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F-14A AIRCRAFT HIGH-SPEED FLOW SIMULATIONS

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Langley Research Center
Hampton, Virginia 23665

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by
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prepared for
National Aeronautics &
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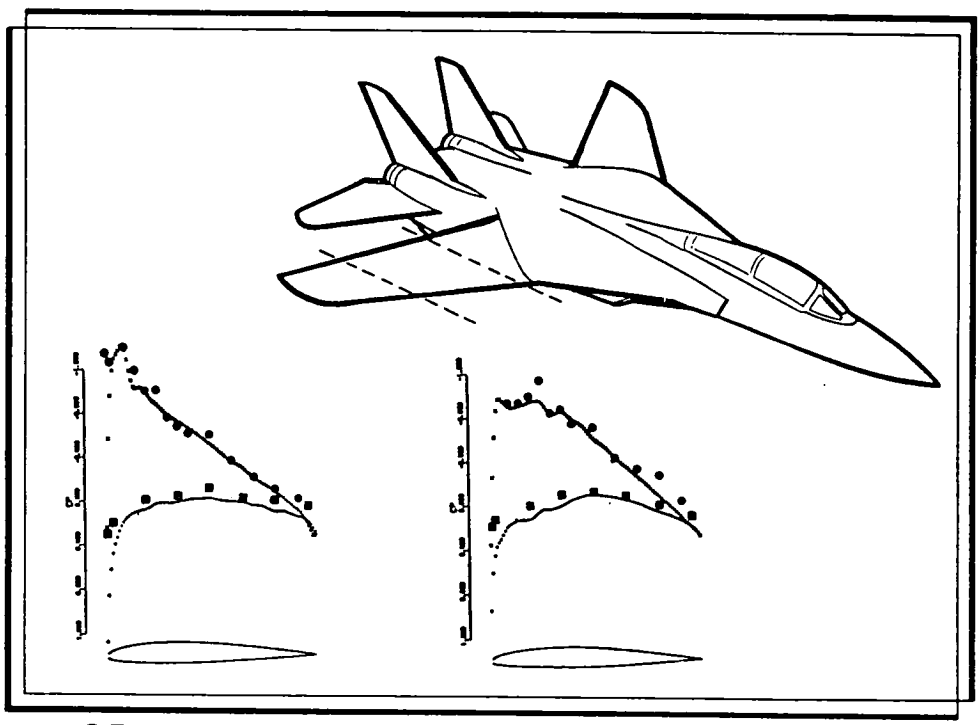

GRUMMAN AEROSPACE CORPORATION

Under Contract
NAS1-14732

CONTENTS

ILLUSTRATIONS

ILLUSTRATIONS (contd)

TABLES

SUMMARY

A model of the Grumman/Navy F-14A aircraft has been developed for analyses using the NASA/Grumman Transonic Wing-Body Code. Computations were performed for isolated wing and wing-fuselage-glove arrangements to determine the extent of aerodynamic interference effects which propagate outward onto the main wing outer panel. Additional studies were conducted using the full potential analysis, FLO-22, to calibrate any inaccuracies that might accrue because of "small disturbance" code limitations. Comparisons indicate that the NASA/Grumman Code provides excellent flow simulations for the range of wing sweep angles and flow conditions that will be of interest for the upcoming "F-14 Variable Sweep Flight Transition Experiment".

INTRODUCTION

The Grumman/Navy F-14A aircraft has been selected for NASA's "Variable Sweep Flight Transition Experiment." The objective of this effort is to provide high Reynolds number boundary layer transition data for use in the design of future laminar flow airfoils and wings. Critical wing sweep effects will be obtained using the F-14A variable-wing-sweep capability.

In order to produce data which is superior in quality to that generated in the past, using the F-111/TACT as a test bed aircraft, extensive computational analyses are planned along with a high-speed wind-tunnel test program. The computational tools will be used to design the natural laminar flow airfoil sections. In addition, analyses are to be performed to evaluate the effect of the F-14A's complex fuselage/glove shape on the wing outer panel flow. The magnitude and extent of the wing outer panel contamination is to be evaluated to insure that designed pressure fields are obtained in flight.

Two-dimensional airfoil design codes that might be used to synthesize the natural laminar flow shapes typically employ the full potential equation coupled with exact boundary conditions. These methods are quite powerful and there are few disadvantages associated with usage. For three-dimensional flows, however, the full potential equation/exact boundary condition approach has not progressed as far as approaches using an extended transonic small-disturbance equation coupled with planar boundary conditions. This applies both to the ability to 1) treat complex realistic aircraft and 2) resolve shock waves. The shape complexity limitation is linked to grid orthogonality constraints. As configurations become more complex, it becomes impossible to obtain a coordinate system which is orthogonal to all surfaces. Shock wave resolution, on the other hand, is limited by mesh system density and for finite volume formulations, a numerical tendency to smear the swept shock discontinuity. Thus, there is a need to study the F-14A configuration using a high resolution analysis capable of simulating complex geometric shapes. The NASA/Grumman Transonic Wing-Body Code (Refs 1, 2) was selected based on past application experiences. A user

manual is being reviewed for an NASA CR; it is entitled "Aerodynamic Analysis for Aircraft with Nacelles, Pylons, and Winglets at Transonic Speeds" by Charles W. Boppe.

Both wind tunnel (Ref 3) and flight data* (Ref 4) were secured to evaluate the codes ability to predict the detailed aerodynamic pressure characteristics of the F-14A configuration. Isolated wing analyses were performed using both TSDE and FPE codes to evaluate 1) the fuselage/glove induced interference effects and 2) the magnitude of "small-disturbance" formulation errors. The FPE transonic wing analysis code FLO-22 (Ref 5, 6) was used. This report summarizes the modeling/correlation effort and provides observations on F-14A configuration aerodynamics and code capabilities.

*An NASA TM detailing the flight data is in preparation; it is entitled "Inflight Wing Pressure Distributions for the F-14A" by T. Moes and R. Meyer.

NOMENCLATURE

CP	Pressure Coefficient
α, ALPHA	Angle-of-Attack
RE	Reynolds Number
2Y/B (η)	Wing Semi-Span Position
C_L	Lift Coefficient
C_M	Moment Coefficient
C_D	Drag Coefficient
M, MACH	Mach Number
Λ	Wing Sweep Angle
DEG	Degrees
LE	Leading Edge

PLOT SYMBOLS

● ● ● Upper Wing Surface Pressures - Wind Tunnel Data

○ ○ ○ Upper
□ □ □ Lower
} Wing Surface Pressures - Flight Data

× × × × Upper
+ + + + Lower
} Wing Surface Pressures - NASA/Grumman Transonic Wing Body Code. (Title Describes Data: Isolated Wing or Wing-Body)

——— Isolated Wing Pressures (NASA/Grumman Transonic Wing Body Code)

– – – – Isolated Wing Pressures (FLO-22)

CONFIGURATION ANALYSIS MODELS

The F-14A general arrangement can be found in Fig. 1. The flow simulation capability was evaluated for three wing sweep angles; 20°, 25° and 35°, where the sweep angle is taken as the wing leading edge sweep angle. This required that three separate models be developed to simulate the wing-fuselage-glove configurations. Three more models were then constructed for the isolated wing analyses and finally, three FLO-22 isolated wing models were created for a total of nine data sets.

A fuselage-nacelle geometry model was formulated based on a 1/40 scale F-14A three-view line drawing. The break between the body side and the wing was taken to be the side of the nacelle. Figures 2 and 3 illustrate the resulting cross-section and body line models. Note that no attempt was made to exactly represent the aft-end nacelle/pancake region because of the quick-geometry constraint which requires that the body surface radius distribution be a single valued function of the body angle. The inlet is modeled with a ramp which covers the inlet face.

Wing section definition for each sweep angle was obtained through the contour development department. These shapes represent the manufactured wing external surface. Aerodynamic loading might in some cases slightly alter this shape. The fuselage shape is identical for each wing-fuselage-glove model. The glove planform (Λ_{LE} = 68°) is identical for each model, but, the streamwise airfoil contours are a combination of fixed glove shapes forward (recall Fig. 1) and main or outer wing panel contours toward the rear which vary with the wing sweep angle. During the course of this study, there appeared to be a chance that the final wing shape tested in the wind tunnel and the wing shape now manufactured are not exactly identical. In addition to the primary study performed using manufactured wing contours, a brief secondary study was executed using wind tunnel model contours. The study results along with the input data set can be found in Appendix A of this report.

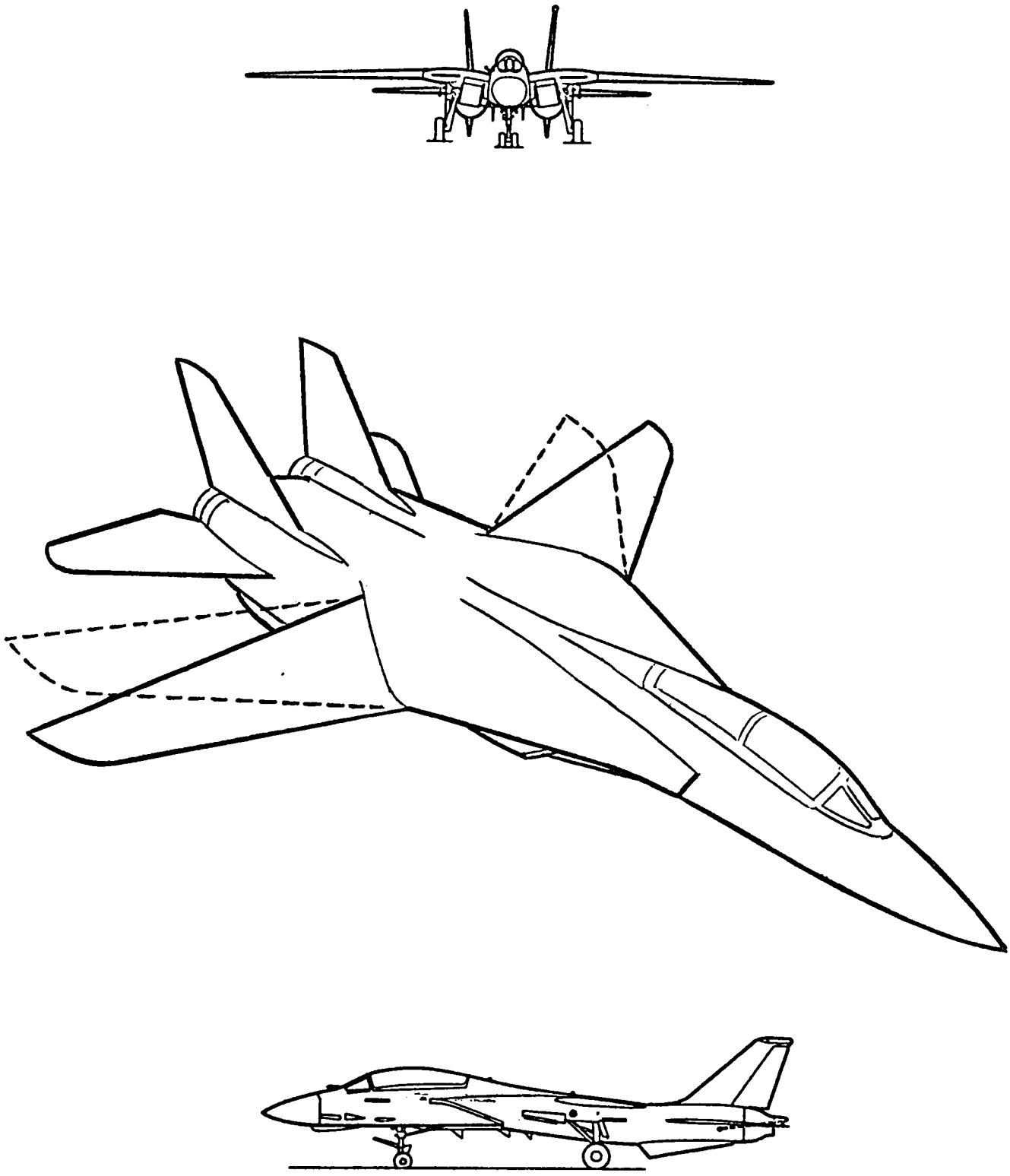

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Fig. 1 F-14A Variable Sweep Aircraft Configuration

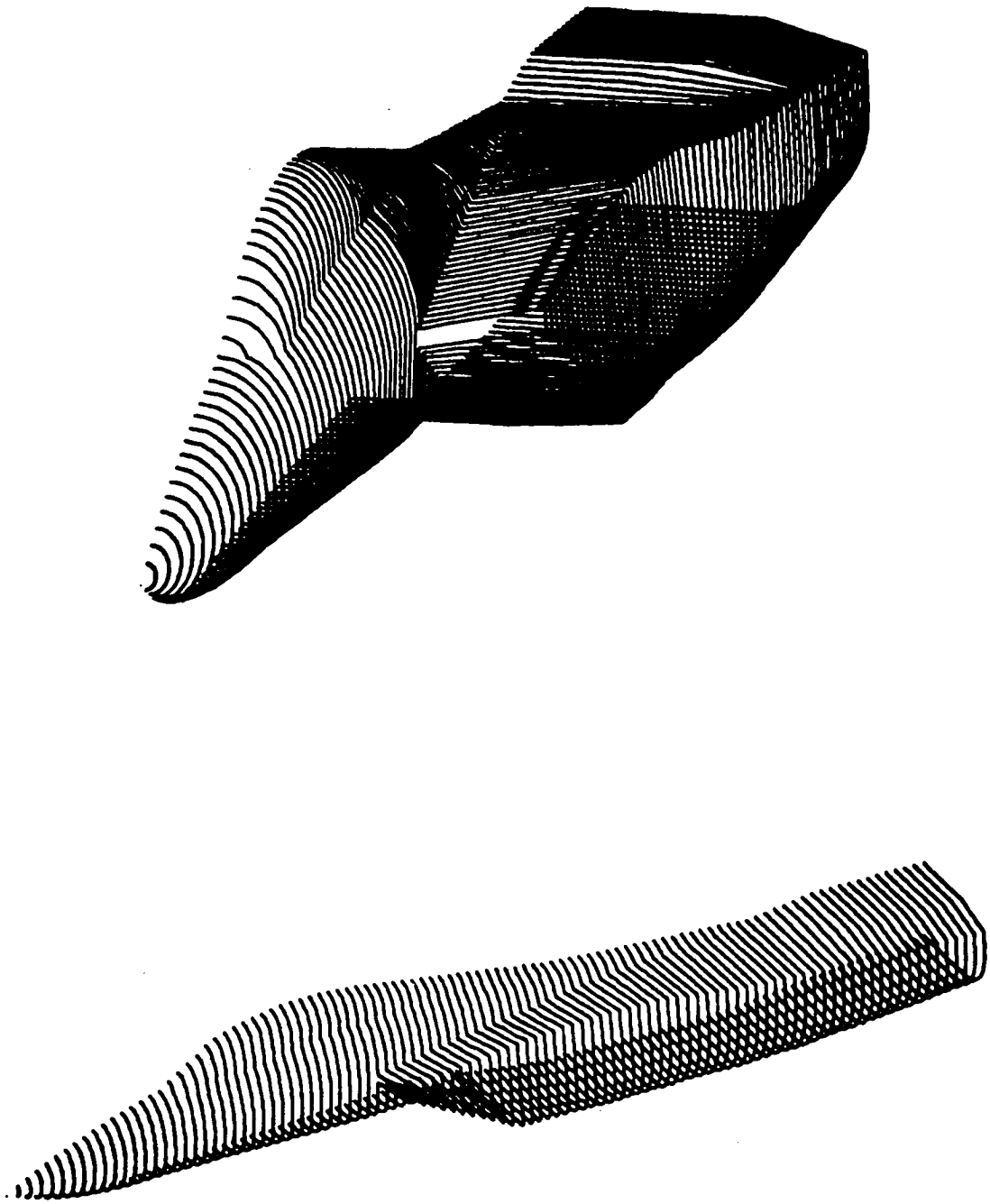

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Fig. 2 F-14A Quick-Geometry Model Cross-Section Line Models

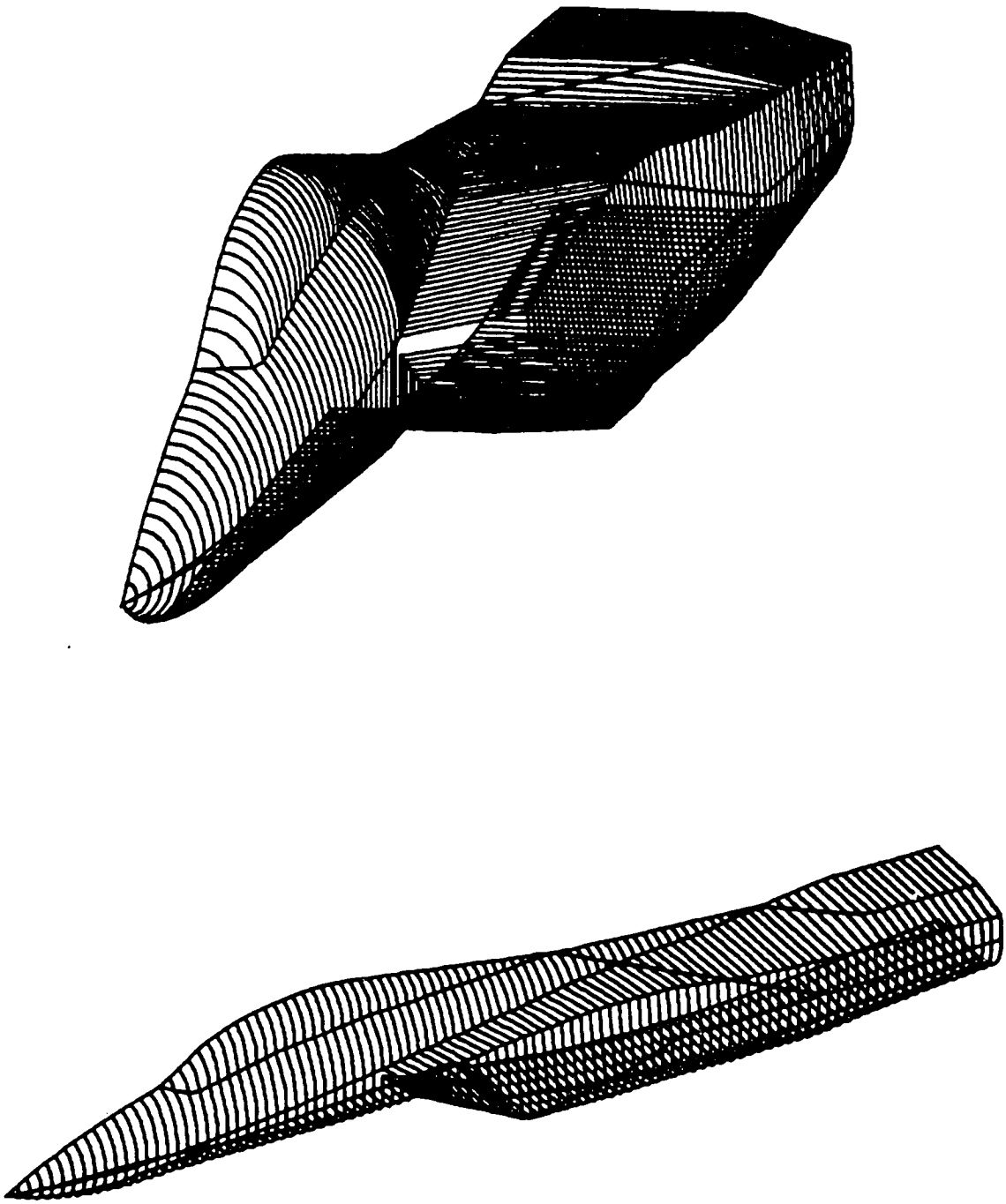

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Fig. 3 F-14A Quick-Geometry Model Cross-Section and Body Line Models

All isolated wing models were generated by simply extending the main wing outer panel leading and trailing edge lines to the configuration centerline. The listing below provides the table number for each wing-fuselage-glove and isolated wing computational model; these are given as code input data files, as identified.

TABLE	CONFIGURATION		FILE NAME
1	F-14A Wing-Fuselage-Glove	$\Lambda = 20°$	A99WBG F14-20
2	F-14A Wing-Fuselage-Glove	$\Lambda = 25°$	A99WBG F14-25
3	F-14A Wing-Fuselage-Glove	$\Lambda = 35°$	A99WBG F14-35
4	F-14A Isolated Wing	$\Lambda = 20°$	A99W F14-20
5	F-14A Isolated Wing	$\Lambda = 25°$	A99W F14-25
6	F-14A Isolated Wing	$\Lambda = 35°$	A99W F14-35
7	F-14A Isolated Wing (FLO-22)	$\Lambda = 20°$	A22W F14-20
8	F-14A Isolated Wing (FLO-22)	$\Lambda = 25°$	A22W F14-25
9	F-14A Isolated Wing (FLO-22)	$\Lambda = 35°$	A22W F14-35
A-1	F-14A Wing-Fuselage-Glove (Wing 7 W.T. Model)	$\Lambda = 20°$	A99W7BG F14-20

Descriptions of these input data and required file formats are given in Ref 1 and the WBPPW user manual for the NASA/Grumman Code and in Ref 6 for the FLO-22 Code.

Geometry verification plots for a typical analysis run can be found in Fig. 4. The input wing sections are shown in Fig. 5. A typical superimposed wing pressure plot, body pressure plot, and wing span load plot can be seen in Figs. 6 and 7.

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 1 of 9)

```
FILE: A99WBG   F14-20

F-14 WING/BODY/GLOVE (20 DEGREE LE)
3.0       0.75      3.0       10.0      100.0     80.0      3.0
0.0       0.0       0.0
12.0      50.0      1.0       532.5     13.5      81360.0   0.4
 187.90012   0.0      623.70898   0.0       1.00000                    162.70581
   0.0       0.00191   0.00496   0.00995   0.02000   0.03993   0.06000
   0.08000   0.10000   0.12000   0.14000   0.16000   0.18000   0.20000
   0.22000   0.24000   0.26000   0.28000   0.30000   0.32000   0.34000
   0.36000   0.38000   0.40000   0.42000   0.44000   0.46000   0.48000
   0.50000   0.52000   0.56000   0.60000   0.64000   0.68000   0.70000
   0.72000   0.74000   0.76000   0.78000   0.80000   0.82000   0.84000
   0.86000   0.88000   0.90000   0.92000   0.94000   0.96000   0.98000
   1.00000
  -0.00037   0.00145   0.00248   0.00357   0.00510   0.00728   0.00912
   0.01082   0.01244   0.01399   0.01546   0.01684   0.01813   0.01933
   0.02043   0.02142   0.02231   0.02310   0.02379   0.02437   0.02487
   0.02527   0.02558   0.02581   0.02597   0.02605   0.02607   0.02602
   0.02591   0.02575   0.02524   0.02451   0.02354   0.02229   0.02155
   0.02074   0.01984   0.01886   0.01779   0.01662   0.01537   0.01403
   0.01261   0.01111   0.00954   0.00792   0.00624   0.00453   0.00280
   0.00105
  -0.00037  -0.00142  -0.00203  -0.00271  -0.00368  -0.00497  -0.00598
  -0.00688  -0.00769  -0.00843  -0.00909  -0.00968  -0.01020  -0.01064
  -0.01101  -0.01133  -0.01159  -0.01179  -0.01193  -0.01202  -0.01207
  -0.01208  -0.01204  -0.01197  -0.01186  -0.01173  -0.01156  -0.01138
  -0.01117  -0.01095  -0.01045  -0.00990  -0.00929  -0.00862  -0.00826
  -0.00788  -0.00747  -0.00704  -0.00657  -0.00609  -0.00557  -0.00504
  -0.00447  -0.00389  -0.00330  -0.00271  -0.00210  -0.00151  -0.00092
  -0.00032
 357.44357  68.50000 626.75684   0.0       1.00000                    161.21141
  -0.00061   0.00241   0.00412   0.00593   0.00846   0.01208   0.01513
   0.01795   0.02064   0.02321   0.02565   0.02795   0.03009   0.03208
   0.03390   0.03555   0.03703   0.03834   0.03948   0.04045   0.04127
   0.04194   0.04246   0.04284   0.04310   0.04324   0.04326   0.04318
   0.04300   0.04273   0.04189   0.04068   0.03906   0.03699   0.03577
   0.03442   0.03293   0.03130   0.02952   0.02758   0.02550   0.02328
   0.02092   0.01844   0.01584   0.01314   0.01036   0.00752   0.00464
   0.00174
  -0.00061  -0.00236  -0.00337  -0.00449  -0.00611  -0.00825  -0.00992
  -0.01141  -0.01276  -0.01399  -0.01509  -0.01606  -0.01692  -0.01766
  -0.01828  -0.01881  -0.01923  -0.01956  -0.01980  -0.01995  -0.02003
  -0.02004  -0.01998  -0.01986  -0.01968  -0.01946  -0.01919  -0.01888
  -0.01854  -0.01817  -0.01735  -0.01643  -0.01542  -0.01431  -0.01371
  -0.01307  -0.01240  -0.01168  -0.01091  -0.01010  -0.00925  -0.00836
  -0.00742  -0.00646  -0.00548  -0.00449  -0.00349  -0.00250  -0.00152
  -0.00053
 432.93372  99.00000 628.11401   0.0       1.00000                    160.54604
   0.00179   0.00824   0.01202   0.01620   0.02198   0.02985   0.03556
   0.04009   0.04385   0.04706   0.04982   0.05221   0.05427   0.05605
   0.05756   0.05883   0.05986   0.06067   0.06128   0.06168   0.06189
   0.06192   0.06177   0.06144   0.06095   0.06030   0.05948   0.05852
   0.05741   0.05616   0.05326   0.04987   0.04602   0.04179   0.03954
   0.03722   0.03482   0.03236   0.02985   0.02728   0.02467   0.02200
   0.01930   0.01656   0.01378   0.01096   0.00811   0.00522   0.00232
```

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 2 of 9)

FILE: A99WBG F14-20

-0.00059							
0.00179	-0.00370	-0.00669	-0.00984	-0.01396	-0.01917	-0.02269	
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-0.03058	-0.02983	-0.02810	-0.02609	-0.02385	-0.02142	-0.02015	
-0.01886	-0.01755	-0.01625	-0.01496	-0.01369	-0.01246	-0.01126	
-0.01012	-0.00902	-0.00798	-0.00696	-0.00597	-0.00498	-0.00399	
-0.00299							
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0.06762	0.06825	0.06857	0.06863	0.06844	0.06803	0.06743	
0.06665	0.06571	0.06462	0.06340	0.06206	0.06061	0.05904	
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0.06424	0.06365	0.06288	0.06193	0.06081	0.05953	0.05811	
0.05654	0.05484	0.05107	0.04685	0.04224	0.03730	0.03473	
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Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 3 of 9)

FILE: A99WBG F14-20

```
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  0.06078   0.06198   0.06291   0.06359   0.06402   0.06421   0.06419
  0.06395   0.06351   0.06287   0.06205   0.06105   0.05989   0.05856
  0.05708   0.05546   0.05182   0.04770   0.04317   0.03828   0.03572
  0.03310   0.03042   0.02770   0.02492   0.02211   0.01927   0.01640
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 -0.02900  -0.02871  -0.02795  -0.02694  -0.02570  -0.02424  -0.02343
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 -0.01340  -0.01203  -0.01064  -0.00923  -0.00781  -0.00638  -0.00494
 -0.00350
556.38062 274.36816 635.91772   0.0      1.00000                      155.65588
 -0.00210   0.00412   0.00754   0.01134   0.01680   0.02441   0.03016
  0.03488   0.03893   0.04249   0.04565   0.04845   0.05094   0.05314
  0.05507   0.05675   0.05817   0.05936   0.06032   0.06106   0.06158
  0.06189   0.06200   0.06191   0.06164   0.06118   0.06054   0.05974
  0.05877   0.05765   0.05496   0.05173   0.04802   0.04388   0.04168
  0.03939   0.03702   0.03458   0.03209   0.02954   0.02694   0.02431
  0.02164   0.01894   0.01623   0.01349   0.01075   0.00800   0.00525
  0.00249
 -0.00210  -0.00787  -0.01123  -0.01427  -0.01799  -0.02226  -0.02490
 -0.02674  -0.02814  -0.02926  -0.03019  -0.03098  -0.03167  -0.03227
 -0.03280  -0.03325  -0.03363  -0.03395  -0.03419  -0.03436  -0.03446
 -0.03447  -0.03441  -0.03426  -0.03404  -0.03373  -0.03334  -0.03286
 -0.03230  -0.03167  -0.03015  -0.02833  -0.02622  -0.02384  -0.02256
 -0.02122  -0.01982  -0.01837  -0.01687  -0.01532  -0.01374  -0.01211
 -0.01046  -0.00877  -0.00706  -0.00533  -0.00358  -0.00183  -0.00006
```

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 4 of 9)

```
FILE: A99WBG    F14-20

   0.00171
 569.77783 311.15283 637.55469   0.0       1.00000                          154.44666
  -0.00919  -0.00300   0.00061  0.00452   0.01008  0.01787  0.02378
   0.02865   0.03287   0.03659  0.03993   0.04294  0.04566  0.04810
   0.05030   0.05226   0.05399  0.05550   0.05679  0.05788  0.05876
   0.05944   0.05992   0.06022  0.06033   0.06026  0.06001  0.05960
   0.05902   0.05828   0.05634  0.05384   0.05083  0.04735  0.04545
   0.04347   0.04139   0.03923  0.03700   0.03471  0.03235  0.02994
   0.02749   0.02500   0.02249  0.01994   0.01738  0.01481  0.01223
   0.00965
  -0.00919  -0.01499  -0.01831 -0.02131  -0.02487 -0.02883 -0.03118
  -0.03278  -0.03396  -0.03488 -0.03563  -0.03626 -0.03679 -0.03722
  -0.03758  -0.03786  -0.03806 -0.03818  -0.03822 -0.03818 -0.03805
  -0.03784  -0.03753  -0.03715 -0.03667  -0.03610 -0.03545 -0.03470
  -0.03387  -0.03296  -0.03087 -0.02846  -0.02573 -0.02272 -0.02111
  -0.01943  -0.01769  -0.01590 -0.01404  -0.01214 -0.01019 -0.00820
  -0.00617  -0.00410  -0.00201  0.00011   0.00225  0.00440  0.00656
   0.00873
 583.17480 347.93726 639.19165   0.0       1.00000                          153.24487
  -0.01912  -0.01295  -0.00937 -0.00540   0.00037  0.00844  0.01456
   0.01963   0.02404   0.02796  0.03151   0.03474  0.03771  0.04043
   0.04293   0.04521   0.04729  0.04917   0.05085  0.05235  0.05366
   0.05479   0.05574   0.05652  0.05712   0.05755  0.05781  0.05791
   0.05785   0.05764   0.05676  0.05531   0.05333  0.05087  0.04947
   0.04796   0.04635   0.04466  0.04287   0.04101  0.03908  0.03708
   0.03503   0.03292   0.03078  0.02860   0.02639  0.02416  0.02192
   0.01968
  -0.01912  -0.02525  -0.02851 -0.03139  -0.03470 -0.03816 -0.04002
  -0.04117  -0.04195  -0.04251 -0.04293  -0.04322 -0.04342 -0.04353
  -0.04354  -0.04347  -0.04332 -0.04308  -0.04275 -0.04234 -0.04184
  -0.04125  -0.04058  -0.03982 -0.03897  -0.03803 -0.03700 -0.03588
  -0.03468  -0.03338  -0.03054 -0.02735  -0.02385 -0.02003 -0.01801
  -0.01592  -0.01376  -0.01154 -0.00926  -0.00692 -0.00452 -0.00208
   0.00040   0.00292   0.00548  0.00806   0.01067  0.01329  0.01592
   0.01856
 596.56421 384.69995 640.82764   0.0       1.00000                          152.03552
  -0.03451  -0.02816  -0.02443 -0.02028  -0.01435 -0.00591  0.00053
   0.00587   0.01053   0.01470  0.01850   0.02200  0.02525  0.02827
   0.03109   0.03373   0.03618  0.03847   0.04060  0.04256  0.04437
   0.04602   0.04752   0.04887  0.05007   0.05112  0.05202  0.05278
   0.05340   0.05388   0.05444  0.05449   0.05405  0.05317  0.05257
   0.05187   0.05107   0.05019  0.04923   0.04820  0.04709  0.04592
   0.04470   0.04343   0.04212  0.04078   0.03941  0.03802  0.03662
   0.03521
  -0.03451  -0.04097  -0.04400 -0.04663  -0.04935 -0.05135 -0.05167
  -0.05149  -0.05115  -0.05076 -0.05036  -0.04995 -0.04951 -0.04903
  -0.04851  -0.04793  -0.04729 -0.04658  -0.04580 -0.04495 -0.04401
  -0.04299  -0.04187  -0.04067 -0.03938  -0.03799 -0.03650 -0.03492
  -0.03324  -0.03147  -0.02763 -0.02341  -0.01884 -0.01392 -0.01135
  -0.00869  -0.00597  -0.00317 -0.00031   0.00261  0.00558  0.00859
   0.01166   0.01475   0.01788  0.02104   0.02421  0.02740  0.03060
   0.03380
-3.        93.0       780.0                                  0.16
F-14 FUSELAGE MODEL
8.
```

R84-1788-007(4/9)B

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 5 of 9)

```
FILE: A99WBG    F14-20

1.          2.          NOSE
BLO         ELLI        BCL         MHB         SCPLO
BUP         ELLI        MHB         TCL         SCPUP
2.          4.          NOSE WITH CANOPY
BLO         ELLI        BCL         MHB         SCPLO
BSI         LINE        MHB         FUP
BUP         ELLI        FUP         CREASE      SCPUP
CAN         ELLI        CREASE      TCL         SCPCAN
3.          7.          INLET
BLO         ELLI        BCL         MHB         SCPLO
BSI         LINE        MHB         FLO
NACLO       LINE        FLO         INLTLO
NACSI       LINE        INLTLO      INLTUP
NACUP       LINE        INLTUP      FUP
BUP         ELLI        FUP         CREASE      SCPUP
CAN         ELLI        CREASE      TCL         SCPCAN
4.          6.          INLET TO NACELLE FOWARD FAIRING
BLO         ELLI        BCL         FLO         SCPLO
NACLO       LINE        FLO         INLTLO
NACSI       LINE        INLTLO      INLTUP
NACUP       LINE        INLTUP      FUP
BUP         ELLI        FUP         CREASE      SCPUP
CAN         ELLI        CREASE      TCL         SCPCAN
5.          6.          INLET TO NACELLE AFT FAIRING
BLO         LINE        BCL         FLO
NACLO       LINE        FLO         INLTLO
NACSI       LINE        INLTLO      INLTUP
NACUP       LINE        INLTUP      FUP
BUP         ELLI        FUP         CREASE      SCPUP
CAN         ELLI        CREASE      TCL         SCPCAN
6.          7.          FOWARD NACELLE
BLO         LINE        BCL         FLO
NACLO       LINE        FLO         INLTLO
NACLS       ELLI        INLTLO      MHB         SCPLO
NACSI       LINE        MHB         INLTUP
NACUP       LINE        INLTUP      FUP
BUP         ELLI        FUP         CREASE      SCPUP
CAN         ELLI        CREASE      TCL         SCPCAN
7.          6.          MID NACELLE
BLO         LINE        BCL         FLO
NACLO       LINE        FLO         INLTLO
NACLS       ELLI        INLTLO      MHB         SCPLO
NACSI       LINE        MHB         INLTUP
NACUP       LINE        INLTUP      FUP
BUP         ELLI        FUP         TCL         SCPUP
8.          6.          AFT NACELLE
BLO         LINE        BCL         FLO
NACLO       LINE        FLO         INLTLO
NACLS       ELLI        INLTLO      CREASE      SCPCAN
NACSI       LINE        CREASE      INLTUP
NACUP       LINE        INLTUP      FUP
BUP         LINE        FUP         TCL
8.
1.          1.          93.0        205.0
2.          2.          205.0       352.0
```

R84-1788-007(5/9)B

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^\circ$ (Sheet 6 of 9)

```
FILE: A99WBG   F14-20

3.          3.          352.0       414.5
4.          4.          414.5       425.0
5.          5.          425.0       433.0
6.          6.          433.0       497.0
7.          7.          497.0       650.0
8.          8.          650.0       780.0
22.0        2.0
10.0        ZTCL
ELLX        93.0        131.45      205.0       171.0       127.5       152.0
LINE        205.0       171.0       241.0       191.65
ELLY        241.0       191.65      313.0       203.0       274.0       203.0
ELLY        313.0       203.0       352.0       199.5       331.0       203.0
LINE        352.0       199.5       497.0       174.5
LINE        497.0       174.5       546.0       169.5
LINE        546.0       169.5       600.0       165.0
LINE        600.0       165.0       650.0       160.5
LINE        650.0       160.5       697.0       165.5
LINE        697.0       165.5       780.0       162.75
10.0        ZBCL
ELLX        93.0        131.45      176.0       116.5       129.5       116.5
LINE        176.0       116.5       205.0       118.0
LINE        205.0       118.0       352.0       121.75
LINE        352.0       121.75      425.0       123.43
LINE        425.0       123.43      433.0       117.0
LINE        433.0       117.0       497.0       107.8
LINE        497.0       107.8       546.0       104.7
LINE        546.0       104.7       600.0       103.0
LINE        600.0       103.0       650.0       104.0
LINE        650.0       104.0       780.0       113.0
7.0         YMHB
ELLY        93.0        0.0         352.0       31.0        164.0       31.0
LINE        352.0       31.0        414.5       29.5
LINE        414.5       29.5        433.0       75.0
LINE        433.0       75.0        497.0       74.0
LINE        497.0       74.0        546.0       73.0
LINE        546.0       73.0        600.0       76.5
LINE        600.0       76.5        650.0       79.0
9.0         ZMHB
LINE        93.0        131.45      164.0       138.0
LINE        164.0       138.0       205.0       138.5
LINE        205.0       138.5       352.0       130.5
LINE        352.0       130.5       414.5       127.93
LINE        414.5       127.93      433.0       119.0
LINE        433.0       119.0       497.0       125.5
LINE        497.0       125.5       546.0       139.0
LINE        546.0       139.0       600.0       139.5
LINE        600.0       139.5       650.0       140.0
9.0         YCREASE
LINE        205.0       0.0         221.0       15.5
LINE        221.0       15.5        283.0       16.0
LINE        283.0       16.0        328.0       16.5
LINE        328.0       16.5        352.0       16.0
LINE        352.0       16.0        405.0       13.0
LINE        405.0       13.0        497.0       0.0
LINE        497.0       0.0         650.0       79.0
```

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 7 of 9)

FILE: A99WBG F14-20

LINE	650.0	79.0	697.0	80.5		
LINE	697.0	80.5	780.0	81.0		
9.0	ZCREASE					
LINE	205.0	171.0	221.0	169.0		
LINE	221.0	169.0	283.0	179.0		
LINE	283.0	179.0	328.0	183.0		
LINE	328.0	183.0	352.0	183.5		
LINE	352.0	183.5	405.0	182.0		
LINE	405.0	182.0	497.0	174.5		
LINE	497.0	174.5	650.0	140.0		
LINE	650.0	140.0	697.0	140.0		
LINE	697.0	141.0	780.0	140.0		
7.0	YFUP					
ELLY	93.0	0.0	352.0	31.0	164.0	31.0
LINE	352.0	31.0	497.0	19.5		
LINE	497.0	19.5	546.0	14.0		
LINE	546.0	14.0	600.0	11.0		
LINE	600.0	11.0	650.0	0.0		
LINE	650.0	0.0	697.0	49.5		
LINE	697.0	49.5	780.0	51.0		
8.0	ZFUP					
LINE	93.0	131.45	205.0	138.5		
LINE	205.0	138.5	352.0	155.0		
LINE	352.0	155.0	497.0	163.0		
LINE	497.0	163.0	546.0	163.5		
LINE	546.0	163.5	600.0	163.0		
LINE	600.0	163.0	650.0	160.5		
LINE	650.0	160.5	697.0	165.5		
LINE	697.0	165.5	780.0	162.75		
6.0	YSCPUP					
ELLY	93.0	0.0	352.0	31.0	164.0	31.0
LINE	352.0	31.0	405.0	23.5		
LINE	405.0	23.5	497.0	14.0		
LINE	497.0	14.0	546.0	7.5		
LINE	546.0	7.5	600.0	5.0		
LINE	600.0	5.0	650.0	0.0		
7.0	ZSCPUP					
ELLX	93.0	131.45	205.0	171.0	127.5	152.0
LINE	205.0	171.0	221.0	158.0		
LINE	221.0	158.0	352.0	173.0		
LINE	352.0	173.0	497.0	174.5		
LINE	497.0	174.5	546.0	169.5		
LINE	546.0	169.5	600.0	165.0		
LINE	600.0	165.0	650.0	160.5		
9.0	YSCPCAN					
LINE	205.0	0.0	221.0	12.5		
LINE	221.0	12.5	283.0	16.0		
LINE	283.0	16.0	328.0	16.5		
LINE	328.0	16.5	352.0	16.0		
LINE	352.0	16.0	405.0	9.5		
LINE	405.0	9.5	497.0	0.0		
LINE	497.0	0.0	650.0	81.5		
LINE	650.0	81.5	697.0	82.5		
LINE	697.0	82.5	780.0	83.0		
7.0	ZSCPCAN					

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20°$ (Sheet 8 of 9)

FILE: A99WBG F14-20

LINE	205.0	171.0	241.0	191.65		
ELLY	241.0	191.65	313.0	203.0	274.0	203.0
ELLY	313.0	203.0	352.0	199.5	331.0	203.0
LINE	352.0	199.5	497.0	174.5		
LINE	497.0	174.5	650.0	105.5		
LINE	650.0	105.5	697.0	110.0		
LINE	697.0	110.0	780.0	116.0		
9.0	ZSCPLO					
ELLX	93.0	131.45	176.0	116.5	129.5	116.5
LINE	176.0	116.5	205.0	118.0		
LINE	205.0	118.0	352.0	121.75		
LINE	352.0	121.75	425.0	123.43		
LINE	425.0	123.43	433.0	119.0		
LINE	433.0	119.0	497.0	113.0		
LINE	497.0	113.0	546.0	110.0		
LINE	546.0	110.0	600.0	105.0		
LINE	600.0	105.0	650.0	105.5		
8.0	YSCPLO					
ELLY	93.0	0.0	352.0	31.0	164.0	31.0
LINE	352.0	31.0	414.5	29.5		
LINE	414.5	29.5	425.0	39.79		
LINE	425.0	39.79	433.0	75.0		
LINE	433.0	75.0	497.0	76.2		
LINE	497.0	76.2	546.0	77.7		
LINE	546.0	77.7	600.0	79.0		
LINE	600.0	79.0	650.0	81.5		
1.0	YMAPAXIS					
LINE	93.0	0.0	780.0	0.0		
2.0	ZMAPAXIS					
LINE	93.0	131.45	352.0	146.0		
LINE	352.0	146.0	780.0	147.0		
9.0	YFLO					
LINE	352.0	31.0	414.5	29.5		
LINE	414.5	29.5	425.0	39.79		
LINE	425.0	39.79	433.0	42.0		
LINE	433.0	42.0	497.0	46.3		
LINE	497.0	46.3	546.0	47.5		
LINE	546.0	47.5	600.0	48.5		
LINE	600.0	48.5	650.0	49.5		
LINE	650.0	49.5	697.0	49.75		
LINE	697.0	49.75	780.0	51.0		
9.0	ZFLO					
LINE	352.0	150.0	414.5	127.93		
LINE	414.5	127.93	425.0	123.43		
LINE	425.0	123.43	433.0	117.0		
LINE	433.0	117.0	497.0	107.8		
LINE	497.0	107.8	546.0	104.7		
LINE	546.0	104.7	600.0	103.0		
LINE	600.0	103.0	650.0	104.0		
LINE	650.0	104.0	697.0	107.0		
LINE	697.0	107.0	780.0	113.0		
7.0	YINLTUP					
LINE	352.0	66.5	433.0	66.5		
LINE	433.0	66.5	497.0	66.5		
LINE	497.0	66.5	546.0	68.0		

R84-1788-007(8/9)B

Table 1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$ (Sheet 9 of 9)

```
FILE: A99WBG   F14-20

LINE      546.0     68.0      600.0     74.5
LINE      600.0     74.5      650.0     77.0
LINE      650.0     77.0      697.0     78.5
LINE      697.0     78.5      780.0     80.0
7.0       ZINLTUP
LINE      352.0     162.5     433.0     169.0
LINE      433.0     169.0     497.0     171.5
LINE      497.0     171.5     546.0     170.0
LINE      546.0     170.0     600.0     165.0
LINE      600.0     165.0     650.0     162.0
LINE      650.0     162.0     697.0     160.0
LINE      697.0     160.0     780.0     155.5
7.0       YINLTLO
LINE      352.0     67.0      433.0     75.0
LINE      433.0     75.0      497.0     65.5
LINE      497.0     66.5      546.0     61.0
LINE      546.0     61.0      600.0     57.0
LINE      600.0     57.0      650.0     57.5
LINE      650.0     57.5      697.0     58.0
LINE      697.0     58.0      780.0     59.0
7.0       ZINLTLO
LINE      352.0     156.5     433.0     119.0
LINE      433.0     119.0     497.0     111.0
LINE      497.0     111.0     546.0     107.0
LINE      546.0     107.0     600.0     104.0
LINE      600.0     104.0     650.0     104.0
LINE      650.0     104.0     697.0     108.0
LINE      697.0     108.0     780.0     114.0
          YTCL      YMAPAXIS
          YBCL      YMAPAXIS
```

R84-1788-007(9/9)B

Table 2 F-14A Wing-Fuselage-Glove, $\Lambda = 25°$ (Sheet 1 of 4)

```
FILE: A99WBG    F14-25

F-14 WING/BODY/GLOVE (25 DEGREE LE)
3.0         0.775       3.0         10.0        100.0       80.0        3.0
0.0         0.0         0.0
12.0        50.0        1.0         532.5       13.5        81360.0     0.4
 187.90012    0.0      615.17920     0.0         1.00000                          162.45967
   0.0        0.00201    0.00501     0.01002     0.02005     0.04000     0.05997
   0.08000    0.10000    0.12000     0.14002     0.16000     0.18000     0.20000
   0.22000    0.24000    0.26000     0.28000     0.30000     0.32000     0.34000
   0.36000    0.38000    0.40000     0.42000     0.44000     0.46000     0.48000
   0.50000    0.52000    0.56000     0.60000     0.64000     0.68000     0.69998
   0.72000    0.74000    0.76000     0.78000     0.80000     0.82000     0.84000
   0.86000    0.88000    0.90000     0.92000     0.94000     0.96000     0.98000
   1.00000
  -0.00040    0.00148    0.00250     0.00361     0.00515     0.00736     0.00921
   0.01093    0.01257    0.01414     0.01563     0.01703     0.01834     0.01956
   0.02068    0.02169    0.02260     0.02341     0.02412     0.02473     0.02524
   0.02566    0.02600    0.02625     0.02643     0.02653     0.02656     0.02653
   0.02644    0.02628    0.02580     0.02507     0.02408     0.02279     0.02203
   0.02117    0.02022    0.01919     0.01806     0.01684     0.01553     0.01414
   0.01267    0.01114    0.00955     0.00791     0.00624     0.00453     0.00279
   0.00105
  -0.00040   -0.00150   -0.00210    -0.00278    -0.00377    -0.00507    -0.00609
  -0.00700   -0.00782   -0.00856    -0.00923    -0.00982    -0.01034    -0.01078
  -0.01116   -0.01148   -0.01173    -0.01192    -0.01207    -0.01215    -0.01220
  -0.01220   -0.01216   -0.01208    -0.01197    -0.01184    -0.01167    -0.01148
  -0.01128   -0.01105   -0.01055    -0.00999    -0.00937    -0.00869    -0.00832
  -0.00793   -0.00751   -0.00707    -0.00660    -0.00610    -0.00557    -0.00502
  -0.00445   -0.00386   -0.00327    -0.00266    -0.00205    -0.00145    -0.00085
  -0.00024
 357.44357   68.50000  624.19702     0.0         1.00000                          161.10240
  -0.00066    0.00244    0.00411     0.00594     0.00847     0.01210     0.01514
   0.01797    0.02066    0.02324     0.02569     0.02799     0.03015     0.03215
   0.03399    0.03566    0.03716     0.03849     0.03965     0.04065     0.04150
   0.04219    0.04274    0.04316     0.04345     0.04361     0.04367     0.04362
   0.04346    0.04321    0.04241     0.04121     0.03958     0.03746     0.03621
  -0.03480    0.03325    0.03155     0.02969     0.02768     0.02553     0.02324
   0.02083    0.01832    0.01570     0.01301     0.01026     0.00744     0.00459
   0.00172
  -0.00066   -0.00246   -0.00345    -0.00457    -0.00620    -0.00834    -0.01001
  -0.01150   -0.01286   -0.01408    -0.01518    -0.01615    -0.01700    -0.01773
  -0.01835   -0.01887   -0.01928    -0.01960    -0.01984    -0.01998    -0.02006
  -0.02006   -0.01999   -0.01986    -0.01968    -0.01946    -0.01919    -0.01888
  -0.01854   -0.01817   -0.01734    -0.01643    -0.01541    -0.01429    -0.01368
  -0.01304   -0.01235   -0.01162    -0.01085    -0.01003    -0.00916    -0.00826
  -0.00732   -0.00635   -0.00537    -0.00437    -0.00337    -0.00238    -0.00139
  -0.00040
 432.93372   99.00000  628.21216     0.0         1.00000                          160.49806
   0.00172    0.00833    0.01204     0.01618     0.02193     0.02979     0.03547
   0.04001    0.04377    0.04698     0.04974     0.05212     0.05419     0.05596
   0.05747    0.05874    0.05977     0.06058     0.06119     0.06159     0.06180
   0.06182    0.06166    0.06133     0.06083     0.06016     0.05934     0.05837
   0.05725    0.05598    0.05305     0.04963     0.04576     0.04151     0.03925
   0.03692    0.03453    0.03207     0.02956     0.02700     0.02440     0.02175
   0.01907    0.01635    0.01360     0.01080     0.00798     0.00512     0.00224
```

Table 2 F-14A Wing-Fuselage-Glove, $\Lambda = 25^{\circ}$ (Sheet 2 of 4)

FILE: A99WBG F14-25

-0.00065							
0.00172	-0.00389	-0.00683	-0.00994	-0.01404	-0.01925	-0.02275	
-0.02537	-0.02741	-0.02904	-0.03035	-0.03140	-0.03223	-0.03288	
-0.03338	-0.03375	-0.03400	-0.03415	-0.03420	-0.03418	-0.03407	
-0.03389	-0.03364	-0.03331	-0.03292	-0.03245	-0.03191	-0.03130	
-0.03061	-0.02984	-0.02809	-0.02606	-0.02378	-0.02132	-0.02003	
-0.01873	-0.01741	-0.01609	-0.01479	-0.01351	-0.01227	-0.01108	
-0.00993	-0.00884	-0.00779	-0.00677	-0.00578	-0.00479	-0.00380	
-0.00280							
503.77861	127.22000	631.92715	0.0	1.00000			159.93892
0.00663	0.01429	0.01801	0.02252	0.02899	0.03787	0.04448	
0.04978	0.05406	0.05753	0.06032	0.06254	0.06427	0.06557	
0.06651	0.06711	0.06742	0.06745	0.06725	0.06685	0.06625	
0.06548	0.06456	0.06349	0.06230	0.06100	0.05958	0.05805	
0.05644	0.05474	0.05106	0.04706	0.04276	0.03816	0.03576	
0.03330	0.03078	0.02820	0.02556	0.02288	0.02015	0.01738	
0.01458	0.01175	0.00889	0.00602	0.00313	0.00023	-0.00267	
-0.00557							
0.00663	0.00025	-0.00338	-0.00728	-0.01211	-0.01812	-0.02204	
-0.02481	-0.02683	-0.02835	-0.02950	-0.03037	-0.03103	-0.03151	
-0.03185	-0.03205	-0.03216	-0.03216	-0.03210	-0.03196	-0.03176	
-0.03151	-0.03121	-0.03087	-0.03048	-0.03007	-0.02962	-0.02914	
-0.02862	-0.02808	-0.02691	-0.02564	-0.02423	-0.02272	-0.02192	
-0.02109	-0.02024	-0.01937	-0.01846	-0.01754	-0.01661	-0.01564	
-0.01468	-0.01369	-0.01270	-0.01171	-0.01071	-0.00970	-0.00870	
-0.00769							
503.80836	127.24000	631.92979	0.0	1.00000			159.93852
0.00732	0.01337	0.01676	0.02056	0.02613	0.03411	0.04006	
0.04485	0.04880	0.05209	0.05484	0.05713	0.05902	0.06055	
0.06175	0.06267	0.06331	0.06371	0.06388	0.06384	0.06360	
0.06317	0.06257	0.06180	0.06087	0.05980	0.05858	0.05724	
0.05576	0.05416	0.05063	0.04668	0.04237	0.03772	0.03529	
0.03279	0.03024	0.02762	0.02496	0.02225	0.01951	0.01672	
0.01391	0.01107	0.00822	0.00534	0.00245	-0.00044	-0.00334	
-0.00624							
0.00732	0.00156	-0.00188	-0.00550	-0.01005	-0.01551	-0.01899	
-0.02150	-0.02343	-0.02496	-0.02621	-0.02723	-0.02809	-0.02880	
-0.02940	-0.02989	-0.03028	-0.03059	-0.03081	-0.03096	-0.03103	
-0.03103	-0.03097	-0.03084	-0.03065	-0.03040	-0.03009	-0.02973	
-0.02931	-0.02884	-0.02776	-0.02650	-0.02509	-0.02354	-0.02272	
-0.02187	-0.02100	-0.02011	-0.01919	-0.01826	-0.01731	-0.01635	
-0.01538	-0.01439	-0.01340	-0.01241	-0.01141	-0.01040	-0.00940	
-0.00839							
520.43506	162.97459	636.63403	0.0	1.00000			159.23047
0.00911	0.01409	0.01736	0.02102	0.02628	0.03369	0.03921	
0.04369	0.04744	0.05062	0.05335	0.05566	0.05761	0.05924	
0.06055	0.06158	0.06234	0.06286	0.06313	0.06319	0.06303	
0.06266	0.06211	0.06137	0.06046	0.05939	0.05815	0.05677	
0.05524	0.05358	0.04989	0.04575	0.04122	0.03635	0.03381	
0.03120	0.02853	0.02582	0.02306	0.02026	0.01743	0.01458	
0.01170	0.00880	0.00589	0.00297	0.00005	-0.00288	-0.00580	
-0.00873							
0.00911	0.00239	-0.00096	-0.00427	-0.00836	-0.01323	-0.01632	
-0.01857	-0.02031	-0.02171	-0.02287	-0.02385	-0.02470	-0.02545	
-0.02610	-0.02668	-0.02718	-0.02763	-0.02801	-0.02833	-0.02859	

R84-1788-008(2/4)B

Table 2 F-14A Wing-Fuselage-Glove, $\Lambda = 25^{\circ}$ (Sheet 3 of 4)

FILE: A99WBG F14-25

-0.02879	-0.02893	-0.02902	-0.02904	-0.02900	-0.02890	-0.02874	
-0.02853	-0.02825	-0.02754	-0.02661	-0.02548	-0.02416	-0.02344	
-0.02269	-0.02189	-0.02106	-0.02020	-0.01931	-0.01840	-0.01746	
-0.01651	-0.01553	-0.01455	-0.01355	-0.01254	-0.01152	-0.01051	
-0.00948							
537.07056	198.71930	641.33887	0.0	1.00000			158.15393
0.00696	0.01317	0.01644	0.02003	0.02515	0.03235	0.03770	
0.04207	0.04577	0.04895	0.05171	0.05410	0.05615	0.05789	
0.05934	0.06052	0.06143	0.06210	0.06254	0.06274	0.06274	
0.06252	0.06211	0.06151	0.06073	0.05978	0.05866	0.05739	
0.05597	0.05440	0.05088	0.04689	0.04248	0.03772	0.03523	
0.03267	0.03005	0.02738	0.02466	0.02191	0.01912	0.01630	
0.01346	0.01061	0.00774	0.00487	0.00198	-0.00090	-0.00378	
-0.00666							
0.00696	0.00141	-0.00175	-0.00491	-0.00880	-0.01339	-0.01630	
-0.01844	-0.02011	-0.02147	-0.02261	-0.02360	-0.02446	-0.02523	
-0.02592	-0.02654	-0.02710	-0.02760	-0.02803	-0.02841	-0.02873	
-0.02899	-0.02918	-0.02931	-0.02937	-0.02937	-0.02930	-0.02916	
-0.02896	-0.02868	-0.02794	-0.02695	-0.02572	-0.02427	-0.02346	
-0.02261	-0.02171	-0.02076	-0.01978	-0.01876	-0.01770	-0.01662	
-0.01550	-0.01437	-0.01321	-0.01204	-0.01086	-0.00966	-0.00846	
-0.00726							
553.71191	234.46390	646.04419	0.0	1.00000			156.96802
0.00293	0.00920	0.01253	0.01614	0.02131	0.02861	0.03407	
0.03855	0.04235	0.04566	0.04857	0.05111	0.05333	0.05526	
0.05691	0.05830	0.05943	0.06033	0.06100	0.06145	0.06169	
0.06171	0.06155	0.06119	0.06065	0.05993	0.05904	0.05799	
0.05679	0.05544	0.05232	0.04870	0.04464	0.04020	0.03785	
0.03543	0.03294	0.03039	0.02779	0.02514	0.02245	0.01973	
0.01699	0.01422	0.01143	0.00864	0.00583	0.00303	0.00022	
-0.00259							
0.00293	-0.00264	-0.00575	-0.00892	-0.01274	-0.01714	-0.01991	
-0.02193	-0.02349	-0.02476	-0.02582	-0.02673	-0.02753	-0.02824	
-0.02887	-0.02943	-0.02993	-0.03036	-0.03073	-0.03103	-0.03127	
-0.03144	-0.03154	-0.03157	-0.03153	-0.03141	-0.03121	-0.03094	
-0.03060	-0.03018	-0.02912	-0.02778	-0.02617	-0.02431	-0.02329	
-0.02222	-0.02109	-0.01991	-0.01869	-0.01742	-0.01612	-0.01478	
-0.01341	-0.01201	-0.01059	-0.00915	-0.00769	-0.00622	-0.00475	
-0.00327							
570.35352	270.20850	650.74927	0.0	1.00000			155.78210
-0.00230	0.00406	0.00735	0.01110	0.01637	0.02382	0.02939	
0.03398	0.03791	0.04135	0.04441	0.04713	0.04954	0.05168	
0.05356	0.05519	0.05659	0.05775	0.05870	0.05943	0.05995	
0.06028	0.06041	0.06035	0.06010	0.05968	0.05909	0.05833	
0.05741	0.05634	0.05377	0.05067	0.04710	0.04310	0.04096	
0.03874	0.03645	0.03408	0.03165	0.02917	0.02663	0.02406	
0.02145	0.01882	0.01616	0.01348	0.01079	0.00809	0.00539	
0.00269							
-0.00230	-0.00788	-0.01098	-0.01409	-0.01778	-0.02203	-0.02463	
-0.02648	-0.02789	-0.02902	-0.02996	-0.03077	-0.03147	-0.03208	
-0.03261	-0.03307	-0.03347	-0.03379	-0.03405	-0.03423	-0.03434	
-0.03437	-0.03432	-0.03419	-0.03398	-0.03369	-0.03332	-0.03286	
-0.03232	-0.03170	-0.03022	-0.02842	-0.02634	-0.02397	-0.02269	
-0.02135	-0.01994	-0.01849	-0.01698	-0.01542	-0.01381	-0.01217	
-0.01049	-0.00878	-0.00704	-0.00528	-0.00349	-0.00170	0.00010	

R84-1788-008(3/4)B

Table 2 F-14A Wing-Fuselage-Glove, $\Lambda = 25^{\circ}$ (Sheet 4 of 4)

```
FILE: A99WBG   F14-25

  0.00191
586.99512 305.95312 655.45459   0.0       1.00000                          154.59607
 -0.00935  -0.00286   0.00047   0.00431   0.00970   0.01732   0.02303
  0.02777   0.03185   0.03546   0.03869   0.04160   0.04424   0.04661
  0.04874   0.05065   0.05234   0.05381   0.05508   0.05615   0.05703
  0.05771   0.05820   0.05852   0.05865   0.05861   0.05840   0.05803
  0.05749   0.05680   0.05498   0.05261   0.04973   0.04640   0.04458
  0.04266   0.04066   0.03858   0.03642   0.03420   0.03192   0.02958
  0.02720   0.02478   0.02233   0.01985   0.01735   0.01485   0.01233
  0.00981
 -0.00935  -0.01496  -0.01809  -0.02107  -0.02457  -0.02855  -0.03089
 -0.03250  -0.03369  -0.03462  -0.03538  -0.03602  -0.03655  -0.03700
 -0.03737  -0.03766  -0.03788  -0.03801  -0.03807  -0.03804  -0.03794
 -0.03774  -0.03746  -0.03709  -0.03664  -0.03609  -0.03546  -0.03474
 -0.03393  -0.03303  -0.03098  -0.02860  -0.02590  -0.02289  -0.02128
 -0.01960  -0.01786  -0.01606  -0.01419  -0.01228  -0.01031  -0.00830
 -0.00624  -0.00415  -0.00202   0.00013   0.00230   0.00449   0.00669
  0.00890
603.63672 341.69775 660.15967   0.0       1.00000                          153.41003
 -0.01938  -0.01271  -0.00932  -0.00541   0.00018   0.00806   0.01399
  0.01891   0.02318   0.02698   0.03042   0.03355   0.03642   0.03905
  0.04147   0.04368   0.04570   0.04753   0.04917   0.05064   0.05192
  0.05304   0.05398   0.05476   0.05537   0.05582   0.05610   0.05623
  0.05621   0.05604   0.05526   0.05393   0.05209   0.04978   0.04845
  0.04703   0.04551   0.04389   0.04220   0.04042   0.03857   0.03666
  0.03469   0.03267   0.03061   0.02852   0.02640   0.02425   0.02210
  0.01994
 -0.01938  -0.02503  -0.02810  -0.03099  -0.03426  -0.03772  -0.03958
 -0.04075  -0.04155  -0.04213  -0.04256  -0.04287  -0.04307  -0.04319
 -0.04322  -0.04317  -0.04303  -0.04280  -0.04249  -0.04210  -0.04162
 -0.04106  -0.04040  -0.03966  -0.03883  -0.03791  -0.03691  -0.03581
 -0.03462  -0.03335  -0.03053  -0.02738  -0.02389  -0.02008  -0.01806
 -0.01597  -0.01381  -0.01158  -0.00928  -0.00693  -0.00452  -0.00206
  0.00044   0.00299   0.00558   0.00819   0.01083   0.01349   0.01616
  0.01883
618.54053 373.70972 664.37329   0.0       1.00000                          152.34717
 -0.03280  -0.02607  -0.02241  -0.01837  -0.01258  -0.00439   0.00179
  0.00694   0.01142   0.01544   0.01910   0.02246   0.02557   0.02847
  0.03117   0.03368   0.03602   0.03820   0.04022   0.04207   0.04378
  0.04533   0.04674   0.04800   0.04911   0.05008   0.05090   0.05159
  0.05214   0.05256   0.05301   0.05297   0.05247   0.05153   0.05092
  0.05021   0.04940   0.04852   0.04755   0.04652   0.04541   0.04425
  0.04302   0.04175   0.04044   0.03909   0.03772   0.03632   0.03491
  0.03349
 -0.03280  -0.03857  -0.04159  -0.04421  -0.04701  -0.04939  -0.05010
 -0.05021  -0.05007  -0.04981  -0.04949  -0.04913  -0.04874  -0.04830
 -0.04781  -0.04727  -0.04667  -0.04600  -0.04527  -0.04446  -0.04357
 -0.04261  -0.04155  -0.04041  -0.03918  -0.03786  -0.03645  -0.03494
 -0.03334  -0.03164  -0.02797  -0.02392  -0.01951  -0.01476  -0.01226
 -0.00968  -0.00703  -0.00431  -0.00151   0.00134   0.00425   0.00721
  0.01022   0.01328   0.01636   0.01948   0.02262   0.02578   0.02895
  0.03212
-3.       93.0      780.0                                    0.16
F-14 FUSELAGE MODEL
      .
      .
      .
```

Fuselage model(as 20 deg. case)

Table 3 F-14A Wing-Fuselage-Glove, $\Lambda = 35^{\circ}$ (Sheet 1 of 4)

```
FILE: A99WBG   F14-35

F-14 WING/BODY/GLOVE (35 DEGREE LE)
3.0        0.80       3.0        10.0       100.0      80.0       3.0
0.0        0.0        0.0
12.0       50.0       1.0        532.5      13.5       81360.0    0.4
 187.90012    0.0      599.60083    0.0        1.00000                          162.59918
   0.0        0.00198    0.00506    0.01000    0.02000    0.04005    0.06000
   0.08000    0.10000    0.12000    0.14006    0.16000    0.18000    0.20000
   0.22000    0.24000    0.26000    0.28000    0.30000    0.32000    0.34000
   0.36000    0.38000    0.40000    0.42000    0.44000    0.46000    0.48000
   0.50000    0.52000    0.56000    0.60000    0.64000    0.68000    0.70000
   0.72000    0.74000    0.76000    0.78000    0.80000    0.82000    0.84000
   0.86000    0.88000    0.90000    0.92000    0.94000    0.96000    0.98000
   1.00000
  -0.00040    0.00153    0.00261    0.00373    0.00532    0.00760    0.00950
   0.01126    0.01295    0.01455    0.01609    0.01753    0.01889    0.02015
   0.02130    0.02236    0.02331    0.02415    0.02489    0.02554    0.02609
   0.02654    0.02691    0.02719    0.02739    0.02752    0.02758    0.02757
   0.02749    0.02735    0.02688    0.02612    0.02507    0.02367    0.02283
   0.02188    0.02082    0.01967    0.01841    0.01705    0.01561    0.01412
   0.01256    0.01096    0.00934    0.00769    0.00600    0.00429    0.00256
   0.00082
  -0.00040   -0.00152   -0.00216   -0.00285   -0.00386   -0.00522   -0.00626
  -0.00719   -0.00802   -0.00878   -0.00946   -0.01005   -0.01056   -0.01101
  -0.01138   -0.01169   -0.01194   -0.01212   -0.01225   -0.01233   -0.01236
  -0.01235   -0.01230   -0.01220   -0.01209   -0.01194   -0.01176   -0.01157
  -0.01135   -0.01111   -0.01060   -0.01002   -0.00937   -0.00864   -0.00825
  -0.00782   -0.00738   -0.00691   -0.00641   -0.00588   -0.00534   -0.00476
  -0.00418   -0.00358   -0.00299   -0.00238   -0.00178   -0.00119   -0.00060
  -0.00002
 357.44357   68.50000  621.27344    0.0        1.00000                          161.17725
  -0.00064    0.00246    0.00418    0.00599    0.00853    0.01219    0.01524
   0.01807    0.02077    0.02335    0.02581    0.02813    0.03030    0.03232
   0.03418    0.03587    0.03739    0.03875    0.03994    0.04098    0.04185
   0.04258    0.04317    0.04362    0.04395    0.04415    0.04425    0.04423
   0.04411    0.04388    0.04312    0.04191    0.04022    0.03797    0.03662
   0.03510    0.03341    0.03155    0.02953    0.02736    0.02505    0.02265
   0.02015    0.01759    0.01498    0.01233    0.00963    0.00689    0.00411
   0.00132
  -0.00064   -0.00244   -0.00346   -0.00457   -0.00620   -0.00837   -0.01004
  -0.01153   -0.01287   -0.01408   -0.01517   -0.01612   -0.01695   -0.01766
  -0.01826   -0.01876   -0.01915   -0.01945   -0.01965   -0.01978   -0.01983
  -0.01981   -0.01973   -0.01958   -0.01939   -0.01915   -0.01887   -0.01856
  -0.01821   -0.01783   -0.01700   -0.01607   -0.01503   -0.01386   -0.01323
  -0.01255   -0.01184   -0.01108   -0.01028   -0.00943   -0.00856   -0.00764
  -0.00671   -0.00575   -0.00479   -0.00382   -0.00286   -0.00191   -0.00097
  -0.00003
 432.93372   99.00000  630.92334    0.0        1.00000                          160.54413
   0.00164    0.00815    0.01187    0.01598    0.02168    0.02951    0.03514
   0.03962    0.04334    0.04651    0.04924    0.05159    0.05362    0.05536
   0.05683    0.05806    0.05905    0.05982    0.06038    0.06074    0.06090
   0.06088    0.06067    0.06029    0.05974    0.05903    0.05816    0.05715
   0.05598    0.05468    0.05168    0.04821    0.04431    0.04007    0.03783
   0.03552    0.03316    0.03075    0.02829    0.02580    0.02326    0.02070
   0.01810    0.01547    0.01280    0.01010    0.00737    0.00461    0.00182
```

R84-1788-009(1/4)B

Table 3 F-14A Wing-Fuselage-Glove, $\Lambda = 35^{\circ}$ (Sheet 2 of 4)

FILE: A99WBG F14-35

```
 -0.00097
  0.00164  -0.00389  -0.00684  -0.00992  -0.01398  -0.01916  -0.02262
 -0.02520  -0.02722  -0.02882  -0.03010  -0.03112  -0.03194  -0.03257
 -0.03305  -0.03340  -0.03363  -0.03376  -0.03380  -0.03376  -0.03363
 -0.03344  -0.03316  -0.03282  -0.03240  -0.03190  -0.03133  -0.03069
 -0.02996  -0.02916  -0.02735  -0.02525  -0.02293  -0.02043  -0.01913
 -0.01782  -0.01651  -0.01520  -0.01392  -0.01266  -0.01145  -0.01029
 -0.00918  -0.00812  -0.00711  -0.00613  -0.00517  -0.00422  -0.00327
 -0.00231
505.34006 127.22000 639.85182   0.0      1.00000                      159.95834
  0.00604   0.01339   0.01705   0.02149   0.02770   0.03632   0.04268
  0.04775   0.05182   0.05507   0.05766   0.05969   0.06126   0.06243
  0.06323   0.06373   0.06395   0.06393   0.06368   0.06324   0.06263
  0.06186   0.06096   0.05993   0.05879   0.05756   0.05622   0.05480
  0.05329   0.05170   0.04829   0.04457   0.04056   0.03628   0.03403
  0.03171   0.02933   0.02689   0.02439   0.02184   0.01924   0.01659
  0.01391   0.01120   0.00846   0.00570   0.00293   0.00016  -0.00263
 -0.00542
  0.00604   0.00002  -0.00367  -0.00741  -0.01201  -0.01781  -0.02149
 -0.02406  -0.02594  -0.02731  -0.02835  -0.02911  -0.02968  -0.03008
 -0.03033  -0.03046  -0.03049  -0.03044  -0.03030  -0.03010  -0.02985
 -0.02956  -0.02923  -0.02885  -0.02846  -0.02803  -0.02757  -0.02710
 -0.02661  -0.02610  -0.02500  -0.02380  -0.02251  -0.02109  -0.02035
 -0.01958  -0.01877  -0.01795  -0.01709  -0.01622  -0.01531  -0.01440
 -0.01346  -0.01252  -0.01155  -0.01058  -0.00961  -0.00862  -0.00764
 -0.00666
505.37272 127.24000 639.85814   0.0      1.00000                      159.95792
  0.00667   0.01231   0.01543   0.01904   0.02430   0.03179   0.03735
  0.04183   0.04554   0.04865   0.05127   0.05345   0.05526   0.05675
  0.05793   0.05885   0.05951   0.05994   0.06016   0.06018   0.06001
  0.05966   0.05915   0.05847   0.05765   0.05668   0.05557   0.05434
  0.05297   0.05149   0.04820   0.04449   0.04042   0.03602   0.03371
  0.03134   0.02890   0.02641   0.02387   0.02128   0.01865   0.01599
  0.01330   0.01058   0.00784   0.00508   0.00231  -0.00047  -0.00325
 -0.00604
  0.00667   0.00145  -0.00188  -0.00532  -0.00964  -0.01482  -0.01807
 -0.02041  -0.02219  -0.02359  -0.02472  -0.02564  -0.02640  -0.02703
 -0.02755  -0.02797  -0.02831  -0.02857  -0.02876  -0.02888  -0.02893
 -0.02893  -0.02886  -0.02874  -0.02856  -0.02833  -0.02804  -0.02771
 -0.02732  -0.02689  -0.02589  -0.02472  -0.02339  -0.02194  -0.02116
 -0.02036  -0.01953  -0.01867  -0.01780  -0.01690  -0.01599  -0.01506
 -0.01412  -0.01317  -0.01220  -0.01123  -0.01026  -0.00928  -0.00829
 -0.00731
528.30591 159.98500 650.21826   0.0      1.00000                      159.27820
  0.00768   0.01341   0.01652   0.01992   0.02484   0.03182   0.03700
  0.04119   0.04470   0.04770   0.05027   0.05245   0.05432   0.05588
  0.05715   0.05817   0.05895   0.05949   0.05980   0.05991   0.05982
  0.05954   0.05908   0.05844   0.05764   0.05667   0.05556   0.05430
  0.05290   0.05137   0.04795   0.04409   0.03984   0.03526   0.03287
  0.03041   0.02789   0.02533   0.02272   0.02007   0.01739   0.01468
  0.01195   0.00921   0.00645   0.00368   0.00091  -0.00187  -0.00465
 -0.00743
  0.00768   0.00255  -0.00054  -0.00373  -0.00767  -0.01232  -0.01521
 -0.01728  -0.01886  -0.02013  -0.02116  -0.02203  -0.02276  -0.02340
 -0.02395  -0.02444  -0.02486  -0.02523  -0.02555  -0.02581  -0.02603
```

R84-1788-009(2/4)B

Table 3 F-14A Wing-Fuselage-Glove, $\Lambda = 35^{\circ}$ (Sheet 3 of 4)

```
FILE: A99WBG   F14-35

  -0.02620  -0.02632  -0.02639  -0.02642  -0.02639  -0.02631  -0.02617
  -0.02599  -0.02576  -0.02514  -0.02432  -0.02331  -0.02211  -0.02145
  -0.02075  -0.02001  -0.01923  -0.01842  -0.01758  -0.01670  -0.01580
  -0.01487  -0.01392  -0.01295  -0.01197  -0.01097  -0.00997  -0.00895
  -0.00794
 551.25439 192.74010 660.58105   0.0     1.00000                      158.39294
   0.00652   0.01219   0.01515   0.01851   0.02329   0.02992   0.03482
   0.03880   0.04217   0.04508   0.04761   0.04979   0.05168   0.05330
   0.05465   0.05575   0.05662   0.05727   0.05770   0.05793   0.05797
   0.05781   0.05747   0.05696   0.05628   0.05544   0.05445   0.05331
   0.05203   0.05062   0.04742   0.04377   0.03972   0.03533   0.03302
   0.03064   0.02821   0.02572   0.02319   0.02062   0.01801   0.01537
   0.01271   0.01003   0.00733   0.00462   0.00191  -0.00081  -0.00352
  -0.00624
   0.00652   0.00128  -0.00172  -0.00478  -0.00852  -0.01292  -0.01571
  -0.01778  -0.01940  -0.02074  -0.02187  -0.02285  -0.02371  -0.02448
  -0.02518  -0.02581  -0.02638  -0.02689  -0.02735  -0.02775  -0.02809
  -0.02837  -0.02860  -0.02876  -0.02886  -0.02889  -0.02886  -0.02876
  -0.02860  -0.02837  -0.02770  -0.02678  -0.02560  -0.02419  -0.02340
  -0.02256  -0.02166  -0.02072  -0.01973  -0.01869  -0.01762  -0.01651
  -0.01537  -0.01420  -0.01301  -0.01179  -0.01056  -0.00932  -0.00807
  -0.00681
 574.21240 225.49500 670.94409   0.0     1.00000                      157.27454
   0.00265   0.00839   0.01139   0.01478   0.01962   0.02634   0.03133
   0.03539   0.03886   0.04187   0.04451   0.04682   0.04885   0.05062
   0.05214   0.05341   0.05447   0.05531   0.05595   0.05639   0.05663
   0.05669   0.05657   0.05628   0.05582   0.05520   0.05442   0.05350
   0.05243   0.05123   0.04843   0.04517   0.04148   0.03743   0.03527
   0.03304   0.03076   0.02841   0.02601   0.02356   0.02107   0.01854
   0.01598   0.01340   0.01080   0.00818   0.00556   0.00293   0.00030
  -0.00233
   0.00265  -0.00261  -0.00562  -0.00862  -0.01228  -0.01655  -0.01922
  -0.02118  -0.02270  -0.02395  -0.02499  -0.02589  -0.02668  -0.02739
  -0.02802  -0.02858  -0.02909  -0.02953  -0.02991  -0.03023  -0.03048
  -0.03067  -0.03080  -0.03086  -0.03084  -0.03076  -0.03060  -0.03036
  -0.03007  -0.02969  -0.02871  -0.02746  -0.02592  -0.02413  -0.02314
  -0.02209  -0.02098  -0.01982  -0.01861  -0.01735  -0.01605  -0.01470
  -0.01332  -0.01190  -0.01046  -0.00899  -0.00751  -0.00601  -0.00450
  -0.00298
 597.17041 258.25000 681.30713   0.0     1.00000                      156.15625
  -0.00237   0.00345   0.00650   0.00993   0.01484   0.02169   0.02679
   0.03097   0.03456   0.03770   0.04049   0.04296   0.04517   0.04714
   0.04887   0.05038   0.05168   0.05277   0.05367   0.05438   0.05490
   0.05524   0.05540   0.05539   0.05522   0.05488   0.05439   0.05374
   0.05295   0.05202   0.04975   0.04698   0.04377   0.04015   0.03820
   0.03617   0.03407   0.03190   0.02967   0.02738   0.02504   0.02265
   0.02023   0.01778   0.01531   0.01281   0.01031   0.00779   0.00526
   0.00274
  -0.00237  -0.00766  -0.01069  -0.01360  -0.01717  -0.02127  -0.02379
  -0.02560  -0.02699  -0.02811  -0.02905  -0.02985  -0.03055  -0.03117
  -0.03172  -0.03219  -0.03261  -0.03295  -0.03324  -0.03345  -0.03359
  -0.03366  -0.03366  -0.03358  -0.03342  -0.03318  -0.03286  -0.03245
  -0.03197  -0.03140  -0.03003  -0.02834  -0.02634  -0.02405  -0.02280
  -0.02149  -0.02010  -0.01866  -0.01716  -0.01561  -0.01400  -0.01235
  -0.01065  -0.00892  -0.00715  -0.00536  -0.00354  -0.00170   0.00014
```

R84-1788-009(3/4)B

Table 3 F-14A Wing-Fuselage-Glove, $\Lambda = 35^{\circ}$ (Sheet 4 of 4)

```
FILE: A99WBG   F14-35

  0.00200
620.12866 291.00513 691.66992   0.0       1.00000                          155.03796
 -0.00916  -0.00338  -0.00018  0.00333   0.00837   0.01542   0.02068
  0.02500   0.02872   0.03201  0.03496   0.03760   0.03999   0.04216
  0.04411   0.04586   0.04741  0.04878   0.04996   0.05097   0.05180
  0.05246   0.05296   0.05329  0.05347   0.05348   0.05335   0.05306
  0.05263   0.05206   0.05051  0.04845   0.04593   0.04297   0.04135
  0.03963   0.03784   0.03596  0.03401   0.03199   0.02991   0.02778
  0.02561   0.02339   0.02114  0.01886   0.01656   0.01425   0.01193
  0.00960
 -0.00916  -0.01455  -0.01752 -0.02035  -0.02377  -0.02763  -0.02993
 -0.03151  -0.03270  -0.03363 -0.03440  -0.03504  -0.03558  -0.03604
 -0.03642  -0.03673  -0.03697 -0.03713  -0.03722  -0.03722  -0.03715
 -0.03700  -0.03677  -0.03645 -0.03605  -0.03556  -0.03498  -0.03432
 -0.03356  -0.03273  -0.03080 -0.02853  -0.02593  -0.02302  -0.02145
 -0.01981  -0.01810  -0.01632 -0.01448  -0.01258  -0.01062  -0.00861
 -0.00655  -0.00446  -0.00232 -0.00015   0.00205   0.00426   0.00649
  0.00873
643.08667 323.76025 702.03296   0.0       1.00000                          153.91968
 -0.01886  -0.01298  -0.00965 -0.00604  -0.00088   0.00641   0.01187
  0.01638   0.02027   0.02373  0.02686   0.02970   0.03230   0.03470
  0.03689   0.03891   0.04075  0.04243   0.04395   0.04531   0.04651
  0.04756   0.04846   0.04921  0.04981   0.05027   0.05059   0.05077
  0.05081   0.05072   0.05016  0.04909   0.04757   0.04561   0.04448
  0.04326   0.04195   0.04055  0.03907   0.03752   0.03590   0.03422
  0.03249   0.03071   0.02888  0.02703   0.02514   0.02324   0.02132
  0.01939
 -0.01886  -0.02428  -0.02723 -0.02998  -0.03316  -0.03657  -0.03843
 -0.03960  -0.04042  -0.04101 -0.04145  -0.04177  -0.04200  -0.04214
 -0.04220  -0.04217  -0.04207 -0.04188  -0.04162  -0.04127  -0.04084
 -0.04033  -0.03973  -0.03905 -0.03829  -0.03743  -0.03649  -0.03546
 -0.03434  -0.03313  -0.03046 -0.02743  -0.02407  -0.02037  -0.01841
 -0.01636  -0.01424  -0.01205 -0.00979  -0.00746  -0.00507  -0.00263
 -0.00013   0.00242   0.00500  0.00762   0.01027   0.01295   0.01564
  0.01833
658.07690 345.14697 708.79883   0.0       1.00000                          153.18933
 -0.02779  -0.02173  -0.01837 -0.01469  -0.00942  -0.00193   0.00371
  0.00838   0.01243   0.01603  0.01930   0.02229   0.02504   0.02760
  0.02997   0.03218   0.03422  0.03612   0.03786   0.03947   0.04093
  0.04225   0.04344   0.04450  0.04542   0.04621   0.04687   0.04741
  0.04782   0.04811   0.04834  0.04811   0.04747   0.04642   0.04576
  0.04502   0.04419   0.04328  0.04231   0.04126   0.04015   0.03899
  0.03778   0.03652   0.03523  0.03390   0.03255   0.03118   0.02980
  0.02841
 -0.02779  -0.03330  -0.03621 -0.03885  -0.04176  -0.04457  -0.04583
 -0.04643  -0.04670  -0.04679 -0.04675  -0.04662  -0.04642  -0.04615
 -0.04582  -0.04543  -0.04497 -0.04445  -0.04386  -0.04320  -0.04247
 -0.04166  -0.04077  -0.03980 -0.03874  -0.03760  -0.03637  -0.03505
 -0.03365  -0.03215  -0.02888 -0.02525  -0.02126  -0.01693  -0.01464
 -0.01227  -0.00982  -0.00729 -0.00469  -0.00203   0.00070   0.00349
  0.00633   0.00921   0.01214  0.01511   0.01810   0.02111   0.02414
  0.02718
-3.        93.0       780.0                                  0.16
F-14 FUSELAGE MODEL
```

Fuselage model(as 20 deg. case)

Table 4 F-14A Isolated Wing, $\Lambda = 20^{\circ}$ (Sheet 1 of 4)

```
FILE: A99W      F14-20

F-14 WING ALONE (20 DEGREE LE)
2.0         0.75        3.0         10.0        100.0       80.0        3.0
11.0        50.0        1.0         532.5       160.0       81360.0     0.4
 456.49927    0.0      623.70898     0.0         1.00000                          162.70581
   0.0        0.00191    0.00491     0.00995     0.02000     0.03993     0.06000
   0.08000    0.10000    0.12000     0.14000     0.16000     0.18000     0.20000
   0.22000    0.24000    0.26000     0.28000     0.30000     0.32000     0.34000
   0.36000    0.38000    0.40000     0.42000     0.44000     0.46000     0.48000
   0.50000    0.52000    0.56000     0.60000     0.64000     0.68000     0.70000
   0.72000    0.74000    0.76000     0.78000     0.80000     0.82000     0.84000
   0.86000    0.88000    0.90000     0.92000     0.94000     0.96000     0.98000
   1.00000
   0.00466    0.01046    0.01422     0.01854     0.02504     0.03454     0.04170
   0.04730    0.05177    0.05534     0.05818     0.06042     0.06214     0.06344
   0.06437    0.06499    0.06533     0.06543     0.06532     0.06502     0.06456
   0.06395    0.06320    0.06232     0.06133     0.06023     0.05903     0.05773
   0.05635    0.05487    0.05165     0.04810     0.04424     0.04007     0.03788
   0.03561    0.03328    0.03088     0.02842     0.02590     0.02332     0.02069
   0.01800    0.01528    0.01251     0.00971     0.00688     0.00403     0.00117
  -0.00171
   0.00466   -0.00158   -0.00540    -0.00991    -0.01570    -0.02267    -0.02714
  -0.03032   -0.03272   -0.03459    -0.03606    -0.03721    -0.03810    -0.03876
  -0.03921   -0.03949   -0.03960    -0.03957    -0.03940    -0.03912    -0.03873
  -0.03824   -0.03766   -0.03701    -0.03629    -0.03551    -0.03468    -0.03381
  -0.03290   -0.03196   -0.03000    -0.02796    -0.02587    -0.02377    -0.02272
  -0.02166   -0.02062   -0.01957    -0.01854    -0.01751    -0.01649    -0.01547
  -0.01447   -0.01347   -0.01248    -0.01150    -0.01052    -0.00955    -0.00858
  -0.00761
 481.43018   68.50000  626.75684     0.0         1.00000                          161.21141
   0.00602    0.01192    0.01557     0.01970     0.02583     0.03469     0.04135
   0.04661    0.05086    0.05432     0.05714     0.05941     0.06122     0.06263
   0.06368    0.06443    0.06491     0.06514     0.06515     0.06496     0.06459
   0.06404    0.06335    0.06250     0.06153     0.06042     0.05920     0.05786
   0.05641    0.05486    0.05146     0.04769     0.04358     0.03916     0.03684
   0.03445    0.03200    0.02948     0.02692     0.02429     0.02162     0.01891
   0.01615    0.01336    0.01054     0.00769     0.00482     0.00194    -0.00095
  -0.00385
   0.00602    0.00001   -0.00369    -0.00783    -0.01309    -0.01939    -0.02343
  -0.02632   -0.02852   -0.03025    -0.03163    -0.03274    -0.03363    -0.03433
  -0.03487   -0.03525   -0.03551    -0.03565    -0.03567    -0.03559    -0.03542
  -0.03517   -0.03483   -0.03442    -0.03395    -0.03342    -0.03283    -0.03219
  -0.03151   -0.03078   -0.02922    -0.02754    -0.02576    -0.02390    -0.02295
  -0.02199   -0.02102   -0.02005    -0.01906    -0.01808    -0.01709    -0.01610
  -0.01510   -0.01411   -0.01312    -0.01213    -0.01114    -0.01016    -0.00917
  -0.00818
 492.53076   99.00000  628.11401     0.0         1.00000                          160.54604
   0.00677    0.01272    0.01631     0.02033     0.02626     0.03476     0.04116
   0.04622    0.05036    0.05376     0.05657     0.05886     0.06071     0.06218
   0.06331    0.06413    0.06468     0.06498     0.06506     0.06493     0.06460
   0.06410    0.06343    0.06261     0.06163     0.06053     0.05929     0.05793
   0.05645    0.05485    0.05135     0.04746     0.04322     0.03866     0.03627
   0.03381    0.03129    0.02872     0.02609     0.02341     0.02069     0.01793
   0.01513    0.01231    0.00946     0.00658     0.00369     0.00079    -0.00212
  -0.00503
```

R84-1788-010(1/4)B

Table 4 F-14A Isolated Wing, $\Lambda = 20^{\circ}$ (Sheet 2 of 4)

FILE: A99W F14-20

0.00677	0.00089	-0.00276	-0.00669	-0.01165	-0.01759	-0.02139	
-0.02412	-0.02621	-0.02786	-0.02920	-0.03029	-0.03118	-0.03190	
-0.03248	-0.03293	-0.03326	-0.03349	-0.03362	-0.03366	-0.03361	
-0.03348	-0.03328	-0.03301	-0.03267	-0.03227	-0.03181	-0.03130	
-0.03074	-0.03014	-0.02880	-0.02731	-0.02569	-0.02397	-0.02308	
-0.02217	-0.02125	-0.02030	-0.01935	-0.01839	-0.01742	-0.01644	
-0.01545	-0.01446	-0.01347	-0.01248	-0.01148	-0.01049	-0.00949	
-0.00850							
502.80542	127.23000	629.37012	0.0	1.00000			159.93018
0.00756	0.01357	0.01710	0.02101	0.02672	0.03485	0.04095	
0.04582	0.04983	0.05317	0.05596	0.05827	0.06017	0.06170	
0.06291	0.06381	0.06444	0.06482	0.06496	0.06489	0.06462	
0.06416	0.06352	0.06271	0.06175	0.06064	0.05938	0.05800	
0.05648	0.05485	0.05124	0.04722	0.04284	0.03812	0.03566	
0.03313	0.03054	0.02790	0.02521	0.02247	0.01970	0.01689	
0.01405	0.01119	0.00830	0.00540	0.00249	-0.00043	-0.00335	
-0.00628							
0.00756	0.00182	-0.00176	-0.00548	-0.01013	-0.01567	-0.01922	
-0.02178	-0.02375	-0.02532	-0.02661	-0.02768	-0.02857	-0.02932	
-0.02994	-0.03046	-0.03087	-0.03120	-0.03144	-0.03160	-0.03168	
-0.03169	-0.03163	-0.03150	-0.03130	-0.03105	-0.03073	-0.03036	
-0.02993	-0.02945	-0.02834	-0.02706	-0.02562	-0.02405	-0.02322	
-0.02236	-0.02148	-0.02058	-0.01966	-0.01872	-0.01777	-0.01680	
-0.01582	-0.01484	-0.01385	-0.01285	-0.01185	-0.01085	-0.00984	
-0.00884							
516.19336	164.01460	631.00684	0.0	1.00000			159.12769
0.00878	0.01488	0.01831	0.02205	0.02742	0.03498	0.04063	
0.04519	0.04901	0.05226	0.05502	0.05737	0.05934	0.06097	
0.06229	0.06331	0.06406	0.06456	0.06481	0.06483	0.06464	
0.06424	0.06365	0.06288	0.06193	0.06081	0.05953	0.05811	
0.05654	0.05484	0.05107	0.04685	0.04224	0.03730	0.03473	
0.03209	0.02939	0.02665	0.02386	0.02103	0.01818	0.01529	
0.01239	0.00947	0.00653	0.00359	0.00064	-0.00231	-0.00526	
-0.00821							
0.00878	0.00324	-0.00023	-0.00362	-0.00778	-0.01273	-0.01589	
-0.01819	-0.01997	-0.02142	-0.02263	-0.02366	-0.02455	-0.02534	
-0.02604	-0.02665	-0.02720	-0.02767	-0.02808	-0.02843	-0.02871	
-0.02893	-0.02909	-0.02918	-0.02920	-0.02917	-0.02907	-0.02890	
-0.02868	-0.02839	-0.02765	-0.02668	-0.02552	-0.02417	-0.02343	
-0.02266	-0.02185	-0.02100	-0.02013	-0.01923	-0.01831	-0.01736	
-0.01639	-0.01541	-0.01442	-0.01342	-0.01241	-0.01139	-0.01037	
-0.00935							
529.58618	200.79919	632.64380	0.0	1.00000			158.07434
0.00722	0.01327	0.01657	0.02033	0.02564	0.03300	0.03852	
0.04301	0.04682	0.05010	0.05294	0.05540	0.05751	0.05930	
0.06078	0.06198	0.06291	0.06359	0.06402	0.06421	0.06419	
0.06395	0.06351	0.06287	0.06205	0.06105	0.05989	0.05856	
0.05708	0.05546	0.05182	0.04770	0.04317	0.03828	0.03572	
0.03310	0.03042	0.02770	0.02492	0.02211	0.01927	0.01640	
0.01351	0.01061	0.00770	0.00478	0.00185	-0.00107	-0.00400	
-0.00692							
0.00722	0.00165	-0.00173	-0.00503	-0.00897	-0.01357	-0.01650	
-0.01863	-0.02029	-0.02164	-0.02277	-0.02375	-0.02461	-0.02537	
-0.02606	-0.02668	-0.02723	-0.02772	-0.02816	-0.02853	-0.02884	
-0.02909	-0.02928	-0.02940	-0.02945	-0.02944	-0.02936	-0.02921	

R84-1788-010(2/4)B

Table 4 F-14A Isolated Wing, $\Lambda = 20^{\circ}$ (Sheet 3 of 4)

FILE: A99W F14-20

-0.02900	-0.02871	-0.02795	-0.02694	-0.02570	-0.02424	-0.02343	
-0.02258	-0.02168	-0.02074	-0.01977	-0.01876	-0.01772	-0.01665	
-0.01556	-0.01445	-0.01332	-0.01217	-0.01102	-0.00986	-0.00869	
-0.00753							
542.98340	237.58369	634.28076	0.0	1.00000			156.86511
0.00316	0.00928	0.01260	0.01642	0.02180	0.02928	0.03490	
0.03949	0.04341	0.04682	0.04981	0.05243	0.05472	0.05671	
0.05840	0.05982	0.06098	0.06189	0.06256	0.06301	0.06323	
0.06324	0.06304	0.06265	0.06207	0.06131	0.06038	0.05928	
0.05802	0.05662	0.05338	0.04964	0.04545	0.04087	0.03846	
0.03598	0.03342	0.03081	0.02815	0.02544	0.02270	0.01992	
0.01712	0.01430	0.01146	0.00861	0.00575	0.00290	0.00004	
-0.00282							
0.00316	-0.00259	-0.00581	-0.00904	-0.01292	-0.01739	-0.02019	
-0.02220	-0.02375	-0.02501	-0.02606	-0.02696	-0.02775	-0.02844	
-0.02906	-0.02962	-0.03010	-0.03052	-0.03088	-0.03117	-0.03139	
-0.03155	-0.03163	-0.03164	-0.03158	-0.03144	-0.03123	-0.03094	
-0.03057	-0.03014	-0.02905	-0.02768	-0.02605	-0.02418	-0.02316	
-0.02209	-0.02097	-0.01980	-0.01859	-0.01734	-0.01606	-0.01474	
-0.01340	-0.01203	-0.01064	-0.00923	-0.00781	-0.00638	-0.00494	
-0.00350							
556.38062	274.36816	635.91772	0.0	1.00000			155.65588
-0.00210	0.00412	0.00754	0.01134	0.01680	0.02441	0.03016	
0.03488	0.03893	0.04249	0.04565	0.04845	0.05094	0.05314	
0.05507	0.05675	0.05817	0.05936	0.06032	0.06106	0.06158	
0.06189	0.06200	0.06191	0.06164	0.06118	0.06054	0.05974	
0.05877	0.05765	0.05496	0.05173	0.04802	0.04388	0.04168	
0.03939	0.03702	0.03458	0.03209	0.02954	0.02694	0.02431	
0.02164	0.01894	0.01623	0.01349	0.01075	0.00800	0.00525	
0.00249							
-0.00210	-0.00787	-0.01123	-0.01427	-0.01799	-0.02226	-0.02490	
-0.02674	-0.02814	-0.02926	-0.03019	-0.03098	-0.03167	-0.03227	
-0.03280	-0.03325	-0.03363	-0.03395	-0.03419	-0.03436	-0.03446	
-0.03447	-0.03441	-0.03426	-0.03404	-0.03373	-0.03334	-0.03286	
-0.03230	-0.03167	-0.03015	-0.02833	-0.02622	-0.02384	-0.02256	
-0.02122	-0.01982	-0.01837	-0.01687	-0.01532	-0.01374	-0.01211	
-0.01046	-0.00877	-0.00706	-0.00533	-0.00358	-0.00183	-0.00006	
0.00171							
569.77783	311.15283	637.55469	0.0	1.00000			154.44666
-0.00919	-0.00300	0.00061	0.00452	0.01008	0.01787	0.02378	
0.02865	0.03287	0.03659	0.03993	0.04294	0.04566	0.04810	
0.05030	0.05226	0.05399	0.05550	0.05679	0.05788	0.05876	
0.05944	0.05992	0.06022	0.06033	0.06026	0.06001	0.05960	
0.05902	0.05828	0.05634	0.05384	0.05083	0.04735	0.04545	
0.04347	0.04139	0.03923	0.03700	0.03471	0.03235	0.02994	
0.02749	0.02500	0.02249	0.01994	0.01738	0.01481	0.01223	
0.00965							
-0.00919	-0.01499	-0.01831	-0.02131	-0.02487	-0.02883	-0.03118	
-0.03278	-0.03396	-0.03488	-0.03563	-0.03626	-0.03679	-0.03722	
-0.03758	-0.03786	-0.03806	-0.03818	-0.03822	-0.03818	-0.03805	
-0.03784	-0.03753	-0.03715	-0.03667	-0.03610	-0.03545	-0.03470	
-0.03387	-0.03296	-0.03087	-0.02846	-0.02573	-0.02272	-0.02111	
-0.01943	-0.01769	-0.01590	-0.01404	-0.01214	-0.01019	-0.00820	
-0.00617	-0.00410	-0.00201	0.00011	0.00225	0.00440	0.00656	
0.00873							

R84-1788-010(3/4)B

Table 4 F-14A Isolated Wing, $\Lambda = 20^{\circ}$ (Sheet 4 of 4)

FILE: A99W F14-20

583.17480	347.93726	639.19165	0.0	1.00000			153.24487
-0.01912	-0.01295	-0.00937	-0.00540	0.00037	0.00844	0.01456	
0.01963	0.02404	0.02796	0.03151	0.03474	0.03771	0.04043	
0.04293	0.04521	0.04729	0.04917	0.05085	0.05235	0.05366	
0.05479	0.05574	0.05652	0.05712	0.05755	0.05781	0.05791	
0.05785	0.05764	0.05676	0.05531	0.05333	0.05087	0.04947	
0.04796	0.04635	0.04466	0.04287	0.04101	0.03908	0.03708	
0.03503	0.03292	0.03078	0.02860	0.02639	0.02416	0.02192	
0.01968							
-0.01912	-0.02525	-0.02851	-0.03139	-0.03470	-0.03816	-0.04002	
-0.04117	-0.04195	-0.04251	-0.04293	-0.04322	-0.04342	-0.04353	
-0.04354	-0.04347	-0.04332	-0.04308	-0.04275	-0.04234	-0.04184	
-0.04125	-0.04058	-0.03982	-0.03897	-0.03803	-0.03700	-0.03588	
-0.03468	-0.03338	-0.03054	-0.02735	-0.02385	-0.02003	-0.01801	
-0.01592	-0.01376	-0.01154	-0.00926	-0.00692	-0.00452	-0.00208	
0.00040	0.00292	0.00548	0.00806	0.01067	0.01329	0.01592	
0.01856							
596.56421	384.69995	640.82764	0.0	1.00000			152.03552
-0.03451	-0.02816	-0.02443	-0.02028	-0.01435	-0.00591	0.00053	
0.00587	0.01053	0.01470	0.01850	0.02200	0.02525	0.02827	
0.03109	0.03373	0.03618	0.03847	0.04060	0.04256	0.04437	
0.04602	0.04752	0.04887	0.05007	0.05112	0.05202	0.05278	
0.05340	0.05388	0.05444	0.05449	0.05405	0.05317	0.05257	
0.05187	0.05107	0.05019	0.04923	0.04820	0.04709	0.04592	
0.04470	0.04343	0.04212	0.04078	0.03941	0.03802	0.03662	
0.03521							
-0.03451	-0.04097	-0.04400	-0.04663	-0.04935	-0.05135	-0.05167	
-0.05149	-0.05115	-0.05076	-0.05036	-0.04995	-0.04951	-0.04903	
-0.04851	-0.04793	-0.04729	-0.04658	-0.04580	-0.04495	-0.04401	
-0.04299	-0.04187	-0.04067	-0.03938	-0.03799	-0.03650	-0.03492	
-0.03324	-0.03147	-0.02763	-0.02341	-0.01884	-0.01392	-0.01135	
-0.00869	-0.00597	-0.00317	-0.00031	0.00261	0.00558	0.00859	
0.01166	0.01475	0.01788	0.02104	0.02421	0.02740	0.03060	
0.03380							

R84-1788-010(4/4)B

Table 5 F-14A Isolated Wing, $\Lambda = 25^{\circ}$ (Sheet 1 of 4)

```
FILE: A99W      F14-25

F-14 WING ALONE (25 DEGREE LE)
2.0         0.775       3.0         10.0        100.0       80.0        3.0
11.0        50.0        1.0         532.5       160.0       81360.0     0.4
 444.60571    0.0       615.17920    0.0          1.00000                          162.45967
   0.0        0.00201     0.00500     0.01002     0.02005     0.04000     0.05997
   0.08000    0.10000     0.12000     0.14002     0.16000     0.18000     0.20000
   0.22000    0.24000     0.26000     0.28000     0.30000     0.32000     0.34000
   0.36000    0.38000     0.40000     0.42000     0.44000     0.46000     0.48000
   0.50000    0.52000     0.56000     0.60000     0.64000     0.68000     0.69998
   0.72000    0.74000     0.76000     0.78000     0.80000     0.82000     0.84000
   0.86000    0.88000     0.90000     0.92000     0.94000     0.96000     0.98000
   1.00000
   0.00298    0.01162     0.01530     0.01944     0.02578     0.03512     0.04213
   0.04767    0.05209     0.05564     0.05847     0.06070     0.06243     0.06373
   0.06468    0.06530     0.06566     0.06578     0.06569     0.06542     0.06498
   0.06440    0.06367     0.06283     0.06187     0.06080     0.05963     0.05837
   0.05701    0.05557     0.05242     0.04894     0.04515     0.04105     0.03889
   0.03666    0.03436     0.03200     0.02957     0.02708     0.02453     0.02193
   0.01928    0.01659     0.01385     0.01108     0.00828     0.00546     0.00263
  -0.00022
   0.00298   -0.00044    -0.00410    -0.00850    -0.01416    -0.02104    -0.02545
  -0.02862   -0.03101    -0.03285    -0.03430    -0.03543    -0.03630    -0.03694
  -0.03739   -0.03767    -0.03779    -0.03776    -0.03760    -0.03733    -0.03695
  -0.03647   -0.03591    -0.03527    -0.03456    -0.03379    -0.03297    -0.03211
  -0.03120   -0.03026    -0.02829    -0.02625    -0.02415    -0.02202    -0.02096
  -0.01990   -0.01884    -0.01779    -0.01674    -0.01570    -0.01467    -0.01365
  -0.01264   -0.01163    -0.01064    -0.00965    -0.00866    -0.00769    -0.00672
  -0.00574
 476.47754   68.50000   624.19702    0.0          1.00000                          161.10240
   0.00501    0.01244     0.01598     0.01996     0.02594     0.03465     0.04116
   0.04635    0.05055     0.05398     0.05678     0.05903     0.06084     0.06225
   0.06331    0.06407     0.06457     0.06482     0.06485     0.06468     0.06434
   0.06382    0.06316     0.06235     0.06140     0.06033     0.05914     0.05784
   0.05643    0.05491     0.05158     0.04789     0.04385     0.03949     0.03721
   0.03485    0.03243     0.02995     0.02742     0.02482     0.02218     0.01950
   0.01677    0.01401     0.01122     0.00840     0.00556     0.00271    -0.00016
  -0.00303
   0.00501    0.00049    -0.00306    -0.00710    -0.01224    -0.01846    -0.02243
  -0.02530   -0.02747    -0.02917    -0.03052    -0.03160    -0.03246    -0.03314
  -0.03366   -0.03403    -0.03428    -0.03441    -0.03443    -0.03435    -0.03419
  -0.03393   -0.03360    -0.03320    -0.03274    -0.03221    -0.03163    -0.03099
  -0.03032   -0.02960    -0.02804    -0.02637    -0.02459    -0.02273    -0.02178
  -0.02082   -0.01985    -0.01887    -0.01788    -0.01690    -0.01590    -0.01491
  -0.01392   -0.01292    -0.01193    -0.01094    -0.00995    -0.00896    -0.00797
  -0.00698
 490.66870   99.00000   628.21216    0.0          1.00000                          160.49806
   0.00612    0.01289     0.01635     0.02025     0.02604     0.03439     0.04063
   0.04563    0.04970     0.05307     0.05584     0.05811     0.05996     0.06142
   0.06256    0.06339     0.06396     0.06428     0.06438     0.06427     0.06398
   0.06351    0.06287     0.06208     0.06115     0.06007     0.05887     0.05755
   0.05610    0.05455     0.05112     0.04730     0.04313     0.03864     0.03628
   0.03386    0.03137     0.02883     0.02623     0.02358     0.02089     0.01816
   0.01539    0.01259     0.00977     0.00692     0.00406     0.00118    -0.00170
  -0.00459
```

R84-1788-011(1/4)B

Table 5 F-14A Isolated Wing, $\Lambda = 25^{\circ}$ (Sheet 2 of 4)

```
FILE: A99W      F14-25

   0.00612   0.00101  -0.00249  -0.00633  -0.01118  -0.01703  -0.02077
  -0.02346  -0.02551  -0.02713  -0.02843  -0.02949  -0.03035  -0.03104
  -0.03160  -0.03203  -0.03234  -0.03256  -0.03268  -0.03271  -0.03266
  -0.03253  -0.03233  -0.03206  -0.03173  -0.03133  -0.03088  -0.03038
  -0.02983  -0.02923  -0.02790  -0.02643  -0.02483  -0.02312  -0.02224
  -0.02133  -0.02041  -0.01947  -0.01852  -0.01756  -0.01658  -0.01561
  -0.01462  -0.01363  -0.01264  -0.01165  -0.01065  -0.00966  -0.00866
  -0.00766
 503.80371 127.23000 631.92847   0.0       1.00000                      159.93872
   0.00732   0.01337   0.01676   0.02056   0.02613   0.03411   0.04006
   0.04485   0.04880   0.05209   0.05484   0.05713   0.05902   0.06055
   0.06175   0.06267   0.06331   0.06371   0.06388   0.06384   0.06360
   0.06317   0.06257   0.06180   0.06087   0.05980   0.05858   0.05724
   0.05576   0.05416   0.05063   0.04668   0.04237   0.03772   0.03529
   0.03279   0.03024   0.02762   0.02496   0.02225   0.01951   0.01672
   0.01391   0.01107   0.00822   0.00534   0.00245  -0.00044  -0.00334
  -0.00624
   0.00732   0.00156  -0.00188  -0.00550  -0.01005  -0.01551  -0.01899
  -0.02150  -0.02343  -0.02496  -0.02621  -0.02723  -0.02809  -0.02880
  -0.02940  -0.02989  -0.03028  -0.03059  -0.03081  -0.03096  -0.03103
  -0.03103  -0.03097  -0.03084  -0.03065  -0.03040  -0.03009  -0.02973
  -0.02931  -0.02884  -0.02776  -0.02650  -0.02509  -0.02354  -0.02272
  -0.02187  -0.02100  -0.02011  -0.01919  -0.01826  -0.01731  -0.01635
  -0.01538  -0.01439  -0.01340  -0.01241  -0.01141  -0.01040  -0.00940
  -0.00839
 520.43506 162.97459 636.63403   0.0       1.00000                      159.23047
   0.00911   0.01409   0.01736   0.02102   0.02628   0.03369   0.03921
   0.04369   0.04744   0.05062   0.05335   0.05566   0.05761   0.05924
   0.06055   0.06158   0.06234   0.06286   0.06313   0.06319   0.06303
   0.06266   0.06211   0.06137   0.06046   0.05939   0.05815   0.05677
   0.05524   0.05358   0.04989   0.04575   0.04122   0.03635   0.03381
   0.03120   0.02853   0.02582   0.02306   0.02026   0.01743   0.01458
   0.01170   0.00880   0.00589   0.00297   0.00005  -0.00288  -0.00580
  -0.00873
   0.00911   0.00239  -0.00096  -0.00427  -0.00836  -0.01323  -0.01632
  -0.01857  -0.02031  -0.02171  -0.02287  -0.02385  -0.02470  -0.02545
  -0.02610  -0.02668  -0.02718  -0.02763  -0.02801  -0.02833  -0.02859
  -0.02879  -0.02893  -0.02902  -0.02904  -0.02900  -0.02890  -0.02874
  -0.02853  -0.02825  -0.02754  -0.02661  -0.02548  -0.02416  -0.02344
  -0.02269  -0.02189  -0.02106  -0.02020  -0.01931  -0.01840  -0.01746
  -0.01651  -0.01553  -0.01455  -0.01355  -0.01254  -0.01152  -0.01051
  -0.00948
 537.07056 198.71930 641.33887   0.0       1.00000                      158.15393
   0.00696   0.01317   0.01644   0.02003   0.02515   0.03235   0.03770
   0.04207   0.04577   0.04895   0.05171   0.05410   0.05615   0.05789
   0.05934   0.06052   0.06143   0.06210   0.06254   0.06274   0.06274
   0.06252   0.06211   0.06151   0.06073   0.05978   0.05866   0.05739
   0.05597   0.05440   0.05088   0.04689   0.04248   0.03772   0.03523
   0.03267   0.03005   0.02738   0.02466   0.02191   0.01912   0.01630
   0.01346   0.01061   0.00774   0.00487   0.00198  -0.00090  -0.00378
  -0.00666
   0.00696   0.00141  -0.00175  -0.00491  -0.00880  -0.01339  -0.01630
  -0.01844  -0.02011  -0.02147  -0.02261  -0.02360  -0.02446  -0.02523
  -0.02592  -0.02654  -0.02710  -0.02760  -0.02803  -0.02841  -0.02873
  -0.02899  -0.02918  -0.02931  -0.02937  -0.02937  -0.02930  -0.02916
```

R84-1788-011(2/4)B

Table 5 F-14A Isolated Wing, $\Lambda = 25^\circ$ (Sheet 3 of 4)

```
FILE: A99W      F14-25


  -0.02896  -0.02868  -0.02794  -0.02695  -0.02572  -0.02427  -0.02346
  -0.02261  -0.02171  -0.02076  -0.01978  -0.01876  -0.01770  -0.01662
  -0.01550  -0.01437  -0.01321  -0.01204  -0.01086  -0.00966  -0.00846
  -0.00726
 553.71191 234.46390 646.04419   0.0      1.00000                      156.96802
   0.00293   0.00920   0.01253   0.01614   0.02131   0.02861   0.03407
   0.03855   0.04235   0.04566   0.04857   0.05111   0.05333   0.05526
   0.05691   0.05830   0.05943   0.06033   0.06100   0.06145   0.06169
   0.06171   0.06155   0.06119   0.06065   0.05993   0.05904   0.05799
   0.05679   0.05544   0.05232   0.04870   0.04464   0.04020   0.03785
   0.03543   0.03294   0.03039   0.02779   0.02514   0.02245   0.01973
   0.01699   0.01422   0.01143   0.00864   0.00583   0.00303   0.00022
  -0.00259
   0.00293  -0.00264  -0.00575  -0.00892  -0.01274  -0.01714  -0.01991
  -0.02193  -0.02349  -0.02476  -0.02582  -0.02673  -0.02753  -0.02824
  -0.02887  -0.02943  -0.02993  -0.03036  -0.03073  -0.03103  -0.03127
  -0.03144  -0.03154  -0.03157  -0.03153  -0.03141  -0.03121  -0.03094
  -0.03060  -0.03018  -0.02912  -0.02778  -0.02617  -0.02431  -0.02329
  -0.02222  -0.02109  -0.01991  -0.01869  -0.01742  -0.01612  -0.01478
  -0.01341  -0.01201  -0.01059  -0.00915  -0.00769  -0.00622  -0.00475
  -0.00327
 570.35352 270.20850 650.74927   0.0      1.00000                      155.78210
  -0.00230   0.00406   0.00735   0.01110   0.01637   0.02382   0.02939
   0.03398   0.03791   0.04135   0.04441   0.04713   0.04954   0.05168
   0.05356   0.05519   0.05659   0.05775   0.05870   0.05943   0.05995
   0.06028   0.06041   0.06035   0.06010   0.05968   0.05909   0.05833
   0.05741   0.05634   0.05377   0.05067   0.04710   0.04310   0.04096
   0.03874   0.03645   0.03408   0.03165   0.02917   0.02663   0.02406
   0.02145   0.01882   0.01616   0.01348   0.01079   0.00809   0.00539
   0.00269
  -0.00230  -0.00788  -0.01098  -0.01409  -0.01778  -0.02203  -0.02463
  -0.02648  -0.02789  -0.02902  -0.02996  -0.03077  -0.03147  -0.03208
  -0.03261  -0.03307  -0.03347  -0.03379  -0.03405  -0.03423  -0.03434
  -0.03437  -0.03432  -0.03419  -0.03398  -0.03369  -0.03332  -0.03286
  -0.03232  -0.03170  -0.03022  -0.02842  -0.02634  -0.02397  -0.02269
  -0.02135  -0.01994  -0.01849  -0.01698  -0.01542  -0.01381  -0.01217
  -0.01049  -0.00878  -0.00704  -0.00528  -0.00349  -0.00170   0.00010
   0.00191
 586.99512 305.95312 655.45459   0.0      1.00000                      154.59607
  -0.00935  -0.00286   0.00047   0.00431   0.00970   0.01732   0.02303
   0.02777   0.03185   0.03546   0.03869   0.04160   0.04424   0.04661
   0.04874   0.05065   0.05234   0.05381   0.05508   0.05615   0.05703
   0.05771   0.05820   0.05852   0.05865   0.05861   0.05840   0.05803
   0.05749   0.05680   0.05498   0.05261   0.04973   0.04640   0.04458
   0.04266   0.04066   0.03858   0.03642   0.03420   0.03192   0.02958
   0.02720   0.02478   0.02233   0.01985   0.01735   0.01485   0.01233
   0.00981
  -0.00935  -0.01496  -0.01809  -0.02107  -0.02457  -0.02855  -0.03089
  -0.03250  -0.03369  -0.03462  -0.03538  -0.03602  -0.03655  -0.03700
  -0.03737  -0.03766  -0.03788  -0.03801  -0.03807  -0.03804  -0.03794
  -0.03774  -0.03746  -0.03709  -0.03664  -0.03609  -0.03546  -0.03474
  -0.03393  -0.03303  -0.03098  -0.02860  -0.02590  -0.02289  -0.02128
  -0.01960  -0.01786  -0.01606  -0.01419  -0.01228  -0.01031  -0.00830
  -0.00624  -0.00415  -0.00202   0.00013   0.00230   0.00449   0.00669
   0.00890
```

R84-1788-011(3/4)B

Table 5 F-14A Isolated Wing, $\Lambda = 25^{\circ}$ (Sheet 4 of 4)

```
FILE: A99W      F14-25

 603.63672 341.69775 660.15967   0.0       1.00000                          153.41003
  -0.01938  -0.01271  -0.00932  -0.00541   0.00018   0.00806   0.01399
   0.01891   0.02318   0.02698   0.03042   0.03355   0.03642   0.03905
   0.04147   0.04368   0.04570   0.04753   0.04917   0.05064   0.05192
   0.05304   0.05398   0.05476   0.05537   0.05582   0.05610   0.05623
   0.05621   0.05604   0.05526   0.05393   0.05209   0.04978   0.04845
   0.04703   0.04551   0.04389   0.04220   0.04042   0.03857   0.03666
   0.03469   0.03267   0.03061   0.02852   0.02640   0.02425   0.02210
   0.01994
  -0.01938  -0.02503  -0.02810  -0.03099  -0.03426  -0.03772  -0.03958
  -0.04075  -0.04155  -0.04213  -0.04256  -0.04287  -0.04307  -0.04319
  -0.04322  -0.04317  -0.04303  -0.04280  -0.04249  -0.04210  -0.04162
  -0.04106  -0.04040  -0.03966  -0.03883  -0.03791  -0.03691  -0.03581
  -0.03462  -0.03335  -0.03053  -0.02738  -0.02389  -0.02008  -0.01806
  -0.01597  -0.01381  -0.01158  -0.00928  -0.00693  -0.00452  -0.00206
   0.00044   0.00299   0.00558   0.00819   0.01083   0.01349   0.01616
   0.01883
 618.54053 373.70972 664.37329   0.0       1.00000                          152.34717
  -0.03280  -0.02607  -0.02241  -0.01837  -0.01258  -0.00439   0.00179
   0.00694   0.01142   0.01544   0.01910   0.02246   0.02557   0.02847
   0.03117   0.03368   0.03602   0.03820   0.04022   0.04207   0.04378
   0.04533   0.04674   0.04800   0.04911   0.05008   0.05090   0.05159
   0.05214   0.05256   0.05301   0.05297   0.05247   0.05153   0.05092
   0.05021   0.04940   0.04852   0.04755   0.04652   0.04541   0.04425
   0.04302   0.04175   0.04044   0.03909   0.03772   0.03632   0.03491
   0.03349
  -0.03280  -0.03857  -0.04159  -0.04421  -0.04701  -0.04939  -0.05010
  -0.05021  -0.05007  -0.04981  -0.04949  -0.04913  -0.04874  -0.04830
  -0.04781  -0.04727  -0.04667  -0.04600  -0.04527  -0.04446  -0.04357
  -0.04261  -0.04155  -0.04041  -0.03918  -0.03786  -0.03645  -0.03494
  -0.03334  -0.03164  -0.02797  -0.02392  -0.01951  -0.01476  -0.01226
  -0.00968  -0.00703  -0.00431  -0.00151   0.00134   0.00425   0.00721
   0.01022   0.01328   0.01636   0.01948   0.02262   0.02578   0.02895
   0.03212
```

R84-1788-011(4/4)B

Table 6 F-14A Isolated Wing, $\Lambda = 35^{\circ}$ (Sheet 1 of 4)

```
FILE: A99W      F14-35


F-14 WING ALONE (35 DEGREE LE)
2.0         0.80        3.0         10.0        100.0       80.0        3.0
11.0        50.0        1.0         532.5       160.0       81360.0     0.4
 416.25928    0.0      599.60083     0.0         1.00000                          162.59918
   0.0        0.00198    0.00499     0.01000     0.02000     0.04005     0.06000
   0.08000    0.10000    0.12000     0.14006     0.16000     0.18000     0.20000
   0.22000    0.24000    0.26000     0.28000     0.30000     0.32000     0.34000
   0.36000    0.38000    0.40000     0.42000     0.44000     0.46000     0.48000
   0.50000    0.52000    0.56000     0.60000     0.64000     0.68000     0.70000
   0.72000    0.74000    0.76000     0.78000     0.80000     0.82000     0.84000
   0.86000    0.88000    0.90000     0.92000     0.94000     0.96000     0.98000
   1.00000
   0.00407    0.00948    0.01259     0.01677     0.02290     0.03171     0.03824
   0.04347    0.04770    0.05110     0.05384     0.05601     0.05770     0.05899
   0.05994    0.06058    0.06097     0.06113     0.06109     0.06087     0.06049
   0.05997    0.05933    0.05856     0.05768     0.05670     0.05561     0.05444
   0.05317    0.05182    0.04885     0.04555     0.04193     0.03799     0.03590
   0.03375    0.03151    0.02921     0.02685     0.02442     0.02192     0.01937
   0.01677    0.01412    0.01143     0.00870     0.00594     0.00315     0.00035
  -0.00246
   0.00407   -0.00141   -0.00531    -0.00945    -0.01471    -0.02127    -0.02547
  -0.02849   -0.03077   -0.03253    -0.03390    -0.03497    -0.03579    -0.03640
  -0.03683   -0.03709   -0.03721    -0.03719    -0.03704    -0.03679    -0.03643
  -0.03597   -0.03542   -0.03480    -0.03411    -0.03335    -0.03253    -0.03167
  -0.03076   -0.02981   -0.02783    -0.02575    -0.02362    -0.02147    -0.02040
  -0.01933   -0.01827   -0.01722    -0.01618    -0.01516    -0.01415    -0.01316
  -0.01218   -0.01121   -0.01027    -0.00933    -0.00841    -0.00750    -0.00659
  -0.00569
 464.23364   68.50000  621.27344     0.0         1.00000                          161.17725
   0.00527    0.01078    0.01390     0.01781     0.02355     0.03175     0.03783
   0.04271    0.04670    0.04997     0.05266     0.05483     0.05658     0.05796
   0.05901    0.05978    0.06030     0.06058     0.06066     0.06055     0.06027
   0.05983    0.05924    0.05852     0.05766     0.05669     0.05559     0.05439
   0.05308    0.05167    0.04855     0.04506     0.04123     0.03708     0.03489
   0.03264    0.03031    0.02792     0.02547     0.02297     0.02042     0.01781
   0.01517    0.01249    0.00977     0.00703     0.00427     0.00148    -0.00131
  -0.00411
   0.00527   -0.00009   -0.00373    -0.00755    -0.01237    -0.01830    -0.02206
  -0.02477   -0.02681   -0.02840    -0.02967    -0.03066    -0.03146    -0.03208
  -0.03255   -0.03289   -0.03310    -0.03321    -0.03322    -0.03314    -0.03297
  -0.03272   -0.03240   -0.03201    -0.03155    -0.03103    -0.03046    -0.02984
  -0.02917   -0.02846   -0.02693    -0.02527    -0.02352    -0.02168    -0.02075
  -0.01980   -0.01885   -0.01789    -0.01693    -0.01596    -0.01500    -0.01403
  -0.01307   -0.01211   -0.01116    -0.01021    -0.00926    -0.00832    -0.00738
  -0.00644
 485.59448   99.00000  630.92334     0.0         1.00000                          160.54413
   0.00595    0.01152    0.01463     0.01840     0.02391     0.03177     0.03760
   0.04229    0.04614    0.04933     0.05199     0.05416     0.05595     0.05738
   0.05849    0.05933    0.05992     0.06027     0.06042     0.06037     0.06015
   0.05975    0.05920    0.05850     0.05766     0.05668     0.05558     0.05436
   0.05303    0.05158    0.04838     0.04479     0.04084     0.03657     0.03433
   0.03201    0.02963    0.02720     0.02470     0.02216     0.01957     0.01694
   0.01427    0.01157    0.00884     0.00609     0.00333     0.00055    -0.00224
  -0.00504
```

R84-1788-012(1/4)B

Table 6 F-14A Isolated Wing, $\Lambda = 35^{\circ}$ (Sheet 2 of 4)

FILE: A99W F14-35

```
  0.00595   0.00065  -0.00284  -0.00648  -0.01106  -0.01662  -0.02014
 -0.02267  -0.02459  -0.02609  -0.02729  -0.02825  -0.02903  -0.02965
 -0.03014  -0.03052  -0.03080  -0.03098  -0.03108  -0.03109  -0.03103
 -0.03090  -0.03070  -0.03044  -0.03011  -0.02973  -0.02930  -0.02882
 -0.02828  -0.02771  -0.02643  -0.02501  -0.02346  -0.02181  -0.02095
 -0.02007  -0.01917  -0.01827  -0.01734  -0.01641  -0.01547  -0.01453
 -0.01358  -0.01262  -0.01166  -0.01070  -0.00974  -0.00878  -0.00782
 -0.00686
505.36572 127.23000 639.85498   0.0       1.00000                    159.95813
  0.00667   0.01231   0.01543   0.01904   0.02430   0.03179   0.03735
  0.04183   0.04554   0.04865   0.05127   0.05345   0.05526   0.05675
  0.05793   0.05885   0.05951   0.05994   0.06016   0.06018   0.06001
  0.05966   0.05915   0.05847   0.05765   0.05668   0.05557   0.05434
  0.05297   0.05149   0.04820   0.04449   0.04042   0.03602   0.03371
  0.03134   0.02890   0.02641   0.02387   0.02128   0.01865   0.01599
  0.01330   0.01058   0.00784   0.00508   0.00231  -0.00047  -0.00325
 -0.00604
  0.00667   0.00145  -0.00188  -0.00532  -0.00964  -0.01482  -0.01807
 -0.02041  -0.02219  -0.02359  -0.02472  -0.02564  -0.02640  -0.02703
 -0.02755  -0.02797  -0.02831  -0.02857  -0.02876  -0.02888  -0.02893
 -0.02893  -0.02886  -0.02874  -0.02856  -0.02833  -0.02804  -0.02771
 -0.02732  -0.02689  -0.02589  -0.02472  -0.02339  -0.02194  -0.02116
 -0.02036  -0.01953  -0.01867  -0.01780  -0.01690  -0.01599  -0.01506
 -0.01412  -0.01317  -0.01220  -0.01123  -0.01026  -0.00928  -0.00829
 -0.00731
528.30591 159.98500 650.21826   0.0       1.00000                    159.27820
  0.00768   0.01341   0.01652   0.01992   0.02484   0.03182   0.03700
  0.04119   0.04470   0.04770   0.05027   0.05245   0.05432   0.05588
  0.05715   0.05817   0.05895   0.05949   0.05980   0.05991   0.05982
  0.05954   0.05908   0.05844   0.05764   0.05667   0.05556   0.05430
  0.05290   0.05137   0.04795   0.04409   0.03984   0.03526   0.03287
  0.03041   0.02789   0.02533   0.02272   0.02007   0.01739   0.01468
  0.01195   0.00921   0.00645   0.00368   0.00091  -0.00187  -0.00465
 -0.00743
  0.00768   0.00255  -0.00054  -0.00373  -0.00767  -0.01232  -0.01521
 -0.01728  -0.01886  -0.02013  -0.02116  -0.02203  -0.02276  -0.02340
 -0.02395  -0.02444  -0.02486  -0.02523  -0.02555  -0.02581  -0.02603
 -0.02620  -0.02632  -0.02639  -0.02642  -0.02639  -0.02631  -0.02617
 -0.02599  -0.02576  -0.02514  -0.02432  -0.02331  -0.02211  -0.02145
 -0.02075  -0.02001  -0.01923  -0.01842  -0.01758  -0.01670  -0.01580
 -0.01487  -0.01392  -0.01295  -0.01197  -0.01097  -0.00997  -0.00895
 -0.00794
551.25439 192.74010 660.58105   0.0       1.00000                    158.39294
  0.00652   0.01219   0.01515   0.01851   0.02329   0.02992   0.03482
  0.03880   0.04217   0.04508   0.04761   0.04979   0.05168   0.05330
  0.05465   0.05575   0.05662   0.05727   0.05770   0.05793   0.05797
  0.05781   0.05747   0.05696   0.05628   0.05544   0.05445   0.05331
  0.05203   0.05062   0.04742   0.04377   0.03972   0.03533   0.03302
  0.03064   0.02821   0.02572   0.02319   0.02062   0.01801   0.01537
  0.01271   0.01003   0.00733   0.00462   0.00191  -0.00081  -0.00352
 -0.00624
  0.00652   0.00128  -0.00172  -0.00478  -0.00852  -0.01292  -0.01571
 -0.01778  -0.01940  -0.02074  -0.02187  -0.02285  -0.02371  -0.02448
 -0.02518  -0.02581  -0.02638  -0.02689  -0.02735  -0.02775  -0.02809
 -0.02837  -0.02860  -0.02876  -0.02886  -0.02889  -0.02886  -0.02876
```

R84-1788-012(2/4)B

Table 6 F-14A Isolated Wing, $\Lambda = 35^{\circ}$ (Sheet 3 of 4)

FILE: A99W F14-35

-0.02860	-0.02837	-0.02770	-0.02678	-0.02560	-0.02419	-0.02340	
-0.02256	-0.02166	-0.02072	-0.01973	-0.01869	-0.01762	-0.01651	
-0.01537	-0.01420	-0.01301	-0.01179	-0.01056	-0.00932	-0.00807	
-0.00681							
574.21240	225.49500	670.94409	0.0	1.00000			157.27454
0.00265	0.00839	0.01139	0.01478	0.01962	0.02634	0.03133	
0.03539	0.03886	0.04187	0.04451	0.04682	0.04885	0.05062	
0.05214	0.05341	0.05447	0.05531	0.05595	0.05639	0.05663	
0.05669	0.05657	0.05628	0.05582	0.05520	0.05442	0.05350	
0.05243	0.05123	0.04843	0.04517	0.04148	0.03743	0.03527	
0.03304	0.03076	0.02841	0.02601	0.02356	0.02107	0.01854	
0.01598	0.01340	0.01080	0.00818	0.00556	0.00293	0.00030	
-0.00233							
0.00265	-0.00261	-0.00562	-0.00862	-0.01228	-0.01655	-0.01922	
-0.02118	-0.02270	-0.02395	-0.02499	-0.02589	-0.02668	-0.02739	
-0.02802	-0.02858	-0.02909	-0.02953	-0.02991	-0.03023	-0.03048	
-0.03067	-0.03080	-0.03086	-0.03084	-0.03076	-0.03060	-0.03036	
-0.03007	-0.02969	-0.02871	-0.02746	-0.02592	-0.02413	-0.02314	
-0.02209	-0.02098	-0.01982	-0.01861	-0.01735	-0.01605	-0.01470	
-0.01332	-0.01190	-0.01046	-0.00899	-0.00751	-0.00601	-0.00450	
-0.00298							
597.17041	258.25000	681.30713	0.0	1.00000			156.15625
-0.00237	0.00345	0.00650	0.00993	0.01484	0.02169	0.02679	
0.03097	0.03456	0.03770	0.04049	0.04296	0.04517	0.04714	
0.04887	0.05038	0.05168	0.05277	0.05367	0.05438	0.05490	
0.05524	0.05540	0.05539	0.05522	0.05488	0.05439	0.05374	
0.05295	0.05202	0.04975	0.04698	0.04377	0.04015	0.03820	
0.03617	0.03407	0.03190	0.02967	0.02738	0.02504	0.02265	
0.02023	0.01778	0.01531	0.01281	0.01031	0.00779	0.00526	
0.00274							
-0.00237	-0.00766	-0.01069	-0.01360	-0.01717	-0.02127	-0.02379	
-0.02560	-0.02699	-0.02811	-0.02905	-0.02985	-0.03055	-0.03117	
-0.03172	-0.03219	-0.03261	-0.03295	-0.03324	-0.03345	-0.03359	
-0.03366	-0.03366	-0.03358	-0.03342	-0.03318	-0.03286	-0.03245	
-0.03197	-0.03140	-0.03003	-0.02834	-0.02634	-0.02405	-0.02280	
-0.02149	-0.02010	-0.01866	-0.01716	-0.01561	-0.01400	-0.01235	
-0.01065	-0.00892	-0.00715	-0.00536	-0.00354	-0.00170	0.00014	
0.00200							
620.12866	291.00513	691.66992	0.0	1.00000			155.03796
-0.00916	-0.00338	-0.00018	0.00333	0.00837	0.01542	0.02068	
0.02500	0.02872	0.03201	0.03496	0.03760	0.03999	0.04216	
0.04411	0.04586	0.04741	0.04878	0.04996	0.05097	0.05180	
0.05246	0.05296	0.05329	0.05347	0.05348	0.05335	0.05306	
0.05263	0.05206	0.05051	0.04845	0.04593	0.04297	0.04135	
0.03963	0.03784	0.03596	0.03401	0.03199	0.02991	0.02778	
0.02561	0.02339	0.02114	0.01886	0.01656	0.01425	0.01193	
0.00960							
-0.00916	-0.01455	-0.01752	-0.02035	-0.02377	-0.02763	-0.02993	
-0.03151	-0.03270	-0.03363	-0.03440	-0.03504	-0.03558	-0.03604	
-0.03642	-0.03673	-0.03697	-0.03713	-0.03722	-0.03722	-0.03715	
-0.03700	-0.03677	-0.03645	-0.03605	-0.03556	-0.03498	-0.03432	
-0.03356	-0.03273	-0.03080	-0.02853	-0.02593	-0.02302	-0.02145	
-0.01981	-0.01810	-0.01632	-0.01448	-0.01258	-0.01062	-0.00861	
-0.00655	-0.00446	-0.00232	-0.00015	0.00205	0.00426	0.00649	
0.00873							

R84-1788-012(3/4)B

Table 6 F-14A Isolated Wing, $\Lambda = 35^{\circ}$ (Sheet 4 of 4)

FILE: A99W F14-35

```
 643.08667 323.76025 702.03296   0.0       1.00000                          153.91968
  -0.01886  -0.01298  -0.00965  -0.00604  -0.00088  0.00641  0.01187
   0.01638   0.02027   0.02373   0.02686   0.02970  0.03230  0.03470
   0.03689   0.03891   0.04075   0.04243   0.04395  0.04531  0.04651
   0.04756   0.04846   0.04921   0.04981   0.05027  0.05059  0.05077
   0.05081   0.05072   0.05016   0.04909   0.04757  0.04561  0.04448
   0.04326   0.04195   0.04055   0.03907   0.03752  0.03590  0.03422
   0.03249   0.03071   0.02888   0.02703   0.02514  0.02324  0.02132
   0.01939
  -0.01886  -0.02428  -0.02723  -0.02998  -0.03316  -0.03657  -0.03843
  -0.03960  -0.04042  -0.04101  -0.04145  -0.04177  -0.04200  -0.04214
  -0.04220  -0.04217  -0.04207  -0.04188  -0.04162  -0.04127  -0.04084
  -0.04033  -0.03973  -0.03905  -0.03829  -0.03743  -0.03649  -0.03546
  -0.03434  -0.03313  -0.03046  -0.02743  -0.02407  -0.02037  -0.01841
  -0.01636  -0.01424  -0.01205  -0.00979  -0.00746  -0.00507  -0.00263
  -0.00013   0.00242   0.00500   0.00762   0.01027  0.01295  0.01564
   0.01833
 658.07690 345.14697 708.79883   0.0       1.00000                          153.18933
  -0.02779  -0.02173  -0.01837  -0.01469  -0.00942  -0.00193  0.00371
   0.00838   0.01243   0.01603   0.01930   0.02229  0.02504  0.02760
   0.02997   0.03218   0.03422   0.03612   0.03786  0.03947  0.04093
   0.04225   0.04344   0.04450   0.04542   0.04621  0.04687  0.04741
   0.04782   0.04811   0.04834   0.04811   0.04747  0.04642  0.04576
   0.04502   0.04419   0.04328   0.04231   0.04126  0.04015  0.03899
   0.03778   0.03652   0.03523   0.03390   0.03255  0.03118  0.02980
   0.02841
  -0.02779  -0.03330  -0.03621  -0.03885  -0.04176  -0.04457  -0.04583
  -0.04643  -0.04670  -0.04679  -0.04675  -0.04662  -0.04642  -0.04615
  -0.04582  -0.04543  -0.04497  -0.04445  -0.04386  -0.04320  -0.04247
  -0.04166  -0.04077  -0.03980  -0.03874  -0.03760  -0.03637  -0.03505
  -0.03365  -0.03215  -0.02888  -0.02525  -0.02126  -0.01693  -0.01464
  -0.01227  -0.00982  -0.00729  -0.00469  -0.00203  0.00070  0.00349
   0.00633   0.00921   0.01214   0.01511   0.01810  0.02111  0.02414
   0.02718
```

R84-1788-012(4/4)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 1 of 22)

```
FILE: A22W      F14-20


F-14 WING ALONE (20 DEGREE LE)
 FNX         FNY         FNZ         FPLOT       FCONT
 48.         4.           8.         -1.         0.
 FIT         COV         P1          P2          P3          BETA        STRIP       F
  15.             1.E-6 1.6         1.00        1.0         .20         0.7         1.
  15.             1.E-6 1.6         1.00        1.0         .20         0.7         1.
  30.             1.E-6 1.6         1.00        1.0         .2          0.7
 FMACH       YA          AL          CDO
  .70         0.           4.0        0.
ZSYM        FNC         SWEEP1      SWEEP2      SWEEP       DIHED1      DIHED2      DIHED
      1.00       11.00       19.92       20.02       20.02       -1.14       -2.82       -2.82
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
     0.0       456.499     162.706     167.210       1.000       0.0         1.000
YSYM        FNU         FNL
       0.0        50.0        50.0
TRL         SLT         XSING       ZSING
    10.9990    -0.0476     0.0043      0.0045
XU          ZU
    0.0         0.00466
    0.00191     0.01046
    0.00491     0.01422
    0.00995     0.01854
    0.02000     0.02504
    0.03993     0.03454
    0.06000     0.04170
    0.08000     0.04730
    0.10000     0.05177
    0.12000     0.05534
    0.14000     0.05818
    0.16000     0.06042
    0.18000     0.06214
    0.20000     0.06344
    0.22000     0.06437
    0.24000     0.06499
    0.26000     0.06533
    0.28000     0.06543
    0.30000     0.06532
    0.32000     0.06502
    0.34000     0.06456
    0.36000     0.06395
    0.38000     0.06320
    0.40000     0.06232
    0.42000     0.06133
    0.44000     0.06023
    0.46000     0.05903
    0.48000     0.05773
    0.50000     0.05635
    0.52000     0.05487
    0.56000     0.05165
    0.60000     0.04810
    0.64000     0.04424
    0.68000     0.04007
    0.70000     0.03788
    0.72000     0.03561
```

R84-1788-013(1/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 2 of 22)

FILE: A22W F14-20

0.74000	0.03328
0.76000	0.03088
0.78000	0.02842
0.80000	0.02590
0.82000	0.02332
0.84000	0.02069
0.86000	0.01800
0.88000	0.01528
0.90000	0.01251
0.92000	0.00971
0.94000	0.00688
0.96000	0.00403
0.98000	0.00117
1.00000	-0.00171

XL	ZL
0.0	0.00466
0.00191	-0.00158
0.00491	-0.00540
0.00995	-0.00991
0.02000	-0.01570
0.03993	-0.02267
0.06000	-0.02714
0.08000	-0.03032
0.10000	-0.03272
0.12000	-0.03459
0.14000	-0.03606
0.16000	-0.03721
0.18000	-0.03810
0.20000	-0.03876
0.22000	-0.03921
0.24000	-0.03949
0.26000	-0.03960
0.28000	-0.03957
0.30000	-0.03940
0.32000	-0.03912
0.34000	-0.03873
0.36000	-0.03824
0.38000	-0.03766
0.40000	-0.03701
0.42000	-0.03629
0.44000	-0.03551
0.46000	-0.03468
0.48000	-0.03381
0.50000	-0.03290
0.52000	-0.03196
0.56000	-0.03000
0.60000	-0.02796
0.64000	-0.02587
0.68000	-0.02377
0.70000	-0.02272
0.72000	-0.02166
0.74000	-0.02062
0.76000	-0.01957
0.78000	-0.01854
0.80000	-0.01751

R84-1788-013(2/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20°$ (Sheet 3 of 22)

```
FILE: A22W      F14-20


    0.82000   -0.01649
    0.84000   -0.01547
    0.86000   -0.01447
    0.88000   -0.01347
    0.90000   -0.01248
    0.92000   -0.01150
    0.94000   -0.01052
    0.96000   -0.00955
    0.98000   -0.00858
    1.00000   -0.00761
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   68.500    481.430    161.211    145.327      1.000      0.0         1.000
YSYM        FNU         FNL
        0.0       50.0       50.0
TRL         SLT         XSING      ZSING ,
    11.0983    -0.0474     0.0042     0.0061
XU          ZU
    0.0         0.00602
    0.00191     0.01192
    0.00491     0.01557
    0.00995     0.01970
    0.02000     0.02583
    0.03993     0.03469
    0.06000     0.04135
    0.08000     0.04661
    0.10000     0.05086
    0.12000     0.05432
    0.14000     0.05714
    0.16000     0.05941
    0.18000     0.06122
    0.20000     0.06263
    0.22000     0.06368
    0.24000     0.06443
    0.26000     0.06491
    0.28000     0.06514
    0.30000     0.06515
    0.32000     0.06496
    0.34000     0.06459
    0.36000     0.06404
    0.38000     0.06335
    0.40000     0.06250
    0.42000     0.06153
    0.44000     0.06042
    0.46000     0.05920
    0.48000     0.05786
    0.50000     0.05641
    0.52000     0.05486
    0.56000     0.05146
    0.60000     0.04769
    0.64000     0.04358
    0.68000     0.03916
    0.70000     0.03684
    0.72000     0.03445
    0.74000     0.03200
    0.76000     0.02948
```

R84-1788-013(3/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 4 of 22)

FILE: A22W F14-20

0.78000	0.02692
0.80000	0.02429
0.82000	0.02162
0.84000	0.01891
0.86000	0.01615
0.88000	0.01336
0.90000	0.01054
0.92000	0.00769
0.94000	0.00482
0.96000	0.00194
0.98000	-0.00095
1.00000	-0.00385

XL	ZL
0.0	0.00602
0.00191	0.00001
0.00491	-0.00369
0.00995	-0.00783
0.02000	-0.01309
0.03993	-0.01939
0.06000	-0.02343
0.08000	-0.02632
0.10000	-0.02852
0.12000	-0.03025
0.14000	-0.03163
0.16000	-0.03274
0.18000	-0.03363
0.20000	-0.03433
0.22000	-0.03487
0.24000	-0.03525
0.26000	-0.03551
0.28000	-0.03565
0.30000	-0.03567
0.32000	-0.03559
0.34000	-0.03542
0.36000	-0.03517
0.38000	-0.03483
0.40000	-0.03442
0.42000	-0.03395
0.44000	-0.03342
0.46000	-0.03283
0.48000	-0.03219
0.50000	-0.03151
0.52000	-0.03078
0.56000	-0.02922
0.60000	-0.02754
0.64000	-0.02576
0.68000	-0.02390
0.70000	-0.02295
0.72000	-0.02199
0.74000	-0.02102
0.76000	-0.02005
0.78000	-0.01906
0.80000	-0.01808
0.82000	-0.01709
0.84000	-0.01610

R84-1788-013(4/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^\circ$ (Sheet 5 of 22)

```
FILE: A22W      F14-20


    0.86000   -0.01510
    0.88000   -0.01411
    0.90000   -0.01312
    0.92000   -0.01213
    0.94000   -0.01114
    0.96000   -0.01016
    0.98000   -0.00917
    1.00000   -0.00818
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
     99.000    492.531    160.546    135.583       1.000       0.0         1.000
YSYM        FNU         FNL
        0.0        50.0        50.0
TRL         SLT         XSING       ZSING
    11.0980    -0.0477     0.0042     0.0067
XU          ZU
    0.0         0.00677
    0.00191     0.01272
    0.00491     0.01631
    0.00995     0.02033
    0.02000     0.02626
    0.03993     0.03476
    0.06000     0.04116
    0.08000     0.04622
    0.10000     0.05036
    0.12000     0.05376
    0.14000     0.05657
    0.16000     0.05886
    0.18000     0.06071
    0.20000     0.06218
    0.22000     0.06331
    0.24000     0.06413
    0.26000     0.06468
    0.28000     0.06498
    0.30000     0.06506
    0.32000     0.06493
    0.34000     0.06460
    0.36000     0.06410
    0.38000     0.06343
    0.40000     0.06261
    0.42000     0.06163
    0.44000     0.06053
    0.46000     0.05929
    0.48000     0.05793
    0.50000     0.05645
    0.52000     0.05485
    0.56000     0.05135
    0.60000     0.04746
    0.64000     0.04322
    0.68000     0.03866
    0.70000     0.03627
    0.72000     0.03381
    0.74000     0.03129
    0.76000     0.02872
    0.78000     0.02609
    0.80000     0.02341
```

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 6 of 22)

FILE: A22W F14-20

0.82000	0.02069
0.84000	0.01793
0.86000	0.01513
0.88000	0.01231
0.90000	0.00946
0.92000	0.00658
0.94000	0.00369
0.96000	0.00079
0.98000	-0.00212
1.00000	-0.00503

XL	ZL
0.0	0.00677
0.00191	0.00089
0.00491	-0.00276
0.00995	-0.00669
0.02000	-0.01165
0.03993	-0.01759
0.06000	-0.02139
0.08000	-0.02412
0.10000	-0.02621
0.12000	-0.02786
0.14000	-0.02920
0.16000	-0.03029
0.18000	-0.03118
0.20000	-0.03190
0.22000	-0.03248
0.24000	-0.03293
0.26000	-0.03326
0.28000	-0.03349
0.30000	-0.03362
0.32000	-0.03366
0.34000	-0.03361
0.36000	-0.03348
0.38000	-0.03328
0.40000	-0.03301
0.42000	-0.03267
0.44000	-0.03227
0.46000	-0.03181
0.48000	-0.03130
0.50000	-0.03074
0.52000	-0.03014
0.56000	-0.02880
0.60000	-0.02731
0.64000	-0.02569
0.68000	-0.02397
0.70000	-0.02308
0.72000	-0.02217
0.74000	-0.02125
0.76000	-0.02030
0.78000	-0.01935
0.80000	-0.01839
0.82000	-0.01742
0.84000	-0.01644
0.86000	-0.01545
0.88000	-0.01446

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 7 of 22)

```
FILE: A22W      F14-20


   0.90000  -0.01347
   0.92000  -0.01248
   0.94000  -0.01148
   0.96000  -0.01049
   0.98000  -0.00949
   1.00000  -0.00850
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   127.230   502.805   159.930   126.565      1.000      0.0        1.000
YSYM        FNU         FNL
       0.0       50.0       50.0
TRL         SLT         XSING      ZSING
   11.1967   -0.0480     0.0041     0.0076
XU          ZU
   0.0         0.00756
   0.00191     0.01357
   0.00491     0.01710
   0.00995     0.02101
   0.02000     0.02672
   0.03993     0.03485
   0.06000     0.04095
   0.08000     0.04582
   0.10000     0.04983
   0.12000     0.05317
   0.14000     0.05596
   0.16000     0.05827
   0.18000     0.06017
   0.20000     0.06170
   0.22000     0.06291
   0.24000     0.06381
   0.26000     0.06444
   0.28000     0.06482
   0.30000     0.06496
   0.32000     0.06489
   0.34000     0.06462
   0.36000     0.06416
   0.38000     0.06352
   0.40000     0.06271
   0.42000     0.06175
   0.44000     0.06064
   0.46000     0.05938
   0.48000     0.05800
   0.50000     0.05648
   0.52000     0.05485
   0.56000     0.05124
   0.60000     0.04722
   0.64000     0.04284
   0.68000     0.03812
   0.70000     0.03566
   0.72000     0.03313
   0.74000     0.03054
   0.76000     0.02790
   0.78000     0.02521
   0.80000     0.02247
   0.82000     0.01970
   0.84000     0.01689
```

R84-1788-013(7/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 8 of 22)

FILE: A22W F14-20

0.86000	0.01405
0.88000	0.01119
0.90000	0.00830
0.92000	0.00540
0.94000	0.00249
0.96000	-0.00043
0.98000	-0.00335
1.00000	-0.00628

XL	ZL
0.0	0.00756
0.00191	0.00182
0.00491	-0.00176
0.00995	-0.00548
0.02000	-0.01013
0.03993	-0.01567
0.06000	-0.01922
0.08000	-0.02178
0.10000	-0.02375
0.12000	-0.02532
0.14000	-0.02661
0.16000	-0.02768
0.18000	-0.02857
0.20000	-0.02932
0.22000	-0.02994
0.24000	-0.03046
0.26000	-0.03087
0.28000	-0.03120
0.30000	-0.03144
0.32000	-0.03160
0.34000	-0.03168
0.36000	-0.03169
0.38000	-0.03163
0.40000	-0.03150
0.42000	-0.03130
0.44000	-0.03105
0.46000	-0.03073
0.48000	-0.03036
0.50000	-0.02993
0.52000	-0.02945
0.56000	-0.02834
0.60000	-0.02706
0.64000	-0.02562
0.68000	-0.02405
0.70000	-0.02322
0.72000	-0.02236
0.74000	-0.02148
0.76000	-0.02058
0.78000	-0.01966
0.80000	-0.01872
0.82000	-0.01777
0.84000	-0.01680
0.86000	-0.01582
0.88000	-0.01484
0.90000	-0.01385
0.92000	-0.01285

R84-1788-013(8/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 9 of 22)

```
FILE: A22W      F14-20


   0.94000  -0.01185
   0.96000  -0.01085
   0.98000  -0.00984
   1.00000  -0.00884
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
   164.015   516.193   159.128   114.813      1.000       0.0         1.000
YSYM        FNU         FNL
       0.0       50.0       50.0
TRL         SLT         XSING       ZSING
   11.3102   -0.0478     0.0041     0.0090
XU          ZU
   0.0         0.00878
   0.00191     0.01488
   0.00491     0.01831
   0.00995     0.02205
   0.02000     0.02742
   0.03993     0.03498
   0.06000     0.04063
   0.08000     0.04519
   0.10000     0.04901
   0.12000     0.05226
   0.14000     0.05502
   0.16000     0.05737
   0.18000     0.05934
   0.20000     0.06097
   0.22000     0.06229
   0.24000     0.06331
   0.26000     0.06406
   0.28000     0.06456
   0.30000     0.06481
   0.32000     0.06483
   0.34000     0.06464
   0.36000     0.06424
   0.38000     0.06365
   0.40000     0.06288
   0.42000     0.06193
   0.44000     0.06081
   0.46000     0.05953
   0.48000     0.05811
   0.50000     0.05654
   0.52000     0.05484
   0.56000     0.05107
   0.60000     0.04685
   0.64000     0.04224
   0.68000     0.03730
   0.70000     0.03473
   0.72000     0.03209
   0.74000     0.02939
   0.76000     0.02665
   0.78000     0.02386
   0.80000     0.02103
   0.82000     0.01818
   0.84000     0.01529
   0.86000     0.01239
   0.88000     0.00947
```

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 10 of 22)

FILE: A22W F14-20

0.90000	0.00653
0.92000	0.00359
0.94000	0.00064
0.96000	-0.00231
0.98000	-0.00526
1.00000	-0.00821

XL	ZL
0.0	0.00878
0.00191	0.00324
0.00491	-0.00023
0.00995	-0.00362
0.02000	-0.00778
0.03993	-0.01273
0.06000	-0.01589
0.08000	-0.01819
0.10000	-0.01997
0.12000	-0.02142
0.14000	-0.02263
0.16000	-0.02366
0.18000	-0.02455
0.20000	-0.02534
0.22000	-0.02604
0.24000	-0.02665
0.26000	-0.02720
0.28000	-0.02767
0.30000	-0.02808
0.32000	-0.02843
0.34000	-0.02871
0.36000	-0.02893
0.38000	-0.02909
0.40000	-0.02918
0.42000	-0.02920
0.44000	-0.02917
0.46000	-0.02907
0.48000	-0.02890
0.50000	-0.02868
0.52000	-0.02839
0.56000	-0.02765
0.60000	-0.02668
0.64000	-0.02552
0.68000	-0.02417
0.70000	-0.02343
0.72000	-0.02266
0.74000	-0.02185
0.76000	-0.02100
0.78000	-0.02013
0.80000	-0.01923
0.82000	-0.01831
0.84000	-0.01736
0.86000	-0.01639
0.88000	-0.01541
0.90000	-0.01442
0.92000	-0.01342
0.94000	-0.01241
0.96000	-0.01139

R84-1788-013(10/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^\circ$ (Sheet 11 of 22)

```
FILE: A22W      F14-20


   0.98000  -0.01037
   1.00000  -0.00935
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
   200.799    529.586    158.074    103.058       1.000       0.0         1.000
YSYM        FNU         FNL
        0.0        50.0        50.0
TRL         SLT         XSING       ZSING
   11.5976    -0.0435     0.0042     0.0074
XU          ZU
   0.0         0.00722
   0.00191     0.01327
   0.00491     0.01657
   0.00995     0.02033
   0.02000     0.02564
   0.03993     0.03300
   0.06000     0.03852
   0.08000     0.04301
   0.10000     0.04682
   0.12000     0.05010
   0.14000     0.05294
   0.16000     0.05540
   0.18000     0.05751
   0.20000     0.05930
   0.22000     0.06078
   0.24000     0.06198
   0.26000     0.06291
   0.28000     0.06359
   0.30000     0.06402
   0.32000     0.06421
   0.34000     0.06419
   0.36000     0.06395
   0.38000     0.06351
   0.40000     0.06287
   0.42000     0.06205
   0.44000     0.06105
   0.46000     0.05989
   0.48000     0.05856
   0.50000     0.05708
   0.52000     0.05546
   0.56000     0.05182
   0.60000     0.04770
   0.64000     0.04317
   0.68000     0.03828
   0.70000     0.03572
   0.72000     0.03310
   0.74000     0.03042
   0.76000     0.02770
   0.78000     0.02492
   0.80000     0.02211
   0.82000     0.01927
   0.84000     0.01640
   0.86000     0.01351
   0.88000     0.01061
   0.90000     0.00770
   0.92000     0.00478
```

R84-1788-013(11/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 12 of 22)

FILE: A22W F14-20

0.94000	0.00185
0.96000	-0.00107
0.98000	-0.00400
1.00000	-0.00692

XL	ZL
0.0	0.00722
0.00191	0.00165
0.00491	-0.00173
0.00995	-0.00503
0.02000	-0.00897
0.03993	-0.01357
0.06000	-0.01650
0.08000	-0.01863
0.10000	-0.02029
0.12000	-0.02164
0.14000	-0.02277
0.16000	-0.02375
0.18000	-0.02461
0.20000	-0.02537
0.22000	-0.02606
0.24000	-0.02668
0.26000	-0.02723
0.28000	-0.02772
0.30000	-0.02816
0.32000	-0.02853
0.34000	-0.02884
0.36000	-0.02909
0.38000	-0.02928
0.40000	-0.02940
0.42000	-0.02945
0.44000	-0.02944
0.46000	-0.02936
0.48000	-0.02921
0.50000	-0.02900
0.52000	-0.02871
0.56000	-0.02795
0.60000	-0.02694
0.64000	-0.02570
0.68000	-0.02424
0.70000	-0.02343
0.72000	-0.02258
0.74000	-0.02168
0.76000	-0.02074
0.78000	-0.01977
0.80000	-0.01876
0.82000	-0.01772
0.84000	-0.01665
0.86000	-0.01556
0.88000	-0.01445
0.90000	-0.01332
0.92000	-0.01217
0.94000	-0.01102
0.96000	-0.00986
0.98000	-0.00869
1.00000	-0.00753

R84-1788-013(12/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 13 of 22)

FILE: A22W F14-20

YLE	XLE	ZLE	CHORD	THICK	ALPHA	NEWSEC
237.584	542.983	156.865	91.297	1.000	0.0	1.000

YSYM	FNU	FNL
0.0	50.0	50.0

TRL	SLT	XSING	ZSING
12.2563	-0.0351	0.0045	0.0032

XU	ZU
0.0	0.00316
0.00191	0.00928
0.00491	0.01260
0.00995	0.01642
0.02000	0.02180
0.03993	0.02928
0.06000	0.03490
0.08000	0.03949
0.10000	0.04341
0.12000	0.04682
0.14000	0.04981
0.16000	0.05243
0.18000	0.05472
0.20000	0.05671
0.22000	0.05840
0.24000	0.05982
0.26000	0.06098
0.28000	0.06189
0.30000	0.06256
0.32000	0.06301
0.34000	0.06323
0.36000	0.06324
0.38000	0.06304
0.40000	0.06265
0.42000	0.06207
0.44000	0.06131
0.46000	0.06038
0.48000	0.05928
0.50000	0.05802
0.52000	0.05662
0.56000	0.05338
0.60000	0.04964
0.64000	0.04545
0.68000	0.04087
0.70000	0.03846
0.72000	0.03598
0.74000	0.03342
0.76000	0.03081
0.78000	0.02815
0.80000	0.02544
0.82000	0.02270
0.84000	0.01992
0.86000	0.01712
0.88000	0.01430
0.90000	0.01146
0.92000	0.00861
0.94000	0.00575
0.96000	0.00290

R84-1788-013(13/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 14 of 22)

```
FILE: A22W      F14-20


   0.98000   0.00004
   1.00000  -0.00282
XL         ZL
   0.0       0.00316
   0.00191  -0.00259
   0.00491  -0.00581
   0.00995  -0.00904
   0.02000  -0.01292
   0.03993  -0.01739
   0.06000  -0.02019
   0.08000  -0.02220
   0.10000  -0.02375
   0.12000  -0.02501
   0.14000  -0.02606
   0.16000  -0.02696
   0.18000  -0.02775
   0.20000  -0.02844
   0.22000  -0.02906
   0.24000  -0.02962
   0.26000  -0.03010
   0.28000  -0.03052
   0.30000  -0.03088
   0.32000  -0.03117
   0.34000  -0.03139
   0.36000  -0.03155
   0.38000  -0.03163
   0.40000  -0.03164
   0.42000  -0.03158
   0.44000  -0.03144
   0.46000  -0.03123
   0.48000  -0.03094
   0.50000  -0.03057
   0.52000  -0.03014
   0.56000  -0.02905
   0.60000  -0.02768
   0.64000  -0.02605
   0.68000  -0.02418
   0.70000  -0.02316
   0.72000  -0.02209
   0.74000  -0.02097
   0.76000  -0.01980
   0.78000  -0.01859
   0.80000  -0.01734
   0.82000  -0.01606
   0.84000  -0.01474
   0.86000  -0.01340
   0.88000  -0.01203
   0.90000  -0.01064
   0.92000  -0.00923
   0.94000  -0.00781
   0.96000  -0.00638
   0.98000  -0.00494
   1.00000  -0.00350
  YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
    274.368    556.381    155.656    79.537     1.000      0.0        1.000
```

R84-1788-013(14/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 15 of 22)

FILE: A22W F14-20

YSYM	FNU	FNL
0.0	50.0	50.0

TRL	SLT	XSING	ZSING
12.9288	-0.0246	0.0044	-0.0020

XU	ZU
0.0	-0.00210
0.00191	0.00412
0.00491	0.00754
0.00995	0.01134
0.02000	0.01680
0.03993	0.02441
0.06000	0.03016
0.08000	0.03488
0.10000	0.03893
0.12000	0.04249
0.14000	0.04565
0.16000	0.04845
0.18000	0.05094
0.20000	0.05314
0.22000	0.05507
0.24000	0.05675
0.26000	0.05817
0.28000	0.05936
0.30000	0.06032
0.32000	0.06106
0.34000	0.06158
0.36000	0.06189
0.38000	0.06200
0.40000	0.06191
0.42000	0.06164
0.44000	0.06118
0.46000	0.06054
0.48000	0.05974
0.50000	0.05877
0.52000	0.05765
0.56000	0.05496
0.60000	0.05173
0.64000	0.04802
0.68000	0.04388
0.70000	0.04168
0.72000	0.03939
0.74000	0.03702
0.76000	0.03458
0.78000	0.03209
0.80000	0.02954
0.82000	0.02694
0.84000	0.02431
0.86000	0.02164
0.88000	0.01894
0.90000	0.01623
0.92000	0.01349
0.94000	0.01075
0.96000	0.00800
0.98000	0.00525
1.00000	0.00249

R84-1788-013(15/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 16 of 22)

FILE: A22W F14-20

XL	ZL
0.0	-0.00210
0.00191	-0.00787
0.00491	-0.01123
0.00995	-0.01427
0.02000	-0.01799
0.03993	-0.02226
0.06000	-0.02490
0.08000	-0.02674
0.10000	-0.02814
0.12000	-0.02926
0.14000	-0.03019
0.16000	-0.03098
0.18000	-0.03167
0.20000	-0.03227
0.22000	-0.03280
0.24000	-0.03325
0.26000	-0.03363
0.28000	-0.03395
0.30000	-0.03419
0.32000	-0.03436
0.34000	-0.03446
0.36000	-0.03447
0.38000	-0.03441
0.40000	-0.03426
0.42000	-0.03404
0.44000	-0.03373
0.46000	-0.03334
0.48000	-0.03286
0.50000	-0.03230
0.52000	-0.03167
0.56000	-0.03015
0.60000	-0.02833
0.64000	-0.02622
0.68000	-0.02384
0.70000	-0.02256
0.72000	-0.02122
0.74000	-0.01982
0.76000	-0.01837
0.78000	-0.01687
0.80000	-0.01532
0.82000	-0.01374
0.84000	-0.01211
0.86000	-0.01046
0.88000	-0.00877
0.90000	-0.00706
0.92000	-0.00533
0.94000	-0.00358
0.96000	-0.00183
0.98000	-0.00006
1.00000	0.00171

YLE	XLE	ZLE	CHORD	THICK	ALPHA	NEWSEC
311.153	569.778	154.447	67.777	1.000	0.0	1.000

YSYM	FNU	FNL
0.0	50.0	50.0

R84-1788-013(16/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^\circ$ (Sheet 17 of 22)

FILE: A22W F14-20

TRL	SLT	XSING	ZSING
13.5571	-0.0100	0.0045	-0.0093

XU	ZU
0.0	-0.00919
0.00191	-0.00300
0.00491	0.00061
0.00995	0.00452
0.02000	0.01008
0.03993	0.01787
0.06000	0.02378
0.08000	0.02865
0.10000	0.03287
0.12000	0.03659
0.14000	0.03993
0.16000	0.04294
0.18000	0.04566
0.20000	0.04810
0.22000	0.05030
0.24000	0.05226
0.26000	0.05399
0.28000	0.05550
0.30000	0.05679
0.32000	0.05788
0.34000	0.05876
0.36000	0.05944
0.38000	0.05992
0.40000	0.06022
0.42000	0.06033
0.44000	0.06026
0.46000	0.06001
0.48000	0.05960
0.50000	0.05902
0.52000	0.05828
0.56000	0.05634
0.60000	0.05384
0.64000	0.05083
0.68000	0.04735
0.70000	0.04545
0.72000	0.04347
0.74000	0.04139
0.76000	0.03923
0.78000	0.03700
0.80000	0.03471
0.82000	0.03235
0.84000	0.02994
0.86000	0.02749
0.88000	0.02500
0.90000	0.02249
0.92000	0.01994
0.94000	0.01738
0.96000	0.01481
0.98000	0.01223
1.00000	0.00965

XL	ZL
0.0	-0.00919

R84-1788-013(17/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 18 of 22)

```
FILE: A22W      F14-20

   0.00191  -0.01499
   0.00491  -0.01831
   0.00995  -0.02131
   0.02000  -0.02487
   0.03993  -0.02883
   0.06000  -0.03118
   0.08000  -0.03278
   0.10000  -0.03396
   0.12000  -0.03488
   0.14000  -0.03563
   0.16000  -0.03626
   0.18000  -0.03679
   0.20000  -0.03722
   0.22000  -0.03758
   0.24000  -0.03786
   0.26000  -0.03806
   0.28000  -0.03818
   0.30000  -0.03822
   0.32000  -0.03818
   0.34000  -0.03805
   0.36000  -0.03784
   0.38000  -0.03753
   0.40000  -0.03715
   0.42000  -0.03667
   0.44000  -0.03610
   0.46000  -0.03545
   0.48000  -0.03470
   0.50000  -0.03387
   0.52000  -0.03296
   0.56000  -0.03087
   0.60000  -0.02846
   0.64000  -0.02573
   0.68000  -0.02272
   0.70000  -0.02111
   0.72000  -0.01943
   0.74000  -0.01769
   0.76000  -0.01590
   0.78000  -0.01404
   0.80000  -0.01214
   0.82000  -0.01019
   0.84000  -0.00820
   0.86000  -0.00617
   0.88000  -0.00410
   0.90000  -0.00201
   0.92000   0.00011
   0.94000   0.00225
   0.96000   0.00440
   0.98000   0.00656
   1.00000   0.00873
YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
   347.937    583.175    153.245    56.017     1.000      0.0        1.000
YSYM       FNU        FNL
      0.0       50.0       50.0
TRL        SLT        XSING      ZSING
   13.9241    0.0100     0.0048    -0.0193
```

R84-1788-013(18/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^\circ$ (Sheet 19 of 22)

FILE: A22W F14-20

XU	ZU
0.0	-0.01912
0.00191	-0.01295
0.00491	-0.00937
0.00995	-0.00540
0.02000	0.00037
0.03993	0.00844
0.06000	0.01456
0.08000	0.01963
0.10000	0.02404
0.12000	0.02796
0.14000	0.03151
0.16000	0.03474
0.18000	0.03771
0.20000	0.04043
0.22000	0.04293
0.24000	0.04521
0.26000	0.04729
0.28000	0.04917
0.30000	0.05085
0.32000	0.05235
0.34000	0.05366
0.36000	0.05479
0.38000	0.05574
0.40000	0.05652
0.42000	0.05712
0.44000	0.05755
0.46000	0.05781
0.48000	0.05791
0.50000	0.05785
0.52000	0.05764
0.56000	0.05676
0.60000	0.05531
0.64000	0.05333
0.68000	0.05087
0.70000	0.04947
0.72000	0.04796
0.74000	0.04635
0.76000	0.04466
0.78000	0.04287
0.80000	0.04101
0.82000	0.03908
0.84000	0.03708
0.86000	0.03503
0.88000	0.03292
0.90000	0.03078
0.92000	0.02860
0.94000	0.02639
0.96000	0.02416
0.98000	0.02192
1.00000	0.01968

XL	ZL
0.0	-0.01912
0.00191	-0.02525
0.00491	-0.02851

R84-1788-013(19/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 20 of 22)

```
FILE: A22W      F14-20

   0.00995  -0.03139
   0.02000  -0.03470
   0.03993  -0.03816
   0.06000  -0.04002
   0.08000  -0.04117
   0.10000  -0.04195
   0.12000  -0.04251
   0.14000  -0.04293
   0.16000  -0.04322
   0.18000  -0.04342
   0.20000  -0.04353
   0.22000  -0.04354
   0.24000  -0.04347
   0.26000  -0.04332
   0.28000  -0.04308
   0.30000  -0.04275
   0.32000  -0.04234
   0.34000  -0.04184
   0.36000  -0.04125
   0.38000  -0.04058
   0.40000  -0.03982
   0.42000  -0.03897
   0.44000  -0.03803
   0.46000  -0.03700
   0.48000  -0.03588
   0.50000  -0.03468
   0.52000  -0.03338
   0.56000  -0.03054
   0.60000  -0.02735
   0.64000  -0.02385
   0.68000  -0.02003
   0.70000  -0.01801
   0.72000  -0.01592
   0.74000  -0.01376
   0.76000  -0.01154
   0.78000  -0.00926
   0.80000  -0.00692
   0.82000  -0.00452
   0.84000  -0.00208
   0.86000   0.00040
   0.88000   0.00292
   0.90000   0.00548
   0.92000   0.00806
   0.94000   0.01067
   0.96000   0.01329
   0.98000   0.01592
   1.00000   0.01856
 YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
    384.700   596.564   152.036    44.263     1.000      0.0        1.000
 YSYM       FNU        FNL
       0.0      50.0       50.0
 TRL        SLT        XSING      ZSING
    13.1372    0.0440    0.0062   -0.0380
 XU         ZU
    0.0       -0.03451
```

R84-1788-013(20/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 21 of 22)

FILE: A22W F14-20

0.00191	-0.02816
0.00491	-0.02443
0.00995	-0.02028
0.02000	-0.01435
0.03993	-0.00591
0.06000	0.00053
0.08000	0.00587
0.10000	0.01053
0.12000	0.01470
0.14000	0.01850
0.16000	0.02200
0.18000	0.02525
0.20000	0.02827
0.22000	0.03109
0.24000	0.03373
0.26000	0.03618
0.28000	0.03847
0.30000	0.04060
0.32000	0.04256
0.34000	0.04437
0.36000	0.04602
0.38000	0.04752
0.40000	0.04887
0.42000	0.05007
0.44000	0.05112
0.46000	0.05202
0.48000	0.05278
0.50000	0.05340
0.52000	0.05388
0.56000	0.05444
0.60000	0.05449
0.64000	0.05405
0.68000	0.05317
0.70000	0.05257
0.72000	0.05187
0.74000	0.05107
0.76000	0.05019
0.78000	0.04923
0.80000	0.04820
0.82000	0.04709
0.84000	0.04592
0.86000	0.04470
0.88000	0.04343
0.90000	0.04212
0.92000	0.04078
0.94000	0.03941
0.96000	0.03802
0.98000	0.03662
1.00000	0.03521

XL	ZL
0.0	-0.03451
0.00191	-0.04097
0.00491	-0.04400
0.00995	-0.04663
0.02000	-0.04935

R84-1788-013(21/22)B

Table 7 F-14A Isolated Wing (FLO-22), $\Lambda = 20^{\circ}$ (Sheet 22 of 22)

FILE: A22W F14-20

0.03993	-0.05135
0.06000	-0.05167
0.08000	-0.05149
0.10000	-0.05115
0.12000	-0.05076
0.14000	-0.05036
0.16000	-0.04995
0.18000	-0.04951
0.20000	-0.04903
0.22000	-0.04851
0.24000	-0.04793
0.26000	-0.04729
0.28000	-0.04658
0.30000	-0.04580
0.32000	-0.04495
0.34000	-0.04401
0.36000	-0.04299
0.38000	-0.04187
0.40000	-0.04067
0.42000	-0.03938
0.44000	-0.03799
0.46000	-0.03650
0.48000	-0.03492
0.50000	-0.03324
0.52000	-0.03147
0.56000	-0.02763
0.60000	-0.02341
0.64000	-0.01884
0.68000	-0.01392
0.70000	-0.01135
0.72000	-0.00869
0.74000	-0.00597
0.76000	-0.00317
0.78000	-0.00031
0.80000	0.00261
0.82000	0.00558
0.84000	0.00859
0.86000	0.01166
0.88000	0.01475
0.90000	0.01788
0.92000	0.02104
0.94000	0.02421
0.96000	0.02740
0.98000	0.03060
1.00000	0.03380

R84-1788-013(22/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 1 of 22)

```
FILE: A22W      F14-25


F-14 WING ALONE (25 DEGREE LE)
 FNX         FNY         FNZ         FPLOT       FCONT
 48.         4.           8.         -1.         0.
 FIT         COV         P1          P2          P3          BETA        STRIP       F
  15.             1.E-6  1.6         1.00        1.0         .20         0.7         1.
  15.             1.E-6  1.6         1.00        1.0         .20         0.7         1.
  30.             1.E-6  1.6         1.00        1.0         .2          0.7
 FMACH       YA          AL          CDO
  .70         0.          4.0         0.
ZSYM        FNC         SWEEP1      SWEEP2      SWEEP       DIHED1      DIHED2      DIHED
       1.00        11.00       24.98       24.90       24.90       -1.02       -2.64       -2.64
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
      0.0       444.606     162.460     170.573       1.000       0.0         1.000
YSYM        FNU         FNL
       0.0        50.0        50.0
TRL         SLT         XSING       ZSING
    10.9577    -0.0464     0.0029      0.0041
XU          ZU
    0.0         0.00298
    0.00201     0.01162
    0.00500     0.01530
    0.01002     0.01944
    0.02005     0.02578
    0.04000     0.03512
    0.05997     0.04213
    0.08000     0.04767
    0.10000     0.05209
    0.12000     0.05564
    0.14002     0.05847
    0.16000     0.06070
    0.18000     0.06243
    0.20000     0.06373
    0.22000     0.06468
    0.24000     0.06530
    0.26000     0.06566
    0.28000     0.06578
    0.30000     0.06569
    0.32000     0.06542
    0.34000     0.06498
    0.36000     0.06440
    0.38000     0.06367
    0.40000     0.06283
    0.42000     0.06187
    0.44000     0.06080
    0.46000     0.05963
    0.48000     0.05837
    0.50000     0.05701
    0.52000     0.05557
    0.56000     0.05242
    0.60000     0.04894
    0.64000     0.04515
    0.68000     0.04105
    0.69998     0.03889
    0.72000     0.03666
```

R84-1788-014(1/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 2 of 22)

FILE: A22W F14-25

0.74000	0.03436
0.76000	0.03200
0.78000	0.02957
0.80000	0.02708
0.82000	0.02453
0.84000	0.02193
0.86000	0.01928
0.88000	0.01659
0.90000	0.01385
0.92000	0.01108
0.94000	0.00828
0.96000	0.00546
0.98000	0.00263
1.00000	-0.00022

XL	ZL
0.0	0.00298
0.00201	-0.00044
0.00500	-0.00410
0.01002	-0.00850
0.02005	-0.01416
0.04000	-0.02104
0.05997	-0.02545
0.08000	-0.02862
0.10000	-0.03101
0.12000	-0.03285
0.14002	-0.03430
0.16000	-0.03543
0.18000	-0.03630
0.20000	-0.03694
0.22000	-0.03739
0.24000	-0.03767
0.26000	-0.03779
0.28000	-0.03776
0.30000	-0.03760
0.32000	-0.03733
0.34000	-0.03695
0.36000	-0.03647
0.38000	-0.03591
0.40000	-0.03527
0.42000	-0.03456
0.44000	-0.03379
0.46000	-0.03297
0.48000	-0.03211
0.50000	-0.03120
0.52000	-0.03026
0.56000	-0.02829
0.60000	-0.02625
0.64000	-0.02415
0.68000	-0.02202
0.69998	-0.02096
0.72000	-0.01990
0.74000	-0.01884
0.76000	-0.01779
0.78000	-0.01674
0.80000	-0.01570

R84-1788-014(2/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 3 of 22)

```
FILE: A22W      F14-25


    0.82000  -0.01467
    0.84000  -0.01365
    0.86000  -0.01264
    0.88000  -0.01163
    0.90000  -0.01064
    0.92000  -0.00965
    0.94000  -0.00866
    0.96000  -0.00769
    0.98000  -0.00672
    1.00000  -0.00574
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
    68.500   476.478   161.102   147.719      1.000      0.0        1.000
YSYM        FNU         FNL
       0.0      50.0       50.0
TRL         SLT         XSING       ZSING
    11.0000   -0.0466     0.0036     0.0057
XU          ZU
    0.0         0.00501
    0.00201     0.01244
    0.00500     0.01598
    0.01002     0.01996
    0.02005     0.02594
    0.04000     0.03465
    0.05997     0.04116
    0.08000     0.04635
    0.10000     0.05055
    0.12000     0.05398
    0.14002     0.05678
    0.16000     0.05903
    0.18000     0.06084
    0.20000     0.06225
    0.22000     0.06331
    0.24000     0.06407
    0.26000     0.06457
    0.28000     0.06482
    0.30000     0.06485
    0.32000     0.06468
    0.34000     0.06434
    0.36000     0.06382
    0.38000     0.06316
    0.40000     0.06235
    0.42000     0.06140
    0.44000     0.06033
    0.46000     0.05914
    0.48000     0.05784
    0.50000     0.05643
    0.52000     0.05491
    0.56000     0.05158
    0.60000     0.04789
    0.64000     0.04385
    0.68000     0.03949
    0.69998     0.03721
    0.72000     0.03485
    0.74000     0.03243
    0.76000     0.02995
```

R84-1788-014(3/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 4 of 22)

FILE: A22W F14-25

0.78000	0.02742
0.80000	0.02482
0.82000	0.02218
0.84000	0.01950
0.86000	0.01677
0.88000	0.01401
0.90000	0.01122
0.92000	0.00840
0.94000	0.00556
0.96000	0.00271
0.98000	-0.00016
1.00000	-0.00303

XL	ZL
0.0	0.00501
0.00201	0.00049
0.00500	-0.00306
0.01002	-0.00710
0.02005	-0.01224
0.04000	-0.01846
0.05997	-0.02243
0.08000	-0.02530
0.10000	-0.02747
0.12000	-0.02917
0.14002	-0.03052
0.16000	-0.03160
0.18000	-0.03246
0.20000	-0.03314
0.22000	-0.03366
0.24000	-0.03403
0.26000	-0.03428
0.28000	-0.03441
0.30000	-0.03443
0.32000	-0.03435
0.34000	-0.03419
0.36000	-0.03393
0.38000	-0.03360
0.40000	-0.03320
0.42000	-0.03274
0.44000	-0.03221
0.46000	-0.03163
0.48000	-0.03099
0.50000	-0.03032
0.52000	-0.02960
0.56000	-0.02804
0.60000	-0.02637
0.64000	-0.02459
0.68000	-0.02273
0.69998	-0.02178
0.72000	-0.02082
0.74000	-0.01985
0.76000	-0.01887
0.78000	-0.01788
0.80000	-0.01690
0.82000	-0.01590
0.84000	-0.01491

R84-1788-014(4/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 5 of 22)

```
FILE: A22W      F14-25


    0.86000   -0.01392
    0.88000   -0.01292
    0.90000   -0.01193
    0.92000   -0.01094
    0.94000   -0.00995
    0.96000   -0.00896
    0.98000   -0.00797
    1.00000   -0.00698
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
     99.000    490.669    160.498    137.543      1.000      0.0         1.000
YSYM        FNU         FNL
        0.0       50.0        50.0
TRL         SLT         XSING       ZSING
    11.0988    -0.0469     0.0039     0.0067
XU          ZU
    0.0         0.00612
    0.00201     0.01289
    0.00500     0.01635
    0.01002     0.02025
    0.02005     0.02604
    0.04000     0.03439
    0.05997     0.04063
    0.08000     0.04563
    0.10000     0.04970
    0.12000     0.05307
    0.14002     0.05584
    0.16000     0.05811
    0.18000     0.05996
    0.20000     0.06142
    0.22000     0.06256
    0.24000     0.06339
    0.26000     0.06396
    0.28000     0.06428
    0.30000     0.06438
    0.32000     0.06427
    0.34000     0.06398
    0.36000     0.06351
    0.38000     0.06287
    0.40000     0.06208
    0.42000     0.06115
    0.44000     0.06007
    0.46000     0.05887
    0.48000     0.05755
    0.50000     0.05610
    0.52000     0.05455
    0.56000     0.05112
    0.60000     0.04730
    0.64000     0.04313
    0.68000     0.03864
    0.69998     0.03628
    0.72000     0.03386
    0.74000     0.03137
    0.76000     0.02883
    0.78000     0.02623
    0.80000     0.02358
```

R84-1788-014(5/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 6 of 22)

FILE: A22W F14-25

0.82000	0.02089
0.84000	0.01816
0.86000	0.01539
0.88000	0.01259
0.90000	0.00977
0.92000	0.00692
0.94000	0.00406
0.96000	0.00118
0.98000	-0.00170
1.00000	-0.00459

XL	ZL
0.0	0.00612
0.00201	0.00101
0.00500	-0.00249
0.01002	-0.00633
0.02005	-0.01118
0.04000	-0.01703
0.05997	-0.02077
0.08000	-0.02346
0.10000	-0.02551
0.12000	-0.02713
0.14002	-0.02843
0.16000	-0.02949
0.18000	-0.03035
0.20000	-0.03104
0.22000	-0.03160
0.24000	-0.03203
0.26000	-0.03234
0.28000	-0.03256
0.30000	-0.03268
0.32000	-0.03271
0.34000	-0.03266
0.36000	-0.03253
0.38000	-0.03233
0.40000	-0.03206
0.42000	-0.03173
0.44000	-0.03133
0.46000	-0.03088
0.48000	-0.03038
0.50000	-0.02983
0.52000	-0.02923
0.56000	-0.02790
0.60000	-0.02643
0.64000	-0.02483
0.68000	-0.02312
0.69998	-0.02224
0.72000	-0.02133
0.74000	-0.02041
0.76000	-0.01947
0.78000	-0.01852
0.80000	-0.01756
0.82000	-0.01658
0.84000	-0.01561
0.86000	-0.01462
0.88000	-0.01363

R84-1788-014(6/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 7 of 22)

```
FILE: A22W      F14-25


    0.90000  -0.01264
    0.92000  -0.01165
    0.94000  -0.01065
    0.96000  -0.00966
    0.98000  -0.00866
    1.00000  -0.00766
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   127.230   503.804   159.939   128.125      1.000      0.0          1.000
YSYM        FNU         FNL
       0.0       50.0       50.0
TRL         SLT         XSING      ZSING
   11.1557   -0.0467    0.0040     0.0073
XU          ZU
    0.0        0.00732
    0.00201    0.01337
    0.00500    0.01676
    0.01002    0.02056
    0.02005    0.02613
    0.04000    0.03411
    0.05997    0.04006
    0.08000    0.04485
    0.10000    0.04880
    0.12000    0.05209
    0.14002    0.05484
    0.16000    0.05713
    0.18000    0.05902
    0.20000    0.06055
    0.22000    0.06175
    0.24000    0.06267
    0.26000    0.06331
    0.28000    0.06371
    0.30000    0.06388
    0.32000    0.06384
    0.34000    0.06360
    0.36000    0.06317
    0.38000    0.06257
    0.40000    0.06180
    0.42000    0.06087
    0.44000    0.05980
    0.46000    0.05858
    0.48000    0.05724
    0.50000    0.05576
    0.52000    0.05416
    0.56000    0.05063
    0.60000    0.04668
    0.64000    0.04237
    0.68000    0.03772
    0.69998    0.03529
    0.72000    0.03279
    0.74000    0.03024
    0.76000    0.02762
    0.78000    0.02496
    0.80000    0.02225
    0.82000    0.01951
    0.84000    0.01672
```

R84-1788-014(7/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 8 of 22)

FILE: A22W F14-25

0.86000	0.01391
0.88000	0.01107
0.90000	0.00822
0.92000	0.00534
0.94000	0.00245
0.96000	-0.00044
0.98000	-0.00334
1.00000	-0.00624

XL	ZL
0.0	0.00732
0.00201	0.00156
0.00500	-0.00188
0.01002	-0.00550
0.02005	-0.01005
0.04000	-0.01551
0.05997	-0.01899
0.08000	-0.02150
0.10000	-0.02343
0.12000	-0.02496
0.14002	-0.02621
0.16000	-0.02723
0.18000	-0.02809
0.20000	-0.02880
0.22000	-0.02940
0.24000	-0.02989
0.26000	-0.03028
0.28000	-0.03059
0.30000	-0.03081
0.32000	-0.03096
0.34000	-0.03103
0.36000	-0.03103
0.38000	-0.03097
0.40000	-0.03084
0.42000	-0.03065
0.44000	-0.03040
0.46000	-0.03009
0.48000	-0.02973
0.50000	-0.02931
0.52000	-0.02884
0.56000	-0.02776
0.60000	-0.02650
0.64000	-0.02509
0.68000	-0.02354
0.69998	-0.02272
0.72000	-0.02187
0.74000	-0.02100
0.76000	-0.02011
0.78000	-0.01919
0.80000	-0.01826
0.82000	-0.01731
0.84000	-0.01635
0.86000	-0.01538
0.88000	-0.01439
0.90000	-0.01340
0.92000	-0.01241

R84-1788-014(8/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 9 of 22)

```
FILE: A22W      F14-25


   0.94000  -0.01141
   0.96000  -0.01040
   0.98000  -0.00940
   1.00000  -0.00839
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   162.975   520.435   159.230   116.199      1.000      0.0          1.000
YSYM        FNU         FNL
       0.0       50.0       50.0
TRL         SLT         XSING      ZSING
   11.3253   -0.0469     0.0038     0.0088
XU          ZU
   0.0         0.00911
   0.00201     0.01409
   0.00500     0.01736
   0.01002     0.02102
   0.02005     0.02628
   0.04000     0.03369
   0.05997     0.03921
   0.08000     0.04369
   0.10000     0.04744
   0.12000     0.05062
   0.14002     0.05335
   0.16000     0.05566
   0.18000     0.05761
   0.20000     0.05924
   0.22000     0.06055
   0.24000     0.06158
   0.26000     0.06234
   0.28000     0.06286
   0.30000     0.06313
   0.32000     0.06319
   0.34000     0.06303
   0.36000     0.06266
   0.38000     0.06211
   0.40000     0.06137
   0.42000     0.06046
   0.44000     0.05939
   0.46000     0.05815
   0.48000     0.05677
   0.50000     0.05524
   0.52000     0.05358
   0.56000     0.04989
   0.60000     0.04575
   0.64000     0.04122
   0.68000     0.03635
   0.69998     0.03381
   0.72000     0.03120
   0.74000     0.02853
   0.76000     0.02582
   0.78000     0.02306
   0.80000     0.02026
   0.82000     0.01743
   0.84000     0.01458
   0.86000     0.01170
   0.88000     0.00880
```

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 10 of 22)

FILE: A22W F14-25

0.90000	0.00589
0.92000	0.00297
0.94000	0.00005
0.96000	-0.00288
0.98000	-0.00580
1.00000	-0.00873

XL	ZL
0.0	0.00911
0.00201	0.00239
0.00500	-0.00096
0.01002	-0.00427
0.02005	-0.00836
0.04000	-0.01323
0.05997	-0.01632
0.08000	-0.01857
0.10000	-0.02031
0.12000	-0.02171
0.14002	-0.02287
0.16000	-0.02385
0.18000	-0.02470
0.20000	-0.02545
0.22000	-0.02610
0.24000	-0.02668
0.26000	-0.02718
0.28000	-0.02763
0.30000	-0.02801
0.32000	-0.02833
0.34000	-0.02859
0.36000	-0.02879
0.38000	-0.02893
0.40000	-0.02902
0.42000	-0.02904
0.44000	-0.02900
0.46000	-0.02890
0.48000	-0.02874
0.50000	-0.02853
0.52000	-0.02825
0.56000	-0.02754
0.60000	-0.02661
0.64000	-0.02548
0.68000	-0.02416
0.69998	-0.02344
0.72000	-0.02269
0.74000	-0.02189
0.76000	-0.02106
0.78000	-0.02020
0.80000	-0.01931
0.82000	-0.01840
0.84000	-0.01746
0.86000	-0.01651
0.88000	-0.01553
0.90000	-0.01455
0.92000	-0.01355
0.94000	-0.01254
0.96000	-0.01152

R84-1788-014(10/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 11 of 22)

```
FILE: A22W      F14-25


   0.98000  -0.01051
   1.00000  -0.00948
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   198.719    537.071    158.154    104.268      1.000      0.0          1.000
YSYM        FNU         FNL
       0.0       50.0       50.0
TRL         SLT         XSING       ZSING
   11.6279    -0.0416     0.0040     0.0071
XU          ZU
   0.0         0.00696
   0.00201     0.01317
   0.00500     0.01644
   0.01002     0.02003
   0.02005     0.02515
   0.04000     0.03235
   0.05997     0.03770
   0.08000     0.04207
   0.10000     0.04577
   0.12000     0.04895
   0.14002     0.05171
   0.16000     0.05410
   0.18000     0.05615
   0.20000     0.05789
   0.22000     0.05934
   0.24000     0.06052
   0.26000     0.06143
   0.28000     0.06210
   0.30000     0.06254
   0.32000     0.06274
   0.34000     0.06274
   0.36000     0.06252
   0.38000     0.06211
   0.40000     0.06151
   0.42000     0.06073
   0.44000     0.05978
   0.46000     0.05866
   0.48000     0.05739
   0.50000     0.05597
   0.52000     0.05440
   0.56000     0.05088
   0.60000     0.04689
   0.64000     0.04248
   0.68000     0.03772
   0.69998     0.03523
   0.72000     0.03267
   0.74000     0.03005
   0.76000     0.02738
   0.78000     0.02466
   0.80000     0.02191
   0.82000     0.01912
   0.84000     0.01630
   0.86000     0.01346
   0.88000     0.01061
   0.90000     0.00774
   0.92000     0.00487
```

R84-1788-014(11/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 12 of 22)

FILE: A22W F14-25

0.94000	0.00198
0.96000	-0.00090
0.98000	-0.00378
1.00000	-0.00666
XL	ZL
0.0	0.00696
0.00201	0.00141
0.00500	-0.00175
0.01002	-0.00491
0.02005	-0.00880
0.04000	-0.01339
0.05997	-0.01630
0.08000	-0.01844
0.10000	-0.02011
0.12000	-0.02147
0.14002	-0.02261
0.16000	-0.02360
0.18000	-0.02446
0.20000	-0.02523
0.22000	-0.02592
0.24000	-0.02654
0.26000	-0.02710
0.28000	-0.02760
0.30000	-0.02803
0.32000	-0.02841
0.34000	-0.02873
0.36000	-0.02899
0.38000	-0.02918
0.40000	-0.02931
0.42000	-0.02937
0.44000	-0.02937
0.46000	-0.02930
0.48000	-0.02916
0.50000	-0.02896
0.52000	-0.02868
0.56000	-0.02794
0.60000	-0.02695
0.64000	-0.02572
0.68000	-0.02427
0.69998	-0.02346
0.72000	-0.02261
0.74000	-0.02171
0.76000	-0.02076
0.78000	-0.01978
0.80000	-0.01876
0.82000	-0.01770
0.84000	-0.01662
0.86000	-0.01550
0.88000	-0.01437
0.90000	-0.01321
0.92000	-0.01204
0.94000	-0.01086
0.96000	-0.00966
0.98000	-0.00846
1.00000	-0.00726

R84-1788-014(12/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 13 of 22)

```
FILE: A22W      F14-25


YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
   234.464    553.712    156.968     92.332      1.000       0.0         1.000
YSYM        FNU         FNL
       0.0       50.0        50.0
TRL         SLT         XSING       ZSING
   12.2441    -0.0327     0.0041      0.0031
XU          ZU
   0.0         0.00293
   0.00201     0.00920
   0.00500     0.01253
   0.01002     0.01614
   0.02005     0.02131
   0.04000     0.02861
   0.05997     0.03407
   0.08000     0.03855
   0.10000     0.04235
   0.12000     0.04566
   0.14002     0.04857
   0.16000     0.05111
   0.18000     0.05333
   0.20000     0.05526
   0.22000     0.05691
   0.24000     0.05830
   0.26000     0.05943
   0.28000     0.06033
   0.30000     0.06100
   0.32000     0.06145
   0.34000     0.06169
   0.36000     0.06171
   0.38000     0.06155
   0.40000     0.06119
   0.42000     0.06065
   0.44000     0.05993
   0.46000     0.05904
   0.48000     0.05799
   0.50000     0.05679
   0.52000     0.05544
   0.56000     0.05232
   0.60000     0.04870
   0.64000     0.04464
   0.68000     0.04020
   0.69998     0.03785
   0.72000     0.03543
   0.74000     0.03294
   0.76000     0.03039
   0.78000     0.02779
   0.80000     0.02514
   0.82000     0.02245
   0.84000     0.01973
   0.86000     0.01699
   0.88000     0.01422
   0.90000     0.01143
   0.92000     0.00864
   0.94000     0.00583
   0.96000     0.00303
```

R84-1788-014(13/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 14 of 22)

```
FILE: A22W      F14-25


    0.98000    0.00022
    1.00000   -0.00259
XL          ZL
    0.0         0.00293
    0.00201    -0.00264
    0.00500    -0.00575
    0.01002    -0.00892
    0.02005    -0.01274
    0.04000    -0.01714
    0.05997    -0.01991
    0.08000    -0.02193
    0.10000    -0.02349
    0.12000    -0.02476
    0.14002    -0.02582
    0.16000    -0.02673
    0.18000    -0.02753
    0.20000    -0.02824
    0.22000    -0.02887
    0.24000    -0.02943
    0.26000    -0.02993
    0.28000    -0.03036
    0.30000    -0.03073
    0.32000    -0.03103
    0.34000    -0.03127
    0.36000    -0.03144
    0.38000    -0.03154
    0.40000    -0.03157
    0.42000    -0.03153
    0.44000    -0.03141
    0.46000    -0.03121
    0.48000    -0.03094
    0.50000    -0.03060
    0.52000    -0.03018
    0.56000    -0.02912
    0.60000    -0.02778
    0.64000    -0.02617
    0.68000    -0.02431
    0.69998    -0.02329
    0.72000    -0.02222
    0.74000    -0.02109
    0.76000    -0.01991
    0.78000    -0.01869
    0.80000    -0.01742
    0.82000    -0.01612
    0.84000    -0.01478
    0.86000    -0.01341
    0.88000    -0.01201
    0.90000    -0.01059
    0.92000    -0.00915
    0.94000    -0.00769
    0.96000    -0.00622
    0.98000    -0.00475
    1.00000    -0.00327
 YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
    270.208    570.354    155.782    80.396      1.000      0.0          1.000
```

R84-1788-014(14/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 15 of 22)

FILE: A22W F14-25

YSYM	FNU	FNL	
0.0	50.0	50.0	
TRL	SLT	XSING	ZSING
12.8738	-0.0218	0.0043	-0.0022
XU	ZU		
0.0	-0.00230		
0.00201	0.00406		
0.00500	0.00735		
0.01002	0.01110		
0.02005	0.01637		
0.04000	0.02382		
0.05997	0.02939		
0.08000	0.03398		
0.10000	0.03791		
0.12000	0.04135		
0.14002	0.04441		
0.16000	0.04713		
0.18000	0.04954		
0.20000	0.05168		
0.22000	0.05356		
0.24000	0.05519		
0.26000	0.05659		
0.28000	0.05775		
0.30000	0.05870		
0.32000	0.05943		
0.34000	0.05995		
0.36000	0.06028		
0.38000	0.06041		
0.40000	0.06035		
0.42000	0.06010		
0.44000	0.05968		
0.46000	0.05909		
0.48000	0.05833		
0.50000	0.05741		
0.52000	0.05634		
0.56000	0.05377		
0.60000	0.05067		
0.64000	0.04710		
0.68000	0.04310		
0.69998	0.04096		
0.72000	0.03874		
0.74000	0.03645		
0.76000	0.03408		
0.78000	0.03165		
0.80000	0.02917		
0.82000	0.02663		
0.84000	0.02406		
0.86000	0.02145		
0.88000	0.01882		
0.90000	0.01616		
0.92000	0.01348		
0.94000	0.01079		
0.96000	0.00809		
0.98000	0.00539		
1.00000	0.00269		

R84-1788-014(15/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 16 of 22)

FILE: A22W F14-25

XL	ZL
0.0	-0.00230
0.00201	-0.00788
0.00500	-0.01098
0.01002	-0.01409
0.02005	-0.01778
0.04000	-0.02203
0.05997	-0.02463
0.08000	-0.02648
0.10000	-0.02789
0.12000	-0.02902
0.14002	-0.02996
0.16000	-0.03077
0.18000	-0.03147
0.20000	-0.03208
0.22000	-0.03261
0.24000	-0.03307
0.26000	-0.03347
0.28000	-0.03379
0.30000	-0.03405
0.32000	-0.03423
0.34000	-0.03434
0.36000	-0.03437
0.38000	-0.03432
0.40000	-0.03419
0.42000	-0.03398
0.44000	-0.03369
0.46000	-0.03332
0.48000	-0.03286
0.50000	-0.03232
0.52000	-0.03170
0.56000	-0.03022
0.60000	-0.02842
0.64000	-0.02634
0.68000	-0.02397
0.69998	-0.02269
0.72000	-0.02135
0.74000	-0.01994
0.76000	-0.01849
0.78000	-0.01698
0.80000	-0.01542
0.82000	-0.01381
0.84000	-0.01217
0.86000	-0.01049
0.88000	-0.00878
0.90000	-0.00704
0.92000	-0.00528
0.94000	-0.00349
0.96000	-0.00170
0.98000	0.00010
1.00000	0.00191

YLE	XLE	ZLE	CHORD	THICK	ALPHA	NEWSEC
305.953	586.995	154.596	68.459	1.000	0.0	1.000

YSYM	FNU	FNL
0.0	50.0	50.0

R84-1788-014(16/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 17 of 22)

FILE: A22W F14-25

TRL	SLT	XSING	ZSING
13.5012	-0.0075	0.0044	-0.0090

XU	ZU
0.0	-0.00935
0.00201	-0.00286
0.00500	0.00047
0.01002	0.00431
0.02005	0.00970
0.04000	0.01732
0.05997	0.02303
0.08000	0.02777
0.10000	0.03185
0.12000	0.03546
0.14002	0.03869
0.16000	0.04160
0.18000	0.04424
0.20000	0.04661
0.22000	0.04874
0.24000	0.05065
0.26000	0.05234
0.28000	0.05381
0.30000	0.05508
0.32000	0.05615
0.34000	0.05703
0.36000	0.05771
0.38000	0.05820
0.40000	0.05852
0.42000	0.05865
0.44000	0.05861
0.46000	0.05840
0.48000	0.05803
0.50000	0.05749
0.52000	0.05680
0.56000	0.05498
0.60000	0.05261
0.64000	0.04973
0.68000	0.04640
0.69998	0.04458
0.72000	0.04266
0.74000	0.04066
0.76000	0.03858
0.78000	0.03642
0.80000	0.03420
0.82000	0.03192
0.84000	0.02958
0.86000	0.02720
0.88000	0.02478
0.90000	0.02233
0.92000	0.01985
0.94000	0.01735
0.96000	0.01485
0.98000	0.01233
1.00000	0.00981

XL	ZL
0.0	-0.00935

R84-1788-014(17/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 18 of 22)

```
FILE: A22W     F14-25

    0.00201  -0.01496
    0.00500  -0.01809
    0.01002  -0.02107
    0.02005  -0.02457
    0.04000  -0.02855
    0.05997  -0.03089
    0.08000  -0.03250
    0.10000  -0.03369
    0.12000  -0.03462
    0.14002  -0.03538
    0.16000  -0.03602
    0.18000  -0.03655
    0.20000  -0.03700
    0.22000  -0.03737
    0.24000  -0.03766
    0.26000  -0.03788
    0.28000  -0.03801
    0.30000  -0.03807
    0.32000  -0.03804
    0.34000  -0.03794
    0.36000  -0.03774
    0.38000  -0.03746
    0.40000  -0.03709
    0.42000  -0.03664
    0.44000  -0.03609
    0.46000  -0.03546
    0.48000  -0.03474
    0.50000  -0.03393
    0.52000  -0.03303
    0.56000  -0.03098
    0.60000  -0.02860
    0.64000  -0.02590
    0.68000  -0.02289
    0.69998  -0.02128
    0.72000  -0.01960
    0.74000  -0.01786
    0.76000  -0.01606
    0.78000  -0.01419
    0.80000  -0.01228
    0.82000  -0.01031
    0.84000  -0.00830
    0.86000  -0.00624
    0.88000  -0.00415
    0.90000  -0.00202
    0.92000   0.00013
    0.94000   0.00230
    0.96000   0.00449
    0.98000   0.00669
    1.00000   0.00890
YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
   341.698    603.637    153.410     56.523      1.000      0.0        1.000
YSYM       FNU        FNL
      0.0       50.0       50.0
TRL        SLT        XSING      ZSING
   13.7822     0.0124     0.0045    -0.0192
```

R84-1788-014(18/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 19 of 22)

FILE: A22W F14-25

XU	ZU
0.0	-0.01938
0.00201	-0.01271
0.00500	-0.00932
0.01002	-0.00541
0.02005	0.00018
0.04000	0.00806
0.05997	0.01399
0.08000	0.01891
0.10000	0.02318
0.12000	0.02698
0.14002	0.03042
0.16000	0.03355
0.18000	0.03642
0.20000	0.03905
0.22000	0.04147
0.24000	0.04368
0.26000	0.04570
0.28000	0.04753
0.30000	0.04917
0.32000	0.05064
0.34000	0.05192
0.36000	0.05304
0.38000	0.05398
0.40000	0.05476
0.42000	0.05537
0.44000	0.05582
0.46000	0.05610
0.48000	0.05623
0.50000	0.05621
0.52000	0.05604
0.56000	0.05526
0.60000	0.05393
0.64000	0.05209
0.68000	0.04978
0.69998	0.04845
0.72000	0.04703
0.74000	0.04551
0.76000	0.04389
0.78000	0.04220
0.80000	0.04042
0.82000	0.03857
0.84000	0.03666
0.86000	0.03469
0.88000	0.03267
0.90000	0.03061
0.92000	0.02852
0.94000	0.02640
0.96000	0.02425
0.98000	0.02210
1.00000	0.01994

XL	ZL
0.0	-0.01938
0.00201	-0.02503
0.00500	-0.02810

R84-1788-014(19/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 20 of 22)

```
FILE: A22W     F14-25

   0.01002  -0.03099
   0.02005  -0.03426
   0.04000  -0.03772
   0.05997  -0.03958
   0.08000  -0.04075
   0.10000  -0.04155
   0.12000  -0.04213
   0.14002  -0.04256
   0.16000  -0.04287
   0.18000  -0.04307
   0.20000  -0.04319
   0.22000  -0.04322
   0.24000  -0.04317
   0.26000  -0.04303
   0.28000  -0.04280
   0.30000  -0.04249
   0.32000  -0.04210
   0.34000  -0.04162
   0.36000  -0.04106
   0.38000  -0.04040
   0.40000  -0.03966
   0.42000  -0.03883
   0.44000  -0.03791
   0.46000  -0.03691
   0.48000  -0.03581
   0.50000  -0.03462
   0.52000  -0.03335
   0.56000  -0.03053
   0.60000  -0.02738
   0.64000  -0.02389
   0.68000  -0.02008
   0.69998  -0.01806
   0.72000  -0.01597
   0.74000  -0.01381
   0.76000  -0.01158
   0.78000  -0.00928
   0.80000  -0.00693
   0.82000  -0.00452
   0.84000  -0.00206
   0.86000   0.00044
   0.88000   0.00299
   0.90000   0.00558
   0.92000   0.00819
   0.94000   0.01083
   0.96000   0.01349
   0.98000   0.01616
   1.00000   0.01883
YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
   373.710   618.541   152.347    45.833     1.000      0.0        1.000
YSYM       FNU        FNL
      0.0      50.0       50.0
TRL        SLT        XSING      ZSING
   13.0819    0.0431     0.0046   -0.0326
XU         ZU
   0.0       -0.03280
```

R84-1788-014(20/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 21 of 22)

FILE: A22W F14-25

0.00201	-0.02607
0.00500	-0.02241
0.01002	-0.01837
0.02005	-0.01258
0.04000	-0.00439
0.05997	0.00179
0.08000	0.00694
0.10000	0.01142
0.12000	0.01544
0.14002	0.01910
0.16000	0.02246
0.18000	0.02557
0.20000	0.02847
0.22000	0.03117
0.24000	0.03368
0.26000	0.03602
0.28000	0.03820
0.30000	0.04022
0.32000	0.04207
0.34000	0.04378
0.36000	0.04533
0.38000	0.04674
0.40000	0.04800
0.42000	0.04911
0.44000	0.05008
0.46000	0.05090
0.48000	0.05159
0.50000	0.05214
0.52000	0.05256
0.56000	0.05301
0.60000	0.05297
0.64000	0.05247
0.68000	0.05153
0.69998	0.05092
0.72000	0.05021
0.74000	0.04940
0.76000	0.04852
0.78000	0.04755
0.80000	0.04652
0.82000	0.04541
0.84000	0.04425
0.86000	0.04302
0.88000	0.04175
0.90000	0.04044
0.92000	0.03909
0.94000	0.03772
0.96000	0.03632
0.98000	0.03491
1.00000	0.03349

XL	ZL
0.0	-0.03280
0.00201	-0.03857
0.00500	-0.04159
0.01002	-0.04421
0.02005	-0.04701

R84-1788-014(21/22)B

Table 8 F-14A Isolated Wing (FLO-22), $\Lambda = 25^{\circ}$ (Sheet 22 of 22)

FILE: A22W F14-25

0.04000	-0.04939
0.05997	-0.05010
0.08000	-0.05021
0.10000	-0.05007
0.12000	-0.04981
0.14002	-0.04949
0.16000	-0.04913
0.18000	-0.04874
0.20000	-0.04830
0.22000	-0.04781
0.24000	-0.04727
0.26000	-0.04667
0.28000	-0.04600
0.30000	-0.04527
0.32000	-0.04446
0.34000	-0.04357
0.36000	-0.04261
0.38000	-0.04155
0.40000	-0.04041
0.42000	-0.03918
0.44000	-0.03786
0.46000	-0.03645
0.48000	-0.03494
0.50000	-0.03334
0.52000	-0.03164
0.56000	-0.02797
0.60000	-0.02392
0.64000	-0.01951
0.68000	-0.01476
0.69998	-0.01226
0.72000	-0.00968
0.74000	-0.00703
0.76000	-0.00431
0.78000	-0.00151
0.80000	0.00134
0.82000	0.00425
0.84000	0.00721
0.86000	0.01022
0.88000	0.01328
0.90000	0.01636
0.92000	0.01948
0.94000	0.02262
0.96000	0.02578
0.98000	0.02895
1.00000	0.03212

R84-1788-014(22/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 1 of 22)

```
FILE: A22W      F14-35


F-14 WING ALONE (35 DEGREE LE)
 FNX         FNY         FNZ         FPLOT       FCONT
 48.         4.           8.         -1.         0.
 FIT         COV         P1          P2          P3          BETA        STRIP       F
  15.             1.E-6  1.6         1.00        1.0         .20         0.7         1.
  15.             1.E-6  1.6         1.00        1.0         .20         0.7         1.
  30.             1.E-6  1.6         1.00        1.0         .2          0.7
 FMACH       YA          AL          CDO
  .70         0.          4.0         0.
ZSYM        FNC         SWEEP1      SWEEP2      SWEEP       DIHED1      DIHED2      DIHED
       1.00        11.00       34.97       35.00       35.00       -1.13       -2.74       -2.74
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
      0.0       416.259     162.599     183.342       1.000       0.0         1.000
YSYM        FNU         FNL
       0.0         50.0        50.0
TRL         SLT         XSING       ZSING
    10.5740    -0.0476     0.0032      0.0041
XU          ZU
    0.0         0.00407
    0.00198     0.00948
    0.00499     0.01259
    0.01000     0.01677
    0.02000     0.02290
    0.04005     0.03171
    0.06000     0.03824
    0.08000     0.04347
    0.10000     0.04770
    0.12000     0.05110
    0.14006     0.05384
    0.16000     0.05601
    0.18000     0.05770
    0.20000     0.05899
    0.22000     0.05994
    0.24000     0.06058
    0.26000     0.06097
    0.28000     0.06113
    0.30000     0.06109
    0.32000     0.06087
    0.34000     0.06049
    0.36000     0.05997
    0.38000     0.05933
    0.40000     0.05856
    0.42000     0.05768
    0.44000     0.05670
    0.46000     0.05561
    0.48000     0.05444
    0.50000     0.05317
    0.52000     0.05182
    0.56000     0.04885
    0.60000     0.04555
    0.64000     0.04193
    0.68000     0.03799
    0.70000     0.03590
    0.72000     0.03375
```

R84-1788-015(1/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 2 of 22)

FILE: A22W F14-35

0.74000	0.03151
0.76000	0.02921
0.78000	0.02685
0.80000	0.02442
0.82000	0.02192
0.84000	0.01937
0.86000	0.01677
0.88000	0.01412
0.90000	0.01143
0.92000	0.00870
0.94000	0.00594
0.96000	0.00315
0.98000	0.00035
1.00000	-0.00246

XL	ZL
0.0	0.00407
0.00198	-0.00141
0.00499	-0.00531
0.01000	-0.00945
0.02000	-0.01471
0.04005	-0.02127
0.06000	-0.02547
0.08000	-0.02849
0.10000	-0.03077
0.12000	-0.03253
0.14006	-0.03390
0.16000	-0.03497
0.18000	-0.03579
0.20000	-0.03640
0.22000	-0.03683
0.24000	-0.03709
0.26000	-0.03721
0.28000	-0.03719
0.30000	-0.03704
0.32000	-0.03679
0.34000	-0.03643
0.36000	-0.03597
0.38000	-0.03542
0.40000	-0.03480
0.42000	-0.03411
0.44000	-0.03335
0.46000	-0.03253
0.48000	-0.03167
0.50000	-0.03076
0.52000	-0.02981
0.56000	-0.02783
0.60000	-0.02575
0.64000	-0.02362
0.68000	-0.02147
0.70000	-0.02040
0.72000	-0.01933
0.74000	-0.01827
0.76000	-0.01722
0.78000	-0.01618
0.80000	-0.01516

R84-1788-015(2/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 3 of 22)

```
FILE: A22W      F14-35


    0.82000   -0.01415
    0.84000   -0.01316
    0.86000   -0.01218
    0.88000   -0.01121
    0.90000   -0.01027
    0.92000   -0.00933
    0.94000   -0.00841
    0.96000   -0.00750
    0.98000   -0.00659
    1.00000   -0.00569
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
     68.500    464.234    161.177    157.040       1.000       0.0         1.000
YSYM        FNU         FNL
        0.0       50.0        50.0
TRL         SLT         XSING       ZSING
    10.6746    -0.0462     0.0034     0.0052
XU          ZU
    0.0         0.00527
    0.00198     0.01078
    0.00499     0.01390
    0.01000     0.01781
    0.02000     0.02355
    0.04005     0.03175
    0.06000     0.03783
    0.08000     0.04271
    0.10000     0.04670
    0.12000     0.04997
    0.14006     0.05266
    0.16000     0.05483
    0.18000     0.05658
    0.20000     0.05796
    0.22000     0.05901
    0.24000     0.05978
    0.26000     0.06030
    0.28000     0.06058
    0.30000     0.06066
    0.32000     0.06055
    0.34000     0.06027
    0.36000     0.05983
    0.38000     0.05924
    0.40000     0.05852
    0.42000     0.05766
    0.44000     0.05669
    0.46000     0.05559
    0.48000     0.05439
    0.50000     0.05308
    0.52000     0.05167
    0.56000     0.04855
    0.60000     0.04506
    0.64000     0.04123
    0.68000     0.03708
    0.70000     0.03489
    0.72000     0.03264
    0.74000     0.03031
    0.76000     0.02792
```

R84-1788-015(3/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 4 of 22)

FILE: A22W F14-35

0.78000	0.02547
0.80000	0.02297
0.82000	0.02042
0.84000	0.01781
0.86000	0.01517
0.88000	0.01249
0.90000	0.00977
0.92000	0.00703
0.94000	0.00427
0.96000	0.00148
0.98000	-0.00131
1.00000	-0.00411

XL	ZL
0.0	0.00527
0.00198	-0.00009
0.00499	-0.00373
0.01000	-0.00755
0.02000	-0.01237
0.04005	-0.01830
0.06000	-0.02206
0.08000	-0.02477
0.10000	-0.02681
0.12000	-0.02840
0.14006	-0.02967
0.16000	-0.03066
0.18000	-0.03146
0.20000	-0.03208
0.22000	-0.03255
0.24000	-0.03289
0.26000	-0.03310
0.28000	-0.03321
0.30000	-0.03322
0.32000	-0.03314
0.34000	-0.03297
0.36000	-0.03272
0.38000	-0.03240
0.40000	-0.03201
0.42000	-0.03155
0.44000	-0.03103
0.46000	-0.03046
0.48000	-0.02984
0.50000	-0.02917
0.52000	-0.02846
0.56000	-0.02693
0.60000	-0.02527
0.64000	-0.02352
0.68000	-0.02168
0.70000	-0.02075
0.72000	-0.01980
0.74000	-0.01885
0.76000	-0.01789
0.78000	-0.01693
0.80000	-0.01596
0.82000	-0.01500
0.84000	-0.01403

R84-1788-015(4/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 5 of 22)

```
FILE: A22W      F14-35


    0.86000   -0.01307
    0.88000   -0.01211
    0.90000   -0.01116
    0.92000   -0.01021
    0.94000   -0.00926
    0.96000   -0.00832
    0.98000   -0.00738
    1.00000   -0.00644
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   99.000    485.594    160.544    145.329      1.000      0.0         1.000
YSYM        FNU         FNL
       0.0      50.0       50.0
TRL         SLT         XSING      ZSING
   10.7318    -0.0457     0.0033     0.0060
XU          ZU
    0.0         0.00595
    0.00198     0.01152
    0.00499     0.01463
    0.01000     0.01840
    0.02000     0.02391
    0.04005     0.03177
    0.06000     0.03760
    0.08000     0.04229
    0.10000     0.04614
    0.12000     0.04933
    0.14006     0.05199
    0.16000     0.05416
    0.18000     0.05595
    0.20000     0.05738
    0.22000     0.05849
    0.24000     0.05933
    0.26000     0.05992
    0.28000     0.06027
    0.30000     0.06042
    0.32000     0.06037
    0.34000     0.06015
    0.36000     0.05975
    0.38000     0.05920
    0.40000     0.05850
    0.42000     0.05766
    0.44000     0.05668
    0.46000     0.05558
    0.48000     0.05436
    0.50000     0.05303
    0.52000     0.05158
    0.56000     0.04838
    0.60000     0.04479
    0.64000     0.04084
    0.68000     0.03657
    0.70000     0.03433
    0.72000     0.03201
    0.74000     0.02963
    0.76000     0.02720
    0.78000     0.02470
    0.80000     0.02216
```

R84-1788-015(5/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^\circ$ (Sheet 6 of 22)

FILE: A22W F14-35

0.82000	0.01957
0.84000	0.01694
0.86000	0.01427
0.88000	0.01157
0.90000	0.00884
0.92000	0.00609
0.94000	0.00333
0.96000	0.00055
0.98000	-0.00224
1.00000	-0.00504

XL	ZL
0.0	0.00595
0.00198	0.00065
0.00499	-0.00284
0.01000	-0.00648
0.02000	-0.01106
0.04005	-0.01662
0.06000	-0.02014
0.08000	-0.02267
0.10000	-0.02459
0.12000	-0.02609
0.14006	-0.02729
0.16000	-0.02825
0.18000	-0.02903
0.20000	-0.02965
0.22000	-0.03014
0.24000	-0.03052
0.26000	-0.03080
0.28000	-0.03098
0.30000	-0.03108
0.32000	-0.03109
0.34000	-0.03103
0.36000	-0.03090
0.38000	-0.03070
0.40000	-0.03044
0.42000	-0.03011
0.44000	-0.02973
0.46000	-0.02930
0.48000	-0.02882
0.50000	-0.02828
0.52000	-0.02771
0.56000	-0.02643
0.60000	-0.02501
0.64000	-0.02346
0.68000	-0.02181
0.70000	-0.02095
0.72000	-0.02007
0.74000	-0.01917
0.76000	-0.01827
0.78000	-0.01734
0.80000	-0.01641
0.82000	-0.01547
0.84000	-0.01453
0.86000	-0.01358
0.88000	-0.01262

R84-1788-015(6/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 7 of 22)

```
FILE: A22W      F14-35


    0.90000   -0.01166
    0.92000   -0.01070
    0.94000   -0.00974
    0.96000   -0.00878
    0.98000   -0.00782
    1.00000   -0.00686
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
    127.230    505.366    159.958    134.489      1.000      0.0         1.000
YSYM        FNU         FNL
         0.0        50.0        50.0
TRL         SLT         XSING       ZSING
    10.7465    -0.0451     0.0034     0.0068
XU          ZU
    0.0         0.00667
    0.00198     0.01231
    0.00499     0.01543
    0.01000     0.01904
    0.02000     0.02430
    0.04005     0.03179
    0.06000     0.03735
    0.08000     0.04183
    0.10000     0.04554
    0.12000     0.04865
    0.14006     0.05127
    0.16000     0.05345
    0.18000     0.05526
    0.20000     0.05675
    0.22000     0.05793
    0.24000     0.05885
    0.26000     0.05951
    0.28000     0.05994
    0.30000     0.06016
    0.32000     0.06018
    0.34000     0.06001
    0.36000     0.05966
    0.38000     0.05915
    0.40000     0.05847
    0.42000     0.05765
    0.44000     0.05668
    0.46000     0.05557
    0.48000     0.05434
    0.50000     0.05297
    0.52000     0.05149
    0.56000     0.04820
    0.60000     0.04449
    0.64000     0.04042
    0.68000     0.03602
    0.70000     0.03371
    0.72000     0.03134
    0.74000     0.02890
    0.76000     0.02641
    0.78000     0.02387
    0.80000     0.02128
    0.82000     0.01865
    0.84000     0.01599
```

R84-1788-015(7/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 8 of 22)

```
FILE: A22W      F14-35


    0.86000    0.01330
    0.88000    0.01058
    0.90000    0.00784
    0.92000    0.00508
    0.94000    0.00231
    0.96000   -0.00047
    0.98000   -0.00325
    1.00000   -0.00604
XL          ZL
    0.0        0.00667
    0.00198    0.00145
    0.00499   -0.00188
    0.01000   -0.00532
    0.02000   -0.00964
    0.04005   -0.01482
    0.06000   -0.01807
    0.08000   -0.02041
    0.10000   -0.02219
    0.12000   -0.02359
    0.14006   -0.02472
    0.16000   -0.02564
    0.18000   -0.02640
    0.20000   -0.02703
    0.22000   -0.02755
    0.24000   -0.02797
    0.26000   -0.02831
    0.28000   -0.02857
    0.30000   -0.02876
    0.32000   -0.02888
    0.34000   -0.02893
    0.36000   -0.02893
    0.38000   -0.02886
    0.40000   -0.02874
    0.42000   -0.02856
    0.44000   -0.02833
    0.46000   -0.02804
    0.48000   -0.02771
    0.50000   -0.02732
    0.52000   -0.02689
    0.56000   -0.02589
    0.60000   -0.02472
    0.64000   -0.02339
    0.68000   -0.02194
    0.70000   -0.02116
    0.72000   -0.02036
    0.74000   -0.01953
    0.76000   -0.01867
    0.78000   -0.01780
    0.80000   -0.01690
    0.82000   -0.01599
    0.84000   -0.01506
    0.86000   -0.01412
    0.88000   -0.01317
    0.90000   -0.01220
    0.92000   -0.01123
```

R84-1788-015(8/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 9 of 22)

```
FILE: A22W      F14-35


   0.94000  -0.01026
   0.96000  -0.00928
   0.98000  -0.00829
   1.00000  -0.00731
YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
   159.985    528.306    159.278    121.912       1.000       0.0         1.000
YSYM        FNU         FNL
       0.0        50.0        50.0
TRL         SLT         XSING       ZSING
   10.7901    -0.0440     0.0035      0.0080
XU          ZU
   0.0         0.00768
   0.00198     0.01341
   0.00499     0.01652
   0.01000     0.01992
   0.02000     0.02484
   0.04005     0.03182
   0.06000     0.03700
   0.08000     0.04119
   0.10000     0.04470
   0.12000     0.04770
   0.14006     0.05027
   0.16000     0.05245
   0.18000     0.05432
   0.20000     0.05588
   0.22000     0.05715
   0.24000     0.05817
   0.26000     0.05895
   0.28000     0.05949
   0.30000     0.05980
   0.32000     0.05991
   0.34000     0.05982
   0.36000     0.05954
   0.38000     0.05908
   0.40000     0.05844
   0.42000     0.05764
   0.44000     0.05667
   0.46000     0.05556
   0.48000     0.05430
   0.50000     0.05290
   0.52000     0.05137
   0.56000     0.04795
   0.60000     0.04409
   0.64000     0.03984
   0.68000     0.03526
   0.70000     0.03287
   0.72000     0.03041
   0.74000     0.02789
   0.76000     0.02533
   0.78000     0.02272
   0.80000     0.02007
   0.82000     0.01739
   0.84000     0.01468
   0.86000     0.01195
   0.88000     0.00921
```

R84-1788-015(9/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 10 of 22)

FILE: A22W F14-35

0.90000	0.00645
0.92000	0.00368
0.94000	0.00091
0.96000	-0.00187
0.98000	-0.00465
1.00000	-0.00743

XL	ZL
0.0	0.00768
0.00198	0.00255
0.00499	-0.00054
0.01000	-0.00373
0.02000	-0.00767
0.04005	-0.01232
0.06000	-0.01521
0.08000	-0.01728
0.10000	-0.01886
0.12000	-0.02013
0.14006	-0.02116
0.16000	-0.02203
0.18000	-0.02276
0.20000	-0.02340
0.22000	-0.02395
0.24000	-0.02444
0.26000	-0.02486
0.28000	-0.02523
0.30000	-0.02555
0.32000	-0.02581
0.34000	-0.02603
0.36000	-0.02620
0.38000	-0.02632
0.40000	-0.02639
0.42000	-0.02642
0.44000	-0.02639
0.46000	-0.02631
0.48000	-0.02617
0.50000	-0.02599
0.52000	-0.02576
0.56000	-0.02514
0.60000	-0.02432
0.64000	-0.02331
0.68000	-0.02211
0.70000	-0.02145
0.72000	-0.02075
0.74000	-0.02001
0.76000	-0.01923
0.78000	-0.01842
0.80000	-0.01758
0.82000	-0.01670
0.84000	-0.01580
0.86000	-0.01487
0.88000	-0.01392
0.90000	-0.01295
0.92000	-0.01197
0.94000	-0.01097
0.96000	-0.00997

R84-1788-015(10/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 11 of 22)

```
FILE: A22W      F14-35


   0.98000  -0.00895
   1.00000  -0.00794
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   192.740   551.254   158.393   109.327      1.000      0.0         1.000
YSYM        FNU         FNL
       0.0       50.0       50.0
TRL         SLT         XSING      ZSING
   11.3779   -0.0361     0.0035     0.0066
XU          ZU
   0.0         0.00652
   0.00198     0.01219
   0.00499     0.01515
   0.01000     0.01851
   0.02000     0.02329
   0.04005     0.02992
   0.06000     0.03482
   0.08000     0.03880
   0.10000     0.04217
   0.12000     0.04508
   0.14006     0.04761
   0.16000     0.04979
   0.18000     0.05168
   0.20000     0.05330
   0.22000     0.05465
   0.24000     0.05575
   0.26000     0.05662
   0.28000     0.05727
   0.30000     0.05770
   0.32000     0.05793
   0.34000     0.05797
   0.36000     0.05781
   0.38000     0.05747
   0.40000     0.05696
   0.42000     0.05628
   0.44000     0.05544
   0.46000     0.05445
   0.48000     0.05331
   0.50000     0.05203
   0.52000     0.05062
   0.56000     0.04742
   0.60000     0.04377
   0.64000     0.03972
   0.68000     0.03533
   0.70000     0.03302
   0.72000     0.03064
   0.74000     0.02821
   0.76000     0.02572
   0.78000     0.02319
   0.80000     0.02062
   0.82000     0.01801
   0.84000     0.01537
   0.86000     0.01271
   0.88000     0.01003
   0.90000     0.00733
   0.92000     0.00462
```

R84-1788-015(11/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 12 of 22)

FILE: A22W F14-35

0.94000	0.00191
0.96000	-0.00081
0.98000	-0.00352
1.00000	-0.00624
XL	ZL
0.0	0.00652
0.00198	0.00128
0.00499	-0.00172
0.01000	-0.00478
0.02000	-0.00852
0.04005	-0.01292
0.06000	-0.01571
0.08000	-0.01778
0.10000	-0.01940
0.12000	-0.02074
0.14006	-0.02187
0.16000	-0.02285
0.18000	-0.02371
0.20000	-0.02448
0.22000	-0.02518
0.24000	-0.02581
0.26000	-0.02638
0.28000	-0.02689
0.30000	-0.02735
0.32000	-0.02775
0.34000	-0.02809
0.36000	-0.02837
0.38000	-0.02860
0.40000	-0.02876
0.42000	-0.02886
0.44000	-0.02889
0.46000	-0.02886
0.48000	-0.02876
0.50000	-0.02860
0.52000	-0.02837
0.56000	-0.02770
0.60000	-0.02678
0.64000	-0.02560
0.68000	-0.02419
0.70000	-0.02340
0.72000	-0.02256
0.74000	-0.02166
0.76000	-0.02072
0.78000	-0.01973
0.80000	-0.01869
0.82000	-0.01762
0.84000	-0.01651
0.86000	-0.01537
0.88000	-0.01420
0.90000	-0.01301
0.92000	-0.01179
0.94000	-0.01056
0.96000	-0.00932
0.98000	-0.00807
1.00000	-0.00681

R84-1788-015(12/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 13 of 22)

FILE: A22W F14-35

YLE	XLE	ZLE	CHORD	THICK	ALPHA	NEWSEC
225.495	574.212	157.275	96.732	1.000	0.0	1.000

YSYM	FNU	FNL
0.0	50.0	50.0

TRL	SLT	XSING	ZSING
11.8518	-0.0273	0.0037	0.0027

XU	ZU
0.0	0.00265
0.00198	0.00839
0.00499	0.01139
0.01000	0.01478
0.02000	0.01962
0.04005	0.02634
0.06000	0.03133
0.08000	0.03539
0.10000	0.03886
0.12000	0.04187
0.14006	0.04451
0.16000	0.04682
0.18000	0.04885
0.20000	0.05062
0.22000	0.05214
0.24000	0.05341
0.26000	0.05447
0.28000	0.05531
0.30000	0.05595
0.32000	0.05639
0.34000	0.05663
0.36000	0.05669
0.38000	0.05657
0.40000	0.05628
0.42000	0.05582
0.44000	0.05520
0.46000	0.05442
0.48000	0.05350
0.50000	0.05243
0.52000	0.05123
0.56000	0.04843
0.60000	0.04517
0.64000	0.04148
0.68000	0.03743
0.70000	0.03527
0.72000	0.03304
0.74000	0.03076
0.76000	0.02841
0.78000	0.02601
0.80000	0.02356
0.82000	0.02107
0.84000	0.01854
0.86000	0.01598
0.88000	0.01340
0.90000	0.01080
0.92000	0.00818
0.94000	0.00556
0.96000	0.00293

R84-1788-015(13/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 14 of 22)

```
FILE: A22W      F14-35


    0.98000    0.00030
    1.00000   -0.00233
XL          ZL
    0.0         0.00265
    0.00198    -0.00261
    0.00499    -0.00562
    0.01000    -0.00862
    0.02000    -0.01228
    0.04005    -0.01655
    0.06000    -0.01922
    0.08000    -0.02118
    0.10000    -0.02270
    0.12000    -0.02395
    0.14006    -0.02499
    0.16000    -0.02589
    0.18000    -0.02668
    0.20000    -0.02739
    0.22000    -0.02802
    0.24000    -0.02858
    0.26000    -0.02909
    0.28000    -0.02953
    0.30000    -0.02991
    0.32000    -0.03023
    0.34000    -0.03048
    0.36000    -0.03067
    0.38000    -0.03080
    0.40000    -0.03086
    0.42000    -0.03084
    0.44000    -0.03076
    0.46000    -0.03060
    0.48000    -0.03036
    0.50000    -0.03007
    0.52000    -0.02969
    0.56000    -0.02871
    0.60000    -0.02746
    0.64000    -0.02592
    0.68000    -0.02413
    0.70000    -0.02314
    0.72000    -0.02209
    0.74000    -0.02098
    0.76000    -0.01982
    0.78000    -0.01861
    0.80000    -0.01735
    0.82000    -0.01605
    0.84000    -0.01470
    0.86000    -0.01332
    0.88000    -0.01190
    0.90000    -0.01046
    0.92000    -0.00899
    0.94000    -0.00751
    0.96000    -0.00601
    0.98000    -0.00450
    1.00000    -0.00298
 YLE         XLE         ZLE         CHORD       THICK       ALPHA       NEWSEC
    258.250    597.170    156.156     84.137       1.000       0.0         1.000
```

R84-1788-015(14/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 15 of 22)

FILE: A22W F14-35

YSYM	FNU	FNL
0.0	50.0	50.0

TRL	SLT	XSING	ZSING
12.5089	-0.0159	0.0037	-0.0021

XU	ZU
0.0	-0.00237
0.00198	0.00345
0.00499	0.00650
0.01000	0.00993
0.02000	0.01484
0.04005	0.02169
0.06000	0.02679
0.08000	0.03097
0.10000	0.03456
0.12000	0.03770
0.14006	0.04049
0.16000	0.04296
0.18000	0.04517
0.20000	0.04714
0.22000	0.04887
0.24000	0.05038
0.26000	0.05168
0.28000	0.05277
0.30000	0.05367
0.32000	0.05438
0.34000	0.05490
0.36000	0.05524
0.38000	0.05540
0.40000	0.05539
0.42000	0.05522
0.44000	0.05488
0.46000	0.05439
0.48000	0.05374
0.50000	0.05295
0.52000	0.05202
0.56000	0.04975
0.60000	0.04698
0.64000	0.04377
0.68000	0.04015
0.70000	0.03820
0.72000	0.03617
0.74000	0.03407
0.76000	0.03190
0.78000	0.02967
0.80000	0.02738
0.82000	0.02504
0.84000	0.02265
0.86000	0.02023
0.88000	0.01778
0.90000	0.01531
0.92000	0.01281
0.94000	0.01031
0.96000	0.00779
0.98000	0.00526
1.00000	0.00274

R84-1788-015(15/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 16 of 22)

FILE: A22W F14-35

XL	ZL
0.0	-0.00237
0.00198	-0.00766
0.00499	-0.01069
0.01000	-0.01360
0.02000	-0.01717
0.04005	-0.02127
0.06000	-0.02379
0.08000	-0.02560
0.10000	-0.02699
0.12000	-0.02811
0.14006	-0.02905
0.16000	-0.02985
0.18000	-0.03055
0.20000	-0.03117
0.22000	-0.03172
0.24000	-0.03219
0.26000	-0.03261
0.28000	-0.03295
0.30000	-0.03324
0.32000	-0.03345
0.34000	-0.03359
0.36000	-0.03366
0.38000	-0.03366
0.40000	-0.03358
0.42000	-0.03342
0.44000	-0.03318
0.46000	-0.03286
0.48000	-0.03245
0.50000	-0.03197
0.52000	-0.03140
0.56000	-0.03003
0.60000	-0.02834
0.64000	-0.02634
0.68000	-0.02405
0.70000	-0.02280
0.72000	-0.02149
0.74000	-0.02010
0.76000	-0.01866
0.78000	-0.01716
0.80000	-0.01561
0.82000	-0.01400
0.84000	-0.01235
0.86000	-0.01065
0.88000	-0.00892
0.90000	-0.00715
0.92000	-0.00536
0.94000	-0.00354
0.96000	-0.00170
0.98000	0.00014
1.00000	0.00200

YLE	XLE	ZLE	CHORD	THICK	ALPHA	NEWSEC
291.005	620.129	155.038	71.541	1.000	0.0	1.000

YSYM	FNU	FNL
0.0	50.0	50.0

R84-1788-015(16/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 17 of 22)

FILE: A22W F14-35

TRL	SLT	XSING	ZSING
13.0638	-0.0022	0.0037	-0.0091

XU	ZU
0.0	-0.00916
0.00198	-0.00338
0.00499	-0.00018
0.01000	0.00333
0.02000	0.00837
0.04005	0.01542
0.06000	0.02068
0.08000	0.02500
0.10000	0.02872
0.12000	0.03201
0.14006	0.03496
0.16000	0.03760
0.18000	0.03999
0.20000	0.04216
0.22000	0.04411
0.24000	0.04586
0.26000	0.04741
0.28000	0.04878
0.30000	0.04996
0.32000	0.05097
0.34000	0.05180
0.36000	0.05246
0.38000	0.05296
0.40000	0.05329
0.42000	0.05347
0.44000	0.05348
0.46000	0.05335
0.48000	0.05306
0.50000	0.05263
0.52000	0.05206
0.56000	0.05051
0.60000	0.04845
0.64000	0.04593
0.68000	0.04297
0.70000	0.04135
0.72000	0.03963
0.74000	0.03784
0.76000	0.03596
0.78000	0.03401
0.80000	0.03199
0.82000	0.02991
0.84000	0.02778
0.86000	0.02561
0.88000	0.02339
0.90000	0.02114
0.92000	0.01886
0.94000	0.01656
0.96000	0.01425
0.98000	0.01193
1.00000	0.00960

XL	ZL
0.0	-0.00916

R84-1788-015(17/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 18 of 22)

```
FILE: A22W      F14-35

   0.00198  -0.01455
   0.00499  -0.01752
   0.01000  -0.02035
   0.02000  -0.02377
   0.04005  -0.02763
   0.06000  -0.02993
   0.08000  -0.03151
   0.10000  -0.03270
   0.12000  -0.03363
   0.14006  -0.03440
   0.16000  -0.03504
   0.18000  -0.03558
   0.20000  -0.03604
   0.22000  -0.03642
   0.24000  -0.03673
   0.26000  -0.03697
   0.28000  -0.03713
   0.30000  -0.03722
   0.32000  -0.03722
   0.34000  -0.03715
   0.36000  -0.03700
   0.38000  -0.03677
   0.40000  -0.03645
   0.42000  -0.03605
   0.44000  -0.03556
   0.46000  -0.03498
   0.48000  -0.03432
   0.50000  -0.03356
   0.52000  -0.03273
   0.56000  -0.03080
   0.60000  -0.02853
   0.64000  -0.02593
   0.68000  -0.02302
   0.70000  -0.02145
   0.72000  -0.01981
   0.74000  -0.01810
   0.76000  -0.01632
   0.78000  -0.01448
   0.80000  -0.01258
   0.82000  -0.01062
   0.84000  -0.00861
   0.86000  -0.00655
   0.88000  -0.00446
   0.90000  -0.00232
   0.92000  -0.00015
   0.94000   0.00205
   0.96000   0.00426
   0.98000   0.00649
   1.00000   0.00873
YLE        XLE        ZLE        CHORD      THICK      ALPHA      NEWSEC
   323.760    643.087    153.920     58.946      1.000      0.0        1.000
YSYM       FNU        FNL
      0.0       50.0       50.0
TRL        SLT        XSING      ZSING
   13.1865     0.0186     0.0038    -0.0188
```

R84-1788-015(18/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 19 of 22)

FILE: A22W F14-35

XU	ZU
0.0	-0.01886
0.00198	-0.01298
0.00499	-0.00965
0.01000	-0.00604
0.02000	-0.00088
0.04005	0.00641
0.06000	0.01187
0.08000	0.01638
0.10000	0.02027
0.12000	0.02373
0.14006	0.02686
0.16000	0.02970
0.18000	0.03230
0.20000	0.03470
0.22000	0.03689
0.24000	0.03891
0.26000	0.04075
0.28000	0.04243
0.30000	0.04395
0.32000	0.04531
0.34000	0.04651
0.36000	0.04756
0.38000	0.04846
0.40000	0.04921
0.42000	0.04981
0.44000	0.05027
0.46000	0.05059
0.48000	0.05077
0.50000	0.05081
0.52000	0.05072
0.56000	0.05016
0.60000	0.04909
0.64000	0.04757
0.68000	0.04561
0.70000	0.04448
0.72000	0.04326
0.74000	0.04195
0.76000	0.04055
0.78000	0.03907
0.80000	0.03752
0.82000	0.03590
0.84000	0.03422
0.86000	0.03249
0.88000	0.03071
0.90000	0.02888
0.92000	0.02703
0.94000	0.02514
0.96000	0.02324
0.98000	0.02132
1.00000	0.01939

XL	ZL
0.0	-0.01886
0.00198	-0.02428
0.00499	-0.02723

R84-1788-015(19/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 20 of 22)

```
FILE: A22W      F14-35

    0.01000  -0.02998
    0.02000  -0.03316
    0.04005  -0.03657
    0.06000  -0.03843
    0.08000  -0.03960
    0.10000  -0.04042
    0.12000  -0.04101
    0.14006  -0.04145
    0.16000  -0.04177
    0.18000  -0.04200
    0.20000  -0.04214
    0.22000  -0.04220
    0.24000  -0.04217
    0.26000  -0.04207
    0.28000  -0.04188
    0.30000  -0.04162
    0.32000  -0.04127
    0.34000  -0.04084
    0.36000  -0.04033
    0.38000  -0.03973
    0.40000  -0.03905
    0.42000  -0.03829
    0.44000  -0.03743
    0.46000  -0.03649
    0.48000  -0.03546
    0.50000  -0.03434
    0.52000  -0.03313
    0.56000  -0.03046
    0.60000  -0.02743
    0.64000  -0.02407
    0.68000  -0.02037
    0.70000  -0.01841
    0.72000  -0.01636
    0.74000  -0.01424
    0.76000  -0.01205
    0.78000  -0.00979
    0.80000  -0.00746
    0.82000  -0.00507
    0.84000  -0.00263
    0.86000  -0.00013
    0.88000   0.00242
    0.90000   0.00500
    0.92000   0.00762
    0.94000   0.01027
    0.96000   0.01295
    0.98000   0.01564
    1.00000   0.01833
YLE         XLE         ZLE         CHORD      THICK      ALPHA      NEWSEC
   345.147    658.077    153.189     50.722      1.000      0.0         1.000
YSYM        FNU         FNL
       0.0       50.0        50.0
TRL         SLT         XSING      ZSING
   12.6467     0.0407     0.0041    -0.0276
XU          ZU
   0.0        -0.02779
```

R84-1788-015(20/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 21 of 22)

FILE: A22W F14-35

0.00198	-0.02173
0.00499	-0.01837
0.01000	-0.01469
0.02000	-0.00942
0.04005	-0.00193
0.06000	0.00371
0.08000	0.00838
0.10000	0.01243
0.12000	0.01603
0.14006	0.01930
0.16000	0.02229
0.18000	0.02504
0.20000	0.02760
0.22000	0.02997
0.24000	0.03218
0.26000	0.03422
0.28000	0.03612
0.30000	0.03786
0.32000	0.03947
0.34000	0.04093
0.36000	0.04225
0.38000	0.04344
0.40000	0.04450
0.42000	0.04542
0.44000	0.04621
0.46000	0.04687
0.48000	0.04741
0.50000	0.04782
0.52000	0.04811
0.56000	0.04834
0.60000	0.04811
0.64000	0.04747
0.68000	0.04642
0.70000	0.04576
0.72000	0.04502
0.74000	0.04419
0.76000	0.04328
0.78000	0.04231
0.80000	0.04126
0.82000	0.04015
0.84000	0.03899
0.86000	0.03778
0.88000	0.03652
0.90000	0.03523
0.92000	0.03390
0.94000	0.03255
0.96000	0.03118
0.98000	0.02980
1.00000	0.02841

XL	ZL
0.0	-0.02779
0.00198	-0.03330
0.00499	-0.03621
0.01000	-0.03885
0.02000	-0.04176

R84-1788-015(21/22)B

Table 9 F-14A Isolated Wing (FLO-22), $\Lambda = 35^{\circ}$ (Sheet 22 of 22)

FILE: A22W F14-35

0.04005	-0.04457
0.06000	-0.04583
0.08000	-0.04643
0.10000	-0.04670
0.12000	-0.04679
0.14006	-0.04675
0.16000	-0.04662
0.18000	-0.04642
0.20000	-0.04615
0.22000	-0.04582
0.24000	-0.04543
0.26000	-0.04497
0.28000	-0.04445
0.30000	-0.04386
0.32000	-0.04320
0.34000	-0.04247
0.36000	-0.04166
0.38000	-0.04077
0.40000	-0.03980
0.42000	-0.03874
0.44000	-0.03760
0.46000	-0.03637
0.48000	-0.03505
0.50000	-0.03365
0.52000	-0.03215
0.56000	-0.02888
0.60000	-0.02525
0.64000	-0.02126
0.68000	-0.01693
0.70000	-0.01464
0.72000	-0.01227
0.74000	-0.00982
0.76000	-0.00729
0.78000	-0.00469
0.80000	-0.00203
0.82000	0.00070
0.84000	0.00349
0.86000	0.00633
0.88000	0.00921
0.90000	0.01214
0.92000	0.01511
0.94000	0.01810
0.96000	0.02111
0.98000	0.02414
1.00000	0.02718

R84-1788-015(22/22)B

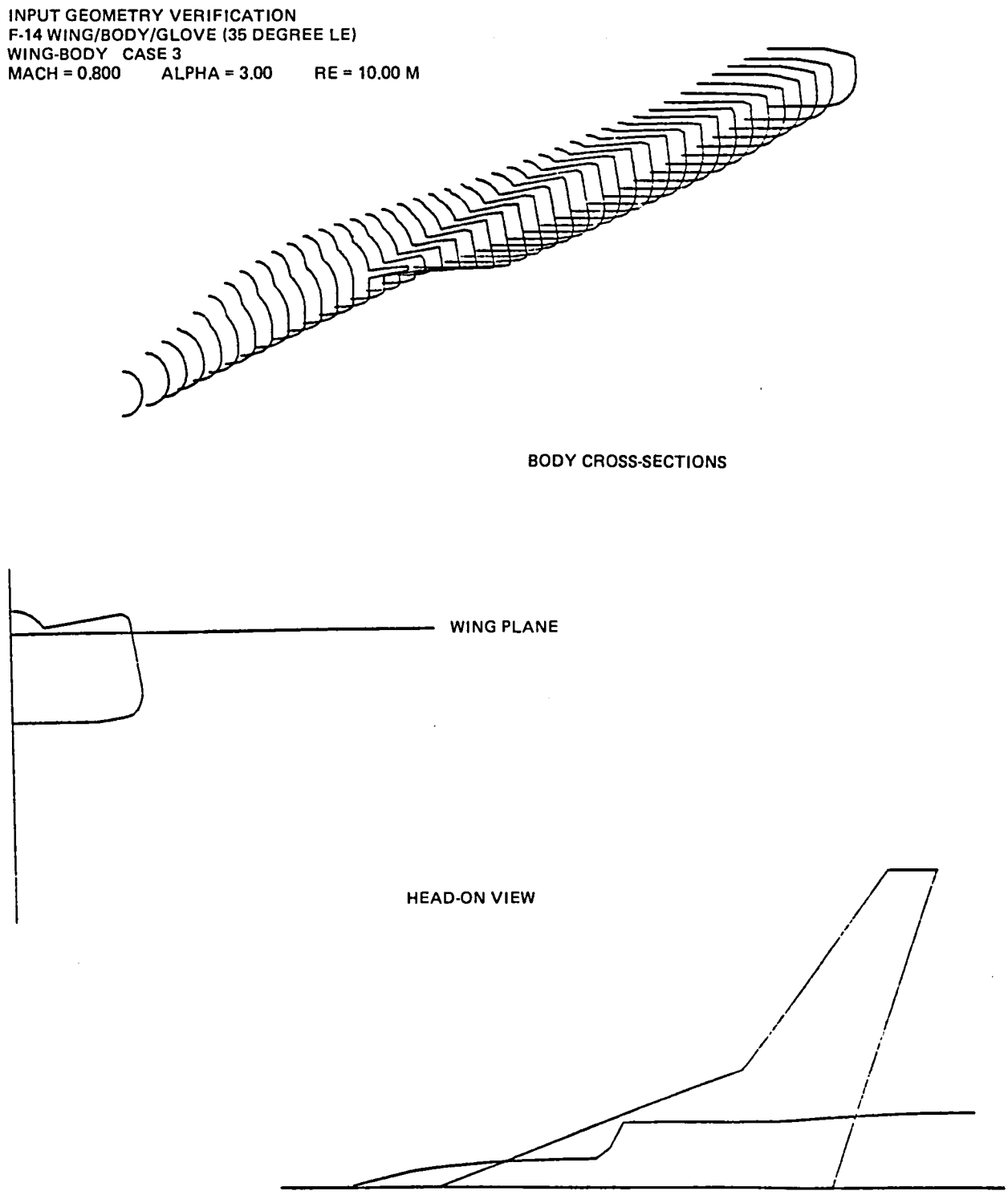
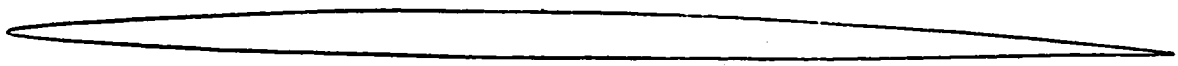
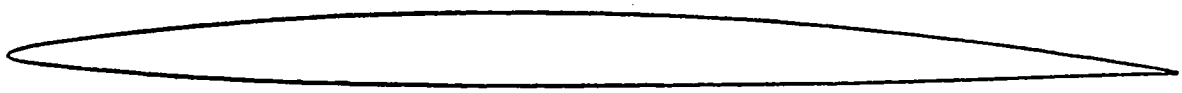


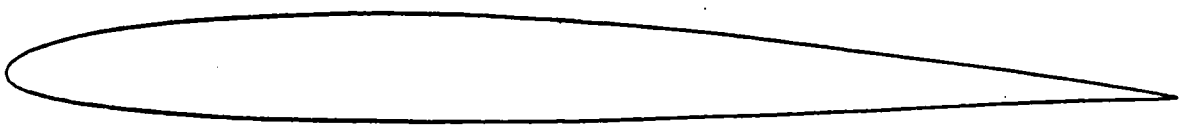
Fig. 4 F-14A Transonic Analysis — Geometry Verification



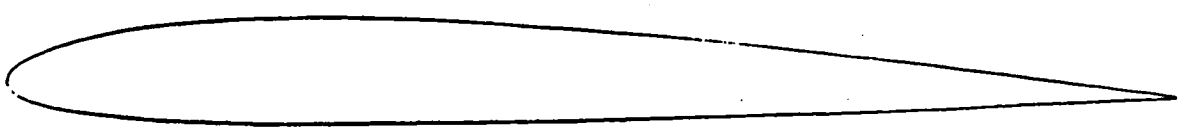
INPUT WING SECTION 1 2Y/B = 0.00



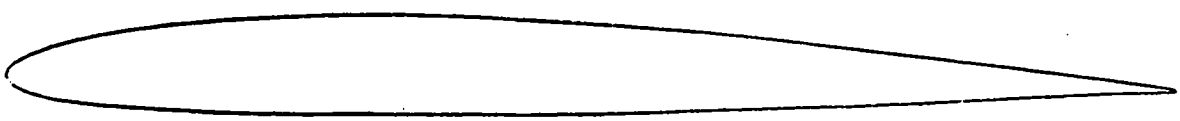
INPUT WING SECTION 2 2Y/B = 0.20



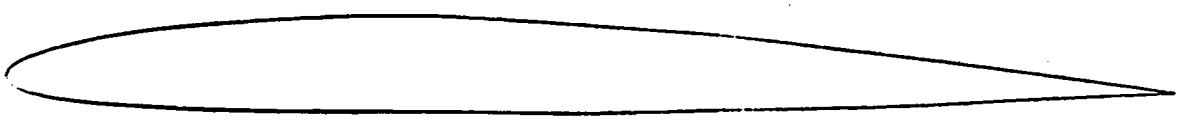
INPUT WING SECTION 3 2Y/B = 0.29



INPUT WING SECTION 4 2Y/B = 0.37



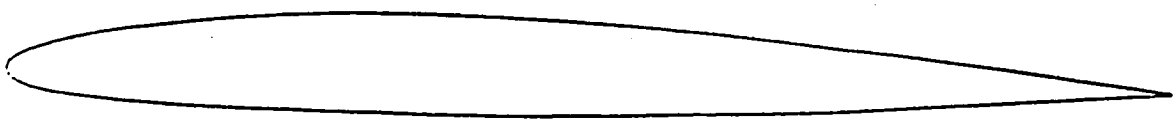
INPUT WING SECTION 5 2Y/B = 0.37



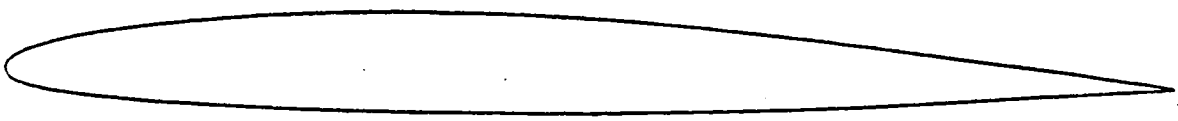
INPUT WING SECTION 6 2Y/B = 0.46

R84-1788-017(1/2)B

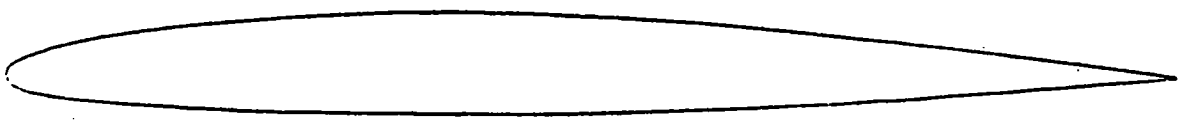
Fig. 5 F-14A Transonic Analysis — Input Airfoil Shapes (Sheet 1 of 2)



INPUT WING SECTION 7 2Y/B = 0.56



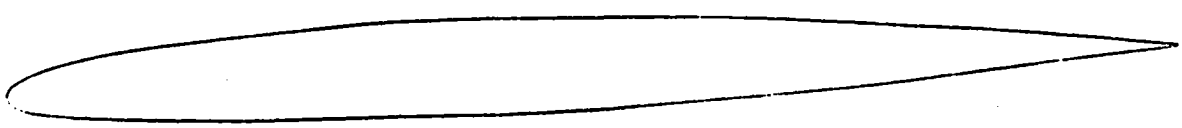
INPUT WING SECTION 8 2Y/B = 0.65



INPUT WING SECTION 9 2Y/B = 0.75

INPUT WING SECTION 10 2Y/B = 0.84

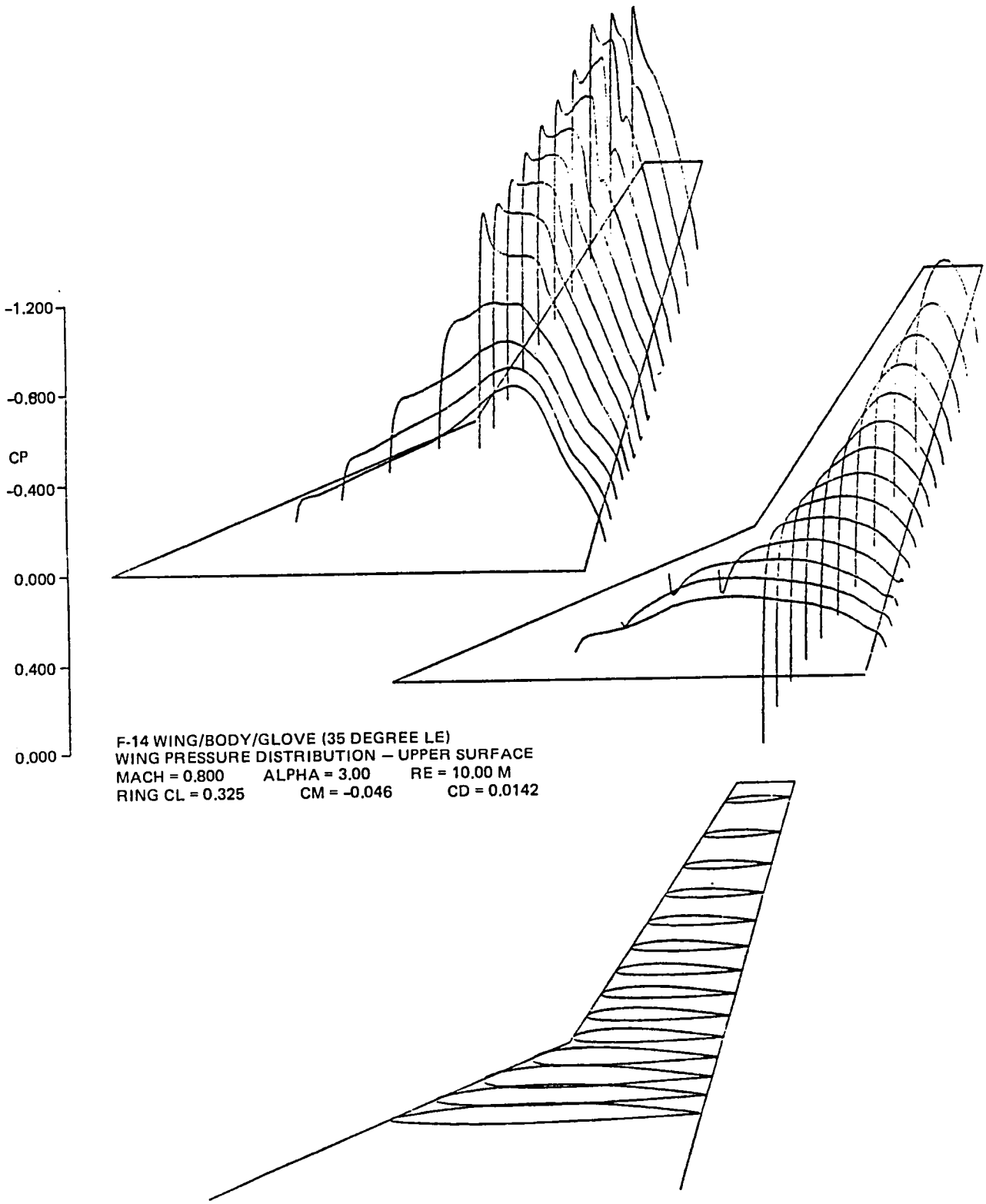
INPUT WING SECTION 11 2Y/B = 0.94



INPUT WING SECTION 12 2Y/B = 1.00

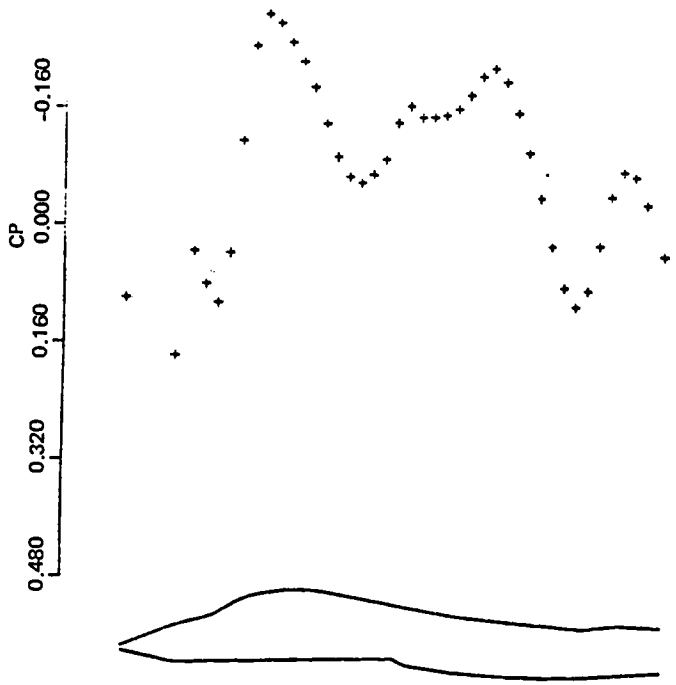
R84-1788-017(2/2)B

Fig. 5 F-14A Transonic Analysis — Input Airfoil Shapes (Sheet 2 of 2)

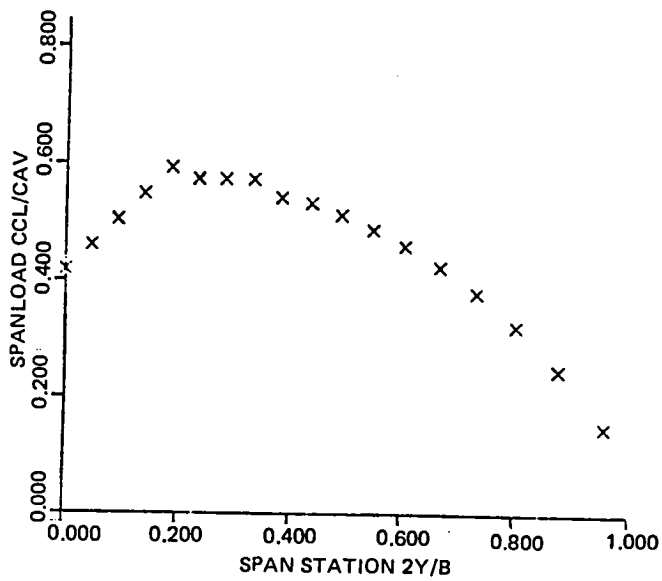


R84-1788-018B

Fig. 6 F-14A Transonic Analysis – Typical Wing Planform/Pressure Plots



F-14 WING/BODY/GLOVE (35 DEGREE LE)
BODY PRESSURE DISTRIBUTION
BODY STATION 1 BODY ANGLE = 90.00 DEGREES
MACH = 0.800 ALPHA = 3.00



F-14 WING/BODY/GLOVE (35 DEGREE LE)
SPAN EFFICIENCY E = 0.998
LIFT INDUCED DRAG = 0.0119
WAVE DRAG = 0.0041
FRICTION DRAG = 0.0097

R84-1788-019B

Fig. 7 F-14A Transonic Analysis — Typical Loading Plots

FLIGHT TEST/ANALYSIS COMPARISONS

F-14A Aircraft 1-X was flight tested at NASA's Dryden Research Facility on 11 January 1984. Wing pressures were obtained at four buttlines using "Strip-A-Tube". Pressure tubes were positioned at buttlines 152", 216", 281", and 333" on the wing which was swept at 19°. Given the F-14A half-span of 384", this resulted in comparison stations at 40%, 56%, 73%, and 87% of the half-span.

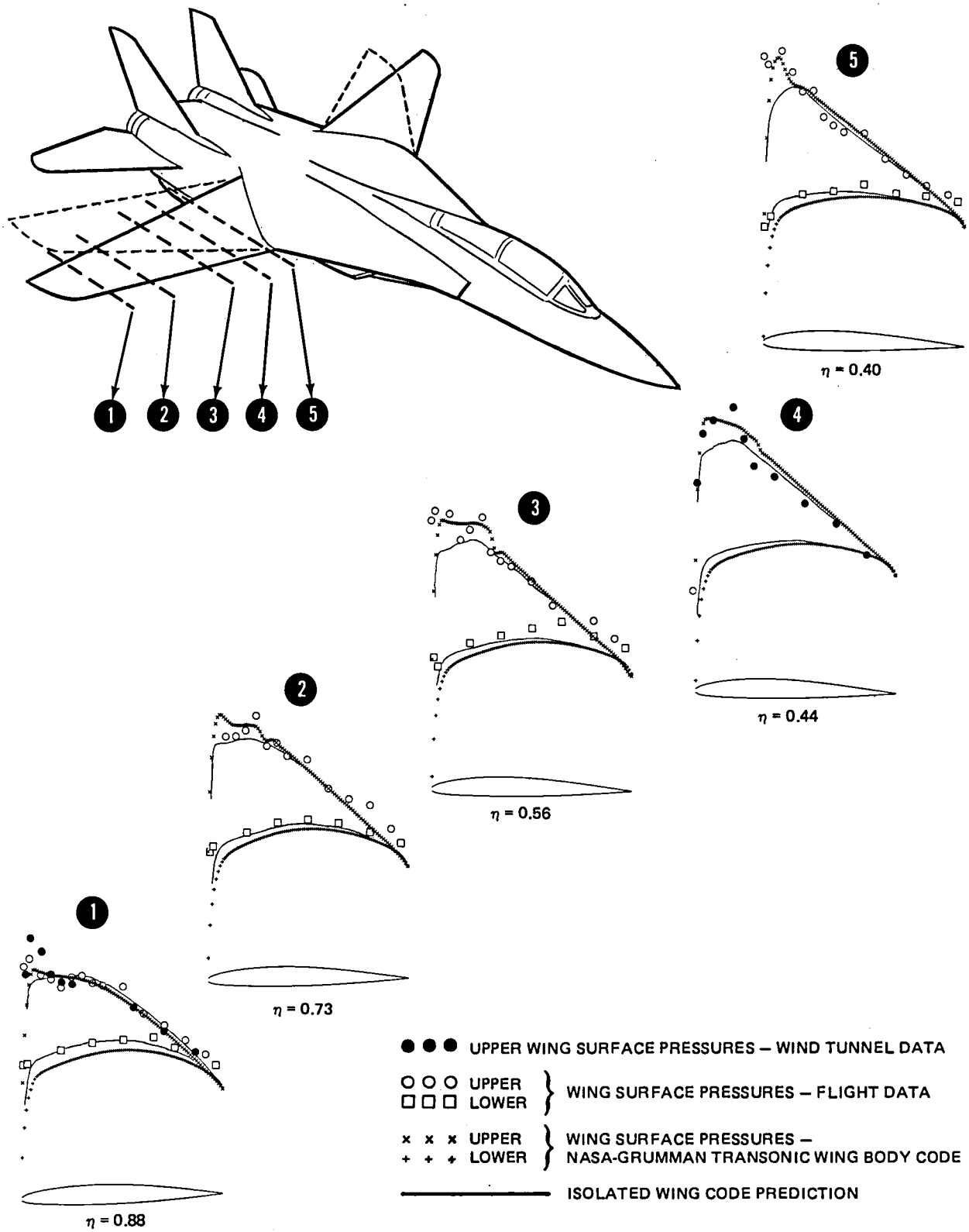
Wing flight pressure correlations were performed primarily for the $\Lambda = 20°$ case. At higher sweep angles, tube misalignment with the free-stream flow direction might induce flow separation and/or erroneous expansions and compressions. One case, however, at $\Lambda = 25°$ has been included. The flight conditions selected are listed below.

Case	Λ	M	α	Figure Set
#1	19°	0.70	3.6°	8
#2	19°	0.75	1.7°	9
#3	19°	0.80	1.4°	10
#4	25°	0.80	3.0°	11

It should be noted that the first analysis model was developed based on a sweep angle of 20°. This discrepancy in sweep (19°-20°) is judged to be insignificant. Also, by performing Case #1 analyses at $\alpha = 4°$ instead of $\alpha = 3.6°$, wind tunnel data could be superimposed on the same figure (see Figs. 8 and A-1). All analyses were obtained using 100 crude iterations followed by 80 crude/fine cycles. The interactive "viscous option" was used; in it the boundary layer is transitioned at 5% chord.

Composite pressure distribution correlations for the four flight cases can be found on the first sheets of Figs. 8-11, respectively. The remaining sheets of each of these figures show individual 5" chord plots so that comparisons can be made to results generated using other model types. The solid lines provide a comparison of isolated wing computations to identify fuselage/glove interference effects.

All analyses were performed at the measured flight angle-of-attack. No attempt was made to match aircraft C_L levels because of the unknown lift components carried by the horizontal/vertical tails and the pancake region between the nacelles. None of these components were modeled.



R84-1788-020(1/6)B

Fig. 8 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 1 of 6)

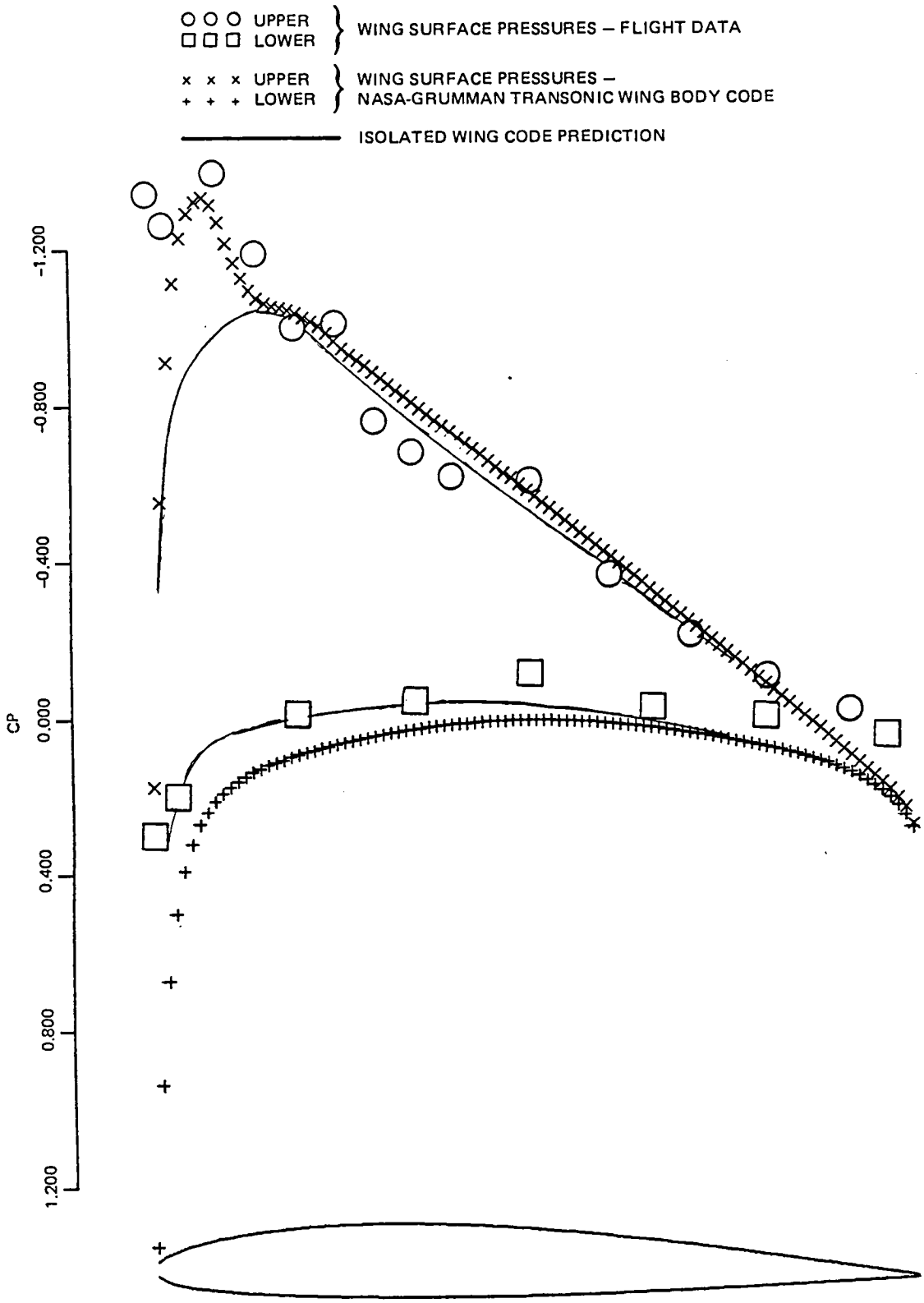


Fig. 8 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations; $\Lambda = 20^\circ$, M = 0.70, $\alpha = 4^\circ$ (Sheet 2 of 6)

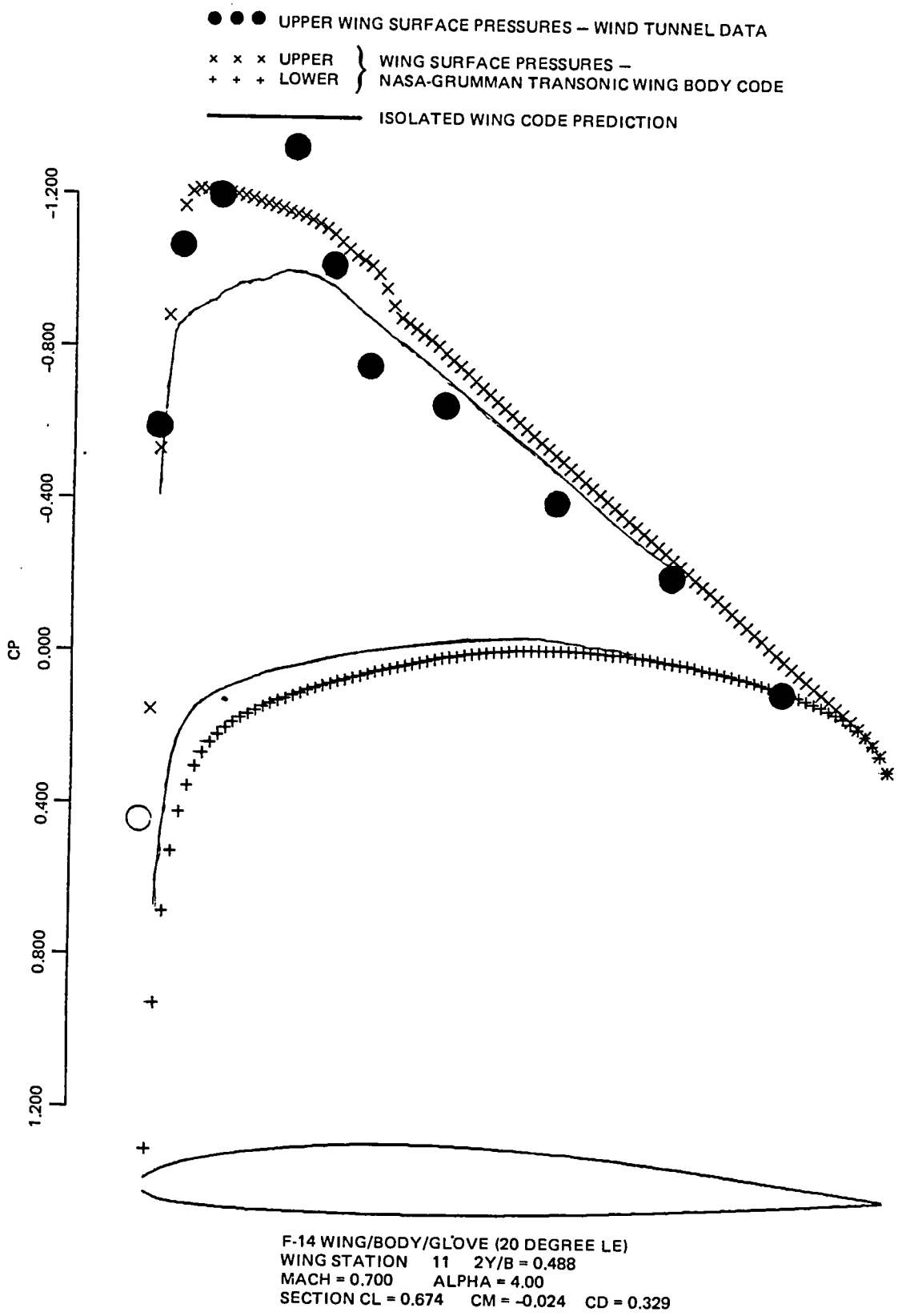
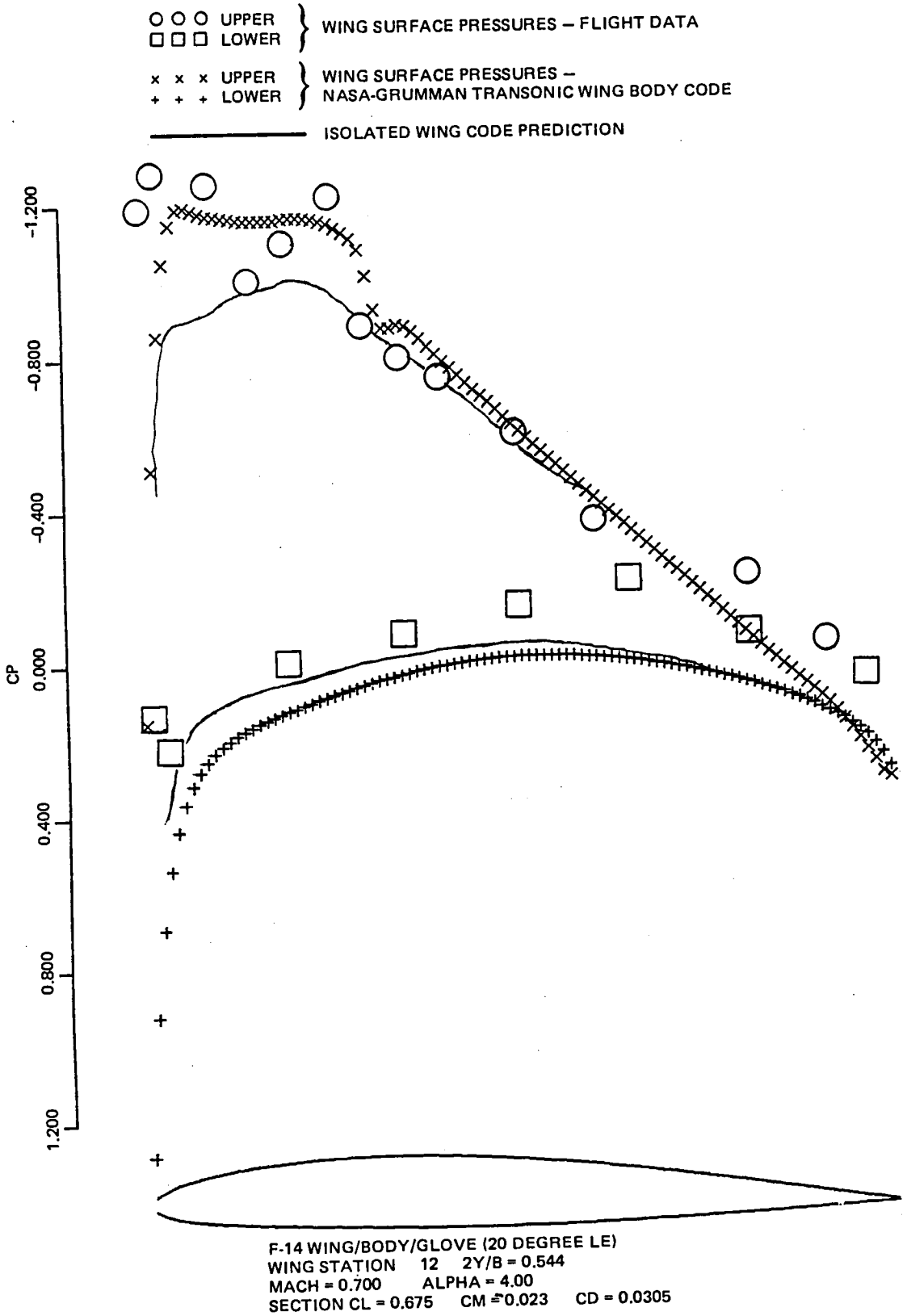


Fig. 8 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 3 of 6)



R84-1788-020(4/6)B

Fig. 8 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations; $\Lambda = 20^\circ$, M = 0.70, $\alpha = 4^\circ$ (Sheet 4 of 6)

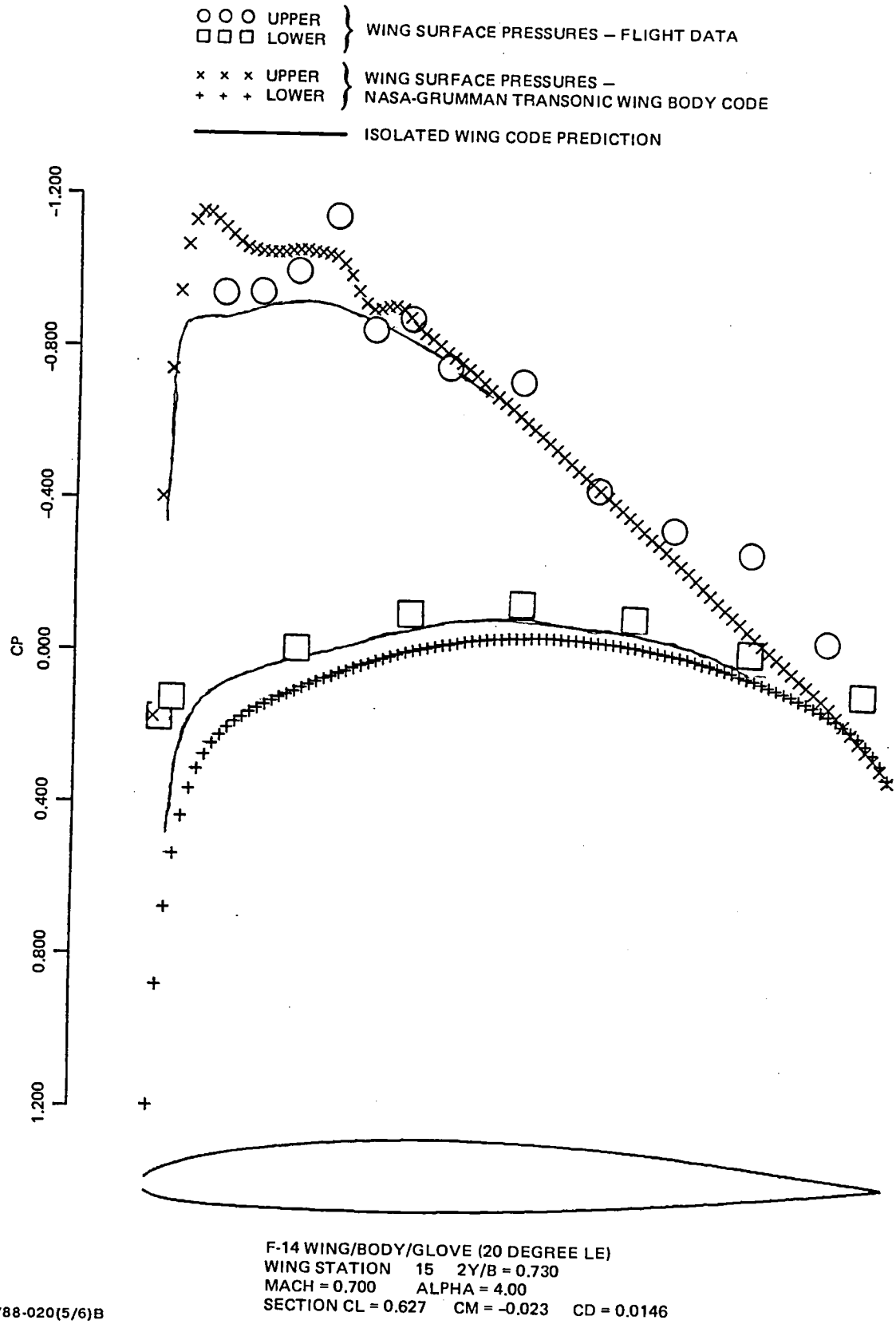
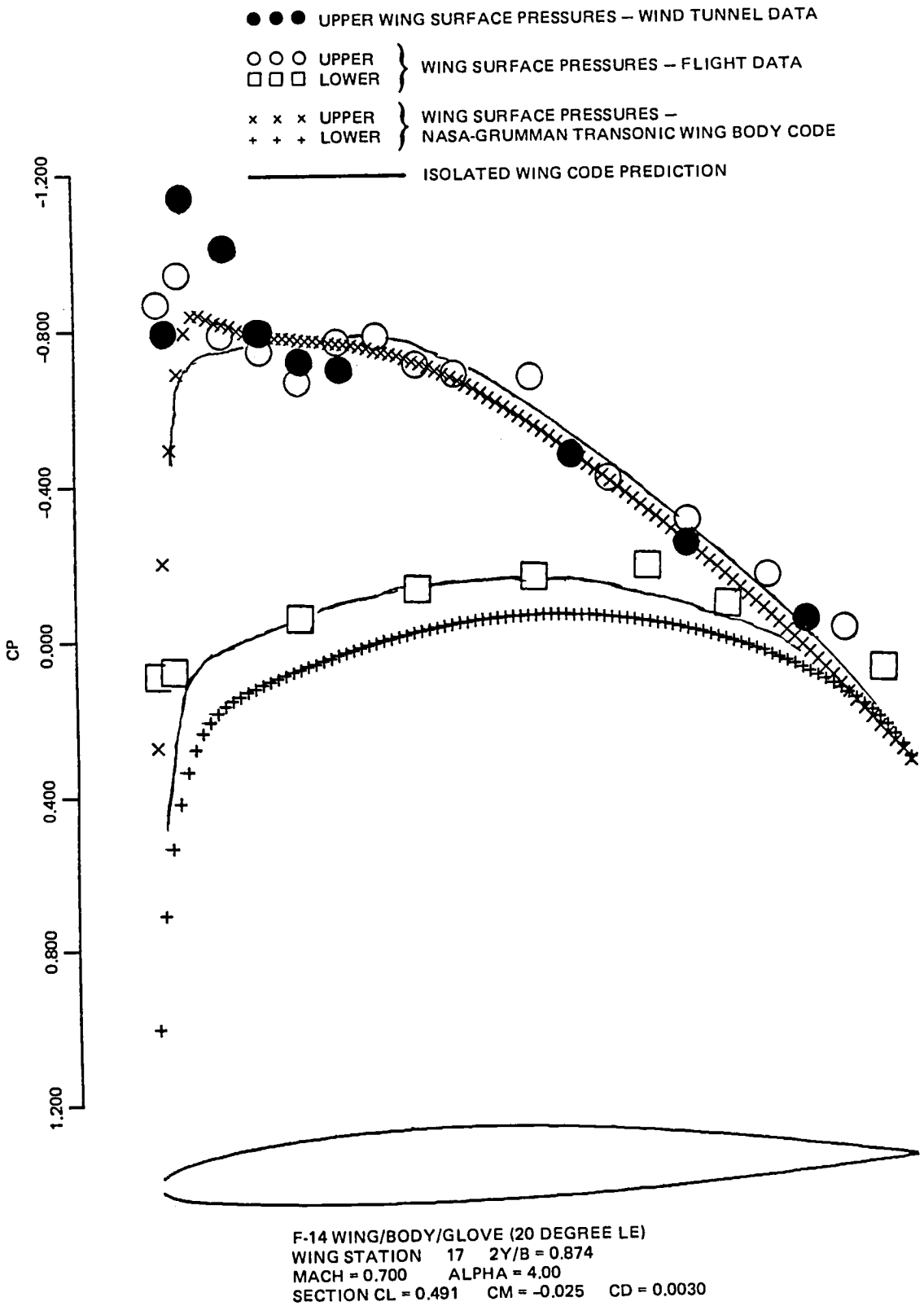


Fig. 8 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 5 of 6)



R84-1788-020(6/6)B

Fig. 8 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 6 of 6)

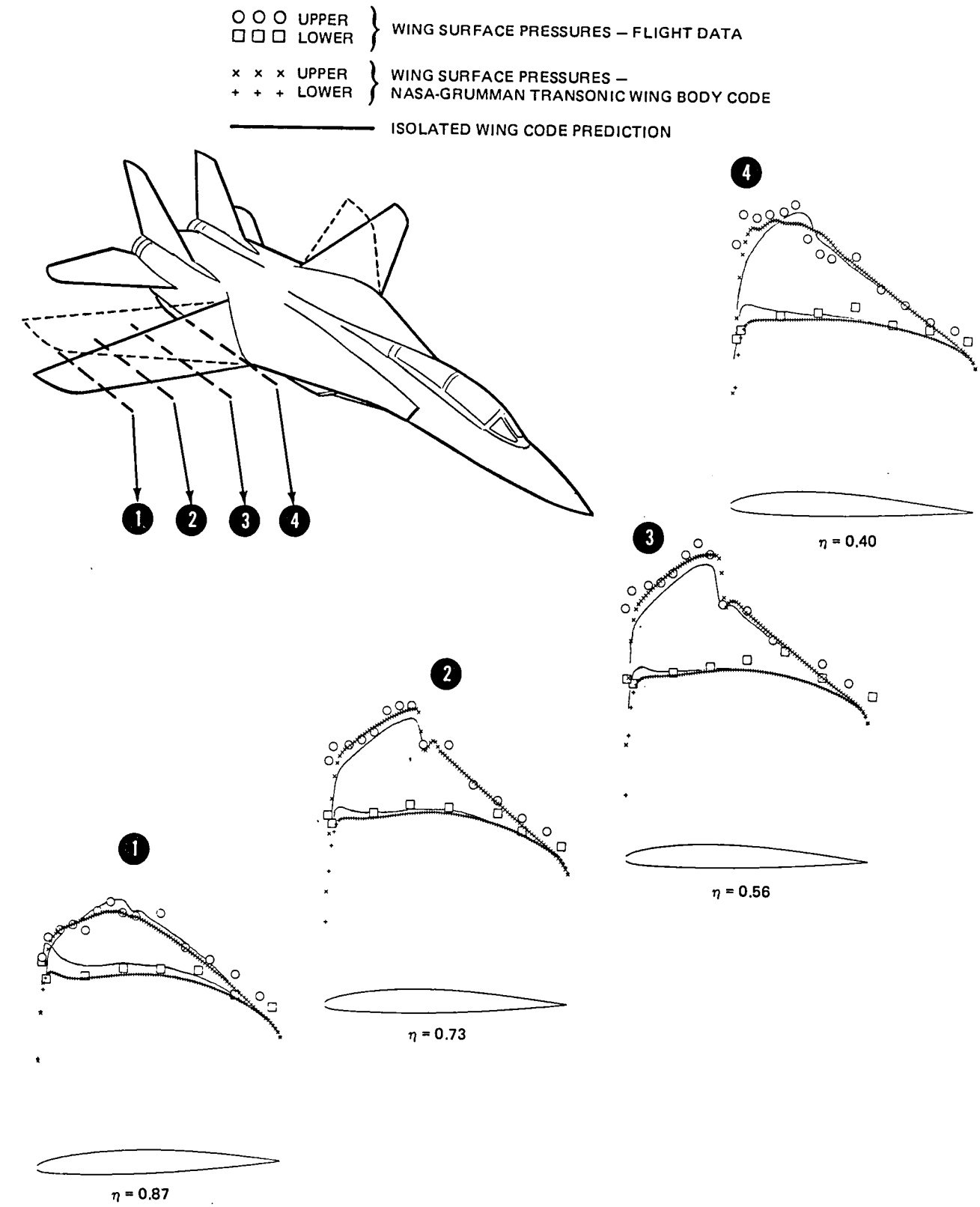
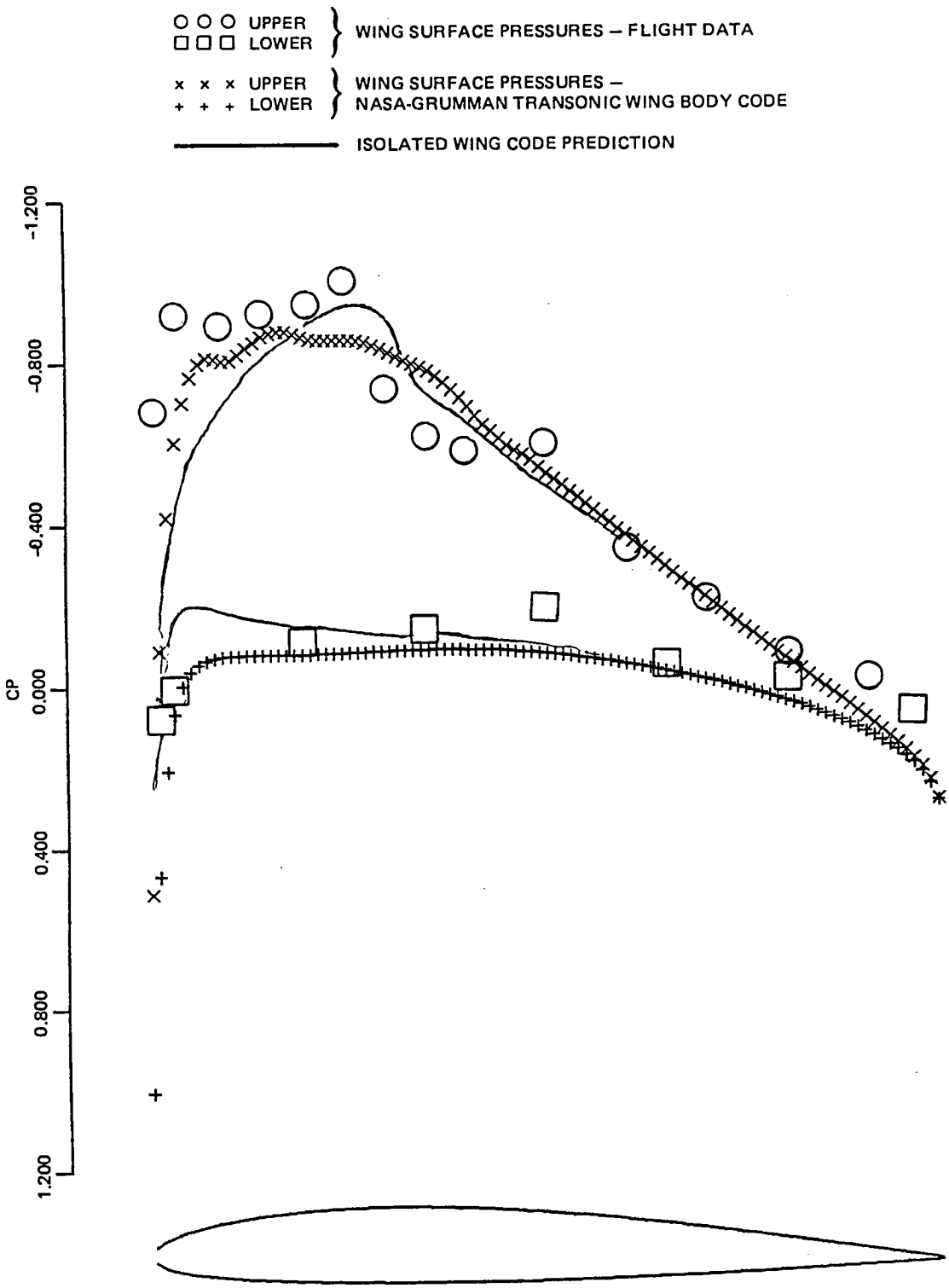
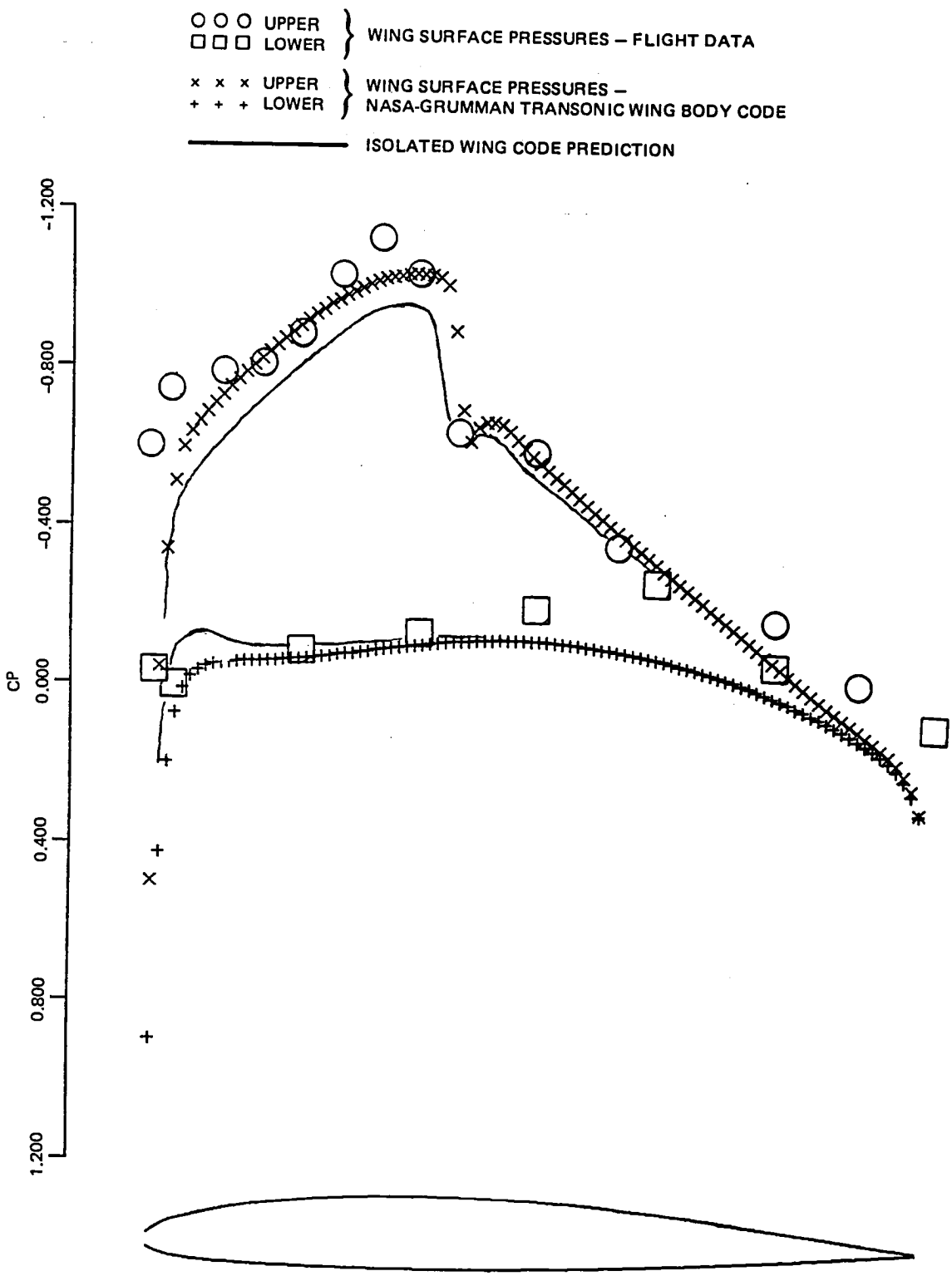


Fig. 9 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 1.7°$ (Sheet 1 of 5)



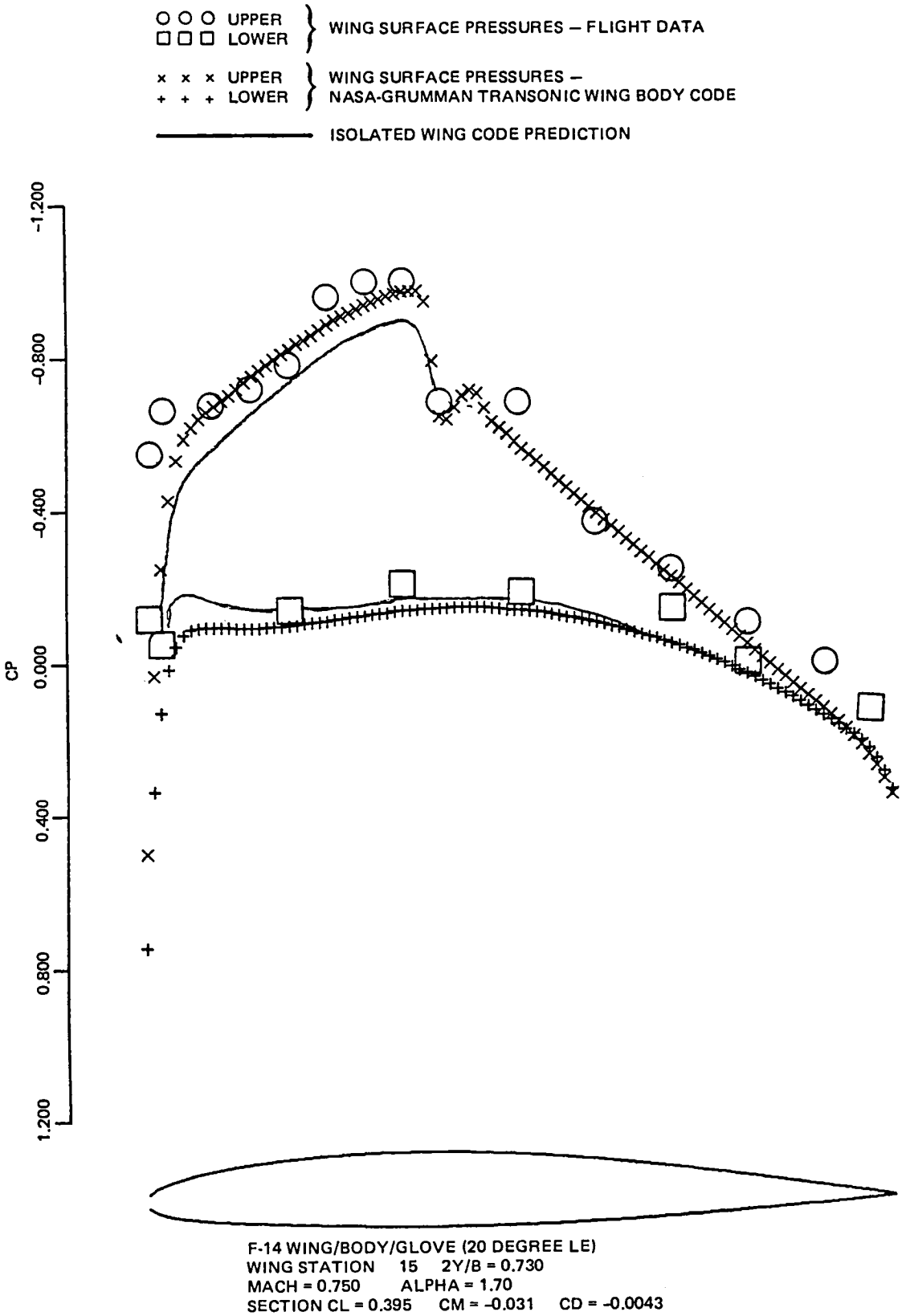
R84-1788-021(2/5)B

Fig. 9 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20^\circ$, M = 0.75, $\alpha = 1.7^\circ$ (Sheet 2 of 5)



R84-1788-021(3/5)B

Fig. 9 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 1.7°$ (Sheet 3 of 5)



R84-1788-021(4/5)B

Fig. 9 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20^\circ$, M = 0.75, $\alpha = 1.7^\circ$ (Sheet 4 of 5)

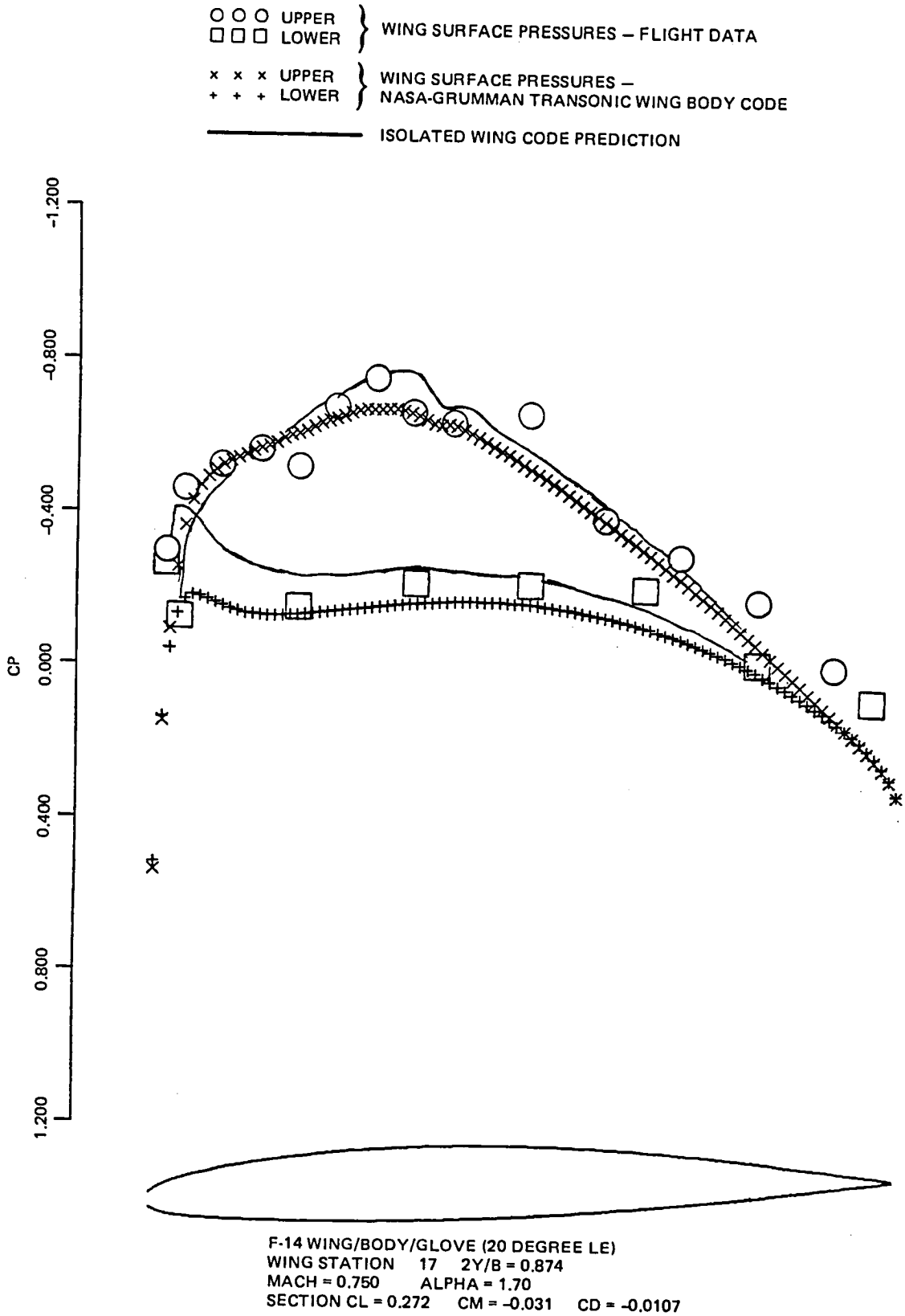
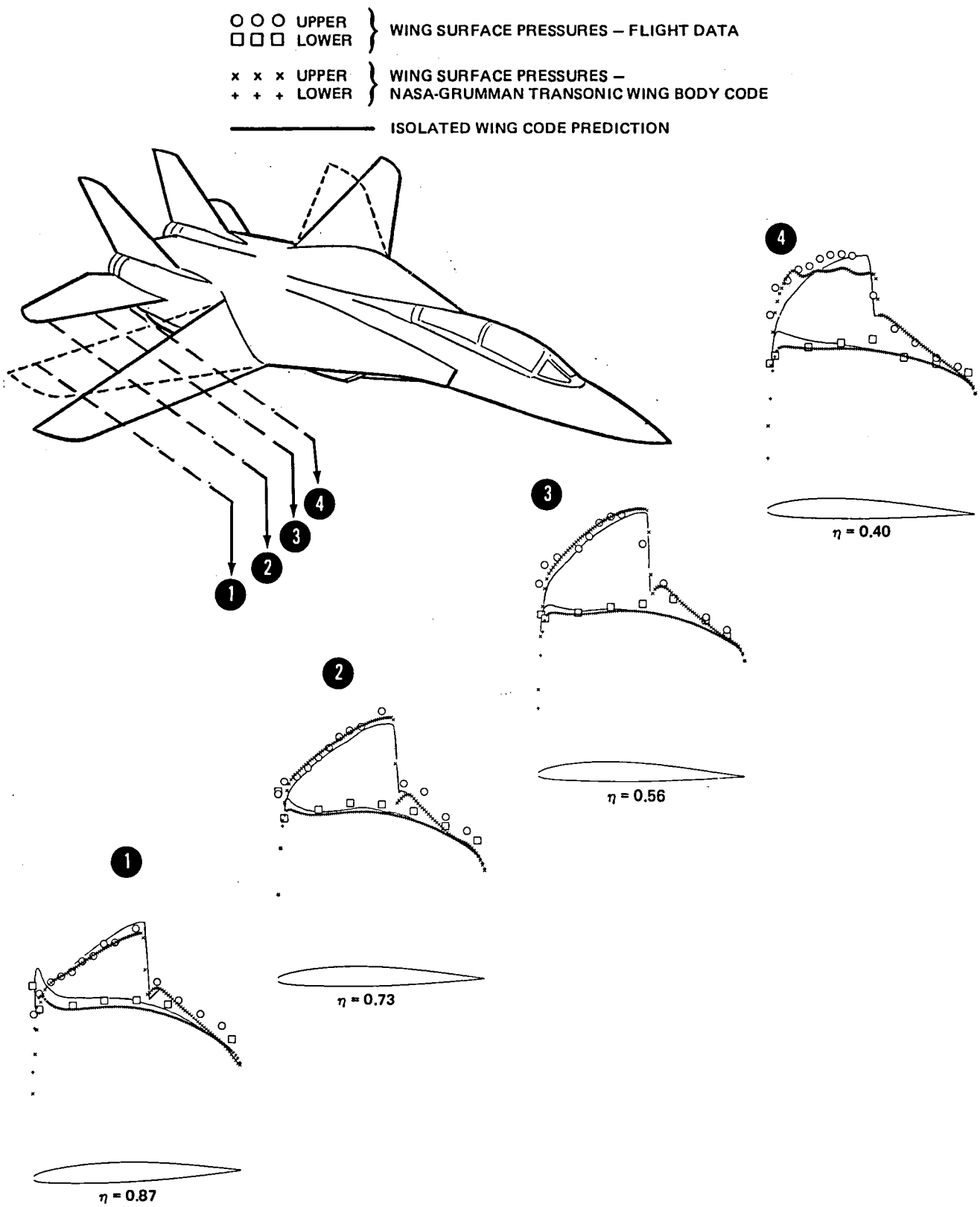
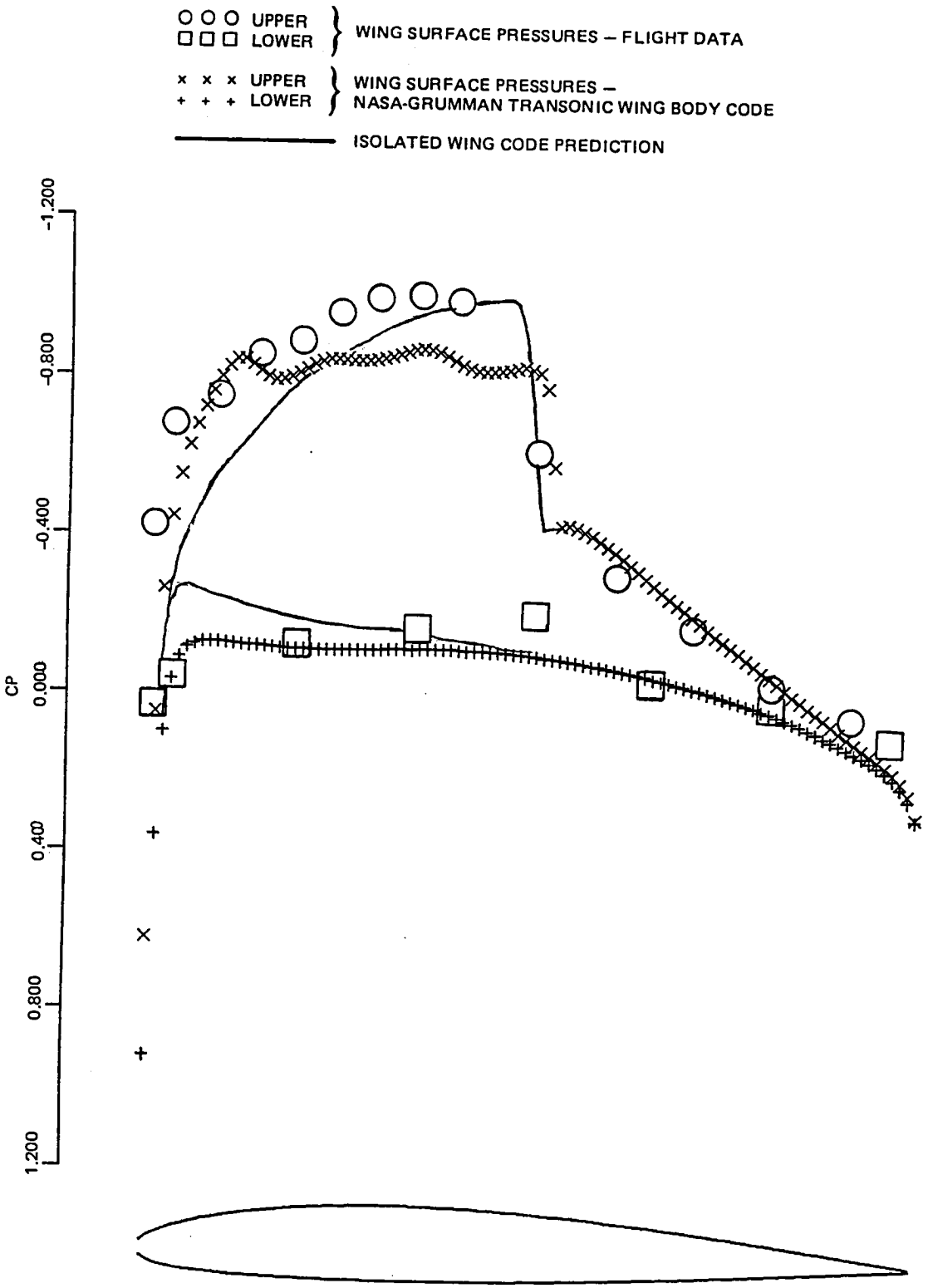


Fig. 9 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 1.7°$ (Sheet 5 of 5)



R84-1788-022(1/5)B

Fig. 10 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 1 of 5)



R84-1788-022(2/5)B

Fig. 10 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 2 of 5)

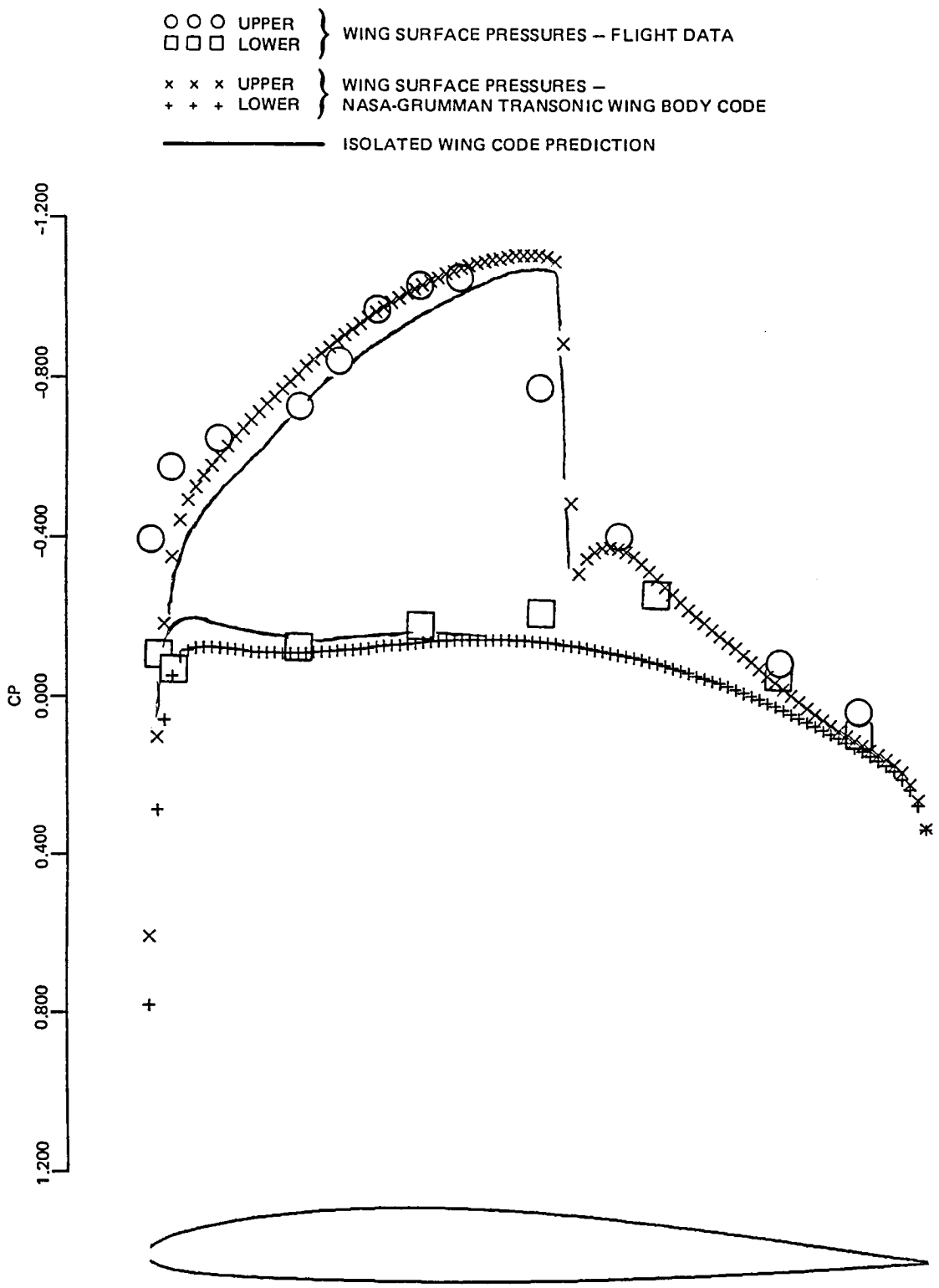
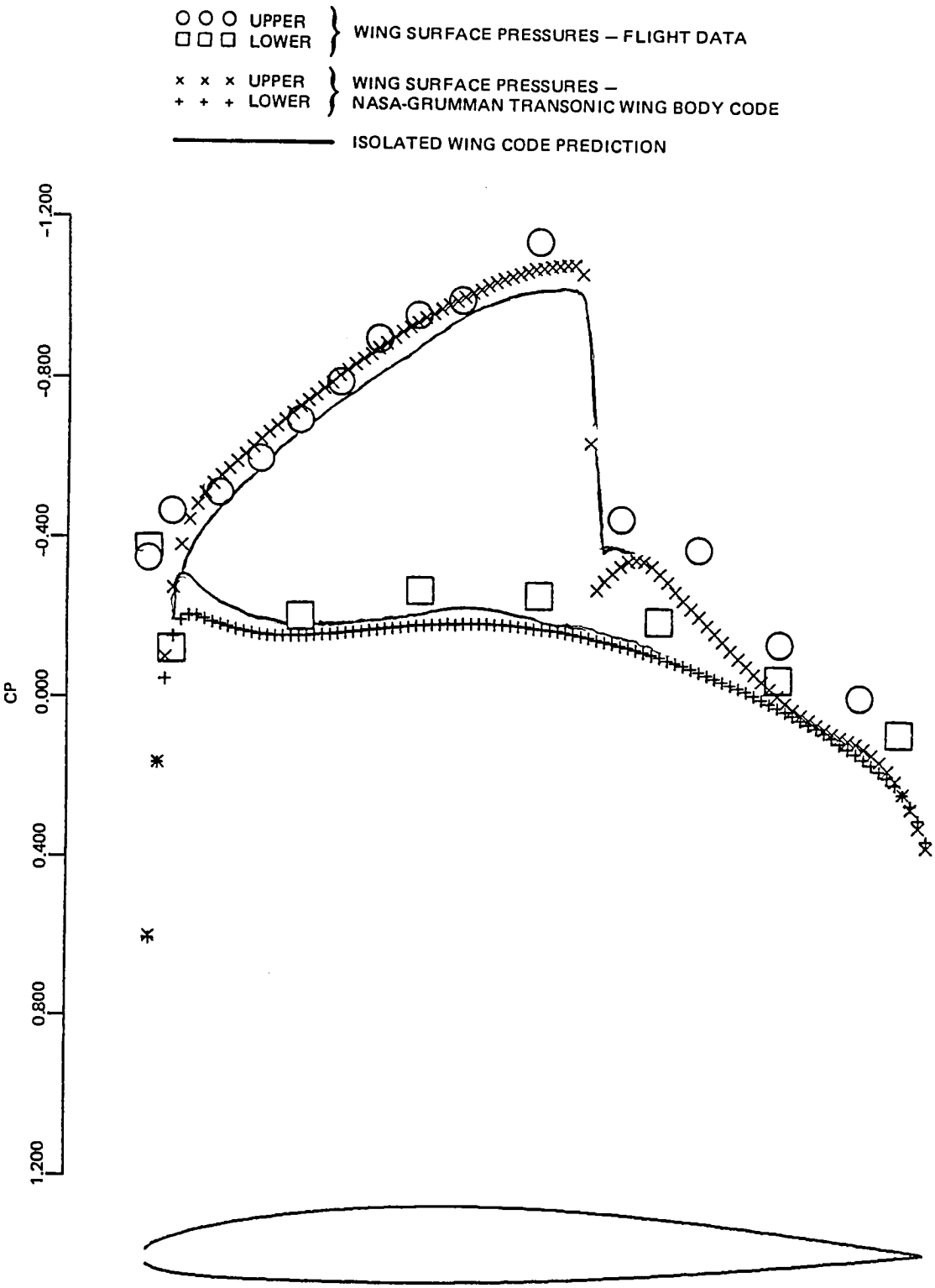


Fig. 10 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 3 of 5)



F-14 WING/BODY/GLOVE (20 DEGREE LE)
WING STATION 15 2Y/B = 0.730
MACH = 0.800 ALPHA = 1.40
SECTION CL = 0.391 CM = -0.049 CD = 0.0007

R84-1788-022(4/5)B

Fig. 10 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 4 of 5)

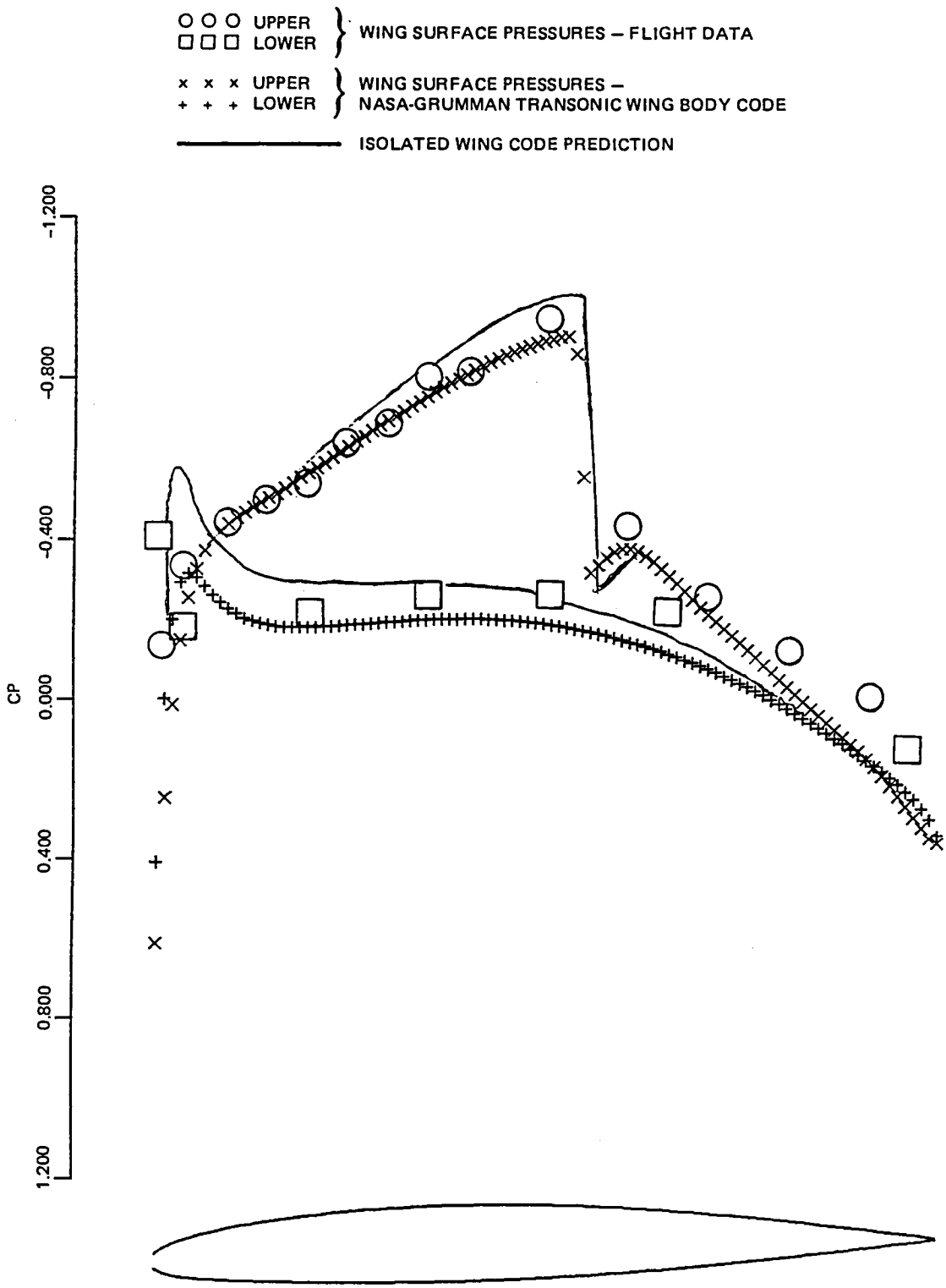


Fig. 10 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 5 of 5)

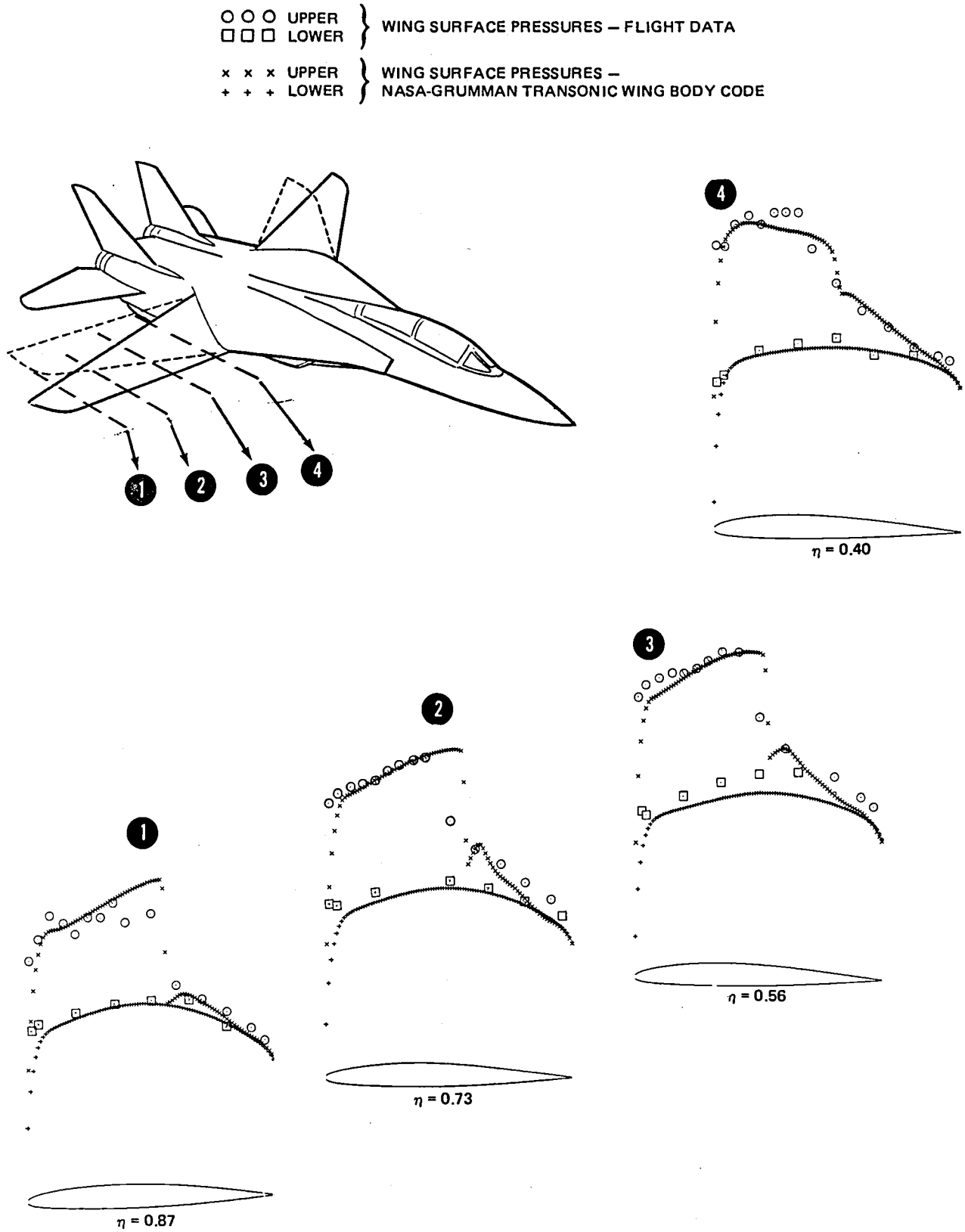


Fig. 11 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.80, $\alpha = 3°$ (Sheet 1 of 5)

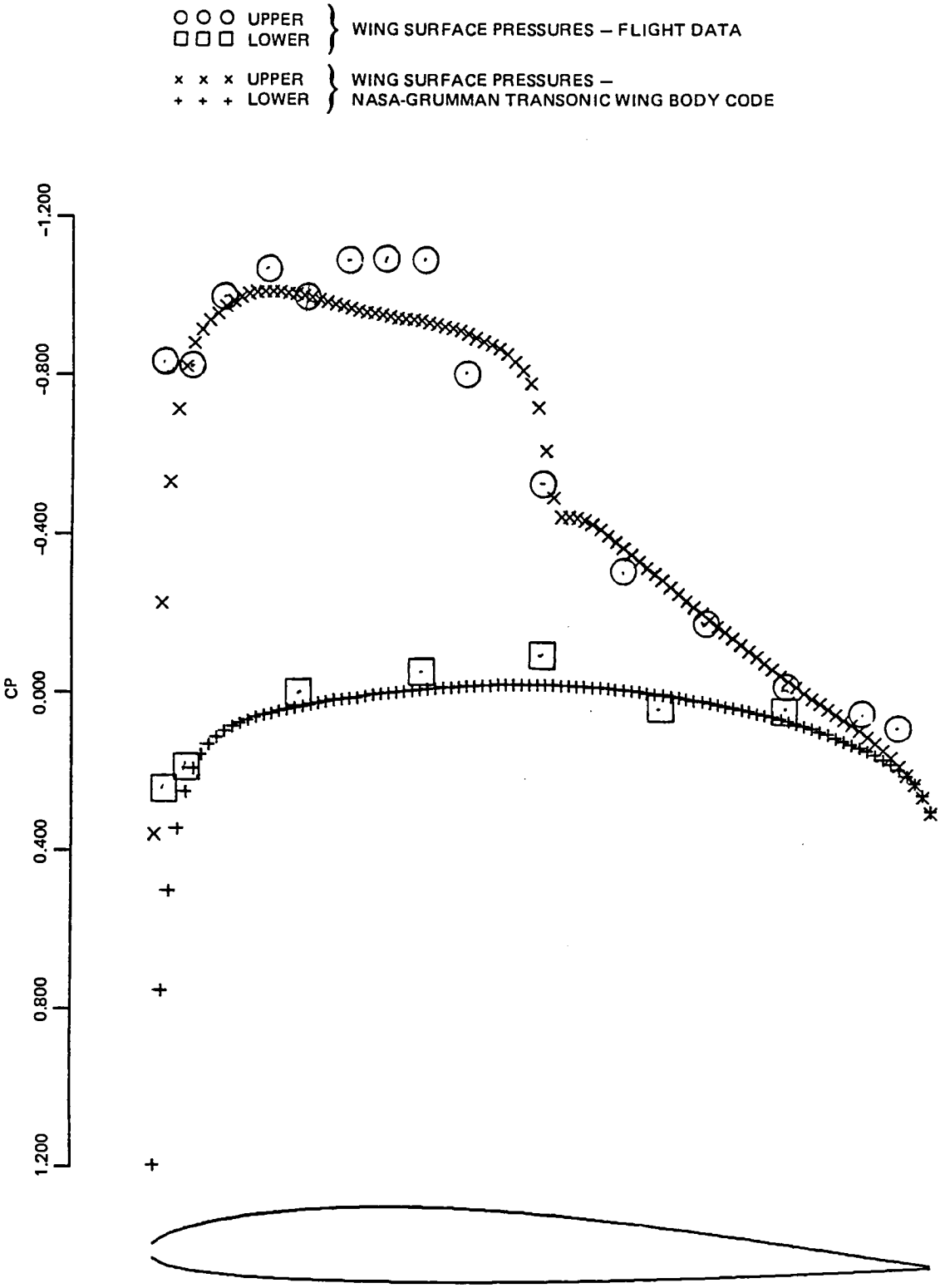


Fig. 11 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.80, $\alpha = 3°$ (Sheet 2 of 5)

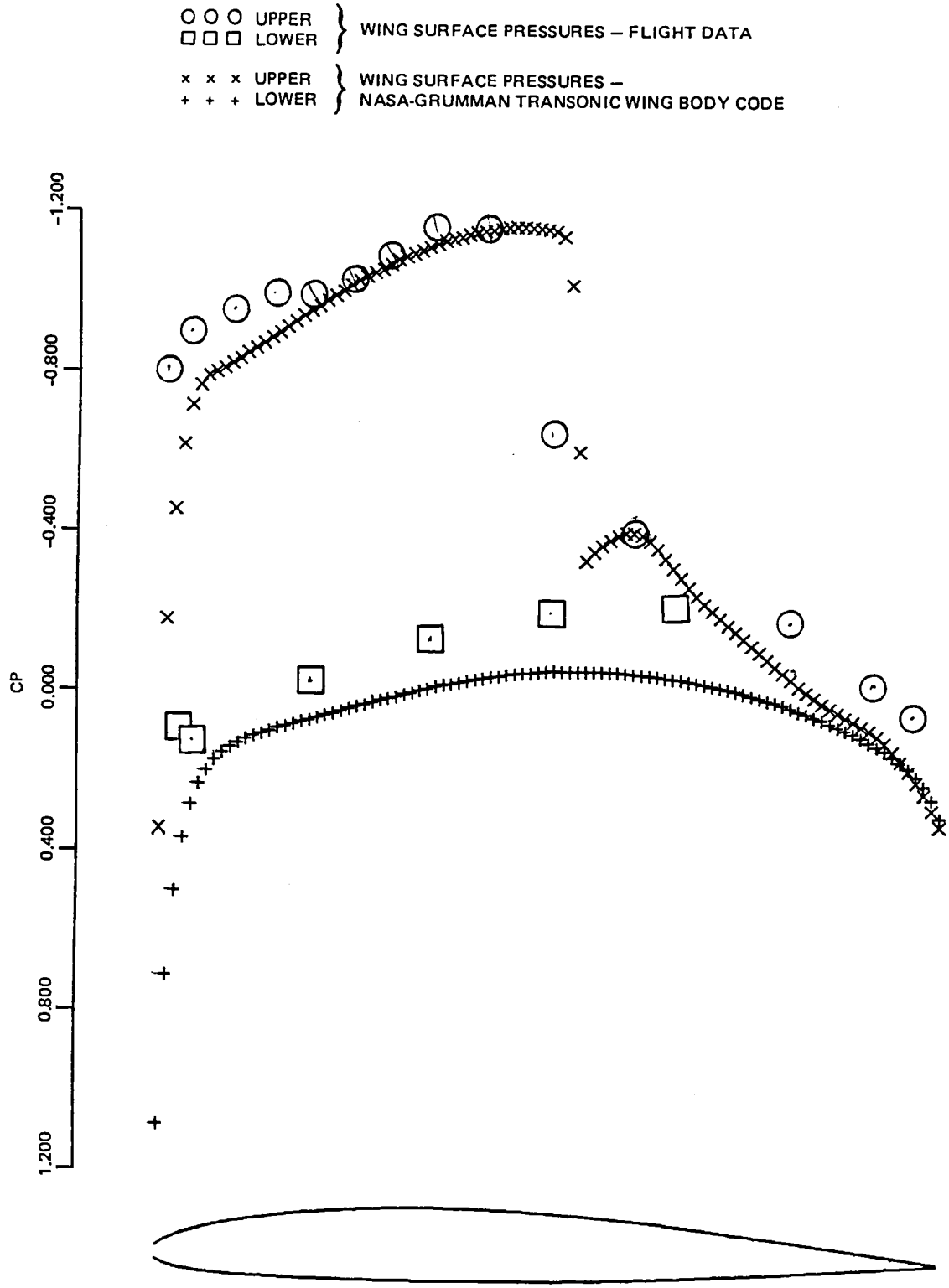
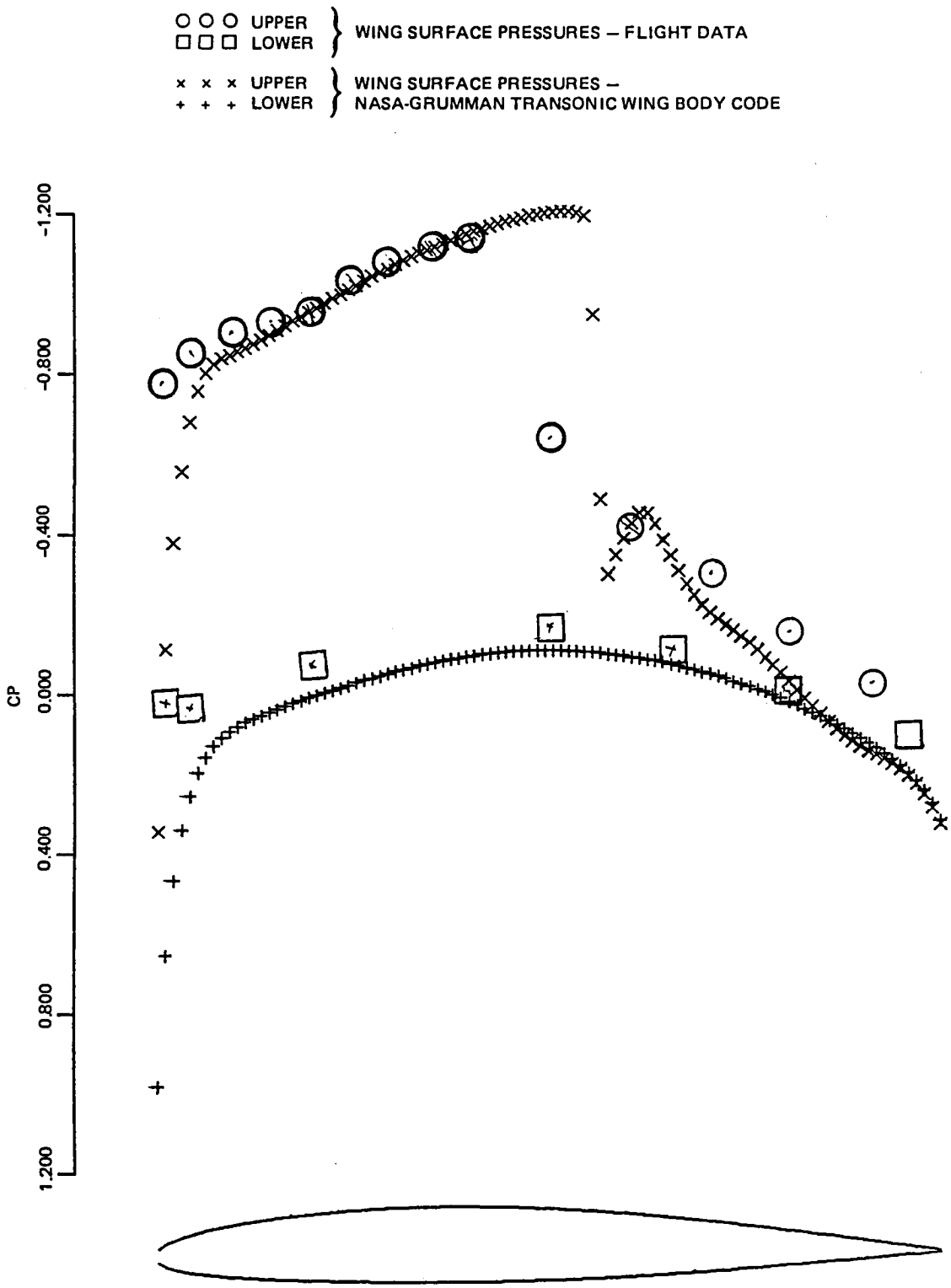
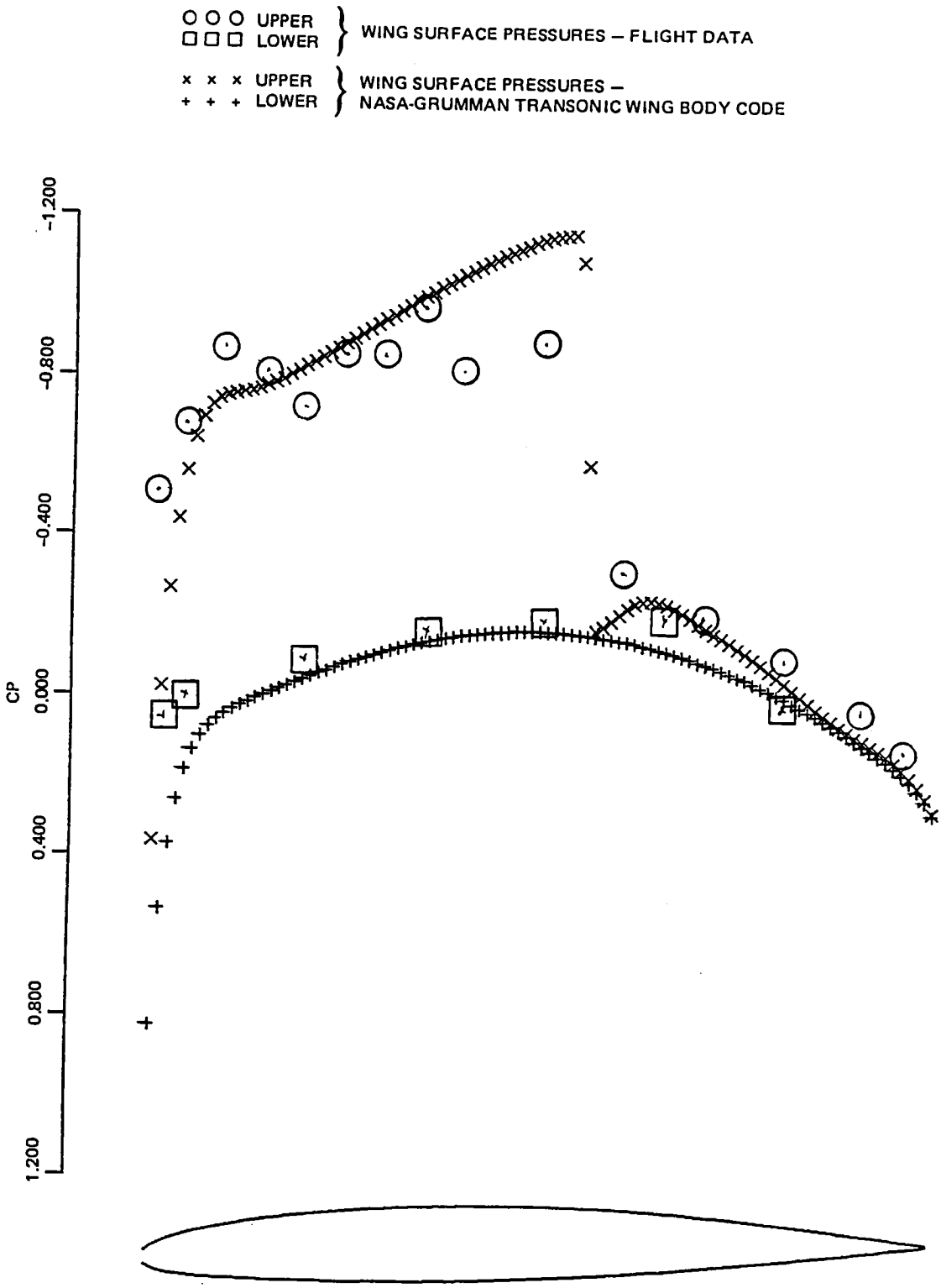


Fig. 11 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.80, $\alpha = 3°$ (Sheet 3 of 5)



R84-1788-023(4/5)B

Fig. 11 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.80, $\alpha = 3°$ (Sheet 4 of 5)



R84-1788-023(5/5)B

Fig. 11 F-14A Flight and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.80, $\alpha = 3°$ (Sheet 5 of 5)

WIND TUNNEL TEST/ANALYSIS COMPARISONS

Wind tunnel data generated at Calspan (Ref 3) in 1969 was used for correlation studies. Eight points were selected.

Case	Λ	M	α	Figure Set
#1	20°	0.700	4°	8
#2	20°	0.700	5°	13
#3	20°	0.750	3°	14
#4	20°	0.750	4°	15
#5	25°	0.775	3°	16
#6	35°	0.800	3°	17
#7	35°	0.800	5°	18
#8	35°	0.850	3°	19

As was the case for the flight comparisons, no attempt was made to match configuration lift levels. Instead, analyses were performed at the wind tunnel angle-of-attack. Predicted lift levels compared to wind tunnel lift levels in Fig. 12 indicate that additional lift is probably generated on the pancake region and horizontal/vertical tail surfaces. Upper surface only pressure stations at buttlines 177 and 340 provide comparisons at 46% and 89% of the wing half-span.

The above list also identifies the figure number associated with each case. Composite wing pressure distribution correlations are shown on sheet 1 of each figure; individual 5" chord plots can be found on the remaining sheets of each figure.

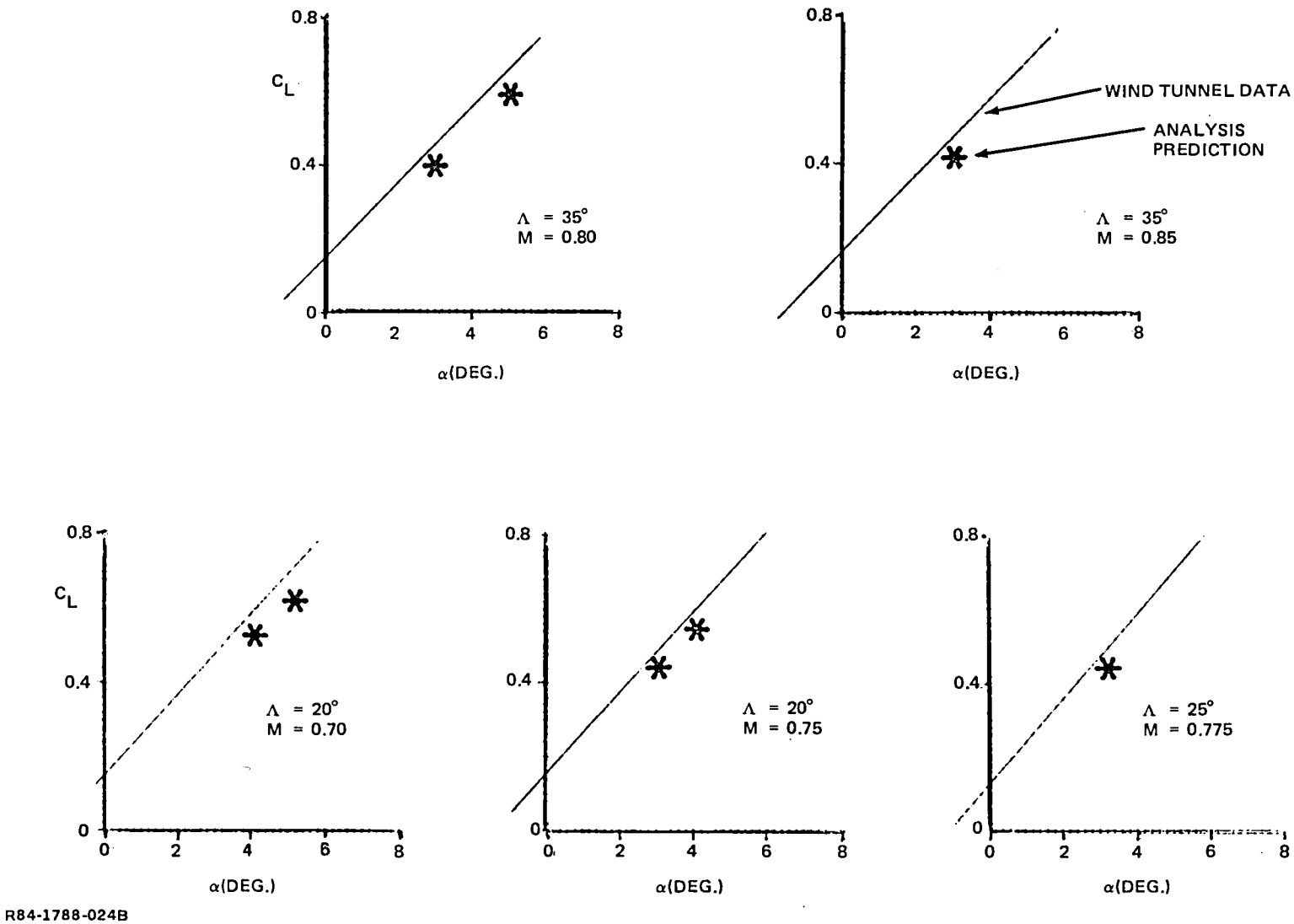
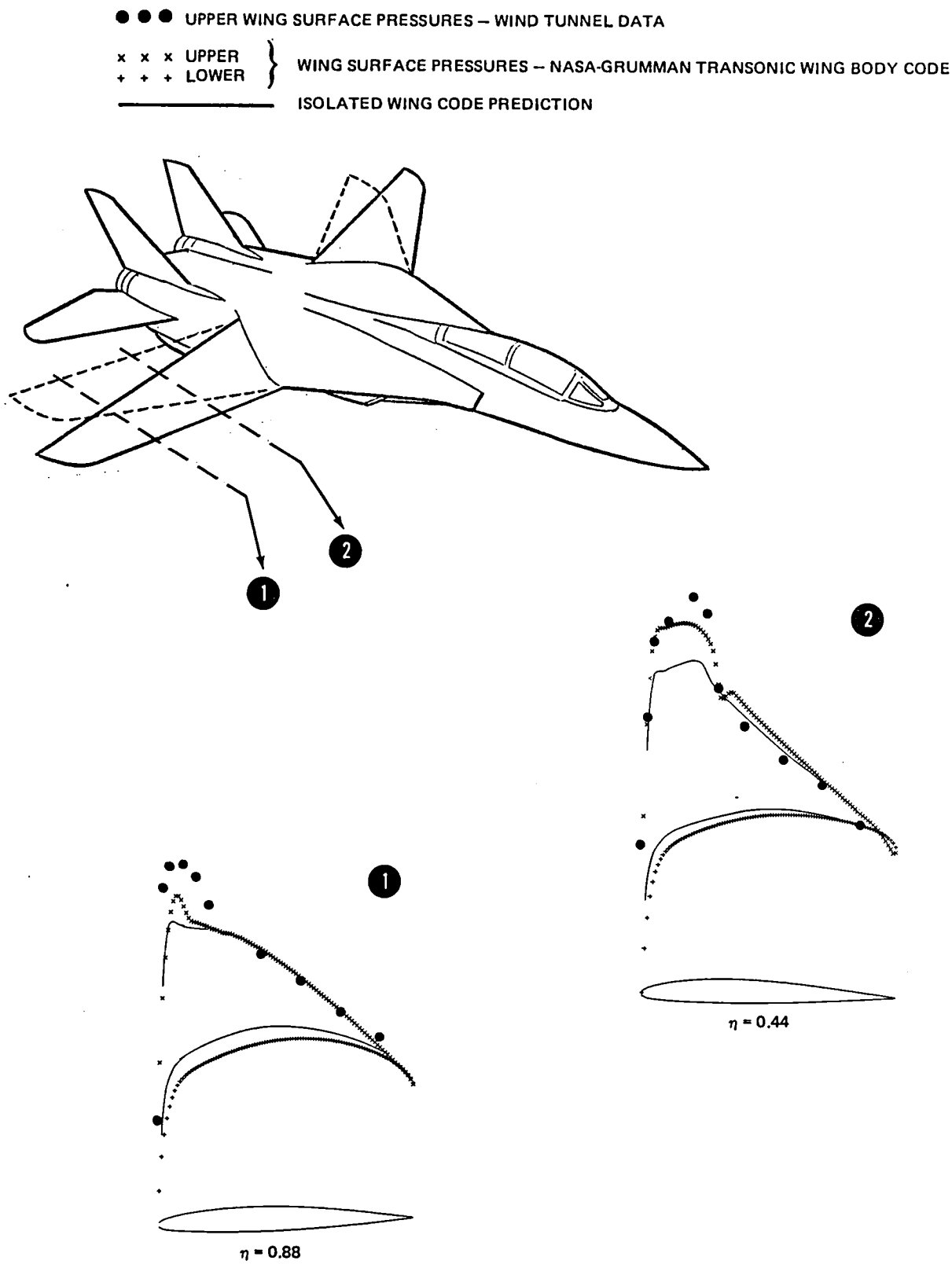
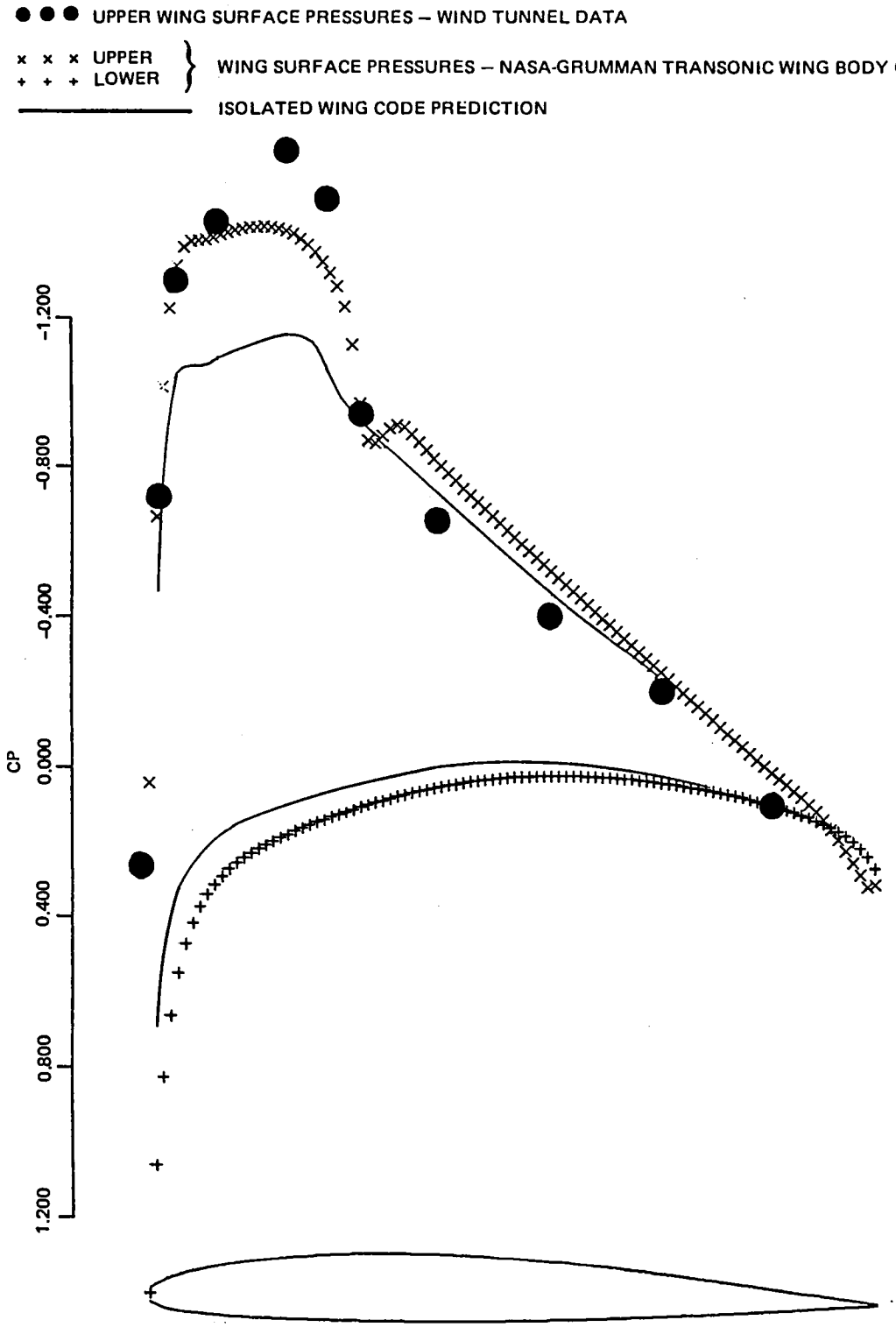


Fig. 12 Comparison of F-14A Predicted Lift Coefficient with Wind Tunnel Data



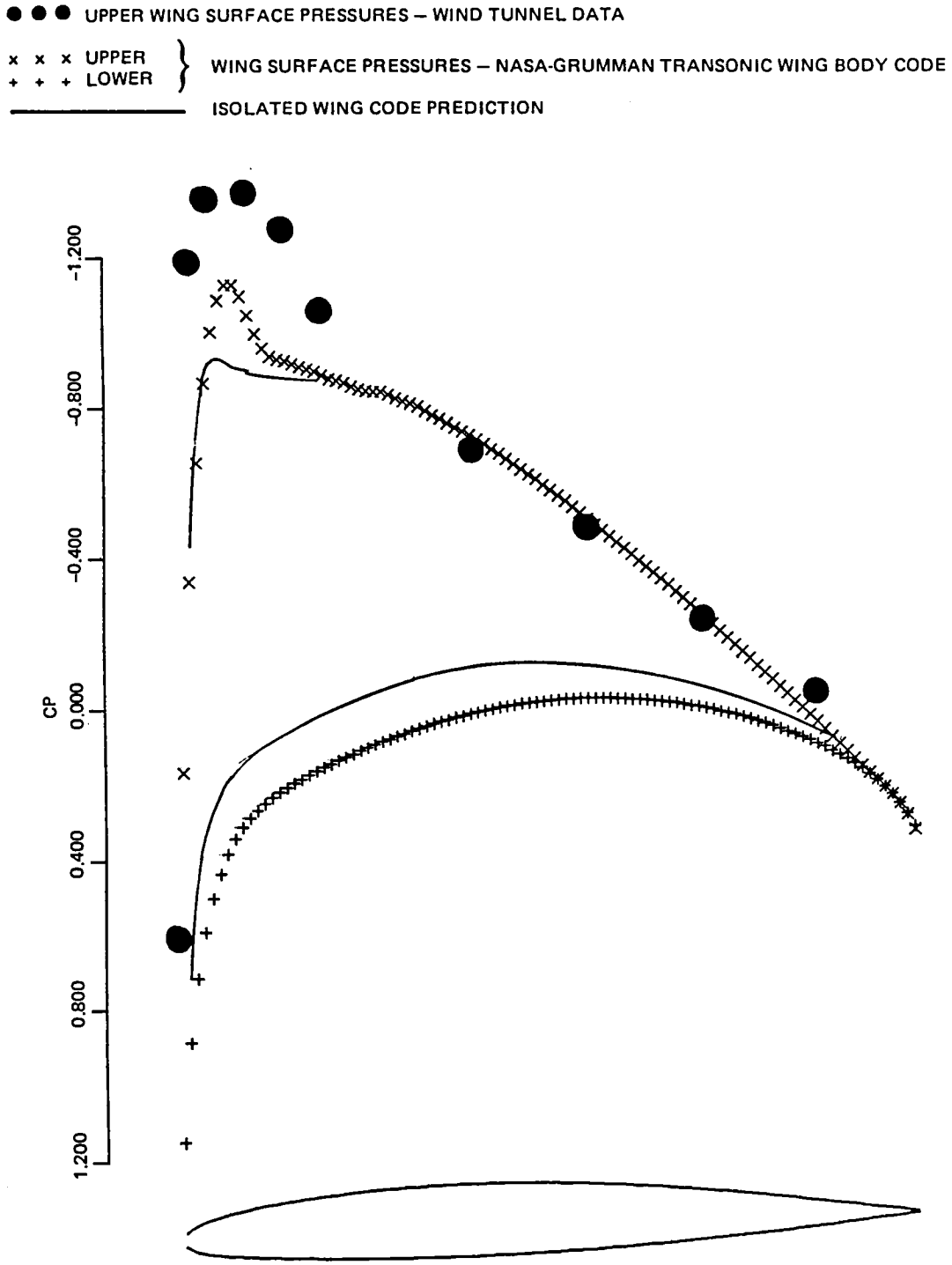
R84-1788-025(1/3)B

Fig. 13 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 5°$ (Sheet 1 of 3)



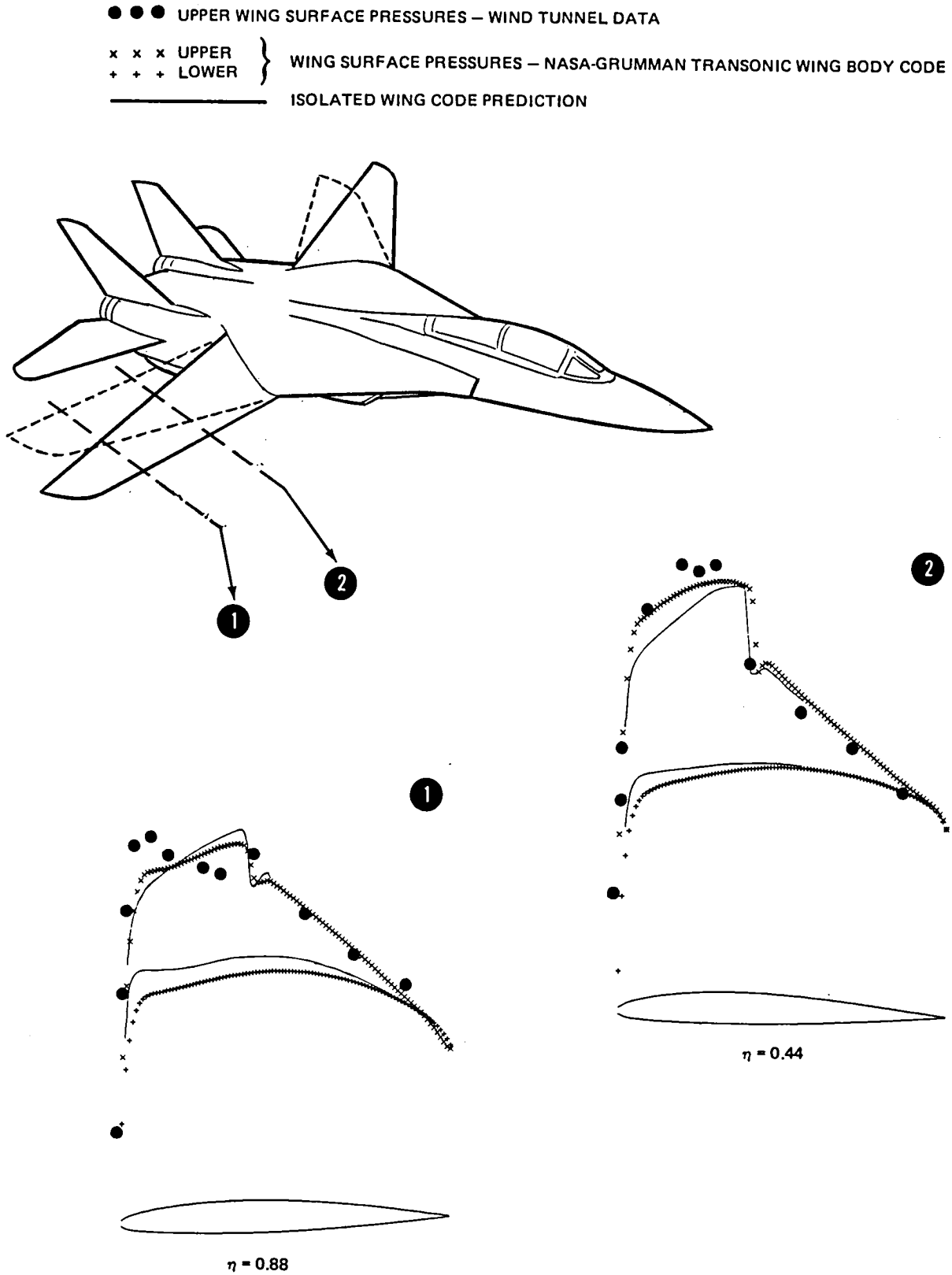
R84-1788-025(2/3)B

Fig. 13 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 5°$ (Sheet 2 of 3)



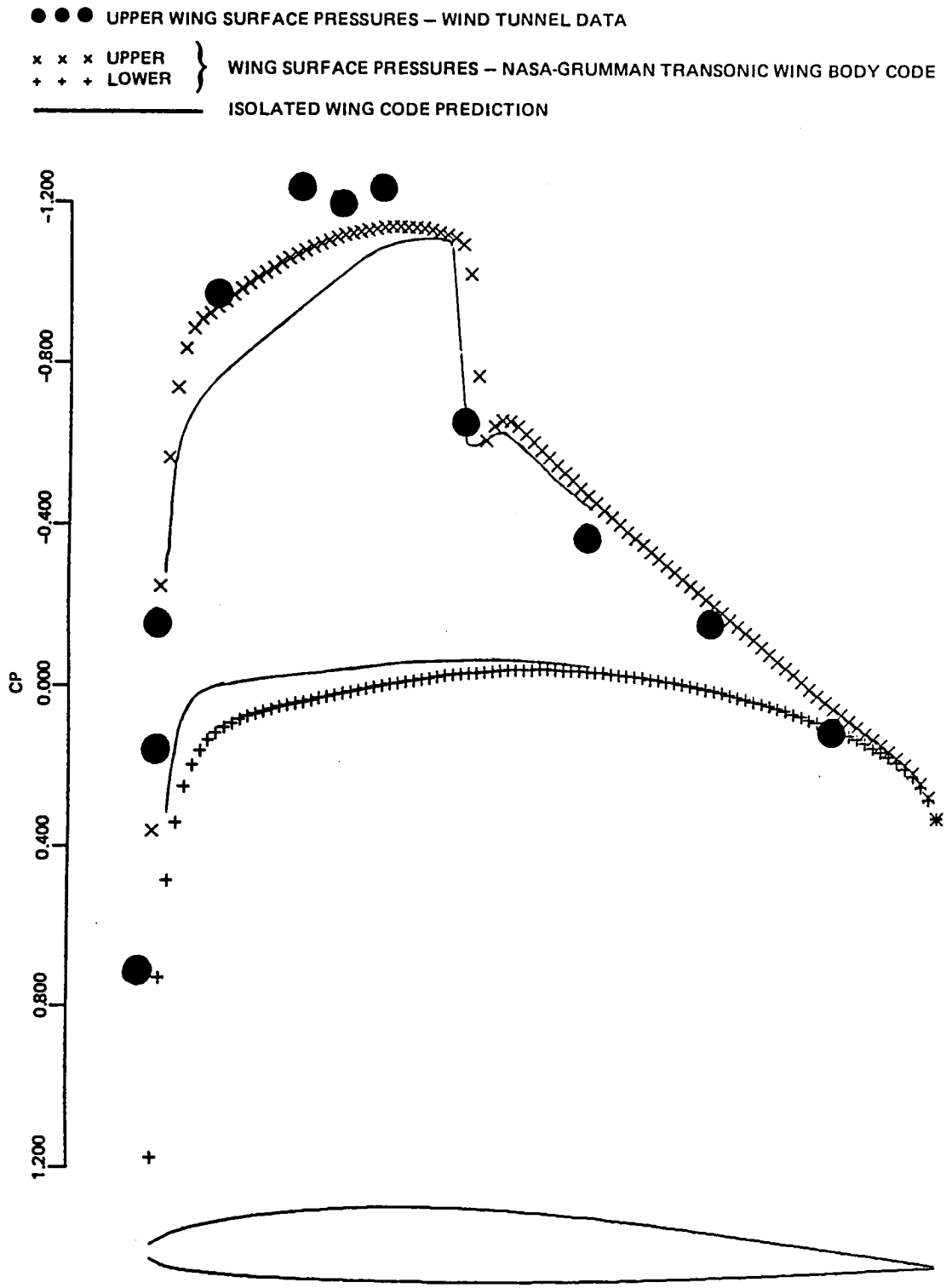
R84-1788-025(3/3)B

Fig. 13 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 5°$ (Sheet 3 of 3)



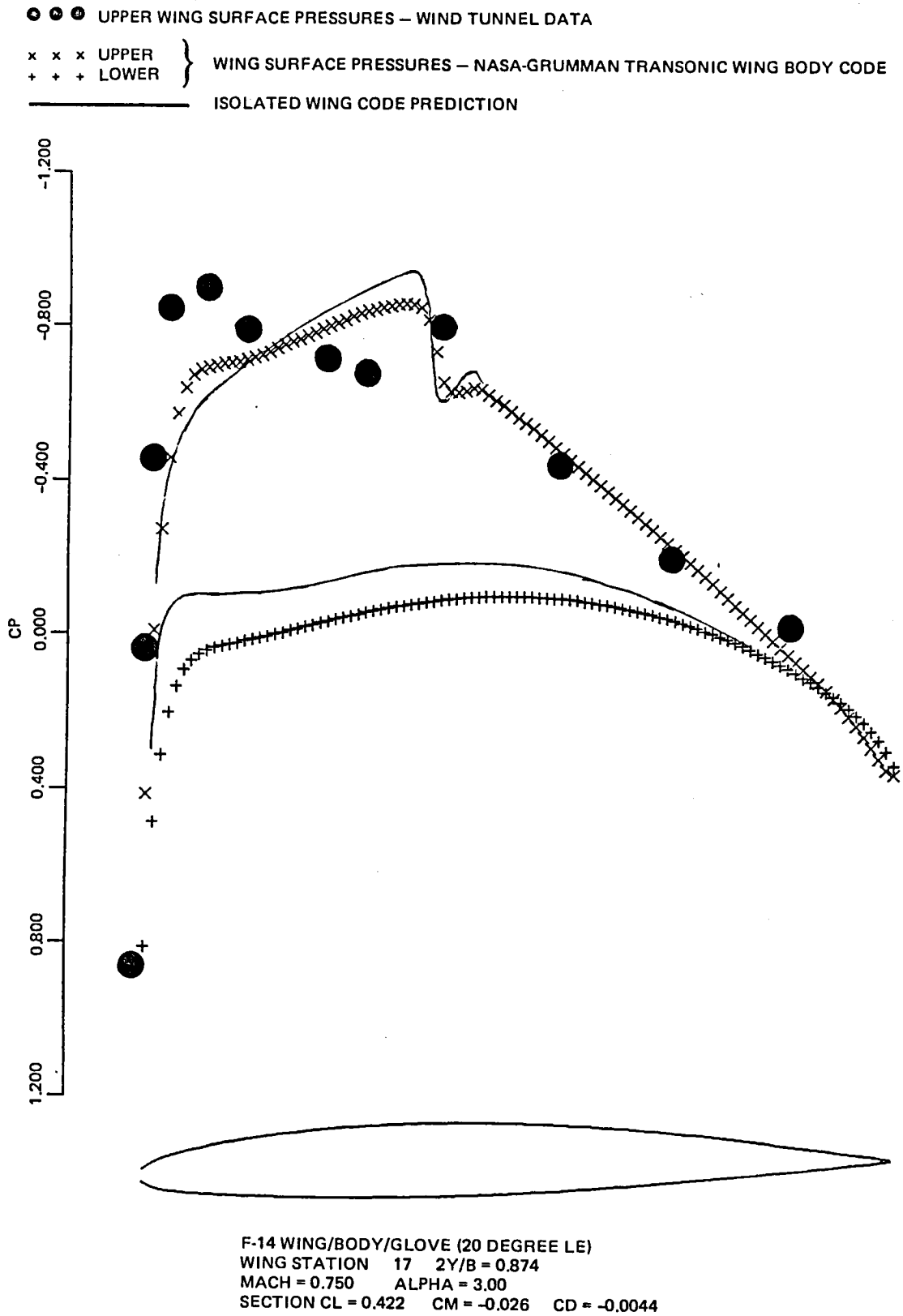
R84-1788-026(1/3)B

Fig. 14 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 3°$ (Sheet 1 of 3)



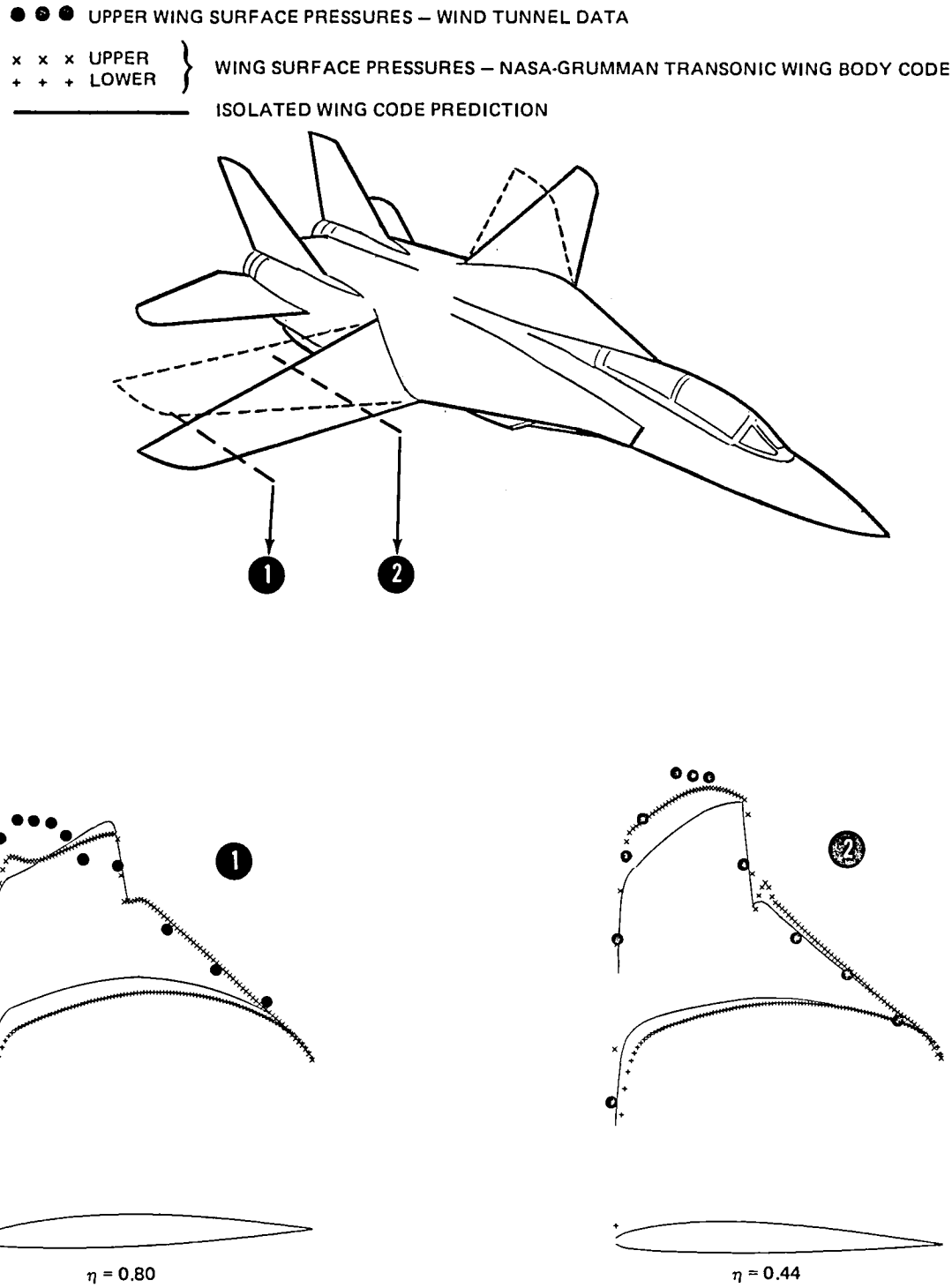
R84-1788-026(2/3)B

Fig. 14 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 3°$ (Sheet 2 of 3)



R84-1788-026(3/3)B

Fig. 14 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 3°$ (Sheet 3 of 3)



R84-1788-027(1/3)B

Fig. 15 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 4°$ (Sheet 1 of 3)

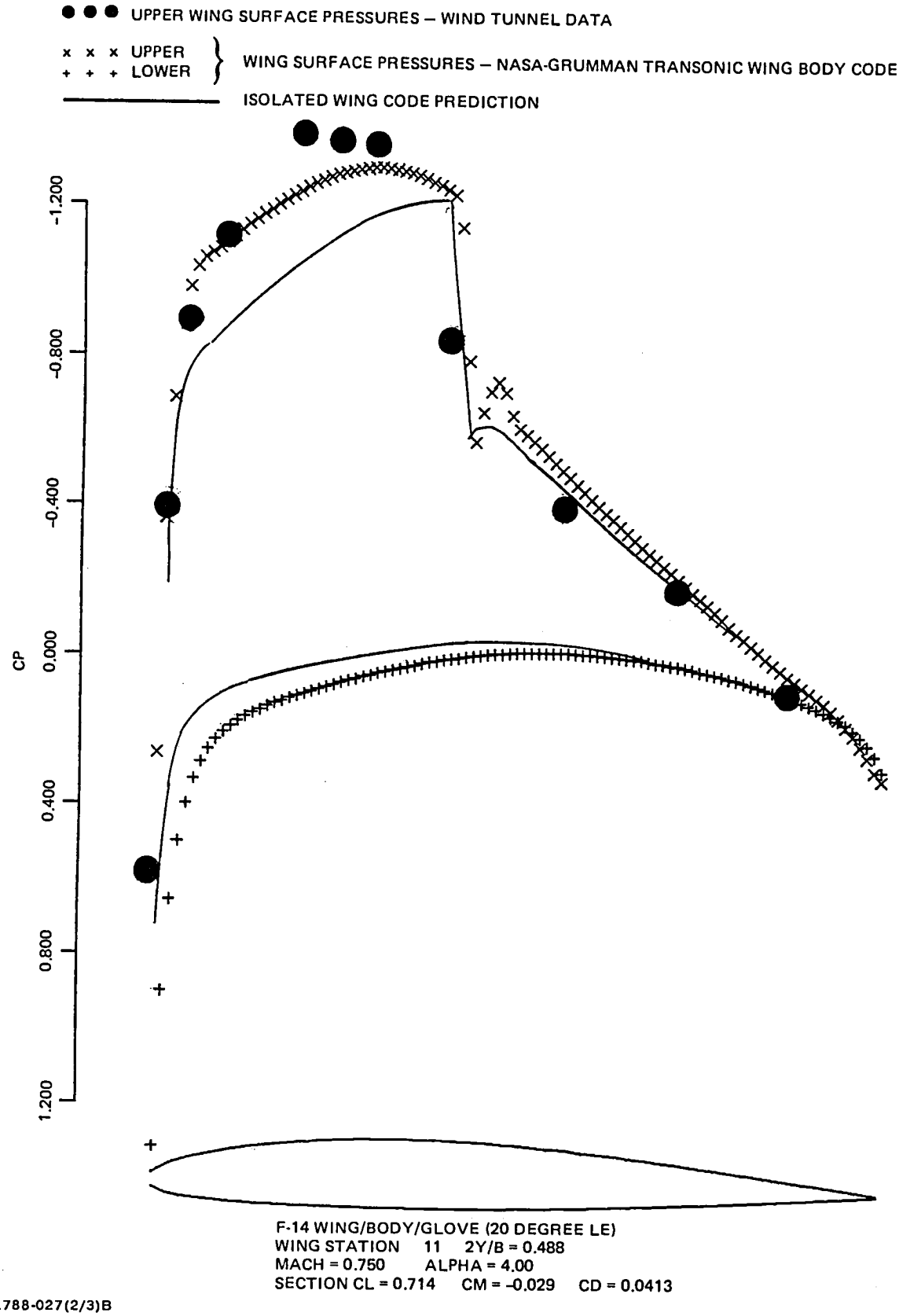
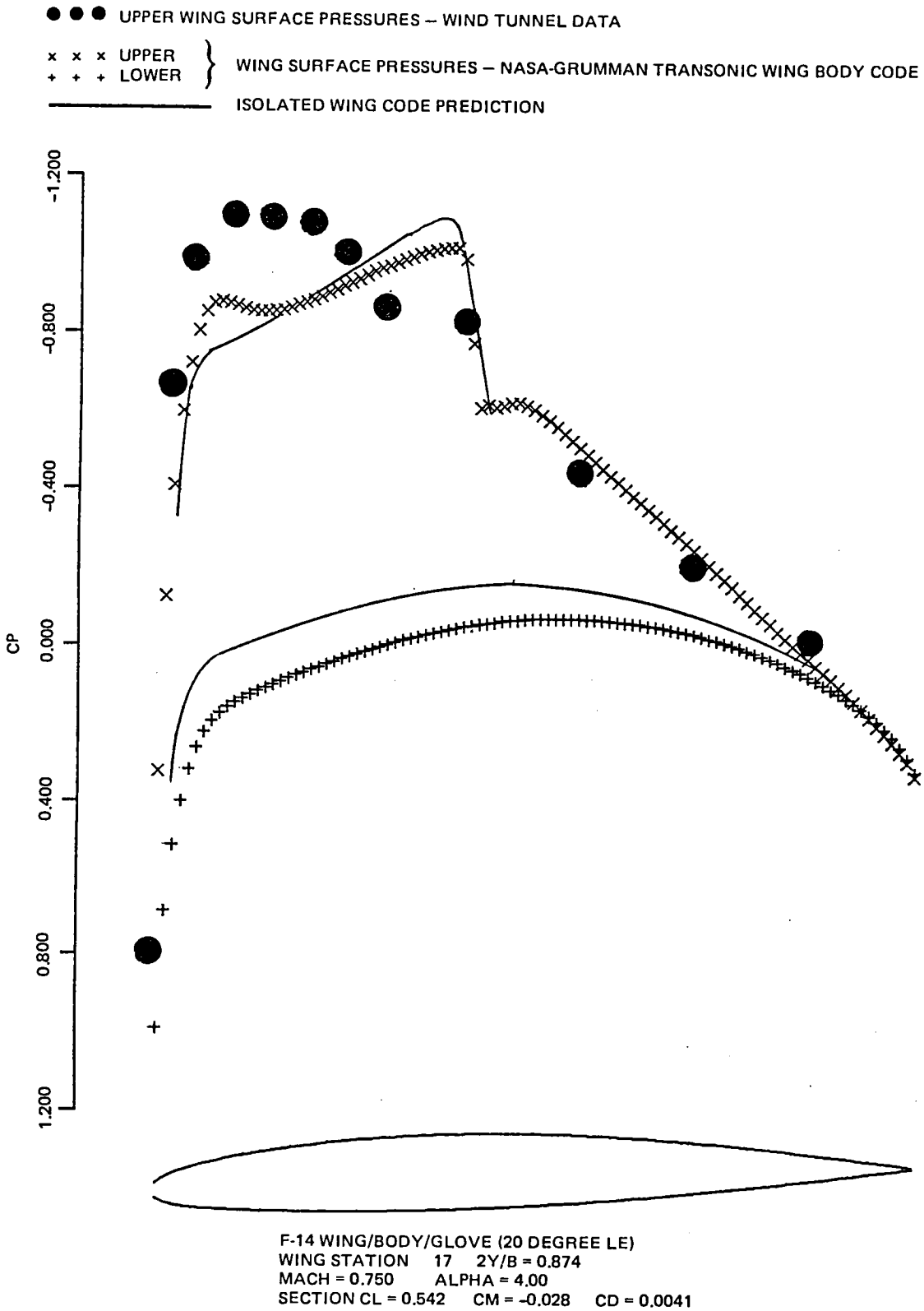
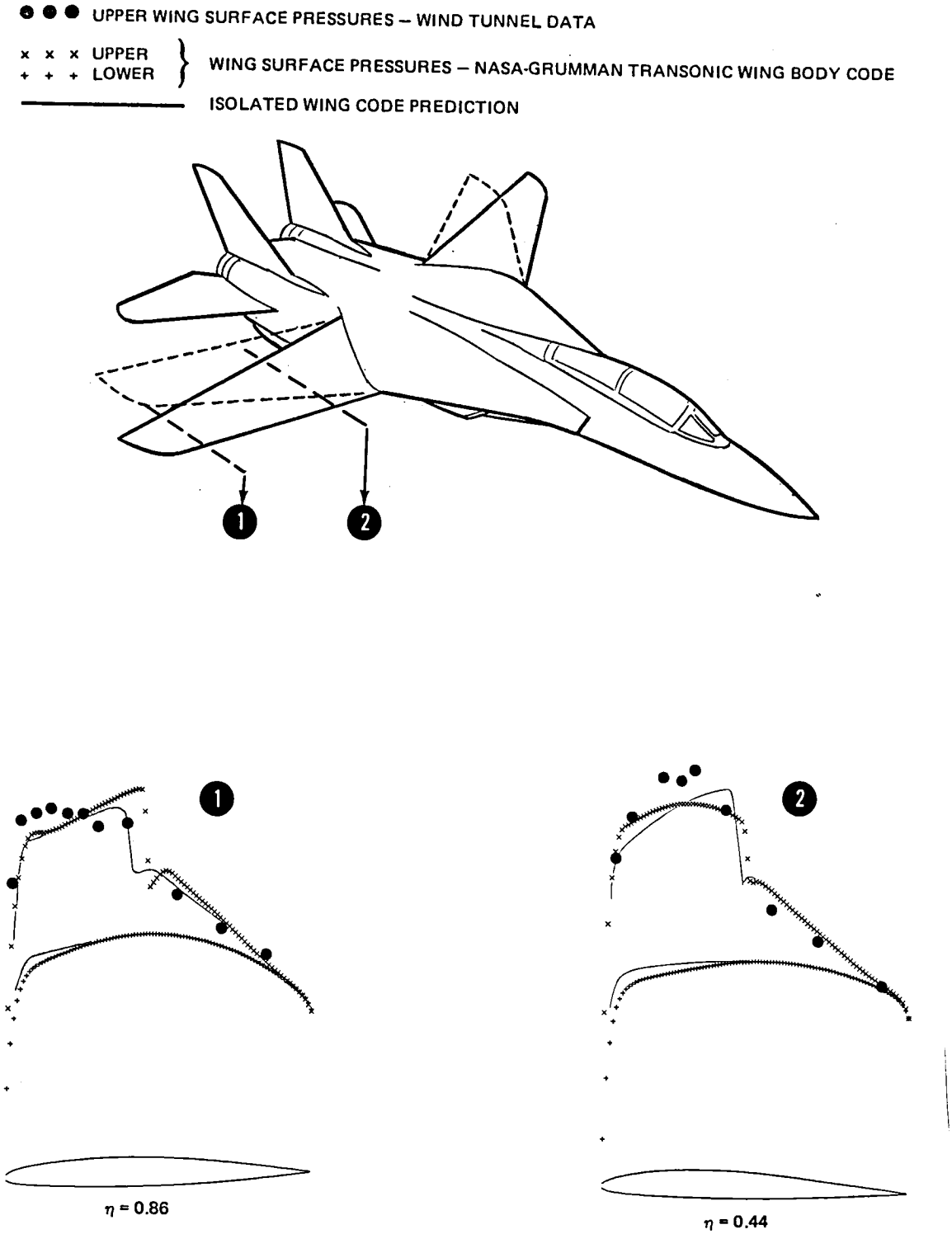


Fig. 15 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 4°$ (Sheet 2 of 3)



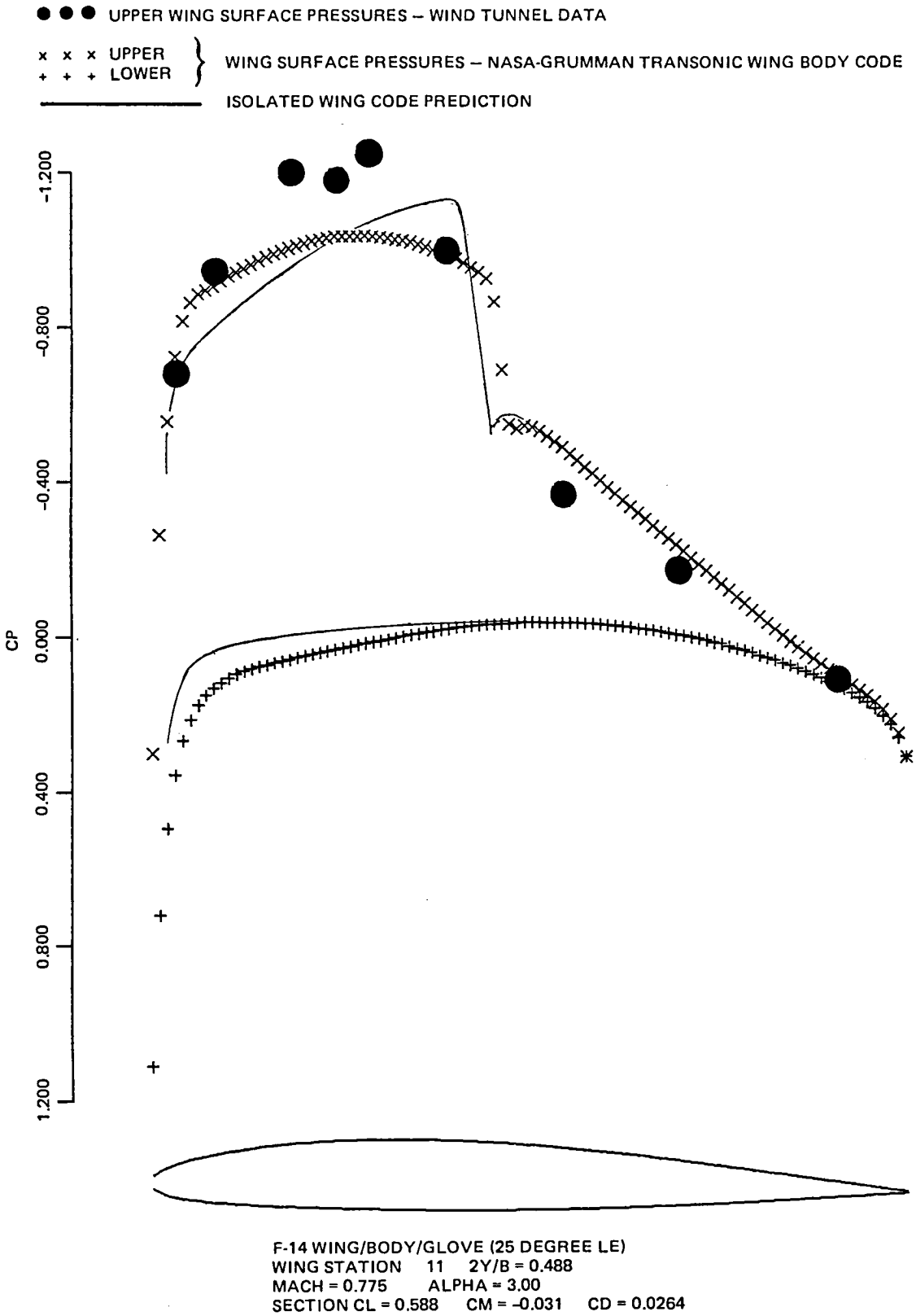
R84-1788-027(3/3)B

Fig. 15 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 4°$ (Sheet 3 of 3)



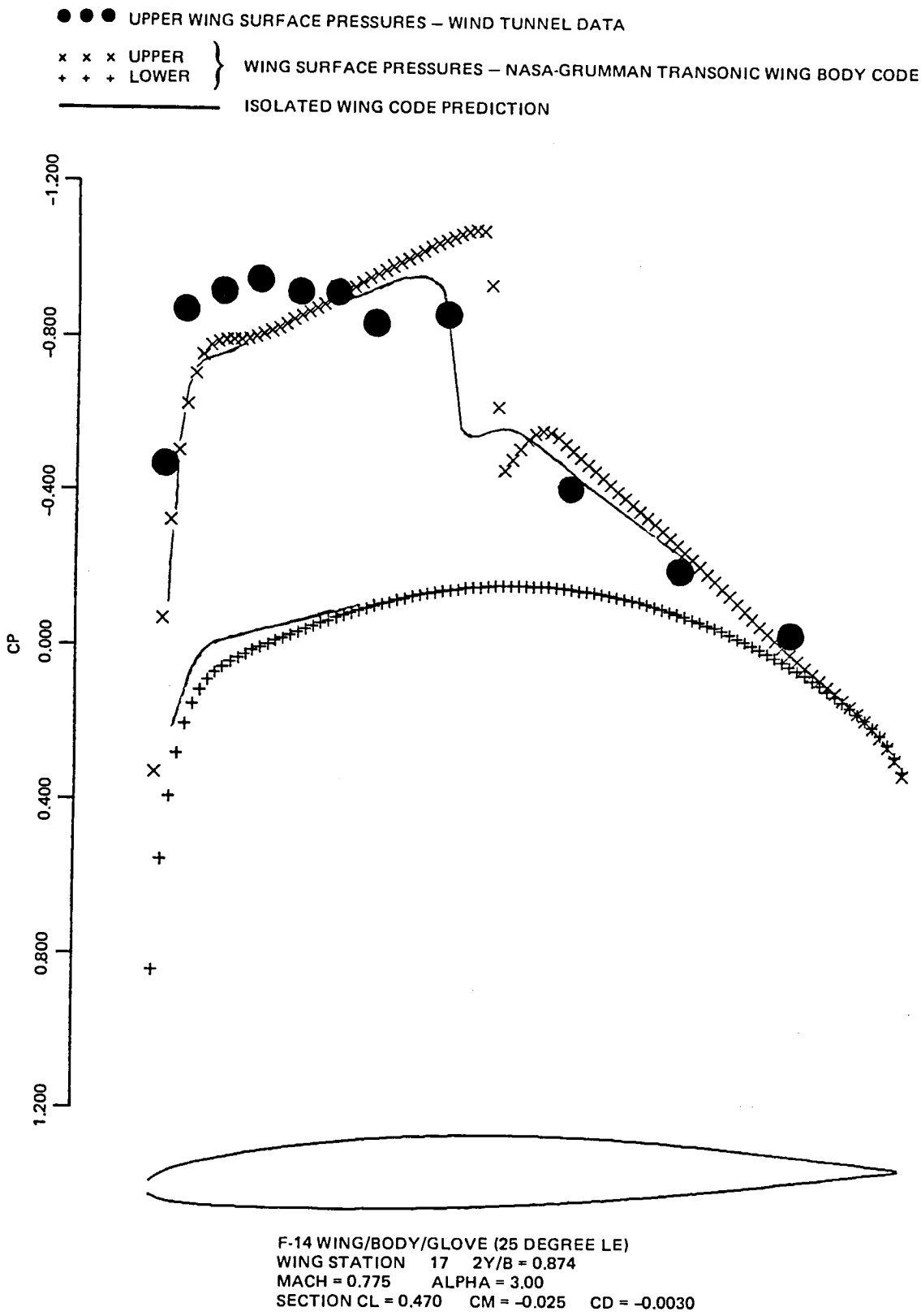
R84-1788-028(1/3)B

Fig. 16 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.775, $\alpha = 3°$ (Sheet 1 of 3)



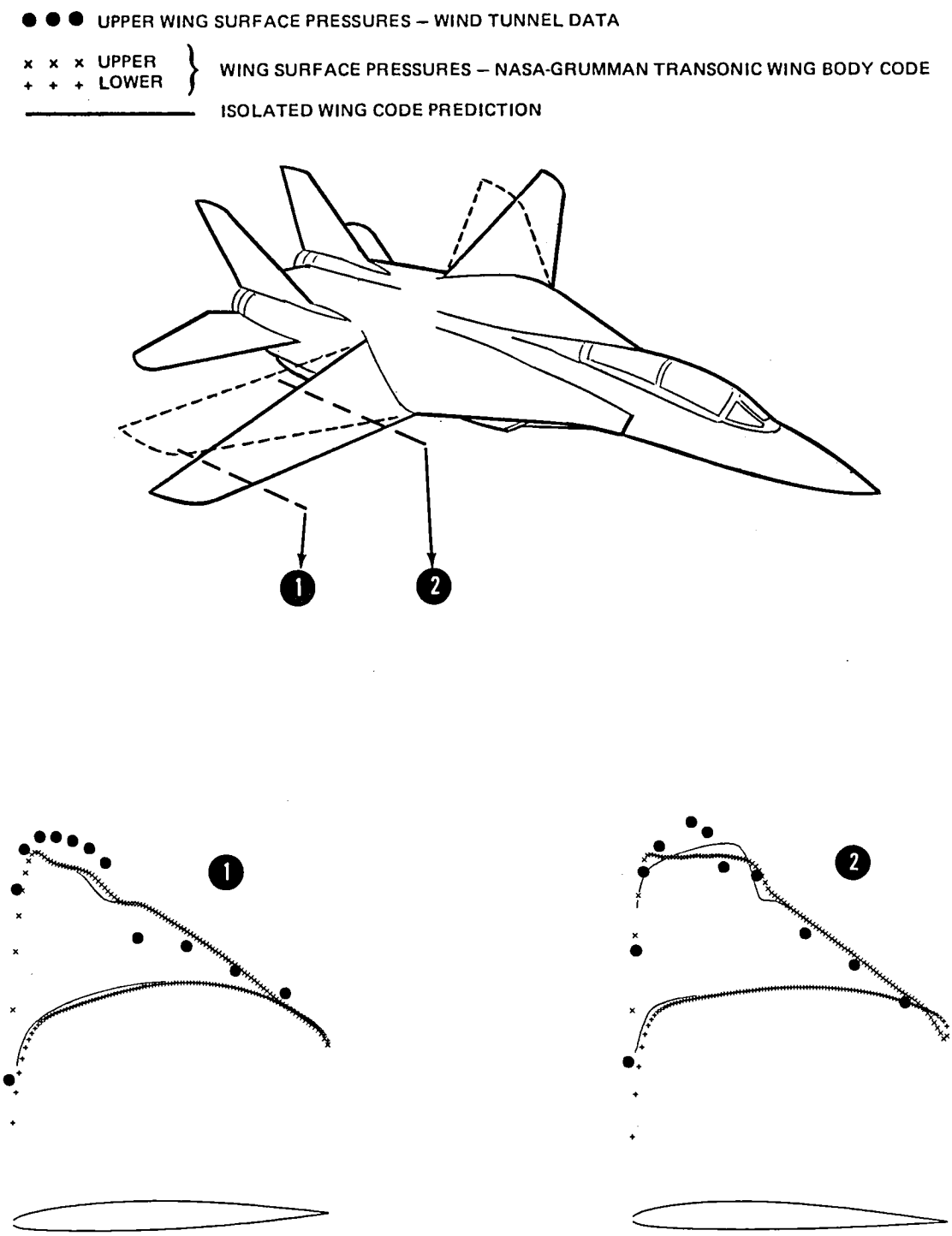
R84-1788-028(2/3)B

Fig. 16 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.775, $\alpha = 3°$ (Sheet 2 of 3)



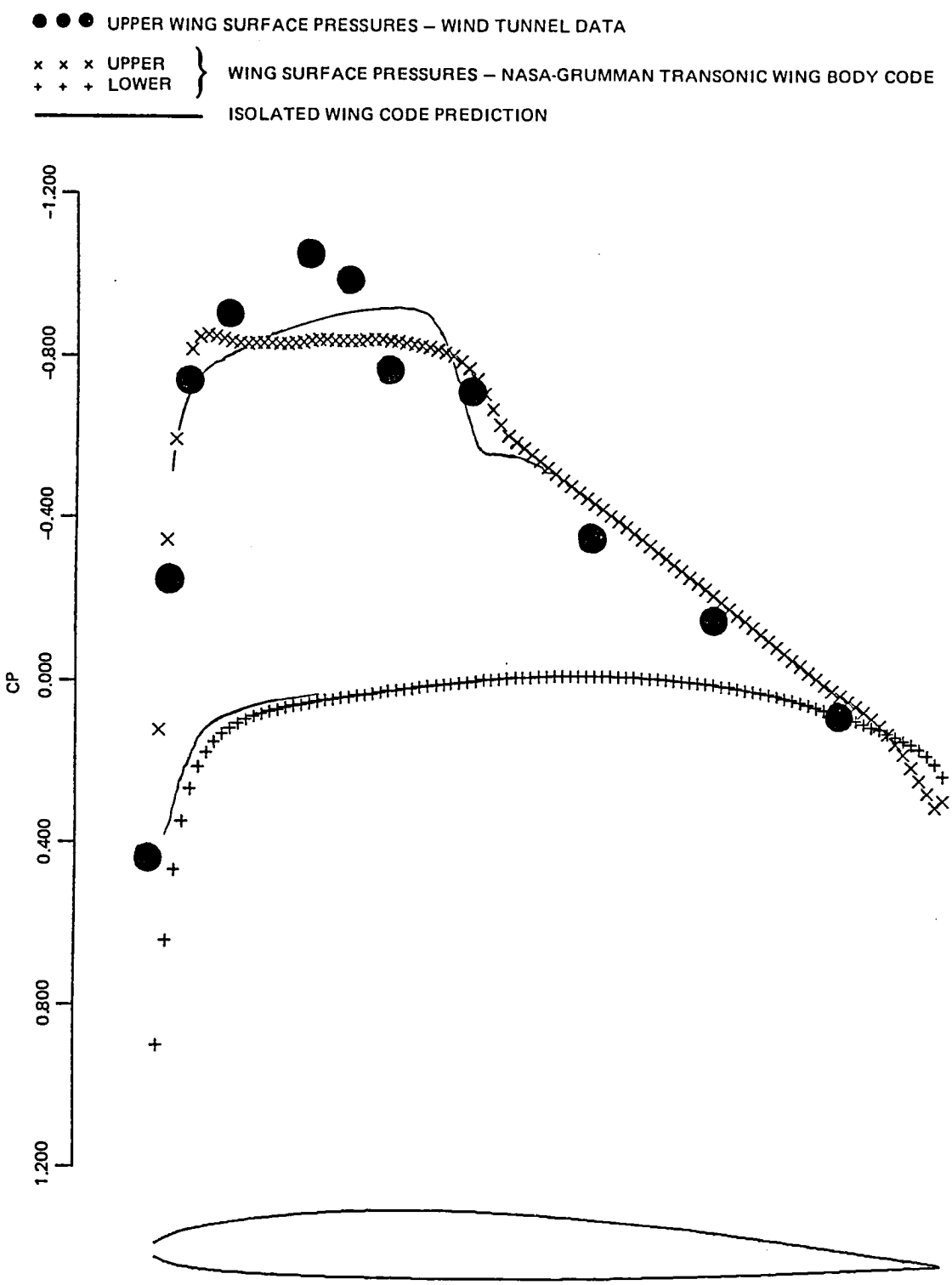
R84-1788-028(3/3)B

Fig. 16 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 25°$, M = 0.775, $\alpha = 3°$ (Sheet 3 of 3)



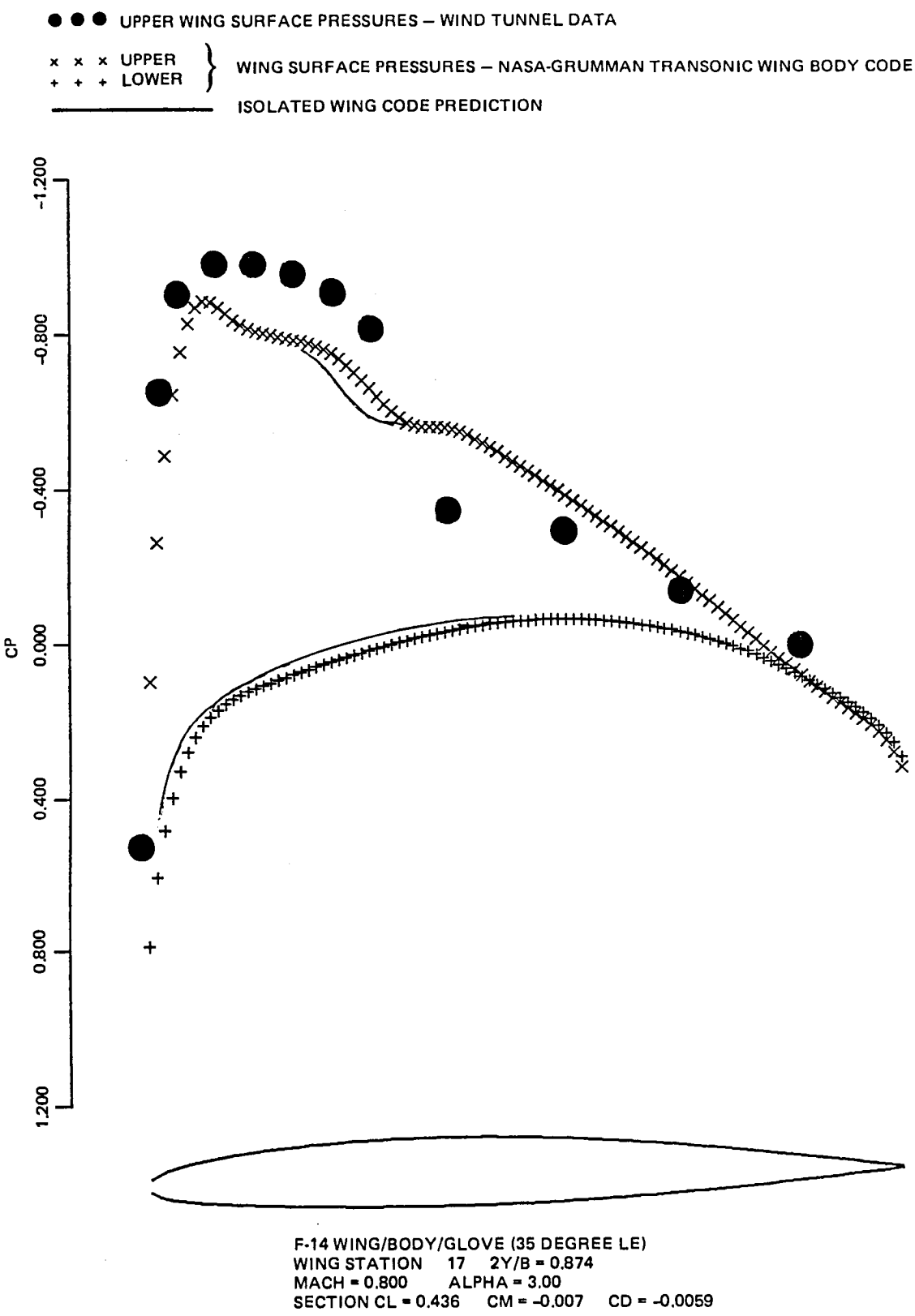
R84-1788-029(1/3)B

Fig. 17 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 3°$ (Sheet 1 of 3)



R84-1788-029(2/3)B

Fig. 17 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35^\circ$, M = 0.80, $\alpha = 3^\circ$ (Sheet 2 of 3)



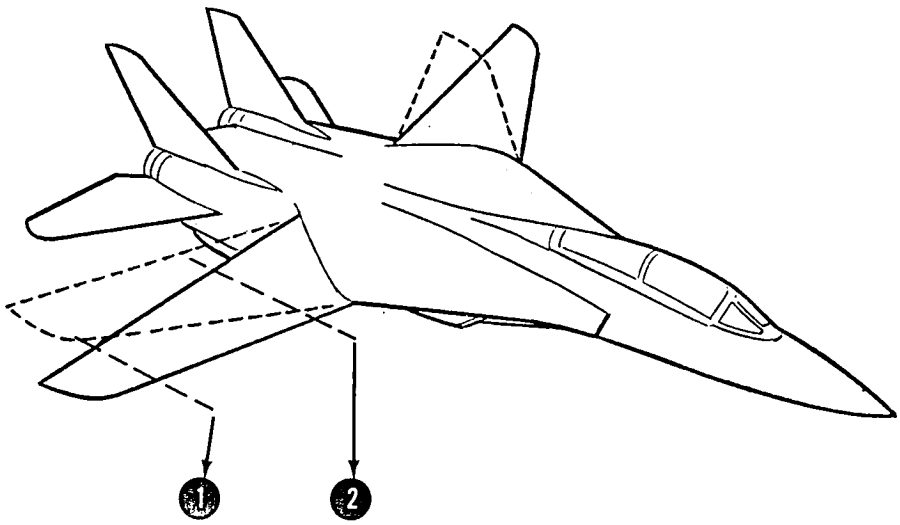
R84-1788-029(3/3)B

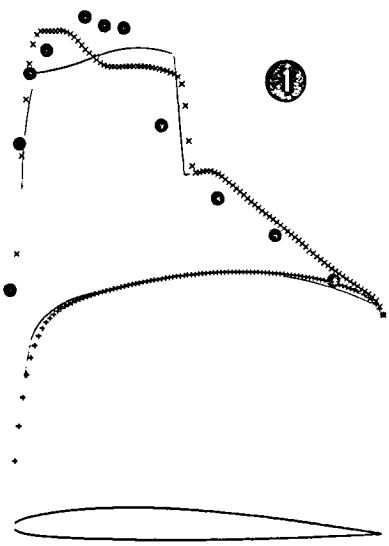
Fig. 17 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 3°$ (Sheet 3 of 3)

● ● ● UPPER WING SURFACE PRESSURES – WIND TUNNEL DATA

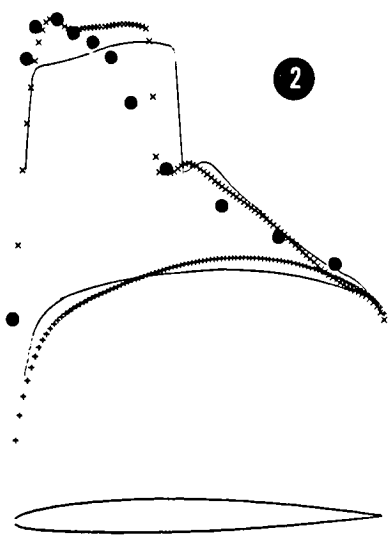
× × × UPPER
+ + + LOWER
} WING SURFACE PRESSURES – NASA-GRUMMAN TRANSONIC WING BODY CODE

——— ISOLATED WING CODE PREDICTION





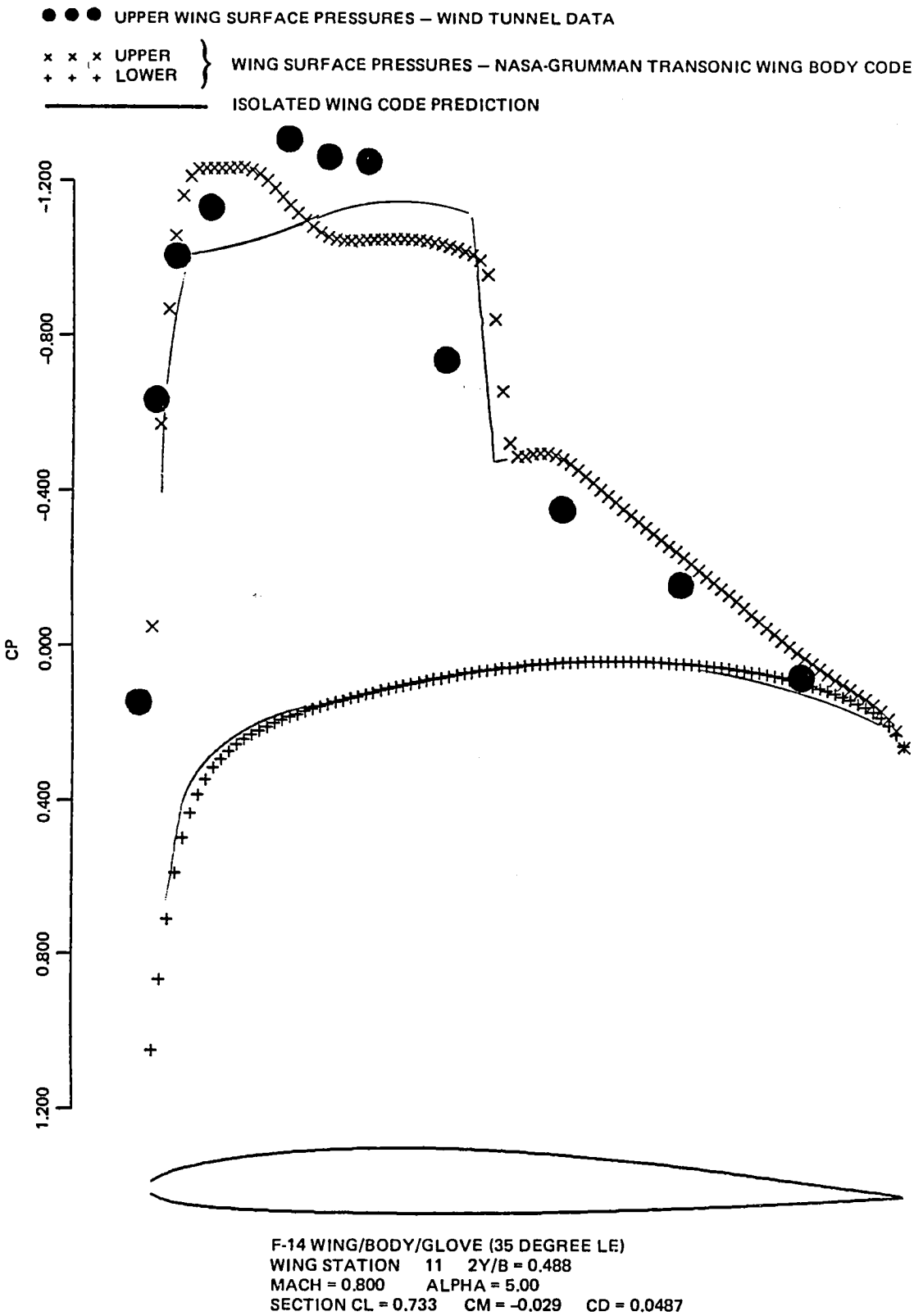
η = 0.88



η = 0.44

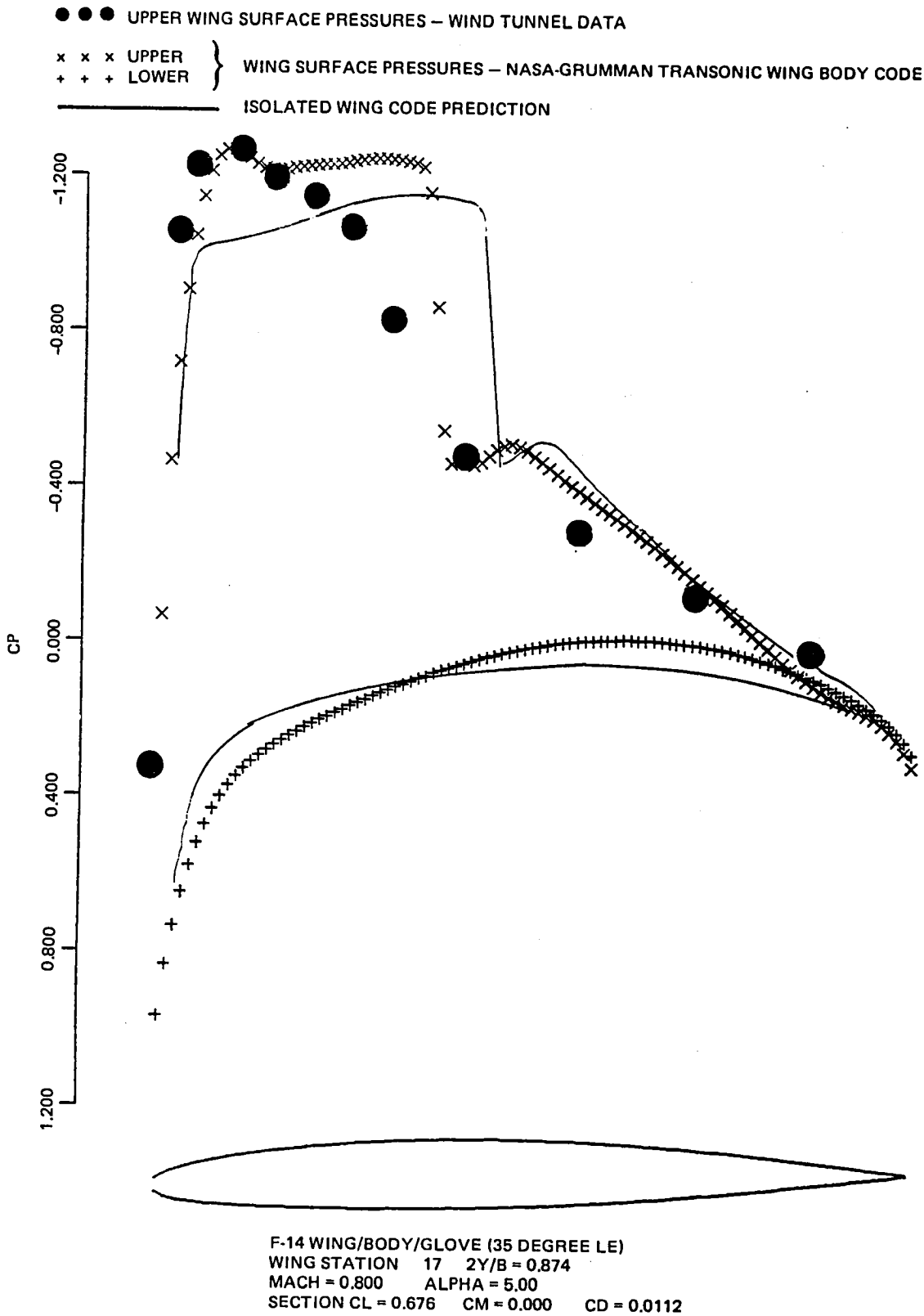
R84-1788-030(1/3)B

Fig. 18 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 5°$ (Sheet 1 of 3)



R84-1788-030(2/3)B

Fig. 18 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 5°$ (Sheet 2 of 3)



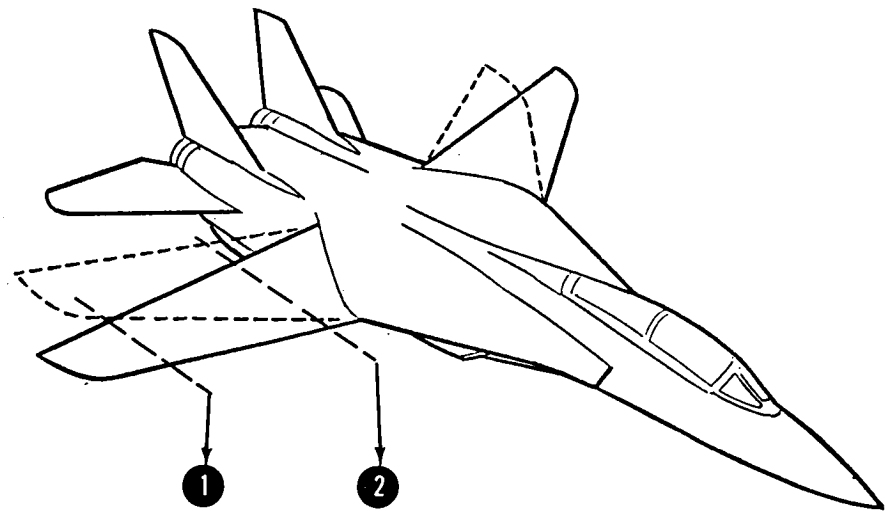
R84-1788-030(3/3)B

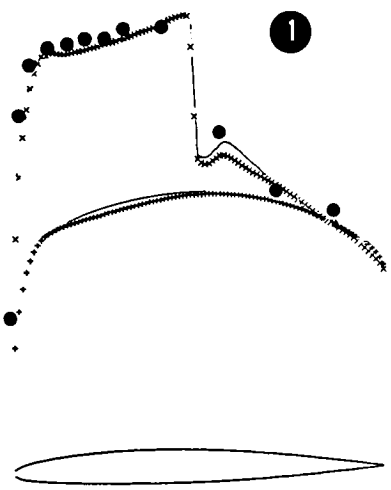
Fig. 18 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 5°$ (Sheet 3 of 3)

● ● ● UPPER WING SURFACE PRESSURES – WIND TUNNEL DATA

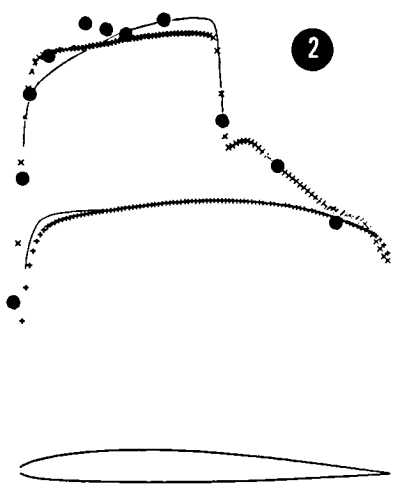
× × × UPPER
+ + + LOWER
} WING SURFACE PRESSURES – NASA-GRUMMAN TRANSONIC WING BODY CODE

——— ISOLATED WING CODE PREDICTION





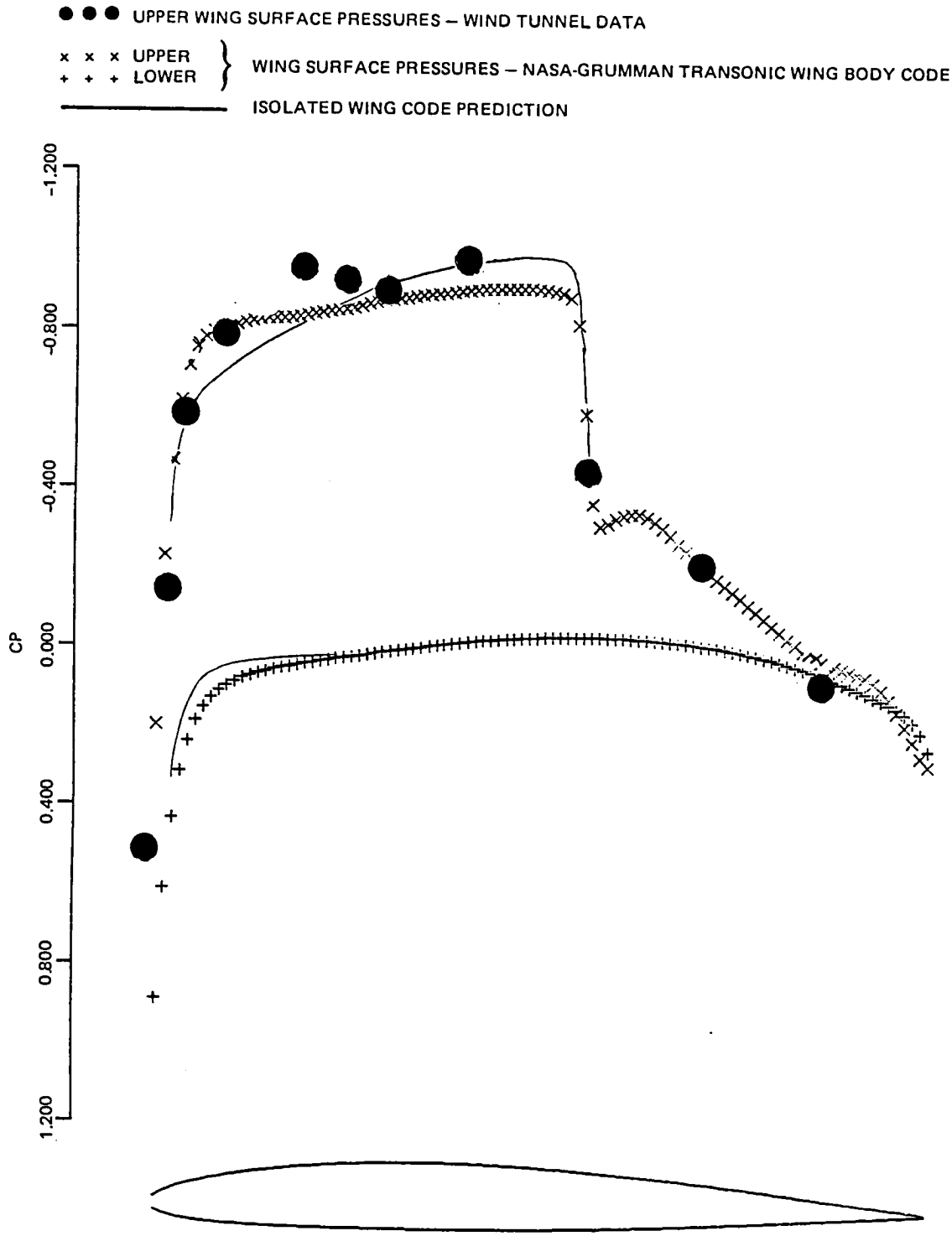
η = 0.88



η = 0.44

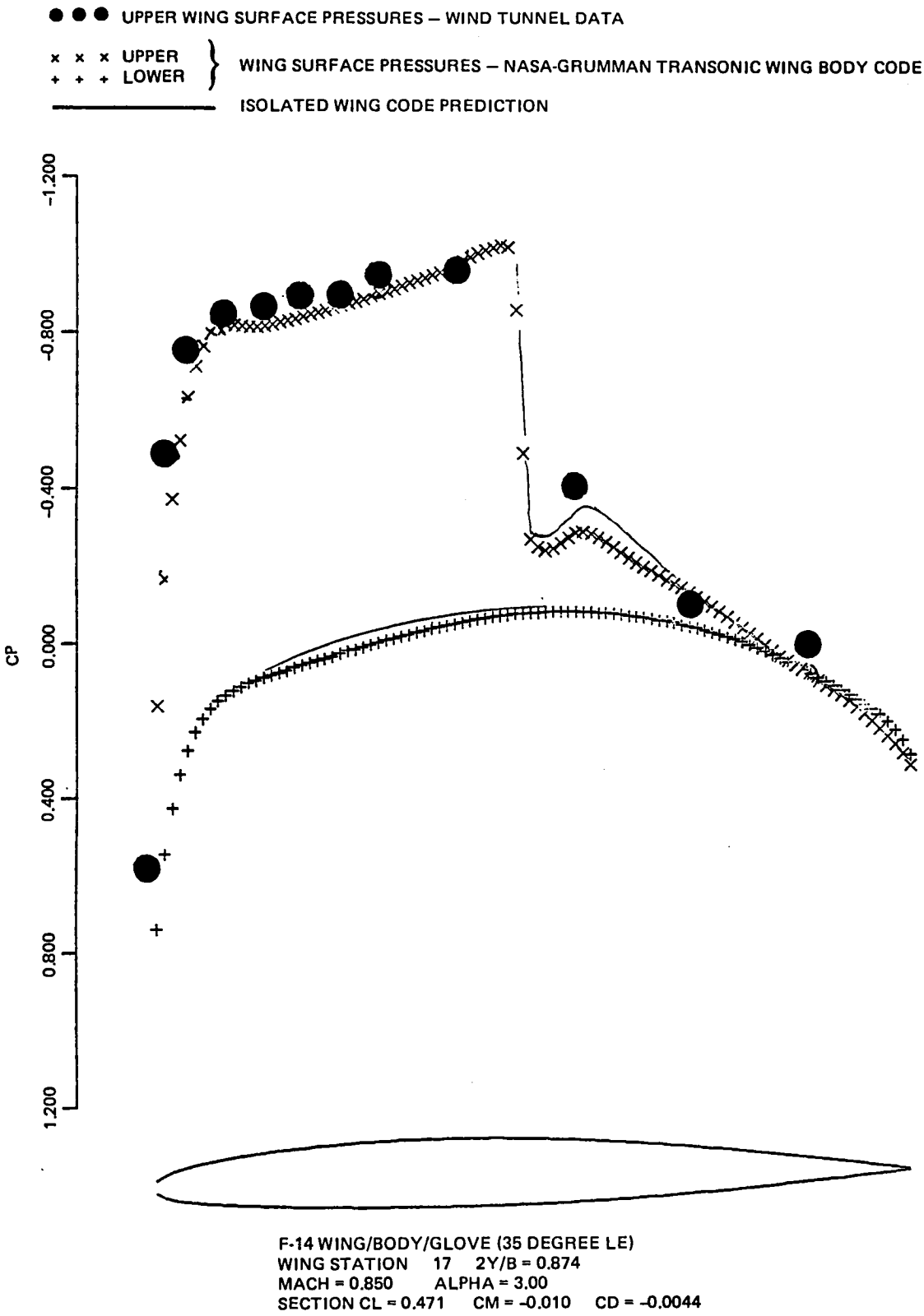
R84-1788-031(1/3)B

Fig. 19 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.85, $\alpha = 3°$ (Sheet 1 of 3)



R84-1788-031(2/3)B

Fig. 19 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.85, $\alpha = 3°$ (Sheet 2 of 3)



R84-1788-031(3/3)B

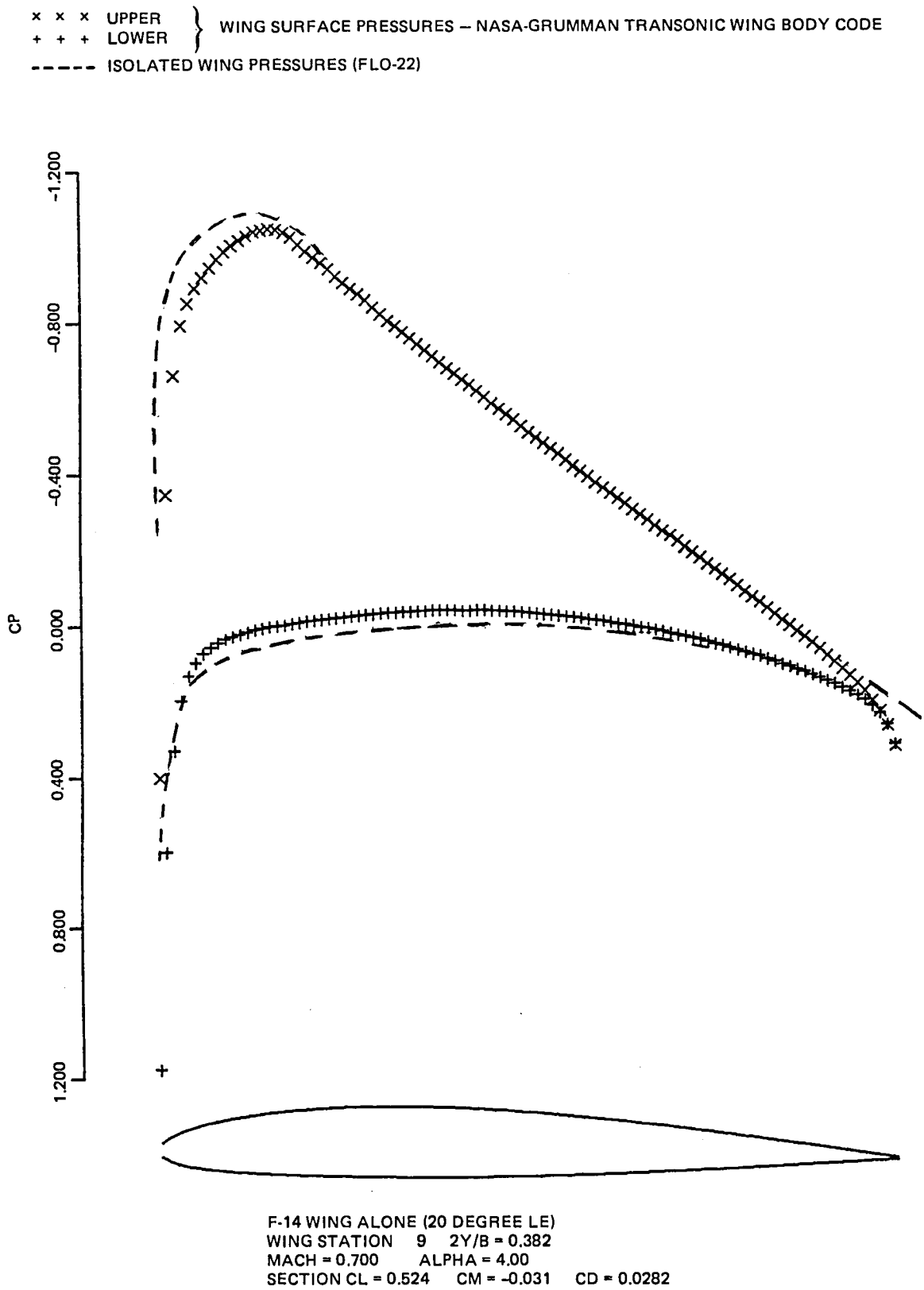
Fig. 19 F-14A Wind Tunnel and Analysis Wing Pressure Correlations; $\Lambda = 35°$, M = 0.85, $\alpha = 3°$ (Sheet 3 of 3)

ISOLATED WING T.S.D.E./F.P.E. COMPARISONS

The isolated wing models found in Tables 4 - 9 were exercised to determine whether or not small-disturbance assumptions/limitations in the basic formulation of the NASA/Grumman Transonic Wing-Body Code would impair code applications on the variable sweep transition test project. A case/figure table can be found below.

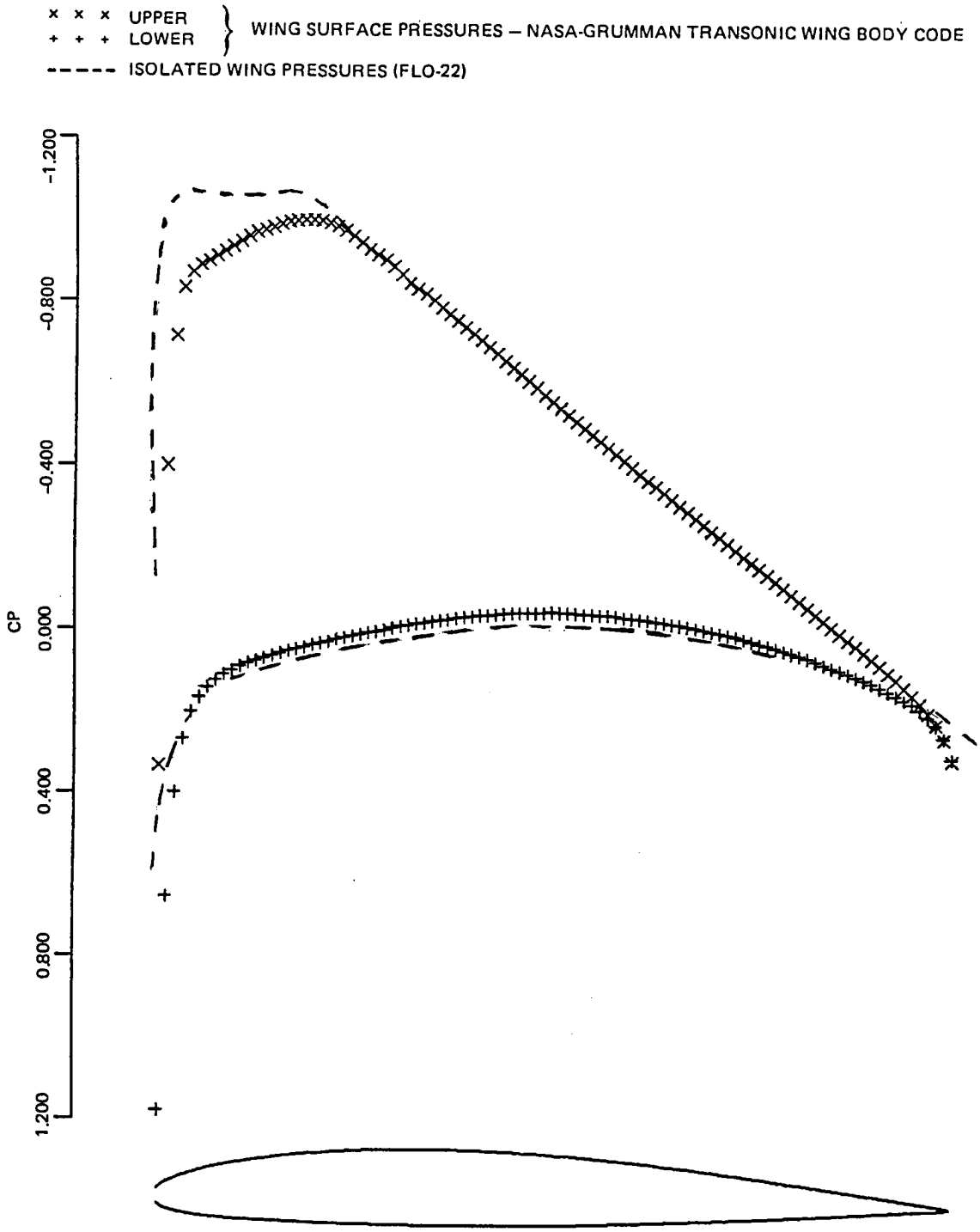
CASE	Λ	M	α	FIGURE SET
#1	20°	0.700	4°	20
#2	20°	0.700	5°	21
#3	20°	0.750	1.7°	22
#4	20°	0.750	3°	23
#5	20°	0.750	4°	24
#6	25°	0.775	3°	25
#7	20°	0.800	1.4°	26
#8	35°	0.800	3°	27
#9	35°	0.800	5°	28
#10	35°	0.850	3°	29

It should be noted that the Transonic Wing-Body Code results were generated using the viscous option which includes a 2-D "strip" boundary layer. Thus, these results are compatible with wing-fuselage-glove results presented earlier. FLO-22 analyses, however, are inviscid. For the F-14A isolated wing comparisons, this difference is judged to be insignificant. Isolated wing-glove models were not used because of difficulties encountered applying FLO-22 to the highly swept (Λ = 68°) cranked wing planform.



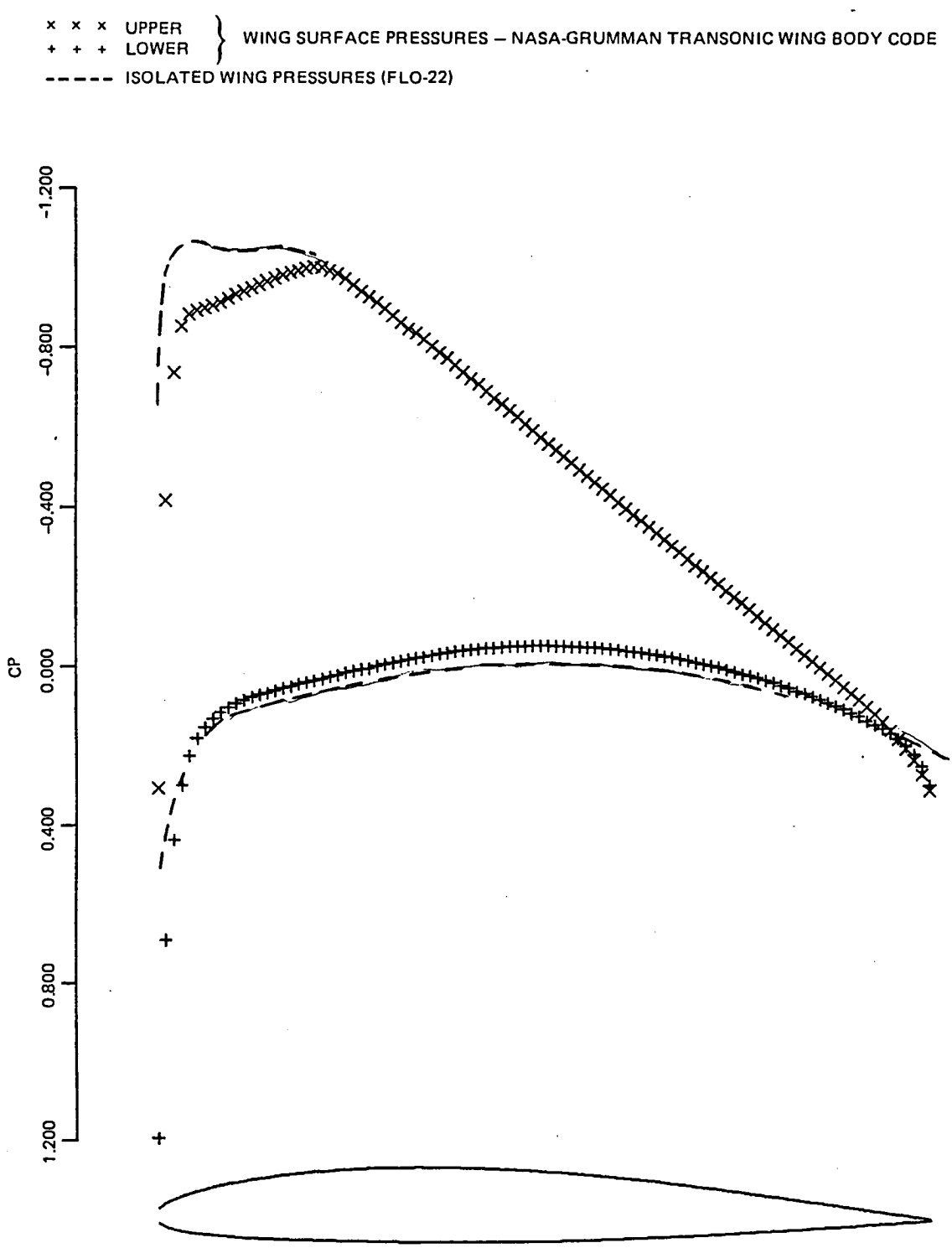
R84-1788-032(1/5)B

Fig. 20 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 1 of 5)



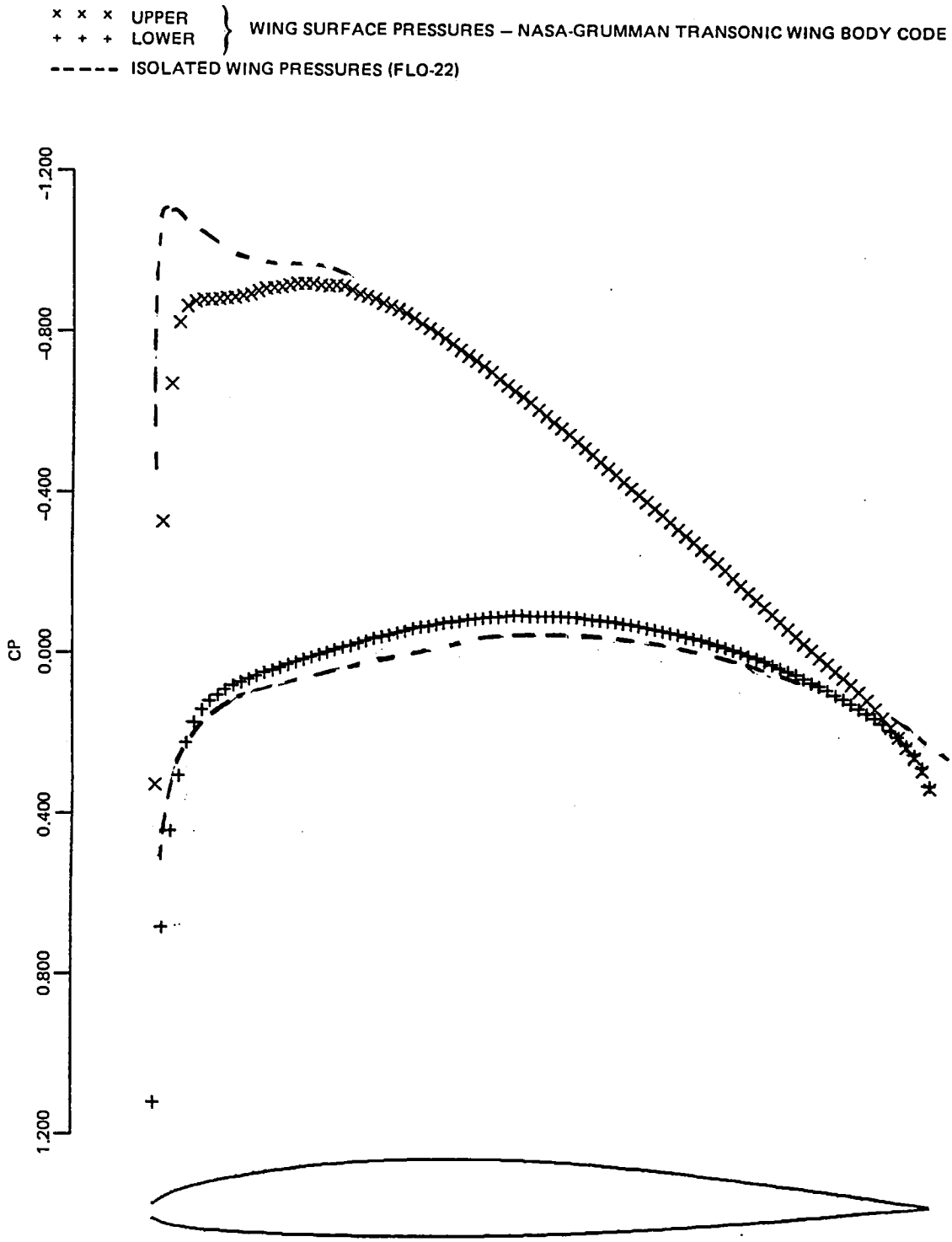
R84-1788-032(2/5)B

Fig. 20 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 2 of 5)



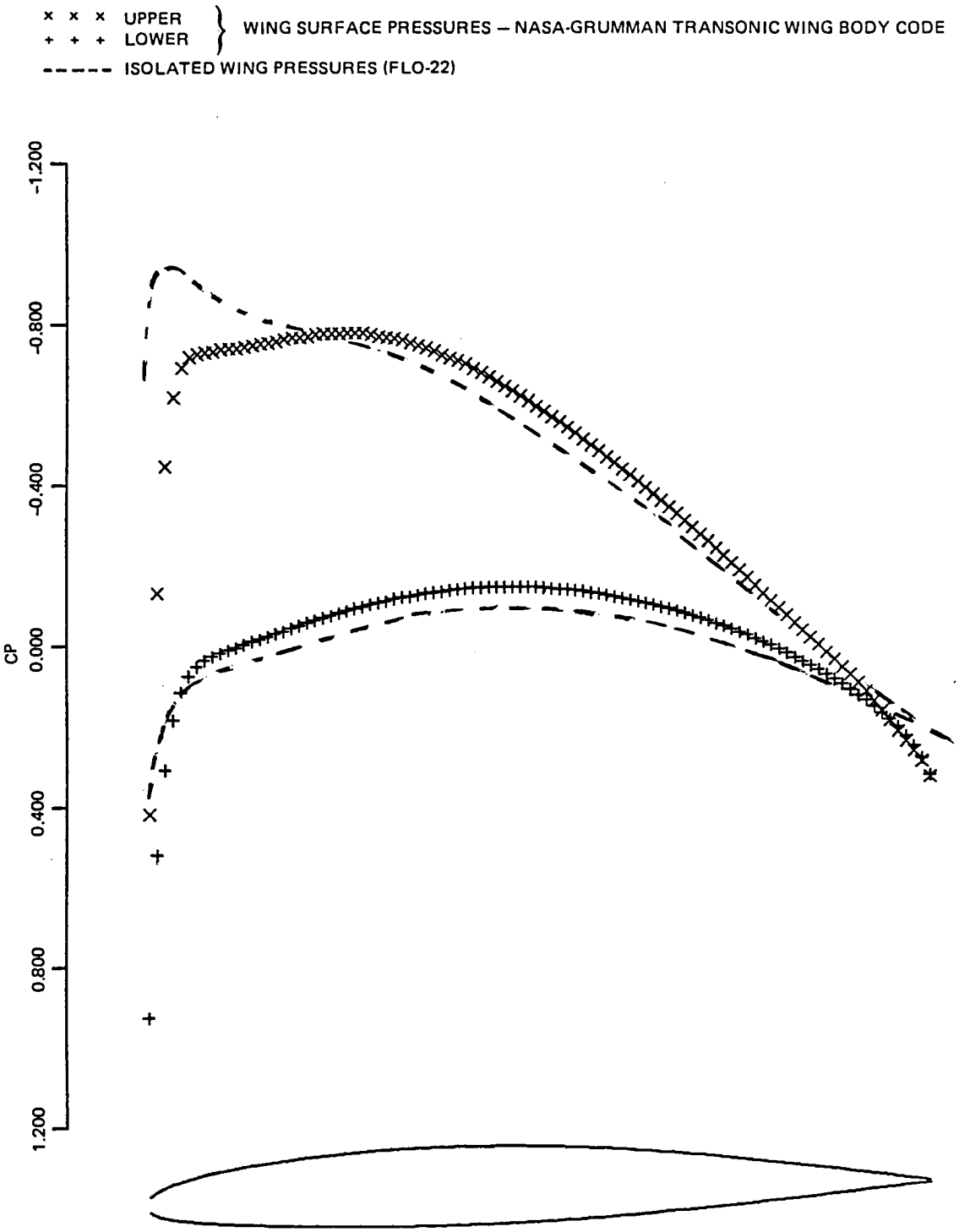
R84-1788-032(3/5)B

Fig. 20 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 3 of 5)



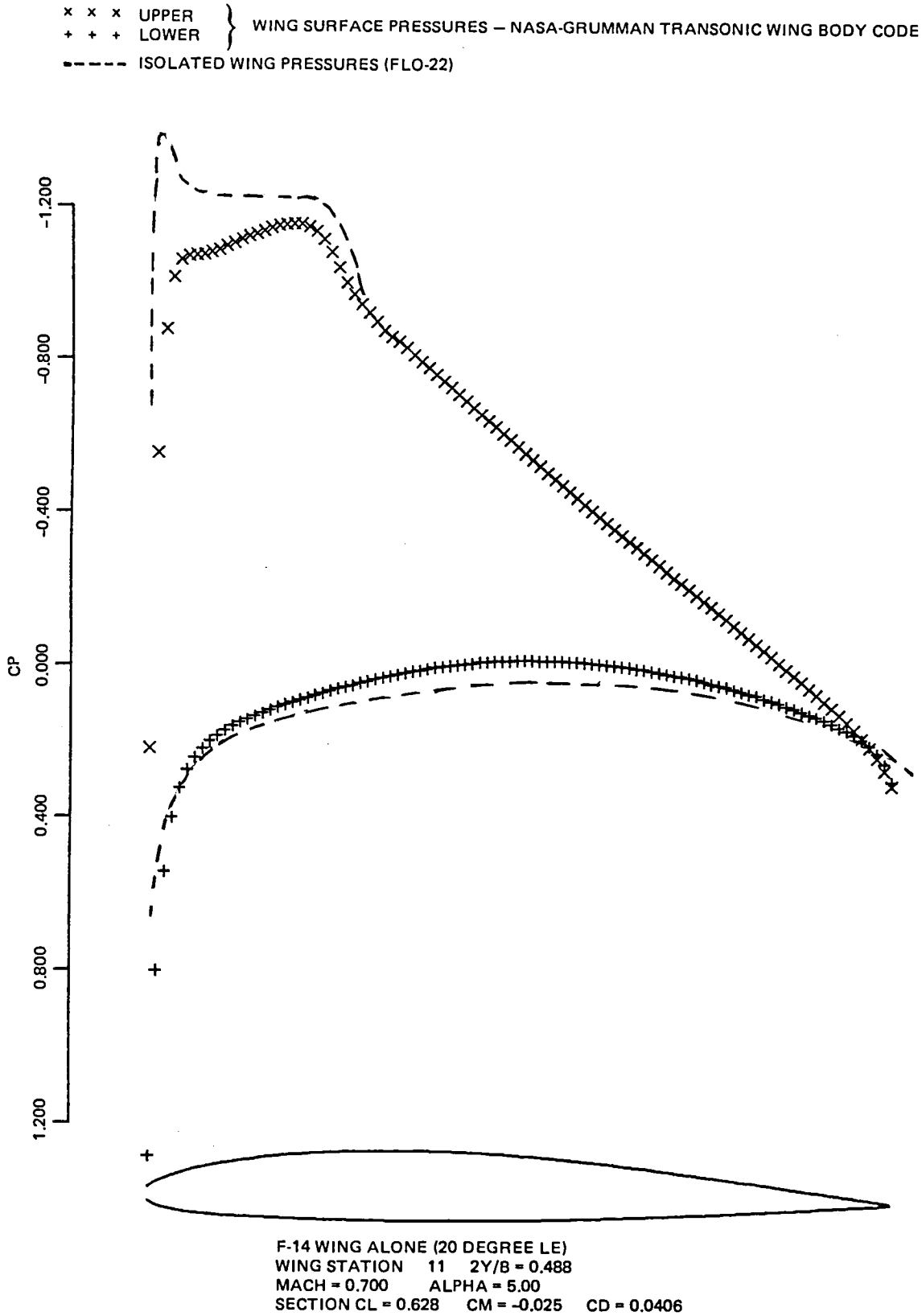
R84-1788-032(4/5)B

Fig. 20 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 4 of 5)



R84-1788-032(5/5)B

Fig. 20 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 5 of 5)



R84-1788-033(1/2)B

Fig. 21 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 5°$ (Sheet 1 of 2)

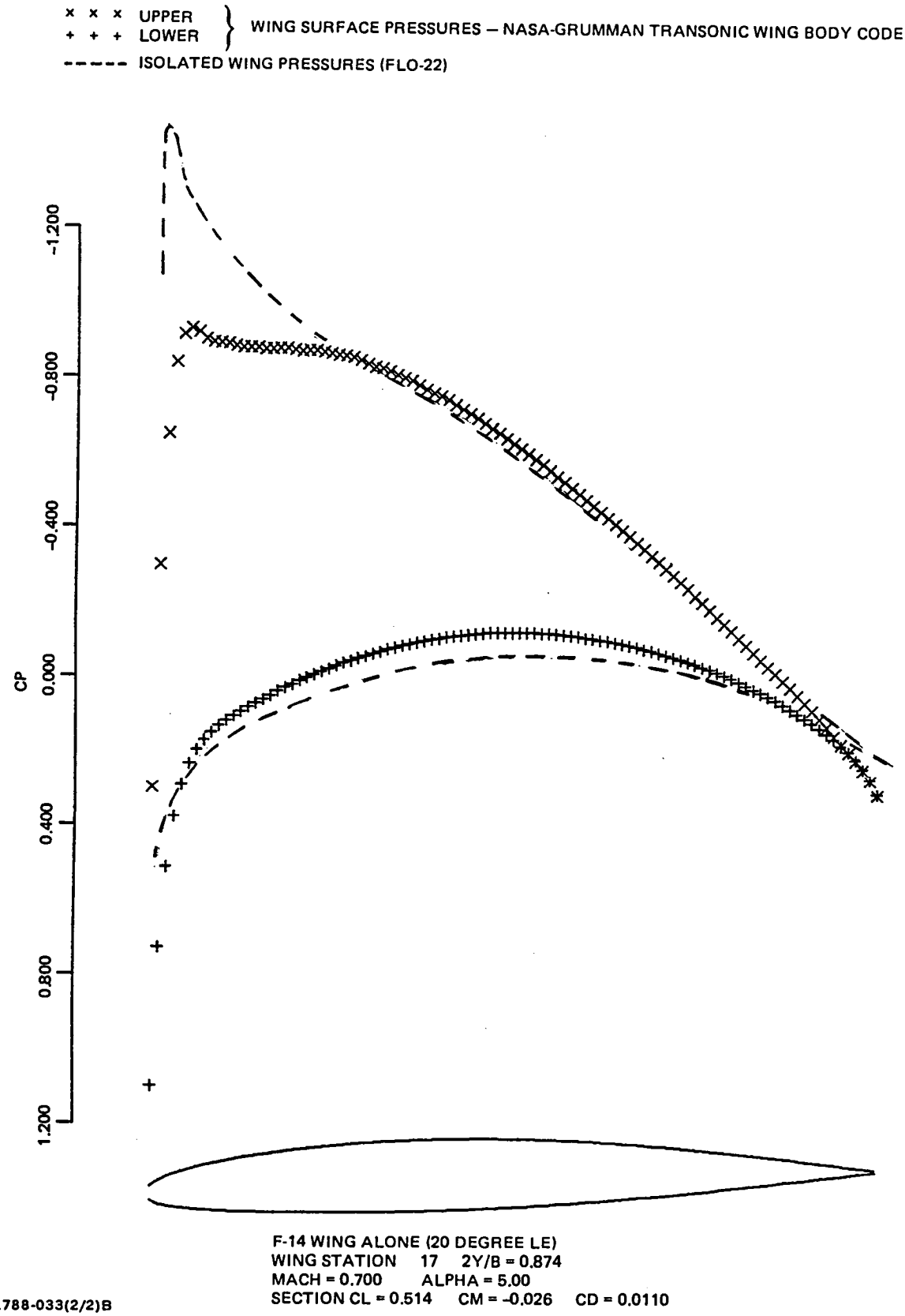
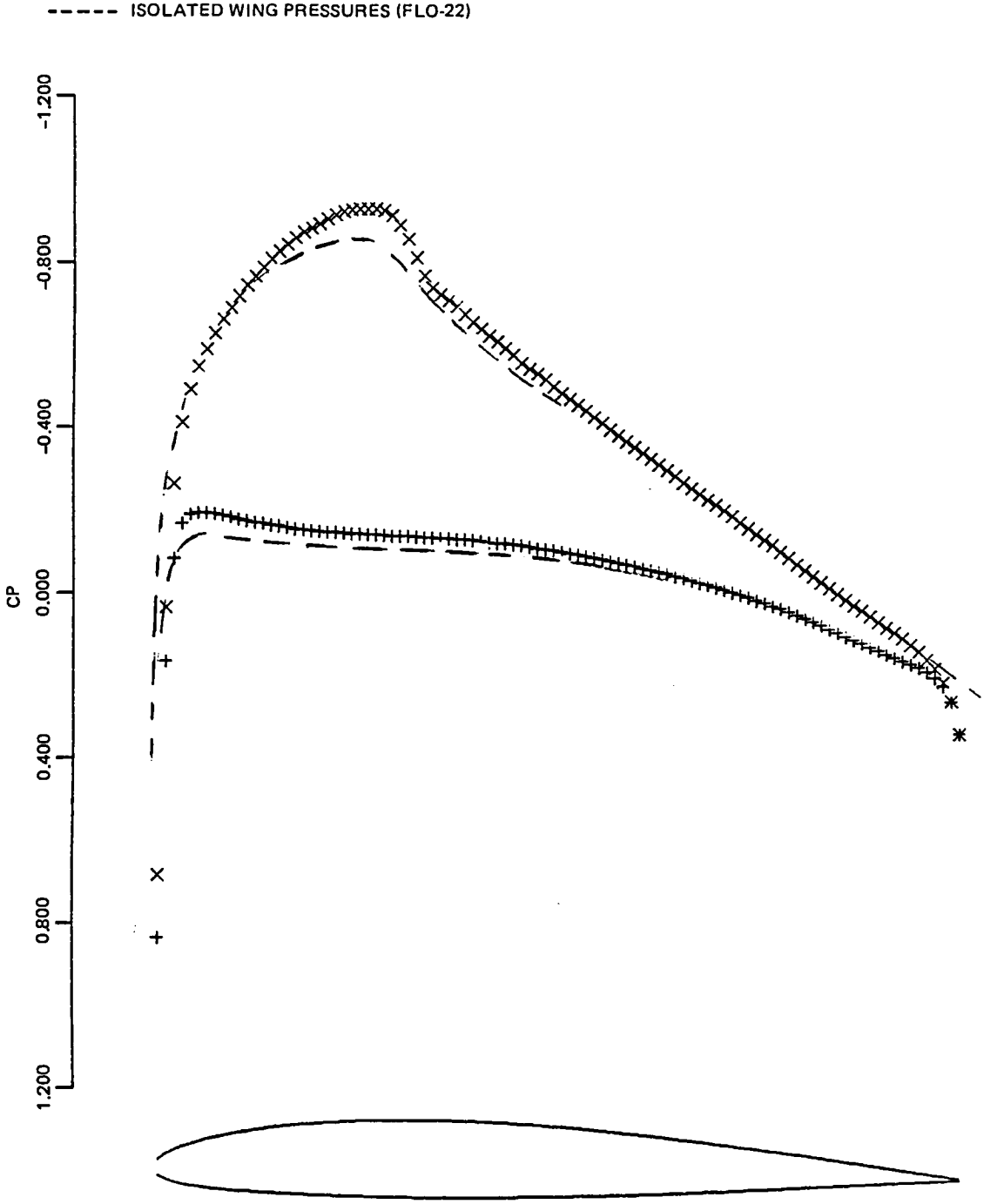
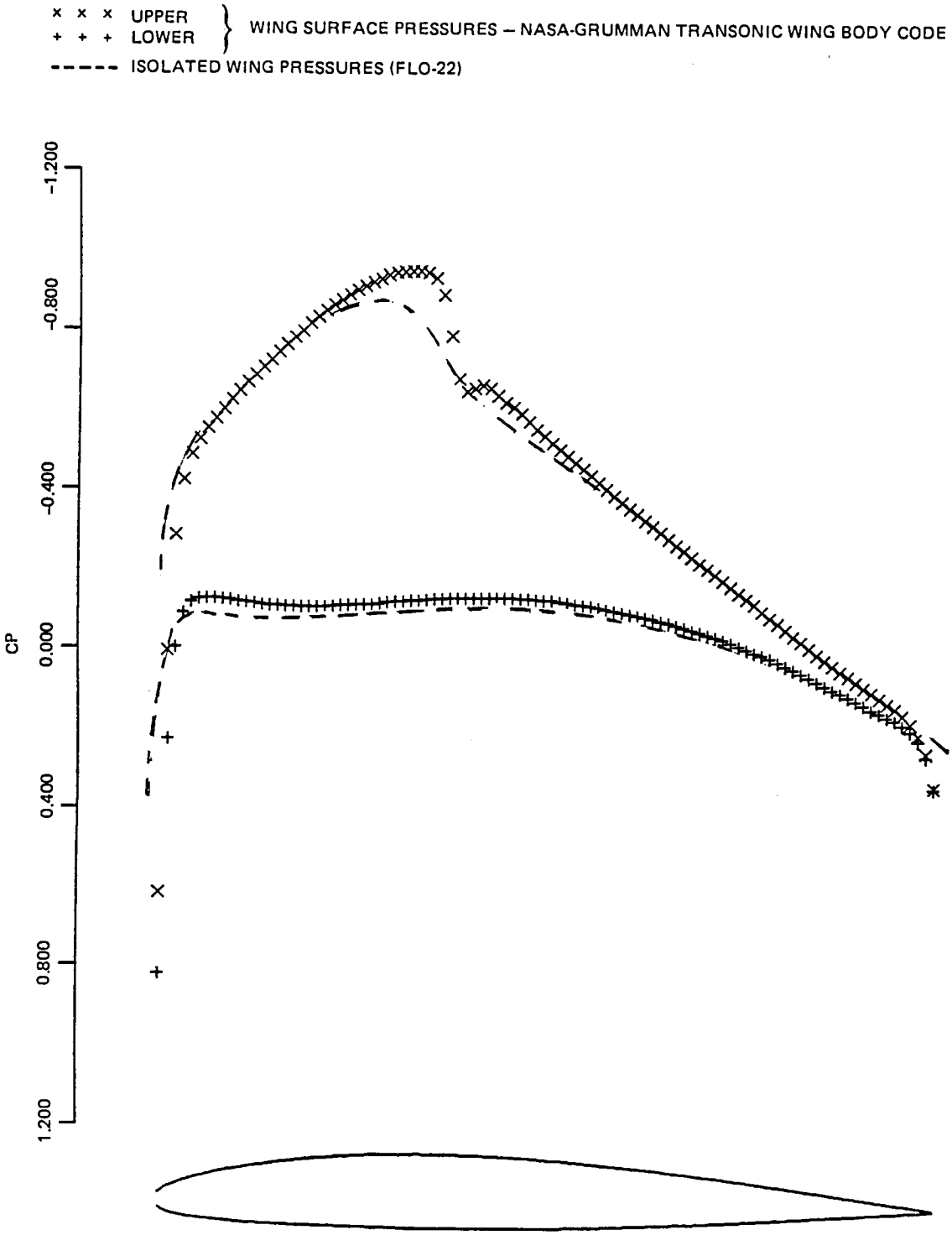


Fig. 21 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.70, $\alpha = 5°$ (Sheet 2 of 2)



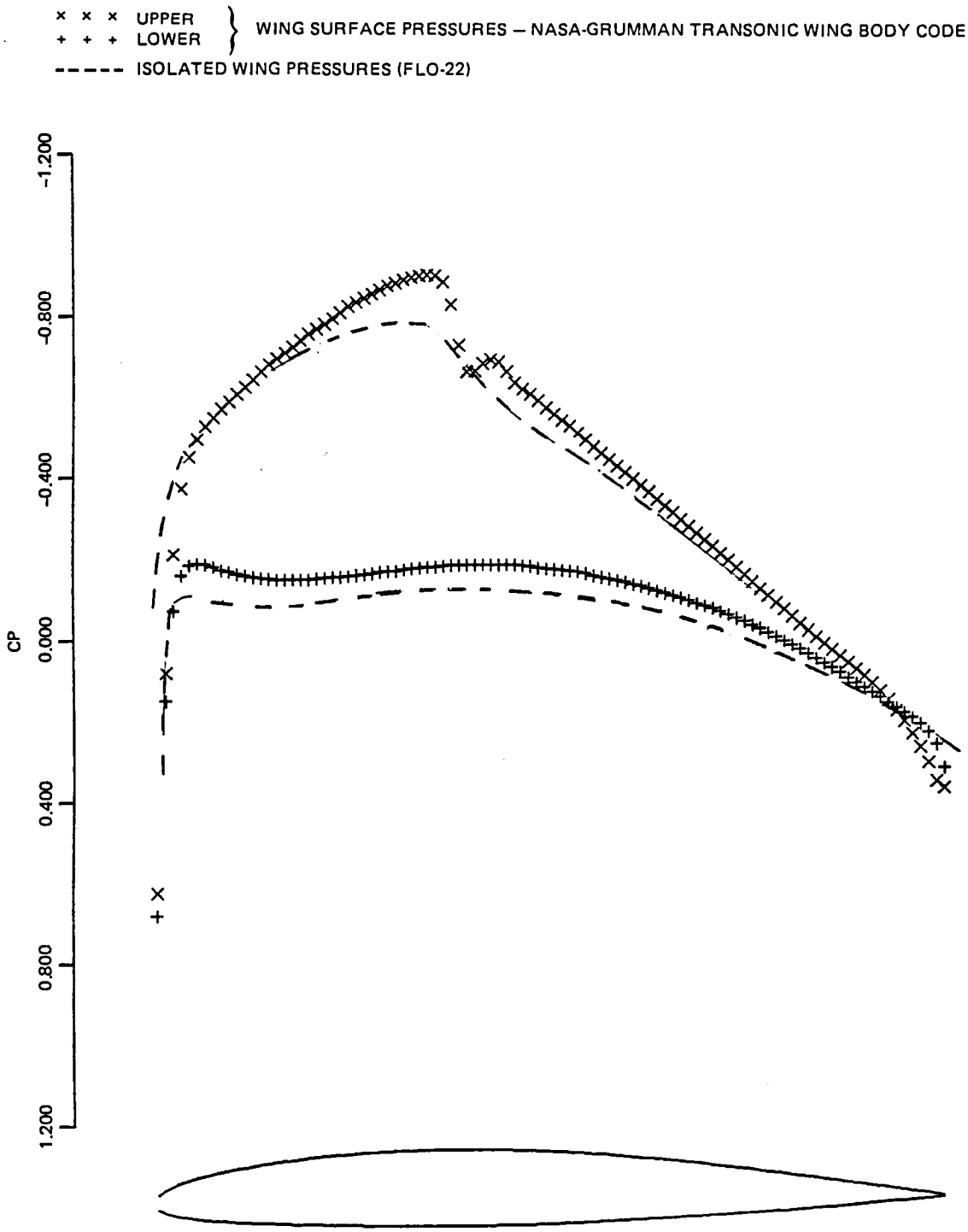
R84-1788-034(1/4)B

Fig. 22 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 1.7°$ (Sheet 1 of 4)



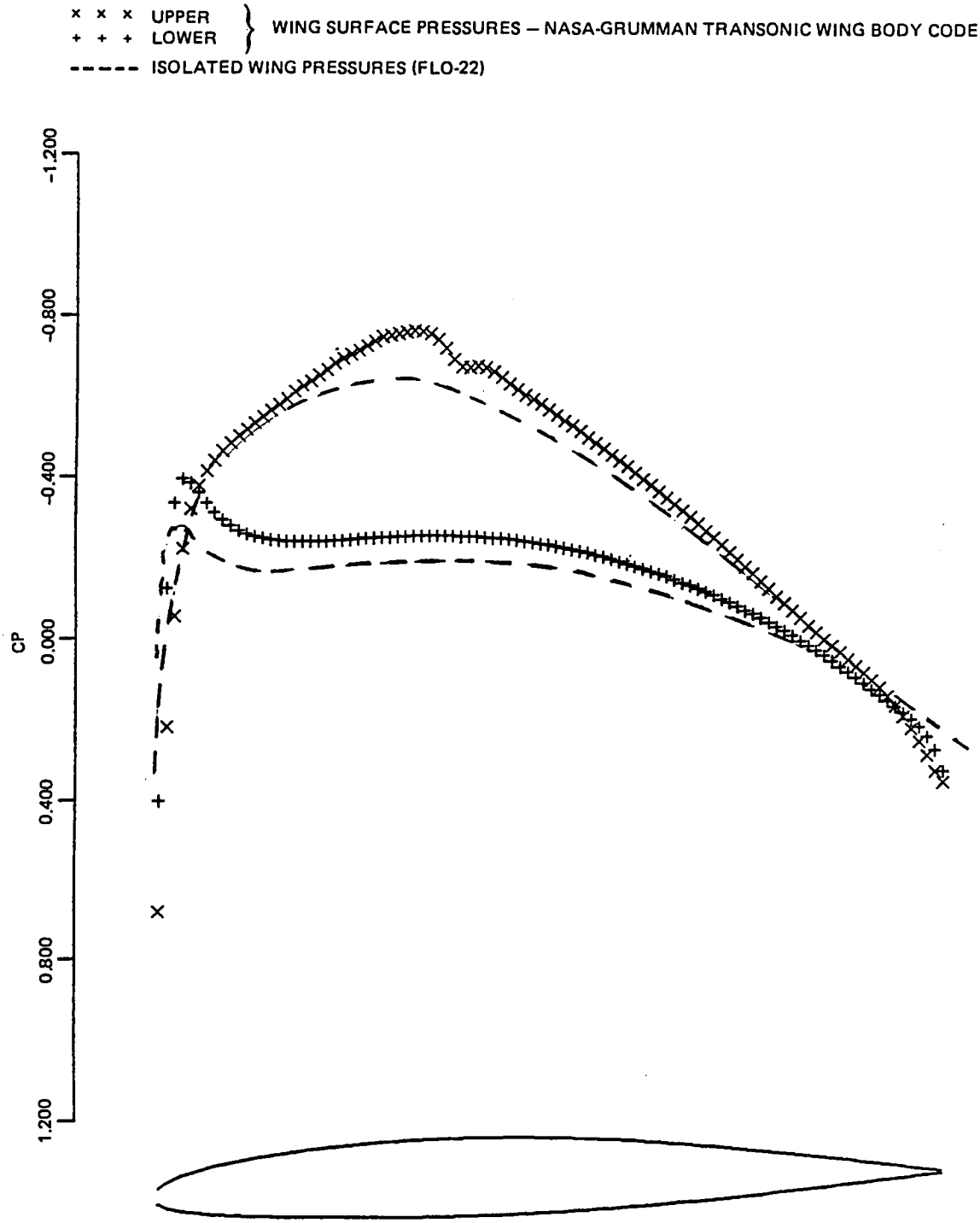
R84-1788-034(2/4)B

Fig. 22 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 1.7°$ (Sheet 2 of 4)



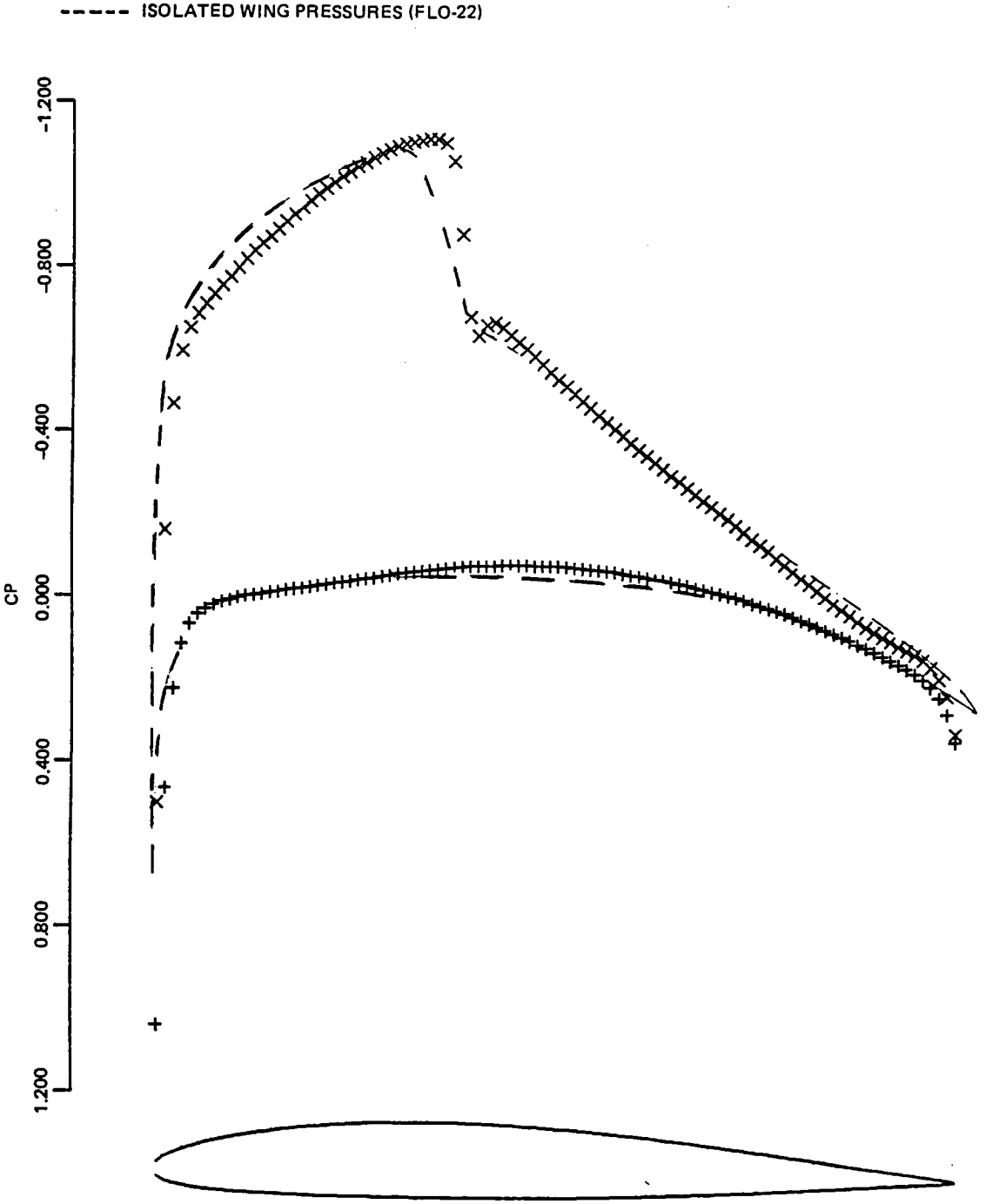
R84-1788-034(3/4)B

Fig. 22 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20^\circ$, M = 0.75, $\alpha = 1.7^\circ$ (Sheet 3 of 4)



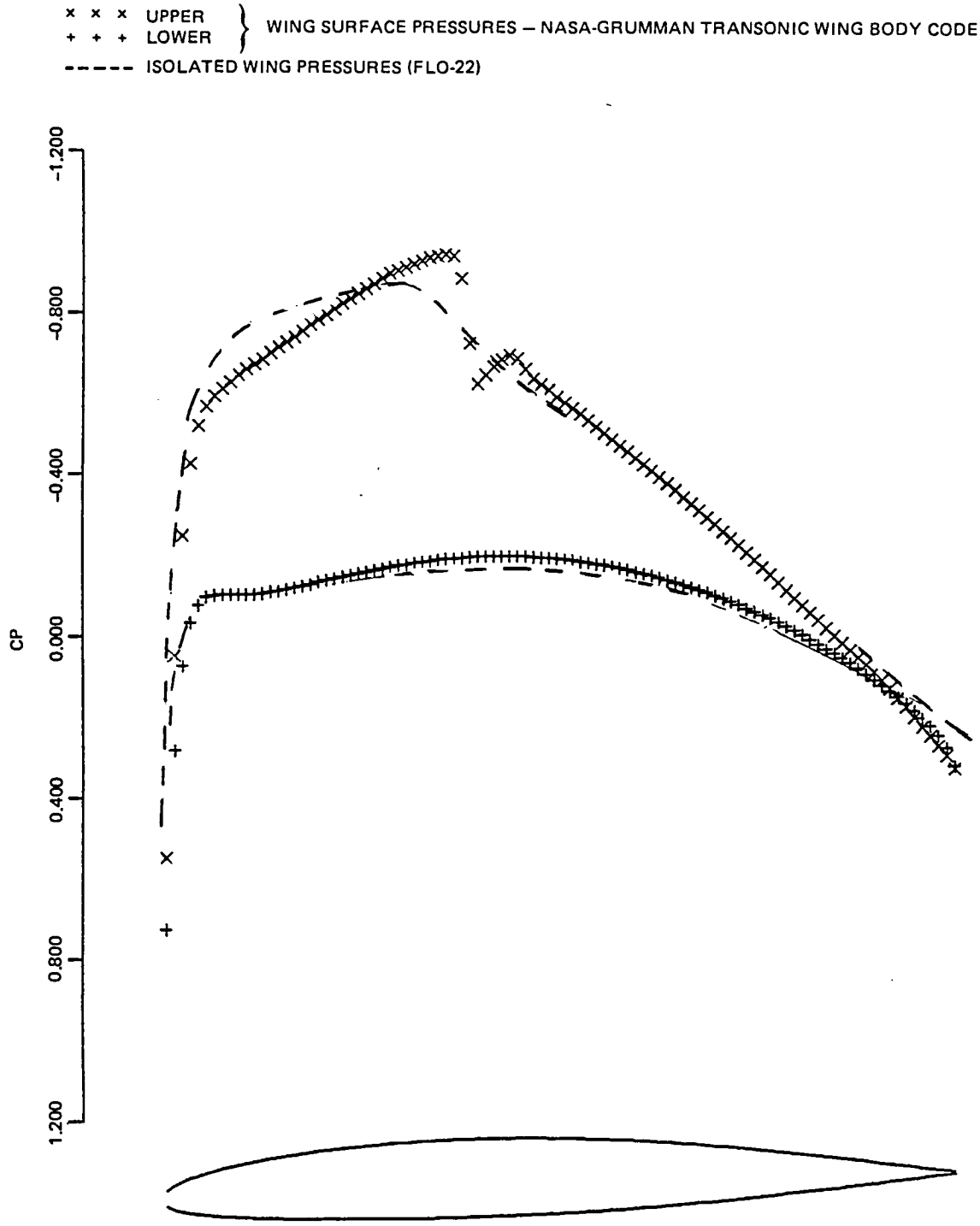
R84-1788-034(4/4)B

Fig. 22 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20^\circ$, M = 0.75, $\alpha = 1.7^\circ$ (Sheet 4 of 4)



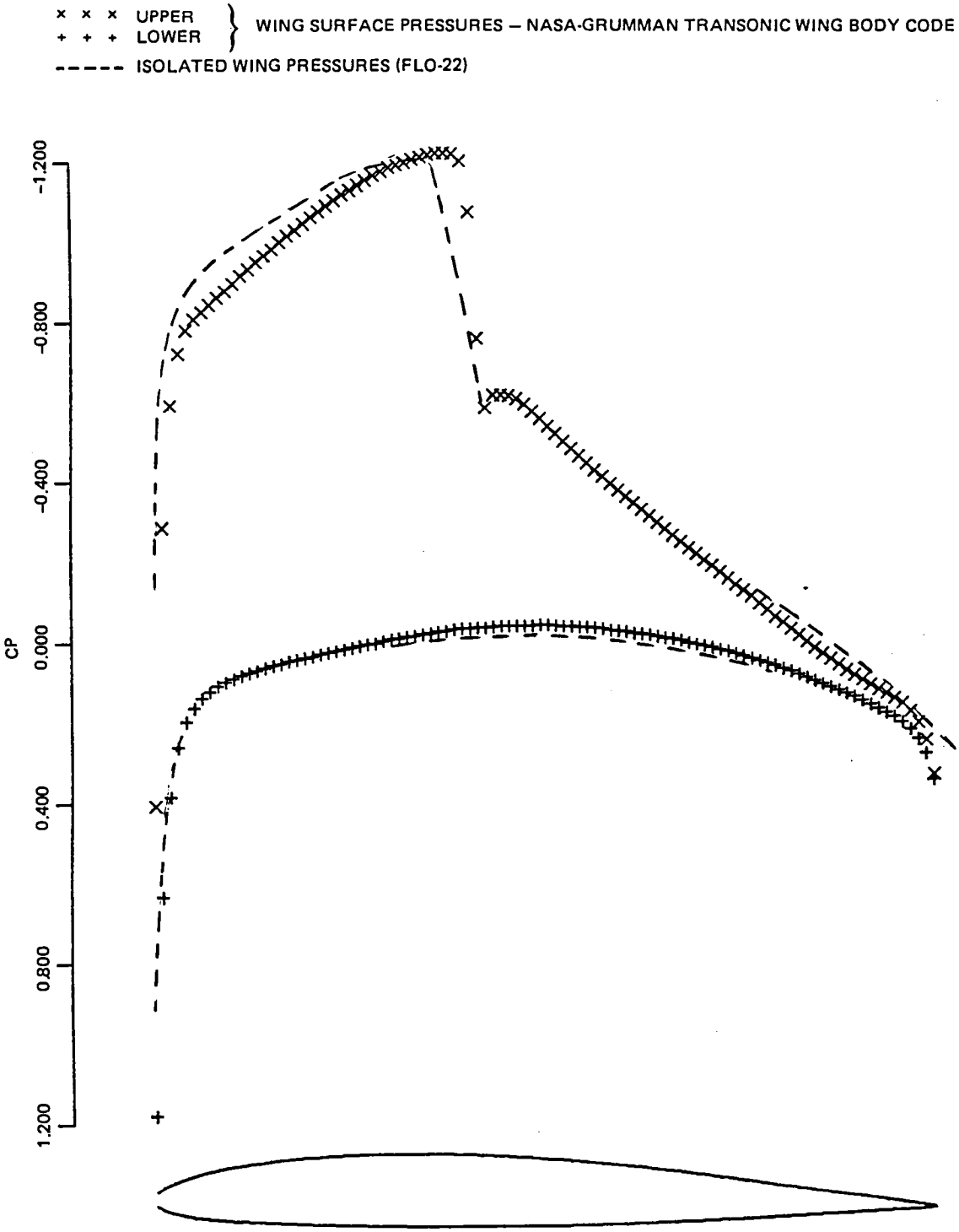
R84-1788-035(1/2)B

Fig. 23 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 3°$ (Sheet 1 of 2)



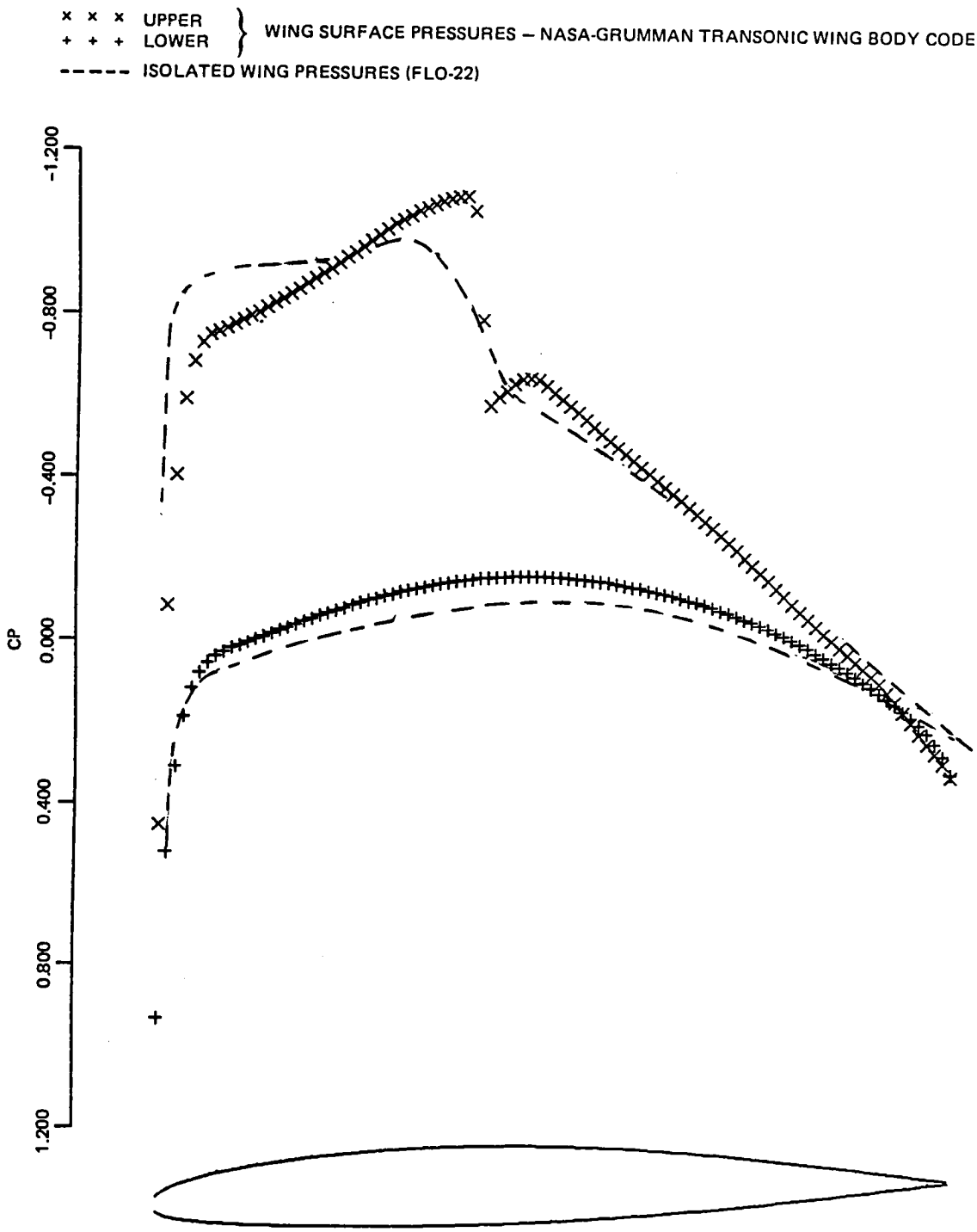
R84-1788-035(2/2)B

Fig. 23 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20^\circ$, M = 0.75, $\alpha = 3^\circ$ (Sheet 2 of 2)



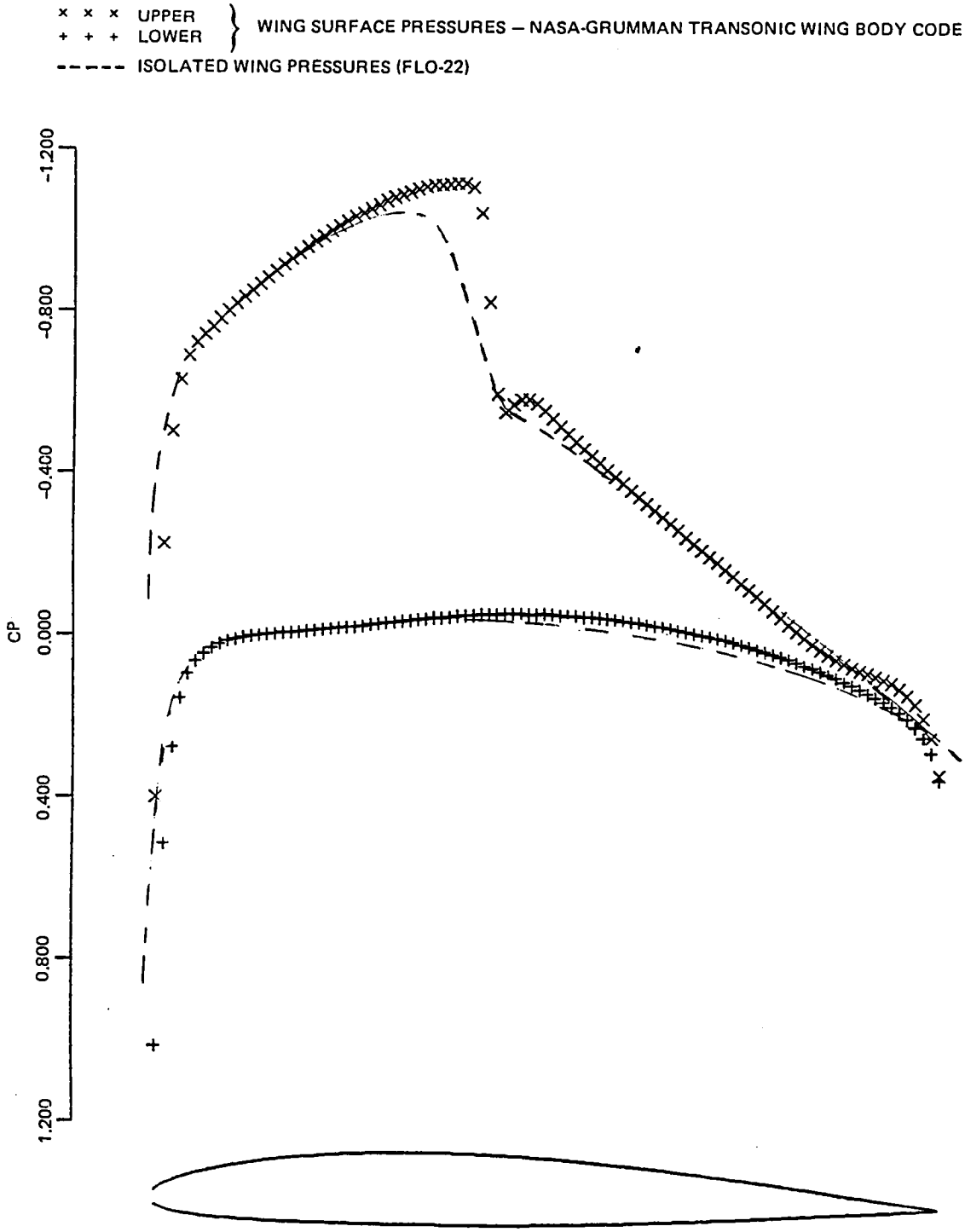
R84-1788-036(1/2)B

Fig. 24 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20^\circ$, M = 0.75, $\alpha = 4^\circ$ (Sheet 1 of 2)



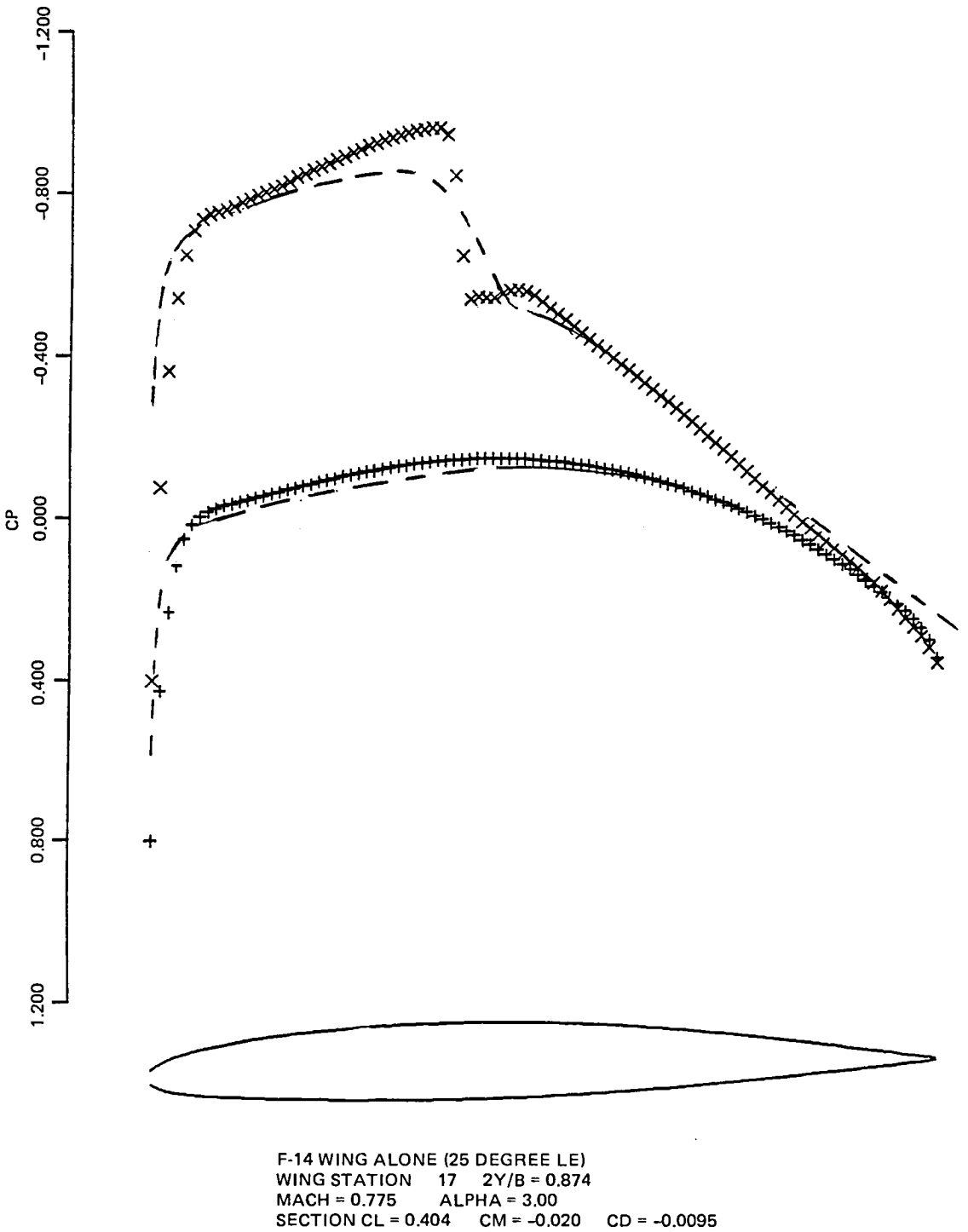
R84-1788-036(2/2)B

Fig. 24 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.75, $\alpha = 4°$ (Sheet 2 of 2)



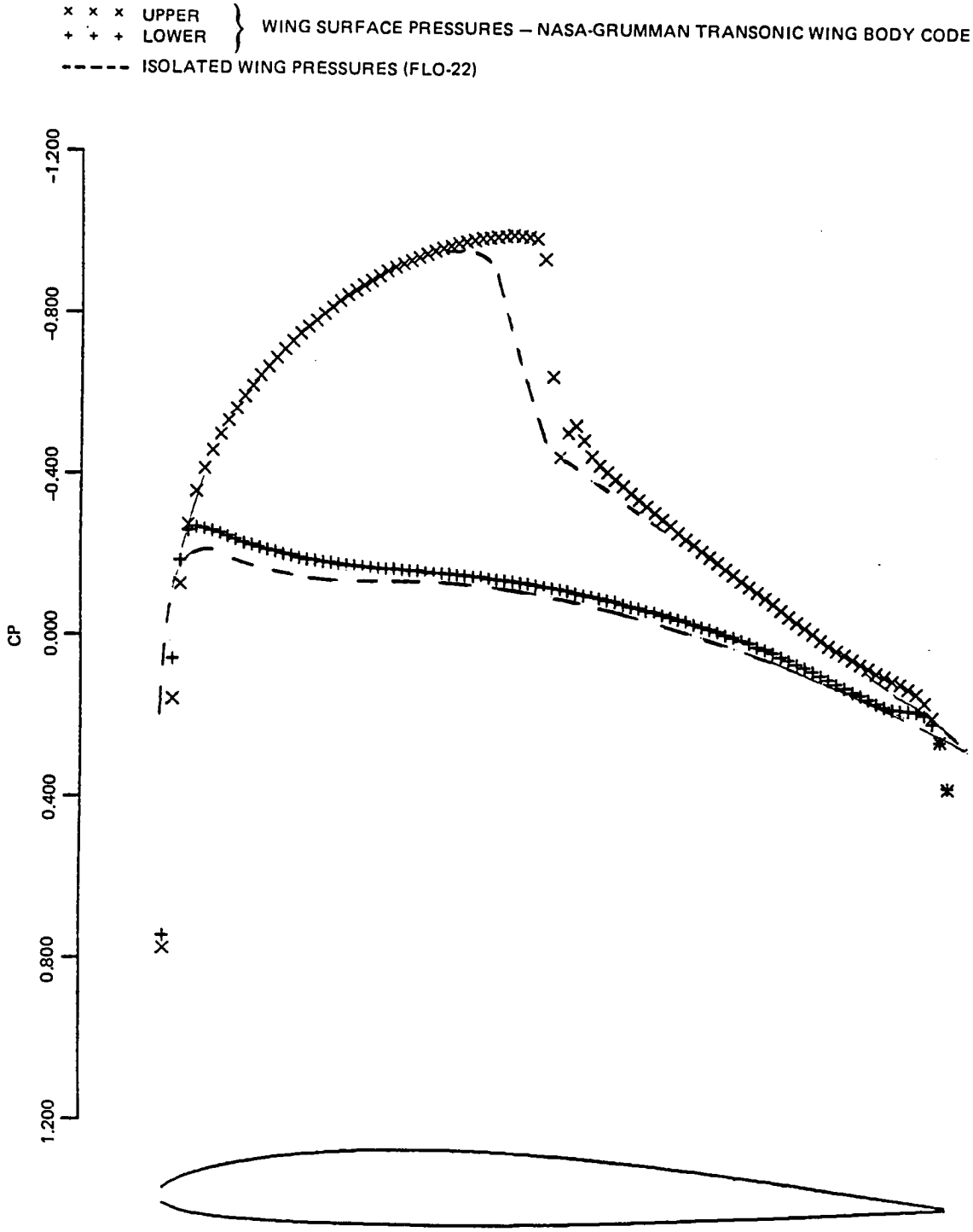
R84-1788-037(1/2)B

Fig. 25 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 25°$, M = 0.775, $\alpha = 3°$ (Sheet 1 of 2)



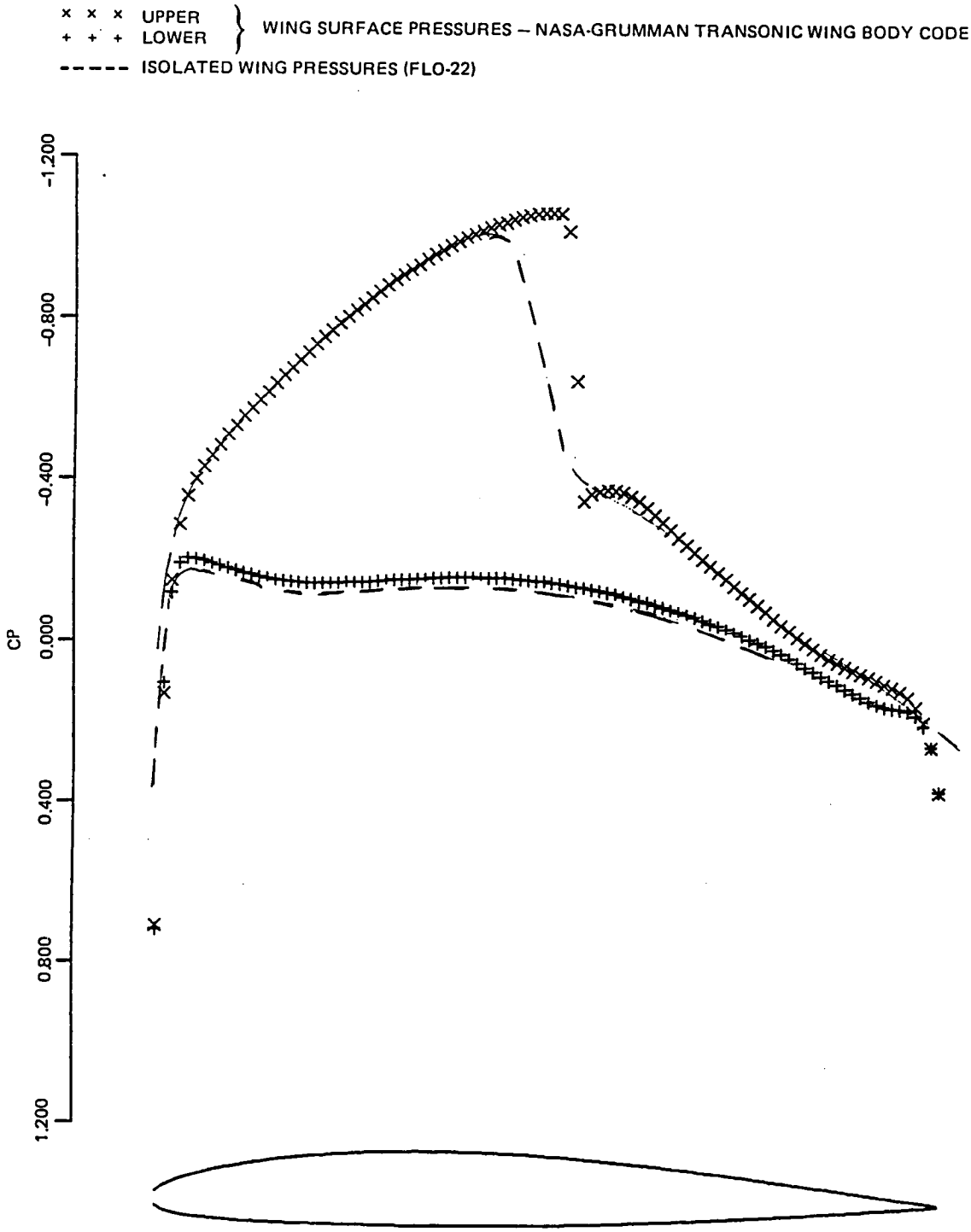
R84-1788-037(2/2)B

Fig. 25 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 25°$, M = 0.775, $\alpha = 3°$ (Sheet 2 of 2)



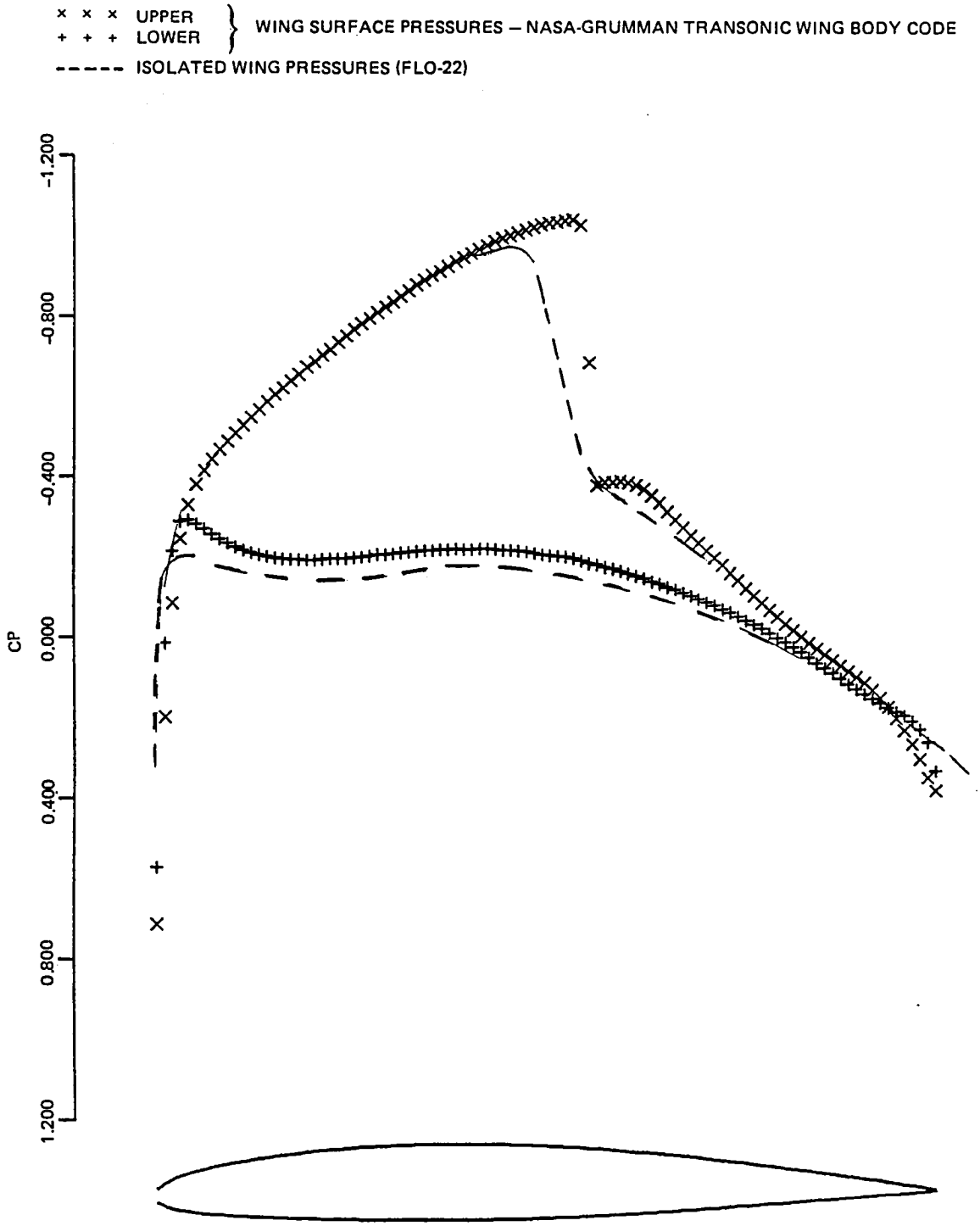
R84-1788-038(1/4)B

Fig. 26 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 1 of 4)



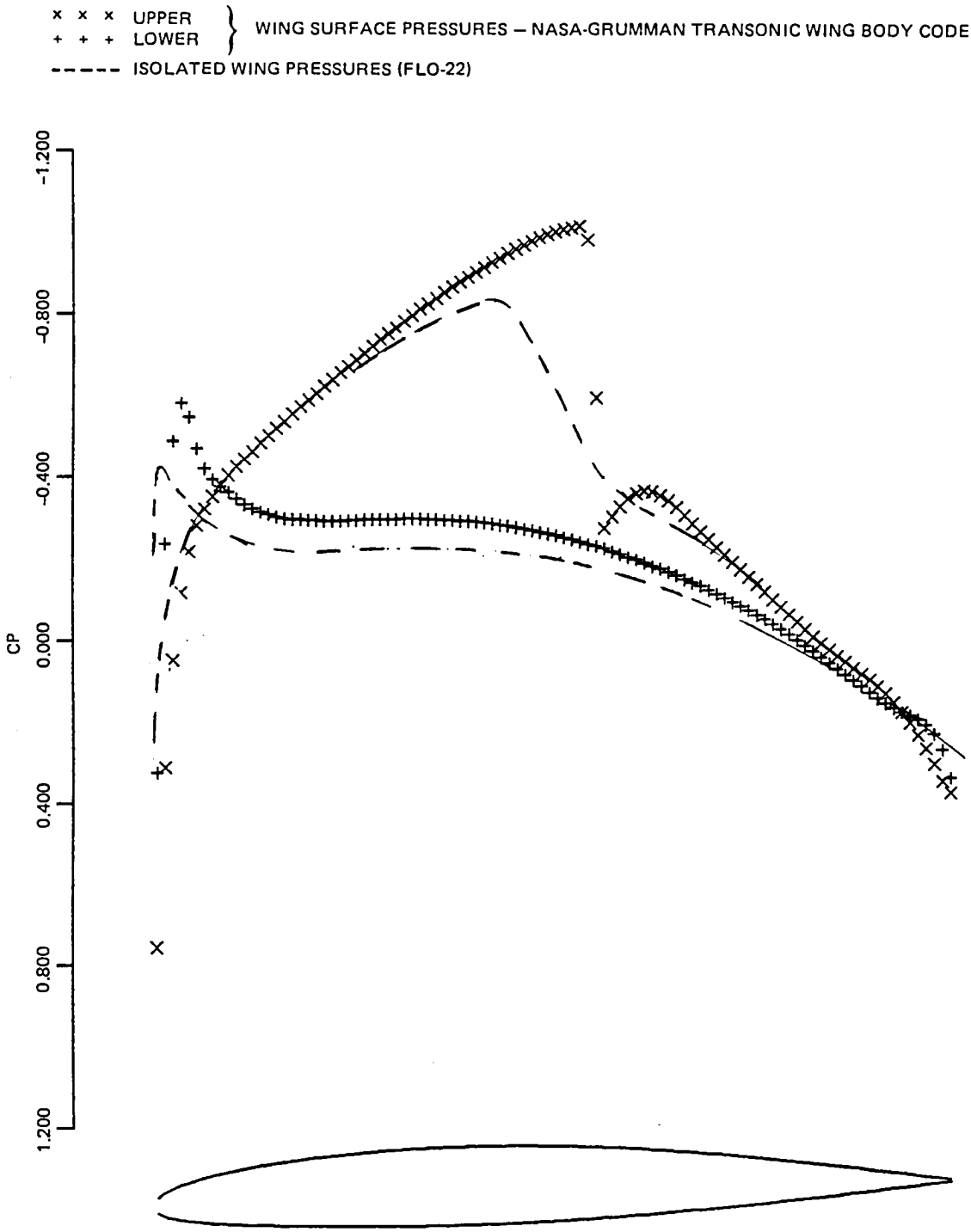
R84-1788-038(2/4)B

Fig. 26 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 2 of 4)



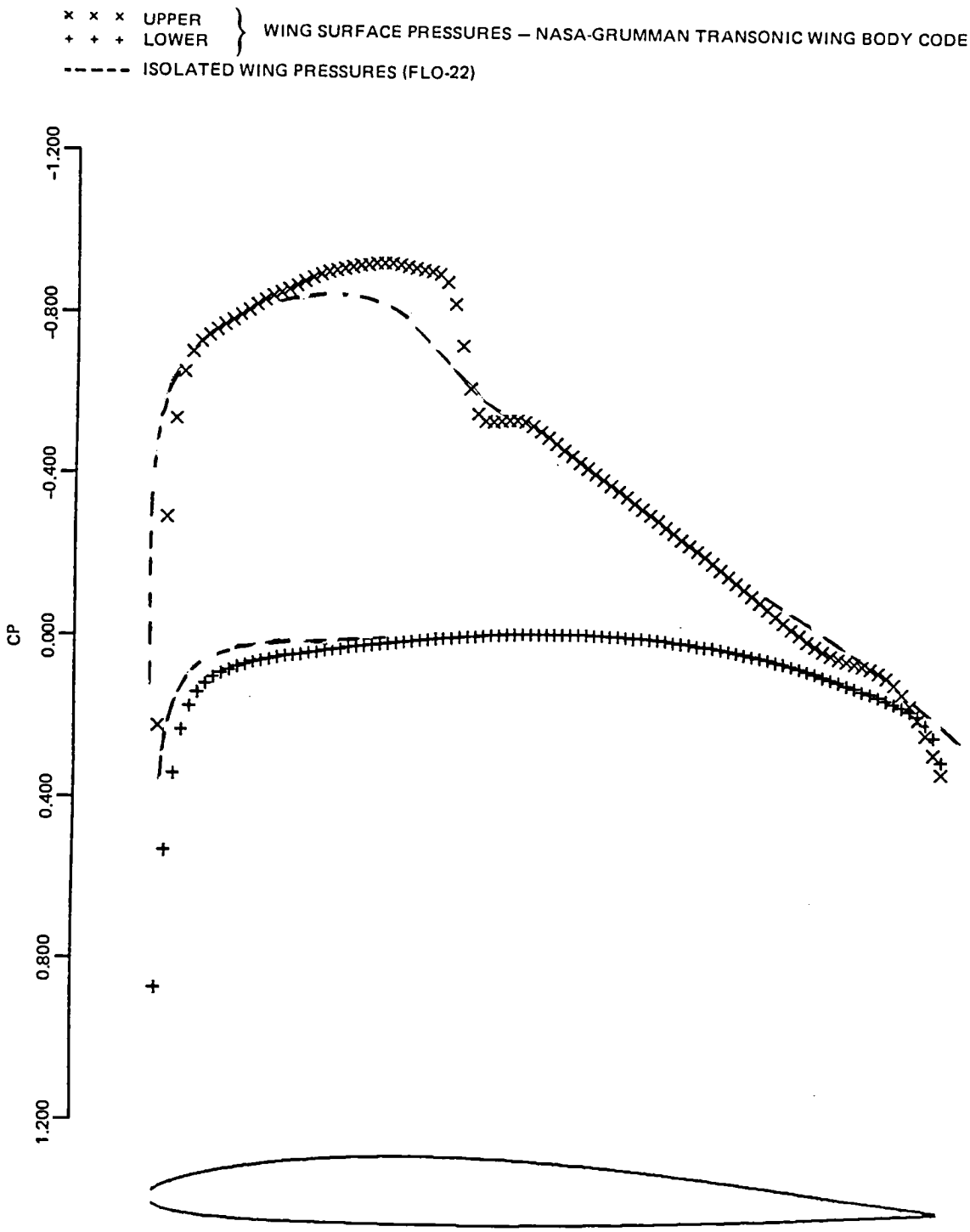
R84-1788-038(3/4)B

Fig. 26 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 3 of 4)



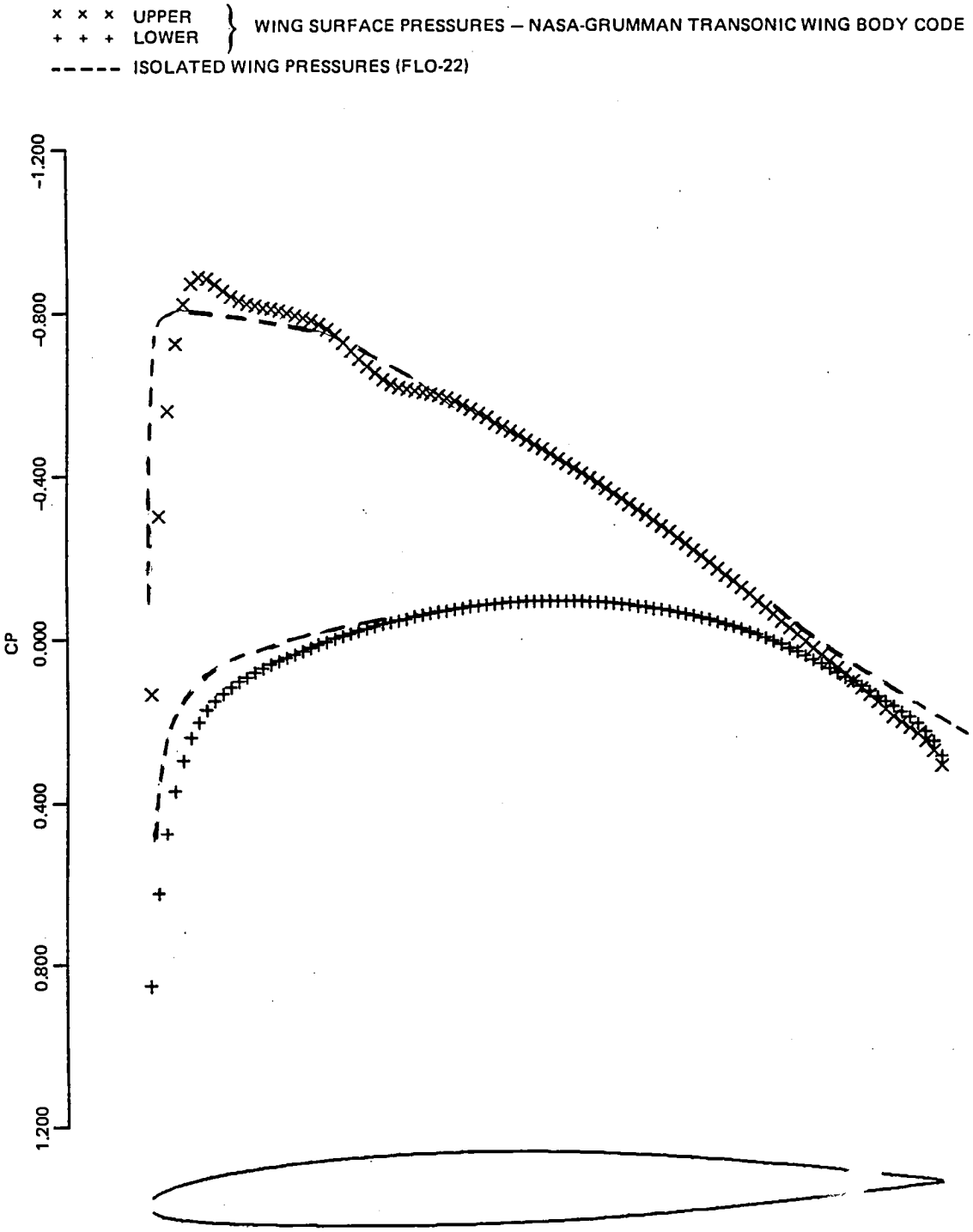
R84-1788-038(4/4)B

Fig. 26 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 20°$, M = 0.80, $\alpha = 1.4°$ (Sheet 4 of 4)



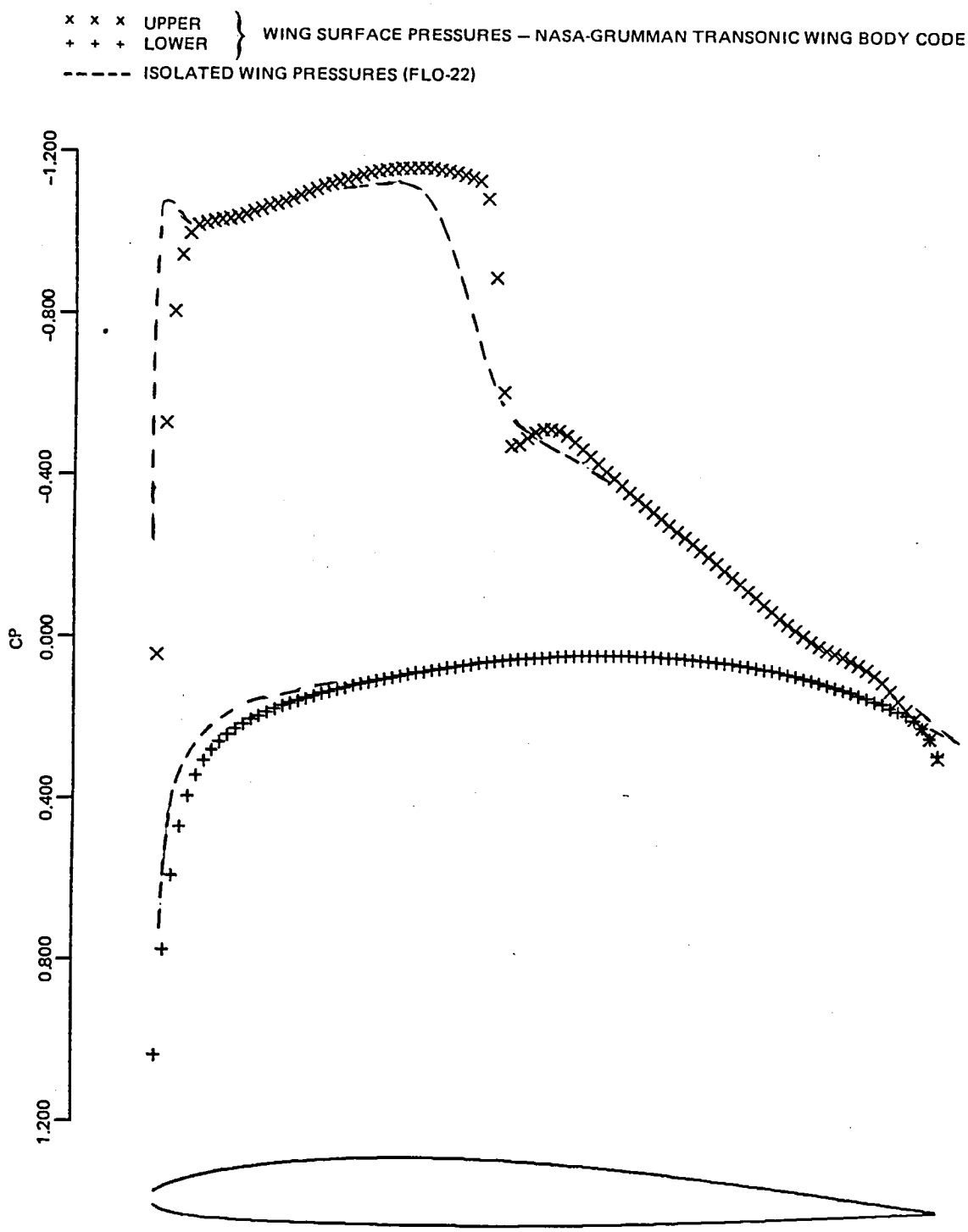
R84-1788-039(1/2)B

Fig. 27 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 3°$ (Sheet 1 of 2)



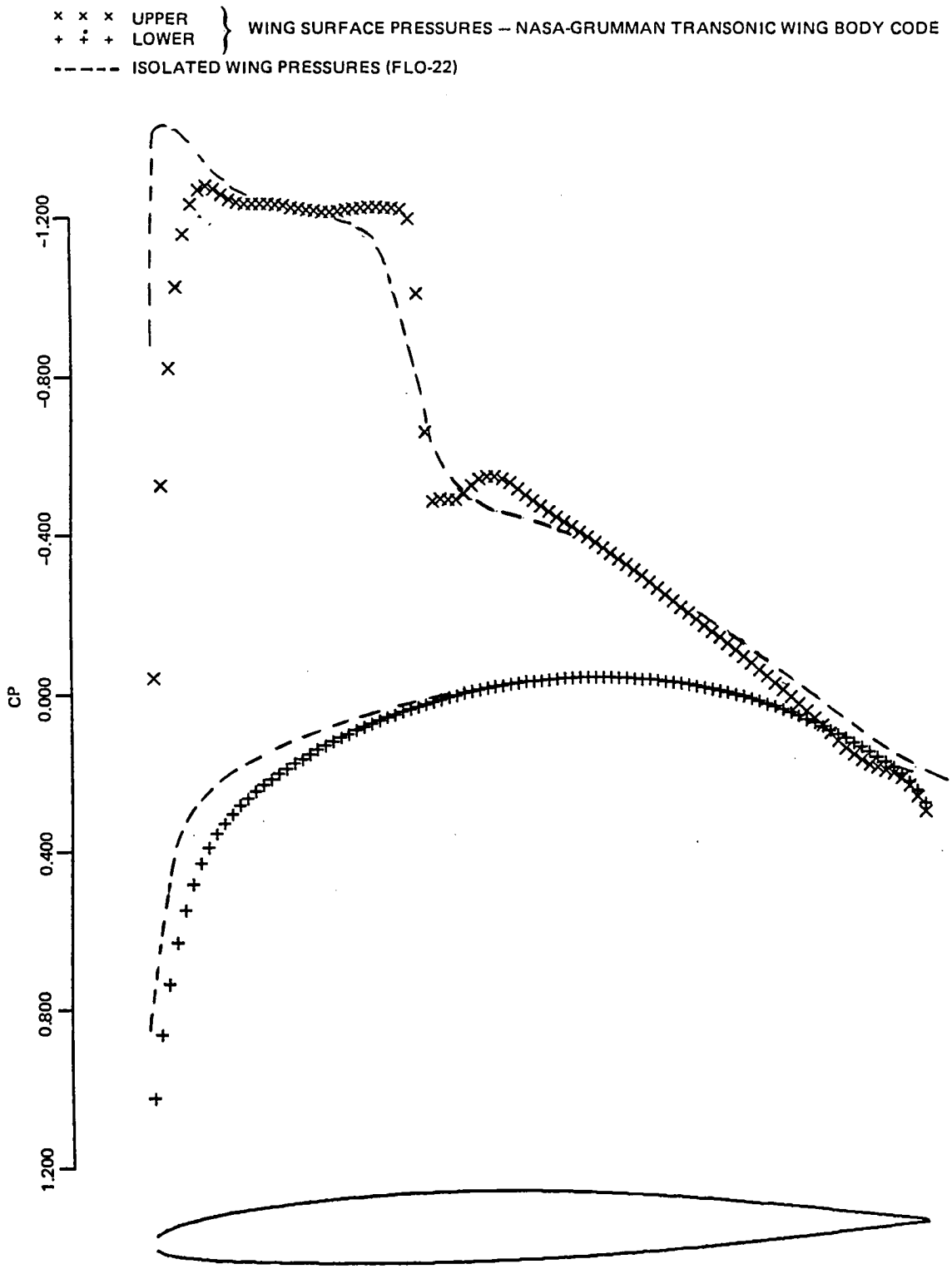
R84-1788-039(2/2)B

Fig. 27 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 3°$ (Sheet 2 of 2)



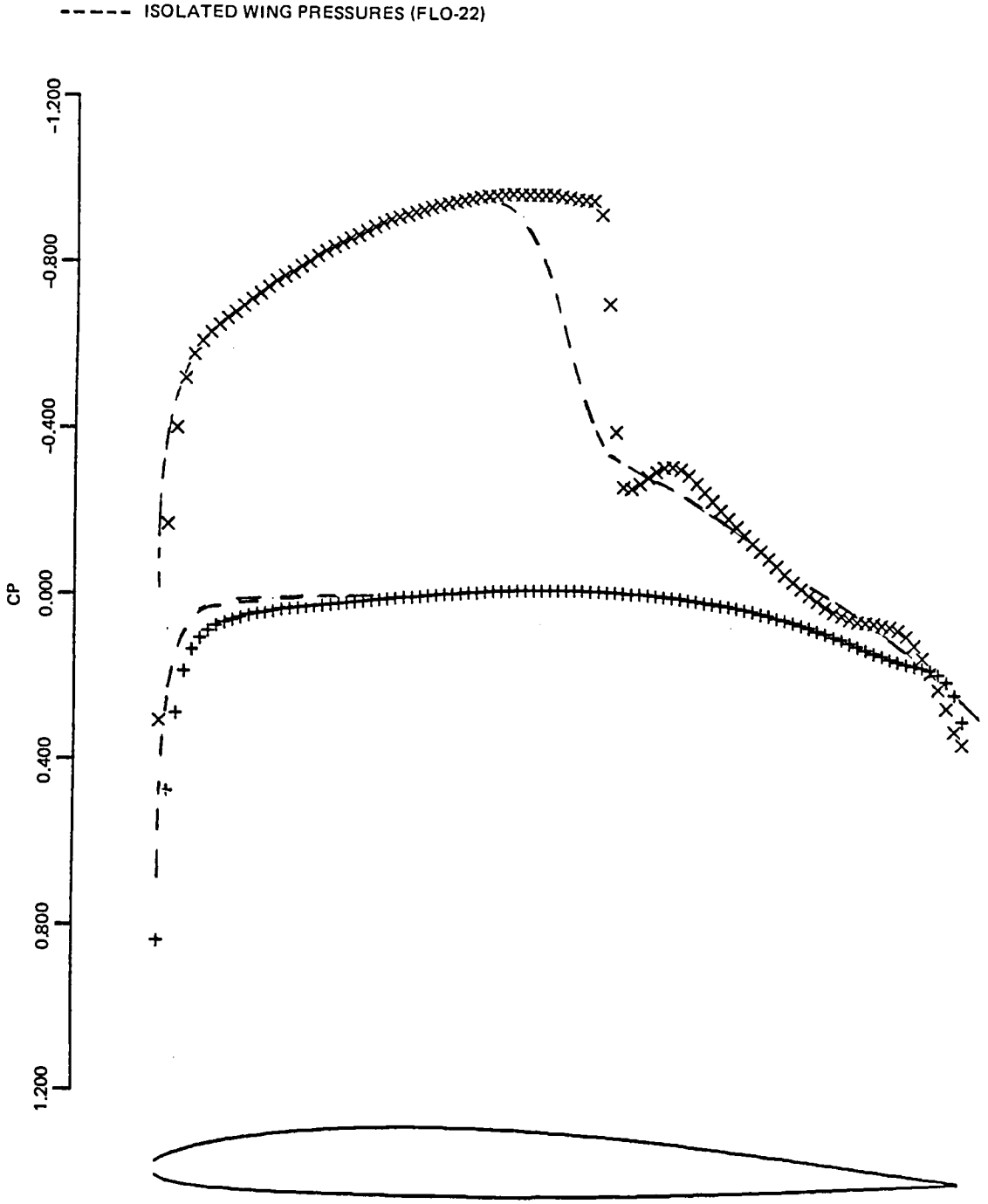
R84-1788-040(1/2)B

Fig. 28 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 35^\circ$, M = 0.80, $\alpha = 5^\circ$ (Sheet 1 of 2)



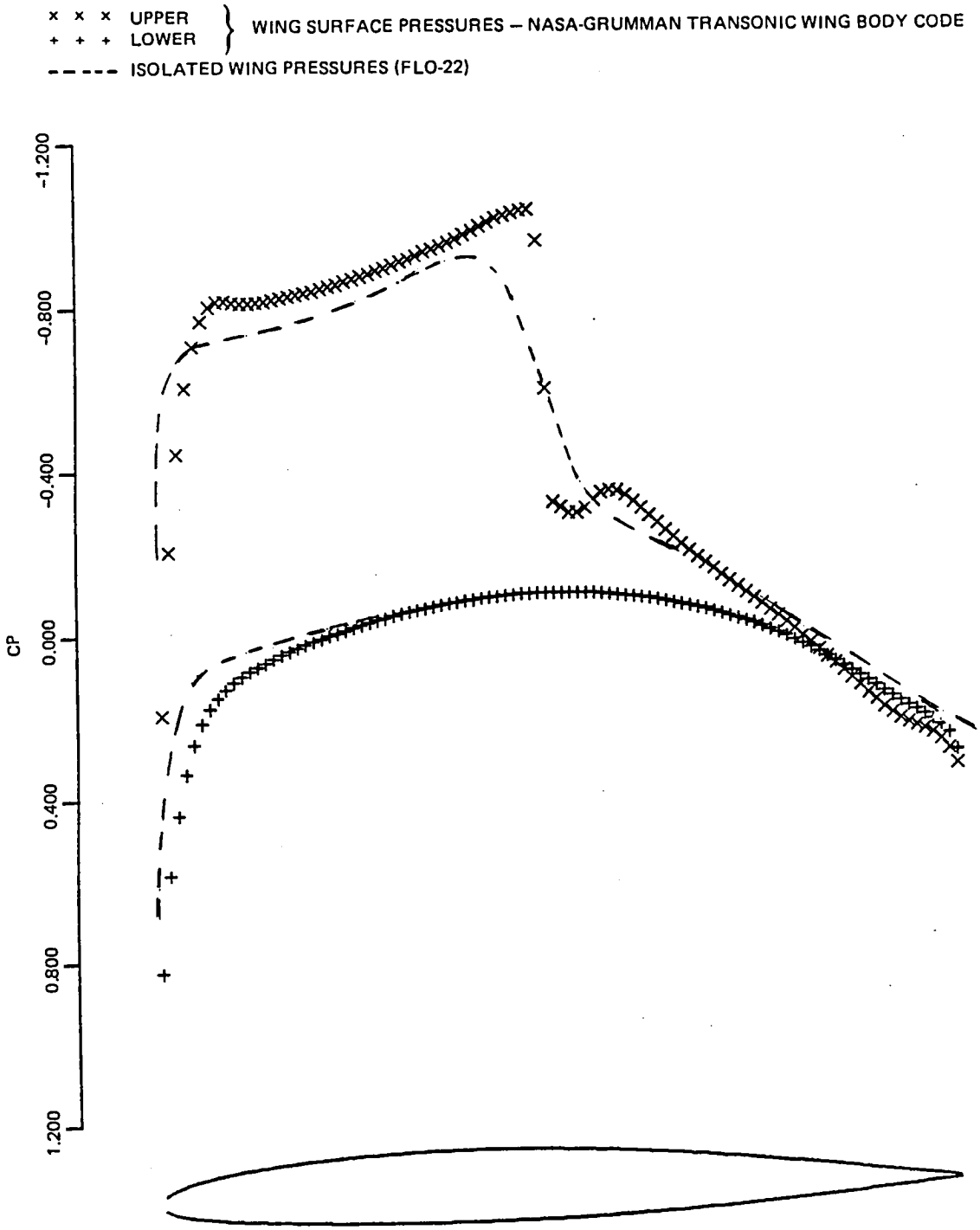
R84-1788-040(2/2)B

Fig. 28 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 35°$, M = 0.80, $\alpha = 5°$ (Sheet 2 of 2)



R84-1788-041(1/2)B

Fig. 29 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 35°$, M = 0.85, $\alpha = 3°$ (Sheet 1 of 2)



R84-1788-041(2/2)B

Fig. 29 F-14A Wing-Alone Analysis Pressure Correlations; $\Lambda = 35°$, M = 0.85, $\alpha = 3°$ (Sheet 2 of 2)

OBSERVATIONS

The following observations have been made based on the flight/analysis, wind tunnel test/analysis and analysis/analysis comparisons included in this report.

- F-14A fuselage-glove interference effects can be separated into two components. First, the fuselage-glove tends to increase load levels across the entire span at any given incidence angle. Second, the character of the pressure distribution is altered at the two most inboard wing stations (η = 0.40, 0.46). In this region, leading edge upper-surface pressures for the aircraft show a greater expansion than provided by an isolated wing analysis.
- F-14A flight pressures exhibit small disturbances which are thought to be caused by slat, flap and spoiler hinge line discontinuities.
- Wind tunnel data for the outboard station exhibits "out-of-character" pressure distributions for several of the selected cases. The reason for this is not known at this time.
- The NASA/Grumman Transonic Wing-Body Code appears to resolve shock waves better than the FLO-22 code. This condition becomes more noticeable as the shock discontinuities move aft toward the wing trailing edge.
- The flow simulations appear to be satisfactory using the match-α approach.
- Wing-7 flow simulations provided in the appendix exhibit somewhat better agreement with data than those of the manufactured wing.
- It is suggested that F-14/1X aircraft wing contours be measured at Dryden.
- Poor grid resolution at the trailing edge can be identified using the FLO-22 code. This results in an artificial wing viscous effect.
- Isolated wing comparisons using the transonic small disturbance code and the full potential code are in good agreement save for the outboard station at the condition: Λ = 20°, M = 0.70, α = 5°. This may account for the wing-fuselage-glove simulation discrepancy found in Fig. 13. A small incidence increment would correct this flow simulation discrepancy.
- These comparisons might be refined further by 1) accounting for wing bending under load and 2) performing the analyses with more iterations (i.e., 150/150 count instead of 100/80 count in the NASA/Grumman Transonic

Wing-Body Code). This is suggested only for selected cases as the present study involved nearly 100 analysis runs.

- F-14A wing pressures appear to be very "two-dimensional" in the region planned for laminar flow testing. To illustrate this, supplemental analyses were done with the 2-D Bauer, Garabedian, and Korn airfoil code (Ref 7) coupled with Sweep Theory. These results can be found in Appendix B. As a result, it is judged that 2-D codes and 2-D contour modifications can play an important role in the design/test program.

CONCLUDING REMARKS

The NASA/Grumman Transonic Wing-Body Code will provide excellent flow simulations for the range of sweep angles and flow conditions that will be of interest for the upcoming Variable Sweep Flight Transition Experiment. The small-disturbance character of the method is not judged to be a disadvantage; in fact, the codes high density grid will probably provide shock wave resolution which is not possible with today's full potential codes. Since an isolated wing code will be used for NLF shape synthesis, it is recommended that the final "designed" outer wing panel should be analyzed using the NASA/Grumman Code to insure that the desired pressure distributions are not altered inboard, and that they are obtained at the design angle-of-attack.

REFERENCES

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2. Boppe, C. W.; and Stern, M. A.: Computational Transonic Flows for Aircraft with Nacelles, Pylons, and Winglets. AIAA Paper 80-130, Jan. 1980.

3. Anon: Transonic Wind Tunnel Tests of a 1/16 Scale Design 303E Airplane-Series VIII. Calspan Report Cal No. AA-2180-W-13, Vol. I, April 1969.

4. Waggoner, E. G.; Phillips, P. S.; Viken, J. K.; and Davis, W. H.: Potential Flow Calculations and Preliminary Wing Design in Support of an NLF Variable Sweep Transition Flight Experiment. AIAA Paper 85-0426, Jan. 1985.

5. Jameson, A.: Iterative Solution of Transonic Flows Over Airfoils and Wings, Including Flows at Mach 1. Comm. on Pure and Applied Math, Vol. 27, May 1974, pp. 283-309.

6. Jameson, Antony; and Caughey, D. A.: Numerical Calculation of the Transonic Flow Past a Swept Wing. ERDA Research and Development Report COO-3077-140, June 1977, New York University (also available as NASA CR-153297).

7. Bauer, F.; Garabedian, P.; and Korn, D.: Supercritical Wing Sections, Lecture Notes in Economics and Mathematical Systems, Vol. 66, Springer-Verlag, New York, 1972.

APPENDIX A

This appendix provides a data set listing and computed results for a $\Lambda = 20°$ wing shape which may be a better representation of the wind tunnel model. This shape is somewhat different than that of the flight vehicle. A data set listing can be found in Table A-1 while computed results for the condition M = 0.70 and $\alpha = 4°$ can be found in Fig. A-1.

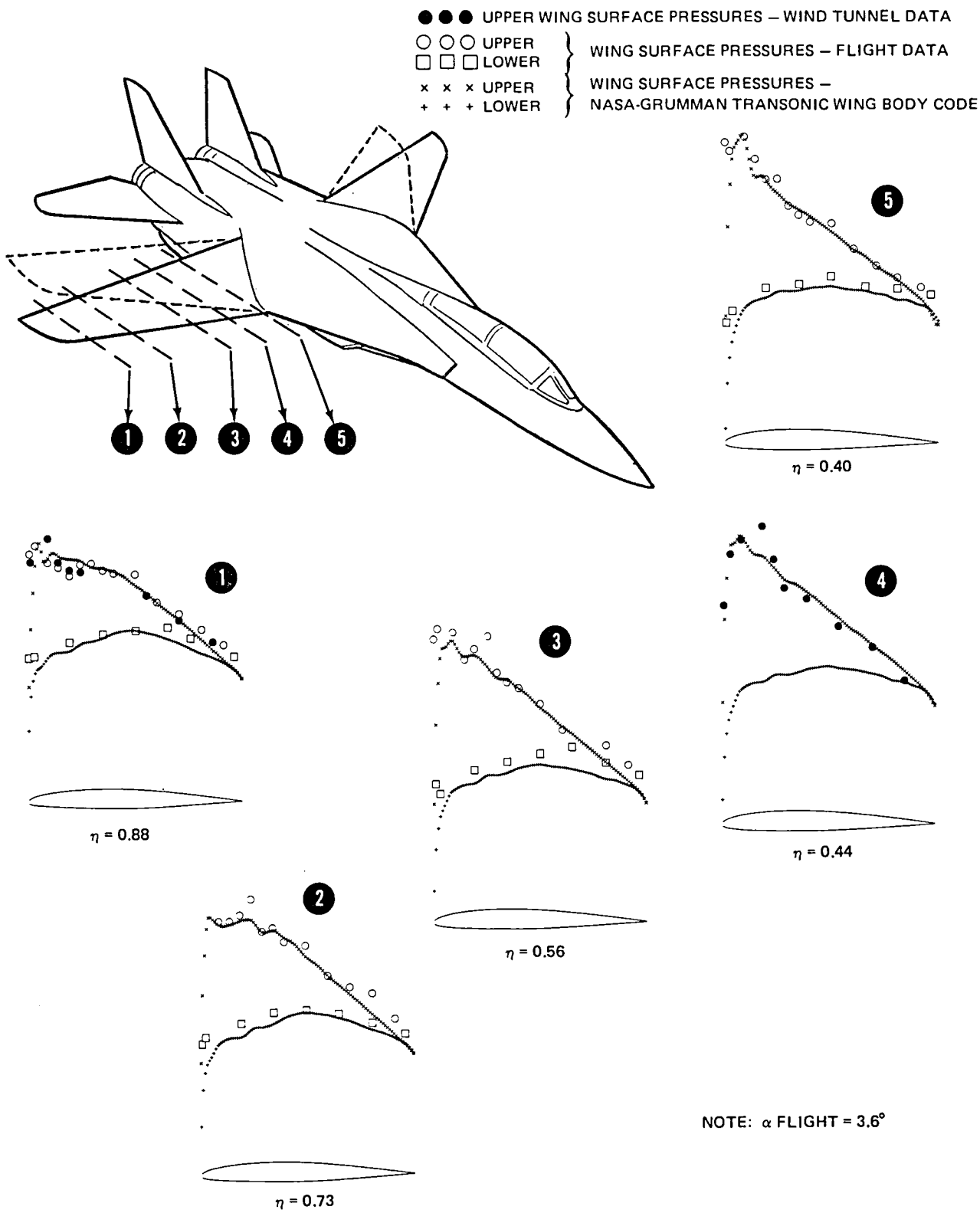
Table A-1 F-14A Wing-Fuselage-Glove, $\Lambda = 20^{\circ}$, (Wing 7 W.T. Model)

```
FILE: A99W7BG  F14-20

F-14 WING-7/BODY/GLOVE (20 DEGREE LE)
3.0       0.70      4.0       10.0      100.0     80.0      3.0
0.0       0.0       0.0
5.0       26.0      1.0       532.5     13.5      81360.0   0.4
 187.90012   0.0     623.70898   0.0       1.00000
0.        0.005     0.0075    0.0125    0.025     0.05      0.075
0.1       0.15      0.2       0.25      0.30      0.35      0.40
0.45      0.50      0.55      0.60      0.65      0.70      0.75
0.80      0.85      0.90      0.95      1.0
0.        0.0099836 0.0123192 0.0158575 0.0224996 0.0316892 0.0385602
0.0437420 0.0516094 0.0566526 0.0596661 0.0611175 0.0613777 0.0605665
0.0587604 0.0560970 0.0526019 0.0484770 0.0439435 0.0387687 0.0332749
0.0275131 0.0212336 0.0147210 0.0078871 0.0001010
0.        -0.0088462-0.0106067-0.0130803-0.0171727-0.0219954-0.0252608
-0.0275110-0.0301811-0.0316587-0.0326113-0.0326891-0.0323149-0.0316693
-0.0305469-0.0290040-0.0268947-0.0245410-0.0220295-0.0191989-0.0162792
-0.0131025-0.0102465-0.0071360-0.0039359-0.0001011
326.0     56.0      626.2     0.47      0.
503.13    128.0     629.4     0.77      0.
546.44    247.0     634.7     -0.72     1.
0.        0.0096653 0.0119908 0.0153951 0.0217524 0.0301901 0.0364229
0.0412670 0.0488411 0.0543571 0.0580366 0.0601388 0.0611440 0.0607825
0.0591751 0.0563370 0.0527070 0.0481949 0.0431150 0.0375293 0.0315913
0.0253794 0.0191587 0.0128230 0.0064604 0.0001192
0.        -0.0080442-0.0095591-0.0114904-0.0145021-0.0175827-0.0203622
-0.0222910-0.0247371-0.0262135-0.0279472-0.0287576-0.0294971-0.0301690
-0.0302084-0.0294860-0.0279418-0.0258893-0.0233062-0.0203689-0.0170731
-0.0136802-0.0103402-0.0069150-0.0035006-0.0001192
596.56421 384.699995 640.82764 -4.1       1.
0.        0.0101305 0.0123630 0.0157806 0.0220259 0.0298091 0.0344552
0.0389080 0.0453568 0.0498132 0.0531408 0.0553672 0.0567184 0.0572749
0.0568486 0.0553520 0.0527740 0.0492072 0.0448318 0.0398111 0.0341068
0.0278530 0.0210874 0.0141480 0.0071829 0.0001927
0.        -0.0086194-0.0101643-0.0121667-0.0149140-0.0169975-0.0180384
-0.0199880-0.0226738-0.0251011-0.0276523-0.0298239-0.0314241-0.0324332
-0.0326683-0.0320070-0.0304459-0.0281488-0.0252631-0.0219597-0.0182892
-0.0144975-0.0108616-0.0072380-0.0037159-0.0001926
-3.        93.0      780.0                                         0.16
F-14 FUSELAGE MODEL
```

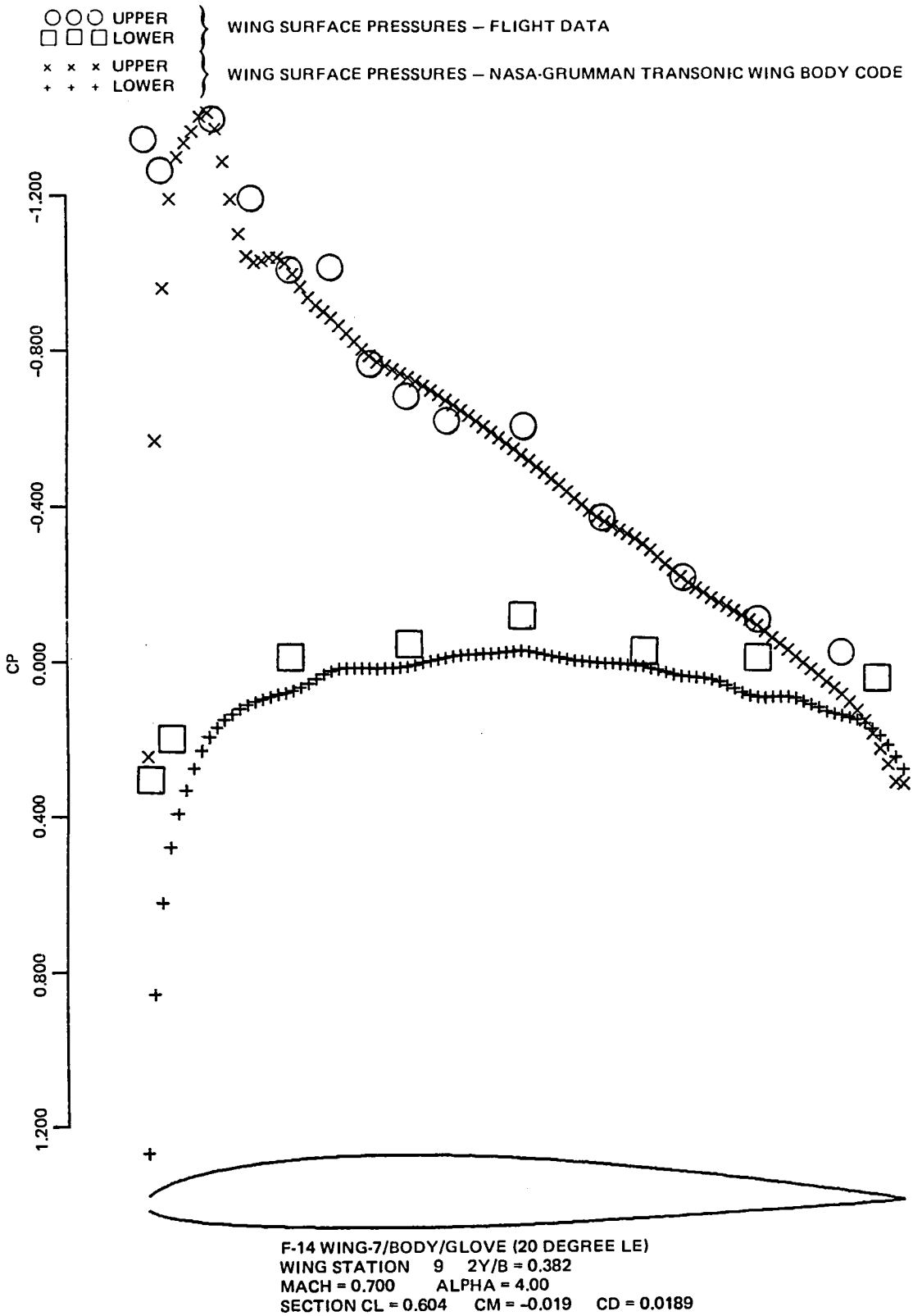
Fuselage model (as in table 1)

R84-1788-042B



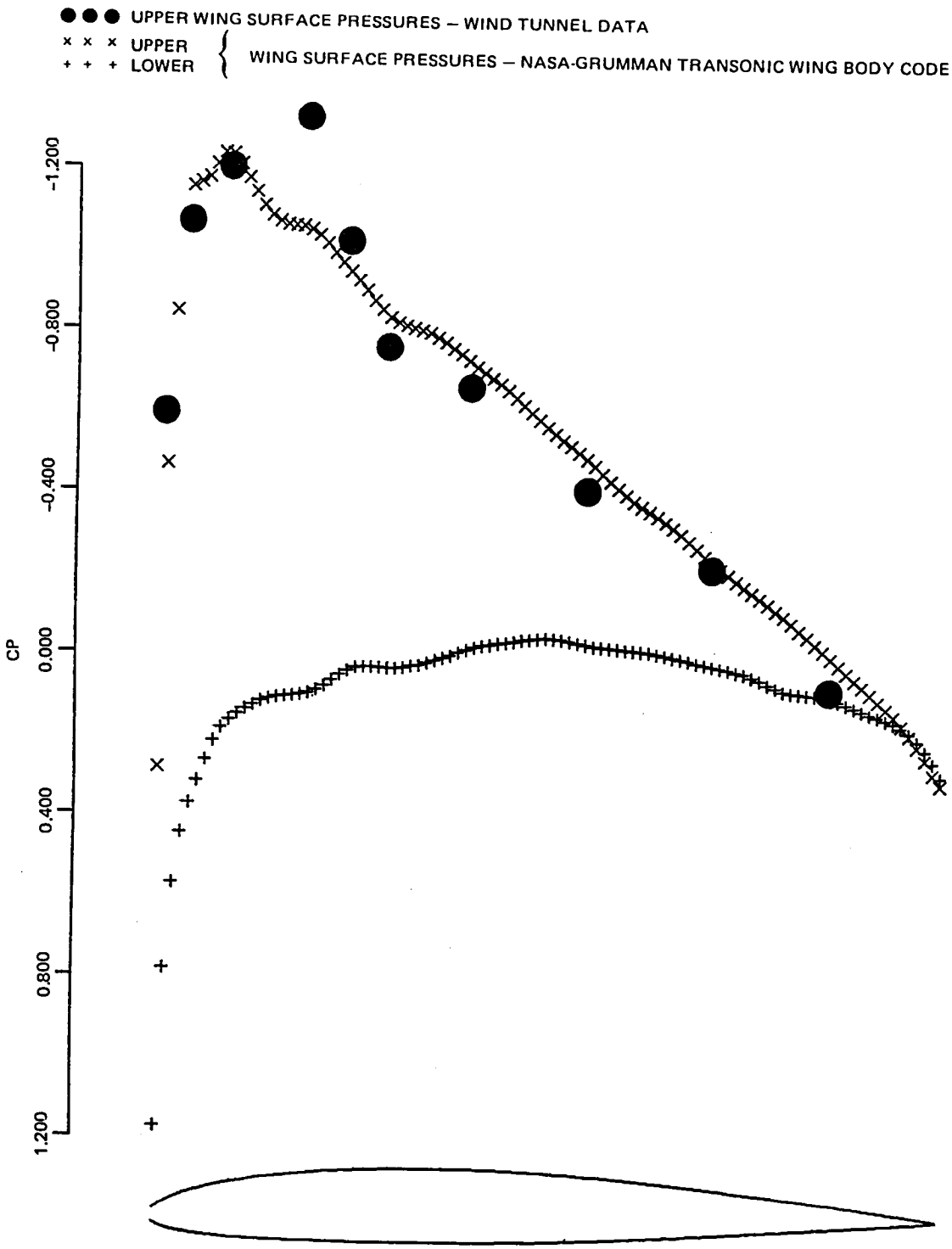
R84-1788-043(1/6)B

Fig. A-1 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations, Wing 7; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 1 of 6)



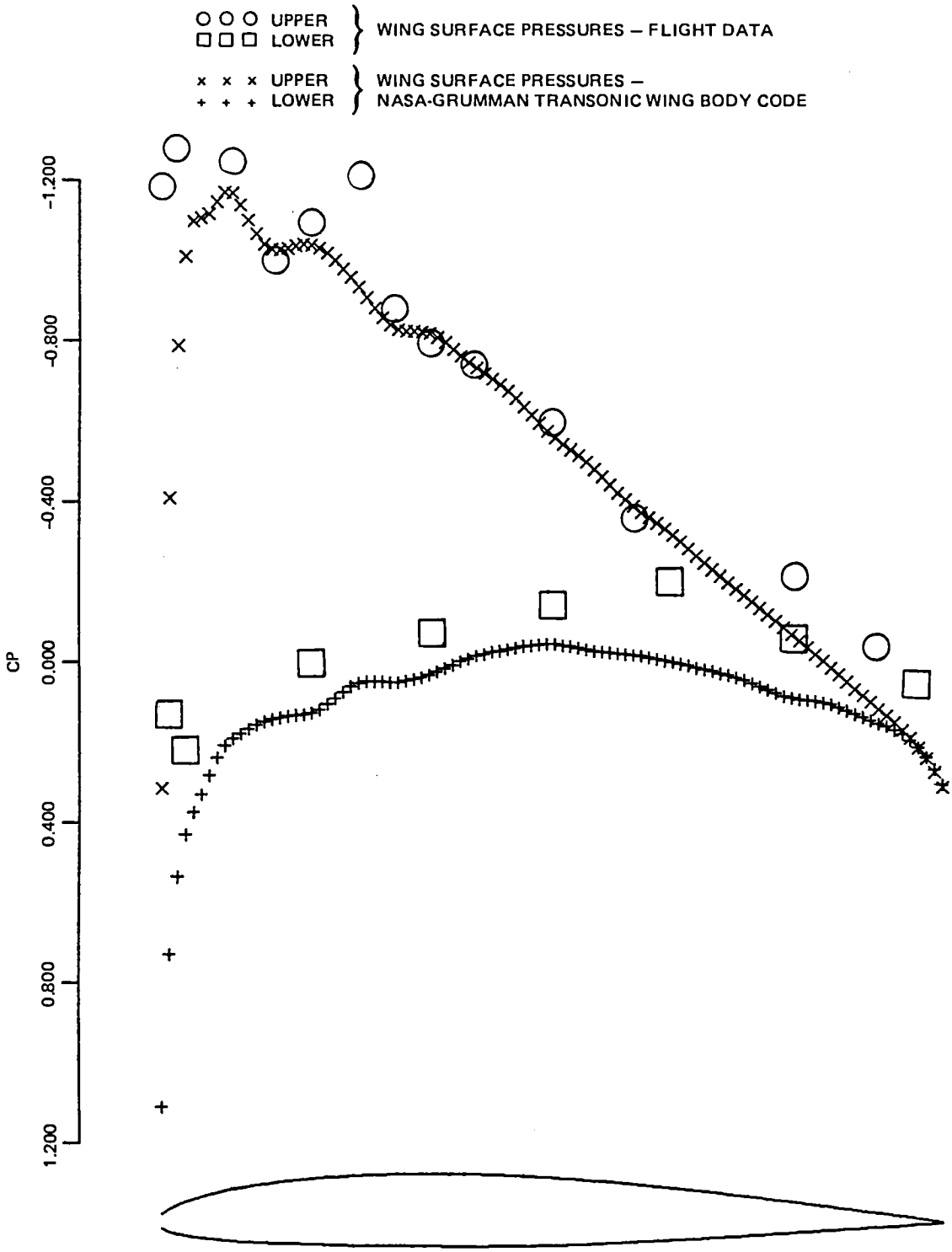
R84-1788-043(2/6)B

Fig. A-1 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations, Wing 7; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 2 of 6)



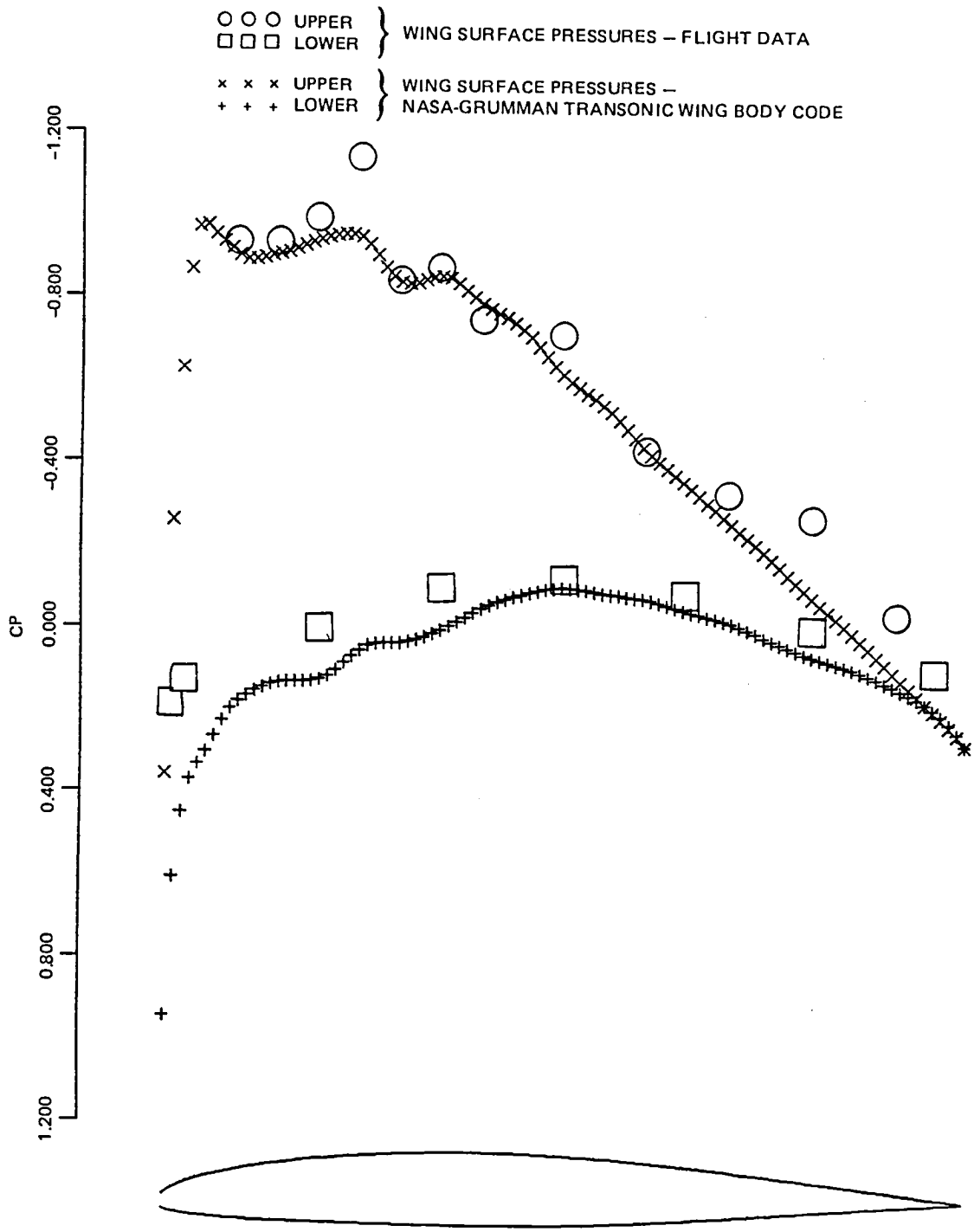
R84-1788-043(3/6)B

Fig. A-1 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations, Wing 7; $\Lambda = 20^\circ$, M = 0.70, $\alpha = 4^\circ$ (Sheet 3 of 6)



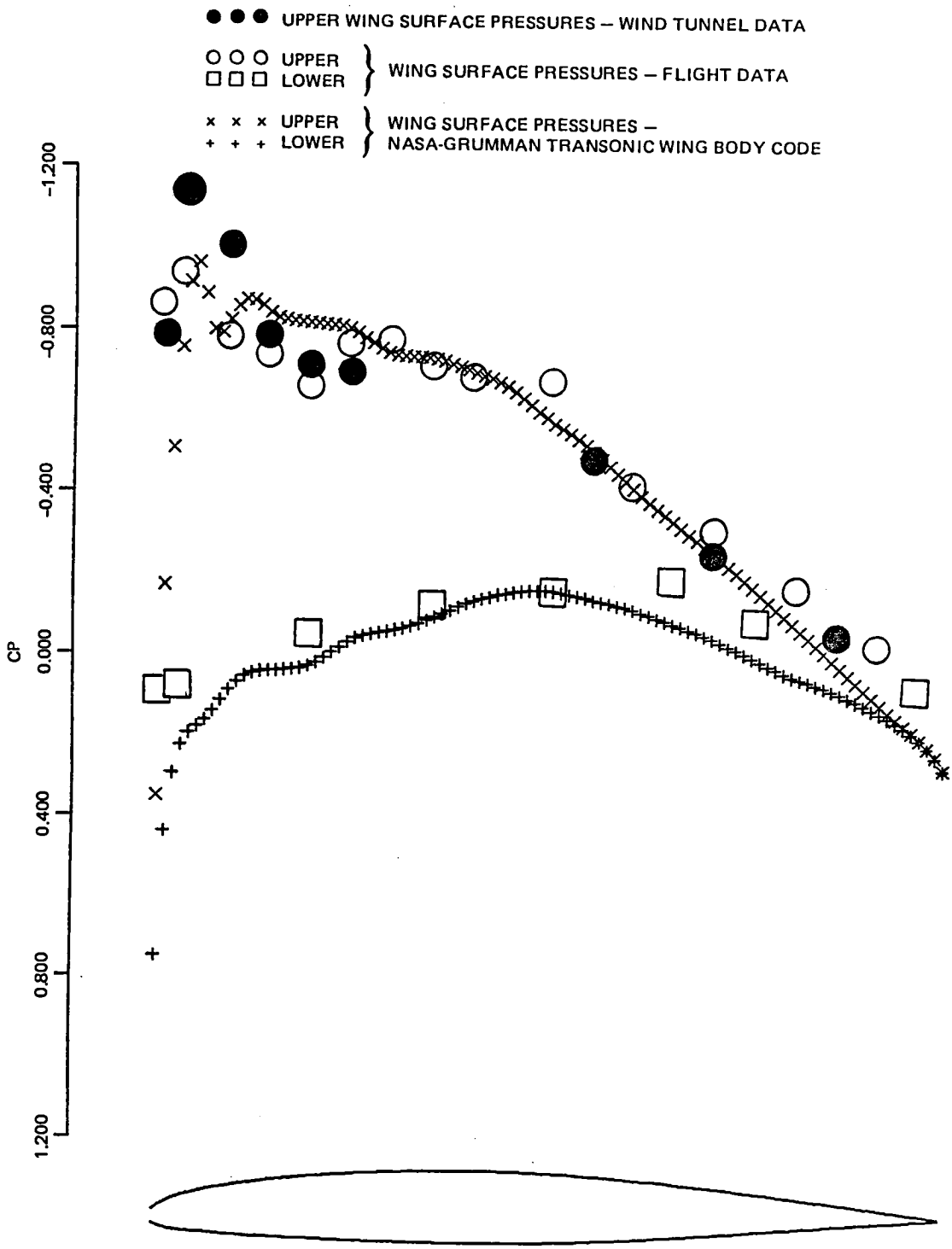
R84-1788-043(4/6)B

Fig. A-1 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations, Wing 7; $\Lambda = 20^\circ$, M = 0.70, $\alpha = 4^\circ$ (Sheet 4 of 6)



R84-1788-043(5/6)B

Fig. A-1 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations, Wing 7; $\Lambda = 20^\circ$, M = 0.70, $\alpha = 4^\circ$ (Sheet 5 of 6)



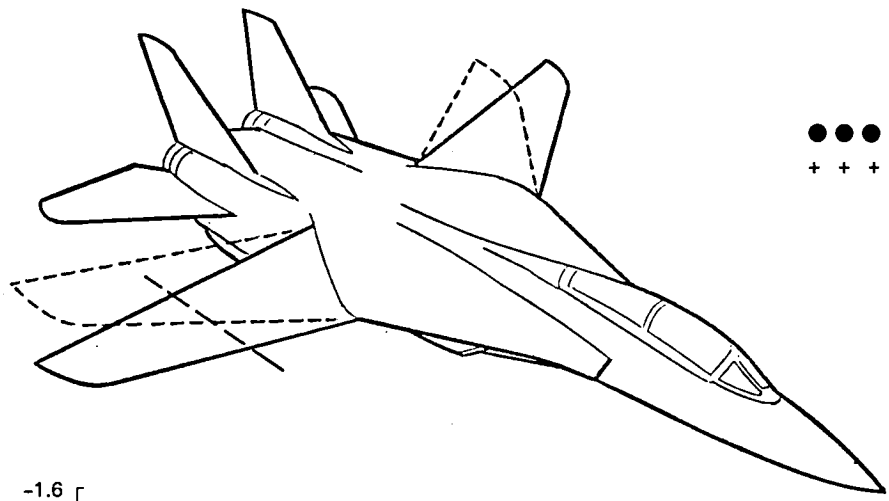
F-14 WING-7/BODY/GLOVE (20 DEGREE LE)
WING STATION 17 2Y/B = 0.874
MACH = 0.700 ALPHA = 4.00
SECTION CL = 0.456 CM = -0.025 CD = -0.0072

R84-1788-043(6/6)B

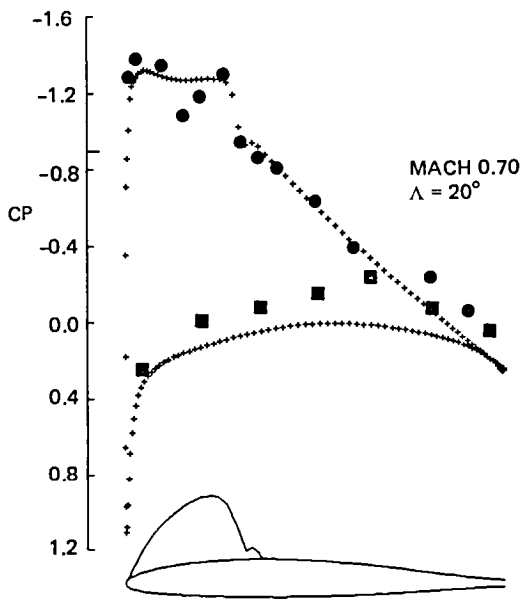
Fig. A-1 F-14A Flight, Wind Tunnel, and Analysis Wing Pressure Correlations, Wing 7; $\Lambda = 20°$, M = 0.70, $\alpha = 4°$ (Sheet 6 of 6)

APPENDIX B

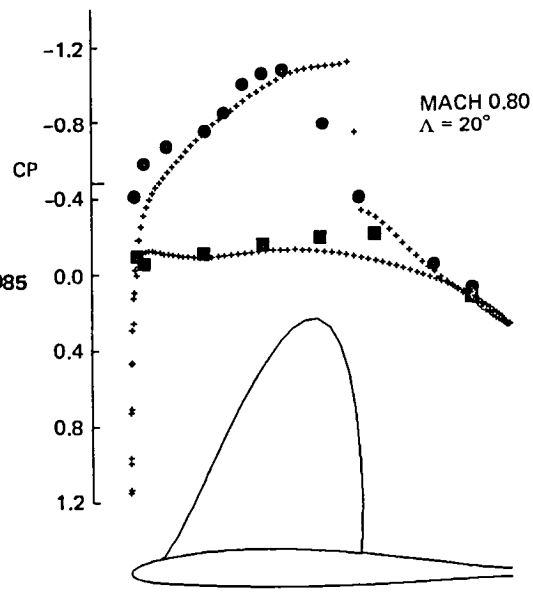
The two-dimensional character of the F-14A wing flow field is illustrated in this appendix. A mid-wing station (η = 0.56) has been selected for comparisons using wind tunnel and flight test data. The streamwise wing section has been scaled and the Mach/lift analysis condition determined using Sweep Theory. Analyses were done with the two-dimensional "Korn" code (ref 7) for a range of Mach number, sweep, and incidence. The results can be found in Figs. B-1 and B-2.



●●● FLIGHT TEST DATA
+ + + 2-D "KORN" ANALYSIS



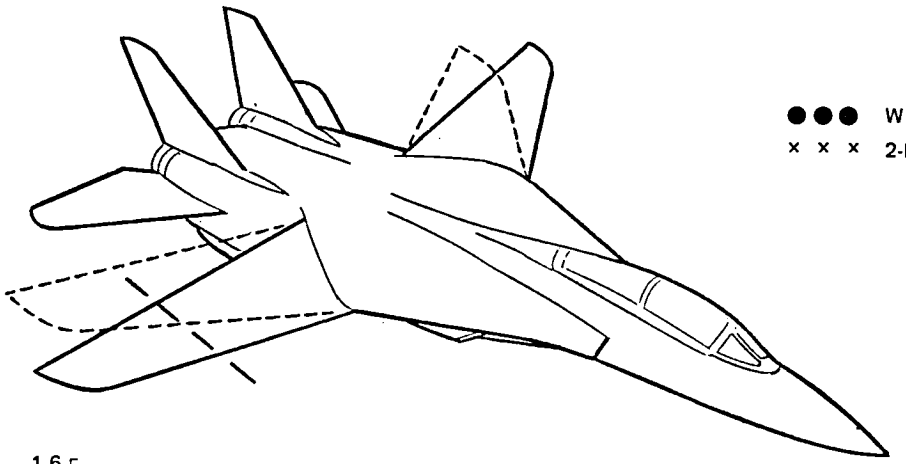
F14 ETA = 0.6 AIRFOIL 7 APRIL 1984 RN = 10.00 MILLION
M-N = 160-30 NCY = 15 M = .674 ALP = 3.14 CL = 0.728 CD = .0085
CM = .0183 CDW = 0.0007 CDF = 0.0078 L/D = 85.56
UPPER SEP AT 0.9778 LOWER SEP AT 0.9582



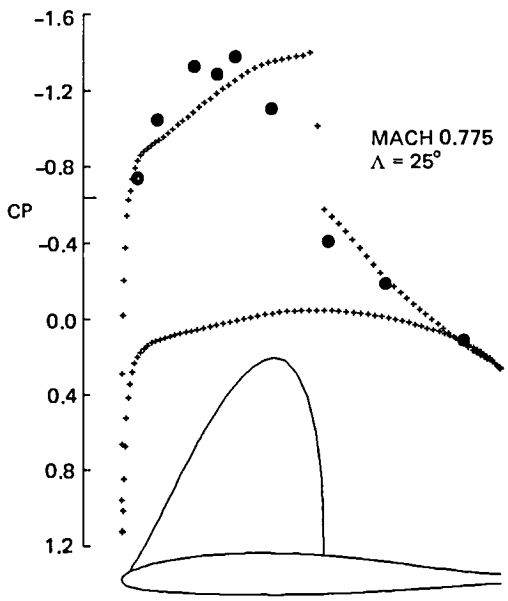
F14 ETA = 0.6 AIRFOIL 7 APRIL 1984 RN = 10.00 MILLION
M-N = 160-30 NCY = 15 M = .785 ALP = 1.14 CL = 0.465 CD = 0.242
CM = .0576 CDW = 0.0153 CDF = 0.0089 L/D = 19.19
UPPER SEP AT 0.6118 LOWER SEP AT 1.0000

R84-1788-044B

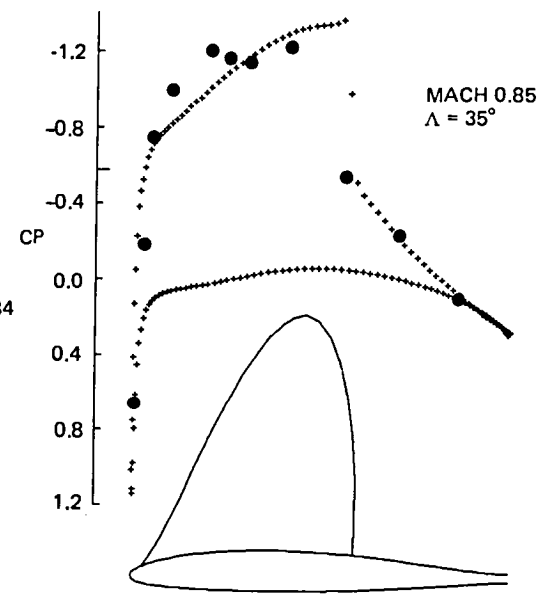
Fig. B-1 F-14A Wing 2-D Section Analysis M = 0.700/0.800



●●● WIND TUNNEL TEST DATA
× × × 2-D "KORN" ANALYSIS



F14 ETA = 0.6 AIRFOIL 9 APRIL 1984 RN = 10.00 MILLION
M-N = 160-30 NCY = 15 M = .737 ALP = 2.77 CL = 0.710 CD = .0288
CM = -.0431 CDW = 0.0187 CDF = 0.0101 L/D = 24.62
UPPER SEP AT 0.9710 LOWER SEP AT 1.0000



F14 ETA = 0.6 AIRFOIL 7 APRIL 1984 RN = 10.00 MILLION
M-N = 160-30 NCY = 15 M = .755 ALP = 2.33 CL = 0.699 CD = .0334
CM = -.0639 CDW = 0.0249 CDF = 0.0086 L/D = 20.90
UPPER SEP AT 0.5722 LOWER SEP AT 0.9982

R84-1788-045B

Fig. B-2 F-14A Wing 2-D Section Analysis M = 0.775/0.850

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Topical Report

16. Abstract

A model of the Grumman/Navy F-14A aircraft has been developed for analyses using the NASA/Grumman Transonic Wing-Body Code. Computations were performed for isolated wing and wing-fuselage-glove arrangements to determine the extent of aerodynamic interference effects which propagate outward onto the main wing outer panel. Additional studies were conducted using the full potential analysis, FLO 22, to calibrate any inaccuracies that might accrue because of "small-disturbance" code limitations. Comparisons indicate that the NASA/Grumman code provides excellent flow simulations for the range of wing sweep angles and flow conditions that will be of interest for the upcoming "F-14 Variable Sweep Flight Transition Experiment."

17. Key Words (Suggested by Author(s))	18. Distribution Statement
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