867	−0.20928	0.16769
−1.31576	0.144888	−0.06024	−0.10208	−0.04934	0.05743	0.578791	0.562772	−1.032	−0.94064	−0.20847	0.167875
−0.78121	0.145605	−0.0684	−0.11866	−0.07205	0.031402	0.590678	0.57586	−1.00309	−0.82543	−0.20823	0.167765
−0.50694	0.145786	−0.07347	−0.12846	−0.08518	0.016399	0.597174	0.5833	−0.98489	−0.74081	−0.20877	0.167446
−0.21485	0.146001	−0.07759	−0.13722	−0.09776	0.001507	0.603095	0.590195	−0.96591	−0.63248	−0.20838	0.167213
0.340799	0.146822	−0.08553	−0.15354	−0.12041	−0.02467	0.614143	0.602008	−0.92779	−0.51165	−0.20672	0.167285
0.896277	0.147542	−0.09305	−0.16939	−0.14234	−0.04963	0.624368	0.61346	−0.88802	−0.44852	−0.20441	0.16776
1.458096	0.149034	−0.09849	−0.18259	−0.16179	−0.07273	0.633954	0.624375	−0.8379	−0.40969	−0.19993	0.168814
2.561401	0.150887	−0.10744	−0.20479	−0.19444	−0.11196	0.647118	0.638858	−0.73545	−0.39546	−0.19097	0.169669
3.119385	0.151975	−0.10814	−0.20982	−0.20427	−0.12523	0.649982	0.642689	−0.71993	−0.40228	−0.18501	0.170336
3.477391	0.152276	−0.10885	−0.2142	−0.21239	−0.13605	0.652362	0.645023	−0.70384	−0.40383	−0.18143	0.170351

(Left axis label: Angle of attack)

Figure 109: Pressure Coefficient of Section SB at M = 0.87.

Normalized x	1	0.47379	0.210775	0.105388	0.052785	0	0	0.105024	0.210229	0.473426	0.999818
−1.85646	0.118234	−0.10175	−0.07852	0.020735	0.073563	0.519	0.397689	−0.91842	−0.79967	−0.18366	0.129511
−1.31576	0.120663	−0.10717	−0.09535	−0.00271	0.0768	0.539058	0.427374	−0.87126	−0.68318	−0.18906	0.131521
−0.78121	0.123137	−0.11187	−0.11073	−0.02521	0.068123	0.557238	0.455167	−0.8129	−0.46687	−0.19167	0.133571
−0.50694	0.124177	−0.11549	−0.1204	−0.03779	0.056576	0.567078	0.470136	−0.7728	−0.41727	−0.19245	0.134085
−0.21485	0.125201	−0.11835	−0.13038	−0.05275	0.040995	0.577004	0.487926	−0.6925	−0.39556	−0.19219	0.13451
0.340799	0.126792	−0.12393	−0.1503	−0.07891	0.019329	0.595235	0.517899	−0.60808	−0.40321	−0.19079	0.13528
0.896277	0.128409	−0.12956	−0.16949	−0.1065	−0.00322	0.610586	0.54686	−0.55884	−0.40051	−0.18981	0.135625
1.458096	0.130771	−0.13359	−0.18633	−0.1398	−0.03299	0.623528	0.571482	−0.5218	−0.40552	−0.18688	0.136508
2.561401	0.132582	−0.13888	−0.21068	−0.18156	−0.09055	0.63801	0.599156	−0.46691	−0.37561	−0.18103	0.136468
3.119385	0.132547	−0.13714	−0.212	−0.18633	−0.11764	0.636903	0.600365	−0.45023	−0.36452	−0.17652	0.136138
3.477391	0.130951	−0.13535	−0.20919	−0.18432	−0.13005	0.632935	0.592574	−0.44968	−0.36126	−0.17359	0.13484

(Left axis label: Angle of attack)

Figure 110: Pressure Coefficient of Section SC at M = 0.87.