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AERODYNAMIC DESIGN AND ANALYSIS OF THE AST-204, -205, and -206 BLENDED WING-FUSELAGE SUPERSONIC TRANSPORT CONFIGURATION CONCEPTS

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SUMMARY

The aerodynamic design and analysis of three blended wing-fuselage supersonic cruise configurations providing four-, five-, and six-abreast seating has been conducted using a previously designed supersonic cruise configuration as the baseline. The five-abreast configuration was optimized for wave drag at a Mach number of 2.7. The four- and six-abreast configurations were also optimized at Mach 2.7, but with the added constraint that the majority of their structure be common with the five-abreast configuration. Analysis of the three configurations indicated an improvement of 6.0, 7.5, and 7.7 percent in cruise lift-to-drag ratio over the baseline configuration for the four-, five-, and six-abreast configurations, respectively. Validation of the design is planned through supersonic wind tunnel tests.

INTRODUCTION

Conventional subsonic aircraft have traditionally been designed with the potential for growth included, thus allowing the development costs for a new configuration to be spread over several versions. This growth is usually accomplished by the addition or deletion of cylindrical fuselage sections ahead and aft of the wing where the structure is relatively simple and less expensive. This method of growth is not practical for supersonic cruise configurations because: (1) proper fuselage area ruling is required for low wave drag, (2) usually there are no constant cross-section fuselage segments, and (3) very little additional passenger capacity can be added without the fuselage becoming excessively long.

A method of allowing growth in a supersonic cruise configuration has been developed by the Boeing Company (refs. 1 and 2). The fuselage is expanded or contracted laterally in the vicinity of the wing (figure 1) thus permitting the majority of the wing carry-through structure to be common between the original design and its derivatives. The empennage and flight deck sections of the fuselage, both of which are complex and expensive, are also common to all versions of the configuration. New structure added ahead and aft of the wing is designed

so that a near optimum area ruling can be preserved for the derivative configurations. The wing, wing fins, and nacelles are also identical for all configurations (figure 2).

The purpose of this report is to describe the aerodynamic design of the AST-204, -205, and -206 fuselages. The AST-205 configuration is a blended wing-fuselage version of the AST-200 supersonic cruise aircraft configuration (ref. 3) and provides five-abreast seating for 273 passengers. The AST-204 and -206 configurations are four- and six-abreast derivatives of the AST-205 configuration. All three aircraft have been optimized for wave drag at the Mach 2.7 cruise condition within the constraints imposed by structural commonality and minimum cross-sectional area requirements.

The resulting configurations represent viable concepts which meet both volume and structural requirements. Wind tunnel tests of the three blended configurations are planned to validate the design and provide the required data base for future configuration studies.

SYMBOLS

A	fuselage cross-sectional area
$\bar{c}$	mean aerodynamic chord
C_D	drag coefficient, $\frac{\text{drag}}{qS}$
C_L	lift coefficient, $\frac{\text{lift}}{qS}$
C_m	pitching moment coefficient, $\frac{\text{pitching moment}}{qS\bar{c}}$
i_t	horizontal tail incidence, degrees
L/D	lift-to-drag ratio
M_∞	freestream Mach number

q	freestream dynamic pressure
S	reference wing area
x	configuration longitudinal coordinate
α_{WRP}	angle of attack of the wing reference plane

CONFIGURATION DEVELOPMENT

The AST-205 supersonic cruise aircraft configuration is a Mach 2.7 cruise blended wing-fuselage concept designed to carry 273 passengers with five-abreast seating. It incorporates the wing, wing fins, nacelles, and horizontal and vertical tails of the AST-200 configuration (ref. 3). Using the method of reference 4, the cross-sectional area distribution of the fuselage was optimized for minimum wave drag at cruise. Restraint points were included to maintain the minimum required cross-sectional areas at both the flight deck station and throughout the passenger compartment. The dimensions shown in figure 3 were used as minimums for the design of the fuselage cross-sections located between the front and rear wing spars and resulted in a minimum cross-sectional area of 8.2 m^2 (88.4 ft^2). The passenger sections ahead of the front spar and aft of the rear spar were designed with the minimum interior dimensions of figure 3, but with a minimum wall thickness of 15.2 cm (6 in) instead of 25.4 cm (10 in). The external contours were designed to be smooth both laterally and longitudinally while simultaneously meeting the optimum area distribution requirements. This design process usually required several iterations. The resulting fuselage meets the necessary volume requirements while simultaneously providing low wave drag. Numerical model descriptions of the final geometry are presented in table I using the format of reference 5.

The AST-204 configuration fuselage, with four-abreast seating, was derived from the AST-205 configuration by removing a 53.3 cm (21 in) wide section from the center of the fuselage longitudinally from the front spar to the rear spar and refairing the top of the fuselage (figure 4a). The fuselage from the flight deck forward and in the area of the empennage was left unchanged to maintain

commonality. A new optimum fuselage area distribution was determined with restraints at the flight deck station, near the empennage and along the fuselage centerbody. New fuselage cross-sections matching the optimum area (figure 5) were designed to transition smoothly from the flight deck station to the front wing spar, and from the rear wing spar to the empennage. The wing, wing fins, nacelles, and empennage of the AST-205 configuration were used for the AST-204 configuration without modification. Numerical model descriptions of the AST-204 configuration geometry are presented in table II.

The AST-206 configuration fuselage, with six-abreast seating, was also derived from the AST-205 configuration. A 53.3 cm (21 in) wide section was added to the center of the fuselage longitudinally (figure 4b) from the front spar to the rear spar and the fuselage lengthened by 5.49 m (18 ft). A 1.83 m (6 ft) section was added in front of the wing and a 3.55 m (12 ft) section was added aft of the wing. This increase in fuselage length was necessary in order to maintain a relatively high fineness ratio for the fuselage. The fuselage forebody and aftbody from the AST-205 configuration were again used unchanged. The optimum fuselage area distribution was determined with restraints at the flight deck station, near the empennage, and along the fuselage centerbody. New fuselage cross-sections matching the optimum area distribution shown in figure 5 were designed to transition smoothly from the flight deck station to the front spar and from the aft spar to the empennage. The wing, wing fins, nacelles, and empennage of the AST-205 configuration were again incorporated without modification. Numerical model descriptions of the AST-206 configuration are presented in table III.

A comparison of representative cross-sections at selected fuselage stations is presented in figure 6.

AERODYNAMIC ANALYSIS

The AST-200, -204, -205, and -206 configurations have been analyzed at Mach numbers of 2.7 and 1.2 to determine the improvements in aerodynamic performance which can be achieved with wing-fuselage blending. The Boeing supersonic design and analysis program (ref. 6) has been used to compute the skin friction and drag-due-to-lift characteristics whereas the method of reference 4 was employed for

the wave drag analysis. The fuselage volume was included in the skin friction and wave drag analyses, but not in the drag-due-to-lift analysis. With the fuselage so excluded, the lift and pitching moment characteristics of the AST-200 and AST-205 configurations presented in figures 7a and 7b are identical. The horizontal tail deflection angles shown in these figures are those required to trim the configuration at lift coefficients of 0.10 and 0.15 for Mach numbers of 2.7 and 1.2, respectively. The design lift coefficient at cruise was 0.10 for all configurations.

The computed drag polars are presented in figure 7c and the lift-to-drag ratios in figure 7d. At the cruise Mach number the AST-204 configuration with its low fuselage volume has the least drag at small lift coefficients. As the lift coefficient increases the low wave drag advantage of the AST-204 configuration is offset by a larger drag-due-to-lift because of its lower wing span. Since the other configurations have greater wing spans and, therefore, lower drag-due-to-lift, they have better lift-to-drag ratios at and above the cruise lift coefficient. The Mach 2.7 cruise lift-to-drag ratios are 9.11 for the AST-204, 9.24 for the AST-205, and 9.26 for the AST-206 at a trimmed lift coefficient of 0.10. The maximum lift-to-drag ratios are 9.12, 9.26, and 9.31, respectively. At a Mach number of 1.2 and a trimmed lift coefficient of 0.15, the lift-to-drag ratios are 9.54, 9.82, and 9.88 for the AST-204, -205, and -206 configurations, respectively. All of these values are greater than the values previously computed for the AST-200 configuration (ref. 3). The beneficial effects of properly canted wing fins and nacelles and wing-fuselage interference have not been included in this analysis, and thus the actual lift-to-drag ratio levels can be expected to be somewhat higher than presented herein.

CONCLUDING REMARKS

The AST-204, -205, and -206 are blended wing-fuselage supersonic transport configurations employing a high degree of structural commonality. An aerodynamic analysis has shown all of these configurations to have significantly better aerodynamic performance than the baseline circular cross-section fuselage configuration.

REFERENCES

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Table I. - AST-205 Numerical Model

(a) SI Units (meters)

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AST-205 (4/17/79)  5 ABREAST DIGITAL BLENDED FUSELAGE

  1  1  1  1  1  1    16 28  1 30 30                    2 20  2 10  1 10

 774.49    588 168.060                                                    REFA
0.      .125    .25     .5      .75     1.0     1.5     2.5     5.0     10.    XAF 10
 15.     20.     25.     30.     35.     40.     45.     50.     55.     60.    XAF 20
65.     70.     75.     80.     85.     90.     95.    100.                    XAF 28
 21.869  1.640 -1.555 45.280                                                   WORG 3A
 22.845  1.920 -1.711 44.292                                                   WORG 4
 26.194  2.880 -2.313 40.925                                                   WORG 5
 29.541  3.840 -2.839 37.556                                                   WORG 6
 32.890  4.800 -3.267 34.189                                                   WORG 7
 38.506  6.411 -3.821 28.539                                                   WORG 8
 42.934  7.681 -4.210 24.458                                                   WORG 9
 47.838  9.086 -4.557 19.938                                                   WORG 10
 52.008 10.536 -4.632 16.164                                                   WORG 11
 54.841 11.521 -4.610 14.200                                                   WORG 12
 57.604 12.481 -4.675 12.286                                                   WORG 13
 61.792 13.936 -4.737  9.384                                                   WORG 14
 61.792 13.937 -4.737  9.384                                                   WORG 15
 64.259 15.361 -4.752  8.175                                                   WORG 16
 67.585 17.281 -4.922  6.546                                                   WORG 17
 70.912 19.201 -5.194  4.917                                                   WORG 18
  0.000  -.001  -.001  -.002  -.003  -.004  -.007  -.016  -.058  -.221         TZ 3A.1
  -.441  -.693  -.963 -1.240 -1.519 -1.793 -2.059 -2.313 -2.554 -2.782         TZ 3A.2
-2.996 -3.195 -3.381 -3.553 -3.712 -3.857 -3.989 -4.104                       TZ 3A.3
  0.000  -.000  -.000  -.001  -.001  -.001  -.002  -.011  -.047  -.200         TZ 4.1
  -.409  -.649  -.903 -1.165 -1.427 -1.685 -1.936 -2.176 -2.405 -2.621         TZ 4.2
-2.825 -3.017 -3.197 -3.364 -3.520 -3.664 -3.795 -3.912                       TZ 4.3
  0.000   .001   .001   .002   .004   .005   .008   .008  -.012  -.123         TZ 5.1
  -.276  -.459  -.653  -.855 -1.058 -1.260 -1.456 -1.648 -1.833 -2.011         TZ 5.2
-2.181 -2.344 -2.500 -2.649 -2.792 -2.927 -3.053 -3.172                       TZ 5.3
  0.000   .001   .002   .005   .008   .010   .015   .025   .018  -.047         TZ 6.1
  -.152  -.279  -.419  -.568  -.719  -.871 -1.024 -1.173 -1.320 -1.464         TZ 6.2
-1.605 -1.744 -1.879 -2.012 -2.141 -2.267 -2.389 -2.506                       TZ 6.3
  0.000   .002   .003   .006   .009   .012   .019   .031   .049   .021         TZ 7.1
  -.043  -.127  -.223  -.326  -.435  -.548  -.662  -.777  -.893 -1.009         TZ 7.2
-1.125 -1.241 -1.358 -1.475 -1.591 -1.707 -1.821 -1.934                       TZ 7.3
  0.000   .002   .004   .007   .011   .014   .021   .035   .065   .085         TZ 8.1
  .073   .041  -.001  -.053  -.110  -.173  -.240  -.311  -.385  -.462         TZ 8.2
  -.543  -.626  -.712  -.799  -.889  -.982 -1.075 -1.169                       TZ 8.3
  0.000   .002   .004   .008   .012   .015   .023   .038   .069   .100         TZ 9.1
   .108   .103   .086   .062   .030  -.007  -.050  -.095  -.145  -.198         TZ 9.2
  -.255  -.315  -.379  -.445  -.514  -.585  -.659  -.735                       TZ 9.3
  0.000   .002   .003   .005   .008   .011   .017   .028   .055   .091         TZ 10.1
   .107   .113   .112   .106   .094   .078   .059   .036   .009  -.021         TZ 10.2
  -.054  -.089  -.127  -.169  -.213  -.259  -.307  -.357                       TZ 10.3
  0.000   .001   .002   .003   .004   .006   .009   .015   .029   .056         TZ 11.1
   .068   .074   .075   .070   .061   .051   .035   .018  -.002  -.025         TZ 11.2
  -.050  -.077  -.107  -.139  -.172  -.207  -.244  -.282                       TZ 11.3
  0.000   .001   .001   .002   .004   .005   .007   .012   .025   .045         TZ 12.1
   .057   .063   .066   .061   .056   .048   .036   .022   .007  -.010         TZ 12.2
  -.031  -.052  -.074  -.100  -.126  -.153  -.181  -.211                       TZ 12.3
  0.000   .001   .001   .002   .003   .004   .006   .010   .020   .035         TZ 13.1
   .048   .054   .059   .058   .057   .052   .046   .037   .028   .016         TZ 13.2
   .003  -.012  -.028  -.045  -.062  -.080  -.098  -.117                       TZ 13.3
  0.000   .000   .000   .001   .001   .001   .002   .003   .006   .015         TZ 14.1
   .025   .031   .034   .036   .036   .035   .035   .034   .031   .029         TZ 14.2
   .026   .023   .020   .017   .013   .009   .005  0.000                       TZ 14.3
  0.000   .000   .000   .001   .001   .001   .002   .003   .006   .015         TZ 15.1
   .025   .031   .034   .036   .036   .035   .035   .034   .031   .029         TZ 15.2
   .026   .023   .020   .017   .013   .009   .005  0.000                       TZ 15.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.014  -.028         TZ 16.1
  -.042  -.050  -.056  -.061  -.067  -.073  -.079  -.084  -.091  -.096         TZ 16.2
  -.102  -.107  -.113  -.119  -.124  -.129  -.135  -.140                       TZ 16.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.015  -.029         TZ 17.1
  -.043  -.058  -.072  -.082  -.092  -.102  -.111  -.117  -.124  -.131         TZ 17.2
  -.138  -.144  -.149  -.155  -.160  -.165  -.170  -.175                       TZ 17.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.014  -.028         TZ 18.1
  -.042  -.048  -.054  -.061  -.067  -.072  -.074  -.077  -.079  -.081         TZ 18.2
  -.082  -.081  -.080  -.079  -.078  -.075  -.071  -.066                       TZ 18.3
```

Table I. - Continued.

(a) Continued

0.	.137	.179	.241	.297	.339	.412	.523	.724	.994	WORD3A.1
1.177	1.315	1.416	1.487	1.528	1.539	1.539	1.539	1.539	1.539	WORD3A.2
1.384	1.210	1.018	.817	.614	.412	.211	0.			WORD3A.3
0.	.136	.178	.237	.291	.333	.405	.514	.712	.978	WORD4.1
1.157	1.292	1.391	1.461	1.501	1.512	1.512	1.512	1.512	1.512	WORD4.2
1.363	1.192	1.003	.806	.606	.406	.208	0.			WORD4.3
0.	.128	.168	.225	.277	.316	.386	.490	.679	.931	WORD5.1
1.103	1.232	1.326	1.392	1.430	1.441	1.441	1.441	1.441	1.437	WORD5.2
1.294	1.132	.953	.765	.576	.385	.197	0.			WORD5.3
0.	.118	.160	.216	.266	.304	.370	.470	.651	.894	WORD6.1
1.059	1.182	1.273	1.336	1.373	1.383	1.383	1.383	1.383	1.341	WORD6.2
1.208	1.056	.889	.714	.537	.360	.184	0.			WORD6.3
0.	.110	.153	.208	.257	.294	.358	.455	.631	.866	WORD7.1
1.025	1.144	1.231	1.293	1.328	1.338	1.338	1.338	1.338	1.277	WORD7.2
1.151	1.006	.848	.681	.512	.343	.175	0.			WORD7.3
0.	.101	.145	.200	.247	.283	.344	.438	.607	.833	WORD8.1
.987	1.101	1.184	1.244	1.278	1.287	1.287	1.287	1.287	1.166	WORD8.2
1.069	.935	.788	.633	.476	.319	.163	0.			WORD8.3
0.	.100	.144	.198	.245	.280	.341	.435	.602	.827	WORD9.1
.979	1.092	1.175	1.234	1.268	1.277	1.277	1.277	1.260	1.161	WORD9.2
1.046	.915	.771	.619	.466	.312	.159	0.			WORD9.3
0.	.102	.146	.201	.248	.284	.345	.440	.609	.836	WORD10.1
.990	1.105	1.189	1.248	1.283	1.292	1.292	1.292	1.247	1.149	WORD10.2
1.035	.906	.763	.613	.461	.309	.156	0.			WORD10.3
0.	.111	.154	.209	.258	.295	.359	.457	.632	.868	WORD11.1
1.028	1.148	1.235	1.297	1.330	1.342	1.342	1.342	1.263	1.164	WORD11.2
1.049	.917	.773	.621	.467	.313	.160	0.			WORD11.3
0.	.116	.160	.216	.266	.304	.370	.470	.651	.894	WORD12.1
1.059	1.181	1.272	1.335	1.372	1.382	1.382	1.382	1.300	1.198	WORD12.2
1.080	.945	.796	.639	.481	.322	.164	0.			WORD12.3
0.	.125	.166	.222	.274	.313	.381	.484	.670	.920	WORD13.1
1.090	1.216	1.309	1.375	1.413	1.423	1.423	1.423	1.339	1.234	WORD13.2
1.112	.972	.819	.658	.495	.331	.169	0.			WORD13.3
0.	.138	.177	.235	.289	.330	.402	.510	.706	.969	WORD14.1
1.148	1.282	1.380	1.449	1.489	1.500	1.500	1.500	1.411	1.300	WORD14.2
1.171	1.024	.862	.692	.521	.349	.178	0.			WORD14.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD15.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD15.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD15.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD16.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD16.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD16.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD17.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD17.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD17.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD18.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD18.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD18.3
0.000	3.289	6.578	9.867	13.156	16.445	19.734	22.845	26.312	29.601	XFUS
32.690	36.179	39.468	42.757	46.046	49.336	52.625	55.914	59.203	62.492	XFUS
65.781	69.070	72.368	75.648	78.937	82.226	85.515	88.804	92.093	95.382	XFUS
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 1
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	Z 1
-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	
-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	
0.000	.072	.129	.194	.251	.304	.349	.386	.424	.450	Y 2
.475	.493	.504	.504	.504	.504	.507	.514	.509	.504	
.487	.459	.427	.392	.337	.282	.220	.154	.085	0.000	
-1.024	-1.019	-1.010	-.993	-.965	-.934	-.891	-.851	-.805	-.758	Z 2
-.708	-.658	-.611	-.611	-.611	-.611	-.573	-.531	-.485	-.424	
-.355	-.294	-.238	-.185	-.136	-.095	-.062	-.033	-.011	-.005	
0.000	.107	.203	.303	.399	.480	.561	.623	.677	.724	Y 3
.767	.798	.818	.818	.818	.818	.834	.838	.839	.832	
.806	.769	.716	.652	.573	.481	.371	.256	.142	0.000	
-1.357	-1.355	-1.329	-1.299	-1.261	-1.208	-1.144	-1.083	-1.015	-.947	Z 3
-.867	-.786	-.706	-.706	-.706	-.706	-.641	-.580	-.499	-.404	
-.285	-.185	-.081	-.009	.101	.170	.236	.287	.315	.324	
0.000	.150	.281	.412	.531	.639	.739	.824	.905	.971	Y 4
1.026	1.065	1.097	1.097	1.097	1.097	1.117	1.125	1.130	1.120	
1.090	1.038	.974	.895	.785	.663	.515	.355	.190	0.000	
-1.645	-1.635	-1.617	-1.568	-1.512	-1.455	-1.376	-1.292	-1.193	-1.102	Z 4
-.999	-.896	-.797	-.797	-.797	-.797	-.709	-.621	-.514	-.383	
-.230	-.088	.047	.174	.294	.398	.492	.558	.598	.615	
-0.000	.181	.338	.495	.638	.780	.892	1.000	1.093	1.170	Y 5
1.240	1.287	1.323	1.323	1.323	1.323	1.346	1.359	1.364	1.354	

Table I. - Continued.

(a) Continued

1.313	1.257	1.174	1.075	.950	.794	.619	.424	.222	0.000	
-1.899	-1.886	-1.860	-1.812	-1.740	-1.664	-1.573	-1.471	-1.364	-1.258	Z 5
-1.124	-1.002	-.872	-.872	-.872	-.872	-.769	-.662	-.528	-.375	
-.194	-.021	.144	.294	.441	.568	.681	.759	.814	.828	
0.000	.187	.360	.529	.695	.850	.993	1.121	1.242	1.351	Y 6
1.450	1.532	1.592	1.592	1.592	1.592	1.629	1.666	1.692	1.699	
1.673	1.612	1.512	1.362	1.165	.961	.729	.501	.268	0.000	
-2.114	-2.109	-2.086	-2.053	-1.997	-1.926	-1.840	-1.738	-1.626	-1.509	Z 6
-1.373	-1.232	-1.092	-1.092	-1.092	-1.092	-.970	-.844	-.680	-.485	
-.246	-.031	.181	.356	.517	.647	.751	.832	.886	.914	
0.000	.185	.369	.560	.731	.895	1.054	1.216	1.366	1.511	Y 7
1.656	1.726	1.765	1.765	1.765	1.765	1.787	1.796	1.796	1.780	
1.738	1.665	1.562	1.429	1.246	1.036	.799	.542	.285	0.000	
-2.356	-2.353	-2.335	-2.295	-2.235	-2.159	-2.083	-1.977	-1.886	-1.777	Z 7
-1.641	-1.472	-1.305	-1.305	-1.305	-1.305	-1.155	-1.008	-.830	-.624	
-.379	-.138	.077	.277	.466	.624	.754	.845	.899	.924	
0.000	.198	.371	.543	.715	.872	1.029	1.185	1.346	1.499	Y 8
1.655	1.808	1.920	1.640	1.640	1.920	1.859	1.815	1.802	1.796	
1.764	1.702	1.605	1.472	1.287	1.069	.839	.551	.294	0.000	
-2.612	-2.600	-2.569	-2.530	-2.479	-2.429	-2.356	-2.283	-2.190	-2.094	Z 8
-1.986	-1.870	-1.733	-1.850	-1.411	-1.733	-1.550	-1.322	-1.105	-.880	
-.624	-.374	-.138	.086	.289	.459	.586	.680	.732	.751	
0.000	.167	.315	.465	.619	.766	.911	1.048	1.201	1.341	Y 9
1.496	1.671	1.920	1.640	1.640	1.920	1.769	1.699	1.671	1.636	
1.565	1.472	1.360	1.217	1.049	.869	.666	.456	.220	0.000	
-2.851	-2.846	-2.827	-2.804	-2.769	-2.725	-2.671	-2.605	-2.531	-2.456	Z 9
-2.368	-2.269	-2.207	-2.235	-1.344	-1.443	-1.318	-1.157	-.970	-.775	
-.590	-.409	-.239	-.076	.077	.195	.300	.372	.418	.433	
0.000	.151	.288	.430	.566	.710	.854	.995	1.157	1.322	Y 10
1.493	1.687	1.920	1.640	1.640	1.920	1.799	1.738	1.655	1.552	
1.435	1.310	1.180	1.039	.879	.719	.550	.375	.195	0.000	
-3.073	-3.070	-3.060	-3.049	-3.027	-3.002	-2.968	-2.920	-2.875	-2.818	Z 10
-2.758	-2.699	-2.629	-2.679	-1.562	-1.598	-1.447	-1.289	-1.135	-.993	
-.856	-.742	-.638	-.533	-.433	-.355	-.293	-.245	-.217	-.200	
0.000	.148	.282	.421	.554	.693	.839	.987	1.148	1.320	Y 11
1.508	1.705	1.920	1.640	1.640	1.920	1.768	1.678	1.575	1.469	
1.351	1.225	1.096	.959	.810	.658	.505	.337	.176	0.000	
-3.467	-3.473	-3.466	-3.452	-3.434	-3.412	-3.383	-3.354	-3.317	-3.268	Z 11
-3.224	-3.164	-3.073	-3.137	-1.867	-1.881	-1.767	-1.632	-1.501	-1.373	
-1.254	-1.149	-1.056	-.959	-.878	-.811	-.760	-.720	-.692	-.679	
0.000	.148	.282	.418	.553	.692	.839	.984	1.145	1.320	Y 12
1.499	1.702	1.920	1.640	1.640	1.920	1.720	1.614	1.514	1.408	
1.287	1.166	1.039	.910	.763	.628	.475	.318	.165	0.000	
-3.904	-3.904	-3.893	-3.874	-3.862	-3.836	-3.805	-3.770	-3.732	-3.694	Z 12
-3.640	-3.579	-3.509	-3.584	-2.225	-2.214	-2.101	-1.970	-1.836	-1.729	
-1.622	-1.522	-1.430	-1.354	-1.273	-1.219	-1.174	-1.135	-1.116	-1.097	
0.000	.148	.280	.416	.553	.692	.839	.984	1.148	1.320	Y 13
1.505	1.703	1.920	1.640	1.640	1.920	1.702	1.596	1.493	1.385	
1.266	1.148	1.024	.892	.748	.611	.466	.313	.164	0.000	
-4.316	-4.319	-4.306	-4.288	-4.274	-4.248	-4.219	-4.190	-4.149	-4.105	Z 13
-4.053	-4.002	-3.917	-4.002	-2.610	-2.582	-2.488	-2.361	-2.237	-2.125	
-2.021	-1.924	-1.838	-1.760	-1.682	-1.631	-1.584	-1.548	-1.527	-1.510	
0.000	.151	.288	.427	.560	.699	.845	.991	1.157	1.323	Y 14
1.508	1.705	1.920	1.640	1.640	1.920	1.696	1.596	1.494	1.384	
1.266	1.151	1.024	.897	.756	.615	.466	.316	.167	0.000	
-4.720	-4.718	-4.707	-4.685	-4.671	-4.649	-4.619	-4.590	-4.549	-4.504	Z 14
-4.448	-4.384	-4.298	-4.388	-2.994	-2.957	-2.682	-2.755	-2.632	-2.520	
-2.416	-2.319	-2.238	-2.156	-2.083	-2.024	-1.977	-1.949	-1.925	-1.912	
0.000	.149	.282	.421	.556	.699	.845	.987	1.154	1.321	Y 15
1.506	1.691	1.920	1.640	1.640	1.920	1.705	1.597	1.494	1.381	
1.266	1.148	1.018	.887	.748	.609	.466	.314	.161	0.000	
-5.066	-5.061	-5.051	-5.042	-5.014	-4.993	-4.965	-4.937	-4.901	-4.854	Z 15
-4.800	-4.738	-4.646	-4.749	-3.355	-3.307	-3.225	-3.104	-2.980	-2.863	
-2.762	-2.671	-2.585	-2.498	-2.427	-2.367	-2.326	-2.293	-2.268	-2.258	
0.000	.170	.304	.442	.580	.718	.857	1.003	1.168	1.341	Y 16
1.522	1.725	1.920	1.640	1.640	1.920	1.709	1.600	1.498	1.389	
1.271	1.150	1.029	.896	.751	.610	.466	.313	.164	0.000	
-5.387	-5.382	-5.376	-5.355	-5.338	-5.320	-5.288	-5.260	-5.220	-5.176	Z 16
-5.122	-5.067	-4.994	-5.073	-3.697	-3.643	-3.554	-3.430	-3.309	-3.197	
-3.096	-2.998	-2.912	-2.826	-2.755	-2.703	-2.651	-2.622	-2.593	-2.579	
0.000	.160	.306	.453	.600	.742	.896	1.042	1.211	1.378	Y 17
1.550	1.726	1.920	1.640	1.640	1.920	1.777	1.702	1.611	1.514	
1.399	1.278	1.148	.999	.848	.684	.520	.356	.191	0.000	
-5.732	-5.729	-5.720	-5.705	-5.678	-5.649	-5.612	-5.568	-5.514	-5.453	Z 17
-5.387	-5.293	-5.174	-5.268	-4.106	-4.033	-3.952	-3.805	-3.667	-3.536	
-3.416	-3.304	-3.196	-3.107	-3.018	-2.955	-2.901	-2.861	-2.837	-2.824	

Table I. - Continued.

(a) Continued

0.000	.182	.345	.506	.657	.822	.977	1.132	1.305	1.456	Y 18
1.626	1.750	1.920	1.640	1.640	1.920	1.771	1.699	1.611	1.508	
1.387	1.269	1.132	.992	.830	.681	.506	.339	.171	0.000	
-6.035	-6.033	-6.017	-5.997	-5.971	-5.935	-5.892	-5.838	-5.759	-5.684	Z 18
-5.581	-5.448	-5.326	-5.420	-4.504	-4.426	-4.299	-4.119	-3.961	-3.809	
-3.658	-3.537	-3.428	-3.328	-3.237	-3.173	-3.119	-3.052	-3.055	-3.045	
0.000	.179	.348	.515	.672	.836	.990	1.145	1.317	1.466	Y 19
1.617	1.741	1.920	1.640	1.640	1.920	1.817	1.768	1.690	1.593	
1.463	1.326	1.187	1.048	.890	.718	.548	.372	.200	0.000	
-6.292	-6.280	-6.247	-6.207	-6.162	-6.107	-6.047	-5.980	-5.896	-5.811	Z 19
-5.708	-5.587	-5.441	-5.530	-4.881	-4.801	-4.642	-4.433	-4.245	-4.085	
-3.927	-3.794	-3.667	-3.566	-3.461	-3.382	-3.310	-3.261	-3.231	-3.219	
0.000	.197	.375	.554	.721	.884	1.045	1.202	1.369	1.514	Y 20
1.647	1.750	1.920	1.640	1.640	1.920	1.829	1.817	1.750	1.687	
1.565	1.432	1.284	1.132	.963	.784	.603	.409	.212	0.000	
-6.513	-6.501	-6.489	-6.441	-6.389	-6.319	-6.244	-6.156	-6.050	-5.950	Z 20
-5.817	-5.668	-5.530	-5.615	-5.232	-5.153	-4.969	-4.757	-4.554	-4.385	
-4.200	-4.042	-3.903	-3.785	-3.664	-3.567	-3.485	-3.425	-3.394	-3.385	
0.000	.197	.382	.575	.751	.927	1.102	1.263	1.423	1.559	Y 21
1.659	1.753	1.920	1.640	1.640	1.920	1.802	1.799	1.780	1.744	
1.662	1.550	1.414	1.241	1.057	.848	.645	.433	.224	0.000	
-6.677	-6.668	-6.640	-6.592	-6.534	-6.462	-6.383	-6.292	-6.168	-6.029	Z 21
-5.862	-5.699	-5.588	-5.667	-5.552	-5.475	-5.284	-5.087	-4.872	-4.678	
-4.457	-4.269	-4.112	-3.982	-3.855	-3.740	-3.655	-3.591	-3.552	-3.537	
0.000	.227	.439	.651	.848	1.023	1.201	1.354	1.487	1.581	Y 22
1.650	1.696	1.720	1.720	1.720	1.720	1.729	1.720	1.696	1.638	
1.541	1.414	1.264	1.114	.945	.767	.581	.394	.201	0.000	
-6.795	-6.777	-6.746	-6.701	-6.640	-6.563	-6.457	-6.323	-6.156	-5.986	Z 22
-5.793	-5.614	-5.443	-5.443	-5.443	-5.443	-5.256	-5.056	-4.857	-4.667	
-4.481	-4.316	-4.182	-4.059	-3.943	-3.854	-3.780	-3.729	-3.697	-3.687	
0.000	.242	.436	.636	.827	1.002	1.166	1.305	1.432	1.530	Y 23
1.602	1.653	1.687	1.687	1.687	1.687	1.711	1.711	1.691	1.631	
1.541	1.416	1.257	1.101	.925	.750	.570	.387	.207	0.000	
-6.777	-6.762	-6.728	-6.677	-6.610	-6.531	-6.416	-6.283	-6.118	-5.953	Z 23
-5.789	-5.625	-5.472	-5.468	-5.472	-5.472	-5.288	-5.093	-4.890	-4.713	
-4.544	-4.378	-4.219	-4.114	-4.013	-3.938	-3.871	-3.835	-3.803	-3.793	
0.000	.212	.409	.592	.769	.921	1.072	1.199	1.323	1.417	Y 24
1.496	1.537	1.559	1.559	1.559	1.559	1.572	1.569	1.539	1.484	
1.414	1.318	1.190	1.060	.893	.721	.548	.369	.197	0.000	
-6.677	-6.674	-6.643	-6.592	-6.518	-6.435	-6.325	-6.204	-6.053	-5.908	Z 24
-5.753	-5.599	-5.455	-5.455	-5.455	-5.452	-5.279	-5.103	-4.919	-4.751	
-4.591	-4.427	-4.272	-4.150	-4.045	-3.970	-3.915	-3.879	-3.858	-3.850	
0.000	.218	.400	.563	.718	.848	.969	1.072	1.163	1.226	Y 25
1.275	1.305	1.320	1.320	1.320	1.320	1.323	1.311	1.278	1.234	
1.175	1.096	.990	.884	.760	.606	.486	.337	.179	0.000	
-6.513	-6.492	-6.447	-6.383	-6.298	-6.204	-6.089	-5.965	-5.820	-5.662	Z 25
-5.550	-5.420	-5.293	-5.293	-5.293	-5.293	-5.142	-4.996	-4.845	-4.702	
-4.575	-4.442	-4.306	-4.200	-4.100	-4.018	-3.947	-3.906	-3.672	-3.858	
0.000	.185	.339	.484	.621	.733	.839	.924	1.005	1.066	Y 26
1.105	1.120	1.151	1.151	1.151	1.151	1.152	1.145	1.120	1.084	
1.028	.963	.871	.781	.669	.555	.425	.294	.160	0.000	
-6.192	-6.177	-6.141	-6.083	-6.011	-5.929	-5.832	-5.726	-5.605	-5.484	Z 26
-5.366	-5.248	-5.142	-5.142	-5.142	-5.142	-5.020	-4.886	-4.752	-4.630	
-4.500	-4.389	-4.271	-4.176	-4.092	-4.020	-3.967	-3.925	-3.888	-3.881	
0.000	.151	.282	.400	.509	.606	.690	.763	.824	.871	Y 27
.908	.925	.939	.939	.939	.939	.939	.930	.912	.878	
.831	.778	.697	.624	.528	.436	.333	.225	.118	0.000	
-5.756	-5.742	-5.711	-5.669	-5.604	-5.531	-5.458	-5.369	-5.274	-5.170	Z 27
-5.070	-4.978	-4.890	-4.886	-4.886	-4.886	-4.783	-4.679	-4.569	-4.469	
-4.377	-4.289	-4.194	-4.121	-4.046	-3.991	-3.949	-3.911	-3.892	-3.889	
0.000	.112	.207	.297	.379	.450	.513	.563	.612	.642	Y 28
.666	.681	.689	.689	.689	.689	.689	.681	.662	.642	
.606	.600	.512	.459	.392	.324	.252	.175	.095	0.000	
-5.279	-5.263	-5.240	-5.205	-5.163	-5.113	-5.044	-4.975	-4.902	-4.829	Z 28
-4.760	-4.691	-4.614	-4.610	-4.618	-4.618	-4.541	-4.469	-4.381	-4.316	
-4.243	-4.186	-4.121	-4.064	-4.010	-3.964	-3.934	-3.907	-3.892	-3.889	
0.000	.076	.141	.199	.252	.290	.336	.370	.393	.416	Y 29
.424	.431	.431	.431	.431	.431	.427	.415	.404	.385	
.358	.327	.296	.262	.220	.177	.135	.093	.047	0.000	
-4.735	-4.727	-4.708	-4.685	-4.654	-4.623	-4.581	-4.535	-4.485	-4.435	Z 29
-4.389	-4.343	-4.301	-4.301	-4.301	-4.301	-4.252	-4.202	-4.156	-4.117	
-4.075	-4.037	-4.003	-3.976	-3.942	-3.919	-3.904	-3.892	-3.885	-3.885	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 30
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	Z 30
-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	

Table I. - Continued.

(a) Concluded

-3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942	
58.679 6.411 -5.965	PODORG 1
0.000 .606 1.211 1.817 2.422 3.028 3.634 4.239 4.845 5.450	XPOD
6.056 6.662 7.267 7.873 8.478 9.084 9.576 9.690 10.295 10.890	XPOD
.781 .793 .805 .818 .831 .843 .855 .868 .880 .893	RPOD
.905 .918 .930 .943 .955 .968 .978 .978 .978 .978	RPOD
59.806 10.536 -5.867	PODORG 2
0.000 .606 1.211 1.817 2.422 3.028 3.634 4.239 4.845 5.450	XPOD
6.056 6.662 7.267 7.873 8.478 9.084 9.576 9.690 10.295 10.890	XPOD
.781 .793 .805 .818 .831 .843 .855 .868 .880 .893	RPOD
.905 .918 .930 .943 .955 .968 .978 .978 .978 .978	RPOD
61.843 13.937 -4.737 10.647 71.905 13.937 -1.741 1.450	V FIN
0. 10. 20. 30. 40. 50. 60. 70. 90. 100.	XFIN
0. .466 .846 1.138 1.345 1.465 1.498 1.390 .641 0.	FINORD
65.792 0.000 -3.889 9.047 93.166 0.000 -.940 2.144	V TAIL
0. 10. 20. 30. 40. 50. 60. 70. 90. 100.	XVTAIL
0. .466 .846 1.138 1.345 1.465 1.498 1.390 .641 0.	TVTAIL
83.603 .878 -4.646 7.327 90.175 4.575 -5.637 2.196	H TAIL
0. 10. 20. 30. 40. 50. 70. 60. 90. 100.	XHTAIL
0.0 .553 .948 1.264 1.448 1.5 1.264 .948 .553 0.0	THTAIL

Table I. - Continued.

(b) U.S. Customary Units (feet)

AST-205 (4/17/79) 5 ABREAST DIGITAL BLENDED FUSELAGE

```
  1  1  1  1  1  1    16 28  1 30 30                    2 20  2 10  1 10

6447.  88.588 168.060                                                    REFA
0.      .125   .25    .5     .75    1.0    1.5    2.5    5.0    10.     XAF 10
 15.    20.    25.    30.    35.    40.    45.    50.    55.    60.     XAF 20
65.    70.    75.    80.    85.    90.    95.   100.                    XAF 28
72.221 5.416  -5.137 149.537                                            WORG 3A
75.447 6.341  -5.650 146.276                                            WORG 4
86.505 9.512  -7.639 135.155                                            WORG 5
97.560 12.682 -9.376 124.030                                            WORG 6
106.61915.853 -10.790112.909                                            WORG 7
127.16721.171 -12.62094.250                                             WORG 8
141.79125.365 -13.90480.773                                             WORG 9
157.98530.008 -15.05165.847                                             WORG 10
171.75734.795 -15.29753.383                                             WORG 11
181.11338.047 -15.22646.897                                             WORG 12
190.23741.216 -15.43840.576                                             WORG 13
204.07046.025 -15.64430.991                                             WORG 14
204.07046.026 -15.64430.991                                             WORG 15
212.21750.730 -15.69526.999                                             WORG 16
223.20057.071 -16.25621.618                                             WORG 17
234.18663.412 -17.15216.237                                             WORG 18
0.      -.002  -.004  -.007  -.011  -.014  -.023  -.054  -.192  -.731    TZ 3A.1
-1.456 -2.290 -3.180 -4.096 -5.016 -5.922 -6.800 -7.639 -8.436 -9.188   TZ 3A.2
-9.893 -10.552-11.166-11.734-12.259-12.739-13.173-13.555                TZ 3A.3
0.      -.001  -.001  -.002  -.003  -.004  -.008  -.036  -.155  -.662    TZ 4.1
-1.351 -2.143 -2.983 -3.846 -4.713 -5.566 -6.394 -7.187 -7.942 -8.657   TZ 4.2
-9.331 -9.964 -10.557-11.110-11.625-12.099-12.532-12.919                TZ 4.3
0.      .002   .004   .008   .012   .017   .025   .027  -.041  -.406    TZ 5.1
-.916  -1.516 -2.158 -2.822 -3.494 -4.160 -4.810 -5.443 -6.055 -6.640   TZ 5.2
-7.202 -7.742 -8.257 -8.749 -9.219 -9.665 -10.084-10.475                TZ 5.3
0.      .004   .008   .017   .025   .034   .050   .084   .059  -.154    TZ 6.1
-.503  -.921  -1.385 -1.877 -2.376 -2.878 -3.381 -3.674 -4.360 -4.836   TZ 6.2
-5.302 -5.759 -6.205 -6.643 -7.070 -7.487 -7.889 -8.277                 TZ 6.3
0.      .005   .010   .021   .031   .041   .062   .103   .163   .071    TZ 7.1
-.141  -.418  -.735  -1.076 -1.438 -1.809 -2.186 -2.567 -2.948 -3.333   TZ 7.2
-3.716 -4.100 -4.486 -4.871 -5.255 -5.638 -6.015 -6.388                 TZ 7.3
0.      .006   .012   .023   .035   .047   .070   .117   .216   .280    TZ 8.1
.241   .135  -.002  -.176  -.364  -.570  -.792  -1.026 -1.270 -1.527   TZ 8.2
-1.793 -2.067 -2.350 -2.640 -2.937 -3.242 -3.550 -3.862                 TZ 8.3
0.      .006   .013   .025   .038   .051   .076   .127   .229   .330    TZ 9.1
.356   .339   .283   .205   .098  -.024  -.164  -.315  -.480  -.655    TZ 9.2
-.843  -1.041 -1.250 -1.468 -1.697 -1.933 -2.176 -2.427                 TZ 9.3
0.      .005   .009   .018   .027   .037   .056   .092   .182   .299    TZ 10.1
.354   .374   .370   .350   .311   .259   .194   .118   .030  -.068    TZ 10.2
-.177  -.295  -.421  -.558  -.703  -.855  -1.013 -1.179                 TZ 10.3
0.      .002   .005   .010   .014   .019   .029   .048   .097   .184    TZ 11.1
.223   .244   .248   .230   .202   .167   .116   .058  -.007  -.084    TZ 11.2
-.166  -.254  -.354  -.458  -.567  -.683  -.806  -.932                 TZ 11.3
0.      .002   .004   .008   .012   .016   .024   .041   .081   .147    TZ 12.1
.187   .207   .219   .203   .184   .158   .120   .074   .022  -.034    TZ 12.2
-.101  -.172  -.246  -.329  -.415  -.505  -.599  -.698                 TZ 12.3
0.      .002   .003   .007   .010   .013   .020   .034   .067   .116    TZ 13.1
.158   .179   .194   .193   .187   .171   .153   .123   .092   .052    TZ 13.2
.011  -.040  -.092  -.148  -.204  -.263  -.322  -.387                 TZ 13.3
0.      .001   .001   .002   .003   .004   .006   .010   .020   .049    TZ 14.1
.061   .101   .112   .118   .118   .117   .115   .111   .104   .096    TZ 14.2
.087   .077   .066   .055   .043   .029   .015   0.                    TZ 14.3
0.      .001   .001   .002   .003   .004   .006   .010   .020   .049    TZ 15.1
.081   .101   .112   .118   .118   .117   .115   .111   .104   .096    TZ 15.2
.087   .077   .066   .055   .043   .029   .015   0.                    TZ 15.3
0.     -.001  -.002  -.005  -.007  -.009  -.014  -.023  -.046  -.092    TZ 16.1
-.139  -.166  -.184  -.203  -.222  -.241  -.260  -.279  -.299  -.318    TZ 16.2
-.337  -.355  -.374  -.392  -.409  -.427  -.446  -.464                 TZ 16.3
0.     -.001  -.002  -.005  -.007  -.010  -.014  -.024  -.048  -.095    TZ 17.1
-.143  -.190  -.238  -.271  -.303  -.336  -.366  -.388  -.411  -.434    TZ 17.2
-.455  -.474  -.493  -.513  -.529  -.545  -.562  -.577                 TZ 17.3
0.     -.001  -.002  -.005  -.007  -.009  -.014  -.023  -.047  -.093    TZ 18.1
-.138  -.159  -.179  -.200  -.220  -.238  -.246  -.253  -.260  -.268    TZ 18.2
-.272  -.268  -.264  -.261  -.257  -.249  -.234  -.219                 TZ 18.3
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Table I. - Continued.

(b) Continued

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0.      .137    .179    .241    .297    .339    .412    .523    .724    .994     WORD3A.1
1.177   1.315   1.416   1.467   1.528   1.539   1.539   1.539   1.539   1.539    WORD3A.2
1.384   1.210   1.018   .817    .614    .412    .211    0.                       WORD3A.3
0.      .136    .178    .237    .291    .333    .405    .514    .712    .978     WORD4.1
1.157   1.292   1.391   1.461   1.501   1.512   1.512   1.512   1.512   1.512    WORD4.2
1.363   1.192   1.003   .806    .606    .406    .208    0.                       WORD4.3
0.      .126    .168    .225    .277    .316    .386    .490    .679    .931     WORD5.1
1.103   1.232   1.326   1.392   1.430   1.441   1.441   1.441   1.441   1.437    WORD5.2
1.294   1.132   .953    .765    .576    .385    .197    0.                       WORD5.3
0.      .118    .160    .216    .266    .304    .370    .470    .651    .894     WORD6.1
1.059   1.182   1.273   1.336   1.373   1.383   1.383   1.383   1.383   1.341    WORD6.2
1.206   1.056   .869    .714    .537    .360    .184    0.                       WORD6.3
0.      .110    .153    .208    .257    .294    .358    .455    .631    .866     WORD7.1
1.025   1.144   1.231   1.293   1.328   1.338   1.338   1.338   1.338   1.277    WORD7.2
1.151   1.006   .845    .681    .512    .343    .175    0.                       WORD7.3
0.      .101    .145    .200    .247    .283    .344    .438    .607    .833     WORD8.1
.987    1.101   1.184   1.244   1.278   1.287   1.287   1.287   1.287   1.186    WORD8.2
1.069   .935    .788    .633    .476    .319    .163    0.                       WORD8.3
0.      .100    .144    .198    .245    .280    .341    .435    .602    .827     WORD9.1
.979    1.092   1.175   1.234   1.266   1.277   1.277   1.277   1.260   1.161    WORD9.2
1.046   .915    .771    .619    .466    .312    .159    0.                       WORD9.3
0.      .102    .146    .201    .248    .284    .345    .440    .609    .836     WORD10.1
.990    1.105   1.189   1.248   1.283   1.292   1.292   1.292   1.247   1.149    WORD10.2
1.035   .906    .763    .613    .461    .309    .156    0.                       WORD10.3
0.      .111    .154    .209    .258    .295    .359    .457    .632    .868     WORD11.1
1.026   1.148   1.235   1.297   1.330   1.342   1.342   1.342   1.263   1.164    WORD11.2
1.049   .917    .773    .621    .467    .313    .160    0.                       WORD11.3
0.      .118    .160    .216    .266    .304    .370    .470    .651    .894     WORD12.1
1.059   1.181   1.272   1.335   1.372   1.382   1.382   1.382   1.300   1.198    WORD12.2
1.080   .945    .796    .639    .481    .322    .164    0.                       WORD12.3
0.      .125    .166    .222    .274    .313    .381    .484    .670    .920     WORD13.1
1.090   1.216   1.309   1.375   1.413   1.423   1.423   1.423   1.339   1.234    WORD13.2
1.112   .972    .819    .656    .495    .331    .169    0.                       WORD13.3
0.      .136    .177    .235    .289    .330    .402    .510    .706    .969     WORD14.1
1.148   1.262   1.360   1.449   1.489   1.500   1.500   1.500   1.411   1.300    WORD14.2
1.171   1.024   .862    .692    .521    .349    .178    0.                       WORD14.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD15.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD15.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD15.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD16.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD16.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD16.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD17.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD17.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD17.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD18.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD18.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD18.3
  0.000 10.862 21.724 32.586 43.448 54.310 65.172 75.447 86.897 97.759  XFUS
108.621119.483130.344141.207152.069162.931173.793184.655195.517206.379  XFUS
217.241228.103238.996249.826260.690271.552282.414293.276304.138315.000  XFUS
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000  Y  1
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  Z  1
 -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700
 -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700
  0.000   0.238   0.427   0.641   0.828   1.003   1.152   1.276   1.399   1.485  Y  2
  1.570   1.629   1.664   1.664   1.664   1.664   1.674   1.696   1.681   1.664
  1.608   1.516   1.410   1.293   1.112   0.932   0.726   0.510   0.281   0.000
 -3.383  -3.365  -3.336  -3.281  -3.188  -3.083  -2.941  -2.812  -2.657  -2.504  Z  2
 -2.337  -2.172  -2.019  -2.019  -2.019  -2.019  -1.892  -1.753  -1.601  -1.399
 -1.173  -0.972  -0.785  -.610   -.449   -.314   -.204   -.108   -.037   -.017
  0.000   0.354   0.671   1.001   1.318   1.586   1.853   2.057   2.237   2.390  Y  3
  2.532   2.636   2.701   2.701   2.701   2.701   2.754   2.768   2.771   2.748
  2.663   2.540   2.366   2.154   1.891   1.589   1.224   0.846   0.468   0.000
 -4.483  -4.474  -4.388  -4.290  -4.166  -3.991  -3.779  -3.578  -3.352  -3.126  Z  3
 -2.862  -2.597  -2.332  -2.332  -2.332  -2.332  -2.117  -1.915  -1.649  -1.333
 -0.940  -.610   -.267   -.031    .332    .562    .781    .949   1.041   1.071
  0.000   0.497   0.928   1.359   1.753   2.109   2.440   2.721   2.990   3.208  Y  4
  3.388   3.518   3.622   3.622   3.622   3.622   3.688   3.716   3.732   3.698
  3.601   3.428   3.218   2.956   2.593   2.191   1.700   1.171   0.626   0.000
 -5.432  -5.398  -5.339  -5.179  -4.992  -4.806  -4.543  -4.268  -3.941  -3.640  Z  4
 -3.300  -2.960  -2.632  -2.632  -2.632  -2.632  -2.341  -2.051  -1.697  -1.266
  -.759   -.290   0.155    .575    .970   1.316   1.624   1.844   1.975   2.032
  0.000   0.597   1.116   1.636   2.106   2.576   2.945   3.302   3.608   3.864  Y  5
  4.095   4.251   4.368   4.368   4.368   4.368   4.446   4.487   4.503   4.470
```

Table I. - Continued.

(b) Continued

4.335	4.150	3.876	3.551	3.138	2.623	2.044	1.401	0.732	0.000	
-6.273	-6.227	-6.143	-5.983	-5.746	-5.497	-5.196	-4.858	-4.506	-4.154	Z 5
-3.713	-3.310	-2.880	-2.860	-2.880	-2.880	-2.539	-2.186	-1.743	-1.237	
-.641	-.070	.476	.972	1.456	1.877	2.249	2.507	2.689	2.734	
0.000	0.619	1.190	1.748	2.295	2.806	3.278	3.702	4.101	4.462	Y 6
4.787	5.061	5.259	5.259	5.259	5.259	5.380	5.501	5.587	5.611	
5.524	5.322	4.993	4.498	3.849	3.174	2.409	1.654	0.886	0.000	
-6.980	-6.965	-6.890	-6.780	-6.595	-6.360	-6.075	-5.741	-5.369	-4.983	Z 6
-4.534	-4.070	-3.606	-3.606	-3.606	-3.606	-3.203	-2.788	-2.246	-1.601	
-.814	-.103	.599	1.177	1.708	2.137	2.480	2.747	2.925	3.018	
0.000	0.610	1.220	1.850	2.415	2.955	3.480	4.015	4.510	4.990	Y 7
5.470	5.700	5.830	5.830	5.830	5.830	5.900	5.930	5.930	5.880	
5.740	5.498	5.159	4.720	4.116	3.423	2.640	1.790	0.940	0.000	
-7.780	-7.770	-7.710	-7.580	-7.380	-7.130	-6.880	-6.530	-6.230	-5.870	Z 7
-5.420	-4.860	-4.310	-4.310	-4.310	-4.310	-3.815	-3.330	-2.740	-2.060	
-1.250	-.455	.255	.915	1.538	2.060	2.490	2.790	2.970	3.050	
0.000	0.655	1.224	1.793	2.361	2.879	3.397	3.915	4.445	4.950	Y 8
5.467	5.972	6.341	5.416	5.416	6.341	6.140	5.995	5.950	5.930	
5.825	5.620	5.300	4.860	4.250	3.530	2.770	1.820	0.970	0.000	
-8.627	-8.587	-8.483	-8.355	-8.186	-8.022	-7.780	-7.538	-7.232	-6.914	Z 8
-6.556	-6.177	-5.722	-6.110	-4.660	-5.722	-5.120	-4.365	-3.650	-2.905	
-2.060	-1.235	-.455	.285	.955	1.515	1.935	2.245	2.419	2.479	
0.000	0.550	1.040	1.535	2.044	2.530	3.010	3.460	3.965	4.430	Y 9
4.940	5.520	6.341	5.416	5.415	6.341	5.842	5.611	5.520	5.403	
5.170	4.860	4.490	4.020	3.465	2.870	2.200	1.505	0.725	0.000	
-9.415	-9.400	-9.335	-9.260	-9.145	-9.000	-8.820	-8.604	-8.360	-8.110	Z 9
-7.820	-7.560	-7.290	-7.382	-4.440	-4.767	-4.352	-3.822	-3.203	-2.558	
-1.950	-1.350	-.790	-.250	.255	.645	.990	1.230	1.380	1.430	
0.000	0.500	0.950	1.420	1.870	2.345	2.820	3.285	3.820	4.365	Y 10
4.930	5.570	6.341	5.416	5.416	6.341	5.940	5.740	5.466	5.125	
4.739	4.325	3.897	3.431	2.903	2.373	1.818	1.237	0.643	0.000	
-10.149	-10.140	-10.105	-10.071	-9.998	-9.913	-9.803	-9.642	-9.494	-9.308	Z 10
-9.109	-8.912	-8.681	-8.848	-5.157	-5.276	-4.778	-4.258	-3.749	-3.279	
-2.833	-2.451	-2.106	-1.761	-1.429	-1.172	-.966	-.810	-.717	-.661	
0.000	0.490	0.930	1.390	1.830	2.290	2.771	3.260	3.790	4.360	Y 11
4.980	5.630	6.341	5.416	5.416	6.341	5.840	5.540	5.200	4.850	
4.462	4.047	3.620	3.167	2.676	2.172	1.667	1.112	0.581	0.000	
-11.515	-11.469	-11.447	-11.401	-11.341	-11.269	-11.172	-11.075	-10.953	-10.793	Z 11
-10.646	-10.450	-10.147	-10.360	-6.165	-6.213	-5.834	-5.389	-4.956	-4.535	
-4.140	-3.795	-3.488	-3.167	-2.896	-2.678	-2.510	-2.379	-2.286	-2.243	
0.000	0.490	0.930	1.380	1.825	2.285	2.770	3.250	3.780	4.360	Y 12
4.950	5.620	6.341	5.416	5.416	6.341	5.680	5.330	5.000	4.650	
4.250	3.850	3.430	3.005	2.520	2.074	1.569	1.050	0.544	0.000	
-12.894	-12.894	-12.857	-12.793	-12.755	-12.667	-12.566	-12.452	-12.325	-12.199	Z 12
-12.022	-11.819	-11.589	-11.835	-7.348	-7.313	-6.937	-6.507	-6.064	-5.710	
-5.356	-5.027	-4.723	-4.470	-4.204	-4.027	-3.876	-3.749	-3.688	-3.623	
0.000	0.490	0.925	1.380	1.825	2.285	2.770	3.250	3.790	4.360	Y 13
4.970	5.625	6.341	5.416	5.416	6.341	5.620	5.270	4.930	4.574	
4.180	3.791	3.381	2.946	2.470	2.019	1.540	1.035	0.542	0.000	
-14.261	-14.265	-14.219	-14.160	-14.114	-14.030	-13.933	-13.837	-13.703	-13.557	Z 13
-13.365	-13.215	-12.935	-13.215	-8.619	-8.528	-8.217	-7.797	-7.388	-7.018	
-6.673	-6.353	-6.070	-5.813	-5.556	-5.387	-5.230	-5.112	-5.043	-4.988	
0.000	0.500	0.950	1.411	1.850	2.310	2.790	3.273	3.820	4.370	Y 14
4.980	5.630	6.341	5.416	5.416	6.341	5.600	5.271	4.933	4.570	
4.181	3.800	3.381	2.963	2.496	2.030	1.538	1.045	0.552	0.000	
-15.589	-15.560	-15.545	-15.472	-15.425	-15.352	-15.255	-15.157	-15.022	-14.874	Z 14
-14.689	-14.478	-14.194	-14.491	-9.889	-9.764	-9.519	-9.099	-8.692	-8.322	
-7.978	-7.659	-7.390	-7.121	-6.878	-6.685	-6.529	-6.437	-6.358	-6.316	
0.000	0.491	0.930	1.390	1.835	2.310	2.790	3.259	3.810	4.361	Y 15
4.972	5.583	6.341	5.416	5.416	6.341	5.630	5.275	4.933	4.560	
4.181	3.790	3.361	2.930	2.470	2.011	1.540	1.036	0.531	0.000	
-16.730	-16.713	-16.682	-16.652	-16.559	-16.491	-16.397	-16.304	-16.187	-16.031	Z 15
-15.652	-15.648	-15.345	-15.682	-11.079	-10.922	-10.650	-10.252	-9.841	-9.455	
-9.120	-8.822	-8.537	-8.251	-8.016	-7.818	-7.683	-7.574	-7.489	-7.456	
0.000	0.560	1.003	1.459	1.915	2.372	2.829	3.311	3.856	4.428	Y 16
5.025	5.698	6.341	5.416	5.416	6.341	5.644	5.283	4.947	4.586	
4.198	3.798	3.397	2.959	2.481	2.016	1.536	1.033	0.541	0.000	
-17.791	-17.773	-17.754	-17.685	-17.628	-17.571	-17.464	-17.370	-17.239	-17.095	Z 16
-16.914	-16.734	-16.493	-16.752	-12.210	-12.030	-11.736	-11.326	-10.929	-10.557	
-10.223	-9.901	-9.616	-9.332	-9.097	-8.926	-8.755	-8.659	-8.563	-8.517	
0.000	0.530	1.010	1.495	1.980	2.450	2.960	3.440	4.000	4.550	Y 17
5.120	5.700	6.341	5.416	5.416	6.341	5.870	5.620	5.320	5.001	
4.620	4.220	3.790	3.300	2.802	2.260	1.718	1.175	0.631	0.000	
-18.930	-18.920	-18.890	-18.840	-18.750	-18.655	-18.535	-18.387	-18.210	-18.010	Z 17
-17.790	-17.480	-17.088	-17.396	-13.561	-13.319	-13.050	-12.567	-12.109	-11.677	
-11.282	-10.912	-10.555	-10.261	-9.966	-9.760	-9.579	-9.449	-9.369	-9.327	

Table I. - Continued.

(b) Continued

```
  0.000  0.600  1.140  1.670  2.170  2.715  3.225  3.740  4.310  4.810  Y 18
  5.370  5.780  6.341  5.416  5.416  6.341  5.850  5.610  5.320  4.980
  4.580  4.190  3.740  3.275  2.740  2.250  1.670  1.130  0.565  0.000
-19.930-19.925-19.670-19.805-19.720-19.600-19.450-19.280-19.020-18.770  Z 18
-18.430-17.993-17.590-17.898-14.676-14.617-14.198-13.603-13.080-12.580
-12.080-11.680-11.320-10.990-10.690-10.480-10.300-10.060-10.089-10.055
  0.000  0.590  1.150  1.700  2.220  2.760  3.270  3.780  4.350  4.840  Y 19
  5.340  5.750  6.341  5.416  5.416  6.341  6.000  5.840  5.580  5.260
  4.630  4.380  3.920  3.460  2.940  2.370  1.810  1.230  0.660  0.000
-20.780-20.740-20.630-20.500-20.350-20.170-19.970-19.750-19.470-19.190  Z 19
-18.850-18.450-17.968-18.264-16.119-15.855-15.330-14.640-14.020-13.490
-12.970-12.530-12.110-11.776-11.430-11.170-10.930-10.770-10.670-10.630
  0.000  0.650  1.240  1.830  2.380  2.920  3.450  3.970  4.520  5.000  Y 20
  5.440  5.780  6.341  5.416  5.416  6.341  6.040  6.000  5.780  5.570
  5.170  4.730  4.240  3.740  3.180  2.590  1.990  1.350  0.701  0.000
-21.510-21.470-21.430-21.270-21.100-20.870-20.620-20.330-19.980-19.650  Z 20
-19.210-18.720-16.262-18.545-17.278-17.017-16.410-15.710-15.040-14.480
-13.670-13.350-12.890-12.500-12.100-11.780-11.510-11.310-11.210-11.180
  0.000  0.650  1.260  1.900  2.480  3.060  3.640  4.170  4.700  5.150  Y 21
  5.480  5.790  6.341  5.416  5.416  6.341  5.950  5.940  5.880  5.760
  5.490  5.120  4.670  4.100  3.490  2.800  2.130  1.430  0.740  0.000
-22.050-22.020-21.930-21.770-21.580-21.340-21.080-20.780-20.370-19.910  Z 21
-19.360-18.820-18.455-18.715-18.334-18.082-17.450-16.800-16.090-15.450
-14.720-14.100-13.580-13.150-12.730-12.350-12.070-11.860-11.730-11.680
  0.000  0.750  1.450  2.150  2.801  3.380  3.965  4.470  4.910  5.220  Y 22
  5.450  5.600  5.680  5.680  5.680  5.680  5.710  5.680  5.600  5.410
  5.090  4.670  4.175  3.680  3.120  2.533  1.920  1.302  0.665  0.000
-22.439-22.380-22.280-22.130-21.930-21.675-21.324-20.882-20.330-19.770  Z 22
-19.130-18.540-17.976-17.976-17.976-17.976-17.357-16.699-16.039-15.414
-14.797-14.254-13.811-13.406-13.023-12.728-12.483-12.314-12.209-12.177
  0.000  0.800  1.440  2.100  2.730  3.310  3.850  4.310  4.730  5.052  Y 23
  5.290  5.460  5.570  5.570  5.570  5.570  5.652  5.650  5.584  5.387
  5.089  4.676  4.150  3.635  3.056  2.477  1.884  1.278  0.665  0.000
-22.380-22.330-22.220-22.050-21.830-21.570-21.190-20.750-20.205-19.660  Z 23
-19.118-18.576-18.071-18.058-18.071-18.071-17.464-16.819-16.148-15.564
-15.005-14.457-13.933-13.587-13.252-13.006-12.785-12.666-12.559-12.527
  0.000  0.700  1.350  1.955  2.540  3.040  3.540  3.960  4.370  4.680  Y 24
  4.940  5.075  5.150  5.150  5.150  5.150  5.190  5.180  5.082  4.900
  4.670  4.352  3.930  3.500  2.950  2.380  1.810  1.220  0.650  0.000
-22.050-22.040-21.940-21.770-21.525-21.250-20.890-20.490-19.990-19.510  Z 24
-19.000-18.490-18.016-18.016-18.016-18.004-17.434-16.852-16.246-15.691
-15.162-14.621-14.107-13.707-13.358-13.110-12.930-12.810-12.740-12.715
  0.000  0.720  1.320  1.860  2.370  2.800  3.200  3.540  3.840  4.050  Y 25
  4.210  4.310  4.360  4.360  4.360  4.360  4.370  4.330  4.220  4.075
  3.880  3.620  3.271  2.920  2.510  2.000  1.606  1.112  0.592  0.000
-21.510-21.440-21.290-21.080-20.800-20.490-20.110-19.700-19.220-18.700  Z 25
-18.330-17.900-17.480-17.480-17.480-17.480-16.980-16.500-16.000-15.530
-15.110-14.670-14.220-13.870-13.540-13.270-13.034-12.898-12.788-12.742
  0.000  0.610  1.120  1.600  2.050  2.420  2.770  3.050  3.320  3.520  Y 26
  3.650  3.700  3.800  3.800  3.800  3.800  3.805  3.780  3.700  3.580
  3.395  3.160  2.875  2.580  2.210  1.833  1.402  0.971  0.528  0.000
-20.450-20.400-20.280-20.090-19.850-19.580-19.260-18.910-18.510-18.110  Z 26
-17.720-17.330-16.980-16.980-16.980-16.980-16.578-16.135-15.693-15.289
-14.860-14.494-14.104-13.790-13.513-13.275-13.101-12.964-12.840-12.816
  0.000  0.500  0.930  1.320  1.680  2.000  2.280  2.521  2.722  2.875  Y 27
  3.000  3.055  3.100  3.100  3.100  3.100  3.100  3.070  3.013  2.899
  2.746  2.568  2.302  2.061  1.744  1.440  1.099  0.744  0.390  0.000
-19.015-18.964-18.862-18.722-18.506-18.265-18.024-17.732-17.416-17.074  Z 27
-16.745-16.441-16.150-16.137-16.137-16.137-15.796-15.454-15.088-14.759
-14.456-14.165-13.850-13.610-13.370-13.181-13.043-12.917-12.855-12.843
  0.000  0.370  0.685  0.980  1.250  1.485  1.695  1.860  2.020  2.121  Y 28
  2.200  2.250  2.275  2.275  2.275  2.275  2.275  2.250  2.166  2.120
  2.000  1.980  1.690  1.515  1.295  1.070  0.833  0.579  0.313  0.000
-17.434-17.382-17.305-17.191-17.051-16.885-16.657-16.429-16.188-15.947  Z 28
-15.719-15.492-15.238-15.226-15.251-15.251-14.998-14.758-14.467-14.252
-14.012-13.823-13.609-13.420-13.243-13.092-12.992-12.904-12.854-12.843
  0.000  0.251  0.466  0.656  0.832  0.959  1.110  1.223  1.299  1.374  Y 29
  1.399  1.424  1.424  1.424  1.424  1.424  1.411  1.372  1.334  1.270
  1.181  1.080  0.978  0.864  0.725  0.585  0.446  0.307  0.155  0.000
-15.638-15.612-15.548-15.472-15.370-15.269-15.129-14.977-14.813-14.648  Z 29
-14.496-14.344-14.205-14.205-14.205-14.041-13.876-13.725-13.598
-13.459-13.333-13.220-13.131-13.018-12.942-12.892-12.855-12.830-12.830
  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  Y 30
  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019  Z 30
-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019
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Table I. - Concluded.

(b) Concluded

-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	
193.788	21.171	-19.698								PODORG 1
0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	XPOD
20.	22.	24.	26.	28.	30.	31.624	32.	34.	35.963	XPOD
2.578	2.619	2.660	2.702	2.743	2.784	2.825	2.866	2.907	2.949	RPOD
2.990	3.031	3.072	3.113	3.154	3.196	3.229	3.229	3.229	3.229	RPOD
197.511	34.795	-19.375								PODORG 2
0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	XPOD
20.	22.	24.	26.	28.	30.	31.624	32.	34.	35.963	XPOD
2.578	2.619	2.660	2.702	2.743	2.784	2.825	2.866	2.907	2.949	RPOD
2.990	3.031	3.072	3.113	3.154	3.196	3.229	3.229	3.229	3.229	RPOD
204.237	46.025	5-15.644	35.163	237.467	46.025	5-5.749	4.787			V FIN
0.	10.	20.	30.	40.	50.	60.	70.	90.	100.	XFIN
0.	.466	.846	1.138	1.345	1.465	1.498	1.390	.641	0.	FINORD
283.330	0.	-12.643	29.877	307.687	0.	-3.103	7.082			V TAIL
0.	10.	20.	30.	40.	50.	60.	70.	90.	100.	XVTAIL
0.	.466	.846	1.138	1.345	1.465	1.498	1.390	.641	0.	TVTAIL
276.100	2.900	-15.343	24.196	297.803	15.110	-18.615	7.252			H TAIL
0.	10.	20.	30.	40.	50.	70.	80.	90.	100.	XHTAIL
0.0	.553	.948	1.264	1.448	1.5	1.264	.948	.553	0.0	THTAIL

Table II. - AST-204 Numerical Model

(a) SI Units (meters)

```
AST-204 (4/19/79)  4 ABREAST DIGITAL BLENDED FUSELAGE

  1  1  1  1  1  1    16 26  1 30 30                        2 20  2 10  1 10

 774.49   588 168.060                                                    REFA
0.     .125    .25     .5     .75    1.0    1.5    2.5    5.0    10.     XAF 10
 15.    20.     25.    30.    35.    40.    45.    50.    55.    60.     XAF 20
65.    70.     75.    80.    85.    90.    95.   100.                    XAF 28
 21.869  1.375 -1.555 45.280                                            WORG 3A
 22.845  1.655 -1.711 44.292                                            WORG 4
 26.194  2.615 -2.313 40.925                                            WORG 5
 29.541  3.575 -2.839 37.556                                            WORG 6
 32.890  4.535 -3.267 34.189                                            WORG 7
 38.506  6.146 -3.821 28.539                                            WORG 8
 42.934  7.416 -4.210 24.458                                            WORG 9
 47.836  8.821 -4.557 19.938                                            WORG 10
 52.008 10.271 -4.632 16.164                                            WORG 11
 54.841 11.256 -4.610 14.200                                            WORG 12
 57.604 12.216 -4.675 12.286                                            WORG 13
 61.792 13.671 -4.737  9.384                                            WORG 14
 61.792 13.672 -4.737  9.384                                            WORG 15
 64.259 15.096 -4.752  8.175                                            WORG 16
 67.585 17.016 -4.922  6.546                                            WORG 17
 70.912 18.936 -5.194  4.917                                            WORG 18
  0.000  -.001  -.001  -.002  -.003  -.004  -.007  -.016  -.058  -.221   TZ 3A.1
  -.441  -.693  -.963 -1.240 -1.519 -1.793 -2.059 -2.313 -2.554 -2.782   TZ 3A.2
-2.996 -3.195 -3.381 -3.553 -3.712 -3.857 -3.989 -4.104                 TZ 3A.3
  0.000  -.000  -.000  -.001  -.001  -.001  -.002  -.011  -.047  -.200   TZ 4.1
  -.409  -.649  -.903 -1.165 -1.427 -1.685 -1.936 -2.176 -2.405 -2.621   TZ 4.2
-2.825 -3.017 -3.197 -3.364 -3.520 -3.664 -3.795 -3.912                 TZ 4.3
  0.000   .001   .001   .002   .004   .005   .008   .008  -.012  -.123   TZ 5.1
  -.278  -.459  -.653  -.855 -1.058 -1.260 -1.456 -1.648 -1.833 -2.011   TZ 5.2
-2.181 -2.344 -2.500 -2.649 -2.792 -2.927 -3.053 -3.172                 TZ 5.3
  0.000   .001   .002   .005   .008   .010   .015   .025   .018  -.047   TZ 6.1
  -.152  -.279  -.419  -.568  -.719  -.871 -1.024 -1.173 -1.320 -1.464   TZ 6.2
-1.605 -1.744 -1.879 -2.012 -2.141 -2.267 -2.389 -2.506                 TZ 6.3
  0.000   .002   .003   .006   .009   .012   .019   .031   .049   .021   TZ 7.1
  -.043  -.127  -.223  -.326  -.435  -.548  -.662  -.777  -.893 -1.009   TZ 7.2
-1.125 -1.241 -1.358 -1.475 -1.591 -1.707 -1.821 -1.934                 TZ 7.3
  0.000   .002   .004   .007   .011   .014   .021   .035   .065   .085   TZ 8.1
   .073   .041  -.001  -.053  -.110  -.173  -.240  -.311  -.385  -.462   TZ 8.2
  -.543  -.626  -.712  -.799  -.889  -.982 -1.075 -1.169                 TZ 8.3
  0.000   .002   .004   .008   .012   .015   .023   .038   .069   .100   TZ 9.1
   .108   .103   .086   .062   .030  -.007  -.050  -.095  -.145  -.198   TZ 9.2
  -.255  -.315  -.379  -.445  -.514  -.585  -.659  -.735                 TZ 9.3
  0.000   .002   .003   .005   .008   .011   .017   .028   .055   .091   TZ 10.1
   .107   .113   .112   .106   .094   .078   .059   .036   .009  -.021   TZ 10.2
  -.054  -.069  -.127  -.169  -.213  -.259  -.307  -.357                 TZ 10.3
  0.000   .001   .002   .003   .004   .006   .009   .015   .029   .056   TZ 11.1
   .068   .074   .075   .070   .061   .051   .035   .016  -.002  -.025   TZ 11.2
  -.050  -.077  -.107  -.139  -.172  -.207  -.244  -.282                 TZ 11.3
  0.000   .001   .001   .002   .004   .005   .007   .012   .025   .045   TZ 12.1
   .057   .063   .066   .061   .056   .048   .036   .022   .007  -.010   TZ 12.2
  -.031  -.052  -.074  -.100  -.126  -.153  -.181  -.211                 TZ 12.3
  0.000   .001   .001   .002   .003   .004   .006   .010   .020   .035   TZ 13.1
   .048   .054   .059   .058   .057   .052   .046   .037   .026   .016   TZ 13.2
   .003  -.012  -.028  -.045  -.062  -.080  -.098  -.117                 TZ 13.3
  0.000   .000   .000   .001   .001   .001   .002   .003   .006   .015   TZ 14.1
   .025   .031   .034   .036   .036   .035   .035   .034   .031   .029   TZ 14.2
   .026   .023   .020   .017   .013   .009   .005  0.000                 TZ 14.3
  0.000   .000   .000   .001   .001   .001   .002   .003   .006   .015   TZ 15.1
   .025   .031   .034   .036   .036   .035   .035   .034   .031   .029   TZ 15.2
   .026   .023   .020   .017   .013   .009   .005  0.000                 TZ 15.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.014  -.028   TZ 16.1
  -.042  -.050  -.056  -.061  -.067  -.073  -.079  -.084  -.091  -.096   TZ 16.2
  -.102  -.107  -.113  -.119  -.124  -.129  -.135  -.140                 TZ 16.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.015  -.029   TZ 17.1
  -.043  -.058  -.072  -.082  -.092  -.102  -.111  -.117  -.124  -.131   TZ 17.2
  -.138  -.144  -.149  -.155  -.160  -.165  -.170  -.175                 TZ 17.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.014  -.028   TZ 18.1
  -.042  -.048  -.054  -.061  -.067  -.072  -.074  -.077  -.079  -.081   TZ 18.2
  -.082  -.081  -.080  -.079  -.078  -.075  -.071  -.066                 TZ 18.3
```

Table II. - Continued.

(a) Continued

0.	.137	.179	.241	.297	.339	.412	.523	.724	.994	WORD3A.1
1.177	1.315	1.416	1.487	1.528	1.539	1.539	1.539	1.539	1.539	WORD3A.2
1.384	1.210	1.018	.817	.614	.412	.211	0.			WORD3A.3
0.	.136	.178	.237	.291	.333	.405	.514	712	.978	WORD4.1
1.157	1.292	1.391	1.461	1.501	1.512	1.512	1.512	1.512	1.512	WORD4.2
1.363	1.192	1.003	.806	.606	.406	.208	0.			WORD4.3
0.	.128	.168	.225	.277	.316	.386	.490	.679	.931	WORD5.1
1.103	1.232	1.326	1.392	1.430	1.441	1.441	1.441	1.441	1.437	WORD5.2
1.294	1.132	.953	.765	.576	.385	.197	0.			WORD5.3
0.	.118	.160	.216	.266	.304	.370	.470	.651	.894	WORD6.1
1.059	1.182	1.273	1.336	1.373	1.383	1.383	1.383	1.383	1.341	WORD6.2
1.208	1.056	.889	.714	.537	.360	.184	0.			WORD6.3
0.	.110	.153	.208	.257	.294	.358	.455	.631	.866	WORD7.1
1.025	1.144	1.231	1.293	1.328	1.338	1.338	1.338	1.336	1.277	WORD7.2
1.151	1.006	.848	.681	.512	.343	.175	0.			WORD7.3
0.	.101	.145	.200	.247	.283	.344	.438	.607	.833	WORD8.1
.987	1.101	1.184	1.244	1.278	1.287	1.287	1.287	1.287	1.186	WORD8.2
1.069	.935	.788	.633	.476	.319	.163	0.			WORD8.3
0.	.100	.144	.198	.245	.280	.341	.435	.602	.827	WORD9.1
.979	1.092	1.175	1.234	1.268	1.277	1.277	1.277	1.260	1.161	WORD9.2
1.046	.915	.771	.619	.466	.312	.159	0.			WORD9.3
0.	.102	.146	.201	.248	.284	.345	.440	.609	.836	WORD10.1
.990	1.105	1.189	1.248	1.283	1.292	1.292	1.292	1.247	1.149	WORD10.2
1.035	.906	.763	.613	.461	.309	.156	0.			WORD10.3
0.	.111	.154	.209	.258	.295	.359	.457	.632	.868	WORD11.1
1.028	1.148	1.235	1.297	1.330	1.342	1.342	1.342	1.263	1.164	WORD11.2
1.049	.917	.773	.621	.467	.313	.160	0.			WORD11.3
0.	.116	.160	.216	.266	.304	.370	.470	.651	.894	WORD12.1
1.059	1.181	1.272	1.335	1.372	1.382	1.382	1.382	1.300	1.198	WORD12.2
1.080	.945	.796	.639	.481	.322	.164	0.			WORD12.3
0.	.125	.166	.222	.274	.313	.381	.484	.670	.920	WORD13.1
1.090	1.216	1.309	1.375	1.413	1.423	1.423	1.423	1.339	1.234	WORD13.2
1.112	.972	.819	.658	.495	.331	.169	0.			WORD13.3
0.	.138	.177	.235	.289	.330	.402	.510	.706	.969	WORD14.1
1.148	1.282	1.380	1.449	1.489	1.500	1.500	1.500	1.411	1.300	WORD14.2
1.171	1.024	.862	.692	.521	.349	.178	0.			WORD14.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD15.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD15.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD15.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD16.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD16.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD16.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD17.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD17.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD17.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD18.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD18.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD18.3
0.000	3.289	6.578	9.867	13.156	16.445	19.734	22.845	26.312	29.601	XFUS
32.890	36.179	39.468	42.757	46.046	49.336	52.625	55.914	59.203	62.492	XFUS
65.781	69.070	72.368	75.648	78.937	82.226	85.515	88.804	92.093	95.382	XFUS
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 1
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	Z 1
-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	
-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	-.515	
0.000	.072	.129	.194	.251	.304	.349	.386	.424	.450	Y 2
.475	.493	.504	.504	.504	.504	.507	.514	.509	.504	
.487	.459	.427	.392	.337	.282	.220	.154	.085	0.000	
-1.024	-1.019	-1.010	-.993	-.965	-.934	-.891	-.851	-.805	-.758	Z 2
-.708	-.658	-.611	-.611	-.611	-.611	-.573	-.531	-.485	-.424	
-.355	-.294	-.238	-.185	-.136	-.095	-.062	-.033	-.011	-.005	
0.000	.107	.203	.303	.399	.480	.561	.623	.677	.724	Y 3
.767	.798	.818	.818	.818	.818	.834	.838	.839	.832	
.806	.769	.716	.652	.573	.481	.371	.256	.142	0.000	
-1.357	-1.355	-1.329	-1.299	-1.261	-1.208	-1.144	-1.083	-1.015	-.947	Z 3
-.867	-.786	-.706	-.706	-.706	-.706	-.641	-.580	-.499	-.404	
-.285	-.185	-.081	-.009	.101	.170	.236	.287	.315	.324	
0.000	.150	.281	.412	.531	.639	.739	.824	.905	.971	Y 4
1.026	1.065	1.097	1.097	1.097	1.097	1.117	1.125	1.130	1.120	
1.090	1.038	.974	.895	.785	.663	.515	.355	.190	0.000	
-1.645	-1.635	-1.617	-1.568	-1.512	-1.455	-1.376	-1.292	-1.193	-1.102	Z 4
-.999	-.896	-.797	-.797	-.797	-.797	-.709	-.621	-.514	-.383	
-.230	-.088	.047	.174	.294	.398	.492	.558	.598	.615	
0.000	.181	.338	.495	.638	.760	.892	1.000	1.093	1.170	Y 5
1.240	1.287	1.323	1.323	1.323	1.323	1.346	1.359	1.364	1.354	

Table II. - Continued.

(a) Continued

1.313	1.257	1.174	1.075	.950	.794	.619	.424	.222	0.000	
-1.699	-1.886	-1.860	-1.812	-1.740	-1.664	-1.573	-1.471	-1.364	-1.258	Z 5
-1.124	-1.002	-.872	-.872	-.872	-.872	-.769	-.662	-.528	-.375	
-.194	-.021	.144	.294	.441	.568	.681	.759	.814	.828	
0.000	.076	.245	.416	.590	.760	.914	1.051	1.178	1.278	Y 6
1.363	1.438	1.496	1.496	1.496	1.496	1.526	1.559	1.588	1.587	
1.559	1.496	1.399	1.260	1.072	.875	.651	.415	.179	0.000	
-2.162	-2.160	-2.138	-2.098	-2.044	-1.968	-1.885	-1.780	-1.671	-1.550	Z 6
-1.421	-1.284	-1.142	-1.142	-1.142	-1.142	-1.023	-.890	-.727	-.530	
-.303	-.091	.115	.297	.469	.609	.724	.802	.848	.865	
0.000	.179	.357	.554	.724	.892	1.048	1.202	1.354	1.505	Y 7
1.641	1.720	1.750	1.750	1.750	1.750	1.771	1.787	1.793	1.780	
1.735	1.659	1.559	1.426	1.249	1.036	.790	.533	.276	0.000	
-2.386	-2.383	-2.365	-2.319	-2.262	-2.189	-2.107	-2.014	-1.914	-1.799	Z 7
-1.671	-1.502	-1.326	-1.326	-1.326	-1.326	-1.185	-1.030	-.854	-.651	
-.403	-.167	.051	.251	.436	.597	.724	.815	.872	.893	
0.000	.026	.204	.380	.545	.701	.864	1.019	1.182	1.334	Y 8
1.487	1.599	1.655	1.375	1.375	1.655	1.699	1.737	1.755	1.752	
1.712	1.643	1.534	1.382	1.188	.955	.695	.422	.147	0.000	
-2.604	-2.604	-2.589	-2.540	-2.483	-2.422	-2.353	-2.277	-2.186	-2.086	Z 8
-1.980	-1.853	-1.733	-1.850	-1.411	-1.733	-1.529	-1.326	-1.111	-.863	
-.566	-.324	-.103	.124	.327	.484	.606	.693	.742	.751	
0.000	.024	.176	.330	.478	.627	.775	.911	1.048	1.199	Y 9
1.354	1.522	1.655	1.375	1.375	1.655	1.590	1.596	1.608	1.578	
1.502	1.393	1.266	1.105	.927	.742	.530	.321	.088	0.000	
-2.846	-2.846	-2.836	-2.807	-2.771	-2.722	-2.662	-2.601	-2.525	-2.450	Z 9
-2.365	-2.280	-2.207	-2.235	-1.344	-1.443	-1.341	-1.129	-.961	-.757	
-.536	-.348	-.182	-.024	.127	.239	.333	.394	.425	.433	
0.000	0.000	.023	.165	.301	.445	.589	.730	.892	1.057	Y 10
1.228	1.422	1.655	1.375	1.375	1.655	1.534	1.473	1.390	1.287	
1.170	1.045	.915	.774	.614	.454	.286	.110	0.000	0.000	
-3.061	-3.061	-3.060	-3.049	-3.027	-3.002	-2.968	-2.920	-2.875	-2.818	Z 10
-2.758	-2.699	-2.629	-2.679	-1.562	-1.598	-1.447	-1.289	-1.135	-.993	
-.858	-.742	-.638	-.533	-.427	-.331	-.253	-.206	-.204	-.204	
0.000	0.000	.017	.156	.289	.428	.574	.722	.883	1.055	Y 11
1.243	1.440	1.655	1.375	1.375	1.655	1.503	1.413	1.310	1.204	
1.086	.960	.831	.694	.545	.393	.240	.072	0.000	0.000	
-3.467	-3.467	-3.466	-3.452	-3.434	-3.412	-3.383	-3.354	-3.317	-3.268	Z 11
-3.224	-3.164	-3.073	-3.137	-1.867	-1.881	-1.767	-1.632	-1.501	-1.373	
-1.254	-1.149	-1.056	-.959	-.871	-.787	-.721	-.681	-.680	-.680	
0.000	0.000	.017	.153	.288	.427	.574	.719	.880	1.055	Y 12
1.234	1.437	1.655	1.375	1.375	1.655	1.455	1.349	1.249	1.143	
1.022	.901	.774	.645	.496	.363	.210	.053	0.000	0.000	
-3.894	-3.894	-3.893	-3.874	-3.862	-3.836	-3.805	-3.770	-3.732	-3.694	Z 12
-3.640	-3.579	-3.509	-3.584	-2.225	-2.214	-2.101	-1.970	-1.836	-1.729	
-1.622	-1.522	-1.430	-1.354	-1.267	-1.195	-1.134	-1.096	-1.096	-1.096	
0.000	0.000	.015	.153	.288	.427	.574	.719	.883	1.055	Y 13
1.240	1.438	1.655	1.375	1.375	1.655	1.437	1.331	1.228	1.120	
1.001	.883	.759	.627	.483	.346	.201	.048	0.000	0.000	
-4.309	-4.309	-4.306	-4.288	-4.274	-4.248	-4.219	-4.190	-4.149	-4.105	Z 13
-4.053	-4.002	-3.917	-4.002	-2.610	-2.582	-2.488	-2.361	-2.237	-2.125	
-2.021	-1.924	-1.838	-1.760	-1.678	-1.607	-1.544	-1.509	-1.509	-1.509	
0.000	0.000	.023	.162	.295	.435	.580	.726	.892	1.058	Y 14
1.243	1.440	1.655	1.375	1.375	1.655	1.431	1.331	1.229	1.119	
1.001	.886	.759	.632	.491	.350	.201	.051	0.000	0.000	
-4.709	-4.709	-4.707	-4.685	-4.671	-4.649	-4.619	-4.590	-4.549	-4.504	Z 14
-4.448	-4.384	-4.298	-4.388	-2.994	-2.957	-2.882	-2.755	-2.632	-2.520	
-2.416	-2.319	-2.238	-2.156	-2.077	-2.000	-1.938	-1.910	-1.910	-1.910	
0.000	0.000	.017	.156	.291	.435	.580	.722	.889	1.056	Y 15
1.241	1.426	1.655	1.375	1.375	1.655	1.440	1.332	1.229	1.116	
1.001	.883	.753	.622	.483	.344	.201	.049	0.000	0.000	
-5.054	-5.054	-5.051	-5.042	-5.014	-4.993	-4.965	-4.937	-4.901	-4.854	Z 15
-4.800	-4.738	-4.646	-4.749	-3.355	-3.307	-3.225	-3.104	-2.980	-2.863	
-2.762	-2.671	-2.585	-2.496	-2.421	-2.343	-2.287	-2.254	-2.254	-2.254	
0.000	0.000	.039	.177	.315	.453	.592	.738	.903	1.076	Y 16
1.257	1.460	1.655	1.375	1.375	1.655	1.444	1.335	1.233	1.124	
1.006	.885	.764	.631	.486	.345	.201	.048	0.000	0.000	
-5.378	-5.378	-5.376	-5.355	-5.338	-5.320	-5.288	-5.260	-5.220	-5.176	Z 16
-5.122	-5.067	-4.994	-5.073	-3.697	-3.643	-3.554	-3.430	-3.309	-3.197	
-3.096	-2.998	-2.912	-2.826	-2.749	-2.679	-2.612	-2.580	-2.574	-2.574	
0.000	0.000	.041	.188	.335	.477	.631	.777	.946	1.113	Y 17
1.285	1.461	1.655	1.375	1.375	1.655	1.512	1.437	1.346	1.249	
1.134	1.013	.883	.734	.583	.419	.255	.091	0.000	0.000	
-5.723	-5.723	-5.720	-5.705	-5.678	-5.649	-5.612	-5.568	-5.514	-5.453	Z 17
-5.387	-5.293	-5.174	-5.268	-4.106	-4.033	-3.952	-3.805	-3.667	-3.536	
-3.416	-3.304	-3.196	-3.107	-3.012	-2.931	-2.861	-2.822	-2.822	-2.822	

Table II. - Continued.

(a) Continued

0.000	0.000	.080	.241	.392	.557	.712	.868	1.040	1.192	Y 18
1.361	1.485	1.655	1.375	1.375	1.655	1.506	1.434	1.346	1.243	
1.122	1.004	.868	.727	.565	.416	.241	.074	0.000	0.000	
-6.020	-6.020	-6.017	-5.997	-5.971	-5.935	-5.892	-5.838	-5.759	-5.684	Z 18
-5.581	-5.448	-5.326	-5.420	-4.504	-4.426	-4.299	-4.119	-3.961	-3.809	
-3.658	-3.537	-3.428	-3.328	-3.231	-3.149	-3.079	-3.025	-3.025	-3.025	
0.000	0.000	.167	.333	.488	.642	.793	.945	1.108	1.260	Y 19
1.393	1.502	1.655	1.375	1.375	1.655	1.547	1.508	1.441	1.341	
1.223	1.096	.960	.836	.681	.521	.363	.197	.018	0.000	
-6.274	-6.274	-6.244	-6.201	-6.153	-6.092	-6.029	-5.953	-5.862	-5.774	Z 19
-5.665	-5.520	-5.441	-5.530	-4.881	-4.801	-4.648	-4.463	-4.277	-4.109	
-3.958	-3.830	-3.703	-3.609	-3.509	-3.416	-3.340	-3.270	-3.225	-3.225	
0.000	.015	.194	.366	.530	.690	.842	.993	1.154	1.299	Y 20
1.414	1.517	1.655	1.375	1.375	1.655	1.562	1.556	1.511	1.438	
1.326	1.202	1.069	.921	.763	.587	.415	.230	.030	0.000	
-6.495	-6.495	-6.465	-6.416	-6.359	-6.271	-6.213	-6.126	-6.023	-5.914	Z 20
-5.765	-5.614	-5.530	-5.615	-5.232	-5.153	-4.996	-4.799	-4.587	-4.418	
-4.236	-4.085	-3.949	-3.821	-3.706	-3.600	-3.512	-3.431	-3.379	-3.376	
0.000	.045	.236	.430	.615	.793	.957	1.114	1.263	1.384	Y 21
1.450	1.553	1.655	1.375	1.375	1.655	1.559	1.556	1.547	1.520	
1.450	1.354	1.232	1.087	.914	.718	.506	.294	.076	0.000	
-6.686	-6.663	-6.659	-6.622	-6.577	-6.498	-6.398	-6.280	-6.147	-6.001	Z 21
-5.817	-5.647	-5.588	-5.667	-5.552	-5.475	-5.299	-5.090	-4.890	-4.690	
-4.475	-4.285	-4.148	-3.994	-3.864	-3.743	-3.646	-3.576	-3.540	-3.534	
0.000	.115	.330	.542	.736	.905	1.060	1.199	1.326	1.420	Y 22
1.496	1.547	1.572	1.572	1.572	1.572	1.587	1.572	1.538	1.484	
1.393	1.281	1.154	1.017	.845	.663	.478	.288	.088	0.000	
-6.831	-6.828	-6.798	-6.737	-6.656	-6.556	-6.428	-6.283	-6.114	-5.953	Z 22
-5.774	-5.611	-5.450	-5.450	-5.450	-5.450	-5.254	-5.069	-4.872	-4.693	
-4.500	-4.330	-4.179	-4.048	-3.921	-3.824	-3.755	-3.709	-3.682	-3.679	
0.000	.018	.230	.445	.650	.821	.984	1.126	1.257	1.357	Y 23
1.429	1.481	1.511	1.512	1.511	1.511	1.526	1.517	1.484	1.426	
1.346	1.241	1.099	.957	.787	.606	.418	.233	.045	0.000	
-6.828	-6.828	-6.810	-6.763	-6.683	-6.589	-6.471	-6.335	-6.168	-5.998	Z 23
-5.832	-5.665	-5.511	-5.511	-5.511	-5.511	-5.326	-5.132	-4.933	-4.748	
-4.578	-4.409	-4.236	-4.109	-3.988	-3.897	-3.827	-3.785	-3.770	-3.770	
0.000	.091	.291	.478	.660	.815	.963	1.087	1.208	1.293	Y 24
1.357	1.402	1.429	1.429	1.429	1.429	1.438	1.429	1.393	1.341	
1.272	1.172	1.042	.911	.757	.590	.424	.239	.061	0.000	
-6.715	-6.710	-6.686	-6.631	-6.553	-6.462	-6.344	-6.220	-6.059	-5.911	Z 24
-5.750	-5.599	-5.450	-5.450	-5.450	-5.450	-5.278	-5.102	-4.921	-4.757	
-4.603	-4.442	-4.285	-4.160	-4.051	-3.967	-3.903	-3.861	-3.840	-3.836	
0.000	.215	.394	.557	.706	.836	.954	1.057	1.145	1.208	Y 25
1.257	1.287	1.302	1.302	1.302	1.302	1.302	1.293	1.263	1.217	
1.163	1.087	.978	.872	.745	.612	.469	.321	.164	0.000	
-6.489	-6.471	-6.428	-6.365	-6.280	-6.186	-6.077	-5.956	-5.811	-5.684	Z 25
-5.541	-5.420	-5.299	-5.299	-5.299	-5.299	-5.148	-5.002	-4.854	-4.718	
-4.587	-4.454	-4.321	-4.215	-4.115	-4.033	-3.967	-3.921	-3.891	-3.882	
0.000	.162	.333	.475	.609	.718	.827	.908	.987	1.048	Y 26
1.090	1.102	1.129	1.129	1.129	1.129	1.136	1.123	1.099	1.066	
1.011	.948	.839	.766	.651	.539	.415	.276	.142	0.000	
-6.170	-6.153	-6.120	-6.062	-5.989	-5.911	-5.811	-5.714	-5.593	-5.472	Z 26
-5.354	-5.238	-5.148	-5.148	-5.148	-5.148	-5.008	-4.887	-4.754	-4.639	
-4.515	-4.400	-4.282	-4.191	-4.100	-4.030	-3.973	-3.930	-3.903	-3.894	
0.000	.151	.282	.400	.509	.606	.690	.763	.824	.871	Y 27
.908	.925	.939	.939	.939	.939	.939	.930	.912	.878	
.831	.778	.697	.624	.528	.436	.333	.225	.118	0.000	
-5.758	-5.742	-5.711	-5.669	-5.604	-5.531	-5.458	-5.369	-5.274	-5.170	Z 27
-5.070	-4.978	-4.890	-4.886	-4.886	-4.886	-4.783	-4.679	-4.569	-4.469	
-4.377	-4.289	-4.194	-4.121	-4.048	-3.991	-3.949	-3.911	-3.892	-3.889	
0.000	.112	.207	.297	.379	.450	.513	.563	.612	.642	Y 28
.666	.681	.689	.689	.689	.689	.689	.681	.662	.642	
.606	.600	.512	.459	.392	.324	.252	.175	.095	0.000	
-5.279	-5.263	-5.240	-5.205	-5.163	-5.113	-5.044	-4.975	-4.902	-4.829	Z 28
-4.760	-4.691	-4.614	-4.610	-4.618	-4.618	-4.541	-4.469	-4.381	-4.316	
-4.243	-4.186	-4.121	-4.064	-4.010	-3.964	-3.934	-3.907	-3.892	-3.889	
0.000	.076	.141	.199	.252	.290	.336	.370	.393	.416	Y 29
.424	.431	.431	.431	.431	.431	.427	.415	.404	.385	
.358	.327	.296	.262	.220	.177	.135	.093	.047	0.000	
-4.735	-4.727	-4.708	-4.685	-4.654	-4.623	-4.581	-4.535	-4.485	-4.435	Z 29
-4.389	-4.343	-4.301	-4.301	-4.301	-4.301	-4.252	-4.202	-4.156	-4.117	
-4.075	-4.037	-4.003	-3.976	-3.942	-3.919	-3.904	-3.892	-3.885	-3.885	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 30
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	Z 30
-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	

Table II. - Continued.

(a) Concluded

```
-3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942   PODORG 1
58.679  6.146 -5.965                                                    XPOD
 0.000   .606  1.211  1.817  2.422  3.028  3.634  4.239  4.845  5.450   XPOD
 6.056  6.662  7.267  7.873  8.478  9.084  9.576  9.690 10.295 10.890   RPOD
  .781   .793   .805   .818   .831   .843   .855   .868   .880   .893   RPOD
  .905   .918   .930   .943   .955   .968   .978   .978   .978   .978   PODORG 2
59.806 10.271 -5.867                                                    XPOD
 0.000   .606  1.211  1.817  2.422  3.028  3.634  4.239  4.845  5.450   XPOD
 6.056  6.662  7.267  7.873  8.478  9.084  9.576  9.690 10.295 10.890   RPOD
  .781   .793   .805   .818   .831   .843   .855   .868   .880   .893   RPOD
  .905   .918   .930   .943   .955   .968   .978   .978   .978   .978   V FIN
61.843 13.672 -4.737 10.647 71.905 13.672 -1.741  1.450                 XFIN
0.     10.    20.    30.    40.    50.    60.    70.    90.    100.    FINORD
0.     .466   .846  1.138  1.345  1.465  1.498  1.390   .641   0.      V TAIL
85.792  0.000 -3.869  9.047 93.168  0.000  -.940  2.144                 XVTAIL
0.     10.    20.    30.    40.    50.    60.    70.    90.    100.    TVTAIL
0.     .466   .846  1.138  1.345  1.465  1.498  1.390   .641   0.      H TAIL
83.603  .878 -4.646  7.327 90.175  4.575 -5.637  2.196                 XHTAIL
0.     10.    20.    30.    40.    50.    70.    80.    90.    100.    THTAIL
0.0    .553   .948  1.264  1.448  1.5    1.264   .948   .553   0.0
```

Table II. - Continued.

(b) U.S. Customary Units (feet)

AST-204 (4/19/79) 4 ABREAST DIGITAL BLENDED FUSELAGE

```
  1  1  1  1  1  1    16 28  1 30 30                    2 20  2 10  1 10
8447.  88.588 168.060                                                    REFA
0.      .125   .25    .5     .75    1.0    1.5    2.5    5.0    10.      XAF 10
 15.    20.    25.    30.    35.    40.    45.    50.    55.    60.      XAF 20
65.    70.    75.    80.    85.    90.    95.    100.                    XAF 28
72.221 4.541  -5.137 149.537                                            WORG 3A
75.447 5.466  -5.650 146.276                                            WORG 4
86.505 8.637  -7.639 135.155                                            WORG 5
97.560 11.807 -9.376 124.030                                            WORG 6
108.61914.978 -10.790112.909                                            WORG 7
127.16720.296 -12.62094.250                                             WORG 8
141.79124.490 -13.90480.773                                             WORG 9
157.98529.133 -15.05165.847                                             WORG 10
171.75733.920 -15.29753.383                                             WORG 11
181.11337.172 -15.22646.897                                             WORG 12
190.23740.343 -15.43840.576                                             WORG 13
204.07045.150 -15.64430.991                                             WORG 14
204.07045.151 -15.64430.991                                             WORG 15
212.21749.855 -15.69526.999                                             WORG 16
223.20056.196 -16.25621.618                                             WORG 17
234.18662.537 -17.15216.237                                             WORG 18
0.      -.002  -.004  -.007  -.011  -.014  -.023  -.054  -.192  -.731    TZ 3A.1
-1.456 -2.290 -3.180 -4.096 -5.016 -5.922 -6.800 -7.639 -8.436 -9.188   TZ 3A.2
-9.893 -10.552-11.166-11.734-12.259-12.739-13.173-13.555                TZ 3A.3
0.      -.001  -.001  -.002  -.003  -.004  -.008  -.036  -.155  -.662    TZ 4.1
-1.351 -2.143 -2.983 -3.846 -4.713 -5.566 -6.394 -7.187 -7.942 -8.657   TZ 4.2
-9.331 -9.964 -10.557-11.110-11.625-12.099-12.532-12.919                TZ 4.3
0.      .002   .004   .008   .012   .017   .025   .027   -.041  -.406    TZ 5.1
-.918  -1.516 -2.158 -2.822 -3.494 -4.160 -4.810 -5.443 -6.055 -6.640   TZ 5.2
-7.202 -7.742 -8.257 -8.749 -9.219 -9.665 -10.084-10.475                TZ 5.3
0.      .004   .008   .017   .025   .034   .050   .084   .059   -.154    TZ 6.1
-.503  -.921  -1.385 -1.877 -2.376 -2.878 -3.381 -3.874 -4.360 -4.836   TZ 6.2
-5.302 -5.759 -6.205 -6.643 -7.070 -7.487 -7.889 -8.277                 TZ 6.3
0.      .005   .010   .021   .031   .041   .062   .103   .163   .071     TZ 7.1
-.141  -.418  -.735  -1.076 -1.438 -1.809 -2.186 -2.567 -2.948 -3.333   TZ 7.2
-3.716 -4.100 -4.486 -4.871 -5.255 -5.638 -6.015 -6.388                 TZ 7.3
0.      .006   .012   .023   .035   .047   .070   .117   .216   .280     TZ 8.1
.241   .135   -.002  -.176  -.364  -.570  -.792  -1.026 -1.270 -1.527   TZ 8.2
-1.793 -2.067 -2.350 -2.640 -2.937 -3.242 -3.550 -3.862                 TZ 8.3
0.      .006   .013   .025   .038   .051   .076   .127   .229   .330     TZ 9.1
.356   .339   .283   .205   .098   -.024  -.164  -.315  -.480  -.655    TZ 9.2
-.843  -1.041 -1.250 -1.468 -1.697 -1.933 -2.176 -2.427                 TZ 9.3
0.      .005   .009   .016   .027   .037   .056   .092   .182   .299     TZ 10.1
.354   .374   .370   .350   .311   .259   .194   .118   .030   -.068    TZ 10.2
-.177  -.295  -.421  -.558  -.703  -.855  -1.013 -1.179                  TZ 10.3
0.      .002   .005   .010   .014   .019   .029   .048   .097   .184     TZ 11.1
.223   .244   .248   .230   .202   .167   .116   .058   -.007  -.084    TZ 11.2
-.166  -.254  -.354  -.458  -.567  -.683  -.806  -.932                  TZ 11.3
0.      .002   .004   .008   .012   .016   .024   .041   .081   .147     TZ 12.1
.187   .207   .219   .203   .184   .158   .120   .074   .022   -.034    TZ 12.2
-.101  -.172  -.246  -.329  -.415  -.505  -.599  -.698                  TZ 12.3
0.      .002   .003   .007   .010   .013   .020   .034   .067   .116     TZ 13.1
.158   .179   .194   .193   .187   .171   .153   .123   .092   .052     TZ 13.2
.011   -.040  -.092  -.148  -.204  -.263  -.322  -.387                  TZ 13.3
0.      .001   .001   .002   .003   .004   .006   .010   .020   .049     TZ 14.1
.061   .101   .112   .118   .118   .117   .115   .111   .104   .096     TZ 14.2
.087   .077   .066   .055   .043   .029   .015   0.                     TZ 14.3
0.      .001   .001   .002   .003   .004   .006   .010   .020   .049     TZ 15.1
.081   .101   .112   .118   .118   .117   .115   .111   .104   .096     TZ 15.2
.087   .077   .066   .055   .043   .029   .015   0.                     TZ 15.3
0.      -.001  -.002  -.005  -.007  -.009  -.014  -.023  -.046  -.092    TZ 16.1
-.139  -.166  -.184  -.203  -.222  -.241  -.260  -.279  -.299  -.318    TZ 16.2
-.337  -.355  -.374  -.392  -.409  -.427  -.446  -.464                  TZ 16.3
0.      -.001  -.002  -.005  -.007  -.010  -.014  -.024  -.048  -.095    TZ 17.1
-.143  -.190  -.238  -.271  -.303  -.336  -.366  -.388  -.411  -.434    TZ 17.2
-.455  -.474  -.493  -.513  -.529  -.545  -.562  -.577                  TZ 17.3
0.      -.001  -.002  -.005  -.007  -.009  -.014  -.023  -.047  -.093    TZ 18.1
-.138  -.159  -.179  -.200  -.220  -.238  -.246  -.253  -.260  -.268    TZ 18.2
-.272  -.268  -.264  -.261  -.257  -.249  -.234  -.219                  TZ 18.3
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Table II. - Continued.

(b) Continued

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0.      .137    .179    .241    .297    .339    .412    .523    .724    .994      WORD3A.1
1.177   1.315   1.416   1.487   1.528   1.539   1.539   1.539   1.539   1.539     WORD3A.2
1.384   1.210   1.018   .817    .614    .412    .211    0.                       WORD3A.3
0.      .136    .178    .237    .291    .333    .405    .514    .712    .978      WORD4.1
1.157   1.292   1.391   1.461   1.501   1.512   1.512   1.512   1.512   1.512     WORD4.2
1.363   1.192   1.003   .806    .606    .406    .208    0.                       WORD4.3
0.      .128    .168    .225    .277    .316    .386    .490    .679    .931      WORD5.1
1.103   1.232   1.326   1.392   1.430   1.441   1.441   1.441   1.441   1.437     WORD5.2
1.294   1.132   .953    .765    .576    .385    .197    0.                       WORD5.3
0.      .118    .160    .216    .266    .304    .370    .470    .651    .894      WORD6.1
1.059   1.182   1.273   1.336   1.373   1.383   1.383   1.383   1.383   1.341     WORD6.2
1.208   1.056   .889    .714    .537    .360    .184    0.                       WORD6.3
0.      .110    .153    .208    .257    .294    .358    .455    .631    .866      WORD7.1
1.025   1.144   1.231   1.293   1.328   1.338   1.338   1.338   1.338   1.277     WORD7.2
1.151   1.006   .848    .681    .512    .343    .175    0.                       WORD7.3
0.      .101    .145    .200    .247    .283    .344    .438    .607    .833      WORD8.1
.987    1.101   1.184   1.244   1.278   1.287   1.287   1.287   1.287   1.186     WORD8.2
1.069   .935    .788    .633    .476    .319    .163    0.                       WORD8.3
0.      .100    .144    .198    .245    .280    .341    .435    .602    .827      WORD9.1
.979    1.092   1.175   1.234   1.268   1.277   1.277   1.277   1.260   1.161     WORD9.2
1.046   .915    .771    .619    .466    .312    .159    0.                       WORD9.3
0.      .102    .146    .201    .248    .284    .345    .440    .609    .836      WORD10.1
.990    1.105   1.189   1.248   1.283   1.292   1.292   1.292   1.247   1.149     WORD10.2
1.035   .906    .763    .613    .461    .309    .156    0.                       WORD10.3
0.      .111    .154    .209    .258    .295    .359    .457    .632    .868      WORD11.1
1.028   1.148   1.235   1.297   1.330   1.342   1.342   1.342   1.263   1.164     WORD11.2
1.049   .917    .773    .621    .467    .313    .160    0.                       WORD11.3
0.      .118    .160    .216    .266    .304    .370    .470    .651    .894      WORD12.1
1.059   1.181   1.272   1.335   1.372   1.382   1.382   1.362   1.300   1.198     WORD12.2
1.080   .945    .796    .639    .481    .322    .164    0.                       WORD12.3
0.      .125    .166    .222    .274    .313    .381    .484    .670    .920      WORD13.1
1.090   1.216   1.309   1.375   1.413   1.423   1.423   1.423   1.339   1.234     WORD13.2
1.112   .972    .819    .658    .495    .331    .169    0.                       WORD13.3
0.      .138    .177    .235    .289    .330    .402    .510    .706    .969      WORD14.1
1.148   1.282   1.380   1.449   1.489   1.500   1.500   1.500   1.411   1.300     WORD14.2
1.171   1.024   .862    .692    .521    .349    .178    0.                       WORD14.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541      WORD15.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440     WORD15.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD15.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541      WORD16.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440     WORD16.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD16.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541      WORD17.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440     WORD17.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD17.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541      WORD18.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440     WORD18.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD18.3
  0.000 10.862 21.724 32.586 43.448 54.310 65.172 75.447 86.897 97.759  XFUS
108.621119.483130.344141.207152.069162.931173.793184.655195.517206.379  XFUS
217.241228.103238.996249.828260.690271.552282.414293.276304.138315.000  XFUS
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000  Y  1
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  Z  1
 -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700
 -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700  -1.700
  0.000   0.238   0.427   0.641   0.828   1.003   1.152   1.276   1.399   1.485  Y  2
  1.570   1.629   1.664   1.664   1.664   1.664   1.674   1.696   1.681   1.664
  1.608   1.516   1.410   1.293   1.112   0.932   0.728   0.510   0.281   0.000
 -3.383  -3.365  -3.336  -3.281  -3.188  -3.083  -2.941  -2.812  -2.657  -2.504  Z  2
 -2.337  -2.172  -2.019  -2.019  -2.019  -2.019  -1.892  -1.753  -1.601  -1.399
 -1.173  -0.972  -0.785  -.610   -.449   -.314   -.204   -.108   -.037   -.017
  0.000   0.354   0.671   1.001   1.318   1.586   1.853   2.057   2.237   2.390  Y  3
  2.532   2.636   2.701   2.701   2.701   2.701   2.754   2.768   2.771   2.748
  2.663   2.540   2.366   2.154   1.891   1.589   1.224   0.846   0.468   0.000
 -4.483  -4.474  -4.388  -4.290  -4.166  -3.991  -3.779  -3.578  -3.352  -3.126  Z  3
 -2.862  -2.597  -2.332  -2.332  -2.332  -2.332  -2.117  -1.915  -1.649  -1.333
 -0.940  -.610   -.267   -.031    .332    .562    .781    .949   1.041   1.071
  0.000   0.497   0.928   1.359   1.753   2.109   2.440   2.721   2.990   3.208  Y  4
  3.388   3.518   3.622   3.622   3.622   3.622   3.688   3.716   3.732   3.698
  3.601   3.428   3.218   2.956   2.593   2.191   1.700   1.171   0.628   0.000
 -5.432  -5.398  -5.339  -5.179  -4.992  -4.806  -4.543  -4.268  -3.941  -3.640  Z  4
 -3.300  -2.960  -2.632  -2.632  -2.632  -2.632  -2.341  -2.051  -1.697  -1.266
  -.759   -.290   0.155    .575    .970   1.316   1.624   1.844   1.975   2.032
  0.000   0.597   1.116   1.636   2.106   2.576   2.945   3.302   3.608   3.864  Y  5
  4.095   4.251   4.368   4.368   4.368   4.368   4.446   4.487   4.503   4.470
```

Table II. - Continued.

(b) Continued

4.335	4.150	3.876	3.551	3.136	2.623	2.044	1.401	0.732	0.000	
-6.273	-6.227	-6.143	-5.983	-5.746	-5.497	-5.196	-4.858	-4.506	-4.154	Z 5
-3.713	-3.310	-2.880	-2.880	-2.880	-2.880	-2.539	-2.186	-1.743	-1.237	
-.641	-.070	.476	.972	1.456	1.877	2.249	2.507	2.689	2.734	
0.000	0.250	.810	1.375	1.950	2.510	3.020	3.470	3.890	4.220	Y 6
4.500	4.750	4.940	4.940	4.940	4.940	5.040	5.150	5.245	5.240	
5.150	4.940	4.620	4.160	3.540	2.890	2.150	1.370	0.590	0.000	
-7.140	-7.135	-7.060	-6.930	-6.750	-6.500	-6.225	-5.880	-5.520	-5.120	Z 6
-4.694	-4.240	-3.770	-3.770	-3.770	-3.770	-3.380	-2.940	-2.400	-1.750	
-1.000	-.300	.380	0.980	1.550	2.010	2.390	2.650	2.800	2.858	
0.000	0.590	1.180	1.830	2.390	2.945	3.460	3.970	4.470	4.970	Y 7
5.420	5.680	5.780	5.780	5.780	5.780	5.850	5.900	5.920	5.880	
5.730	5.480	5.150	4.710	4.125	3.420	2.610	1.760	0.910	0.000	
-7.880	-7.870	-7.810	-7.660	-7.470	-7.230	-6.960	-6.650	-6.320	-5.940	Z 7
-5.520	-4.960	-4.380	-4.380	-4.380	-4.380	-3.915	-3.400	-2.820	-2.150	
-1.330	-.550	.170	.830	1.440	1.970	2.390	2.690	2.880	2.950	
0.000	0.085	.675	1.255	1.800	2.315	2.855	3.365	3.905	4.405	Y 8
4.910	5.280	5.466	4.541	4.541	5.466	5.610	5.735	5.795	5.785	
5.655	5.425	5.065	4.565	3.925	3.155	2.295	1.395	.485	0.000	
-8.600	-8.600	-8.550	-8.390	-8.200	-8.000	-7.770	-7.520	-7.220	-6.890	Z 8
-6.540	-6.120	-5.722	-6.110	-4.660	-5.722	-5.050	-4.380	-3.670	-2.850	
-1.870	-1.070	-.340	.410	1.080	1.600	2.000	2.290	2.450	2.480	
0.000	0.080	.580	1.090	1.580	2.070	2.560	3.010	3.460	3.960	Y 9
4.470	5.025	5.466	4.541	4.540	5.466	5.250	5.270	5.310	5.210	
4.960	4.600	4.180	3.650	3.060	2.450	1.750	1.060	0.290	0.000	
-9.400	-9.400	-9.365	-9.270	-9.150	-8.990	-8.790	-8.590	-8.340	-8.090	Z 9
-7.810	-7.530	-7.290	-7.382	-4.440	-4.767	-4.430	-3.730	-3.175	-2.500	
-1.770	-1.150	-.600	-.080	.420	.790	1.100	1.300	1.405	1.430	
0.000	0.000	.075	.545	.995	1.470	1.945	2.410	2.945	3.490	Y 10
4.055	4.695	5.466	4.541	4.541	5.466	5.065	4.865	4.591	4.250	
3.864	3.450	3.022	2.556	2.028	1.498	.943	.362	0.000	0.000	
-10.110	-10.110	-10.105	-10.071	-9.996	-9.913	-9.803	-9.642	-9.494	-9.308	Z 10
-9.109	-8.912	-8.681	-8.848	-5.157	-5.276	-4.778	-4.258	-3.749	-3.279	
-2.833	-2.451	-2.106	-1.761	-1.409	-1.092	-.836	-.679	-.675	-.675	
0.000	0.000	.055	.515	.955	1.415	1.896	2.385	2.915	3.485	Y 11
4.105	4.755	5.466	4.541	4.541	5.466	4.965	4.665	4.325	3.975	
3.587	3.172	2.745	2.292	1.801	1.297	.792	.237	0.000	0.000	
-11.450	-11.450	-11.447	-11.401	-11.341	-11.269	-11.172	-11.075	-10.953	-10.793	Z 11
-10.646	-10.450	-10.147	-10.360	-6.165	-6.213	-5.834	-5.389	-4.956	-4.535	
-4.140	-3.795	-3.488	-3.167	-2.878	-2.598	-2.380	-2.249	-2.246	-2.246	
0.000	0.000	.055	.505	.950	1.410	1.895	2.375	2.905	3.485	Y 12
4.075	4.745	5.466	4.541	4.541	5.466	4.805	4.455	4.125	3.775	
3.375	2.975	2.555	2.130	1.645	1.199	.694	.175	0.000	0.000	
-12.660	-12.860	-12.857	-12.793	-12.755	-12.667	-12.566	-12.452	-12.325	-12.199	Z 12
-12.022	-11.819	-11.589	-11.835	-7.348	-7.313	-6.937	-6.507	-6.064	-5.710	
-5.356	-5.027	-4.723	-4.470	-4.184	-3.947	-3.746	-3.619	-3.619	-3.619	
0.000	0.000	.050	.505	.950	1.410	1.895	2.375	2.915	3.485	Y 13
4.095	4.750	5.466	4.541	4.541	5.466	4.745	4.395	4.055	3.699	
3.305	2.916	2.506	2.071	1.595	1.144	.665	.160	0.000	0.000	
-14.230	-14.230	-14.219	-14.160	-14.114	-14.030	-13.933	-13.837	-13.703	-13.557	Z 13
-13.385	-13.215	-12.935	-13.215	-8.619	-8.528	-8.217	-7.797	-7.388	-7.018	
-6.673	-6.353	-6.070	-5.813	-5.540	-5.307	-5.100	-4.982	-4.982	-4.982	
0.000	0.000	.075	.536	.975	1.435	1.915	2.398	2.945	3.495	Y 14
4.105	4.755	5.466	4.541	4.541	5.466	4.725	4.396	4.058	3.695	
3.306	2.925	2.506	2.088	1.621	1.155	.663	.170	0.000	0.000	
-15.550	-15.550	-15.545	-15.472	-15.425	-15.352	-15.255	-15.157	-15.022	-14.874	Z 14
-14.689	-14.478	-14.194	-14.491	-9.889	-9.764	-9.519	-9.099	-8.692	-8.322	
-7.978	-7.659	-7.390	-7.121	-6.858	-6.605	-6.399	-6.307	-6.307	-6.307	
0.000	0.000	.055	.515	.960	1.435	1.915	2.384	2.935	3.486	Y 15
4.097	4.708	5.466	4.541	4.541	5.466	4.755	4.400	4.058	3.685	
3.306	2.915	2.486	2.055	1.595	1.136	.665	.161	0.000	0.000	
-16.690	-16.690	-16.682	-16.652	-16.559	-16.491	-16.397	-16.304	-16.187	-16.031	Z 15
-15.852	-15.648	-15.345	-15.682	-11.079	-10.922	-10.650	-10.252	-9.841	-9.455	
-9.120	-8.822	-8.537	-8.251	-7.996	-7.738	-7.553	-7.444	-7.444	-7.444	
0.000	0.000	.128	.584	1.040	1.497	1.954	2.436	2.981	3.553	Y 16
4.150	4.823	5.466	4.541	4.541	5.466	4.769	4.408	4.072	3.711	
3.323	2.923	2.522	2.084	1.606	1.141	.663	.158	0.000	0.000	
-17.760	-17.760	-17.754	-17.685	-17.628	-17.571	-17.464	-17.370	-17.239	-17.095	Z 16
-16.914	-16.734	-16.493	-16.752	-12.210	-12.030	-11.736	-11.326	-10.929	-10.557	
-10.223	-9.901	-9.616	-9.332	-9.077	-8.846	-8.625	-8.520	-8.500	-8.500	
0.000	0.000	.135	.620	1.105	1.575	2.085	2.565	3.125	3.675	Y 17
4.245	4.825	5.466	4.541	4.541	5.466	4.995	4.745	4.445	4.126	
3.745	3.345	2.915	2.425	1.927	1.385	.843	.300	0.000	0.000	
-18.900	-18.900	-18.890	-18.840	-18.750	-18.655	-18.535	-18.387	-18.210	-18.010	Z 17
-17.790	-17.480	-17.088	-17.396	-13.561	-13.319	-13.050	-12.567	-12.109	-11.677	
-11.282	-10.912	-10.555	-10.261	-9.946	-9.680	-9.449	-9.319	-9.319	-9.319	

Table II. - Continued.

(b) Continued

```
  0.000  0.000   .265   .795  1.295  1.840  2.350  2.865  3.435  3.935  Y 18
  4.495  4.905  5.466  4.541  4.541  5.466  4.975  4.735  4.445  4.105
  3.705  3.315  2.865  2.400  1.865  1.375   .795   .245  0.000  0.000
-19.880-19.880-19.870-19.805-19.720-19.600-19.460-19.260-19.020-18.770  Z 18
-18.430-17.993-17.590-17.898-14.876-14.617-14.198-13.603-13.080-12.580
-12.080-11.680-11.320-10.990-10.670-10.400-10.170 -9.990 -9.990 -9.990
  0.000  0.000   .550  1.100  1.610  2.120  2.620  3.120  3.660  4.160  Y 19
  4.600  4.960  5.466  4.541  4.541  5.466  5.110  4.980  4.760  4.430
  4.040  3.620  3.170  2.760  2.250  1.720  1.200   .650  0.060  0.000
-20.720-20.720-20.620-20.480-20.320-20.120-19.910-19.660-19.360-19.070  Z 19
-18.710-18.230-17.968-18.264-16.119-15.855-15.350-14.740-14.125-13.570
-13.070-12.650-12.230-11.920-11.590-11.280-11.030-10.800-10.650-10.650
  0.000  0.050   .640  1.210  1.750  2.280  2.780  3.280  3.810  4.290  Y 20
  4.670  5.010  5.466  4.541  4.541  5.466  5.160  5.140  4.990  4.750
  4.380  3.970  3.530  3.040  2.520  1.940  1.370   .760  0.100  0.000
-21.450-21.450-21.350-21.190-21.000-20.710-20.520-20.230-19.890-19.530  Z 20
-19.040-18.540-18.262-18.545-17.278-17.017-16.500-15.849-15.150-14.590
-13.990-13.490-13.040-12.620-12.240-11.890-11.600-11.330-11.160-11.150
  0.000  0.150   .780  1.420  2.030  2.620  3.160  3.680  4.170  4.570  Y 21
  4.790  5.130  5.466  4.541  4.541  5.466  5.150  5.140  5.110  5.020
  4.790  4.470  4.070  3.590  3.020  2.370  1.670  0.970  0.250  0.000
-22.080-22.070-21.990-21.870-21.720-21.460-21.130-20.740-20.300-19.820  Z 21
-19.210-18.650-18.455-18.715-18.334-18.082-17.500-16.810-16.150-15.490
-14.760-14.150-13.700-13.190-12.760-12.360-12.040-11.810-11.690-11.670
  0.000  0.380  1.090  1.790  2.430  2.990  3.500  3.960  4.380  4.690  Y 22
  4.940  5.110  5.190  5.190  5.190  5.190  5.240  5.190  5.080  4.900
  4.600  4.230  3.810  3.360  2.790  2.190  1.580  0.950  0.290  0.000
-22.560-22.550-22.450-22.250-21.980-21.650-21.230-20.750-20.190-19.660  Z 22
-19.070-18.530-18.000-18.000-18.000-18.000-17.350-16.740-16.090-15.500
-14.860-14.300-13.800-13.370-12.950-12.630-12.400-12.250-12.160-12.150
  0.000  0.060   .760  1.470  2.145  2.710  3.250  3.720  4.150  4.480  Y 23
  4.720  4.890  4.990  4.995  4.990  4.990  5.040  5.010  4.900  4.710
  4.445  4.100  3.630  3.160  2.600  2.000  1.380  0.770  0.150  0.000
-22.550-22.550-22.490-22.335-22.070-21.760-21.370-20.920-20.370-19.810  Z 23
-19.260-18.710-18.200-18.200-18.200-18.200-17.590-16.950-16.290-15.680
-15.120-14.560-13.990-13.570-13.170-12.870-12.640-12.500-12.450-12.450
  0.000  0.300   .960  1.560  2.180  2.690  3.180  3.590  3.990  4.270  Y 24
  4.480  4.630  4.720  4.720  4.720  4.720  4.750  4.720  4.600  4.430
  4.200  3.870  3.440  3.010  2.500  1.950  1.400  0.790  0.200  0.000
-22.175-22.160-22.080-21.900-21.640-21.340-20.950-20.540-20.010-19.520  Z 24
-18.990-18.490-18.000-18.000-18.000-18.000-17.430-16.850-16.250-15.710
-15.200-14.670-14.150-13.740-13.380-13.100-12.890-12.750-12.680-12.675
  0.000  0.710  1.300  1.840  2.330  2.760  3.150  3.490  3.780  3.990  Y 25
  4.150  4.250  4.300  4.300  4.300  4.300  4.300  4.270  4.170  4.020
  3.640  3.589  3.230  2.880  2.460  2.020  1.550  1.060  0.540  0.000
-21.430-21.370-21.230-21.020-20.740-20.430-20.070-19.670-19.190-18.770  Z 25
-18.300-17.900-17.500-17.500-17.500-17.500-17.000-16.520-16.030-15.580
-15.150-14.710-14.270-13.920-13.590-13.320-13.100-12.950-12.850-12.820
  0.000  0.600  1.100  1.570  2.010  2.370  2.730  3.000  3.260  3.460  Y 26
  3.600  3.640  3.730  3.730  3.730  3.730  3.750  3.710  3.630  3.520
  3.340  3.130  2.770  2.530  2.150  1.780  1.370  0.910  0.470  0.000
-20.375-20.320-20.210-20.020-19.780-19.520-19.190-18.870-18.470-18.070  Z 26
-17.680-17.300-17.000-17.000-17.000-17.000-16.540-16.140-15.700-15.320
-14.910-14.530-14.140-13.840-13.540-13.310-13.120-12.980-12.890-12.860
  0.000  0.500  0.930  1.320  1.680  2.000  2.280  2.521  2.722  2.875  Y 27
  3.000  3.055  3.100  3.100  3.100  3.100  3.100  3.070  3.013  2.899
  2.746  2.568  2.302  2.061  1.744  1.440  1.099  0.744  0.390  0.000
-19.015-18.964-18.862-18.722-18.506-18.265-18.024-17.732-17.416-17.074  Z 27
-16.745-16.441-16.150-16.137-16.137-16.137-15.796-15.454-15.088-14.759
-14.456-14.165-13.850-13.610-13.370-13.181-13.043-12.917-12.855-12.843
  0.000  0.370  0.685  0.980  1.250  1.485  1.695  1.860  2.020  2.121  Y 28
  2.200  2.250  2.275  2.275  2.275  2.275  2.275  2.250  2.186  2.120
  2.000  1.980  1.690  1.515  1.295  1.070  0.833  0.579  0.313  0.000
-17.434-17.382-17.305-17.191-17.051-16.885-16.657-16.429-16.188-15.947  Z 28
-15.719-15.492-15.238-15.226-15.251-15.251-14.998-14.758-14.467-14.252
-14.012-13.823-13.609-13.420-13.243-13.092-12.992-12.904-12.854-12.843
  0.000  0.251  0.466  0.656  0.832  0.959  1.110  1.223  1.299  1.374  Y 29
  1.399  1.424  1.424  1.424  1.424  1.424  1.411  1.372  1.334  1.270
  1.181  1.080  0.978  0.864  0.725  0.585  0.446  0.307  0.155  0.000
-15.638-15.612-15.548-15.472-15.370-15.269-15.129-14.977-14.813-14.648  Z 29
-14.496-14.344-14.205-14.205-14.205-14.205-14.041-13.876-13.725-13.598
-13.459-13.333-13.220-13.131-13.018-12.942-12.892-12.855-12.830-12.830
  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  Y 30
  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019  Z 30
-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019
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Table II. - Concluded.

(b) Concluded

-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	
193.788	20.296	-19.698								PODORG 1
0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	XPOD
20.	22.	24.	26.	28.	30.	31.624	32.	34.	35.963	XPOD
2.576	2.619	2.660	2.702	2.743	2.784	2.825	2.866	2.907	2.949	RPOD
2.990	3.031	3.072	3.113	3.154	3.196	3.229	3.229	3.229	3.229	RPOD
197.511	33.920	-19.375								PODORG 2
0.	2.	4.	6.	8.	10.	12.	14.	16.	18.	XPOD
20.	22.	24.	26.	28.	30.	31.624	32.	34.	35.963	XPOD
2.576	2.619	2.660	2.702	2.743	2.784	2.825	2.866	2.907	2.949	RPOD
2.990	3.031	3.072	3.113	3.154	3.196	3.229	3.229	3.229	3.229	RPOD
204.237	45.150	5-15.644	35.163	237.467	45.150	5-5.749	4.787			V FIN
0.	10.	20.	30.	40.	50.	60.	70.	90.	100.	XFIN
0.	.466	.846	1.138	1.345	1.465	1.498	1.390	.641	0.	FINORD
283.330	0.	-12.843	29.877	307.687	0.	-3.103	7.082			V TAIL
0.	10.	20.	30.	40.	50.	60.	70.	90.	100.	XVTAIL
0.	.466	.846	1.138	1.345	1.465	1.498	1.390	.641	0.	TVTAIL
276.100	2.900	-15.343	24.196	297.803	15.110	-18.615	7.252			H TAIL
0.	10.	20.	30.	40.	50.	70.	80.	90.	100.	XHTAIL
0.0	.553	.948	1.264	1.448	1.5	1.264	.948	.553	0.0	THTAIL

Table III. - AST-206 Numerical Model

(a) SI Units (meters)

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AST-206 (5/21/79)  6 ABREAST DIGITAL BLENDED FUSELAGE

  1  1  1  1  1  1    16 28  1 30 30                    2 20  2 10  1 10

 774.49   588 174.060                                                    REFA
0.      .125    .25     .5      .75     1.0     1.5     2.5     5.0     10.    XAF 10
 15.     20.     25.     30.     35.     40.     45.     50.     55.     60.    XAF 20
65.     70.     75.     80.     85.     90.     95.     100.                   XAF 28
 63.685  1.905 -1.555 45.260                                                   WORG 3A
 24.662  2.185 -1.711 44.292                                                   WORG 4
 28.011  3.145 -2.313 40.925                                                   WORG 5
 31.358  4.105 -2.839 37.556                                                   WORG 6
 34.707  5.065 -3.267 34.189                                                   WORG 7
 40.323  6.676 -3.821 28.539                                                   WORG 8
 44.751  7.945 -4.210 24.456                                                   WORG 9
 49.655  9.351 -4.557 19.938                                                   WORG 10
 53.825 10.801 -4.632 16.164                                                   WORG 11
 56.658 11.786 -4.610 14.200                                                   WORG 12
 59.421 12.746 -4.675 12.286                                                   WORG 13
 63.609 14.201 -4.737  9.384                                                   WORG 14
 63.609 14.202 -4.737  9.384                                                   WORG 15
 66.076 15.626 -4.752  8.175                                                   WORG 16
 69.402 17.546 -4.922  6.546                                                   WORG 17
 72.728 19.466 -5.194  4.917                                                   WORG 18
  0.000  -.001  -.001  -.002  -.003  -.004  -.007  -.016  -.058  -.221         TZ 3A.1
  -.441  -.693  -.963 -1.240 -1.519 -1.793 -2.059 -2.313 -2.554 -2.782        TZ 3A.2
-2.996 -3.195 -3.381 -3.553 -3.712 -3.857 -3.989 -4.104                       TZ 3A.3
  0.000  -.000  -.000  -.001  -.001  -.001  -.002  -.011  -.047  -.200         TZ 4.1
  -.409  -.649  -.903 -1.165 -1.427 -1.685 -1.936 -2.176 -2.405 -2.621        TZ 4.2
-2.825 -3.017 -3.197 -3.364 -3.520 -3.664 -3.795 -3.912                       TZ 4.3
  0.000   .001   .001   .002   .004   .005   .008   .008  -.012  -.123         TZ 5.1
  -.278  -.459  -.653  -.855 -1.058 -1.260 -1.456 -1.648 -1.833 -2.011        TZ 5.2
-2.181 -2.344 -2.500 -2.649 -2.792 -2.927 -3.053 -3.172                       TZ 5.3
  0.000   .001   .002   .005   .008   .010   .015   .025   .018  -.047         TZ 6.1
  -.152  -.279  -.419  -.566  -.719  -.871 -1.024 -1.173 -1.320 -1.464        TZ 6.2
-1.605 -1.744 -1.879 -2.012 -2.141 -2.267 -2.389 -2.506                       TZ 6.3
  0.000   .002   .003   .006   .009   .012   .019   .031   .049   .021         TZ 7.1
  -.043  -.127  -.223  -.326  -.435  -.548  -.662  -.777  -.893 -1.009        TZ 7.2
-1.125 -1.241 -1.358 -1.475 -1.591 -1.707 -1.821 -1.934                       TZ 7.3
  0.000   .002   .004   .007   .011   .014   .021   .035   .065   .085         TZ 6.1
   .073   .041  -.001  -.053  -.110  -.173  -.240  -.311  -.385  -.462        TZ 8.2
  -.543  -.626  -.712  -.799  -.889  -.982 -1.075 -1.169                       TZ 8.3
  0.000   .002   .004   .008   .012   .015   .023   .038   .069   .100         TZ 9.1
   .108   .103   .086   .062   .030  -.007  -.050  -.095  -.145  -.198        TZ 9.2
  -.255  -.315  -.379  -.445  -.514  -.585  -.659  -.735                       TZ 9.3
  0.000   .002   .003   .005   .008   .011   .017   .028   .055   .091         TZ 10.1
   .107   .113   .112   .106   .094   .078   .059   .036   .009  -.021        TZ 10.2
  -.054  -.089  -.127  -.169  -.213  -.259  -.307  -.357                       TZ 10.3
  0.000   .001   .002   .003   .004   .006   .009   .015   .029   .056         TZ 11.1
   .068   .074   .075   .070   .061   .051   .035   .018  -.002  -.025        TZ 11.2
  -.050  -.077  -.107  -.139  -.172  -.207  -.244  -.282                       TZ 11.3
  0.000   .001   .001   .002   .004   .005   .007   .012   .025   .045         TZ 12.1
   .057   .063   .066   .061   .056   .048   .036   .022   .007  -.010        TZ 12.2
  -.031  -.052  -.074  -.100  -.126  -.153  -.181  -.211                       TZ 12.3
  0.000   .001   .001   .002   .003   .004   .006   .010   .020   .035         TZ 13.1
   .048   .054   .059   .058   .057   .052   .046   .037   .028   .016        TZ 13.2
   .003  -.012  -.028  -.045  -.062  -.080  -.098  -.117                       TZ 13.3
  0.000   .000   .000   .001   .001   .001   .002   .003   .006   .015         TZ 14.1
   .025   .031   .034   .036   .036   .035   .035   .034   .031   .029        TZ 14.2
   .026   .023   .020   .017   .013   .009   .005  0.000                       TZ 14.3
  0.000   .000   .000   .001   .001   .001   .002   .003   .006   .015         TZ 15.1
   .025   .031   .034   .036   .036   .035   .035   .034   .031   .029        TZ 15.2
   .026   .023   .020   .017   .013   .009   .005  0.000                       TZ 15.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.014  -.028         TZ 16.1
  -.042  -.050  -.056  -.061  -.067  -.073  -.079  -.084  -.091  -.096        TZ 16.2
  -.102  -.107  -.113  -.119  -.124  -.129  -.135  -.140                       TZ 16.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.015  -.029         TZ 17.1
  -.043  -.058  -.072  -.082  -.092  -.102  -.111  -.117  -.124  -.131        TZ 17.2
  -.138  -.144  -.149  -.155  -.160  -.165  -.170  -.175                       TZ 17.3
  0.000  -.000  -.001  -.002  -.002  -.003  -.004  -.007  -.014  -.028         TZ 18.1
  -.042  -.048  -.054  -.061  -.067  -.072  -.074  -.077  -.079  -.081        TZ 18.2
  -.082  -.081  -.080  -.079  -.078  -.075  -.071  -.066                       TZ 18.3
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Table III. - Continued.

(a) Continued

0.	.137	.179	.241	.297	.339	.412	.523	.724	.994	WORD3A.1
1.177	1.315	1.416	1.487	1.528	1.539	1.539	1.539	1.539	1.539	WORD3A.2
1.384	1.210	1.016	.817	.614	.412	.211	0.			WORD3A.3
0.	.136	.178	.237	.291	.333	.405	.514	.712	.978	WORD4.1
1.157	1.292	1.391	1.461	1.501	1.512	1.512	1.512	1.512	1.512	WORD4.2
1.363	1.192	1.003	.806	.606	.406	.208	0.			WORD4.3
0.	.128	.168	.225	.277	.316	.386	.490	.679	.931	WORD5.1
1.103	1.232	1.326	1.392	1.430	1.441	1.441	1.441	1.441	1.437	WORD5.2
1.294	1.132	.953	.765	.576	.385	.197	0.			WORD5.3
0.	.118	.160	.216	.266	.304	.370	.470	.651	.894	WORD6.1
1.059	1.182	1.273	1.336	1.373	1.383	1.383	1.383	1.383	1.341	WORD6.2
1.208	1.056	.889	.714	.537	.360	.184	0.			WORD6.3
0.	.110	.153	.208	.257	.294	.358	.455	.631	.866	WORD7.1
1.025	1.144	1.231	1.293	1.328	1.338	1.338	1.338	1.338	1.277	WORD7.2
1.151	1.006	.846	.681	.512	.343	.175	0.			WORD7.3
0.	.101	.145	.200	.247	.283	.344	.436	.607	.833	WORD8.1
.987	1.101	1.184	1.244	1.278	1.287	1.287	1.287	1.287	1.186	WORD8.2
1.069	.935	.788	.633	.476	.319	.163	0.			WORD8.3
0.	.100	.144	.198	.245	.280	.341	.435	.602	.827	WORD9.1
.979	1.092	1.175	1.234	1.268	1.277	1.277	1.277	1.260	1.161	WORD9.2
1.046	.915	.771	.619	.466	.312	.159	0.			WORD9.3
0.	.102	.146	.201	.248	.284	.345	.440	.609	.836	WORD10.1
.990	1.105	1.189	1.248	1.283	1.292	1.292	1.292	1.247	1.149	WORD10.2
1.035	.906	.763	.613	.461	.309	.156	0.			WORD10.3
0.	.111	.154	.209	.258	.295	.359	.457	.632	.868	WORD11.1
1.028	1.148	1.235	1.297	1.330	1.342	1.342	1.342	1.263	1.164	WORD11.2
1.049	.917	.773	.621	.467	.313	.160	0.			WORD11.3
0.	.118	.160	.216	.266	.304	.370	.470	.651	.894	WORD12.1
1.059	1.181	1.272	1.335	1.372	1.382	1.382	1.382	1.300	1.198	WORD12.2
1.080	.945	.796	.639	.481	.322	.164	0.			WORD12.3
0.	.125	.166	.222	.274	.313	.381	.484	.670	.920	WORD13.1
1.090	1.216	1.309	1.375	1.413	1.423	1.423	1.423	1.339	1.234	WORD13.2
1.112	.972	.819	.658	.495	.331	.169	0.			WORD13.3
0.	.138	.177	.235	.289	.330	.402	.510	.706	.969	WORD14.1
1.148	1.282	1.380	1.449	1.489	1.500	1.500	1.500	1.411	1.300	WORD14.2
1.171	1.024	.862	.692	.521	.349	.178	0.			WORD14.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD15.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD15.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD15.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD16.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD16.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD16.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD17.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD17.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD17.3
0.	.0069	.0144	.0294	.0440	.0590	.0884	.1462	.2853	.541	WORD18.1
.766	.961	1.126	1.261	1.365	1.440	1.485	1.500	1.485	1.440	WORD18.2
1.365	1.261	1.126	.961	.766	.541	.285	0.			WORD18.3
0.000	3.289	6.578	9.867	13.156	16.445	19.734	24.662	26.129	31.418	XFUS
34.707	37.996	41.285	44.574	47.863	51.152	54.441	57.730	61.019	64.308	XFUS
67.597	70.886	74.185	81.098	84.367	87.676	90.965	94.254	97.543	100.832	XFUS
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 1
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	Z 1
-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	
-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	-.360	
0.000	.072	.129	.194	.251	.304	.349	.386	.424	.459	Y 2
.475	.493	.504	.504	.504	.504	.507	.514	.509	.504	
.487	.459	.427	.392	.337	.282	.220	.154	.085	0.000	
-.870	-.864	-.856	-.839	-.811	-.779	-.736	-.697	-.650	-.604	Z 2
-.553	-.503	-.457	-.457	-.457	-.457	-.418	-.376	-.330	-.269	
-.201	-.140	-.083	-.030	.018	.059	.093	.122	.143	.149	
0.000	.107	.203	.303	.399	.480	.561	.623	.677	.724	Y 3
.767	.798	.818	.818	.818	.818	.834	.838	.839	.832	
.806	.769	.716	.652	.573	.481	.371	.256	.142	0.000	
-1.203	-1.200	-1.174	-1.145	-1.107	-1.054	-.990	-.929	-.861	-.792	Z 3
-.712	-.632	-.552	-.552	-.552	-.552	-.487	-.425	-.345	-.249	
-.130	-.030	.074	.145	.255	.325	.391	.442	.470	.479	
0.000	.150	.281	.412	.531	.639	.739	.824	.905	.971	Y 4
1.026	1.065	1.097	1.097	1.097	1.097	1.117	1.125	1.130	1.120	
1.090	1.038	.974	.895	.785	.663	.515	.355	.190	0.000	
-1.490	-1.480	-1.462	-1.414	-1.357	-1.301	-1.221	-1.138	-1.039	-.948	Z 4
-.845	-.742	-.643	-.643	-.643	-.643	-.554	-.467	-.359	-.229	
-.075	.067	.201	.329	.448	.553	.646	.713	.752	.770	
0.000	.161	.338	.495	.638	.780	.892	1.000	1.093	1.170	Y 5
1.240	1.287	1.323	1.323	1.323	1.323	1.346	1.359	1.364	1.354	

Table III. - Continued.

(a) Continued

1.313	1.257	1.174	1.075	.950	.794	.619	.424	.222	0.000	
-1.745	-1.731	-1.706	-1.657	-1.585	-1.510	-1.419	-1.317	-1.210	-1.103	Z 5
-.970	-.848	-.718	-.718	-.718	-.718	-.614	-.507	-.373	-.220	
-.040	.133	.299	.449	.595	.723	.835	.914	.969	.982	
0.000	.182	.351	.542	.721	.872	1.030	1.166	1.296	1.378	Y 6
1.450	1.502	1.532	1.532	1.532	1.532	1.559	1.578	1.590	1.602	
1.593	1.559	1.496	1.363	1.178	.957	.715	.469	.266	0.000	
-1.980	-1.968	-1.935	-1.893	-1.835	-1.768	-1.674	-1.562	-1.432	-1.311	Z 6
-1.166	-1.020	-.893	-.893	-.893	-.893	-.757	-.636	-.454	-.333	
-.145	.088	.363	.636	.833	.966	1.051	1.109	1.132	1.148	
0.000	.151	.327	.500	.648	.812	.957	1.099	1.238	1.372	Y 7
1.532	1.678	1.747	1.747	1.747	1.747	1.793	1.817	1.832	1.838	
1.817	1.771	1.684	1.559	1.390	1.160	.902	.612	.303	0.000	
-2.232	-2.223	-2.198	-2.162	-2.123	-2.068	-2.023	-1.941	-1.859	-1.762	Z 7
-1.605	-1.420	-1.281	-1.281	-1.281	-1.281	-1.154	-1.036	-.914	-.681	
-.351	-.062	.239	.521	.781	.999	1.129	1.202	1.245	1.263	
0.000	.151	.333	.488	.636	.812	.969	1.181	1.347	1.499	Y 8
1.620	1.771	2.185	1.905	1.905	2.185	2.044	1.968	1.896	1.838	
1.793	1.662	1.541	1.372	1.175	.954	.699	.475	.224	0.000	
-2.574	-2.574	-2.556	-2.528	-2.483	-2.425	-2.365	-2.268	-2.189	-2.111	Z 8
-2.044	-1.959	-1.723	-1.850	-1.420	-1.723	-1.432	-1.211	-.899	-.651	
-.506	-.145	.139	.421	.645	.796	.893	.951	.987	1.002	
0.000	.197	.348	.524	.666	.802	.960	1.120	1.296	1.478	Y 9
1.690	1.877	2.185	1.905	1.905	2.185	1.935	1.841	1.735	1.650	
1.532	1.429	1.341	1.226	1.099	.930	.757	.524	.254	0.000	
-2.831	-2.826	-2.807	-2.771	-2.731	-2.689	-2.634	-2.568	-2.498	-2.422	Z 9
-2.347	-2.283	-2.210	-2.241	-1.347	-1.447	-1.220	-1.078	-.775	-.548	
-.291	-.112	-.009	.088	.167	.239	.291	.348	.385	.409	
0.000	.416	.553	.695	.831	.975	1.119	1.260	1.422	1.587	Y 10
1.756	1.952	2.185	1.905	1.905	2.185	2.064	2.003	1.920	1.817	
1.700	1.575	1.445	1.304	1.144	.983	.815	.640	.460	0.000	
-3.073	-3.070	-3.060	-3.049	-3.027	-3.002	-2.968	-2.920	-2.875	-2.818	Z 10
-2.758	-2.699	-2.629	-2.679	-1.562	-1.598	-1.447	-1.289	-1.135	-.993	
-.858	-.742	-.638	-.533	-.433	-.355	-.293	-.245	-.217	-.200	
0.000	.413	.547	.686	.819	.958	1.104	1.252	1.413	1.585	Y 11
1.773	1.970	2.185	1.905	1.905	2.185	2.033	1.942	1.840	1.734	
1.616	1.490	1.361	1.224	1.075	.923	.770	.602	.441	0.000	
-3.487	-3.473	-3.466	-3.452	-3.434	-3.412	-3.383	-3.354	-3.317	-3.268	Z 11
-3.224	-3.164	-3.073	-3.137	-1.867	-1.881	-1.767	-1.632	-1.501	-1.373	
-1.254	-1.149	-1.056	-.959	-.878	-.811	-.760	-.720	-.692	-.679	
0.000	.413	.547	.683	.818	.957	1.104	1.249	1.410	1.585	Y 12
1.764	1.967	2.185	1.905	1.905	2.185	1.985	1.879	1.779	1.673	
1.552	1.431	1.304	1.175	1.028	.893	.740	.583	.430	0.000	
-3.904	-3.904	-3.893	-3.874	-3.862	-3.836	-3.805	-3.770	-3.732	-3.694	Z 12
-3.640	-3.579	-3.509	-3.584	-2.225	-2.214	-2.101	-1.970	-1.836	-1.729	
-1.622	-1.522	-1.430	-1.354	-1.273	-1.219	-1.174	-1.135	-1.116	-1.097	
0.000	.413	.545	.683	.818	.957	1.104	1.249	1.413	1.585	Y 13
1.770	1.968	2.185	1.905	1.905	2.185	1.967	1.861	1.758	1.650	
1.531	1.413	1.289	1.157	1.013	.876	.731	.578	.429	0.000	
-4.318	-4.319	-4.306	-4.288	-4.274	-4.248	-4.219	-4.190	-4.149	-4.105	Z 13
-4.053	-4.002	-3.917	-4.002	-2.610	-2.582	-2.486	-2.361	-2.237	-2.125	
-2.021	-1.924	-1.838	-1.760	-1.682	-1.631	-1.584	-1.548	-1.527	-1.510	
0.000	.416	.553	.692	.825	.964	1.110	1.256	1.422	1.588	Y 14
1.773	1.970	2.185	1.905	1.905	2.185	1.961	1.861	1.759	1.649	
1.531	1.416	1.289	1.162	1.021	.880	.731	.581	.432	0.000	
-4.720	-4.718	-4.707	-4.685	-4.671	-4.649	-4.619	-4.590	-4.549	-4.504	Z 14
-4.448	-4.384	-4.298	-4.368	-2.994	-2.957	-2.882	-2.755	-2.632	-2.520	
-2.416	-2.319	-2.238	-2.156	-2.083	-2.024	-1.977	-1.949	-1.925	-1.912	
0.000	.414	.547	.686	.821	.964	1.110	1.252	1.419	1.585	Y 15
1.770	1.955	2.185	1.905	1.905	2.185	1.970	1.862	1.759	1.646	
1.531	1.413	1.283	1.152	1.013	.874	.731	.579	.426	0.000	
-5.066	-5.061	-5.051	-5.042	-5.014	-4.993	-4.965	-4.937	-4.901	-4.854	Z 15
-4.800	-4.738	-4.646	-4.749	-3.355	-3.307	-3.225	-3.104	-2.980	-2.863	
-2.762	-2.671	-2.585	-2.498	-2.427	-2.367	-2.326	-2.293	-2.268	-2.258	
0.000	.435	.569	.707	.845	.983	1.122	1.268	1.433	1.606	Y 16
1.787	1.990	2.185	1.905	1.905	2.185	1.974	1.865	1.763	1.654	
1.536	1.415	1.294	1.161	1.016	.875	.731	.578	.429	0.000	
-5.387	-5.382	-5.376	-5.355	-5.338	-5.320	-5.288	-5.260	-5.220	-5.176	Z 16
-5.122	-5.067	-4.994	-5.073	-3.697	-3.643	-3.554	-3.430	-3.309	-3.197	
-3.096	-2.998	-2.912	-2.826	-2.755	-2.703	-2.651	-2.622	-2.593	-2.579	
0.000	.425	.571	.718	.864	1.007	1.161	1.307	1.476	1.643	Y 17
1.815	1.991	2.185	1.905	1.905	2.185	2.042	1.967	1.876	1.779	
1.664	1.543	1.413	1.264	1.113	.949	.785	.621	.456	0.000	
-5.732	-5.729	-5.720	-5.705	-5.678	-5.649	-5.612	-5.568	-5.514	-5.453	Z 17
-5.387	-5.293	-5.174	-5.266	-4.106	-4.033	-3.952	-3.805	-3.667	-3.536	
-3.416	-3.304	-3.196	-3.107	-3.018	-2.955	-2.901	-2.861	-2.637	-2.824	

Table III. - Continued.

(a) Continued

0.000	.447	.610	.771	.922	1.087	1.241	1.397	1.570	1.721	Y 18
1.891	2.015	2.185	1.905	1.905	2.185	2.036	1.964	1.876	1.773	
1.652	1.534	1.397	1.257	1.095	.946	.771	.604	.436	0.000	
-6.035	-6.033	-6.017	-5.997	-5.971	-5.935	-5.892	-5.836	-5.759	-5.684	Z 18
-5.581	-5.448	-5.326	-5.420	-4.504	-4.426	-4.299	-4.119	-3.961	-3.809	
-3.658	-3.537	-3.428	-3.328	-3.237	-3.173	-3.119	-3.073	-3.055	-3.045	
0.000	.444	.613	.780	.937	1.101	1.255	1.410	1.582	1.731	Y 19
1.882	2.006	2.185	1.905	1.905	2.185	2.082	2.033	1.955	1.658	
1.727	1.591	1.452	1.313	1.155	.983	.813	.637	.465	0.000	
-6.292	-6.280	-6.247	-6.207	-6.162	-6.107	-6.047	-5.980	-5.896	-5.811	Z 19
-5.708	-5.587	-5.441	-5.530	-4.881	-4.801	-4.642	-4.433	-4.245	-4.085	
-3.927	-3.794	-3.667	-3.566	-3.461	-3.382	-3.310	-3.261	-3.231	-3.219	
0.000	.188	.403	.590	.775	.966	1.157	1.347	1.532	1.681	Y 20
1.832	1.983	2.185	1.905	1.905	2.185	2.104	2.092	2.053	1.977	
1.820	1.678	1.520	1.363	1.151	.917	.712	.463	.197	0.000	
-6.495	-6.489	-6.477	-6.447	-6.407	-6.344	-6.265	-6.174	-6.059	-5.944	Z 20
-5.811	-5.681	-5.529	-5.617	-5.238	-5.154	-5.026	-4.860	-4.648	-4.454	
-4.197	-4.039	-3.897	-3.782	-3.649	-3.543	-3.482	-3.431	-3.394	-3.376	
0.000	.133	.312	.475	.657	.854	1.060	1.284	1.514	1.714	Y 21
1.877	2.014	2.185	1.905	1.905	2.185	2.083	2.059	2.017	1.941	
1.783	1.632	1.484	1.332	1.157	.975	.778	.576	.303	0.000	
-6.634	-6.631	-6.616	-6.586	-6.559	-6.498	-6.426	-6.338	-6.226	-6.077	Z 21
-5.899	-5.714	-5.587	-5.662	-5.553	-5.472	-5.329	-5.096	-4.884	-4.651	
-4.354	-4.157	-4.009	-3.891	-3.785	-3.706	-3.643	-3.588	-3.549	-3.528	
0.000	.215	.421	.624	.821	.996	1.193	1.378	1.596	1.780	Y 22
1.923	1.983	2.014	2.014	2.014	2.014	2.023	1.989	1.935	1.853	
1.729	1.575	1.408	1.217	1.011	.805	.603	.403	.206	0.000	
-6.731	-6.716	-6.686	-6.643	-6.592	-6.537	-6.447	-6.347	-6.220	-6.074	Z 22
-5.871	-5.665	-5.472	-5.472	-5.472	-5.472	-5.241	-5.017	-4.796	-4.584	
-4.375	-4.209	-4.061	-3.939	-3.843	-3.773	-3.740	-3.691	-3.664	-3.646	
0.000	.118	.312	.566	.781	1.008	1.178	1.438	1.620	1.762	Y 23
1.871	1.932	1.953	1.953	1.953	1.953	1.977	1.968	1.926	1.859	
1.741	1.584	1.378	1.175	.984	.772	.590	.363	.151	0.000	
-6.752	-6.746	-6.731	-6.692	-6.628	-6.537	-6.450	-6.292	-6.138	-5.971	Z 23
-5.808	-5.641	-5.466	-5.466	-5.466	-5.466	-5.299	-5.087	-4.890	-4.709	
-4.509	-4.330	-4.164	-4.039	-3.949	-3.876	-3.827	-3.782	-3.758	-3.752	
0.000	.200	.391	.572	.751	.914	1.090	1.241	1.366	1.475	Y 24
1.526	1.575	1.602	1.602	1.602	1.602	1.614	1.599	1.565	1.514	
1.444	1.329	1.193	1.051	.884	.709	.536	.360	.191	0.000	
-6.631	-6.616	-6.586	-6.547	-6.492	-6.422	-6.329	-6.216	-6.068	-5.917	Z 24
-5.753	-5.599	-5.450	-5.450	-5.450	-5.450	-5.279	-5.093	-4.911	-4.742	
-4.584	-4.421	-4.266	-4.148	-4.061	-3.994	-3.945	-3.909	-3.891	-3.876	
0.000	.142	.351	.563	.766	.911	1.042	1.163	1.260	1.335	Y 25
1.381	1.411	1.414	1.414	1.414	1.414	1.417	1.411	1.399	1.360	
1.290	1.187	1.063	.945	.815	.657	.521	.369	.170	0.000	
-6.438	-6.431	-6.401	-6.350	-6.274	-6.189	-6.092	-5.977	-5.844	-5.690	Z 25
-5.529	-5.399	-5.296	-5.296	-5.296	-5.296	-5.190	-5.045	-4.924	-4.763	
-4.590	-4.439	-4.312	-4.215	-4.130	-4.058	-4.006	-3.961	-3.918	-3.900	
0.000	.091	.203	.318	.454	.590	.718	.854	.930	1.030	Y 26
1.114	1.163	1.178	1.178	1.178	1.178	1.175	1.169	1.157	1.129	
1.072	.993	.878	.769	.654	.500	.375	.282	.167	0.000	
-6.147	-6.144	-6.129	-6.104	-6.065	-6.008	-5.941	-5.835	-5.759	-5.620	Z 26
-5.444	-5.278	-5.148	-5.148	-5.148	-5.148	-5.042	-4.905	-4.775	-4.642	
-4.494	-4.342	-4.197	-4.109	-4.039	-3.982	-3.949	-3.927	-3.909	-3.900	
0.000	.151	.282	.400	.509	.606	.690	.763	.824	.871	Y 27
.908	.925	.939	.939	.939	.939	.939	.930	.912	.878	
.831	.776	.697	.624	.528	.436	.333	.225	.118	0.000	
-5.758	-5.742	-5.711	-5.669	-5.604	-5.531	-5.458	-5.369	-5.274	-5.170	Z 27
-5.070	-4.978	-4.890	-4.886	-4.886	-4.886	-4.783	-4.679	-4.569	-4.469	
-4.377	-4.289	-4.194	-4.121	-4.048	-3.991	-3.949	-3.911	-3.892	-3.889	
0.000	.112	.207	.297	.379	.450	.513	.563	.612	.642	Y 28
.666	.681	.689	.689	.689	.689	.689	.681	.662	.642	
.606	.600	.512	.459	.392	.324	.252	.175	.095	0.000	
-5.279	-5.263	-5.240	-5.205	-5.163	-5.113	-5.044	-4.975	-4.902	-4.829	Z 28
-4.760	-4.691	-4.614	-4.610	-4.618	-4.618	-4.541	-4.469	-4.381	-4.316	
-4.243	-4.186	-4.121	-4.064	-4.010	-3.964	-3.934	-3.907	-3.892	-3.889	
0.000	.076	.141	.199	.252	.290	.336	.370	.393	.416	Y 29
.424	.431	.431	.431	.431	.431	.427	.415	.404	.385	
.358	.327	.296	.262	.220	.177	.135	.093	.047	0.000	
-4.735	-4.727	-4.708	-4.685	-4.654	-4.623	-4.581	-4.535	-4.485	-4.435	Z 29
-4.389	-4.343	-4.301	-4.301	-4.301	-4.301	-4.252	-4.202	-4.156	-4.117	
-4.075	-4.037	-4.003	-3.976	-3.942	-3.919	-3.904	-3.892	-3.885	-3.885	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 30
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	Z 30
-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	-3.942	

Table III. - Continued.

(a) Concluded

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-3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942 -3.942
60.496  6.676 -5.965                                                    PODORG 1
 0.000   .606  1.211  1.817  2.422  3.028  3.634  4.239  4.845  5.450  XPOD
 6.056  6.662  7.267  7.873  8.478  9.084  9.576  9.690 10.295 10.890  XPOD
  .781   .793   .805   .818   .831   .843   .855   .868   .880   .893  RPOD
  .905   .918   .930   .943   .955   .968   .978   .978   .978   .978  RPOD
61.623 10.801 -5.867                                                    PODORG 2
 0.000   .606  1.211  1.817  2.422  3.028  3.634  4.239  4.845  5.450  XPOD
 6.056  6.662  7.267  7.873  8.478  9.084  9.576  9.690 10.295 10.890  XPOD
  .781   .793   .805   .818   .831   .843   .855   .868   .880   .893  RPOD
  .905   .918   .930   .943   .955   .968   .978   .978   .978   .978  RPOD
63.660 14.201 -4.737 10.647 73.722 14.201 -1.741  1.450                 V FIN
0.     10.    20.    30.    40.    50.    60.    70.    90.    100.    XFIN
0.     .466   .846  1.138  1.345  1.465  1.498  1.390  .641   0.      FINORD
91.243  0.000 -3.889  9.047 98.618  0.000  -.940  2.144                 V TAIL
0.     10.    20.    30.    40.    50.    60.    70.    90.    100.    XVTAIL
0.     .466   .846  1.138  1.345  1.465  1.498  1.390  .641   0.      TVTAIL
89.053   .878 -4.646  7.327 95.625  4.575 -5.637  2.196                 H TAIL
0.     10.    20.    30.    40.    50.    70.    80.    90.    100.    XHTAIL
0.0    .553   .948  1.264  1.448  1.5    1.264  .948   .553   0.0     THTAIL
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Table III. - Continued.

(b) U.S. Customary Units (feet)

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AST-206 (5/21/79)  6 ABREAST DIGITAL BLENDED FUSELAGE

  1  1  1  1  1  1    16 28  1 30 30                    2 20  2 10  1 10

8447.  88.586 174.060                                                    REFA
0.      .125   .25    .5     .75    1.0    1.5    2.5    5.0    10.     XAF 10
 15.    20.    25.    30.    35.    40.    45.    50.    55.    60.     XAF 20
65.    70.    75.    80.    85.    90.    95.    100.                    XAF 28
76.221 6.291  -5.137 149.537                                            WORG 3A
81.447 7.216  -5.650 146.276                                            WORG 4
92.505 10.387 -7.639 135.155                                            WORG 5
103.56013.557 -9.376 124.030                                            WORG 6
114.61916.728 -10.790112.909                                            WORG 7
133.16722.046 -12.62094.250                                             WORG 8
147.79126.240 -13.90480.773                                             WORG 9
163.98530.883 -15.05165.847                                             WORG 10
177.75735.670 -15.29753.383                                             WORG 11
187.11338.922 -15.22646.897                                             WORG 12
196.23742.093 -15.43840.576                                             WORG 13
210.07046.900 -15.64430.991                                             WORG 14
210.07046.901 -15.64430.991                                             WORG 15
216.21751.605 -15.69526.999                                             WORG 16
229.20057.946 -16.25621.616                                             WORG 17
240.18664.287 -17.15216.237                                             WORG 18
0.      -.002  -.004  -.007  -.011  -.014  -.023  -.054  -.192  -.731    TZ 3A.1
-1.456 -2.290 -3.180 -4.096 -5.016 -5.922 -6.800 -7.639 -8.436 -9.188   TZ 3A.2
-9.893 -10.552-11.166-11.734-12.259-12.739-13.173-13.555                TZ 3A.3
0.      -.001  -.001  -.002  -.003  -.004  -.008  -.036  -.155  -.662    TZ 4.1
-1.351 -2.143 -2.983 -3.846 -4.713 -5.566 -6.394 -7.187 -7.942 -8.657   TZ 4.2
-9.331 -9.964 -10.557-11.110-11.625-12.099-12.532-12.919                TZ 4.3
0.      .002   .004   .008   .012   .017   .025   .027   -.041  -.406    TZ 5.1
-.918  -1.516 -2.158 -2.822 -3.494 -4.160 -4.810 -5.443 -6.055 -6.640   TZ 5.2
-7.202 -7.742 -6.257 -8.749 -9.219 -9.665 -10.084-10.475                TZ 5.3
0.      .004   .008   .017   .025   .034   .050   .084   .059   -.154    TZ 6.1
-.503  -.921  -1.385 -1.877 -2.376 -2.878 -3.381 -3.874 -4.360 -4.836   TZ 6.2
-5.302 -5.759 -6.205 -6.643 -7.070 -7.487 -7.889 -8.277                 TZ 6.3
0.      .005   .010   .021   .031   .041   .062   .103   .163   .071     TZ 7.1
-.141  -.418  -.735  -1.076 -1.438 -1.809 -2.186 -2.567 -2.948 -3.333   TZ 7.2
-3.716 -4.100 -4.486 -4.871 -5.255 -5.638 -6.015 -6.388                 TZ 7.3
0.      .006   .012   .023   .035   .047   .070   .117   .216   .280     TZ 8.1
.241   .135   -.002  -.176  -.364  -.570  -.792  -1.026 -1.270 -1.527   TZ 8.2
-1.793 -2.067 -2.350 -2.640 -2.937 -3.242 -3.550 -3.862                 TZ 8.3
0.      .006   .013   .025   .038   .051   .076   .127   .229   .330     TZ 9.1
.396   .339   .283   .205   .098   -.024  -.164  -.315  -.460  -.655    TZ 9.2
-.843  -1.041 -1.250 -1.468 -1.697 -1.933 -2.176 -2.427                 TZ 9.3
0.      .005   .009   .018   .027   .037   .056   .092   .182   .299     TZ 10.1
.354   .374   .370   .350   .311   .259   .194   .118   .030   -.068    TZ 10.2
-.177  -.295  -.421  -.558  -.703  -.855  -1.013 -1.179                  TZ 10.3
0.      .002   .005   .010   .014   .019   .029   .048   .097   .184     TZ 11.1
.223   .244   .248   .230   .202   .167   .116   .056   -.007  -.084    TZ 11.2
-.166  -.254  -.354  -.456  -.567  -.683  -.806  -.932                  TZ 11.3
0.      .002   .004   .008   .012   .016   .024   .041   .081   .147     TZ 12.1
.187   .207   .219   .203   .184   .158   .120   .074   .022   -.034    TZ 12.2
-.101  -.172  -.246  -.329  -.415  -.505  -.599  -.698                  TZ 12.3
0.      .002   .003   .007   .010   .013   .020   .034   .067   .116     TZ 13.1
.156   .179   .194   .193   .187   .171   .153   .123   .092   .052     TZ 13.2
.011   -.040  -.092  -.148  -.204  -.263  -.322  -.387                  TZ 13.3
0.      .001   .001   .002   .003   .004   .006   .010   .020   .049     TZ 14.1
.081   .101   .112   .118   .118   .117   .115   .111   .104   .096     TZ 14.2
.087   .077   .066   .055   .043   .029   .015   0.                     TZ 14.3
0.      .001   .001   .002   .003   .004   .006   .010   .020   .049     TZ 15.1
.081   .101   .112   .118   .118   .117   .115   .111   .104   .096     TZ 15.2
.087   .077   .066   .055   .043   .029   .015   0.                     TZ 15.3
0.      -.001  -.002  -.005  -.007  -.009  -.014  -.023  -.046  -.092    TZ 16.1
-.139  -.166  -.184  -.203  -.222  -.241  -.260  -.279  -.299  -.318    TZ 16.2
-.337  -.355  -.374  -.392  -.409  -.427  -.446  -.464                  TZ 16.3
0.      -.001  -.002  -.005  -.007  -.010  -.014  -.024  -.048  -.095    TZ 17.1
-.143  -.190  -.238  -.271  -.303  -.336  -.366  -.388  -.411  -.434    TZ 17.2
-.455  -.474  -.493  -.513  -.529  -.545  -.562  -.577                  TZ 17.3
0.      -.001  -.002  -.005  -.007  -.009  -.014  -.023  -.047  -.093    TZ 18.1
-.138  -.159  -.179  -.200  -.220  -.238  -.246  -.253  -.260  -.268    TZ 18.2
-.272  -.268  -.264  -.261  -.257  -.249  -.234  -.219                  TZ 18.3
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Table III. - Continued.

(b) Continued

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0.      .137    .179    .241    .297    .339    .412    .523    .724    .994     WORD3A.1
1.177   1.315   1.416   1.487   1.528   1.539   1.539   1.539   1.539   1.539    WORD3A.2
1.364   1.210   1.018   .817    .614    .412    .211    0.                       WORD3A.3
0.      .136    .178    .237    .291    .333    .405    .514    .712    .976     WORD4.1
1.157   1.292   1.391   1.461   1.501   1.512   1.512   1.512   1.512   1.512    WORD4.2
1.363   1.192   1.003   .806    .606    .406    .208    0.                       WORD4.3
0.      .128    .168    .225    .277    .316    .366    .490    .679    .931     WORD5.1
1.103   1.232   1.326   1.392   1.430   1.441   1.441   1.441   1.441   1.437    WORD5.2
1.294   1.132   .953    .765    .576    .385    .197    0.                       WORD5.3
0.      .118    .160    .216    .266    .304    .370    .470    .651    .894     WORD6.1
1.059   1.182   1.273   1.336   1.373   1.383   1.383   1.383   1.383   1.341    WORD6.2
1.208   1.056   .889    .714    .537    .360    .184    0.                       WORD6.3
0.      .110    .153    .208    .257    .294    .358    .455    .631    .866     WORD7.1
1.025   1.144   1.231   1.293   1.328   1.338   1.338   1.338   1.338   1.277    WORD7.2
1.151   1.006   .846    .681    .512    .343    .175    0.                       WORD7.3
0.      .101    .145    .200    .247    .283    .344    .438    .607    .833     WORD8.1
.987    1.101   1.184   1.244   1.278   1.287   1.287   1.287   1.287   1.186    WORD8.2
1.069   .935    .788    .633    .476    .319    .163    0.                       WORD8.3
0.      .100    .144    .198    .245    .280    .341    .435    .602    .827     WORD9.1
.979    1.092   1.175   1.234   1.268   1.277   1.277   1.277   1.260   1.161    WORD9.2
1.046   .915    .771    .619    .466    .312    .159    0.                       WORD9.3
0.      .102    .146    .201    .248    .284    .345    .440    .609    .836     WORD10.1
.990    1.105   1.189   1.248   1.283   1.292   1.292   1.292   1.247   1.149    WORD10.2
1.035   .906    .763    .613    .461    .309    .156    0.                       WORD10.3
0.      .111    .154    .209    .256    .295    .359    .457    .632    .868     WORD11.1
1.028   1.148   1.235   1.297   1.330   1.342   1.342   1.342   1.263   1.164    WORD11.2
1.049   .917    .773    .621    .467    .313    .160    0.                       WORD11.3
0.      .118    .160    .216    .266    .304    .370    .470    .651    .894     WORD12.1
1.059   1.181   1.272   1.335   1.372   1.382   1.382   1.382   1.300   1.198    WORD12.2
1.080   .945    .796    .639    .481    .322    .164    0.                       WORD12.3
0.      .125    .166    .222    .274    .313    .381    .484    .670    .920     WORD13.1
1.090   1.216   1.309   1.375   1.413   1.423   1.423   1.423   1.339   1.234    WORD13.2
1.112   .972    .819    .658    .495    .331    .169    0.                       WORD13.3
0.      .138    .177    .235    .289    .330    .402    .510    .706    .969     WORD14.1
1.148   1.282   1.380   1.449   1.489   1.500   1.500   1.500   1.411   1.300    WORD14.2
1.171   1.024   .862    .692    .521    .349    .178    0.                       WORD14.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD15.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD15.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD15.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD16.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD16.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD16.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD17.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD17.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD17.3
0.      .0069   .0144   .0294   .0440   .0590   .0884   .1462   .2853   .541     WORD18.1
.766    .961    1.126   1.261   1.365   1.440   1.485   1.500   1.485   1.440    WORD18.2
1.365   1.261   1.126   .961    .766    .541    .285    0.                       WORD18.3
  0.000 10.862 21.724 32.586 43.448 54.310 65.172 81.447 92.897103.759  XFUS
114.621125.483136.344147.207158.069168.931179.793190.655201.517212.379  XFUS
223.241234.103244.996267.828278.690289.552300.414311.276322.138333.000  XFUS
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000  Y  1
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
  0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000   0.000
 -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  Z  1
 -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190
 -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190  -1.190
  0.000    .238    .427    .641    .826   1.003   1.152   1.276   1.399   1.485  Y  2
  1.570   1.629   1.664   1.664   1.664   1.664   1.674   1.696   1.681   1.664
  1.608   1.516   1.410   1.293   1.112    .932    .728    .510    .281   0.000
 -2.873  -2.855  -2.826  -2.771  -2.678  -2.573  -2.431  -2.302  -2.147  -1.994  Z  2
 -1.827  -1.662  -1.509  -1.509  -1.509  -1.509  -1.382  -1.243  -1.091   -.889
  -.663   -.462   -.275   -.100    .061    .196    .306    .402    .473    .493
  0.000    .354    .671   1.001   1.318   1.586   1.853   2.057   2.237   2.390  Y  3
  2.532   2.636   2.701   2.701   2.701   2.701   2.754   2.768   2.771   2.748
  2.663   2.540   2.366   2.154   1.891   1.589   1.224    .846    .468   0.000
 -3.973  -3.964  -3.878  -3.760  -3.656  -3.481  -3.269  -3.068  -2.842  -2.616  Z  3
 -2.352  -2.087  -1.822  -1.822  -1.822  -1.822  -1.607  -1.405  -1.139   -.823
  -.430   -.100    .243    .479    .842   1.072   1.291   1.459   1.551   1.581
  0.000    .497    .928   1.359   1.753   2.109   2.440   2.721   2.990   3.208  Y  4
  3.388   3.518   3.622   3.622   3.622   3.622   3.688   3.716   3.732   3.698
  3.601   3.428   3.218   2.956   2.593   2.191   1.700   1.171    .628   0.000
 -4.922  -4.888  -4.829  -4.669  -4.482  -4.296  -4.033  -3.758  -3.431  -3.130  Z  4
 -2.790  -2.450  -2.122  -2.122  -2.122  -2.122  -1.631  -1.541  -1.187   -.756
  -.249    .220    .665   1.085   1.480   1.826   2.134   2.354   2.485   2.542
  0.000    .597   1.116   1.636   2.106   2.576   2.945   3.302   3.608   3.864  Y  5
  4.095   4.251   4.368   4.368   4.368   4.368   4.446   4.487   4.503   4.470
```

Table III. - Continued.

(b) Continued

4.335	4.150	3.876	3.551	3.138	2.623	2.044	1.401	.732	0.000	
-5.763	-5.717	-5.633	-5.473	-5.236	-4.987	-4.686	-4.348	-3.996	-3.644	Z 5
-3.203	-2.800	-2.370	-2.370	-2.370	-2.370	-2.029	-1.676	-1.233	-.727	
-.131	.440	.986	1.482	1.966	2.387	2.759	3.017	3.199	3.244	
0.000	.600	1.160	1.790	2.380	2.880	3.400	3.850	4.280	4.550	Y 6
4.790	4.960	5.060	5.060	5.060	5.060	5.150	5.210	5.250	5.290	
5.260	5.150	4.940	4.500	3.890	3.160	2.360	1.550	.880	0.000	
-6.540	-6.500	-6.390	-6.250	-6.060	-5.840	-5.530	-5.160	-4.730	-4.330	Z 6
-3.850	-3.370	-2.950	-2.950	-2.950	-2.950	-2.500	-2.100	-1.500	-1.100	
-.480	.290	1.200	2.100	2.750	3.190	3.470	3.650	3.740	3.790	
0.000	.500	1.080	1.650	2.140	2.680	3.160	3.630	4.090	4.530	Y 7
5.060	5.540	5.770	5.770	5.770	5.770	5.920	6.000	6.050	6.070	
6.000	5.850	5.560	5.150	4.590	3.830	2.980	2.020	1.000	0.000	
-7.370	-7.340	-7.260	-7.140	-7.010	-6.830	-6.680	-6.410	-6.140	-5.820	Z 7
-5.300	-4.690	-4.230	-4.230	-4.230	-4.230	-3.810	-3.420	-3.020	-2.250	
-1.160	-.270	.790	1.720	2.580	3.300	3.730	3.970	4.110	4.170	
0.000	.500	1.100	1.610	2.100	2.680	3.200	3.900	4.450	4.950	Y 8
5.350	5.850	7.216	6.291	6.291	7.216	6.750	6.500	6.260	6.070	
5.920	5.490	5.090	4.530	3.880	3.150	2.310	1.570	.740	0.000	
-8.500	-8.500	-8.440	-8.350	-8.200	-8.010	-7.810	-7.490	-7.230	-6.970	Z 8
-6.750	-6.470	-5.690	-6.110	-4.690	-5.690	-4.730	-4.000	-2.970	-2.150	
-1.670	-0.480	0.460	1.390	2.130	2.630	2.950	3.140	3.260	3.310	
0.000	.650	1.150	1.730	2.200	2.650	3.170	3.700	4.280	4.880	Y 9
5.580	6.200	7.216	6.291	6.291	7.216	6.390	6.080	5.730	5.450	
5.060	4.720	4.430	4.050	3.630	3.070	2.500	1.730	.840	0.000	
-9.350	-9.340	-9.270	-9.150	-9.020	-8.880	-8.700	-8.480	-8.250	-8.000	Z 9
-7.750	-7.540	-7.300	-7.400	-4.450	-4.780	-4.030	-3.560	-2.560	-1.810	
-0.960	-0.370	-.030	0.290	.550	0.790	0.960	1.150	1.270	1.350	
0.000	1.375	1.825	2.295	2.745	3.220	3.695	4.160	4.695	5.240	Y 10
5.805	6.445	7.216	6.291	6.291	7.216	6.815	6.615	6.341	6.000	
5.614	5.200	4.772	4.306	3.778	3.248	2.693	2.112	1.518	0.000	
-10.149	-10.140	-10.105	-10.071	-9.998	-9.913	-9.803	-9.642	-9.494	-9.308	Z 10
-9.109	-8.912	-8.681	-8.848	-5.157	-5.276	-4.778	-4.258	-3.749	-3.279	
-2.833	-2.451	-2.106	-1.761	-1.429	-1.172	-.966	-.810	-.717	-.661	
0.000	1.365	1.605	2.265	2.705	3.165	3.646	4.135	4.665	5.235	Y 11
5.855	6.505	7.216	6.291	6.291	7.216	6.715	6.415	6.075	5.725	
5.337	4.922	4.495	4.042	3.551	3.047	2.542	1.987	1.456	0.000	
-11.515	-11.469	-11.447	-11.401	-11.341	-11.269	-11.172	-11.075	-10.953	-10.793	Z 11
-10.646	-10.450	-10.147	-10.360	-6.165	-6.213	-5.834	-5.389	-4.956	-4.535	
-4.140	-3.795	-3.488	-3.167	-2.898	-2.678	-2.510	-2.379	-2.286	-2.243	
0.000	1.365	1.605	2.255	2.700	3.160	3.645	4.125	4.655	5.235	Y 12
5.825	6.495	7.216	6.291	6.291	7.216	6.555	6.205	5.875	5.525	
5.125	4.725	4.305	3.880	3.395	2.949	2.444	1.925	1.419	0.000	
-12.894	-12.894	-12.857	-12.793	-12.755	-12.667	-12.566	-12.452	-12.325	-12.199	Z 12
-12.022	-11.819	-11.589	-11.835	-7.348	-7.313	-6.937	-6.507	-6.064	-5.710	
-5.356	-5.027	-4.723	-4.470	-4.204	-4.027	-3.876	-3.749	-3.686	-3.623	
0.000	1.365	1.600	2.255	2.700	3.160	3.645	4.125	4.665	5.235	Y 13
5.845	6.500	7.216	6.291	6.291	7.216	6.495	6.145	5.805	5.449	
5.055	4.666	4.256	3.821	3.345	2.894	2.415	1.910	1.417	0.000	
-14.261	-14.265	-14.219	-14.160	-14.114	-14.030	-13.933	-13.837	-13.703	-13.557	Z 13
-13.385	-13.215	-12.935	-13.215	-8.619	-8.528	-8.217	-7.797	-7.388	-7.018	
-6.673	-6.353	-6.070	-5.813	-5.556	-5.387	-5.230	-5.112	-5.043	-4.988	
0.000	1.375	1.825	2.286	2.725	3.185	3.665	4.148	4.695	5.245	Y 14
5.855	6.505	7.216	6.291	6.291	7.216	6.475	6.146	5.808	5.445	
5.056	4.675	4.256	3.838	3.371	2.905	2.413	1.920	1.427	0.000	
-15.589	-15.580	-15.545	-15.472	-15.425	-15.352	-15.255	-15.157	-15.022	-14.674	Z 14
-14.689	-14.478	-14.194	-14.491	-9.869	-9.764	-9.519	-9.099	-8.692	-8.322	
-7.978	-7.659	-7.390	-7.121	-6.878	-6.685	-6.529	-6.437	-6.358	-6.316	
0.000	1.366	1.605	2.265	2.710	3.185	3.665	4.134	4.685	5.236	Y 15
5.847	6.458	7.216	6.291	6.291	7.216	6.505	6.150	5.808	5.435	
5.056	4.665	4.236	3.805	3.345	2.886	2.415	1.911	1.406	0.000	
-16.730	-16.713	-16.682	-16.652	-16.559	-16.491	-16.397	-16.304	-16.187	-16.031	Z 15
-15.652	-15.648	-15.345	-15.682	-11.079	-10.922	-10.650	-10.252	-9.841	-9.455	
-9.120	-8.822	-8.537	-8.251	-8.016	-7.818	-7.683	-7.574	-7.489	-7.456	
0.000	1.435	1.678	2.334	2.790	3.247	3.704	4.186	4.731	5.303	Y 16
5.900	6.573	7.216	6.291	6.291	7.216	6.519	6.158	5.822	5.461	
5.073	4.673	4.272	3.834	3.356	2.891	2.413	1.908	1.416	0.000	
-17.791	-17.773	-17.754	-17.685	-17.628	-17.571	-17.464	-17.370	-17.239	-17.095	Z 16
-16.914	-16.734	-16.493	-16.752	-12.210	-12.030	-11.736	-11.326	-10.929	-10.557	
-10.223	-9.901	-9.616	-9.332	-9.097	-8.926	-8.755	-8.659	-8.563	-8.517	
0.000	1.405	1.885	2.370	2.855	3.325	3.835	4.315	4.875	5.425	Y 17
5.995	6.575	7.216	6.291	6.291	7.216	6.745	6.495	6.195	5.876	
5.495	5.095	4.665	4.175	3.677	3.135	2.593	2.050	1.506	0.000	
-18.930	-18.920	-18.890	-18.840	-18.750	-18.655	-18.535	-18.387	-18.210	-18.010	Z 17
-17.790	-17.480	-17.088	-17.396	-13.561	-13.319	-13.050	-12.567	-12.109	-11.677	
-11.282	-10.912	-10.555	-10.261	-9.966	-9.760	-9.579	-9.449	-9.369	-9.327	

Table III. - Continued.

(b) Continued

0.000	1.475	2.015	2.545	3.045	3.590	4.100	4.615	5.185	5.685	Y 18
6.245	6.655	7.216	6.291	6.291	7.216	6.725	6.485	6.195	5.855	
5.455	5.065	4.615	4.150	3.615	3.125	2.545	1.995	1.440	0.000	
-19.930	-19.925	-19.870	-19.805	-19.720	-19.600	-19.460	-19.280	-19.020	-18.770	Z 18
-18.430	-17.993	-17.590	-17.898	-14.876	-14.617	-14.196	-13.803	-13.080	-12.580	
-12.080	-11.680	-11.320	-10.990	-10.690	-10.480	-10.300	-10.150	-10.089	-10.055	
0.090	1.465	2.025	2.575	3.095	3.635	4.145	4.655	5.225	5.715	Y 19
6.215	6.625	7.216	6.291	6.291	7.216	6.875	6.715	6.455	6.135	
5.705	5.255	4.795	4.335	3.815	3.245	2.685	2.105	1.535	0.000	
-20.760	-20.740	-20.630	-20.500	-20.350	-20.170	-19.970	-19.750	-19.470	-19.190	Z 19
-18.850	-18.450	-17.968	-18.264	-16.119	-15.855	-15.330	-14.840	-14.020	-13.490	
-12.970	-12.530	-12.110	-11.776	-11.430	-11.170	-10.930	-10.770	-10.670	-10.630	
0.000	0.620	1.330	1.950	2.560	3.190	3.820	4.450	5.060	5.550	Y 20
6.090	6.550	7.216	6.291	6.291	7.216	6.950	6.810	6.780	6.530	
6.010	5.540	5.020	4.500	3.860	3.030	2.350	1.930	0.650	0.000	
-21.450	-21.430	-21.390	-21.290	-21.160	-20.950	-20.690	-20.390	-20.010	-19.630	Z 20
-19.190	-18.760	-18.260	-18.550	-17.300	-17.020	-16.600	-16.050	-15.350	-14.710	
-13.860	-13.340	-12.870	-12.490	-12.050	-11.700	-11.500	-11.330	-11.210	-11.150	
0.000	.440	1.030	1.570	2.170	2.820	3.500	4.240	5.000	5.660	Y 21
6.200	6.650	7.216	6.291	6.291	7.216	6.880	6.800	6.660	6.410	
5.890	5.390	4.900	4.400	3.820	3.220	2.570	1.910	1.000	0.000	
-21.910	-21.900	-21.850	-21.750	-21.660	-21.460	-21.230	-20.930	-20.560	-20.070	Z 21
-19.460	-18.870	-18.450	-18.700	-18.340	-18.070	-17.600	-16.930	-16.130	-15.360	
-14.380	-13.730	-13.240	-12.850	-12.500	-12.240	-12.030	-11.850	-11.720	-11.650	
0.000	.710	1.390	2.060	2.710	3.290	3.940	4.550	5.270	5.880	Y 22
6.350	6.550	6.650	6.650	6.650	6.650	6.680	6.570	6.390	6.120	
5.710	5.200	4.650	4.020	3.340	2.660	1.990	1.330	.680	0.000	
-22.230	-22.180	-22.080	-21.940	-21.770	-21.590	-21.290	-20.960	-20.540	-20.060	Z 22
-19.390	-18.710	-18.070	-18.070	-18.070	-18.070	-17.310	-16.570	-15.840	-15.140	
-14.450	-13.900	-13.410	-13.010	-12.690	-12.460	-12.350	-12.190	-12.100	-12.040	
0.000	.390	1.030	1.870	2.580	3.330	3.890	4.750	5.350	5.820	Y 23
6.180	6.380	6.450	6.450	6.450	6.450	6.530	6.500	6.360	6.140	
5.750	5.230	4.550	3.880	3.250	2.550	1.950	1.200	.500	0.000	
-22.300	-22.280	-22.230	-22.100	-21.890	-21.590	-21.300	-20.780	-20.270	-19.720	Z 23
-19.160	-18.630	-18.050	-18.050	-18.050	-18.050	-17.500	-16.800	-16.150	-15.550	
-14.890	-14.300	-13.750	-13.340	-13.040	-12.800	-12.640	-12.490	-12.410	-12.390	
0.000	.660	1.290	1.890	2.480	3.020	3.600	4.100	4.510	4.870	Y 24
5.040	5.200	5.290	5.290	5.290	5.290	5.330	5.280	5.170	5.000	
4.770	4.390	3.940	3.470	2.920	2.340	1.770	1.190	.630	0.000	
-21.900	-21.850	-21.750	-21.620	-21.440	-21.210	-20.900	-20.530	-20.040	-19.540	Z 24
-19.000	-18.490	-18.000	-18.000	-18.000	-18.000	-17.434	-16.820	-16.220	-15.660	
-15.140	-14.600	-14.090	-13.700	-13.410	-13.190	-13.030	-12.910	-12.850	-12.800	
0.000	.470	1.160	1.860	2.530	3.010	3.440	3.840	4.160	4.410	Y 25
4.560	4.660	4.670	4.670	4.670	4.670	4.680	4.660	4.620	4.490	
4.260	3.920	3.510	3.120	2.690	2.170	1.720	1.220	.560	0.000	
-21.260	-21.240	-21.140	-20.970	-20.720	-20.440	-20.120	-19.740	-19.300	-18.790	Z 25
-18.260	-17.830	-17.490	-17.490	-17.490	-17.490	-17.140	-16.660	-16.260	-15.730	
-15.160	-14.660	-14.240	-13.920	-13.640	-13.400	-13.230	-13.080	-12.940	-12.680	
0.000	.300	0.670	1.050	1.500	1.950	2.370	2.820	3.070	3.400	Y 26
3.680	3.840	3.890	3.890	3.890	3.890	3.880	3.860	3.820	3.730	
3.540	3.280	2.900	2.540	2.160	1.650	1.240	.930	.550	0.000	
-20.300	-20.290	-20.240	-20.160	-20.030	-19.840	-19.620	-19.270	-19.020	-18.560	Z 26
-17.980	-17.430	-17.000	-17.000	-17.000	-17.000	-16.650	-16.200	-15.770	-15.330	
-14.840	-14.340	-13.860	-13.570	-13.340	-13.150	-13.040	-12.970	-12.910	-12.880	
0.000	.500	.930	1.320	1.680	2.000	2.280	2.521	2.722	2.875	Y 27
3.000	3.055	3.100	3.100	3.100	3.100	3.100	3.070	3.013	2.899	
2.746	2.568	2.302	2.061	1.744	1.440	1.099	.744	.390	0.000	
-19.015	-18.964	-18.862	-18.722	-18.506	-18.265	-18.024	-17.732	-17.416	-17.074	Z 27
-16.745	-16.441	-16.150	-16.137	-16.137	-16.137	-15.796	-15.454	-15.088	-14.759	
-14.456	-14.165	-13.850	-13.610	-13.370	-13.181	-13.043	-12.917	-12.855	-12.843	
0.000	.370	.685	.980	1.250	1.485	1.695	1.860	2.020	2.121	Y 28
2.200	2.250	2.275	2.275	2.275	2.275	2.275	2.250	2.186	2.120	
2.000	1.980	1.690	1.515	1.295	1.070	.833	.579	.313	0.000	
-17.434	-17.382	-17.305	-17.191	-17.051	-16.885	-16.657	-16.429	-16.186	-15.947	Z 28
-15.719	-15.492	-15.238	-15.226	-15.251	-15.251	-14.998	-14.758	-14.467	-14.252	
-14.012	-13.823	-13.609	-13.420	-13.243	-13.092	-12.992	-12.904	-12.854	-12.843	
0.000	.251	.466	.656	.832	.959	1.110	1.223	1.299	1.374	Y 29
1.399	1.424	1.424	1.424	1.424	1.424	1.411	1.372	1.334	1.270	
1.181	1.080	.978	.864	.725	.585	.446	.307	.155	0.000	
-15.638	-15.612	-15.548	-15.472	-15.370	-15.269	-15.129	-14.977	-14.813	-14.648	Z 29
-14.496	-14.344	-14.205	-14.205	-14.205	-14.205	-14.041	-13.876	-13.725	-13.598	
-13.459	-13.333	-13.220	-13.131	-13.018	-12.942	-12.892	-12.855	-12.830	-12.830	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Y 30
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	Z 30
-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	-13.019	

Table III. - Concluded.

(b) Concluded

```
-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019-13.019
199.78822.046 -19.698                                                  PODORG 1
0.      2.      4.      6.      8.      10.     12.     14.     16.     18.     XPOD
20.     22.     24.     26.     28.     30.     31.624  32.     34.     35.963  XPOD
2.578   2.619   2.660   2.702   2.743   2.784   2.825   2.866   2.907   2.949   RPOD
2.990   3.031   3.072   3.113   3.154   3.196   3.229   3.229   3.229   3.229   RPOD
203.51135.670 -19.375                                                  PODORG 2
0.      2.      4.      6.      8.      10.     12.     14.     16.     18.     XPOD
20.     22.     24.     26.     28.     30.     31.624  32.     34.     35.963  XPOD
2.578   2.619   2.660   2.702   2.743   2.784   2.825   2.866   2.907   2.949   RPOD
2.990   3.031   3.072   3.113   3.154   3.196   3.229   3.229   3.229   3.229   RPOD
210.23746.9005-15.64435.163 243.46746.9005-5.749 4.787                 V FIN
0.      10.     20.     30.     40.     50.     60.     70.     90.     100.    XFIN
0.      .466    .846    1.138   1.345   1.465   1.498   1.390   .641    0.      FINORD
301.3300.       -12.84329.877 325.6870.       -3.103 7.062                   V TAIL
0.      10.     20.     30.     40.     50.     60.     70.     90.     100.    XVTAIL
0.      .466    .846    1.138   1.345   1.465   1.498   1.390   .641    0.      TVTAIL
294.1002.900    -15.34324.196 315.60315.110 -18.6157.252                H TAIL
0.      10.     20.     30.     40.     50.     70.     80.     90.     100.    XHTAIL
0.0     .553    .948    1.264   1.448   1.5     1.264   .948    .553    0.0     THTAIL
```

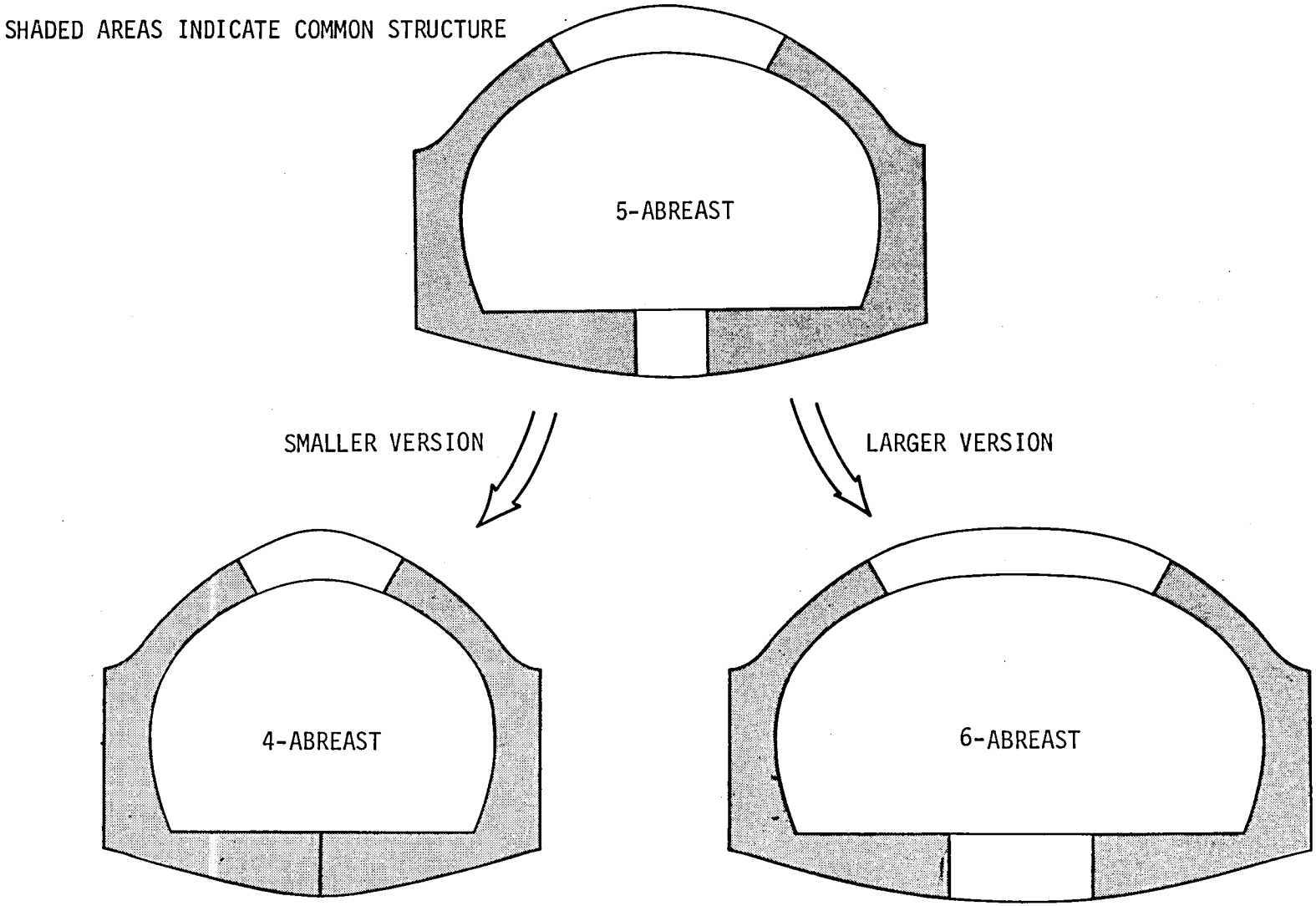


Figure 1. - Fuselage modifications for derivative configurations.

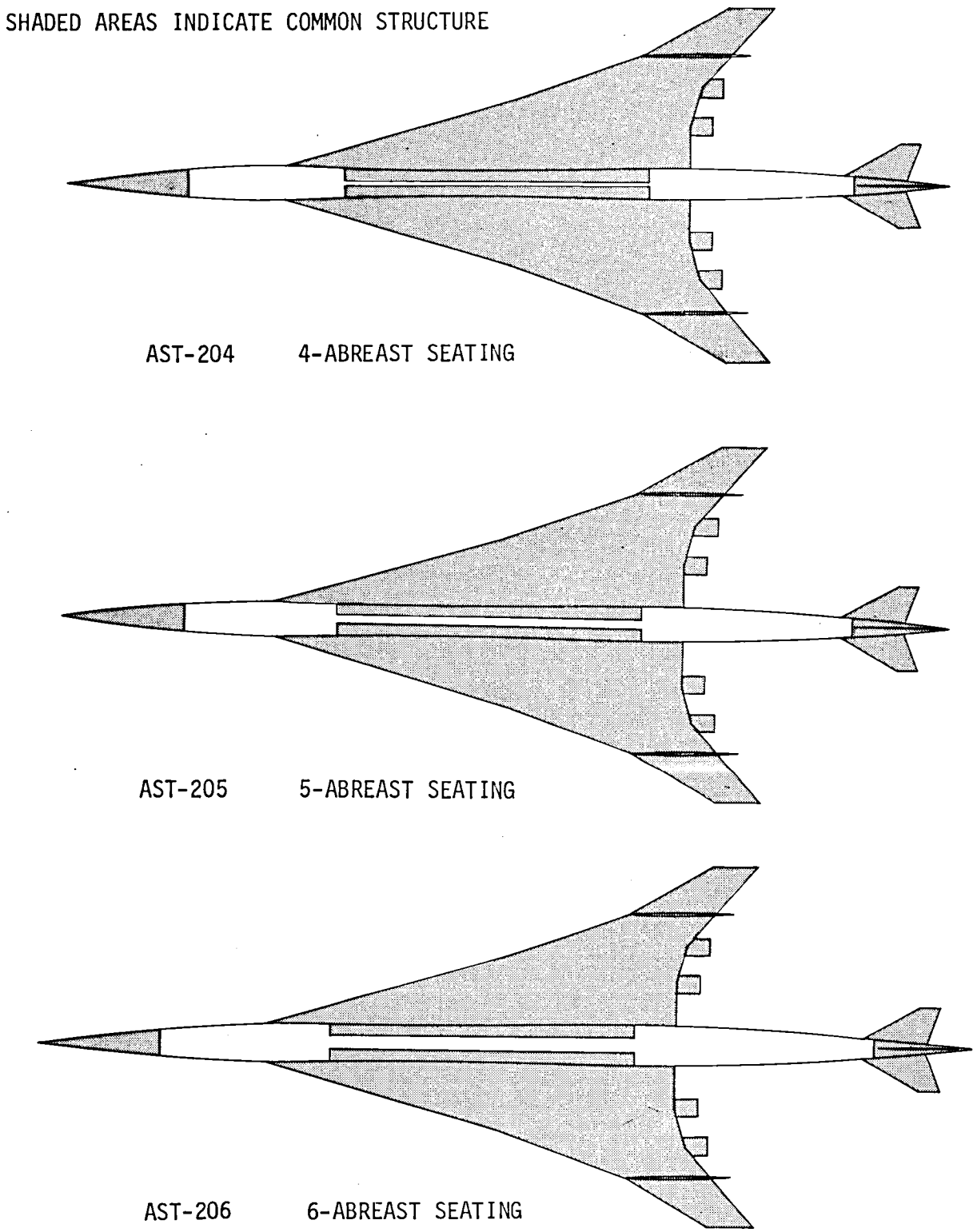


Figure 2. - Structural commonality for the basic and derivative configurations.

Dimensions in centimeters (inches)

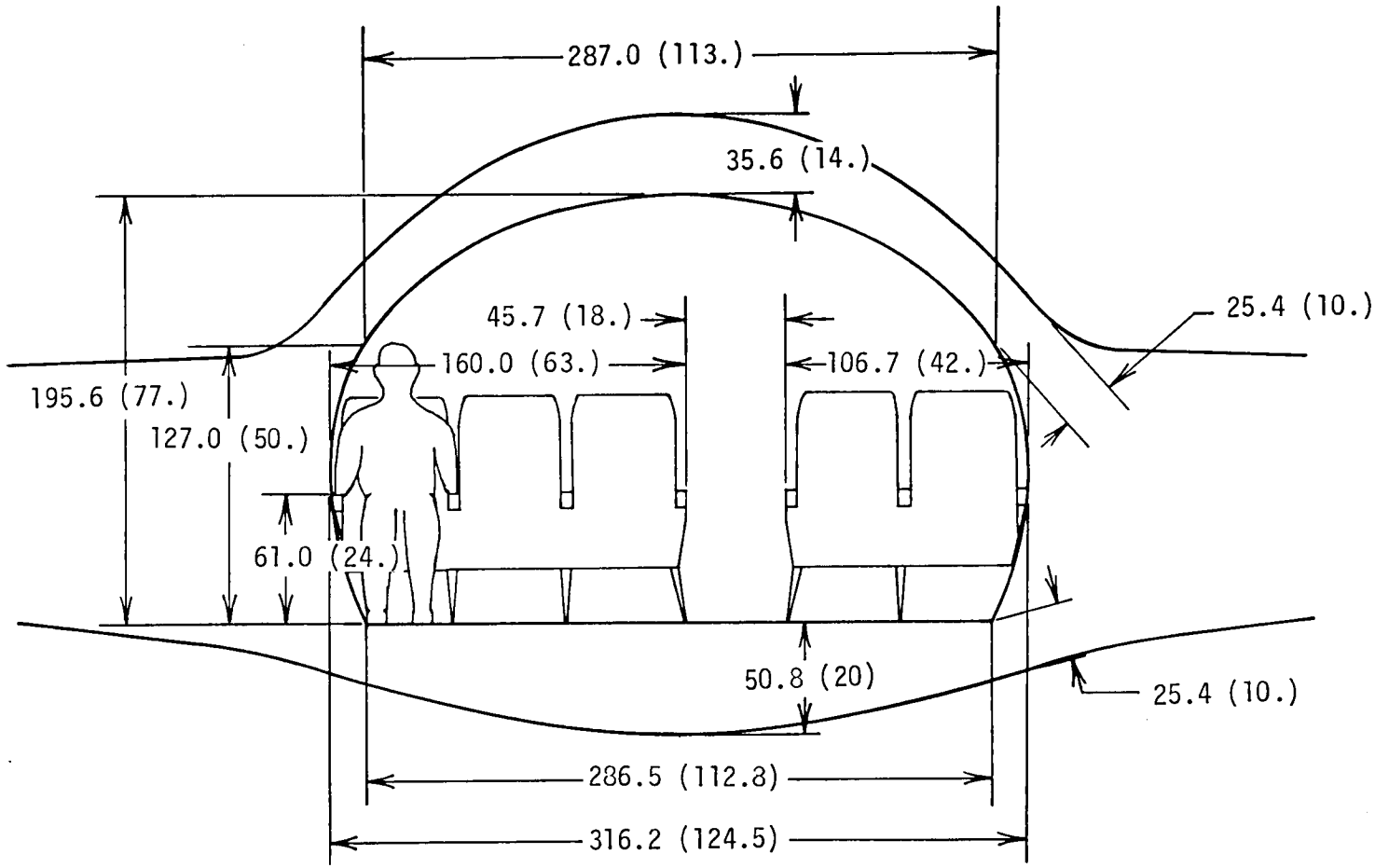
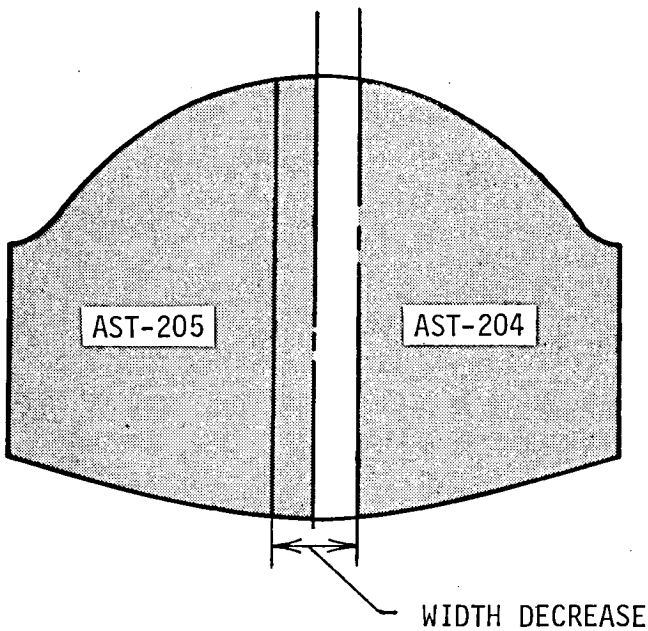
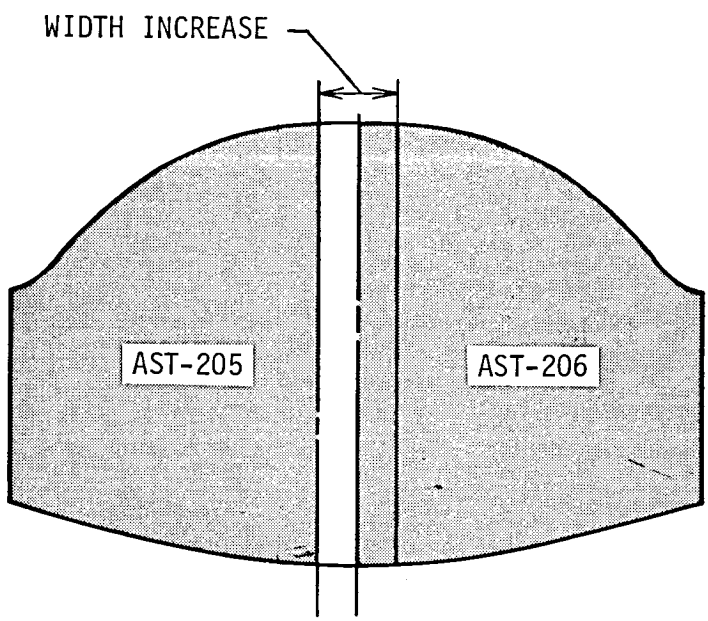


Figure 3. - Minimum dimensions for fuselage centerbody.



(a)



(b)

Figure 4. - Locations of the fuselage width decrease for the AST-204 and increase for the AST-206.

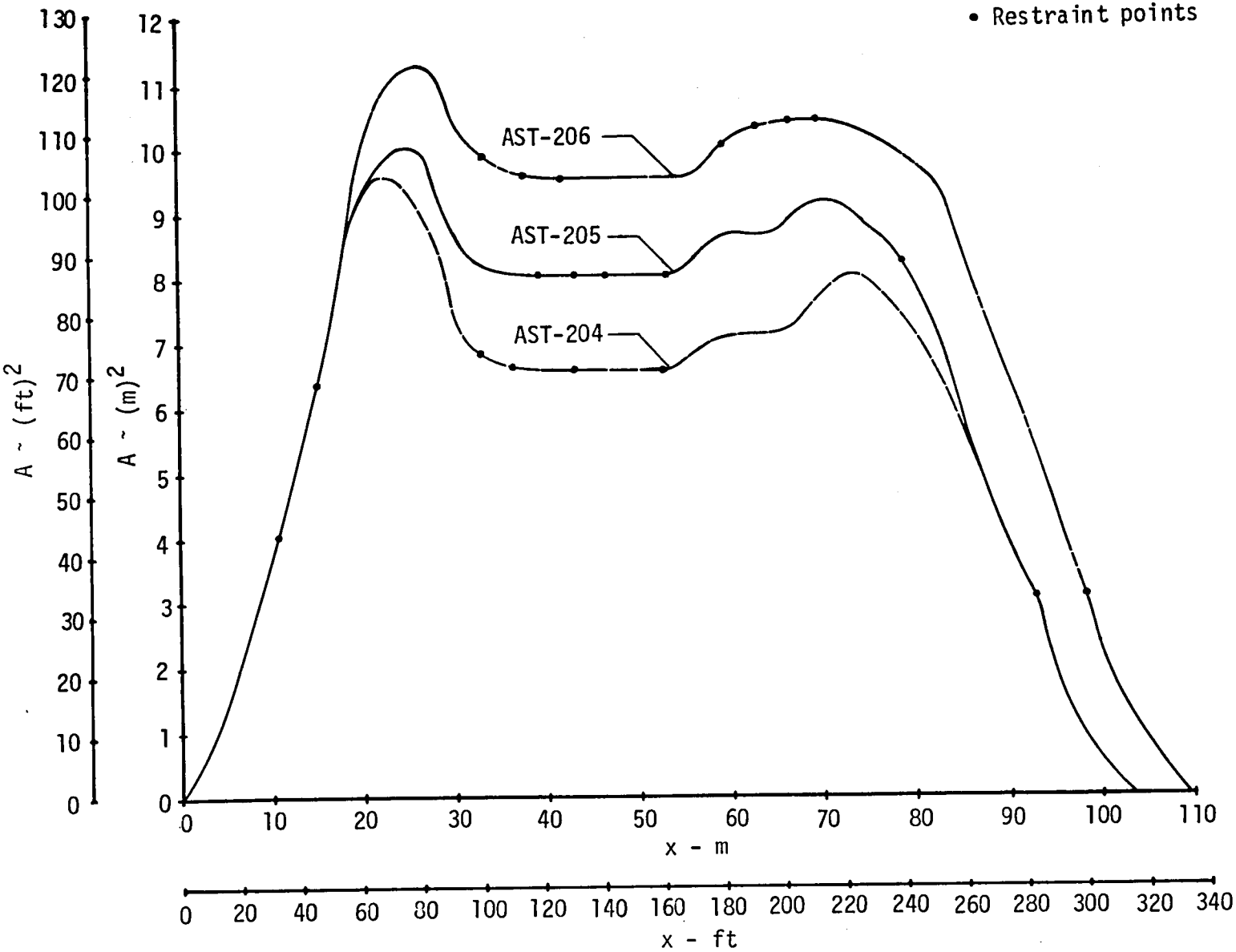
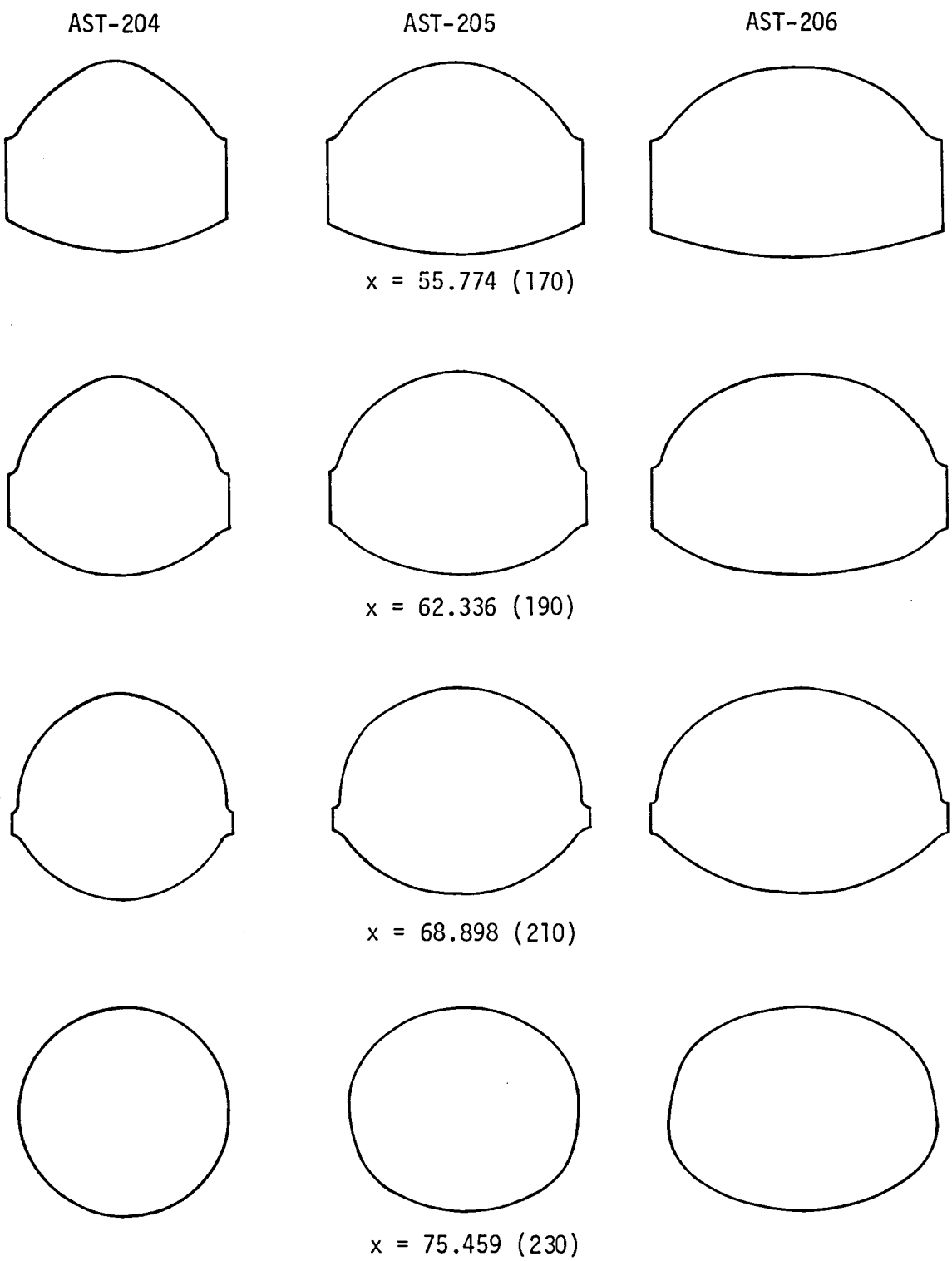
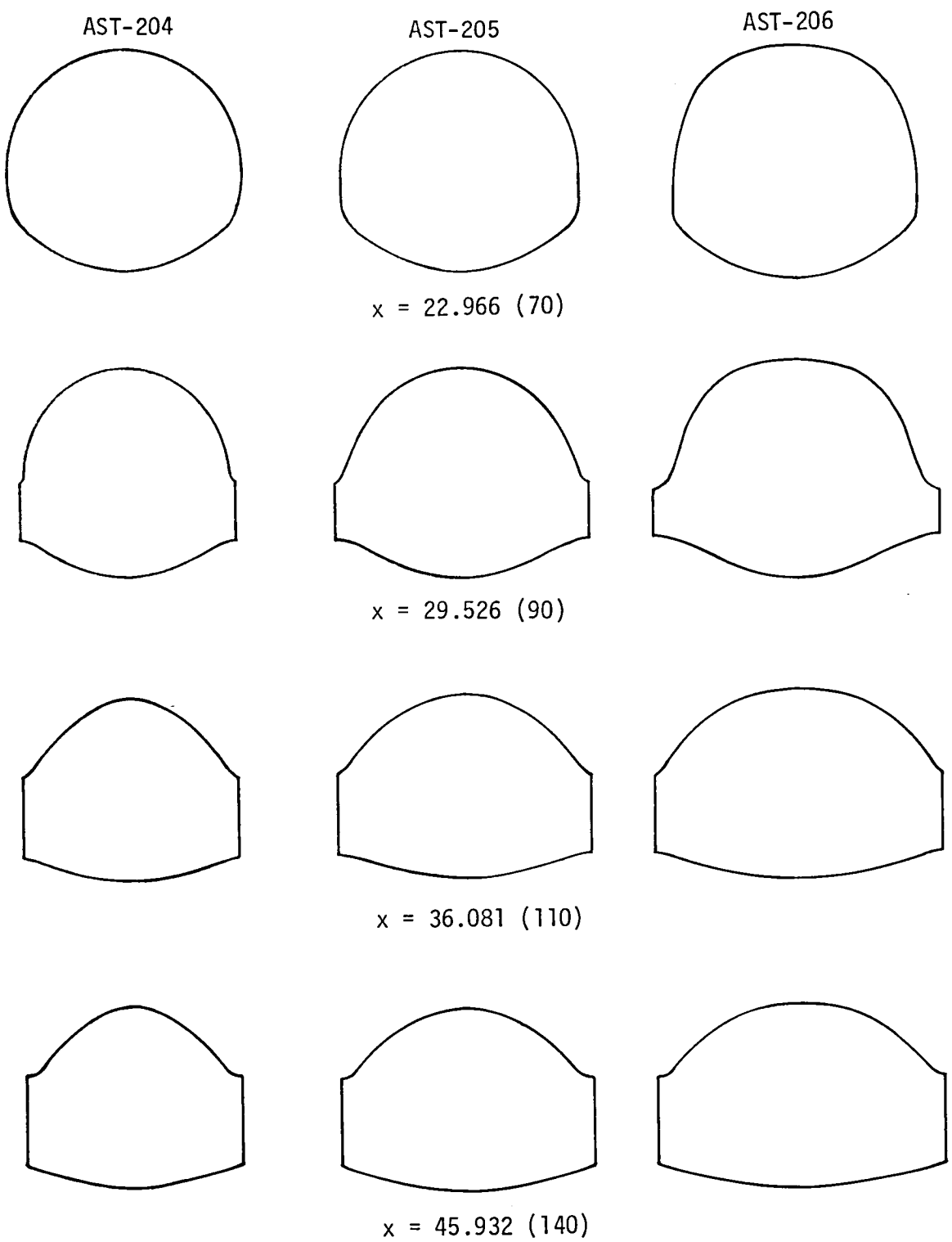


Figure 5. - Fuselage area distribution comparison



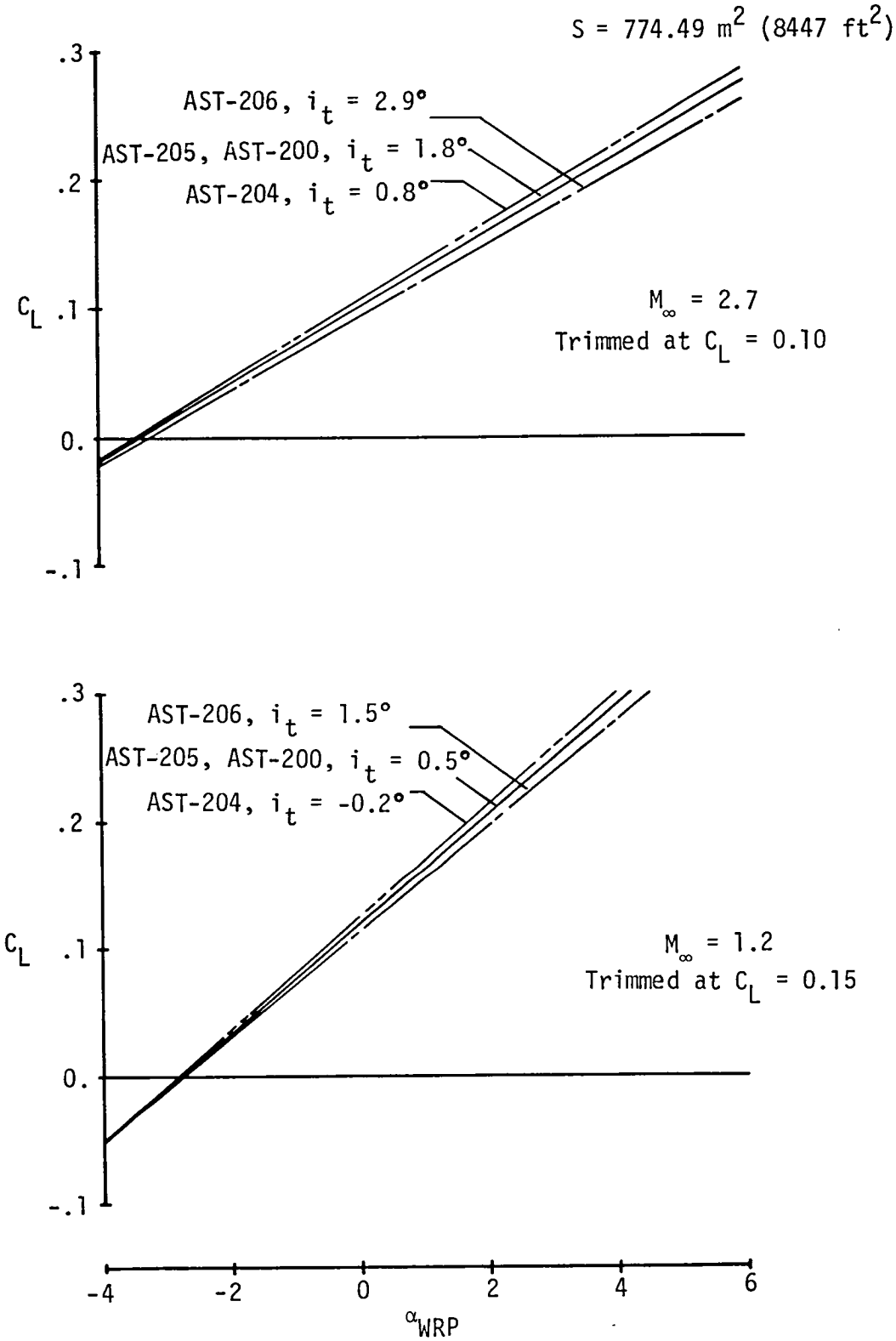
Dimensions in meters (feet)

Figure 6. - Concluded.



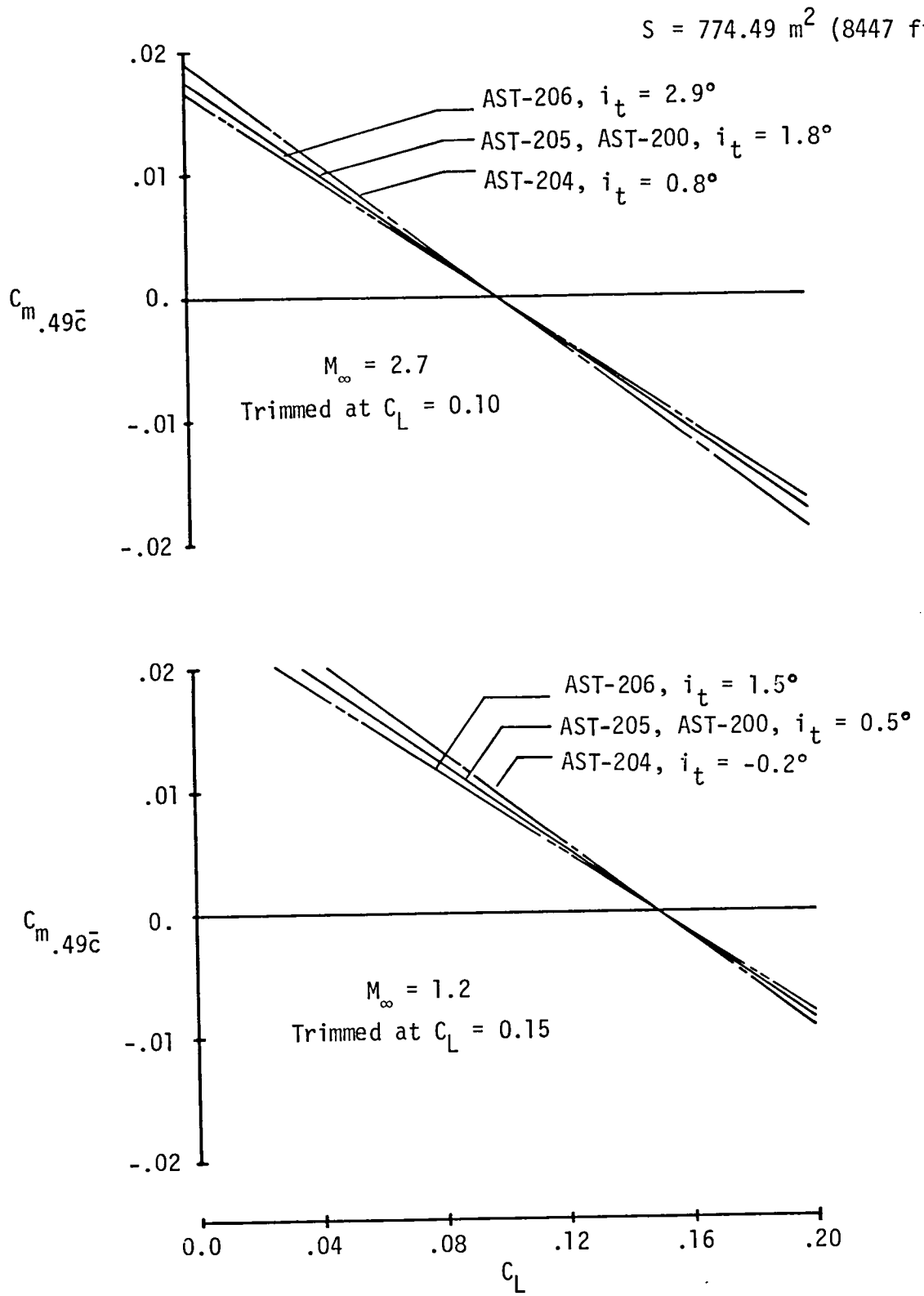
Dimensions in meters (feet)

Figure 6. - Fuselage cross-section comparison



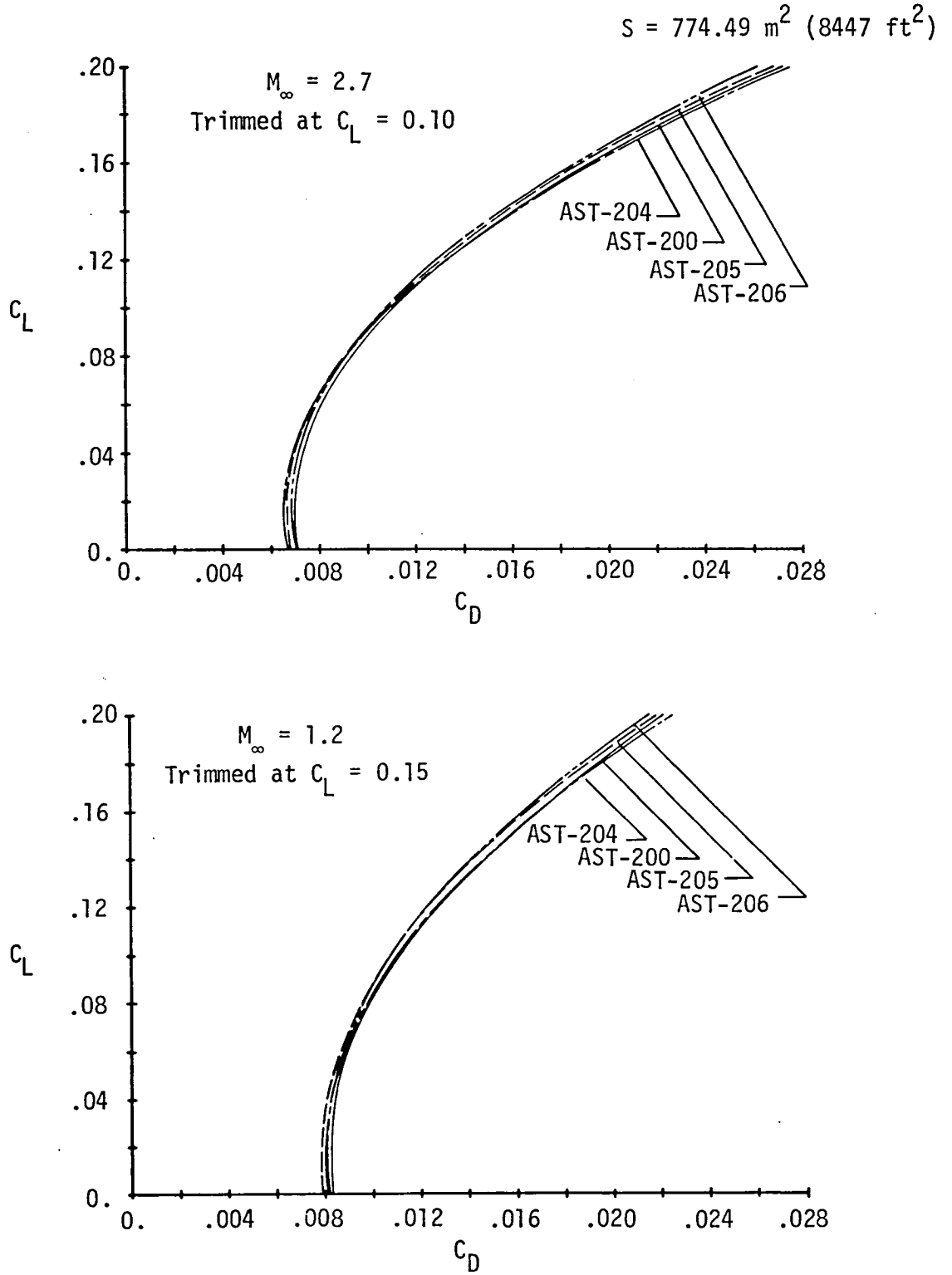
(a) Lift comparison.

Figure 7. - Aerodynamic performance.



(b) Pitching moment comparison.

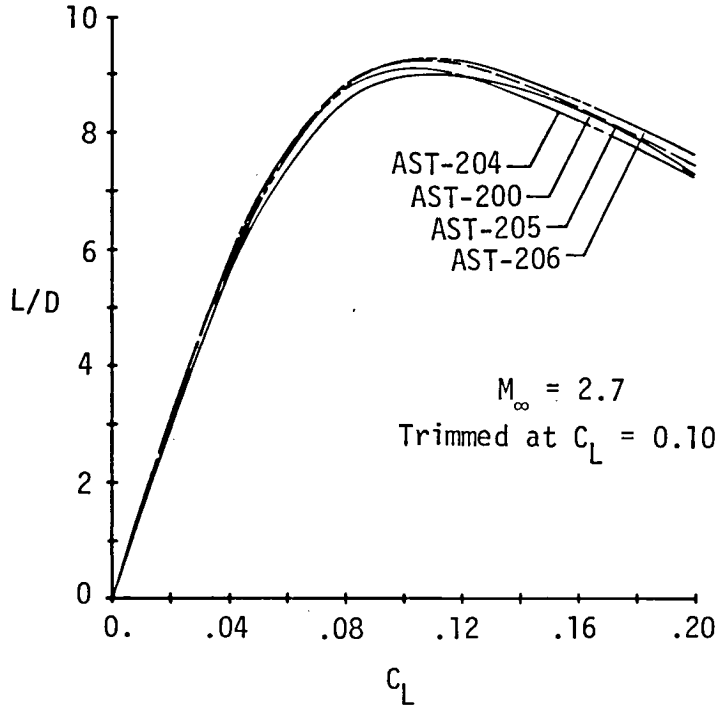
Figure 7. - Continued.

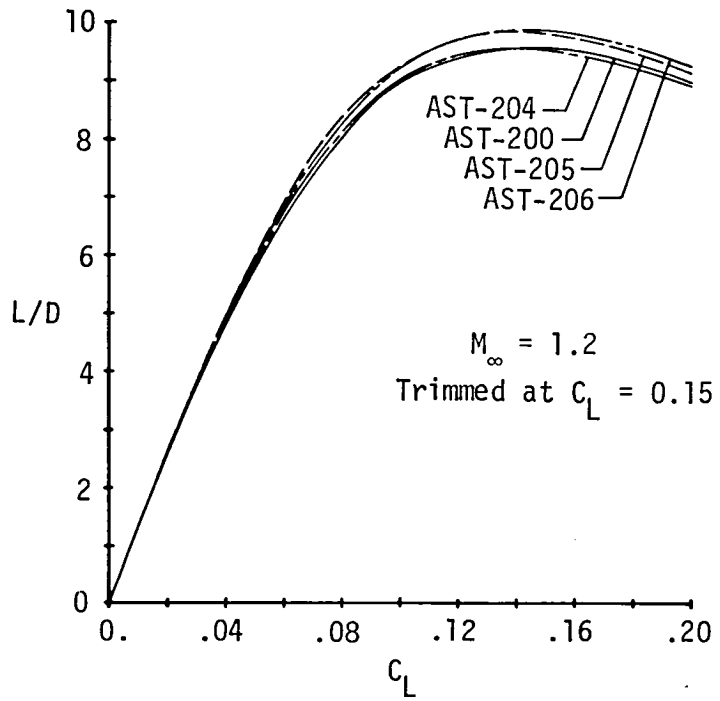


(c) Drag comparison.

Figure 7. - Continued.

S = 774.49 m^2 (8447 ft^2)





(d) L/D comparison.
Figure 7. - Concluded.

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15. Supplementary Notes

Langley Technical Monitor: Samuel M. Dollyhigh

16. Abstract

The aerodynamic design and analysis of three blended wing-fuselage supersonic cruise configurations providing four-, five-, and six-abreast seating has been conducted using a previously designed supersonic cruise configuration as the baseline. The five-abreast configuration was optimized for wave drag at a Mach number of 2.7. The four- and six-abreast configurations were also optimized at Mach 2.7, but with the added constraint that the majority of their structure be common with the five-abreast configuration. Analysis of the three configurations indicated an improvement of 6.0, 7.5, and 7.7 percent in cruise lift-to-drag ratio over the baseline configuration for the four-, five-, and six-abreast configurations, respectively. Validation of the design is planned through supersonic wind tunnel tests.

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